

PRESS INFORMATION

Precise linear movements thanks to miniature ball screw assemblies

Manuela Kessler | 17.01.2023 | Lohr am Main, Germany | PI 003/23

Bosch Rexroth adds cylindrical single nut to its miniature series



The ZEM-E-S cylindrical single nut is ideal for precision applications where space is limited. (Image source: Bosch Rexroth AG)

Precision ball screw assemblies from Bosch Rexroth have been in use in numerous sectors for decades. The company has now expanded its miniature series by adding cylindrical single nuts with guaranteed low maintenance requirements and a long operating life. They are used in ready-to-install PSK precision modules and anywhere where precise linear movements are needed in tight or the very tightest spaces.

The cylindrical single nut is designed for screws with diameters of 6 and 8 mm and offers leads between 1 and 5 millimeters. It thus meets the high precision requirements in sectors such as medicine or semiconductors. With its new, flangeless design, it is compact and thus suitable for use wherever space is limited. During day-to-day use, users benefit from long relubrication intervals and maximum reliability. The nut's smooth running guarantees absolute precision.

The new cylindrical single nut series complements Rexroth's existing range of miniature ball screw assemblies. These offer nominal diameters of 6 to 12 millimeters and leads of 1 to 10 millimeters. Thanks to the principle of internal recirculation, the miniature ball screws allow even functioning. The innovative system for removing balls from the track ensures particularly smooth running. Together with the miniature ball rail systems, the ball screw assemblies provide optimum conditions for all applications requiring small component sizes and a high load capacity.

The calculation program Linear Motion Designer (LMD) helps users to select and design their screw drives.

Basic Information Bosch Rexroth

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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 31,000 associates generated sales revenue of around 6.2 billion euros in 2021.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 402,600 associates worldwide (as of December 31, 2021). The company generated sales of 78.7 billion euros in 2021. 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 some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company's future growth is its innovative strength. At 128 locations across the globe, Bosch employs some 76,100 associates in research and development, of which more than 38,000 are software engineers.

Press Contact

Please get in touch with our Press Contact



Manuela Kessler

Spokesperson

technology topics

+49 9352 184145

Manuela.Kessler@boschrexroth.de