



SLEWING BEARING INSTALLMENT AND MAINTAIN INSTRUCTION



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FDON MANUFACTURING CO., LTD

(FDON GROUP)



At the beginning, thanks for your purchase of our FDON Slewing Bearing.

FDON MANUFACTURING CO., LTD is specialized in manufacturing 200–5000mm slewing bearing. The products have pass their National machinery structural parts quality test and have acquired the certificate of the ISO9001:2000 system of quality certification. Main products are four series of slewing bearings: single–row spherical type, double–row spherical type, three–row rolling type and crossover rolling type.

Before setting the slewing bearing, read the detailed explanation in this handbook carefully so as to avoid any unexpected damage. If you follow the instructs of this hand book, you will get a desire result. And the slowing bearing will function efficiently and have a long working life.



★ Suggestions :

- A.** The product has received rust–proofing treatment before it leaves the factory. The period of validity is 6 months. If you have stored this product for more than 6 months, you have to give it a rust–proofing treatment over again.
- B.** Before the product leaves the factory, its track was lubricated with some grease.
You need to fill it with butter as required before you use it.

★ Statement:

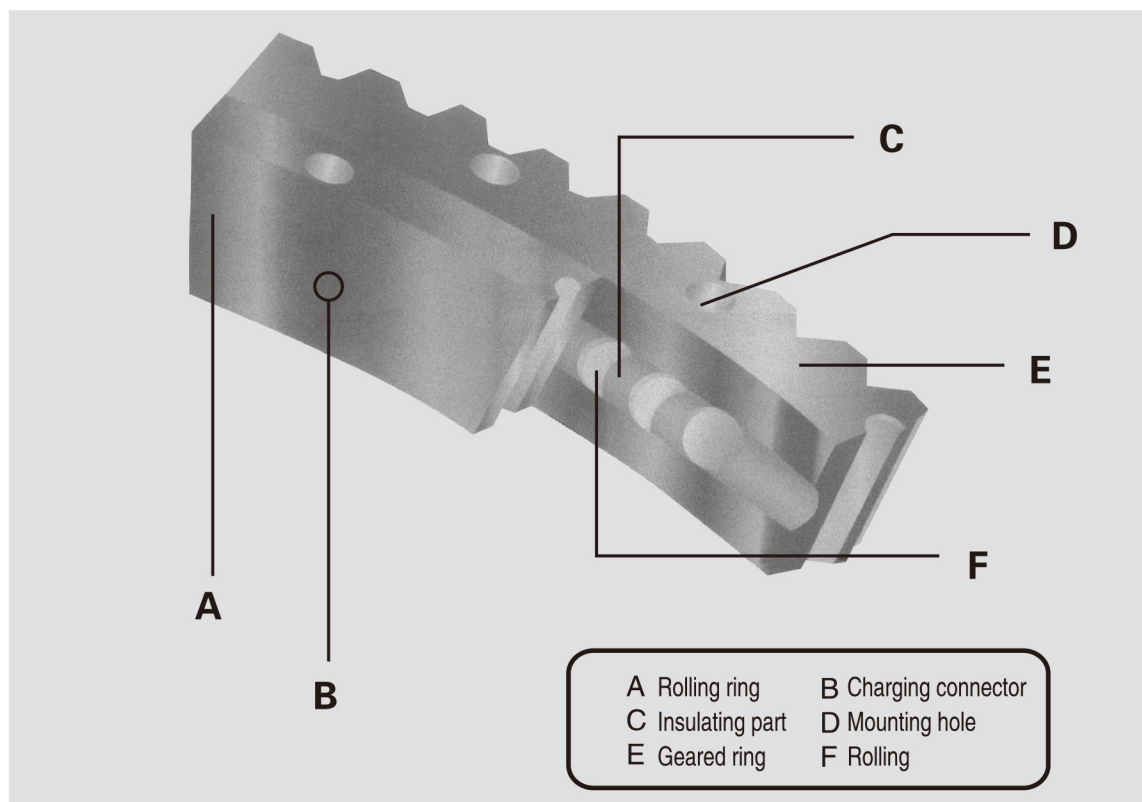
- A.** If there is amendment made, the customer will not be informed.
- B.** This handbook only applies the related information of explanation, setting, using, and maintenance. It is not the promise made by XuZhou FenqHe intelligent technology Co.,Ltd.
- C.** As to the items this handbook not mentioned, please refer to the standard in JB/T2300–1999.
- D.** The right to interpret of this handbook belongs to XuZhou FenqHe intelligent technology Co.,Ltd. without our consent, others should not photocopy, copy, or spread out thishandbook for commercial purposes.
- E.** Before the product leaves the factory, the interval accuracy has been turned. The product should not be dismantled without our permission.



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Cognition Slewing Bearing



Scutcheon and Marker

A

scutcheon is on the slewing bearing's rolling ring (outside or inside near the jam), it shows the brief and important information about the slewing bearing such as manufacturing factory, type, the date of leaving factory, contact methods, etc. As showed in the following picture.

B

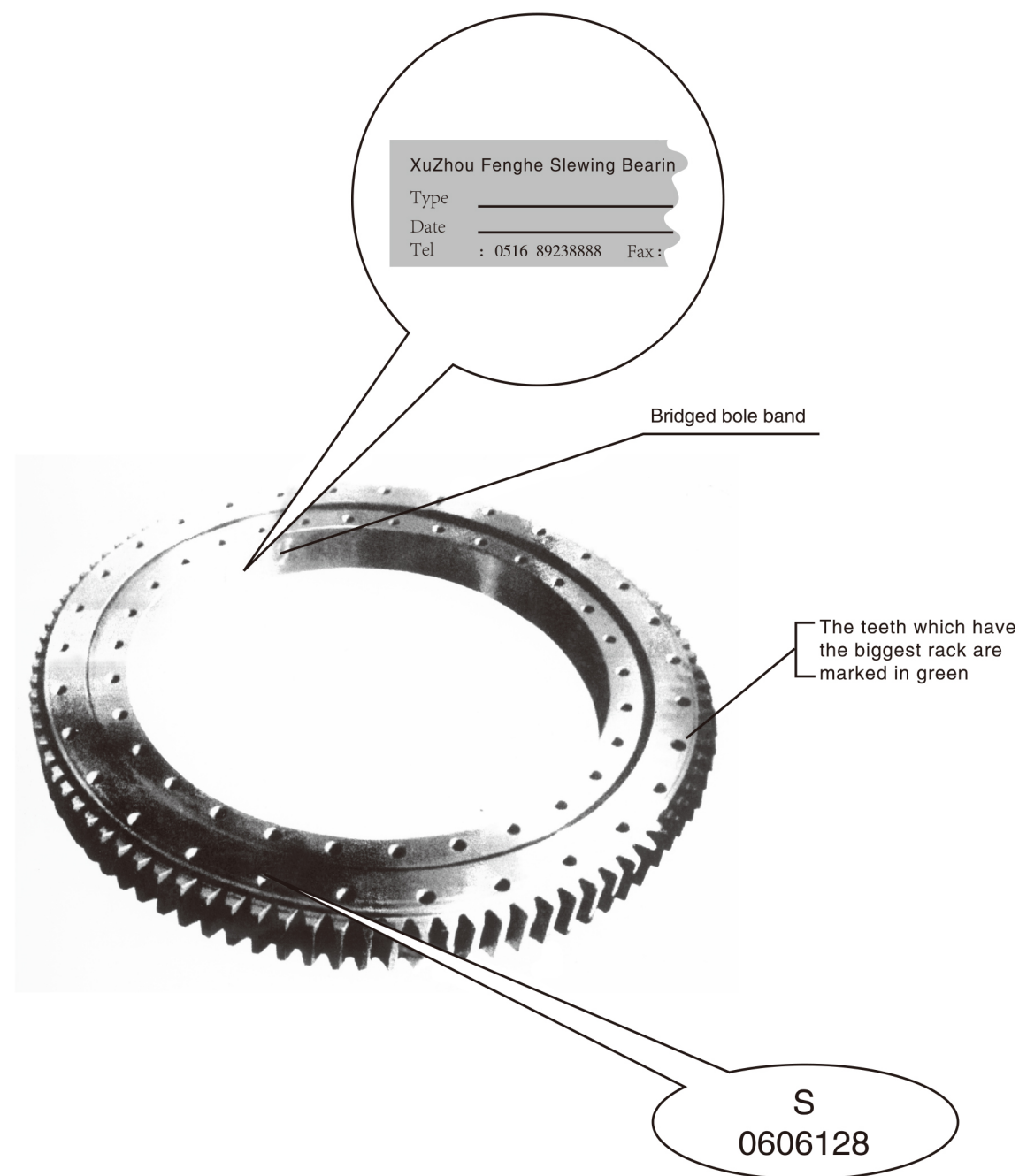
Slewing bearing ball track quencher band is in the non-loading zone or non-regularity loading zone. The band lies between the exterior marker "S" and the jam.

The teeth which have the biggest rack on the geared ring and gear wheel are marked in green. The gap between two teeth of the small drive geared wheel should be adjusted in this position.

Particular Suggestion : The string of numbers underneath the letter "S" is serial number of our products.

Scutcheon is generally near the jam.

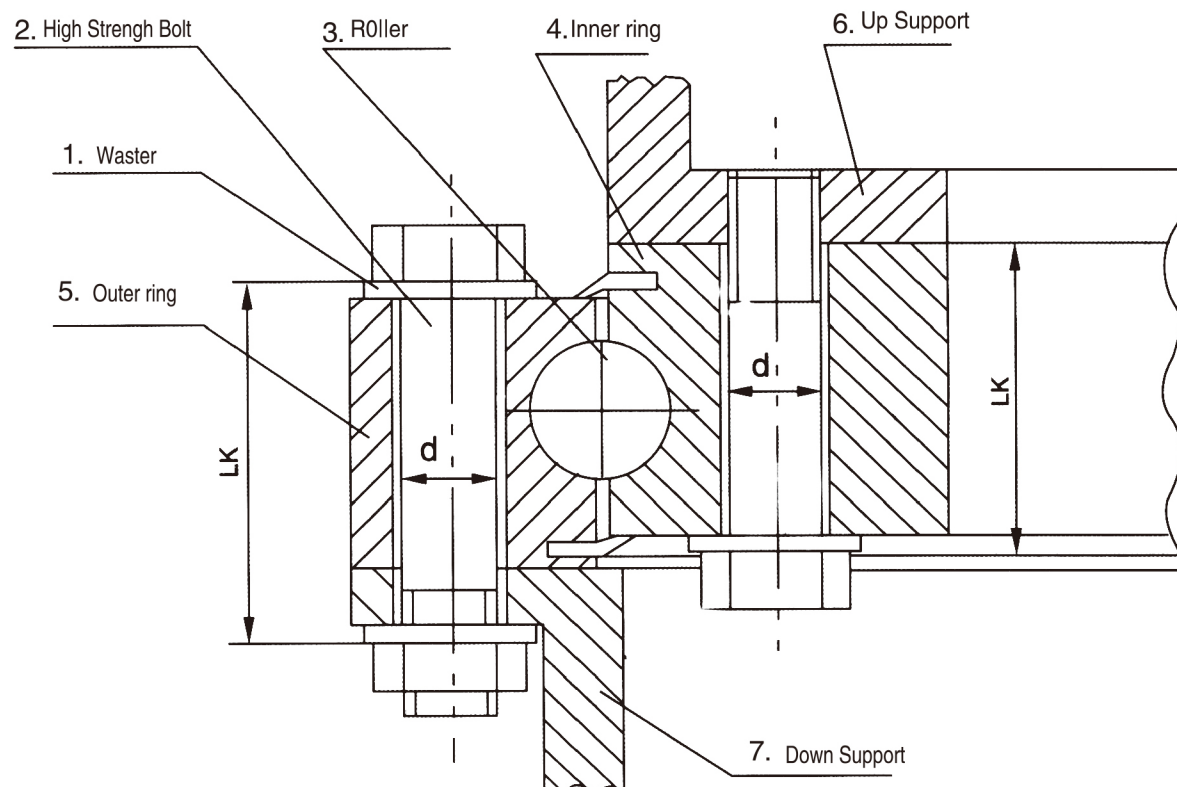
Using Picture Explain



Setting and Using explain

Setting PrefDARATION task

- ◆ externals inspection: check if the package is sound or not.
- ◆ make sure the slewing bearing you receive is in agreement with the requirement in the contract
- ◆ make certain that the slewing bearing is not damaged in the process of transportation and it can running agilely.
- ◆ remove the protective wrapping in clean and dry environment. Make every composition plane clean. Wipe off scrap iron, oil paint, antirust, etc.
- ◆ check whether the sealing member is still at the right place. Clean the setting surface of the slewing bearing and the mating parts. Check whether the screw in the setting surface can fit'with the mounting hole in the slewing bearing.

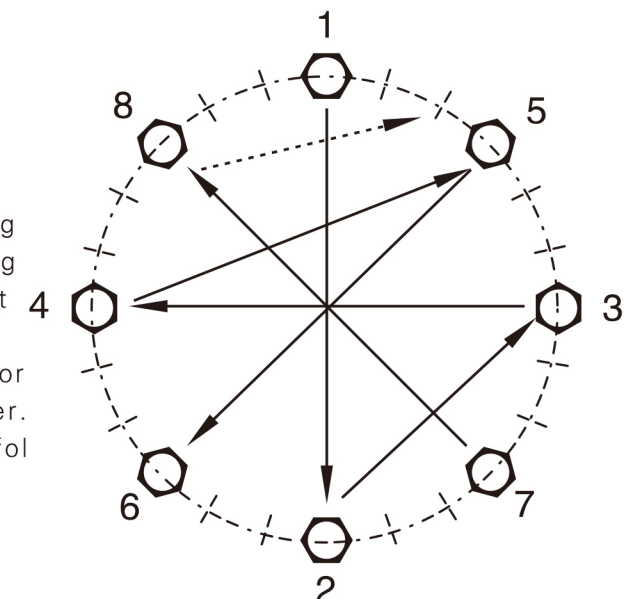


- A** The precision and rigidity of the setting plane should meet the specification mentioned above.
- B** The protective wrapping should be removed in clean and dry environment. Make every composition plane clean. Wipe off scrap iron, oil paint, antirust, etc.
- C** Check whether the sealing member is still at the right place. Clean the setting surface of the slewing bearing and the mating parts. Check whether the screw in the setting surface can fit with the mounting hole in the slewing bearing.
- D** Use high strength bolt to connect different parts. The bearing and the setting plane need to be screw down equably to attain the prerequisite.
- E** Jointing is not allowed on in the slewing bearing so that the bearing will not be distorted! besides special slewing bearing jointing)
- F** In the process of setting, make place for protruding and concave circular bead for radial orientation purpose on the setting plane.
- G** .Temper band (low rigidity layer) for bearing ball track quenching should in the regular load zone and non-load zone. Upper and lower rolling ring's temper band should stagger for 180 degree. The temper band whose rolling ring is droved by hoist and grub machine should stagger for 90 degree with the arm support. The temper band of the rolling (geared) ring should in the position what has the low operation frequency.
- H** To make sure that the bearing works steadily, slewing initiative pinion and the geared ring should meet the required working precision, operation stationarity, tangency precision and working backlash.

Special Suggestion

Bolds used in setting slewing bearing should be high strength bolts. According to the bearing's supporting power, select proper bolts.

When fixing bolt gasket, use modulator plain washer. Don't use spring washer. Screw down the bolts in order as the following steps.



Check-up, Maintenance, and Lubricating

Check-up Glue Maintenance

In the slewing bearing working period, in order to discover problems and debug the product in time, check and maintain the slewing bearing as required.

A Examination of the performance of the slewing bearing;

- A—1 Whether it librates or not;
- A—2 Whether the ball track and the reverse make a noise or any abnormal sound;
- A—3 When it is slewing, whether the resistance increases and whether brake phenomenon happens;

B Check-up the bolts, geared ring and seal

- B—1 Whether the setting bolts of the slewing bearing are loose, whether they need to be screwed down;
- B—2 Whether there is foreign body in the geared ring.
- B—3 Whether the geared ring is well lubricated;
- B—4 Whether the teeth flank is abnormally wore;
- B—5 Whether the lips of the seal is well cleaned up and lubricated;
- B—6 Whether the seal falls off or not fit, whether the lubricating grease leaks.

Maintenance and Lubricating

Usually, use lubricating grease to lubricate slewing bearing' s ball track and geared ring. It can not only reduce friction on the vice plane, but also have seal and antirust effect. Besides, high pressure oil can also be used to lubricate.

A The term of lubricating

Ball track that operating in the environment which the temperature is between $-20^{\circ}C$ ~ $80^{\circ}C$ can be maintained as following; For the slewing bearing working in high temperature and dusty environment, truncate the lubrication periods. Around long-term laying aside the machine, it needs to be lubricated. Lubricate the geared ring and the pinion, according to the condition of the gear face. When the gear face has high point, it needs to be lubricated. Generally, 2-3 times per month.

- A—1 Working in unclean environment and run continuously, lubricate it every 40-50 minutes;
- A—2 Working in unclean and moist environment and run intermittently, lubricate immediately before or after it working ;
- A—3 Working in clean environment and run intermittently, lubricate every 3-6 months.

B Lubricate ball track

As injecting lubricant, keep the bearing running. Lubricant must fill the whole ball track, let the extra grease leek from the labyrinth seal together with dirt and dust .etc

- B—1 Connect every lubrication points and intently lubricated parts with pipes, that is central lubrication;
- B—2 Inject lubricant into every lubrication points' flowing bean, that is decentralized lubrication;

C Requirements on the lubricant

- C—1 the dropping point should be higher than the working temperature— $10^{\circ}C$. Generally, the dropping point of the lubricating grease is around $90 \sim 100^{\circ}C$
- C—2 appropriate contraposing limit;
- C—3 it has extreme pressure property :under heavy load the bearing can form a high oil film strength ;
- C—4 it possesses many property as equipment stability, stability of colloids,
- C—5 oxidation stability and durability;
- C—6 It does not eat in metal. It has wet strength and protective strength and utility.