

HSBL (Japan) Bearing Co., Ltd



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<http://www.hbsl-bearing.com/>

HBSL
せいみつじくうけ

HBSL

せいみつじくうけ

BEARINGS



BRAND

to brand integrity of tre tree to win the market

COMMITMENT AND VALUE

High quality bearings in compliance with international standard
Timely delivery

Professional technical support
Rapid response and top quality service

HBSL

せいみつじくうけ

INTRODUCTION

HBSL Group is a family owned enterprise from Japan. HBSL Group is a leading global manufacturer of rolling bearings and linear motion products, and is also one of the highly reputable suppliers in the automotive manufacturing industry.

HBSL Group is actively active in the fields of automotive manufacturing, industrial manufacturing, and aerospace. The Automotive Industry Department of HBSL Group has become a reliable partner for almost all car manufacturers and other major suppliers with its expertise in the overall powertrain (engine, chassis, gearbox, and auxiliary devices) of sedans and trucks.

HBSL began investing in production in China in 1995. For over 20 years, Burns has become an important supplier and partner in the automotive and industrial sectors of China. Adhering to the concept of "local resources serving the local market", Burns Greater China is committed to local production and research and development, providing customers with high-quality products and close service.

At present, HBSL Greater China has over 13000 employees, a research and development center in Anting, 8 factories in Taicang, Suzhou, Yinchuan, Nanjing, and 22 sales offices across the country in Beijing, Shanghai, Shenyang, Guangzhou, Nanjing, Jinan, Chengdu, Wuhan, Taiyuan, Chongqing, Xi'an, Tianjin, Dalian, Hangzhou, Changsha, Harbin, Zhengzhou, Wuxi, Suzhou, Hong Kong, Taipei, Taichung, and other places.

The main application areas of some of its products are listed below: aviation engineering, metal cutting machine tools, steel processing equipment, converters, casting equipment, rolling mills, mechanical transmission equipment, papermaking machinery, cement machinery, mills, mining machinery, engineering machinery and vibration machinery, environmental protection equipment, wind power generation equipment, ships, antennas and radars, textile machinery, packaging machinery, etc.

GENUINE PARTS

PROFESSIONAL MANUFACTURING

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BEARING



DIRECTORY

Corporate Culture	005-006
Introduction	007-008
Talent Strategy	009-010
Structure	011-012
Quality Management System	013-014
Production Strength	015-016
Applications	017-018
Product Contents	019-020
Bearing knowledge	021-158
Contact in HBSLrmation	159-160

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GENUINE PARTS
PROFESSIONAL MANUFACTURING



Company principle:Quality first,reputation first
Business philosophy:Sincere cooperation;credible management,genuine goods at a fair price,top quality service
Enterprise goals:Sophisticated manufacturing and rapid development
Core values:Customer orientation;staff development,advocating cooperation and encouraging innovation

HBSL
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A graphic design for a bearings advertisement. It features the company name 'HBSL' in large blue letters, with 'せいみつじくうけ' in smaller blue Japanese characters below it. To the right is a glowing blue globe with a city skyline silhouette. Below the globe and skyline is a reflection of the same elements. At the bottom, the word 'BEARINGS' is written in large, bold, black, sans-serif capital letters.



DEVELOPED IN
HIGH-END TECHNOLOGY

TALENT

HBSL TALENT STRATEGY
GUIDING IDEOLOGY
AND BASIC CONCEPTS

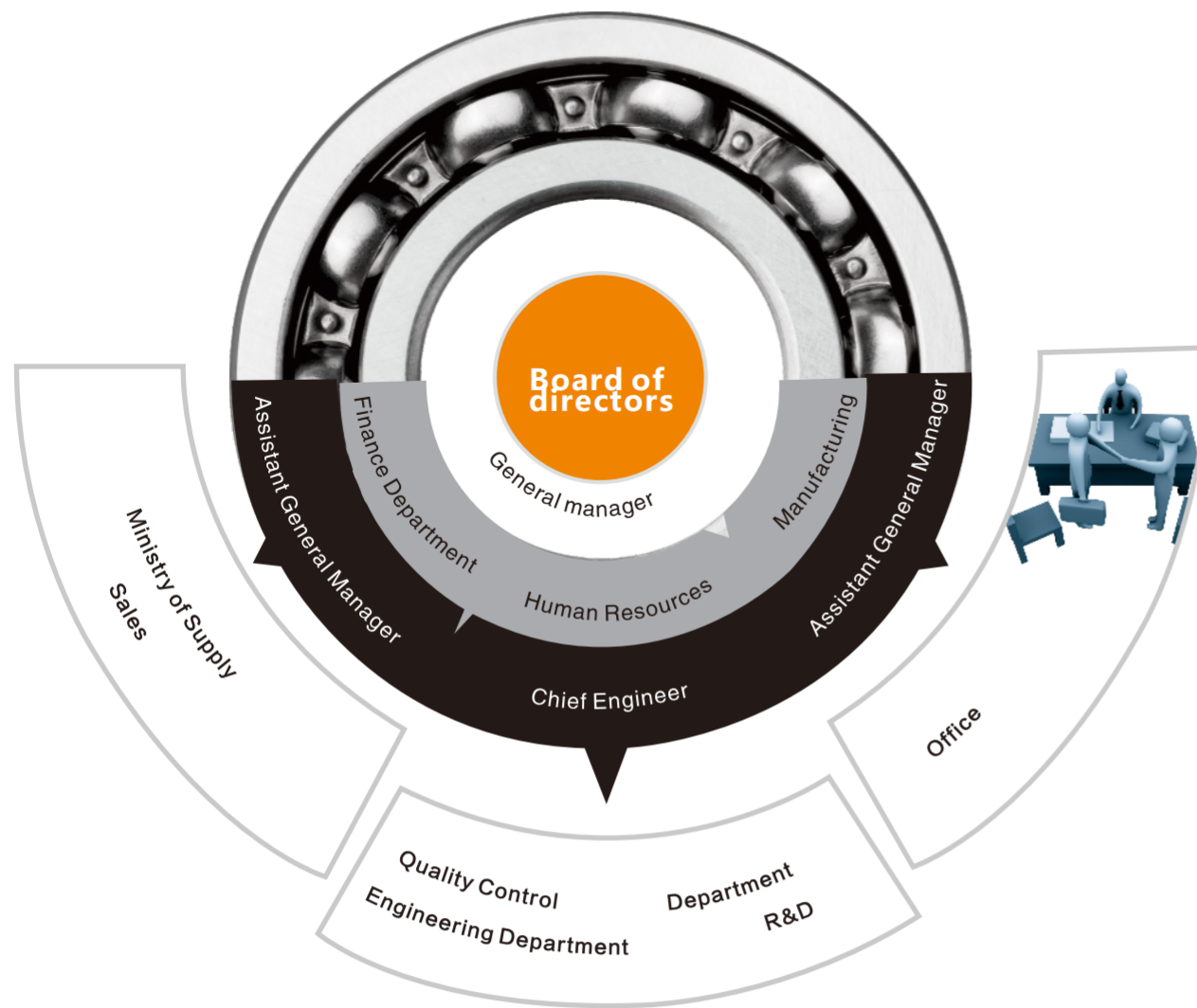


- ◆ **Promote people-oriented corporate culture:**HBSL the human person as the first company to fully respect the talent,nurturing talent,ability to paly to provide the largest possible space.
- ◆ **Widely to attract all kinds of talents:**
there are many types of talents if we can identify from different angles, then everyone is a talent.
To open up channels from the three talents.
 - 1) The majority of collages graduates
 - 2) The corporate and service centers throughout the society in the open recruitment
 - 3) Returned personnel with well-behaved
- ◆ **Insist on employ HBSLur principles:**Appreciation,Tolerating,Employment,Life.
- ◆ **To create fair air and open competition.**
 - 1) No stick to one pattern,equal opportunity,merit
 - 2) No gender,ethnicity,phsical characteristics of the bias
 - 3) No alumni factions,origin sectarianism
 - 4) No personal employment preferences leadership
- ◆ **Designed HBSLr employes challeng career:**
- ◆ **To maintain a certain degree of staff mobility company:**The company encourages employees to flow.But through the efHBSLrts of management , the turnover will be limited to a certain level.
- ◆ **A fair and reasonable staff promotion mechanisms.**

GENUINE PARTS

PROFESSIONAL MANUFACTURING
BEARINGS

ORGANIZATION
MANAGEMENT SYSTEM



EFFECTIVE COORDINATION OF THE OTHER POWERS

We are good at listening,
We are convinced that everyone needs and can realize their full potential.
ThereHBSLre,
We are willing to actively provide HBSLr each employee required to support and help,
through effective organization system,
the spirit of giving,
create and unite to HBSLrm an excited team spirit HBSLrce,
participate in the competition,
employees and the company jointly growth.



QUALITY ASSURANCE SYSTEM



OUTSTANDING COMES FROM QUALITY

GENUINE PARTS
PROFESSIONAL MANUFACTURING



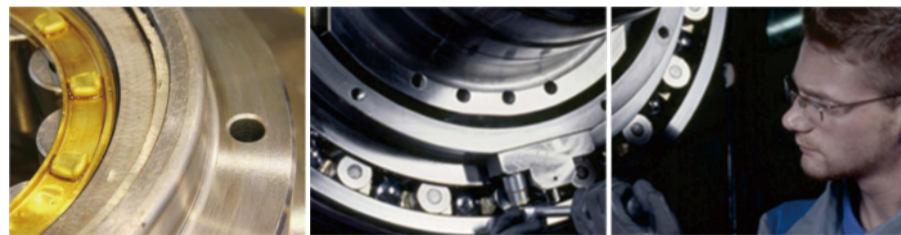
Note: As many of the regulations and standards, this figure is only lists part of the process

PRODUCTION

STRENGTH ARTICLES



The uncompromising pursuit of quality is our highest priority and a cornerstone of our success. This quality process starts with engineering, development, manufacturing and commercial service, where customers' requirements are analysed and implemented. Through out the complete supply chain-from the first customer contact till after sales service-we aim at "zero defect". Through proactive quality management we implement measures and regular checks across all processes to prevent defects.



TEST ASSEMBLY



Material: hardness testing, Spectrometer (chemical analysis)
Dimension: Linear height measurement, shape and roughness measurement, CNC coordinate measuring system, roundness measurement
Function: Noise/vibrations testing machine



GENUINE

PROFESSIONAL

GENUINE PARTS
PROFESSIONAL MANUFACTURING



APPLICATIONS

GENUINE

PARTS

PROFESSIONAL MANUFACTURING

DEEP GROOVE BALL BEARINGS

HBSL manufacture a full range of deep groove ball bearings. These bearings are the most common type and used HBSL a wide variety of applications.



SELF-ALIGNING

BALL BEARINGS

This type of ball bearing is recommended when alignment of the shaft and housing is difficult and the shaft may flex. The outer ring has a spherical raceway and its center of curvature coincides with that of the bearing; Thereby, the axis of the inner ring, balls and cage can deflect to some extent around the bearing center. Pressed steel cages are usually used. Since the contact angle is small, the axial load capacity is low.

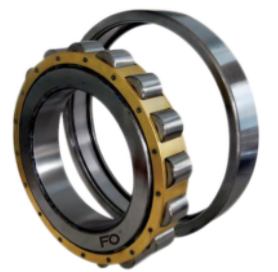


GENUINE PARTS

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CYLINDRICAL ROLLER BEARINGS



In Bearings of this type, the cylindrical rollers are in linear contact with the raceways. They have a high radial load capacity and are suitable for high speeds.

There are different types designated as NU, NJ, NUP, N, NF (HBSLr single-row bearings), NNU, and NN (HBSLr double-row bearings depending on the design absence of side ribs).

HUB BEARING



ANGULAR

CONTACT BALL BEARINGS

ANGULAR CONTACT BALL BEARINGS

The HBSL range of angular contact ball bearings has been designed to meet the increasing demanding requirements of original equipment manufacturers.

Since they have a angular contact, thereHBSLre, they can bear the radial load and large axial load in one direction at same time



HBSL

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TAPERED ROLLER BEARINGS

Conical roller bearings consist of HBSLur interdependent components:
the cone, or inner ring; The cup, or outer ring;
the tapered rollers, or rolling elements;
and the cage, or roller retainer.

The tapered angles allow the bearing to handle a combination
of radial and thrust loads.

The Steeper the cup angle,
the greater ability of the bearing to handle thrust loads.



GENUINE PARTS

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THRUST

BALL BEARINGS

Thrust ball bearing can provide superior performance in high speed applications and easy to assemble. This bearing type provides axial stiffness, but it is not recommended to the applications with radial load.



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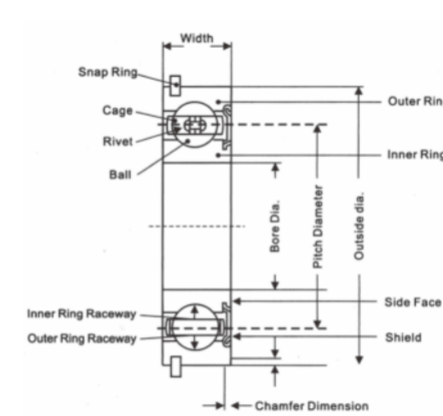
BEARING KNOWLEDGE

» 1 TYPES AND FEATURES OF ROLLING BEARINGS

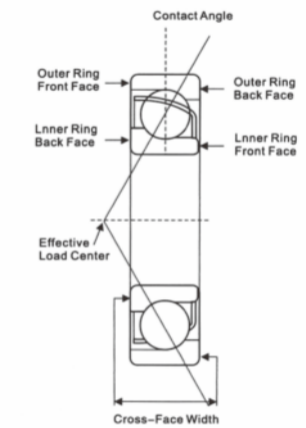
1.1 Design and Classification

Rolling bearings generally consist of two rings, rolling elements, and a cage, and they are classified into radial bearings or thrust bearings depending on the direction of the main load. In addition, depending on the type of rolling elements, they are classified into ball bearings or roller bearings, and they are further segregated by differences in their design or specific purpose.

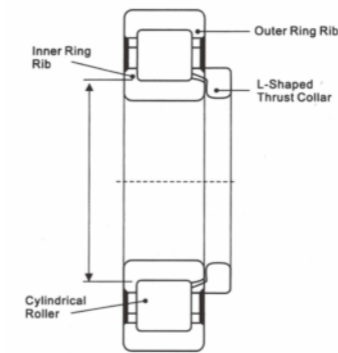
The most common bearing types and structure of bearing parts are shown in Fig.1.



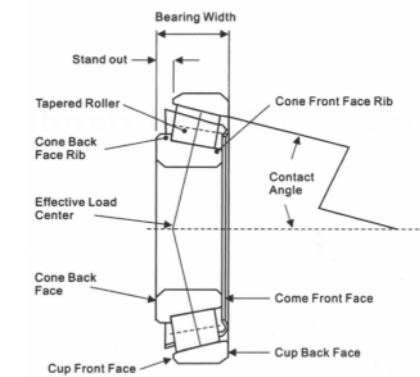
Single-Row Deep Groove Ball Bearing



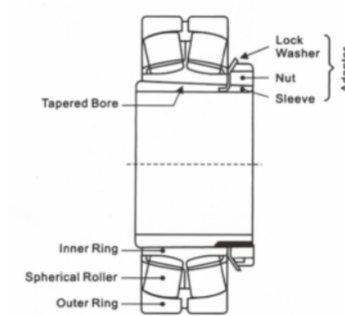
Single-Row Angular Contact Ball Bearing



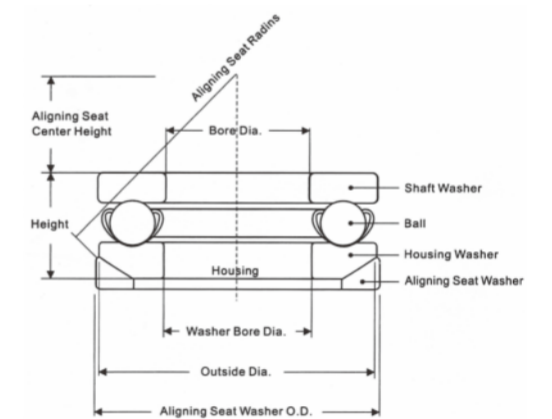
Cylindrical Roller Bearing



Tapered Roller Bearing



Spherical Roller Bearing



Single-Direction Thrust Ball Bearing

» 2 BEARING HANDLING

2.1 Precautions for Proper Handling of Bearings

Since rolling bearings are high precision machine parts, they must be handled accordingly. Even if high quality bearings are used, their expected performance cannot be achieved if they are not handled properly. The main precautions to be observed are as follows:

1) Keep Bearings and Surrounding Area Clean

Dust and dirt, even if invisible to the naked eye, have harmful effects on bearings. It is necessary to prevent the entry of dust and dirt by keeping the bearings and its environment as clean as possible.

2) Careful Handling

Heavy shocks during handling may cause bearings to be scratched or otherwise damaged possibly resulting in its failure. Excessively strong impacts may cause flaw, breaking, or cracking.

3) Use Proper Tools

Always use the proper equipment when handling bearings and avoid general purpose tools.

4) Prevent Corrosion

Since perspiration on the hands and various other contaminants may cause corrosion, keep the hands clean when handling bearings. Wear gloves if possible. Pay attention to rust of bearing caused by corrosive gases.

2.2 Mounting

The method of mounting rolling bearings strongly affects their accuracy, life, and performance, so their mounting deserves careful attention. Their characteristics should first be thoroughly studied, and then they should be mounted in the proper manner. It is recommended that the handling procedures for bearings be fully investigated by the design engineers and that standards be established with respect to the following items:

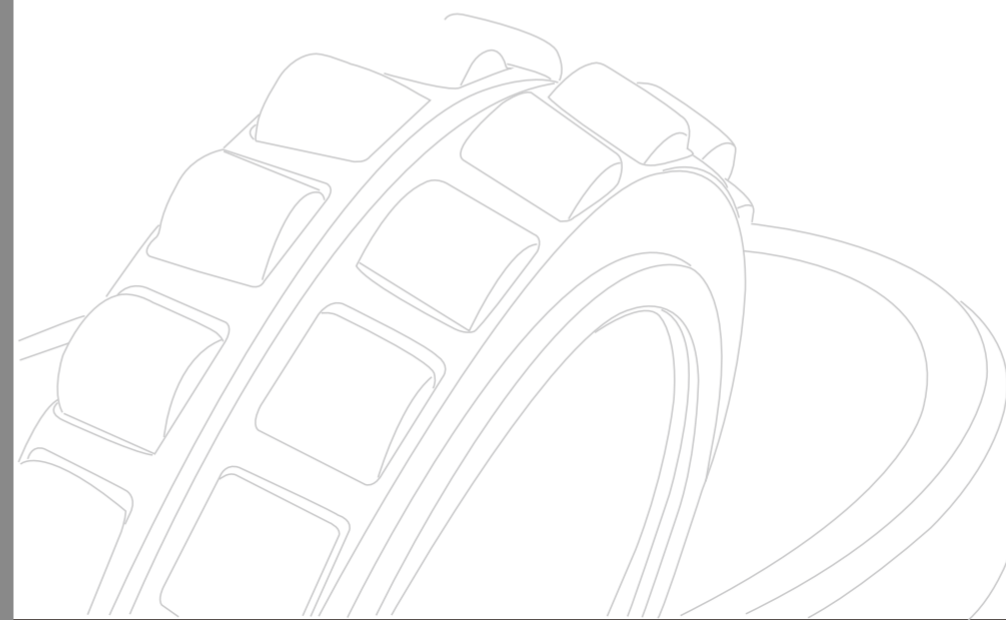
- (1) Cleaning the bearings and related parts.
- (1) Checking the dimensions and finishing of related parts.
- (1) Mounting procedures.
- (1) Inspection after mounting.
- (1) Supply of lubricants.

Bearings should not be unpacked until immediately before mounting. When using ordinary grease lubrication, the grease should be packed in the bearings without first cleaning them. Even in the case of ordinary oil lubrication, cleaning the bearings is not required. However, bearings for instruments or high speed operation must first be cleaned with clean filtered oil in order to remove the anti-corrosion agent.

2.3 Operation Inspection

After the mounting has been completed, a running test should be conducted to determine if the bearing has been mounted correctly. Small machines may be manually operated to assure that they rotate smoothly. Items to be checked include sticking due to dirt, visible flaws, uneven torque caused by improper mounting or an improper mounting surface, and excessive torque caused, by an inadequate clearance, mounting error, or seal friction. If there are no abnormalities, powered operation may be started.

Large machines, which cannot be turned by hand, can be started after examination with no load, and the power immediately cutoff and the machine allowed to coast to a stop. Confirm that there is no abnormality such as vibration, noise, contact of rotating parts, etc. Powered operation should be started slowly without load and the operation should be observed carefully until it is determined that no abnormalities exist, then gradually increase the speed, load, etc. to their normal levels. Items to be checked during the test operation include the existence of abnormal noise, excessive rise of bearing temperature, leakage and contamination of lubricants, etc. If any abnormality is found during the test operation, it must be stopped immediately and the machine should be inspected. If necessary, the bearing should be dismantled for examination.



Irregularities	Possible Causes	Countermeasures
Noise	Abnormal Load	Improve the fittings, internal clearance, preload, position of housing shoulder, etc.
	Incorrect mounting	Improve the machining accuracy and alignment of shaft and housing, accuracy of mounting method.
	Insufficient or improper Lubricant Contact of rotating parts	Replenish the lubricant or select another lubricant. Modify the labyrinth seal, etc.
Loud Metallic Sound(*)		
Loud Regular Sound	Flaws, corrosion, or scratches on raceways Brinelling Flaking on raceway	Replace or clean the bearing, improve the seals, and use clean lubricant Replace the bearing and use care when handling bearings. Replace the bearing
Irregular Sound	Excessive clearance Penetration of HBSLreign particles Flaws or flaking on balls	Improve the fittings, clearance and preload Replace or clean the bearing, improve the seals, and use clean lubricant Replace the bearing
Abnormal Temperature Rise	Excessive amount of lubricant	Reduce amount of lubricant, select stiffer grease.
	Insufficient or improper lubricant	Replenish lubricant or select a better one.
	Abnormal load	Improve the fittings, internal clearance, preload, position of housing shoulder
	Incorrect mounting	Improve the machining accuracy and alignment of shaft and housing, accuracy of mounting, or mounting method.
Creep on fitted surface, excessive seal friction		Correct the seals, replace the bearing, correct the fitting or mounting.
	Brinelling	Replace the bearing and use care when handling bearings.
	Flaking	Replace the bearing
Vibration (Axial runout)	Incorrect mounting	Correct the squareness between the shaft and housing shoulder or side of spacer.
	Penetration of HBSLreign particles	Replace or clean the bearing, improve the seals.
Leakage or Discoloration of Lubricant	Too much lubricant, Penetration by HBSLreign matter or abrasion chips	Reduce the amount of lubricant, select a stiffer grease, Replace the bearing or lubricant, Clean the housing and adjacent parts.

2.4 Dismounting

A bearing may be removed HBSLr periodic inspection or HBSLr other reasons. If the removed bearing is to be used again or it is removed only HBSLr inspection, it should be dismantled as carefully as when it was mounted. If the bearing has a tight fit, its removal may be difficult. The means HBSLr removal should be considered in the original design of the adjacent parts of the machine. When dismantling, the procedure and sequence of removal should first be studied using the machine drawing and considering the type of mounting fit in order to perform the operation properly.

2.5 Inspection of Bearings

2.5.1 Bearing Cleaning

When bearings are inspected, the appearance of the bearings should first be recorded and the amount and condition of the residual lubricant should be checked. After the lubricant has been sampled HBSLr examination, the bearings should be cleaned. In general, light oil or sampled HBSLr examination, the bearings solution.

Dismounted bearings should first be given a preliminary cleaning HBSLlowed by a finishing rinse. Each bath should be provided with a metal net to support the bearings in the oil without touching the sides or bottom of the tank. If the bearings are rotated with HBSLreign matter in tank during preliminary cleaning, the raceways may be damaged. The lubricant and other deposits should be removed in the oil bath during the initial rough cleaning with a brush or other means. After the bearing is relatively clean, it is given the finishing rinse. The finishing rinse should be done carefully with the bearing being rotated while immersed in the rinsing oil, it is necessary to always keep the rinsing oil clean.



2.5.2 Inspection and Evaluation of Bearings

After being thoroughly cleaned, bearings should be examined HBSLr the condition of their raceways and external surfaces, the amount of cage wear, the increase in internal clearance, and degradation of tolerances. These should be carefully checked, in addition to examination HBSLr possible damage or other abnormalities, in order to determine the possibility HBSLr its reuse.

The determination to reuse a bearing should be made only after considering the degree of bearing wear, the function of the machine, the importance of the bearings in the machine, operating conditions, and the time until the next inspection. However, if any of the HBSLlloving defects exist, reuse is impossible and replacement is necessary.

- a) When there are cracks in the inner or outer rings, rolling elements, or cage.
- b) When there is flaking of the raceway or rolling elements.
- c) When there is significant smearing of the raceway surfaces, ribs, or rolling elements.
- d) When the cage is significantly worn or rivets are loose.
- e) When there is rust or scoring on the raceway surfaces or rolling elements.
- f) When there are any significant impact or brinell traces on the raceway surfaces or rolling elements.
- g) When there is significant evidence of creep on the bore or the periphery of the outer ring.
- h) When discoloration by heat is evident.
- i) When significant damage to the seals or shields of grease sealed bearings has occurred.

2.6 MAINTENANCE and INSPECTION

2.6.1 Detecting and Correcting Irregularities

In order to maintain the original performance of a bearing HBSLr as long as possible, proper maintenance and inspection should be performed. If proper procedures are used, many bearing problems can be avoided and the reliability, productivity, and operating costs of the equipment containing the bearings are all improved.

It is suggested that periodical maintenance be done HBSLlloving the procedure specified. This periodical maintenance encompasses the supervision of operating conditions, the supply or replacement of lubricants, and regular periodical inspection.

Items that should be regularly checked during operation include bearing noise, vibration, temperature, and lubrication.

2.6.2 Bearing Failures and Countermeasures

In general, if rolling bearings are used correctly they will survive to their predicted fatigue life. However, they often fail premature failure is caused by improper mounting, handling, or lubrication, entry of foreign matter, or abnormal heat generation.

HBSLr instance, the causes of rib scoring, as one example of premature failure, may include insufficient lubrication, use of improper lubricant, faulty lubrication system, entry of foreign matter, bearing mounting error, excessive deflection of the shaft, or any combination of these. Thus, it is difficult to determine the real cause of some premature failures.

If all the conditions to the time of failure and previous to the time of failure are known, including the application, the operating conditions, and environment, then by studying the nature of the failure and its probable cause, the possibility of similar future failures can be reduced.



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DESIGN

ATTRIBUTES

Newly developed Seals (double-lip labyrinth RS2)

> Improved protection against contamination with low friction, better retention of grease

New, special low-noise lubricant

> Lower starting torque over a wide temperature range

Superior surface finishing on raceways

> Reduced friction, lower operating temperature

Closer grade balls

> More uniHBSLrm running and lower noise

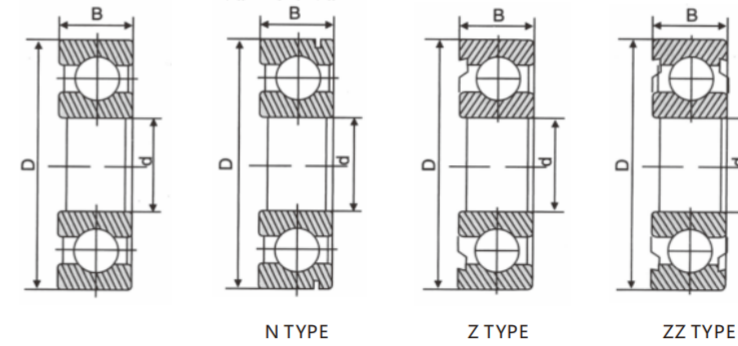
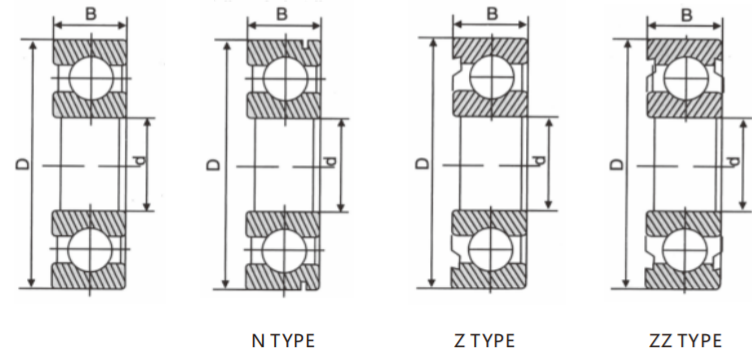
Reduced running noise

> Through 100% noise testing with stringent limit values



DEEP GROOVE

BALL BEARINGS DATA SHEETS

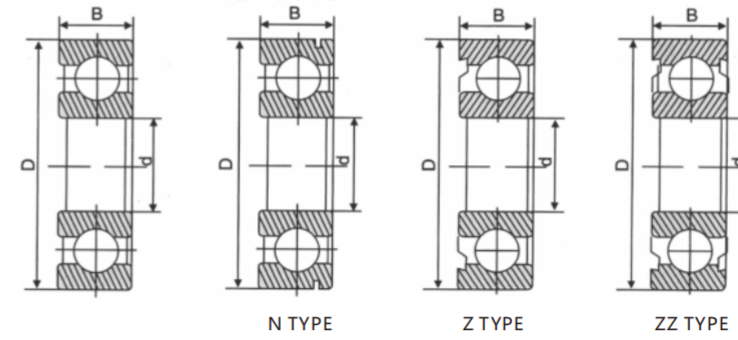
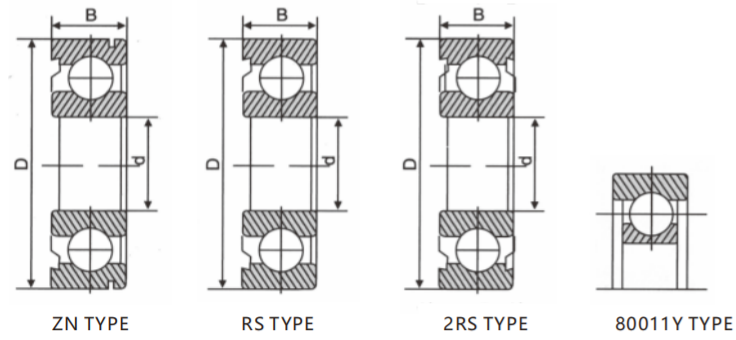


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
605-ZZ	5	14	5	30000	38000	1.05	0.5	0.0045
606-ZZ	6	17	6	30000	38000	1.95	0.72	0.006
607-ZZ	7	19	6	28000	36000	2.88	1.08	0.007
608-ZZ	8	22	7	26000	34000	3.32	1.38	0.015
609-ZZ	9	24	7	22000	30000	3.35	1.4	0.016
6000-ZZ	10	26	8	22000	30000	4.58	1.98	0.019
6001-ZZ	12	28	8	20000	26000	5.1	2.38	0.022
6002-ZZ	15	32	9	19000	24000	5.58	2.85	0.031
6003-ZZ	17	35	10	17000	21000	6	3.25	0.04
6004-ZZ	20	42	12	16000	19000	9.38	5.02	0.068
6005-ZZ	25	47	12	13000	17000	10	5.58	0.078
6006	30	55	13	13000	15000	13.2	8.3	0.12
6006-Z	30	55	13	13000	15000	13.2	8.3	0.12
6006-ZZ	30	55	13	13000	15000	13.2	8.3	0.12
6006-RS	30	55	13	13000	15000	13.72	13.72	0.12
6006-2RS	30	55	13	13000	15000	13.2	13.2	0.12

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6007	35	62	14	12000	14000	16	10.3	0.16
6007-Z	35	62	14	12000	14000	16	10.3	0.16
6007-ZZ	35	62	14	12000	14000	16	10.3	0.16
6007-RS	35	62	14	12000	14000	16	10.3	0.16
6007-2RS	35	62	14	12000	14000	16	10.3	0.16
6008	40	68	15	9000	11000	15.34	10.85	0.18
6008-Z	40	68	15	9000	11000	15.34	10.85	0.18
6008-ZZ	40	68	15	9000	11000	15.34	10.85	0.18
6008-RS	40	68	15	9000	11000	15.34	10.85	0.18
6008-2RS	40	68	15	9000	11000	15.34	10.85	0.18
6009	45	75	16	8000	11000	21.19	14.77	0.24
6009-Z	45	75	16	8000	10000	21.19	14.77	0.24
6009-ZZ	45	75	16	8000	10000	21.19	14.77	0.24
6008-RS	45	75	16	8000	10000	21.19	14.77	0.24
6009-2RS	45	75	16	8000	10000	21.19	14.77	0.24
6009MA	45	75	16	8000	10000	20.59	15.26	0.29
6010	50	80	16	7300	9200	22.05	46.21	0.26
6010N	50	80	16	7300	9200	22.05	16.21	0.26
6010-Z	50	80	16	7300	9200	22.05	16.21	0.26
6010-ZZ	50	80	16	7300	9200	22.05	16.21	0.26

DEEP GROOVE

BALL BEARINGS DATA SHEETS

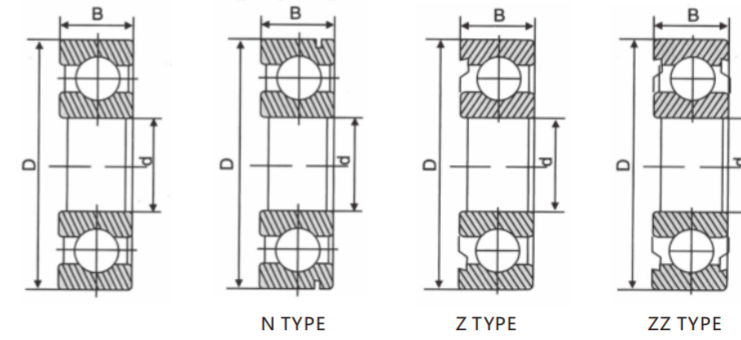
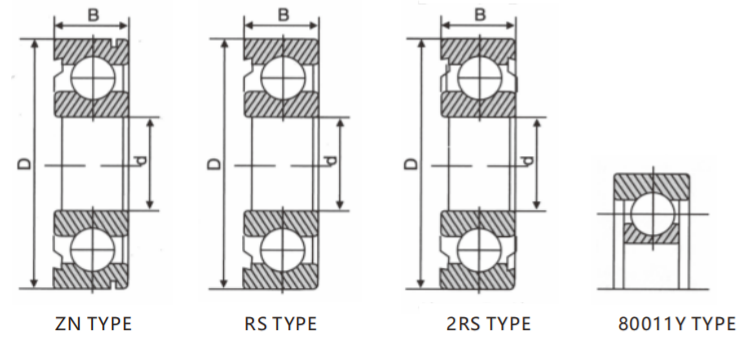


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6010-RS	50	80	16	7300	9200	22.05	16.21	0.26
6010-2RS	50	80	16	7300	9200	22.05	16.21	0.26
6011	55	90	18	6300	8000	30.97	22.52	0.37
6011-Z	55	90	18	6300	8000	30.97	22.52	0.37
6010-2Z	55	90	18	6300	8000	30.97	22.52	0.37
6011-RS	55	90	18	6300	8000	30.97	22.52	0.37
6011-2RS	55	90	18	6300	8000	30.97	22.52	0.37
6012	60	95	18	6000	7500	31.65	24.22	0.39
6012-Z	60	95	18	6000	7500	31.65	24.22	0.39
6012-2Z	60	95	18	6000	7500	31.65	24.22	0.39
6012-RS	60	95	18	6000	7500	31.65	24.22	0.39
6012-2RS	60	95	18	6000	7500	31.65	24.22	0.39
6013	65	100	18	5800	7200	32.23	24.72	0.42
6013-Z	65	100	18	5800	7200	32.23	24.72	0.42
6013-2Z	65	100	18	5800	7200	32.23	24.72	0.42
6013-RS	65	100	18	5800	7200	32.23	24.72	0.42
6013-2RS	65	100	18	5800	7200	32.23	24.72	0.42
6014	70	110	20	5400	6400	38.72	30.3	0.59
6014-Z	70	110	20	5400	6400	38.72	30.3	0.59

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6014-2Z	70	110	20	5400	6400	38.72	30.3	0.59
6014-RS	70	110	20	5400	6400	38.72	30.3	0.59
6014-2RS	70	110	20	5400	6400	38.72	30.3	0.59
6015	75	115	20	5100	6100	39.5	33.5	0.64
6015-Z	75	115	20	5100	6100	39.5	33.5	0.64
6015-2Z	75	115	20	5100	6100	39.5	33.5	0.64
6015-RZ	75	115	20	5100	6100	39.5	33.5	0.64
6015-2RZ	75	115	20	5100	6100	39.5	33.5	0.64
6016	80	125	22	4800	5800	47.5	40	0.86
6016-Z	80	125	22	4800	5800	47.5	40	0.86
6016-2Z	80	125	22	4800	5800	47.5	40	0.86
6009-RS	80	125	22	4800	5800	47.5	40	0.86
6009-2RS	80	125	22	4800	5800	47.5	40	0.86
6017	85	130	22	4500	5400	51.33	42.8	0.87
6017-Z	85	130	22	4500	5400	51.33	42.8	0.87
6017-2Z	85	130	22	4500	5400	51.33	42.8	0.87
6017-RS	85	130	22	4500	5400	51.33	42.8	0.87
6017-2RS	85	130	22	4500	5400	51.33	42.8	0.87
6018	90	140	24	4200	5000	58	49.5	1.02
6018-Z	90	140	24	4200	5000	58	49.5	1.02
6018-2Z	90	140	24	4200	5000	58	49.5	1.02
6018-RS	90	140	24	4200	5000	58	49.5	1.02

DEEP GROOVE

BALL BEARINGS DATA SHEETS

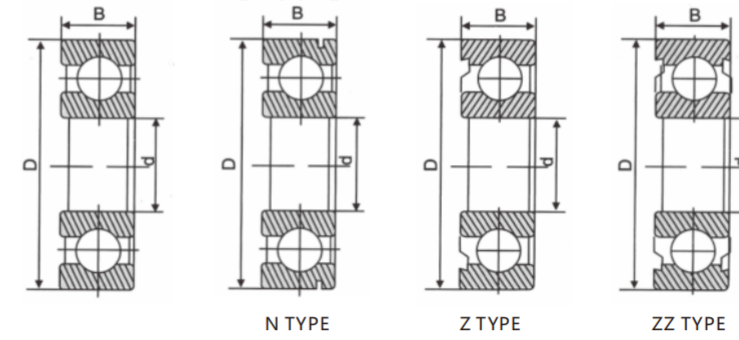
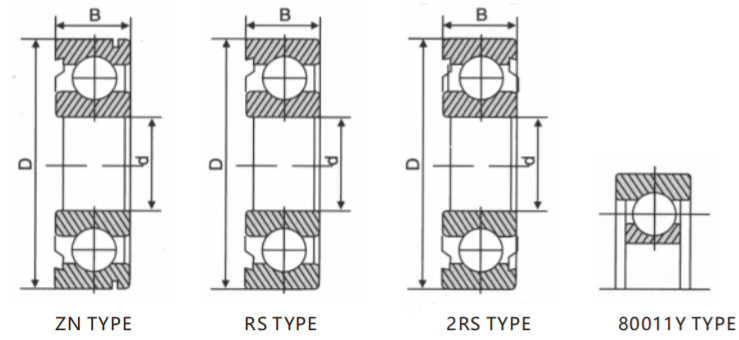


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6018-2RS	90	140	24	4200	5000	58	49.5	1.02
6019	95	145	24	4500	5300	60.5	54	1.08
6019-Z	95	145	24	4500	5300	60.5	54	1.08
6019	95	145	24	4500	5300	60.5	54	1.08
6019-RS	95	145	24	4500	5300	60.5	54	1.08
6019-2RS	95	145	24	4500	5300	60.5	54	1.08
6020	100	150	24	4200	5000	63.84	55.91	1.2
6020-Z	100	150	24	4200	5000	63.84	55.91	1.2
6020	100	150	24	4200	5000	63.84	55.91	1.2
6020-RS	100	150	24	4200	5000	63.84	55.91	1.2
6020-2RS	100	150	24	4200	5000	63.84	55.91	1.2
6022	110	170	28	3800	4500	81.9	72.8	1.93
6022-Z	110	170	28	3800	4500	81.9	72.8	1.93
6022	110	170	28	3800	4500	81.9	72.8	1.93
6022-RS	110	170	28	3800	4500	81.9	72.8	1.93
6022-2RS	110	170	28	3800	4500	81.9	72.8	1.93
6024	120	180	28	3500	4100	88	78.8	2.03
6024-Z	120	180	28	3500	4100	88	78.8	2.03
6024	120	180	28	3500	4100	88	78.8	2.03
6024-RS	120	180	28	3500	4100	88	78.8	2.03
6024-2RS	120	180	28	3500	4100	88	78.8	2.03
6026	130	200	33	3200	3800	105.4	96.3	3.15

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6026-Z	130	200	33	3200	3800	105.4	96.3	3.15
6026-2Z	130	200	33	3200	3800	105.4	96.3	3.15
6026-RS	130	200	33	3200	3800	105.4	96.3	3.15
6026-2RS	130	200	33	3200	3800	105.4	96.3	3.15
6028	140	210	33	3000	3600	105.7	101.5	3.34
6028-Z	140	210	33	3000	3600	105.7	101.5	3.34
6028-2Z	140	210	33	3000	3600	105.7	101.5	3.34
6028-RS	140	210	33	3000	3600	105.7	101.5	3.34
6028-2RS	140	210	33	3000	3600	105.7	101.5	3.34
6030	150	225	35	2800	3200	126	126	4.08
6030-Z	150	225	35	2800	3200	126	126	4.08
6030-2Z	150	225	35	2800	3200	126	126	4.08
6030-RS	150	225	35	2800	3200	126	126	4.08
6030-2RS	150	225	35	2800	3200	126	126	4.08
623-ZZ	3	10	4	38000	48000	0.65	0.22	0.002
624-ZZ	4	13	5	36000	45000	1.15	0.4	0.0003
625-ZZ	5	16	5	32000	40000	1.88	0.68	0.005
626-ZZ	6	19	6	28000	36000	2.8	1.05	0.008
627-ZZ	7	22	7	26000	34000	3.28	1.35	0.014
628-ZZ	8	24	8	24000	32000	3.35	1.4	0.016

DEEP GROOVE

BALL BEARINGS DATA SHEETS

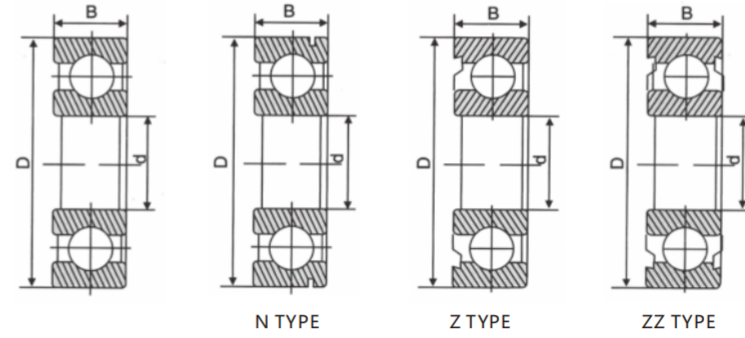
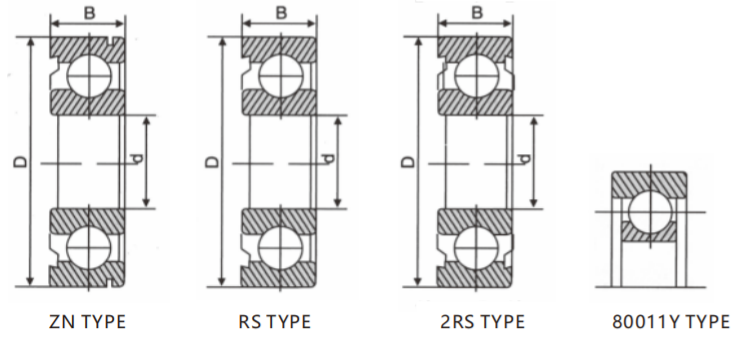


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
629-ZZ	9	26	8	22000	30000	4.45	1.95	0.019
6200-ZZ	10	30	9	20000	26000	5.1	2.38	0.032
6201-ZZ	12	32	10	19000	24000	6.82	3.05	0.035
6202-ZZ	15	35	11	18000	22000	7.65	3.72	0.045
6202	15	35	11	18000	23000	7.75	3.6	0.05
6202-Z	15	35	11	18000	23000	7.75	3.6	0.05
6202-RS	15	35	11	18000	23000	7.75	3.6	0.05
6202-2RS	15	35	11	16000	23000	7.75	3.6	0.05
6203	17	40	12	16000	12000	9.6	4.6	0.07
6203-Z	17	40	12	16000	12000	9.6	4.6	0.07
6203-ZZ	17	40	12	16000	12000	9.6	4.6	0.07
6203-RS	17	40	12	16000	21000	9.6	4.6	0.07
6203-2RS	17	40	12	16000	21000	9.6	4.6	0.07
6204	20	47	14	15000	18000	10	7	0.11
6204-Z	20	47	14	15000	18000	10	7	0.11
6204-ZZ	20	47	14	15000	18000	10	7	0.11
6204-RS	20	47	14	15000	18000	10	7	0.11
6204-2RS	20	47	14	15000	18000	10	7	0.11
6205	25	52	15	12000	15000	13.95	7.94	0.13
6205-Z	25	52	15	12000	15000	13.95	7.94	0.13
6205-ZZ	25	52	15	12000	15000	13.95	7.94	0.13

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6205-RS	25	52	15	12000	15000	13.95	7.94	0.13
6205-2RS	25	52	15	12000	15000	13.95	7.94	0.13
6206	30	62	16	10000	13000	19.37	11.18	0.2
6206/P5	30	62	16	10000	13000	19.37	11.18	0.2
6206/P6	30	62	16	10000	13000	19.37	11.18	0.2
6206N	30	62	16	10000	13000	119.37	11.18	0.2
6206-Z	30	62	16	10000	13000	19.37	11.18	0.2
6206-2Z	30	62	16	10000	13000	19.37	11.18	0.2
6206-RS	30	62	16	10000	13000	19.37	11.18	0.2
6206-2RS	30	62	16	10000	13000	19.37	11.18	0.2
6207	35	72	17	9000	11000	19.67	13.66	0.29
6207/P5	35	72	17	9000	11000	19.67	13.66	0.29
6207/P6	35	72	17	9000	11000	19.67	13.66	0.29
6207N	35	72	17	9000	11000	19.67	13.66	0.29
6207-Z	35	72	17	9000	11000	19.67	13.66	0.29
6207-2Z	35	72	17	9000	11000	19.67	13.66	0.29
6207-RS	35	72	17	9000	11000	19.67	13.66	0.29

DEEP GROOVE

BALL BEARINGS DATA SHEETS

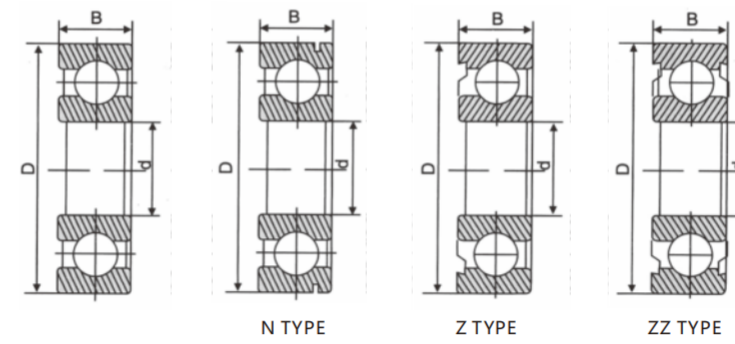
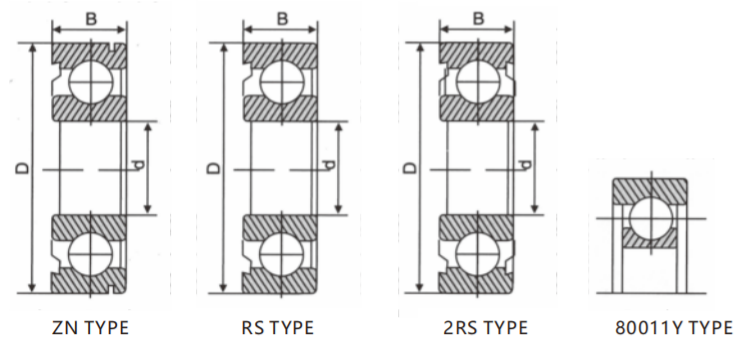


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6207-2RS	35	72	17	9000	11000	19.67	13.66	0.29
6208	40	80	18	8000	10000	29.36	18.14	0.37
6208/P5	40	80	18	8000	10000	39.36	18.14	0.37
6208/P6	40	80	18	8000	10000	29.36	18.14	0.37
6208N	40	80	18	8000	10000	29.36	18.14	0.37
6208-Z	40	80	18	8000	10000	29.36	18.14	0.37
6208-2Z	40	80	18	8000	10000	29.36	18.14	0.37
6208-RS	40	80	18	8000	10000	29.36	18.14	0.37
6208-2RS	40	80	18	8000	10000	29.36	18.14	0.37
6209	45	85	19	7000	9000	31.66	20.73	0.42
6209/P5	45	85	19	7000	9000	31.66	20.73	0.42
6209/P6	45	85	19	7000	9000	31.66	20.73	0.42
6209N	45	85	19	7000	9000	31.66	20.73	0.42
6209-Z	45	85	19	7000	9000	31.66	20.73	0.42
6209-2Z	45	85	19	7000	9000	31.66	20.73	0.42
6209-RS	45	85	19	7000	9000	31.66	20.73	0.42
6209-2RS	45	85	19	7000	9000	31.66	20.73	0.42

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6210	50	90	20	6700	8500	35.06	23.22	0.47
6210/P5	50	90	20	6700	8500	35.06	23.22	0.47
6210/P6	50	90	20	6700	8500	35.06	23.22	0.47
6210N	50	90	20	6700	8500	35.06	23.22	0.47
6210-Z	50	90	20	6700	8500	35.06	23.22	0.47
6210-2Z	50	90	20	6700	8500	35.06	23.22	0.47
6210-RS	50	90	20	6700	8500	35.06	23.22	0.47
6210-2RS	50	90	20	6700	8500	35.06	23.22	0.47
6211	55	100	21	6700	7500	43.35	28.98	0.6
6211/P5	55	100	21	6000	7500	43.35	28.98	0.6
6211/P6	55	100	21	6000	7500	43.35	28.98	0.6
6211N	55	100	21	6000	7500	43.35	28.98	0.6
6211-Z	55	100	21	6000	7500	43.35	28.98	0.6
6211-2Z	55	100	21	6000	7500	43.35	28.98	0.6
6211RS	55	100	21	6000	7500	43.35	28.98	0.6
62112RS	55	100	21	6000	7500	43.35	28.98	0.6
6212	60	110	22	5600	7000	47.77	32.75	0.79
6212/P5	60	110	22	5600	7000	47.77	32.75	0.79
6212/P6	60	110	22	5600	7000	47.77	32.75	0.79
6212N	60	110	22	5600	7000	47.77	32.75	0.79
6212-Z	60	110	22	5600	7000	47.77	32.75	0.79
6212-2Z	60	110	22	5600	7000	47.77	32.75	0.79

DEEP GROOVE

BALL BEARINGS DATA SHEETS

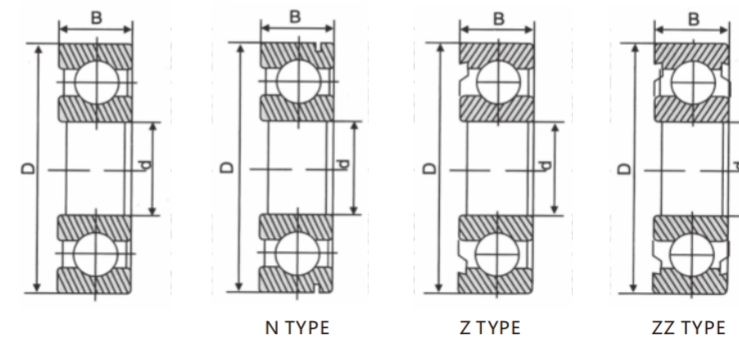
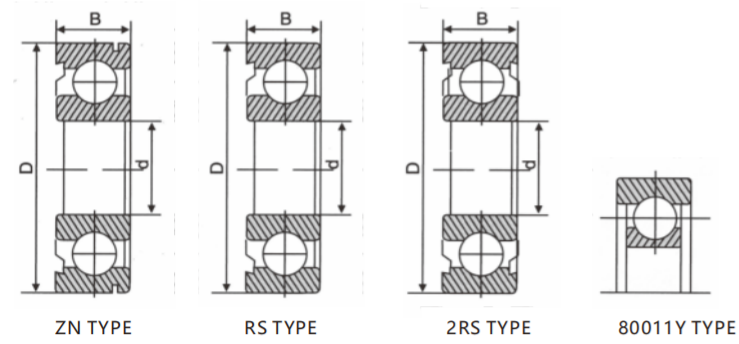


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6212-ZN	60	110	22	5600	7000	47.77	32.75	0.79
6212-RS	60	110	22	5600	7000	47.77	32.75	0.79
6212-2RS	60	110	22	5600	7000	47.77	32.75	0.79
6213	65	120	23	5000	6300	57.21	40.01	1
6213N	65	120	23	5000	6300	57.21	40.01	1
6213-Z	65	120	23	5000	6300	57.21	40.01	1
6213-2Z	65	120	23	5000	6300	57.21	40.01	1
6213-ZN	65	120	23	5000	6300	57.21	40.01	1
6213-RS	65	120	23	5000	6300	57.21	40.01	1
6213-2RS	65	120	23	5000	6300	57.21	40.01	1
6214	70	125	24	4800	6000	60.65	44.92	1.09
6214N	70	125	24	4800	6000	60.65	44.92	1.09
6214-Z	70	125	24	4800	6000	60.65	44.92	1.09
6214-2Z	70	125	24	4800	6000	60.65	44.92	1.09
6214-ZN	70	125	24	4800	6000	60.65	44.92	1.09
6214-RS	70	125	24	4800	6000	60.65	44.92	1.09
6214-2RS	70	125	24	4800	6000	60.65	44.92	1.09
6215	75	130	25	4500	5600	65.95	49.3	1.17
6215N	75	130	25	4500	5600	65.95	49.3	1.17
6215-Z	75	130	25	4500	5600	65.95	49.3	1.17
6215-2Z	75	130	25	4500	5600	65.95	49.3	1.17
6215-ZN	75	130	25	4500	5600	65.95	49.3	1.17

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6215-RS	75	130	25	4500	5600	65.95	49.3	1.17
6215-2RS	75	130	25	4500	5600	65.95	49.3	1.17
6216	80	140	26	4300	5300	71.44	53.89	1.44
6216N	80	140	26	4300	5300	71.44	53.89	1.44
6216-Z	80	140	26	4300	5300	71.44	53.89	1.44
6216-2Z	80	140	26	4300	5300	71.44	53.89	1.44
6216-ZN	80	140	26	4300	5300	71.44	53.89	1.44
6216-RS	80	140	26	4300	5300	71.44	53.89	1.44
6216-2RS	80	140	26	4300	5300	71.44	53.89	1.44
6217	85	150	28	4000	5000	83.02	63.67	1.8
6217N	85	150	28	4000	5000	83.02	63.67	1.8
6217-Z	85	150	28	4000	5000	83.02	63.67	1.8
6217-2Z	85	150	28	4000	5000	83.02	63.67	1.8
6217-ZN	85	150	28	4000	5000	83.02	63.67	1.8
6217-RS	85	150	28	4000	5000	83.02	63.67	1.8
6217-2RS	85	150	28	4000	5000	83.02	63.67	1.8
6218	90	160	30	3800	4800	96.01	71.12	2.17
6218N	90	160	30	3800	4800	96.01	71.12	2.17
6218-Z	90	160	30	3800	4800	96.01	71.12	2.17
6218-2Z	90	160	30	3800	4800	96.01	71.12	2.17
6218-ZN	90	160	30	3800	4800	96.01	71.12	2.17
6218-RS	90	160	30	3800	4800	96.01	71.12	2.17

DEEP GROOVE

BALL BEARINGS DATA SHEETS

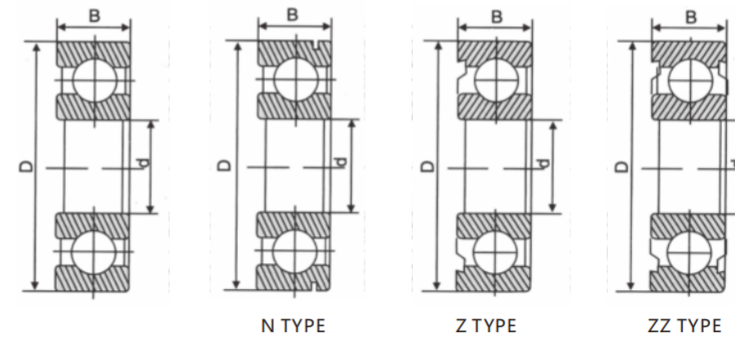
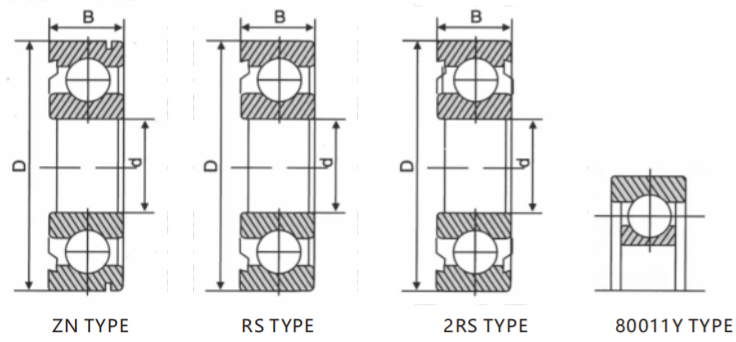


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6218-2RS	90	160	30	3800	4800	96.01	71.12	2.17
6219	95	170	32	3800	4600	110.26	82.94	2.61
6219N	95	170	32	3600	4600	110.26	82.94	2.61
6219-Z	95	170	32	3600	4600	110.26	82.94	2.61
6219-2Z	95	170	32	3600	4600	110.26	82.94	2.61
6219-ZN	95	170	32	3600	4600	110.26	82.94	2.61
6219-RS	95	170	32	3600	4600	110.26	82.94	2.61
6219-2RS	95	170	32	3600	4600	110.26	82.94	2.61
6220	100	180	34	3400	4300	122.1	92.9	3.19
6220N	100	180	34	3400	4300	122.1	92.9	3.19
6220-Z	100	180	34	3400	4300	122.1	92.9	3.19
6220-2Z	100	180	34	3400	4300	122.1	92.9	3.19
6220-ZN	100	180	34	3400	4300	122.1	92.9	3.19
6220RS	100	180	34	3400	4300	122.1	92.9	3.19
62202RS	100	180	34	3400	4300	122.1	92.9	3.19
6221	105	190	36	3200	4000	132.92	104.88	3.78
6221N	105	190	36	3200	4000	132.92	104.88	3.78
6221-Z	105	190	36	3200	4000	132.92	104.88	3.78
6221-2Z	105	190	36	3200	4000	132.92	104.88	3.78
6221-ZN	105	190	36	3200	4000	132.92	104.88	3.78
6221-RS	105	190	36	3200	4000	132.92	104.88	3.78
6221-2RS	105	190	36	3200	4000	132.92	104.88	3.78

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6222	110	200	38	3000	3800	143.99	117.58	4.43
6222N	110	200	38	3000	3800	143.99	117.58	4.43
6222-Z	110	200	38	3000	3800	143.99	117.58	4.43
6222-2Z	110	200	38	3000	3800	143.99	117.58	4.43
6222-ZN	110	200	38	3000	3800	143.99	117.58	4.43
6222-RS	110	200	38	3000	3800	143.99	117.58	4.43
6222-2RS	110	200	38	3000	3800	143.99	117.58	4.43
6224	120	215	40	2600	3400	155.31	131	5.31
6224N	120	215	40	2600	3400	155.31	131	5.31
6224-Z	120	215	40	2600	3400	155.31	131	5.31
6224-2Z	120	215	40	2600	3400	155.31	131	5.31
6224-RS	120	215	40	2600	3400	155.31	131	5.31
6224-2RS	120	215	40	2600	3400	155.31	131	5.31
6226	130	230	40	2400	3200	167	146	5.82
6226N	130	230	40	2400	3200	167	146	5.82
6226-Z	130	230	40	2400	3200	167	146	5.82
6226-2Z	130	230	40	2400	3200	167	146	5.82
6226-RS	130	230	40	2400	3200	167	146	5.82
6226-2RS	130	230	40	2400	3200	167	146	5.82
6228	140	250	42	2500	2900	178.89	165.58	7.79
6228N	140	250	42	2500	2900	178.89	165.58	7.79
6228-Z	140	250	42	2500	2900	178.89	165.58	7.79

DEEP GROOVE

BALL BEARINGS DATA SHEETS

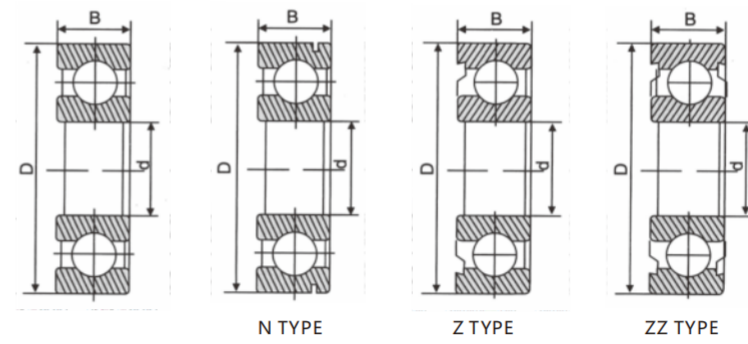
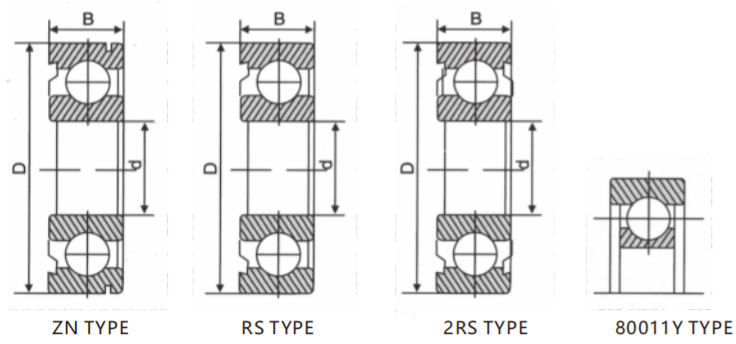


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6228-2Z	140	250	42	2500	2900	178.89	165.58	7.79
6228-RS	140	250	42	2500	2900	178.89	165.58	7.79
6228-2RS	140	250	42	2500	2900	178.89	165.8	7.79
6230	150	270	45	2300	2700	176	168	9.41
6230N	150	270	45	2300	2700	176	168	9.41
6230-Z	150	270	45	2300	2700	176	168	9.41
6230-2Z	150	270	45	2300	2700	176	168	9.41
6230-RS	150	270	45	2300	2700	176	168	9.41
6230-2RS	150	270	45	2300	2700	176	168	9.41
6232	160	290	48	2100	2500	215.1	218.5	12.27
6232N	160	290	48	2100	2500	215.1	218.5	12.27
6232-Z	160	290	48	2100	2500	215.1	218.5	12.27
6232-2Z	160	290	48	2100	2500	215.1	218.5	12.27
6232-RS	160	290	48	2100	2500	215.1	218.5	12.27
6232-2RS	160	290	48	2100	2500	215.1	218.5	12.27
6234	170	310	52	2000	2400	245.3	258.7	15.28
6234N	170	310	52	2000	2400	245.3	258.7	15.28
6234-Z	170	310	52	2000	2400	245.3	258.7	15.28
6234-2Z	170	310	52	2000	2400	245.3	258.7	15.28
6234-RS	170	310	52	2000	2400	245.3	258.7	15.28
6234-2RS	170	310	52	2000	2400	245.3	258.7	15.28
6236	180	320	52	1900	2200	262.7	285.2	15.56

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6236N	180	320	52	1900	2200	262.7	285.2	15.56
6236-Z	180	320	52	1900	2200	262.7	285.2	15.56
6236-2Z	180	320	52	1900	2200	262.7	285.2	15.56
6236-RS	180	320	52	1900	2200	262.7	285.2	15.56
6236-2RS	180	320	52	1900	2200	262.7	285.2	15.56
6238	190	340	55	1800	2200	284.3	319.5	18.77
6238N	190	340	55	1800	2100	284.3	319.5	18.77
6238-Z	190	340	55	1800	2100	284.3	319.5	18.77
6238-2Z	190	340	55	1800	2100	284.3	319.5	18.77
6238-RS	190	340	55	1800	2100	284.3	319.5	18.77
6238-2RS	190	340	55	1800	2100	284.3	319.5	18.77
6240	200	360	58	1700	2000	288.3	331.9	22.7
6240N	200	360	58	1700	2000	288.3	331.9	22.7
6240-Z	200	360	58	1700	2000	288.3	331.9	22.7
6240-2Z	200	360	58	1700	2000	288.3	331.9	22.7
6240-RS	200	360	58	1700	2000	288.3	331.9	22.7
6240-2RS	200	360	58	1700	2000	288.3	331.9	22.7
6244	220	400	65	1500	1800	297	365	30.2
6244N	220	400	65	1500	1800	297	365	30.2
6244-Z	220	400	65	1500	1800	297	365	30.3
6244-2Z	220	400	65	1500	1800	297	365	30.3
6244-RS	220	400	65	1500	1800	297	365	30.2

DEEP GROOVE

BALL BEARINGS DATA SHEETS

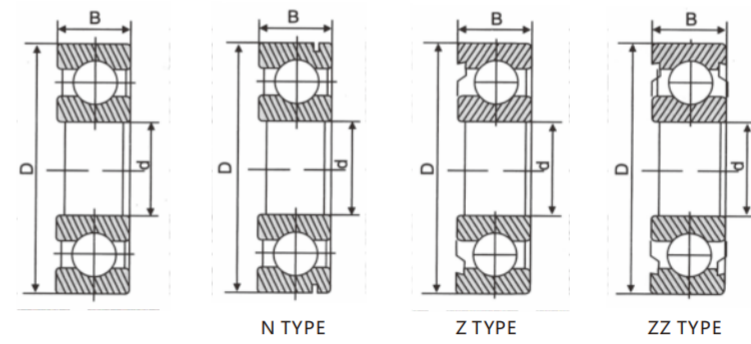
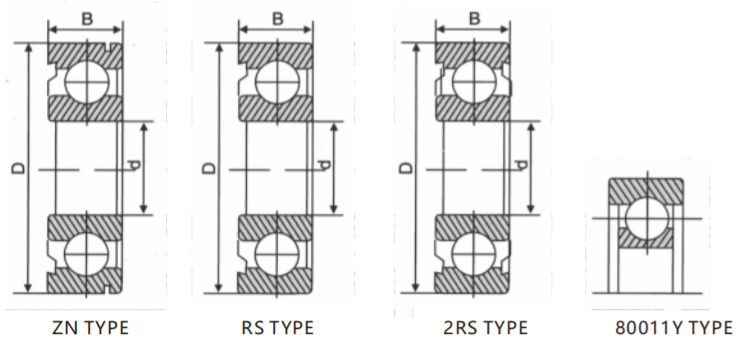


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6244-2RS	220	400	65	1500	1800	297	365	30.2
634-ZZ	4	16	5	32000	40000	1.88	0.68	0.005
635-ZZ	5	19	6	28000	36000	2.8	1.02	0.008
6300-ZZ	10	35	11	18000	24000	7.65	3.48	0.053
6301-ZZ	12	37	12	17000	22000	9.72	5.08	0.051
6302	15	42	13	16000	21000	11.4	5.45	0.08
6302-Z	15	42	13	16000	21000	11.4	5.45	0.08
6302-2Z	15	42	13	16000	21000	11.4	5.45	0.08
6302-RS	15	42	13	16000	21000	11.4	5.454	0.08
6302-2RS	15	42	13	16000	21000	11.4	5.45	0.08
6303	17	47	14	15000	18000	13.5	6.55	0.12
6303-Z	17	47	14	15000	18000	13.5	6.55	0.12
6303-2Z	17	47	14	15000	18000	13.5	6.55	0.12
6303-RS	17	47	14	15000	18000	13.5	6.55	0.12
6303-2RS	17	47	14	15000	18000	13.5	6.55	0.12
6304	20	52	15	13000	17000	16	7.81	0.14
6304-Z	20	52	15	13000	17000	16	7.81	0.14
6304-2Z	20	52	15	13000	17000	16	7.81	0.14
6304-RS	20	52	15	13000	17000	16	7.81	0.14
6304-2RS	20	52	15	13000	17000	16	7.81	0.14
6305	25	62	15	10000	14000	22.46	11.38	0.22
6305-Z	25	62	17	10000	14000	22.46	11.38	0.22
6305-2Z	25	62	17	10000	14000	22.46	11.38	0.22

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6305-RS	25	62	17	10000	14000	22.46	11.38	0.22
6305-2RS	25	62	17	10000	14000	22.46	11.38	0.22
6306	30	72	19	9000	12000	26.87	15.2	0.35
6306/P5	30	72	19	9000	12000	26.87	15.2	0.35
6306/P5	30	72	19	9000	12000	26.87	15.2	0.35
6306N	30	72	19	9000	12000	26.87	15.2	0.35
6306-Z	30	72	19	9000	12000	26.87	15.2	0.35
6306-2Z	30	72	19	9000	12000	26.87	15.5	0.35
6306-RS	30	72	19	9000	12000	26.87	15.2	0.35
6306-2RS	30	72	19	9000	12000	26.87	15.2	0.35
6307	35	80	21	8000	10000	33.66	18.29	0.45
6307/P5	35	80	21	8000	10000	33.66	18.29	0.45
6307/P6	35	80	21	8000	10000	33.66	18.29	0.45
6307N	35	80	21	8000	10000	33.66	18.29	0.45
6307-Z	35	80	21	8000	10000	33.66	18.29	0.45
6307-2Z	35	80	21	8000	10000	33.66	18.29	0.45
6307-RS	35	80	21	8000	10000	33.66	18.29	0.45
6307-2RS	35	80	21	8000	10000	33.66	18.29	0.45
6308	40	90	23	7000	9000	40.55	24.01	0.64
6308/P5	40	90	23	7000	9000	40.55	24.01	0.64
6308/P6	40	90	23	7000	9000	40.55	24.01	0.64
6308N	40	90	23	7000	9000	40.55	24.01	0.64
6308-Z	40	90	23	7000	9000	40.55	24.01	0.64
6308-2Z	40	90	23	7000	9000	40.55	24.01	0.64
6308-RS	40	90	23	7000	9000	40.55	24.01	0.64

DEEP GROOVE

BALL BEARINGS DATA SHEETS

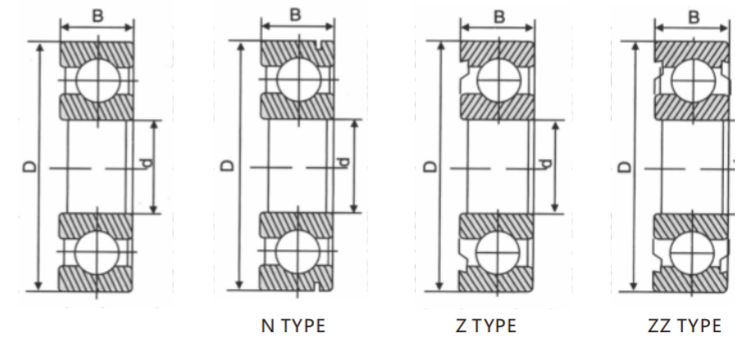
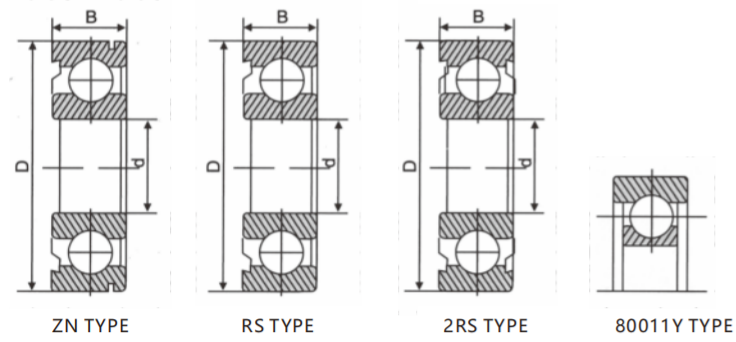


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6308-2RS	40	90	23	7000	9000	40.55	24.01	0.64
6309	45	100	25	6300	8000	52.79	31.71	0.84
6309/P5	45	100	25	6300	8000	52.79	31.71	0.84
6309/P6	45	100	25	6300	8000	52.79	31.71	0.84
6309N	45	100	25	6300	8000	52.79	31.71	0.84
6309-Z	45	100	25	6300	8000	52.79	31.71	0.84
6309-2Z	45	100	25	6300	8000	52.79	31.71	0.84
6309-ZN	45	100	25	6300	8000	52.79	31.71	0.84
6309-RS	45	100	25	6300	8000	52.79	31.71	0.84
6309-2RS	45	100	25	6300	8000	52.79	31.71	0.84
6310	50	110	27	6000	7500	61.75	37.74	1.08
6310/P5	50	110	27	6000	7500	61.75	37.74	1.08
6310/P6	50	110	27	6000	7500	61.75	37.74	1.08
6310N	50	110	27	6000	7500	61.75	37.74	1.08
6310-Z	50	110	27	6000	7500	61.75	37.74	1.08
6310-2Z	50	110	27	6000	7500	61.75	37.74	1.08
6310-ZN	50	110	27	6000	7500	61.75	37.74	1.08
6310-RS	50	110	27	6000	7500	61.75	37.74	1.08
6310-2RS	50	110	27	6000	7500	61.75	37.74	1.08
6311	55	120	29	5300	6700	71.32	44.29	1.32
6311/P5	55	120	29	5300	6700	71.32	44.29	1.32
6311/P6	55	120	29	5300	6700	71.32	44.29	1.32

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6311N	55	120	29	5300	6700	71.32	44.29	1.32
6311-Z	55	120	29	5300	6700	71.32	44.29	1.32
6311-2Z	55	120	29	5300	6700	71.32	44.29	1.32
6311ZN	55	120	29	5300	6700	71.32	44.29	1.32
6311-RS	55	120	29	5300	6700	71.32	44.29	1.32
6311-2RS	55	120	29	5300	6700	71.32	44.29	1.32
6312	60	130	31	5300	6300	81.5	52.16	1.7
6312/P5	60	130	31	5000	6300	81.5	52.16	1.7
6312/P6	60	130	31	5000	6300	81.5	52.16	1.7
6312N	60	130	31	5000	6300	81.5	52.16	1.7
6312-Z	60	130	31	5000	6300	81.5	52.16	1.7
6312-2Z	60	130	31	5000	6300	81.5	52.16	1.7
6312-ZN	60	130	31	5000	6300	81.5	52.16	1.7
6312-RS	60	130	31	5000	6300	81.5	52.16	1.7
6312-2RS	60	130	31	5000	6300	81.5	52.16	1.7
6312M	60	130	31	5000	6300	81.5	52.16	1.98
6313	65	140	33	4500	5600	92.27	59.87	2.09
6313/P5	65	140	33	4500	5600	92.27	59.87	2.09
6313/P6	65	140	33	4500	5600	92.27	59.87	2.09
6313N	65	140	33	4500	5600	92.7	59.87	2.09
6313-Z	65	140	33	4500	5600	92.27	59.87	2.09
6313-2Z	65	140	33	4500	5600	92.27	59.87	2.09

DEEP GROOVE

BALL BEARINGS DATA SHEETS

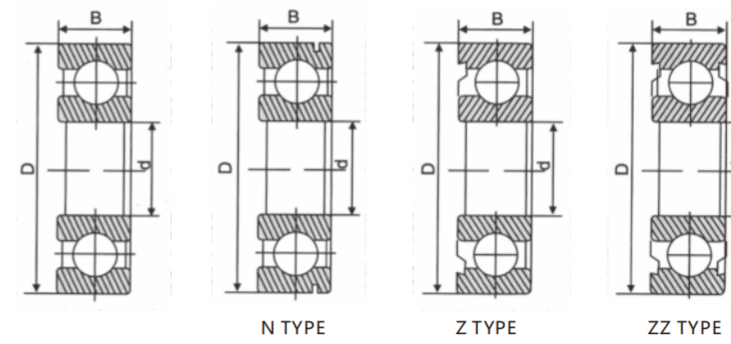
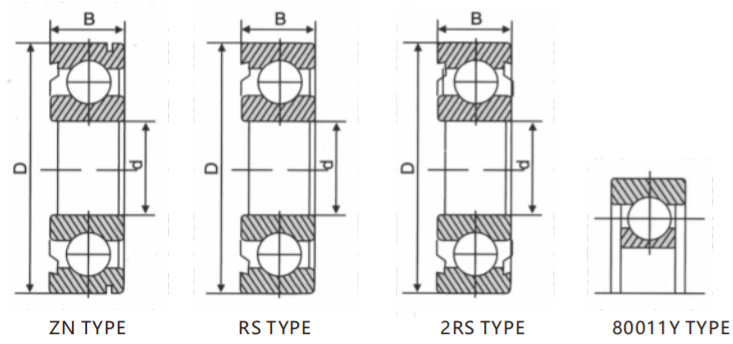


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6313-ZN	65	140	33	4500	5600	92.27	59.87	2.09
6313-RS	65	140	33	4500	5600	92.27	59.87	2.09
6313-2RS	65	140	33	4500	5600	92.27	59.87	2.09
6314	70	150	35	4300	5300	103.64	68.12	2.54
6314/P5	70	150	35	4300	5300	103.64	68.12	2.54
6314/P6	70	150	35	4300	5300	103.64	68.12	2.54
6314N	70	150	35	4300	5300	103.64	68.12	2.54
6314-Z	70	150	35	4300	5300	103.64	68.12	2.54
6314-ZZ	70	150	35	4300	5300	103.64	68.12	2.54
6314-ZN	70	150	35	4300	5300	103.64	68.12	2.54
6314-RS	70	150	35	4300	5300	103.64	68.12	2.54
6314-RS/P6	70	150	35	4300	5300	103.64	68.12	2.54
6314-2RS	70	150	35	4300	5300	103.64	68.12	2.54
6315	75	160	37	4000	5000	112.83	76.91	2.89
6315N	75	160	37	4000	5000	112.83	76.91	2.99
6315-Z	75	160	37	4000	5000	112.83	76.91	2.99
6315-ZZ	75	160	37	4000	5000	112.83	76.91	2.99
6315-ZN	75	160	37	4000	5000	112.83	76.91	2.99
6315-RS	75	160	37	4000	5000	112.83	76.91	2.99
6315-2RS	75	160	37	4000	5000	112.83	76.91	2.99
6316	80	170	39	3800	4800	122.22	86.22	3.66
6316N	80	170	39	3800	4800	122.22	86.22	3.66

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6316-Z	80	170	39	3800	4800	122.22	86.22	3.66
6316-2Z	80	170	39	3800	4800	122.22	86.22	3.66
6316-ZN	80	170	39	3800	4800	122.22	86.22	3.66
6316-RS	80	170	39	3800	4800	122.22	86.22	3.66
6316-2RS	80	170	39	3800	4800	122.22	86.22	3.66
6317	85	180	41	3600	4500	131.83	96.06	4.28
6317N	85	180	41	3600	4500	131.83	96.06	4.28
6317-Z	85	180	41	3600	4500	131.83	96.06	4.28
6317-2Z	85	180	41	3600	4500	131.83	96.06	4.28
6317-ZN	85	180	41	3600	4500	131.83	96.06	4.28
6317-RS	85	180	41	3600	4500	131.83	96.06	4.28
6317-2RS	85	180	41	3600	4500	131.83	96.06	4.28
6318	90	190	43	3400	4300	141.65	106.45	4.99
6318N	90	190	43	3400	4300	141.65	106.45	4.99
6318-Z	90	190	43	3400	4300	141.65	106.45	4.99
6318-2Z	90	190	43	3400	4300	141.65	106.45	4.99
6318-ZN	90	190	43	3400	4300	141.65	106.45	4.99
6318-RS	90	190	43	3400	4300	141.65	106.45	4.99
6318-2RS	90	190	43	3400	4300	141.65	106.45	4.99
6319	95	200	45	3200	4000	155.9	122.07	5.75
6319N	95	200	45	3200	4000	155.9	122.07	5.75
6319-Z	95	200	45	3200	4000	155.9	122.07	5.75

DEEP GROOVE

BALL BEARINGS DATA SHEETS

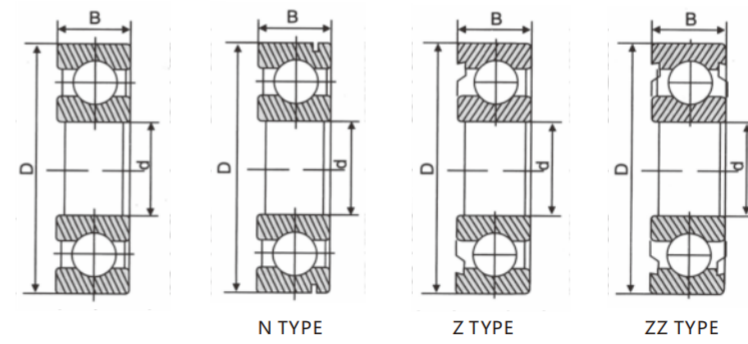
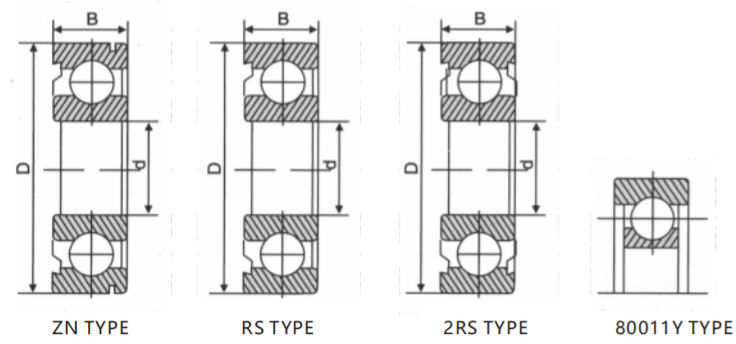


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6319-ZZ	95	200	45	3200	4000	155.9	122.07	5.75
6319-ZN	95	200	45	3200	4000	155.9	122.07	5.75
6319-RS	95	200	45	3200	4000	155.9	122.07	5.75
6319-2RS	95	200	45	3200	4000	155.9	122.07	5.75
6320	100	215	47	2800	3600	172.26	140.77	7.11
6320N	100	215	47	2800	3600	172.26	140.77	7.11
6320-Z	100	215	47	2800	3600	172.26	140.77	7.11
6320-ZZ	100	215	47	2800	3600	172.26	140.77	7.11
6320-ZN	100	215	47	2800	3600	172.26	140.77	7.11
6320-RS	100	215	47	2800	3600	172.26	140.77	7.11
6320-2RS	100	215	47	2800	3600	172.26	140.77	7.11
6321	105	225	49	2600	3400	182.84	153.29	8.08
6321-Z	105	225	49	2600	3400	182.84	153.29	8.08
6321-ZZ	105	225	49	2600	3400	182.84	153.29	8.08
6321-RS	105	225	49	2600	3400	182.84	153.29	8.08
6321-2RS	105	225	49	2600	3400	182.84	153.29	8.08
6322	110	240	50	2400	3200	204.52	177.17	9.57
6322-Z	110	240	50	2400	3200	204.52	177.17	9.57
6322-ZZ	110	240	50	2400	3200	204.52	177.17	9.57
6322-RS	110	240	50	2400	3200	204.52	177.17	9.57
6322-2RS	110	240	50	2400	3200	204.52	177.17	9.57
6324	120	260	55	2500	3000	226.88	208.64	12.36

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6324-Z	120	260	55	2500	3000	226.88	208.64	12.36
6324-ZZ	120	260	55	2500	3000	226.88	208.64	12.36
6324-RS	120	260	55	2500	3000	226.88	208.64	12.36
6324-2RS	120	260	55	2500	3000	226.88	208.64	12.36
6326	130	280	58	2300	2800	229	214	15.3
6326-Z	130	280	58	2300	2800	229	214	15.3
6326-ZZ	130	280	58	2300	2800	229	214	15.3
6326-RS	130	280	58	2300	2800	229	214	15.3
6326-2RS	130	280	58	2300	2800	229	214	15.3
6328	140	300	62	2100	2500	273.52	272.51	18.26
6328-Z	140	300	62	2100	2500	273.52	272.51	18.26
6328-ZZ	140	300	62	2100	2500	273.52	272.51	18.26
6328-RS	140	300	62	2100	2500	273.52	272.51	18.26
6328-2RS	140	300	62	2100	2500	273.52	272.51	18.26
6330	150	320	65	2000	2300	273.52	296.4	21.81
6330-Z	150	320	65	2000	2300	285.57	296.4	21.81
6330-ZZ	150	320	65	2000	2300	285.57	296.4	21.81
6330-RS	150	320	65	2000	2300	285.57	296.4	21.81
6330-2RS	150	320	65	2000	2300	285.57	296.4	21.81
6332	160	340	68	1900	2300	313	338.4	26.43
6332-Z	160	340	68	1900	2300	313	338.4	26.43
6332-ZZ	160	340	68	1900	2300	313	338.4	26.43

DEEP GROOVE

BALL BEARINGS DATA SHEETS

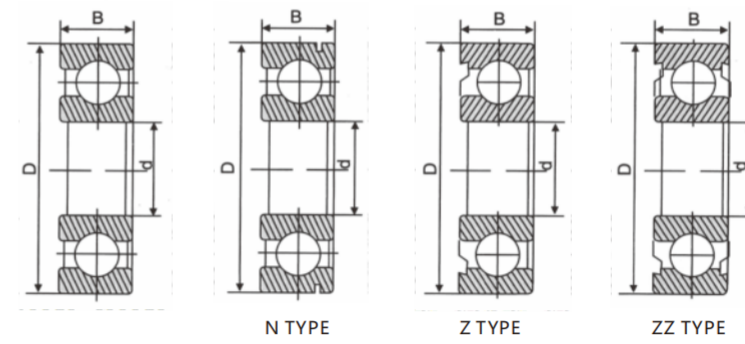
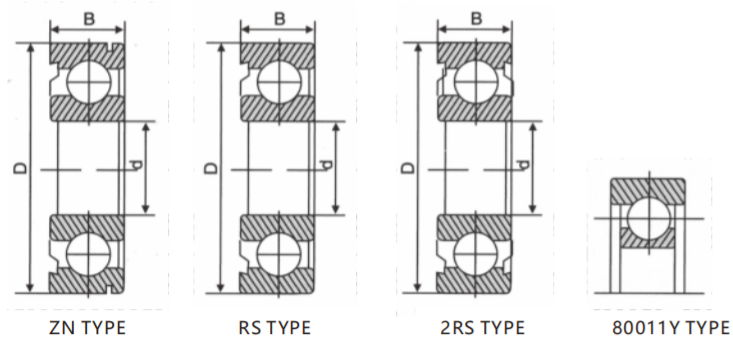


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6332-RS	160	340	68	1900	2300	313	338.4	26.43
6332-2RS	160	340	68	1900	2300	313	338.4	26.43
6334	170	360	72	1800	2100	335.7	381.2	31.34
6334-Z	170	360	72	1800	2100	335.7	381.2	31.34
6334-2Z	170	360	72	1800	2100	335.7	381.2	31.34
6334-RS	170	360	72	1800	2100	335.37	381.2	31.34
6334-2RS	170	360	72	1800	2100	335.7	381.2	31.34
6336	180	380	75	1700	2000	375.7	425.8	35.23
6336-Z	180	380	75	1700	2000	375.7	425.8	35.23
6336-2Z	180	380	75	1700	2000	375.7	425.8	35.23
6336-RS	180	380	75	1700	200	375.7	425.8	35.23
6336-2RS	180	380	75	1700	200	375.7	425.8	35.23
6338	190	400	78	1600	1900	390.2	456.3	40.53
6338-Z	190	400	78	1600	1900	390.2	456.3	40.53
6338-2Z	190	400	78	1600	1900	390.2	456.3	40.53
6338-RS	190	400	78	1600	1900	390.2	456.3	40.53
6338-2RS	190	400	78	1600	1900	390.2	456.3	40.53
6405	25	80	21	8500	11000	38.43	20.41	0.51
6405/P5	25	80	21	8500	11000	38.43	41.41	0.51
6405N	25	80	21	8500	11000	38.43	20.41	0.51
6406	30	90	23	8000	11000	47.17	25.69	0.7
6406/P5	30	90	23	8000	10000	47.17	25.69	0.7

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6406N	90	90	23	8000	10000	47.17	25.69	0.7
6407	35	100	25	6700	8500	56.22	31.22	0.92
6407/P5	35	100	25	6700	8500	56.22	31.22	0.92
6407/P6	35	100	25	6700	8500	56.22	31.22	0.92
6407N	35	100	25	6700	8500	56.22	31.22	0.92
6408	40	110	27	6300	8000	65.15	37.35	1.21
6408/P5	40	110	27	6300	8000	65.15	37.35	1.21
6408N	40	110	27	6300	8000	65.15	37.35	1.21
6409	45	120	29	5600	7000	76.75	45.54	1.52
6409N	45	120	29	5600	7000	76.75	45.54	1.52
6410	50	130	31	5300	6700	92.24	55.13	1.87
6410N	50	130	31	5300	6700	92.24	55.13	1.87
6411	55	140	31	4800	6000	99.89	62.71	2.31
6411N	55	140	33	4800	6000	99.89	62.71	2.31
6412	60	150	35	4500	5600	108.21	70.3	2.81
6412N	60	150	35	4500	5600	108.21	70.3	2.81
6413	65	160	37	4300	5200	111	72.5	3.3
6413N	65	160	37	4300	5200	111	72.5	3.3
6414	70	180	42	3900	4600	128	89.5	4.83
6414N	70	180	42	3900	4600	128	89.5	4.83

DEEP GROOVE

BALL BEARINGS DATA SHEETS

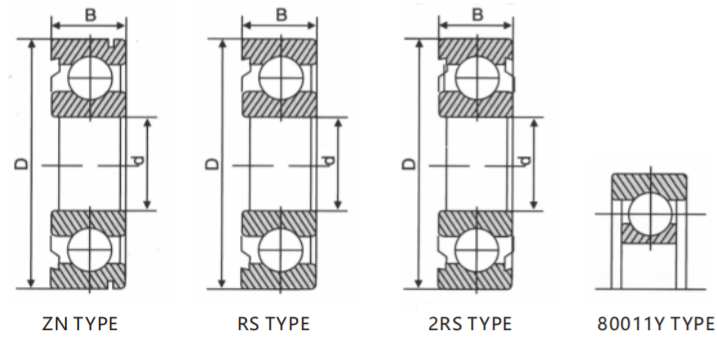


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM) SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6415	75	190	45	3600	4400	138	99	5.72
6415N	75	190	45	3600	4400	138	99	5.72
6416	80	200	48	3400	4100	164	125	6.76
6416N	80	200	48	3400	4100	164	125	6.76
6417	85	210	52	3200	3900	165	128	7.95
6417N	85	210	52	3200	3900	165	128	7.95
6418	90	225	54	3000	3700	184	149	9.56
6418N	90	225	54	3000	3700	184	149	9.56
6419	95	240	55	3000	3500	186	153	13.4
6419N	65	240	55	3000	3500	186	153	13.4
6420	100	250	58	2900	3400	206	175	12.9
6420N	100	250	58	2900	3400	206	175	12.9
6422	110	280	65	2600	3000	247	227	18.34
6422N	110	280	65	2600	3000	247	227	18.34
6424	120	310	72	2300	2800	291	287	29
6424N	120	310	72	2300	2800	291	287	29
6426	130	340	78	2200	2500	300	298	38
6426N	130	340	78	2200	2500	300	298	38
685-ZZ	5	11	3	43000	51000	0.715	0.282	0.0011

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
6905-ZZ	25	42	9	14000	18000	7	4.5	0.038
6906-ZZ	30	47	9	12000	16000	7.2	5	0.043
6907-ZZ	35	55	10	10000	13000	9.5	6.8	0.078
6908-ZZ	40	62	12	9500	12000	13.7	9.9	0.103
6909-ZZ	45	68	12	8500	11000	14.1	10.9	0.123
6910-ZZ	50	72	12	8000	9500	14.5	11.7	0.122
6911-ZZ	55	80	13	7500	9000	15.9	13.2	0.17
6912-ZZ	60	85	13	5700	8000	16.4	14.2	0.181
6913-ZZ	65	90	13	6300	7500	17.4	16	0.196
6914-ZZ	70	100	16	6000	7000	23.7	21.1	0.336
6915-ZZ	75	105	16	5600	6700	24.3	22.5	0.355
6916-ZZ	80	110	16	5300	6300	24.9	23.9	0.375
6917-ZZ	85	120	18	4800	6000	31.9	29.7	0.507
6918-ZZ	90	125	18	4500	5600	32.8	31.5	0.533
6919-ZZ	95	130	18	4300	5300	33.7	33.3	0.56
6920-ZZ	100	140	20	4000	5000	41.9	41.9	0.77
16001-ZZ	12	28	7	20000	26000	5.1	2.4	0.015
16002-ZZ	15	32	8	19000	24000	5.6	2.8	0.023

DEEP GROOVE

BALL BEARINGS DATA SHEETS



DESIGN

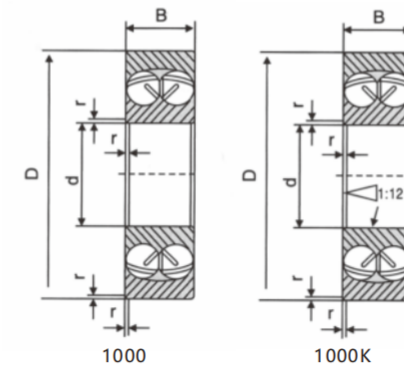
SELF-ALIGNING BALL BEARINGS

- > Excellent alignment compensation due to the spherical outer ring raceway
- > Suitable HBSLr low to medium radial loads and low thrust loads
- > Available in open and sealed versions, as well as in tapered bore

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
16003-ZZ	17	35	8	18000	22000	6	3.3	0.028
16004-ZZ	20	42	8	16000	19000	7.9	4.5	0.052
16005-ZZ	25	47	8	13000	17000	8.8	5.6	0.059
16006-ZZ	30	55	9	11000	14000	11.2	7.4	0.084
16007-ZZ	35	62	9	9500	12000	12.2	8.8	0.107
16008-ZZ	40	68	9	9000	11000	12.6	9.6	0.125
16009-ZZ	45	75	10	8000	10000	15.6	12.2	0.155
16010-ZZ	50	80	10	8000	9500	16.1	13.1	0.166
16011-ZZ	55	90	11	7000	8500	19.4	16.2	0.207
16012-ZZ	60	95	11	6300	7500	19.9	17.5	0.224
16013-ZZ	65	100	11	6000	7000	20.5	18.6	0.241
16014-ZZ	70	110	13	5600	6700	27.9	25	0.386
16015-ZZ	75	115	13	5300	6300	28.7	26.8	0.411
16016-ZZ	80	125	14	5000	6000	33.1	31.4	0.539
16017-ZZ	85	130	14	4500	5600	34	33.3	0.568
16018-ZZ	90	140	16	4300	5300	41.5	39.3	0.671
16019-ZZ	95	145	16	4000	5000	42.7	41.9	0.71
16020-ZZ	100	150	16	3800	4800	43.8	44.3	0.74



SELF-ALIGNING BALL BEARINGS DATA SHEETS

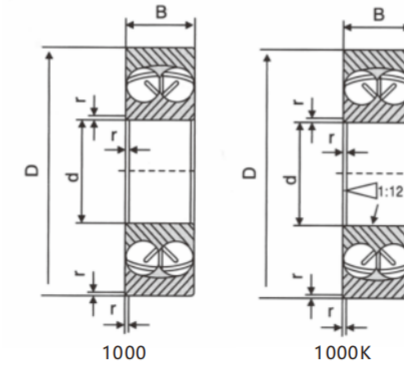
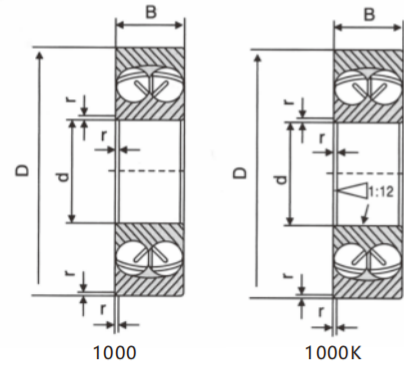


HBSL
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BEARING NO.		BOUNDARY DIMENSIONS(MM)				SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
Cylindric bore	Tapered bore	d	D	B	R _{smin}	Grease lubrication	Oil lubrication	Cr	Cor	
1200	1200	10	30	9	0.6	23000	28000	1.92	2.97	0.034
2200	2200	10	30	14	0.6	23000	28000	1.07	1.65	0.047
1201	1201	12	32	10	0.6	21000	26000	1.89	2.93	0.040
2201	2201	12	32	14	0.6	21000	26000	1.18	1.83	0.053
1301	1301	12	37	12	1	19000	23000	1.77	2.74	0.067
2301	2301	12	37	17	1	17000	21000	1.17	1.81	0.095
1202	1202	15	35	11	0.6	18000	22000	1.90	2.95	0.049
2202	2202	15	35	14	0.6	18000	22000	1.27	1.97	0.060
1302	1302	15	42	13	1	16000	20000	1.86	2.88	0.094
2302	2302	15	42	17	1	14000	18000	9.5	2	0.114
1203	1203	17	40	12	0.6	16000	20000	8	2.01	0.072
2203	2203	17	40	16	0.6	16000	20000	9.9	2.42	0.085
1303	1303	17	47	14	1	14000	17000	12.7	3.2	0.135
2303	2303	17	47	19	1	13000	16000	14.7	3.55	0.155
1204	1204K	20	47	14	1	14000	17000	10	2.61	0.12
2204	2204K	20	47	18	1	14000	17000	12.8	3.3	0.133
1304	1304K	20	52	15	1.1	12000	15000	12.6	3.35	0.165
2304	2304K	20	52	21	1.1	11000	14000	18.5	4.7	0.193
1205	1205K	25	52	15	1	12000	14000	12.2	3.3	0.14
2205	2205K	25	52	18	1	12000	14000	12.4	3.45	0.15
1305	1305K	25	62	17	1.1	1000	13000	18.2	5	0.255
2305	2305K	25	62	24	1.1	9500	12000	24.9	6.6	0.319
1206	1206K	30	62	16	1	10000	12000	15.8	4.65	0.22
2206	2206K	30	62	20	1	10000	12000	15.3	4.55	0.25
1306	1306K	30	72	19	1.1	8500	11000	21.4	6.3	0.385
2306	2306K	30	72	27	1.1	8000	10000	32	8.75	0.48
1207	1207	35	72	17	1.1	8500	10000	15.9	5.1	0.32

SELF-ALIGNING BALL

BEARINGS DATA SHEETS



BEARING NO.		BOUNDARY DIMENSIONS(MM)				SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
Cylindric bore	Tapered bore	d	D	B	R _{smin}	Grease lubrication	Oil lubrication	Cr	Cor	
2207	2207K	35	72	23	1.1	8500	10000	21.7	6.6	0.38
1307	1307K	35	80	21	1.5	7500	9500	25.3	7.85	0.51
2307	2307K	35	80	31	1.5	7100	9000	40	11.3	0.64
1208	1208K	40	80	18	1.1	7500	9000	19.3	6.5	0.42
2208	2208K	40	80	23	1.1	7500	9000	22.4	7.35	0.48
1308	1308K	40	90	23	1.5	6700	8500	29.8	9.7	0.72
2308	2308K	40	90	33	1.5	6300	8000	45.5	13.5	0.89
1209	1209K	45	85	19	1.1	7100	8500	22	7.35	0.47
2209	2209K	45	85	23	1.1	7100	8500	23.3	8.15	0.52
1309	1309K	45	100	25	1.5	6000	7500	38.5	12.7	0.96
2309	2309K	45	100	36	1.5	5600	7100	55	16.7	1.2
1210	1210K	50	90	20	1.1	6300	8000	22.8	8.1	0.53
2210	2210K	50	90	23	1.1	6300	8000	23.3	8.45	0.56
1310	1310K	50	110	27	2	5600	6700	43.5	14.1	1.25
2310	2310K	50	110	40	2	5000	6300	65	20.2	1.58
1211	1211K	55	100	21	1.5	6000	7100	26.9	10	0.71
2211	2211K	55	100	25	1.5	6000	7100	26.7	9.9	0.75
1311	1311K	55	120	29	2	5000	6300	51.5	17.9	1.6
2311	2311K	55	120	43	2	4800	6000	76.5	24	2.03
1212	1212	60	110	22	1.5	5300	6300	30.5	11.5	0.9
2212	2212	60	110	28	1.5	5300	6300	34	12.6	1.03
1312	1312	60	130	31	2.1	4500	5600	57.5	20.8	2.03

BEARING NO.		BOUNDARY DIMENSIONS(MM)				SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
Cylindric bore	Tapered bore	d	D	B	R _{smin}	Grease lubrication	Oil lubrication	Cr	Cor	
2312	2312K	60	130	46	2.1	4300	5300	88.5	28.3	2.57
1213	1213K	65	120	23	1.5	4800	6000	31	12.5	1.15
2213	2213K	65	120	31	1.5	4800	6000	43.5	16.4	1.4
1313	1313K	65	140	33	2.1	4300	5300	62.5	22.9	2.54
2313	2313K	65	140	48	2.1	3800	4800	97	32.5	3.2
1214	1214K	70	125	24	1.5	4800	5600	35	13.8	1.3
2214	2214K	70	125	31	1.5	4500	5600	44	17.1	1.52
1314	1314K	70	150	35	2.1	4000	5000	65	25.1	3.19
2314	2314K	70	150	51	2.1	3600	4500	111	37.5	3.9
1215	1215K	75	130	25	1.5	4300	5300	39	15.7	1.41
2215	2215K	75	130	31	1.5	4300	5300	44.5	17.8	1.6
1315	1315K	75	160	37	2.1	3800	4500	80	30	3.65
2315	2315K	75	160	55	2.1	3400	4300	125	43	4.77
1216	1216K	80	140	26	2	4000	5000	40	17	1.74
2216	2216K	80	140	33	2	4000	5000	49	19.9	1.98
1316	1316K	80	170	39	2.1	3600	4300	89	33	4.32
2316	2316K	80	170	58	2.1	3200	4000	130	45	5.55
1217	1217K	85	150	28	2	3800	4500	49.5	20.8	2.1
2217	2217K	85	150	36	2	3800	4800	58.5	23.6	2.5
1317	1317K	85	180	41	3	3400	4000	98.5	38	5.15
2317	2317K	85	180	60	3	3000	3800	142	51.5	6.58
1218	1218K	90	160	30	2	3600	4300	57.5	23.5	2.56
2218	2218K	90	160	40	2	3600	4300	70.5	28.7	3.14
1318	1318K	90	190	43	3	3200	3800	117	44.5	5.95
2318	2318K	90	190	64	3	2800	3600	154	57.5	7.77

DESIGN

ATTRIBUTES

Clean bearing steel > Longer bearing service life

Optimised geometries of raceway and rolling elements
> Improved load capacity

Modified contact geometry and crowned inner ring raceways
> Better compensation of misalignments

Improves design of bearing guiding flanges
> Suitable HBSLr taking up higher axial loadings (NJ and NUP)

Tighter tolerances HBSLr roller sorting > Uniform HBSLr load distribution

Superior surface finishing on raceways
> Reduced friction, lower operating temperature

Modified cage design > Enhance HBSLr formation of lubrication film



PRODUCT VARIANTS

Design variants	
Cage materials	Brass, Polyamide
Cage designs	Roller and outer ring guided
Radial clearance groups	CN (standard) C3 C4

TYPICAL APPLICATIONS

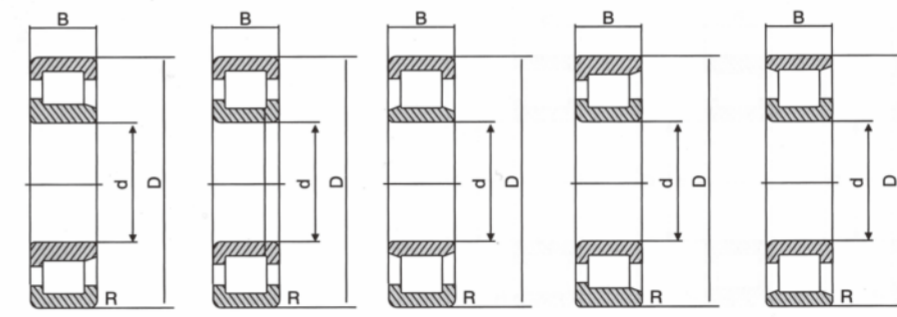
Industrial gear boxes
 HBSLrge press
 Electrical motors
 Pumps and compressors
 Traction motors and axle boxes HBSLr railway vehicles
 Steel mills etc.



HBSL
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CYLINDRICAL ROLLER

BEARINGS DATA SHEETS 圆柱滚子轴承数据表

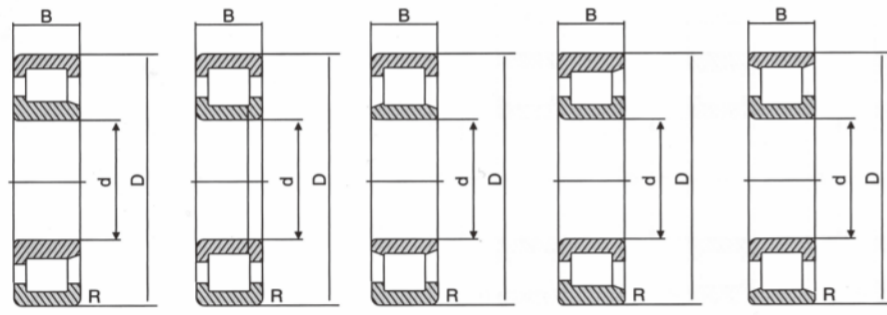


NJ SERIES NUP SERIES NU SERIES NF SERIES N SERIES

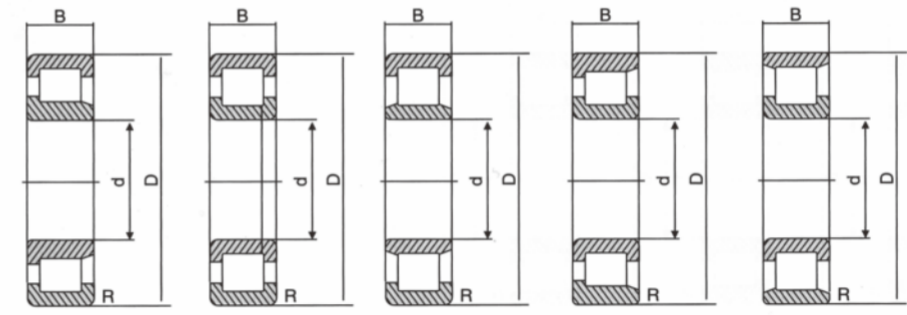
BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ1021M	105	160	26	4300	5100	105	142	1.84
NJ1022M	110	170	28	4100	4800	131	174	2.33
NJ1024M	120	180	28	3800	4400	139	191	2.44
NJ1026M	130	200	33	3400	4000	172	238	3.69
NJ1028M	140	210	33	3200	3800	176	250	4.05
NJ1030M	150	225	35	3000	3500	202	294	4.77
NJ1032M	160	240	38	2800	3300	238	340	5.9
NJ1034M	170	260	42	2600	3000	278	400	7.88
NJ1036M	180	280	46	2400	2900	340	485	10.3
NJ1038M	190	290	46	2300	2700	350	510	10.7
NJ1040M	200	310	51	2200	2600	390	580	13.9
NJ1044M	220	340	56	2000	2300	500	750	18.2
NJ1048M	240	360	56	1800	2100	530	820	19.6
NJ1052M	260	400	65	1600	1900	645	1000	29.1
NJ1056M	280	420	65	1500	1800	660	1050	30.9
NJ1060M	300	460	74	1400	1600	855	1340	43.6
NJ1046M	320	480	74	1300	1500	875	1410	46
NJ203EM	17	40	12	18000	18000	17.6	14.6	0.01
NJ204	20	47	14	17000	20000	17	14.4	0.12
NJ204E	20	47	14	17000	20000	16.6	13.9	0.11
NJ204EV	20	47	14	14000	16000	31.4	32.6	0.12
NJ204EM	20	47	14	17000	20000	16.6	13.9	0.11

CYLINDRICAL ROLLER

BEARINGS DATA SHEETS



NJ SERIES NUP SERIES NU SERIES NF SERIES N SERIES



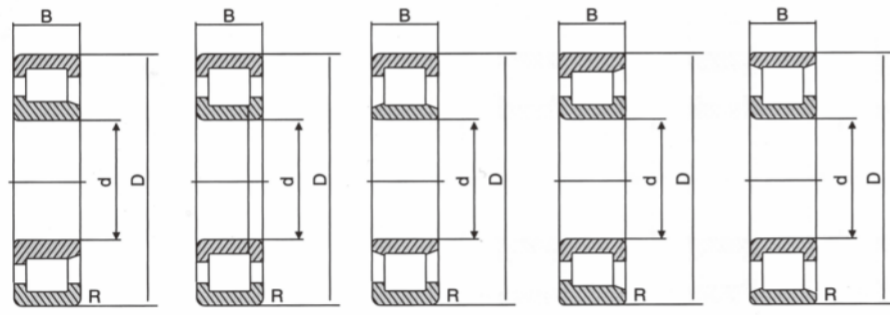
NJ SERIES NUP SERIES NU SERIES NF SERIES N SERIES

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ205E	25	52	15	11000	14000	27.5	26.8	0.15
NJ205EV	25	52	15	9000	12000	35.1	38.8	0.16
NJ205EM	25	52	15	11000	14000	27.5	26.8	0.16
NJ206E	30	62	16	8500	11000	36	35.6	0.22
NJ206EV	30	62	16	7000	9000	45.9	51.2	0.22
NJ206EM	30	62	16	8500	11000	36	35.6	0.24
NJ207	35	72	17	7500	9500	37.9	41.3	0.34
NJ207E	35	72	17	7500	9500	46.5	48	0.34
NJ207EM	35	72	17	7500	9500	46.5	48	0.36
NJ208M	40	80	18	7000	9500	49.8	53	0.4
NJ208E	40	80	18	7000	9000	51.5	53	0.39
NJ208EM	40	80	18	7000	9000	51.5	53	0.44
NJ209E	45	85	19	6300	8000	58.5	63.8	0.52
NJ209EM	45	85	19	6300	8000	58.5	63.8	0.53
NJ210E	50	90	20	6000	7500	61.2	69.2	0.56
NJ210EM	50	90	20	6000	7500	61.2	69.2	0.58
NJ211E	55	100	21	5300	6700	80.2	95.5	0.62
NJ211EV	55	100	21	4300	5500	97.7	115.8	0.7
NJ211M	55	100	21	5300	6700	80.2	95.5	0.63
NJ212M	60	110	22	5000	6300	86.6	102	0.9
NJ212E	60	110	22	5000	6300	89.8	102	0.84
NJ212EM	60	110	22	5000	6300	89.8	102	0.95

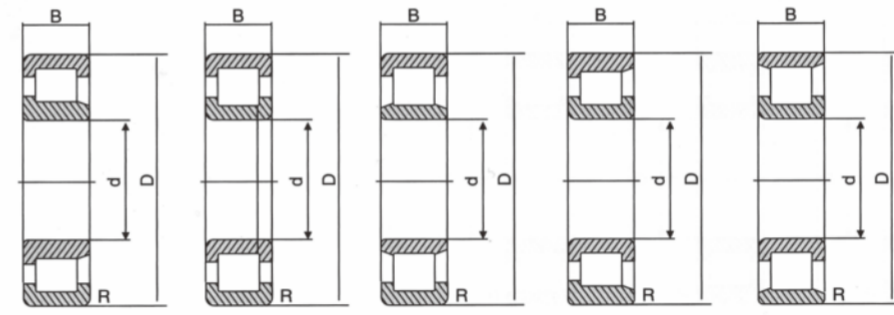
BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ213E	65	120	23	4500	5600	102	118	1.05
NJ213EM	65	120	23	4500	5600	102	118	1.15
NJ214E	70	125	24	4300	5300	112	135	1.29
NJ214EM	70	125	24	4300	5300	112	135	1.34
NJ215E	75	130	25	4000	5000	125	155	1.45
NJ215EM	75	130	25	4000	5000	125	155	1.72
NJ216M	80	140	26	3800	4800	128	167	1.6
NJ216E	80	140	26	3800	4800	132	165	1.74
NJ216EM	80	140	26	3800	4800	132	165	1.76
NJ217E	85	150	28	3600	4500	158	192	2.08
NJ217EM	85	150	28	3600	4500	158	192	2.1
NJ218E	90	160	30	3400	4300	170	203	2.5
NJ218EM	90	160	30	3400	4300	170	203	2.63
NJ219M	95	170	32	3200	4000	184	244	3.14
NJ219E	95	170	32	3200	4000	192	214	2.8
NJ219EM	95	170	32	3200	4000	192	214	3.06
NJ220E	100	180	34	3000	3800	208	226	3.14
NJ220EM	100	180	34	3000	3800	208	226	3.45
NJ221E	105	190	36	2800	3600	224	238	4
NJ221EM	105	190	36	2800	3600	224	238	4.4
NJ222E	110	200	38	2600	3400	239	342	5.11
NJ222EM	110	200	38	2600	3400	239	342	5.36

CYLINDRICAL ROLLER

BEARINGS DATA SHEETS



NJ SERIES NUP SERIES NU SERIES NF SERIES N SERIES



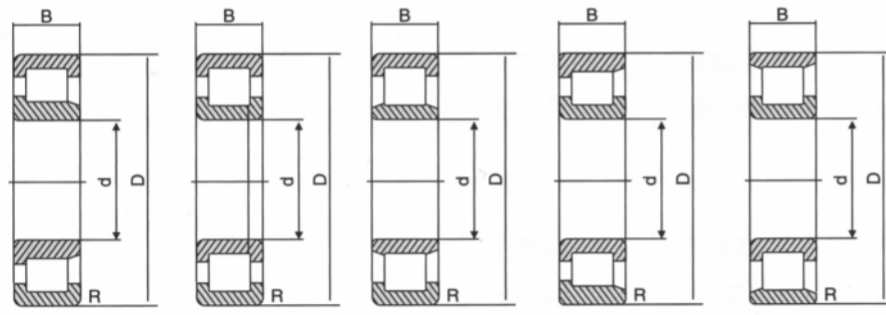
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BEARING NO. NJ/NU/N/NF/NUP	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ224E	120	215	40	2200	3000	247	249	6.32
NJ224EM	120	215	40	2200	3000	247	249	6.48
NJ226E	130	230	40	2000	2800	358	372	7.38
NJ226EM	130	230	40	2000	2800	358	372	7.49
NJ228E	140	250	42	1800	2400	302	415	9.01
NJ228EM	140	250	42	1800	2400	302	415	9.35
NJ230EM	150	270	45	2000	2400	450	595	12.5
NJ232EM	160	290	48	1900	2200	500	665	15.5
NJ234EM	170	310	52	1800	2200	605	800	19.2
NJ236EM	180	320	52	1700	2000	625	850	20
NJ238EM	190	340	55	1600	1900	695	955	24
NJ240EM	200	360	58	1500	1800	765	1060	28.6
NJ244EM	220	400	65	1500	1800	760	1080	37.3
NJ248EM	240	440	72	1300	1600	935	1340	52.5
NJ252EM	260	480	80	1100	1400	1170	1700	71
NJ256EM	280	500	85	1100	1400	1190	1760	70.8
NJ260EM	300	540	92	1100	1300	1400	2070	88.2
NJ264EM	320	580	14	800	1000	1500	2100	113
NJ303E	17	47	14	13000	15000	24.6	21.1	0.14
NJ303EM	17	47	14	13000	15000	24.6	21.1	0.14
NJ304E	20	52	15	14000	17000	23.1	19.2	0.15
NJ304EM	20	52	15	14000	17000	23.1	19.2	0.15

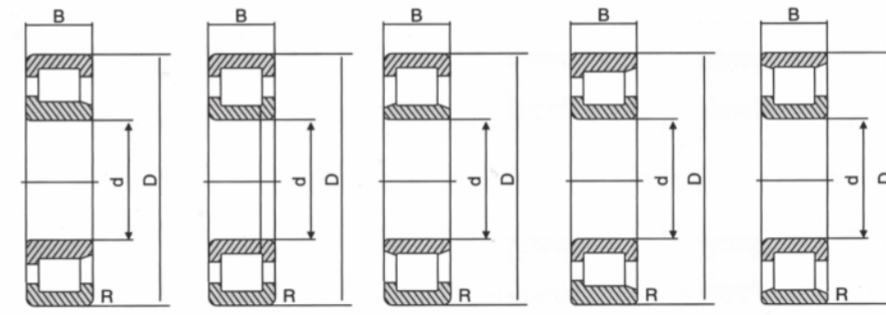
BEARING NO. NJ/NU/N/NF/NUP	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ305M	25	52	17	9000	12000	37.3	35.9	0.27
NJ305E	25	62	17	9000	12000	38.5	35.8	0.24
NJ305EN	25	62	17	7200	10000	48.1	46.4	0.27
NJ305EM	25	62	17	9000	12000	38.5	35.8	0.28
NJ306M	30	72	19	8000	10000	47.8	48.4	0.36
NJ306E	30	72	19	8000	10000	49.2	48.2	0.38
NJ306EM	30	72	19	8000	10000	49.2	48.2	0.41
NJ307M	35	80	21	7000	9000	60.1	63.3	0.47
NJ307E	35	80	21	7000	9000	62	63.6	0.49
NJ307EV	35	80	21	6000	7500	78.8	88.5	0.53
NJ307EM	35	80	21	7000	9000	62	63.3	0.54
NJ308E	40	90	23	6300	8000	76.8	77.8	0.65
NJ308EM	40	90	23	6300	8000	76.8	77.8	0.71
NJ309E	45	100	25	5600	7000	93	98	0.95
NJ309EV	45	100	25	4600	6000	117	125	1
NJ309EN	45	100	25	5600	7000	93	98	0.98
NJ310E	50	110	27	5300	6700	105	112	1.2
NJ310EV	50	110	27	3500	4800	154	139	1.22
NJ310EK	50	110	27	3500	4800	154	139	1.22
NJ310EM	50	110	27	5300	6700	119	125	1.31
NJ311E	55	120	29	4800	6600	128	138	1.61
NJ311EV	55	120	29	3200	4500	163	178	1.61

CYLINDRICAL ROLLER

BEARINGS DATA SHEETS



NJ SERIES NUP SERIES NU SERIES NF SERIES N SERIES



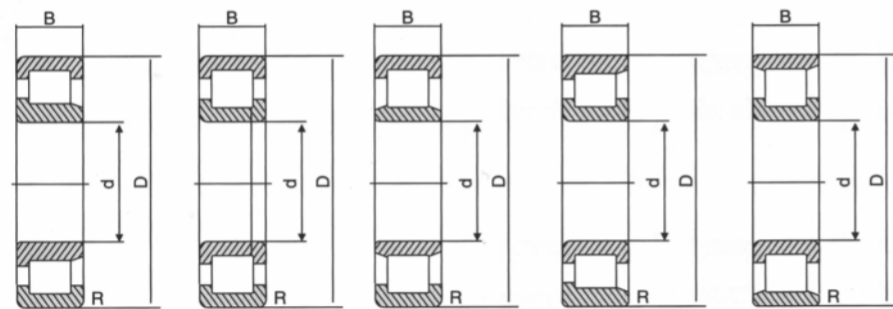
NJ SERIES NUP SERIES NU SERIES NF SERIES N SERIES

BEARING NO. NJ/NU/N/NF/NUP	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ311EM	55	120	29	4800	6000	128	138	1.7
NJ312E	60	130	31	4500	5600	142	155	1.94
NJ312EV	60	130	31	3200	4500	185	511	2.01
NJ312EM	60	130	31	4500	5600	142	155	2.07
NJ313E	65	140	33	4000	5000	170	188	2.42
NJ313EM	65	140	33	4000	5000	170	188	2.58
NJ314E	70	150	35	3800	4800	195	220	2.9
NJ314EM	70	150	35	3800	4800	195	220	3.04
NJ315E	75	160	37	3600	4500	228	260	3.59
NJ315EM	75	160	37	3600	4500	228	260	3.88
NJ316E	80	170	39	3400	4300	245	270	3.9
NJ316EM	80	170	39	3400	4300	245	270	4.3
NJ317E	85	180	41	3200	4000	265	280	5.2
NJ317EM	85	180	41	3200	4000	265	280	5.25
NJ318E	90	190	43	3000	3800	290	320	6.17
NJ318EM	90	190	43	3000	3800	290	320	6.24
NJ319E	95	200	45	2800	3600	320	350	6.92
NJ319EM	95	200	45	2800	3600	320	350	7.27
NJ320E	100	215	47	2600	3200	355	380	8.24
NJ320EM	100	215	47	2600	3200	355	380	8.69
NUP320E	100	215	47	2600	3200	355	380	8.24
NJ321E	105	225	49	2200	3000	390	420	9.9

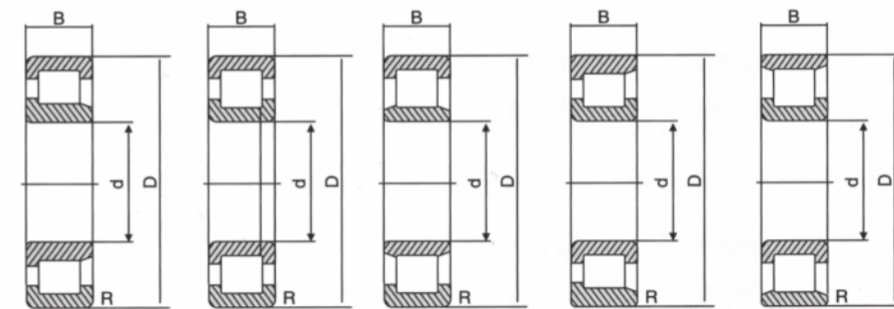
BEARING NO. NJ/NU/N/NF/NUP	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ321EM	105	225	49	2200	3000	390	420	10.7
NJ322E	110	240	50	2000	2800	415	470	11.2
NJ322EM	110	240	50	2000	2800	415	470	11.7
NJ324E	120	260	55	1900	2600	440	552	14.1
NJ324EM	120	260	55	1900	2600	440	552	14.3
NJ326EM	130	280	58	1900	2400	615	735	19.3
NJ328EM	140	300	62	1700	2200	665	795	23.7
NJ330EM	150	320	65	1600	2000	715	855	26.8
NJ332EM	160	340	68	1500	1900	860	1050	33
NJ334EM	170	360	72	1600	2000	795	1010	37.5
NJ336EM	180	380	75	1500	1800	905	1150	43.5
NJ338EM	180	400	78	1200	1500	1140	1500	50
NJ340EM	200	420	80	1300	1600	990	1320	56
NJ344EM	220	460	88	1200	1500	1210	1630	72.5
NJ348EM	240	500	95	1300	1500	1430	1950	93.4
NJ352EM	260	540	102	1200	1400	1620	2230	117
NJ356EM	280	580	108	900	1000	1620	2340	144
NJ407	35	100	25	6000	7500	70.8	68.2	0.98
NJ407M	35	100	25	6000	7500	70.8	68.2	0.12
NJ408	40	110	27	5600	7000	90.5	89.8	0.15
NJ408M	40	110	27	5600	7000	90.5	89.8	1.3
NJ409	45	120	29	5000	6300	102	100	1.77

CYLINDRICAL ROLLER

BEARINGS DATA SHEETS



NJ SERIES NUP SERIES NU SERIES NF SERIES N SERIES



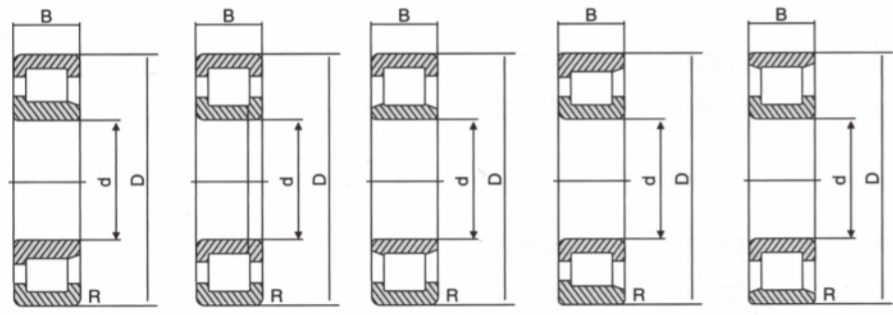
Nj SERIES NUP SERIES NU SERIES NF SERIES N SERIES

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ409M	45	120	29	5000	6300	102	100	1.97
NJ410	50	130	31	4800	6000	120	120	2.26
NJ410M	50	130	31	4800	6000	120	120	2.3
NJ411	55	140	33	4200	5700	145	141	2.95
NJ411M	55	140	33	4200	5700	145	141	3.24
NJ412	60	150	35	4000	5300	148	144	3.2
NJ412M	60	150	35	4000	5300	148	144	3.5
NJ413	65	160	37	3500	4700	185	191	3.92
NJ413M	65	160	37	3500	4700	185	191	4.03
NJ414	70	180	42	3300	4400	205	210	6.4
NJ414M	70	180	42	3300	4400	205	210	6.7
NJ415	75	190	45	3100	4200	254	265	7.03
NJ415M	75	190	45	3100	4200	254	265	7.28
NJ416	80	200	48	3000	4000	275	284	8.25
NJ416M	80	200	48	3000	4000	275	284	8.55
NJ417	85	210	52	2800	3700	312	325	9.5
NJ417M	85	210	52	2800	3700	312	325	9.8
NJ418	90	225	54	2600	3400	350	360	11
NJ418M	90	225	54	2600	3400	350	360	12
NJ419M	95	240	55	2600	3200	400	445	13.6
NJ420M	100	250	58	2600	3000	450	500	15.5
NJ421M	105	260	60	2200	2800	501	570	19

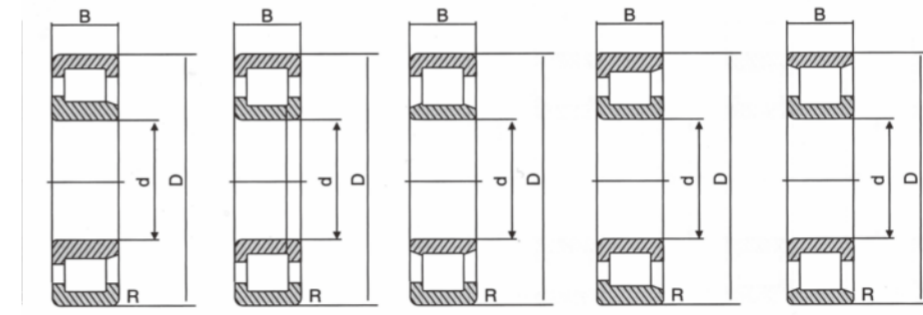
BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ422M	110	280	65	2100	2500	550	620	21.2
NJ424M	120	310	72	1900	2300	675	770	28.9
NJ426M	130	340	78	1800	2100	825	955	37.7
NJ428M	140	360	82	1600	1900	875	1020	44.3
NJ430M	150	380	85	1400	1600	900	1020	50.8
NJ2203EM	17	40	16	16000	18000	24	22	0.09
NJ2204EM	20	47	18	15000	18000	22.2	20.3	0.14
NJ2204EV	20	47	18	12000	14000	37.4	39.8	0.15
NJ2205EM	25	52	18	10000	14000	23.7	22.8	0.16
NJ2206EM	30	62	20	7500	11000	23.9	33.1	0.3
NJ2207EM	35	72	23	6500	9500	49	51.2	0.45
NJ2208EM	40	80	23	6000	9000	58.3	62	0.49
NJ2209EM	45	85	23	5500	8000	61.4	67.8	0.54
NJ2210EM	50	90	23	5200	7500	94.2	73.6	0.65
NJ2211EM	55	100	25	5000	6700	75.3	8702	0.77
NJ2212EM	60	110	28	4800	6300	101	123	1.09
NJ2213EM	65	120	31	4600	5600	120	149	1.55
NJ2214EM	70	125	31	4400	5300	119	151	1.7
NJ2215EM	75	130	31	4200	5000	135	172	1.8
NJ2216EM	80	140	33	4000	4800	148	186	2.2
NJ2217EM	85	150	36	3800	4500	169	218	2.8
NJ2218EM	90	160	40	3600	4300	207	265	3.6

CYLINDRICAL ROLLER

BEARINGS DATA SHEETS



NJ SERIES NUP SERIES NU SERIES NF SERIES N SERIES



Nj SERIES NUP SERIES NU SERIES NF SERIES N SERIES

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ2219EM	95	170	43	3400	4000	230	298	4.3
NJ2220EM	100	180	46	3200	3800	259	338	5.99
NJ2222EM	110	200	53	2800	3400	334	442	8.7
NJ2224EM	120	215	58	2400	3000	367	492	9.55
NJ2226EM	130	230	64	2200	2800	395	560	11.9
NJ2228EM	140	250	68	2200	2600	550	790	15.9
NJ2230EM	150	270	73	2000	2400	635	930	19.9
NJ2232EM	160	290	80	1900	2400	810	1190	25.4
NJ2234EM	170	310	86	1800	2200	925	1330	30.5
NJ2236EM	180	320	86	1700	2000	1010	1500	31.5
NJ2238EM	190	340	92	1600	1900	1100	1660	40
NJ2240EM	200	360	98	1500	1800	1230	1900	47
NJ224EM	220	400	108	1300	1600	1570	2280	64
NJ2248EM	240	440	120	1200	1500	1450	2360	86
NJ2252EM	260	480	130	1000	1300	1780	2930	112
NJ2256EM	280	500	130	1000	1100	1800	3000	111
NJ2260EM	300	540	140	1000	1000	2080	3500	140
NJ2264EM	320	580	150	1000	900	2400	4200	175
NJ2268EM	340	620	165	1000	1500	2640	4500	220
NJ2272EM	360	650	170	950	1400	2920	4900	250
NJ2276EM	380	680	175	900	1600	3140	5500	275
NJ2305EM	25	62	24	9000	12000	42.7	40.9	0.4

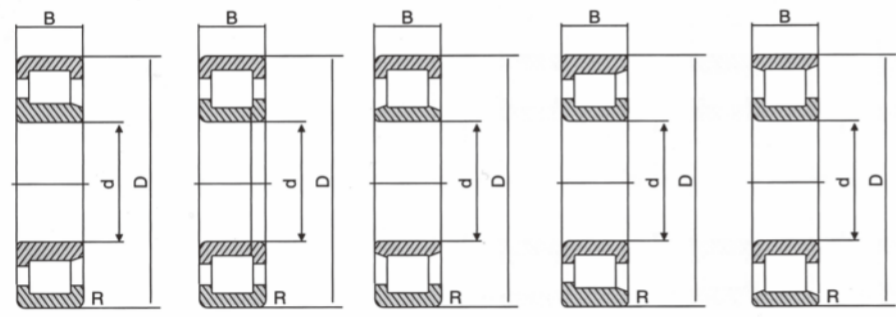
BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ2305EV	25	62	24	7200	1000	67	72.7	0.37
NJ2306EM	30	72	27	8000	10000	51.4	50.8	0.6
NJ2307EM	35	80	31	7000	9000	64.4	65.7	0.9
NJ2308EM	40	90	33	6300	8000	82.2	88	1.1
NJ2309EM	45	100	36	5600	7000	106	113	1.51
NJ2310EM	50	110	40	5300	6700	128	142	2.01
NJ2311M	55	120	43	4800	6000	184	231	2.2
NJ2311EM	55	120	43	4800	6000	148	162	2.8
NJ2312M	60	130	46	4500	5600	206	263	3.4
NJ2312EM	60	130	46	4500	5600	168	188	3.38
NJ2313EM	65	140	48	4000	5000	190	212	3.75
NJ2314EM	70	150	51	3800	4800	224	262	4.5
NJ2315EM	75	160	55	3600	4500	275	327	6.33
NJ2316EM	80	170	58	3400	4300	275	332	6.6
NJ2317M	85	180	60	320	4000	285	227	7.3
NJ2317EM	85	180	60	320	4000	315	382	8.6
NJ2318EM	90	190	64	3000	3800	329	395	10
NJ2319EM	95	200	67	2800	3600	394	496	11.5
NJ2320EM	100	215	73	12600	3200	464	548	15.5
NJ2322EM	110	240	80	2000	2800	604	789	19.5
NJ2324EM	120	260	86	2400	2800	710	920	21.1
NJ2326EM	130	280	93	1800	2200	935	1250	32

CYLINDRICAL ROLLER

BEARINGS DATA SHEETS

DESIGN

ATTRIBUTES



NJ SERIES NUP SERIES NU SERIES NF SERIES N SERIES

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
NJ2328EM	140	300	102	1700	2200	1020	1380	39.5
NJ2330EM	150	320	108	1600	2000	1160	1600	47.5
NJ2332EM	160	340	114	1500	1800	1320	1860	55
NJ2334EM	170	360	120	7000	1700	1230	1800	65
NJ2336EM	180	380	126	1300	1600	1400	2040	75
NJ2338EM	190	400	132	1200	1500	1830	2550	85
NJ2340EM	200	420	138	1200	1500	2050	2850	99
NJ2344EM	220	460	145	1000	1300	2330	3250	123
NJ2348EM	240	500	155	1100	1300	2100	3200	147
NJ2352EM	260	540	165	1000	1200	2340	3600	182
NJ2356EM	280	580	175	920	1100	2600	4100	224
NJ307/V	35	80	23	7000	9000	83.3	97.7	0.56
NJ308EV	40	90	23	6300	8000	103.7	109.8	0.72

Dimension

> Overall dimension of bearing listed in bearing table accords to ISO 015-1981

Angular alignment tolerance

> Spherical roller bearing is designed in such way that it is self-aligning. That means that bearing can adjust itself and angular alignment tolerance between outer rings. Under normal load working condition and inner ring rotation, the unsymmetrical value listed in below table is allowed. Achieving completely specified value is subject to design and seal type of configured bearing.

Tolerance

> HBSL Spherical roller bearing with cylindrical bore or conical core is of common tolerance level.

Internal clearance

> According to HBSL standard, spherical roller bearing is of common tolerance level in internal clearance in its direction. Almost all bearings can be supplied at C3 clearance, or even higher level C4 clearance. Bearings with dimension less than common level C2 clearance can also be supplied. Please consult first to check supply status HBSLr bearing with non-standard radial clearance (including C5), These clearance values are used HBSLr zero load testing and shaft, which remains uninstalled,

Structure

> Besides CA type, HBSL can provide CC and MB structure for special clients, Please contact with HBSL HBSLr details.

BEARING

Unsymmetrical value is allowed

	Angle
Series213	1
Series222	1.5
Series223	2
Series230	1.5
Series231	1.5
Series232	2.5
Series239	1.5
Series240	2
Series241	2.5

TYPICAL APPLICATIONS

- Continuous casters
- Vibratory screens
- Gear drives

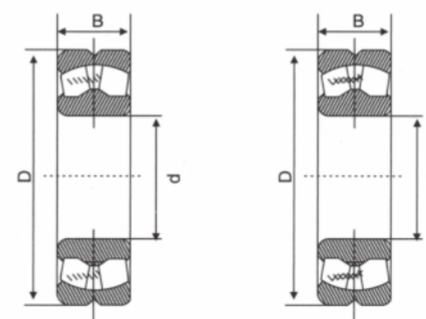




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BEARINGS DATA SHEETS



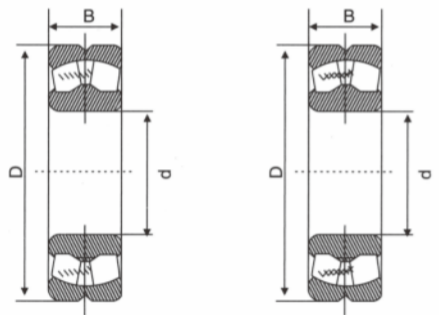
20000CA(W33)

20000MB(W33)

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
21308	40	90	23	5000	6300	89	95	0.78
21308K	40	90	23	5000	6300	89	95	0.78
21309	45	100	25	4500	6000	95	107	1.05
21309K	45	100	25	4500	6000	95	107	1.05
21310	50	110	27	4300	5300	99.5	116	1.36
21310K	50	110	27	4300	5300	99.5	116	1.36
21311	55	120	29	3800	5000	122	143	1.7
21311K	55	120	29	3800	5000	122	143	1.7
21312	60	130	31	3600	4500	150	174	2.1
21312K	60	130	31	3600	4500	150	174	2.1
21313	65	140	33	3200	4000	175	216	2.6
21313K	65	140	33	3200	4000	175	216	2.6
21314	70	150	35	3000	3800	182	230	3.1
21314K	70	150	35	3000	3800	182	230	3.1
21315	75	160	37	3000	3800	190	247	3.8
21315K	75	160	37	3000	3800	190	247	3.8
21316	80	170	39	2800	3400	214	273	4.5
21316K	80	170	39	2800	3400	214	273	4.5

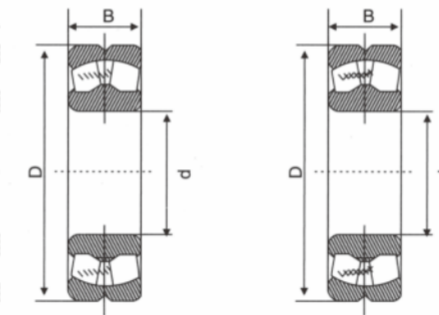
SPHERICAL ROLLER

BEARINGS DATA SHEETS



20000CA(W33)

20000MB(W33)



20000CA(W33)

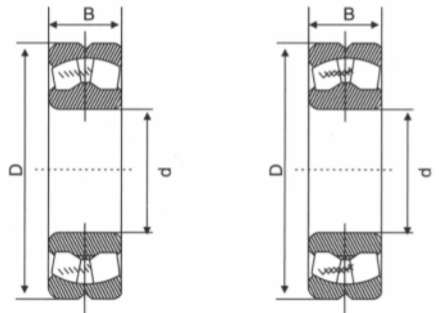
20000MB(W33)

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
21317	85	180	41	2600	3200	251	315	5.3
21317K	85	180	41	2600	3200	251	315	5.3
21318	90	190	43	2400	3000	292	375	6.1
21318K	90	190	43	2400	3000	292	375	6.1
21319	95	200	45	2200	2800	330	425	7.1
21319K	95	200	45	2200	2800	330	425	7.1
21320	100	215	47	1700	2200	385	530	8.8
21320K	100	215	47	1700	2200	385	530	8.8
21322	110	240	50	1600	2000	460	630	12
21322K	110	240	50	1600	2000	460	630	12
22208	40	80	23	5000	6300	89.5	95	0.48
22208K	40	80	23	5000	6300	89.5	95	0.48
22209	45	85	23	4500	6000	95	107	0.53
22209K	45	85	23	4500	6000	95	107	0.53
22210	50	90	23	4300	5300	99.5	116	0.57
22210K	50	90	23	4300	5300	99.5	116	0.57
22211	55	100	25	3800	5000	122	143	0.76
22211K	55	100	25	3800	5000	122	143	0.76

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
22212	60	110	28	3600	4500	150	174	1.04
22212K	60	110	28	3600	4500	150	174	1.04
22213	65	120	31	3200	4000	175	216	1.43
22213K	65	120	31	3200	4000	175	216	1.43
22214	70	125	31	3000	3800	182	230	1.51
22214K	70	125	31	3000	3800	182	230	1.51
22215	75	130	31	3000	3800	190	247	1.59
22215K	75	130	31	3000	3800	190	247	1.59
22216	80	140	33	2800	3400	214	273	1.93
22216K	80	140	33	2800	3400	214	273	1.93
22217	85	150	36	2600	3200	251	315	2.41
22217K	85	150	36	2600	3200	251	315	2.41
22218	90	160	40	2400	3000	292	375	3.11
22218K	90	160	40	2400	3000	292	375	3.11
22219	95	170	43	2200	2800	330	425	3.82
22219K	95	170	43	2200	2800	330	425	3.82
22220	100	180	46	2200	3000	311	415	4.85
22220K	100	180	46	2200	3000	311	415	4.85

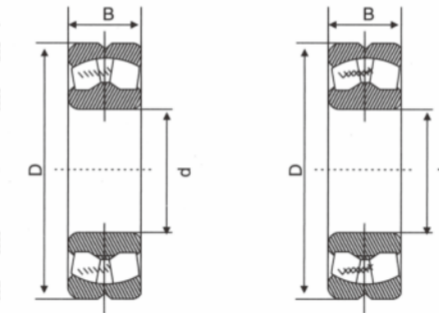
SPHERICAL ROLLER

BEARINGS DATA SHEETS



20000CA(W33)

20000MB(W33)



20000CA(W33)

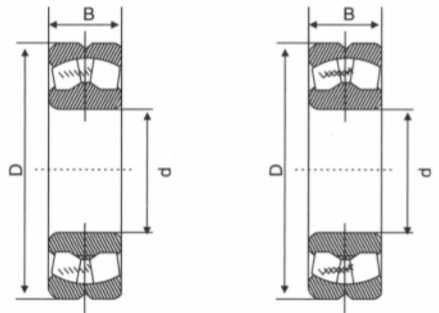
20000MB(W33)

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
22220	110	200	53	2000	2800	408	560	7
22222K	110	200	53	2000	2800	408	560	7
22224	120	215	58	1900	2600	466	670	8.7
22224K	120	215	58	1900	2600	466	670	8.7
22226	130	230	64	1800	2400	546	800	11
22226K	130	230	64	1800	2400	546	800	11
22228	140	250	68	1700	2200	610	900	14
22228K	140	250	68	1700	2200	610	900	14
22230	150	270	73	1600	2000	736	1080	18
22230K	150	270	73	1600	2000	736	1080	18
22232	160	290	80	1500	1900	863	1290	22.5
22232K	160	290	80	1500	1900	863	1290	22.5
22234	170	310	86	1300	1700	978	1460	28.5
22234K	170	310	86	1300	1700	978	1460	28.5
22236	180	320	86	1300	1700	1010	1560	29.5
22236K	180	320	86	1300	1700	1010	1560	29.5
22238	190	340	92	1200	1600	1110	1700	36.5
22238K	190	340	92	1200	1600	1110	1700	36.5

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
22240	200	360	98	1100	1500	1270	1930	43.5
22240K	200	360	98	1100	1500	1270	1930	43.5
22244	220	400	108	950	1300	1520	2360	60.5
22244K	220	400	108	950	1300	1520	2360	60.5
22248	240	440	120	900	1200	1910	3000	83
22248K	240	440	120	900	1200	1910	3000	83
22308	40	90	33	4500	6000	135	152	0.96
22308K	40	90	33	4500	6000	135	152	0.96
22309	45	100	36	4000	5300	160	181	1.28
22309K	45	100	36	4000	5300	160	181	1.28
22310	50	110	40	3800	4800	197	224	1.67
22310K	50	110	40	3800	4800	197	224	1.67
22311	55	120	43	3400	4300	226	264	2.19
22311K	55	120	43	3400	4300	226	264	2.19
22312	60	130	46	3200	4000	265	310	2.72
22312K	60	130	46	3200	4000	265	310	2.72
22314	70	150	51	2800	3400	335	400	4.04
22314K	70	150	51	2800	3400	335	400	4.04

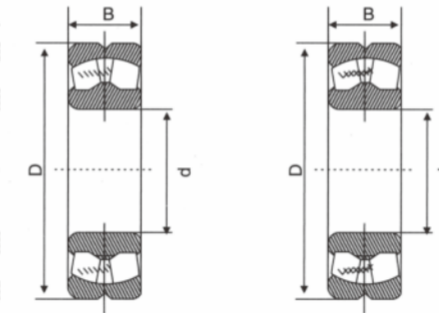
SPHERICAL ROLLER

BEARINGS DATA SHEETS



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20000CA(W33)

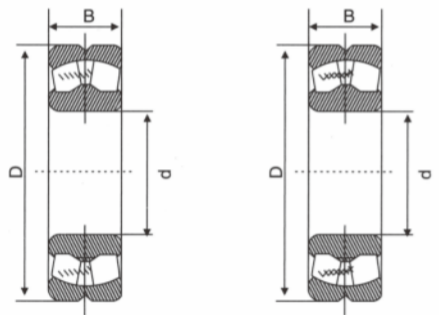
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BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
22313	65	140	48	3000	3800	305	355	3.44
22313K	65	140	48	3000	3800	305	355	3.44
22315	75	160	55	2600	3200	385	465	4.96
22315K	75	160	55	2600	3200	385	465	4.96
22316	80	170	58.5	2400	3000	430	525	5.91
22316K	80	170	58	2400	3000	430	525	5.91
22317	85	180	60	2200	2800	470	565	6.72
22317K	85	180	60	2200	2800	470	565	6.72
22318	90	190	64	2200	2600	530	645	8.06
22318K	90	190	64	2200	2600	530	645	8.06
22319	95	200	67	2000	2600	575	705	9.3
22319K	95	200	67	2000	2600	575	705	9.3
22320	100	215	73	1700	2200	610	800	13
22320K	100	215	73	1700	2200	610	800	13
22322	110	240	80	1600	2000	725	965	18
22322K	110	245	80	1600	2000	725	965	18
22324	120	260	86	1400	1800	845	1120	22
22324K	120	260	86	1400	1800	845	1120	22

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
22326	130	280	93	1300	1700	978	1320	28.5
22326K	130	180	93	1300	1700	978	1320	28.5
22328	140	300	102	110	1500	1130	1560	34.5
22328K	140	300	102	1100	1500	1130	1560	34.5
22330	150	320	108	1000	1400	1270	1760	41.5
22330K	150	320	108	1000	1400	1270	1760	41.5
22332	160	340	114	950	1300	1380	1960	50
22332K	160	340	114	950	1300	1380	1960	50
22334	170	360	120	950	1300	1540	2160	58.5
22334K	170	360	120	950	1300	1540	2160	58.5
22336	180	380	126	900	1200	1730	2450	69
22336K	180	380	126	900	1200	1730	2450	69
22338	190	400	132	850	1100	1870	2650	80
22338K	190	400	132	850	1100	1870	2650	80
22340	200	420	138	850	1100	2020	2900	92.5
22340K	200	420	138	850	1100	2020	2900	92.5
22344	220	460	145	750	950	2350	3450	120
22344K	220	460	145	750	950	2350	3450	120

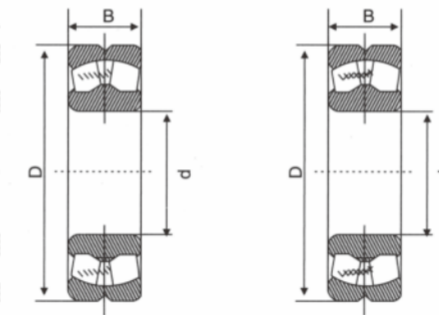
SPHERICAL ROLLER

BEARINGS DATA SHEETS



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20000CA(W33)

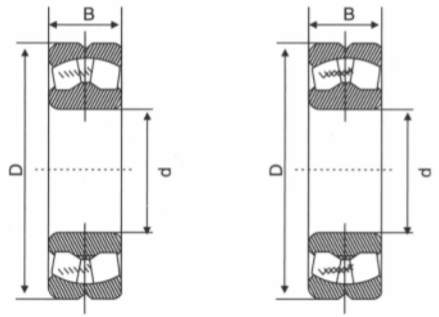
20000MB(W33)

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
22348	240	500	155	670	850	2670	4000	155
22348K	240	500	155	670	850	2670	4000	155
23022	110	170	45	2200	2800	310	440	3.8
23022K	110	170	45	2200	2800	310	440	3.8
23024	120	180	46	2000	2800	355	510	4.2
23024K	120	180	46	2000	2800	355	510	4.2
23026	130	200	52	1900	2600	430	610	6
23026K	130	200	52	1900	2600	430	610	6
23028	140	230	80	1800	2400	465	680	6.55
23028K	140	230	80	1800	2400	465	680	6.55
23030	150	225	56	1700	2200	510	750	7.85
23030K	150	225	56	1700	2200	510	750	7.85
23032	160	240	60	1700	2200	585	880	9.7
23032K	160	240	60	1700	2200	585	880	9.7
23034	170	260	67	1600	2000	710	1060	13
23034K	170	260	67	1600	2000	710	1060	13
23036	180	280	74	1400	1800	830	1250	17
23036K	180	280	74	1400	1800	830	1250	17

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
23038	190	290	75	1300	1700	865	1340	18
23038K	190	290	75	1300	1700	865	1340	18
23040	200	310	82	1200	1600	1000	1530	23.3
23040K	200	310	82	1200	1600	1000	1530	23.3
23044	220	340	90	1100	1500	1220	1860	30.5
23044K	220	340	90	1100	1500	1220	1860	30.5
23048	240	360	92	1000	1400	1290	2060	33.5
23048K	240	360	92	1000	1400	1290	2060	33.5
23052	260	400	104	900	1200	1600	2550	48.5
23052K	260	400	104	900	1200	1600	2550	48.5
23120	100	165	52	2000	2800	365	490	4.55
23120K	100	165	52	2000	2800	365	490	4.55
23122	110	180	56	1900	2600	430	585	5.75
23122K	110	180	56	1900	2600	430	585	5.75
23124	120	200	62	1800	2400	510	695	8
23124K	120	200	62	1800	2400	510	695	8
23126	130	210	64	1700	2220	560	780	8.8
23126K	130	210	64	1700	2220	560	780	8.8

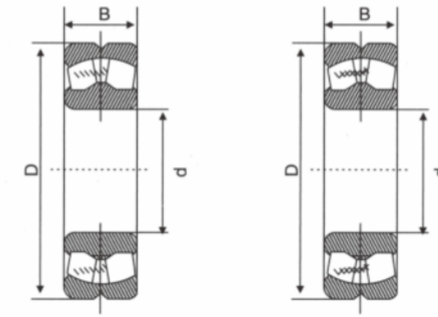
SPHERICAL ROLLER

BEARINGS DATA SHEETS



20000CA(W33)

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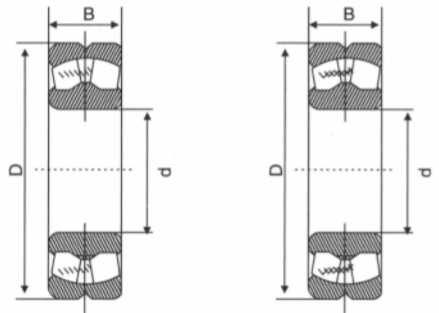
20000MB(W33)

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
23128	140	225	68	1600	2000	630	900	10.5
23128K	140	225	68	1600	2000	630	900	10.5
23130	150	250	80	1400	1800	830	1200	16
23130K	150	250	80	1400	1800	830	1200	16
23132	160	270	86	1300	1700	980	1370	20.5
23132K	160	270	86	1300	1700	980	1370	20.5
23134	170	280	88	1200	1600	1040	1500	22
23134K	170	280	88	1200	1600	1040	1500	22
23136	180	300	98	1100	1500	1200	1760	28
23136K	180	300	98	1100	1500	1200	1760	28
23138	190	320	104	1000	1400	1370	2080	35
23138K	190	320	104	1000	1400	1370	2080	35
23140	200	340	112	950	1300	1600	2360	43
23140K	200	340	112	950	1300	1600	2360	43
23220	100	180	60	1700	2200	414	600	6.7
23220K	100	180	60	1700	2200	414	600	6.7
23222	110	200	70	1600	2000	518	765	9.7
23222K	110	200	70	1600	2000	518	765	9.7
23224	120	215	76	1500	1900	610	930	12
23224K	120	215	76	1500	1900	610	930	12

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
23226	130	230	80	1300	1700	690	1060	14
23226K	130	230	80	1300	1700	690	1060	14
23228	140	250	88	1200	1600	799	1250	18.5
23228K	140	250	88	1200	1600	799	1250	18.5
23230	150	270	96	1100	1500	937	1460	24
23230K	150	270	96	1100	1500	937	1460	24
23232	160	290	104	1000	1400	1070	1660	30
23232K	160	290	104	1000	1400	1070	1660	30
23234	170	310	110	950	1300	1220	1930	36.5
23234K	170	310	110	950	1300	1220	1930	36.5
23236	180	320	112	900	1200	1290	2120	39
23236K	180	320	112	900	1200	1290	2120	39
23238	190	340	120	850	1100	1460	2400	47.5
23238K	190	340	120	850	1100	1460	2400	47.5
23240	200	360	128	850	1100	1610	2700	57
23240K	200	360	128	850	1100	1610	2700	57
23244	220	400	144	750	950	2070	3450	79.5
23244K	220	400	144	750	950	2070	3450	79.5
23248	240	440	160	670	850	2530	4300	110
23248K	240	440	160	670	850	2530	4300	110

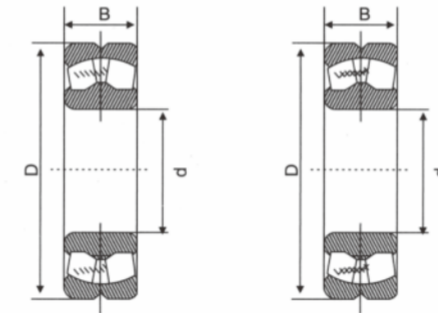
SPHERICAL ROLLER

BEARINGS DATA SHEETS



20000CA(W33)

20000MB(W33)



20000CA(W33)

20000MB(W33)

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
24020	100	160	50	1700	2100	285	415	3.15
24020K	100	160	50	1700	2100	285	415	3.15
24022	110	170	60	1650	2050	415	620	5
24022K	110	170	60	1650	2050	415	620	5
24024	120	180	60	1600	2000	430	670	5.45
24024K	120	180	60	1600	2000	430	670	5.45
24026	130	200	69	1500	1900	540	815	8.05
24026K	130	200	69	1500	1900	540	815	8.05
24028	140	210	69	1400	1800	570	900	8.55
24028K	140	210	69	1400	1800	570	900	8.55
24030	150	225	75	1300	1700	655	1040	10.5
24030K	150	225	75	1300	1700	655	1040	10.5
24032	160	240	80	1100	1500	750	1200	13
24032K	160	240	80	1100	1500	750	1200	13
24034	170	260	90	1000	1400	900	1460	17.5
24034K	170	260	90	1000	1400	900	1460	17.5
24036	180	280	100	950	1300	1060	1730	23
24036K	180	280	100	950	1300	1060	1730	23
24038	190	290	100	950	1300	1120	1800	24.5
24038K	190	290	100	950	1300	1120	1800	24.5
24040	200	310	109	900	1200	1200	2120	31
24040K	200	310	109	900	1200	1200	2120	31

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
24120	100	165	65	1000	1400	455	640	5.65
24120K	100	165	65	1000	1400	455	640	5.65
24122	110	180	69	1000	1400	520	750	7.1
24122K	110	180	69	1000	1400	520	750	7.1
24124	120	200	80	900	1200	655	950	10.3
24124K	120	200	80	900	1200	655	950	10.3
24126	130	210	80	900	1200	580	1000	11
24126K	130	210	80	900	1200	580	1000	11
24128	140	225	85	850	1100	765	1160	13.5
24128K	140	225	85	850	1100	765	1160	13.5
24130	150	250	100	500	1000	1020	1530	20
24130K	150	250	100	500	1000	1020	1530	20
24132	160	270	109	700	900	1180	1760	25
24132K	160	270	109	700	900	1180	1760	25
24134	170	280	109	670	850	1220	1860	27.5
24134K	170	280	109	670	850	1220	1860	27.5
24136	180	300	118	630	800	1400	2160	34.5
24136K	180	300	118	630	800	1400	2160	34.5
24138	190	320	128	600	750	1500	2500	43
24138K	190	320	128	600	750	1500	2500	43

DESIGN

ATTRIBUTES

High Quality Steel > Ultra clean steel to extend bearing life by up to 80%

Advanced Grease Technology
> HBSL lubricants that can extend grease life and performance.

High Grade Balls > Quiet and smooth operation even at high speed.

Super Finished Raceways
> Specially honed to minimise noise and improve lubricant distribution and life.

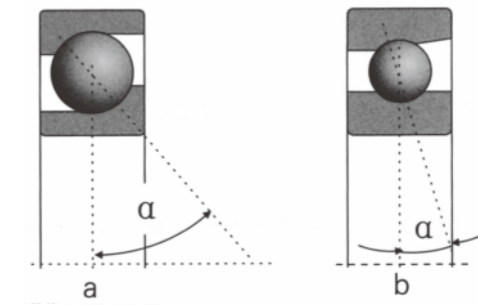
Contact Angle
> Offer products in 15, 25 and 40 degree angles.

Cages
> Available in range of Polyamide, steel and brass cage assemblies.



CONTACT ANGLES (α)

HBSL single row angular contact ball bearings (series 72 and 73) are produced with several different contact angles, which are identified by various suffixes.

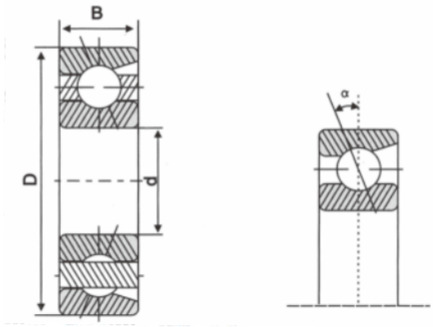


Suffix	Contact angle α
B	40°
C	15°
AC	25°

TYPICAL APPLICATIONS

Gearboxes
Agricultural machinery
Pumps and compressors
Ventilators
Machine tools Etc.

ANGULAR CONTACT BALL BEARINGS DATA SHEETS

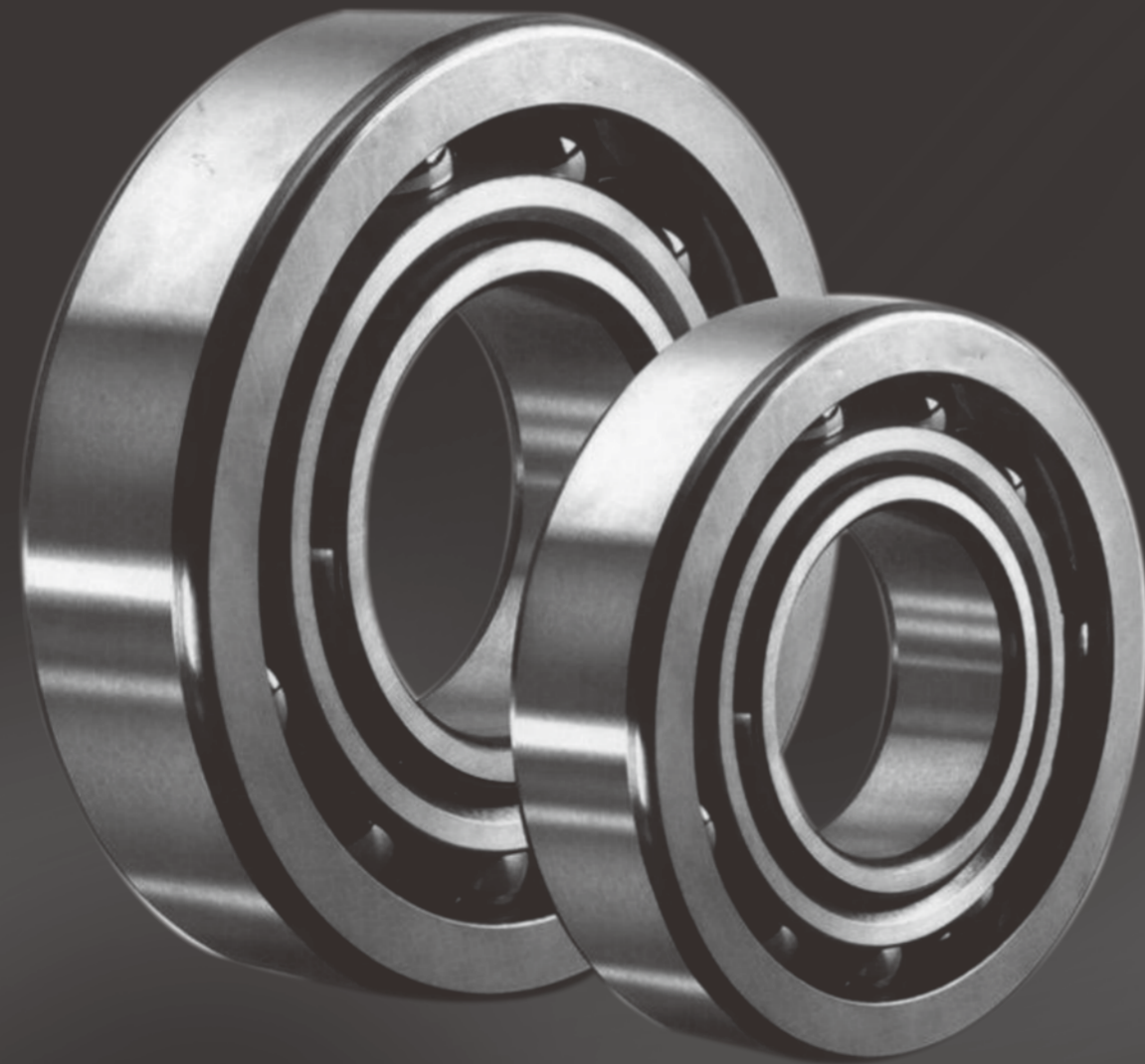


C (AC) Type

7000 (C, AC, B) Type

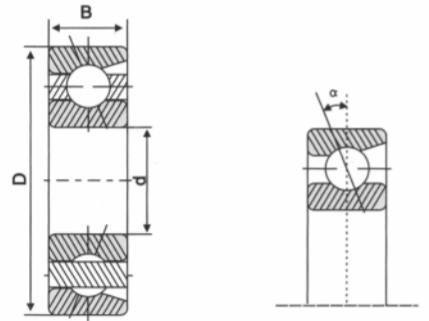
C Type : $\alpha=15^\circ$
AC Type : $\alpha=25^\circ$
B Type : $\alpha=40^\circ$

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7000AC	10	26	8	19000	28000	4.75	2.12	0.018
7000C	10	26	8	19000	28000	4.92	2.25	0.018
7001AC	12	28	8	18000	26000	5.2	2.55	0.02
7001C	12	28	8	18000	26000	5.42	2.65	0.02
7002AC	15	32	9	17000	24000	5.95	3.25	0.028
7002C	15	32	9	17000	24000	6.25	3.42	0.028
7003AC	17	35	10	16000	22000	6.3	3.68	0.036
7003C	17	35	10	16000	22000	6.6	3.85	0.036
7004AC	20	42	12	14000	19000	10	5.78	0.064
7004C	20	42	12	14000	19000	10.5	6.08	0.064
7005AC	25	47	12	12000	17000	11.2	7.08	0.074
7005C	25	47	12	12000	17000	11.5	7.45	0.074
7006AC	30	55	13	9500	14000	14.5	9.85	0.11
7006C	30	55	13	9500	14000	15.2	10.2	0.11
7007AC	35	62	14	8500	12000	18.5	13.5	0.15
7007C	40	68	15	15000	21000	16	12.9	0.21
7009AC	45	75	16	14000	19000	19.87	16.36	0.24
7009C	45	75	16	14000	19000	19.87	16.36	0.24



HBSL
せいみつじくうけ

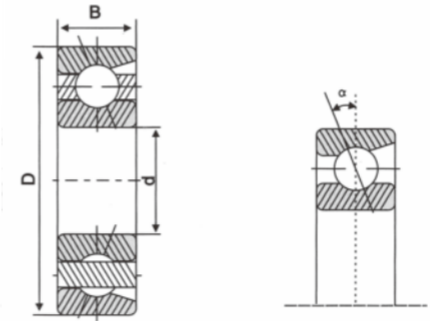
ANGULAR CONTACT BALL BEARINGS DATA SHEETS



C (AC) Type

7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$



C (AC) Type

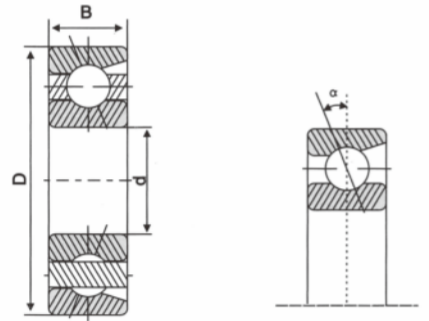
7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$

BEARING NO.	BOUNDARY 外形尺寸 DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7010C	50	80	16	13000	17000	21	19	0.26
7010AC	50	80	16	13000	17000	21	19	0.26
7011C	55	90	18	12000	15000	26.1	22.6	0.36
7011AC	55	90	18	12000	15000	26.1	22.6	0.36
7012C	60	95	18	11000	14000	32.5	27	0.45
7012AC	60	95	18	11000	14000	32.5	27	0.45
7013C	65	100	18	9900	13000	35.2	30	0.5
7013AC	65	100	18	9900	13000	35.2	30	0.5
7014C	70	110	20	9200	12000	41.1	37.3	0.59
7014AC	70	110	20	9200	12000	41.1	37.3	0.59
7015C	75	115	20	8600	11000	42.5	40.7	0.69
7015AC	75	115	20	8600	11000	42.5	40.7	0.69
7016C	80	125	22	8000	11000	53.4	50.6	0.93
7016AC	80	125	22	8000	11000	53.4	50.6	0.93
7017C	85	130	22	7600	13000	54.6	53.7	0.95
7017AC	85	130	22	7600	10000	54.6	53.7	0.95
7018C	90	140	24	7100	9500	68.6	65.4	0.96
7018AC	90	140	24	7100	9500	68.6	65.4	0.96
7019C	95	145	24	6800	9000	73.5	73	1.17

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7019AC	95	145	24	6800	9000	73.5	73	1.17
7020C	100	150	24	6400	8600	75.5	77	1.25
7020AC	100	150	24	6400	8600	75.5	77	1.25
7021C	105	160	26	6100	8100	88	89.5	1.53
7021AC	105	160	26	6100	8100	88	89.5	1.53
7022C	110	170	28	5800	7700	101	101	1.91
7022AC	110	170	28	5800	7700	101	101	1.91
7024C	120	180	28	5300	7100	103	108	2.04
7024AC	120	180	28	5300	7100	103	108	2.04
7026C	130	200	33	4900	6500	129	137	3.73
7026AC	130	200	33	4900	6500	129	137	3.73
7028C	140	210	33	4500	6000	132	145	3.96
7028AC	140	210	33	4500	6000	132	145	3.96
7030C	150	225	35	4200	5600	151	168	4.82
7030AC	150	225	35	4200	5600	151	168	4.82
7200AC	10	30	9	18000	26000	5.58	2.82	0.03
7200C	10	30	9	18000	26000	5.82	2.95	0.03
7201AC	12	32	10	17000	24000	7.1	3.35	0.035
7201C	12	32	10	17000	24000	7.35	3.52	0.035
7202AC	15	35	11	16000	22000	8.35	4.4	0.043
7202C	15	35	11	16000	22000	8.68	4.62	0.043
7203AC	17	40	12	15000	20000	10.5	5.65	0.062
7203C	17	40	12	15000	20000	10.8	5.65	0.062

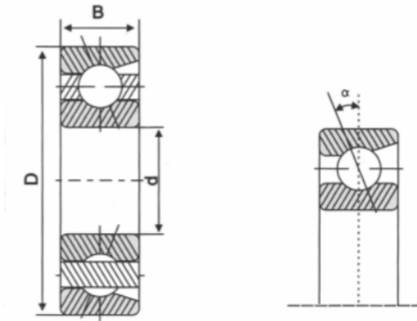
ANGULAR CONTACT BALL BEARINGS DATA SHEETS



C (AC) Type

7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$



C (AC) Type

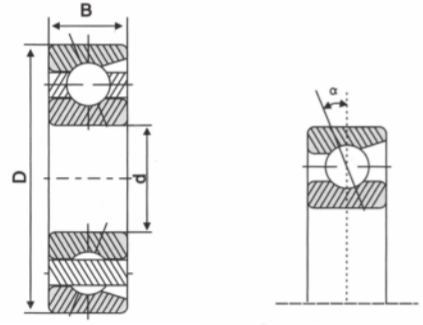
7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7204C	20	47	14	25000	34000	15	8.6	0.1
7204AC	20	47	14	25000	34000	15	8.6	0.1
7204B	20	47	14	25000	34000	13.31	7.65	0.12
7205C	25	52	15	21000	28000	16.2	10.3	0.13
7205AC	25	52	15	21000	28000	16.2	10.3	0.13
7205B	25	52	15	21000	28000	14.03	8.63	0.14
7206C	30	62	16	18000	24000	16.94	12.14	0.2
7204AC	20	47	14	13000	18000	14	7.82	0.1
7204B	20	47	14	13000	18000	14	7.85	0.11
7204C	20	47	14	13000	18000	14.5	8.22	0.1
7205AC	25	52	15	11000	16000	15.8	9.88	0.12
7205B	25	52	15	9500	14000	15.8	9.45	0.13
7205C	25	52	15	11000	16000	16.5	10.5	0.12
7206AC	30	62	16	18000	24000	16.94	12.14	0.2
7206AC/P5	30	62	16	18000	24000	16.94	12.14	0.2
7206B	30	62	16	18000	24000	19.48	12.43	0.22
7207C	35	72	17	16000	21000	22.36	16.52	0.3

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7207AC	35	72	17	16000	21000	22.36	16.52	0.3
7207AC/P5	35	72	17	16000	21000	22.36	16.52	0.3
7207B	35	72	17	16000	21000	25.7	16.91	0.32
7208C	40	80	18	14000	19000	27.08	20.87	0.37
7208AC	40	80	18	14000	19000	27.08	20.87	0.37
7208AC/P5	40	80	18	14000	19000	27.08	20.87	0.37
7208B	40	80	18	14000	19000	30.98	21.8	0.41
7209C	45	85	19	13000	17000	28.34	22.47	0.41
7209AC	45	85	19	13000	17000	28.34	22.47	0.41
7209AC/P5	45	85	19	13000	17000	28.34	22.47	0.46
7209B	45	85	19	13000	17000	32.28	23.78	0.46
7210C	50	90	20	12000	15000	32.91	26.83	0.45
7210AC	50	90	20	12000	15000	32.91	26.83	0.45
7210AC/P5	50	90	20	12000	15000	32.91	26.83	0.45
7210B	50	90	20	12000	15000	35.74	26.64	0.6
7211C	55	100	21	11000	14000	40.71	33.96	0.6
7211AC	55	100	21	11000	14000	40.71	33.96	0.6
7211B	55	100	21	11000	14000	41.19	33.72	0.69

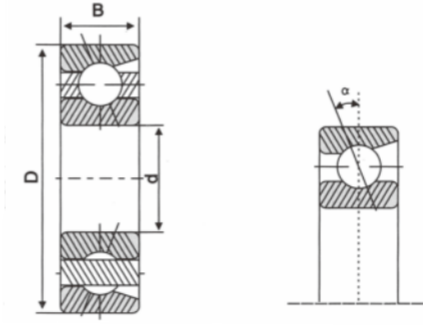
ANGULAR CONTACT BALL BEARINGS DATA SHEETS



C (AC) Type

7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$



C (AC) Type

7000 (C, AC, B) Type

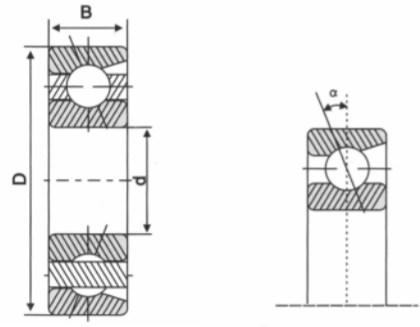
C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7212C	60	110	22	9700	13000	46.9	40.53	0.81
7212AC	60	110	22	9700	13000	46.9	40.53	0.81
7212B	60	110	22	9700	13000	50.99	40.25	0.9
7213C	65	120	23	9000	12000	53.67	46.22	1.01
7213AC	65	120	23	9000	12000	53.67	46.22	1.01
7213B	65	120	23	9000	12000	61.06	49.17	1.13
7214C	70	125	24	8300	11000	56.04	49.52	1.08
7214AC	70	125	24	8300	11000	56.04	49.52	1.08
7214B	70	125	24	8300	11000	66.4	53.9	1.05
7215C	75	130	25	7800	10000	60.91	54.34	1.68
7215AC	75	130	25	7800	10000	60.91	54.34	1.68
7215B	75	130	25	7800	10000	68.61	58.3	1.36
7216C	80	140	26	7300	9700	68.81	63.35	1.48
7216AC	80	140	26	7300	9700	68.81	63.35	1.48
7216B	80	140	26	7300	9700	74.32	63.73	1.65
7217C	85	150	28	6900	9100	77.5	72.6	1.88
7217AC	85	150	28	6900	9100	77.5	72.6	1.88
7217B	85	150	28	6900	9100	86.36	75.29	2.05
7218C	90	160	30	6500	8600	89.91	82.6	2.26
7218AC	90	160	30	6500	8600	89.91	82.6	2.26
7218B	90	160	30	6500	8600	102.49	87.4	2.5
7219C	95	170	32	6100	8100	96.5	88.8	2.78

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7219AC	95	170	32	6100	8100	96.5	88.8	2.78
7219B	95	170	32	6100	8100	117.69	101.93	3.1
7220C	100	180	34	5800	7700	111.2	96.8	3.32
7220AC	100	180	34	5800	7700	111.2	96.8	3.32
7220B	100	180	34	5800	7700	130.33	114.16	3.71
7221C	105	190	36	5500	7300	119.2	105.6	3.95
7221AC	105	190	36	5500	7300	119.2	105.6	3.95
7222C	110	200	38	5200	6900	129.6	118.4	4.65
7222AC	110	200	38	5200	6900	129.6	118.4	4.65
7224C	120	215	40	4800	6400	139.2	132.8	5.49
7224AC	120	215	40	4800	6400	139.2	132.8	5.49
7226C	130	230	40	4400	5800	156.8	156.8	6.21
7226AC	130	230	40	4400	5800	156.8	156.8	6.21
7228C	140	250	42	4000	5300	174.4	187.2	7.76
7228AC	140	250	42	4000	5300	174.4	187.2	7.76
7230C	150	270	45	3700	5000	248	280	9.75
7230AC	150	270	45	3700	5000	248	280	9.75
7230B	150	270	45	3700	5000	225	254	10.8
7232C	160	290	48	2400	2600	230	263	12.1
7232AC	160	290	48	2400	2600	230	263	12.1
7232B	160	290	48	2400	2600	238	279	13.6
7234C	170	310	52	2400	2400	272	331	15.1

ANGULAR CONTACT BALL

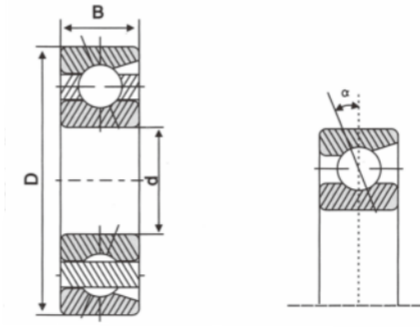
BEARINGS DATA SHEETS



C (AC) Type

7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$



C (AC) Type

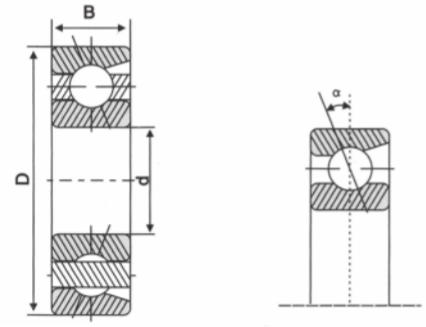
7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7234AC	170	310	52	2400	2400	272	331	15.1
7234B	170	310	52	2400	2400	245	300	16.7
7236C	180	320	52	2200	2400	303	390	18.1
7236AC	180	320	52	2200	2400	303	390	18.1
7236B	180	320	52	2200	2400	265	329	17.6
7238C	190	340	55	2000	2200	303	390	18.8
7238AC	190	340	55	2000	2200	303	390	18.8
7238B	190	340	55	2000	2200	273	353	21.9
7240C	200	360	58	1800	2000	324	423	22.4
7240AC	200	360	58	1800	2000	324	423	22.4
7240B	200	360	58	1800	2000	292	384	25
7244C	220	400	65	1800	1800	350	460	33
7244AC	220	400	65	1800	1800	350	460	33
7244B	220	400	65	1800	1800	390	560	35.2
7303C	17	47	14	26000	35000	13.8	7.3	0.12
7303AC	17	47	14	26000	35000	13.8	7.3	0.12
7303B	17	47	14	26000	35000	13.79	7.2	0.12
7304C	20	52	15	23000	31000	16.2	8.7	0.15
7304AC	20	52	15	23000	31000	16.2	8.7	0.15
7304B	20	52	15	23000	31000	17.33	9.73	0.16
7305C	25	62	17	19000	26000	22.9	13.3	0.24
7305AC	25	62	17	19000	26000	22.9	13.3	0.24

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7305B	25	62	17	19000	26000	24.33	14.18	0.26
7306C	30	72	19	16000	22000	25.2	18.5	0.35
7307C	35	80	21	7000	9500	38.2	24.5	0.51
7308C	40	90	23	6300	8500	46.2	30.5	0.67
7309C	45	100	25	6000	8000	59.5	39.8	0.9
7310AC	50	110	27	10000	14000	55.5	44.5	1.08
7310B	50	110	27	10000	14000	64.33	44.03	1.23
7311C	55	120	29	9400	13000	67.2	56.8	1.39
7311AC	55	120	29	9400	13000	67.2	56.8	1.39
7311B	55	120	29	9400	13000	74.3	51.68	1.56
7312C	60	130	31	8700	12000	77.8	65.8	1.71
72312AC	60	130	31	8700	12000	77.8	65.8	1.71
7312B	60	130	31	8700	12000	89.97	65.38	1.97
7313C	65	140	33	8100	11000	87.3	74.6	2.09
7313AC	65	140	33	8100	11000	87.3	74.6	2.09
7313B	65	140	33	8100	11000	103.32	76.24	2.49
7314C	70	150	35	7500	10000	98.5	86	2.67
7314AC	70	150	35	7500	10000	98.5	86	2.67
7314B	70	150	35	7500	10000	114.42	85.4	3.01
7315C	75	160	37	7000	9300	108	97	3.1
7315AC	75	160	37	7000	9300	108	97	3.1
7315B	75	160	37	7000	9300	124.56	96.41	3.59

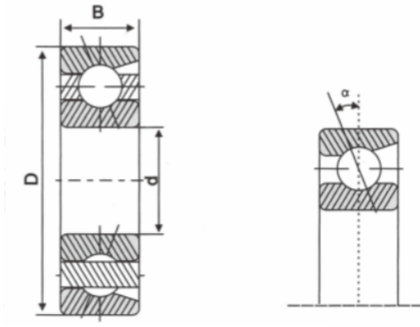
ANGULAR CONTACT BALL BEARINGS DATA SHEETS



C (AC) Type

7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$



C (AC) Type

7000 (C, AC, B) Type

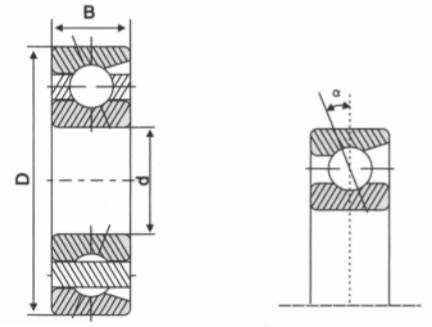
C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7316C	80	170	39	6500	8700	115	106	3.97
7316AC	80	170	39	6500	8700	115	106	3.97
7316B	80	170	39	6500	8700	134.93	108.08	4.34
7317C	85	180	41	6200	8200	129	118	4.84
7317AC	85	180	41	6200	8200	129	118	4.84
7317B	85	180	41	6200	8200	145.54	120.43	5.06
7318C	90	190	43	5800	7800	148	124	5.3
7318AC	90	190	43	5800	7800	148	124	5.3
7318B	90	190	43	5800	7800	156.11	136.22	5.87
7319C	95	200	45	5500	7300	158	137	6.12
7319AC	95	200	45	5500	7300	158	137	6.12
7319B	95	200	45	5500	7300	172.11	153.06	6.79
7320C	100	215	47	5200	6900	168	148	7.53
7320AC	100	215	47	5200	6900	168	148	7.53
7320B	100	215	47	5200	6900	190.17	176.46	8.5
7321C	105	225	49	3400	3600	208	193	8.62
7321AC	105	225	49	3400	3600	208	193	8.62
7321B	105	225	49	3400	3600	191	177	9.12

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7322C	110	240	50	3200	3200	232	226	10.1
7322AC	110	240	50	3200	3200	232	226	10.1
7322B	110	240	50	3200	3200	213	208	10.7
7324C	120	260	55	3000	3200	246	252	12.6
7324AC	120	260	55	3000	3200	246	252	12.6
7324B	120	260	55	3000	3200	225	231	13.8
7326C	130	280	58	2800	2800	301	329	15.4
7326AC	130	280	58	2800	2800	301	329	15.5
7326B	130	280	58	2800	2800	250	268	17.1
7328C	140	300	62	2600	2600	329	374	18.8
7328AC	140	300	62	2600	2600	329	374	18.8
7328B	140	300	62	2600	2600	302	344	21.3
7330C	150	320	65	2400	2400	348	414	22.4
7330AC	150	320	65	2400	2400	348	414	22.4
7330B	150	320	65	2400	2400	318	380	25
7332C	160	340	68	2200	2200	365	455	26.4
7332AC	160	340	68	2200	2200	365	455	26.4
7332B	160	340	68	2200	2200	332	416	28
7334C	170	360	72	2000	2200	389	485	31.2

ANGULAR CONTACT BALL

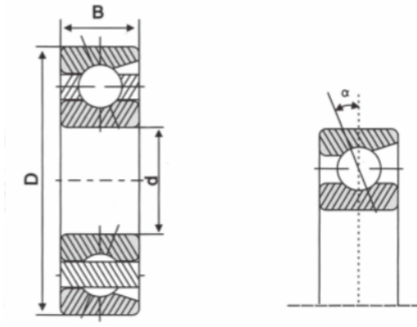
BEARINGS DATA SHEETS



C (AC) Type

7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$



C (AC) Type

7000 (C, AC, B) Type

C Type : $\alpha=15^\circ$
 AC Type : $\alpha=25^\circ$
 B Type : $\alpha=40^\circ$

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7334AC	170	360	72	2000	2200	389	485	31.2
7334B	170	360	72	2000	2200	355	444	34.6
7336C	180	380	75	2000	2000	409	534	40
7336AC	180	380	75	2000	2000	409	534	40
7336B	180	380	75	2000	2000	373	488	40
7338C	190	400	78	1900	1900	450	598	45.5
7338AC	190	400	78	1900	1900	450	598	45.5
7338B	190	400	78	1900	1900	411	548	48.3
7406AC	30	90	23	7300	9700	47.6	28.4	0.68
7406B	30	90	23	7300	9700	51.24	28.91	0.8
7407AC	35	100	25	6500	8600	60.4	37	0.95
7407B	35	100	25	6500	8600	61.07	35.13	1.05
7408AC	40	110	27	5900	7900	69.9	43.5	1.23
7408B	40	110	27	5900	7900	71.82	46.28	1.39
7409AC	45	120	29	5400	7100	79.4	53.8	1.55
7409B	45	125	29	5400	7100	84.6	55.51	1.79
7410AC	50	130	31	4900	6600	97.4	65.3	1.92
7410B	50	130	31	4900	6600	101.15	67.71	2.2
7411AC	55	140	33	4500	6400	117.5	79.1	2.22
7411B	55	140	33	4500	6400	110.1	76.4	3.32

BEARING NO.	BOUNDARY DIMENSIONS (MM)			SPEED RATING (IPM)		BASIC LOAD RATING (KN)		WEIGHT (KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
7412AC	60	150	35	4300	6200	122.5	85.3	2.7
7412B	60	150	35	4300	6200	199.3	85.7	4.02
7413AC	65	160	37	4000	5900	133.1	96.5	3.22
7413B	65	160	37	4000	5900	128.7	95.5	4.83
7414AC	70	180	42	3800	5700	156.3	120.7	4.75
7414B	70	180	42	3800	5700	152.2	121.3	7.08
7415AC	75	190	45	3600	5500	172.8	139.2	5.59
7415B	75	190	45	3600	5500	168.1	140	8.4
7416AC	80	200	48	3100	5200	183.4	151.6	6.6
7416B	80	200	48	3100	5200	178.5	152.3	10
7417AC	85	210	52	2900	4900	196.3	167.1	7.71
7417B	85	210	52	2900	4900	191	168	11.9
7418AC	90	225	54	2600	4500	216.2	191.8	9.36
7418B	90	225	54	2600	4500	210.4	192.8	14.17
7419AC	95	240	55	2400	4300	233	214.7	11.06
7419B	95	240	55	2400	4300	225.3	212.5	16.46
7420AC	100	250	58	2100	4000	250.6	236	12.5
7420B	100	250	58	2100	4000	244	238	18.8
7422AC	110	280	65	1800	3700	288.3	291	17.9
7422B	110	280	65	1800	3700	278	288	26.8

DESIGN

ATTRIBUTES

- > Suitable HBSLr high radial loads and thrust loads(in one direction)
- > Take up tilting moments
- > When in pairs,can take on thrust loads in both directions



CAGE

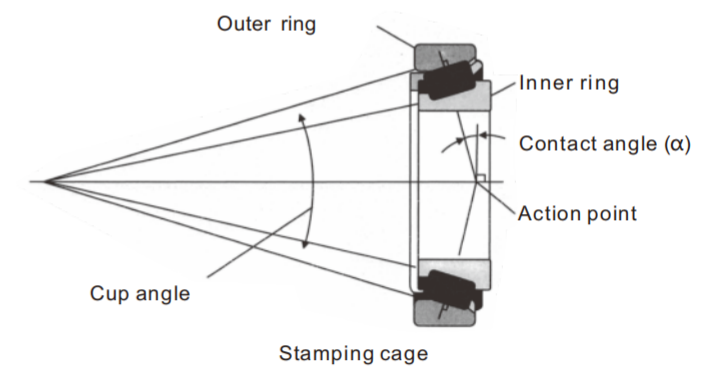
Tapered roller bearing generally use die stamping steel plate basket cage,also can use machined solid cage if its dimension is bigger.

ALLOWABLE ANGLE ERROR

Tapered roller bearing generally is in admissibility inclination between axis and case shell hole.If there is,can't be bigger than2'.

CLEARANCE

Only after arrangement single row conical roller bearing could appear clearance, and should be determined after adjusted by another right-about localization bearing. The clearance of double row and HBSLur row conical roller bearing can be provided with relevant standard according to the requirement of the customers.

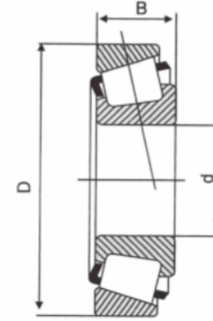




HBSL
せいみつじくうけ

TAPERED ROLLER

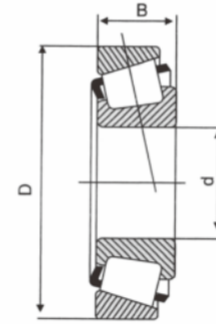
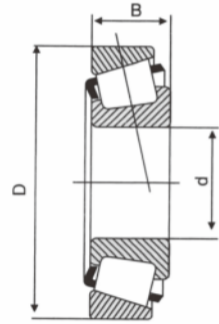
BEARINGS DATA SHEETS



BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
30203	17	40	13.25	9000	12000	20.8	21.8	0.079
30204	20	42	15	8500	11000	25.0	28.2	0.095
30205	25	47	15	7500	9500	28.0	34.0	0.11
30206	30	62	16	6300	8400	43.3	43.3	0.23
30207	35	72	17	5500	7400	54.2	54.2	0.33
30208	40	80	18	4900	6600	63	63	0.42
30209	45	85	19	4400	5900	67.9	67.9	0.47
30210	50	90	20	4000	5300	73.3	73.3	0.52
30211	55	100	21	3600	4900	90.8	90.8	0.71
30212	60	110	22	3400	4500	103.3	103.3	0.9
30213	65	120	23	3100	4200	120.6	120.6	1.13
30214	70	125	24	2900	3900	132.3	132.3	1.26
30215	75	130	25	2700	3600	138.4	138.4	1.36
30216	80	140	26	2500	3400	160	160	1.67
30217	85	150	28	2400	3200	178	178	2.06
30218	90	160	30	2200	3000	200	200	2.54
30219	95	170	32	2100	2800	227	227	3.04
30220	100	180	34	2000	2700	254	254	3.72
30221	105	190	36	1900	2500	285	285	4.38
30222	110	200	38	1800	2400	315	315	5.21
30224	120	215	40	1700	2200	337	337	6.2
30226	130	230	40	1500	2000	366	366	6.94
30228	140	250	42	1400	1900	409	409	8.73
30230	150	270	45	1300	1700	451	451	10.8
30232	160	290	48	1200	1600	512	512	13.3

TAPERED ROLLER

BEARINGS DATA SHEETS

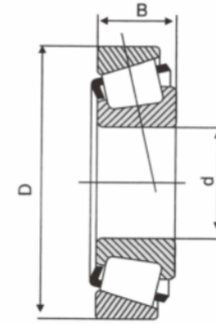
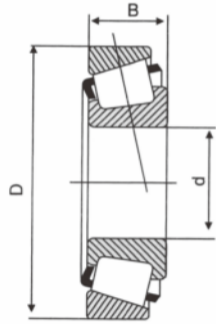


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
30234	170	310	52	1100	1500	591	866	16.6
30236	180	320	52	1100	1400	610	912	17.3
30238	190	340	55	1000	1300	715	1000	20.8
30240	200	360	58	950	1300	675	990	15.4
30244	220	400	72	950	1300	990	1400	40
30306	30	72	19	5700	7600	59	63.1	0.38
30307	35	80	21	5000	6600	75.3	82.6	0.51
30308	40	90	23	4400	5900	90.9	107.6	0.74
30309	450	100	25	4000	5300	108.9	129.8	0.98
30310	50	110	27	3600	4800	130.1	157	1.28
30311	55	120	29	3300	4400	153	188	1.63
30312	60	130	31	3000	4000	171	210	1.99
30313	65	140	33	2800	3700	196	242	2.44
30314	70	150	35	2600	3500	219	272	2.98
30315	75	160	37	2400	3200	253	319	3.57
30316	80	170	39	2300	3000	279	353	4.27
30317	85	180	41	2100	2900	305	388	4.96
30318	90	190	43	2000	2700	342	441	5.8
30319	95	200	45	1900	2500	369	478	6.8
30320	100	215	47	1800	2400	406	526	8.22
30321	105	225	49	1700	2300	433	562	9.38
30322	110	240	50	1600	2200	473	612	11

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
30324	120	260	55	1500	2000	561	710	14
30326	130	280	58	1300	1800	627	800	17
30328	140	300	62	1200	1700	737	950	21
30330	150	320	65	1100	1600	825	1060	28.52
30332	160	340	68	1000	1500	913	1180	29
30334	170	360	72	950	1400	1020	1340	35
32206	30	62	20	6300	8400	51.8	63.7	0.28
32207	35	72	23	5500	7400	70.6	89.5	0.44
32208	40	80	23	4500	6000	77.9	97.2	0.55
32209	45	85	23	4200	5500	80.7	104	0.6
32210	50	90	23	3800	5000	82.8	107.6	0.64
32211	55	100	25	3300	4500	108	142.3	0.87
32212	60	110	28	3200	4200	133	180	1.1
32213	65	120	31	2800	4000	161	222	1.5
32214	70	125	31	2700	3800	169	237	1.68
32215	75	130	31	2500	3500	170	242	1.7
32216	80	140	33	2300	3200	198	279	2.1
32216/P6	80	140	33	2300	3200	198	279	2.1
32217	85	150	36	2200	3200	227	324	2.7
32218	90	160	40	2000	3000	270	396	3.4
32219	95	170	43	1900	2800	303	448	4.3
32220	100	180	46	1800	2600	341	512	5.1

TAPERED ROLLER

BEARINGS DATA SHEETS 圆锥滚子轴承数据表

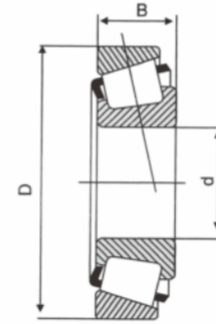
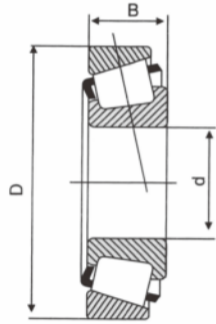


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
32221	105	190	50	1700	2500	381	579	6.2
32222	110	200	58	1700	2400	432	666	7.1
32224	120	215	58	1600	2200	468	695	9.15
32226	130	230	64	1500	2000	550	830	11.5
32228	140	250	68	1400	1900	644	1000	14.5
32230	150	270	73	1200	1700	737	1140	17.5
32232	160	290	80	1100	1600	880	1400	25.5
32234	170	310	86	1000	1500	1010	1630	28.5
32236	180	320	86	950	1400	1010	1638	29.5
32238	190	340	92	1000	1300	1000	1670	33.3
32240	200	360	98	950	1300	1150	1970	43.6
32244	220	400	108	1100	1500	1610	2700	60
32248	240	440	120	1000	1400	1790	3350	83.5
32306	30	72	27	5700	7600	681.6	96.4	0.56
32307	35	80	18	5000	6600	999	118.3	0.76
32308	40	90	33	4200	5700	115	147	1
32309	45	100	36	3800	5100	145	180	1.4
32310	50	110	40	3400	4600	177	236	1.9
32311	55	120	43	3100	4200	203	271	2.4
32312	60	130	46	2800	3800	226	303	3
32313	65	140	48	2600	3500	260	340	3.6
32314	70	150	51	2400	3300	198	408	4.4

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
32315	75	160	55	2200	3000	345	480	5.3
32316	80	170	58	2100	2800	386	543	6.1
32317	85	180	60	1900	2700	421	592	7.1
32318	90	190	64	1800	2500	478	683	8.5
32319	95	200	67	1700	2300	516	737	10.1
32320	100	215	73	1600	2100	600	872	13.01
32322	110	240	80	1400	1900	627	830	17
32324	120	260	86	1300	1800	792	1120	21.5
32326	130	280	93	1100	1600	858	1180	30.5
32330	150	320	114	950	1400	1170	1660	46
32004	20	42	15	8500	11000	25.1	28.2	0.09
32005	25	47	15	7500	9500	28	34.1	0.11
32006	30	55	17	6300	8000	35.8	46.8	0.17
32006/P6	30	55	17	6300	8000	35.8	46.8	0.17
32007	35	62	18	6100	8100	41.5	52.5	0.22
32008	40	68	19	5300	7100	50	65	0.27
32009	45	75	20	4800	6400	57.5	76.5	0.35
32010	50	80	20	4400	5800	62.5	88	0.37
32011	55	90	23	4000	5400	80.5	118	0.56
32012	60	95	23	3700	4900	82	123	0.58
32013	65	100	23	3400	4600	83	128	0.63
32014	70	110	25	3200	4200	105	160	0.85

TAPERED ROLLER

BEARINGS DATA SHEETS 圆锥滚子轴承数据表

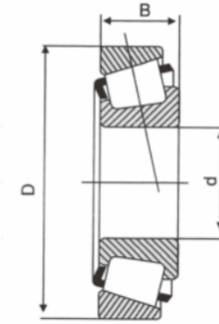
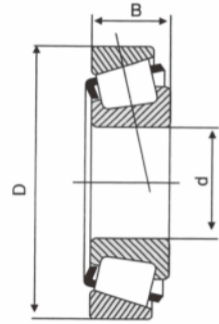


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
32015	75	115	25	3000	4000	106	167	0.91
32016	80	125	29	2800	3700	139	216	1.28
32017	85	130	29	2600	3500	142	224	1.35
32018	90	140	32	2500	3300	168	270	1.79
32019	95	145	32	2300	3100	171	280	1.83
32020	100	150	32	2200	3000	170	281	1.91
32021	105	160	35	2100	2800	201	335	2.42
32022	110	170	38	2000	2700	236	390	3.07
32024	120	180	38	1800	2500	245	420	3.25
32026	130	200	45	1700	220	320	545	4.96
32028	140	210	45	1600	2100	330	580	5.28
32030	150	225	48	1400	1900	370	655	6.37
32032	160	240	51	1400	1800	435	790	7.8
32034	170	260	57	1300	1700	500	895	10.5
32036	180	280	64	1200	1600	645	1170	14.5
32038	190	290	64	1100	1500	655	1210	15.1
32040	200	310	70	1100	1400	800	1470	19.3
32044	220	340	76	960	1300	920	1692	25
32048	240	360	76	870	1200	930	1760	26.8
32008	40	68	22	5300	7100	59.5	82.5	0.31
32009	45	75	24	4800	6400	66	83.5	0.4
33010	50	80	24	4400	5800	69.5	103	0.43

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
33011	55	90	27	4000	5400	91.5	138	0.64
33012	60	95	27	3700	4900	93.5	145	0.68
33013	65	100	27	3400	4600	97.5	156	0.73
33014	70	110	31	3200	4200	127	204	1.07
33015	75	115	31	3000	4000	129	212	1.13
33016	80	125	36	2800	3700	173	284	1.6
33017	85	130	36	2600	3500	176	296	1.7
33018	90	140	39	2500	3300	215	360	2.18
33019	95	145	39	2300	3100	219	375	1.27
33020	100	150	39	2200	3000	224	390	2.37
33021	105	160	43	2100	2800	245	420	3
33022	110	170	47	2000	2700	288	500	3.8
33024	120	180	48	2600	3400	292	540	4.2
33030	150	225	59	2000	2600	457	865	8.15
33108	40	75	26	5200	6900	79.5	103	0.49
33109	45	80	26	4700	6200	84.5	115	0.54
33110	50	85	26	4200	5600	86.5	121	0.58
33111	55	95	30	3900	5200	111	155	0.85
33112	60	100	30	3600	4700	113	164	0.91
33113	65	110	34	3300	4400	144	211	1.28
33114	70	120	37	4000	4400	172	250	1.7
33115	75	125	37	3800	4400	176	265	1.8

TAPERED ROLLER

BEARINGS DATA SHEETS 圆锥滚子轴承数据表



BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
33116	80	130	37	3600	4800	179	280	1.9
33117	85	140	41	3400	4500	220	340	2.45
33118	90	150	45	3000	4300	251	390	3.1
33120	100	165	52	2800	4100	325	523	4.29
33121	105	175	56	2600	3800	360	607	5.33
33122	110	180	56	2600	3400	369	630	5.55
33124	120	200	62	2400	3200	462	785	7.73
33207	35	72	28	5500	7400	87.5	109	0.53
33208	40	80	32	4900	6600	103	132	0.73
33209	45	85	32	4400	5900	107	141	0.78
33210	50	90	32	4000	5300	115	158	0.85
33211	55	100	35	3600	4900	138	188	1.15
33212	60	110	38	3400	4500	167	234	1.55
33213	65	120	41	3100	4200	195	265	1.98
33214	70	125	41	2900	3900	201	282	2.1
33215	75	130	41	2700	3600	208	298	2.2
33216	80	140	46	2500	3400	250	365	2.92
31308	40	90	23	5600	7500	85	81.5	0.72
31309	45	100	25	5000	6700	106	102	0.95
31310	50	110	27	4500	6000	122	120	1.2
31311	55	120	29	4300	5600	140	137	1.5
31312	60	130	31	3800	5300	166	166	1.9

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
31313	65	140	33	3600	4800	190	193	2.35
31314	70	150	35	3400	4500	216	220	2.95
31315	75	160	37	3200	4300	240	245	3.5
31316	80	170	39	3000	4000	260	265	4.05
31317	85	180	41	2600	3800	242	285	4.6
31318	90	190	43	2400	3400	264	315	5.9
31319	95	200	45	2400	3400	292	355	6.46
31320	100	215	51	2400	3000	430	465	8.6
31322	110	240	57	1900	2800	457	585	12
31324	120	260	62	1700	2400	539	695	15.5
31326	130	280	66	1600	2400	605	780	18.5

DESIGN

ATTRIBUTES

- > Available in single direction and double direction designs
- > Suitable HBSLr relatively high axial loads
- > Suitable HBSLr low to medium speed ratings

Minimum axial load

> It is necessary to apply some axial load to thrust bearings to prevent slippage between the rolling elements and raceways.



PRELOAD OF THRUST BALL BEARINGS

$$F_{a \min} = \frac{C_{0a}}{100} \left(\frac{n}{N_{\max}} \right)^2$$

$$F_{a \min} = \frac{C_{0a}}{1000}$$

where $F_{a \min}$: Minimum axial load (N) , {kgf}
 C_{0a} : Basic static load rating(N) , {kgf}
 n : Speed (rpm)
 N_{\max} : Limit speed (oil lubrication) (rpm)

Units (μm)

Nominal Bore Dia.		Target shaft Interference	Nominal Outside Dia.		Target Housing Clearance
d(mm)			D(mm)		
over	incl		over	incl	
—	18	0~2	—	18	—
18	30	0~2.5	18	30	2~6
30	50	0~2.5	30	50	2~6
50	80	0~3	50	80	3~8
80	120	0~4	80	120	3~9
120	150	—	120	150	4~12
150	180	—	150	180	4~12
180	250	—	180	250	5~15

TYPICAL APPLICATIONS

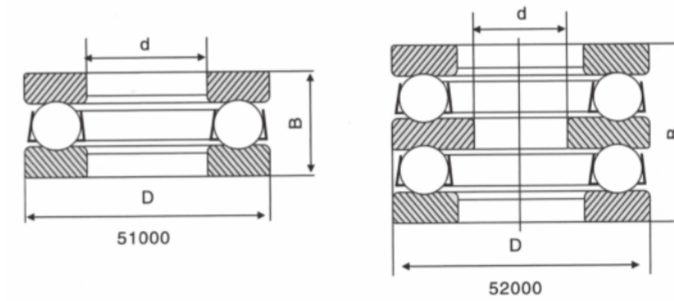
Fluid control valves
Machine tool tables



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THRUST BALL

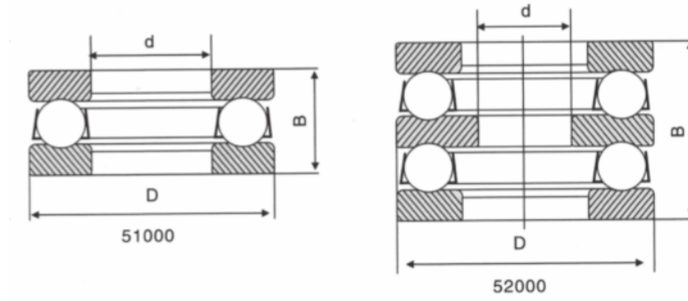
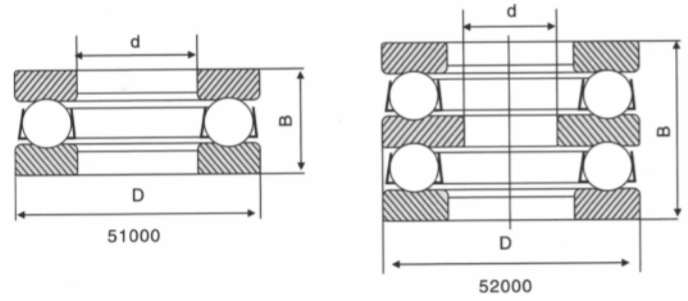
BEARINGS DATA SHEETS



BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
51100	10	24	9	6700	10000	10.1	14	0.019
51101	12	26	9	6700	10000	10.4	15.4	0.021
51102	15	28	9	6300	9500	10.6	16.8	0.024
51103	17	30	9	6000	9000	11.4	19.5	0.025
51104	20	35	10	5300	8000	15.1	26.5	0.037
51105	25	42	11	4800	7100	19.7	37	0.056
51106	30	47	11	4300	6700	20.6	42	0.065
51107	35	52	12	4000	6000	22.1	49	0.081
51108	40	60	13	3600	5300	27.1	63	0.116
51109	45	65	14	3400	5000	28.1	69	0.14
51110	50	70	14	3200	4800	29	75.5	0.148
51111	55	78	16	2800	4300	35	93	0.228
51112	60	85	17	2600	4000	41.5	113	0.284
51113	65	90	18	2400	3800	42	117	0.324
51114	70	95	18	2400	3600	43.5	127	0.347
51115	75	100	19	2200	3400	43.5	131	0.388
51116	80	105	19	2200	3400	45	141	0.409
51117	85	110	19	2200	3200	46.5	150	0.426

THRUST BALL

BEARINGS DATA SHEETS

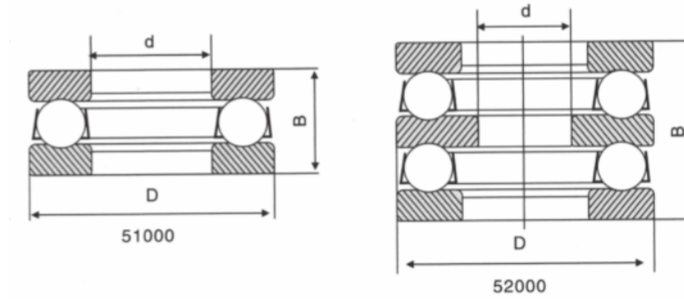
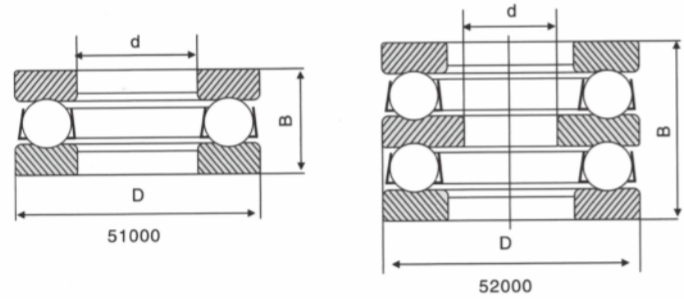


BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
51118	90	120	22	1900	3000	60	190	0.655
51200	10	26	11	5900	8800	11.43	16.42	0.028
51201	12	228	11	5600	8500	11.88	18.24	0.031
51202	15	32	12	5100	7600	14.94	23.81	0.043
51203	17	35	12	4800	7300	15.48	26.21	0.050
51204	20	40	14	4300	6300	22.5	37.5	0.077
51205	25	47	15	3800	5600	28	50.5	0.107
51206	30	52	16	3400	5300	29.5	58	0.132
51207	35	62	18	3000	4500	39.5	78	0.21
51208	40	68	19	2800	4300	47.5	98.5	0.262
51209	45	73	20	2600	4000	48	105	0.306
51210	50	78	22	2400	3600	49	111	0.372
51211	55	90	25	2200	3200	70	159	0.586
51212	60	95	26	2000	3000	71.5	169	0.674

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
51213	65	100	27	1900	2800	75.5	189	0.743
51214	70	105	27	1900	2800	74	189	0.787
51215	75	110	27	1800	2800	78	209	0.831
51216	80	115	28	1800	2600	79	218	0.914
51217	85	125	31	1600	2400	96	264	1.233
51218	90	135	35	1400	2200	114	310	1.691
51220	100	150	38	1300	2000	135	375	2.239
51222	110	160	38	1300	1900	136	395	2.426
51305	25	52	18	3200	5000	36	61.5	0.166
51306	30	60	21	2800	4300	43	78.5	0.259
51307	35	68	24	2400	3800	56	105	0.371
51308	40	78	26	2200	3400	70	135	0.538
51309	45	85	28	2000	3000	80.5	163	0.66
51310	50	95	31	1800	2800	97.5	202	0.929

THRUST BALL

BEARINGS DATA SHEETS



BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
51311	55	105	35	1600	2400	115	244	1.304
51312	60	110	35	1600	2400	119	263	1.389
51313	65	115	36	1500	2400	123	282	1.507
51314	70	125	40	1400	2000	137	315	2.01
51315	75	135	44	1300	1900	159	365	2.622
51316	80	140	44	1300	1900	164	395	2.69
51317	85	150	49	1100	1700	207	490	3.529
51318	90	155	50	1100	1700	214	525	3.741
51320	100	170	55	1000	1500	239	595	4.919
51405	25	60	24	2600	4000	56	89.5	0.318
51406	30	70	28	2200	3400	73	126	0.523
51407	35	80	32	2000	3000	87.5	155	0.767
51408	40	90	36	1700	2600	103	188	1.03
51409	45	100	36	1600	2400	128	246	1.431
51410	50	110	43	1400	2200	147	288	1.891
51411	55	120	48	1300	1900	181	350	2.547
51412	60	130	51	1200	1800	202	395	3.123
51413	65	140	56	1100	1700	234	495	3.961

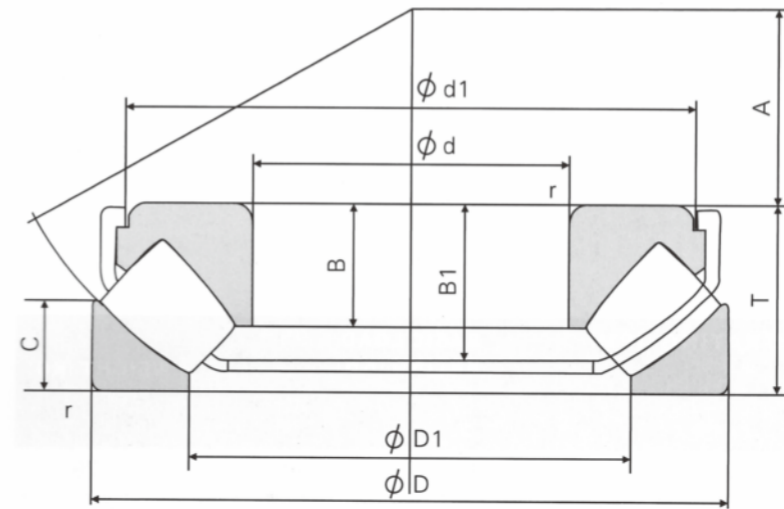
BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING(IPM)		BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B	Grease lubrication	Oil lubrication	Cr	Cor	
51414	70	150	60	1000	1500	252	555	4.941
51415	75	160	65	950	1400	254	560	6.176
51416	80	170	68	900	1300	272	620	7.228
51417	85	180	72	850	1200	288	685	9.17
51418	90	190	77	790	1100	305	750	11
51420	100	210	85	710	1000	370	970	14.7
52210	50	78	39	2400	3400	49.4	106	0.71
52211	55	90	45	1900	2800	61.8	134	1.1
52212	60	95	46	1900	2800	62.4	140	1.2
52213	65	100	47	1800	2600	63.7	150	1.35
52214	70	105	47	1800	2600	65	160	1.52
52215	75	110	47	1700	2400	67.6	170	1.55
52216	80	115	48	1700	2400	76.1	190	1.7
52217	85	125	55	1600	2200	97.5	250	2.4
52310	50	95	58	1800	2600	88.4	173	1.75
52311	55	105	64	1600	2200	104	208	2.4
52313	65	115	65	1500	2000	106	220	2.75



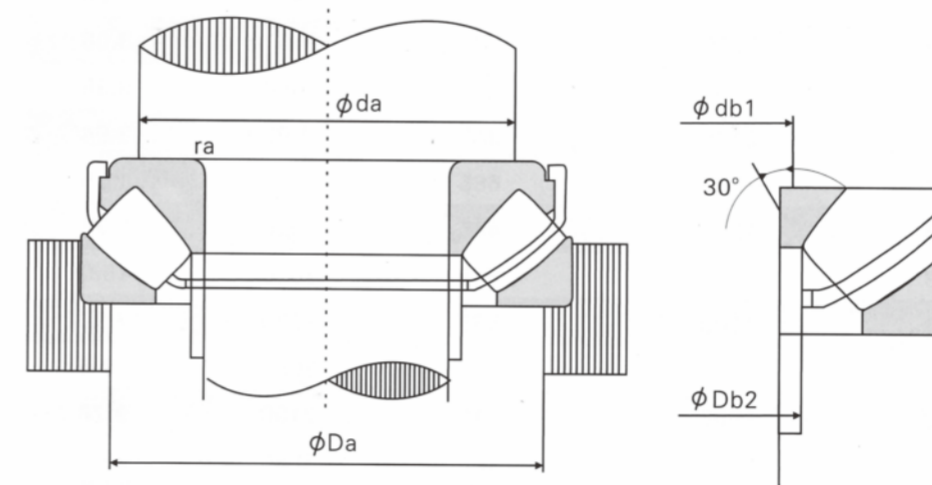
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THRUST-ALIGNING

ROLLER BEARINGS DATA SHEETS



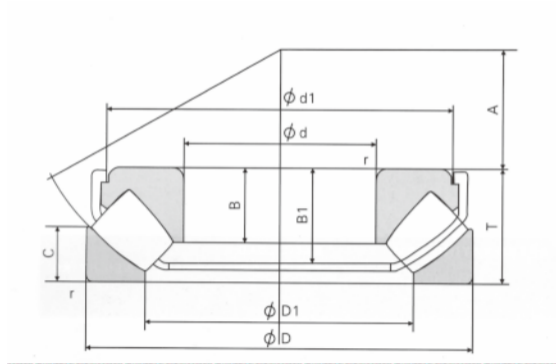
EX型



- dynamic equivalent axial load
 $P_a = F_a + 1.2F_r$
 - static equivalent axial load
 $P_{0a} = F_a + 2.7F_r$
- where F_a : axial load
 F_r : Radial load
But it must be ensured that $F_r/F_a \leq 0.55$

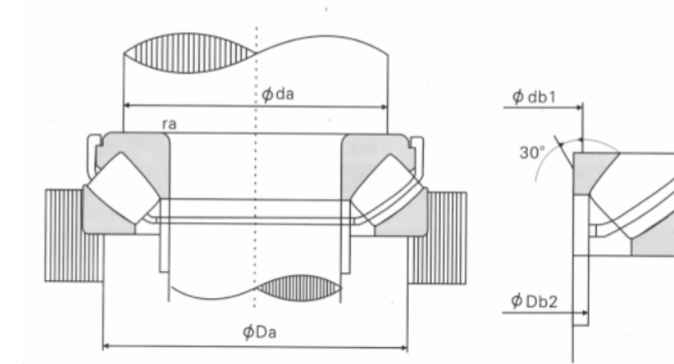
THRUST-ALIGNING

ROLLER BEARINGS DATA SHEETS



EX Type

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)	BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B		Oil lubrication	Cr	
29412	60	130	42	2600	283	805	2.78
29413	65	140	45	2400	330	945	3.44
29414	70	150	48	2200	365	1040	4.19
29415	75	160	51	2100	415	1190	5.07
29416	80	170	54	1900	460	1380	6.09
29317	85	150	39	2300	265	820	2.94
29417	85	180	58	1800	490	1480	7.20
29318	90	155	39	2300	285	915	3.08
29418	90	190	60	1700	545	1680	8.38
29320	100	170	42	2100	345	1160	3.94
29420	100	210	67	1500	685	2130	11.5
29322	110	190	48	1800	445	1500	5.78
29422	110	230	73	1400	845	2620	15.0
29424	120	210	54	1600	535	1770	7.92
29424	120	250	78	1300	975	3050	18.6
29326	130	225	58	1500	615	2100	9.76
29426	130	270	85	1200	1080	3550	23.7
29428	140	240	60	1400	685	2360	11.4
29428	140	280	85	1200	1110	3750	25.2
29230	150	215	39	1800	340	1340	4.56

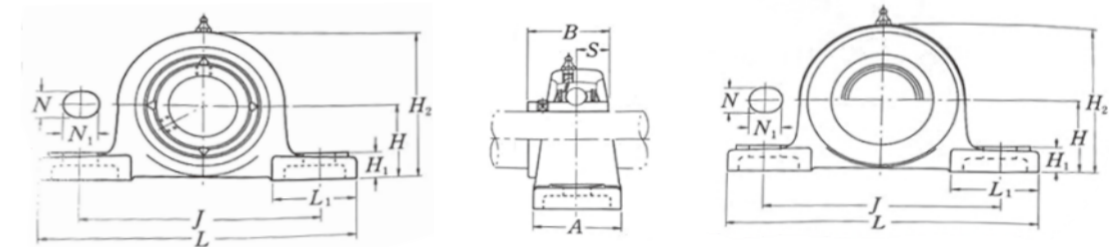
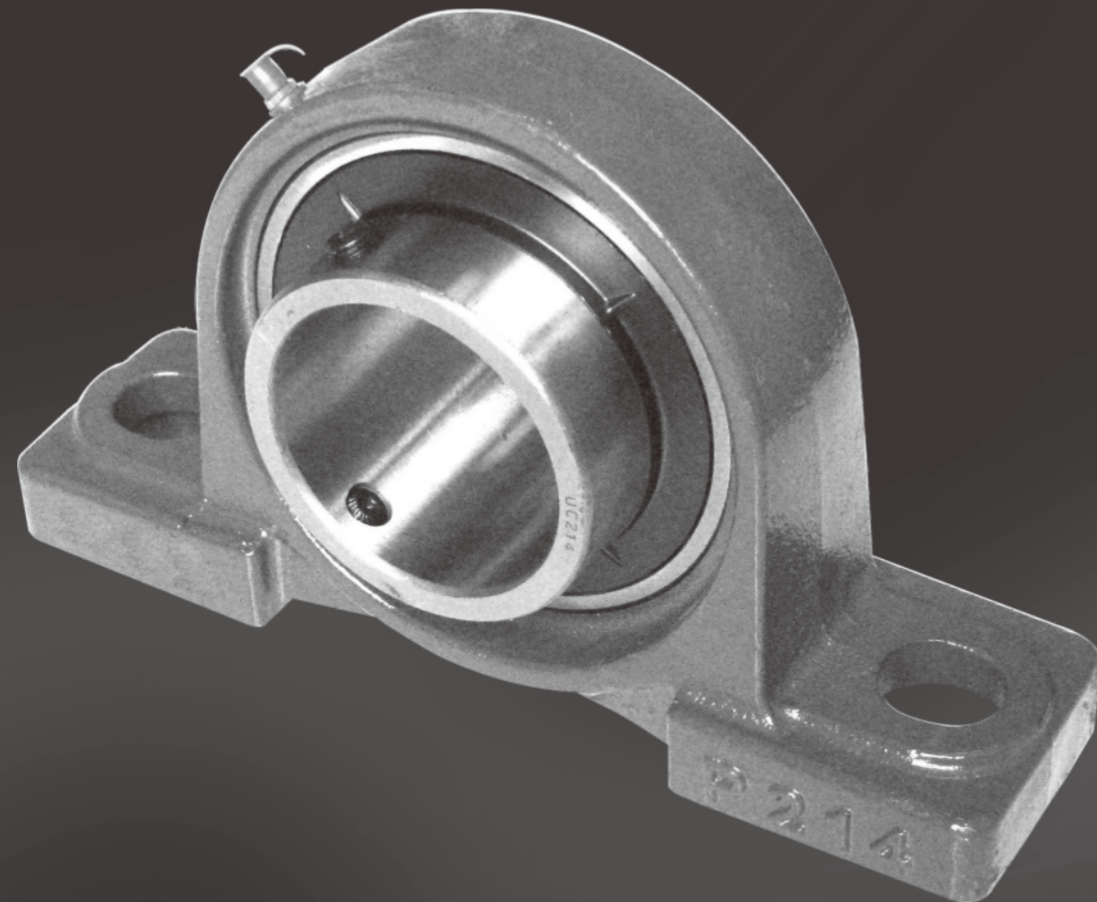


• dynamic equivalent axial load
 $P_a = F_a + 1.2F_r$
 • static equivalent axial load
 $P_{0a} = F_a + 2.7F_r$
 where, F_a : axial load
 F_r : Radial load
 But it must be ensured that $F_r/F_a \leq 0.55$

BEARING NO.	BOUNDARY DIMENSIONS(MM)			SPEED RATING (IPM)	BASIC LOAD RATING(KN)		WEIGHT(KG)
	d	D	B		Oil lubrication	Cr	
29330	150	250	60	1400	675	2390	12.0
29430	150	300	90	1100	1280	4350	30.5
29232	160	225	39	1700	360	1460	4.88
29332	160	270	67	1300	820	2860	15.9
29432	160	320	95	1000	1500	5150	37.0
29234	170	240	42	1600	425	1770	6.02
29334	170	280	67	1200	855	3050	16.6
29434	170	340	103	940	1660	5750	15.0
29236	180	250	42	1600	450	1920	6.27
29336	180	300	73	1100	995	3600	21.2
29436	180	360	109	890	1840	6200	52.9
29238	190	270	48	1400	530	2230	8.80
29338	190	320	78	1100	1150	4250	26.0
29438	190	380	115	840	2010	6800	62.0
29240	200	280	48	1400	535	2300	9.14
29340	200	340	85	980	1280	4600	31.9
29440	200	400	122	790	2230	7650	73.3

PILLOW BLOCKS UNITS CAST HOUSINGSET SCREW TYPE

BEARINGS DATA SHEETS



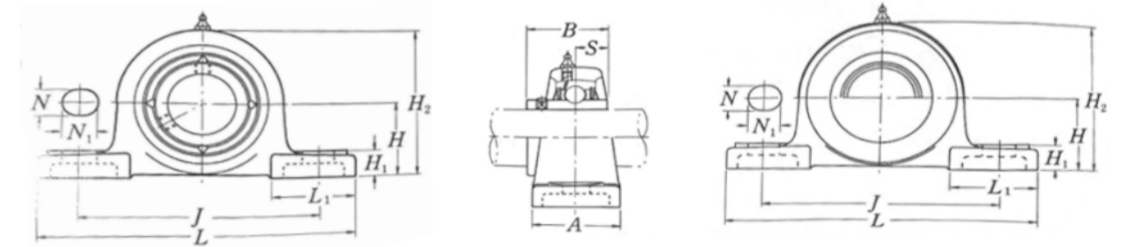
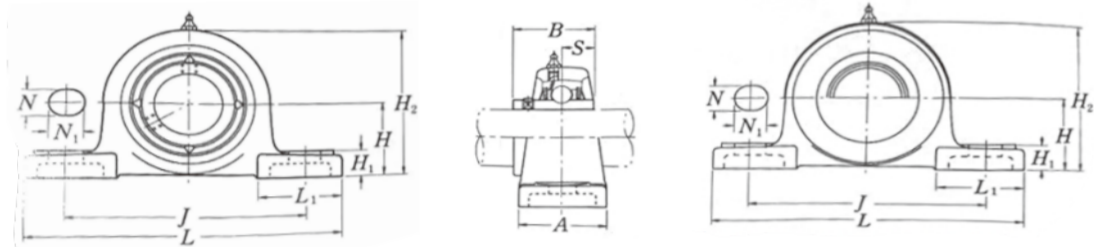
FO®
BEARINGS

Shaft dia. mm inch	Unit number ⁽¹⁾	Nominal dimensions mm inch											Bolt size mm inch	Bearing number
		H	L	J	A	N	N ₁	H ₁	H ₂	L ₁	B	S		
12 1/2	UCP201 UCP201-8	30.2 1 3/16	127 5	95 3 3/4	38 1 1/2	13 1/2	16 5/8	14 9/16	62 2 7/16	42 1 21/32	31 1.2205	12.7 0.500	M10 3/8	UC201D1 UC201-008D1
15 9/16 5/8	UCP202 UCP202-9 UCP202-10	30.2 1 3/16	127 5	95 3 3/4	38 1 1/2	13 1/2	16 5/8	14 9/16	62 2 7/16	42 1 21/32	31 1.2205	12.7 0.500	M10 3/8	UC202D1 UC202-009D1 UC202-010D1
17 11/16	UCP203 UCP203-11	30.2 1 3/16	127 5	95 3 3/4	38 1 1/2	13 1/2	16 5/8	14 9/16	62 2 7/16	42 1 21/32	31 1.2205	12.7 0.500	M10 3/8	UC203D1 UC203-011D1
20 3/4	UCP204 UCP204-12	33.3 1 5/16	127 5	95 3 3/4	38 1 1/2	13 1/2	16 5/8	14 9/16	65 2 9/16	42 1 21/32	31 1.2205	12.7 0.500	M10 3/8	UC204D1 UC204-012D1
25 13/16 7/8 15/16 1	UCP205 UCP205-13 UCP205-14 UCP205-15 UCP205-16	36.5 1 7/16	140 5 1/2	105 4 1/8	38 1 1/2	13 1/2	16 5/8	15 19/32	71 2 25/32	42 1 21/32	34.1 1.3425	14.3 0.563	M10 3/8	UC205D1 UC205-013D1 UC205-014D1 UC205-015D1 UC205-100D1
30 1 1/16 1 1/8 1 3/16 1 1/4	UCP206 UCP206-17 UCP206-18 UCP206-19 UCP206-20	42.9 1 11/16	165 6 1/2	121 4 3/4	48 1 7/8	17 21/32	20 25/32	17 21/32	83 3 9/32	54 2 1/8	38.1 1.5000	15.9 0.626	M14 1/2	UC206D1 UC206-101D1 UC206-102D1 UC206-103D1 UC206-104D1
35 1 1/4 1 5/16 1 3/8 1 7/16	UCP207 UCP207-20 UCP207-21 UCP207-22 UCP207-23	47.6 1 7/8	167 6 9/16	127 5	48 1 7/8	17 21/32	20 25/32	18 23/32	93 3 21/32	54 2 1/8	42.9 1.6890	17.5 0.689	M14 1/2	UC207D1 UC207-104D1 UC207-105D1 UC207-106D1 UC207-107D1
40 1 1/2 1 9/16	UCP208 UCP208-24 UCP208-25	49.2 1 15/16	184 7 1/4	137 5 13/32	54 2 1/8	17 21/32	20 25/32	18 23/32	98 3 27/32	52 2 1/16	49.2 1.9370	19 0.748	M14 1/2	UC208D1 UC208-108D1 UC208-109D1

Note(1) These numbers indicate reubicatable type. If maintenance free type is needed, please order without suffix "D1"

PILLOW BLOCKS UNITS CAST HOUSINGSET SCREW TYPE

BEARINGS DATA SHEETS



Shaft dia. mm inch	Unit number ⁽¹⁾	Nominal dimensions mm inch											Bolt size mm inch	Bearing number
		H	L	J	A	N	N ₁	H ₁	H ₂	L ₁	B	S		
45 15/8 111/16 13/4	UCP209 UCP209-26 UCP209-27 UCP209-28	54 2 1/8	190 7 15/32	146 5 3/4	54 2 1/8	17 21/32	20 25/32	20 25/32	106 4 3/16	60 2 3/8	49.2 1.9370	19 0.748	M10 1/8	UC209D1 UC209-110D1 UC209-111D1 UC209-112D1
50 1 13/16 1 7/8 1 15/16 2	UCP210 UCP210-29 UCP210-30 UCP210-31 UCP210-32	57.2 2 1/4	206 8 1/8	159 6 1/4	60 2 3/8	20 25/32	23 29/32	21 13/16	114 4 1/2	65 2 9/16	51.6 2.0315	19 0.748	M16 5/8	UC210D1 UC210-113D1 UC210-114D1 UC210-115D1 UC210-200D1
55 2 2 1/16 2 1/8 2 3/16	UCP211 UCP211-32 UCP211-33 UCP211-34 UCP211-35	63.5 2 1/2	219 8 5/8	171 6 23/32	60 2 3/8	20 25/32	23 29/32	23 29/32	126 4 31/32	65 2 9/16	55.6 2.1890	22.2 0.874	M16 5/8	UC211D1 UC211-200D1 UC211-201D1 UC211-202D1 UC211-203D1
60 2 1/4 2 5/16 2 3/8 2 7/16	UCP212 UCP212-36 UCP212-37 UCP212-38 UCP212-39	69.8 2 3/4	241 9 1/2	184 7 1/4	70 2 3/4	20 25/32	23 29/32	25 31/32	138 5 7/16	70 2 3/4	65.1 2.5630	25.4 1.000	M20 5/8	UC212D1 UC212-204D1 UC212-205D1 UC212-206D1 UC212-207D1
65 2 1/2 2 9/16	UCP213 UCP213-40 UCP213-41	76.2 3	265 10 8/16	203	70 2 3/4	25 31/32	28 13/32	27 11/16	151 5 15/16	77 3 1/32	65.1 2.5630	25.4 1.000	M20 3/4	UC213D1 UC213-208D1 UC213-209D1
70 2 5/8 2 11/16 2 3/4	UCP214D1 UCP214-42 UCP214-43 UCP214-44	79.4 3 1/8	266 10 15/32	210 8 9/32	72 2 27/32	25 31/32	28 13/32	27 11/16	157 6 3/16	77 3 1/32	74.6 2.9370	30.2 1.189	M20 3/4	UC214D1 UC214-210D1 UC214-211D1 UC214-212D1

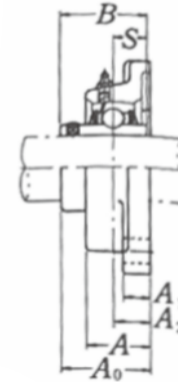
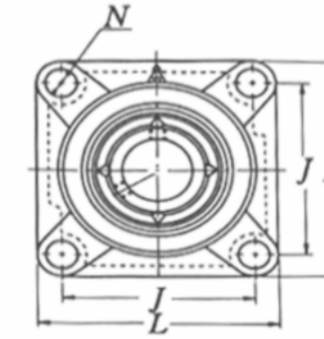
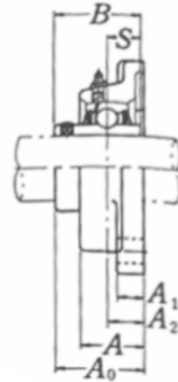
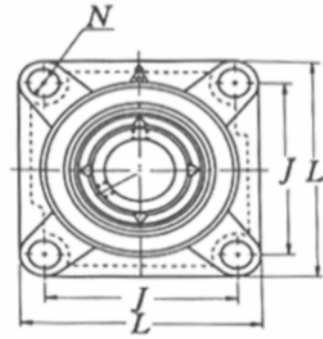
Note(1)These numbers indicate reubicatable type. If maintenance free type is needed, please order without suffix"D1"

Shaft dia. mm inch	Unit number ⁽¹⁾	Nominal dimensions mm inch											Bolt size mm inch	Bearing number
		H	L	J	A	N	N ₁	H ₁	H ₂	L ₁	B	S		
75 2 13/16 2 7/8 2 15/16 3	UCP215 UCP215-45 UCP215-46 UCP215-47 UCP215-48	82.6 3 1/4	275 10 13/16	217 8 17/32	74 2 29/32	25 31/32	28 13/32	28 13/32	163 6 13/32	80 3 5/32	77.8 3.0630	33.3 1.311	M20 3/4	UC215D1 UC215-213D1 UC215-214D1 UC215-215D1 UC215-300D1
80 3 1/16 3 1/8 3 3/16	UCP216 UCP216-49 UCP216-50 UCP216-51	88.9 3 1/2	292 11 1/2	232 9 1/8	78 3 1/16	25 31/32	28 13/32	30 13/16	175 6 7/8	88 3 11/32	82.6 3.2520	33.3 1.311	M20 3/4	UC216D1 UC216-301D1 UC216-302D1 UC216-303D1
85 3 1/4 3 5/16 3 7/16	UCP217 UCP217-52 UCP217-53 UCP217-55	95.2 3 3/4	310 12 7/32	247 9 23/32	83 3 9/32	25 31/32	28 13/32	32 1 1/4	187 7 3/8	85 3 11/32	85.7 3.3740	34.1 1.343	M20 3/4	UC217D1 UC217-304D1 UC217-305D1 UC217-307D1
90 3 1/2	UCP218 UCP218-56	101.6 4	327 12 7/8	262 10 5/16	88 3 15/32	27 1 1/16	30 13/16	33 1 5/16	200 7 7/8	90 3 17/32	96 3.7795	39.7 1.563	M22 7/8	UC218D1 UC218-308D1

Note(1)These numbers indicate reubicatable type. If maintenance free type is needed, please order without suffix"D1"

SQUARE FLANGED UNITS CAST HOUSINGSET SCREW TYPE

BEARINGS DATA SHEETS



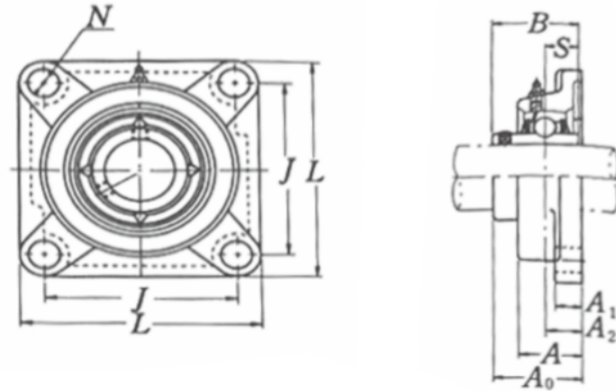
Shaft dia. mm inch	Unit number ⁽¹⁾	Nominal dimensions mm inch									Bolt size mm inch	Bearing number
		L	J	A ₂	A ₁	A	N	A ₀	B	S		
12 1/2	UCF201 UCF201-8	86 3 3/8	64 2 33/64	15 19/32	11 7/16	25.5 1	12 15/32	33.3 1 5/16	31 1.2205	12.7 0.500	M10 3/8	UC201D1 UC201-008D1
15 9/16 5/8	UCF202 UCF202-9 UCF202-10	86 3 3/8	64 2 33/64	15 19/32	11 7/16	25.5 1	12 15/32	33.3 1 5/16	31 1.2205	12.7 0.500	M10 3/8	UC202D1 UC202-009D1 UC202-010D1
17 11/16	UCF203 UCP203-11	86 3 3/8	64 2 33/64	15 19/32	11 7/16	25.5 1	12 15/32	33.3 1 5/16	31 1.2205	12.7 0.500	M10 3/8	UC203D1 UC203-011D1
20 3/4	UCF204 UCF204-12	86 3 3/8	64 2 33/64	15 19/32	11 7/16	25.5 1	12 15/32	33.3 1 5/16	31 1.2205	12.7 0.500	M10 3/8	UC204D1 UC204-012D1
25 13/16 7/8 15/16 1	UCF205 UCF205-13 UCF205-14 UCF205-15 UCF205-16	95 3 3/4	70 2 3/4	16 5/8	13 1/2	27 1 1/16	12 15/32	33.3 1 13/32	34.1 1.3425	14.3 0.563	M10 3/8	UC205D1 UC205-013D1 UC205-014D1 UC205-015D1 UC205-100D1
30 1 1/16 1 1/8 1 3/16 1 1/4	UCF206 UCF206-17 UCF206-18 UCF206-19 UCF206-20	108 4 1/4	83 3 17/64	18 45/64	13 1/2	31 1 7/32	12 15/32	40.2 1 37/64	38.1 1.5000	15.9 0.626	M10 3/8	UC206D1 UC206-101D1 UC206-102D1 UC206-103D1 UC206-104D1
35 1 1/4 1 5/16 1 3/8 1 7/16	UCF207 UCF207-20 UCF207-21 UCF207-22 UCF207-23	117 4 19/32	92 3 5/8	19 3/4	15 19/32	34 1 11/32	12 35/64	44.4 1 3/4	42.9 1.6890	17.5 0.689	M12 7/16	UC207D1 UC207-104D1 UC207-105D1 UC207-106D1 UC207-107D1
40 1 1/2 1 9/16	UCFP208 UCF208-24 UCF208-25	130 5 1/8	102 4 1/64	21 53/64	15 19/32	36 1 13/32	16 5/8	51.2 2 1/64	49.2 1.9370	19 0.748	M14 1/2	UC208D1 UC208-108D1 UC208-109D1

Note(1) These numbers indicate reubicatable type. If maintenance free type is needed, please order without suffix "D1"

Shaft dia. mm inch	Unit number ⁽¹⁾	Nominal dimensions mm inch									Bolt size mm inch	Bearing number
		L	J	A ₂	A ₁	A	N	A ₀	B	S		
45 1 5/8 1 11/16 1 3/4	UCF209 UCF209-26 UCF209-27 UCF209-28	137 5 13/32	105 4 9/64	22 55/64	16 5/8	38 1 1/2	16 5/8	52.2 2 1/16	49.2 1.9370	19 0.748	M14 1/2	UC209D1 UC209-110D1 UC209-111D1 UC209-112D1
50 1 13/16 1 7/8 1 15/16 2	UCF210 UCF210-29 UCF210-30 UCF210-31 UCF210-32	143 5 5/8	111 4 3/8	22 55/64	16 5/8	40 1 9/16	16 5/8	54.6 2 5/32	51.6 2.0315	19 0.748	M14 1/2	UC210D1 UC210-113D1 UC210-114D1 UC210-115D1 UC210-200D1
55 2 2 1/16 2 1/8 3 3/16	UCF211 UCF211-32 UCF211-33 UCF211-34 UCF211-35	162 6 3/8	130 5 1/8	25 63/64	18 23/32	43 1 11/16	19 3/4	58.4 2 19/64	55.6 2.1890	22.2 0.874	M16 5/8	UC211D1 UC211-200D1 UC211-201D1 UC211-202D1 UC211-203D1
60 2 1/4 2 5/16 2 3/8 2 7/16	UCF212 UCF212-36 UCF212-37 UCF212-38 UCF212-39	175 6 7/8	143 5 5/8	29 19/64	18 23/32	48 1 7/8	19 3/4	68.7 2 45/64	65.1 2.5630	25.4 1.000	M16 5/8	UC212D1 UC212-204D1 UC212-205D1 UC212-206D1 UC212-207D1
65 2 1/2 2 9/16	UCF213 UCF213-40 UCF213-41	187 7 3/8	149 5 55/64	30 13/16	22 7/8	50 1 31/32	19 3/4	69.7 2 3/4	65.1 2.5630	25.4 1.000	M16 5/8	UC213D1 UC213-208D1 UC213-209D1
70 2 5/8 2 11/16 2 3/4	UCF214 UCF214-42 UCF214-43 UCF214-44	193 7 19/32	152 5 63/64	31 17/32	22 7/8	54 1 1/8	19 3/4	75.4 2 31/32	74.6 2.9370	30.2 1.189	M16 5/8	UC214D1 UC214-210D1 UC214-211D1 UC214-212D1

SQUARE FLANGED UNITS CAST HOUSING SET SCREW TYPE

BEARINGS DATA SHEETS

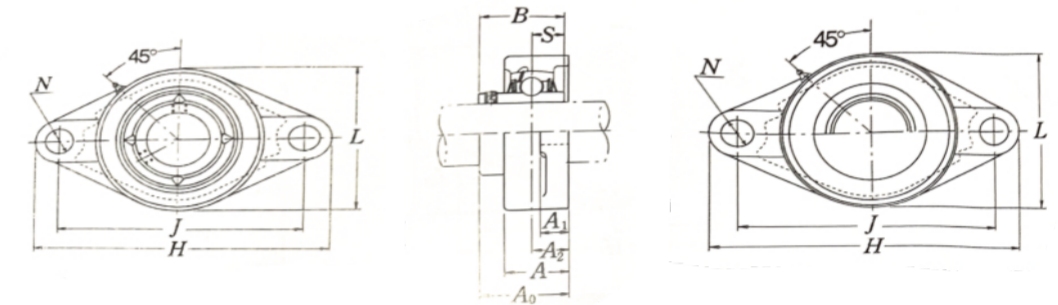


Shaft dia. mm inch	Unit number ⁽¹⁾	Nominal dimensions mm inch									Bolt size mm inch	Bearing number
		L	J	A ₂	A ₁	A	N	A ₀	B	S		
75 2 ¹³ / ₁₆ 2 ⁷ / ₈ 2 ¹⁵ / ₁₆ 3	UCF215 UCF215-45 UCF215-46 UCF215-47 UCF215-48	200 7 ⁷ / ₈	159 6 ¹⁷ / ₆₄	34 1 ¹¹ / ₃₂	22 7 ⁷ / ₈	56 2 ⁷ / ₃₂	19 3 ³ / ₄	78.5 3 ³ / ₃₂	77.8 3.0630	33.3 1.311	M16 5 ⁸ / ₈	UC215D1 UC215-213D1 UC215-214D1 UC215-213D1 UC215-300D1
80 3 ¹ / ₁₆ 3 ¹ / ₈ 3 ³ / ₁₆	UCF216 UCF216-49 UCF216-50 UCF216-51	208 8 ³ / ₁₆	165 6 ¹ / ₂	34 1 ¹¹ / ₃₂	22 7 ⁷ / ₈	58 2 ⁹ / ₃₂	23 2 ⁹ / ₃₂	83.3 3 ⁹ / ₃₂	82.6 3.2520	33.3 1.311	M20 3 ³ / ₄	UC216D1 UC216-301D1 UC216-302D1 UC216-303D1
85 3 ¹ / ₄ 3 ⁵ / ₁₆ 3 ⁷ / ₁₆	UCF217 UCF217-52 UCF217-53 UCF217-55	220 8 ²¹ / ₃₂	175 6 ⁵⁷ / ₆₄	36 1 ²⁷ / ₆₄	24 1 ⁵ / ₁₆	63 2 ¹⁵ / ₃₂	23 2 ⁹ / ₃₂	87.6 3 ²⁹ / ₆₄	85.7 3.3740	34.1 1.343	M20 3 ³ / ₄	UC217D1 UC217-304D1 UC217-305D1 UC217-307D1
90 3 ¹ / ₂	UCF218 UCF218-56	235 9 ¹ / ₄	187 7 ²³ / ₆₄	40 1 ³⁷ / ₆₄	24 1 ⁵ / ₁₆	68 2 ¹¹ / ₁₆	23 2 ⁹ / ₃₂	96.3 3 ⁵¹ / ₆₄	96 3.7795	39.7 1.563	M20 3 ³ / ₄	UC218D1 UC218-308D1

Note(1) These numbers indicate reubicatable type. If maintenance free type is needed, please order without suffix "D1"

RHOMBUS FLANGED UNITS CAST HOUSING SET SCREW TYPE

BEARINGS DATA SHEETS



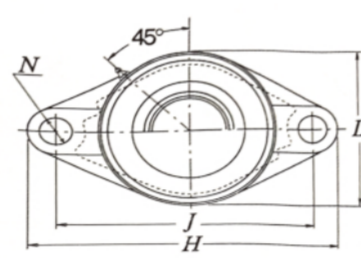
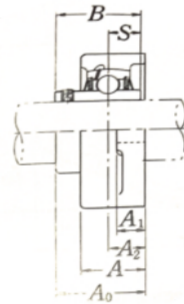
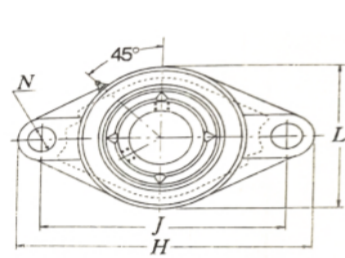
Pressed steel dust cover type
Open end Z-UCFL..D'
Closed end ZM-UCFL..D'

Shaft dia. mm inch	Unit number ⁽¹⁾	Nominal dimensions mm inch										Bolt size mm inch	Bearing number
		H	J	A ₂	A ₁	A	N	L	A ₀	B	S		
12 1 ² / ₂	UCFL201 UCFL201-8	113 4 ⁷ / ₁₆	90 3 ³⁵ / ₆₄	15 1 ⁹ / ₃₂	11 7 ⁷ / ₁₆	25.5 1	12 1 ⁵ / ₃₂	60 2 ³ / ₈	33.3 1 ⁵ / ₁₆	31 1.2205	12.7 0.500	M10 3 ⁸ / ₈	UC201D1 UC201-008D1
15 9 ¹⁶ / ₁₆ 5 ⁸ / ₈	UCFL202 UCFL202-9 UCFL202-10	113 4 ⁷ / ₁₆	90 3 ³⁵ / ₆₄	15 1 ⁹ / ₃₂	11 7 ⁷ / ₁₆	25.5 1	12 1 ⁵ / ₃₂	60 2 ³ / ₈	33.3 1 ⁵ / ₁₆	31 1.2205	12.7 0.500	M10 3 ⁸ / ₈	UC202D1 UC202-009D1 UC202-010D1
17 1 ¹¹ / ₁₆	UCFL203 UCFL203-11	113 4 ⁷ / ₁₆	90 3 ³⁵ / ₆₄	15 1 ⁹ / ₃₂	11 7 ⁷ / ₁₆	25.5 1	12 1 ⁵ / ₃₂	60 2 ³ / ₈	33.3 1 ⁵ / ₁₆	31 1.2205	12.7 0.500	M10 3 ⁸ / ₈	UC203D1 UC203-011D1
20 3 ⁴ / ₄	UCFL204 UCFL204-12	113 4 ⁷ / ₁₆	90 3 ³⁵ / ₆₄	15 1 ⁹ / ₃₂	11 7 ⁷ / ₁₆	25.5 1	12 1 ⁵ / ₃₂	60 2 ³ / ₈	33.3 1 ⁵ / ₁₆	31 1.2205	12.7 0.500	M10 3 ⁸ / ₈	UC204D1 UC204-012D1
25 1 ³ / ₁₆ 7 ⁸ / ₈ 1 ⁵ / ₁₆ 1	UCFL205 UCFL205-13 UCFL205-14 UCFL205-15 UCFL205-16	130 5 ¹ / ₈	99 3 ⁵⁷ / ₆₄	16 5 ⁸ / ₈	13 1 ² / ₂	27 1 ¹¹ / ₁₆	16 5 ⁸ / ₈	68 2 ¹¹ / ₁₆	35.8 1 ¹³ / ₃₂	34.1 1.3425	14.3 0.563	M14 1 ² / ₂	UC205D1 UC205-013D1 UC205-014D1 UC205-015D1 UC205-100D1
30 1 ¹ / ₁₆ 1 ¹ / ₈ 1 ³ / ₁₆ 1 ¹ / ₄	UCFL206 UCFL206-17 UCFL206-18 UCFL206-19 UCFL206-20	148 5 ¹³ / ₁₆	117 4 ³⁹ / ₆₄	18 4 ⁵ / ₆₄	13 1 ² / ₂	31 1 ⁷ / ₃₂	16 5 ⁸ / ₈	80 3 ⁵ / ₃₂	40.2 1 ³⁷ / ₆₄	38.1 1.5000	15.9 0.626	M14 1 ² / ₂	UC206D1 UC206-101D1 UC206-102D1 UC206-103D1 UC206-104D1
35 1 ¹ / ₄ 1 ⁵ / ₁₆ 1 ³ / ₈ 1 ⁷ / ₁₆	UCFL207 UCFL207-20 UCFL207-21 UCFL207-22 UCFL207-23	161 6 ¹¹ / ₃₂	130 5 ¹ / ₈	19 3 ³ / ₄	15 1 ⁹ / ₃₂	34 1 ¹¹ / ₃₂	16 5 ⁸ / ₈	90 3 ¹⁷ / ₃₂	44.4 1 ³ / ₄	42.9 1.6890	17.5 0.689	M14 1 ² / ₂	UC207D1 UC207-104D1 UC207-105D1 UC207-106D1 UC207-107D1
40 1 ¹ / ₂ 1 ⁹ / ₁₆	UCFL208 UCFL208-24 UCFL208-25	175 6 ⁷ / ₈	144 5 ⁴³ / ₆₄	21 5 ³ / ₆₄	15 1 ⁹ / ₃₂	36 1 ¹¹ / ₃₂	16 5 ⁸ / ₈	100 3 ¹⁵ / ₁₆	51.2 2 ¹ / ₆₄	49.2 1.9370	19 0.748	M14 1 ² / ₂	UC208D1 UC208-108D1 UC208-109D1

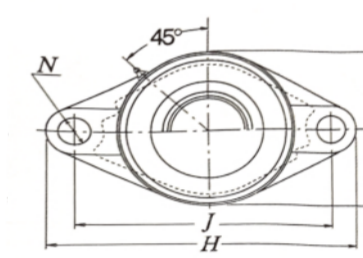
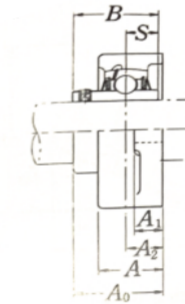
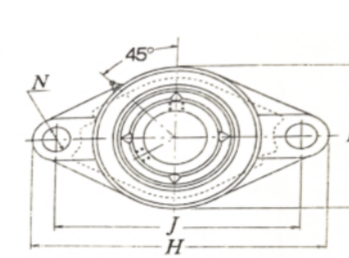
Note(1) These numbers indicate reubicatable type. If maintenance free type is needed, please order without suffix "D1"

RHOMBUS FLANGED UNITS CAST HOUSING SET SCREW TYPE

BEARINGS DATA SHEETS



Pressed steel dust cover type
Open end **Z-UCFL..D'**
Closed end **ZM-UCFL ..D'**



Pressed steel dust cover type
Open end **Z-UCFL..D'**
Closed end **ZM-UCFL ..D'**

Shaft dia. mm inch	Unit number ⁽¹⁾	Nominal dimensions mm inch										Bolt size mm inch	Bearing number
		H	J	A ₂	A ₁	A	N	L	A ₀	B	S		
45 1 ⁵ / ₈ 1 ¹¹ / ₁₆ 1 ³ / ₄	UCFL209	188	148	22	16	38	19	108	52.2	49.2	19	M16	UC209D1
	UCFL209-26												UC209-110D1
	UCFL209-27 UCFL209-28	7 ¹³ / ₃₂	5 ⁵³ / ₆₄	5 ⁵ / ₆₄	5 ⁵ / ₈	1 ¹ / ₂	3 ³ / ₄	4 ¹ / ₄	2 ¹ / ₁₆	1.9370	0.748	5 ⁵ / ₈	UC209-111D1 UC209-112D1
50 1 ¹³ / ₁₆ 1 ⁷ / ₈ 1 ¹⁵ / ₁₆ 2	UCFL210	197	157	22	16	40	19	115	54.6	51.6	19	M16	UC210D1
	UCFL210-29 UCFL210-30 UCFL210-31 UCFL210-32												UC210-113D1 UC210-114D1 UC210-115D1 UC210-200D1
	7 ³ / ₄	6 ³ / ₁₆	5 ⁵ / ₆₄	5 ⁵ / ₈	1 ⁹ / ₁₆	3 ³ / ₄	4 ¹⁷ / ₃₂	2 ⁵ / ₃₂	2.0315	0.748	5 ⁵ / ₈		
55 2 2 ¹ / ₁₆ 2 ¹ / ₈ 2 ³ / ₁₆	UCFL211	224	184	25	18	43	19	130	58.4	55.6	22.2	M16	UC211D1
	UCFL211-32 UCFL211-33 UCFL211-34 UCFL211-35												UC211-200D1 UC211-201D1 UC211-202D1 UC211-203D1
	8 ¹³ / ₁₆	7 ¹ / ₄	6 ³ / ₆₄	2 ³ / ₃₂	1 ¹¹ / ₁₆	3 ³ / ₄	5 ¹ / ₈	2 ¹⁹ / ₆₄	2.1890	0.874	5 ⁵ / ₈		
60 2 ¹ / ₄ 2 ⁵ / ₁₆ 2 ³ / ₈ 2 ⁷ / ₁₆	UCFL212	250	202	29	18	48	23	140	68.7	65.1	25.4	M20	UC212D1
	UCFL212-36 UCFL212-37 UCFL212-38 UCFL212-39												UC212-204D1 UC212-205D1 UC212-206D1 UC212-207D1
	9 ²⁷ / ₃₂	7 ⁶¹ / ₆₄	1 ⁹ / ₆₄	2 ³ / ₃₂	1 ⁷ / ₈	2 ⁹ / ₃₂	5 ¹ / ₂	2 ⁴⁵ / ₆₄	2.5630	1.000	3 ³ / ₄		
65 2 ¹ / ₂ 2 ⁹ / ₁₆	UCFL213	258	210	30	22	50	23	155	69.7	65.1	25.4	M20	UC213D1
	UCFL213-40 UCFL213-41												UC213-208D1 UC213-209D1
	10 ⁵ / ₃₂	8 ¹⁷ / ₆₄	1 ³ / ₁₆	7 ⁷ / ₈	1 ³¹ / ₃₂	2 ⁹ / ₃₂	6 ³ / ₃₂	2 ³ / ₄	2.5630	1.000	3 ³ / ₄		
70 2 ⁵ / ₈ 2 ¹¹ / ₁₆ 2 ³ / ₄	UCFL214	265	216	31	22	54	23	160	75.4	74.6	30.2	M20	UC214D1
	UCFL214-42 UCFL214-43 UCFL214-44												UC214-210D1 UC214-211D1 UC214-212D1
	10 ⁷ / ₁₆	8 ¹ / ₂	1 ⁷ / ₃₂	7 ⁷ / ₈	2 ¹ / ₈	2 ⁹ / ₃₂	6 ⁵ / ₁₆	2 ³¹ / ₃₂	2.9370	1.189	3 ³ / ₄		

Note(1)These numbers indicate reubicatable type. If maintenance free type is needed, please order without suffix "D1"

Shaft dia. mm inch	Unit number ⁽¹⁾	Nominal dimensions mm inch										Bolt size mm inch	Bearing number												
		H	J	A ₂	A ₁	A	N	L	A ₀	B	S														
75 2 ¹³ / ₁₆ 2 ⁷ / ₈ 2 ¹⁵ / ₁₆ 3	UCFL215																								
	UCFL215-45 UCFL215-46 UCFL215-47 UCFL215-48																								UC215D1 UC215-213D1 UC215-214D1 UC215-215D1 UC215-300D1
	275	225	34	22	56	23	165	78.5	77.8	33.3	M20														
	10 ¹³ / ₁₆	8 ⁵⁵ / ₆₄	1 ¹¹ / ₃₂	7 ⁷ / ₈	2 ⁷ / ₃₂	2 ⁹ / ₃₂	6 ¹ / ₂	3 ³ / ₃₂	3.0630	1.311	3 ³ / ₄														
80 3 ¹ / ₁₆ 3 ¹ / ₈ 3 ³ / ₁₆	UCFL216																								
	UCFL216-49 UCFL216-50 UCFL216-51																							UC216D1 UC216-301D1 UC216-302D1 UC216-303D1	
	290	233	34	22	58	25	180	83.3	82.6	33.3	M22														
11 ¹³ / ₃₂	9 ¹¹ / ₆₄	1 ¹¹ / ₃₂	7 ⁷ / ₈	2 ⁹ / ₃₂	6 ³ / ₆₄	7 ³ / ₃₂	3 ⁹ / ₃₂	3.2520	1.311	7 ⁷ / ₈															
85 3 ¹ / ₄ 3 ⁵ / ₁₆ 3 ⁷ / ₁₆	UCFL217																								
	UCFL217-52 UCFL217-53 UCFL217-55																							UC217D1 UC217-304D1 UC217-305D1 UC217-307D1	
	305	248	36	22	63	25	190	87.6	85.7	34.1	M22														
12	9 ⁴⁹ / ₆₄	1 ²⁷ / ₆₄	1 ⁵ / ₁₆	2 ¹⁵ / ₃₂	6 ³ / ₆₄	7 ¹⁵ / ₃₂	3 ²⁹ / ₆₄	3.3740	1.343	7 ⁷ / ₈															
90 3 ¹ / ₂	UCFL218																								
	UCFL218-56																							UC218D1 UC218-308D1	
	320	265	40	24	68	25	205	96.3	96	39.7	M22														
12 ¹⁹ / ₃₂	10 ⁷ / ₁₆	1 ³⁷ / ₆₄	1 ⁵ / ₁₆	2 ¹¹ / ₁₆	6 ³ / ₆₄	8 ¹ / ₁₆	3 ⁵¹ / ₆₄	3.7795	1.563	7 ⁷ / ₈															

Note(1)These numbers indicate reubicatable type. If maintenance free type is needed, please order without suffix "D1"

CRESCENT BEARING

BEARINGS DATA SHEETS



HBSL せいみつじくうけ	
A4VG28	A11V160
A4VG40	A11V190
A4V40	A11V260
A4VG45	PV90R042
A10VG45	PV90R055
A4VG56	PV90R075
A4V56	PV90R100
A10VG63	PV90R130
A4VG71	PV90R180
A4V71	PV90R250
A4VG90	A4VG105
A4V90	A4VG110
A4VG125	A4VG175
A4V125	A4VG145
A4VG140	F-831304
A4VG180	F-2603727
A4VG250	F-206878.6
A4V250	F-205156.6
A4TG71	F-208142.6
A4TG90	F-228614
A11VG50	F-208174.6
A11V060	F-207333.7
A11V075	2603728
住友120	F-228614
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A11V130	F-225035.3
A11V145	F-225036

HYDRAULIC PUMP TRANSMISSION BEARING

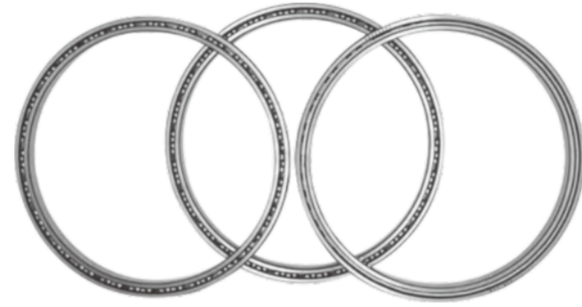
BEARINGS DATA SHEETS



HBSL せいみつじくうけ				
F-57491	F-56718	R0895	F-205045	CPM2492
RNUP0709V	F-207813	R0688	RNU080821NR	CPM2526
F-58787	F-205526	M30-8	RNU0727	F-204783
103-2560	F-314818	M35-2	YSN08	514857A RNU
10-8032	F-240027.02	M35-3	06NU0721	204782
F-209285	F-253917	M38-1	25RT595N	F-219590 CPM2529
10-5319	F-509027	U40-5	34RUKS64NR	21040B
BC1B320784A	F-55375	M40-19	06NUP0820ANR	BS225597
BC1B320308A	NUP2210EVX2	UC1306	SC050617CVC3	553575.1
F-84874	F-214101	UC305	CBK239	F-49285
F-202972	60*84*22	L25-5A	CBK238	CPM2190
F-203740	55*100*31	J30-1A	P30-25	CPM2625
PLC 44-203 SH	F-560425	J32-1A	F-204716	202808.3
F-202703	F-355722	F-56718	F-560280	24303胶封
F-202168RNU	F-204754	S-43461.4	MUS5205UM	24303铁封
F-232169	F-212543	F-45226	MUS1307UM	F-229072.RN
F-57063/57065	F-201872	F-559465	MU1306UM	219593
F-202965	F-217041.1	F-204797	MUB1308UM	PLC43-203SH RNU
F-202626	F-217040.1	F-19014	MU5206UM	F-202972.3RNU
BC1B320785	NUP2210/P5	F-19001	MU1309RU	R3021
F-201380	F-222094.2	F-224580	M7309EAHL	NJ2208X2
F-202577	F-221321.1	F-202578.RNU	M1210TV	RNN3009X3V
F-235793	F-94480	F-204716	M1207TV	RN606M/YB
F-204864	F-204781	0-115	M7308EAHL	RN606X3-1
F-202808	UV30-8	F-45226	M1311EAHL	RN606X3-7
F-224580	UV30-11	F-123242.03	MU1308TM	RN3004V
F-205045	UV35-8	SC070902	MU1307TM	RN307M/YA
F-201209	UV35-5	NK30.5*50*17	M1309TV	RNP1734PX1
F-201346	UV35-8	07NU1026-4VH	RN606M	RNUP0709V
F-202578/202785	RNU25/15	08NU1030-1VH	RN6/38	RNUP208-4
F-94196	F-562552	M30-6	RN606X3-5	RNU2304ECP
F-201381	F-562553	SC050615VC3	RN40X81.4X37.5V	RNU2307V
76-592708-M1	F-566514	017-1NUP	RN307M/YA-1	RUG3017

EXCAVATOR BEARNG

BEARINGS DATA SHEETS

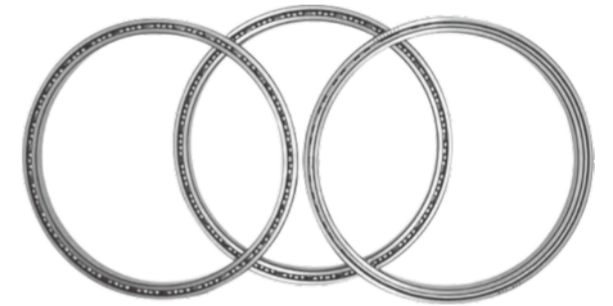


BEARING NO.	BOUNDARY DIMENSIONS(MM)		
	d	D	B
	mm	mm	mm
SF2046	100	160	48
105BA14	105	144	14
BA115-1	115	145	15
120BA16	120	166	22
BD130-1SA	130	166	34
DE2622PX1	130	166	34
BD130-16WSA	130	166	41
SF2812VPX1	140	175	17.5
SF2912	145	200	27.5
BA152-2036	152	203	26
BD155-1WSA	155	198	48
SF3227VPX1	160	200	10
SF3215	160	200	20/28
BD165-6A	165	210	52
BA16519A	165	203	19
BA168-1	168	205	20
BA180-2256	180	225	21.5
180BA-2256SA	180	225	22
SF3607VPX1	180	225	21
BA180-4WSA	180	250	33
180BN19W	180	250	33
SF3650VPX1	182	214	18
184BA-2251	184	226	21.5
BA195-3A	195	280	36.5

BEARING NO.	BOUNDARY DIMENSIONS(MM)		
	d	D	B
	mm	mm	mm
SF4007VPX1	200	250	24
BA200-7B	200	250	25
SF4019VPX1	200	260	30
200BA27V-2	200	270	33
BA210-10	200	280	38
BA200-10	200	280	38
BA205-1	205	295	40
210BA29V	210	295	35
AC423040-1	210	300	40
GB40397	205	285	84
AC523438-1	260	340	38
260BA355-2	260	355	44
BA270-3	270	350	40/39
BA280-2SA/WSA	280	370	40
BA289-1	289	355	33
AC5836	289	355	34
BA290-3A	290	380	40
SF5811PX1	290	380	40
MC6034	300	340	18
AC6037-1	300	370	33
CR6016PX1	300	380	38
SF6016PX1	300	380	38
CPM2441	230	312	85
BA245-2A	245	305	33
CU3699	381	479.5	50.5
SF5620PX1	280	370	37
517977	210	300	40

EXCAVATOR BEARNG

BEARINGS DATA SHEETS

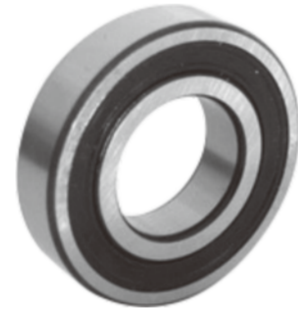


BEARING NO.	BOUNDARY DIMENSIONS(MM)		
	d	D	B
	mm	mm	mm
BA220-6WSA	220	276	26
BA220-6SA	220	276	26
BA220-1	220	280	28
BN220-1	220	280	28
CR4411PX1	220	290	32
SF4411VPX1	220	290	32
SF4444VPX1	220	295	32
B-SF4454PX1	220	295	33
BA222-1WSA	222	273	26
BA4531	225	315	40
AC4531	225	315	36
AC4629	230	290	27
AC4630	230	300	35
BA230-7A	230	300	32
BA230-7ASA/WSA	230	300	35
SF4615VPX1	230	300	35/33
SF4631VPX1	230	310	39
AC4631	230	310	40/39
AC463240	230	320	40
BA230-2A	230	320	40
SF4820VPX1	240	310	33
SF4826VPX1	240	310	33
SF4852VPX1	240	310	33
SF4815VPX1	240	310	33/34
SF4831VPX1	240	310	25/33.4
BA4852PX1	240	310	33
BA240-3ASA/WSA	240	310	33.5
BA240-3A	240	310	33
BA4852PX1	240	310	33

BEARING NO.	BOUNDARY DIMENSIONS(MM)		
	d	D	B
	mm	mm	mm
240BA3251	240	320	38
SF4860	240	320	38
245BA35S1	245	355	44/45
BA246-2A	246	313	32
AC5033	250	330	37/38
BA250-4A	250	330	38
BD185-6A	252	273	48
BA257-1	257	315	30
SF3235VPX1	260	330	35
SF5235PX1	260	330	35
BA260-6	260	340	36
BA260-3	260	340	38/36
BA260-4A	260	340	28
BA300-5	300	380	40
BA300-4WSA	300	395	50
4T-065	65	130	37.1
R196-4SA	196.85	241.3	24
L540045/10	196.85	254	28.5
T2ED045	45	95	36
322/22	22	50	19.5
4T-LL73S449V1	178	216	20
R25-26Gg	25	52	
HS05145	117	145	14
HS05154	126	154	14
HS05383	320	383	30
MC6034	300	340	18
R196Z-4	196.85	241.3	12
180N19W	180	250	33

LR LFR ROLLER BEARINGS

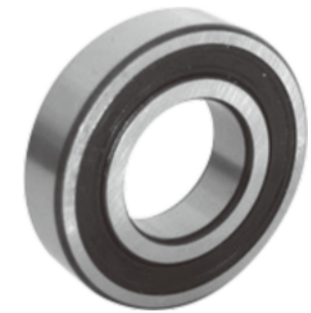
BEARINGS DATA SHEETS



BOUNDARY DIMENSIONS(MM)			BEARING NO.	BASIC LOAD RATING(KN)		WEIGHT(KG)
d	D	B		Cr (N)	Cor (N)	
10	28	12	LR5000KDDU	4750	2850	0.03
	28	12	LR5000NPPU	4750	2850	0.03
	32	14	LR5200KDDU	6800	4050	0.07
	32	14	LR5200NPPU	6800	4050	0.07
	32	14	305700C-2Z	6800	4050	0.07
	32	14	305800C-2Z	6800	4050	0.07
12	30	12	LR5001NPPU	4950	3100	0.03
	35	15.9	LR5201KDDU	8600	5100	0.08
	35	15.9	LR5201NPPU	8600	5100	0.08
	42	19	LR5301KDDU	11300	7100	0.12
	42	19	LR5301NPPU	11300	7100	0.12
	42	19	305701C-2Z	11300	7100	0.12
	35	15.9	305801C-2Z	8600	5100	0.08
	35	15.9	LR5002NPPU	8600	5100	0.08
	35	13	LR5202KDDU	6500	4100	0.05
15	40	15.9	LR5202NPPU	9800	6200	0.11
	40	15.9	LR5302KDDU	9800	6200	0.11
	47	19	LR5302NPPU	14600	9200	0.15
	47	19	305702C-2Z	14600	9200	0.15
	40	15.9	305802C-2Z	9800	6200	0.11
	40	15.9	306702C-2Z	9800	6200	0.11
	47	19	306802C-2Z	14600	9200	0.15
	47	19	LR5003NPPU	14600	9200	0.15
	47	19	LR5203KDDU	7700	5200	0.07
17	47	17.5	LR5203NPPU	12600	8200	0.17
	52	22.2	LR5303KDDU	17200	11100	0.21
	52	22.2	LR5303NPPU	17200	11100	0.21
	47	17.5	305703C-2Z	12600	8200	0.17
	47	17.5	305803C-2Z	12600	8200	0.17
	52	22.2	306703C-2Z	17200	11100	0.21
	52	22.2	306803C-2Z	17200	11100	0.21

LR LFR ROLLER BEARINGS

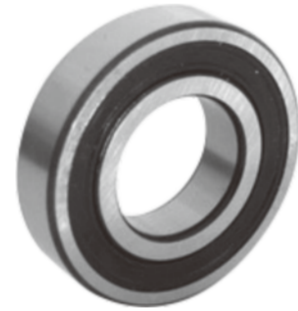
BEARINGS DATA SHEETS



BOUNDARY DIMENSIONS(MM)			BEARING NO.	BASIC LOAD RATING(KN)		WEIGHT(KG)	
d	D	B		Cr (N)	Cor (N)		
20	47	16	LR5004NPPU	11500	7700	0.12	
	52	20.6	LR5204KDDU	15800	10500	0.23	
	52	20.6	LR5204NPPU	15800	10500	0.23	
	62	22.2	LR5304KDDU	21100	14500	0.34	
	62	22.2	LR5304NPPU	21100	14500	0.34	
	52	20.6	305704C-2Z	15800	10500	0.23	
	52	20.6	305804C-2Z	15800	10500	0.23	
	62	22.2	306704C-2Z	21100	14500	0.34	
	62	22.2	306804C-2Z	21100	14500	0.34	
	25	52	16	LR5005NPPU	11600	8100	0.15
		62	20.6	LR5205KDDU	18500	13000	0.34
		62	20.6	LR5205NPPU	18500	13000	0.34
72		25.4	LR5305KDDU	27500	19500	0.5	
72		25.4	LR5305NPPU	27500	19500	0.5	
62		20.6	305705C-2Z	18500	13000	0.34	
62		20.6	305805C-2Z	18500	13000	0.34	
72		25.4	306705C-2Z	27500	19500	0.5	
72		25.4	306805C-2Z	27500	19500	0.5	
30		62	19	LR5006NPPU	15800	11800	0.25
		72	23.8	LR5206KDDU	24600	21400	0.51
		72	23.8	LR5206NPPU	24600	21400	0.51
	80	30.2	LR5306KDDU	36500	26500	0.67	
	80	30.2	LR5306NPPU	36500	26500	0.67	
	72	23.8	305706C-2Z	24600	21400	0.51	
	72	23.8	305806C-2Z	24600	21400	0.51	
	80	30.2	306706C-2Z	36500	26500	0.67	
	80	30.2	306806C-2Z	36500	26500	0.67	
	35	68	20	LR5007NPPU	17600	13100	0.3
		80	27	LR5207KDDU	30500	22400	0.66
		80	27	LR5207NPPU	30500	22400	0.66
90		34.9	LR5307KDDU	44500	33000	0.97	
90		34.9	LR5307NPPU	44500	33000	0.97	
80		27	305707C-2Z	30500	22400	0.66	
80		27	305807C-2Z	30500	22400	0.66	
90		34.9	306707C-2Z	44500	33000	0.97	
90		34.9	306807C-2Z	44500	33000	0.97	
40		75	21	LR5008NPPU	18400	14600	0.37
		85	30.2	LR5208KDDU	34500	25500	0.75
		85	30.2	LR5208NPPU	34500	25500	0.75
	100	36.5	LR5308KDDU	56000	42000	1.2	
	100	36.5	LR5308NPPU	56000	42000	1.2	
	100	36.5	306708C-2Z	56000	42000	1.2	
100	36.5	306808C-2Z	56000	42000	1.2		

LR LFR ROLLER BEARINGS

BEARINGS DATA SHEETS



BEARING NO.	BEARING NO.	BOUNDARY DIMENSIONS(MM)		
		d	D	B
LR200NPPU	LR200-2Z	10	32	9
LR201NPPU	LR201-2Z	12	35	10
LR202NPPU	LR202-2Z	15	40	11
LR203NPPU	LR203-2Z	7	47	12
LR204NPPU	LR204-2Z	20	52	14
LR205NPPU	LR205-2Z	25	62	15
LR206NPPU	LR206-2Z	30	72	16
LR207NPPU	LR207-2Z	35	80	17
LR208NPPU	LR208-2Z	40	85	18
LR209NPPU	LR209-2Z	45	90	19
LR604NPPU	LR604-2RS	4	13	4
LR605NPPU	LR605-2RS	5	16	5
LR606NPPU	LR606-2RS	6	19	6
LR607NPPU	LR607-2RS	7	22	6
LR608NPPU	LR608-2RS	8	24	7
LR6000NPPU	LR6000-2RS	10	28	8
LR6001NPPU	LR6001-2RS	12	30	8
	361200R	10	32	9
	361201R	12	35	10
	361202R	15	40	11
	361203R	17	47	12
	361204R	20	52	14
	361205R	25	62	15
	361206R	30	72	16
	361207R	35	80	17
	361208R	40	85	18
	361209R	45	90	19

LR LFR ROLLER BEARINGS

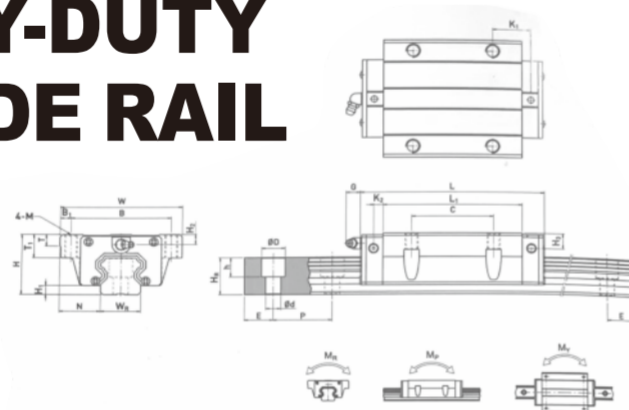
BEARINGS DATA SHEETS



BEARING NO.	BEARING NO.	BOUNDARY DIMENSIONS(MM)				
		Dw	d	D	C(Outside height)	B(Internal height)
LFR50/4NPP	LFR50/4KDD	5	4	13	6	7
LFR50/5-4NPP	LFR50/5-4KDD	4	5	16	7	8
LFR50/5NPP	LFR50/5KDD	6	5	17	7	8
LFR50/5-6NPP	LFR50/5-6KDD	6	5	17	7	8
LFR50/6NPP	LFR50/6KDD		6	19	9	9
LFR50/8NPP	LFR50/8KDD	6	8	24	11	11
LFR50/8-8NPP	LFR50/8-8KDD	8	8	24	11	11
LR30/8NPPU	LR30/8KDD		8	26.8	13	11
LR50/5NPPU	LR50/5-2RS		5	17	7	7
LR50/6NPPU	LR50/6-2RS		6	19	9	9
LR50/7NPPU	LR50/7-2RS		7	22	10	10
LR50/8NPPU	LR50/8-2RS		8	24	11	11
SG10		5	4	13	6	6.5
SG15	SG5RS	6	5	17	8	9.25
SG15-10		10	5	17	8	
SG15-1		7	5	16	8	9.75
SG20	SG6RS	8	6	24	11	12.75
SG20-1		9	6	24	11	
SG25	SG8RS	10	8	30	14	15.5
SG25-1		5	8	27.6	10	
SG35	SG12RS	12	12	42	19	22
SG15-2			6	17	8	9.75
SG15-3			5	17	8	
SG66			6	22	10	11
SG66-1			6	22	10	11.5
SG66-2			6	22	10	
SG66-3			6	22	11	12
SG66-4			6	21	11	12
SG66-5			6	22	8	10
SG22			8	22.5	13.5	14.5
V22			8	22.5	13.5	14.5
SG625			8	24.9	17	
SG825			8	25	14	15
SG825-1			8	25	14	19
V28			8	28.4	13.2	

HG SERIES HEAVY-DUTY BALL LINEAR SLIDE RAIL

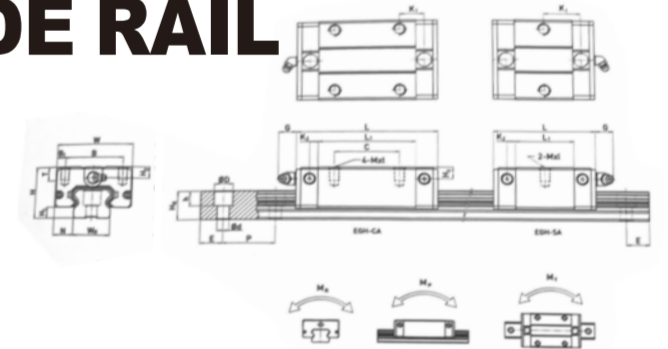
(3)HGW-CA / HGW-HA



NO.	Component dimensions (mm)			Slider size(mm)										Slide size(mm)										Slideway Fixed screw Bolt size	basic Dynamic amount Constant load C[KN]	basic Quiescent forehead Constant load C ₀ [KN]	Allowable static moment			weight		
	H	H ₁	N	W	B	B ₁	C	L ₁	L	K ₁	K ₂	G	MxI	T	H ₂	H ₃	W _r	H _r	D	h	d	P	E				[mm]	M _r	M _p	M _v	slider	slider
																											KN-m	KN-m	KN-m	Kg	Kg/m	
HGW15CA	24	4.3	16	47	38	4.5	30	39.4	61.4	8	4.85	5.3	M5	6	8.9	3.95	3.7	15	15	7.5	5.3	4.5	60	20	M4x16	11.38	16.97	0.12	0.10	0.10	0.17	1.45
HGW20CA	30	4.6	21.5	63	53	5	40	50.5	77.5	10.25	6	12	M6	8	10	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	17.75	27.76	0.27	0.20	0.20	0.40	2.21
HGW20HA								65.2	92.2	17.6																21.18	35.90	0.35	0.35	0.35	0.52	
HGW25CA	36	5.5	23.5	70	57	6.5	45	58	84	11.8	6	12	M8	8	14	6	5	23	22	11	9	7	60	20	M6x20	26.48	36.49	0.42	0.33	0.33	0.59	3.21
HGW25HA								78.6	104.6	22.1																32.75	49.44	0.56	0.57	0.57	0.80	
HGW30CA	42	6	31	90	72	9	52	70	97.4	14.25	6	12	M10	8.5	16	6.5	10.8	28	26	14	12	9	80	20	M8x25	38.74	52.19	0.66	0.53	0.53	1.09	4.47
HGW30HA								93	120.4	25.75																47.27	69.16	0.88	0.92	0.92	1.44	
HGW35CA	48	7.5	33	100	82	9	62	80	112.4	14.6	7	12	M10	10.1	18	9	12.6	34	29	14	12	9	80	20	M8x25	49.52	69.16	1.16	0.81	0.81	1.56	6.30
HGW35HA								105.8	138.2	27.5																60.21	91.63	1.54	1.40	1.40	2.06	
HGW45CA	60	9.5	37.5	120	100	10	80	97	139.4	13	10	12.9	M12	15.1	22	8.5	20.5	45	38	20	17	14	105	22.5	M12x35	77.57	102.71	1.98	1.55	1.55	2.79	10.41
HGW45HA								128.8	171.2	28.9																94.54	136.46	2.63	2.68	2.68	3.69	
HGW55CA	70	13	43.5	140	116	12	95	117.7	166.7	17.35	11	12.9	M14	17.5	26.5	12	19	53	44	23	20	16	120	30	M14x45	114.44	148.33	3.69	2.64	2.64	4.52	15.08
HGH55HA								155.8	204.8	36.4																139.35	196.20	4.88	4.57	4.57	5.96	
HGH65CA	90	15	53.5	170	142	14	110	144.2	200.2	23.1	14	12.9	M16	25	37.5	15	15	63	53	26	22	18	150	35	M16x50	163.63	215.33	6.65	4.27	4.27	9.17	21.18
HGH 65HA								203.6	259.6	52.8																208.36	303.13	9.38	7.38	7.38	12.89	

EG SERIES LOW ASSEMBLY BALL LINEAR SLIDE RAIL

2-5-9 EG SERIES LINEAR SLIDE RAIL SIZE TABLE



NO.	Component dimensions (mm)			Slider size(mm)										Slide size(mm)										Slideway Fixed screw Bolt size	basic Dynamic amount Constant load C[KN]	basic Quiescent forehead Constant load C ₀ [KN]	Allowable static moment			weight		
	H	H ₁	N	W	B	B ₁	C	L ₁	L	K ₁	K ₂	G	MxI	T	H ₂	H ₃	W _r	H _r	D	h	d	P	E				[mm]	M _r	M _p	M _v	slider	slider
																											KN-m	KN-m	KN-m	Kg	Kg/m	
EGH1SCA	24	4.5	9.5	34	26	4	-	23.1	40.1	14.8	3.5	5.7	M4x6	6	5.5	6	15	12.5	6	4.5	3.5	60	20	M3x16	5.35	9.40	0.08	0.04	0.04	0.09	1.25	
EGH1SCA							6	39.8	56.8	10.15															7.83	16.19	0.13	0.10	0.10	0.15		
EGH20SCA	28	6	11	42	32	5	-	29	50	18.75	4.15	12	M5x7	7.5	6	6	20	15.5	9.5	8.5	6	60	20	M5x16	7.23	12.74	0.13	0.06	0.06	0.15	2.08	
EGH20SCA							5	48.1	69.1	12.3															10.31	21.13	0.22	0.16	0.16	0.24		
EGH25SCA	33	7	12.5	48	35	6.5	-	35.5	59.1	21.9	4.55	12	M6x9	8	8	8	23	18	11	9	7	60	20	M6x20	11.40	19.50	0.23	0.12	0.12	0.25	2.67	
EGH25SCA							6.5	59	82.6	16.15															16.27	32.40	0.38	0.32	0.32	0.41		
EGH30SCA	42	10	16	60	40	10	-	41.5	69.5	26.75	6	12	M8x12	8	9	9	28	23	11	9	7	80	20	M6x25	16.42	28.10	0.40	0.21	0.21	0.45	4.35	
EGH30SCA							10	70.1	98.1	21.05															23.70	47.66	0.68	0.55	0.55	0.76		
EGH35SCA	48	11	18	70	50	10	-	45	75	28.5	7	12	M8x12	8.5	8.5	8.5	34	27.5	14	12	9	80	20	M8x25	22.66	37.38	0.56	0.31	0.31	0.66	6.14	
EGH35SCA							10	78	108	20															33.35	64.84	0.98	0.69	0.69	1.13		