

Get more uptime all the time

SKF Explorer tapered roller bearings



SKF Explorer tapered roller bearings for your toughest challenges

In today's industrial world, you need solutions that are able to handle the toughest challenges and ready to meet even greater demands. Solutions that work harder, work longer and work safer. Solutions robust enough to cope with challenging conditions and testing environments. Solutions that deliver longer and more consistent periods of uptime to ensure greater productivity and efficiency.

We understand what markets demand and the size of the challenges you face. Only through understanding these challenges can we come up with better, more effective solutions.

- **You need a tapered roller bearing that can handle high loads**
- **A tapered roller bearing that is both durable and reliable**
- **A tapered roller bearing that is not going to compromise your productivity and safety**
- **A tapered roller bearing that can withstand challenging and extreme conditions**



Always innovating on your behalf

You need a solution that meets all your challenges. That is why we're working to develop new ideas that answer those needs.

For example, the dynamic load rating is one of the most common factors considered by customers when choosing rolling bearings, but bearing performance in the field is also impacted by the bearing's material composition, surface finish and contact profile. Additionally, application fit, lubrication, sealing and mounting are all essential in maximizing the bearings service life. We understand the practicality of this situation and we've developed a solution that addresses these needs.

You told us – we listened

"I need more reliable, better performing tapered roller bearings"

For gearboxes

One that supporting higher loads. Survives challenging conditions. Resists contamination. Enables easier mounting. Maintains clearance pre-load set during mounting. Provides a longer life.

For pinions, and fluid pumps

One that copes with inadequate lubrication. Achieves higher speeds with lower friction. Supports heavy loads. Maintains high stiffness under preload. Offers low friction during running-in.

For truck and trailer wheels

One that provides reliable lubricant film formation in the rolling contacts. Copes with misalignment and cornering load. Performs successfully at low/medium speeds and with varying loads.

Setting new standards

Only SKF Explorer tapered roller bearings answer all your requirements

In order to understand all our different customers' needs, our engineers spoke with key customer groups to identify their specific requirements. The result is an innovative, and practical tapered roller bearing solution that overcomes a wide range of individual challenges.

- **Long service life** – in tests, SKF came out on top for best service life
- **Increased dynamic load ratings by up to 23%** - SKF Explorer have the highest ratings
- **Reduced early failure** – design features and manufacturing process set the standards for high reliability
- **Better performance** – low friction torque, noise and vibration, increased speed and running accuracy
- **Optimum combination of material and heat treatment** – for high fatigue life, increased contamination resistance and improved dimensional stability
- **Customisable** – for specific requirements like high speeds, heavy loads, contaminated environment, high temperature and vibratory conditions

More uptime, less maintenance – reliability built-in

You can rely on SKF Explorer tapered roller bearings. In heavy-duty applications, they're strong enough to support heavy loads. In challenging conditions, they're robust enough to perform better and last longer.

And with SKF's global presence and proven expertise, you've got a partner that you can rely on, too.



SKF Explorer design

Engineered for optimum performance

Our expertise in bearing design, tribology, metallurgy, lubrication and manufacturing have come together to create SKF Explorer class bearings. A new standard of excellence in design, performance and precision manufacturing – one that is still unmatched in the marketplace.

SKF Explorer bearings are a result of extremely high steel quality. Optimized design. Manufacturing process improvements. Tighter tolerances and less spread (→ **diagram 1**).

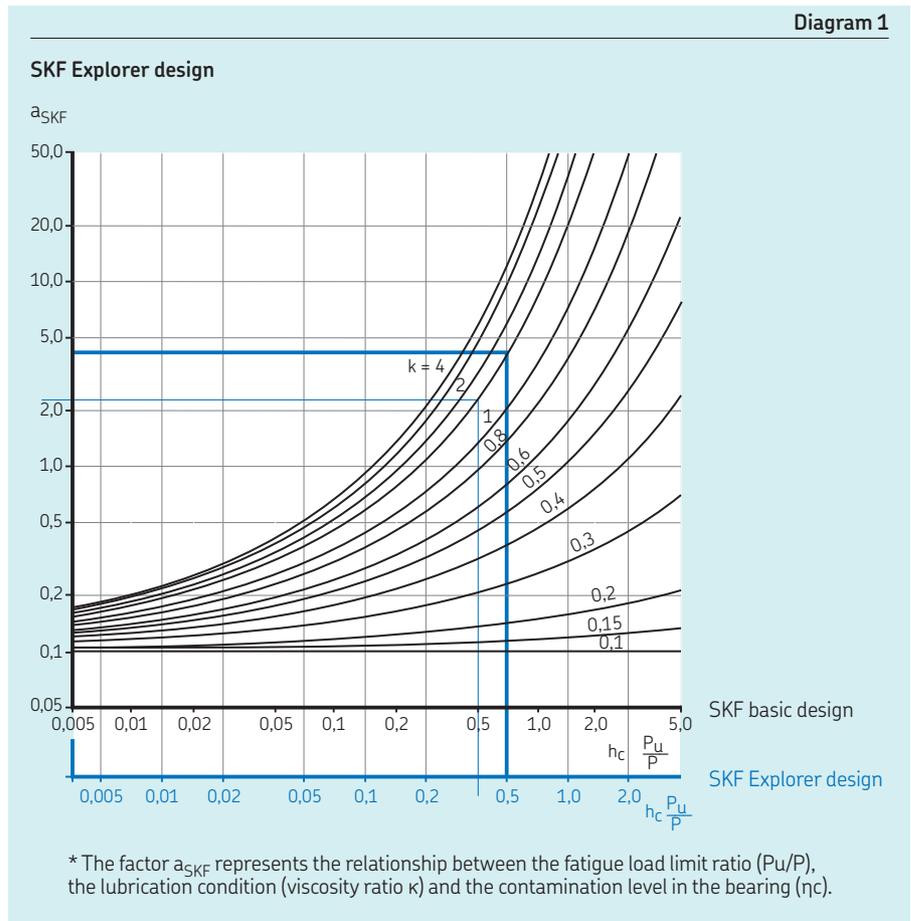
SKF Explorer provides:

- Longer service life
- +15% higher load carrying capacity
- Improved a_{SKF} factor*
- Possible downsizing
- Possible stiffness increase

A simplified designation system

All items in the catalogue assortment will have a designation according to ISO or ABMA standard with a minimum of suffixes.

Items according to SKF Explorer performance will be indicated in blue in the new Rolling bearing catalogue. The bearings and the package labels will be marked SKF Explorer.



Run your machine smoother for longer

If you want to get more out of a machine or piece of equipment, it helps if the bearings are made by SKF. With SKF Explorer tapered roller bearings, you can expect the lowest friction torque, noise and vibration, whilst experiencing increased speed and reduced run-out results – bar none. They deliver longer, more predictable periods of uptime to ensure productivity, efficiency and safety.

Reduce bearing fatigue under the toughest conditions

Fit the best performing SKF Explorer tapered roller bearings and you're experiencing a safer solution. The robust design means it can handle high speeds, heavy loads and contaminated environments for longer periods of time (→ **diagram 2-3**). Because it delivers longer/optimum performance, any potential hazard that results from bearing failure significantly decreases. With SKF, a better running machine is also a safer running machine. And that's important for your business and your peace of mind.

Fit the right part at the right time, every time

Getting a replacement tapered roller bearing can be a challenge, especially if the application is in a remote location. It's often hard to obtain the solution you need. Machines can be out of action for long periods. Productivity can be severely impacted and costs can quickly escalate. With SKF you'll get the right support and the right parts, no matter where your application is based. We have 17 000 distribution locations in over 130 countries around the globe. So we'll get the part to you, no matter what.

With SKF you can be certain you're getting the best tapered roller bearing for your needs. We offer a broad and continually extending assortment of standard metric and inch sizes. So whatever you need, you can rely on SKF. And with SKF's global presence and proven expertise, you've got a partner that you can rely on, too.

Superior performance – verified

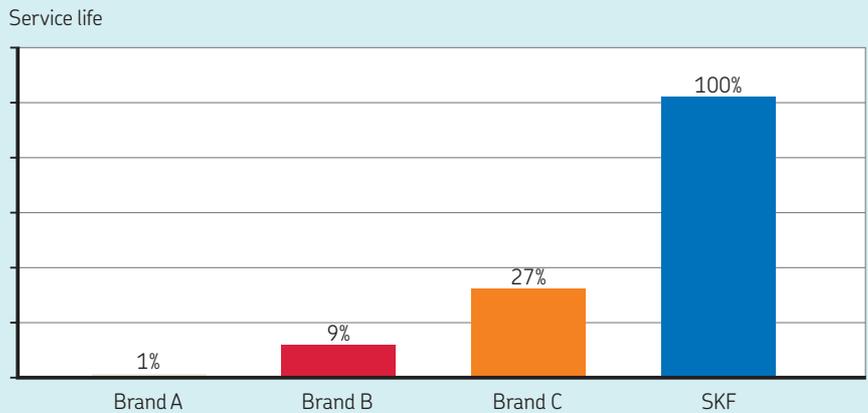
Proven to deliver longer operating life

Don't just take our word for it. Comprehensive benchmark tests show overall superior bearing performance of SKF Explorer tapered roller bearings.

And in the medium size assortment, the product performance is on similar or slightly better level.

Diagram 2

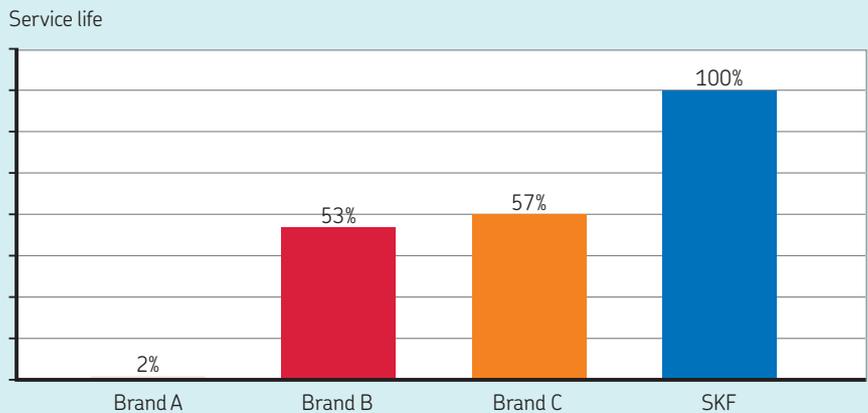
Service life under clean conditions*



* All figures and graphs are rounded off and based on SKF comparative endurance tests under clean oil lubrication.

Diagram 3

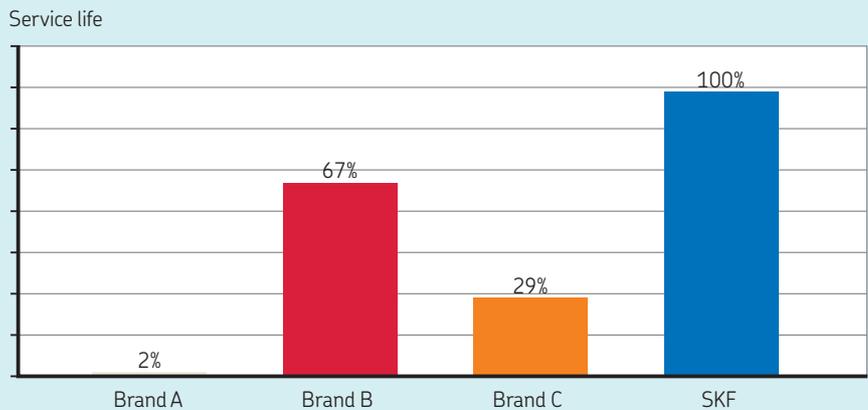
Service life under contaminated conditions*



* All figures and graphs are rounded off and based on SKF comparative endurance tests under impact of contamination.

Diagram 4

Service life under misalignment conditions*



* All figures and graphs are rounded off and based on SKF comparative endurance tests under movement loads.

Inch assortment

There are now hundreds of options within the SKF Explorer tapered roller bearing assortment

- Approx. 300 inch final variants
- Approx. 150 inch series
- Additional options can be offered on request
- On-going assortment extensions

A range that receives continuous advancements

SKF continues to improve the tapered roller bearings

AT SKF, a key part of our job is improving our product and moving bearing performance levels forward. We focus on what to do next, spending our energies on pushing boundaries, trying new things and moving forward towards finding a better answer.

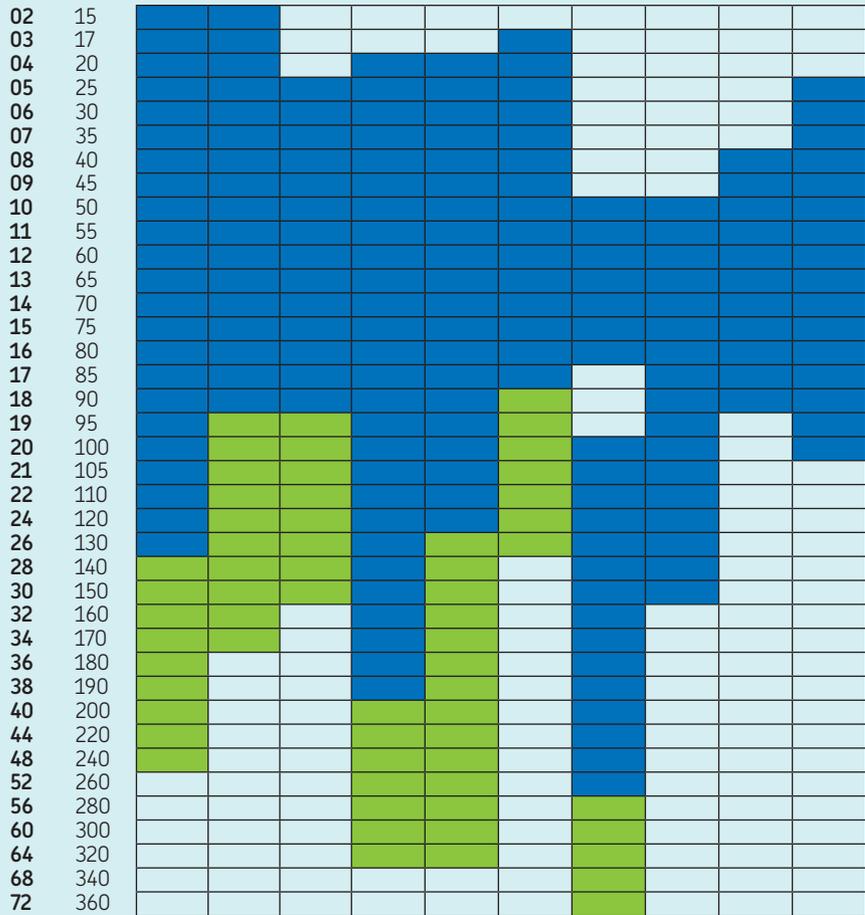
For example, SKF has now increased the dynamic load rating for SKF tapered roller bearings by 7%. This increase is based on independent test results and field experience.

We are also pushing for continuous improvements in manufacturing, which have made it possible to qualify a majority of the tapered roller bearings catalogue assortment to the SKF Explorer design. So you can always depend on the quality of the product.

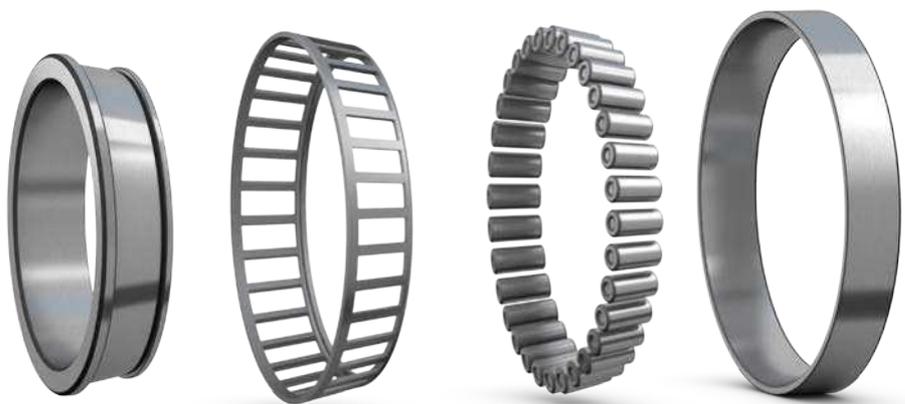
What's more, we've even made bearing selection easier. So you can make the right choice and always select the appropriate bearing for the best performance in any particular field.

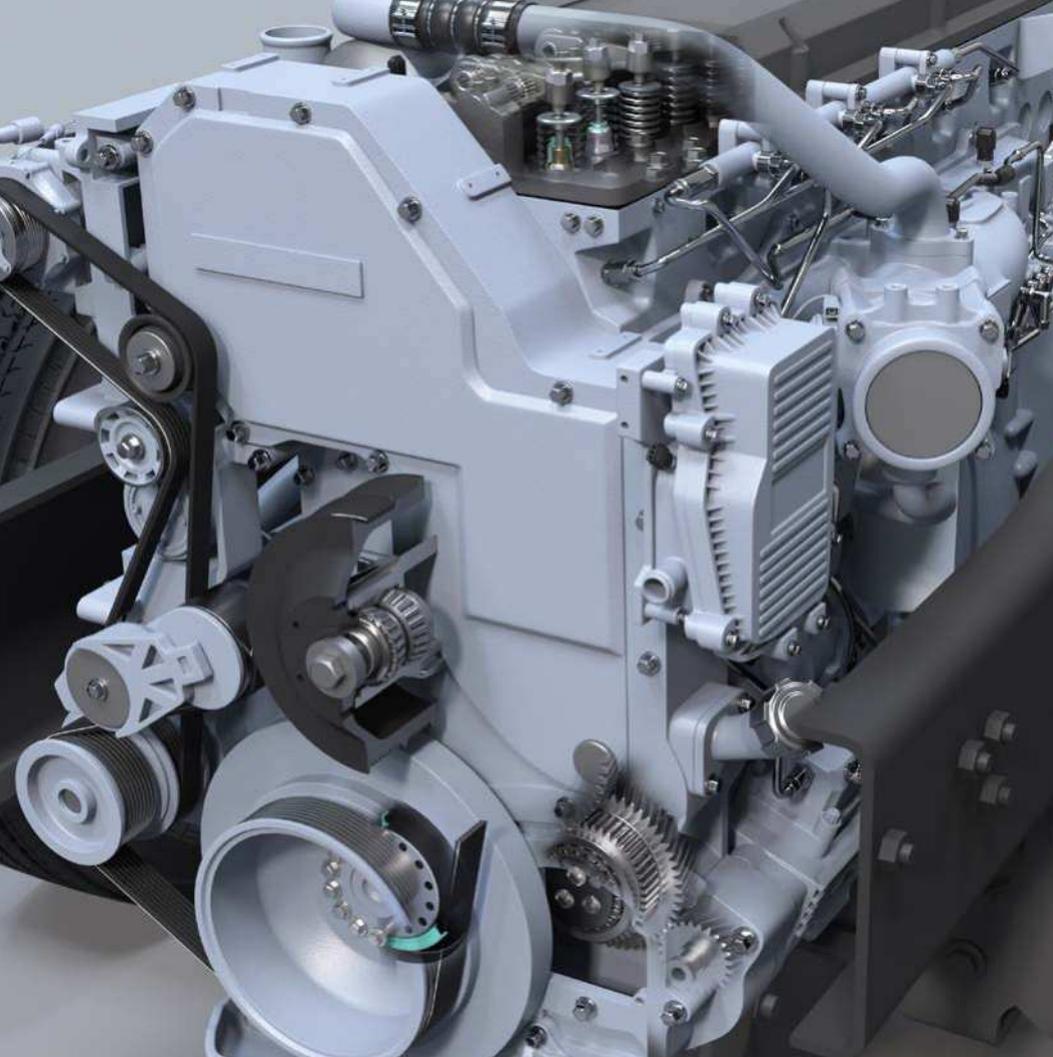
Metric assortment

Series	bore	302	303	313	320	322	323	329	330	331	332
size	group										
		code									
		mm									



Blue: SKF Explorer Green: Basic design





UP TO
23%
INCREASED
DYNAMIC LOAD
RATINGS



SKF Explorer tapered roller bearings – get more uptime all the time

- Robustness
- Wear resistance
- Reliable in operation
- Long service intervals
- Contamination resistance
- Additional options include case hardened bearings and coatings



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