# Why SKF?

# SKF Explorer spherical roller bearings for vibratory applications




## Common applications

- Vibrating screens
- Compactors
- Road rollers

## User benefits

- Lower operating temperatures
- Increased bearing service life
- Improved wear and contamination resistance
- Excellent high speed performance
- Reduced risk of fretting corrosion and induced axial preload (VA406)

By design, SKF spherical roller bearings can accommodate very heavy radial and heavy axial loads in applications prone to misalignment or shaft deflections. In addition, 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 robust that they can last several times longer than other spherical roller bearings under typical heavy-duty conditions.

## Upgraded self-aligning SKF Explorer bearings

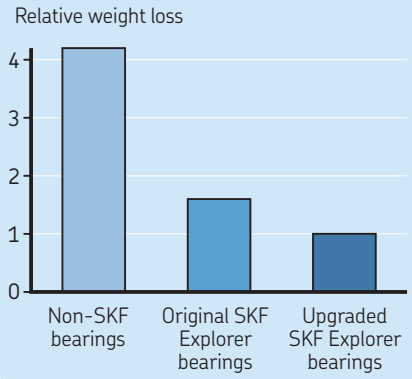
All SKF Explorer spherical roller bearings have been upgraded to a new level of performance, featuring a combination of high-quality steel and an improved heat treatment. Upgraded SKF Explorer spherical roller bearings provide longer service life, particularly in applications where there are high levels of contamination or poor lubrication conditions.

## Product features

- Designed for high vibration levels
- Made of super-clean and tough upgraded steel
- Reduced dimensional tolerances
- Special cage design
- C4 Clearance as standard
- Available with a PTFE coated bore (designation suffix VA406)

**Diagram 1**

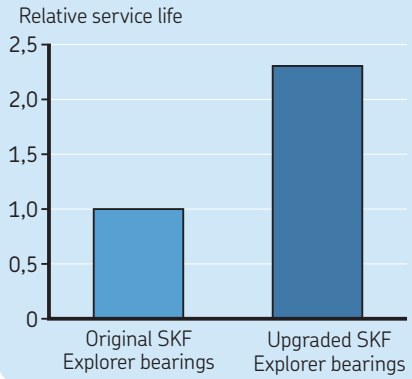
**Relative wear for different bearing steel**




**Test conditions**
Lubricant: Turbo T 68 mineral oil containing 3 g/l of cast iron powder
$\kappa = 1,2$
C/P = 3,4
Speed: 525 r/min
Running time: 72 h
All components were weighed before and after the test

**Diagram 2**

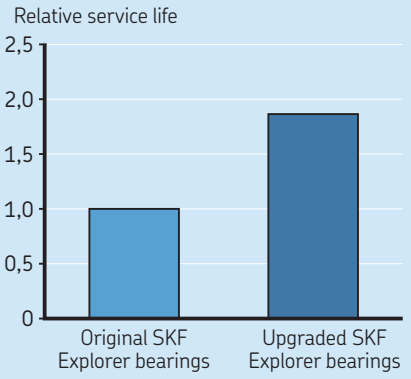
**Service life under poor lubrication conditions**



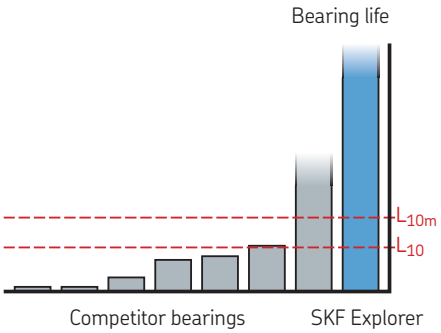

**Test conditions**
Bearings: 22220 E
Load: 140 kN
Speed: 1 500 r/min
Lubricant: Turbo T 9 mineral oil
$\kappa = 0,45$
Temperature: 75 °C

**Diagram 3**

**Service life under contaminated conditions**




**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
$\kappa = 2,1$




**Test conditions**
Test results of SKF Explorer performance class spherical roller bearings compared to competitor bearings.
Bearing basic designation: 22220
Sample: 35 bearings per brand
Load: 140 kN
C/P = 3,0
$\kappa = 1,76$
Speed: 1 500 r/min

## Upgraded SKF Explorer spherical roller bearings

Upgraded SKF Explorer spherical roller bearings are identified on the packaging, and the bearing outer rings are marked “WR”.





## A complete assortment for vibratory applications

SKF offers spherical roller bearings for vibratory applications in the 223-series, identified with suffix VA405, or VA406 (PTFE coated cylindrical bore).

**Table 1**

**SKF Explorer spherical roller bearings for vibratory applications**

| d | Bearing | VA405 | VA406 |
|---|---|---|---|
| mm | – | – | – |
| 40 | 22308 | • | |
| 45 | 22309 | • | |
| 50 | 22310 | • | |
| 55 | 22311 | • | |
| 60 | 22312 | • | |
| 65 | 22313 | • | |
| 70 | 22314 | • | |
| 75 | 22315 | • | • |
| 80 | 22316 | • | • |
| 85 | 22317 | • | • |
| 90 | 22318 | • | • |
| 95 | 22319 | • | • |
| 100 | 22320 | • | • |
| 110 | 22322 | • | • |
| 120 | 22324 | • | • |
| 130 | 22326 | • | • |
| 140 | 22328 | • | • |
| 150 | 22330 | • | • |
| 160 | 22332 | • | • |
| 170 | 22334 | • | • |
| 180 | 22336 | • | • |
| 190 | 22338 | • | • |
| 200 | 22340 | • | • |
| 220 | 22344 | • | |

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