

PRESS INFORMATION

The future of the packaging industry: intelligent automation and AI for maximum flexibility and efficiency

Manuela Kessler | 07.05.2026 | Lohr am Main / Germany |



Tobias Gerhard, Business Development Manager Fast Moving Consumer Goods, Bosch Rexroth AG (Image source: Bosch Rexroth AG)

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"The framework conditions for packaging machine manufacturers and operators is undergoing profound changes. Shorter product lifecycles and the e-commerce boom require adaptive production processes, even down to batch sizes of one. Volatile supply chains are increasing the need for resilient manufacturing strategies, and personnel-intensive, repetitive tasks are increasingly being automated – not least because qualified operating personnel are becoming increasingly difficult to find. At the same time, legal requirements and corporate goals for greater sustainability and a circular economy are leading to new design principles for plants and packaging.

To ensure the industry's competitiveness, we see three key technology trends: the shift toward software-defined automation based on open ecosystems, the migration of AI applications to the network edge, and the integration of sustainability goals into core processes.

Thanks to open interfaces and standardized engineering tools, machine designs can be implemented with significantly reduced integration effort, and variant changes can be made in minutes rather than hours. With our automation platform ctrlX AUTOMATION, we enable collaboration within a broad partner ecosystem. Artificial intelligence is evolving from a purely analytical technology into an operational tool directly at the machine. Instead of sending large amounts of data to a cloud for processing, powerful edge devices enable AI-supported decisions in real time – for example, for predictive maintenance, adaptive process control in the event of material fluctuations, or inline quality control. Decentralized intelligence is essential for significantly increasing the efficiency and autonomy of production lines, if IT/OT security is considered from the very beginning.

To reliably process new, sustainable packaging materials and further reduce the energy consumption of packaging machines, we rely on a holistic approach to the automation of packaging machines. Through data-driven energy optimization and adaptive motion profiles, we can measurably reduce energy consumption and material waste – without compromising performance.

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We continuously develop our automation solutions for future-proof packaging machines – for open, intelligent and self-optimizing production in which machines, materials and people work together seamlessly."

Infobox: Bosch Rexroth at the interpack 2026

At interpack 2026 in hall 6, booth A42, Bosch Rexroth will present how open, modular automation solutions work together on three levels: in the machine, between machines and above machines. On this basis, machine manufacturers and end users can tailor future-proof machine concepts to their specific needs:

Within the machine, the automation system ctrlX AUTOMATION provides a flexible basis for developing machines more quickly and adapting them to changing challenges throughout their lifecycle. Bosch Rexroth also continuously adapts its linear motion technology product portfolio to changing market conditions. Whether for packaging, palletizing, stacking, or even end-of-line inspection – the Rexroth standard portfolio enables a wide range of guidance tasks in the packaging sector to be implemented economically, efficiently, and quickly. Customers can now also obtain linear guides, for example, in a cost-optimized variant featuring the familiar Rexroth quality. The electromechanical cylinders are available in approximately 3,000 different configurations. With lifetime lubrication available for many applications, these maintenance-free actuators offer greater flexibility in machine design.

To ensure seamless, flexible material flow and interlinking between machines, modular transport systems are available – ranging from the VarioFlow plus chain conveyor system and the VarioFlow belt for transporting bulk and film-packed products to the planar system ctrlX FLOW6D for contactless high-performance transport and positioning with six degrees of freedom.

Intelligent data integration is crucial for communication above multiple machines. Open interfaces, for example, enable OEE monitoring, energy management, and predictive maintenance to be carried out using a shared database, including from third-party providers. When combined with collaborative robots, this allows personnel-intensive and repetitive tasks to be automated.

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 31,900 associates generated sales revenue of 6.5 billion euros in 2025.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 413,000 associates worldwide (as of December 31, 2025). The company generated sales of 91 billion euros in 2025. 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, digitalization, electrification, and artificial intelligence. In this context, Bosch's broad diversification across regions and industries strengthens its innovativeness and robustness. Bosch uses its proven expertise in hardware, 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 intelligent, user-friendly, and 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 500 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

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world. Bosch's innovative strength is key to the company's further development. Bosch employs some 82,000 associates in research and development.

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