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BAYAT ENERGY



Horizontal Axis Wind Turbines

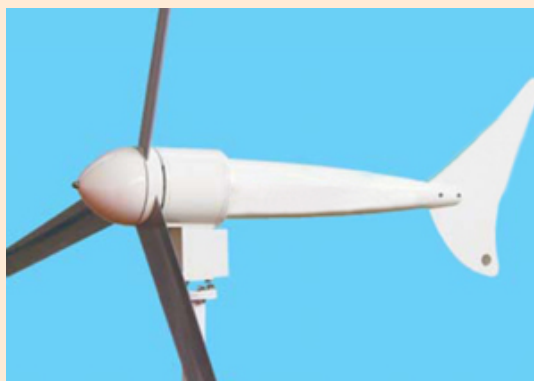


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Small and Medium Wind Power Generator

Characteristics

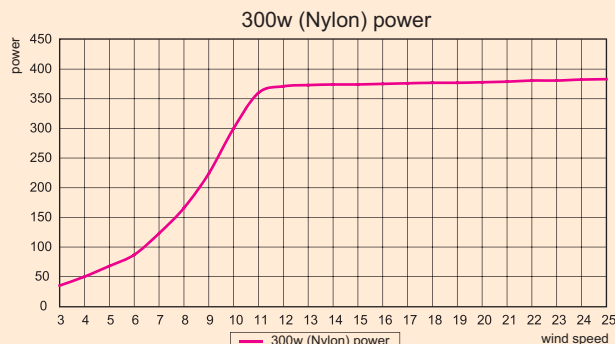
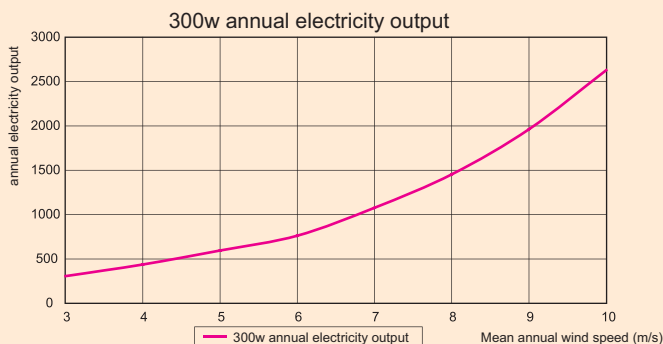
- 1.The motors have permanent magnetic material Nd-Fe-B.
- 2.The blades are of aluminum alloy materials, with an error $\leq 0.3g$, and with a good dynamic balancing performance, which are drawn in the air.
- 3.Requiring a low start-up wind speed, can withstand typhoon, protect against corrosion, and with a good performance in withstanding sandstorm
- 4.With electromagnetic and mechanical speed limiting modes, and automatic navigation
- 5.With good appearance, needing no maintenance, can be assembled easily
- 6.24v low-voltage DC output, without the danger of electric shock
- 7.With a service life of 20 years
- 8.With high performance-price ratio
- 9.Withstanding force 14 typhoon



BE-300H

Application Environment

Suitable for wind-solar-powered streetlamps/lighting systems, ornamental lighting system, etc. where the mean annual wind speed is low



Parameters of wind-driven generator

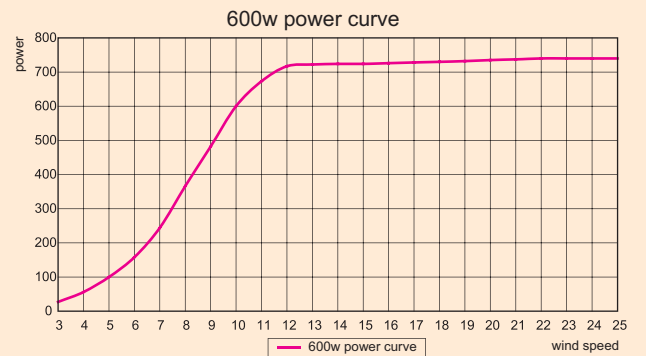
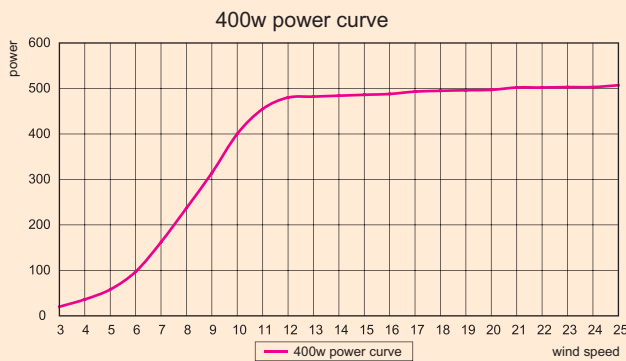
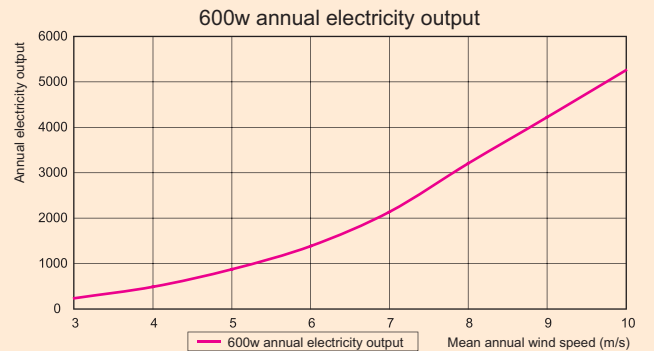
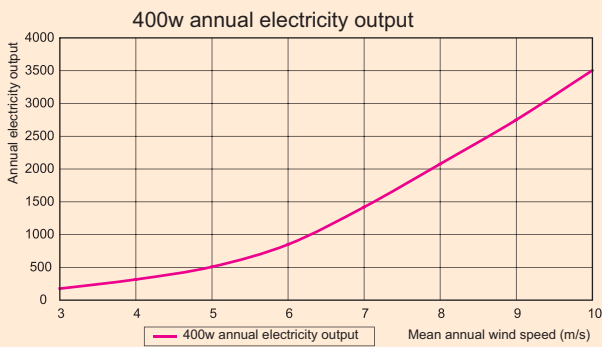
Models	DC-300P	DC-400P	DC-600P
Rated voltage (V)	DC24/48	DC24/48	DC24/48
Rated power (W)	300	450	600
Rated rotation speed (rpm)	450	450	450
Rotor diameter (m)	2	2.2	2.5
Start-up wind speed (m/s)	2.3	2.5	3
Cut-in wind speed (m/s)	3	3	3.5
Rated wind speed (m/s)	10	10	10
Working temperature (°C)	-30~50	-30~50	-30~50
Speed limiting mode	Electromagnetic & centrifugal	Electromagnetic & centrifugal	Electromagnetic & centrifugal
Weight (kg)	32.8	34	36.8
Material and number of the blades	High-strength nylon ×3 / Aluminum alloy ×3	High-strength nylon ×3 / Aluminum alloy ×3	Aluminum alloy ×3



BE-400H



BE-600H



Application environment

Suitable for wind-solar-powered streetlamps/lighting systems, ornamental lighting system, school scientific popularization, fishing boats, etc. where the mean annual wind speed is low.

Application environment

Suitable for communications base stations, independent power supply, large advertising billboards, etc. where the mean annual wind speed is low.

Small and Medium Wind Power Generator

Characters

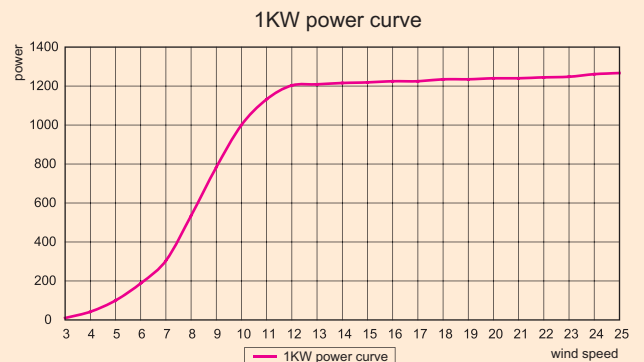
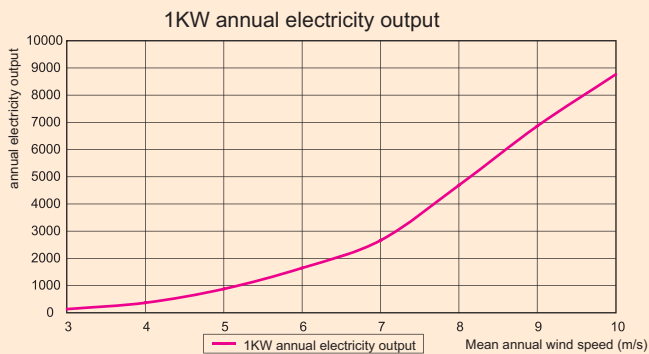
1. The motors have permanent magnetic material Nd-Fe-B.
2. The blades are of GRP, carbon fiber, and high-strength plastic, etc.
3. Requiring low start-up wind speed, can withstand typhoon, protect against corrosion, and with a good performance in withstanding sandstorm
4. With electromagnetic and mechanical speed limiting modes, and automatic navigation
5. With good appearance, needing no maintenance, can be assembled easily
6. 48v low-voltage DC output, without the danger of electric shock
7. With a service life of 15-20 years
8. With high performance-price ratio
9. Withstanding force 16 typhoon



BE-1000H

Application Environment

Suitable for communications base stations, independent power supply, large advertising billboards, domestic power supply etc. where the mean annual wind speed is low.



Parameters of wind-driven generator

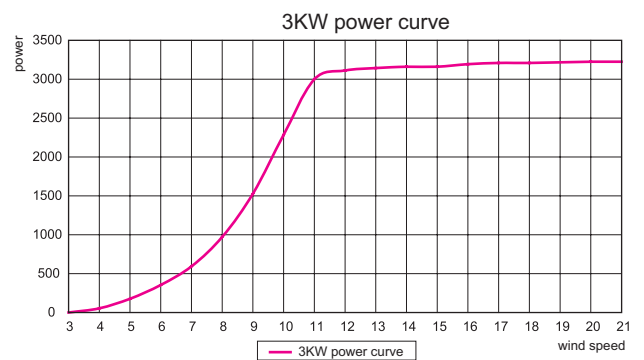
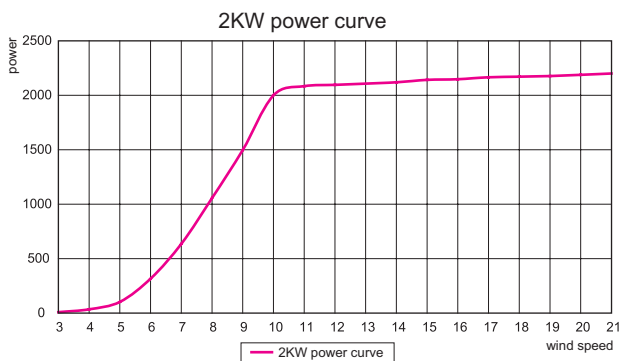
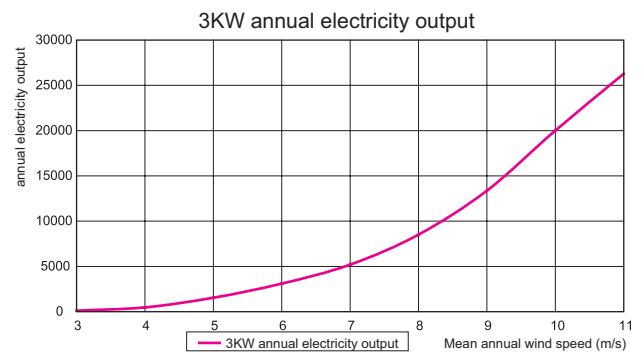
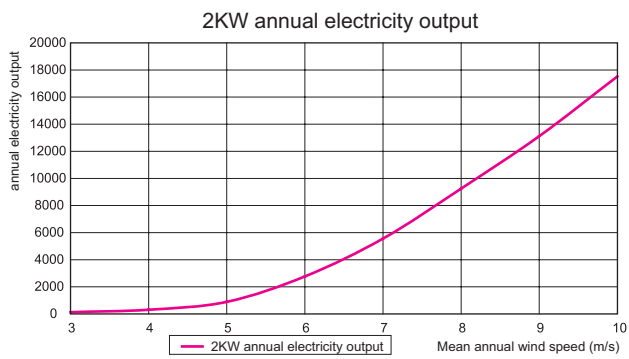
Models	BE-1000H	BE-2000H	BE-3000H
Rated voltage (V)	DC24/48	DC48/115/230	DC115/230
Rated power (W)	1000	2K	3K
Rated rotation speed (rpm)	450	360	280
Rotor diameter (m)	2.8	3.2	4.2
Start-up wind speed (m/s)	3	3	3.5
cut-in wind speed (m/s)	3.5	3.5	4
Rated wind speed (m/s)	10	10	11
Working temperature (°C)	-30~50	-30~50	-30~50
Speed limiting mode	Electromagnetic & centrifugal	Electromagnetic & variable-pitch	Variable-pitch adjustment
Weight (kg)	44	130	250
Material and number of the blades	Aluminum alloy ×3	FRP ×3	FRP ×3



BE-2000H



BE-3000H



Application environment

Suitable for separate power supply, building power supply, island power supply, domestic power supply, etc., where the mean annual wind speed is low

Application environment

Suitable for independent power supply, building power supply, island power supply, domestic power supply, etc., where the mean annual wind speed is low

Small and Medium Wind Power Generator

Characteristics

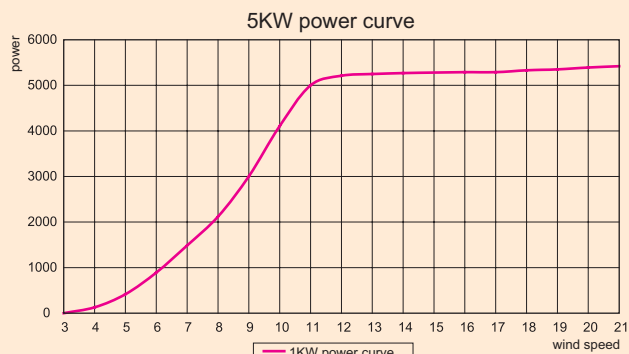
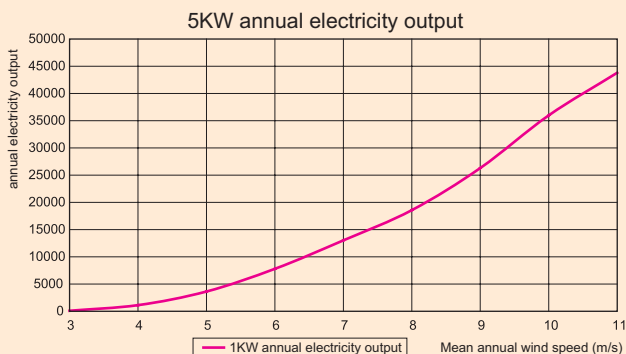
1. The motors have permanent magnetic material Nd-Fe-B.
2. The blades are of GRP, carbon fiber, and high-strength plastic, etc., which are optional.
3. Requiring low start-up wind speed, can withstand typhoon, protect against corrosion, and with a good performance in withstanding sandstorm
4. With electromagnetic and mechanical speed limiting modes, and automatic navigation
5. With good appearance, needing no maintenance, can be assembled easily
6. 48v low-voltage DC output, without the danger of electric shock
7. With a service life of 20 years
8. With high performance-price ratio
9. Withstanding force 16 typhoon



BE-5000H

Application environment

Suitable for independent power supply system, combined power grid system, island power supply, medium-load power supply, etc. in open areas where wind speed is favorable



Parameters of wind-driven generator

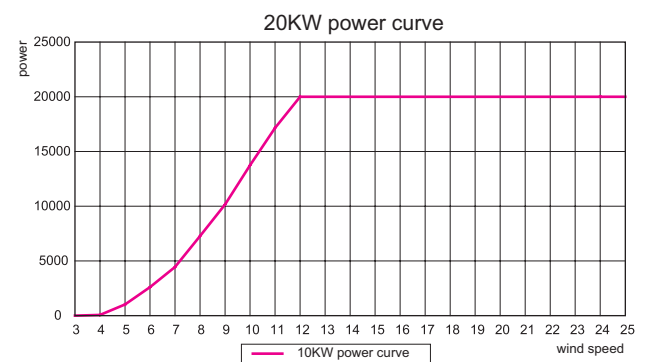
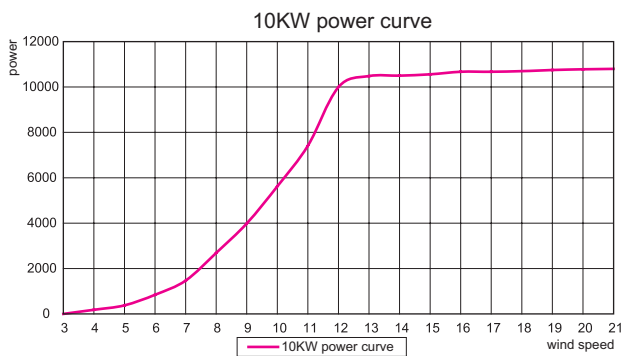
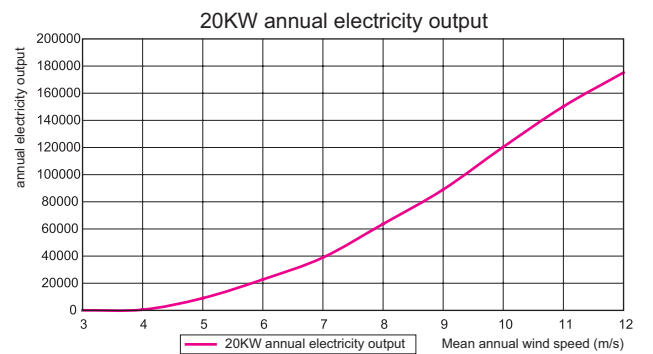
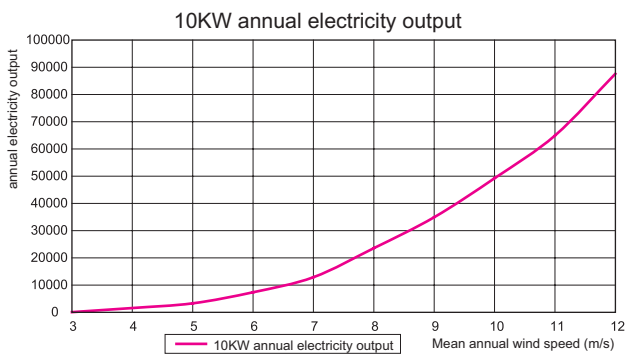
Models	BE-5000H	BE-10KH	BE-20KH
Rated voltage (V)	DC230	DC230/500	DC230/500
Rated power (W)	5K	10K	20K
Rated rotation speed (rpm)	220	200	185
Rotor diameter (m)	5.2	7.6	10
Start-up wind speed (m/s)	3.5	3.5	3.5
cut-in wind speed (m/s)	4	4	4
Rated wind speed (m/s)	11	12	12
Working temperature (°C)	-30~50	-30~50	-30~50
Speed limiting mode	Variable-pitch adjustment	Variable-pitch adjustment	Variable-pitch adjustment
Weight (kg)	280	500	750
Material and number of the blades	FRP × 3	FRP × 3	FRP × 3



BE-10KH



BE-20KH



Application environment

Suitable for separate power supply, connected-grid power supply, military camps, sea water desalination, etc. in open areas where wind resources abundant.

Application environment

Suitable for separate power supply, connected-grid power supply, military camps, sea water desalination, etc. in open areas where wind resources abundant.

BE-30KH Wind Power Generator

The 30KW wind power generator set is comprised by wind rotor, motor composite unit (including generator and gyro-rotor), independent pole, hydraulic/lattice type tower, anemoscope, wind transducer, intelligent controller and so on.

1. Wind rotor: wind rotor has three blades, laminar flow aerofoil profile, high lift drag ratio and good quality performance.
2. Generator and gyro-rotor: generator and gyro-rotor is designed by mechanical & electrical integration, that means to combine the generator case and the gyro-rotor as a whole, they are connected and relying on each other's structure, thus enhance the strength and greatly reduced the weight of material and handpiece.
3. Wind speed and wind transducer transmit the digital signal to the controller in order to achieve intelligent control, if the wind is over-speed or over-voltage, it will stop working automatically.

Advantageous

1. The motors have excellent permanent magnetic material Nd-Fe-B;
2. Automatically yawing, headtowind and cast loose;
3. Double protection with two braking modes: mechanical and electromagnetic;
4. wing shape have advantages of late shunt, high lift drag ratio and blade surface pressure mitigate transformation.

Application Conditions

Suitable for open terrain with the mean annual wind speed is above 5m/s, and require higher electricity demand.

Application Environment

Suitable for agricultural and pastoral areas, island border post and observatory with abundant wind resources but no conventional energy resources, can provide stable electricity for electrical equipment like lighting, TV and navigation mark.

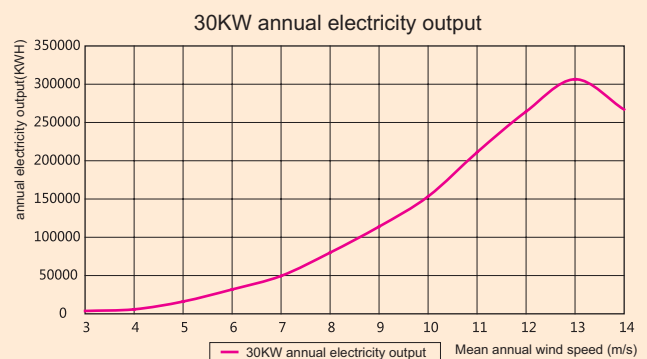
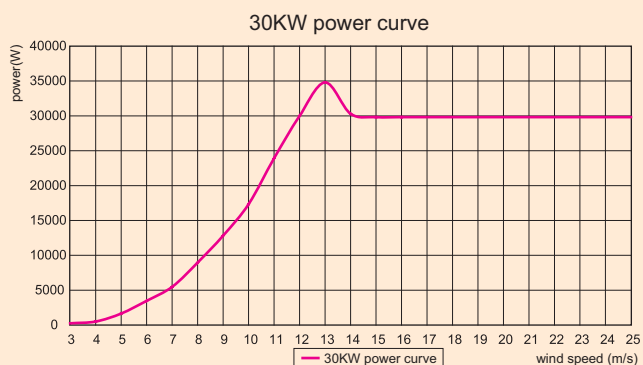
Suitable for grid-connected inverter system as well.



BE-30KWH

Parameters of wind-driven generator

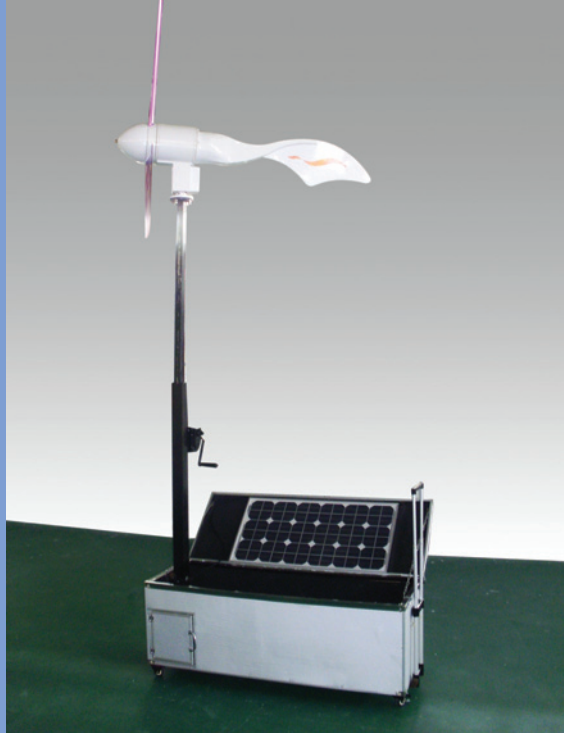
Models	BE-30KH
Rated power (W)	30000
Rated voltage(DCV)	240
Rated current(DCA)	83
Rotor diameter(m)	125
Material of the blades	strengthen glass fiber reinforced plastics
Direction of rotation (view following the wind)	clockwise
Start-up wind speed (m/s)	2.5
Rated wind speed (m/s)	12.5
cut-out wind speed(m/s)	20
safety wind speed(m/s)	45
Net weight (T)	1.1
Mold	upwind mold
Rated rotation speed (rpm)	75
Quantity of blades	3
Altitude of hydraulic tower (m)	18
Yawing system	motor-driven
Annual energy output(kwh)	70000
Yawing mode	automatic / manual operation
Efficiency	0.85
Angle of elevation	6°
Protection Method	- Yawing - hydraulic braking - unloading



Portable Mobile Power

Wind and solar Independent Power Supply System





Portable and mobile independent power supply system solution

Usage of environmental resources: (annual average wind rate approx 4m/s, annual sunshine duration about 2,100hrs)

System scheme configuration: BE-400P

Configuration	Specification	Quantity
Wind turbine generator system	300W/DC24V	1 set
Solar panel	50W/DC12V	2 pcs
Wind-solar energy controller	Wind 400W+light 100W/DC24V	1 set
Battery	55AH/DC12V	2 pcs
Guyed tower pole	6m	1 set
Cable conductor		Provide as requested
Accessories	Guy rope fitting and mounting tool	1 set
System average generating capacity/day		0.5KWH
Load power consumption	30W/DC24V, 6hrs/day	0.18KWH
Annual coal consumption saved		0.074t
Annual exhaust emission reduced		0.197t

Functions achieved: ensuring about 6hrs/day for power consumption during outdoor camping, living and working, enabling normal running at least two days under no wind and light. The system can be in service without problems for 20 years, suitable for defined system technical proposals of independent power supply for Wind-solar energy in different regions. We can provide proper design services according to natural resources in the applied regions and user demands.



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Horizontal Axis Wind Turbines



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