# Bearinx-online Easy Pump

Online calculation of fluid pumps

**SCHAEFFLER**

▶ # High performance calculation software ...

Through optimum design of our products, we aim to provide you with a competitive edge. With this goal in mind, we have been successfully applying and using calculation programs for 50 years.

### BEARINX – a world-leading program

Through the use of BEARINX, specific bearing loads can be calculated in detail, represented and documented taking account of operating and environmental conditions – even for complex machine systems. The contact pressure on each individual rolling element is included in the calculation process.

### New for BEARINX-online customers

With the new BEARINX-online module "Easy Pump", the bearing arrangements in fluid pumps can be calculated in order to arrive at the appropriate selection. In addition to the results for the bearing arrangement, guide values are also generated for displacement in operation and the comparative stresses in the shaft.

Good service is a Schaeffler tradition – in the same way as the development and production of high precision parts to premium quality. In order to ensure that our products perform reliably, we offer you the necessary support as early as the development phase. This is because, to us, service means: a partnership with the customer, from the first idea behind the design to physical delivery of the products.

A key component in our design advisory work is the design of the rolling bearings.
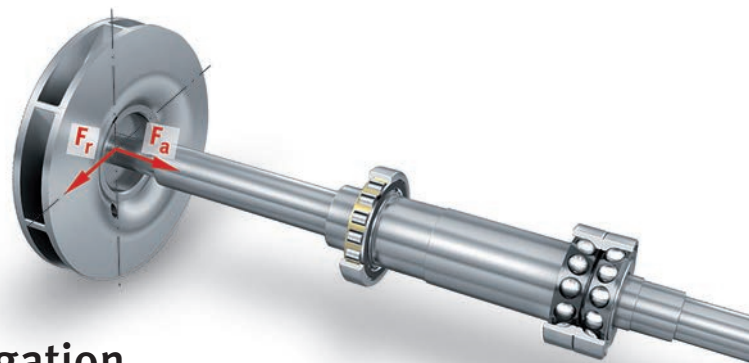
Easy Pump can access the Schaeffler bearing database. It is possible to integrate cylindrical roller bearings, ball bearings or angular contact ball bearings without difficulty. Influencing factors typical for the application are also taken into consideration:

- precise internal geometrical data of the bearings, including the profiles on the rolling elements and raceways
- elastic deflection behaviour of rolling elements
- bearing clearance
- drive and process forces
- cleanliness and lubricant (viscosity class)
- mass and position of an optional impeller

The calculation program is available online and can be used free of charge.

Typical applications for calculation using BEARINX-online Easy Pump

# …with self-explanatory menu navigation

## User-friendly interface

With "Easy Pump", you can calculate fluid pumps of horizontally or vertically oriented designs. For calculation, the user-friendly menu guides you step by step through the program; your inputs are presented visually for checking. The menu navigation allows quick, simple input of data for modelling of the shaft using several segments, creation of an impeller, bearing selection and fits for the shaft and housing. As operating data, you can input the proportional durations of various load cases, the speed of the shaft and different operating temperatures as well as the loads on the shaft system. The inputs include data on the lubricant.

## Data exchange with Schaeffler

All input data can be stored locally. As a result, relevant modifications can be quickly made to an existing application case – such as load variants, size adjustments or comparative calculations – without the need for duplicated input of data. In addition, the stored data can be exchanged with the Schaeffler engineering service in order to allow verification of the results or more detailed analysis using the full version of BEARINX.
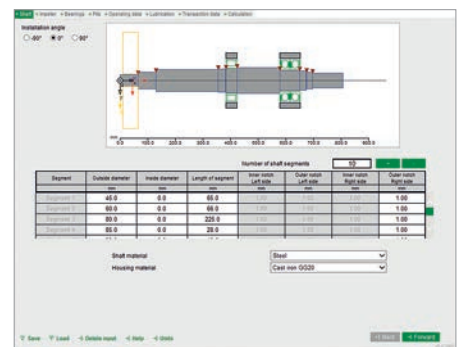
## Calculation and documentation

Calculation is carried out on powerful calculation servers at Schaeffler. For all bearing arrangements, the program displays the adjusted and basic rating life as well as the catalog rating life in accordance with DIN ISO 281. In addition, the input data and further detailed results, such as displacement of the shaft at one point, are documented in a PDF file.
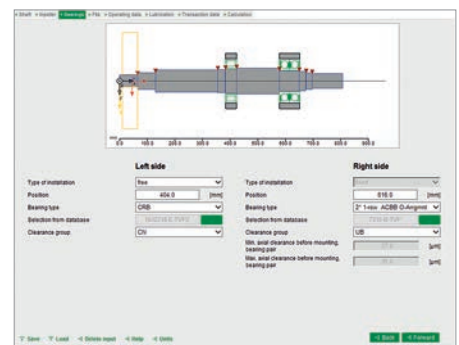
At the end of the process, you can send in a commercial enquiry.
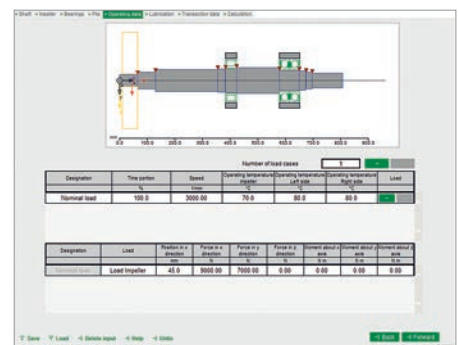
## Points to bear in mind

BEARINX-online Easy Pump can only be used to calculate Schaeffler products. Responsibility for the concept and design of any adjacent parts lies with the user. The guidelines given in our rolling bearings catalogue HR1 must always be taken into consideration. General information on bearing arrangements in fluid pumps can be found in publication TPI 223 "Rolling Bearing Competence for Fluid Pumps".
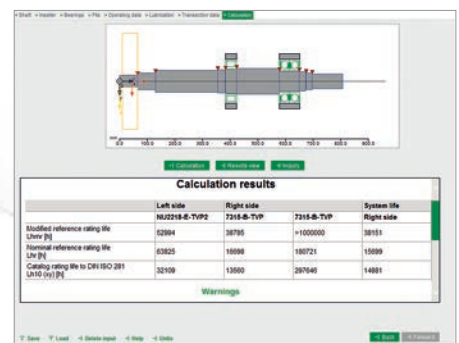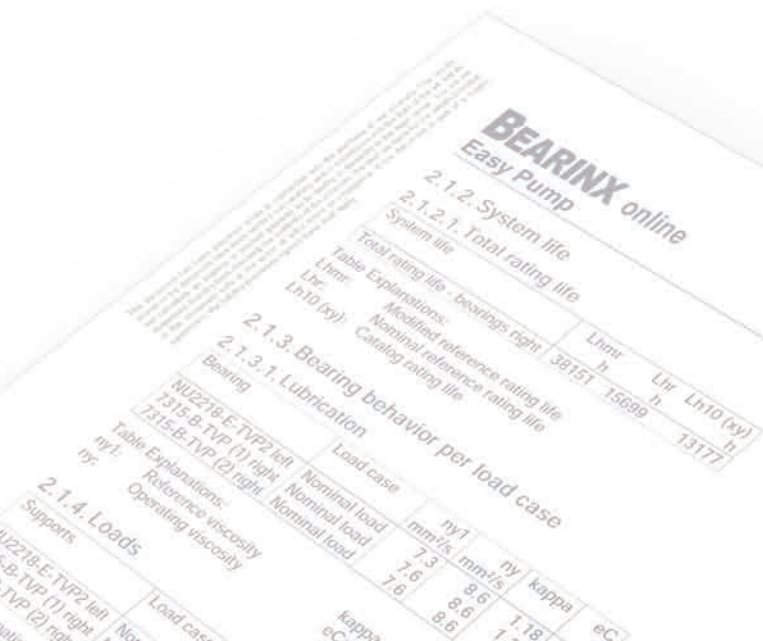
Simple shaft modelling

Bearing selection from the extensive Schaeffler database

Input of several load cases possible

Overview of calculation results

## ▶ Registration: BEARINX-online Easy Pump

The calculation software BEARINX-online Easy Pump is available only in an online format and can be used free of charge and without restrictions. Initial registration takes only a short time and you can then start your calculation work straight away.

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

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