

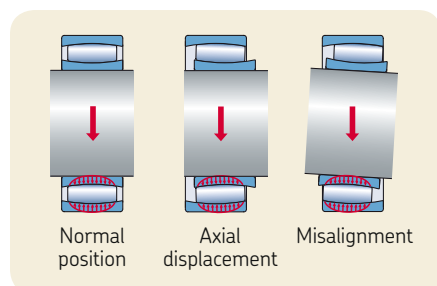
Why SKF?

CARB toroidal roller bearings

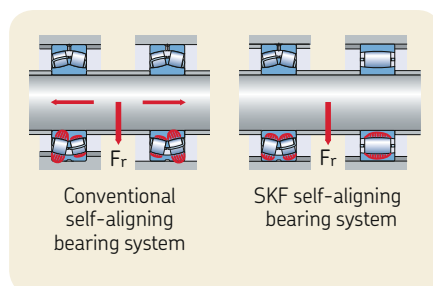


The CARB toroidal roller bearing is a revolutionary bearing type that is self-aligning like a spherical roller bearing, and axially free like a cylindrical roller or needle roller bearing. SKF developed the CARB bearing specially for the non-locating position in a self-aligning bearing system.

A CARB bearing accommodates misalignment and axial displacement within the bearing, without inducing internal axial loads and virtually without friction. This eliminates the need to compromise between tight fit and axial freedom, permitting tight fits to be used to eliminate “creep” and fretting corrosion, common with conventional bearing arrangements. The results are lower operating temperatures and reduced vibration levels, and improvements in reliability, bearing and lubricant life, and energy consumption.



- Unique internal geometry provides an optimal load distribution between the rollers and raceways, irrespective of misalignment, to provide the best possible operating conditions
- Normal axial displacement is approximately $\pm 10\%$ of the bearing width



- Enables shaft deflection/misalignment up to $0,5^\circ$
- No reduction of life or increase of friction due to misalignment
- Compact design

Product features

- Angular and axial self-alignment
- Very high radial load capacity
- May well replace a spherical roller bearing on the non-locating side without major modifications
- The same mounting methods as for spherical roller bearings
- Available in needle roller bearing dimensions

Bearing system benefits

- Predictable vibration levels
- Predictable performance

User benefits

- Improved machine reliability
- Extended relubrication intervals
- Significantly longer bearing life
- Significantly longer lubricant life
- Down-sizing possibilities
- Reduced energy consumption
- Maintains constant torque in idler rolls. Example: plastic film production
- Environmentally friendly

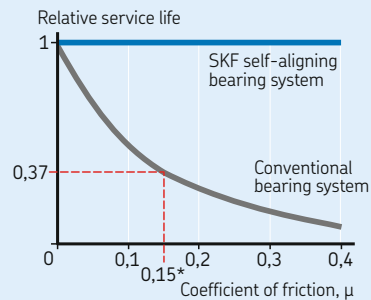
Common applications

- Paper machines
- Continuous casters
- Fans and blowers
- Crushers
- Grinding mills
- Industrial transmissions
- Conveyors
- Textile machinery
- Oscillating equipment
- Hydraulic motors and pumps
- Automotive applications
- Pinion shafts
- Wind mills, main shaft



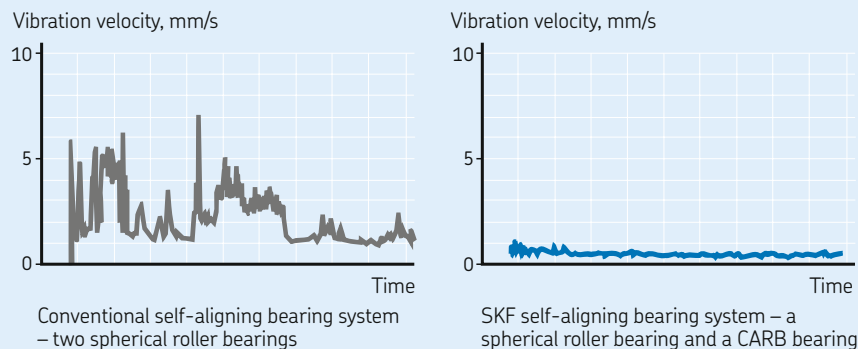
Boosts bearing system life

Life comparison of an SKF versus conventional self-aligning bearing system (one specific case)



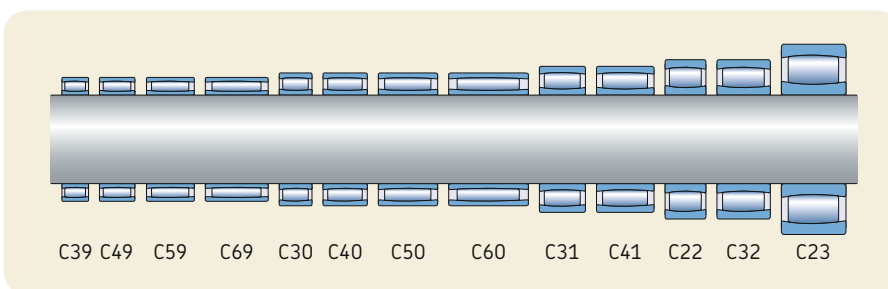
* Bearing ring sliding in cast iron housing

Fan vibrations were radically reduced after the SKF self-aligning bearing system was installed

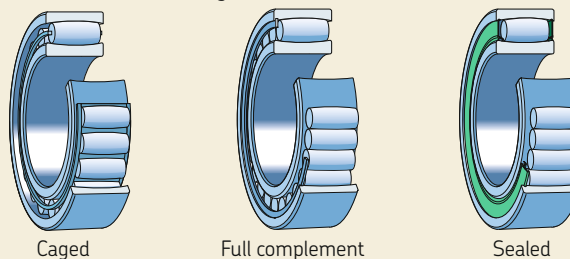


CARB bearing assortment

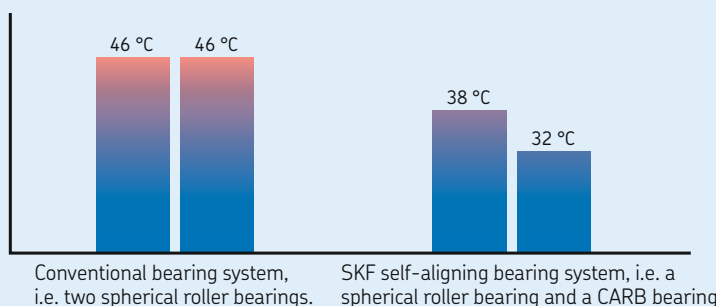
The SKF standard assortment of CARB bearings comprises bearings in 13 ISO dimension series ranging in bore diameter from 25 up to 1 800 mm. Generally, when an existing arrangement is upgraded, or a new bearing arrangement is to be designed, there is an appropriate CARB bearing available to replace a non-locating self-aligning ball bearing, a spherical, cylindrical or even a needle roller bearing.



Variants of CARB toroidal roller bearings



Lower operating temperatures nearly double the relubrication interval for the SKF self-aligning bearing system



An SKF Documented Solution specialist can show you the approximate return on investment (ROI) you can expect to receive by using this product in your application. Ask your SKF Authorized Distributor or SKF representative for more details.

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