

ENERGY SOLUTIONS FOR THE MINING INDUSTRY



EWT'S DIRECT DRIVE TECHNOLOGY, HIGH ENERGY YIELDS AT A LOW COST



About EWT

Dutch wind turbine company Energya Wind Technologies is a global designer and manufacturer of high-quality direct drive wind turbines, known for their outstanding performance, reliability and cost effectiveness. The company has an extensive product line, a highly qualified in-house engineering team and a dedicated service and maintenance organization.

Direct Drive technology for optimal reliability

EWT's direct drive wind turbines achieve high energy yields at a low cost. The combination of proven direct drive technology and advanced control features makes **EWT's DIRECTWIND** the more productive and reliable choice.

In **DIRECTWIND** technology, the turbine rotor directly powers the generator without the need for a gearbox. This significantly reduces the number of rotating components, resulting in less wear and tear and consequently a lower maintenance need, saving costs.

DIRECTWIND equipment features

There are over 650 **EWT DIRECTWIND** turbines operational in Europe, Asia and North America. Notwithstanding the remoteness of some locations, the size and dimensions of EWT wind turbines allow them to be transported to places without a major road network. Bringing projects to fruition in the most isolated of areas has made EWT a specialist in peripheral and stand-alone power generation.

The **DIRECTWIND** turbine is suitable to operate in weak grids and micro grids and can easily be connected to the existing network. This allows for:

- ▶ Distributed generation; on-site generated electricity, at the point of consumption
- ▶ Improvement of micro grids
- ▶ Integration of the **DIRECTWIND** technology with other forms of on-site generation such as diesel and solar, connected to the local substation



EWT DECREASES MINING OPERATIONS' CARBON FOOTPRINT

EWT DIRECTWIND solutions

EWT has the expertise to efficiently manage the integration of often complex industrial processes with the successful operation of our wind turbines, displacing the use of conventional energy sources such as diesel at different stages of the production process.

With regard to mining operations, EWT provides power supply solutions to specific processes, including:

- ▶ Water treatment works
- ▶ Desalination plants
- ▶ Water pumping stations
- ▶ Power supply to mining camps
- ▶ Operations at loading docks
- ▶ Specific machinery operations, such as broken engine replacement, ventilation systems, etc.

Monitoring services

Experienced Operations & Maintenance professionals at EWT's headquarters in The Netherlands use specialist software to monitor over 650 operational turbines worldwide. Monitoring and turbine performance analysis take place on a 24/7 basis, which guarantees the earliest possible response to any irregularity. Complementing this are established Service Teams in countries where EWT wind turbines are in operation, in order to ensure a quick response time should on-site support be required.

If required, monitoring software can also be made available to EWT customers directly, enabling them to monitor the turbine's performance from their offices on a minute-to-minute basis.

DIRECTWIND Service Programme

- ▶ Extended product warranty
- ▶ Preventative maintenance
- ▶ Corrective maintenance
- ▶ Power curve guarantee
- ▶ Availability guarantee
- ▶ Business interruption compensation



**MORE ENERGY
LESS COMPLEXITY**

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Today, the mining industry is one of the largest consumers of energy. The use of electricity has become critical for the industry, both in terms of cost as well as reliability. Many mining operations are situated in remote areas, connected to weak electricity networks, or even operating without any grid connection at all. In many of these cases, electricity prices exceed the prices that wind power can achieve.

EWT's energy solutions provide much-needed continuity and security of supply, decreasing the risks and costs associated with the transport and storage of diesel, generator outages and unreliable network connections in remote areas. By providing a reliable energy source that has the capacity to generate a substantial part of the mining operation's total consumption,

EWT helps to stabilize and improve energy supply and reduce downtimes. By generating zero-carbon power at the point it is needed, EWT helps mining operations to significantly reduce their carbon footprints, enabling them to improve their green credentials and corporate reputation.

EWT offers flexible energy solutions that can be adapted to meet each client's specific technical and operational requirements. For each project, the team undertakes a feasibility study, financial modelling and works out which system fits best with existing operations, resulting in an affordable, cost-effective and competitive solution.

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