

PRESS RELEASE

PI 013-21  
2021-04-20

## Smart calculation of planetary screw assemblies

**Fast and error-free dimensioning: Intuitive software simplifies complex calculations for heavy-duty screw drives.**

- ▶ Optimized dimensioning of robust planetary screw assemblies PLSA
- ▶ Automatic calculation of lubrication intervals and quantities
- ▶ Time savings and error prevention through new functions



Intuitive operation, additional functions: The Linear Motion Designer (LMD) replaces manual processes such as catalog searches. (Image source: Bosch Rexroth AG)

**Intuitive parameterization instead of rummaging through thick catalogs: With the latest extension of the proven Linear Motion Designer (LMD) tool, Bosch Rexroth is setting new standards for the calculation of screw drives and linear guides. Service life and lubricant usage can be determined with just a few clicks. Thanks to seamless data transfer to the configurator, the linear motion technology can be dimensioned and documented much more quickly and conveniently.**

The performance of the extended [LMD calculation tool](#) is particularly evident in the [planetary screw assemblies PLSA](#). For example, important target variables such as travel speed, revolutions or cycle time can be intuitively parameterized in logical steps. If users enter certain framework data such as

Contact for Journalists:  
Bosch Rexroth AG  
Manuela Kessler  
97816 Lohr a. Main  
Tel.: +49 9352 18-4145  
manuela.kessler@boschrexroth.de

## **PRESS RELEASE**

PI 013-21  
2021-04-20

stroke and process time, they immediately receive the appropriate result variables. Another practical feature concerns the end shape of the screw: After selecting it, the LMD immediately displays the resulting drive torque.

### **Error-free dimensioning and optimized use of resources**

As a result, the targeted user guidance with product-specific calculation algorithms in the background avoids critical design errors. The improved functions of the LMD therefore go far beyond a purely DIN-compliant life expectancy calculation. In addition, the interactive software tool automatically calculates the necessary lubrication intervals and quantities on the basis of the environment and operating data entered, if required. This optimizes maintenance and saves resources.

The documentation is also exemplary. At the end of the calculations, the user automatically receives a detailed PDF file with an overview of all technical information. Overall, the effort required for product configuration can be reduced to a minimum.

### **Seamless connection to the configurator**

Bosch Rexroth provides additional time savings with the seamless connection to the configurator. Among other things, the data and dimensions of the end bearing defined in the LMD are also transferred directly. This means that even when switching to the configurator, it is no longer necessary to refer to the product catalog. The complete screw drive unit can be ordered more quickly.

### **Comprehensive product range for heavy duty applications**

Planetary screw assemblies PLSA are designed for high load capacities and dynamics: Compared to conventional preloaded systems, the load ratings of the preloaded single nut are twice as high. The result is an eightfold increase in nominal life. With screw diameters from 20 to 75 mm, the PLSAs cover a finely graduated, wide range of forces in the top performance range. With travel speeds of up to 50 m/min and dynamic load capacities of up to 544 kN, they open up a wide range of applications. PLSAs are used, among other

Contact for Journalists:  
Bosch Rexroth AG  
Manuela Kessler  
97816 Lohr a. Main  
Tel.: +49 9352 18-4145  
manuela.kessler@boschrexroth.de

**PRESS RELEASE**

PI 013-21  
2021-04-20

things, in the automotive sector to apply adhesives as part of dispensing tasks, for example when bonding windows. Other typical applications include testing machines, tube bending machines, servo presses or packaging machines.

*As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, and Factory Automation. With its intelligent components, customized system solutions and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things. With locations in over 80 countries more than 29,600 associates generated sales revenue of around 5.2 billion euros in 2020.*

To learn more, please visit [www.boschrexroth.com](http://www.boschrexroth.com)

*The Bosch Group is a leading global supplier of technology and services. It employs roughly 394,500 associates worldwide (as of December 31, 2020). According to preliminary figures, the company generated sales of 71.6 billion euros in 2020. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At 126 locations across the globe, Bosch employs some 73,000 associates in research and development, as well as roughly 30,000 software engineers.*

Additional information is available online at [www.bosch.com](http://www.bosch.com), [www.iot.bosch.com](http://www.iot.bosch.com), [www.bosch-press.com](http://www.bosch-press.com), <https://twitter.com/BoschPress>

Contact for Journalists:  
Bosch Rexroth AG  
Manuela Kessler  
97816 Lohr a. Main  
Tel.: +49 9352 18-4145  
[manuela.kessler@boschrexroth.de](mailto:manuela.kessler@boschrexroth.de)