

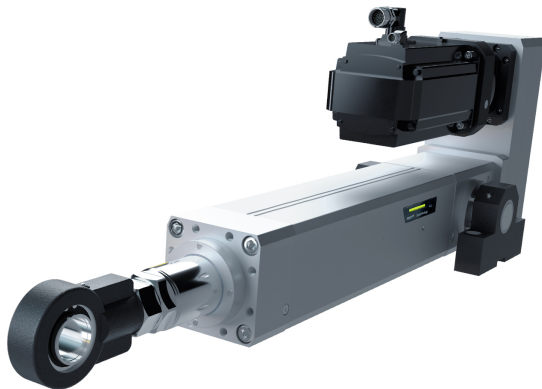
PRESS INFORMATION

Durable cylinders for high forces

Manuela Kessler | 19.05.2025 | Lohr am Main / Germany | PI 028/25

New high-power version of the EMC-HP electromechanical cylinder covers a wide range of heavy-duty applications with forces up to 250 kN

- High power density and precision for demanding applications
- Simple engineering and quick commissioning
- Optional oil bath lubrication for continuous load applications
- Sensor package to display lubrication recommendation or oil temperature



The new electromechanical cylinders in the EMC-HP high-power series in sizes 190 and 220 combine maximum performance and durability with minimal engineering, operating, and maintenance costs. (Image source: Bosch Rexroth AG)

Whether it's pressing, forming or riveting, tensioning, positioning or testing: In industrial production, there are numerous processes in which linear movements with high forces must be performed economically and energy-efficiently. For this purpose, Bosch Rexroth is expanding the electromechanical cylinders in the EMC-HP high-power series to include sizes 190 and 220. Heavy-duty applications with high axial forces of up to 250 kN can be implemented with these sizes in a particularly compact, precise, and dynamic manner – either in direct drive or in parallel using a robust spur gear. An integrated sensor and display package that visualizes either a lubrication recommendation and the oil temperature, depending on the version, ensures maximum productivity. As part of the digital quick selection, an oil bath can now also be selected as a lubrication option for continuous load applications.

The new sizes meet the highest requirements in terms of power density, precision, and dynamics, which are required, among other things, as part of the calendaring process in battery production, in the pressing of wood panels or for sheet metal forming. The EMC-HP portfolio with protection class IP 54 that covers sizes 115 to 220 (housing geometry), now meets the requirements for heavy-duty applications with strokes of up to 1,500 mm in length even more effectively.

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The proven PLSA planetary screw assembly installed in the EMC-HP covers dynamic load capacities (C_{dyn}) of up to 473 kN. The series' top speed is 0.83 m/s. The new sizes with a robust spur gear ensure optimum power transmission to the screw drive. The new EMC-HP offers additional benefits in terms of durability, maintenance, and efficiency through an integrated sensor package. An optional LED colored strip indicates a re-lubrication recommendation and the oil bath temperature on the basis of the collected operating data.

Simple engineering, quick commissioning

All actuators in various length and mounting options can be selected easily and quickly using the LinSelect e-tool. Complete automation packages including motor, controller, and cables are also available to quickly set up subsystems. A software package (Smart Function Kit) for easy parameterization of the motion task is available on request. After the final online configuration, the individual cylinder or subsystem can be ordered directly from the Rexroth shop.

The preconfigured complete package with parameters stored in the motor memory for the drive controller simplifies and shortens commissioning considerably. The compact design with lightweight aluminum housing and the single-cable solution available for most drives ensure easy integration and quick mounting.

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 32,600 associates generated sales revenue of 6.5 billion euros in 2024.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 418,000 associates worldwide (as of December 31, 2024). The company generated sales of 90.3 billion euros in 2024. 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 490 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 87,000 associates in research and development.

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