Bosch Rexroth introduces innovative drive solution for movable bridges and ship lock gates

Compact integrated electro-hydraulic solutions provide plug-and-play installation and control

- Innovative solution combines hydraulics with drive control in one compact linear actuator
- Integrated oil reservoir reduces on-site space as no separate power unit and oil tank are required
- Closed-loop system ensures high efficiency

Bosch Rexroth, the leading company in drive and control solutions, has introduced a new system concept of electro-hydraulic drives targeted at large civil engineering and infrastructure projects, such as ship locks and movable bridges. The innovative system features a compact hydraulic cylinder with integrated servo-hydraulics.

The new actuators use a closed loop system, which means that there is no need for large oil storage reservoirs at the site, often a significant factor in civil engineering or industrial projects. This has the additional benefit that the systems can fully tested before delivery, significantly reducing testing and commissioning on site. The hydraulic cylinders are also very resilient to sudden shocks or external loads, such as those caused by a ship moving into and through a ship lock.

“This solution draws on closed-loop hydraulic systems that we developed for the offshore market. By combining those with our proven drive technologies, we have developed an innovative solution that addresses the needs of the civil and infrastructure markets,” said Ron Van den Oetelaar, Vice President Business Unit Large Projects at Bosch Rexroth.
Press Release

The new systems bring together proven technologies from six different Bosch Rexroth divisions including the closed loop hydraulic cylinders, the electric drivers, power units and the control systems. The latter can be installed separately in their own cabinets or integrated with the overall operating or control system for the project.

Additionally, the system can include sensors that monitor oil quality, temperature, etc. This allows for remote monitoring of the systems and enables predictive maintenance, as the operator can see if there is an issue developing and schedule maintenance outside of normal operating hours.

“These smart electro-hydraulic cylinders are the missing link in smart infrastructure systems.” said Mr. Van den Oetelaar. “They bring the reliability of Bosch Rexroth's hydraulic cylinders to the market in a simple plug-and-play solution.”

About Bosch Rexroth:

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 390,000 associates worldwide (as of December 31, 2016). According to preliminary figures, the company generated sales of 73.1 billion euros in 2016. 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 440 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 120 locations across the globe, Bosch employs 59,000 associates in research and development.