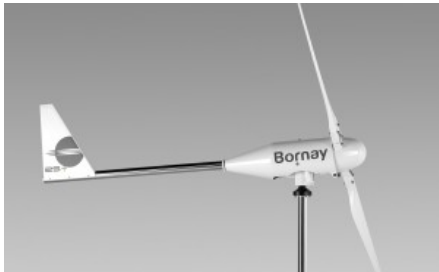


WIND +

Wind + is the result of over 45 years of experience in the small wind industry, where Bornay has worked hard to innovate and to get a so far unknown result.



Aerogenerador minieolica Bornay Wind 13+



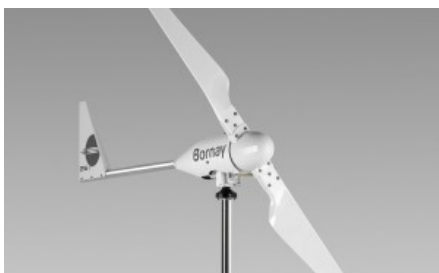
Aerogenerador minieolica Bornay Wind 25.2+



Aerogenerador minieolica Bornay Wind 25.3+



Aerogenerador minieolica Bornay Wind 13+



Aerogenerador minieolica Bornay Wind 25.2+

The range of our small wind turbines, Wind+, goes a step further with the development of the small wind technology to an extent unknown in this technology.

Under an aesthetic already known, we have worked hard in an evolution towards more compatible, easier to install and better performance turbines.

Among the most notable challenges, the new Wind+ is equipped with permanent magnet neodymium alternator to a single output voltage of 220 Vac, for any application, providing maximum efficiency equipment. The second major challenge comes from the hand of the control electronics, with 2 drivers for all applications: Controller MPPT for battery charging and interface for direct connection of all types of consumption, both AC or DC, or grid connection inverters.

The new drivers introduce a new machine control system, which incorporates voltage control and rpm, ensuring perfect machine control, while substantially improving the efficiency of the wind turbine.

We have employed 8 years for the development of the new range of small wind turbines, Wind+, with the implication of three technicians and the collaboration with the UPV (Polytechnic University of Valencia). There have been interesting results at key points of development of small wind turbines: Up to 20% more output, lower startup speed, efficiency alternator up to 96%, compatible with all types of batteries (included Lithium), new compatibilities with direct consumption, remote monitoring...

With the Wind +, small wind turbines open a new stage, with many applications and integrations with other technologies.

SPECIFICATIONS

	Wind 13 +	Wind 25.2 +	Wind 25.3 +
Technical Specifications			
Number of blades	2	2	3
Material	Fiberglass and carbon fiber		
Direction of rotation	Counterclockwise		
Control systems	1. Electronic regulator 2. Passive by tilting		
Electrical specifications			
Alternator	Three phases permanent magnet		
Magnets	Neodymium		
Nominal Power	1500 W	3000 W	5000 W
Peak Power	2500 W	4500 W	7500 W
Nominal Voltage	220 Vac	220 Vac	220 Vac
RPM	@ 600	@ 400	@ 400
Controllers	Wind + MPPT Controller Multi voltage: 12, 24, 48 Vdc Current: Max. 125 Amp. Battery type: Flooded, AGM, Gel, Lithium		
	Wind + Interface Direct water pump AC or DC (Grundfos SQFlex) Telecom Grid connection		
Performance, windspeed			
Working windspeed range	2 - 30 m/s	2 - 30 m/s	2 - 30 m/s
For turn on	3 m/s	3 m/s	3 m/s
For nominal power	12 m/s	12 m/s	12 m/s
For automatic brake system	14 m/s	14 m/s	14 m/s
Survival	60 m/s	60 m/s	60 m/s
Physical specifications			
Windturbine weight	41 Kg	93 Kg	107 Kg
Controller weight	30 Kg	30 Kg	30 Kg
Packaging Dimensions - weight	50 x 77 x 57 cm - 68 Kg 153 x 27 x 7 cm - 7 Kg	120 x 80 x 80 cm - 150 Kg 220 x 40 x 15 cm - 19 Kg	120 x 80 x 80 cm - 160 Kg 260 x 40 x 15 cm - 22 Kg
Total	0,22 m3 - 65 Kg	0,90 m3 - 169 Kg.	0,91 m3 - 182 Kg.
Warranty	3 years	3 years	3 years

CONTROLLERS

Interface Wind +

Interface Wind + rectifies, controls and filter the **energy produced by the wind turbine**, and supplies energy suitable for use in different applications:

- **Grid connection**, interface supply direct current to a grid connection inverter. Available with ABB Wind grid connection inverters.
- **Water pumping**, interface supplies energy directly to the water pump, direct current to work with pumps like or alternate current at 230 V three phases to work with any kind of pump or motor.
- **Telecom**, this interface delivers direct current to supply directly to the telecom rectifiers or alternate current to the telecom inverters, depending of the

telecom electronics manufacturer.

ModBus Communication, allows us a bi-directional communications between the different components of the system: for energy management, monitoring, parameters change ...

Wind Turbine Input

Input	Three phases AC
Connectors	MC4
Operating Voltage range	80 - 480 Vac
Maximum Voltage	510 Vac
Maximum power	3000 W (Wind 13+) / 6000 W (Wind 25+)
Braking Resistance	5000 W (Wind 13+) / 10000 W (Wind 25+)
Overvoltage protection	Varistors

Output

Tipo de salida	CA / CC
Conectores	MC4
Rango de voltaje	80 - 380 Vac / 100 - 450 Vac
Protección	IGBT
Operacionales	
Consumo en reposo	< 3 W
Consumo a máxima potencia	< 30 W

Conexiones

Anemometer	Yes, Optional
Communications	2 x RS485 / 1 x RS232
USB	1 x mini USB Type B female
Bluetooth	Optional with Bornay Bluetooth dongle
Emergency stop	Yes, Brake switch
Remote emergency stop	Yes, with external interruptor
Relay	Free potential relayLibre de potencial, COM, NO, NC
Digital auxiliary inputs	2
Digital outputs	Pulse frequency output to synchronize with inverters that allows F-P power curves signal

Physical

Enclosure rate	IP20
Material	Aluminium
Color	RAL7035
Cooling	Forced ventilation
Mounting system	Wall installation
Dimensions	399 x 494 x 190 mm 220 x 490 x 353 mm (Optional Telecom Rack)
Packaging	280 x 480 x 560 mm - 0,08 m3
Weight	14 Kg (Wind 13+) / 18,5 Kg (Wind 25+)
Packaging Weight	16,5 Kg (Wind 13+) / 21 Kg (Wind 25+)

APPLICATIONS



RURAL ELECTRIFICATION



WATER PUMPING



TELECOM



GRID CONNECTION

DOWNLOADS



Bornay Wind + Small Wind Turbine brochure (9.66 MiB)



Interface Bornay Wind Plus ENG (5.52 MiB)



Bornay Fixation Plate (141.02 KiB)



Bornay Tower Top Adaptor (167.87 KiB)



Tower Bornay P750 (223.14 KiB)



Autocad Perspectiva Aerogenerador Bornay (268.38 KiB)

