

nheolis  
3D wind turbines



nheowind 3D 100

Small Wind Turbine  
for home & business 3,5 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

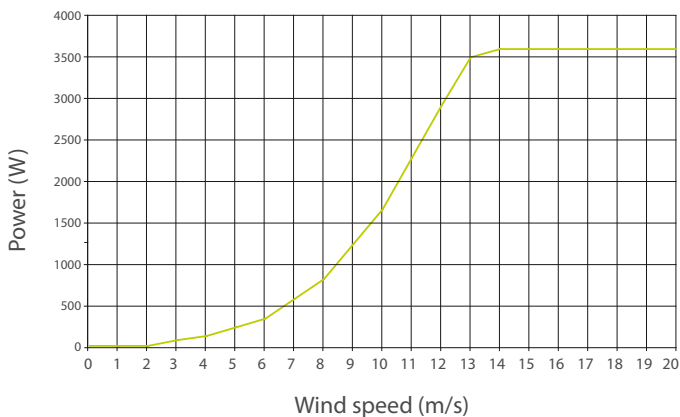
### nheowind 3D 100

Nominal power out	3.5 kW
Weight	300 kg
Rotor diameter	4 m
Swept area	12.6 m <sup>2</sup>
Type	HAWT
Blades	3 - "chistera"
Blades length	2.7 m
Nominal Speed	125 rpm
Rated speed	40 to 395 rpm
Orientation	Self Oriented (no rudder)
Nominal wind speed	43 km/h (12 m/s)
Wind speed range	9 - 130 km/h (2.5 - 36 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)

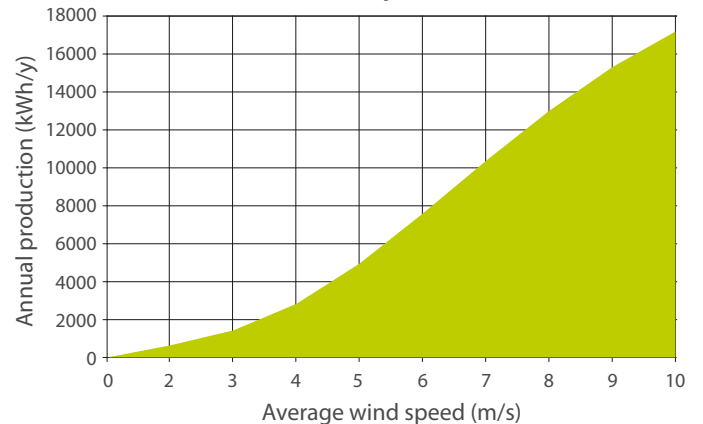
### MATERIALS

Blade	Composite Fiberglass
Nacelle	Aluminium
Hull	Thermoforming ABS
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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