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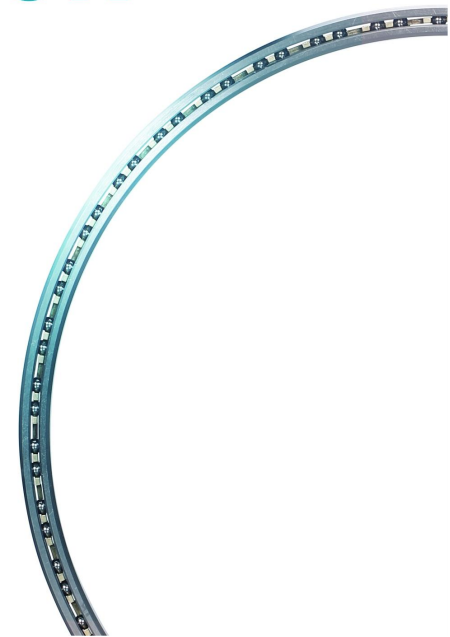
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THIN SECTION BEARINGS

Luoyang Huigong Bearing Technology Co., Ltd
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ABOUT US

Luoyang Huigong Bearing Technology Co., Ltd., located at No. 999 Guanlin Road, Luolong District, Luoyang City, was established in March 1998 with a registered capital of 31 million yuan. As a high-tech enterprise specializing in the design, R&D, manufacturing, and sales of rolling mill bearings and high-precision thin-walled bearings, the company covers an area of 39,330 square meters and employs over 300 staff members, including 28.57% mid-to-senior level engineering technicians.

The company operates both a Henan Provincial Engineering Technology Research Center and a Henan Provincial Enterprise Technology Center, ensuring core competitiveness in bearing products. Equipped with more than 220 core production and testing facilities—over 85% of which are CNC intelligent equipment—it maintains an annual production capacity of 30,000 sets of long-life rolling mill bearings and 40,000 sets of high-precision thin-walled bearings, with technological processes remaining domestically leading.

Certified by the GJB9001C National Military Standard Quality Management System, ISO9001 Quality Management System, ISO14001 Environmental Management System, ISO 45001 Occupational Health and Safety Management System, and ISO50001 Energy Management System, its "CHG" brand products—including constant cross-section thin-walled bearings, heavy-duty bearings, and high-end large rollers—are widely distributed across domestic and international markets.



CATALOGUE

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- C —Customer Centric
- H —High Performance
- G —Global Solutions



I Type Description of Bearing

Position	1	2	3	4	5	6	7	8	9	10	11	12
Descri ption	Brand	Material	External shape	Size reference	Internal shape	Seal	Cage	Precision	Radial clearance or contact angle	Pairing form and preload	Diameter grade	Lubrication method
Example	H	— W	— F FN	— 618 A	— H B Q X	— RS -2RS	— R E N Q	P2 P4 P5	1 2 3 4 5 6	DO DX DT D	C CL11	H47 G20 ...
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Position 1: Brand CHG abbreviation

Position 2: The material of rolling element and bearing ring

— Vacuum degassing steel

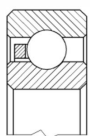
Gcr15 has good comprehensive properties, can withstand high loads and operate at a maximum temperature of 150°C. It cannot be used in a corrosive environment.

W Stainless steel

This type of Martensite stainless steel has a hardness of over 58HRC and has excellent corrosion resistance. It will undergo one or more deep freezing treatments during the heat treatment process and is suitable for use in a temperature range of -80°C to +150°C.

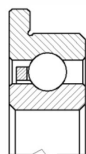
Position 3: External shape

— Standard external shape



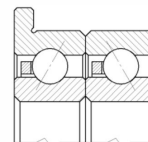
Unless otherwise specified, the bearing has a standard external shape.

F Outer ring with flange



Flanges can enhance bearing rigidity and reduce deformation after assembly. It also facilitates installation and improves positioning accuracy. CHG can design special flanges according to customer requirements.

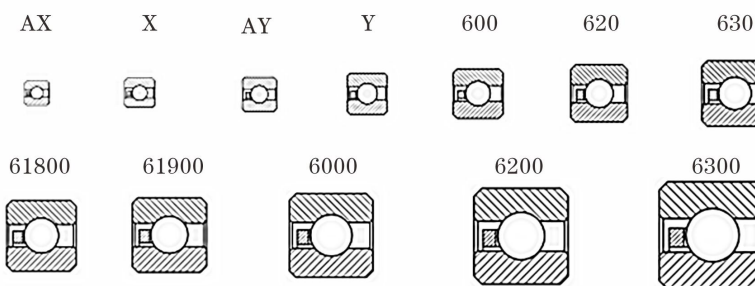
FN Combination of flange bearing + standard bearing



This number represents a pair of bearings. The combination of a flange bearing and a standard bearing facilitates positioning in the bearing housing.

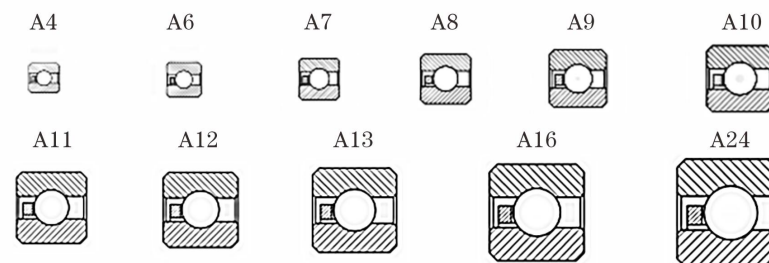
Position 4: Size reference

— Non thin-section bearing (see tables on pages 22 to 31)



618 Metric thin-section bearing (see tables on pages 59 to 60)

A Thin-section bearing (see tables on pages 32 to 58)



Double-row thin-section bearing, has 4 series:AA,AB,AD,AF

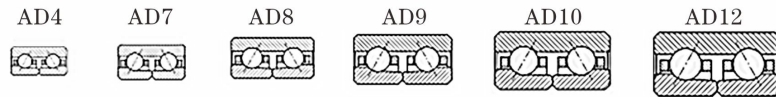
Compared with traditional paired bearings, this type of double-row bearing has improved operating precision and frictional torque. It has better performance and longer life. AA and AD type double-row bearings have an integral outer ring with double raceways, and the preload force mode is D0 type. AB and AF type double-row bearings have an integrated inner ring with double raceways, and the preload force method is DX type. This solution avoids misalignment of two sets of single row bearings during installation.

Compared with paired bearings of the same specification, the width of the two series AD and AF of double-row thin-section bearings is smaller.

AD Back to Back (DO) Preloaded double row bearings (see tables on pages 43 to 48)

Integrated bearing outer ring

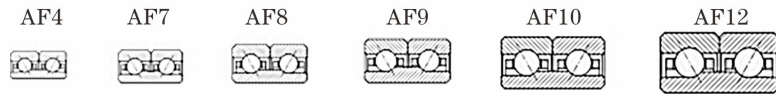
The AD double-row bearing has a reduced width compared to paired single-row bearing, except for the AD4 series.



AF Face to Face (DX) Preloaded double row bearings

Integrated bearing inner ring

This structure is equivalent to the face-to-face (DX) force mode of the AD series bearing. The inner ring of the bearing is one-piece. The width of the AF double-row bearing is reduced compared with the paired single-row thin-walled bearing, except for the AF4 series. The dimensions and loads of this series are the same as those of the AD series.

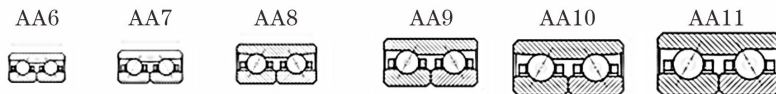


Compared to double-row thin-section bearings of the same specification with equal width in paired bearings, the two series are AA AB

AA Back to Back (DO) Preloaded double row bearings (see tables on pages 49 to 51)

Integrated bearing outer ring

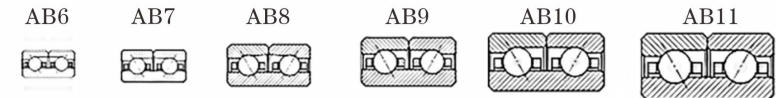
The width and rolling element diameter of this series of double-row bearings are equivalent to a pair of single-row thin-section bearings. Specifications include AA12, AA13, AA16 and Aa24.



AB Face to Face (DX) Preloaded double row bearings

Integrated bearing inner ring

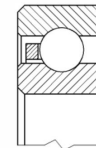
This structure is equivalent to the face-to-face (DX) force-bearing method of the AA series bearings. The specifications include AB12, AB13, AB16 and AB24. The size specifications and loads of this series are the same as those of the AD series.



Position 5: Internal shape

The internal shape of the bearing is mainly determined by the axial and radial loads it bears. The most common "deep groove" bearing can bear loads in both axial and radial directions. "Angular contact" bearings can meet higher operating speeds and greater axial load requirements.

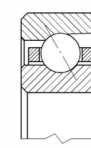
— Deep groove ball bearing



This type of bearing is the most commonly used and can meet the needs of various applications. This type of bearing mainly bears radial loads, and can also bear axial loads.

This type of bearing can also be installed in pairs, and CHG can adjust the preload and special contact angle according to customer needs.

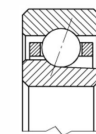
H Inseparable angular contact ball bearings



This type of bearing can accommodate more rolling elements than deep groove ball bearings, and has an increased load capacity. This type of bearing can be designed with a larger contact angle to increase the axial load capacity.

This type of bearing is usually preloaded to make it in angular contact state and eliminate axial and radial clearance. When using a set of angular contact bearings alone, axial clearance must be eliminated.

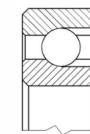
B Separable angular contact ball bearings



Separable angular contact ball bearings are delivered assembled, but their inner ring can be separated from the bearing to facilitate installation in the running system. The rolling elements are restrained in the cage and integrally restrained on the outer ring.

These bearings have the same characteristics as non-separable angular contact ball bearings.

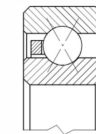
Q Full complement ball bearings



This type of bearing is a deep groove ball bearing with a ball filling slot to be filled with balls. This special design can increase the bearing load capacity.

However, the friction torque of this type of bearing will be much higher than that of a bearing equipped with a cage.

X Four point contact ball bearing



These bearings have four contact points through the peach-shaped groove, two on each ring. These bearings can withstand higher loads than standard bearings, but the internal structure increases the friction torque.

It is possible to generate preload for these bearings through negative clearance, but this structure cannot be used in the same way as a pair of bearings with preload. In fact, the X-type bearing generates preload through the internal structure. This method produces a large dispersion of preload. In addition, the highly integrated four-point contact leads to large fluctuations in friction torque.

Position 6: Seal

The seal design of the bearing is mainly based on the following two considerations:

- It can work in a polluted environment, and the seal design can extend the service life of the bearing to the greatest extent.
- Under the use conditions with high cleanliness requirements, the bearing lubricating oil may cause pollution, and the seal structure can prevent the lubricating oil from leaking.

— Deep bearing

Unless otherwise specified, it is an open bearing with no sealing structure.

RS One-side nitrile rubber sealed bearing

–2RS Double-sided nitrile rubber sealed bearings

The bearing can be sealed with nitrile rubber with a metal skeleton on one or both sides. The contact between the seal ring and the inner ring makes the seal good. However, this increases the friction torque. The operating temperature of this type of seal is between -20°C and +100°C. Other sealing materials (RS2: fluorinated high elastic rubber: -30°C; 180°C) are available to maintain good elasticity at higher temperatures.

Position 7: Cage

Depending on the size and internal shape of the bearing, as well as the working environment and use (speed, temperature, load, corrosion), different types of cages (different shapes and materials) can be selected.

1. Cage shape

— Integrated circular hole



The retainer is an integrally formed unit with cylindrical rolling elements embedded in it. This type of retainer is suitable for medium- and ultra-high-speed low-friction angular contact ball bearings. Depending on the application, the retainer can be made of copper, steel, or polymer.

E Isolation tube



The isolation tube is assembled between the rolling elements of the bearing. The isolation tube is used for deep groove ball bearings, especially for low-speed rotating or swinging bearings. The material is polytetrafluoroethylene to ensure low friction.

Q Full complement ball



There are no separators between the rolling elements of this type of bearing. This type of bearing is a full complement ball bearing or angular contact bearing with position 5. This design is only used under high load conditions and has a large friction torque.

R Crown cage



This type of cage is a "comb-tooth" crown ring that can be embedded in the rolling element. It is suitable for medium-speed, low-friction deep groove bearings. Depending on the application, the cage can be made of copper, steel, or polymer.

N Isolation ring



In angular contact bearings, an isolation ring is placed for each rolling element. It is especially suitable for low-speed rotating or swinging bearings. The material is polytetrafluoroethylene to ensure low friction.

2. Cage material

Phenolic resin

Phenolic resin is the standard material for one-piece round pockets and crown retainers. It is made of thermosetting synthetic resin with a reinforcing fiber mesh. The porous nature of this material allows it to maintain a long service life without maintenance after being soaked in lubricants. The operating temperature range of phenolic resin is -70°C to 120°C.

Polytetrafluoroethylene

The material of the isolation ring and isolation tube is usually polytetrafluoroethylene, which has low friction characteristics and is resistant to chemical corrosion. It has a wide operating temperature range (-200°C to 250°C) and is an ideal solution when liquid lubricants cannot be used at low temperatures.

PEEK

This is a high-performance polyetheretherketone resin with high temperature resistance (can be used at temperatures up to +260°C) and wear resistance. Carbon fibers can be added to improve its performance. This material is non-hydrolyzable and can be used in steam or water at high pressures up to 250°C while retaining most of its mechanical properties. This material is mainly used in high-temperature or high-speed conditions.

STEEL

One-piece round pockets and crowned cages can be made of steel 42CrMo4, 35NiCrMo16 or stainless steel X105CrMo17 (440C), X2CrNi19-11Z for high speed or high temperature environments. These steels can be coated with silver or MoS2 to reduce sliding friction between the rolling elements and the cage.

Copper alloy

The cage material can be made of copper alloy to meet special use environments (temperature, speed, non-magnetic, etc.)

Position 8: Precision

Non thin-section bearings Tolerance class P5-P4-P2

Inner ring

Tolerance unit: μm $0 < d \leq 18\text{mm}$

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit: mm	
		0 to 18	
		max.	min.
Single ID tolerance	P5-P4	0	-5
	P2	0	-2.5
ID ovality, taper	P5-P4	2.5	
	P2	1.3	
Radial runout	P5	3.5	
	P4	2.5	
	P2	1.3	
ID verticality	P5	7	
	P4	2.5	
	P2	1.3	
Axial runout	P5	7	
	P4	2.5	
	P2	1.3	

Outer ring

Tolerance parameters	Tolerance class	Nominal outer diameter D Unit:mm					
		0 to 18		18 to 30		30 to 50	
		max.	min.	max.	min.	max.	min.
Average OD tolerance	P5-P4	0	-5	0	-5	0	-5
Opened bearing							
Single OD tolerance	P5-P4	0	-5	0	-5	0	-5
	P2	0	-2.5	0	-3.75	0	-3.75
OD roundness	P5-P4	2.5		2.5		2.5	
	P2	1.3		2		2	
Sealed bearing							
Single OD tolerance	P5-P4	+1	-6	+1	-6	+1	-6
OD ovality	P5-P4	5		5		5	
All bearing type							
Radial runout	P5	5		5		5	
	P4	3.5		3.5		5	
	P2	1.3		2.5		2.5	
OD verticality	P5	7		7		7	
	P4	3.5		3.5		3.5	
	P2	1.3		1.3		1.3	
Axial runout	P5	7		7		7	
	P4	5		5		5	
	P2	1.3		2.5		2.5	
Flange diameter tolerance	P5-P4	0	-25	0	-25	0	-25
Flange width tolerance	P5-P4	0	-50	0	-50	0	-50

Inner ring and outer ring

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit:mm	
		0 to 18	
		max.	min.
Single bearing width tolerance	P5-P4-P2	0	-25
Paired bearing width tolerance ¹	P5-P4-P2	0	-380
Width variation ²	P5	5	
	P4	2.5	
	P2	1.3	

Non thin-section bearings Tolerance class P5-P4-P2

Inner ring

Tolerance unit: μm $18 < d < 305\text{mm}$

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit:mm															
		0 to 30		30 to 50		50 to 80		80 to 120		120 to 150		150 to 180		180 to 250		250 to 305	
		max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
Single ID tolerance	P5	0	-6	0	-8	0	-9	0	-10	0	-13	0	-13	0	-15	0	-18
	P4	0	-5	0	-6	0	-7	0	-8	0	-10	0	-10	0	-12	0	-15
	P2	0	-2.5	0	-2.5	0	-4	0	-5	0	-7	0	-7	0	-8	0	-10
ID ovality ³	P5	6		8		9		10		13		13		15		18	
	P4	5		6		7		8		10		10		12		15	
	P2	2.5		2.5		4		5		7		7		8		10	
ID taper	P5	3		4		5		5		7		7		8		9	
	P4	2.5		3		3.5		4		5		5		6		7	
	P2	1.3		1.5		2		2.5		3.5		3.5		4		5	
Radial runout	P5	4		5		5		6		8		8		10		13	
	P4	3		4		4		5		6		6		8		10	
	P2	2.5		2.5		2.5		2.5		2.5		5		5		7	
ID verticality	P5	8		8		8		9		10		10		11		13	
	P4	4		4		5		5		6		6		7		9	
	P2	1.5		1.5		1.5		2.5		2.5		4		5		7	
Axial runout	P5	8		8		8		9		10		10		13		15	
	P4	4		4		5		5		7		7		8		10	
	P2	2.5		2.5		2.5		2.5		2.5		5		5		7	

Outer ring

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit:mm															
		30 to 50		50 to 80		80 to 120		120 to 150		150 to 180		180 to 250		250 to 315		315 to 330	
		max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
Average outer diameter tolerance	P5	0	-7	0	-9	0	-10	0	-11	0	-13	0	-15	0	-18	0	-20
	P4	0	-6	0	-7	0	-8	0	-9	0	-10	0	-11	0	-13	0	-15
	P2	0	-4	0	-4	0	-5	0	-5	0	-7	0	-8	0	-8	0	-10
Single OD tolerance	P5-P4	—		—		—		—		—		—		—		—	
	P2	0	-4	0	-4	0	-5	0	-5	0	-7	0	-8	0	-8	0	-10
OD ovality ⁴	P5	7		9		10		11		13		15		18		20	
	P4	6		7		8		9		10		11		13		15	
	P2	4		4		5		5		7		8		8		10	
OD taper	P5	4		5		5		6		7		8		9		10	
	P4	3		3.5		4		5		5		6		7		8	
	P2	2		2		2.5		2.5		3.5		4		4		5	
Radial runout	P5	7		8		10		11		13		15		18		20	
	P4	5		5		6		7		8		10		11		13	
	P2	2.5		4		5		5		5		7		7		8	
OD verticality	P5	8		8		9		10		10		11		13		13	
	P4	4		4		5		5		5		7		8		10	
	P2	1.5		1.5		2.5		2.5		2.5		4		5		7	
Axial runout	P5	8		10		11		13		14		15		18		20	
	P4	5		5		6		7		8		10		10		13	
	P2	2.5		4		5		5		5		7		7		8	

Inner ring and outer ring

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit:mm															
		18 to 30		30 to 50		50 to 80		80 to 120		120 to 150		150 to 180		180 to 250		250 to 305	
		max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
Single bearing width tolerance	P5–P4	0	–120	0	–120	0	–150	0	–200	0	–250	0	–250	0	–300	0	–350
	P2																
Width tolerance of complete bearing sets¹	P5–P4	0	–500	0	–500	0	–500	0	–750	0	–750	0	–750	0	–750	0	–750
	P2																
Width variation	P5	5		5		6		7		8		8		10		13	
	P4	2.5		3		4		4		5		5		6		7	
	P2	1.3		1.5		1.5		2.5		2.5		4		5		6	

1. The tolerance of an integral component consisting of multiple bearings is equal to the tolerance of a single bearing multiplied by the number of bearings divided by 2.
2. For flange bearings, this variation value applies to the flange width.
3. For flange bearings, take the P5 tolerance value.
4. Only applicable to ISO 8 and 9 series, bearings with d>18mm.

Thin section bearing Tolerance classes P5 - P4

Series A4 to A13

Tolerances in: μm Size from 13mm to 80mm

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit:mm									
		13 to 18		18 to 30		30 to 45		45 to 65		65 to 80	
		max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
Mean bore diameter tolerance	P5	0	-5	0	-5	0	-7.5	0	-10	0	-10
	P4	0	-5	0	-5	0	-5	0	-7.5	0	-7.5
Series A, AD, AF4											
Single ID Tolerance	P5	+2.5	-7.5	+5	-10	+7.5	-15	+10	-20	+15	-25
	P4	0	-5	+2.5	-7.5	+5	-10	+7.5	-15	+11	-19
Series A, AA, AD, AF6-7-8-9-10-11-13											
Single ID Tolerance	P5	+2.5	-7.5	+2.5	-7.5	+2.5	-10	+2.5	-12.5	+5	-15
	P4	0	-5	+1	-6	+2.5	-7.5	+2.5	-10	+3	-11
All series A											
Radial runout	P5	5		5		8		10		10	
	P4	2.5		4		4		5		5	
Inner diameter verticality	P5	7.5		7.5		7.5		7.5		7.5	
	P4	2.5		4		4		5		5	
Axial runout	P5	7.5		7.5		7.5		10		10	
	P4	2.5		4		4		5		5	

outer ring

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit:mm							
		18 to 28		28 to 50		50 to 80		80 to 120	
		max.	min.	max.	min.	max.	min.	max.	min.
Mean outer diameter tolerance	P5	0	-5	0	-10	0	-10	0	-12
	P4	0	-5	0	-5	0	-7.5	0	-10
Open series bearing A, AD, AF4									
Single OD Tolerance	P5	+2.5	-7.5	+7	-17	+10	-20	+15	-27
	P4	0	-5	+5	-10	+7	-15	+10	-20
Open series bearing A, AA, AD, AF6-7-8-9-10-11-13									
Single OD Tolerance	P5	+2.5	-7.5	+2.5	-12.5	+2.5	-12.5	+5	-17
	P4	0	-5	+2.5	-7.5	+2.5	-10	+2.5	-12.5
Sealed series bearing A, AD, A4									
Single OD Tolerance	P5	+5	-10	+10	-20	+12	-22	+18	-30
	P4	+2.5	-7.5	+7	-12	+10	-17	+12	-22
Sealed series bearing A, AA, AD6-7-9-11-13									
Single OD Tolerance	P5	+5	-10	+5	-15	+5	-15	+7	-20
	P4	+2.5	-7.5	+5	-10	+5	-12	+5	-15
All series A									
Radial runout	P5	5		8		8		10	
	P4	4		5		5		8	
Outer diameter verticality	P5	8		8		8		8	
	P4	4		4		4		5	
Axial runout	P5	8		8		10		12	
	P4	5		5		8		8	

Inner Ring and Outer Ring

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit:mm									
		13 to 18		18 to 30		30 to 45		45 to 65		65 to 80	
		max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
Single bearing width tolerance	P5	0	-25	0	-25	0	-125	0	-125	0	-125
	P4	0	-25	0	-25	0	-25	0	-25	0	-25
Width tolerance of bearing pairs	P5	0	-380	0	-380	0	-500	0	-500	0	-500
	P4	0	-380	0	-380	0	-380	0	-380	0	-380
Width variation	P5	5		5		5		5		8	
	P4	2.5		2.5		2.5		4		4	

Thin section bearing Tolerance class P5 - P4

Series A8 to A24

Inner Ring

Tolerances in: μm Size from 80mm to 305mm

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit:mm									
		80 to 120		120 to 150		150 to 180		180 to 254		254 to 305	
		max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
Mean outer diameter tolerance	P5	0	-12	0	-13	0	-15	0	-18	0	-20
	P4	0	-9	0	-10	0	-12	0	-15	0	-18
Radial runout	P5	6		6		8		10		13	
	P4	5		5		6		8		10	
Axial runout	P5	9		9		10		13		13	
	P4	5		5		7		8		10	

Outer Ring

Tolerance parameters	Tolerance class	Nominal outer diameter D Unit:mm											
		80 to 120		120 to 150		150 to 180		180 to 254		254 to 305		305 to 330	
		max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
Mean outer diameter tolerance	P5	0	-12	0	-13	0	-15	0	-18	0	-20	0	-22
	P4	0	-10	0	-10	0	-12	0	-15	0	-18	0	-20
Radial runout	P5	10		10		13		15		18		20	
	P4	5		6		8		10		11		13	
Axial runout	P5	11		13		14		15		18		18	
	P4	5		7		8		10		10		13	

Inner Ring and Outer Ring

Tolerance parameters	Tolerance class	Nominal inner diameter d Unit:mm									
		80 to 120		120 to 150		150 to 180		180 to 254		254 to 305	
		max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
Single bearing width tolerance	P5–P4	0	–125	0	–125	0	–125	0	–125	0	–250
Width tolerance of bearing pairs	P5–P4	0	–500	0	–500	0	–500	0	–500	0	–500
Width variation	P5	7		7		8		10		12	
	P4	4		4		5		6		8	

Position 9 Radial internal clearance or contact angle

This terminology designates three types of parameters:

- Radial internal clearance,
- Contact angle,
- Axial internal clearance.

The definition of one of these parameters is sufficient to define the other two which are geometrically connected. The choice of these parameters is of primary importance to obtain the final mechanical performances of the bearing in terms of capacity, stiffness and friction torque.

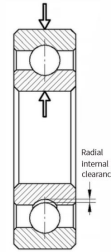
1.Radial internal clearance

The radial internal clearance in a ball bearing is the radial free space which exists between the raceways and the balls. From a practical point of view, it is the radial relative and total displacement of a moving ring with respect to the other ring which is stationary. Depending on the internal design (ball diameter, raceway radii), a variation in the radial internal clearance influences the contact angle and the axial clearance, and consequently load ratings, friction torque and stiffness. When properly chosen, all these parameters will improve the system's performances.

Particular attention must be paid to define the fits to avoid restricting the radial internal clearance during thermal stresses. In such cases, our Design & Engineering Department is available to help you calculate the effects and discuss the system's design to improve performances.

General remarks

- The definition of the radial internal clearance is generally applied to deep groove ball bearings. Angular contact ball bearings are generally defined by the contact angle's value.
- The radial internal clearance values are given under zero measuring loads.
- All deep groove ball bearings, as well as thin-section ball bearings in all versions, are supplied with the normal radial internal clearance unless otherwise specified.
- The specific radial clearance value code will be indicated after the tolerance grade code. For example, HWA1056P43. And it is set according to the following table.
- The radial clearance ranges not coded in the table are indicated in μm after the letter J. For example, HWA1056P4J010.



Radial internal clearance codes and values.

Table 1 - Non-thin section deep groove ball bearings, $d \leq 18\text{mm}$

Inner diameter dimension d Unit: mm Including upper limit	Radial internal clearance codes, Unit: μm											
	Small				Normal				Large			
	1	2	3	4	5	6	7	8	9	10	11	12
0 to 10	1	5	2	7	5	10	8	13	12	20	20	28
10 to 18	—	—	2	8	5	11	9	15	13	23	20	30

These values are for instrument bearings. There are more radial clearance classes than in international standards and the clearance range is narrower to ensure repeatability. Radial clearance classes 1, 3 and 4 are not available for P0 and P6 bearings.

Table 2 - Non-thin section deep groove ball bearings, d 18mm-40mm

Inner diameter dimension d Unit: mm Including upper limit	Radial internal clearance codes, Unit: μm									
	2		Normal		3		4		5	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
18 to 24	0	10	5	20	13	28	20	36	28	46
24 to 30	0	11	5	20	13	28	23	41	31	51
30 to 40	0	11	6	20	15	33	28	46	40	62

Table 3 - Thin-section ball bearings

Series	Radial internal clearance codes, Unit: μm									
	2		Normal		3		4		5	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
A4/AD4/AF4	2	8	7	15	12	22	20	30	28	40
A6/AA6/AB6 AD7.8.9/AF7.8.9	3	12	10	22	18	33	30	45	42	60
A7.8.9.11.12.13 AA7.8.9.11.12.13 AD10/AF10	5	15	12	28	25	45	40	60	55	80
A10/AA10/AB10 AD12/AF12	3	13	10	25	21	38	35	55	50	70
A16/AA16/AB16	5	20	15	40	35	60	55	90	80	120
A24/AA24/AB24	10	30	25	55	50	90	85	130	115	170

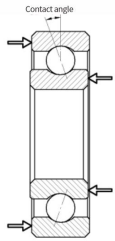
Table 4 - Thin-section ball bearings—metric series—Series 618

Basic bearing designation	Radial internal clearance codes, Unit: μm									
	2		Normal		3		4		5	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
61805 à 61808	3	10	8	20	17	30	28	45	40	60
61809 à 61810	3	13	10	25	21	38	35	55	50	70
61811 à 61812	5	15	12	28	25	45	40	60	55	80
61813 à 61816	5	20	13	33	30	55	50	80	70	105
61817 à 61820	5	25	20	43	40	70	60	100	90	130
61822 à 61824	8	30	25	50	45	85	80	120	105	160
61826 à 61828	10	35	30	60	50	100	90	145	125	190
61830 à 61832	10	40	30	65	60	115	105	165	145	215
61834 à 61836	12	45	35	75	70	130	120	185	165	245
61838 à 61844	15	50	40	85	75	145	135	210	180	275

The above table parameters are the clearance values of our specific products. According to internal design, the parameters correspond to the following average contact angle values:

- 10° for code 2,
- 15° for normal code,
- 20° for code 3,
- 25° for code 4,
- 30° for code 5.

2.Contact angle



Under zero measuring load, the contact angle depends directly on the radial internal clearance for a given internal design.

The normal contact angle values for angular contact ball bearings is:
 $15^\circ \pm 2^\circ$

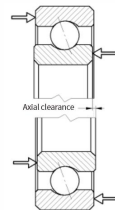
For specific contact angles, the following codification is generally used: A + nominal angle followed by N + tolerance.

E.g.: A20N25 (contact angle = 20° and tolerance $\pm 2.5^\circ$)

	Determination of contact angle according to codification			
	Nominal	Minimum	Maximum	Tolerance ($\pm$)
A20N25	20°	17.5°	22.5°	2.5°

Deep groove ball bearings may also be used to a certain extent like angular contact ball bearings to accommodate thrust loads. If a specific angle is requested, the codification is given by a radial internal clearance code. Our Design & Engineering Department can carry out the corresponding calculation.

3.Axial clearance



Under zero measuring load, the axial clearance depends directly on the radial internal clearance for a given internal design. This value can be derived from the maximum axial movement between the inner and outer rings.

Axial clearance is not directly codified. The radial internal clearance or contact angle code implicitly defines it. Our Design & Engineering Department can supply you with axial clearance values depending on the contact angle or the radial internal clearance.

Position 10: Preload and duplex configurations

The main purpose of the preload is to eliminate the bearings internal clearances to guarantee a high operating precision. The preload value directly affects the stiffness of the rotating system guaranteeing the load ratings and the bearings service life. We will strictly measure and control the preload value during the processing

1.Main duplex configurations

DO “Back-to-Back”

The “opposed” duplex configuration is capable of accommodating combined and reversible radial internal, axial loads and overturning moments. The “O” arrangement of the bearings increases the angular stiffness of the assembly, as well as its resistance to moment loads.

DX “Face-to-face”

The “X” duplex configuration is differentiated from the DO configuration by its lower angular stiffness. This solution accommodates better the misalignments of housings, while guaranteeing good axial and radial stiffnesses.

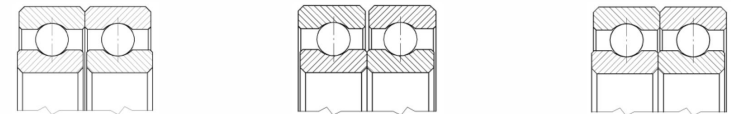
DT “Tandem”

The “Tandem” combination increases the resistance to thrust loads, but in only one direction. When radial loads are applied, the tandem assembly has to be axially preloaded.

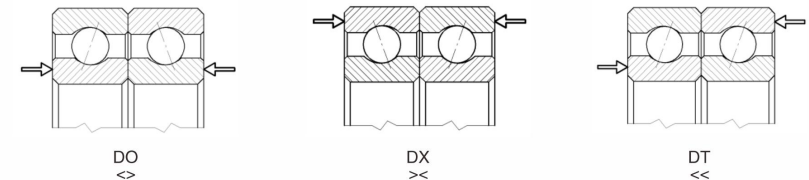
D “Universal Duplex Configuration”

The “Universal” duplex configuration is generally used to limit the number of duplex configurations for a pair of bearings. Both faces of each bearing are reworked in order to be able to obtain a DO, DX configuration according to the position of the chosen ball bearings.

Position of rings before preload



Position of rings after preloading



2.Preload value

The duplex configuration symbol is followed by a nominal preload value expressed in Newtons along with a tolerance on the nominal preload of $\pm 20\%$.

E.g.: DO1500 (Back-to-Back configuration with a preload of 1500 ± 300 N)

E.g.: DX250 (Face-to-Face configuration with a preload of 250 ± 50 N)

3.Generalities

Classification

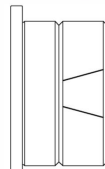
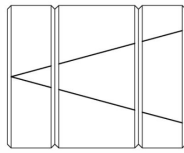
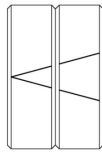
All matching methods require grading of the inner and outer diameters (see Position 11). The inner and outer rings of the matching should be of the same grade. This grading can improve assembly accuracy and reduce errors in the running system.

Symbols indicating the position of the bearings

This marking is a visual aid to help you correctly and rapidly position the bearing assemblies during mounting phases. The duplex configurations (DO and DX) and other multiplex configurations have a single 30° angle “V” symbol etched on the outer diameters of the bearings. This V symbol must be properly positioned when the set of bearings is mounted in the housing.

For tandem sets DT, the tip of the V shows the point where the thrust load is applied on the inner ring.

DO,DX,DT DO,DX With Inner&Outer Spacers DO Flanged bearing ,Unflanged bearing



For the universal duplex configuration type D, each bearing is marked with a 30° angle V symbol. The tip of the V shows the point where the force is applied on the inner ring. The mounted configuration's marking will represent an O (⇔) for a DO pair and an X (⇔) for a DX pair.

Symbols indicating the high points of radial runout

The alignment of the rings radial runouts allows reducing to the maximum rotational eccentricities, which can generate angular positioning errors and vibrations.

CHG has aligned the marks when matching the bearings. Aligning the marks during installation can ensure good reproduction of the product's performance in the clean room test.

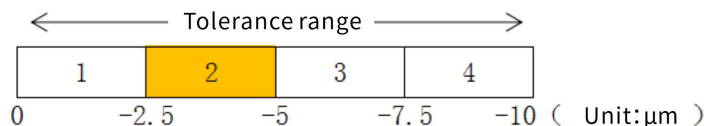
The V symbol aligns the high points on the outer rings.

Position 11 :Diameter classification

To ensure the best performance of the rotating system, the bearing sometimes needs to fit precisely with the shaft and the housing, and the bearing geometric tolerance needs to be reduced. Grading the bearing diameter is a solution to more accurately determine the geometric tolerance. For high-precision bearings, the tolerances of the inner and outer diameters are graded to better control the clearance between the shaft and the housing.

definition

Grading: Tolerances are divided into grades and marked at relevant dimension positions.
Eg:



The encoding rules are as follows:

1.Requirement for grading

a-In the order

- The letter C represents the bearing classification,
- The first number represents the grade number of the inner diameter d,
- The second number represents the grade number of the outer diameter D,
- If one of the two parameters (d or D) is not graded, it is represented by the number 0,
- If both d and D are required to be divided into two grades, only the letter C is used to represent it, and the two numbers 2 (C22) are omitted,
- The tolerance range of the grade is the total tolerance divided by the grade number

Hierarchical coding example

Code	Number of levels
C	d and D are divided into 2 levels each (i.e. C22)
C20	Only d-level 2
C40	Only d-level 4
C02	Only D grade 2
C04	Only D-level 4
C24	d is divided into 2 levels, D is divided into 4 levels
C42	d is divided into 4 levels, D is divided into 2 levels
C44	d and D are divided into 4 levels each

d:ID D:OD

b- Delivery

For example: Delivery mark: C121

Inner diameter code 2, i.e. d tolerance is -2.5-5μm

Outer diameter code 1, i.e. D tolerance is 0-2.5μm

2. Classification Description

- Tolerance grading is only for bearings of P5 grade and above.
- When the tolerance range of the grade is smaller than the ovality tolerance or taper tolerance, these tolerances will not be additionally restricted unless the customer makes additional requirements before product processing.
- The grading standard for non-thin-walled bearings is based on the minimum inner diameter and maximum outer diameter after measurement.
- Since thin-walled bearings have a larger ovality, the average value of the inner diameter or outer diameter after measurement is used as the basis for grading.

Position 12 :Greases

Select the appropriate lubricant according to the product's purpose, operating environment and system requirements.

Fluid Lubricants

Fluid lubricants are divided into two categories: lubricating oil and lubricating grease. This type of lubricant is widely used in environments with temperatures ranging from -70°C to +250°C.

Lubricating oil

Mainly composed of synthetic oil or mineral oil and additives. Usually used in bearings that require low friction torque or high-speed rotation. Vacuum penetration technology allows the porous retainer to absorb enough lubricating oil to extend the life of the bearing

Grease

Composed of a colloidal matrix containing mineral or synthetic oils. Grease is widely used in all types of bearings because it is easy to use. It ensures lubrication of the bearing at moderate speeds and protects the raceways from oxidation, foreign particles or liquid impurities.

— Standard Specifications

- **Sealed bearings:** Unless otherwise specified, G20 (Esso Beacon 325) grease shall be used for all bearings of any accuracy grade.
- **Open bearings:** Unless otherwise specified, H47 (Kluber Isoflex PDP 38) lubricant shall be used for bearings of any accuracy grade.

Encoding

1. Lubricating oil

H——

H+“number”

Indicates the lubricating oil code used for the bearing. For example: H47.

H+“number”+D

This type of lubricant has been vacuum degassed, which can significantly reduce the volatilization of the lubricant in the bearing to reduce the contamination of adjacent mechanical, electronic or optical components. For example: H47D.

V+“number”

The porous retainer is vacuum infiltrated with lubricating oil representing the relevant code. After this technical treatment, the retainer can store oil and provide lifetime lubrication for the bearing. For example: V47.

H+“number”+L

Indicates the special usage requirements of this type of lubricant. L + minimum and maximum values in mg. For example: H47L510.

2.Grease

G——

G+“number”

Represents the grease code used for the bearing. For example: G20.

GF+“number”

This indicates that this type of grease is used in a dilution-evaporation manner. This method of use evenly distributes the grease inside the bearing. For example: Gf20.

G+“number”+P

This stands for full filling of the grease (100% of the internal space of the bearing). Filling the internal space of the bearing completely with grease can increase the sealing of the bearing and prevent external contamination from entering.

G+“number”+R

This stands for partial filling of this grease. Under high-speed operation, partial filling of grease is recommended to avoid overheating of the grease in the bearing. Example: G20R.

G+“number”+L

Indicates the special usage requirements of this type of grease. L + minimum and maximum values in mg. For example: G20L512.

Main Lubricants Lists

code	manufacturer	product name	Suggested Operating Temp. (°C)		standard		
			Min	Max	MIL	AIR	OTAN
H20	Shell	Aeroshell Fluid 12	-60	+150	L6085D	3511	147
H23	BP	Turbo Oil 2389	-54	+175			
H46	Dupont de Nemours	Krytox 143AB	-43	+232			
H47	Kluber	Isoflex PDP 38	-65	+100	L6085A	3511	147
H50	Kluber	Isoflex PDP 65	-50	+120			
H55	BP	Extra Turbo Oil 274	-50	+150			149
H70	Mobil Oil	SHC 624	-40	+150			
H72	Dupont de Nemours	Krytox 143AC	-35	+288			
H77	Anderol	Anderol 402	-53	+175	L6085C		
H78	Castrol	Brayco 815Z	-65	+204			
H81	NYE Lubricants	NYE Synthetic Oil 173	-35	+125			
H83	Solvay Solexis	Fomblin Z25	-75	+250			
H94	Mobil Oil	Spectrasyn 6	-45	+170			
H97	Dupont de Nemours	Krytox 143AA	-51	+177			
H100	Lubcon	Turmofluid H50	-60	+100			

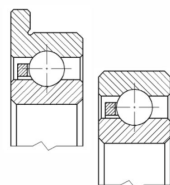
Main Greases Lists

code	manufacturer	product name	Suggested Operating Temp. (°C)		standard		
			Min	Max	MIL	AIR	OTAN
G20	Esso	Beacon 325	-54	+121	G3278A	4225A	G350
G31	Shell	Alvania Grease RL2	-20	+120	G18709		
G39	Kluber	Isoflex Super LDS18	-50	+120	G7118A	4210A	
G63	Kluber	Isoflex LDS 18 SPecial A	-50	+120	G23827		
G66	Mobil Oil	Mobilux EP2	-15	+120			
G68	NYE Lubricants	Rheolube 374C	-40	+150			
G74	Shell	Aeroshell Grease 7	-73	+130	G23827B		
G81	Mobil Oil	Mobil Grease 28	-54	+176	G81322	4205A	
G85	Kluber	PDB 38 CX1000	-70	+120			
G86	Dupont de Nemours	Krytox 240AB	-40	+232	G38220A		
G87	Dupont de Nemours	Krytox 240AC	-34	+285	G27617A		
G91	Dupont de Nemours	Krytox 240AZ	-54	+150			
G105	Dupont de Nemours	Krytox 283AB	-40	+232			
G112	NYE Lubricants	Rheotemp 500	-54	+175			
G121	Kluber	Asonic GLY 32	-50	+140			
G133	Kluber	Barrierta IL	-45	+200			
G148	Castrol	Braycote 601EF	-80	+204			
G149	Map	Maplub SH 051A	-40	+100			
G150	Dow Corning	Molykote M-77	-46	+400			
G151	Map	Maplub SH 050-A	-40	+100			
G154	Map	Maplub PF 101-A	-60	+250			
G159	Kluber	Kluberalfa HX83-302	-60	+240			
G160	Kluber	Kluberalfa YV 93-302	-60	+200			
G161	NYE Lubricants	Rheolube 2000	-45	+125			
G164	Shell	Aeroshell Grease 33MS	-73	+121	G21164D		
G166	Lubcon	Turmogrease Highspeed L252	-40	+120			
G167	Shell	Aeroshell Grease 22	-64	+204	PRF-81322F		G395

|| Bearing model list

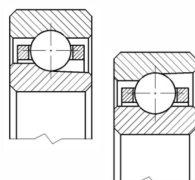
A • Deep Groove Ball Bearing

- 1 • Metric series bearing22
- 2 • Inch series bearing25
- 3 • Metric series with flanged outer ring bearing26
- 4 • Inch series with flanged outer ring bearing27



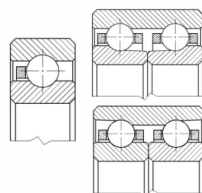
B • Angular Contact Ball Bearing

- 1 • Metric series, type H28
- 2 • Metric series, type B (separable)30
- 3 • Inch series, type H31
- 4 • Inch series, type B (separable)31



C • Thin Section Ball Bearing

- 1 • A4 to A24 inch bearings32
- 2 • AD, AA type inch bearings,super duplex43
- 3 • Series 618, metric series.59

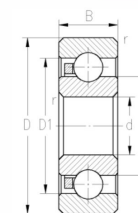


A • Deep Groove Ball Bearing

Bore diameter d from 3mm to 8mm

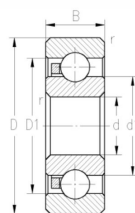
1 • Metric series bearing

Accuracy class: P5, P4, P2



Basic Specifications	Dimensions (mm)						Basic load rating (N)				Average quality
							Radial			Static Axial	
	d	D	B	d1	D1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	Cax	g
AX3	3	7	2	4.25	5.75	0.15	256	205	93	45	0.34
X3	3	8	2.5	4.6	6.4	0.15	325	260	113	58	0.59
619/3	3	8	3	4.35	6.55	0.15	484	387	155	96	0.64
623	3	10	4	5.15	7.55	0.15	500	400	156	111	1.58
AX4	4	9	2.5	5.2	7.48	0.15	547	438	192	152	0.7
X4	4	10	3	5.95	8.35	0.15	550	440	201	112	1.06
AY4	4	11	4	5.9	9	0.15	735	588	252	111	1.69
604	4	12	4	6.45	9.55	0.2	821	657	303	130	2.18
624	4	13	5	6.6	10.4	0.2	921	737	289	151	3.11
634	4	16	5	8.3	12.7	0.3	1150	921	414	243	5.4
X5	5	11	3	6.8	9.2	0.15	648	518	269	145	1.22
AY5	5	13	4	7.65	10.75	0.2	902	712	365	149	2.47
625	5	16	5	8.3	12.7	0.3	1150	921	414	243	4.99
635	5	19	6	10	15	0.3	1920	1530	773	378	8.98
X6	6	12	3	7.8	10.2	0.15	640	512	278	146	1.36
AX6	6	13	3.5	7.9	11.1	0.15	901	721	369	108	1.88
AY6	6	15	5	8.6	12.4	0.2	1250	1000	518	204	3.89
626	6	19	6	10	15	0.3	1920	1530	773	378	8.38
AX7	7	14	3.5	8.9	12.1	0.15	968	774	428	122	2.04
X7	7	14	4	8.9	12.1	0.15	968	774	428	122	2.32
628/7	7	14	5	8.9	12.1	0.15	968	774	428	122	2.77
AY7	7	17	5	9.8	14.2	0.3	1510	1210	614	245	4.9
607	7	19	6	10.5	15.5	0.3	1920	1540	786	379	7.72
627	7	22	7	11.5	17.9	0.3	2850	2280	1170	487	13
X8	8	16	4	10.1	13.9	0.2	1350	1080	610	232	3.09
638/8	8	16	6	10.1	13.9	0.2	1350	1080	610	232	4.31
AY8	8	19	6	11.1	16.1	0.3	1930	1540	800	380	7.05
608	8	22	7	11.5	17.9	0.3	2850	2280	1170	487	12.1

1.Minimum chamfer of the bearing and maximum fillet of the shaft or housing.



A • Deep Groove Ball Bearing

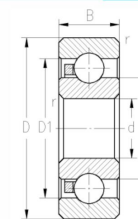
Inner diameter d from 9mm to 17mm

1 • Metric series bearing

Precision grades: P5, P4, P2

Specification	Dimension (mm)						Basic Load Rating (N)				Weight
							Radial			Static Axial	
							Dynamic		Static		
	d	D	B	d1	D1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	Cax	g
X9	9	17	4	11.1	14.9	0.2	1440	1150	693	259	3.35
AY9	9	20	6	12	17	0.3	2110	1690	937	436	7.63
609	9	24	7	13.7	19.9	0.3	2890	2310	1240	604	14.5
629	9	26	8	14	21.1	0.6	3950	3160	1690	1380	18.8
X10	10	19	5	12.6	16.4	0.3	1510	1210	784	286	5.4
63800	10	19	7	12.6	16.4	0.3	1510	1210	784	286	8.43
AY10	10	22	6	13.05	18.05	0.3	2110	1690	959	438	9.72
6000	10	26	8	14	21.1	0.3	3950	3160	1690	1380	19
6200	10	30	9	17.15	22.85	0.6	5810	4640	3230	1820	33
6300	10	35	11	17.7	26.8	0.6	10300	8240	5380	2120	53
61801	12	21	5	15	18.2	0.3	1490	1190	716	818	6.15
AY12	12	24	6	15.5	20.5	0.3	2410	1930	1240	541	10.4
6001	12	28	8	17.15	22.85	0.3	5800	4640	3220	1800	22
6201	12	32	10	18.26	25.7	0.6	7900	6320	4250	2090	37
6301	12	37	12	19.5	29.7	1	11500	9240	5860	3180	58
61802	15	24	5	17.9	21.1	0.3	1610	1290	872	1330	7.26
AY15	15	28	7	18.4	24.6	0.3	3390	2710	1740	842	14.4
6002	15	32	9	20.2	26.7	0.3	6200	4960	3490	1100	30
6202	15	35	11	21.51	29	0.6	8040	6430	4530	3030	44
6302	15	42	13	23.7	33.65	1	13600	10800	7860	3480	83
61803	17	26	5	20.2	23.2	0.3	1730	1390	1020	1080	8.03
AY17	17	30	7	20.4	26.6	0.3	3600	2880	1970	940	15.7
Y17	17	32	8	20.4	26.6	0.3	3600	2880	1970	940	24
6003	17	35	10	22.8	29.2	0.3	6550	5240	3800	1430	40
6203	17	40	12	24.5	32.7	0.6	7200	5760	3100	4750	65
6303	17	47	14	26.5	37.6	1	15700	12600	9140	4570	115

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.



A • Deep Groove Ball Bearing

Inner diameter d from 20mm to 40mm

1 • Metric series bearing

Precision grades: P5, P4, P2

Specification	Dimension (mm)						Basic Load Rating (N)				Weight
							Radial			Static Axial	
	Dynamic		Static								
	d	D	B	d1	D1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	C _{ax}	g
61804	20	32	7	24	28.25	0.3	2720	2170	1550	1350	18
AY20	20	37	9	25.55	31.35	0.3	6750	5400	3910	2220	38
6004	20	42	12	27.2	34.8	0.6	10400	8340	6240	3650	68
6204	20	47	14	28.5	38.45	1	14900	11900	9010	3960	105
6304	20	52	15	30.3	42.1	1	18500	14800	11000	6490	145
AY22	22	39	9	27.3	34	0.3	7170	5730	4500	526	40
Y22	22	40	9	27.3	34	0.3	7170	5730	4500	526	45
AY25	25	42	9	30.3	36.7	0.3	6990	5590	4330	1620	45
6005	25	47	12	32	40.3	0.6	11600	9310	7400	3730	77
6205	25	52	15	34.04	43.95	1	15200	12100	9410	4940	130
6305	25	62	17	36.6	50.9	1	24500	19600	15200	7850	225
AY28	28	45	9	33.35	40	0.3	7830	6260	5910	782	48
AY30	30	47	9	35.3	42	0.3	8140	6510	6420	825	50
6006	30	55	13	38.2	46.8	1	9250	7400	4680	7630	115
6206	30	62	16	40.36	51.55	1	15400	12300	7840	13600	200
6306	30	72	19	43.2	59.5	1	31200	24900	20200	10700	335
AY32	32	52	10	38	46	0.6	9360	7480	6820	1970	70
AY35	35	55	10	41	49	0.6	9720	7780	7440	2130	75
6007	35	62	14	43.75	53.25	1	13200	10500	7980	12900	150
6207	35	72	17	46.9	60.6	1	27100	21700	17800	9650	275
6307	35	80	21	49.5	66.1	1.5	28700	23000	16600	28300	450
AY40	40	62	12	47.7	54.5	0.6	14500	11600	12400	4620	112
6008	40	68	15	49.25	58.75	1	13900	11100	9470	17000	190
6208	40	80	18	52.6	67.9	1	32600	26000	21900	9410	350
6308	40	90	23	55.2	75.5	1.5	46700	37400	31900	16600	600

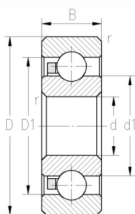
1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

A• Deep Groove Ball Bearing

Inner diameter from 0.1562inches (3.967 mm) to 0.5inches (12.7 mm)

2.inch series bearing

Precision grades: P5, P4, P2



Specification	Dimension (in./mm)						Basic Load Rating (N)				Weight
							Radial		Static	Axial	
	Dynamic		Static								
	d	D	B	d1	D1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co		
X5/32	0.1562	0.3125	0.1094	0.2197	0.2795	0.004	206	165	65	106	0.63
	3.9675	7.9375	2.779	5.58	7.1	0.1					
AX3/16	0.1875	0.3125	0.1094	0.2197	0.2795	0.004	206	165	65	106	0.47
	4.7625	7.9375	2.779	5.58	7.1	0.1					
X3/16	0.1875	0.375	0.125	0.2343	0.3287	0.005	445	356	133	193	0.78
	4.7625	9.525	3.175	5.95	8.35	0.125					
Y3/16	0.1875	0.5	0.1562	0.2697	0.4154	0.012	821	657	242	323	2.69
	4.7625	12.7	3.967	6.85	10.55	0.3					
R3	0.1875	0.5	0.1562	0.2717	0.4075	0.012	821	657	242	323	2.69
	4.7625	12.7	3.967	6.9	10.35	0.3					
X1/4	0.25	0.375	0.125	0.2835	0.3425	0.005	229	183	83	136	0.58
	6.35	9.525	3.175	7.2	8.7	0.125					
R188	0.25	0.5	0.125	0.311	0.437	0.005	669	535	213	297	2.08
	6.35	12.7	3.175	7.9	11.1	0.125					
Y1/4	0.25	0.625	0.196	0.3622	0.5118	0.012	929	743	305	416	4.43
	6.35	15.875	4.978	9.2	13	0.3					
R4	0.25	0.625	0.196	0.374	0.5	0.012	1270	1020	527	592	4.43
	6.35	15.875	4.978	9.5	12.7	0.3					
R4A	0.25	0.75	0.2188	0.3937	0.5906	0.016	1400	1120	445	578	9.58
	6.35	19.05	5.558	10	15	0.4					
SP5407	0.3125	0.5	0.1562	0.3622	0.4429	0.005	547	438	203	302	1.7
	7.937	12.7	3.967	9.2	11.25	0.125					
Y3/8	0.375	0.875	0.2188	0.5	0.748	0.016	2100	1680	701	892	9.36
	9.525	22.225	5.557	12.7	19	0.4					
R8	0.5	1.125	0.25	0.6752	0.8996	0.016	6320	5050	3220	1350	22.5
	12.7	28.575	6.35	17.15	22.85	0.4					

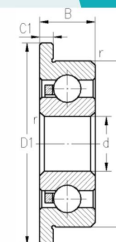
1.Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

A• Deep Groove Ball Bearing

Inner diameter d from 3mm to 6mm

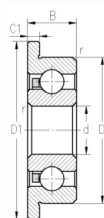
3• Metric series flange outer ring bearing

Precision grades: P5, P4, P2



Specification	Dimension (mm)						Basic Load Rating (N)				Weight
							Radial			Static Axial	
	Dynamic			Static							
d	D	D1	B	C1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	Cax	g	
FAX3	3	7	8.1	2	0.5	0.15	256	205	93	45	0.39
FX3	3	8	9.5	3	0.7	0.15	325	260	113	58	0.7
F623	3	10	11.5	4	1	0.15	500	400	156	111	1.77
FAX4	4	9	10.3	2.5	0.6	0.15	547	438	192	152	0.79
FX4	4	10	11.5	3	0.8	0.15	550	440	201	112	1.17
FAY4	4	11	12.5	4	1	0.15	735	588	252	111	1.91
F624	4	13	15	5	1	0.2	921	737	289	151	3.45
F634	4	16	18	5	1	0.3	1150	921	414	243	5.77
FX5	5	11	12.5	3	0.8	0.15	648	518	269	145	1.35
FAY5	5	13	15	4	1	0.2	902	712	365	149	2.81
F625	5	16	18	5	1	0.3	1150	921	414	243	5.24
F635	5	19	22	6	1.5	0.3	1920	1530	773	378	10.2
FAX6	6	13	15	3.5	1	0.15	901	721	369	108	2.22
FAY6	6	15	17	5	1.2	0.2	1250	1000	518	204	4.36
F626	6	19	22	6	1.5	0.3	1920	1530	773	378	9.51
FAX7	7	14	16	3.5	1	0.15	968	774	428	122	2.41
FAY7	7	17	19	5	1.2	0.3	1510	1210	614	245	5.43
F607	7	19	22	6	1.5	0.3	1920	1540	786	379	8.85
F627	7	22	25	7	1.5	0.3	2850	2280	1170	487	14.3
FX8	8	16	18	4	1	0.2	1350	1080	610	232	3.36
FAY8	8	19	22	6	1.5	0.3	1930	1540	800	380	8.18
F608	8	22	25	7	1.5	0.3	2850	2280	1170	487	13.4
FX9	9	17	19	4	1	0.2	1440	1150	693	259	3.79
FAY9	9	20	23	6	1.5	0.3	2110	1690	937	436	8.82
F609	9	24	27	7	1.5	0.3	2890	2310	1240	604	15.9
F629	9	26	28	8	2	0.6	3950	3160	1690	1380	20.2
FX10	10	19	21	5	1	0.3	1510	1210	784	286	5.89

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.



A • Deep Groove Ball Bearing

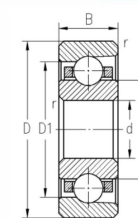
Inner diameter d from 0.125inch (3.175mm) to 0.5inch (12.7mm)

4 • Metric series flange outer ring bearing

Precision grades: P5, P4, P2

Specification	Dimension (in./mm)						Basic Load Rating (N)				Weight
							Radial			Static Axial	
							Dynamic		Static		
	d	D	D1	B	C1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	Cax	
FAX1/8	0.125	0.25	0.296	0.0937	0.023	0.004	192	154	53	86	0.36
	3.175	6.35	7.518	2.38	0.584	0.1					
FX1/8	0.125	0.3125	0.359	0.1094	0.023	0.005	351	281	89	127	0.75
	3.175	7.9375	9.119	2.779	0.584	0.125					
FR2	0.125	0.375	0.44	0.1562	0.03	0.012	401	321	111	160	1.32
	3.175	9.525	11.176	3.967	0.762	0.3					
FX5/32	0.1562	0.3125	0.359	0.1094	0.023	0.004	206	165	65	106	0.7
	3.9675	7.9375	9.119	2.779	0.584	0.1					
FAX3/16	0.1875	0.3125	0.359	0.1094	0.023	0.004	206	165	65	106	0.54
	4.7625	7.9375	9.119	2.779	0.584	0.1					
FX3/16	0.1875	0.375	0.422	0.125	0.023	0.005	445	356	133	193	0.87
	4.7625	9.525	10.719	3.175	0.584	0.125					
FY3/16	0.1875	0.5	0.565	0.196	0.042	0.012	821	657	242	323	2.96
	4.7625	12.7	14.351	4.978	1.067	0.3					
FX1/4	0.25	0.375	0.422	0.125	0.023	0.005	229	183	83	136	0.65
	6.35	9.525	10.719	3.175	0.584	0.125					
FR188	0.25	0.5	0.547	0.125	0.023	0.005	669	535	213	297	2.19
	6.35	12.7	13.894	3.175	0.584	0.125					
FY1/4	0.25	0.625	0.69	0.196	0.042	0.012	929	743	305	416	4.79
	6.35	15.875	17.526	4.978	1.067	0.3					
FSP5407	0.3125	0.5	0.547	0.1562	0.031	0.005	547	438	203	302	1.85
	7.937	12.7	13.894	3.967	0.787	0.125					
FY3/8	0.3750	0.875	0.969	0.2812	0.062	0.016	2100	1680	701	892	11.7
	9.525	22.225	24.612	7.142	1.575	0.4					
FR8	0.5	1.125	1.225	0.25	0.062	0.016	6320	5050	3220	1350	24
	12.7	28.575	31.115	6.35	1.575	0.4					

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.



B • Angular Contact Ball Bearing

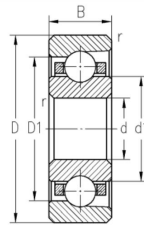
Inner diameter d from 5mm to 45mm

1 • H-type metric bearing Standard contact angles: 15° ± 2°

Precision grades: P5, P4, P2

Specification	Dimension (mm)						Basic Load Rating (N)				Weight
							Radial		Static Axial		
							Dynamic	Static			
	d	D	B	d1	D1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	Cax	g
635H	5	19	6	11.1	15.05	0.3	1960	1570	752	1390	8.79
626H	6	19	6	10.6	14.55	0.3	1890	1510	764	1510	8.37
607H	7	19	6	11.1	15.05	0.3	1960	1570	752	1390	7.9
638/8H	8	16	6	10.1	13.9	0.2	1430	1150	671	217	4
608H	8	22	7	12.45	17.65	0.3	2900	2320	1130	2080	12.3
609H	9	24	7	13.95	19.15	0.3	3150	2520	1310	2440	15
61900H	10	22	6	14	18	0.3	2260	1810	1010	1910	9.77
6000H	10	26	8	14.85	21.15	0.3	4030	3220	1620	2990	18.8
6200H	10	30	9	16.8	23.6	0.6	5280	4220	2170	3980	30.5
61901H	12	24	6	15.9	20.6	0.3	2510	2010	1250	1410	10.7
6001H	12	28	8	16.85	23.15	0.3	4380	3500	1900	3530	21
6201H	12	32	10	18.3	26.4	0.6	7500	6000	3780	2750	35.1
61902H	15	28	7	18.95	24.07	0.3	3580	2860	1780	3380	15.5
6002H	15	32	9	20.6	26.8	0.3	4700	3760	2260	4260	29.5
6202H	15	35	11	21.51	29	0.6	7310	5850	3290	6090	44
61903H	17	30	7	21	26	0.3	3550	2840	1830	3490	16.8
6203H	17	40	12	24.23	32.7	0.6	8210	6570	3830	7110	64.1
61904H	20	37	9	25.55	31.35	0.3	5460	4370	3080	5880	36.4
6004H	20	42	12	27.2	34.8	0.6	8370	6690	4360	8220	67.6
61905H	25	42	9	30.3	36.7	0.3	6090	4870	3890	7490	42.7
6205H	25	52	15	33.52	43.64	0.6	14600	11700	9120	8890	126
61906H	30	47	9	35.3	42	0.3	6170	4930	4240	5500	48
61907H	35	55	10	41.1	48.9	0.6	9370	7490	7310	5500	74.7
6007H	35	62	14	43.75	53.25	0.6	14900	11900	9840	18800	154
61908H	40	62	12	46.7	55.3	0.6	12300	9850	9570	10500	111
6008H	40	68	15	49.25	59.1	1	16400	13100	12200	22300	187
6009H	45	75	16	54.2	65.8	1	21500	17200	15100	29000	236

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.



B • Angular Contact Ball Bearing

Inner diameter d from 50mm to 140mm

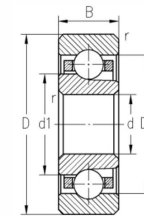
1 • H-type metric bearing

Standard contact angles: $15^\circ \pm 2^\circ$

Precision grades: P5, P4, P2

Specification	Dimension (mm)						Basic Load Rating (N)				Weight
							Radial		Static Axial		
	d	D	B	d1	D1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	Cax	
61910H	50	72	12	57.1	64.9	0.6	12400	9940	10700	20900	135
6010H	50	80	16	59.2	70.8	1	22100	17700	16300	21400	252
6210H	50	90	20	62.3	77.7	0.6	33600	26900	22900	43600	465
61911H	55	80	13	62.7	72.3	0.6	18000	14400	15200	29400	180
6012H	60	95	18	70.8	84.2	1.1	29100	23300	22400	43000	399
6212H	60	110	22	75.4	94.6	0.6	—	40300	37600	72600	797
61913H	65	90	13	73	82.1	1	18500	14800	16900	32800	207
6017H	85	130	22	99.4	115.6	1.1	—	38400	44000	93000	897
61920H	100	140	20	112	128	1	—	34700	45600	90100	796
61928H	140	190	24	155	175	1	—	66100	101000	109000	1670

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.



B • Angular Contact Ball Bearing

Inner diameter d from 3mm to 50mm

2 • Type B (separable) metric bearings

Standard contact angles: $15^\circ \pm 2^\circ$

Precision grades: P5, P4, P2

Specification	Dimension (mm)						Basic Load Rating (N)				Weight
							Radial			Static Axial	
							Dynamic		Static		
	d	D	B	d1	D1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	Cax	
623B	3	10	4	5.2	7.45	0.15	398	318	110	181	1.53
604B	4	12	4	6.6	9.4	0.2	595	476	173	284	2.15
624B	4	13	5	6.75	10.2	0.2	728	582	202	330	3.04
634B	4	16	5	7.65	12.35	0.3	1170	942	337	545	5.01
625B	5	16	5	7.65	12.35	0.3	1170	942	337	545	4.7
626B	6	19	6	10.15	14.85	0.3	1380	1100	439	721	8.12
607B	7	19	6	10.65	15.35	0.3	1390	1110	446	735	7.59
608B	8	22	7	12.15	17.85	0.3	2050	1640	674	1100	11.5
6000B	10	26	8	14.2	20.85	0.3	2830	2260	959	1560	18.8
6001B	12	28	8	16.7	23.35	0.3	3420	2730	1300	2140	20
6002B	15	32	9	20.6	26.8	0.3	4700	3760	2260	4260	29.2
6003B	17	35	10	22.8	29.2	0.3	3950	3160	1730	2890	38.2
6006B	30	55	13	38.2	47.1	0.6	12700	10200	8850	15300	115
6007B	35	62	14	43.75	53.25	0.6	16700	13400	12400	22100	156
6210B	50	90	20	62	78.6	0.6	37500	30000	27400	33400	439

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

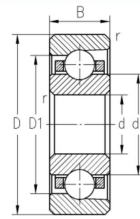
B·Angular Contact Ball Bearing

Inner diameter d from 0.25inch (3.175mm) to 0.5inch (12.7mm)

3·H-typeinch Bearing

Standard contact angles: $15^{\circ} \pm 2^{\circ}$

Precision grades: P5、P4、P2



Specification	Dimension (in./mm)						Basic Load Rating (N)				Weight
							Radial			Static Axial	
	Dynamic		Static								
	d	D	B	d1	D1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	Cax	g
R4H	0.25	0.625	0.196	0.374	0.5	0.012	991	792	338	560	4.4
	6.35	15.875	4.978	9.5	12.7	0.3					
R8H	0.5	1.125	0.3125	0.7283	0.8976	0.016	2410	1930	1170	1960	19.4
	12.7	28.575	7.937	18.5	22.8	0.4					

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

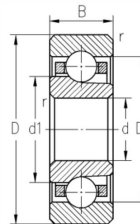
B·Angular Contact Ball Bearing

Inner diameter d from 0.125inch (3.175mm) to 0.25inch (6.35mm)

4·Type-B (separable)inch bearing

Standard contact angles: $15^{\circ} \pm 2^{\circ}$

Precision grades: P5、P4、P2



Specification	Dimension (in./mm)						Basic Load Rating (N)				Weight
							Radial			Static Axial	
	Dynamic		Static								
	d	D	B	d1	D1	r ¹	C _(GCr15)	C _(G102Cr18Mo)	Co	C _{ax}	g
X1/8B	0.125	0.3125	0.1094	0.1732	0.2618	0.005	349	279	89	145	0.54
	3.175	7.9375	2.779	4.4	6.65	0.125					
R2B	0.125	0.375	0.1562	0.2047	0.2933	0.012	398	318	110	181	1.31
	3.175	9.525	3.967	5.2	7.45	0.3					
Y3/16B	0.1875	0.5	0.1562	0.2756	0.4114	0.012	812	650	239	391	2.14
	4.7625	12.7	3.967	7	10.45	0.3					
Y1/4B	0.25	0.625	0.196	0.3681	0.5039	0.012	916	733	300	498	4.4
	6.35	15.875	4.978	9.35	12.8	0.3					

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

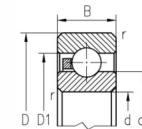
C·Thin-section bearing

Inner diameter d from 0.625inch (15.875mm) to 1.625inch (41.275mm)

1·A4 series

Rolling element diameter: 1/16inch (1.588mm)

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static	
							Dynamic		Axial	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA410	0.625	0.875	0.1562	0.7083	0.7917	0.01	720	600	690	4
	15.875	22.225	3.967	17.99	20.11	0.25				
HWA412	0.75	1	0.1562	0.8335	0.9169	0.01	750	680	790	4.7
	19.05	25.4	3.967	21.17	23.29	0.25				
HWA414	0.875	1.125	0.1562	0.9583	1.0417	0.01	810	790	940	5.4
	22.225	28.575	3.967	24.34	26.46	0.25				
HWA417	1.0625	1.3125	0.1562	1.1461	1.2295	0.01	850	930	1110	6.4
	26.9875	33.3375	3.967	29.11	31.23	0.25				
HWA420	1.25	1.5	0.1562	1.3335	1.4169	0.01	880	1030	1250	7.4
	31.75	38.1	3.967	33.87	35.99	0.25				
HWA422	1.375	1.625	0.1562	1.4583	1.5417	0.01	920	1140	1400	8
	24.925	41.275	3.967	37.04	39.16	0.25				
HWA424	1.5	1.75	0.1562	1.5835	1.6669	0.01	960	1260	1540	8.7
	38.1	44.45	3.967	40.22	42.34	0.25				
HWA426	1.625	1.875	0.1562	1.7083	1.7917	0.01	990	1370	1680	9.4
	41.275	47.625	3.967	43.39	45.51	0.25				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

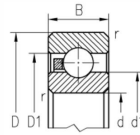
C·Thin-section bearing

Inner diameter d from 0.875inch (22.225mm) to 2.5inch (63.5mm)

1·A6 series

Rolling element diameter: 3/32inch (2.381mm)

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA614	0.875	1.25	0.1875	1.0043	1.1205	0.01	1470	1290	2080	11
	22.225	31.75	4.762	25.51	28.46	0.25				
HWA616	1	1.375	0.1875	1.1291	1.2453	0.01	1570	1480	2380	12
	25.4	34.925	4.762	28.68	31.63	0.25				
HWA618	1.125	1.5	0.1875	1.2543	1.3705	0.01	1620	1600	2640	14
	28.575	38.1	4.762	31.86	34.81	0.25				
HWA620	1.25	1.625	0.1875	1.3791	1.4953	0.01	1660	1720	2830	15
	31.75	41.275	4.762	35.03	37.98	0.25				
HWA622	1.375	1.75	0.1875	1.5043	1.6205	0.01	1700	1850	3090	16
	34.925	44.45	4.762	38.21	41.16	0.25				
HWA624	1.5	1.875	0.1875	1.6291	1.7453	0.01	1730	1970	3270	17
	38.1	47.625	4.762	41.38	44.33	0.25				
HWA628	1.75	2.125	0.1875	1.8791	1.9953	0.01	1840	2280	3830	20
	44.45	53.975	4.762	47.73	50.68	0.25				
HWA632	2	2.375	0.1875	2.1291	2.2453	0.01	1900	2520	4270	22
	50.8	60.325	4.762	54.08	57.03	0.25				
HWA640	2.5	2.875	0.1875	2.6291	2.7453	0.01	2050	3080	5270	27
	63.5	73.025	4.762	66.78	69.73	0.25				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

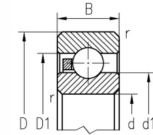
C·Thin-section bearing

Inner diameter d from 0.625inch (15.875mm) to 2.5625inch (65.0875mm)

1·A7 series

Rolling element diameter: 1/8inch (3.175mm)

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA710	0.625	1.0625	0.25	0.7661	0.9217	0.015	2090	1550	2290	12
	15.875	26.9875	6.35	19.46	23.41	0.38				
HWA712	0.75	1.1875	0.25	0.8909	1.0465	0.015	2240	1780	2690	14
	19.05	30.1625	6.35	22.63	26.58	0.38				
HWA713	0.8125	1.25	0.25	0.9535	1.1091	0.015	2310	1890	2890	15
	20.6375	31.75	6.35	24.22	28.17	0.38				
HWA714	0.875	1.3125	0.25	1.0161	1.1717	0.015	2280	1870	2900	16
	22.225	33.3375	6.35	25.81	29.76	0.38				
HWA717	1.0625	1.5	0.25	1.2035	1.3591	0.015	2470	2210	3500	19
	26.9875	38.1	6.35	30.57	34.52	0.38				
HWA721	1.3125	1.75	0.25	1.4535	1.6091	0.015	2590	2530	4100	22
	33.3375	44.45	6.35	36.92	40.87	0.38				
HWA725	1.5625	2	0.25	1.7035	1.8591	0.015	2710	2860	4710	26
	39.6875	50.8	6.35	43.27	47.22	0.38				
HWA729	1.8125	2.25	0.25	1.9535	2.1091	0.015	2880	3300	5510	30
	46.0375	57.15	6.35	49.62	53.57	0.38				
HWA733	2.0625	2.5	0.25	2.2035	2.3591	0.015	2970	3630	6110	34
	52.3875	63.5	6.35	55.97	59.92	0.38				
HWA737	2.3125	2.75	0.25	2.4535	2.6091	0.015	3060	3950	6710	37
	58.7375	69.85	6.35	62.32	66.27	0.38				
HWA741	2.5625	3	0.25	2.7035	2.8591	0.015	3200	4400	7520	41
	65.0875	76.2	6.35	68.67	72.62	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

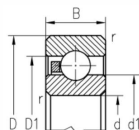
C·Thin-section bearing

Inner diameter d from 2inch (50.8mm) to 7inch (177.8mm)

1·A8 series

Rolling element diameter: 1/8inch (3.175mm)

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA832	2	2.5	0.25	2.172	2.3275	0.025	2990	3630	6110	40
	50.8	63.5	6.35	55.17	59.12	0.635				
HWA840	2.5	3	0.25	2.672	2.8275	0.025	3150	4280	7320	48
	63.5	76.2	6.35	67.87	71.82	0.635				
HWA848	3	3.5	0.25	3.172	3.3275	0.025	3360	5050	8720	57
	76.2	88.9	6.35	80.57	84.52	0.635				
HWA856	3.5	4	0.25	3.672	3.8275	0.025	3450	5590	9730	66
	88.9	101.6	6.35	93.27	97.22	0.635				
HWA864	4	4.5	0.25	4.172	4.3275	0.025	3710	6590	11500	75
	101.6	114.3	6.35	105.97	109.92	0.635				
HWA868	4.25	4.75	0.25	4.422	4.5775	0.025	3770	6920	12100	79
	107.95	120.62	6.35	112.32	116.27	0.635				
HWA872	4.5	5	0.25	4.672	4.8275	0.025	3830	7250	12700	83
	114.3	127	6.35	118.67	122.62	0.635				
HWA876	4.75	5.25	0.25	4.922	5.0775	0.025	3920	7690	13500	88
	120.65	133.35	6.35	125.02	128.97	0.635				
HWA880	5	5.5	0.25	5.172	5.3275	0.025	3970	8010	14100	92
	127	139.7	6.35	131.37	135.32	0.635				
HWA888	5.5	6	0.25	5.672	5.8275	0.025	4080	8670	15300	101
	139.7	152.4	6.35	144.07	148.02	0.635				
HWA896	6	6.5	0.25	6.172	6.3275	0.025	4210	9440	16700	109
	152.4	165.1	6.35	156.77	160.72	0.635				
HWA8104	6.5	7	0.25	6.672	6.8275	0.025	4340	10200	18100	118
	165.1	177.8	6.35	169.47	173.42	0.635				
HWA8112	7	7.5	0.25	7.172	7.3275	0.025	4420	10800	19300	127
	177.8	190.5	6.35	182.17	186.12	0.635				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

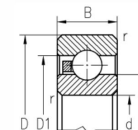
C·Thin-section bearing

Inner diameter d from 2.0625inch (52.3875mm) to 7inch (177.8mm)

1·A9 series

Rolling element diameter: 1/8inch (3.175mm)

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA933	2.0625	2.625	0.25	2.2657	2.4212	0.015	3010	3740	6310	49
	52.3875	66.675	6.35	57.55	61.5	0.38				
HWA937	2.3125	2.875	0.25	2.5157	2.6712	0.015	3160	4180	7110	54
	58.7375	73.025	6.35	63.9	67.85	0.38				
HWA940	2.5	3.0625	0.25	2.7031	2.8587	0.015	3200	4400	7520	58
	63.5	77.7875	6.35	68.66	72.61	0.38				
HWA948	3	3.5625	0.25	3.2031	3.3587	0.015	3350	5050	8720	68
	76.2	90.4875	6.35	81.36	85.31	0.38				
HWA956	3.5	4.0625	0.25	3.7031	3.8587	0.015	3490	5710	9930	79
	88.9	103.1875	6.35	94.06	98.01	0.38				
HWA964	4	4.5625	0.25	4.2031	4.3587	0.015	3660	6470	11300	89
	101.6	115.8875	6.35	106.76	110.71	0.38				
HWA972	4.5	5.0625	0.25	4.7031	4.8587	0.015	3820	7240	12700	100
	114.3	128.5875	6.35	119.46	123.41	0.38				
HWA980	5	5.5625	0.25	5.2031	5.3587	0.015	3930	7900	13900	110
	127	141.2875	6.35	132.16	136.11	0.38				
HWA988	5.5	6.0625	0.25	5.7031	5.8587	0.015	4070	8670	15300	120
	139.7	153.9875	6.35	144.86	148.81	0.38				
HWA996	6	6.5625	0.25	6.2031	6.3587	0.015	4170	9330	16500	130
	152.4	166.6875	6.35	157.56	161.51	0.38				
HWA9104	6.5	7.0625	0.25	6.7031	6.8587	0.015	4300	10100	17900	141
	165.1	179.3875	6.35	170.26	174.21	0.38				
HWA9112	7	7.5625	0.25	7.2031	7.3587	0.015	4390	10700	19100	151
	177.8	192.0875	6.35	182.96	186.91	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

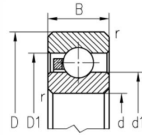
C·Thin-section bearing

Inner diameter d from 2inch (50.8mm) to 8inch (203.2mm)

1·A10 series

Rolling element diameter: 5/32inch (3.969mm)

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA1032	2	2.625	0.3125	2.2154	2.4094	0.04	4630	5870	6350	63
	50.8	66.675	7.937	56.27	61.2	1.015				
HWA1040	2.5	3.125	0.3125	2.7154	2.9094	0.04	5070	7390	7900	76
	63.5	79.375	7.937	68.97	73.9	1.015				
HWA1048	3	3.625	0.3125	3.2154	3.4094	0.04	5250	8430	8940	89
	76.2	92.075	7.937	81.67	86.6	1.015				
HWA1056	3.5	4.125	0.3125	3.7154	3.9094	0.04	5600	9940	10400	103
	88.9	104.775	7.937	94.37	99.3	1.015				
HWA1064	4	4.625	0.3125	4.2154	4.4094	0.04	5920	11400	12000	116
	101.6	117.475	7.937	107.07	112	1.015				
HWA1068	4.25	4.875	0.3125	4.4654	4.6594	0.04	5990	11900	12500	123
	107.95	123.825	7.937	113.42	118.35	1.015				
HWA1072	4.5	5.125	0.3125	4.7154	4.9094	0.04	6140	12700	13300	130
	114.3	130.175	7.937	119.77	124.7	1.015				
HWA1076	4.75	5.375	0.3125	4.9654	5.1594	0.04	6280	13500	14100	137
	120.65	136.525	7.937	126.12	131.05	1.015				
HWA1080	5	5.625	0.3125	5.2154	5.4094	0.04	6410	14200	14800	143
	127	142.875	7.937	132.47	137.4	1.015				
HWA1088	5.5	6.125	0.3125	5.7154	5.9094	0.04	6600	15500	16100	157
	139.7	155.575	7.937	145.17	150.1	1.015				
HWA1096	6	6.625	0.3125	6.2154	6.4094	0.04	6770	16800	174100	170
	152.4	168.275	7.937	157.87	162.8	1.015				
HWA10104	6.5	7.125	0.3125	6.7154	6.9094	0.04	7010	18300	19000	184
	165.1	180.975	7.937	170.57	175.5	1.015				
HWA10112	7	7.625	0.3125	7.2154	7.4094	0.04	7230	19800	20500	197
	177.8	193.675	7.937	183.27	188.2	1.015				
HWA10120	7.5	8.125	0.3125	7.7154	7.9094	0.04	7320	20800	21600	210
	190.5	206.375	7.937	195.97	200.9	1.015				
HWA10128	8	8.625	0.3125	8.2154	8.4094	0.04	7470	22100	22900	224
	203.2	219.075	7.937	208.67	213.6	1.015				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

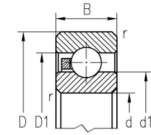
C·Thin-section bearing

Inner diameter d from 2.5625inch (65.0875mm) to 6.8125inch (173.0375mm)

1·A11 series

Rolling element diameter: 3/16inch (4.762mm)

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA1141	2.5625	3.25	0.3125	2.7896	3.0228	0.015	6520	8840	9650	87
	65.0875	82.55	7.937	70.856	76.78	0.38				
HWA1145	2.8125	3.5	0.3125	3.0396	3.2728	0.015	6860	9920	10700	94
	71.4375	88.9	7.937	77.206	83.13	0.38				
HWA1149	3.0625	3.75	0.3125	3.2896	3.5228	0.015	7030	10600	11500	102
	77.7875	95.25	7.937	83.556	89.48	0.38				
HWA1153	3.3125	4	0.3125	3.5396	3.7728	0.015	7180	11400	12200	109
	84.1375	101.6	7.937	89.906	95.83	0.38				
HWA1161	3.8125	4.5	0.3125	4.0396	4.2728	0.015	7480	12800	13700	123
	96.8375	114.3	7.937	102.606	108.53	0.38				
HWA1169	4.3125	5	0.3125	4.5396	4.7728	0.015	7880	14700	15500	138
	109.5375	127	7.937	115.306	121.23	0.38				
HWA1177	4.8125	5.5	0.3125	5.0396	5.2728	0.015	8130	16100	17000	153
	122.2375	139.7	7.937	128.006	133.93	0.38				
HWA1185	5.3125	6	0.3125	5.5396	5.7728	0.015	8360	17600	18500	168
	134.9375	152.4	7.937	140.706	146.63	0.38				
HWA1193	5.8125	6.5	0.3125	6.0396	6.2728	0.015	8690	19400	20300	183
	147.6375	165.1	7.937	153.406	159.33	0.38				
HWA11101	6.3125	7	0.3125	6.5396	6.7728	0.015	8900	20900	21800	197
	160.3375	177.8	7.937	166.106	172.03	0.38				
HWA11109	6.8125	7.5	0.3125	7.0396	7.2728	0.015	9110	22400	23300	212
	173.0375	190.5	7.937	178.806	184.73	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

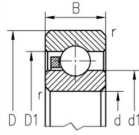
C·Thin-section bearing

Inner diameter d from 4inch (101.6mm) to 10inch (254mm)

1·A12 series

Rolling element diameter: 3/16inch (4.762mm)

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA1264	4	4.75	0.375	4.2583	4.4917	0.04	7760	13900	14800	172
	101.6	120.65	9.525	108.16	114.09	1.015				
HWA1268	4.25	5	0.375	4.5083	4.7417	0.04	7890	14700	15500	181
	107.95	127	9.525	114.51	120.44	1.015				
HWA1272	4.5	5.25	0.375	4.7583	4.9917	0.04	8020	15400	16300	191
	114.3	133.35	9.525	120.86	126.79	1.015				
HWA1276	4.75	5.5	0.375	5.0083	5.2417	0.04	8140	16100	17000	204
	120.65	139.7	9.525	127.21	133.14	1.015				
HWA1280	5	5.75	0.375	5.2583	5.4917	0.04	8380	17200	18100	211
	127	146.05	9.525	133.56	139.49	1.015				
HWA1288	5.5	6.25	0.375	5.7583	5.9917	0.04	8600	18700	19600	230
	139.7	158.75	9.525	146.26	152.19	1.015				
HWA1296	6	6.75	0.375	6.2583	6.4917	0.04	8920	20500	21400	250
	152.4	171.45	9.525	158.96	164.89	1.015				
HWA12104	6.5	7.25	0.375	6.7583	6.9917	0.04	9120	22000	22900	269
	165.1	184.15	9.525	171.66	177.59	1.015				
HWA12112	7	7.75	0.375	7.2583	7.4917	0.04	9400	23800	24800	289
	177.8	196.85	9.525	184.36	190.29	1.015				
HWA12120	7.5	8.25	0.375	7.7583	7.9917	0.04	9580	25300	26200	309
	190.5	209.55	9.525	197.06	202.99	1.015				
HWA12128	8	8.75	0.375	8.2583	8.4917	0.04	9850	27100	28100	328
	203.2	222.25	9.525	209.76	215.69	1.015				
HWA12144	9	9.75	0.375	9.2583	9.4917	0.04	10100	30100	31000	366
	228.6	247.65	9.525	235.16	241.09	1.015				
HWA12160	10	10.75	0.375	10.2583	10.4917	0.04	10600	33700	34700	406
	254	273.05	9.525	260.56	266.49	1.015				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

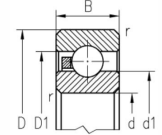
C·Thin-section bearing

Inner diameter d from 3.0625inch (77.7875mm) to 10inch (254mm)

1·A13 series

Rolling element diameter: 3/16inch (4.762mm)

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA1349	3.0625	3.875	0.3125	3.3521	3.5854	0.015	7140	11000	11800	130
	77.7875	98.425	7.937	85.144	91.07	0.38				
HWA1356	3.5	4.3125	0.3125	3.7895	4.0228	0.015	7470	12400	13300	147
	88.9	109.5375	7.937	96.254	102.18	0.38				
HWA1364	4	4.8125	0.3125	4.2895	4.5228	0.015	7750	13900	14800	165
	101.6	122.2375	7.937	108.954	114.88	0.38				
HWA1372	4.5	5.3125	0.3125	4.7895	5.0228	0.015	8000	15400	16300	184
	114.3	134.9375	7.937	121.654	127.58	0.38				
HWA1380	5	5.8125	0.3125	5.2895	5.5228	0.015	8250	16900	17800	202
	127	147.6375	7.937	134.354	140.28	0.38				
HWA1388	5.5	6.3125	0.3125	5.7895	6.0228	0.015	8480	18300	19200	221
	139.7	160.3375	7.937	147.054	152.98	0.38				
HWA1396	6	6.8125	0.3125	6.2895	6.5228	0.015	8700	19800	20700	239
	152.4	173.0375	7.937	159.754	165.68	0.38				
HWA13104	6.5	7.3125	0.3125	6.7895	7.0228	0.015	8910	21300	22200	258
	165.1	185.7375	7.937	172.454	178.38	0.38				
HWA13112	7	7.8125	0.3125	7.2895	7.5228	0.015	9100	22800	23600	276
	177.8	198.4375	7.937	185.154	191.08	0.38				
HWA13120	7.5	8.3125	0.3125	7.7895	8.0228	0.015	9300	24200	25100	295
	190.5	211.1375	7.937	197.854	203.78	0.38				
HWA13128	8	8.8125	0.3125	8.2895	8.5228	0.015	9490	25700	26600	313
	203.2	223.8375	7.937	210.554	216.48	0.38				
HWA13144	9	9.8125	0.3125	9.2895	9.5228	0.015	9840	28600	29500	350
	228.6	249.2375	7.937	235.954	241.88	0.38				
HWA13160	10	10.8125	0.3125	10.2895	10.5228	0.015	10100	31600	32500	387
	254	274.6375	7.937	261.354	267.28	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

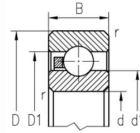
C·Thin-section bearing

Inner diameter d from 4inch (101.6mm) to 12inch (304.8mm)

1·A16 series

Rolling element diameter: 1/4inch (6.35mm)

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA1664	4	5	0.5	4.3445	4.6555	0.06	11800	18900	18300	312
	101.6	127	12.7	110.35	118.25	1.525				
HWA1668	4.25	5.25	0.5	4.5945	4.9055	0.06	11850	19600	21000	329
	107.95	133.35	12.7	116.7	124.6	1.525				
HWA1672	4.5	5.5	0.5	4.8445	5.1555	0.06	12200	20900	22300	346
	114.3	139.7	12.7	123.05	130.95	1.525				
HWA1676	4.75	5.75	0.5	5.0945	5.4055	0.06	12500	22200	23600	364
	120.65	146.05	12.7	129.4	137.3	1.525				
HWA1680	5	6	0.5	5.3445	5.6555	0.06	12550	22800	24200	380
	127	152.4	12.7	135.75	143.65	1.525				
HWA1688	5.5	6.5	0.5	5.8445	6.1555	0.06	13100	25400	26800	415
	139.7	165.1	12.7	148.45	156.35	1.525				
HWA1696	6	7	0.5	6.3445	6.6555	0.06	13400	27400	28800	450
	152.4	177.8	12.7	161.15	169.05	1.525				
HWA16104	6.5	7.5	0.5	6.8445	7.1555	0.06	13700	29300	30700	484
	165.1	190.5	12.7	173.85	181.75	1.525				
HWA16112	7	8	0.5	7.3445	7.6555	0.06	14200	31900	33300	519
	177.8	203.2	12.7	186.55	194.45	1.525				
HWA16120	7.5	8.5	0.5	7.8445	8.1555	0.06	14500	33900	35300	553
	190.5	215.9	12.7	199.25	207.15	1.525				
HWA16128	8	9	0.5	8.3445	8.6555	0.06	14700	35900	37200	587
	203.2	228.6	12.7	211.95	219.85	1.525				
HWA16144	9	10	0.5	9.3445	9.6555	0.06	15400	40400	41800	657
	228.6	254	12.7	237.35	245.25	1.525				
HWA16160	10	11	0.5	10.3445	10.6555	0.06	16000	45000	46300	726
	254	179.4	12.7	262.75	270.65	1.525				
HWA16176	11	12	0.5	11.3445	11.6555	0.06	16500	48900	50200	794
	279.4	304.8	12.7	288.15	296.05	1.525				
HWA16192	12	13	0.5	12.3445	12.6555	0.06	16900	52800	54100	863
	304.8	330.2	12.7	313.55	321.45	1.525				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

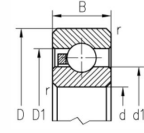
C·Thin-section bearing

Inner diameter d from 4inch (101.6mm) to 11inch (279.6mm)

1·A24 series

Rolling element diameter: 3/8inch (9.525mm)

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWA2464	4	5.5	0.75	4.5169	4.9831	0.75	21400	29400	32600	746
	101.6	139.7	19.05	114.73	126.57	1.905				
HWA2468	4.25	5.75	0.75	4.7669	5.2331	0.75	21700	30900	34100	784
	107.95	146.05	19.05	121.08	132.92	1.905				
HWA2472	4.5	6	0.75	5.0169	5.4831	0.75	22700	33700	37100	826
	114.3	152.4	19.05	127.43	139.27	1.905				
HWA2476	4.75	6.25	0.75	5.2669	5.7331	0.75	23000	35200	38600	865
	120.65	158.75	19.05	133.78	145.62	1.905				
HWA2480	5	6.5	0.75	5.5169	5.9831	0.75	23300	36700	40200	904
	127	165.1	19.05	140.13	151.97	1.905				
HWA2488	5.5	7	0.75	6.0169	6.4831	0.75	23900	39600	43200	981
	139.7	177.8	19.05	152.83	164.67	1.905				
HWA2496	6	7.5	0.75	6.5169	6.9831	0.75	25000	44000	47800	1070
	152.4	190.5	19.05	165.53	177.37	1.905				
HWA24104	6.5	8	0.75	7.0169	7.4831	0.75	25600	46900	50700	1140
	165.1	203.2	19.05	178.23	190.07	1.905				
HWA24112	7	8.5	0.75	7.5169	7.9831	0.75	26100	49900	53700	1220
	177.8	215.9	19.05	190.93	202.77	1.905				
HWA24120	7.5	9	0.75	8.0169	8.4831	0.75	27000	54300	58100	1300
	190.5	228.6	19.05	203.63	215.47	1.905				
HWA24128	8	9.5	0.75	8.5169	8.9831	0.75	27500	57200	61100	1380
	203.2	241.3	19.05	216.33	228.17	1.905				
HWA24144	9	10.5	0.75	9.5169	9.9831	0.75	28700	64500	68500	1540
	228.6	266.7	19.05	241.73	253.57	1.905				
HWA24160	10	11.5	0.75	10.5169	10.9831	0.75	29500	70400	74400	1690
	254	292.1	19.05	267.13	278.97	1.905				
HWA24176	11	12.5	0.75	11.5169	11.9831	0.75	30700	77800	81800	1850
	279.4	317.5	19.05	292.53	304.37	1.905				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to R-type bearings.

C•Thin-section bearing

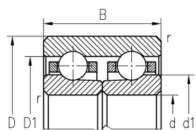
Inner diameter d from 0.75inch (19.05mm) to 1.625inch (41.275mm)

2•AD4 series, double-row bearing

Rolling element diameter: 1/16inch (1.588mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	
HWAD412	0.75	1	0.3125	0.8335	0.9169	0.01	1470	1780	1040	9.4
	19.05	25.4	7.937	21.17	23.29	0.25				
HWAD420	1.25	1.5	0.3125	1.3335	1.4169	0.01	1640	2540	1530	15
	31.75	38.1	7.937	33.87	35.99	0.25				
HWAD424	1.5	1.75	0.3125	1.5835	1.6669	0.01	1740	2970	1820	18
	38.1	44.45	7.937	40.22	42.34	0.25				
HWAD426	1.625	1.875	0.3125	1.7083	1.7917	0.01	1790	3190	1960	19
	41.275	47.625	7.937	43.39	45.51	0.25				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C•Thin-section bearing

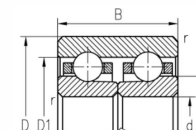
Inner diameter d from 0.625inch (15.875mm) to 2.5625inch (65.0875mm)

2•AD7 series, double-row bearing

Rolling element diameter: 3/32inch (2.381mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	
HWAD710	0.625	1.0625	0.375	0.7661	0.8827	0.015	2200	2100	1620	21
	15.875	26.9875	9.525	19.46	22.42	0.38				
HWAD712	0.75	1.1875	0.375	0.8909	1.0075	0.015	2300	2340	1840	24
	19.05	30.1625	9.525	22.63	25.59	0.38				
HWAD713	0.8125	1.25	0.375	0.9535	1.0701	0.015	2340	2460	1950	25
	20.6375	31.75	9.525	24.22	27.18	0.38				
HWAD714	0.875	1.3125	0.375	1.0161	1.1327	0.015	2390	2590	2070	27
	22.225	33.3375	9.525	25.81	28.77	0.38				
HWAD717	1.0625	1.5	0.375	1.2035	1.3201	0.015	2510	2950	2400	31
	26.9875	38.1	9.525	30.57	33.53	0.38				
HWAD721	1.3125	1.75	0.375	1.4535	1.5701	0.015	2720	3570	2960	37
	33.3375	44.45	9.525	36.92	39.88	0.38				
HWAD725	1.5625	2	0.375	1.7035	1.8201	0.015	2840	4060	3410	43
	39.6875	50.8	9.525	43.27	46.23	0.38				
HWAD729	1.8125	2.25	0.375	1.9535	2.0701	0.015	3010	4680	3970	49
	46.0375	57.15	9.525	49.62	52.58	0.38				
HWAD733	2.0625	2.5	0.375	2.2035	2.3201	0.015	3850	7110	6080	57
	52.3875	63.5	9.525	55.97	58.93	0.38				
HWAD737	2.3125	2.75	0.375	2.4535	2.5701	0.015	3990	7850	6750	63
	58.7375	69.85	9.525	62.32	65.28	0.38				
HWAD741	2.5625	3	0.375	2.7035	2.8201	0.015	4130	8590	7420	69
	65.0875	76.2	9.525	68.67	71.63	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

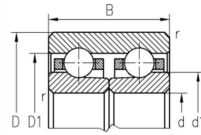
Inner diameter d from 2inch (50.8mm) to 7inch (177.8mm)

2·AD8 series, double-row bearing

Rolling element diameter: 3/32inch (2.381mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWAD832	2	2.5	0.375	2.1913	2.3083	0.015	3810	6980	5790	66
	50.8	63.5	9.525	55.66	58.63	0.38				
HWAD840	2.5	3	0.375	2.6913	2.8083	0.015	4090	8460	7090	80
	63.5	76.2	9.525	68.36	71.33	0.38				
HWAD848	3	3.5	0.375	3.1913	3.3083	0.015	4340	9940	8400	95
	76.2	88.9	9.525	81.06	84.03	0.38				
HWAD856	3.5	4	0.375	3.6913	3.8083	0.015	4560	11400	9700	110
	88.9	101.6	9.525	93.76	96.73	0.38				
HWAD864	4	4.5	0.375	4.1913	4.3083	0.015	4740	12700	10800	124
	101.6	114.3	9.525	106.46	109.43	0.38				
HWAD868	4.25	4.75	0.375	4.4413	4.5583	0.015	4840	13500	11500	131
	107.95	120.65	9.525	112.81	115.78	0.38				
HWAD872	4.5	5	0.375	4.6913	4.8083	0.015	4930	14200	12200	139
	114.3	127	9.525	119.16	122.13	0.38				
HWAD876	4.75	5.25	0.375	4.9413	5.0583	0.015	5020	14900	12800	146
	120.65	133.35	9.525	125.51	128.48	0.38				
HWAD880	5	5.5	0.375	5.1913	5.3083	0.015	5110	15700	13500	153
	127	139.7	9.525	131.86	134.83	0.38				
HWAD888	5.5	6	0.375	5.6913	5.8083	0.015	5280	17200	14800	168
	139.7	152.4	9.525	144.56	147.53	0.38				
HWAD896	6	6.5	0.375	6.1913	6.3083	0.015	5450	18600	16100	183
	152.4	165.1	9.525	157.26	160.23	0.38				
HWAD8104	6.5	7	0.375	6.6913	6.8083	0.015	5600	20100	17400	197
	165.1	177.8	9.525	169.96	172.93	0.38				
HWAD8112	7	7.5	0.375	7.1913	7.3083	0.015	5720	21500	18600	212
	177.8	190.5	9.525	182.66	185.63	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.
2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

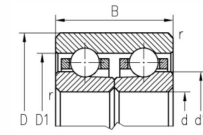
Inner diameter d from 2.0625inch (52.3875mm) to 7inch (177.8mm)

2·AD9 series, double-row bearing

Rolling element diameter: 3/32inch (2.381mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWAD933	2.0625	2.625	0.375	2.2657	2.3823	0.015	3140	5290	4530	79
	52.3875	66.675	9.525	57.55	60.51	0.38				
HWAD937	2.3125	2.875	0.375	2.5157	2.6323	0.015	3280	5910	5090	87
	58.7375	73.025	9.525	63.9	66.86	0.38				
HWAD940	2.5	3.0625	0.375	2.7031	2.8197	0.015	4130	8590	7420	95
	63.5	77.7875	9.525	68.66	71.62	0.38				
HWAD948	3	3.5625	0.375	3.2031	3.3197	0.015	4370	10000	8760	112
	76.2	90.4875	9.525	81.36	84.32	0.38				
HWAD956	3.5	4.0625	0.375	3.7031	3.8197	0.015	4560	11400	10000	129
	88.9	103.1875	9.525	94.06	97.02	0.38				
HWAD964	4	4.5625	0.375	4.2031	4.3197	0.015	4770	12800	11300	146
	101.6	115.8875	9.525	106.76	109.72	0.38				
HWAD972	4.5	5.0625	0.375	4.7031	4.8197	0.015	4960	14300	12600	163
	114.3	128.5875	9.525	119.46	122.42	0.38				
HWAD980	5	5.5625	0.375	5.2031	5.3197	0.015	5140	15800	14000	180
	127	141.2875	9.525	132.16	135.12	0.38				
HWAD988	5.5	6.0625	0.375	5.7031	5.8197	0.015	5310	17300	15300	197
	139.7	153.9875	9.525	144.86	147.82	0.38				
HWAD996	6	6.5625	0.375	6.2031	6.3197	0.015	5470	18800	16700	214
	152.4	166.6875	9.525	157.56	160.52	0.38				
HWAD9104	6.5	7.0625	0.375	6.7031	6.8197	0.015	5600	20100	17900	230
	165.1	179.3875	9.525	170.26	173.22	0.38				
HWAD9112	7	7.5625	0.375	7.2031	7.3197	0.015	5740	21600	19200	247
	177.8	192.0875	9.525	182.96	185.92	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.
2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

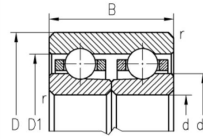
Inner diameter d from 2inch (50.8mm) to 8inch (203.2mm)

2·AD10 series, double-row bearing

Rolling element diameter: 1/8inch (3.175mm)

Back-to-Back

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
	d	D	B	d1	D1	r ¹	Dynamic	Static	Cax	
HWAD1032	2	2.625	0.5	2.2346	2.3906	0.025	5890	9830	8230	110
	50.8	66.675	12.7	56.76	60.72	0.635				
HWAD1040	2.5	3.125	0.5	2.7346	2.8906	0.025	6310	11800	10000	134
	63.5	79.375	12.7	69.46	73.42	0.635				
HWAD1048	3	3.625	0.5	3.2346	3.3906	0.025	6670	13700	11800	157
	76.2	92.075	12.7	82.16	86.12	0.635				
HWAD1056	3.5	4.125	0.5	3.7346	3.8906	0.025	7010	15700	13600	181
	88.9	104.775	12.7	94.86	98.82	0.635				
HWAD1064	4	4.625	0.5	4.2346	4.3906	0.025	7250	17500	15200	205
	101.6	117.475	12.7	107.56	111.52	0.635				
HWAD1068	4.25	4.875	0.5	4.4846	4.6406	0.025	7430	18600	16200	217
	107.95	123.825	12.7	113.91	117.87	0.635				
HWAD1072	4.5	5.125	0.5	4.7346	4.8906	0.025	7540	19400	17000	229
	114.3	130.175	12.7	120.26	124.22	0.635				
HWAD1076	4.75	5.375	0.5	4.9846	5.1406	0.025	7710	20500	18000	241
	120.65	136.525	12.7	126.61	130.57	0.635				
HWAD1080	5	5.625	0.5	5.2346	5.3906	0.025	7810	21400	18800	252
	127	142.875	12.7	132.96	136.92	0.635				
HWAD1088	5.5	6.125	0.5	5.7346	5.8906	0.025	8070	23400	20600	276
	139.7	155.575	12.7	145.66	149.62	0.635				
HWAD1096	6	6.625	0.5	6.2346	6.3906	0.025	8310	25400	22300	300
	152.4	168.275	12.7	158.36	162.32	0.635				
HWAD10104	6.5	7.125	0.5	6.7346	6.8906	0.025	8540	27300	24100	324
	165.1	180.975	12.7	171.06	175.02	0.635				
HWAD10112	7	7.625	0.5	7.2346	7.3906	0.025	8760	29300	25900	348
	177.8	193.675	12.7	183.76	187.72	0.635				
HWAD10120	7.5	8.125	0.5	7.7346	7.8906	0.025	8970	31330	27770	372
	190.5	206.375	12.7	196.46	200.42	0.635				
HWAD10128	8	8.625	0.5	8.2346	8.3906	0.025	9140	33080	29370	395
	203.2	219.075	12.7	209.16	213.12	0.635				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

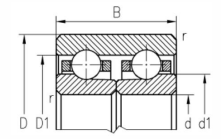
Inner diameter d from 4inch (101.6mm) to 10inch (254mm)

2·AD12 series, double-row bearing

Rolling element diameter: 5/32inch (3.969mm)

Back-to-Back

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
	d	D	B	d1	D1	r ¹	Dynamic	Static	Cax	
HWAD1264	4	4.75	0.625	4.278	4.472	0.04	11600	30700	16100	305
	101.6	120.65	15.875	108.66	113.59	1.015				
HWAD1268	4.25	5	0.625	4.528	4.722	0.04	11900	32700	17100	323
	107.95	127	15.875	115.01	119.94	1.015				
HWAD1272	4.5	5.25	0.625	4.778	4.972	0.04	12100	34300	17900	340
	114.3	133.35	15.875	121.36	126.29	1.015				
HWAD1276	4.75	5.5	0.625	5.028	5.222	0.04	12300	36300	18900	358
	120.65	139.7	15.875	127.71	132.64	1.015				
HWAD1280	5	5.75	0.625	5.278	5.472	0.04	12500	37800	19700	375
	127	146.05	15.875	134.06	138.99	1.015				
HWAD1288	5.5	6.25	0.625	5.778	5.972	0.04	12900	41400	21400	410
	139.7	158.75	15.875	146.76	151.69	1.015				
HWAD1296	6	6.75	0.625	6.278	6.472	0.04	13300	45000	23200	445
	152.4	171.45	15.875	159.46	164.39	1.015				
HWAD12104	6.5	7.25	0.625	6.778	6.972	0.04	13700	49000	25200	480
	165.1	184.15	15.875	172.16	177.09	1.015				
HWAD12112	7	7.75	0.625	7.278	7.472	0.04	14100	52600	27000	515
	177.8	196.86	15.875	184.86	189.79	1.015				
HWAD12120	7.5	8.25	0.625	7.778	7.972	0.04	14400	56100	28800	550
	190.5	209.55	15.875	197.56	202.49	1.015				
HWAD12128	8	8.75	0.625	8.278	8.472	0.04	14700	59700	30600	585
	203.2	222.25	15.875	210.26	215.19	1.015				
HWAD12144	9	9.75	0.625	9.278	9.472	0.04	15300	66800	34100	655
	228.6	247.65	15.875	235.66	240.59	1.015				
HWAD12160	10	10.75	0.625	10.278	10.472	0.04	15900	74000	37700	725
	254	273.05	15.875	261.06	265.99	1.015				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

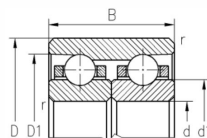
Inner diameter d from 0.875inch (22.225mm) to 2.5inch (63.5mm)

2·AA6 series, double-row bearing

Rolling element diameter: 3/32inch (2.381mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
	d	D	B	d1	D1	r ¹	Dynamic	Static	Cax	
HWAA614	0.875	1.25	0.375	1.0043	1.1665	0.01	3030	3680	2950	21
	22.225	31.75	9.525	25.51	29.63	0.25				
HWAA616	1	1.375	0.375	1.1291	1.2913	0.01	3150	4050	3250	24
	25.4	34.925	9.525	28.68	32.8	0.25				
HWAA618	1.125	1.5	0.375	1.2543	1.4161	0.01	3250	4420	3630	26
	28.575	38.1	9.525	31.86	35.97	0.25				
HWAA620	1.25	1.625	0.375	1.3791	1.5409	0.01	3290	4650	3810	29
	31.75	41.275	9.525	35.03	39.14	0.25				
HWAA622	1.375	1.75	0.375	1.5043	1.6657	0.01	3380	5020	4190	31
	34.925	44.45	9.525	38.21	42.31	0.25				
HWAA624	1.5	1.875	0.375	1.6291	1.7906	0.01	3470	5390	4470	33
	38.1	47.625	9.525	41.38	45.48	0.25				
HWAA628	1.75	2.125	0.375	1.8791	2.0402	0.01	3590	6000	5030	38
	44.45	53.975	9.525	47.73	51.82	0.25				
HWAA632	2	2.375	0.375	2.1291	2.2898	0.01	3800	6860	5800	44
	50.8	60.325	9.525	54.08	58.16	0.25				
HWAA640	2.5	2.875	0.375	2.6291	2.789	0.01	4080	8340	7140	53
	63.5	73.025	9.525	66.78	70.84	0.25				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

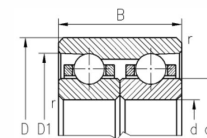
Inner diameter d from 0.625inch (15.875mm) to 2.5625inch (65.0875mm)

2·AA7 series, double-row bearing

Rolling element diameter: 1/8inch (3.175mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
	d	D	B	d1	D1	r ¹	Dynamic	Static	Cax	
HWAA710	0.625	1.0625	0.5	0.7661	0.9843	0.015	3940	3890	2870	25
	15.875	26.9875	12.7	19.46	25	0.38				
HWAA712	0.75	1.1875	0.5	0.8909	1.1091	0.015	4310	4580	3460	28
	19.05	30.1625	12.7	22.63	28.17	0.38				
HWAA713	0.8125	1.25	0.5	0.9535	1.1713	0.015	4410	4790	3670	30
	20.6375	31.75	12.7	24.22	29.75	0.38				
HWAA714	0.875	1.3125	0.5	1.0161	1.2339	0.015	4490	5010	3870	32
	22.225	33.3375	12.7	25.81	31.34	0.38				
HWAA717	1.0625	1.5	0.5	1.2035	1.4209	0.015	4860	5900	4670	37
	26.9875	38.1	12.7	30.57	36.09	0.38				
HWAA721	1.3125	1.75	0.5	1.4535	1.6705	0.015	5110	6760	5470	45
	33.3375	44.45	12.7	36.92	42.43	0.38				
HWAA725	1.5625	2	0.5	1.7035	1.9201	0.015	5550	8100	6670	52
	39.6875	50.8	12.7	43.27	48.77	0.38				
HWAA729	1.8125	2.25	0.5	1.9535	2.1697	0.015	5740	8970	7480	60
	46.0375	57.15	12.7	49.62	55.11	0.38				
HWAA733	2.0625	2.5	0.5	2.2035	2.4193	0.015	5920	9840	8280	67
	52.3875	63.5	12.7	55.97	61.45	0.38				
HWAA737	2.3125	2.75	0.5	2.4535	2.6689	0.015	6090	10700	9090	74
	58.7375	69.85	12.7	62.32	67.79	0.38				
HWAA741	2.5625	3	0.5	2.7035	2.9185	0.015	6330	11800	10000	81
	65.0875	76.2	12.7	68.67	74.13	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

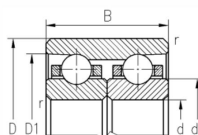
Inner diameter d from 2inch (50.8mm) to 7inch (177.8mm)

2·AA8 series, double-row bearing

Rolling element diameter: 1/8inch (3.175mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
	d	D	B	d1	D1	r ¹	Dynamic	Static	Cax	
HWAA832	2	2.5	0.5	2.172	2.3878	0.025	5950	9840	8280	79
	50.8	63.5	12.7	55.17	60.65	0.635				
HWAA840	2.5	3	0.5	2.672	2.8866	0.025	6270	11500	9890	96
	63.5	76.2	12.7	67.87	73.32	0.635				
HWAA848	3	3.5	0.5	3.172	3.3858	0.025	6640	13500	11600	114
	76.2	88.9	12.7	80.57	86	0.635				
HWAA856	3.5	4	0.5	3.672	3.885	0.025	6980	15500	13500	132
	88.9	101.6	12.7	93.27	98.68	0.635				
HWAA864	4	4.5	0.5	4.172	4.3843	0.025	7290	17500	15300	149
	101.6	114.3	12.7	105.97	111.36	0.635				
HWAA868	4.25	4.75	0.5	4.422	4.6339	0.025	7400	18300	16100	158
	107.95	120.65	12.7	112.32	117.7	0.635				
HWAA872	4.5	5	0.5	4.672	4.8835	0.025	7510	19200	16900	167
	114.3	127	12.7	118.67	124.04	0.635				
HWAA876	4.75	5.25	0.5	4.922	5.1331	0.025	7680	20300	17900	176
	120.65	133.35	12.7	125.02	130.38	0.635				
HWAA880	5	5.5	0.5	5.172	5.3827	0.025	7790	21200	18700	184
	127	139.7	12.7	131.37	136.72	0.635				
HWAA888	5.5	6	0.5	5.672	5.8819	0.025	8050	23200	20500	202
	139.7	152.4	12.7	144.07	149.4	0.635				
HWAA896	6	6.5	0.5	6.172	6.3811	0.025	8290	25100	22300	220
	152.4	165.1	12.7	156.77	162.08	0.635				
HWAA8104	6.5	7	0.5	6.672	6.8799	0.025	8520	27100	24100	2380
	165.1	177.8	12.7	169.47	174.75	0.635				
HWAA8112	7	7.5	0.5	7.172	7.3791	0.025	8740	29100	25900	255
	177.8	190.5	12.7	182.17	187.43	0.635				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

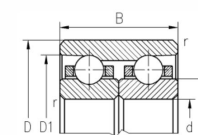
Inner diameter d from 2.0625inch (52.3875mm) to 7inch (177.8mm)

2·AA9 series, double-row bearing

Rolling element diameter: 1/8inch (3.175mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
	d	D	B	d1	D1	r ¹	Dynamic	Static	Cax	
HWAA933	2.0625	2.625	0.5	2.2657	2.4811	0.015	6050	10200	8680	98
	52.3875	66.675	12.7	57.55	63.02	0.38				
HWAA937	2.3125	2.875	0.5	2.5157	2.7307	0.015	6210	11100	9480	108
	58.7375	73.025	12.7	63.9	69.36	0.38				
HWAA940	2.5	3.0625	0.5	2.7031	2.9181	0.015	6330	11800	10000	116
	63.5	77.7875	12.7	68.66	74.12	0.38				
HWAA948	3	3.5625	0.5	3.2031	3.4173	0.015	6690	13700	11800	137
	76.2	90.4875	12.7	81.36	86.8	0.38				
HWAA956	3.5	4.0625	0.5	3.7031	3.9165	0.015	7030	15700	13700	157
	88.9	103.1875	12.7	94.06	99.48	0.38				
HWAA964	4	4.5625	0.5	4.2031	4.4154	0.015	7270	17500	15300	178
	101.6	115.8875	12.7	106.76	112.15	0.38				
HWAA972	4.5	5.0625	0.5	4.7031	4.9146	0.015	7560	19400	17100	199
	114.3	128.5875	12.7	119.46	124.83	0.38				
HWAA980	5	5.5625	0.5	5.2031	5.4138	0.015	7830	21400	18900	220
	127	141.2875	12.7	132.16	137.51	0.38				
HWAA988	5.5	6.0625	0.5	5.7031	5.913	0.015	8080	23400	20700	241
	139.7	153.9875	12.7	144.86	150.19	0.38				
HWAA996	6	6.5625	0.5	6.2031	6.4122	0.015	8330	25400	22500	262
	152.4	166.6875	12.7	157.56	162.87	0.38				
HWAA9104	6.5	7.0625	0.5	6.7031	6.9114	0.015	8560	27300	24300	283
	165.1	179.3875	12.7	170.26	175.55	0.38				
HWAA9112	7	7.5625	0.5	7.2031	7.4106	0.015	8770	29300	26100	304
	177.8	192.0875	12.7	182.96	188.23	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

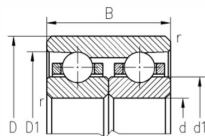
Inner diameter d from 2inch (50.8mm) to 8inch (203.2mm)

2·AA10 series, double-row bearing

Rolling element diameter: 5/32inch (3.969mm)

Back-to-Back

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWAA1032	2	2.625	0.625	2.2154	2.4819	0.04	9050	15500	8380	124
	50.8	66.675	15.875	56.27	63.04	1.015				
HWAA1040	2.5	3.125	0.625	2.7154	2.9811	0.04	9760	19000	10100	151
	63.5	79.375	15.875	68.97	75.72	1.015				
HWAA1048	3	3.625	0.625	3.2154	3.4799	0.04	10500	23100	12200	179
	76.2	92.075	15.875	81.67	88.39	1.015				
HWAA1056	3.5	4.125	0.625	3.7154	3.9791	0.04	11000	26600	14000	206
	88.9	104.775	15.875	94.37	101.07	1.015				
HWAA1064	4	4.625	0.625	4.2154	4.4783	0.04	11500	30200	15800	233
	101.6	117.475	15.875	107.07	113.75	1.015				
HWAA1068	4.25	4.875	0.625	4.4654	4.728	0.04	11800	32200	16900	247
	107.95	123.825	15.875	113.42	120.09	1.015				
HWAA1072	4.5	5.125	0.625	4.7154	4.9776	0.04	12100	34300	17900	260
	114.3	130.175	15.875	119.77	126.43	1.015				
HWAA1076	4.75	5.375	0.625	4.9654	5.2272	0.04	12300	35800	18700	274
	120.65	136.525	15.875	126.12	132.77	1.015				
HWAA1080	5	5.625	0.625	5.2154	5.4701	0.04	12500	37800	19700	288
	127	142.875	15.875	132.47	138.94	1.015				
HWAA1088	5.5	6.125	0.625	5.7154	5.9756	0.04	12900	41400	21500	315
	139.7	155.575	15.875	145.17	151.78	1.015				
HWAA1096	6	6.625	0.625	6.2154	6.4748	0.04	13300	44900	23400	342
	152.4	168.275	15.875	157.87	164.46	1.015				
HWAA10104	6.5	7.125	0.625	6.7154	6.974	0.04	13700	48500	25200	369
	165.1	180.975	15.875	170.57	177.14	1.015				
HWAA10112	7	7.625	0.625	7.2154	7.4732	0.04	14100	52600	27200	397
	177.8	193.675	15.875	183.27	189.82	1.015				
HWAA10120	7.5	8.125	0.625	7.7154	7.9724	0.04	14500	56100	29100	424
	190.5	206.375	15.875	195.97	202.5	1.015				
HWAA10128	8	8.625	0.625	8.2154	8.4717	0.04	14800	59700	30900	452
	203.2	219.075	15.875	208.67	215.18	1.015				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

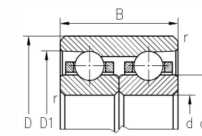
Inner diameter d from 2.5625inch (65.0875mm) to 6.8125inch (173.0375mm)

2·AA11 series, double-row bearing

Rolling element diameter: 3/16inch (4.762mm)

Back-to-Back

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWAA1141	2.5625	3.25	0.625	2.7896	3.1102	0.015	13100	24500	13300	173
	65.0875	82.55	15.875	70.856	79	0.38				
HWAA1145	2.8125	3.5	0.625	3.0396	3.3598	0.015	13500	26700	14500	188
	71.4375	88.9	15.875	77.206	85.34	0.38				
HWAA1149	3.0625	3.75	0.625	3.2896	3.6094	0.015	13900	28900	15600	203
	77.7875	95.25	15.875	83.556	91.68	0.38				
HWAA1153	3.3125	4	0.625	3.5396	3.8591	0.015	14300	31100	16700	217
	84.1375	101.6	15.875	89.906	98.02	0.38				
HWAA1161	3.8125	4.5	0.625	4.0396	4.3583	0.015	15000	35500	18900	248
	96.8375	114.3	15.875	102.606	110.7	0.38				
HWAA1169	4.3125	5	0.625	4.5396	4.8575	0.015	15600	39900	21100	277
	109.5375	127	15.875	115.306	123.38	0.38				
HWAA1177	4.8125	5.5	0.625	5.0396	5.3563	0.015	16100	43600	23000	307
	122.2375	139.7	15.875	128.006	136.05	0.38				
HWAA1185	5.3125	6	0.625	5.5396	5.8555	0.015	16600	48000	25200	337
	134.9375	152.4	15.875	140.706	148.73	0.38				
HWAA1193	5.8125	6.5	0.625	6.0396	6.3465	0.015	17200	52400	27400	368
	147.6375	165.1	15.875	153.406	161.2	0.38				
HWAA11101	6.3125	7	0.625	6.5396	6.8539	0.015	17700	56800	29600	397
	160.3375	177.8	15.875	166.106	174.09	0.38				
HWAA11109	6.8125	7.5	0.625	7.0396	7.3531	0.015	18200	61200	31800	427
	173.0375	190.5	15.875	178.806	186.77	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

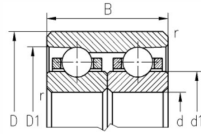
Inner diameter d from 4inch (101.6mm) to 10inch (254mm)

2·AA12 series, double-row bearing

Rolling element diameter: 3/16inch (4.762mm)

Back-to-Back

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
	d	D	B	d1	D1	r ¹	Dynamic	Static	Cax	
HWAA1264	4	4.75	0.75	4.2583	4.5819	0.04	15000	36300	19200	338
	101.6	120.65	19.05	108.16	116.38	1.015				
HWAA1268	4.25	5	0.75	4.5083	4.8315	0.04	15300	38500	20300	358
	107.95	127	19.05	114.51	122.72	1.015				
HWAA1272	4.5	5.25	0.75	4.7583	5.0811	0.04	15600	40700	21500	377
	114.3	133.35	19.05	120.86	129.06	1.015				
HWAA1276	4.75	5.5	0.75	5.0083	5.3307	0.04	15900	42900	22600	397
	120.65	139.7	19.05	127.21	135.4	1.015				
HWAA1280	5	5.75	0.75	5.2583	5.5803	0.04	16200	45100	23700	417
	127	146.05	19.05	133.56	141.74	1.015				
HWAA1288	5.5	6.25	0.75	5.7583	6.0795	0.04	16800	49500	25900	456
	139.7	158.75	19.05	146.26	154.42	1.015				
HWAA1296	6	6.75	0.75	6.2583	6.5783	0.04	17300	53900	28100	495
	152.4	171.45	19.05	158.96	167.09	1.015				
HWAA12104	6.5	7.25	0.75	6.7583	7.078	0.04	17800	58300	30300	534
	165.1	184.15	19.05	171.66	179.78	1.015				
HWAA12112	7	7.75	0.75	7.2583	7.5669	0.04	18300	62700	32500	575
	177.8	196.85	19.05	184.36	192.2	1.015				
HWAA12120	7.5	8.25	0.75	7.7583	8.076	0.04	18700	67100	34700	613
	190.5	209.55	19.05	197.06	205.13	1.015				
HWAA12128	8	8.75	0.75	8.2583	8.5752	0.04	19200	71500	36900	652
	203.2	222.25	19.05	209.76	217.81	1.015				
HWAA12144	9	9.75	0.75	9.2583	9.5736	0.04	20000	80300	41400	730
	228.6	247.65	19.05	235.16	243.17	1.015				
HWAA12160	10	10.75	0.75	10.2583	10.572	0.04	20800	89100	45800	810
	254	273.05	19.05	206.56	268.53	1.015				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

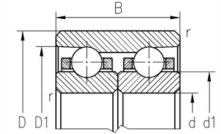
Inner diameter d from 3.0625inch (77.7875mm) to 10inch (254mm)

2·AA13 series, double-row bearing

Rolling element diameter: 3/16inch (4.762mm)

Back-to-Back

Precision grades: P5、P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
	d	D	B	d1	D1	r ¹	Dynamic	Static	Cax	
HWAA1349	3.0625	3.875	0.625	3.3521	3.672	0.015	13900	28000	15500	260
	77.7875	98.425	15.875	85.144	93.27	0.38				
HWAA1356	3.5	4.3125	0.625	3.7895	4.1087	0.015	14700	33300	17800	293
	88.9	109.5375	15.875	96.254	104.36	0.38				
HWAA1364	4	4.8125	0.625	4.2895	4.6079	0.015	15300	37700	20000	331
	101.6	122.2375	15.875	108.954	117.04	0.38				
HWAA1372	4.5	5.3125	0.625	4.7895	5.1067	0.015	15800	41400	21900	369
	114.3	134.9375	15.875	121.654	129.71	0.38				
HWAA1380	5	5.8125	0.625	5.2895	5.6059	0.015	16400	45800	24100	405
	127	147.6375	15.875	134.354	142.39	0.38				
HWAA1388	5.5	6.3125	0.625	5.7895	6.1051	0.015	16900	50200	26300	443
	139.7	160.3375	15.875	147.054	155.07	0.38				
HWAA1396	6	6.8125	0.625	6.2895	6.6043	0.015	17400	54600	28500	481
	152.4	173.0375	15.875	159.754	167.75	0.38				
HWAA13104	6.5	7.3125	0.625	6.7895	7.1035	0.015	17900	59000	30700	519
	165.1	185.7375	15.875	172.454	180.43	0.38				
HWAA13112	7	7.8125	0.625	7.2895	7.6028	0.015	18400	63400	32900	556
	177.8	198.4375	15.875	185.154	193.11	0.38				
HWAA13120	7.5	8.3125	0.625	7.7895	8.102	0.015	18800	67800	35100	594
	190.5	211.1375	15.875	197.854	205.79	0.38				
HWAA13128	8	8.8125	0.625	8.2895	8.6012	0.015	19300	72200	37300	632
	203.2	223.8375	15.875	210.554	218.47	0.38				
HWAA13144	9	9.8125	0.625	9.2895	9.5992	0.015	20100	81000	41700	708
	228.6	249.2375	15.875	235.954	243.82	0.38				
HWAA13160	10	10.8125	0.625	10.2895	10.5976	0.015	20900	89800	46100	784
	254	274.6375	15.875	261.354	269.18	0.38				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

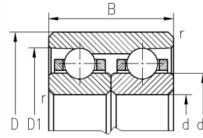
Inner diameter d from 4inch (101.6mm) to 12inch (304.8mm)

2·AA16 series, double-row bearing

Rolling element diameter: 1/4inch (6.35mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWAA1664	4	5	1	4.3445	4.7787	0.06	23100	50000	26900	620
	101.6	127	25.4	110.35	121.38	1.525				
HWAA1668	4.25	5.25	1	4.5945	5.0283	0.06	23500	52700	28200	654
	107.95	133.35	25.4	116.7	127.72	1.525				
HWAA1672	4.5	5.5	1	4.8445	5.278	0.06	24200	56500	30100	690
	114.3	139.7	25.4	123.05	134.06	1.525				
HWAA1676	4.75	5.75	1	5.0945	5.5276	0.06	24600	59200	31400	724
	120.65	146.05	25.4	129.4	140.4	1.525				
HWAA1680	5	6	1	5.3445	5.7772	0.06	24900	61800	32700	758
	127	152.4	25.4	135.75	146.74	1.525				
HWAA1688	5.5	6.5	1	5.8445	6.2764	0.06	25900	68300	36000	828
	139.7	165.1	25.4	148.45	159.42	1.525				
HWAA1696	6	7	1	6.3445	6.7752	0.06	26500	73500	38600	897
	152.4	177.8	25.4	161.15	172.09	1.525				
HWAA16104	6.5	7.5	1	6.8445	7.2744	0.06	27100	78700	41200	965
	165.1	190.5	25.4	173.85	184.77	1.525				
HWAA16112	7	8	1	7.3445	7.7736	0.06	27700	84000	43800	1040
	177.8	203.2	25.4	186.55	197.45	1.525				
HWAA16120	7.5	8.5	1	7.8445	8.2728	0.06	28500	90500	47000	1110
	190.5	215.9	25.4	199.25	210.13	1.525				
HWAA16128	8	9	1	8.3445	8.772	0.06	29000	95700	49600	1180
	203.2	228.6	25.4	211.95	222.81	1.525				
HWAA16144	9	10	1	9.3445	9.7701	0.06	30300	107400	55500	1320
	228.6	254	25.4	237.35	248.16	1.525				
HWAA16160	10	11	1	10.3445	10.7685	0.06	31400	119100	61300	1460
	254	279.4	25.4	262.75	273.52	1.525				
HWAA16176	11	12	1	11.3445	11.7669	0.06	32300	129600	66500	1600
	179.4	304.8	25.4	288.15	298.88	1.525				
HWAA16192	12	13	1	12.3445	12.7654	0.06	33400	141300	72400	1740
	304.8	330.2	25.4	313.55	324.24	1.525				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

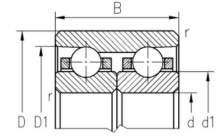
Inner diameter d from 4inch (101.6mm) to 11inch (279.4mm)

2·AA24 series, double-row bearing

Rolling element diameter: 3/8inch (9.525mm)

Back-to-Back

Precision grades: P5, P4



Specification	Dimension (in./mm)						Basic Load Rating ² (N)			Weight ² g
							Radial		Static Axial	
							Dynamic	Static	Cax	
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWAA2464	4	5.5	1.5	4.5169	5.1728	0.075	42700	80200	44500	1490
	101.6	139.7	38.1	114.73	131.39	1.905				
HWAA2468	4.25	5.75	1.5	4.7669	5.4224	0.075	44100	86000	47500	1570
	107.95	146.05	38.1	121.08	137.73	1.905				
HWAA2472	4.5	6	1.5	5.0169	5.672	0.075	44400	89100	49000	1640
	114.3	152.4	38.1	127.43	144.07	1.905				
HWAA2476	4.75	6.25	1.5	5.2669	5.9217	0.075	45600	94800	52000	1720
	120.65	158.75	38.1	133.78	150.41	1.905				
HWAA2480	5	6.5	1.5	5.5169	6.1709	0.075	46000	97900	53600	1800
	127	165.1	38.1	140.13	156.74	1.905				
HWAA2488	5.5	7	1.5	6.0169	6.6701	0.075	47400	106700	58100	1960
	139.7	177.8	38.1	152.83	169.42	1.905				
HWAA2496	6	7.5	1.5	6.5169	7.1693	0.075	48800	115500	62700	2110
	152.4	190.5	38.1	165.53	182.1	1.905				
HWAA24104	6.5	8	1.5	7.0169	7.6681	0.075	50100	124400	67200	2270
	165.1	203.2	38.1	178.23	194.77	1.905				
HWAA24112	7	8.5	1.5	7.5169	8.1673	0.075	51300	133200	71600	2430
	177.8	215.9	38.1	190.93	207.45	1.905				
HWAA24120	7.5	9	1.5	8.0169	8.6665	0.075	52500	142000	76100	2580
	190.5	228.6	38.1	203.63	220.13	1.905				
HWAA24128	8	9.5	1.5	8.5169	9.1657	0.075	53600	150800	80500	2740
	203.2	241.3	38.1	216.33	232.81	1.905				
HWAA24144	9	10.5	1.5	9.5169	10.1638	0.075	55800	168400	89400	3050
	228.6	266.7	38.1	241.73	258.16	1.905				
HWAA24160	10	11.5	1.5	10.5169	11.1622	0.075	58400	188900	99700	3370
	254	292.1	38.1	267.13	283.52	1.905				
HWAA24176	11	12.5	1.5	11.5169	12.1606	0.075	60200	206500	108600	3690
	279.4	317.5	38.1	292.53	308.88	1.905				

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

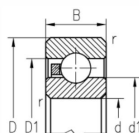
2. Parameters are applicable to H-type bearings.

C·Thin-section bearing

Inner diameter d from 25mm to 220mm

3·618 series, Metric bearing

Precision grades: P5、P4



Specification	Dimension (mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static		
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HW61805	25	37	7	29	33	0.3	2540	2300	2450	22
HW61806	30	42	7	34	38	0.3	2750	2780	2920	26
HW61807	35	47	7	39	43	0.3	2850	3120	3240	29
HW61808	40	52	7	44	48	0.3	3030	3600	3710	33
HW61809	45	58	7	49	54	0.3	4390	5110	5300	38
HW61810	50	65	7	55	60	0.3	4530	5630	5800	52
HW61811	55	72	9	60.5	66.5	0.3	6070	7390	7720	80
HW61812	60	78	10	66	72	0.3	6300	8120	8440	105
HW61813	65	85	10	71.6	78.4	0.6	7990	10000	11800	124
HW61814	70	90	10	76.6	83.4	0.6	8330	11000	12900	133
HW61815	75	95	10	81.6	88.4	0.6	8420	11500	13500	140
HW61816	80	100	10	86.6	93.4	0.6	8730	12500	14600	149
HW61817	85	110	13	93.1	101.9	1.1	12800	17400	19700	257
HW61818	90	115	13	98.1	106.9	1.1	13000	18200	20600	270
HW61820	100	125	13	108.1	116.9	1.1	13400	19900	22300	296
HW61822	110	140	16	119.7	130.3	1.1	18800	27200	32700	490
HW61824	120	150	16	129.7	140.3	1.1	19400	29700	35500	530
HW61826	130	165	18	141.2	153.8	1.1	25300	38000	44600	760
HW61828	140	175	18	151.2	163.8	1.1	25600	39800	46500	800
HW61830	150	190	20	162.7	177.3	1.1	32900	50700	59400	1100
HW61832	160	200	20	172.7	187.3	1.1	34200	55200	64400	1170
HW61834	170	215	22	184.2	200.8	1.1	40100	62400	71900	1530
HW61836	180	225	22	194.2	210.8	1.1	41800	68200	78300	1620
HW61838	190	240	24	206	224	1.5	49000	78000	100300	2070
HW61840	200	250	24	216	234	1.5	51100	85100	109200	2180
HW61844	220	270	24	236	254	1.5	52600	92500	118100	2370

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

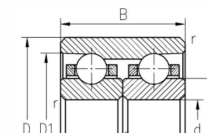
2. Parameters are applicable to R-type bearings.

C·Thin-section bearing

Inner diameter d from 25mm to 220mm

3·DM618 series, Metric bearing double-row bearing

Precision grades: P5、P4



Specification	Dimension (mm)						Basic Load Rating ² (N)			Weight ²
							Radial		Static Axial	
							Dynamic	Static		
	d	D	B	d1	D1	r ¹	C	Co	Cax	g
HWDM61805	25	37	14	29	33	0.3	5110	6350	3425	44
HWDM61806	30	42	14	34	38	0.3	5530	7640	4060	52
HWDM61807	35	47	14	39	43	0.3	5760	8640	4550	58
HWDM61808	40	52	14	44	48	0.3	5980	9630	5030	66
HWDM61809	45	58	14	49	54	0.3	8610	13510	7110	76
HWDM61810	50	65	14	55	60	0.3	8940	15060	7860	104
HWDM61811	55	72	18	60.5	66.5	0.3	12140	20170	10590	160
HWDM61812	60	78	20	66	72	0.3	12400	21680	11310	210
HWDM61813	65	85	20	71.6	78.4	0.6	15970	27490	16200	248
HWDM61814	70	90	20	76.6	83.4	0.6	16400	29490	17300	266
HWDM61815	75	95	20	81.6	88.4	0.6	16810	31490	18410	280
HWDM61816	80	100	20	86.6	93.4	0.6	17200	33490	19520	298
HWDM61817	85	110	26	93.1	101.9	1.1	25050	45510	26140	514
HWDM61818	90	115	26	98.1	106.9	1.1	25810	48750	27910	540
HWDM61820	100	125	26	108.1	116.9	1.1	26740	53720	30580	592
HWDM61822	110	140	32	119.7	130.3	1.1	37060	72800	44070	980
HWDM61824	120	150	32	129.7	140.3	1.1	37820	77840	46900	1060
HWDM61826	130	165	36	141.2	153.8	1.1	50090	101680	60240	1520
HWDM61828	140	175	36	151.2	163.8	1.1	51270	108620	64090	1600
HWDM61830	150	190	40	162.7	177.3	1.1	64820	135350	78880	2200
HWDM61832	160	200	40	172.7	187.3	1.1	66500	144490	83910	2340
HWDM61834	170	215	44	184.2	200.8	1.1	81234	173860	100080	3060
HWDM61836	180	225	44	194.2	210.8	1.1	81830	180040	103320	3240
HWDM61838	190	240	48	206	224	1.5	99250	217150	140020	4140
HWDM61840	200	250	48	216	234	1.5	100110	224770	144530	4360
HWDM61844	220	270	48	236	254	1.5	103720	246820	157930	4740

1. Minimum chamfer of the bearing and maximum round corner of the shaft or housing.

2. Parameters are applicable to H-type bearings.

Investigation Form of Bearing Operating Conditions

Luoyang Huigong Bearing Technology Co.,Ltd										TEL:0086-379-65793135 E-mail:hg-jsk@163.com			
Company:	Bearing type			Standard ☐			Non-standard ☐						
Machine Name	Material												
Bearing Designation	Lubrication												
Operating Temperature	Accuracy												
Mounting	Horiz. ☐			Vert. ☐			Clearance						
Description of Operating Conditions	Axial Load (kN)		Radial Load (kN)		Moment load (kN)		Rotation Speed (rpm)		Operating Time (%)				
Common Operating Condition													
Extreme Operating condition													
Bearing Arrangements	Single ☐		Pair ☐		Shaft and bearing housing		Shaft material		Bearing housing material				
	Matche distack ☐	Back-to-back ☐	Face-to-face ☐	Tandem ☐							Others ☐		
Rotating Ring	Outer Ring ☐		Inner Ring ☐		Shock loads								
Expected Life	reference										YES ☐		No ☐
Other Requirements													

This form is used as an important basis for bearing design. Please fill in it accurately.

Bearings

Keeping the World in Motion