

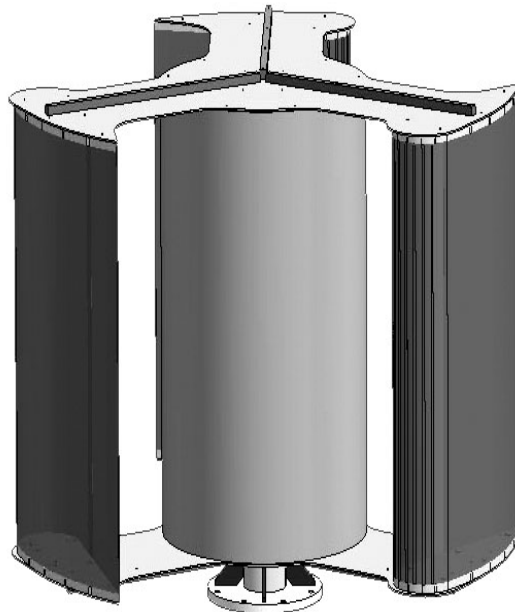
# WindRotor – Technical Details



## WindRotor – “Mini Vertical”

### 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 Twister can be delivered with a 24V battery charger.



- Independence:** from the direction of the wind.
- High wind forces:** robust construction for extreme wind speeds.
- Automatic start-up:** Even at a wind speed of only 2-3 m/s.
- Noise-free:** The WindRotor is not audible!
- Multifunctional:** charging batteries, heating water or air

### Turbine

Rated output 10 m/s	app. 280W
Rated output 14 m/s	app. 700W
Cut-in wind speed	~3 m/s
Over speed control	Not required
Cut-off wind speed	none
Rotor weight	160 kg
Rotor blade type	Vertical Axis Wind Turbine
Rotor diameter	1,5 m
Swept area	2,25 m <sup>2</sup> (1,5 m x 1,5 m)
Gear box type	No gear box – direct driven
Brake system	Not required

### Alternator

Type	750W-permanent / multi-pole
Energy transmission	Brush less
Voltage*	~120VAC* (at 14 m/s)
Poles	16

\*) depending on RPM / on sea level

The 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%.

