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HBT GmbH

UNLEASHING
THE POWER OF
AUTONOMOUS
MINING



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UNLEASHING THE POWER OF AUTONOMOUS MINING



HBT GmbH's roots lie in the longwall mining industry, dating back to the early days of mechanised mining in the 1800s. Over the past two centuries, the company has driven innovation and performance, shaped by a series of industry leaders—notably Hauhincó, DBT and Caterpillar.

In 1908, Hauhincó established itself in Germany as a trusted manufacturer of pneumatic tools. DBT, renowned as a technology leader, brought over two centuries of experience in mechanising and automating the coal industry. DBT's innovations, including the armoured face conveyor and coal plow were pivotal in the development of modern longwall mining. Caterpillar Global Mining also boasts a rich engineering heritage and mining industry experience, with impressive industrial manufacturing capabilities, cutting-edge technology, and advanced supply chain systems. Through the seamless integration of these elements, HBT has positioned itself for the future as a powerful, fully integrated mining technology provider.

The formation of the HBT GmbH was bolstered by the acquisition of forward-thinking, high-performance companies, including Waratah Engineering, Exprotec, Pempek Systems, Breuer Motoren and Advantec. The international **HBT GmbH** now brings together a network of high-performing, medium-sized companies that combine their strengths to offer a single, fully integrated solution for mining and tunnelling. Specialising in high-performance longwall mining systems, room-and-pillar and roadway development equipment, HBT is supported by advanced automation technologies and electrical engineering, all backed by a global team of experts.

It recently joined forces with TotalEnergies to provide a complete fluid and lubricant

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solution, including Longwall HFA fluid and predictive maintenance services.

“Our approach isn't about adding parts; it's about creating whole solutions,” says Christoph Koslowski, CEO. “Mining is evolving fast, and we're ensuring our partners don't just keep up but lead.”

What does this mean for mining operations? More than a manufacturer of cutting-edge tools, they gain a trusted ally committed to solving real challenges. From enhancing safety to increasing efficiency and delivering groundbreaking autonomy, it ensures clients are ready to lead the way into the future of mining.

Purpose-Built for the Toughest Conditions

Reliability and operability are the two pillars of HBT's equipment enabling it to withstand the harsh conditions of underground mining. With a strong emphasis on research and development, HBT ensures its diverse solutions—from hydraulic roof supports and gear-driven conveyors to programmable mining controls—are engineered to adapt to varying seam heights and geological conditions to meet the highest standards.

“Our equipment can withstand extreme operational demands while maintaining optimal productivity,” says Jay Armburger, CTO.

Take HBT's electro-hydraulic control system for longwall plow systems, which automatically advances face conveyors and shield supports as coal is removed. The system enables precise operation in even the most challenging geology with adjustable parameters like coal hardness and cutting depth.

HBT's vertically integrated approach makes these advanced systems possible. Combining in-house expertise with trusted components from renowned brands like Breuer Motors and Hauhincó ensures every piece of equipment is built to endure the harshest mining conditions.

Another shining innovation is the HTD4100 High Torque Driven System for armoured face conveyors (AFC). Designed to optimise speed and torque control, the system features converted-controlled motors that deliver maximum torque at any speed. Real-time monitoring reduces equipment failures, while its modular design simplifies installation and maintenance. The result? Extended conveyor chain life, reduced downtime and increased productivity with reduced wear and tear.

Every product's ultimate mission is to help mining operations achieve and sustain peak performance and make sure the investment delivers maximum value.

Safer and Smarter Automated Mining

Longwall Mining has always been a delicate balance between risk and reward. The need for greater productivity often collides with the imperative to protect workers in some of the harshest environments. HBT tackles this challenge head-on through its advanced automation technologies, prioritising operational efficiency and worker safety.



A cornerstone of this innovation is its partnership with Pempek Systems, which introduces cutting-edge telemetry and remote-control capabilities to its mining equipment. Operators can manage complex tasks from a safe distance, reducing the need for manual intervention in hazardous areas to protect workers and streamline production.

HBT programmable mining controls (PMC) take automation to the next level. Designed explicitly for longwall mining, HBT's modular system dynamically adapts to shifting geological conditions. Automating critical processes, the PMC technology enables precision and flexibility in environments where split-second adjustments are what lead to success.

Many of its innovations are designed to keep workers safe by automating tasks like roof support adjustments and dust suppression. These systems reduce exposure to dangerous, dust-filled environments while ensuring operations stay efficient and productive.

One of the best examples is HBT's fully automated plow systems. Built specifically for low and medium seam heights its plow systems operate at speeds of up to three meters per second. Mines achieve impressive productivity without putting workers at risk. When paired with **HBT's** Advantec roadheaders, the ploughs become part of a broader solution. Together, they offer an unsurpassed approach to tunnelling and coal production, where efficiency and safety work hand in hand to meet the demands of modern mining operations.

Uninterrupted Support for Maximised Mining Efficiency

Where unplanned downtime can cost millions, support becomes imperative. HBT sets the gold standard for a global support network to keep operations running smoothly. From overhauls and refurbishment to re-engineering, its maintenance services extend equipment lifespan and maximise productivity.

Strategic acquisitions, like Waratah Engineering in Australia, strengthen HBT's localised last-mile support. These partnerships ensure faster, more effective maintenance, reducing downtime and empowering clients with confidence.

Beyond maintenance, HBT's upgrade programs breathe new life into older equipment. Customers can adapt to new technologies through component exchanges integrating advanced sub-assemblies. This forward-thinking approach enhances system functionality, delivering long-term profitability for mining operations.

Preventative maintenance is another cornerstone of the support strategy. Advanced monitoring systems with plug-and-play capabilities enable rapid installation and commissioning of roof support systems. Electronic controls, linked through a high-speed bus circuit, create intelligent systems that record and display critical operational data. Tools like HBT V-Software provide real-time data visualisation and remote monitoring, allowing teams to analyse machine performance and implement predictive maintenance strategies.

“Our system is designed for early fault detection, where data is monitored remotely at the headgate, allowing quick intervention when needed,” says Kevin Parsons, CSO.

Support doesn't stop at technology. HBT also invests in its customers by providing comprehensive equipment installation, operation and maintenance training. Properly trained teams can manage systems more effectively, reducing disruptions and ensuring steady productivity.



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When challenges arise, the 24/7 customer service line delivers immediate support. A computerised parts management system streamlines the spare parts supply chain—from identification to delivery—ensuring customers get the necessary components as quickly as possible. This reinforces HBT's commitment to keeping operations running efficiently.

From Germany to the World

HBT GmbH name has become synonymous with transformation in mining. A century of expertise has reshaped the boundaries of what's possible, redefining innovation into impact and partnerships into pathways for global progress. By empowering miners to extract resources with precision, sustainability and foresight, HBT **GmbH** is rewriting the industry's role in shaping a better tomorrow.

HBT **GmbH** is not just a legacy; it's a revolution in how mining connects safety, efficacy and environmental care with the pursuit of a purpose-driven future. **M&M**