

PRESS INFORMATION

Bosch Rexroth at LogiMAT 2023: Shuttle solution revolutionizes intralogistics

Manuela Kessler | 11.04.2023 | Lohr am Main / Germany | PI 021/23

- Mobile and flexible assistants are replacing rigid transport units
- The space-saving, high-performance control unit ctrlX CORE controls DAMBACH COMPACT SHUTTLE
- Pallets in high-bay warehouses can be stored and retrieved even more efficiently



The DAMBACH COMPACT SHUTTLE allows pallets in high-bay warehouses to be stored and retrieved even more efficiently. (Image source: DAMBACH Lagersysteme GmbH & Co. KG)

Intralogistics is changing: In many areas, mobile and flexible assistants are replacing rigid transport units or manual processes. The company DAMBACH Lagersysteme is bringing the benefits of automation to the warehouse. The DAMBACH COMPACT SHUTTLE allows pallets in high-bay warehouses to be stored and retrieved even more efficiently. At LogiMAT 2023 (Hall 6, booth D31), Bosch Rexroth will demonstrate how the solution is controlled by the space-saving and high-performance control system ctrlX CORE and how its strengths can thus be optimally exploited.

High-bay warehouses offer great potential when it comes to storage space and handling capacity. With flexible and automated conveyor technology, these factors can be exploited to the maximum compared to manually operated systems. DAMBACH therefore develops automated storage systems which meet both current and future demands for versatility and speed in industry and commerce.

1,500 kilograms pallets stored and retrieved in next to no time

The DAMBACH COMPACT SHUTTLE makes it possible to store and retrieve large load carriers, e.g. EUR pallets, in high-bay warehouse channels. It is extremely quick too: It takes less than two seconds to pick up or put down a load. Up to 1,500 kilograms can be picked up and transported reliably and quickly. Together with storage and retrieval machines or the transport vehicle "CARRIER", pallets can be stored in a particularly compact manner with multi-depth storage. The storage channels are equipped with runner profiles on which the shuttle moves. It travels

PRESS INFORMATION

along the runner profile to a specific storage area and then picks up or puts down a pallet. Optimized positioning of the shuttle further increases the storage density of the pallets on the shelf. The storage and retrieval machine or transport vehicle then brings it to the relevant loading or unloading point in the warehouse.

Small, light and open: ctrlX CORE controls the shuttle

ctrlX CORE is part of the automation toolkit ctrlX AUTOMATION from Bosch Rexroth and controls the DAMBACH COMPACT SHUTTLE 2.0. One of the unique selling points: The controller works with app technology thanks to the Linux Ubuntu Core operating system. As a result, new functions can be developed and added easily in order to meet virtually all automation requirements.

In addition to the control system, the shuttle uses servo drives controlled by ctrlX CORE for the axis movements “running and lifting”. Among other things, DAMBACH uses the motor-integrated servo drive IndraDrive Mi from Bosch Rexroth. The shuttle runs completely independently with its own power supply. This is provided via PowerCaps for energy storage purposes. As a result the system can run independently of the storage and retrieval machine in the warehouse channels and store and retrieve goods. The PowerCaps can be recharged in just a few seconds on the storage and retrieval machine or transport vehicle, which means that the system can operate 24/7 without interruptions.

Thorsten Veit, Head of Control Technology at DAMBACH Lagersysteme GmbH & Co. KG, explained: “The control system ctrlX CORE is small, light and open. These properties made it extremely easy to integrate. Engineering and operation are equally straightforward. Programming the system requires no specialist knowledge. And the solution grows along with your requirements. It can easily be expanded with apps such as NodeRed for IoT applications. Thanks to the open platform design, new functions can be added to the shuttle at any time, thus ensuring that it remains future-proof and always on the move.”

DAMBACH decided to use components from Bosch Rexroth because of their compact, high-performance design. These properties mean that they have a key advantage compared to other solutions on the market. “It saves even more space in the shuttle and we can use the freed-up space to store our shuttle caps. System performance could therefore be improved further – with an increased operating time. Thanks to the more compact dimensions, the storage density in new projects can be increased significantly. A further advantage is the high resilience of Bosch Rexroth components – they are unaffected by external influences such as vibrations. That makes the shuttle even more robust,” said Thorsten Veit.

Bosch Rexroth will demonstrate this and other solutions for inbound, outbound and intralogistics of the future at LogiMAT in Stuttgart (Hall 6, Stand D31) from April 25 - 27.

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

PRESS INFORMATION

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 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 420,000 associates worldwide (as of December 31, 2022). According to preliminary figures, the company generated sales of 88.4 billion euros in 2022. 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 85,000 associates in research and development, of which nearly 44,000 are software engineers.

Press Contact

Please get in touch with our Press Contact



Manuela Kessler

Spokesperson

technology topics

+49 9352 184145

Manuela.Kessler@boschrexroth.de