



ZHEJIANG SENWEI WIND POWER CO.,LTD.

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Product Catalog 2007



We conscientious of
“trustworthiness, devote one’s
mind, be solid and creative” of
enterprise spirit, concentrate on
the expansion of the wind power
machine product, do the
contribution for the
environmental protection
enterprise.

About Senwei

SenWei Wind Power Co. set up in 1996, is one of the leading manufactories of small wind turbine generators in China. We specially manufacture safe and secure wind power generator, lamina and completely automatic sine wave inverse controller for the world market.

The company and the factory are occupying the area 60,000 square meter. We have advanced equipment and specialized monitoring facility mainly engaged in wind power products range from 200 W to 20 KW produce and sales. We own many engineer who have engaged in over a

long period of time investigating the wind energy generator electricity, so we have responsibility to service everything we capable either large or small for your require.

We encourage the use of our wind power generator for its cleanly, environment protect, and economy energy sources. And our aim is to develop more advanced wind power generator with high scientific and technologic lever. We carry out ISO9001 standard to give customer security, and all products have the CE certified for the European market.





(OFFICE)



(FACTORY)

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Our Main Products

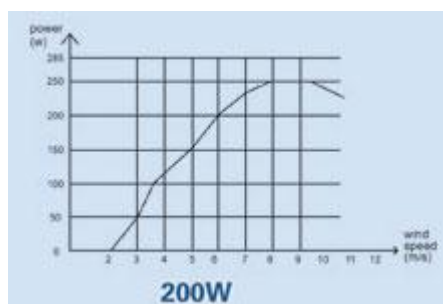
200W Wind Turbine 300W Wind Turbine 500W Wind Turbine 800W Wind Turbine
1kW Wind Turbine 2kW Wind Turbine 3kW Wind Turbine 5kW Wind Turbine
10kW Wind Turbine 20kW Wind Turbine
Grid tie Inverter Grid off Inverter
Wind power & Ray Mutual Complement System
SW 200w Wind Turbine



Main Parameter

- > Model: SW-200
- > Rated Input Power (W): 200
- > Rate Input Voltage (V): 28
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 6
- > Diameter of wind Turbine (M): 2.2
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min): 400
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.38
- > Shelf High Degree (M): 5.5
- > Shelf Steel Diameter (mm): \varnothing 60
- > Battery: 12120AH (2Set)

Power sine wave



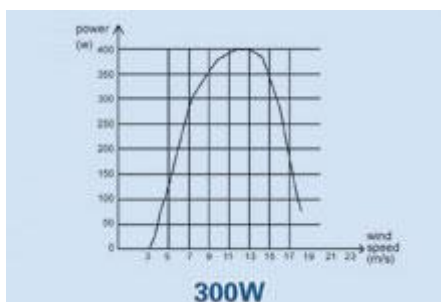
SW 300w Wind Turbine



Main Parameter

- > Model: SW-300
- > Rated Input Power (W): 300
- > Rate Input Voltage (V): 28
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 7
- > Diameter of wind Turbine (M): 2.5
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min): 400
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.40
- > Shelf High Degree (M): 6
- > Shelf Steel Diameter (mm): $\Phi 76$
- > Battery: 12V150AH (2.5Set)

Power sine wave



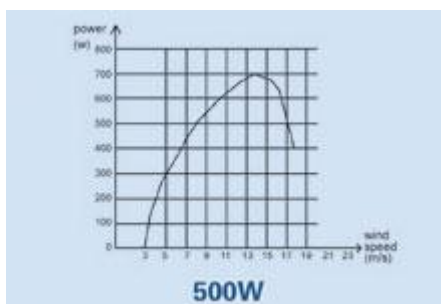
SW 500w Wind Turbine



Main Parameter

- > Model: SW-500
- > Rated Input Power (W): 500
- > Rate Input Voltage (V): 28
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 8
- > Diameter of wind Turbine (M): 2.5
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min): 400
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.40
- > Shelf High Degree (M): 6
- > Shelf Steel Diameter (mm): $\Phi 76$
- > Battery: 12v150AH (2.5Set)

Power sine wave



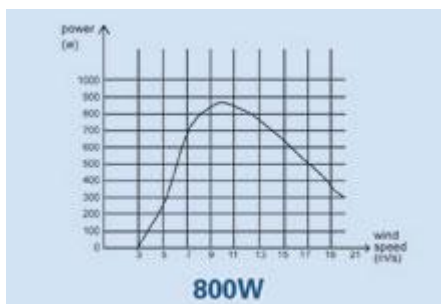
SW 800w Wind Turbine



Main Parameter

- > Model: SW-800
- > Rated Input Power (W): 800
- > Rate Input Voltage (V): 36
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 8
- > Diameter of wind Turbine (M): 2.7
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min): 400
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.40
- > Shelf High Degree (M): 6
- > Shelf Steel Diameter (mm): $\Phi 76$
- > Battery: 12v200AH (2-3Set)

Power sine wave



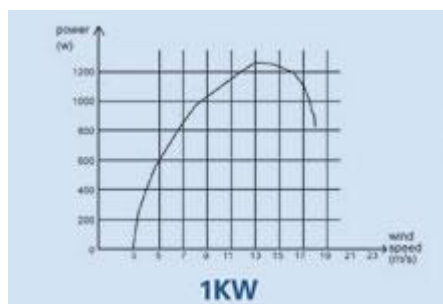
SW 1kw Wind Turbine



Main Parameter

- > Model: SW-1000
- > Rated Input Power (W): 1000
- > Rate Input Voltage (V): 36/48
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 9
- > Diameter of wind Turbine (M): 3.0
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min): 400
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.40
- > Shelf High Degree (M): 6
- > Shelf Steel Diameter (mm): $\Phi 89$
- > Battery: 12v150AH (2-4Set)

Power sine wave



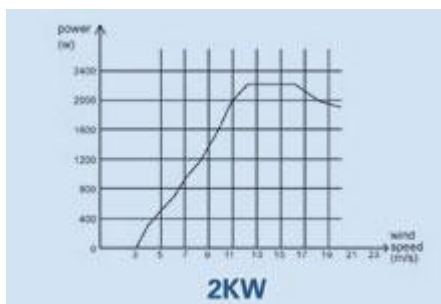
SW 2kw Wind Turbine



Main Parameter

- > Model: SW-2000
- > Rated Input Power (W): 2000
- > Rate Input Voltage (V): 48/96
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 9
- > Diameter of wind Turbine (M): 3.6
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min): 400
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.42
- > Shelf High Degree (M): 9
- > Shelf Steel Diameter (mm): $\Phi 108$
- > Battery: 12v150AH (4-8Set)

Power sine wave



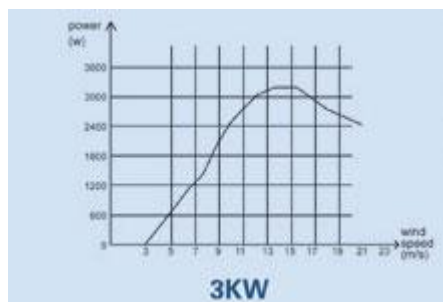
SW 3kw Wind Turbine



Main Parameter

- > Model: SW-3000
- > Rated Input Power (W): 3000
- > Rate Input Voltage (V): 48/96
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 9
- > Diameter of wind Turbine (M): 4.0
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min): 360
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.42
- > Shelf High Degree (M): 9
- > Shelf Steel Diameter (mm): $\Phi 108$
- > Battery: 12v200AH (4-8Set)

Power sine wave



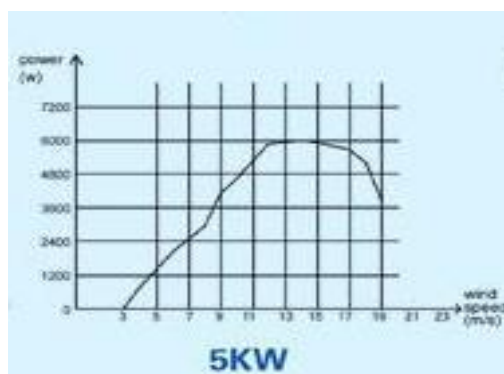
SW 5kw Wind Turbine



Main Parameter

- > Model: SW-5000
- > Rated Input Power (W): 5000
- > Rate Input Voltage (V): 280
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 10
- > Diameter of wind Turbine (M): 6.4
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min): 200
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.42
- > Shelf High Degree (M): 9
- > Shelf Steel Diameter (mm): $\Phi 114$
- > Battery: 12v300AH (20Set)

Power sine wave



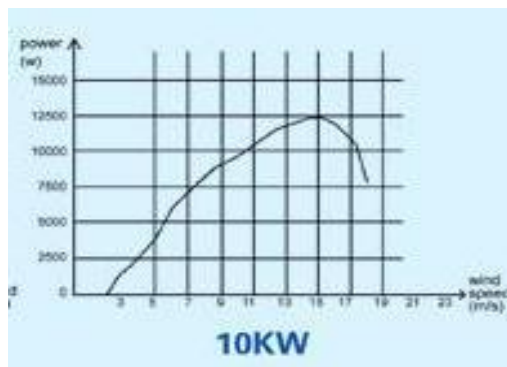
SW 10kw Wind Turbine



Main Parameter

- > Model: SW-10000
- > Rated Input Power (W): 10000
- > Rate Input Voltage (V): 280
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 10
- > Diameter of wind Turbine (M): 8
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min):160
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.42
- > Shelf High Degree (M): 12
- > Shelf Steel Diameter (mm): $\Phi 273$
- > Battery:12v400AH (20Set)

Power sine wave



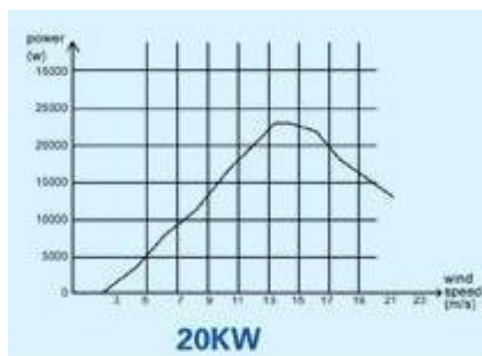
SW 20kw Wind Turbine



Main Parameter

- > Model: SW-20000
- > Rated Input Power (W): 20000
- > Rate Input Voltage (V): 280/360
- > Start The Wind Velocity (m/s): 3
- > Rated Input Wind Velocity (m/s): 12
- > Diameter of wind Turbine (M): 12
- > Quantity Of Wind Turbine: 3
- > Rated Input Speed (r/min):90
- > Wind Velocity Scope (m/s): 4-30
- > Wind Energy Utilization: 0.42
- > Shelf High Degree (M): 18
- > Shelf Steal Diameter (mm): $\Phi 325$
- > Battery:12v400AH (20-30Set)

Power sine wave



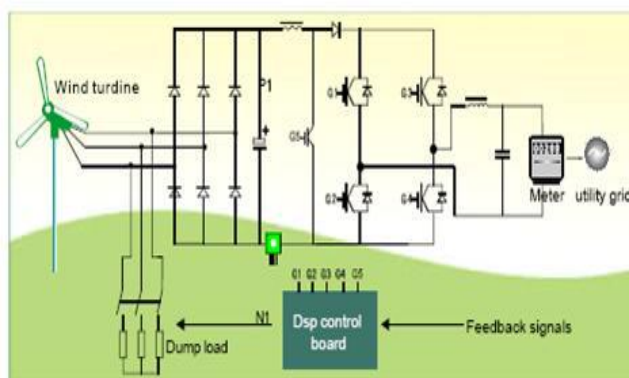
Grid Tie Inverter for Grid Connected Wind Power System



Small wind turbine grid-connected power system includes small wind turbine dump load, grid-connected inverter, meter and power switchboard.

When wind speed reaches the cut-in-speed, the AC power from the wind turbine will be fed in the utility grid after rectifying and inverting.

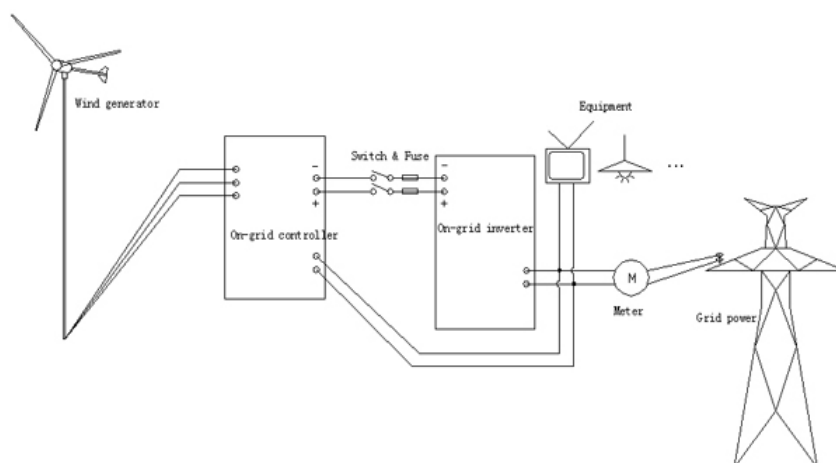
If the wind speed is too large, part of the dump load will be connected to the wind turbine to keep the constant power to feed in the utility grid.



Product advantages

1. DSP controller
2. MPPT (Maximum Power Point Tracking) technology
3. High efficiency up to 95%
4. Perfect protect functions include anti-islanding
5. In accordance with IEEE929-2000, UL1741
6. Quick and easy installation
7. A LCD /LED display for monitoring all system information
8. Can set the operation parameters via LCD and keys.
9. Boost circuit provide wide AC input range.
10. Mitsubishi IPM Module inside.
11. Electrical brake
12. CE certificate

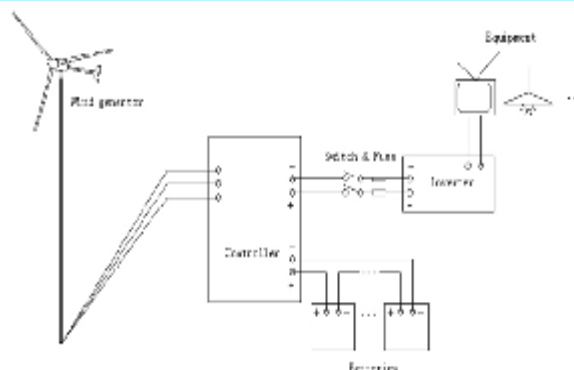
Electrical wiring map for on-grid:



Grid off Inverter for Wind Power System



Grid-off systems are independent from the utility grid, avoiding the possibility of losing power when the grid goes down. Electricity from grid-off systems is used on site, such as an RV or cabin. Power that is generated can be stored in batteries and used on no wind days. A generator may also be used for back-up.



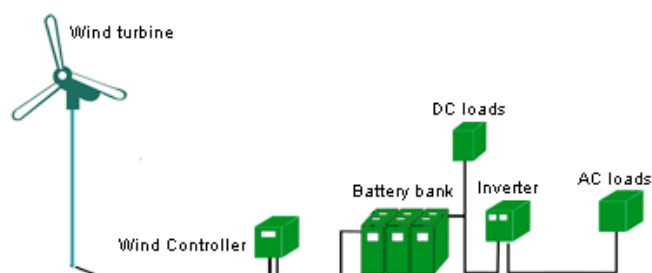
FUNCTION DESCRIPTION

Automatic voltage-steadying output

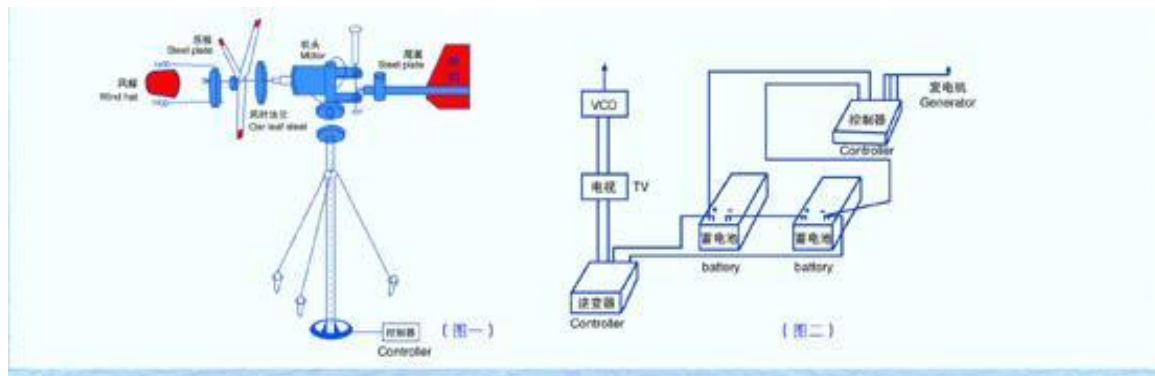
This equipment can stabilize voltage-output at $AC220V \pm 8\%$ in case the voltage of storage batteries waves from 90% to 125% of normal voltage. When the storage batteries' voltage is below 90% this function is not available meanwhile the alternating voltage sent from inverter will fall down quickly with the decrease of the batteries' voltage. In this case the inverter will execute the short-voltage-protection automatically.

Product advantages

1. Controlled by CPU, pure sine wave output, it can drive different kinds of household appliances and industrial appliances. Such as tube lights, refrigerators, air-conditioners, dynamoelectric tools and so on.



- 2. Output slow-starting function, even though you open the unit with loads, it won't damage the inverter
- 3. High transfer efficiency, it is up to 85% when it drives tube lights, which save the input of the solar energy and wind energy.
- 4. With complete protective functions, protections against output overload, short-circuit, input with high voltage and low voltages, etc.
- 5. With most advanced technologies, it has been up to the best cost performance.

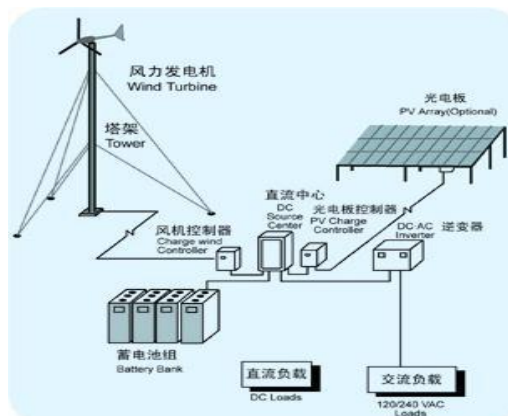


SPECIFICATIONS

Rating output power	2000W
Matching battery groups	48V
Output voltage	220V
Output frequency	50±2Hz
Function	Charge, Inverse
Application environment	Temperature:-10~40℃ Humidity:≤80%
Output wave	Square wave
Over discharge protection	35V±2 V
Working mode	75% Continue resistant load
Overload protection	5500W instant protection
Fuse current (A)	63A

Wind power & Ray Mutual Complement System

Wind power & Ray Mutual Complement street lamp (three years take back the investment cost)



Wind Power & Ray Mutual Complement street lamp

1. Cost and gearing expenses are each roughly 16800 RMB.
2. Every year uses expenses as 0 RMB
3. Because the landscape repairs with each other the light is a new energy, new product, having the very strong advertisement effect with the visual effect, on the therefore each pole street lamp the high roughly 1000 RMB in an income in a light for common street lamp in ratio in every year in ad revenue ascending gearing in light is or so (three year is 3000 RMB)
4. The devotion expenses of the actual each pole street lamp 16800-3000 is: 13800 RMB

From above of the calculation result can get: Installs the landscape to repairs road the light with each other, not only can lift only should increases an image of city with personal status, but also have the very strong and social performance, economic performance, environmental protection performance, landscape performance with promote the meaning that nation economizes energy.

Remarks:

- (1) The energy is nervous, it is inevitable trend that electricity charges soar.
- (2) The usage of the green environmental protection energy is the main direction of the our country energy policy.
- (3) The landscape repairs road the need not paving in light circuit with each other, having to guard against theft goodly function.
- (4) The application of the green energy is one of the symbol of a city development, combining can increase the invisible income.

Product characteristics:

- (1) Landscape integral whole, repair the with each other strong, the stability is high.
- (2) The suitable for use scope is extensive, the adaptability is strong, the function is strong.
- (3) A devotion, last long output, service life is long
- (4) Do not produce any pollution, absolute green environmental protection to the environment.
- (5) The function is stable, the breakdown rate is low.

High Quality Control System

The **Sen wei** Wind Energy Systems carry a Three years limited product warranty to the original purchaser beginning upon the date of installation or ninety (90) days after shipment from the factory, whichever comes first. This warranty covers the **Sen wei** Wind Turbine, Controls and Tower (exclusive of foundation and wiring).



Warranty of Products

3 Years Limited Warranty

This limited warranty does not cover:

- Towers, equipment, materials, or supplies not manufactured by Senwei;
- Abuse, misuse or vandalism.
- Senwei equipment that has been modified or altered without prior factory approval;
- Repairs performed by other than authorized SENWEI service personnel;
- tower system foundations.
- all acts of god, including tornadoes and all other cyclonic windstorms.
- Damage or loss of function sustained during periods with wind speeds exceeding survive wind speed of Senwei equipment;
- damage due to voltage irregularities, including lightning or utility system failures that enter intertied SENWEI systems from the output (grid) SIDE
- failure to periodically service and maintain system in accordance with instructions furnished by SENWEI

SENWEI reserves the right to make changes or improvements in its products in the future without incurring

obligations to make these changes and improvements to products previously supplied. SENWEI reserves the right

to change the terms of this warranty in the future without incurring any obligations to make the reserved terms

applicable to products previously supplied. This limited warranty is transferable and only covers products shipped

after January 1, 2006.



Application of Wind Power



The main application is to produce electric energy in order for you to reduce your expenses for buying electricity.

A wind power plant is an ideal power supply for separate houses, islands, agricultural farming, small industries, communities and other places with good wind resources.

By installing a wind power plant, you produce energy in an ecological way, and therefore saving energy resources for the world.

According to your requirements, you can connect to the electric grid wire, using wind electricity with wind, and using grid electricity without wind.

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By installing a wind power plant, you produce energy in an ecological way, and therefore saving energy resources for the world. According to your requirements, you can connect to the electric grid wire, using wind electricity with wind, and using grid electricity without wind.

Wind Power-Where and How?

Before the concrete design of a wind power installation, several fundamental questions should be clarified:

Average Wind Velocity

Power in the wind is the cubic function of the wind speed. The higher the average wind is, the more power a wind turbine can generate. It is better to choose the area where average wind speed is over 3m/second.

Turbulence

Turbulence might damage wind turbine and will largely reduce its efficiency. Therefore, it is desirable to locate the turbine in a site that has no turbulence.

Local Prevailing Wind Direction

Prevailing wind direction is the direction of the wind lasting the longest time at a specific location. It is better to install at a site with steady prevailing wind direction, and without wind ward blocks.



Favorable Terrain

Favorable terrain can speed up the wind. It is better to locate the turbine in the facing-wind side of a hill or a mountain.

Height of the Tower

Erect the tower as high as possible, because the farther the turbine gets away from the earth's surface, the higher and steadier the wind is. In even areas, the recommended height of the tower is at least 12 m. The recommended height of the tower for our turbines is 12 m -18 m.

Obstacle

Trees and buildings will obstruct the airflow and cause a wide and thick turbulence area in front of and behind the obstacle. Avoid locating the wind turbine in such an area. The wind turbine should be located in an area without surrounding obstacles within a 400 meter radius. The height of the turbine has to be twice as high as the highest obstacle if any. For best efficiency, the wind turbine system should be positioned at least 75 meters from and 6 meters above any surrounding buildings.

Local regulations:

The installation should of course pay attention to local regulations.

Technical Description Principle

The system is using the wind energy as the motive power to revolve a permanent-magnet generator at low speed to generate alternating current. This alternating current is converted to direct current through constant-voltage rectifier under control and stored in the battery.

The direct current transmitted from the battery can be converted to alternating current through inversion power source and then put into use by linking to a load.

Features

The product is featured by novel design, unique technique and strong practicability. The key technique of the unit has been awarded the invention patent and practical new patent by the State Intellectual Property Office and enjoys the independent intellectual property right in China.

The product offers the most efficient technique for the conversion from wind energy into electric energy.

Compared with its counterparts, it has a lower rated revolving speed, thus raising the work efficiency.

On Grid Compared to Off Grid

We can supply wind power plants for all applications? Our wind power plants can either be connected to the power grid (on grid) or generate electricity off grid. We can fulfil all your requirements with a product range from 200 W to 250 kW.

On Grid Wind Turbine System

Wind turbine system feed all the AC power into national electric grid through an on grid inverter, the grid will supply power for your heating, lighting, home appliances and other loads.

Off Grid Wind Turbine System

Wind turbine generates electricity with wind and charge into battery group, and then the system can supply DC and AC power for your heating