

PRESS INFORMATION

Bosch Rexroth Launches Next-Generation Adaptive Resistance Welding Controller

Eden Estabrook | 01/14/2022 | USA | AE22001

PRC7000 family of high-speed automated welding controllers features advanced processors and new software to help manufacturers maximize welding throughput and quality

Bosch Rexroth is an industry leader in the development of automated resistance welding controllers, introducing several generations of more sophisticated adaptive resistance control systems that incorporate advancements in software and processor performance.

The PRC7000 provides the highest-quality weld control, with reliable high weld spot quality and ultraprecise adjustment of the welding current to eliminate spatter and expensive reworking. Innovative software tools and a modular design enable up to 90% faster commissioning, making it much easier for manufacturers to implement and use the system.

The PRC7000 can store up to 10,000 welding programs that can be easily selected and built via a drag-and-drop graphical interface to program more sophisticated welding sequences that can have 100 or more separate heat blocks. Through user-friendly programming tools, each heat block can be configured to handle specific weld criteria.

The system also features a new, Industry 4.0-ready dual-processor architecture for both process control and communications with higher-level automation systems. This design enables high data transfer rates without affecting the process control; combined with an integrated web server, this supports wireless operator control and diagnostics via mobile devices.

The new system has a more compact design, with features created to improve energy efficiency. The PRC7000 reduces energy consumption by 30% in operating mode, compared to previous systems, and up to 80% in idle mode. New performance electronics reduce power loss and enable the use of smaller, more compact cooling systems to help keep the system's footprint to a minimum.

Patented technology addresses changes in automotive manufacturing

The PRC7000 system incorporates major advances in controller hardware and software to help address key developments in automotive manufacturing, such as an increased use of high-strength steel, aluminum and next-generation materials in vehicle bodies and parts.

The core of adaptive resistance welding control is having the capability to adjust the quality of the weld within a millisecond time frame. With the PRC7000, Rexroth is introducing a patented capability for the controller's force feedback system that reads the expansion of the aluminum due to heat and can regulate the weld through adaptive control of the weld tip pressure and the current being applied.

This new capability makes it easier for manufacturers to incorporate new materials in their vehicle and equipment designs without risking complications and added costs or quality control problems in their assembly operations.

For more information on the PRC7000, visit www.boschrexroth-us.com/prc7000.

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Industry 4.0-ready PRC7000 adaptive resistance welding controls feature a dual-processor architecture to enable high data transfer rates without affecting the welding process control.

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.

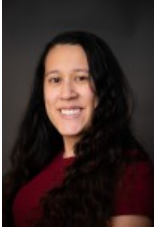
Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 395,000 associates worldwide (as of December 31, 2020). The company generated sales of 71.5 billion euros in 2020. 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 129 locations across the globe, Bosch employs some 73,000 associates in research and development, of which nearly 34,000 are software engineers.

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