X-life – Premium Quality
**What Does X-life Stand For?**

X-life is the seal of quality for ultra-high performance products from the INA and FAG brands. They are characterized by higher dynamic load ratings compared to conventional products, resulting in a longer rating life and operating life.

<table>
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<th>X times longer service life</th>
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<td>If the load and design envelope are unchanged, X-life bearings have a longer rating and operating life. In this case, longer intervals are possible between maintenance operations.</td>
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<th>X times greater load-carrying capacity</th>
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<td>Conversely, an X-life bearing with the same design envelope and the same rating life can support higher loads.</td>
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<th>X times more efficient use of space</th>
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<td>Where both the rating life and the load are unchanged, the use of X-life bearings results in greater power density, optimization of the design envelope, and a reduction in weight.</td>
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Standard Bearings with Top Performance Values...

...but what characterizes X-life quality?

The positioning of the X-life bearings in the overall product portfolio is of decisive importance. X-life is not an additional premium series but the standard in each case; from Schaeffler’s perspective, “standard” means that the respective bearing series with their performance and rating life values are positioned at the top of the premium segment compared to the competition.

The premium quality of X-life is generally based on four essential technical improvements:

1. Improved surface quality
2. Functionally optimized internal construction
3. Higher precision and restricted tolerances
4. Superior materials and improved heat treatment and coating methods
Development of Basic Load Rating

If the load rating of a spherical roller bearing from back in 1932 is assumed to be 100 %, the value achieved by a Schaeffler spherical roller bearing manufactured in 2012 is 80 % higher. The load rating of tapered roller bearings has tripled since 1931, and that of needle roller bearings has more than doubled since 1950.
10 Years of X-life

The X-life variants are consistently and permanently replacing the catalog products.

INA offers a wide range of needle roller bearings and radial insert ball bearings, housing units, full complement cylindrical roller bearings, axial angular contact ball bearings for screw drives, yoke and stud type track rollers, and multi row linear recirculating ball and roller bearing and guideway assemblies in X-life quality. In 2015 the track rollers LR52 and LR53 were added to the X-life portfolio.

Cylindrical, tapered, and spherical roller bearings, axial spherical roller bearings, single and double row angular contact ball bearings, four-point contact ball bearings, high precision cylindrical roller bearings, and TORB toroidal roller bearings are available under the FAG brand name. Recent additions to the range include spherical and cylindrical roller bearings with outside diameters of up to 1,600 mm.

### X-life market launches since 2003

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<td>FAG SRB</td>
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<td>INS radial insert ball bearings</td>
<td>FAG CRB &gt; 320 mm OD</td>
<td>FAG CRB</td>
<td>INA axial ACBB for screw drives (ZKLN &amp; ZKLF)</td>
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<td>INA CRB</td>
<td>&gt; 320 mm OD</td>
<td>FAG CRB with opt. rib contact</td>
<td>INA radial insert ball bearings</td>
<td>FAG TRB</td>
<td>FAG high precision CRB (N10, NN30)</td>
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<td>INA KUVE</td>
<td>FAG axial SRB</td>
<td>INA needle roller bearings (including PWKR and PWTR)</td>
<td>INA needle roller bearings w/ TWin cage</td>
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<td>INA ball type track rollers LR52, LR53</td>
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<td>INA RUE</td>
<td>FAG TRB T7FC</td>
<td>FAG single row ACBB</td>
<td>INA needle roller bearings -D-XL</td>
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<td>FAG toroidal roller bearings TORB</td>
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<td>INA needle roller bearings</td>
<td>INA CRB with</td>
<td>ELGES spherical plain bearings</td>
<td>FAG double row ACBB</td>
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Decades of experience with a comprehensive product portfolio – proven on the market
X-life Product Portfolio

Schaeffler offers the most comprehensive range of premium products.

- Tapered roller bearings
- TAROL axlebox bearings
- Spherical roller bearings
- TORB toroidal roller bearings
- Axial spherical roller bearings

- Cylindrical roller bearings
- High precision cylindrical roller bearings
- Machined needle roller bearings
- Machined needle roller bearings - D-XL
- Needle roller bearings with TWin cage

- Yoke and stud type track rollers PWTR and PWKR
- Ball type track rollers LR52, LR53
- Radial insert ball bearings and housing units
- Single row angular contact ball bearings
- Double row angular contact ball bearings

- Four-point contact ball bearings
- Axial angular contact ball bearings for screw drives
- HS linear recirculating ball bearing and guideway assembly
- Hydrostatic compact guide
- ELGES large spherical plain bearings
Application Examples

X-life products are successfully used in a wide range of applications and in every industrial sector worldwide.
Customer Benefits

When an existing standard bearing is replaced with an X-life rolling bearing, the drive operator firstly benefits from an increased bearing rating life and extended maintenance intervals. This improves the “total cost of ownership” and provides increased protection against failure for the drive or machine in question. However, the increased load rating also means that the bearings can support higher loads while maintaining the same rating life, or the customer can use a smaller rolling bearing but maintain the same rating life and load carrying capacity and thus achieve a more compact design while saving weight. Their reduced friction and noise generation are also important arguments in favor of using X-life products.

- Allows downsizing and an optimized design envelope
- Extends machine maintenance intervals
- Robust and capable of handling high loads
- Increases performance
- Increases energy efficiency
- Allows reduced overall operating costs (TCO)
- Increases drives’ productivity, reliability, and availability

X-life provides solutions for central trends in drive technology.
X-life
Higher load ratings

X times longer service life

X times more efficient use of space

X times greater load-carrying capacity
Every care has been taken to ensure the correctness of the information contained in this publication but no liability can be accepted for any errors or omissions. We reserve the right to make technical changes.

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