

PRESS INFORMATION

Bosch Rexroth AMR improves safety and productivity of manufacturing facilities

Eden Estabrook | 04/12/2022 | USA | AT22002

Rexroth North America's MP1000R is a new 1000 kg payload capacity autonomous mobile robot (AMR) that can automate material handling applications without additional external infrastructure.

Using Bosch Rexroth's ROKIT Locator Software, the MP1000R is able to navigate autonomously in highly dynamic environments without additional infrastructure. The MP1000R is a flexible and scalable solution which can replace manual forklifts and tuggers in manufacturing spaces, leading to improved efficiency and help protect workers from potential injury.

When used for industrial material handling tasks, forklifts and tuggers are often involved in thousands of warehouse accidents each year, some of which can be fatal. The MP1000R can safely and autonomously transport finished goods, raw material components and work in process on pallets or shelves within your factory or warehouse with flexibility similar to human-operated pallet jacks, forklifts or tuggers.

In collaboration with leading AMR provider Geek+, Bosch Rexroth developed the simultaneous localization and mapping (SLAM) technology for the MP1000R. The CE- and ETL-certified robot features hybrid navigation with SLAM + QR Code, 360-degree obstacle detection together with anti-collision bumpers and emergency stop buttons in the front and rear.

In addition to reducing safety risks, the MP1000R offers more flexibility to material handling processes. The MP1000R can lift a max payload of 1000 kilograms on a standard rack or shelf base. It can also interface with customer specific equipment using a square or roller top conveyor at customized heights. A large-capacity 39Ah lithium battery provides continuous power for the MP1000R for a typical 8-hour work shift via autonomous opportunity charging.

Its compact size and zero turning radius make it ideal for operating in tight spaces or down to aisle widths of 1400mm (55 inches). Its fully loaded moving speed of 1.5 meters per second makes it perfect for moving pallets and shelves between warehouses or automatic storage and retrieval systems (AS/RS) to production areas or shipping docks. Its location accuracy of +/-10mm enables materials feeding to the production line, work-in-progress (WIP) transfer and finished goods transport.

The MP1000R has minimal IT requirements and can easily interface with existing systems. It connects to on-site servers using existing wireless infrastructure and users can trigger robot actions via a web browser or handheld device. APIs are also available to connect the robot software to ERP, MES, WMS, PLC and more.

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The new MP1000R from Rexroth improves safety and offers greater flexibility in manufacturing spaces.

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 402,600 associates worldwide (as of December 31, 2021). The company generated sales of 78.7 billion euros in 2021. 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 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 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. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company's future growth is its innovative strength. At 128 locations across the globe, Bosch employs some 76,100 associates in research and development, of which more than 38,000 are software engineers.

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