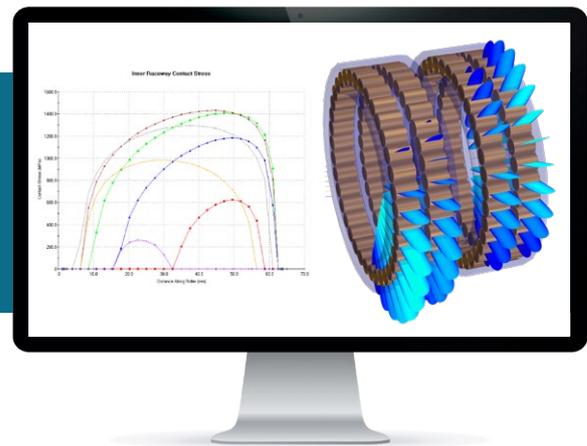# Romax Spin

Advanced simulation of rolling element bearings for bearing designers and application engineers

Bearing specialists need independent tools which offer advanced analyses and allow suppliers and customers to collaborate. They require access to the latest technology for advanced analytical methods, combined within a full electro-mechanical system simulation.

Applications range from selecting appropriate bearings for a concept design, to designing a custom bearing for a specific application, to identifying the root cause analysis of a bearing failure. Romax are founded on bearing expertise, and Romax Spin embodies our latest, world-leading technology in this area.
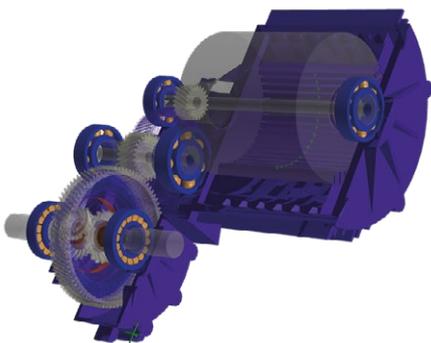
Benefits

- Collaborative working - between bearing suppliers and their customers, with the option to secure sensitive IP

- Advanced analysis algorithms - rapid enough to be usable at all stages of the design process yet accurate enough to capture fine details of contact stress behaviour and its effect on bearing performance and life

- Engineering insight - to design or select optimal bearings for a specific application, to understand bearing failures and identify appropriate counter-measures

> **What's most important is that we can support our customers with correct bearing life calculations in order to prevent future bearing failures and claims. Our investment in the software is well worth the huge costs at risk with such issues. [Romax software] gives us the confidence to design bearings which we know will perform to our high standards of quality. We envisage we will use it for many years to come."**

FLT Polska

Romax Spin: insight through cutting edge analysis and simulation of rolling element bearings

Modelling:

- Quickly and easily build a detailed, parametric electro-mechanical system model, including shafts, bearings, gears, splines, clutches, housings, and electric machines

- Search supplier catalogs directly and choose from more than 60,000 bearings from SKF, Schaeffler, Timken, JTEKT, and Nachi

- Model fully customisable bearings of all ball and roller types, including all external, internal dimensions and micro-geometry

- Specify ring flexibility, clearance and press fits, preload, internal clearance, mounting distortion, temperatures and other assembly and operating properties

- Analyse bearing stresses to the finest detail with the enhanced bearing contact analysis featuring a coupled strip model accurately capturing roller edge stresses, end effects, material yield, rib contact, and truncation

- Accurate bearing stress including micro-geometry means you get the most accurate results from ISO 281, ISO/TS 16281, and other life prediction methods

- Perform roller bearing time domain simulation to understand dynamic behaviour and avoid new, non-conventional failure modes such as bearing skidding

Analysis:

- Perform advanced analysis of rolling element bearings to give unrivalled insight into bearing performance, enable optimal bearing selection and avoid premature bearing failures

- All calculations are based on a fully-coupled flexible system simulation optimised for speed and accuracy and underpinned by a sophisticated non-linear bearing stiffness model

- Accurately and rapidly predict static deflections, misalignments, loads, and stresses at different operating conditions
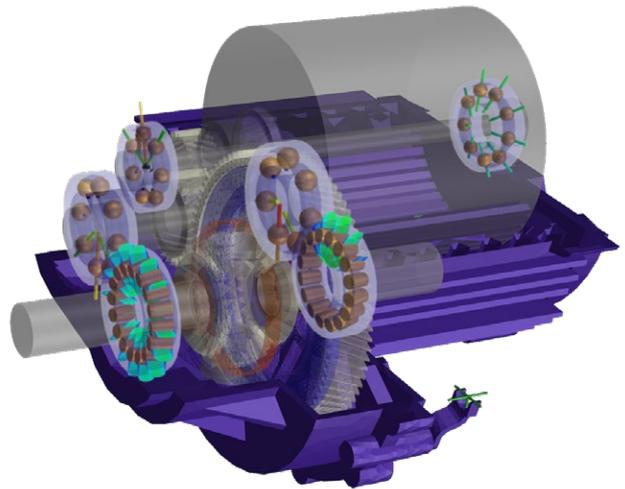
Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Romax, part of Hexagon's Manufacturing Intelligence division, provides world-leading solutions for the design, analysis, testing and manufacture of gearboxes, drivetrains and bearings. Learn more at romaxtech.com. Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com and follow us @HexagonAB.