

Westwind 20kW Wind Turbine

Overview

The Westwind 20 is a well tried and tested product over many years from Australia and comes with a 2 year warranty, suitable for powering farms, community centres, schools, commercial properties and applications where a serious amount of electricity is wanted.

Performance

The energy capture of the Westwind 20 turbine is exceptionally good across a wide range of wind speeds, and comes installed on an 18m free-standing tower for maximum energy capture.

Reliability

The Westwind 20 turbine is designed for a 20 year life, and is intended for a range of harsh conditions, especially exposed rural locations.

Efficiency

The efficient three blade configuration drives the permanent magnet rotor. At rated rpm, the automatic furling mechanism operates and the turbines turns out of the wind to prevent over powering.

Reliability

Westwind have been developing and selling small wind turbines for many years to operate in the harsh Australian climate.

The generator is sealed to stop the ingress of foreign particles. This reduces corrosion (especially in coastal locations) but also stops the magnets attracting airborne particles.

The Westwind 20 is a long established model that has a proven track record with many installations world-wide.



Characteristics Performance

At a particular location, the wind speed will vary about an annual mean value. The expected energy yields for the Westwind at various annual mean wind speeds (AMWS) is shown below.

Note: The annual electricity consumption of a medium size home is in the region of 4 to 6 MWh. This is equivalent to a daily consumption of 11 to 16 kWh.

Generator rating	20 kW at 14 m/s
Rotor speed	160 rpm nominal (variable)
Cut-in wind speed	3.0 m/s
Survival wind speed	50 m/s (110 mph)
Rotor diameter	10.4 m
Rotor orientation	Upwind
Number of blades	3
Blade material	Carbon reinforced fibreglass.
Control system	Automatic side furling
Gearbox	None
Brakes	Electro-dynamic
Generator	Permanent magnet alternator
Yaw control	Tail vane
Tower height	18 m
Tower	Free standing.

AMWS m/s	Daily kWh	Annual MWh
4	30	11
5	63	23
6	104	38
7	140	51
8	175	64
9	205	75

