

# Basic structure of slewing ring

## The first type----single row four-point contact ball

The single-row four-point contact ball bearing slewing ring consists of two races. It is compact in structure, light in weight, and the steel ball is in contact with the arc track at four points. It can simultaneously withstand axial force, radial force and tipping moment. Construction machinery such as rotary conveyors, welding operators, small and medium-sized cranes and excavators are available.

## The second one----single row cross roller type

Single row cross roller type slewing ring consists of two races. It is compact in structure, light in weight, high in manufacturing precision, small in assembly clearance, high in installation accuracy, and 1:1 cross-arrangement of rollers. Force, large radial force and tipping moment. It is widely used in lifting transportation, construction machinery and military products.

## The third----double row or double row ball

The double-row or double-row ball slewing bearing has three races. The steel ball and the spacer block can be directly discharged into the upper and lower raceways. According to the force condition, the upper and lower rows of steel balls with different diameters or the same are arranged, and the upper and lower arcs are rolled. The track has a bearing angle of  $90^\circ$  and can withstand large axial forces and tipping moments. When the radial force is greater than 0.1 times the axial force, the raceway must be specially designed. The double volleyball type slewing ring has large axial and radial dimensions and a solid structure. It is especially suitable for loading and unloading machines such as tower cranes and truck cranes that require medium and large diameters.

## The fourth----three-row roller type

The three-row roller type slewing bearing has three races, and the upper and lower and the radial raceways are separated, so that the load of each row of rollers can be accurately determined and can bear various loads at the same time. The most bearing capacity, the shaft and radial dimensions are large and firm, especially suitable for heavy machinery requiring large diameter, such as bucket wheel excavator, wheeled crane, marine crane, ladle slewing and large tonnage truck crane Waiting for the machine.

## The fifth kind---ball joint

The ball-column combined slewing bearing has the advantages of small eccentricity, long service life and double structure of roller and ball. It is suitable for mainframes with large axial load, overturning moment, high life requirement and continuous operation. For example, power plants, port open-air material stackers and reclaimers and other equipment.

The above are the five major track structures of the slewing ring. Most of the slewing bearings on the market today are these types, and there are some special non-standard ones, such as the inner and

outer two tracks applied to the theme park. The slewing ring is not static and can be customized according to customer needs.