

HPS™ **Spherical Roller Bearings**

HPS, redefining the standard.

Trademark registration
pending



HPS, redefining the standard.



Continually developing products with greater strength and higher accuracy, NSK's new HPS fully incorporate the advantages of NSK's world-class design, materials, and manufacturing technology, setting a new standard for bearings.

High performance in diverse applications with reduced maintenance costs and more compact design

HPS spherical roller bearings meet the needs of various equipment for components with reduced maintenance costs and unsurpassed functionality. By taking full advantage of NSK's wealth of experience and expertise, HPS spherical roller bearings realize unprecedented endurance and high limiting speeds to support downsizing while at the same time improving performance and lengthening equipment operating life. Just what you would expect from NSK, the leading bearing company.

Features of HPS Spherical Roller Bearings

Life
2 times
the operating life
(maximum)

Limiting Speed
20% higher
(maximum)

Long Life Lower Maintenance Cost

Maintenance costs are an important factor in reducing total equipment costs. HPS spherical roller bearings realize twice the operating life of conventional products, and longer operating life leads to lower maintenance costs.

Flexible Applicable to a variety of applications

With improved cage resistance to wear at higher speeds over longer period of operation, HPS spherical roller bearings deliver high performance to a variety of applications.

Compact Contributing to equipment downsizing

Achieving longer operating life can be realized together with the selection of smaller bearings. HPS spherical roller bearings allow compact design for various equipment, thereby supporting the demand for downsizing.

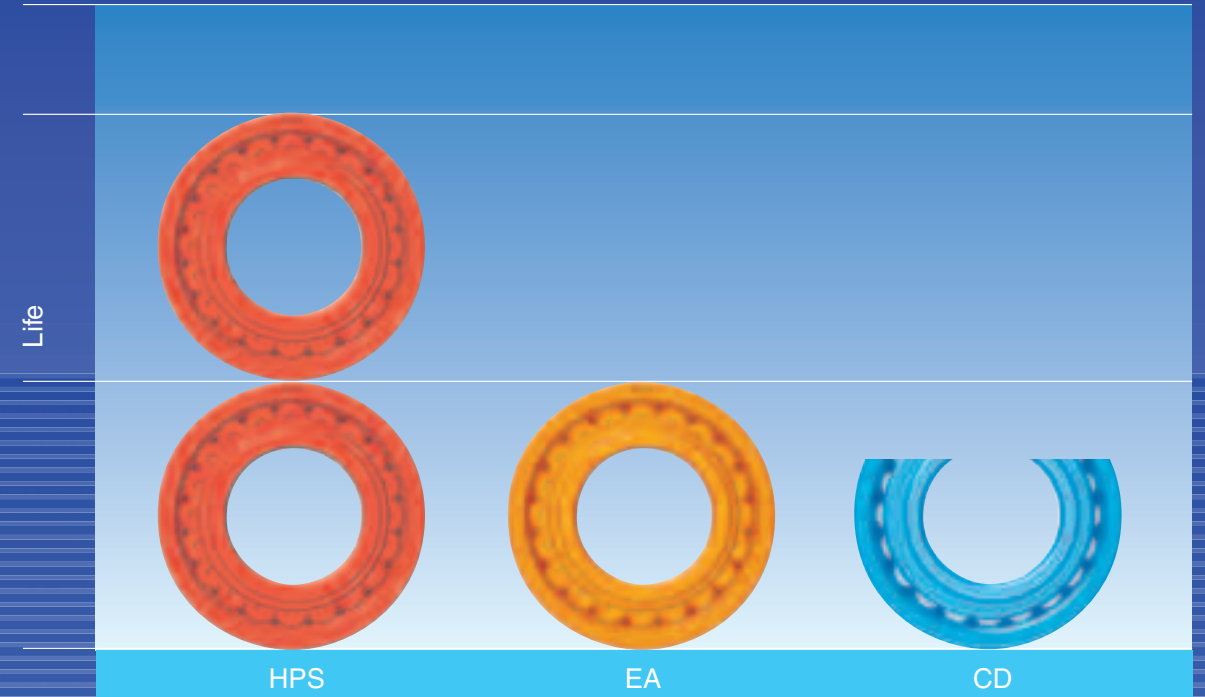
Comparison

Life
2 times
the operating life
(maximum)

Limiting Speed
20% higher
(maximum)

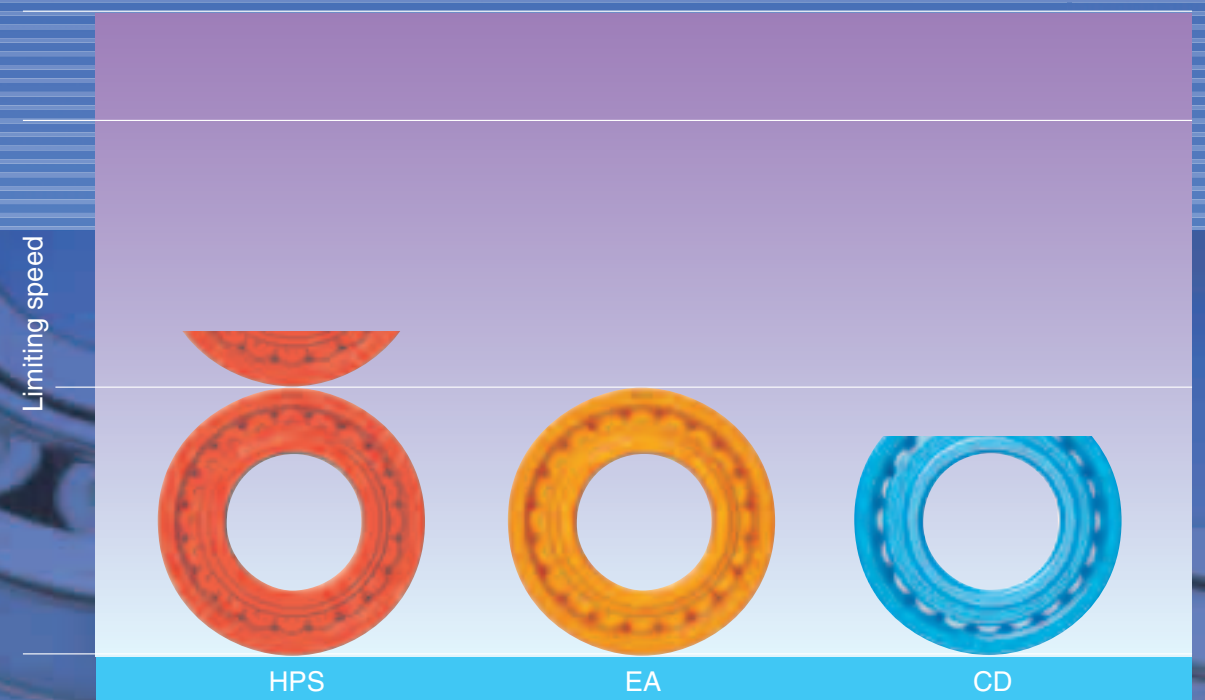
Long operating life reduces maintenance cost

HPS spherical roller bearings demonstrate twice the operating life of conventional EA Series bearings for longer equipment operating life that lowers maintenance costs.



High-speed, long-term operability provides increased flexibility across a wide range of applications.

HPS spherical roller bearings exhibit dramatically reduced cage wear at higher speeds over longer periods of operation. As a result, limiting speeds are increased to provide greater flexibility across an extensive range of applications.

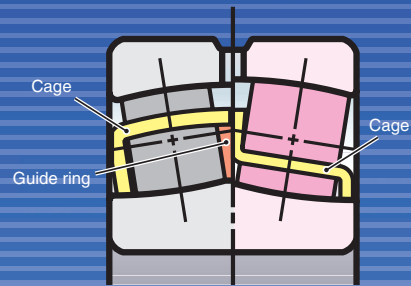


Innovative design drawing upon a variety of technologies leads to high performance in next-generation products

Technology

Innovative design developed through enhanced structural analysis

The HPS cage incorporates a roller guide function in place of a guide ring. Eliminating the guide ring and optimizing the design of the inner and outer ring configuration facilitates the placement of additional, larger rollers. Optimized design for the internal specifications and improved press technology greatly increase load capacity, and realize longer life. Special surface treatment further strengthens the cage, reducing wear, heat and friction; it also allows for higher limiting speeds.



NSK old type bearing HPS

Bearing Interior Design Comparison

Elimination of the guide ring allowed for a design change that improves cage balance and strength.

Adoption of state-of-the-art materials

HPS spherical roller bearings are made from NSK's high-cleanliness Z steel. This steel features greater fatigue strength. In addition, special surface treatment makes it more resistant to wear and more durable in a variety of applications.

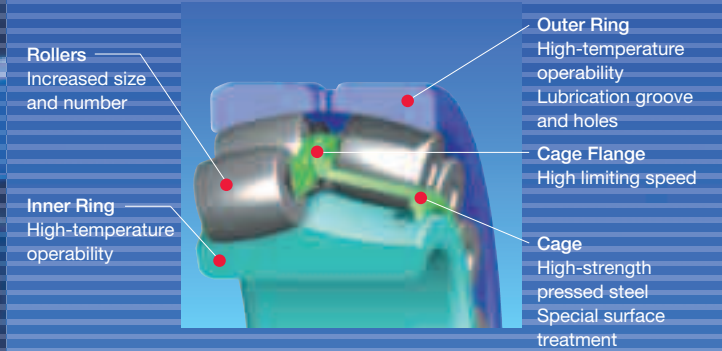
Cage design features stronger resistance to wear

By utilizing the space gained from eliminating the guide ring and improving the design through advanced structural analysis, cage strength has been increased dramatically. The high-precision roller guide function in place of the guide ring, united with a special surface treatment, strengthens the cage against wear and increases the limiting speeds.



Advanced production system ensures outstanding quality

As global leaders in the bearing industry, we have continually invested in developing and refining our manufacturing technology and quality control procedures so that we are able to manufacture bearings of exceptional quality and accuracy.



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