

PRESS INFORMATION

Automation is the key to short cycle times, low production costs and flexibility in battery production

Manuela Kessler | 18.06.2024 | Lohr am Main / Germany |

Dr. Andreas Letsch, Head of Center of Competence Battery, Bosch Rexroth AG

The global demand for lithium-ion batteries (LIB) is increasing. By 2030, it will have multiplied compared to today. Manufacturers will only be able to meet the high demand in future by rapidly scaling up battery production capacities. To achieve this, production must become more efficient, more cost-effective and more sustainable. Bosch Rexroth supports machine and system manufacturers with the broadest product and solution portfolio on the market and across the entire battery production value stream - from electrode and cell production to end-of-line testing and the discharge process for subsequent recycling.

Intelligent solutions already help to save time during commissioning. Linear robots from Bosch Rexroth, for example, are supplied as complete mechatronic packages, optionally with pre-installed operating software. This means they can be quickly commissioned, sequenced and connected to the higher-level line control system. By combining different material transport systems, such as a cost-efficient chain conveyor system with a high-precision linear motor drive, manufacturers can focus precision solutions on areas where they are really needed. This enables high throughput and reduces the overall costs of the system. To shorten cycle times, several processes can also be mapped simultaneously using linear robots.

Our open automation system ctrlX AUTOMATION is the key to combining a wide range of solutions. With a real-time capable Linux-based operating system, consistently open standards, app programming technology, web-based engineering and a comprehensive IoT connection, it reduces component and engineering effort by 30 to 50 percent.

With the increasing demand for raw materials, but also regulatory requirements such as the EU Battery Regulation, battery recycling and the associated return of raw materials is becoming increasingly important. The majority of existing LIB recycling capacities are currently located in East Asia, particularly China, but capacities are also being built up in Europe. With its modular solution kit for the diagnosis, unloading and dismantling of used vehicle batteries, Bosch Rexroth enables the automation of these process steps upstream of recycling. The company supplied one of the first automated solutions in Europe to BLC - The Battery Lifecycle Company in Magdeburg.

Bosch Rexroth at the Battery Show Europe 2024: Hall 10, booth A40

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

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software and interfaces to the Internet of Things. With locations in over 80 countries, around 33,800 associates generated sales revenue of 7.6 billion euros in 2023.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 429,000 associates worldwide (as of December 31, 2023). The company generated sales of 91.6 billion euros in 2023. 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, electrification, digitalization, connectivity, and an orientation to sustainability. In this context, Bosch's broad diversification across regions and industries strengthens its innovativeness and robustness. Bosch uses its proven expertise in sensor technology, 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 user-friendly, 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 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. Bosch's innovative strength is key to the company's further development. At 136 locations across the globe, Bosch employs some 90,000 associates in research and development, of which nearly 48,000 are software engineers.

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