

— Important safety instructions (must complete a detailed reading, before the assembly use)

- 1) Read and understand all warnings and take it seriously.
- 2) Do not install the windy day.
- 3) If abnormal noise or perceived status, turn off the machine, and with a qualified service personnel.
- 4) In the assembly and installation process, please take care to tighten all fasteners.
- 5) Act and in accordance with local electrical standards to determine the grounding techniques.
- 6) Install the P-300W wind turbine, the state must comply with this manual and warranty maintenance on the relevant provisions. Failure to comply with the relevant provisions of this manual and the state may affect your purchase of the product warranty and may cause the warranty.
- 7) Rotating blade is a high-risk behavior. Install the P-300W wind turbine must ensure that no one will come into contact with rotating blades.
- 8) To comply with this manual on "connection" requirement, including the use of recommended specifications of the wire.

In this manual you will see the following icon:



Warning: do not follow the operation, the device will cause serious damage, personal injury or even death. Please follow instructions carefully.



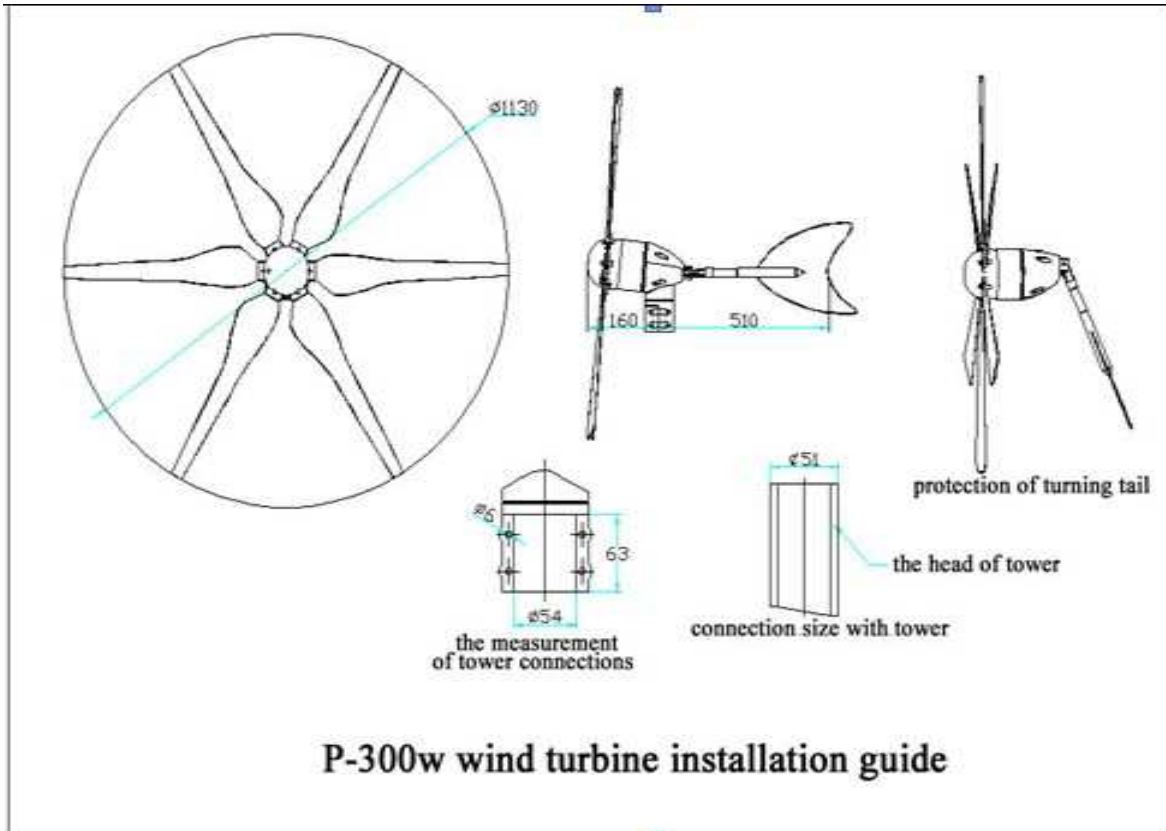
Important: critical assembly and operating instructions and recommendations. Not required to operate, will result in equipment damage.



Tip: streamline operations, facilitate the operation instructions and recommendations.

1-1、 P-300W Technical Specifications (this machine has rectified 12V, 24V two specifications)

Model	P-300W
Name	Hyacinth
Rated power	300W
Rated DC voltage	DC 12V/24V
Rated current	25A/12.5A
Rated speed	900r/m
Max power	350W
Number of blade	6 pcs
Starting wind speed	2m/s
Cut-in wind speed	3m/s
Cut-out wind speed	15m/s
Security wind speed	40m/s
Rated wind speed	12.5m/s
Engine (generator)	Three-phase permanent magnet generator
Rotor diameter	1140mm
Blade material	Carbon fiber reinforced plastics
Output line anti-winding device	Overall three-phase commutator
Over-speed wind protection	Tip stall protection + turned protection + Electromagnetic brake
Life span	15 years
Equipment surface protection	Aluminum oxide + plastic coating



Map 1-1 Refer to the section on the size of paper connecting tower production
 Thrust axis wind speed $45 \text{ m}^* / \text{sec}$ for the 270^* values do not contain beef
 safety factor. Our recommended 1.5 safety factor

二、Reference P-300W wind wheel assembly

P-300W at time of delivery has been partially assembled. Further assembly, install the blade to blade plate, and then leaves the body plate fixed to the generator, and installation of diversion to the blade drive cap. Assembly need to use the Allen wrench provided with random.

2-1 torque specifications:

Blade to blade plate bolt: $1/4-20 \times 1.25$ inches, Au stud, cattle $\bullet 9.5$ meters.

Plate to the rotor blade nuts: $5/8-18$ inch, card only nuts, cattle $\bullet 70$ meters.

Snap locking bolts connecting rod: $M5 \times 35$ mm, Au stud, cattle $\bullet 5.5$ meters.

See how the leaves onto the leaves on the plate (see Figure 2-1), and then began to assemble. Roots and leaves in the leaves on the plate coated with a layer of glue that comes with (because of transportation for security reasons can't be supplied, at the local hardware store to buy bolt-on glue). Goal is to not loose all the nuts, cause the fan to damage or accidents.

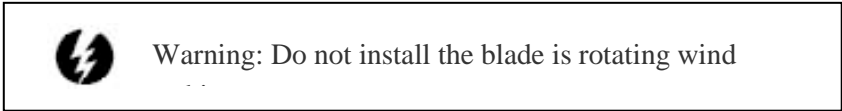


Nut glue is particularly important to ensure the safe operation of the future.

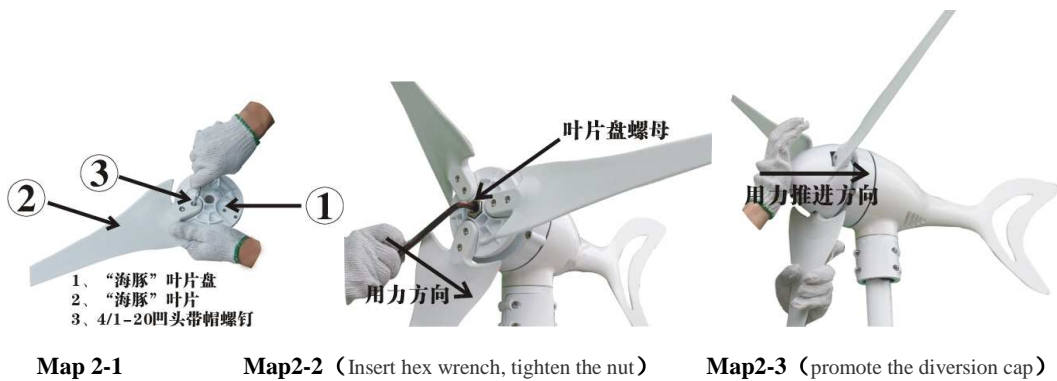
The leaves on the leaves on the plate, with a nylon locking nut (Figure 1 4) into the back of the fixed blade plate groove. A bolt through the blade, screwed into the nylon locking nut - Do not fully

tighten the first bolt. Install the second bolt and nylon locking nut and two bolts to 9.5 cattle • m. According to (Map 2-1) the steps to install the remaining two blades.

If the tilt of the tower to install the P-300W, the next step will be blade / vane plate assembly mounted to the generator itself. Screw 5/8-18 thread on the shaft nut leaf plate, the leaf disk full "spin" to the generator shaft. Generator into a body axis in 5 / 16 inch hex wrench, and turning leaves in the process of the axis of rotation, the blade plate is fully tightened to 70 cattle • m. Map 2-2
 If installed on a vertical power tower P-300W, then the first turbine installed in the tower body, and then install the blade / blade plate assembly, so to avoid the installation of wind turbine blade rotation - rotating the blade install the P-300W is very dangerous.



Along the outer edge of the deflector plate vane cap buckle into place. To ensure that all the three diversion cap buckle into the blade edge is the edge of plate. After installation, pull the deflector cap to ensure it is securely attached. **Reference similar** (Map2-3)



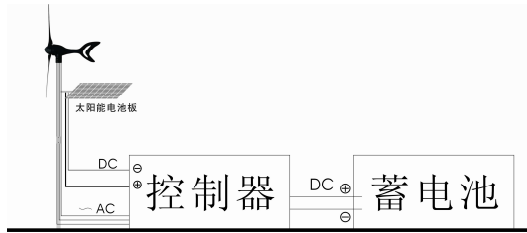
三、Reference P-300W Installation location


Small changes in wind speed may affect the generation of electricity. Thus the wind turbine site is very important, both considering the tower, the distance to the battery, but also consider local zoning requirements as well as buildings, trees and other obstacles.

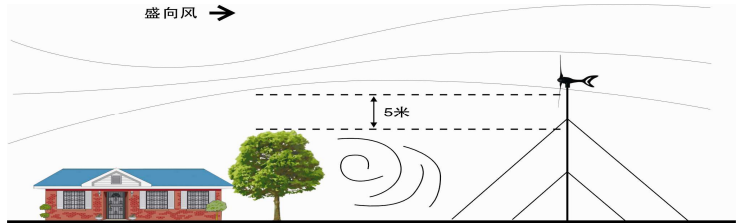
Typically, the higher the tower, wind speed, the higher the final power output.

Minimum recommended tower height is 5 meters (open land), or 5 meters above the surrounding obstructions (see Figure). Try to install wind turbines in the turbulent few places, because turbulence will reduce the efficiency of wind turbines, and will accelerate wear on rotating parts.

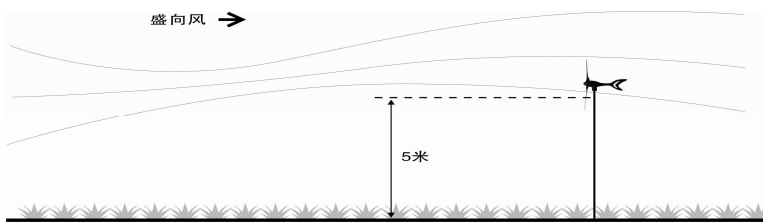
Select the installation location, the first consideration is safety. Install the P-300W, to ensure that leaves do not accidentally come into contact with other animals and plants and people (even if forced to wind turbines installed in the undesirable position). Safety above all else.



 Warning: Installation "Dolphin", to ensure that there is no possible accidental contact with rotating blades (safety above all else).



Map 1 P-300W best installation location



Map 2 P-300W best installation location

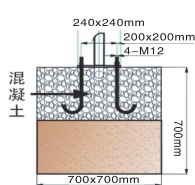
四、Reference P-300W Tower and foundation construction

4-1、Tower of materials and sizes

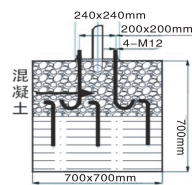
P-300W design for installation in the outer diameter of **51 mm** of the tube. This design allows the P-300W in a lot of tower installation. However, in no case shall the use of plastic pipe to build the tower.

 Warning: Do not use plastic pipe to build the tower!

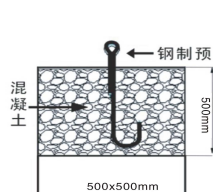
4-2、Foundation construction, please do the same drawings, with reference to section 5-5 "tower grounding" and Figure 5-5 for ground electrode construction.



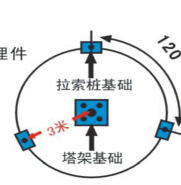
Map 一



Map 二



Map 三



Map 四

五、Reference P-300W wiring

5-1、P-300W to the battery's connection:

We recommend the P-300W directly to its dedicated controller, then connect the battery through the controller, the dolphins can operate independently. Controller monitors the battery, adjust the wind turbine running, and the amount needed to maintain charge. If you have additional needs (such as wind and solar installations, or street installations, please contact the company to recommend a

dedicated controller).



Wind turbine to be connected to the battery by the controller

5-2、 Dedicated controller

P-300W to connect to the battery by the controller

P-300W dedicated controller has the following features:

A, rectifier regulator B, Wind C, charge the battery management (ie, anti-overcharge, over-discharge prevention)

D, strong wind speed is too high, the P-300W to control speed protection (ie, the brake function)

E, a timer switch on the battery discharge function (light control and time control in two forms)

There are also less comprehensive than commercially available controller does not function, but to meet the P-300W output voltage and current requirements, but also in line with the battery and the fan over-speed protection requirements.

P-300W dedicated controller as follows:

5-3、 Dolphin Wind controller instructions

1. Product features and characteristics

1.1: Battery:

1.1.1: Battery over-voltage protection, under voltage protection, reverse polarity protection, short circuit protection;

1.1.2: System voltage 12V \ 24V Automatic recognition;

1.1.3: Temperature compensation battery charging, and whether the line sensor with automatic identification function;

1.1.4: Short-circuit protection fuse, fuse built-in but can be replaced;

1.2: Solar panels:

1.2.1: anti-reverse feature and night anti-recoil feature;

1.2.2: unique serial charging circuit, the diode than the average reduction of nearly half of the drop, effectively improve the efficiency of solar charging;

1.2.3: Pulse modulation charge, charging according to battery voltage automatically adjusts the pulse width, effectively extending the battery life;

1.3: Wind Turbine:

1.3.1: Manual brake and automatic brake function;

1.3.2: PWM unloading brake design, the fan in unloading the brake, the current is very small, to avoid the impact of burning high-current motor;

1.3.3: wind turbine brake automatic recovery function;

1.4: Load Output:

1.4.1: Two DC outputs, respectively working without disturbing each other;

1.4.2: multiple operating modes: normally open, pure light control, light control + time control to open relations;

1.4.3: the unique sensitivity of detection of light control, lighting in the early, middle and late adjustable;

1.5: LED display:

1.5.1: load output, battery voltage, solar charging, charging wind turbine in the system operation,

such as LED display system;

1.5.2: LED indicator function defined

Off 不亮 flash长亮 bright	负载输出 load output 无直流输出	No DC output / 有直流输出	DC output
蓄电池 Battery / 系 统运行指示	System operating instructions 欠压	Under-voltage	太阳能 solar panel 不 在充 Not in charge 充 电中 charging /
风力发电机 wind generator 不在充电 Not in charge 充电中 charging /			
Off 不亮 flash长 亮 bright	负载输出 load output 无直流输出	No DC output / 有直流输出	DC output
蓄电池 Battery / 系 统运行指示	System operating instructions 欠压	Under-voltage	太阳能 solar panel 不 在充 Not in charge 充 电中 charging /

1.6: Definition of the function of dial switch



A (B) 路定时时间设置由位 1 (4)、位 2 (5)、位 3 (6) 决定 the time setting of load A(B) depends on load 1(4) load 2(5) load 3(6)				
A 路定时时间 time (小时) (hour)	位 Load1 (4)	位 Load2 (5)	位 load3 (6)	说明 discription
不定时 untimed	OFF	OFF	OFF	纯光控制模式 light control mode
5	ON	OFF	OFF	光控+时控 light control and time control
6	OFF	ON	OFF	同上 light control and time control
7	ON	ON	OFF	同上 (出厂设置) light control and time control
8	OFF	OFF	ON	同上 light control and time control
9	ON	OFF	ON	同上 light control and time control
10	OFF	ON	ON	同上 light control and time control
11	ON	ON	ON	同上 light control and time control

光控灵敏度设置 Light-activated sensitivity Settings			
检测电压阈值 detecting voltage threshold	位 Load 7	位 load 8	说明 description

无光控 no time control	OFF	OFF	两路长亮 two loads bright
2V/12V 4V/24V	ON	OFF	晚 dusk
3V/12V 6V/24V	OFF	ON	中 noon
4V/12V 8V/24V	ON	ON	早 dawn

2. Technical parameters

Wind and solar power system snws400-12V \ 24V

Parameter name Default value range

Control system voltage 12V \ 24V Automatic Identification

Solar panels power rating 150W/12V 300W/24V

Wind turbine rated power of 300W-400W load

Wind turbine brake recovery time of 30 minutes

Match the maximum safety when the battery 200AH

Over-voltage protection voltage 15.0V/12V 30.0V/24V

Float charging voltage 14.4V/12V 28.8V/24V

Charge return voltage 13.5V/12V 27.0V/24V

Over-discharge recovery voltage 12.1V/12V 24.2V/24V

Over-discharge protection voltage 11.0V/12V 22.0V/24V

Battery charge temperature compensation factor 4mV / °C / 2V

Temperature compensated battery charging range of -30 ~ 65 °C

Load type low pressure sodium, lamp, LED lamps, etc.

Single load the maximum output current A Road: 10A B Road 5A

Load normally open output, light control + time control

Light control sensitivity threshold 1 ~ 3V/12V 2 ~ 6V/24V

Load loss ≤ 25mA

Ambient temperature -20 ~ +55 °C

Storage temperature -30 ~ +65 °C

Operating humidity range 35 ~ 85% RH (without condensation)

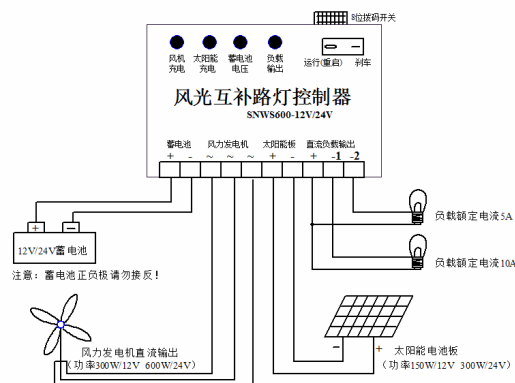
Use altitude ≤ 5500 M

Shell Size 155mm * 147mm * 60mm

Blue aluminum housing material

Natural way of cooling heat

3. Wiring diagram



4. Installation Steps

- 1: 接入蓄电池，手动开关打到刹车档；
- 2: 接入风力发电机三相交流输入；
- 3: 接入负载输出，约20秒内光源应亮起；
- 4: 接入太阳能电池板，如果是白天安装，约20秒内，光源应熄灭；
- 5: 把手动开关恢复到运行档，控制器自动重启，风机刹车解除，安装完毕；

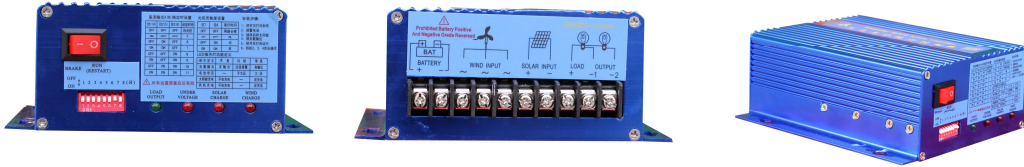
- 1, connect battery, turn hand switch to brake.
- 2, connect wind generator and three phase current input
- 3, connect load, the light will be on within 20 seconds
- 4, connect solar panel. The lights will be off within

20 seconds if installed in the day

5, turn the hand switch back to operating and the controller will be reset, the brake of wind generator will be off automatically and finish the installation.

可根据实际配置要求定制增加负载和电池板功率； can increase the power of load and solar panel according to actual configuration requirements

5. Physical picture



5-4、 Wire selection

Please refer to the following choice of conductor wire size metric wire size (mm²)

	0-9m	9-10m	18-27m	27-46m	46-58m
12V system	6mm ²	10mm ²	16mm ²	20mm ²	35mm ²
24V system	2.5mm ²	4mm ²	6mm ²	10mm ²	16mm ²

5-5、 Battery

There are many types of batteries available - maintenance-free lead-acid batteries, gel cell battery and dedicated wind turbines, the specific type of battery used, depending on the location of the battery and cost. For the gas discharge is safe and will not cause leakage of battery acid form of installation, maintenance-free lead-acid battery is a more economical choice.

Minimum recommended battery capacity:

12-volt systems: 200 Ah

24-volt system: 12V 100 Ah, twoλ tandem

Important: Do not wind turbines are not directly connected to the battery by the controller

5-6、 P-300W ground

P-300W grounding, eliminating the possibility of dangerous voltage potential to make people and equipment are protected.

Ground consists of two aspects - one of the electrical system grounding conductor and the conductor may be due to electrical failure with a voltage potential of the grounding of all metal structure.

(Please refer to the instructions of the supplier of electrical grounding)

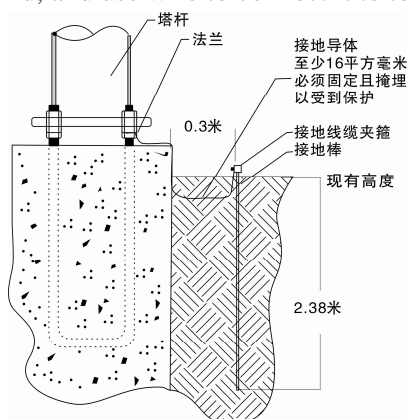
Strongly recommended that installation of the vessel grounded. For vessels, especially vessels connecting DC power ashore, grounding must comply with special requirements, may cause serious electric shock hazard.

5-7、Tower grounding

Each wind turbine and tower must be grounded in the base of the tower, even though the system may have been at the service panel or battery ground wire through the yaw were grounded. Ground at the tower at the base of the tower to prevent failure due to electrical contact with the tower of causing electric shock.

The following content is for reference only. Recommend that you review the provisions of state on the ground.

Tower grounding in several ways. The most common way is to laminate steel electrodes into the ground, and use wire to connect it to tower.



Schematic ground electrode 5-5

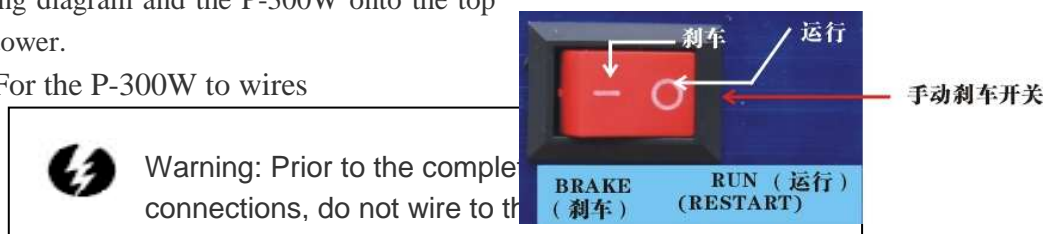
六、Reference P-300W system installed

Before installation, be sure to complete the following basic steps:

- comprehensive reading P-300W user manual
- tower and site selection, installation of tower.
- determine the wire size (see Section 5.4 of this manual).
- system design, including battery, controller and inverter, to draw the line graph.
- obtain the required components.
- Wind wheel assembly (see the second part of this manual, "the wind wheel assembly").

Once completed, the final installation is quite simple. Including the electrical connections according to wiring diagram and the P-300W onto the top of the tower.

6-1、For the P-300W to wires



Entangled with each other using welding or wire connection, the P-300W three wires are connected to outlet pipe along the tower down, follow work rules, the use of high-quality electrical insulation adhesive tape on the connection part. Leave enough wire for the maintenance of leeway, so that the P-300W from the top of the tower removed.

Accordance with the system circuit diagram, the wires to the controller, the controller switches on

the hand brake to the brake position, until all connections.

6-2、 The P-300W installed in the tower top

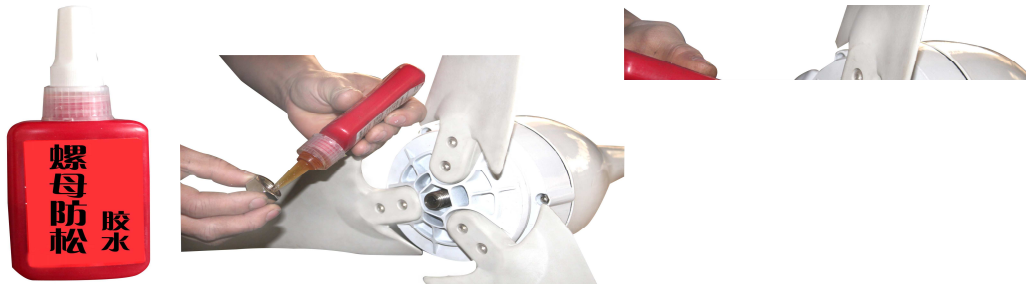
In the Connect the wires to the P-300W, the tower down to the wire along, and P-300W connection locking slide tower lock. Full tower set into the connection lock after the top of tower, and then connect locking to bring about 3 to 6 mm between the lock and the top of the tower across the rubber insulation pad, so the tower can reduce the noise and vibration.

Connection lock installed, use the supplied 5 / 32 inch hex wrench to lock assembly tighten the clamping bolt - tighten to 7 Nm. (Map 6-1)

If the blade / vane disc set has not been installed in the generator body, you can now be installed.

The 5/8-18 nut leaf plate into the groove of the central hexagonal fixed. Be screwed to the plate and leaves the generator shaft. Insert a generator shaft 5 / 16 inch hex wrench, keeping the fixed blade, tighten the wrench, torque to 70 Nm. (Map 6-2)

Along the outer edge of the blade plate, the deflector cap snaps into place. To ensure that diversion cap in all three edges are the outer edge of the buckle into the blade plate. After installation, pull the deflector cap to ensure it is securely installed. (Map 6-3)



ERROR: ioerror
OFFENDING COMMAND: image

STACK: