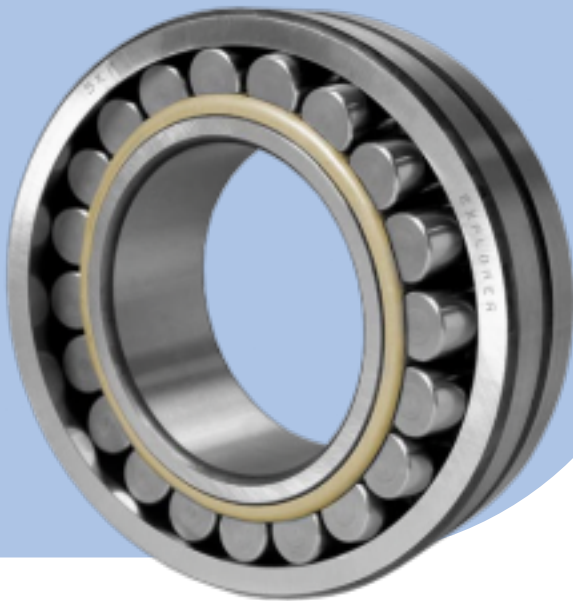


## Why SKF?

# SKF Explorer spherical roller bearings for vibratory applications



By design, SKF spherical roller bearings can accommodate very heavy radial and heavy axial loads in applications prone to misalignment or shaft deflection. In addition, the SKF spherical roller bearings for vibratory applications are designed to accommodate very high vibration levels.

SKF Explorer spherical roller bearings provide a significant improvement in key operational parameters. These bearings are so advanced that they can last several times longer than their rivals under typical heavy-duty conditions.

### SKF Explorer performance class upgrade

All SKF Explorer spherical roller bearings have been upgraded. Combining the clean and homogenous high-quality steel used in the original SKF Explorer bearings with an improved heat treatment process, upgraded SKF Explorer spherical roller bearings provide longer service life, particularly under difficult operating conditions where bearings are subjected to contamination or poor lubrication.

### Product features

- Designed for high vibration levels
- Made of super-clean and tough up-graded steel
- Higher load-carrying capacity
- Lower operating temperatures
- Longer lubricant life

### Common applications

- Vibrating screens
- Compactors
- Road rollers
- Vibratory hammers
- Vibrating bowls
- Block vibropresses
- Baggers
- Wood chippers

### User benefits

- Increased uptime and productivity
- Improved reliability
- Lower maintenance and operating costs
- Increased bearing service life
- Increased wear and contamination resistance
- Excellent high speed performance

## Off-the-chart endurance

Under both clean and contaminated conditions, SKF Explorer spherical roller bearings can last several times longer than other spherical roller bearings on the market.

### Test conditions

Original test results of SKF Explorer performance class spherical roller bearings compared to competitors', prior to the upgrade.  
 Bearing basic designation: 22220  
 Sample: 35 bearings per brand  
 Load: 140 kN  
 C/P: 3,0  
 k: 1,76  
 Speed: 1 500 r/min

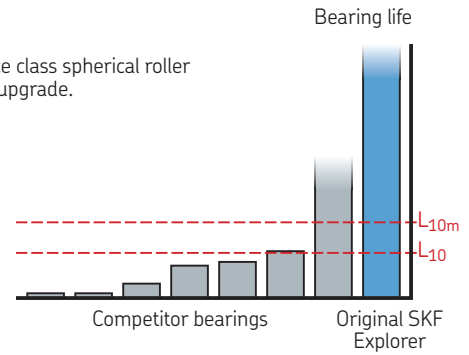
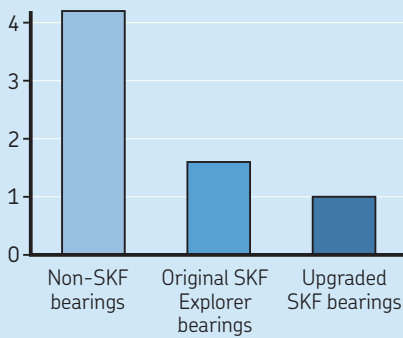


Diagram 1

### Relative wear for different bearing steels: Medium and large size bearings

Relative weight loss



### Test conditions

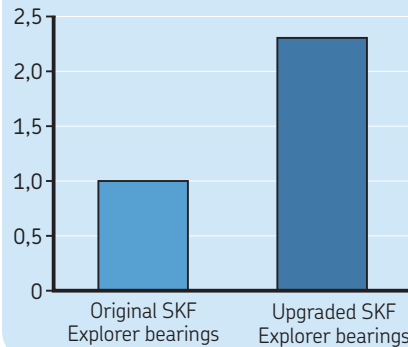
Lubricant: Turbo T 68 mineral oil containing 3g/l of cast iron powder  
 $\kappa$ : 1,2  
 C/P: 3,4

Speed: 525 r/min  
 Running time: 72 hours  
 All components were weighed before and after the test

Diagram 2

### Service life under poor lubrication conditions

Relative service life



### Test conditions

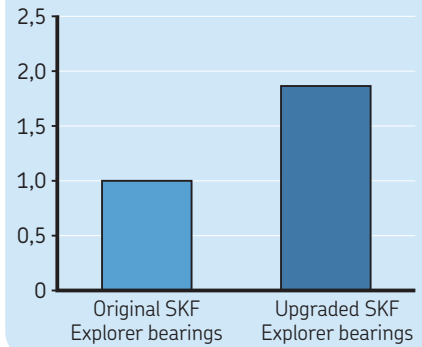
Bearings: 22220 E  
 Load: 140 kN  
 Speed: 1 500 r/min

Lubricant: Turbo T 9 mineral oil  
 $\kappa$ : 0,45  
 Operating temperature = 75 °C

Diagram 3

### Service life under contaminated conditions

Relative service life



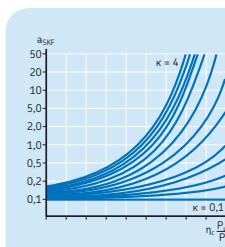
### Test conditions

Bearings: 22220 E  
 The bearings were run-in under contaminated conditions.  
 $\eta_c = 0,2$

Operating conditions after cleaning  
 Load: 140 kN  
 C/P: 3,0  
 Speed: 1 500 r/min  
 Lubricant: Turbo T 68 mineral oil  
 $\kappa$ : 2,1

## Better raceways

SKF Explorer spherical roller bearings for vibratory applications feature an improved raceway surface finish that maximizes lubricant effectiveness for a smoother, cooler-running bearing that lasts longer.



Cooler running means higher lubricant viscosity. This in turn improves the viscosity ratio ( $\kappa$ ), resulting in extended bearing service life (reflected by  $a_{SKF}$ ).



## A complete assortment for vibrating applications

SKF offers a large assortment of SKF Explorer spherical roller bearings for vibratory applications to meet the demanding requirements of heavy-duty equipment.

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