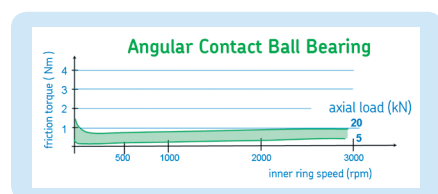


Angular contact ball bearings for driveline applications

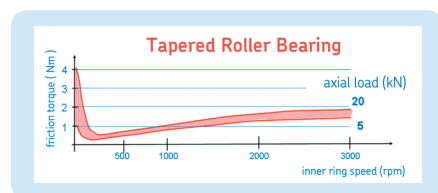
Driveline bearings designed to reduce power loss and lower fuel consumption

How it works

Automotive gearboxes and axle drives often employ tapered roller bearings, particularly in areas such as pinion and differential support. Efforts to improve system efficiency throughout the vehicle and to minimize operating temperature have driven a basic development within SKF's engineering team, searching for an appropriate replacement



Friction torque of driveline angular contact ball bearing at typical operating conditions.



Friction torque of tapered roller bearings at typical operating conditions.

of preloaded tapered roller bearing arrangements in order to reduce power losses. The study suggests a potential replacement of traditionally used tapered roller bearings by customized angular contact ball bearings. This offers a significant reduction in power loss and consequently lower fuel consumption together with a lower operating temperature.

Available applications

- Automotive driveline

Features of the product

- High carrying capacity
- Optimized surface topography
- Application oriented internal geometry
- Innovative cage design
- Outer ring separable from inner ring ballset

Benefits of the product

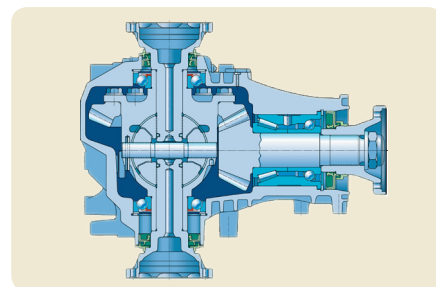
- Contribution to lower fuel consumption
- Enhancement of lubricant service life
- Reduction of operating temperature
- Increase of speed rating
- Reduction of weight
- No impact on current assembly processes
- High stiffness

Competitive advantages

- Reduction of gearbox noise vibration harshness (NVH) behaviour
- No run-in wear
- Lower operating temperatures



Driveline angular contact ball bearing



Example: Driveline angular contact ball bearings in a car differential

- Reduction of lubricant's quantity
- Longer system service life
- No setting losses of initial preload

SKF is the leading bearing supplier for automotive gearboxes. Through our long and in depth cooperation with gearbox producers all around the world we have acquired unique know-how. Supported by our own bearing lifetime calculation software, we are the ideal partner for developing optimized solutions for gearbox design and production.

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