

DSP - DIRECTWIND Service Program

EWT stands for high-quality direct drive turbines characterised by reliability and cost efficiency. To ensure optimal performance and trouble-free operation of our DIRECTWIND turbines, we have an extensive service and maintenance program in place. The DIRECTWIND Service Program offers:

- ⊗ Preventive maintenance
- ⊗ Power curve guarantee
- ⊗ Corrective maintenance
- ⊗ Extended product warranty
- ⊗ Availability guarantee
- ⊗ Business Interruption compensation

EWT's remote monitoring strength

All DIRECTWIND turbines that have been installed worldwide are monitored 24/7 from EWT's headquarters in Amersfoort, The Netherlands. Our highly experienced, professional staff, together with a modern and efficient control room and innovative turbine analysis software, contribute towards the high availability of our turbines.



DW54 900kW



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**MORE ENERGY
LESS COMPLEXITY**

DW54 900kW

Direct drive technology for optimum reliability

EWT offers a highly efficient product range based on direct drive technology with a high yield and low cost of energy. The combination of proven direct drive technology and advanced control features makes EWT's DIRECTWIND a first-class choice with regard to energy yield and reliability.

In the DIRECTWIND turbines, the rotor directly drives the synchronous generator without the use of a gearbox. Eliminating the gearbox means that the number of rotating components is reduced and therefore, the wear and tear on the parts, leading to a lower maintenance need.

Perfect for weak grids and micro grids

Energy generated from the turbine is fed into the grid via a modern back-to-back full-power converter, which controls the power output. In addition, the turbine has a number of programmable functions, such as a capability to adjust the power factor and a capability to automatically control the voltage in order to comply with stringent grid requirements. This makes our turbine suitable to operate in weak grids and micro grids. The perfect choice for single wind turbine applications, and demanding locations where specific environmental demands must be met.

Specifications:

Rotor diameter:	54 m
IEC wind class:	IIIA
Rotor speed variable:	12 - 26 rpm
Nominal power output:	900 kW
Hub heights:	40, 50 and 75 m
Cut-in wind speed:	2.5 m/s
Rated wind speed:	13.5 m/s
Cut-out wind speed:	25 m/s, 10 min. avg.
Survival wind speed:	52.5 m/s
Power output control:	Pitch controlled
Generator:	Synchronous multi-pole
Power converter:	IGBT-controlled

Technically suited to integration with other generation

The flexibility that the direct drive and back-to-back full-power converter technology offers, makes the turbine highly suited for integration with other generation sources such as hybrid wind/diesel power systems.

Focused on medium and low wind regimes

Much of the world's turbine demand is in low-medium wind areas (IEC class II and III). EWT's turbines are designed to maximize yield from such sites relative to other turbines in our capacity range.

This enables wind project owners to achieve high yields and, therefore, more attractive financial returns, even at sites with low wind conditions.

Proven robust DW54 - 900kW

The DIRECTWIND 54-900kW is a pitch controlled variable speed wind turbine that combines continuous market driven innovation with highly advanced and proven direct drive technology. The DW54-900kW turbine boasts a track record of over 600 units based on our technology operating in the field.

Advantages of EWT's direct drive technology:

- ⊗ High energy yield
- ⊗ High return on investment
- ⊗ High availability
- ⊗ Low costs of ownership
- ⊗ Low noise levels
- ⊗ Friendly to weak grids

Variable pitch:

Each blade is automatically pitched to control the generator rotation speed.

Direct drive:

Fewer rotating parts reduce mechanical stress, leading to a lower maintenance need and therefore superior availability levels.

Nacelle:

Spacious nacelle design for excellent serviceability and maximum safety.

Rotor blades:

Large rotor diameter to achieve high energy yield. Optimum aerodynamic performance, reducing noise emission.

Power Curve:

