

# BEARING CATALOGUE

"WE ARE WITH YOU  
WITH OUR QUALITY"

**IMEC LLC**

No12, 1222 Alasgar  
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# TYPES OF BEARINGS PROVIDED BY OUR COMPANY



## About Bearing

Bearings are an essential part of the machinery. A bearing's goal is to ensure motion is regulated in a moving part and help reduce friction.

**IMEC Engineering Company** offers the same solution; to keep your business moving forward and reduce friction. Machine failures are unpredictable, and if you don't have the backup bearings you need, you may be stuck with long-lead times, causing you to waste time and money. At **IMEC**, you get a one-stop solution for all your bearings needs, including modification, manufacturing, and repair.

## Types of Bearing

1. Deep groove ball bearings
2. Cylindrical roller bearings
3. Tapered roller bearings
4. Thrust ball bearings
5. Thrust roller bearings
6. Needle roller bearings
7. Plain bearings
8. Magnetic bearings

# DEEP GROOVE BALL BEARINGS

## Characteristics of deep groove ball bearings.

1. Simple structure, low manufacturing cost, easy to achieve high manufacturing accuracy.
2. Low friction coefficient and high speed.
3. Mainly used to bear radial load, but in the bearing radial clearance increases, with the nature of angular contact ball bearings, can withstand two directions of alternating axial load;.
4. It cages more steel plate stamping wave-shaped cage, large bearing more car metal solid cage.
5. They are the most representative rolling bearings, widely used, very durable, without frequent maintenance.
6. With a certain degree of alignment ability, the size range and form change in a variety of ways.





# CYLINDRICAL ROLLER BEARINGS

## Characteristics of cylindrical roller bearings.

1. The rollers and raceway are in linear contact, so the capacity of the radial load is large and can withstand heavy loads and shock loads.
2. Small friction coefficient, can be used for very high speed working occasions, its limit speed next to deep groove ball bearings.
3. N-type and NU type cylindrical roller bearing can do axial movement, can adapt to the thermal expansion or installation error caused by the shaft and the housing relative position changes, can be used to support the free end.
4. The processing needs of the shaft or base hole are high, to strictly control the relative deviation of the outer ring axis that may be caused by bearing installation, avoid the concentration of contact stress;
5. The inner rings or outer rings of the bearings can be separated to facilitate installation and disassembly.



# TAPERED ROLLER BEARINGS

## Characteristics of circular vertebral roller bearings.

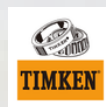
1. Inner ring and outer ring of bearing have tapered raceway, the shape of the rollers is round table-shaped. The roller is in line contact with the raceway and can withstand the heavy combined radial and axial loads as well as axial loads. The axial bearing capacity increases with the increase of contact Angle.
2. Tapered roller design should make the roller and the raceway of the inner ring and outer ring contact line extended after the intersection of the same point on the axis of the bearing used to achieve rolling.
3. Tapered roller bearings can be categorized into single row, double row, and four-row, and other different types according to the number of rollers installed. This type of bearing also uses more imperial series products.
4. The new design of tapered roller bearing uses strengthened structure, the longer diameter of rollers, the longer length of rollers, more rollers, and the rollers with convex shape are used, the capacity and service life are obviously improved. The contact of the big end face and the big retaining edge of the rollers is spherical and conical, which improves lubrication.



# THRUST BALL BEARINGS

## Characteristics of thrust ball bearings.

1. The thrust ball are separable bearings, with a contact angle of  $90^\circ$ , which can be mounted separately and can only withstand axial load.
2. Low limit speed. Steel ball plus centrifugal force squeezed to the outside of the raceway, easy to abrasion, but not suitable for high-speed operation.
3. The one-way bearing can withstand one-way axial load, the two-way bearing can withstand two-way axial load.
4. With spherical seat ring thrust ball bearings with spherical alignment performance, can eliminate the impact of installation errors.



# THRUST ROLLER BEARINGS

## Characteristics of thrust roller bearings.

1. Can only withstand unidirectional axial loads and minor shocks.
2. Large bearing rigidity, small space occupation, large axial load capacity, and low sensitivity to shock load.
3. Suitable for low speed, often used in work situations where thrust ball bearings are not applicable.
4. Installation does not allow the axis of the shaft and the rings to be tilted.



# NEEDLE ROLLER BEARINGS

## The characteristics of needle roller bearings.

1. Small radial size of needle roller bearings, the radial bearing capacity is very high, can not bear axial load, only as a free end support use.
2. Conducive to the miniaturization and lightweight of equipment.
3. The use of needle roller bearings without an inner ring or without an outer ring, only with cage needle roller assembly, the requirements of the matching journal or bearing housing hole machining accuracy, surface hardness should be the same as the bearing collar raceway.
4. They have a large coefficient of friction and are not suitable for higher speeds.





# PLUMMER AND PILLOW BLOCKS

## **The characteristics of plummer and pillow block.**

Both use different types of bearings but with a similar design. The application of both types is to mount a bearing safely, enabling its outer ring to be stationary while allowing rotation of the inner ring.

Plummer blocks are used to transfer high power and support heavy industrial loads.

Pillow blocks are used in mechanical power transmission systems to support shafts and couplings; they are for lightweight usage.



# WHAT WE DO ?



**THANK YOU, AND  
WE LOOK  
FORWARD TO  
WORKING WITH  
YOU.**

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## **About Us**

"IMEC" LLC engineering company is a dynamic, innovative startup company which has been formed in 2022. The mission of company involves in advanced engineering solutions, consulting, commercial services in Mining industry which is expected to grow and develop within the next ten years and in other industrial fields; Supply of equipment, its startup, periodic planned and unplanned maintenance works; designing HDPE Pipeline projects and pipeline construction works.

Founders and engineers of the IMEC company have got more than 10 years' experience of technical maintenance, engineering consulting and process control services in Mining and other Industries from the projects in Azerbaijan and Overseas (UAE, Poland, Turkey etc.). Our qualified specialists will be honored with recommending superior and economically efficient equipment with applying to their experience from the projects in Azerbaijan and Overseas. Our main goal is to offer the best solutions and engineering services to our customers.