



What are the Benefits of the Window-Type Cage in NTN's ULTAGE® Spherical Roller Bearings?



Did you know the cage style in spherical roller bearings matters? When choosing a spherical roller bearing for your application, NTN's pressed steel window-type cage (**Fig. 1**) has several added benefits.

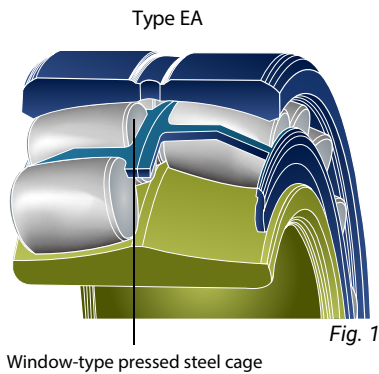


Fig. 1

NTN's window type cage is designed with chamfered cage pockets (**Fig. 2**) and 4 tabs to stabilize the rollers (**Fig. 3**). The reduction in contact area between the cage pocket and the roller reduces the friction generated, allowing the bearing to run faster and cooler than traditional pressed steel caged spherical roller bearings.

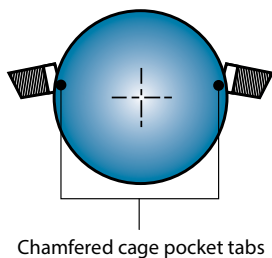


Fig. 2

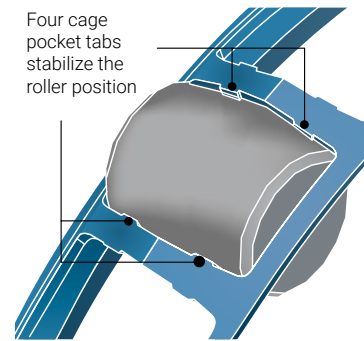


Fig. 3

NTN's pressed steel cage also has a special surface treatment to enhance the wear resistance. The back face of the cage provides a guide function that eliminates the need for a guide ring. The back to back cage system matched with the cage pocket shape allows for easier flow of lubrication to the roller surfaces and ensures a stable supply of lubrication into the bearing when properly lubricated (**Fig. 4**).

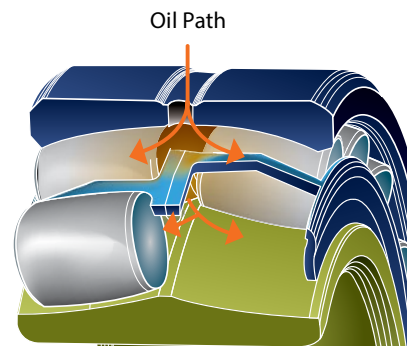


Fig. 4

ULTAGE®

SPHERICAL ROLLER BEARINGS

Combining premium-grade materials, optimized design and precision manufacturing, ULTAGE is the new generation of high-performance bearings from NTN that delivers unmatched service life, the highest limiting speeds and the best load capacities on the market to maximize the productivity of your equipment.

ULTAGE spherical roller bearings combine cutting-edge product research, premium-grade materials, and an optimized internal and external design to greatly extend bearing life. The result is greater profitability for our customers thanks to improved uptime and productivity.

- **Made from premium-grade steel and larger rollers,** ULTAGE SRBs provide a 65% increase in capacity compared to a conventional bearing, resulting in up to 5 times longer service life. In addition, ULTAGE SRBs provide up to 35% greater basic static load rating compared to conventional bearings.
- **ULTAGE SRBs contain an optimized surface finish** and incorporate high-performance, window-type pressed steel cage without the center guide ring for higher rigidity, stability, and better lubrication flow through the bearing. All these design features allows for a 20% higher limiting speeds when compared to conventional designs, reducing operating temperatures that extend lubrication intervals and keep production lines running longer.
- **Our special heat treatment process** allows for dimensional stability of the bearing up to 200°C (392°F) all while maintaining high hardness. The combination of high temperature stability and high hardness allows the bearing to achieve a longer life, thus reducing down time and increasing production.
- **Manufactured in our state-of-the-art facilities** which maintain consistently tighter tolerances through production, ULTAGE spherical roller bearings feature an optimized design that enables higher loads and faster rotational speeds. Besides allowing machines to run at maximum productivity, the improved design reduces heat generation for extended grease life and improved uptime, compared to conventional bearing designs.

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