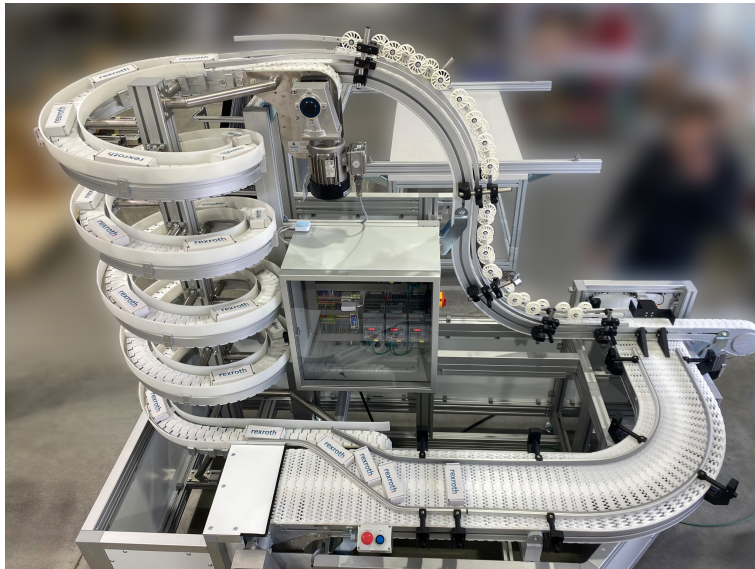


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Bosch Rexroth together with partner companies at Motek 2023: A broad portfolio of solutions for automation in assembly

Manuela Kessler | 10.10.2023 | Lohr am Main / Germany | PI 060/23



Spiral conveyor based on components from the VarioFlow chain conveyor system from Bosch Rexroth (image source: Bosch Rexroth AG)

Together with its Certified Excellence (CE) partner companies Altmann, DFS Automation, HELDELE, the PTS Group and teamtechnik Industrieausrüstung, Bosch Rexroth will present an extensive portfolio of solutions and exciting applications for automation in assembly at Motek in Stuttgart from October 10 to 13, 2023. As local contacts, partner companies offer a extensive portfolio – from readily available products and engineering services to ready-assembled systems. They combine the stability and competence of a large company with the flexibility and agility of a medium-sized firm – in the immediate vicinity of customers.

Automating assembly solutions to meet specific customer requirements

The automation toolkit ctrlX AUTOMATION from Bosch Rexroth provides all hardware and software components for highly flexible, automated assembly lines. ctrlX AUTOMATION cuts component and engineering costs by 30 to 50 percent with the help of the real time-capable operating system Linux, fully open standards, app programming technologies, web-based engineering and a comprehensive IoT connection.

At Motek, the CE partner HELDELE will present a robotics use case for straightforward order picking tasks. The movements of the cobot from Kassow Robots are controlled by ctrlX CORE from the Bosch Rexroth automation toolkit.

PRESS INFORMATION

Modern linear motion technology saves time, money and resources

In the field of linear motion technology, end-to-end e-tools from Bosch Rexroth are speeding up the engineering processes for individual components and smart mechatronic subsystems. For example, pre-installed operating software with a virtual assistant reduces the commissioning time for Smart Function Kits by up to 80 percent. With high load ratings in the case of profile rail systems and screw assemblies for example, the integration of additional functions as well as coordinated and pre-assembled complete solutions, linear motion technology helps to improve performance and cost-effectiveness in production.

The new automation packages for linear axes and electromechanical cylinders also allow straightforward engineering and quick commissioning. Servo motors, drive controllers, mains filters, wiring and the optional software complement the long-lasting mechanical systems. The pre-installed software comes with a commissioning wizard with automatic parameterization of the drive controller as well as a module for the convenient graphical programming of movements. Pre-defined Smart Function Kits for handling as well as pressing and dispensing tasks speed up commissioning further.

The CE partner Altmann and DFS Automation will present various linear motion technology solutions at the stand at Motek. DFS will also present a station made up of function-integrated profiles from Bosch Rexroth whose stroke positioning unit allows short cycle and workpiece pallet changing times.

The quick way to a stable shop floor application

With the further developed EcoShape round tube system, shop floor solutions can now be planned and implemented more quickly. Even applications with large dynamic loads can be achieved at low cost with fewer components. The free MTpro planning software includes numerous model templates for typical applications which can easily be scaled, adapted and completed. The round tube system is compatible with a range of Rexroth components from the aluminum profile kit and can therefore be expanded and reconfigured flexibly.

At Motek, the PTS Group will present one possible usage scenario – a partly automated workstation. The parts are transported to an ergonomic workstation using the ACTIVE Shuttle autonomous mobile robot and a box lifting device. The material is fed in using the VarioFlow chain conveyor system and a cobot from Kassow Robots. At the ergonomic height-adjustable workstation, assistant systems such as the Operator Guidance System (OGS) and a pick to light solution help production staff with the assembly work.

AI support for order picking tasks

Intelligent pick and place solutions such as Smart Item Picking from Bosch Rexroth are used to sort, pack or transfer materials within goods and value streams. The software for commercially

PRESS INFORMATION

available industrial robots recognizes a large number of objects to be gripped model-free and without teaching. It also combines high pick rates with significantly reduced error rates.

The CE partner HELDELE will present the solution at Motek.

Compact transport solution for the economical transport of goods

Customized products and small lot sizes require a high degree of flexibility. At the same time, space in production is often limited. With the VarioFlow plus chain conveyor system, Bosch Rexroth offers a key component for flexible and economical transport in factories. It transports packaged and unpackaged goods vertically and horizontally in the smallest of spaces. Together with the spiral conveyor from smartPac Srl, this results in an end-to-end transport system with low commissioning and maintenance costs.

Flexible transport for heavy loads

The CE partner teamtechnik Industrieausrüstung will present another transport solution: A heavy-duty rotating table in conjunction with standard transfer systems from Bosch Rexroth allows flexible transport of components weighing up to 2,000 kg such as battery modules. The components can be moved with a diameter of up to 2.6 m. The workpiece pallet or goods being transported can also be stopped and positioned. The rotating table fits seamlessly into system controllers and higher-level IT systems.

Battery recycling on an industrial scale

At Motek, Bosch Rexroth will also present the first industrial automation solution for the deep discharging of high-power batteries in order to allow recycling. Thanks to the solution, a process that used to take 24 hours now takes less than 15 minutes. The TS 5 transfer system transports battery cells of different sizes and types from various manufacturers between the diagnostic, discharging and dismantling stations. After contacting, a modular solution from the automation toolkit ctrlX AUTOMATION discharges the battery cells in the discharging station. The discharging equipment automates the initial inspection, the patented deep discharging process with chemical inactivation and the final check. By recycling the batteries, up to 95 percent of the chemical elements can be fed back into the battery production process.

Bosch Rexroth, Altmann, DFS Automation, HELDELE, PTS Group and teamtechnik Industrieausrüstung at Motek 2023: Hall 3, Booth 3305.

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

PRESS INFORMATION

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 more than 32,000 associates generated sales revenue of around 7.0 billion euros in 2022.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 421,000 associates worldwide (as of December 31, 2022). The company generated sales of 88.2 billion euros in 2022. Its operations are divided into four business sectors: Mobility, 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 470 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 world. The basis for the company's future growth is its innovative strength. At 136 locations across the globe, Bosch employs some 85,500 associates in research and development, of which nearly 44,000 are software engineers.

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