# Introduction to the use of tapered roller bearings

Tapered roller bearings mainly bear radial and axial combined loads. The bearing capacity of the bearing depends on the raceway angle of the outer ring. The larger the angle, the greater the load carrying capacity. This type of bearing is a split type bearing, which is divided into single row, double row and four row tapered roller bearings according to the number of rows of rolling elements in the bearing. The clearance of single-row tapered roller bearings needs to be adjusted by the user during installation; the double-row and four-row tapered roller bearing clearances are given according to user requirements when the product leaves the factory, and no user adjustment is required.

Tapered roller bearings have a conical inner ring and an outer ring raceway, and tapered rollers are arranged between the two. The projection lines of all conical surfaces converge at the same point on the bearing axis. This design makes tapered roller bearings particularly suitable for bearing composite (radial and axial) loads. The axial load capacity of the bearing is mostly determined by the contact angle ?; the larger the angle ?, the higher the axial load capacity. The angle size is expressed by the calculation coefficient e; the larger the e value, the larger the contact angle, and the greater the applicability of the bearing to the axial load.

Tapered roller bearings are usually of a separate type, ie a conical inner ring assembly consisting of an inner ring with a roller and cage assembly can be mounted separately from the outer bevel (outer ring).

The secondary reason for the emergence of tapered roller bearings in the process of installation is that the bearing is being assembled, the inner ring and the outer ring are slanted during assembly; or the load is in the process of assembly and assembly, and the bearing is formed. .

When the tapered roller bearing is being installed, it should be stopped according to the working specifications. If a lot of achievements are not formed, if the form or method of the device is not used, the bearing raceway surface and the bone surface will form a wound-like line. The deep groove ball bearing device indirectly reflects the precision, life and function of the bearing.

Although the quality of tapered roller bearings is better in all aspects, rolling bearings are precision components, and their use must be carried out with caution. No matter how high-performance bearings are used, if not used properly, the expected high performance will not be achieved. The following precautions for the use of bearings are as follows:
(1) Keep the tapered roller bearing and its surroundings clean:
Even small dust that is invisible to the eyes can have a bad effect on the bearings. Therefore, keep the area clean so that the dust does not intrude into the bearing.
(2) Use with caution:
In the use of the tapered roller bearing strong impact, it will produce scratches and indentations, which is the cause of the accident. In severe cases, it will crack and break, so you must pay attention.
(3) Use the appropriate operating tools:
Avoid using existing tools instead and use the right tools.
(4) Pay attention to the corrosion of tapered roller bearings:
When operating the bearing, the sweat on the hand can cause rust. Be careful to use a clean hand, it is best to wear gloves as much as possible.