

Press Release

Working hydraulics from Bosch Rexroth sets Internet of Things in motion

The new EDG valve block translates IT commands into concrete movement sequences for customized warehouse processes

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Network-capable implement hydraulics control the customized movement sequences in the entire logistics operations. (Copyright: Bosch Rexroth AG)

The Internet of Things (IoT) is gaining enormous importance in logistics. Furthermore, the connection of virtual cloud-based business transactions with concrete logistics processes is rapidly progressing. With its new EDG valve block, Bosch Rexroth is pushing ahead in providing the necessary control of the working hydraulics using IT systems. Implement hydraulics can handle different situations and the requirements of conveyor systems without human intervention using the appropriate control units in the vehicle and gateways to higher-level systems.

Especially in warehouses containing a wide variety of goods, operators of forklifts must comply with a large number of specifications in order to transport sensitive goods with the necessary care. In light of increasing warehouse sizes and wider varieties of goods, drivers can easily become overwhelmed, resulting in damaged goods. IoT approaches guarantee that sensitive goods are lifted and placed down gently and offer the possibility of having complete documentation. To accomplish this, they have direct access to the implement hydraulics and additional sensors on the fork lift truck.

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This is exactly what Bosch Rexroth makes possible with electrified hydraulic solutions such as the new electrohydraulic EDG valve block with load-sensing pressure limitation. IT systems use sensors to detect the goods being transported and their respective handling instructions. These specifications are sent via gateways to the electronic Rexroth control unit from the BODAS family, which then translates these specifications into setpoints for the EDG valve block. As a result, the support function offered by IT has a direct influence on the implement hydraulics' power, acceleration and other parameters, thereby providing relief to the driver.

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The Rexroth EDG electrohydraulic valve block has a modular sandwich plate design and the basic variant is aimed at the market segment of 1 to 3.5 ton fork lift trucks. The optimized flow in the cast iron components greatly improves efficiency. Load pressure-independent load-sensing (LS) is available for all sections of the blocks. The pressure compensator and the secondary valves are integrated into the disc housing. Flow volumes of up to 120 l/min are possible by exchanging the inlet element. Hence the valve block can also be used for fork lift trucks above 3.5 tons.

Economical, precise, safe, and energy efficient: drive and control technology from Bosch Rexroth moves 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 to develop innovative components as well as tailored system solutions and services. Bosch Rexroth offers its customers hydraulics, electric drives and controls, gear technology, and linear motion and assembly technology all from one source. With locations in over 80 countries, more than 29,500 associates generated sales revenue of approximately 5 billion euros in 2016.

To learn more, please visit www.boschrexroth.com

The Bosch Group is a leading global supplier of technology and services. It employs roughly 400,500 associates worldwide (as of December 31, 2017). According to preliminary figures, the company generated sales of 78 billion euros in 2017. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT company, Bosch offers innovative solutions for smart homes, smart cities, connected mobility, and connected industry. 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 create solutions for a connected life, and to improve 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 450 subsidiaries 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. The basis for the company's future growth is its innovative strength. At 125 locations across the globe, Bosch employs 62,500 associates in research and development.

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