

Rolling bearing assembly method

When assembling the bearing, the most basic requirement is to make the applied axial force directly on the end face of the ferrule of the mounted bearing (when mounted on the shaft, the applied axial force should directly act on the inner ring, When the hole is on the hole, the applied force is directly applied to the outer ring). Try not to affect the rolling elements. The assembly methods include hammering method, press assembly method, hot charging method, and freezing assembly method.

1 Hammering method Use a hammer rod to place a copper rod and some soft materials and then hammer it. Be careful not to let foreign objects such as copper powder fall into the bearing raceway. Do not directly hit the inner and outer rings of the bearing with a hammer or a punch. So as not to affect the bearing precision or cause bearing damage.

2 Screw press or hydraulic machine assembly method For bearings with large interference tolerance, it can be assembled by screw press or hydraulic press. Before the pressure, the shaft and bearing should be leveled and coated with a little oil. The pressing speed should not be too fast. After the bearing is in place, the pressure should be quickly removed to prevent damage to the bearing or shaft.

3 hot-packing method is to heat the bearing to 80 °C-100 °C in the oil, so that the inner hole of the bearing is swollen and put on the shaft to prevent the shaft and bearing from being damaged. For bearings with a dust cap and seal, the internal grease-filled bearing is not suitable for hot charging.

(3) The tapered roller bearing clearance is adjusted after assembly. The main methods are gasket adjustment, screw adjustment, nut adjustment, etc.

(4) When assembling the thrust ball bearing, the tight ring and the loose ring should be distinguished first. The diameter of the inner diameter of the tight ring is slightly smaller. The tight ring and the shaft after assembly are relatively static during operation. It always leans on the shaft. At the end of the step or hole, otherwise the bearing will lose its rolling action and accelerate wear.