



Vestas

V39 500kW Wind Turbine

OVERVIEW

A 500kW medium sized wind turbine suitable for powering large farms, community projects and commercial properties

PERFORMANCE

The energy capture of the Vestas V39 turbine is exceptionally good across a wide range of wind speeds and comes installed on a 40m free-standing tower for maximum energy capture.

RELIABILITY

The Vestas V39 turbine is intended for a range of harsh conditions, especially exposed locations. The remaining design life of these machines is in excess of 15 years.

Every machine supplied is fully refurbished by Segen and comes with an all inclusive 5 year warranty and support service to ensure trouble free operation throughout the expected payback period.

COST

Typical fully installed cost is around £550,000 depending upon the site conditions and electrical connection. This compares favourably with the cost per kW of smaller wind turbines.



Segen is meeting the need for affordable clean energy.

Segen is committed to the production of clean affordable energy through the development of sustainable energy generation projects.

Segen is an authorised distributor and installer for the Vestas V39 turbine which is a very efficient and cost effective small wind turbine. The Vestas V39 wind turbine generates exceptional levels of power for its size, but is remarkably quiet.

Segen can supply, install and support the Vestas V39 turbine to help power semi-rural domestic properties and many more applications.

Segen works in partnership with site owners, financiers, suppliers and other stakeholders to guide projects through the process until the energy starts to flow and beyond.

Segen also sells a range of smaller turbines for less power hungry applications.

Association Memberships





Vestas V39 Wind Turbine

Technical Specification

Efficiency and reliability for maximum lifetime power generation

EFFICIENCY

The efficient three blade configuration drives the asynchronous generator through a gearbox ensuring the generator runs at optimal speed throughout the expected wind speeds

RELIABILITY

The Danish manufacturer has been developing and selling small wind turbines since 1980. They are installed all around the world.

The V39 is a long established model that has a proven track record with many installations world wide.



PERFORMANCE

At a particular location, the wind speed will vary about an annual mean value. The expected energy yields for the Vestas V39 at various annual wind speeds (AMWS) is shown below:

AMWS m/s	Annual MWh	Daily kWh
4	255	699
5	552	1,512
6	785	2,151
7	1,114	3,052
8	1,672	4,581
9	1,999	5,477

Note: The annual electricity consumption of a medium size home is in the region of 4-6 MWh or 11-16 kWh per day. At 6 m/s wind speed the Vestas V39 can provide the annual energy needs for 190 homes.

CHARACTERISTICS

Generator Rating	500 kW at 16 m/s
Rotor Speed	30 rpm nominal
Cut-in Wind Speed	4.5 m/s
Survival wind speed	50 m/s
Rotor diameter	39m
Rotor orientation	Upwind
Number of blades	3
Blade material	Fibreglass/polyester
Control system	Pitch controlled
Gearbox	Planetary/helical
Brakes	Disc
Generator	Asynchronous
Yaw control	Powered
Tower height	40 m
Tower	Free standing

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