



LINEAR MOTION TECHNOLOGY: ready for the future

Our Linear Motion Technology division is faced with the challenge of developing the existing components business, while pressing ahead with digitalization. We spoke to Dr. Ulf Lehmann, Head of the Business Unit Linear Motion Technology at Bosch Rexroth, about how Linear Motion Technology can achieve this balancing act.

Q1 Linear Motion Technology is regarded as a purely mechanical discipline. Why do you think this will change?

A generational change is currently taking place in manufacturing offices. I personally belong to the telephone box generation. If we wanted to call someone while we were out, we'd look for a telephone box. But everyone who's younger than their mid thirties will have grown up with mobile phones and the Internet. In other words, they're digital natives. They use digital technology in a private setting every day and have very different strategies for solving problems compared to the generations before them. We have to accept these changes in information and communication habits and apply them to our business.

Q2 How are you facing up to this challenge?

This new generation wants real solutions for automation processes and functions. Components, even systems, are just a means to an end. On top of that, all applications, information channels and platforms must be easy to use. We realized this years ago and are always thinking about which digital tools would offer the best possible support for our customers and other interested parties. We already have modern engineering tools and configurators available, which we'll continue to optimize and supplement in the future, for example with new selectors, configurators and a user-friendly website with chat options.

Q3 So what role do the hardware components now play?

Linear Motion Technology components remain a core part of our business. But we have to achieve a balancing act between continually expanding our component portfolio and developing additional solutions with higher functional integration, by using sensors, for example. This goes as far as digital business models. I'm very optimistic that we'll be able to rise to this challenge.

Q4 How are your developers dealing with this challenge? Can you give any examples?

Yes, I can. Linear Guidance Systems and Ball Screw Assemblies with intelligent sensors record status data, such as temperature and vibrations. We can then use this data together with algorithms to identify wear and thus carry out predictive maintenance. There will also be a digital nameplate for our products in the future. This will make commissioning easier and, if servicing is required, will provide all the relevant data.

Another approach is developing kits for functions like joining and pressing. At this year's Hannover Messe, we'll present the Smart Press Kit, a plug & produce solution, which the customer only needs to parametrize.

Q5 How quickly can Bosch Rexroth achieve these goals?

In a number of areas we've already made good progress, and products will be available shortly. With other solutions, it's difficult to estimate how long it will take. What we're doing is getting Linear Motion Technology ready for the future. Within our company, we have a wealth of knowledge of the various automation technologies. We've combined this knowledge perfectly for decades and we have all the necessary specialists in our business. As a result, we can follow the path towards the digital future with great enthusiasm.

Q6 Why do you think that digital business models will win through?

The fact that the Bosch Group is increasingly becoming a leading company when it comes to the Internet of Things (IoT) is an advantage for us. Our Linear Motion Technology benefits from all the unique knowledge the Bosch Group has, whether it be in the area of sensor systems or software programming. In many advanced development projects, we work together with a range of other divisions. As a result, we can already see and predict what major advantages digital business models will create for our customers.

Smart Press Kit

Our kit for joining and pressing applications, combines preselected mechanical and electrical components to create plug & produce solutions designed for forces between 2kN and 30kN. The installed software with auto-parametrization requires no programming knowledge for commissioning and operation.

Easy product selection

- Kits for forces of 2, 4, 7, 12, 19 and 30 kN
- All components from one single source

Plug & Produce

- Pre-installed operating software
- Auto-parametrization of the drive

Zero programming

- No programming skills required
- Easy and logical configuration of the process
- Browser-based Web HMI accessible with any device