

PRESS INFORMATION

Fast, precise, compact: Bosch Rexroth adds linear motor modules to its portfolio

Manuela Kessler | 02.05.2024 | Lohr am Main / Germany | PI 017/24

New linear motor axes meet the highest dynamics and precision requirements in minimal spaces

- Compact, highly precise and easy to maintain thanks to zero-backlash direct drive
- Economical complete solution: Easy ordering, quick assembly
- Available as an ironless or iron-core linear motor



Compact, economical and fast: The ready-to-install LMM linear motor modules for demanding applications. (Image source: Bosch Rexroth AG)

Fast, compact and precise – these properties characterize the new linear motor modules (LMM) from Bosch Rexroth. The axes are available in sizes 140, 180 and 220 and feature a zero-backlash direct drive. They complement the existing linear motion technology portfolio as a ready-to-install solution offering excellent value for money.

The linear modules are available in all sizes with iron-core linear motors. The sizes 180 and 220 are also available with an ironless motor. This opens up a wide range of applications with standard strokes of up to 1,540 mm and forces of up to 2,400 N. At speeds of up to 5 m/s and with accelerations of up to 250 m/s², the LMMs achieve repeatability of $\pm 1.0 \mu\text{m}$. These performance figures allow very short cycle times – an important consideration for the production of electronic and optical components, semiconductors or in electromobility. Typical applications include high-precision pick-and-place tasks, handling electronic components or automated optical inspections.

Maximum efficiency in the smallest of spaces

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The high efficiency of the new linear motor modules is partly due to the integrated screw-free direct drive which replaces mechanical power transmission. This significantly increases dynamics and mechanical efficiency and allows great repeatability. At the same time, the modular design of the ready-to-install LMM reduces the installation effort. The new linear motor modules also reduce maintenance costs, on the one hand due to the maintenance-free linear motor and on the other hand due to the high-quality, long-lasting ball rail systems with long relubrication intervals.

Basic Information Bosch Rexroth

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 and Industrial Applications as well as Factory Automation. With its intelligent components, customized system solutions, engineering 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, around 33,800 associates generated sales revenue of 7.6 billion euros in 2023.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 429,000 associates worldwide (as of December 31, 2023). The company generated sales of 91.6 billion euros in 2023. Its operations are divided into four business sectors: Mobility, Industrial Technology, Consumer Goods, and Energy and Building Technology. With its business activities, the company aims to use technology to help shape universal trends such as automation, electrification, digitalization, connectivity, and an orientation to sustainability. In this context, Bosch's broad diversification across regions and industries strengthens its innovativeness and robustness. Bosch uses its proven expertise in sensor technology, software, and services to offer customers cross-domain solutions from a single source. It also applies its expertise in connectivity and artificial intelligence in order to develop and manufacture user-friendly, sustainable products. With technology that is "Invented for life," Bosch wants to help improve quality of life and conserve natural resources. The Bosch Group comprises Robert Bosch GmbH and its roughly 470 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. Bosch's innovative strength is key to the company's further development. At 136 locations across the globe, Bosch employs some 90,000 associates in research and development, of which nearly 48,000 are software engineers.

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