

POWERING UP DOWN BELOW



Becker-Warkop's transport systems move passengers and cargo quickly and safely, above and below ground.

Becker-Warkop's next-generation power pack is moving people and materials safely and more cleanly in coal mines

In a coal mine, safety comes first. Becker-Warkop develops transport systems to move people and materials swiftly and safely in these hazardous underground environments. And to make the next generation of these systems a cleaner ride, Becker-Warkop chose a John Deere PowerTech™ E 6.8L Tier 3/Stage IIIA engine for its hydraulic power pack. Already, more than 30 John Deere-powered systems have been sold worldwide and new, compact designs are in the works.

Becker-Warkop Sp. z o.o., headquartered in Swierklany, Poland, is a leading producer of underground transport systems ideal for coal mines, where methane and coal dust pose explosion hazards. Building on 30 years of experience and a commitment to constant improvement, the company designs mining solutions that combine the highest safety standards with productivity and flexibility. "Our systems let contractors move materials faster and safer, so they can increase their development of coal seams while saving on labor and maintenance costs," says Mateusz Koc, international sales department manager.

Next-generation power

Finding the most suitable solution for the customer is one of the biggest challenges for Becker-Warkop. "Underground conditions can vary a lot: heat, dust, moisture. We constantly challenge ourselves to develop systems that work efficiently in extreme conditions," Koc continues.

Becker-Warkop uses a single power pack in its wide range of modular, diesel-driven floor-mounted and suspended monorail

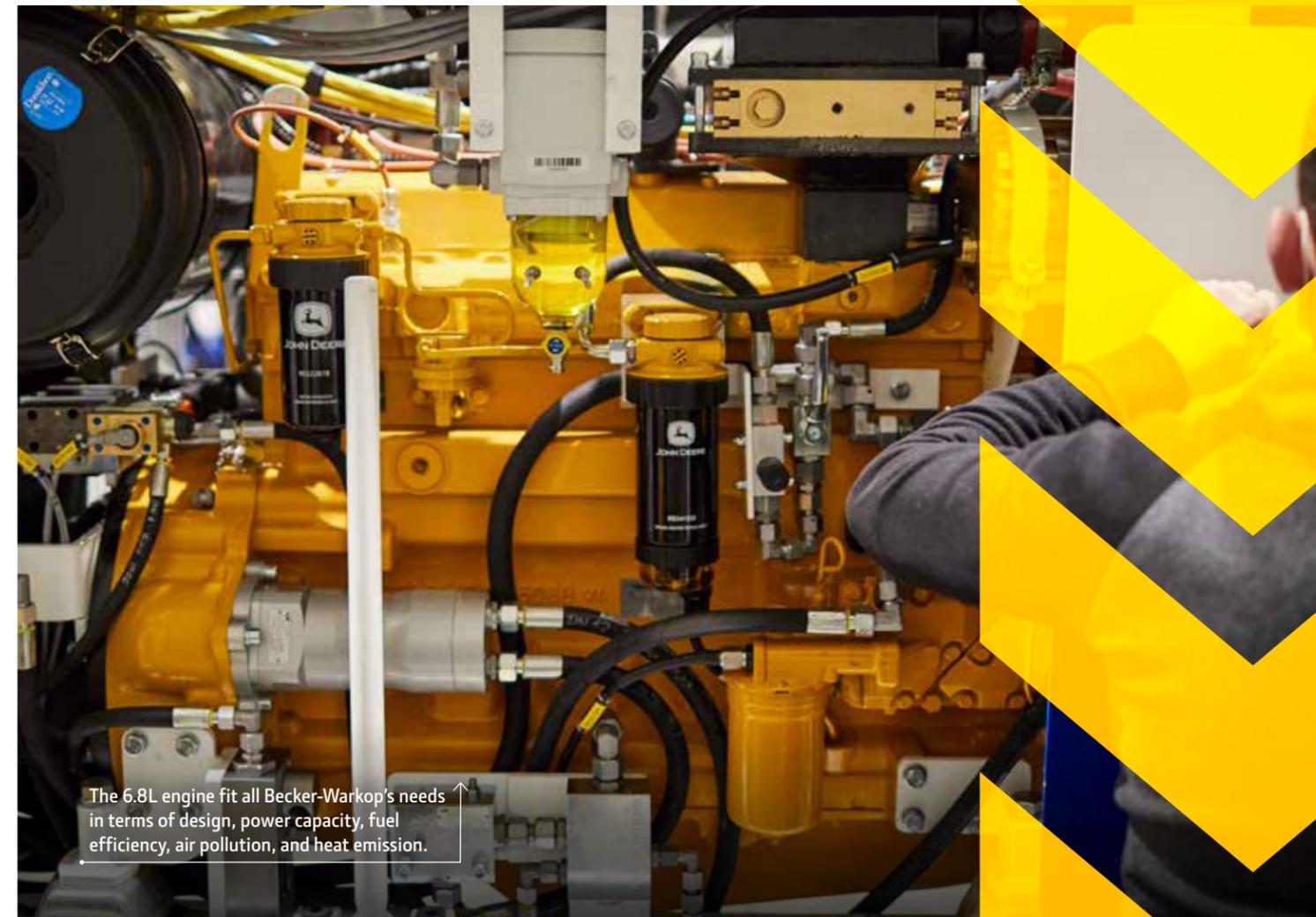
systems. "For our next generation of diesel-driven systems, our focus was on optimizing key aspects, including fuel efficiency, air pollution, and heat emission. And we knew from experience that for the 'ideal' diesel engine, a power ratio of 150 kW (200 hp) power would be optimal."

The 6.8L engine fit the bill: in power, Tier 3/Stage IIIA emission regulation, and simplicity of design. "It could also be modified to meet explosion-proof certification, which is crucial in mining applications," explains Koc. "The engine's high-pressure common rail injection system increases fuel efficiency and, combined with a new exhaust gas and engine cooling system, reduces air pollution and heat emission."

"Know-how, experience, reliability"

Becker-Warkop does everything in-house, from design stage to final product. "Our motto is 'Know-how, experience, reliability'," explains Koc. During design and development of the power pack, local John Deere engine distributor Techbud proved to be a true asset. "They gave us all the technical documentation and 3D models and were closely involved in the process."

Customers praise the 6.8L engine for its ability to maintain speed when carrying heavy loads.



The 6.8L engine fit all Becker-Warkop's needs in terms of design, power capacity, fuel efficiency, air pollution, and heat emission.

These guys are amazing; engaged in our product and committed to helping us market a product that makes a real difference for our customers. They visited us often during the development stage, and always answer our questions quickly. Plus, they gave great feedback and technical training for our staff."

Due to transport system's success, Becker-Warkop produces seven new units each month. "Our customers immediately noticed the difference: lower emissions, better fuel efficiency, and especially the ability to maintain speed when carrying heavy loads. This directly translates into higher efficiency."

The 6.8L engine is very flexible; it caters to different speed and pull configurations. "Our KPZS 149-kW, KPCS 149-kW, and KPCZ 149-kW suspended monorail systems and our KSZS floor-mounted, rack-and-pinion railway system all carry the 6.8L engine. The John Deere advantage is more than technical. Our systems are used all over the world, and the well-developed John Deere support network gives us and our customers reassurance and peace of mind."

This success certainly isn't slowing down Becker-Warkop's commitment to expanding its range of products. A compact system is currently being developed, which will be powered by a smaller capacity John Deere engine.

 Distributor: Techbud Sp. z o.o. in Zielona Gora, Poland; www.techbud.eu