

nheolis

3D wind turbines



nheowind 3D 50

Small Wind Turbine
for home & business 1,5 kW



- PERFORMANCE
- ROBUSTNESS
- SILENCE
- DESIGN

> DESCRIPTION

nheowind turbines provide many unique advantages:

- **Performance:** The performance of **nheowind** turbines during low wind speeds (from 2.5 m/s, 9 km/h), as with high speeds (up to 36 m/s, 130 km/h), allows you to generate far greater levels of electricity than traditional wind turbines with the same bulk.

- **Robustness:** The reinforced structure was designed and tested to withstand powerful gusts and turbulences through the rigging of the blades. In January 2009, two **nheowind** turbines installed in Toulouse weathered Storm Klaus perfectly and three **nheowind** turbines installed in Nantes resisted Storm Xynthia in February 2010.

- **Silence:** The unique shape of the blades does not cause wind shear. The noise generated by **nheowind** turbines, regardless of operating speed, is lower than the noise level generated by the wind itself.

- **Design:** The unique design of the 3D blades allows better landscape integration and greater visual acceptance for both domestic and corporate installations.

In addition to these unique benefits, **nheolis** is committed to providing the most economical electric power sources on the market.

> INNOVATION



nheolis wind turbines are based on advanced, patented technologies. With innovative three-dimensional blades, **nheowind** turbines implement fluid dynamics for the first time in SWT. Using components specifically developed for its 3D wings, **nheowind** turbines can deliver far better efficiency with very low noise levels.



SPECIFICATIONS

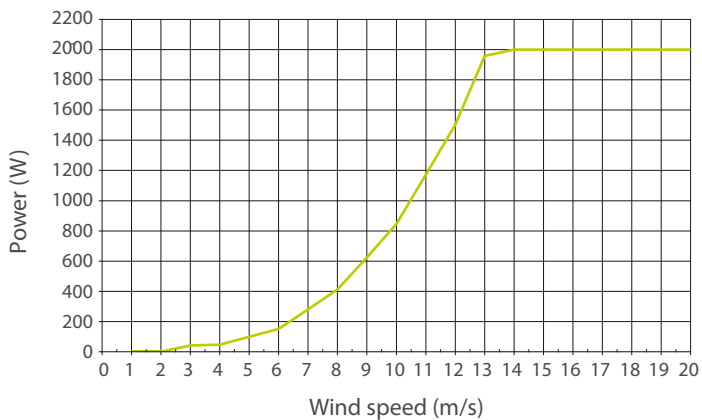
nheowind 3D 50

Nominal power out	1.5 kW
Weight	120 kg
Rotor diameter	2.2 m
Swept area	3.8 m ²
Type	HAWT
Blades	3 - "chistera"
Blades length	1.5 m
Nominal Speed	150 rpm
Rated speed	40 to 425 rpm
Orientation	Self Oriented (no rudder)
Nominal wind speed	43 km/h (12 m/s)
Wind speed range	9 - 110 km/h (2.5 - 30 m/s)
Survival wind speed	180 km/h (50 m/s)
On-Grid	Aurora Power One Inverter 230 V, 50 Hz, 1 phase or equivalent
Off-Grid	XTM Stüder Inverter 230 V, 50 Hz, 1 phase or equivalent
Sound emission	<35dB @ 12 m/s
Color	White (other RAL color available)

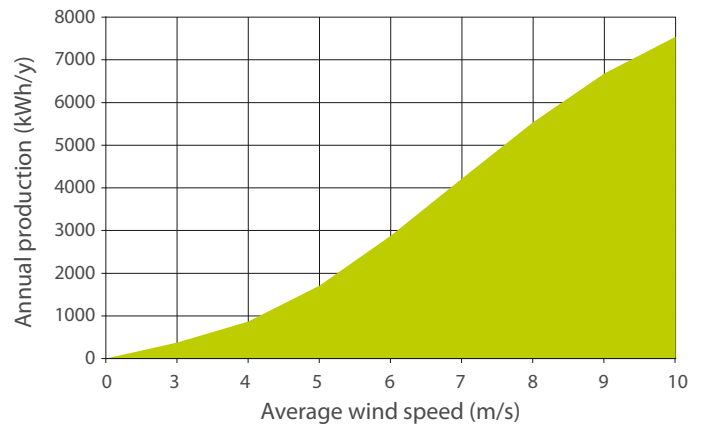
MATERIALS

Blade	Composite Fiberglass
Nacelle	Aluminium
Fixations	Stainless steel
Tower	11 m conical self standing, galvanised steel, painting upon request
Warranty	5 years

Power curve



Potential production



nheolis reserve the right to modify the characteristics of the equipment supplied without notice as part of the continued development of our products.



> NHEOLIS CORPORATE PROFILE

nheolis designs and manufactures new dimension wind power technology. Specializing in Small Wind Turbines (SWT), **nheolis** is the emerging leader of the European market.

After more than 3 years of research and development, including tests in CNRS (French National Center for Scientific Research) wind tunnels, **nheolis** revolutionized the energy world in 2009 with its innovative, world-first 3D blades design, used on the **nheowind 3D 100 CP**. Using fluid dynamics applied to SWT, **nheolis** made wind energy both more efficient and reliable than ever before. In partnership with ONERA, the French Aerospace Lab, **nheolis** further improved the **nheowind** design with the curved 3D blades "Chistera", introduced in 2010 with the **nheowind 3D 50** and **3D 100**.

nheolis' disruptive technology drives our original design, reaching performance, robustness and silence levels never before achieved in SWT.

nheolis' existing customers include individuals, private companies and government agencies determined to benefit from the most cost-effective and efficient renewable energy source for on-grid and off-grid usage. **nheolis** products are manufactured in Europe, CE certified and distributed through **nheolis'** Certified Partners network throughout Europe, with global distribution scheduled to commence in H2 2010.

The market for small turbines has grown by more than 50% in the last two years, with continued growth expected across global markets, including areas previously denied energy due to prohibitive infrastructure costs. **nheolis'** wind turbines can be installed in both urban and isolated areas and can be customized to meet individual requirements.

In December 2009, **nheolis** received the Gold EEP Award of the European Environmental Press for excellence in environmental innovation. **nheolis** is a member of Capenergies Competitiveness Cluster, Renewable UK, the EWEA (European Wind Energy Association) and the AWEA (American Wind Energy Association). With its **nheowind** turbine, **nheolis** is committed to generating one of the most competitively priced kWh in the global marketplace to allow greater access to affordable renewable energy.



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