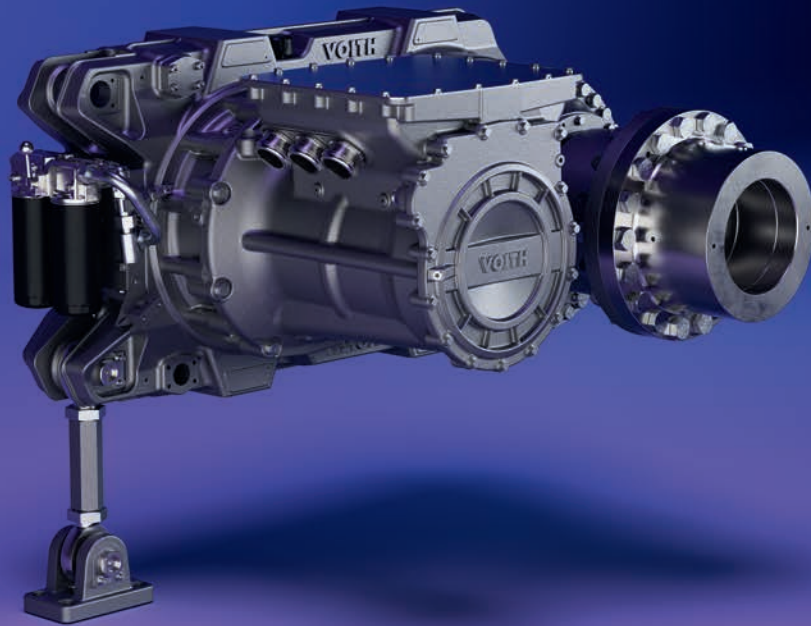




> PRODUCT SHEET

Electrify the conveyor. Invest smarter.

PowerDrive Mining

- > Attractive pricing
- > Robust technology and intelligent condition monitoring
- > Higher efficiency than industry-standard systems
- > Simplified transport and fast commissioning with BeltControl
- > One partner for drivetrain, control, condition monitoring and service



Why you as a plant owner should rely on PowerDrive Mining?



Attractive pricing

Thanks to our highly efficient manufacturing and the delivery of the complete drive package from a single source, we offer an outstanding price-performance ratio. In the motor, we use a material-optimized design – reducing copper without compromising efficiency and avoiding expensive materials

like rare earths. The system is also cost-optimized in its construction: just one dynamic seal reduces costs and increases robustness, as seals are typical weak points – and fewer of them means fewer potential failures compared to systems with multiple sealing points.



Higher efficiency than industry-standard systems

Our complete drive system achieves an overall efficiency of at least 92%, including all drivetrain components. The electric motor itself operates at an efficiency of up to 97%. This is made possible by the precise coordination of all components – motor, gearbox, and frequency converter are perfectly matched. The motor is optimized via characteristic map tuning and actively cooled by an external system, ensuring the electronics operate

consistently within the optimal temperature range. Additionally, the gearbox operates without conventional splash lubrication and an internal oil reservoir. Oil is injected directly to the lubrication points, reducing internal losses and increasing overall efficiency. The result: maximum efficiency with minimal energy consumption.



Sustainable product design

Sustainability is a key priority at Voith – that's why we continuously develop our drive systems with the future in mind. By using planetary gear units, we achieve exceptionally high power density, allowing for compact and lightweight designs. Compared to conventional systems with asynchronous motors and helical-bevel gear units, this results in a reduction of up to 18 tons of CO₂ emissions (Scope 1 and 2).

Our system is also highly efficient in operation: with a total system efficiency of over 92% and perfectly matched components – motor, gearbox, and a high-efficiency frequency converter – we ensure optimal energy use. This makes our solution not only powerful, but also a responsible choice for long-term sustainability.



Why you as a plant operator should rely on PowerDrive Mining?



Maximum availability through robust technology and intelligent condition monitoring

Our drive solution minimizes downtime and maintenance costs: The gearing is permanently designed according to ISO 6336, and the bearings achieve over 50,000 operating hours in accordance with ISO 16281 – without the need for relubrication thanks to lifetime lubrication. A solid cast housing reliably protects all components from external influences. If a component needs to be replaced, the modular design and low component weight enable quick replacement. With OnCare.

Health PowerDrive Mining, this robust design is complemented by continuous condition monitoring of the motor, gearbox and oil supply system. Component-specific health scores and advanced monitoring functions provide transparency into the condition of the complete drive system, enabling early detection of abnormal conditions and supporting condition-based maintenance planning. This helps reduce the risk of unplanned downtime and further increases system availability.



Simplified transport and fast commissioning with BeltControl

PowerDrive Mining is up to 65% smaller and lighter than conventional systems using asynchronous motors and helical-bevel gear units. This significantly reduces space requirements and simplifies both transport and handling. The preassembled and tested unit is delivered ready to connect – no shaft alignment or measuring is needed on site. Large cranes are unnecessary, enabling quick installation and minimizing commissioning downtime.

PowerDrive Mining includes BeltControl, a preprogrammed and tested controller for belt conveyor applications, coordinating the complete drive system with minimal parameterization. Standardized interfaces ensure seamless integration into the customer's control system, enabling faster commissioning and eliminating extensive custom programming.



One partner for drivetrain, control, condition monitoring, and service

With Voith, you get the complete PowerDrive Mining system from a single source – including drivesystem, BeltControl, OnCare.Health condition monitoring and lifecycle services. Our experts support the system throughout its lifecycle, com-

binning drivesystem expertise with digital condition monitoring and service capabilities. This integrated approach reduces interfaces and provides one reliable partner for the complete drive system.

Our know-how

For more than 100 years, Voith has been a trusted partner to the mining and material handling industries. Our comprehensive portfolio includes constant fill fluid couplings, filled controlled couplings such as the TurboBelt TPXL, pulleys, control solutions, engineering services, and conveyor consulting. With BeltGenius Conveyor Consulting, Voith supports the design of new conveyor systems and rapid root cause analysis for existing operations. Backed by extensive conveyor expertise, our specialists perform dynamic and static calculations and deliver reliable, customized solutions for complete belt conveyor systems.

Voith conveyor pulleys are engineered to perform, providing outstanding reliability and tailored engineering solutions



based on more than a century of conveyor experience. Through ELIN Motoren, a Voith company, we contribute over 130 years of expertise in electric motor development, with a product range from 50 kW to 60 MW. In addition, Voith has been manufacturing planetary gearboxes since 1932, with more than 7,000 units supplied worldwide. Designed for demanding industrial applications, these high-efficiency gearboxes combine proven reliability, precision engineering, and decades of drivetrain expertise. Together, these technologies enable Voith to provide fully integrated drive solutions from a single source for the world's most demanding conveyor applications.

