

WindRotor WRE.030

Product Information Sheet

General

The Ropatec WindRotor is a vertically driven wind rotor which demonstrates special product characteristics through its unique construction. The system could be described as a hybrid solution, building upon the Savonius and Darrieus principles. The WindRotor WRE.030 can be delivered with the MSP-Controller, an innovative CPU controlled charge regulator (48V) with incorporated SMD DC/AC inverter with 4500VA continuous output .

Benefits

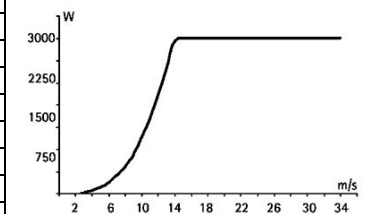
- Cut in wind speed at 2 m/s (in every position)
- Independent from the wind direction
- Low maintenance
- Truly noiseless even at high wind velocities
- No cut off wind speed
- Aerodynamically auto regulated rpm's
- Nominal output at wind speeds of 14 m/s and higher
- No electromagnetic field built-up
- Very reliable, long product life
- Expandable to a hybrid system including photovoltaic modules and/or gen-sets

Technical data		
WindRotor	Rated output on axis (at 14 m/s)	3000 W*
	Cut-in wind speed	2-3 m/s*
	Rated wind speed	14 m/s*
	Rotor speed control	Aerodynamically auto regulated
	Over speed control	Not required
	Maximum rpm	100-120 rpm at 14 m/s
	Cut-off wind speed	none
	Rotor weight	430 kg
	Rotor blade type	Vertical Axis Wind Turbine (VAWT)
	Rotor diameter	3,3 m
	Swept area	7,26 m ² (3,3 m x 2,2 m)
	Gear box type	No gear box - direct driven
	Brake system	Not required
Alternator	Type	Permanent excited multi-pole
	Electrical transmission	Brush less
	Voltage depending on rpm*	0 - 220*
	Poles	48
MSP-Controller	Battery charger	48 VDC
	Output MSP on-grid	2x115VAC/ 230 VAC/50-60 Hz
Limited Warranties	Product workmanship	2 years
	Rated output (at 14 m/s)	15 years
Typical performance**)	Average wind 5 m/s	Annual energy output 1526 kwh
	Average wind 7 m/s	Annual energy output 3804 kwh
	Average wind 9 m/s	Annual energy output 6431 kwh
	Average wind 11 m/s	Annual energy output 8735 kwh

WindRotor Model WRE.030



WRE.030.MSP.E Potency curve (nominal-on axis)



mechanical output on axis - energy production depends on the configuration of the system

*) on sea level

**) sea level, Weibull K 2, mast 10 m, anemometer 10m

Usable energy production depends on the configuration of the system. A typical situation is the WindRotor with a battery charger and batteries.

Due to losses in wiring, battery charger and batteries the efficiency can differ from 65% to 80%.

Due to product improvement the specifications in this product information sheet are subject to change without notice.

All data about the annual energy output are based on assumptions and may differ depending on the actual location of the WindRotor.

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