Tapered Roller Bearings T7FC

Higher cost-effectiveness and operational reliability with X-life
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Single row tapered roller bearings T7FC are capable of supporting high radial loads as well as axial loads in one direction due to their large contact angle. They can support axial forces and moments from both directions in O or X arrangement. Bearings of this type are used, for example, in hydraulic pumps or transmissions (pinion bearing supports).

In order to fulfill the requirements of X-life, the geometry, surfaces, dimensional and running accuracy as well as the material and heat treatment process were optimized for the T7FC series. This resulted in an increase of up to 20 % in the basic dynamic load rating (C) compared with previous designs. Under the same operating conditions, the basic rating life (L₁₀) is increased by around 70 %.

A further convincing advantage of X-life is product characteristics that fulfill your specific requirements and offer additional benefits: for example, particularly low-noise or high load capacity system solutions. Furthermore, X-life optimizes all the parameters that are decisive for a problem-free production cycle. This includes correct mounting and dismantling, maintenance intervals matched to the specific application and the selection of lubricants matched to operating conditions.

- Higher performance bearing supports
- More economical bearing supports due to downsizing
- Lower operating costs due to reduced energy consumption
- Extremely high reliability

Extended maintenance intervals because of improved lubrication

An increase in the service life of approximately 70 % under the same operating conditions

Less strain is placed on the lubricant due to reduced heat generation

An increase in the basic dynamic load ratings of up to 20 %

Less noise

FAG Tapered Roller Bearings T7FC
4 points for improved performance

1. Through hardened premium material

The specially heat treated premium material increases the resistivity of the surfaces of the inner and outer rings against solid particles. This considerably increases the life of the tapered roller bearings. The bearing supports can also be (supplied in smaller designs) downsized for particular applications (downsizing).

2. Higher dimensional and running accuracy

Significantly reduced dimensional and running tolerances (in accordance with DIN 620 - tolerance class PN) ensure optimal load distribution. Stress peaks are avoided, which reduces material loading.

3. Optimized surfaces

An elasto-hydrodynamic lubricant film is formed even at very low speeds due to the low surface roughness of the rings and the rollers. The bearings can be placed under very high loads directly after initial operation.

Along with the increased dimensional and running accuracy, the improved surface topography significantly reduces the development of friction and heat.

4. Improved geometry

A logarithmic profile was developed for the raceways and the outside surface of the rollers, which compensates stress peaks under high loads and any possible skewing. In addition, the improved contact geometry of the inner ring ribs and the roller end faces reduces friction and prevents heat generation.

You will find all important information about FAG tapered roller bearings T7FC in X-life quality in Technical Product Information TPI 143 D-E.