

---

## **Automatic control loop tuning** **New software components for easy hydraulics control**

*B&R is introducing new software components for controlling hydraulics applications. These components provide easier access to advanced closed-loop control functions and assist developers in the design, simulation, virtual commissioning and diagnosis of hydraulic systems. B&R mapp Hydraulics provides numerous new functions, particularly for variable-speed pump drives.*

### **Automatic control loop tuning**

With the autotuning function, the system automatically optimizes the control loop parameters for the hydraulic pressure controller. This boosts both quality and system performance. Optimized pressure control parameters also help prevent damage caused by overloading or cavitation.

If autotuning is used during operation, the machine software can automatically recalibrate the controller following changes to environmental conditions or other factors such as load forces or characteristics.

### **Automatic calculation of maximum values**

Another mapp Hydraulics component automatically calculates the maximum acceleration and deceleration values for a hydraulic drive. The drive moves autonomously within the operational limits defined by the user to identify the maximum values for a given hydraulic axis. This significantly shortens commissioning times for hydraulic axes.



mapp Hydraulics software components provide convenient access to advanced closed-loop hydraulic functions.

## About B&R

B&R is an innovative automation company with headquarters in Austria and offices all around the world. On July 6, 2017, B&R became a business unit of the ABB Group. As a global leader in industrial automation, B&R combines state-of-the-art technology with advanced engineering to provide customers in virtually every industry with complete solutions for machine and factory automation, motion control, HMI and integrated

safety technology. With Industrial IoT communication standards like OPC UA, POWERLINK and openSAFETY as well as the powerful Automation Studio software development environment, B&R is constantly redefining the future of automation engineering. The innovative spirit that keeps B&R at the forefront of industrial automation is driven by a commitment to simplifying processes and exceeding customer expectations.

---

## Condition monitoring for mobile equipment Higher machine availability with mobile X90 control system

*The modular X90 control and I/O system can now be equipped with condition monitoring functions. Problems can be detected in their early stages and corrected before they result in unplanned downtime. Condition-based predictive maintenance can maximize machine availability and save the considerable cost of outages and unplanned service calls.*

### Predictive maintenance

The X90 module allows operators to continuously monitor the status of mobile equipment. The results help determine exactly which components require maintenance and when. Typical applications include continuous monitoring of rotating machine components such as hydraulic assemblies, belts, gears and motors. The processed sensor data is also available for further use in the application.



The optional condition monitoring circuit board provides early warning of impending failures on mobile equipment.