



Luoyang JCB Bearing Technology Company Limited

90-1Z45-0550-1363

SLEWING BEARING

CROSSED ROLLER SLEWING BEARING





Luoyang JCB Bearing Technology Company Limited

CONTENTS

01.

[MAIN SPECIFICATION](#)

02.

[TECHNICAL INFORMATION](#)

03.

[MANUFACTURE & INSPECTION](#)

04.

[PACKING AND STORAGE](#)

05.

[WARRANTY & CERTIFICATE](#)



Luoyang JCB Bearing Technology Company Limited

90-1Z45-0550-1363

01

MAIN SPECIFICATION



[REFERENCE DRAWING](#)



[LUBRICATIONA](#)



[SPECIFICATION](#)



[BOLT HOLES TYPE & BOLTS](#)



[RAW MATERIAL](#)



[CORROSION PROTECTION](#)

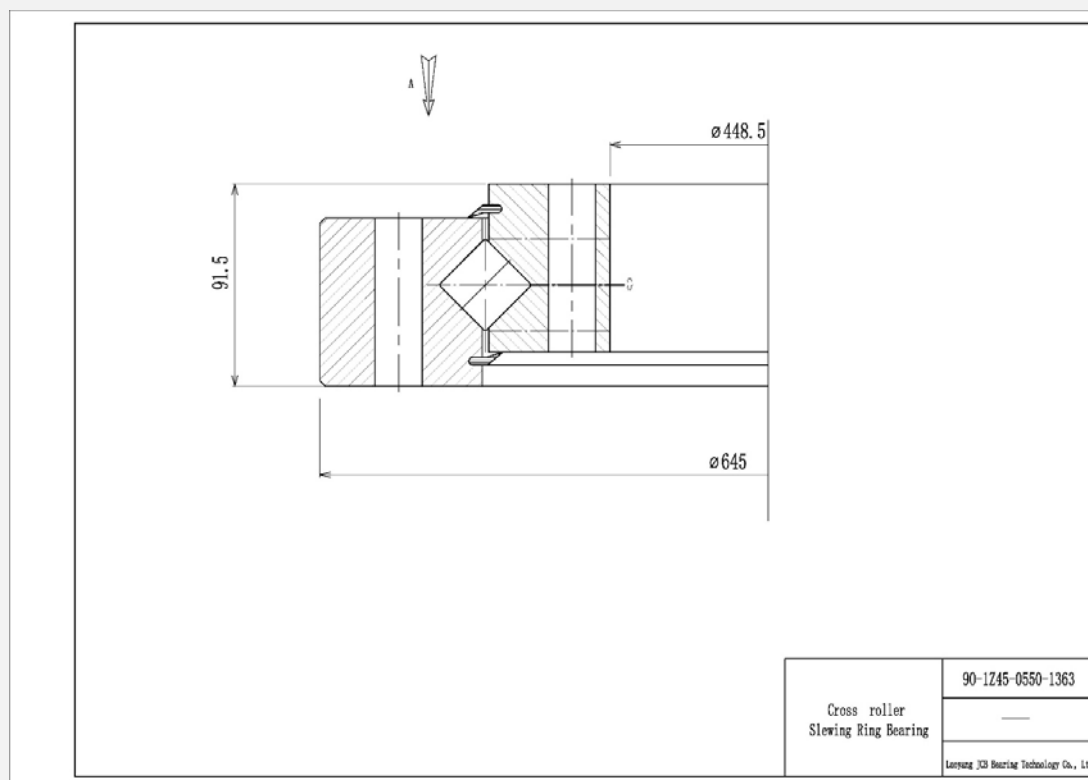


Luoyang JCB Bearing Technology Company Limited

90-1Z45-0550-1363

REFERENCE DRAWING

This drawing is reference for user, if user request for formal drawing , please contact with us: sales@jcb-bearing.com, the official drawing will be submitted to them.



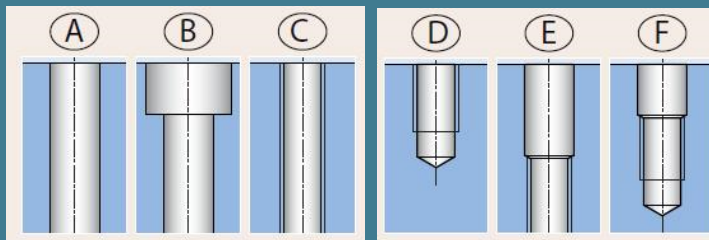
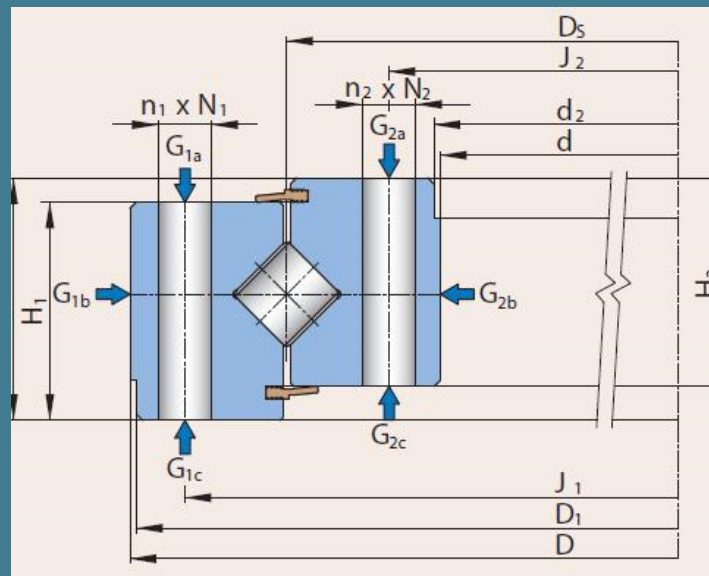
01-2

Luoyang JCB Bearing Technology Company Limited



SPECIFICATION

90-1Z45-0550-1363



Inner diameter (d) :448.5

Outer diameter (D) :645

Overall height (T) :91.5

Outer ring height (H1):

Inner ring height (H2):

Weight: 95 KG

External bolt circle dia (J1) :

Number of bolt holes per hole circle (n1) :

External bolt hole type : Selected by user

External bolt hole diameter(N1) :

Internal bolt circle dia(J2):

Number of bolt holes per hole circle(n2):

Internal bolt hole type : Selected by user

Internal bolt hole diameter (N2) :



RAW MATERIAL

- For slewing bearing ring , usually the raw material is alloy steel, such as 50Mn, C45E, 42CrMo (DIN 42CrMo4, AISI 4142), and some special non-ferrous metals, such as aluminum, stainless steel and so on, it should be selected according to user's application if user have special request.
- _For slewing bearing cage, 1). steel 2). Nylon 66 or 1010 (Polyamide66) 3). Polyetheretherketone 4. Brass 5. Other cage materials.
_For spacer, raw material should be Nylon 66 (Polyamide66) or Nylon 1010. it should be selected according to user's application if user have special request.
- For seal, raw material is oil resistant rubber I-3, or other special raw material for seal.
- Rolling element (ball or roller), high chrome alloy bearing steel,GCr15 and GCr15SiMn, or stainless steel.



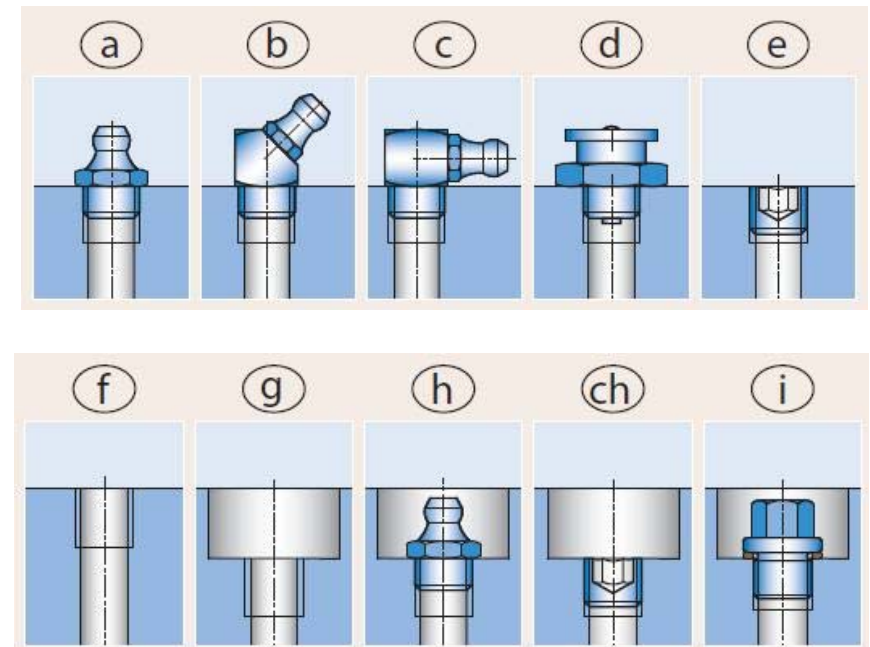
LUBRICATIONA

Recommended lubricants

Producer	Lubricant type	
	Raceway	Gear
	Aralub HLP 2 (-30 °C to +120 °C)	Aralub MKA - Z 1 (-20 °C to +200 °C)
	Energol LS - EP 2 (-25 °C to +140 °C)	Energol LC 2 (-30 °C to +150 °C)
	Spheerol EPL 2 (-20 °C to +140 °C)	Castrol LZV - EP (-30 °C to 150 °C)
	Epexa 2 (-20 °C to +140 °C)	Cardrexa DC 1 (-20 °C to +120 °C)
	Beacon EP 2 (-20 °C to +110 °C)	Multi purpose grease (Moly) (-25 °C to +150 °C)
	Ronex MP (-25 °C to +130 °C)	Dynagear (-20 °C to +100 °C)
	agermeister EP 2 (-20 °C to +130 °C)	Ceplattyn 300 (-30 °C to +250 °C)
	Klüberlub BE 41-542 (-20 °C to +140 °C)	Grafloscon C-SG 0 Ultra (-30 °C to +200 °C)
	Mobilux EP 2 (-25 °C to +120 °C)	Mobilgear OGL 461 (-20 °C to +120 °C)
	Shell Alvania EP 2 (-25 °C to +130 °C)	Shell Malleus OGH (-20 °C to +130 °C)
	Multifak EP 2 (-30 °C to +120 °C)	Crater 2x Fluid or 5x Fluid (-12 °C to +116 °C)
	Multis EP 2 (-30 °C to +150 °C)	Total Cardrexa GR 1 - AL (-30 °C to +120 °C)
	Unoba EP 2 (-18 °C to +143 °C)	Gearite HD CF 4800 (12 °C to +120 °C)

Lubrication spots type

lubrication spots type should be selected according to user's application with order.

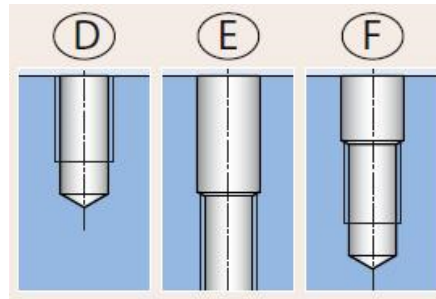
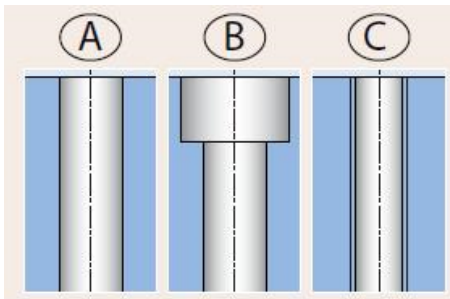




BOLT HOLES TYPE & BOLTS

BOLT HOLES TYPE

Bolt holes type should be selected according to their application with order if user have special request.
We can supply quality bolts with ordered slewing bearing if user required



Preload forces and tightening torques

Preload Forces and Tightening Torques for Metric Bolts (Friction Coefficient $\mu = 0.14$)								
Strength Class of the Bolt according to DIN/ISO 898		8.8		10.9		12.9		
Yield Strength R_{eH} [MPa]		640 for $\leq M 16$ 660 for $> M 16$		940		1100		
Bolt Size according to DIN 13	Pre-loaded Cross-Section A_s [mm ²]	Thread Cross-Section A_d [mm ²]	Preload Force F_u [N]	Tightening Torque M_u [Nm]	Preload Force F_u [N]	Tightening Torque M_u [Nm]	Preload Force F_u [N]	Tightening Torque M_u [Nm]
M 5	14.2	12.7	6,400	5.5	9,300	8.0	10,900	9.3
M 6	20.1	17.9	9,000	9.3	13,200	13.9	15,400	16.2
M 8	36.6	32.8	16,500	22.5	24,200	33	28,500	38
M 10	58	52.3	26,000	45	38,500	67	45,000	78
M 12	84.3	76.2	38,500	78	56,000	117	66,000	135
M 14	115	105	53,000	126	77,000	184	90,000	216
M 16	157	144	72,000	193	106,000	279	124,000	333
M 18	193	175	91,000	270	129,000	387	151,000	459
M 20	245	225	117,000	387	166,000	558	194,000	648
M 22	303	282	146,000	522	208,000	747	243,000	873
M 24	353	324	168,000	666	239,000	954	280,000	1,116
M 27	459	427	221,000	990	315,000	1,395	370,000	1,665
M 30	561	519	270,000	1,350	385,000	1,890	450,000	2,250
M 33	694	647	335,000	See note	480,000	See note	560,000	See note
M 36	817	759	395,000		560,000		660,000	
M 39	976	913	475,000		670,000		790,000	
M 42	1,120	1,045	542,000		772,000		904,000	
M 45	1,300	1,224	635,000		905,000		1,059,000	
M 48	1,470	1,377	714,000		1,018,000		1,191,000	
M 52	1,760	1,652	857,000		1,221,000		1,429,000	
M 56	2,030	1,905	989,000		1,408,000		1,648,000	
M 60	2,360	2,227	1,156,000		1,647,000		1,927,000	

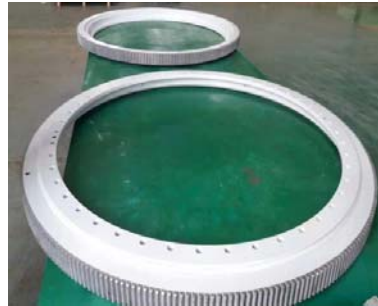
CORROSION PROTECTION

CORROSION PROTECTION

If user has high requirement of corrosion protection for parts of their application which work in harsh environments , they can select corrosion protection way and submit is to us with order.

SPRAY COATING

Metal surface spray painting is a very important means of maintaining metal corrosion resistance.



BLACK COATING

Oxidize the surface of steel parts to form dense oxide film protective layer, improving the anti-rust ability of steel parts.



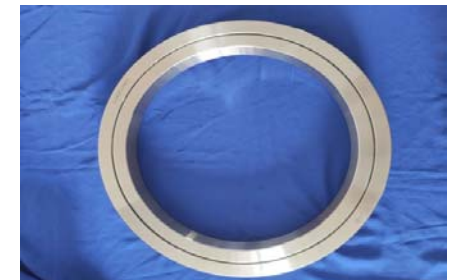
ZINE PLATING

Surface treatment technology that coats the surface of metal with a layer of zinc for rust prevention.



NICKEL PLATING

The electroplated nickel layer has high stability in the air, because metallic nickel has strong passivation ability,



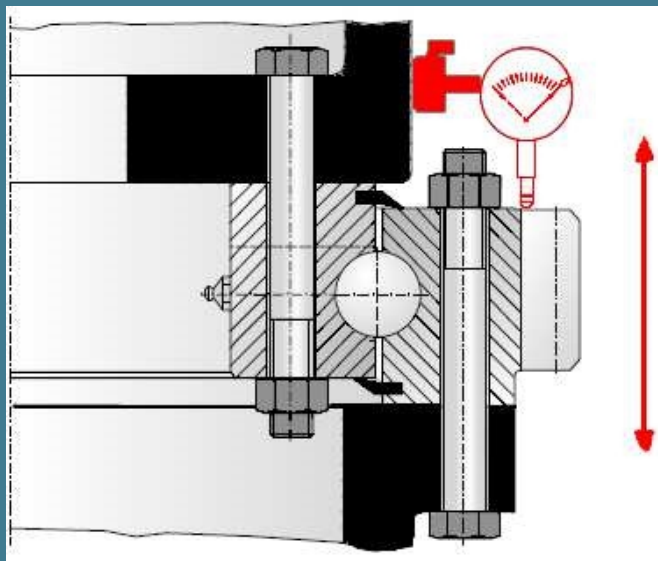


Luoyang JCB Bearing Technology Company Limited

02

TECHNICAL INFORMATION

- [AXIAL CLEARANCE](#)
- [RUNNING ACCURACY](#)
- [DIMENSION TOLERANCES](#)
- [OTHER TECHNICAL INFORMATION](#)



AXIAL CLEARANCE

Axial clearance should be selected according to their application with order if user have special request.
Dpw: outer diameter (mm)

Dpw mm		BEARING GRADE					
		P0		P6		P5	
		AXIAL CLEARANCE (μm)					
OVER	TO	OVER	TO	OVER	TO	OVER	TO
280	450	70	170	50	130	30	90
450	710	100	220	70	170	40	120
710	1120	120	280	100	220	50	150
1120	1800	150	350	100	260	60	180
1800	2800	200	440	150	350	80	240
2800	4500	260	540	200	440	100	300



RUNNING ACCURACY

RUNNING ACCURACY PARAMETER	BEARING GRADE	Outer diameter mm									
		>	150	400	630	1000	1600	2500	4000	6300	9000
		≤	400	630	1000	1600	2500	4000	6300	9000	12500
		RUNNING ACCURACY VALUE (MAX μm)									
S_{in} S_{en}	P0		85	110	140	170	220	280	350	500	—
	P6		43	55	70	85	110	140	180	240	—
	P5		30	38	50	65	77	100	130	170	—
K_{in} K_{en}	P0		120	150	200	250	310	390	500	650	—
	P6		63	77	100	120	150	190	250	330	—
	P5		43	55	70	85	110	140	170	230	—
F_{rin} F_{ren}	P0		280	340	420	480	630	750	850	1000	—
	P6		220	250	280	360	420	560	630	760	—
	P5		160	180	220	250	320	420	480	580	—
	P5		160	180	220	250	320	420	480	580	—



DIMENSION TOLERANCES

dimension		ΔT_s	Δd_s^b			ΔD_{sb}		
grade of tolerance								
>	≤	P0、P6、P5	P0	P6	P5	P0	P6	P5
150	400	±0.6	H9	H8	H7	h9	h8	h7
400	630	±0.8						
630	1000	±1.0						
1000	1600	±1.2						
1600	2000	±1.4						
2000	2500	±1.6	H10	H9	H8	h10	h9	h8
2500	4000	±1.8						
4000	6300	±2.0						
6300	9000	±2.2						
9000	12500	±2.5						



OTHER TECHNICAL INFORMATION

BALL GRADE

Bearing grade	Steel ball grade			
	Dw	over	> 0	> 30
		to	< 30	< 50
P0、P6	DW: ball diameter		G40	G60
P5			G20	G40
				G100
				G60

DEPTH OF HARDENED LAYER OF RACEWAY

DEPTH OF HARDENED LAYER OF RACEWAY (mm)

Dw	≤30	> 30~40	> 40~50	> 50
DS	≥3.0	≥3.5	≥4.0	≥5.0

Remark:

DS: depth of hardened layer of bearing raceway as over HRC48 hardness mm

DW; Ball diameter



Luoyang JCB Bearing Technology Company Limited

03

MANUFACTURE & INSPECTION

- [FORGING BLANK PROCESS](#)
- [MECHANNICAL PROCESS](#)
- [INSPECTION](#)



Luoyang JCB Bearing Technology Company Limited

FORGING BLANK PROCESS



Heating of raw materials is an important step in the forging process and is also the core technology for final product quality assurance.



Quality material 42CrMo which we source from famous steel mill - Special Steel Group of CITIC Pacific (CITIC Special Steel Group)

03-1



The ring is finally formed using a ring rolling machine, with the size range ranging from 1000 mm to 6500 mm.



Luoyang JCB Bearing Technology Company Limited

MECHANICAL PROCESS

CNC GRINDING MACHINE

CNC grinding machines can effectively ensure the machining accuracy of bearing parts, thereby meeting various technical requirements for precision bearings.



CNC MACHINING CENTER

The CNC machining centers can greatly improve production efficiency



03-2



HIGH SPEED GEAR HOBGING MACHINE

The production efficiency of high-speed gear hobbing machines is 2-3 times higher than that of conventional gear hobbing machines. The precision of processed gears can reach level 8, and the maximum processing range is 3500mm.



Luoyang JCB Bearing Technology Company Limited

INSPECTION

DIMENSION INSPECTION

Complete testing instruments and scientific testing methods ensure product quality.



3D INSPECTION

The inspection of precision slewing bearings is carried out using three-coordinate inspection equipment.

03-3



UNDT INSPECTION

All slewing bearing parts are subjected to 100% non-destructive testing (NUDT) during processing and before assembly.



Luoyang JCB Bearing Technology Company Limited

04

PACKING AND STORAGE

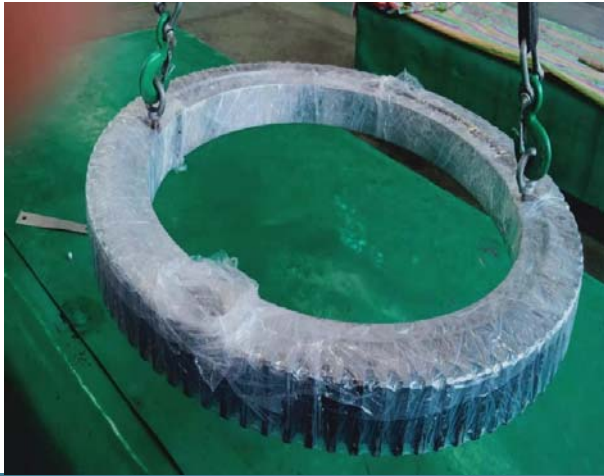
- [PACKING](#)
- [TRANSPORTATION](#)
- [STORAGE](#)
- [MAINTENANCE](#)



Luoyang JCB Bearing Technology Company Limited

PACKING

The bearings are firmly fixed in the packaging box, and waterproof and moisture-proof measures are taken to ensure that the bearings are not damaged during transportation.



The bearing surface is coated with anti-rust oil, covered with plastic film, and wrapped with high-strength nylon tape.

04-1



Bearings and bearing accessories are placed in the packaging box, including product certificates and instructions for use. Various markings on the outside of the packaging box are clear.



Luoyang JCB Bearing Technology Company Limited

TRANSPORTATION

TRANSPORTATION

We have three transportation way for customer to reference.

1. Delivery by express
2. Delivery by sea
3. Delivery by air



PACKING LIST

User can arrange transportation according to this Packing List

Transportation requirement

During transportation, the bearings should be placed horizontally on the vehicle, and measures should be taken to prevent sliding and vibration. Auxiliary supports can be added if necessary.

EXPRESS

We accept to deliver bearing by customer's account of Express or using our account of Express.



Luoyang JCB Bearing Technology Company Limited

STORAGE

Bearings should be placed horizontally on a dry, ventilated, flat site, and should be isolated from chemicals and other corrosive items during storage.



Bearings must pass the inspection by the quality inspection department and be accompanied by a certificate before they leave the factory.

04-3



If multiple sets of bearings need to be stacked on top of each other, more than three wooden pads of equal height should be placed evenly between each set of bearings along the circumferential direction, and the upper and lower pads should be placed in the same position.

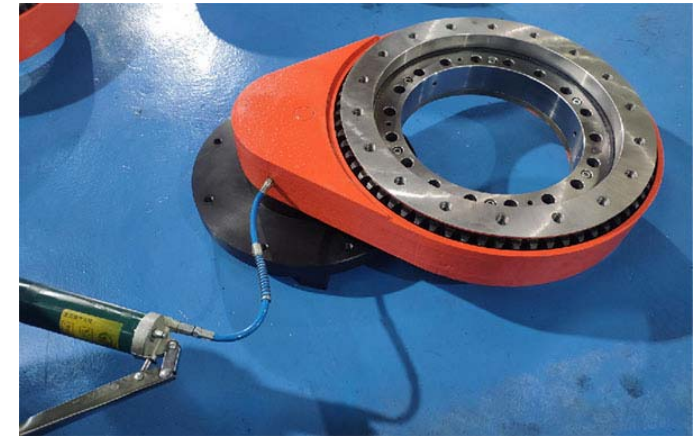


Luoyang JCB Bearing Technology Company Limited

MAINTENANCE

Bearings should be replenished with grease regularly. When replenishing grease, rotate the bearing at the same time to distribute the grease evenly until the new grease squeezes out of the oil hole or sealing lip.

Under normal circumstances, bearings in use should be filled with new grease every six months. Under harsh environmental conditions, the fat replenishment cycle can be shortened appropriately;



If the bearing is out of service for more than half a year, add new grease before use.



Luoyang JCB Bearing Technology Company Limited

WARRANTY POLICY

05

JCB bearing provides a broad range of maintenance and technical support that helps user best solve their usage and installation problems.

All JCB bearing products are shipped with 4 years standard warranty. Optional advanced services and warranties are available and vary by product family and region. You can contact JCB bearing sales representatives for more information.

This Warranty Policy shall be globally applicable and enforced in all countries. In the event that any terms of this Warranty Policy conflicts with local laws, local laws shall prevail.

05-1



WARRANTY TERMS





Luoyang JCB Bearing Technology Company Limited

PRODUCT CERTIFICATEION

05-2



classification society

According to customer requirements, classification society inspection reports can be provided



Professional inspection agency

According to customer requirements, test reports from third-party professional testing agencies can also be provided.



National testing center

According to customer requirements, test reports from China's national testing institutions can also be provided.



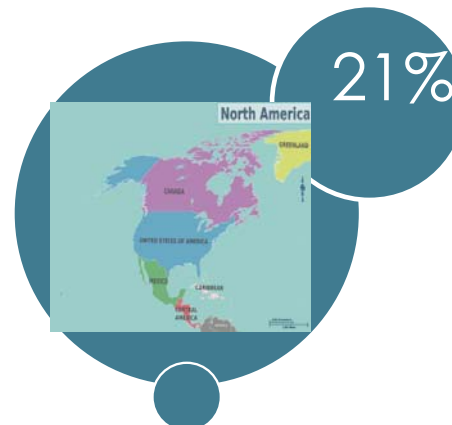
Luoyang JCB Bearing Technology Company Limited

PRODUCT SALE RANGE IN WORLDWIDE



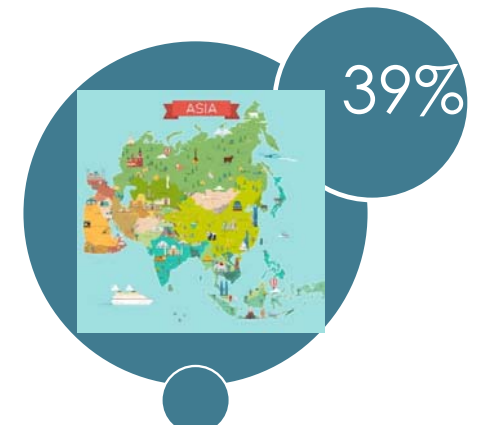
EUROPE

Main applications include sewage treatment, port machinery, and ship lifting equipment.



NORTH AMERICA

Mainly used in large transportation vehicles, forest machinery, and medical equipment.



ASIA

Mainly used in amusement facilities, machine tools, and construction equipment.



Luoyang JCB Bearing Technology Company Limited

CONTACT US

Company Address: No. 285, Fenghua Road, High-tech Development Zone, Luoyang Area, (Henan) Free Trade Zone of China. Postal code : 471000

Phone : 0086-379-6861-1678 EX8001 **Fax :** 0086-379-6861-1679

E-mail: sales@jcb-bearing.com

Reserved E-mail: jcb-bearing@hotmail.com

Website: www.jcb-bearing.com

WhatsApp: 0086-186-0379-5853

THANK YOU