Suzhou Newmeil Machinery and Equipment Co.,Ltd

欣美业机械

Wind turbine

Dynamo V-400

User's Manual

Thank you for purchasing a Dynamo V-400.

The Dynamo V-400 is a wind generator of highest quality and will reliably generate power for many years. However, reliable operation not only will depend on product quality but also on accurate assembling and proper wiring. Please read this manual carefully before you start the installation. Please also keep in mind our safety instructions and warning notices. Our main concern is with your safety.

Notices:

This information is believed to be correct and reliable. However, Dynamo assumes no responsibility for inaccuracies or omissions. The user of this information and product assumes full responsibility and risk. All specifications are subject to change without notice.

Manufacturer:

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Contents

1. General information and references

1.1 Range of application

The electric power generated by the V-400 charges batteries and can directly be used for 12 VDC or 24 VDC-appliances (depending on the system voltage). AC-appliances are supplied via an optional inverter. There is a wide range of high quality 12 VDC or 24 VDC equipment available like energy saving lamps, refrigerators, deep-freezers, water pumps, ventilators, consumer electronics, TV, radio and navigation equipment, etc.

Ideal fields of application for example are sailing yachts, campers, summer cottages, mountain shelters, as well as industrial applications, like navigational aids, traffic management systems, environmental monitoring stations or transmitters. For rural electrification the V-400 supplies basic power to families, schools, small health care centers etc. The combination with solar arrays is without problems. At many places, energy supplies from sun and wind complement each other. That is why the V-400 is used in wind/solar hybrid systems to optimize the availability of power (at minimized battery capacity).

1.2 V-400 wind generator has the below advantages:

1. New design and material, long running life up to 15years.
2. Very smart turbine, very nice design and new material.
3. Low wind start, low noise.
4. Automatic protection for strong wind.
5. Multi functional electric power controller.
6. Easy to install and uninstall.
7. Free running cost, free maintenance.
8. Excellent after sale service

2. Safety instructions

Please carefully study this manual before starting assembly and installation. The information provided is to ensure your safety during mounting, operation and in case of trouble. If you have any additional questions please contact your dealer, a V-400 service partner or the manufacturer.

2.1 Mechanical dangers

The main danger is the spinning rotor. The rotor blades are sharp and can cause very serious injuries even at very low speed.

WARNING:

! Never touch the running rotor.

! Never try to stop the rotor by hands.

! Do not mount the rotor at places where any persons can reach the area swept by the rotor.

! Avoid any objects touching the running rotor.

2.2 Electrical dangers

WARNING:

Cables with insufficiently dimensioned cross sections can heat up extremely and cause electrical fire. So:

! You must be extremely cautious never to short-circuit the battery.

! Never install the batteries at places with danger of spark formation.

! Provide sufficient ventilation at all times.

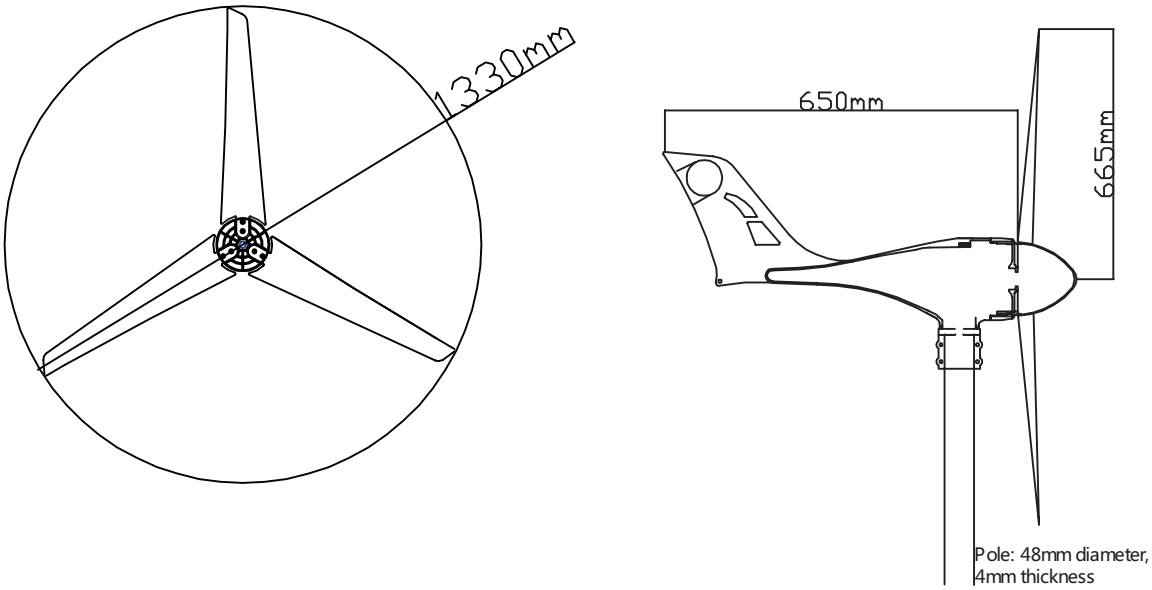
! Never install the power resistors on inflammable surfaces.

3. Specifications

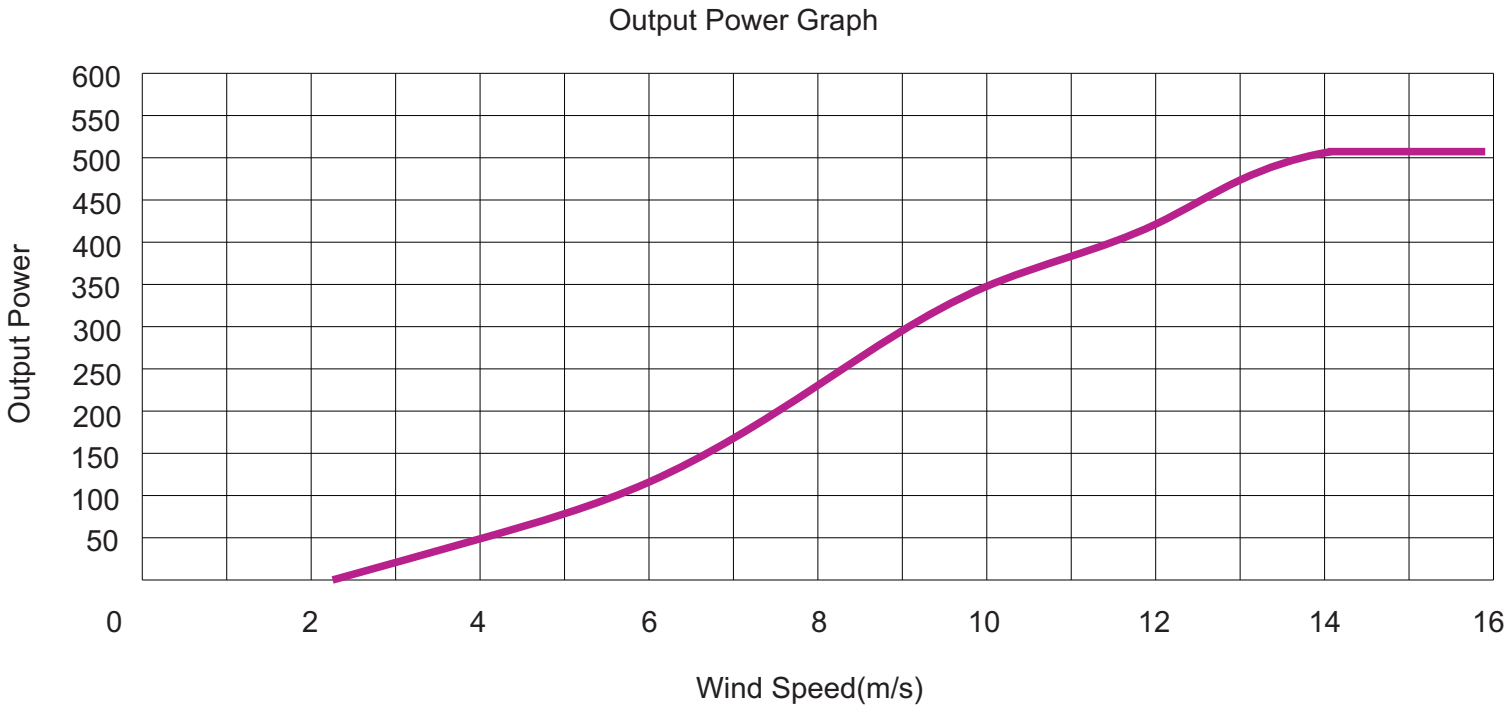
3.1 Technical data

Model	V-400
Rated power	400W
Max power	500W
Rated wind speed	11 m/s
Start up wind speed	2.5m/s
Rotor diameter	1.33 m
Number of blades	3
Blade material	Carbon fiber
Body	magnalium framework
Rotor speed	500 – 1000 rpm
Generator	permanent magnet, 3-phase with rectifier
Rated voltage	12 V DC or 24 V DC
Brake	electromagnetic brake
Surface protection	Aluminum oxide and plastic coating
Weight	7.8 kg
Controller	high function external charge controller

3.2 Dimentions :



3.3 Performance specifications

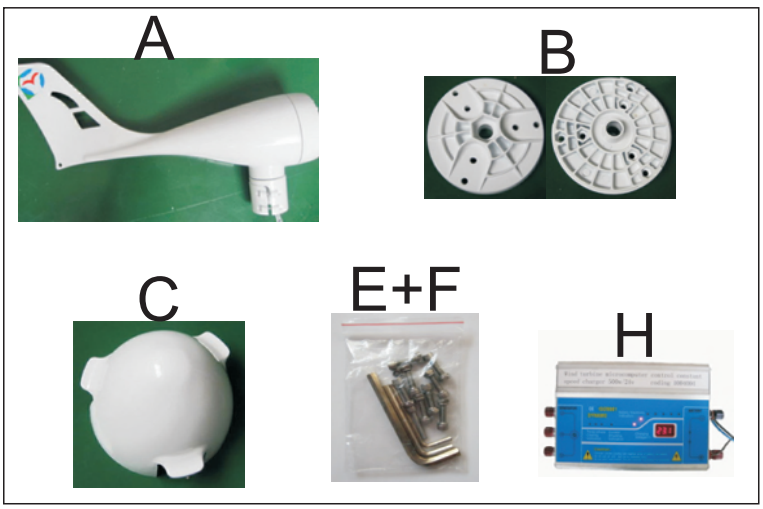


4.Preparations for assembly

4.1 Packing list

Please check your delivery for completeness and transport damage.

A	1 pcs	Generator
B	1 pcs	Hub
C	1 pcs	nose cone
D	3 pcs	Rotor blades
E	10 pcs	Screw
F	10 pcs	Nuts
G	1 pcs	Operation manual
H	1 pcs	Controller (optional)

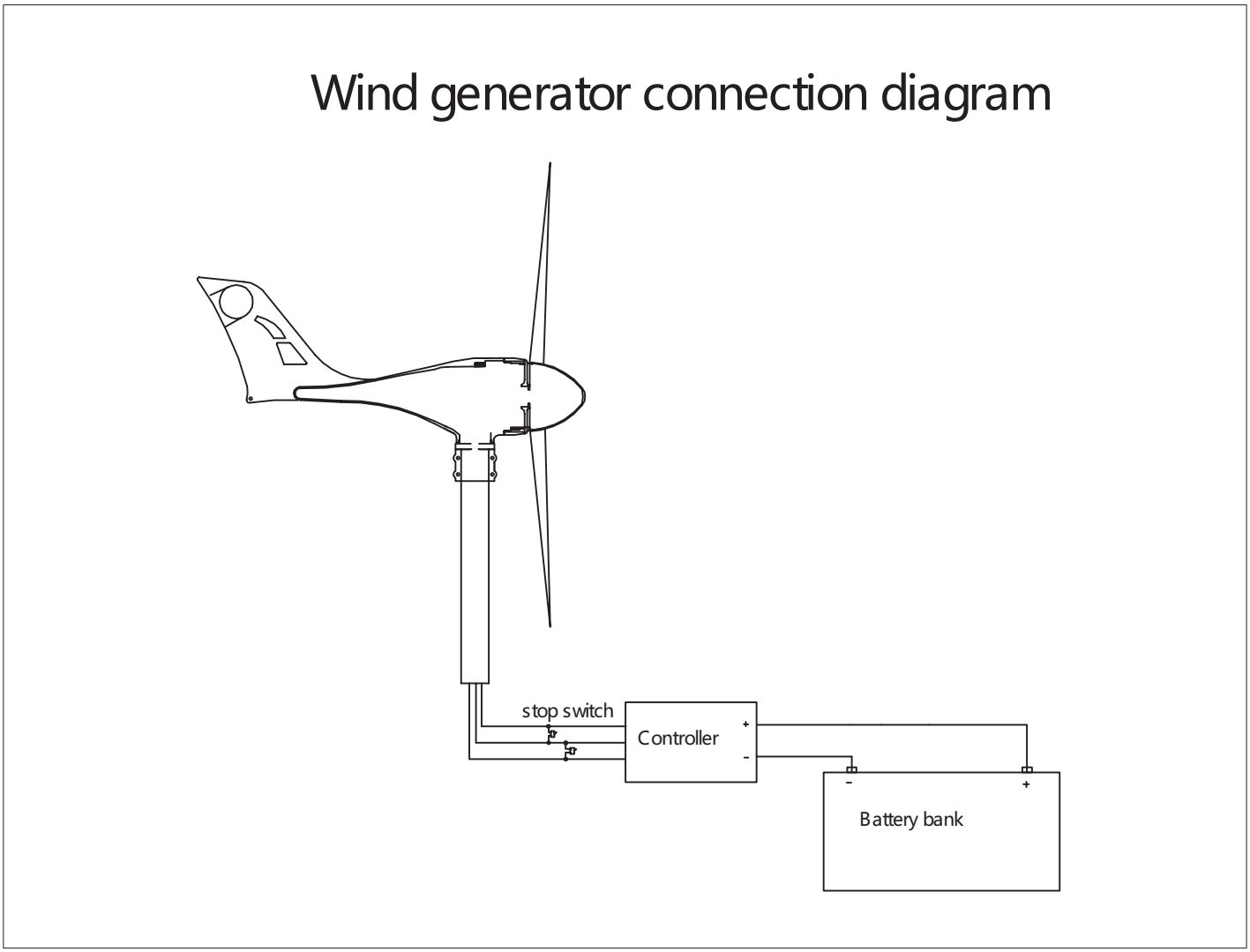


5. Electrical components and electrical connection

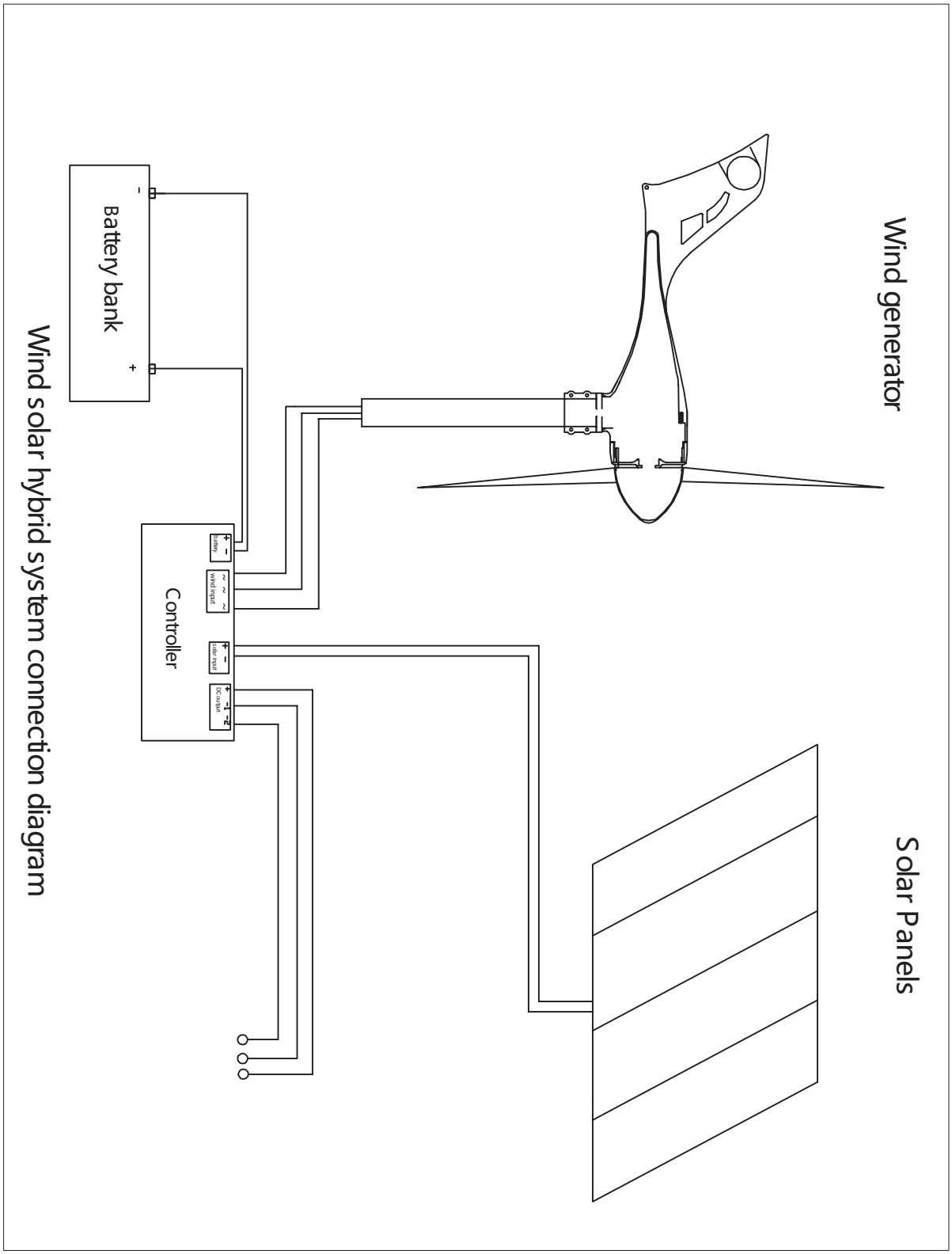
NOTE:

After careful planning first the electrical components should be installed at their respective places.
The electrical connection should be made in a second step.
Make sure that the batteries are disconnected until installation is complete.

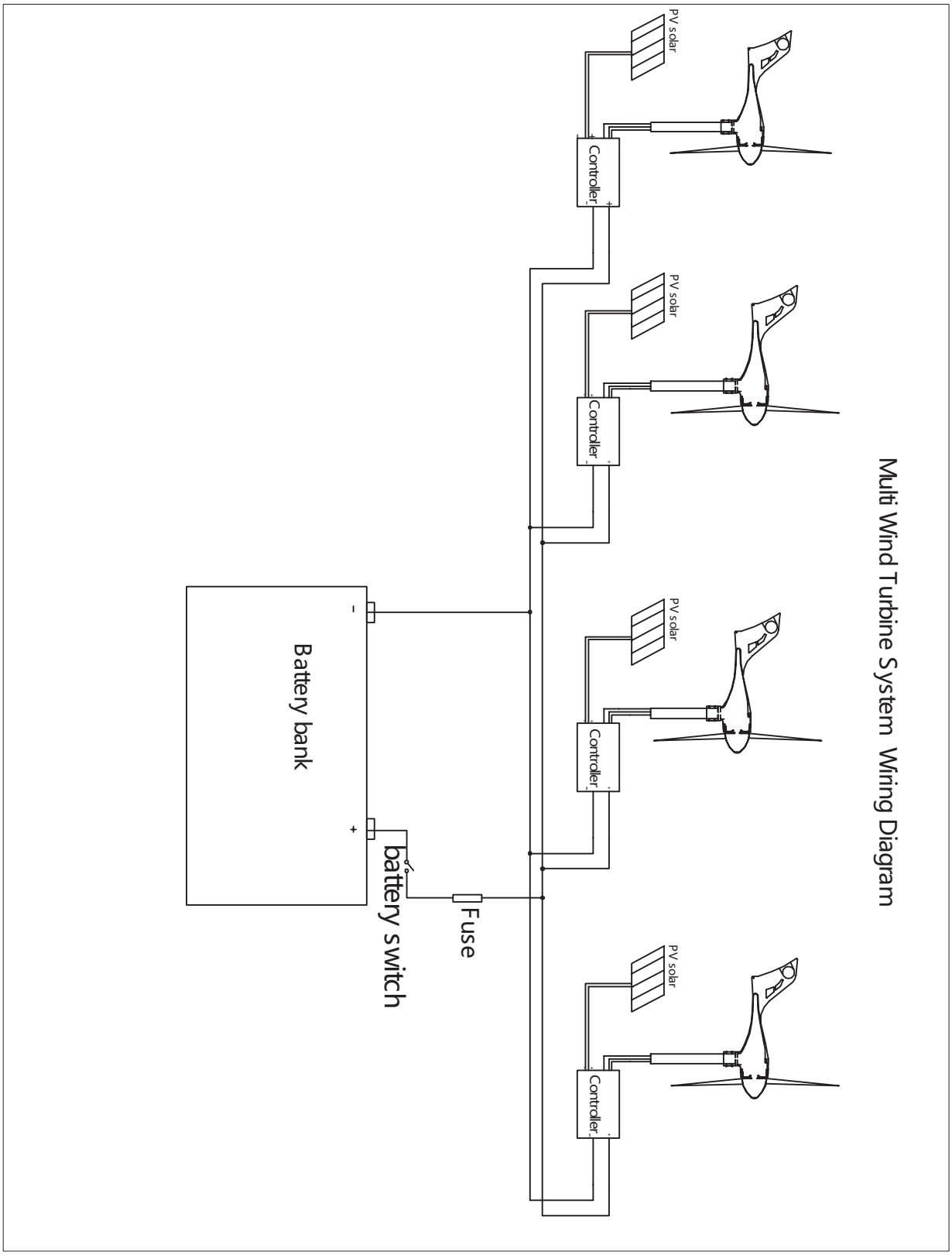
5.1 Wind generator wiring diagrams



5.2 Wind solar hybrid system wiring diagrams



5.3 Muilti-wind solar hybrid system wiring diagrams



NOTE:

For wiring diagrams of these charge controllers, pls refer to the respective manuals.

5.4 System components

5.4.1 Wires

The cross sections of the wires to be used depend on their length and the rated voltage of your wind generator.
Cables with insufficiently dimensioned cross sections can heat up extremely and cause electrical fire.

distance from mast head to the battery	Up to 10,6 m	10,7 – 17,6 m	17,7 –28,2 m	28,3 – 42.4 m	42.3 – 70.6 m	70.7-112.9 m
minimum cross section recommended per cable	2.5 mm²=AWG14	4 mm²=AWG12	6 mm² =AWG10	10 mm² =AWG8	16 mm² =AWG6	25 mm² =AWG4

WARNING:

Cables with insufficiently dimensioned cross sections can heat up extremely and cause electrical fire.

5.4.2 Battery

Lead acid batteries are most commonly used.

WARNING:

Never install the batteries at places with danger of spark formation.
Provide sufficient ventilation at any time
Never short-circuit the battery.

The battery terminals may be connected only after all work on the electric system has been completed.

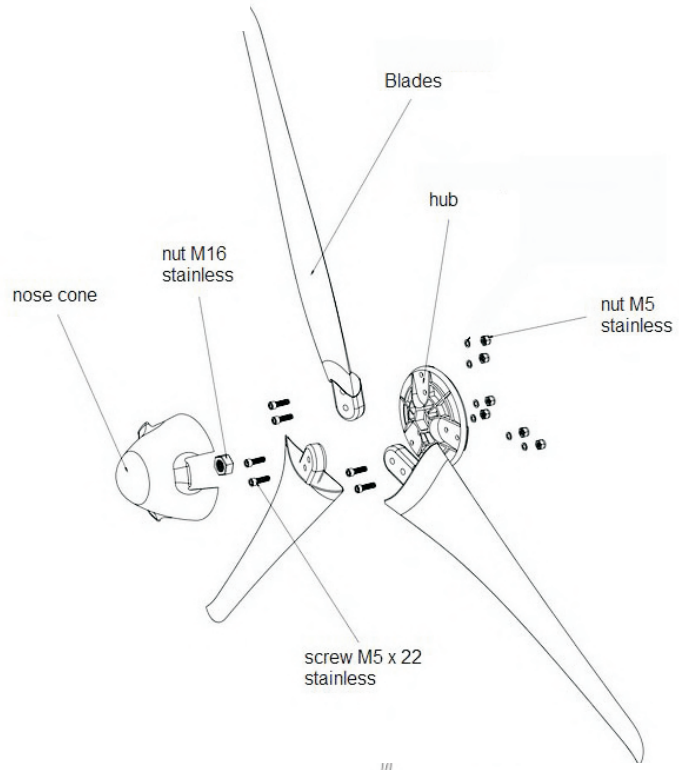
5.4.3 Charge controller

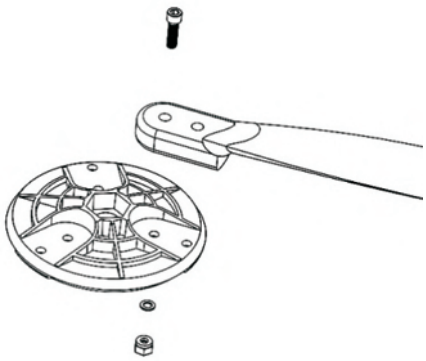
We recommend to install the charge regulators DW05/24. These regulators are adapted optimally to the V-400 and ensure effective charging of the batteries.
Before installing the charge regulator please read the respective operating instructions. Also follow the instructions concerning the point of installation.
WARNING: Do not interchange the polarity of the cables.

6. Mounting on a standard mast

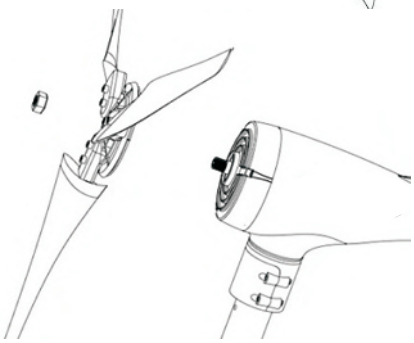
The yaw shaft of your V-400 fits for various sizes of mast tubes:
description outer-∅ thickness inner-∅ material

Steel Pipe: 1 1/2 ", Schedule 40 steel pipe (Actual OD 1.875 inches, 48mm)





Step 1



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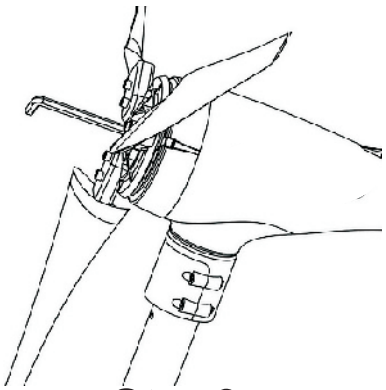
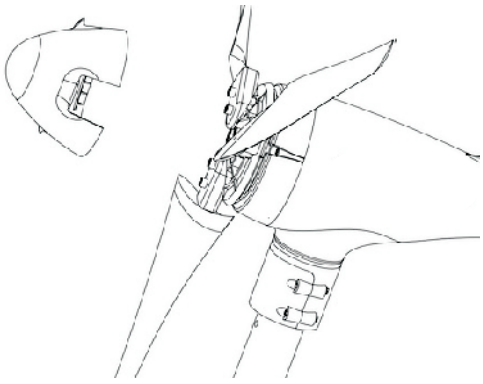


Step3



Step4

3 YEAR WARRANTY FORM

Owner information:

Owner name:		
Company:		
Address:		
City:	State:	Zip code:
Country:	Phone:	
Email:		

Dealer information:

Dealer name:		
Company:		
Address:		
City:	State:	Zip code:
Country:	Phone:	
Email:		

Consumer information:

What is the application?				
Grid Tie ☐	Sailboat ☐	Telecommunications ☐	Cathodic protection ☐	Other ☐
Remote home / Cabin ☐	Monitoring station ☐	Water pumping ☐	Hobby ☐	

Other information:

Model: _____ Voltage: 12V ☐ 24V ☐ 36V ☐ 48V ☐ Type: LAND ☐ MARINE ☐

Tower Height: _____ Average Wind Speed Per Month: _____

What is the Main reason for selecting this product?(select only one)			
Performance ☐	Recommendation ☐	Warranty ☐	Price ☐
Features ☐	Size ☐	Styling / Appearance ☐	Other ☐

Serial Number

3 YEARS WARRANTY

Please mail this card to your wind generator dealer/distributor or register on line.

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