PRESS INFORMATION

Less is more: Intelligent, sustainable hydraulics saves resources

Manuela Kessler | 29.08.2022 | Lohr am Main / Germany

The current shortages of energy, raw materials and specialist staff are affecting companies around the world. At the same time, climate protection and decarbonization are becoming key priorities for global industry. Intelligent, sustainable and safe hydraulic solutions play an important role in helping machine manufacturers and end users of metal forming and sheet metal working to meet these challenges throughout the entire life cycle.

Software tools and preconfigured modules for hydraulic systems make engineering easier and speed up commissioning. By shifting once mechanical functions to the software, hardware variance can be reduced and concepts can be adapted to meet specific customer-specific requirements quickly.

Even in the design phase, engineers are able to parameterize the digital twins of intelligent hydraulic solutions. On this basis, they can then reduce the commissioning time by transferring the saved settings to the hydraulic modules. Software wizards guide technicians – even those without a specific knowledge of fluid technology – logically through the commissioning process. As a result, they obtain stable and efficient controller settings more quickly.

For end users, the availability and productivity of machines and systems are key factors. Hydraulics scores here with its great robustness and energy efficiency. With their variable-speed drives, modern hydraulic power units and ready-to-install self-contained actuators set new standards when it comes to power and energy efficiency. They reduce the power consumption of hydraulic systems by up to 80 percent. Intelligent die cushion controllers for the lower piston recover energy and feed it back into the machine to reduce energy consumption.

Data-based maintenance concepts are becoming increasingly important as a way of avoiding unplanned downtimes. Connected hydraulic systems monitor component wear, allow real-time access to current and historical data and analyze these data predictively.

With the help of machine learning, the data obtained can be used to come up with maintenance recommendations early on, thus allowing end users to replace the components affected as planned. By avoiding unplanned downtime and with improved maintenance planning, considerable costs can be saved and productivity can be increased. In many cases, avoiding an unplanned system standstill means that the money invested is immediately recouped.

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 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.

Press Contact

Please get in touch with our Press Contact

Manuela Kessler
Spokesperson
technology topics
+49 9352 184145
Manuela.Kessler@boschrexroth.de