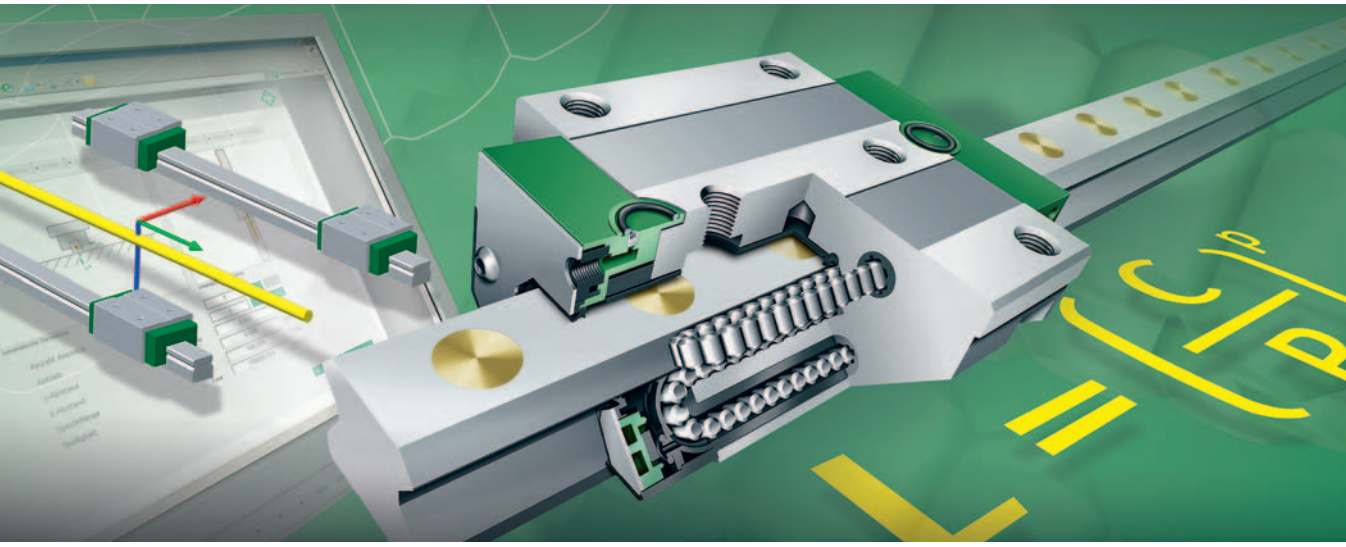
SCHAEFFLER



BEARINX®-online Easy Linear

The calculation program for INA monorail guidance systems

LuK INA FAG

High-performance calculation software …

Along with developing and manufacturing top-quality precision parts, great service is an important tradition at Schaeffler. Rolling bearing design is one of the focal points of our design support. We want to give you a competitive edge by supplying you with perfectly designed products. We have already been using calculation programs successfully for 50 years to meet these requirements.

BEARINX® – a leading program

BEARINX® enables users to calculate, display, and document specific bearing loads in detail while taking operating and environmental conditions into consideration – even for complex machine systems. The contact pressure on every single rolling element is considered in the calculation.

Dedicated module for linear calculation

There is a dedicated module for linear technology, which can be used to precisely calculate even extensive linear guidance systems. Amongst others, BEARINX® considers the following factors:

- Non-linear elastic deflection behavior of the rolling elements
- The elasticity of the carriage and guideway in recirculating guidance systems
- Load-related contact angle shifts in the case of linear ball bearings
- The actual contact pressure, taking skewing and profiling of the rolling elements into consideration.

The “Easy Series” for online customers

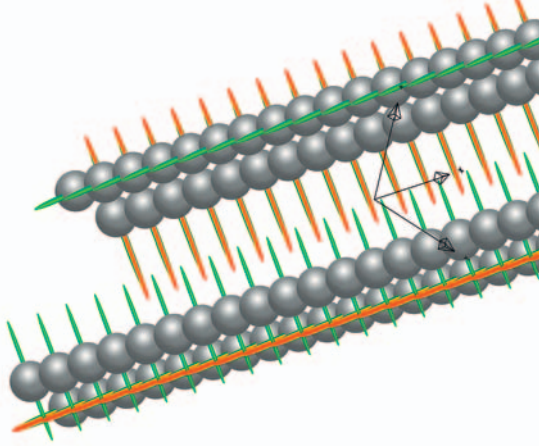
With the BEARINX®-online module “Easy Linear”, you can easily and conveniently calculate the basic rating life and static load safety factor of driven linear axes supported by rolling bearings.

This takes account of all drive, inertia and operating forces. Misalignments of the adjacent construction are also taken into consideration. Possible deformations of the linear system can also be calculated by setting working points.

Intuitive user interface

The self-explanatory menu navigation enables users to easily enter data. The most commonly used linear axis combinations in a drive, guideway and carriage arrangement are preconfigured. In addition, there is the option of freely selecting an axis combination with up to four guideways and 16 carriages.

... with self-explanatory menu navigation



All required operating data can be entered using the menu navigation:

- Load cycles
- Acting directions
- Masses
- Forces
- Working points

The benefits offered by the online program are clearly shown by the load cycle input dialog, in which the speed, acceleration, time, and distances can be entered. The corresponding motion diagram is then created automatically.

Scope

Easy Linear can be used to calculate all INA monorail guidance systems:

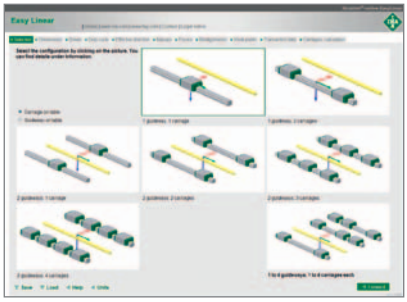
- Linear recirculating roller bearing and guideway assemblies RUE-E
- Two-row linear recirculating ball bearing and guideway assemblies KUE
- Four-row linear recirculating ball bearing and guideway assemblies KUVE-B
- Six-row linear recirculating ball bearing and guideway assemblies KUSE
- Two-row miniature linear recirculating ball bearing and guideway assemblies KUEM
- Four-row miniature linear recirculating ball bearing and guideway assemblies KUME-C

Data exchange

All input data can be saved locally. This enables any relevant changes to an existing design, such as adjustments to the size or comparative calculations, to be made quickly without having to enter the data twice. In addition, users can send their saved files to our Engineering Service so that results can be verified and examined in more detail using the full version of BEARINX®.

Calculation and documentation

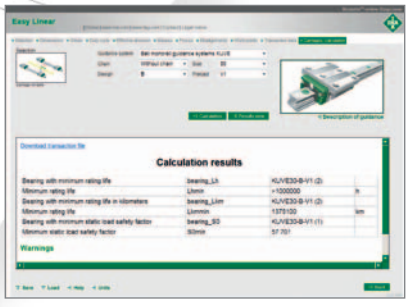
Calculations are carried out on powerful calculation servers at Schaeffler Technologies AG & Co. KG. The most important results are displayed immediately in a results window. In addition, the input data and the calculation results are documented in a PDF file.



Selection of the configuration

Geometrical data input

Load cycle input



Calculation results

Registration: BEARINX®-online Easy Linear

The calculation program BEARINX®-online Easy Linear is only available on the Internet and can be used free of charge. After initial registration, which takes very little time, you can start your calculation immediately.

http://bearinx-online-easy-linear.schaeffler.com

Registration: BEARINX®-online Easy Linear System

With the BEARINX®-online Easy Linear System, it is possible to calculate the basic rating life and static load safety factor of multi-axis positioning systems with driven INA linear actuators. The conditions of use and access are the same as for Easy Linear.

http://bearinx-online-easy-linearsystem.schaeffler.com

Additional features: BEARINX®-online Linear Calculation

For individual requirements in calculating linear systems, we offer our customers and sales partners the more comprehensive BEARINX®-online Linear Calculation system.

http://www.ina.com/content.ina.de/en/products_services/calculating/bearinxonlinelinear/bearinx_online_linear_calculation.jsp

Schaeffler Technologies AG & Co. KG

Linear Technology Division
Berliner Strasse 134
66424 Homburg (Saar)
Germany
E-Mail info.linear@schaeffler.com
Phone +49 6841 701-0
Fax +49 6841 701-2625
Internet www.ina.com

Issued: 2012, November

LES neu / US-D / 201211 / pdf only for web