PRESS INFORMATION

Unpack, connect, go

Manuela Kessler | 20/04/2020 | Lohr am Main |

Dr. Ulf Lehmann, Head of Business Unit Linear Motion Technology at Bosch Rexroth AG

In times of increasing uncertainty, it is becoming a key criterion for many companies to be able to quickly adapt their production. Flexibility is not only required of employees – the systems also need to be flexibly transformable to new production processes. New solutions have to facilitate easy and quick adaptation and just as fast commissioning. The digitalization of what seem to be pure mechanical components, such as in Linear Motion Technology, helps with the technical implementation.

Bosch Rexroth has laid the foundation for the evolution of Linear Motion Technology at an early stage. Today already, we are offering a whole host of digital engineering tools and configurators which can be used to simplify design processes significantly. But that is only the beginning. For us, digital transformation is a process that is constantly developed further – and that helps us to raise Linear Motion Technology to a new level.

New platform for smart mechatronic solutions

We are benefiting from our proven expertise and decades of experience in Linear Motion Technology, which is reflected in our best-in-class components. This basis enables us to consequently think about where Linear Motion Technology is going and to demonstrate how it opens up new opportunities for the Factory of the Future, even as a seemingly purely mechanic technology.

On the basis of our proven product portfolio, we are making Linear Motion Technology more intelligent – from the vertical integration with additional features such as software and electronics to the targeted use of sensors in our Linear Motion Technology components. A first solution kit that does just that has been on the market since last year. The Smart Function Kit for pressing and joining applications is a modular subsystem consisting of mechanics, electrics and software. The real stand-out features are the intuitive commissioning and process configuration. No programming knowledge is required for either. Even during subsequent operations, the software is intuitive and can be used without any prior knowledge right from the outset.

From flexibility to transformability

With our new platform for smart mechatronic solutions, we are clearly focusing on the needs of our customers and are offering a suitable solution for every process step. This already begins when selecting and dimensioning a product: Rexroth customers don’t have to cumbersomely familiarize themselves with the technology, but instead realize their ideas intuitively with our tools in just a few steps leading up to the finished product.

For commissioning, we are placing our focus on plug & produce, a principle that we have known for years in the consumer area as plug & play. Here's a practical example of what that means for linear axes: unpack, connect, and carry out the function test within a few minutes.

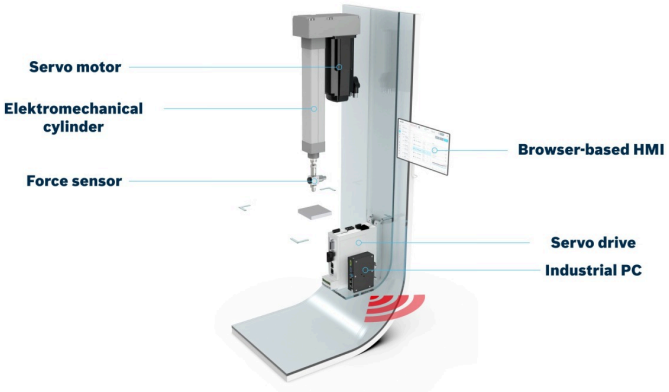
In operation itself, our vision is adaptable – and thus transformable handling systems that can be flexibly adapted for new production processes. A concrete example is a quick-change system for linear axes: they can be exchanged with just two clicks, are then able to recommission themselves and are immediately ready for new tasks.

Ultimately, this quick component exchange also effects maintenance: If a linear axis needs servicing, a technician today can immediately insert a replacement and the machine can continue working without any downtime. In addition, sensors offer the opportunity to actively use predictive maintenance and condition monitoring to increase system efficiency. System efficiency is further enhanced by completely new product approaches, one example for which would be a compensation unit which offers unparalleled improvement of positioning accuracy for robots and Cartesian systems.

Interested users can already have a look at a film on all our solutions on the Rexroth website .

Images

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



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Plug & produce with the Smart Function Kit: Examples for smart mechatronic solutions (Image source: Bosch Rexroth AG)

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 2019.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 400,000 associates worldwide (as of December 31, 2019). The company generated sales of 77.7 billion euros in 2019. 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 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. The basis for the company's future growth is its innovative strength. Bosch employs some 72,600 associates in research and development at 126 locations across the globe, as well as roughly 30,000 software engineers.

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