

## Why SKF?

# Self-aligning ball bearings



SKF self-aligning ball bearings have been solving problems with misalignment and shaft deflections for more than 100 years. This product has been redesigned continuously to the current optimized internal design featuring two rows of balls with a common sphered raceway in the outer ring.

SKF self-aligning ball bearings generate less frictional heat and can accommodate higher speeds than other self-aligning rolling bearings and other types of ball bearings, depending on size and type. SKF self-aligning ball bearings, which have a very low operating friction, can accommodate up to 3 degrees of misalignment without affecting bearing performance. Basic types include open and sealed designs: customized variants are available to meet the needs of a particular application.

SKF offers a wide assortment of sealed self-aligning ball bearings that are pre-greased at the factory under clean conditions. Depending on application requirements, stamped steel, polyamide or machined brass cages are available.

### Product features

- Extremely low friction
- Highly effective seals keep grease in and contaminants out of the bearing during installation and operation
- Excellent high-speed performance
- The “E” range have their internal design optimized to increase load carrying capacity up to 30%

### User benefits

- Longer service life
- Lower operating temperatures extend grease life and enable higher speed
- Increased energy efficiency
- Lower maintenance and operating costs
- Increased uptime and productivity
- Reduced vibration and noise

### Common applications

- Textile yarn spindles
- Fans and blowers
- Agricultural attachments
- Conveyors: take-up pulleys
- Food industry separators
- Pulp and paper processing equipment



## Optimized internal design

SKF self-aligning ball bearings which carry the designation suffix "E" are optimized to incorporate more and larger balls. The result is a load carrying capacity which is up to 30% more than the previous standard execution. This enables a longer service life, allows a higher load or the possibility to downsize the bearing.

## Widest range in sealed design

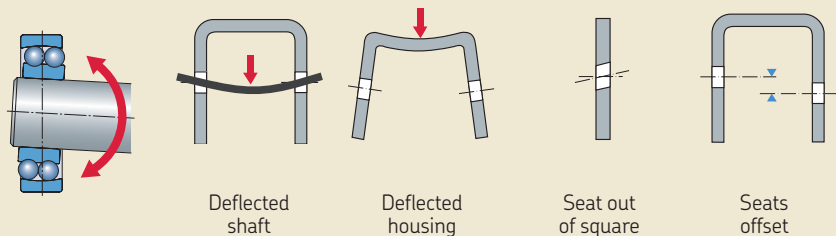
SKF offers the widest range of sealed self-aligning ball bearings in series 22 and 23.



## Superior performance and selections

By design, ball bearings generate less friction and less frictional heat than a similarly sized roller bearing. Of the four bearing types listed in **table 1**, self-aligning ball bearings run cooler and at higher speeds.

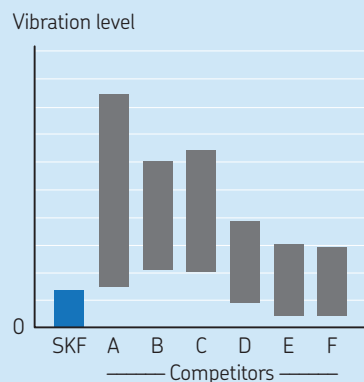
### Typical misalignment situations



Self-aligning ball bearings accommodate up to 3 degrees of misalignment without increasing friction and frictional heat

Diagram 1

### Comparison of vibration levels generated by SKF self-aligning ball bearings vs competitor bearings



## Lowest vibration levels

Vibration tests performed in SKF laboratories show that SKF self-aligning ball bearings have significantly lower vibration levels than other bearings in the market (→ **diagram 1**). Less vibration also reduces noise levels.

Table 1

### Comparison with other bearing types

Characteristics	Self-aligning ball bearings	Spherical roller bearings	Y-bearings	Deep groove ball bearings
High-speed performance	+++	+	+	+++
Low friction performance	+++	+	++	++
Long relubrication intervals	+++	+	++	+++
Self-aligning performance	+++	++	+ <sup>1)</sup>	–
Accommodate high combined loads	–	+++	+	+

<sup>1)</sup> Initial misalignment

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PUB BU/P8 06549/1 EN · February 2014

