

FA21004B 06/06/2022

With Smart MechatroniX, Bosch Rexroth offers new solutions for the Factory of the Future

The first mechatronic solution packages are already available or are in the test phase



Image 1: With Smart MechatroniX, Bosch Rexroth offers new solutions for the Factory of the Future. (Image source: Bosch Rexroth AG)

With the new Smart MechatroniX solution platform, which combines best-in-class linear motion technology components with electronics and software, Bosch Rexroth is responding to market trends in factory automation on the way to the Factory of the Future. The resulting solutions can be used in a wide range of areas. Not only do they allow quick commissioning — they also offer full process transparency and ensure a short time-to-market and high productivity.

As one of the leading suppliers of linear motion technology and mechatronic systems, Bosch Rexroth has always been close to its customers and knows their requirements. The new solutions impress with their simplicity and quick implementation — from development to the start of production — as well as their high performance and longevity. They are also modular and designed to be retrofittable. This allows long-term, flexible and efficient use of the durable components.

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One platform, numerous smart solutions

The Smart Function Kit offers quick and intuitive commissioning and configuration for a range of processes, such as joining, pressing and handling. It works according to the plug and produce principle by combining preselected mechanical and electronic components with software. Bosch Rexroth presented the first smart mechatronic solution at Hannover Messe in 2019: the Smart Function Kit for pressing and joining applications. This modular toolbox consists of an electromechanical cylinder, a force sensor, a motor, a servo drive and a motion controller, plus a software package that enables easy commissioning and operation as well as comprehensive process analysis.

The second solution package — the Smart Function Kit for handling tasks — is currently being prepared. It is a single- or multi-axis system with innovative control technology and preinstalled software. This kit is suitable for a range of handling tasks where components or work pieces must be moved precisely and reliably within a defined space. In this application, plug and produce is also possible thanks to the associated software package.

Other advantages of the Smart Function Kits include easy product selection and dimensioning via Bosch Rexroth's LinSelect tool as well as quick online configuration and ordering.

Another Smart MechatroniX solution that is currently being developed is a compensation module with an active measuring function in six degrees of freedom. For example, it increases the precision of handling robots and opens up new areas of use for robots and Cartesian systems. The Smart Flex Effector can be used in numerous applications, including joining small tolerances, quality documentation, Tool Center Point detection or compensation of position drifts in the x-, y- and z-direction.

"All these new products and solutions are Bosch Rexroth's contribution toward the Factory of the Future. Bearing in mind the needs of our customers, we're using entirely new approaches in order to meet current and future requirements in factory automation," said Dr. Simon Hertenberger, Head of the Mechatronics product department within the Linear Motion Technology division, Bosch Rexroth AG. FA21004B 06/06/2022

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To learn more about Smart MechatroniX, visit <u>www.boschrexroth-us.com/smartmechatronix</u>

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Image 2: Dr. Simon Hertenberger, Head of Product Area Mechatronics within the Linear Motion Technology Business Unit, Bosch Rexroth AG. (Image source: Bosch Rexroth AG)



Image 3: The Smart Function Kit for pressing and joining applications allows plug and produce with no programming. (Image source: Bosch Rexroth AG)

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Image 4: With the Smart Function Kit, Bosch Rexroth provides a single- or multi-axis system solution for various holding tasks that can be operated intuitively via Web HMI. (Image source: Bosch Rexroth AG)



Image 5: The Smart Flex Effector makes intelligent robotics even more precise and increases performance in handling and joining processes. (Image source: Bosch Rexroth AG)

About 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 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. To learn more, please visit <u>www.boschrexroth-us.com</u>.

About Bosch:

The Bosch Group is a leading global supplier of technology and services. It employs roughly 401,300 associates worldwide (as of December 31, 2021). According to preliminary figures, the company generated sales of 78.8 billion euros in 2021. Its operations are divided into four

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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 76,300 associates in research and development, of which more than 38,000 are software engineers.

Additional information is available online at <u>www.bosch.com</u>, <u>www.iot.bosch.com</u>, <u>www.bosch-</u> presse.de, <u>www.twitter.com/BoschPresse</u>.

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