



AWE 52-900 Turbines



AWE 52-900

Meet the newest member of our AWE turbines family. The AWE 52-900 is our latest offering in a mid-size direct drive machine. It comes from a rich heritage of innovative proven technology.

The AWE 52-900's elegant high tech energy conversion system produces electric power of an excellent quality with its slow running ring generator.

In direct drive turbines, the number of components has been reduced tremendously. The result is a less vulnerable machine. The rotor and generator rotate as one integrated unit, supported by a designed single bearing system.

The absence of a gearbox simplifies maintenance procedures. The use of a monocoque nacelle also allows "all weather" access to essential systems and controls due to internal access.

The AWE 52-900 turbine is available in two configurations. A 52 meter rotor diameter machine for Class II wind conditions. A 54 meter rotor diameter machine (the AWE 54-900) is also available for Class III lower wind conditions.

Power Quality

Optimised grid properties allow for better utilisation of existing infrastructure and may save grid connection costs.

The variable speed AWE 900 series turbines are ready for present and future requirements due to its sophisticated inverter system and advanced control electronics.

An important programmable function is the power factor, which can be adjusted on demand.

Americas Wind Energy Inc.

Americas Wind Energy Inc. is a North American Company with the exclusive manufacturing and marketing rights for North America for the products developed by Lagerwey Windturbine B.V. of the Netherlands and Emergya Wind Technologies BV.

The AWE 900 is a much upgraded version of the LW 52-750 wind turbine installed in many locations around the world including the machine on Toronto's waterfront.

AWE's strategy is to manufacture in North America and provide strong market, service, and parts support to wind turbine customers in North America.





AWE 52-900 Turbine

Technical Specifications

Rotor

Type	3-Bladed Horizontal axis
Position	Up wind
Diameter	51.5 meters
Swept area	2082 m ²
Rotor Speed	Variable Normal 26 rpm
Power regulation	Pitch control
Rotor tilt angle	5°

Blade set

Type	Polymarin design PMC 24.5
Blade Length	24.5
Tip chord	0.723/0.542 m
Root chord	2.402
Aerodynamic profile	DU 91, DU 98 and NACA 646
Material	Glass reinforced Epoxy
Blade tip	Special low noise geometry
Surface colour	Light grey RAL 7035

Inverter system

Type	Voltage source inverter
Control	Micro processor
Grid coupling	AC_DC_AC
Output voltage	600 or 690 Volt

Transmission system

Type	Direct drive
Couplings	flange connection only

Controller

Type	Parallel processing
Monitoring	Serial all processes

Generator

Type	Synchronous
Normal power	900 KW
Voltage	690 Volt
Field excitation	Active wound rotor
Protection	IP 54 Insulation class F

Service Brake

Type	Maintenance
Position	At hub flange
Callipers	Hydraulic one piece

Yaw system

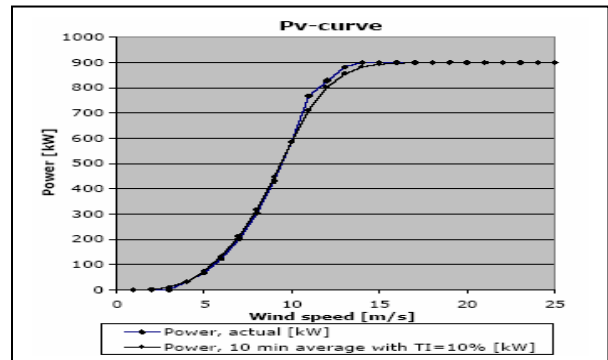
Type	Active
Yaw bearing	4 point ball bearing
Yaw drive	Electric motors
Yaw Brake	Passive friction brake

Tower

Type	Tapered tubular tower
Hub Height	40 meters 50 meters 75 meters
Surface colour	Light Grey RAL 7035

Safety system

Type	Independent pitching blades
Activation	Redundant electrical mechanical



"Specifications are subject to change. Specifications shown are not binding"



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