Engineering plastic bearings vs metal composite bearings

The bearings currently used can be generally divided into rolling bearings and sliding bearings.

The working principle of rolling bearings and sliding bearings can be distinguished by their names. The friction that occurs when the rolling bearings work is rolling friction, while the sliding bearers work.

Sliding friction occurs during operation; the magnitude of rolling friction depends mainly on manufacturing accuracy; and the magnitude of sliding bearing friction depends mainly on the material of bearing sliding surface.

Material. Sliding bearings have self-lubrication function in general working face; sliding bearings are divided into non-metallic sliding bearings and metal sliding bearings according to material. Non metal sliding bearing

At present, mainly plastic bearings, plastic bearings are generally made of better performance engineering plastics; more professional manufacturers generally have engineering plastics from

Lubrication modification technology, through fiber, special lubricant, glass beads, etc. to enhance the self-lubrication of engineering plastics to achieve a certain performance, and then modified

Sex plastics are self-lubricating plastic bearings made by injection molding. At present, more professional manufacturers in the world are IGUS of Germany and CSB of China. Metal sliding bearing

At present, the most commonly used is three-layer composite bearings, which are generally based on carbon steel plate, through sintering technology on the steel plate first sintered a layer of spherical copper powder.

Then a PTFE lubricant layer with a thickness of 0.03 mm is sintered on the copper powder layer, and the spherical copper powder layer in the middle is mainly used to strengthen the bonding between the steel plate and PTFE.

Strength, of course, plays a certain role in loading and lubrication when working.

At present, the more professional manufacturers in the world are GGB Company of the United States, OILES Company of Japan and CSB Company of China; it is not difficult to see from the above description that plastic shaft

There are the following differences between the bearing and the metal sliding bearing.

1. Plastic bearings as a whole are lubricating materials, long service life; and metal sliding bearing lubrication layer is only 0.003 mm PTFE surface, when this thin layer

The end of the service life will be declared after the friction is finished.

2. Plastic bearings will not rust in use and corrosion resistance, and metal bearings are prone to rust can not be used in chemical liquids;

3, the quality of plastic bearing is lighter than metal, which is more suitable for modern lightweight design trend.

4. The manufacturing cost of plastic bearings is lower than that of metals. Plastic bearings are made by injection molding and are suitable for mass production.

5. Plastic bearings do not have any noise in operation, and have a certain vibration absorption function; because plastic bearings have many advantages over metal sliding bearings, the current plastic bearings

The production of material bearings is expanding day by day, and the use of plastic bearings is constantly extending, from fitness equipment to office equipment and the automotive industry and so on.

Plastic bearings, vehicles currently running on highways, do not use plastic bearings. The prospect of plastic bearing market is limitless.