

## PRESS INFORMATION

# ActiveShuttle with Advanced Interaction: simpler, safer and more flexible

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Autonomous mobile robot from Bosch Rexroth automates intralogistics and finds its own way around factories.

- Maximum safety: Personal and object protection
- Interactive touchscreen display for easier operation
- Compatible with VDA 5050



Touchscreen display and 3D obstacle detection: The new ActiveShuttle with Advanced Interaction transports small load carriers autonomously, safely and with great flexibility. (Image source: Bosch Rexroth AG)

**The autonomous mobile robot ActiveShuttle with Advanced Interaction brings more movement into intralogistics while increasing safety, efficiency and flexibility. The camera-based 3D obstacle detection system even recognizes objects protruding into the vehicle's path and thus offers improved object protection. The new integrated touchscreen display allows individual configuration and quick fault management on the mobile robot itself. The updated AMS (ActiveShuttle Management System) control software communicates seamlessly with the shopfloor infrastructure and allows individual transport jobs with configurable job templates.**

With the ActiveShuttle, intralogistics processes can be made highly flexible without having to change the factory infrastructure. The robust, plug & go ActiveShuttle transports dollies with small load carriers and a total load of up to 260 kg through factories in a fully automatic manner.

### 3D obstacle detection increases safety

The integrated personal protection system meets Performance Level (PL) d requirements as specified in EN ISO 13849-1. As a result, the new ActiveShuttle with Advanced Interaction can move freely around factories. In addition to the safety laser scanners, stereo depth cameras survey the room three-dimensionally. As a result, even objects protruding into the vehicle's path either above or below the scan level are recognized. Consequently, the mobile robot can brake and avoid obstacles in real time. The improved recognition capabilities not only increase site protection – they also allow the system to be used in tight spaces, environments with obstructions or non-standardized environments with no defined floor areas.

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### Touchscreen display: Interaction on location

The ActiveShuttle is geared to conventional supply principles such as cyclical transport or the consumption-based supply of materials. The new touchscreen display which is integrated into the vehicle console makes the system even more efficient. After all, the operating personnel can now interact directly and intuitively with the mobile robot. This ensures greater transparency thanks to job and status information, saves time when diagnosing and rectifying faults and makes boarding easier.

### Job and fleet management even more flexible and individual

Thanks to the integrated VDA 5050-compatible communication interface, ActiveShuttles can be used anywhere. In practice, users already utilize them in conjunction with various VDA 5050-compatible management systems in intralogistics. With the ActiveShuttle Management System (AMS), Bosch Rexroth also offers a comprehensive piece of software for fleet and job management which now offers even greater degrees of freedom. In addition to simple transport movements from the source to the sink, complex work sequences too can now be created. For example, users can define reference trips or use advanced functions. When it comes to machine-to-machine communication, the ActiveShuttle can send signals to specific route points or only set off in response to a relevant signal.

Jobs are transferred to the ActiveShuttle either fully automatically from higher-level IT systems (MES, ERP etc.) or manually via the web-based operating interface with the help of a PC or tablet. The connection to the shopfloor infrastructure is being continuously improved with a view to connecting assembly and logistics seamlessly. Machines, robots and sensors (e.g. dash buttons) can communicate directly with the AMS via various standard interfaces and request replenishments if materials are running low for example.

### 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 2021.

### 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

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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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