



Innovative technology  
and products for  
metalworking

PERFECTION IN AUTOMATION  
A MEMBER OF THE ABB GROUP



# Your automation partner

Machine tools are the backbone of modern manufacturing. To meet smart factory requirements, they need state-of-the-art solutions for operation and communication. With B&R's innovative products and cutting-edge technology, you'll be equipped with the competitive advantage that makes all the difference.

Eroding (EDM)



Bending, folding and straightening



Punching and stamping



Cutting (laser, plasma, oxy-fuel, waterjet)



Welding and soldering



# for metalworking



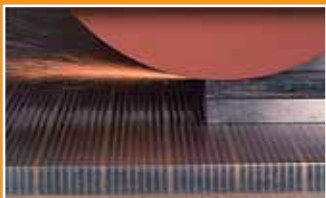
Milling



Turning



Drilling



Grinding



Polishing, deburring and honing



#### HMI 4.0

B&R's fully customizable HMI solutions make even the most complex machine tools efficient to operate.

With B&R's mapp View HMI solution, you can give your machine tool a state-of-the-art web-based user interface even without special web design training. HMI pages can be viewed on a variety of devices, even providing user-specific content on each device.

- - Custom panels and operating elements
- - Modern web-based HMI without specialist training
- - Multi-client and multi-user mapp View architecture



#### Energy monitoring

The ready-made mapp Energy software block makes it possible to set up a comprehensive energy monitoring system with only a few clicks of the mouse. mapp Energy automatically collects energy data for the entire machine and displays it in a clear overview on the HMI screen.

- - Automatic collection of energy data for entire machine or line
- - Energy consumption converted to costs
- - Custom reports and dynamic analysis



#### OPC UA for seamless connectivity

Vertical and horizontal connectivity is a core component of the Industry 4.0 concept. OPC UA simplifies line integration and connects production management systems (SCADA, MES and ERP) to your machine tools.

B&R has tightly integrated OPC UA into its automation products. Any B&R controller can be operated as an OPC UA server or client.

- From the sensor to the ERP system
- Cross-vendor, cross-platform communication





More than 100 manufacturers of metalworking machinery put their trust in automation solutions from B&R:



### Integrated safety technology

B&R's integrated safety technology makes it possible to design truly modular machinery and equipment. With POWERLINK, safety-related and standard machine modules can be combined in a single network. B&R offers a complete PLCopen-compliant library of safety functions for mechanical, electrical and hydraulic press applications.

B&R's integrated safety technology complies with the applicable industrial safety standards: IEC 61508, IEC 62061 and ISO 13849.

- Increased machine modularity
- One safety application for many machine options
- Streamlined mechanics and reduced machine footprint



# Your automation partner

*"ACOPDS functions blocks and POWERLINK cross-communication have been key to the performance of our new controller. These mechanisms allow the BSR drives to execute control functions remotely and to communicate directly with one another without going through the controller."*



Roland Regler,  
Chief Designer,  
Kadia

## Software development fast and easy

B&R's innovative mapp technology allows machine tool manufacturers to develop their application software faster – and test it faster too – with mapp components providing extensive options for simulation and diagnostics.

The B&R system offers machine tool manufacturers an integrated, multi-channel system with control and CNC running on a shared processor. This allows the CNC system to read and write variables on the controller with exceptionally precise synchronization, as well as use them in standard and user-defined function blocks, making it easier to implement user-specific machine tool functions.

- mapp technology for machine tools
- Universal engineering tool for simulation, programming, testing and commissioning
- Open for application-specific functions



## Predictive maintenance with APROL ConMon

By combining centralized acquisition of operating and process data with integrated condition monitoring, APROL offers the advantages of condition-based maintenance with minimal effort.

- Prevent secondary damage through timely detection of primary damage
- Increase machine uptime
- Avoid unnecessary repair and replacement



# for metalworking

*"We selected B&R as our supplier because of its products' performance, the global presence, the ability to support and service our customers with parts, service and technical information, as well as the potential for a true partnership where we could essentially co-develop technology."*

Tim Fabian,  
Director of Customer Care,  
FLOW



## Scalable hardware and software platform

Every machine has unique demands with respect to automation hardware and software. To equip each variant with an optimal solution, you need both cost-effective and high-performance options.

B&R offers a seamlessly coordinated product range that covers all performance classes. Customers can choose from a wide range of industrial PCs, operator panels and controllers. B&R drives can be perfectly dimensioned to meet the needs of a given application.

- The right hardware platform for every application
- Cost-effective, high-performance solutions
- Hardware-independent software development

## Robots as machine components

B&R offers the most advanced form of robotics integration – with robots seamlessly incorporated in the machine's control logic. Whether it's a press brake, transfer machine or machining center, machines and robots share the same processor and the same memory. Robot and machine are fully synchronized with a jitter of less than one microsecond. The common DC bus for machine and robot drives enables maximum energy efficiency.

- Maximum productivity through synchronization of robot and machine tool
- Common DC bus for energy efficiency
- Web-based diagnostics and remote maintenance



Integrated automation  
Global presence  
Solid partnership



ETHERNET   
**POWERLINK**

open   
**SAFETY**