

PRESS INFORMATION

Smart handling for the Factory of the Future

Manuela Kessler | 08.03.2022 | Lohr am Main / Germany |



Dr. Ulf Lehmann, head of the Linear Motion Technology Business Unit at Bosch Rexroth AG (Image source: Bosch Rexroth AG)

It is hard to imagine factory automation systems without linear robots. They are used to handle incoming goods, in production, in assembly or when packaging products – whether they are integrated into individual machines, as pick and place units or in semi or fully automated lines. However, designing, configuring, commissioning and programming multi-axis systems was always regarded as a complicated, time-consuming process requiring numerous different interfaces. At the same time, the ever-present competitive pressure and the need to reduce costs and save time made them more difficult to use. Fortunately, the digitalization trend is now allowing radical evolution towards smart subsystems.

At Bosch Rexroth, we rose to the challenge and developed new solutions which make selecting multi-axis systems and integrating them into production lines much easier: Using modern, intuitive e-tools, we help experts in technology and construction to find a suitable Cartesian robot in just a few minutes. We have used our knowledge of applications which we have gained over many decades in the process. Users now only need to enter their application data. On the basis of these data, a suitable multi-axis system including motors, connection elements and energy supply is suggested. Further detailed specifications can then be added in the connected online configurator with a 3D live preview. Rexroth multi-axis systems can also be supplied as smart linear robots with pre-installed software.

A wizard guides users intuitively through the commissioning process and the drive controllers parameterize themselves automatically upon connection. The handling process itself no longer needs to be laboriously programmed – it is combined with suitable functional modules via drag and drop. This procedure can be achieved without entering complex code and without help from costly specialists.

We are proud of this successful further development. By linking best-in-class components with innovative functions, linear robots are now a much more attractive proposition for numerous

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applications. They reduce the engineering effort and raise productivity to a new level. As a result, they play a key role in optimizing processes.

Based on our vision of the highly efficient Factory of the Future, we further develop all of our handling solutions on an ongoing basis – in the area of sensor systems too. The Smart Flex Effector, our new sensor-based compensation module, makes the handling system even smarter. The solution mounted on the gripper combines the precision of a robot with the sensitivity of a hand. It opens up new areas of application for robots and Cartesian systems.

The Factory of the Future is thus easily within reach and is only a few clicks away.

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 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.

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