



For Worldwide Release: March 2023

Release Number: 711PR1

New HBT PMC-R 2.0 longwall roof support control unit enhances automation readiness with greater computing power and expanded communication capabilities

Luenen, March 3, 2023

The new HBT PMC-R 2.0 roof support control unit is designed to provide a solid foundation that increases autonomous capability and sets the benchmark for high-performance longwall mining systems, now and into the future.

Advanced microcontroller technology with increased computing power and enhanced communication capabilities offers the user a future-proof control system for HBT and third-party roof supports used in self-advancing longwall systems. The PMC-R 2.0 also delivers a superior operator interface for both local and remote control and improved serviceability on the mine-site, which results in a lower total cost of ownership over the life of the controller.

The next-generation design features a complete electronic and network architecture upgrade, equipping the controllers to meet future demands of automated longwall mining without hardware upgrades. Lower latency communications delivered through its fast Ethernet backbone increases refresh rates, making data analysis and reporting more efficient and remote operation easier and safer. Machine health and process information is updated in near real time, allowing for faster decision making.

The PMC-R 2.0 boasts a durable, highly resistant metal housing with chrome plating, offering an IP 68 rating, so it can handle the toughest conditions on the longwall. Compatible with the majority of current HBT roof support electronics, only minimal updates to existing components are required, allowing operations to easily and cost effectively deploy the new system as a retrofit or upgrade. With equipment uptime critical for any high-performance longwall operation, key learnings from the successful PMC-R are incorporated into the core design of the new controller, resulting in demonstrable in-service reliability more than 99.9%.

Expanded capabilities

The PMC-R 2.0 features an A6 family controller with multicore central processing unit (CPU) architecture and increased memory to provide a performance increase of nearly 10 times its predecessor. Combined with its 100 Mbit/s, high-speed Ethernet backbone, the data transfer between roof support controllers and other longwall equipment is significantly improved, resulting in more effective equipment integration. The increased bandwidth provided by the new design allows for greater data traffic through the control system backbone for advanced machine health diagnostics with virtually real-time updates on equipment performance and status.

The new controller also offers expanded communications capability. Its integrated wireless technology delivers more connectivity for options like wireless shield recovery, integrated infrared receiver for backup shearer position detection, and a Controller Area Network (CAN) interface for additional sensors and future smart device connections such as the Next Generation Personal Proximity Detection system.

Reducing the cost of ownership to improve financial performance, the new controller offers easy and cost-effective in-service component repair. The buzzer and keyboard foil can be easily exchanged at the mine-site, which provides a cost benefit and significantly reduces the risks associated with sending equipment off-site for repairs.

Enhanced operation and safety

Offering a more intuitive and convenient operator experience, the new color LCD display of the PMC-2.0 is 50% larger and includes features such as enhanced help functions, full text capability and more direct access keys. Boasting an ergonomic design and reduced weight, the most frequently used functions are arranged for ease of operation. Function keys offer haptic feedback for the operator as a positive confirmation of operator commands. Push button recording functionality, combined with haptic feedback, ensures commands issued by the operator are confirmed and recorded to provide an additional layer of safety.

Analyzed by function to identify risk during operation, the new Cat PMC-R 2.0 roof support controller is certified with a SIL2 (safety integrity level) rating with regard to local lockout, local emergency stop and face-wide emergency stop. This provides increased levels operator safety without adversely impacting production.

More information about the PMC-R 2.0 longwall roof support controller can be found by contacting your regional HBT representative or visiting: <https://www.hbt-group.com>

©2023 HBT GmbH All Rights Reserved

Press Inquiries

Guido Schawohl
Marketing Communications
HBT GmbH, Industriestrasse 1, 44534 Luenen, Germany
P +49 2306.709.1183 M +49 170.91.52.244
guido.schawohl@hbt-group.com
www.hbt-group.com
[LinkedIn](#)