

WINDTURBINES FOR ENERGY PRODUCTION



The Ropatec vertical axes wind turbines are a quality made in Italy product. All the parts are made in Italy and tested by Ropatec before it will leave our warehouse.

The main characteristics are:

- Noisless (43dB 10m distance)
- Robust (up to 41m/s)
- Automatic start up at 3m/s
- Design (eye catcher also for advertising purposes)
- Independent from the wind direction
- Direct driven generator with stator inside and rotor outside
- Brake system
- Multifunctional, as you will see below:

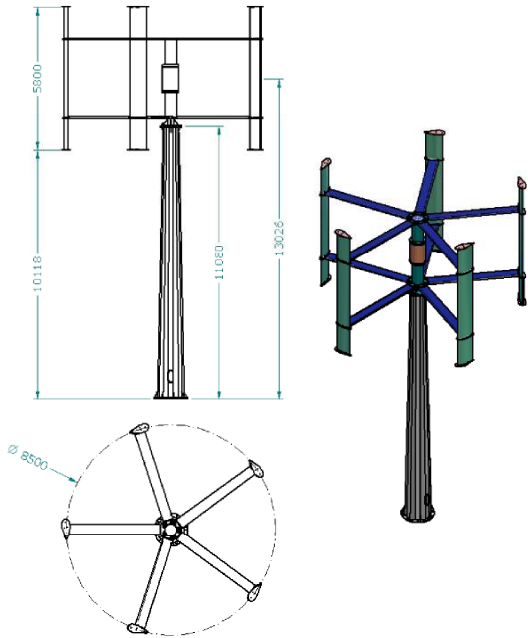
The windturbines Simply Vertical and Maxi Vertical can be ordered with the MWI-Controller for off-grid installations, or with the on-grid inverter "Aurora" or with the heating system HotMax.

The MWI-Controller has been developed to operate a complete hybrid off-grid system. It is in fact a 48V battery charger for the WindRotor with integrated solar charger and 4500W off-grid inverter. It offers also the possibility to connect a back-up Genset system. Please note that, when the MWI-Controller is used, the polarity of the batteries cannot be inversed.

The inverter are certified by Power-One Company, and are used for feeding into the national grid in mono phase. The 20kw has a three phase inverter for grid connection also.

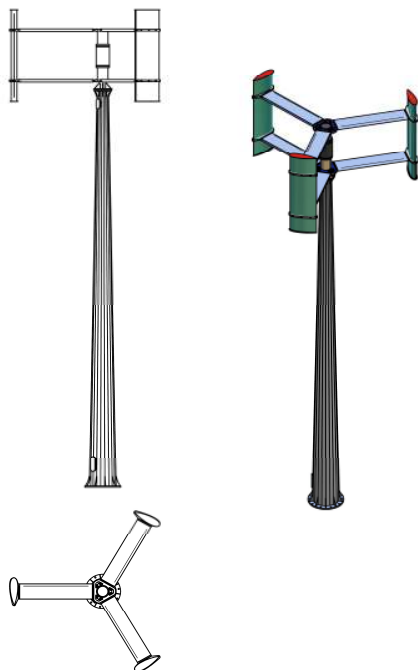
This heating system consists of the turbine, the heating controller "HotMax" and an electrical resistance. The heating controller, based on a system of pulse wide modulation, gives the resistance exactly the amount of energy the turbine can deliver in the given wind situation. The resistance, installed into the hot water tank, is heating the water and saving combustible.

Mega Star 20KVA



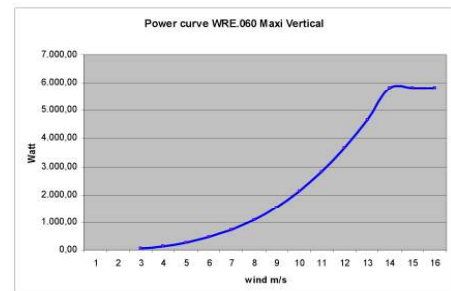
Turbine model / Manufacturer	VAWT-WT20 / Ropatec S.r.l ; Italy
Design wind speed	12.5 m/s
Nominal power at rotor center	20640 Watt
Nominal electrical power	19200 Watt
Design turbine speed	50 Rpm
Rotor diameter	8 m
Rotor lenght	5.8 m
Cut-in wind speed	3.5 m/s
Cut-out wind speed	18 m/s
Shutdown wind speed	18 m/s
Overspeed control type / start of the breaking	Short circuit break / 18 m/s
Maximum operating wind speed	18 m/s
Maximum operating rotor speed	90 RPM
Surviving wind speed / class IEC 61400-2	50 m/s / Class II ; IEC 61400-2
Turbine weight	~3700 kg

Maxi Vertical 6KVA

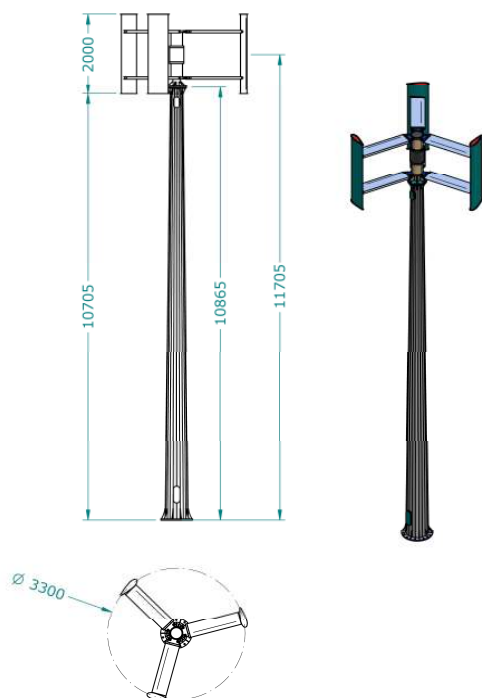


Technical details

Wind Turbine Class IEC-61400-2	
Sites up to a 8,5m/s average wind speed	
Rated output 14m/s	6KVA
Cut-in wind speed	~3 m/s
Rated wind speed	14 m/s
Rotor weight	960 kg
Rotor size	4,6m x 2,5 m
Swept area	11,5 m ²
Brake system	SBC06 at 18m/s
Alternator	PMG
Wind rotor Max Noise	42dB

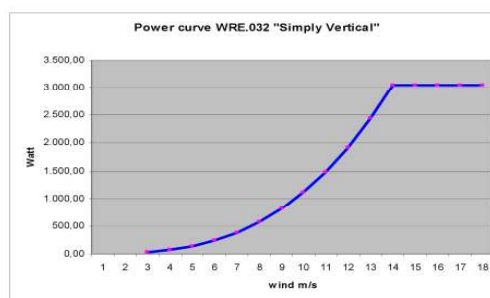


Simply Vertical 3KVA



Technical details

Wind Turbine Class IEC-61400-2	
Sites up to 8,5m/s average wind speed	
Rated output 14m/s	3KVA
Cut-in wind speed	~3 m/s
Rated wind speed	14 m/s
Rotor weight	617 kg
Rotor size	3,3m x 2 m
Swept area	6,6 m ²
Brake system	SBC03 at 18m/s
Alternator	PMG
Wind rotor Max Noise	42dB



Wind speed [m/s]	Symply	Maxi	Mega Star
3	22	46	146
4	64	112	345
5	127	224	717
6	224	394	1440
7	362	638	2486
8	551	970	4007
9	799	1427	6128
10	1117	2068	8696
11	1497	2834	11960
12	1957	3845	16278
13	2506	5110	21982
14	3152	6747	29982
15	3600	7800	33982
16	3600	7800	33982
17	3600	7800	33982
18	3600	7800	33982

Wind Rotor weight	617 kg	960 kg	3700 kg
Wind Rotor size (D x H)	3.3 x 2 m	4.6 x 2.5 m	8.0 x 5.8 m
Wind Rotor Swept Area	6.6 m ²	11.5 m ²	46.4 m ²
Generator type	PMG		
Wind Turbine Class IEC-61400-2	2		
Sites up to 8.5 m/s average wind speed			
Wind Rotor Max Noise	42 dB		
Required Safety/Maintenance check	-	-	5 years
Annual visual safety inspection	Yes		
Short circuit braking system include	18 m/s		