

FRB Bearings

Slewing Bearing



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FRB BEARINGS, YOU BEST CHOICE, YOU BEST SUPPLIER

Slewing Bearings

FRB is a professional manufacturer and exporter of kinds of slewing bearings, thin section bearings and other bearings. From opened in 2003, we always supply excellent product and service to every users. Moreover, we have gained ISO9001 certificate for our control of quality. We specialized in slewing bearings and other medium and large size bearings. Product range is from 50mm to 5000mm.

We are very professional in controlling the quality of our product. Since we have very strong ability both in design and technical analysis, we can provide our customers with exact, suitable, economic products also the technical services. We've built up good relationship with our customers all over the world, especially in the Europe and USA market. Product is widely used in metallurgy, mining, petroleum exploitation, light industry, aviation, Harbor/quay, vessels, military industry, instruments and meters etc.

Our goal is to supply the customer with high quality, suitable produces and professional, prompt service to ensure your machine keep running!

FRB bearings with Reasonable price, Timely delivery, Responsible quality.

Examples for application

- ◆ Equipment
- ◆ Areal Hydraulic Platform
- ◆ Bogie Bearing for Vehical
- ◆ Excavators
- ◆ Harbor and Shipyard Cranes
- ◆ Machine Tools
- ◆ Mechanical Engineering
- ◆ Mobile Cranes
- ◆ Offshore Technology
- ◆ Packaging and Filling Machine
- ◆ Rail Vehicle

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● Concept of Slewing Bearing

● Definition

Slewing Bearing is a large-sized bearing with special configuration, which can endure bigish multiply load, such as axial & radial load, overturning moment, etc.

● Structure

Slewing bearing is composed of **Outer ring** (teeth or non-teeth), **Rolling element** (steel ball, cylindrical roller, tapered roller), **Cage**, **Inner ring** (teeth or non-teeth) and **Seals** (the one with sealed structure).

● Classification

Slewing bearing can be classified by different structure: four-point contact ball slewing ring, double-row ball slewing bearing, crossed roller slewing bearing and three-row roller slewing bearing according to their different structural styles.

Slewing bearing also can be classified by teeth: slewing bearing can be divided into without gear, external gear and internal gear.

● Function & Characteristic of Slewing Bearing

● Function

Slewing bearing itself is featured in compact structure, convenient lead to slew, easy for installation & maintenance, which is widely used as slewing set in the fields of heavy machine, slewing platform in the steelworks, excavator grab, material taking & stacking set, material traveler, harbor machine, missile launching cargo, CT set, etc.

● Characteristic

- 1) Four-point contact ball slewing bearing can take more dynamic load, and suitable for the application with speed.
- 2) Crossed roller slewing bearing can take more static load, it's pre-interference is better for more support rigidity and slewing precision.
- 3) Three-row roller slewing bearing is a high load capacity slewing set, different direct raceway and rollers can take load from different side. So when have the same load, it can be smaller size that can make the application compact.

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● Choosing Type

How to choose the slewing bearing type to suit the application best?

Most of the companies choose slewing bearing depends on the load chart.

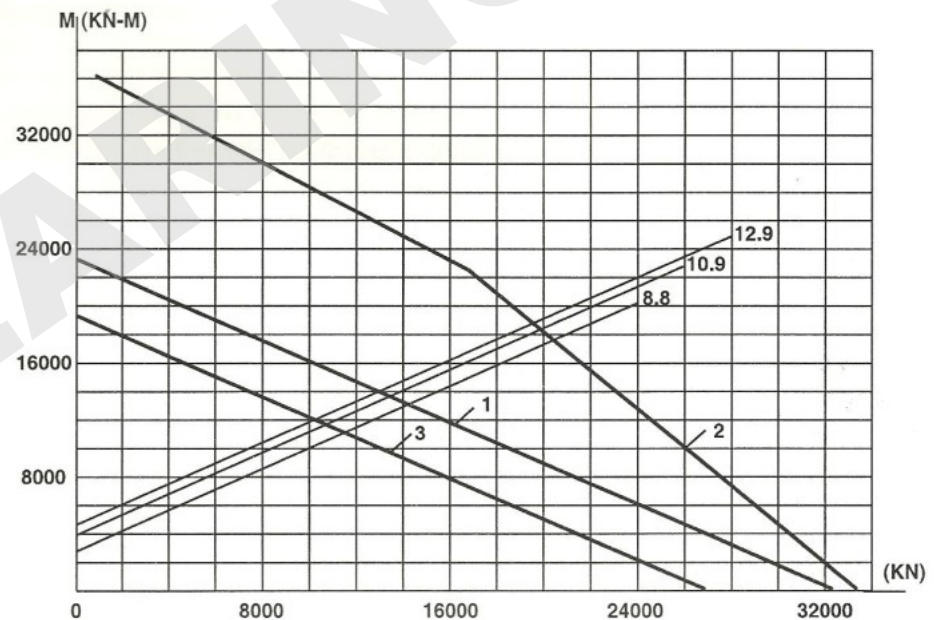
Most of slewing bearing work under eccentric load, take axial load (F_a), radial load (F_r) and overturning moment (M). So before choosing a suitable bearing need to have calculation for the bearing using condition, need to calculate the load for dynamic and static condition. Calculating the service life according to the safety factor of different application. Then may choose the suitable bearing.

Curve 1 means when material is 42CrMo, it is the allowable static load curve for ball bearing with allowable contact stress 3850Mpa, or roller bearing with allowable contact stress 2700Mpa.

Curve 2 means rated dynamic load curve when bearing has whole turning with reliability 90%, life time 0.03×10^6 , under condition of not high radial load, low speed of turning and not high working precision.

Curve 3 means when material is 50Mn, it is the allowable static load curve for the ball bearing with allowable contact stress 3400Mpa, or roller bearing with allowable contact stress 2100Mpa.

The maximum load curve of the bolt is when its joint length is five times long as the bolt diameter, and the preliminary stress is 10% of the yield strength of the material.



2797/2680K Slewing bearing load curve