



**Vestas**®

V27 Wind Turbine – Technical Specification

**OVERVIEW**

A 225kW medium sized wind turbine suitable for powering larger farms, community projects and commercial properties.

**PERFORMANCE**

The energy capture of the Vestas V27 turbine is exceptionally good across a wide range of wind speeds and comes installed on a 31m free-standing tower for maximum energy capture.

**RELIABILITY**

The Vestas V27 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**

<b>Generator Rating</b>	225kW @ 16 m/s
<b>Rotor Speed</b>	43 rpm nominal
<b>Cut-in Wind Speed</b>	3.5 m/s
<b>Survival wind speed</b>	56 m/s
<b>Rotor diameter</b>	27m
<b>Rotor orientation</b>	Upwind
<b>Number of blades</b>	3
<b>Blade material</b>	Fibreglass/polyester
<b>Control system</b>	Pitch controlled
<b>Gearbox</b>	Planetary
<b>Brakes</b>	Disc
<b>Generator</b>	Asynchronous
<b>Yaw control</b>	Powered
<b>Tower height</b>	31m
<b>Tower</b>	Free standing



At a particular location, the wind speed will vary about an annual mean value. The expected energy yields for the Vestas V27 at various annual wind speeds (AMWS) is shown below:

<b>AMWS m/s</b>	<b>Annual MWh</b>	<b>Daily kWh</b>
<b>4</b>	128	351
<b>5</b>	255	699
<b>6</b>	411	1126
<b>7</b>	575	1575
<b>8</b>	734	2011
<b>9</b>	878	2405

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 V27 can provide the annual energy needs for 100 homes.

**WIND PIONEER LTD**

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Experts in Wind Power & Planning  
**WINDPIONEER**

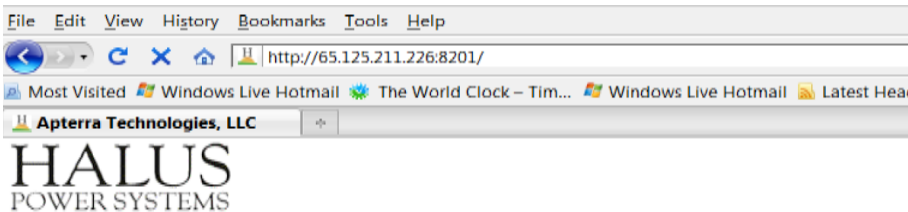
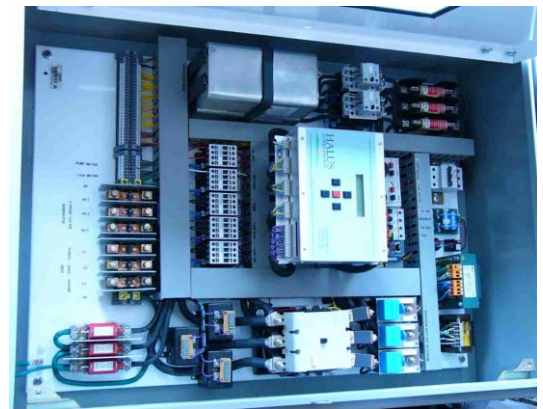
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**Halus Power Systems** are the USA's leading supplier of remanufactured wind turbines, specialising in turbines originally produced by Vestas. They have been manufacturing turbines for 10 years at their 5 acre facility in San Leandro, California. 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



**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 start   
 Reset alarms  Toggle mode   
 Motor start  Yaw left   
 Yaw right  Reset errorlist   
 Reset counter  Reset peak   
 Capture Data

System Data | Control Parameters | Errors | Email Setup

<< first < prev 1 next > last >> Rows: 33

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		14.80	KW
Power T		14.80	KW
Total Power		43.50	KW
Total Power (10 Min. Avg.)		40.20	KW
Total Peak Power		63.80	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		-1.60	C
Temperature 2		122.80	C
Thyristor Angle		180.00	Deg

**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 V27 turbine, remanufactured by Halus Power Systems, which is the most efficient and cost effective in its class. The Vestas V27 wind turbine generates exceptional levels of power for its size, but is remarkably quiet.

**Wind Pioneer** can supply, install and support the Vestas V27 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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