

Spherical Roller Bearings with CC Type Cages

In recent years, [Industrial Bearings Inc](#) in order to meet the wide range of applications of spherical roller bearings in gearboxes, blowers, paper, steel, ships, coal mining machinery, electric power and other industries, the bearing capacity, speed and life requirements of bearings are also increasingly high, the traditional CA type bearing is limited by the inner ring rib in its structure, and the roller cannot be lengthened and the number is increased in the limited space of the bearing. In order to meet and improve the bearing performance requirements, the CC type spherical roller bearing technology was introduced, which is characterized in that the inner ring has no ribs, the middle rib is replaced by a live ring, and each set of bearings is equipped with two steel stamping cages. .

Structural features of the CC cage:

- 1) The cage adopts the steel plate stamping structure, which greatly reduces the weight of the cage, effectively reduces the moment of inertia of the cage, has little effect on the roller freedom, and improves the limit rotation speed of the bearing.
- 2) The window of the cage adopts the point lock to prevent the roller from falling off and press the slope at the lock point; in order to increase the strength of the cage, the surface is subjected to phosphating or carbonitriding treatment.
- 3) It is allowed to put more, longer and larger diameter rollers to increase the rated dynamic and static load of the bearing and prolong the service life of the bearing.
- 4) One-time pressure slope is applied to the lock point, the product precision is high; and the bearing rotation flexibility of using 2 cages is higher than CA Bearings.

CC type cage [spherical roller bearing](#) advantages

In the case that the inner ring has no ribs, each row of rollers is provided with a stamping cage, and the window of the cage has a locking point to prevent the rollers from falling off. In the case of a movable septum, the roller and the inner ring raceway are self-guided, and the middle spacer is made of oil-containing powder metallurgy to improve lubrication. The cage has a slope at the lock point and increases the height of the lock point relative to the center position of the roller, so that the roller has a certain amount of rotation gap, and the operation is stable, thereby reducing roller wear. Since the inner ring of the CC type spherical roller bearing has no ribs, it is easier to achieve high-precision machining (above P5) and assembly than the CA type. Each bearing is equipped with 2 cages, and the running effect is better than that of the CA type. The number of sub-numbers can be increased by 1 to 2, and the rated load is increased by about 10%.

Due to the improved bearing structure and cage, the CC type cage [spherical roller bearing](#) has a great improvement in the speed performance and service life compared to the CA type cage spherical roller bearing. The replacement of the brass cage saves costs, so the CC type cage spherical roller bearing is worthy of popularization and application.