



NTN-SNR INNOVATION

KIZEI® : The new exclusive range of spherical roller bearings

NTN-SNR's exclusive, revolutionary offer - a new range of spherical roller bearings protected by metal shields - boasts improved production efficiency, lower maintenance costs, ISO standard dimensions, guaranteed interchangeability, innovative design, and more. Halfway between the sealed and open models, KIZEI® is today's innovation and tomorrow's standard.

Staying true to the company's top priority - customer satisfaction - the NTN-SNR engineering team based in Annecy, France, observed that 21% of damage to open spherical bearings is due to solid contamination and 13% to lubrication problems. This results in premature wear to the bearing, high maintenance costs and significant production losses. The problem is daunting: how to limit these two factors that cause premature end-of-life?

After more than four years of research, development, industrialization and real-world tests, NTN Bearing Corporation of Canada Limited, a leading producer of premium quality ball and roller bearings, is pleased to announce the introduction of KIZEI®, a full range of new spherical roller bearings developed to meet current market requirements.



KIZEI® guarantees the customer both optimized performance and reduced maintenance costs.

Its ease of use and standard dimensions ensure **complete interchangeability**, and hence no interruption to the customer's working practices. Unlike the larger sealed model that requires special accessories, KIZEI® fully adapts to the mechanisms already used with standard open bearings: same housing, same accessories, same mounting, same grease. All that is needed is to change the part. The KIZEI®'s commitments thus boil down to this: effortless implementation, longer life and increased equipment performance.

A patented innovative concept

A spherical roller bearing protected by metal shields attached directly to the cage. The idea may seem simple, but it presented a significant challenge in terms of design and manufacturing.

Provides protection against solid particles (dust, pebbles, etc.), **improves grease retention**, **respects ISO dimensions** – and all of this without reducing load capacity, limiting speed and maintaining misalignment capabilities of open spherical roller bearings. These were the main considerations when the KIZEI® range was being designed by NTN-SNR.

Completely interchangeable, zero disturbance

With a minimum **lifespan** twice that of an open spherical roller bearing, and a need for **relubrication** that is **three times less**,

A complete range

In adding this innovation to its catalogue, NTN-SNR now offers **the most complete range of spherical roller bearings on the market**. The aim is clear: to strengthen NTN-SNR's position in the market and to be seen as a major innovator.

The KIZEI® range will be available for purchase starting in July 2020 in Canada.



FREQUENTLY ASKED QUESTIONS

KIZEI® Spherical Roller Bearings



Q: What are some of the typical applications for Kizei® Spherical Roller Bearing

A: Mines, quarries, industrial ventilation, cement works, the iron and steel industries, sectors that make use of conveyors and overhead cranes, and more. KIZEI® is marketed via industrial distribution and aims to become the standard rather than an open bearing. And that's why we want to develop the most complete range possible.

Q: What tests were carried out before the Kizei® bearing was launched in the market?

A: The KIZEI® was rigorously tested and shown to make a difference! After 2,200 hours of service on a quarry conveyor, it was found that the KIZEI® bearing, having worked for twice as long as the original open bearing, displayed far fewer contamination indentations. This proved that the metal shield was really doing its job.

The second highly revealing test took place in the abrasive, dusty environment of a cement works. The company had recorded a \$1,174,000 loss due to downtime caused by near-monthly replacement of the open bearing. When KIZEI® bearings were used, there were three times fewer shutdowns, and the cement works plant saved over \$793,000 in the first year.

These tests prove that the KIZEI® is as important for maintenance as it is to production. And meeting the needs of both of these is one of NTN-SNR's stated aims.

Q: How is Kizei® priced in the market?

A: Like every single innovation that enters a market, KIZEI® has a higher purchase price than existing models. The cost is justified because its exclusive features guarantee a lifespan that is at least twice as long, with one third of the maintenance costs. As for its ISO dimensions, they are completely interchangeable and do not entail any additional costs.

Q: Why the name "KIZEI®"?

A: "Kisei" with an "s", means "regulation" in Japanese. This signifies the regulation brought about by the new product: less contamination going in, less grease going out. "Kisei" is also one of the major title names in professional **Shogi**, a Japanese chess game. We wrote the name with a "Z" because in bearing terminology, a product part number is symbolized by a number and letters that represent different options. Metal shields, and the metal shield used in this new series, are commonly symbolized by a "Z" suffix - hence the name KIZEI®. A "ZZ" suffix is added to the standard ULTAGE® part number to identify a shield on both sides of the KIZEI® series.

NTN-SNR'S DEDICATED RANGE OF SPHERICAL ROLLER BEARINGS

EXCLUSIVE FEATURES

| | Open bearing | KIZEI® | Sealed bearing |
|----------------------------|-----------------|-----------------|-----------------|
| Dimensions | ISO | ISO | Special |
| Protection | 0 | + | ++ |
| Grease retention | 0 | + | ++ |
| Temperature range | -40°C to -200°C | -40°C to +200°C | -10°C to +120°C |
| Speed | ++ | ++ | + |
| Nominal load | ULTAGE® | ULTAGE® | ULTAGE® |
| Internal clearance control | Yes | Yes | No |
| Internal control | Yes | Yes | No |
| Sleeve & nut | Standard | Standard | Special |
| Delivered with grease | No | No | Yes |

- ULTAGE® label
- Load capacities and rotation speed identical to an ULTAGE® open bearing
- ISO standard dimensions
- Nitrided shield and cage for greater impact resistance
- Temperature range from -40°C up to +200°C (-40°F up to +392°F)
- Initial lubrication identical to an open bearing
- Optimal misalignment
- Simple mounting on cylindrical or conical to tapered

*Suitable for sealing against solid dust particles, but not liquids.

ULTAGE® QUALITY LABEL

The ULTAGE® label is the product of two combined concepts: "Ultimate" and "Stage". It offers longer service life, higher rotation speeds, lower maintenance costs and enhanced environmental protection. NTN-SNR offers the widest range of ULTAGE®-label spherical roller bearings on the market, from 25 mm bore diameter to 2,180 mm outside diameter.

