AEOLOS
wind turbine

Aeolos-H 50KW

Aeolos wind turbine
SINCE 1986

windturbinestar.com

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Turbine

Rated power	50 kW
Max Power	72 kW
Cut-in wind speed	3 m/s (6.7 mph)
Rated Wind speed	10 m/s (22.3 mph)
Survival wind speed	50 m/s (111.5 mph)
Design lifetime	20 years
Overall weight	3120 kg (6878.3 lbs)

Rotor

Rotor diameter	18.0 m (59.1 ft)
swept area	254.3 m²(2741.9 ft²)
Rotor speed	60 rpm
Blade material	Fiber Glass

Generator

Drive Type	Direct Drive (Without Gearbox)
Generator Type	Permanent Magnet Generator
Generator Voltage	360 VDC (Grid-off) 450 VDC (Grid-on)
Efficiency	95%

Controller

Control System	PLC with Touch Screen
Remote Monitoring	Optional

Safety

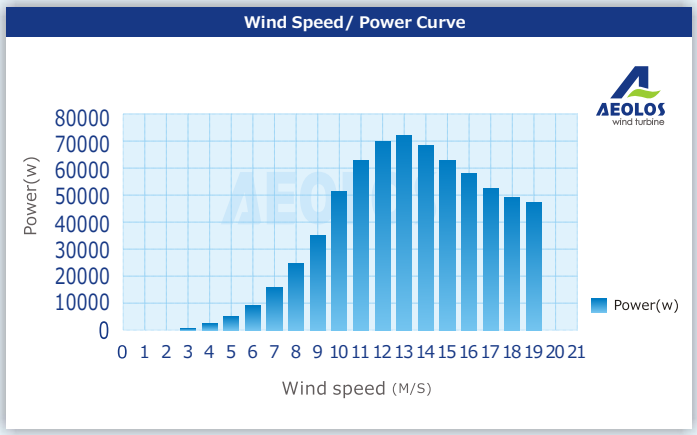
Main Brake System	Yaw Control & Electronic Brake
Secondary Brake System	Mechanical Hydraulic Brake

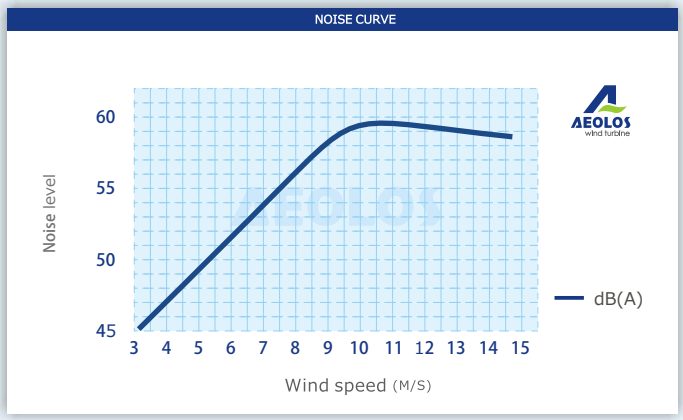
Tower

Monopole Tower	18m 24m 30m
Hydraulic Tower	18m 24m

Warranty

Standard warranty	5 years





Aeolos-H 50kW Wind Turbine Output

Wind Speed(m/s)	3	4	5	6	7	8	9	10
Generator Power(w)	825	2274	5400	9650	15983	25430	35420	50210
Annual Energy Output(kwh)	14454	35856	80417	135254	210017	311874	403363	527808

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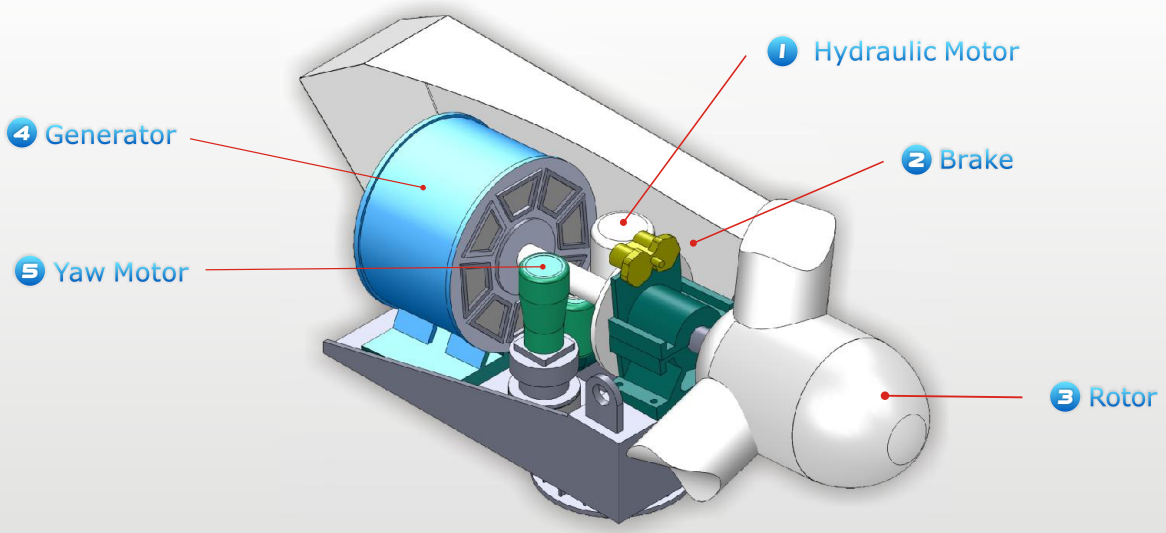


Why Choose AEOLOS-H 50kW Wind Turbine?

Triple Safety & Brake Protection

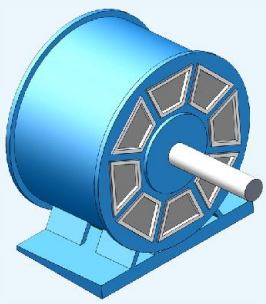
Yaw Control: PLC controller will control the yaw motor to deviate wind turbine from the wind direction at an angle of 30 degrees, 60 degrees or 90 degrees when it detects the faults of over wind speed, over voltage or generator over temperature.

Electronic Brake: Aeolos-H 50kW has a 75kw dump load box and uses PWM technology as the electronic brake control. PWM could control the over voltage and turbine over speed smoothly.

Mechanical Brake: As the secondary protection system, mechanical brake was driven by high quality German hydraulic station. It could stop the wind turbine rotor in over speed, over voltage, over temperature or grid failure.

High Efficiency & Reliable Design

Aeolos-H 50kW uses a directly driven generator without gearbox or booster device. The generator is directly driven by blade rotor. It has 30% more power output than induction generator at the same wind speed.

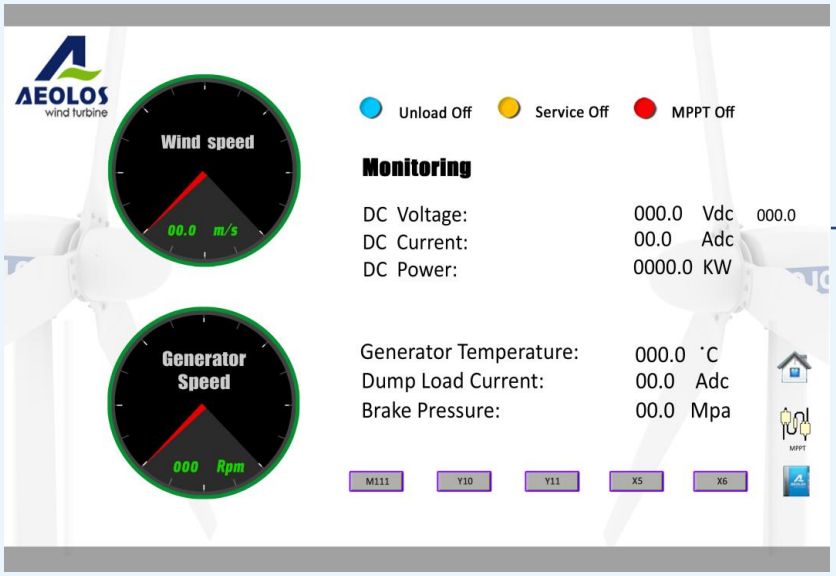


The directly driven design is more reliable than the induction generator with gearbox. All of the mechanical and electronic components choose the best quality manufacturers like SKF, ABB and Omron. All of designs follow the less or free maintenance principles.

5 YEAR WARRANTY

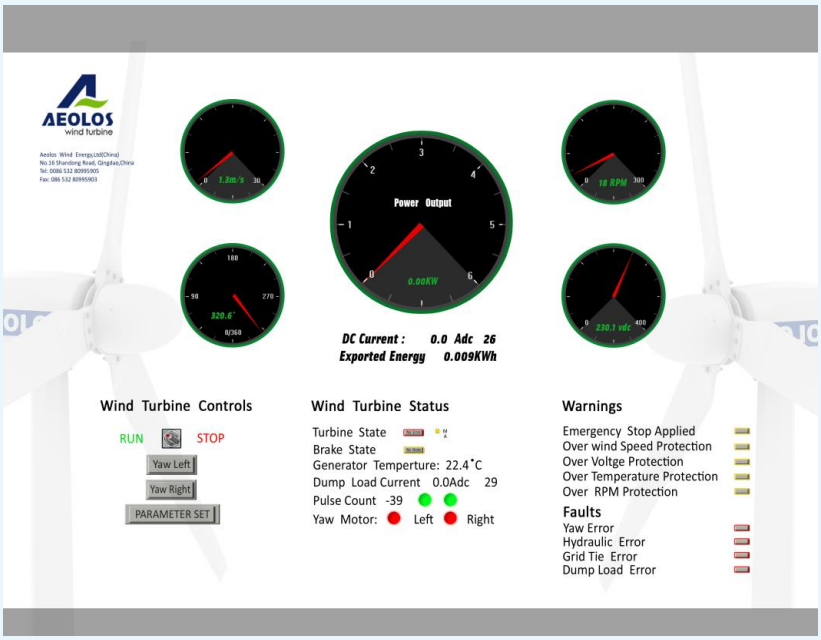
Intelligent Control & Remote Monitoring

Aeolos employs Programmable logic controller (PLC) and touch screen as the control system. All the operation data like wind speed and power output can be recorded and customer can easily adjust the protection data of wind speed, voltage, current and rpm through controller.



Touch Screen

Aeolos provides remote monitoring function to the customers. You can remotely monitor and control the wind turbine operation through wireless or wire internet in home, office, airport and anywhere.



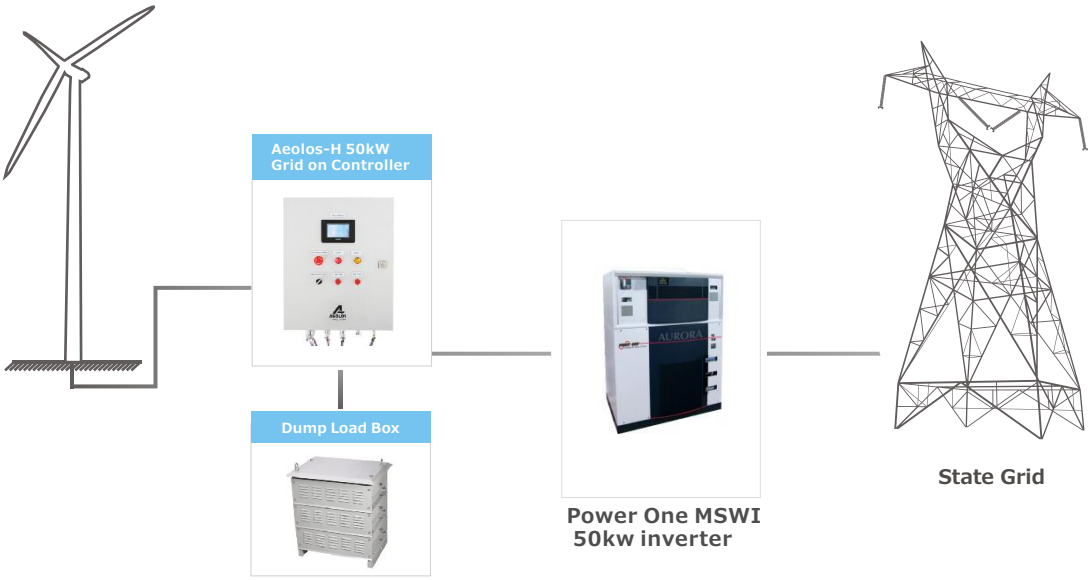
Remote Monitoring Software

5 YEAR WARRANTY

50kW Grid On System Wiring Diagram

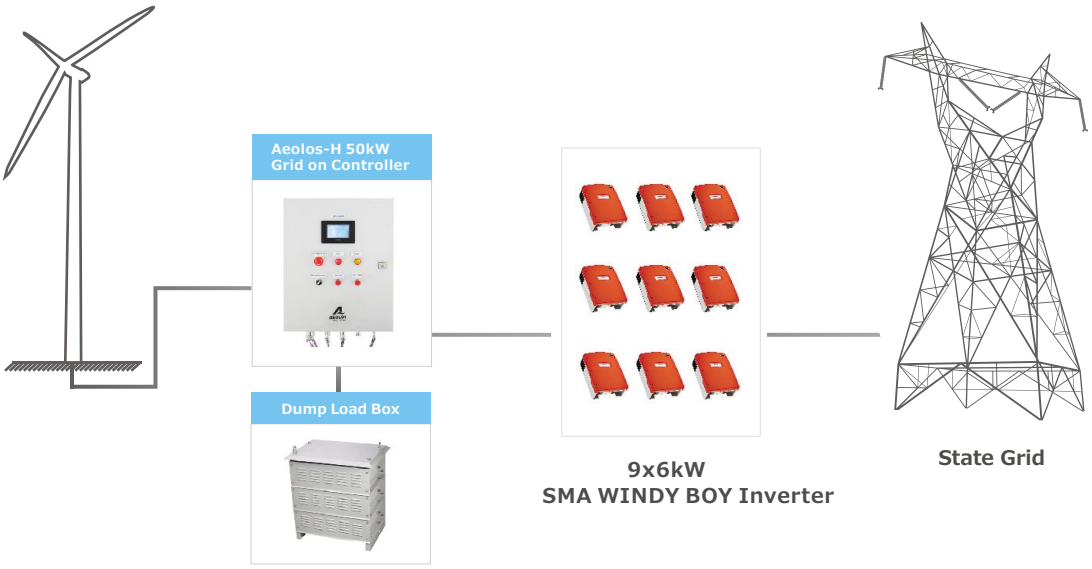
Solution I

Aeolos-H 50kW wind turbine could perfectly match with Power One MSWI 50kw inverter. The MSWI 50kw inverter will save the cost than multiple inverters solution but it required the wind turbine controller to command and control the inverter power output. Aeolos and Power One engineers did many works in house and onsite to ensure the system matching perfectly.



Solution II

Aeolos-H 50kW wind turbine could connect with 9 x 6kw SMA Inverters for a 50kw grid on system solution. SMA Wind boy inverters were widely applied in Aeolos wind turbines from 3kw to 50kw.



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5 YEAR WARRANTY