

# The right choice for your high performance solution

SKF Explorer deep groove ball bearings



# Better performing, longer lasting, smoother running

Failure of critical process machinery is expensive. It can result in thousands of dollars per hour in lost production.

Downtime doesn't just hurt the companies that depend on these machines, it also impacts the companies that manufacture them. OEMs selling failure-prone machines risk damaging their reputations and losing business to their competitors.

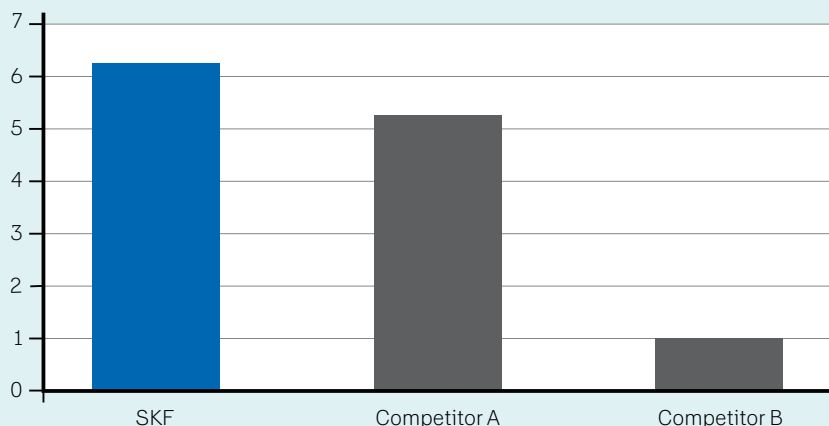
Yet this can be avoided. By using a more robust bearing, you can improve service life and have longer trouble-free machine

operation with lower operating costs. Life test results shown below confirm the superior behaviour of SKF Explorer deep groove ball bearings in comparison to two competitors' solutions.

The SKF Explorer deep groove ball bearing checks all the boxes. This is the range that delivers the performance levels that reduce downtime. The range that's been manufactured to world-class specifications. The range that's capable and versatile enough to answer "yes", no matter how much you ask of it.

**Life test results for SKF Explorer deep groove ball bearings compared with two competitors' products**

Relative life



Test conditions: Speed: 6 000 r/min | Radial load: 18 kN | Bearing type: 6309

# More reliable and more versatile

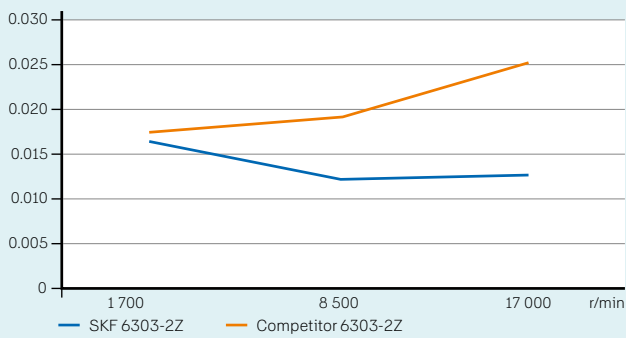
When it comes to performance, SKF Explorer deep groove ball bearings lead the way. They run more smoothly, more quietly, at cooler temperatures, and for longer than typical deep groove ball bearings.

SKF-specified steel has a higher resistance to fatigue. And with the capacity to handle greater loads, SKF offers you a high performing solution that is available as a catalogue offering and versatile enough to be used in many different applications.



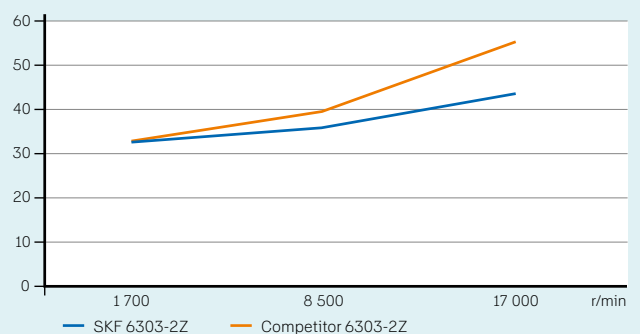
## Lower friction than competitor bearings

Friction torque average [Nm]



## Lower running temperature than competitor bearings

Running temperature average [°C]



# Performance fine-tuned for your application

Beyond our catalogue offering, SKF Explorer deep groove ball bearings are a great choice when there is a specific type of performance that you need in your application.

Take into account all of our different seals, greases and other features and you will find that there are numerous possible variants of our product. This brings you as close as possible to the exact performance mix that you need in your application, whatever it may be.



## Robust seals for longer service life

Seals are a major contributor to the durability of the bearing, especially in high contaminated environments. They help to retain the grease inside the bearing and keep out contaminants. That is why SKF offers a wide range of capping options to choose from for your application and operating conditions.

## Improved precision and performance

SKF Explorer deep groove ball bearings are produced to ISO tolerance class 6 – which is higher precision than ISO “Normal” tolerances. Furthermore, higher bearing precision contributes to a consistent outcome when mounting the bearing in the application, achieves a lower run-out, and minimizes vibration and heat generation.

## Tried, tested, and trusted around the world

SKF Explorer deep groove ball bearings are our most widely used bearing type in industry today. Compatible with a wide range of machinery, they are available in many variants and sizes.

Each is made with high quality steel for robustness and offers premium performance in demanding applications – for example, where there are higher loads, high rotation speeds, or contaminated environments.



Table 1

### Selection guidelines for SKF capping options

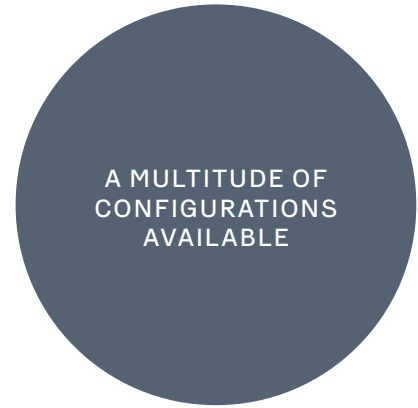
Requirement	Shields	Non-contact seals	Low-friction seals	Contact seals		
	Z	RZ	RSL	RSH	RS1	RSF
Low friction	+++	+++	++	O	O	–
High speed	+++	+++	++	O	O	O
Grease retention	O	+	++	+++	++	+++
Dust exclusion	O	O	+	++	++	+++
Water exclusion						
static	–	–	O	+++	++	+++
dynamic	–	–	O	++	+	+++
high pressure	–	–	O	+++	O	+++

#### Symbols:

+++ = best    ++ = very good    + = good    O = fair    – = not recommended

# Configuration options

Here are some of the features that can be selected to help you get the very best out of your bearing in application:



## More options for enhanced seal efficiency

The right sealing protection means you can extend bearing life with better performance in areas like friction, speed, grease retention, dust exclusion and water exclusion. The SKF Explorer deep groove ball bearing offers a wide range of sealing options (see Table 1, page 4). These can help you achieve the specific performance you need in your application.



## Heat stabilization




If the normal operating temperatures of the application is higher than 120 °C, consider a bearing with a higher stabilization class to deliver an even longer service life, and to allow for the appropriate selection of cage, lubrication, and sealing.

## The right cage for your application

If you are looking for exceptional performance in applications running at high speeds, or with high acceleration or high ambient temperatures, choosing the right cage can make all the difference. SKF Explorer deep groove ball bearings offer several cage alternatives that can help meet your specific requirements.

**Table 2**

**SKF Explorer deep groove ball bearing cage designs and materials**

Application examples	Cage type	Description	Benefits
All standard applications: electric motor, fans, conveyors, gearboxes, etc.	Steel cage	 Pressed steel cage, standard cage, no suffix	Cost-effective, low noise
Industrial electrical generators, screw compressors	Brass cage	 Machined brass cage, M suffix	High speed, high temperature
Vehicle electric systems, pumps	Polymer cage	 Polymer cage, TN9, TN9W, TN6 suffix	High speed, good behaviour under vibration, limited risk of bearing seizure

## Optimized lubricant options

The lubrication requirements of an SKF Explorer deep groove ball bearing can vary depending on the application and its operating conditions. The catalogue offer is available with a multi-purpose grease suitable for a wide range of conditions. This lubricant is just one option in a wide range of bearing greases available to meet different performance needs, including application-specific greases such as food grade grease and alternative lubricants.

Table 3

### Grease performance for SKF Explorer deep groove ball bearings

Grease	Description	Application examples	Special conditions	GPF
MT33	General purpose industrial and automotive	Any standard application: electric motor, pump, fans, conveyors, gearboxes, etc.	Vertical shaft, outer ring rotation, vibrating conditions	1
MT47	General purpose industrial and automotive		Low noise	1
LHT23	Wide temperature, low noise	Low noise electric motors and fans	Vibrating conditions	2
LT	Low temperature, extremely high speed	Textile spinning mills		1
WT	Wide temperature, high performance	High temperature electric motors	Oscillating movement, outer ring rotation	4
GJN	General purpose polyurea grease	Washing machine, conveyor, electric motor		2
HT	Wide temperature polyurea grease	High temperature fans		2
GE2	Wide temperature, high performance, low friction	Low friction electric motors and pumps	Low noise, vibrating conditions	2
GFQ	Food compatible	Food processing equipment		1

GPF = Grease performance factor. For more information, refer to the Rolling bearings catalogue.

# Supporting your sustainability goals

Your choice of components impacts sustainability. Thanks to long bearing life, low friction, and low grease consumption, SKF Explorer deep groove ball bearings can contribute to reduced material and energy use, less waste, and lower emissions. We produce these bearings in many regions which helps to reduce transportation needs and shorten lead times.

SKF Explorer deep groove ball bearings factories are compliant with:

- ISO 14001 “Waste management and resources use”
- ISO 50001 “Continuously improving energy performance”
- ISO 45001 “Occupational health and safety management systems”

At SKF, we aim to decarbonize all our operations by 2030 and reach net-zero greenhouse gas emissions by 2050.

Read more on



[skf.com/sustainability](https://skf.com/sustainability)



# Upgrade to the ultimate all-rounder

For practically every application, the SKF Explorer deep groove ball bearing is the simple off-the-shelf solution that can deliver quieter, cooler performance with lower friction and longer service life. The SKF Explorer deep groove ball bearing is typically included in our

distributors' bearing assortments, making it readily available worldwide.

- Easily interchangeable with original bearings
- Ready stock availability

## Find a solution that's up to your challenge

Whatever your specific performance requirements, the SKF Explorer deep groove ball bearing is ready to meet the challenge. More robust than typical deep groove ball bearings, it is highly versatile, with many different possible combinations of components. This

allows you to find the optimum configuration to deliver the kind of high performance you need – whether that's exceptional durability, for example, or lower friction.



## Close to you

Knowledge, product excellence, and availability are key to overcoming the industrial challenges of rotating equipment – from design to operation.

With SKF's advanced technology, world-class manufacturing locations, services, as well as our certified SKF distributors all working hand in hand, you have access to the SKF network and expertise in nearly every corner of the world. Wherever you are, and whenever you need it, you can be certain SKF is nearby to serve and support you.

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**PUB BU/P2 17453/1 EN** · November 2023

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