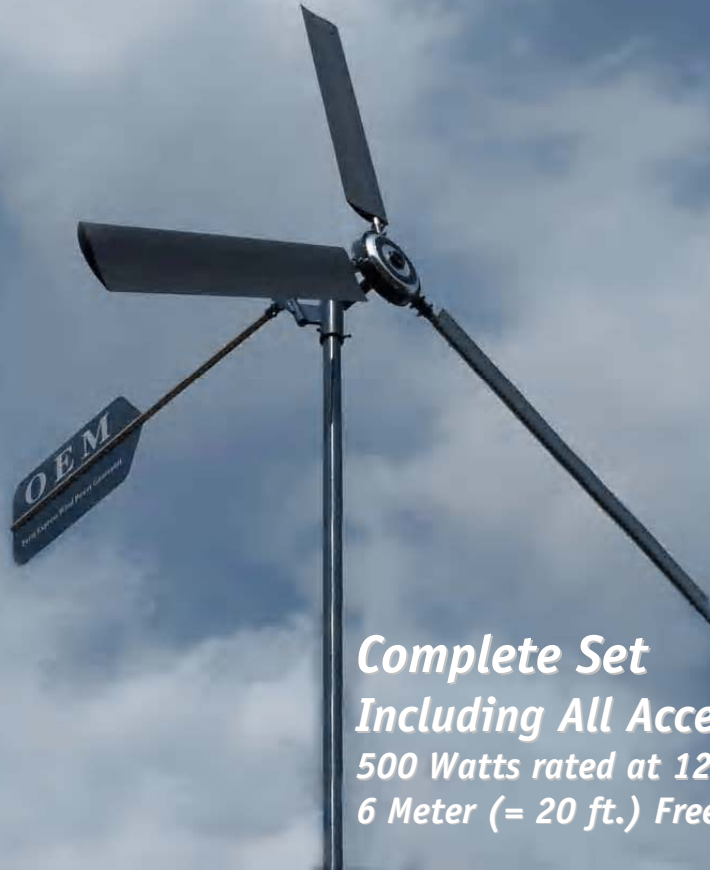


OEM Wind Power

GENERATOR Model-No. wp1933



WIND GENERATOR KIT



Complete Set

Including All Accessories

500 Watts rated at 12,5 m/s (= 28 mph)

6 Meter (= 20 ft.) Free-Standing Tower

ASSEMBLY INSTRUCTIONS



WIND GENERATOR KIT

Complete Set Including All Accessories

500 Watts – 6 Meter Free-Standing Tower

ASSEMBLY INSTRUCTIONS AND STEPS

Step 1: Base Anchoring Installation	page	4
Step 2: Tower Assembly	page	5
Step 3: Assembly of the Generator Head on Tower and Tail on Generator	page	6
Step 4: Assembly of the Rotor Blades on the Generator	page	7
Step 5: Tower Lifting with Assembled Generator	page	8
Step 6: Connecting the Wind Generator to the Bridge Rectifier	page	9
or Alternatively to the Controller (Only for Charging Batteries) + Connection to Inverter (for Powering 110/230 Volt Devices in Island Operation)	page	9
or Alternatively to the Grid-Tie Inverter (Only When Connecting to the Grid)	page	10

Safe Installation

Safety needs to be considered especially when installing a tower and wind generator.

Please keep in mind that any wind generator has moving parts and can be very dangerous if not installed properly and with care!

Important: Choose a wind-free day to do your installation.

Notice: This information is believed to be correct – however, OEM PARTS EXPRESS, Inc. 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.



steel base (1) incl. J-bolts (4),
M16 nuts and washers (8)



M12 x 110 bolts, nuts and washers (2)
M8 x 30 bolts and nuts (9)
M8 x 35 bolts and nuts (3)
connecting plates (3)



tower section (5)
1,2 meters length each



stainless steel M8 bolts and nuts (8)
used for attaching wind mill blades
to the generator (already inserted in
generator head)



extruded aircraft-quality aluminum
rotor blades, clear anodized (3)
1 m length each



bridge rectifier (1)
1000 watts / 50 amps
with heat sink



wind generator tail (1)
(attached with 2 bolts, supplied)



wind generator head (1) incl. M6
bolts and lock washers (3)



8 m electric cable set (1) incl. slip
ring (1) and M3 screws (2)

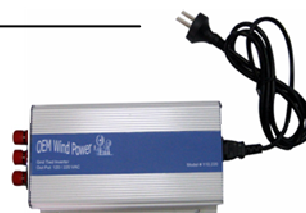
OPTIONAL ACCESSORIES



250 watt controller (with
built-in bridge rectifier) for 12
/ 24 / 36 volt battery banks



200 watt dump load for
12 / 24 / 36 volt battery banks



250 watt grid-tie inverter



300 watt inverter for 12 / 24 / 36 volt
battery banks (minimum 65 amps)



600 watt inverter for 12 / 24 / 36 volt
battery banks (minimum 250 amps)

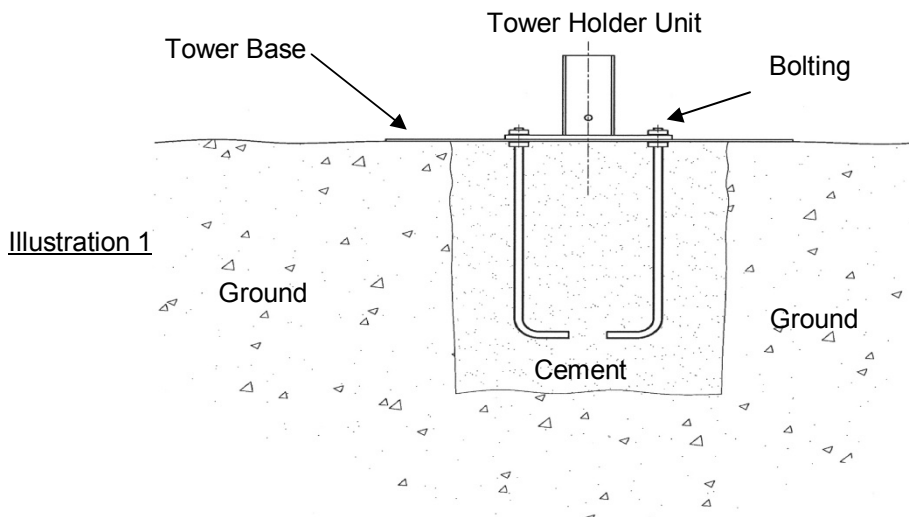


FOR THIS ASSEMBLY STEP YOU NEED:

- cement
- tower base
- 4 J-bolts
- 8 M16 nuts and washers

STEP 1 - BASE ANCHORING INSTALLATION (free-standing tower)

Dig a hole (approx. 50 x 50 cm wide and 80 cm deep) at the place where the wind generator will be installed. After digging the hole, mount the 4 anchoring J-bolts to the tower base by using the M16 nuts and washers as shown in illustration 1. Place and level the tower base, as illustrated in picture 2. Insert the tower base with the 4 J-bolts into the ground hole using a support (for example: wooden board or metal plate – picture 2) to be placed underneath the tower base and in between the anchoring system. This prevents the tower base from sinking into the cement. If necessary, re-adjust the base by using a level (picture 2). Then fill the ground hole with cement. After the cement block is cured (dry) the temporary support can be removed.



Picture 2



Picture 3

**FOR THIS ASSEMBLY STEP YOU NEED :**

- 5 tower segments
- 1 M12 x 110 bolt, nut and washer
- 9 M8 x 30 bolts and nuts
- 3 M8 x 35 bolts and nuts + guy wire link (for use with guy wires)
- 8 m cable-set including slip ring

STEP 2 - TOWER ASSEMBLY

Lay the 5 tower segments on the ground end-to-end starting from the tower base. Feed the electrical cable set through all 5 tower segments (starting with the top/smallest diameter tube) while they are still on the ground. Then assemble the lower tower segment to the tower base by using the M12 x 110 bolt (picture 4). At the same time make sure the electric cable notch in the bottom end of the tower is facing the appropriate direction (front). Please note that the slip ring at the end of the cable needs to be attached to the top tower segment by using the provided self-tapping screws (picture 5). Connect and securely tighten the 5 tower segments together using the provided bolts (picture 6). If you plan to use guy wires, the links for the guy-wires should be attached to the flange of the top section (picture 7) when assembling the tower segments.



Picture 4



Picture 5



Picture 6



Picture 7



FOR THIS ASSEMBLY STEP YOU NEED :

- wind generator head including 3 M6 screws and lock washers
- 2 M8 bolts and nuts (already inserted in the generator head)

STEP 3 – ASSEMBLY OF THE GENERATOR HEAD ON TOWER AND TAIL ON GENERATOR

Support the assembled tower from underneath by using, for example, a saw-horse or stool. Place the generator head over the top tower segment (picture 8) and firmly tighten the screws of the locking ring (picture 9). After the generator head is fixed to the top tower segment, insert the tail into the furling mechanism using the bolts supplied and firmly tighten bolts (picture 10).



Picture 8



Picture 9



Picture 10



Picture 11



FOR THIS ASSEMBLY STEP YOU NEED :

- 3 rotor blades
- 6 M8 bolts and nuts (already assembled to the generator head)

STEP 4 - ASSEMBLY OF THE ROTOR BLADES ON THE GENERATOR

Insert the 3 rotor blades tubes into the 3 connecting tubes on the generator head and fix those by using the M6 bolts and nuts (pictures 12 + 13). **Make sure that the screws are firmly tightened (pictures 14 + 15).**



Picture 12



Picture 13



Picture 14



Picture 15



STEP 5 - TOWER LIFTING WITH ASSEMBLED GENERATOR

Erect the tower including the fully-assembled generator (make sure you have sufficient assistance - 2 full-grown men - due to the relative heavy weight). At the same time make sure that the electric cable set is aligned with the existing notch on the bottom of the tower segment, to prevent it from being pinched.

Start with lifting the tower at the generator end and continue slowly towards the bottom of the tower (picture 16).

After erecting the tower, tighten the bolts firmly at the tower base by using the second M12 bolt and nut (picture 18). Make the final and exact tower position-adjustment using a level (picture 17).



Picture 16



Picture 17



Picture 18



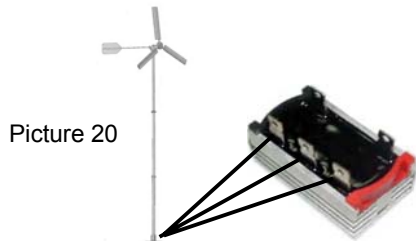
Picture 19



FOR THIS ASSEMBLY STEP YOU NEED:

- bridge rectifier (included in kit)

STEP 6 – CONNECTING THE WIND GENERATOR TO THE BRIDGE RECTIFIER



Picture 20

Connect the 3 wires from the wind generator cable set to the bridge rectifier. The wires can be attached in any order (picture 20).

Remark: The bridge rectifier can be used for direct connection to various electrical devices in case that no controller or grid-tie inverter is used.

FOR THIS ASSEMBLY STEP YOU NEED:

- controller with built-in bridge rectifier (optional)

STEP 6 – (alternative)

CONNECTING THE WIND GENERATOR TO THE CONTROLLER AND BATTERY BANK



CONTROLLER (only for charging battery banks)

This controller has its own built-in bridge rectifier and terminals for connecting to a dump load (optional accessory). The controller is used to prevent overcharging the battery (picture 21).



Picture 21

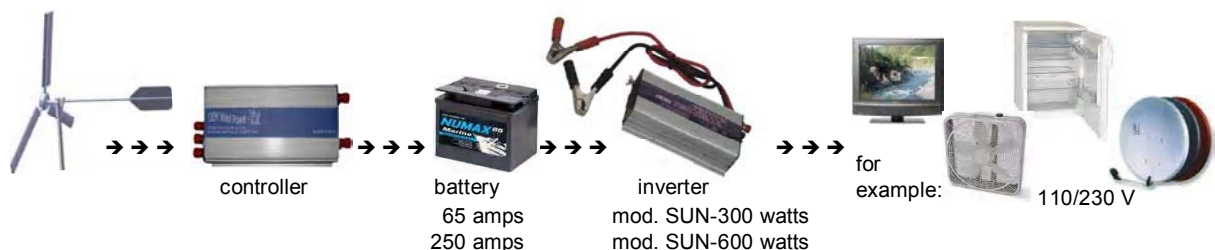
FOR THIS ASSEMBLY STEP YOU NEED:

- inverter (optional)

STEP 6 – (alternative)

CONNECTING THE WIND GENERATOR TO THE INVERTER FOR CONNECTING TO 110/230 VOLT DEVICES IN ISLAND OPERATION

110/230 volt devices can be powered by the wind generator via a connected inverter. In this respect 2 inverter units are being offered optionally (suitable for 65 and 250 amp battery banks).





FOR THIS ASSEMBLY STEP YOU NEED:

- grid-tie inverter with built-in bridge rectifier (optional)

STEP 6 – (alternative)

CONNECTING THE WIND GENERATOR TO THE GRID-TIE INVERTER

GRID-TIE INVERTER (only when connecting to the grid)

The grid-tie inverter is used for feeding the wind generator power into the grid (picture 22).



Picture 22

INSTALLATION

- Connect the electrical cable from the wind generator to the AC input connections of the grid-tie inverter. (The inverter has an integrated bridge rectifier).
- Adjust the AC output voltage slide switch of the grid-tie inverter to the correct position (230 volts for Europe, 110 volts for the U.S.A.).
- Connect the AC power cable - one end into the grid-tie inverter and the other end into the home electrical outlet. **Recommendation: The first connection of the unit to the grid should be done by a licensed electrician.**
- As soon as the grid connection and DC flow from the wind generator are established, 3 green LED lights will blink sequentially from left to right. This shows that the grid-tie inverter is functioning.
- The blinking speed of the LED lights indicate the amount of power that is being received from the wind generator. The higher the power input, the faster the lights blink. The grid-tie inverter only works between 14 and 32 volts input. If it is outside this range, the LED fault light will show red.
- The grid-tie inverter has the function “Anti-Islanding Protection”. If the grid is down, the grid-tie inverter cannot work.



ONE OR MORE GRID-TIE INVERTERS CAN BE CONNECTED IN ORDER TO GAIN MORE POWER FROM YOUR WIND GENERATOR.