

# Vertical Wind Turbine Brochure

Aeolos wind turbine SINCE 1986



Aeolos-V IØKW

AEOLOS





## **Aeolo 5 - V** windturbinestar.com



#### **Specification**

Generator Type: Three Phase

Permanent Magnet

 Rotor Height:
 5.3m (17.38 ft)

 Rotor Width:
 4.2m (13.77 ft)

 Turbine Weight:
 385kg (848.8 lbs)

Blades Material: Fiber Glass

Blade Quantity: 3 pcs

Design Lifetime: 20 years Working Humidity:  $\leq$  95% Protection Class: Ip55

#### **Performance**

Rated Power: 10 KW Max Output Power: 12 KW

Cut In Wind Speed: 2.5m/s (5.6 mph)
Rated Wind Speed: 12m/s (26.8 mph)
Survival Wind Speed: 55m/s (122.65 mph)

Generator Efficiency: 96%

Noise Level: < 45 dB(A) Warranty: 5 year

#### **Safety**

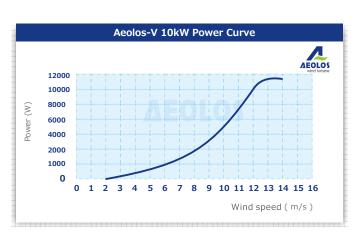
Blades RPM Limitation: 150 RPM
PWM Dump Load: 15 kW Box
Mechanical Brake: Manual/Auto

#### **Optional**

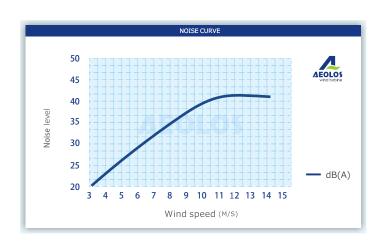
Remote Monitoring System (Internet/Wireless) Auto Hydraulic Brake System (Unattended Site)

Off Grid: 96V or 240 V

Grid Tie: 380 V



Aeolos-V 10kW Wind Turbine Annual EnergyOutput				
Wind Speed(m/s)	Annual Energy Output (KWh)		Wind Speed(m/s)	Annual Energy Output (KWh)
3 m/s	2278 kWh		8 m/s	26280 kWh
4 m/s	4380 kWh		9 m/s	35741 kWh
5 m/s	6657 kWh		10 m/s	42924 kWh
6 m/s	11386 kWh		11 m/s	68328 kWh
7 m/s	17958 kWh		12 m/s	89352 kWh













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## Why Choose AEOLOS-V 10kW Wind Turbine?

#### **Triple safety protections**

Aeolos-V 10kW has triple safety protections: PWM electronic brake, auto hydraulic brake and 24v UPS.





PWM Electronic Brake



Auto Hydraulic Brake



24V UPS

## **Protections For:**

Over Wind speed
Over DC voltage
Over DC current
Over temperature
Over RPM
Emergency Stop
Power lose/ Grid failure
All other faults

#### Reliable and less maintenance design

Aeolos design the wind turbines according to IEC 61400-2 SWT Class-I 50m/s wind speed and Extreme operating gust 25m/s wind speed. The wind turbine and tower were strictly designed and tested by the real wind farm running and FEA in computer.

5 YEAR WARRANTY







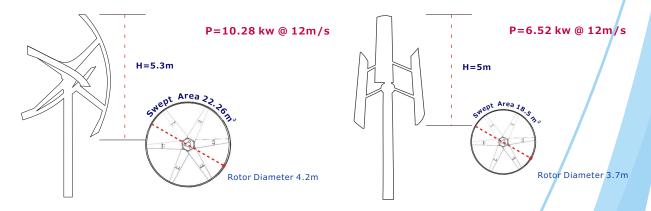


#### More power output

Power= $0.5 \times \rho \times v^3 \times s \times \eta 1 \times Cp$ 

V= Wind Speed N1= Generator Efficiency S= Rotor Swept Area Cp= Wind Energy Utilize Ratio

So there are three factors deciding the wind turbine power output (Rotor Swept Area, Generator Efficiency and Wind energy utilize ratio) at the same wind speed. Aeolos-V 10kW choose **the larger rotor diameter, high efficiency generator** and **high Cp blades design** to produce more power output than other 10 kW vertcial wind turbines.



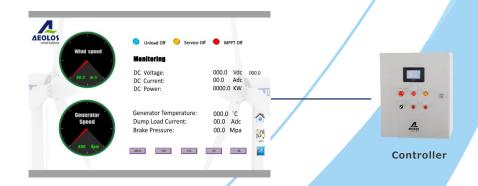
**Aeolos-V 10kW Wind Turbine** 

**Wind Turbine B** 

#### **Intelligent Control System**

#### Aeolos programmable Logic controller (PLC) with below features:

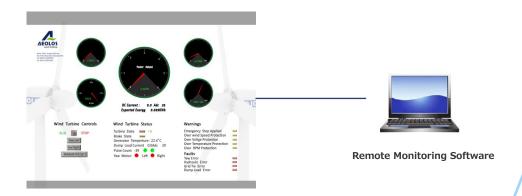
- Flexibility: most of setting parameters are adjustable. User could change the setting parameters according to their own situation.
- Modular design: All of components are modular design, it is easy to replace and scalable.
- High-quality: Aeolos controller integrated the best quality components from ABB and Omron.





#### **Remote Monitoring system**

Aeolos-V 10kW provides remote monitoring system for our customers. You can remote monitor, control and record your wind turbine through internet at home, office, airport or anywhere.



#### **5 Years Warranty**

Aeolos wind turbine has 5 years warranty, including all of the parts purchased from Aeolos. For the small components, we will send to customer via DHL or Fedex which will arrive most of cities in the world within 7 days.



#### Aeolos + Package

Aeolos provided some special packages for special places such as low wind speed area, low temperature area, Island, desert, wind & solar hybrid system, Telecom station. Aeolos + service could provide the most suitable products for different customers.



re Island







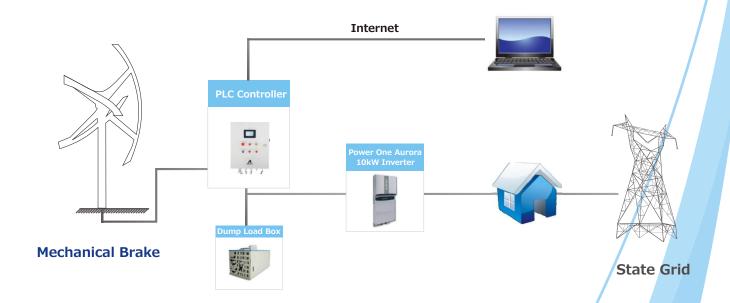
**Telecom Station** 

Low wind speed



### Wiring Diagram

#### Grid-on



### Grid-off

