



Vestas[®]

V17 Wind Turbine – Technical Specification

OVERVIEW

A 75kW medium sized wind turbine suitable for powering larger farms, community projects and commercial properties.

PERFORMANCE

The energy capture of the Vestas V17 turbine is exceptionally good across a wide range of wind speeds and comes installed on a 23m free-standing tower for maximum energy capture.

RELIABILITY

The Vestas V17 turbine is intended for a range of harsh conditions, especially exposed locations. The remaining design life of these machines is in excess of 20 years.



TECHNICAL SPECIFICATION

Generator Rating	75kW @ 15 m/s
Rotor Speed	45 rpm nominal
Cut-in Wind Speed	3.5 m/s
Survival wind speed	55 m/s
Rotor diameter	17m
Rotor orientation	Upwind
Number of blades	3
Blade material	Fibreglass/polyester
Control system	Pitch controlled
Gearbox	Yes
Brakes	Disc
Generator	Synchronous
Yaw control	Powered
Tower height	23m
Tower	Free standing

PERFORMANCE

At a particular location, the wind speed will vary about an annual mean value. The expected energy yields for the Vestas V17 at various annual wind speeds (AMWS) is shown below:

AMWS m/s	Annual MWh	Daily kWh
4	55	151
5	102	281
6	156	427
7	210	576
8	261	716
9	307	842

Note: The annual electricity consumption of a medium size home is in the region of 4-6MWh or 11-16 kWh per day. At 6 m/s wind speed the Vestas V17 can provide the annual energy needs of 35 homes.

WIND PIONEER LTD

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Halus Power Systems are the USA's leading supplier of remanufactured wind turbines, specialising in turbines originally produced by Vestas. They have been manufacturing turbines for 10 years at their 5 acre facility in San Leandro, California. All turbines come with a standard 5 year parts warranty and an expected life of 20yrs+

Wind Turbine Controller – All turbines come with a new advanced controller. Some of the features of our controllers are:

- Advanced soft-start motor control with user definable thyristor trigger angle and cut in slope
- Automatic motor start
- Power factor control including user definable delay for capacitor connection and capacitor discharging time
- Web-based TCP/IP control and monitoring system which can also be used on site
- Top box for ease of maintenance and service



Experts in Wind Power & Planning

Wind Pioneer is committed to the production of clean affordable energy with these remanufactured and upgraded wind turbines.

Wind Pioneer is the exclusive distributor and installer for the Vestas V17 turbine, remanufactured by Halus Power Systems, which is the most efficient and cost effective in its class. The Vestas V17 wind turbine generates exceptional levels of power for its size, but is remarkably quiet.

Wind Pioneer can supply, install and support the Vestas V17 turbine to help power semi-rural domestic properties and many more applications.

Wind Pioneer works in partnership with site owners, financiers, suppliers and other stakeholders to guide projects through the process and beyond.

Wind Pioneer also sells a range of larger turbines for less power hungry applications.

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 Apterra Technologies, LLC

HALUS POWER SYSTEMS

System Status

Turbine: winterhof1
 System Time: 2010-01-13 03:48:10
 Status: Production
 Mode: Automatic
 Last Error: Motorstart timeout [0102]
 Controller Version: Vestas V17 ver 3.01
 Software Version: 4.24

Commands

Stop
 Reset alarms
 Motor start
 Yaw right
 Reset counter
 Capture Data

System Data Control Parameters Errors Email Setup

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Field	Code	Value	Units
Voltage R		277.80	V
Voltage S		276.80	V
Voltage T		274.90	V
Current R		48.10	A
Current S		46.70	A
Current T		43.90	A
Power R		14.10	kW
Power S		14.60	kW
Power T		14.80	kW
Total Power		43.50	kW
Total Power (10 Min. Avg.)		40.20	kW
Total Peak Power		83.80	kW
Grid Frequency		60.22	Hz
Wind Speed		8.80	m/s
Wind Speed (10 Min. Avg.)		8.80	m/s
Peak Wind Speed		11.60	m/s
Generator 1		1487.10	RPM
Generator 2		1209.10	RPM
Rotor		47.60	RPM
Temperature 1		11.60	C
Temperature 2		122.80	C
Thyristor Angle		180.00	Deg