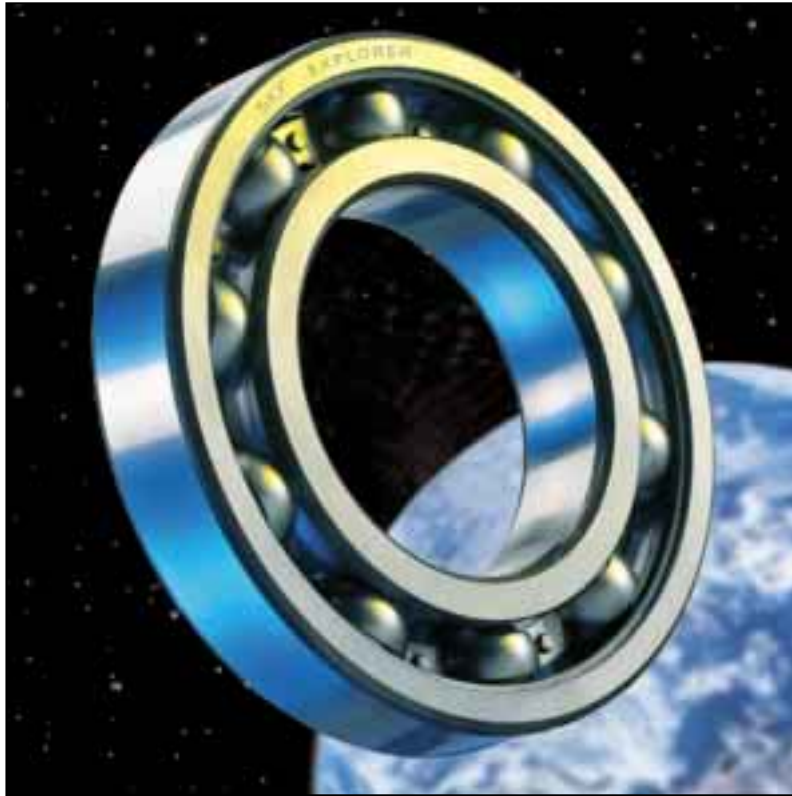


SKF Explorer Deep Groove Ball Bearings



The new world standard for endurance and performance in deep groove ball bearings

SKF® the world leader in bearing technology has substantially improved the precision of its deep groove ball bearings.

These improvements have resulted in a quieter running bearing with higher speed capabilities. The result is a longer lasting bearing that runs smoother.

SKF Explorer deep groove ball bearings are characterized by the following improvements:

- Optimized internal geometry
- Material improvements
- Higher ball quality
- Process improvements

Each of these improvements contributes to the new performance class of bearings.

SKF Explorer deep groove ball bearing

A new standard for outstanding performance

The SKF advantage

Over the years, as part of SKF's continuous improvement process, the geometry of the raceways and cage of the SKF deep groove ball bearings have been re-engineered. These improvements combined with developments in steel making and manufacturing have had a significant impact on the running and dimensional accuracy of the bearing.

With improved precision, SKF Explorer deep groove ball bearings will run smoother – with less noise and vibration than previous designs. The tighter width tolerance of these bearings is particularly important for OEMs as it can be used to reduce the overall tolerance chain of a shaft system.

For the enduser, these bearings will run quieter, longer.

Benefits

- Quiet running
- Reduced vibrations
- Longer service life
- Increased speed capability
- Improved sealing



Manufacturing process

Continuous improvements in all areas of manufacturing have contributed to the superior surface finish and accuracy of the SKF Explorer deep groove ball bearing. The benefits include longer bearing service life, reduced noise, improved speed capability.

Improved precision

- Running accuracy to ISO tolerance class 5 up to 52 mm outside diameter
- Dimensional accuracy to ISO tolerance class 6
- Width tolerance tighter than ISO tolerance class Normal.

These improvements provide SKF Explorer deep groove ball bearings with higher speed capability, reduced vibration and extended service life.

Improved bearing steel

SKF researchers established a correlation between oxygen content and rolling contact fatigue strength. As a result, SKF Explorer deep groove ball bearings use steel that is extremely clean and homogenous with low oxygen level content. This improved steel has been proven to increase bearing service life and reduce fatigue failures.

Optimized transition shoulder

The unique raceway shoulder transition reduces edge stresses, friction and heat while improving lubrication and decreasing wear especially in applications with heavy axial loads or misalignment.

Improved surface finish

SKF Explorer deep groove ball bearings have an optimized surface finish on all contact surfaces to maximize the effects of the lubricant. This allows the bearing to run cooler and last longer.

Improved ball quality

SKF Explorer deep groove ball bearings use improved ball quality to provide a smoother running and quieter bearing.



Bearing steel cleanliness

SKF engineers have established the correlation between the cleanliness of the steel and the rolling contact fatigue strength of the bearing. As a result, SKF Explorer deep groove ball bearings use bearing steel with a minimum number of macro-inclusions and low oxygen level for longer bearing service life.

Bearings

Performance



Optimized cage

With its optimized cage geometry, SKF Explorer deep groove ball bearings minimize noise and vibration levels. Bearings are available with steel cages as standard, but some also with polyamide and brass cages.

Improved sealing

The seals for small sizes and shields of SKF Explorer deep groove ball bearings have been redesigned to provide better grease retention and better protection against contaminants without compromising the bearing's speed capabilities. For high temperature applications several different seal materials are available.

Lubrication

SKF Explorer capped deep groove ball bearings are available with a variety of greases. Greases include the ultra quiet SKF standard grease, SKF food quality grease, and SKF high temperature greases.

Improve performance of existing designs

Don't need to increase power output? Then use SKF Explorer deep groove ball bearing of equal size to:

- Reduce noise and vibration
- Reduce power loss with the new seal
- Increase safety factor
- Increase service intervals
- Increase machine uptime

Maintain power output of new designs

Use a smaller SKF Explorer deep groove ball bearing to:

- Run smoother
 - Increase speeds
 - Reduce power loss with the new seal

Increase power output of existing designs

Avoid costly redesign by using an SKF Explorer deep groove ball bearing of equal size to:

- Increase power density
- Increase speeds
- Increase loads

Increase power density of new designs

Use a lower section height SKF Explorer deep groove ball bearing with the same outside diameter to:

- Increase shaft size
- Achieve a stiffer design
- Provide precise axial positioning
- Provide comfort and smooth running
- Operate at the same or higher speeds

When calculating the rating life of an SKF Explorer deep groove ball bearing, use the life modification factor for SKF Explorer radial ball bearings as described in the SKF General Catalogue 5000.

Power-up or size-down

The option you choose depends on whether you're developing a new design or making improvements within existing parameters. Either way, you'll be able to increase speeds, reduce noise level, and increase service life of the application.

Application examples



Industrial gearboxes

Existing gearbox designs can be upgraded with SKF Explorer deep groove ball bearings providing higher power rating. New designs can be downsized.



Industrial electrical motors

SKF Explorer deep groove ball bearings can run at higher speeds with less noise and vibration than previous designs.



Textile

To support the need for accuracy and speed in textile applications, SKF Explorer deep groove ball bearings meet the requirements for high running accuracy.



Agricultural equipments

Increase uptime and decrease maintenance costs by extending service intervals with SKF Explorer deep groove ball bearings.

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