

SKF Explorer spherical roller bearings

Features

- Made of clean and tough upgraded steel
- Self-guiding rollers
- Accommodates heavy loads and misalignment

Benefits

- Lower operating temperature and longer lubricant life
- Reduced noise and vibration levels
- Improved bearing service life
- Increased wear and contamination resistance
- Excellent high speed performance

Typical applications

- Gearboxes
- Wind turbines
- Pumps
- Fans and blowers
- Mining and construction equipment
- Pulp and paper processing equipment
- Marine and offshore machinery
- Metal industry equipment
- Railway axle boxes

By design, SKF spherical roller bearings can accommodate very heavy radial and heavy axial loads in applications prone to misalignment or shaft deflections. Spherical roller bearings were introduced by SKF in 1919, and have been continuously improved to increase reliability and decrease friction.

All spherical roller bearings are now available as upgraded SKF Explorer bearings, including open bearings, sealed bearings and bearings for vibratory applications.

The SKF Explorer spherical roller bearings have proven to be so robust that they can last several times longer than other spherical roller bearings.

Upgraded SKF Explorer spherical roller 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.





Upgraded SKF Explorer self-aligning roller bearings

Upgraded self-aligning roller bearings are identified on the packaging, and the bearing outer rings are marked "WR".

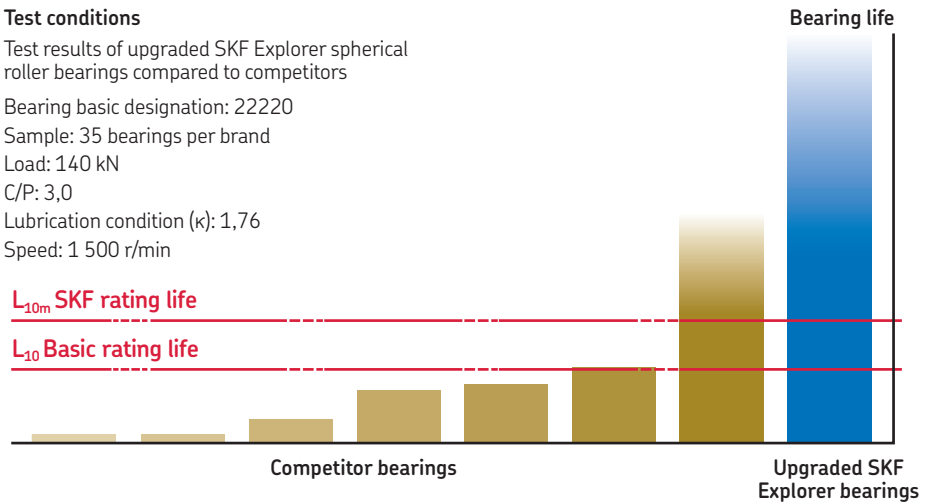
Test conditions

Test results of upgraded SKF Explorer spherical roller bearings compared to competitors

Bearing basic designation: 22220
 Sample: 35 bearings per brand
 Load: 140 kN
 C/P: 3,0
 Lubrication condition (κ): 1,76
 Speed: 1 500 r/min

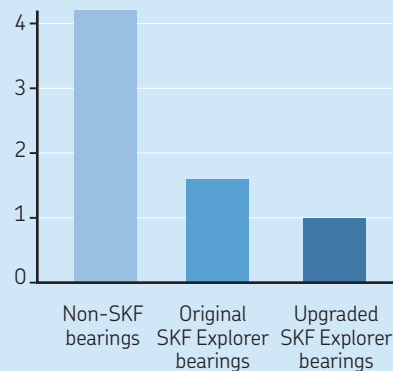
L_{10m} SKF rating life

L_{10} Basic rating life



Relative wear for different bearing steel

Relative weight loss



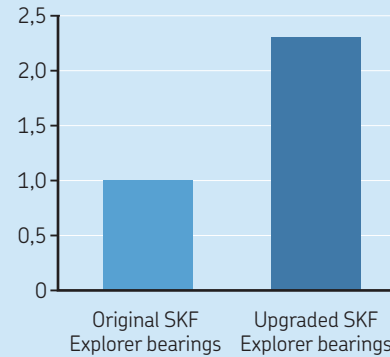
Test conditions

Bearings: 22220 E
 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

Service life under poor lubrication conditions

Relative weight loss



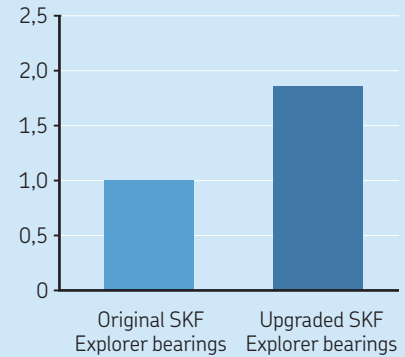
Test conditions

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

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

Service life under contaminated conditions

Relative weight loss



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
 $\kappa = 2,1$

For more information about upgraded SKF Explorer spherical roller bearings, go to skf.com/upgrade.

skf.com | skf.com/srb

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