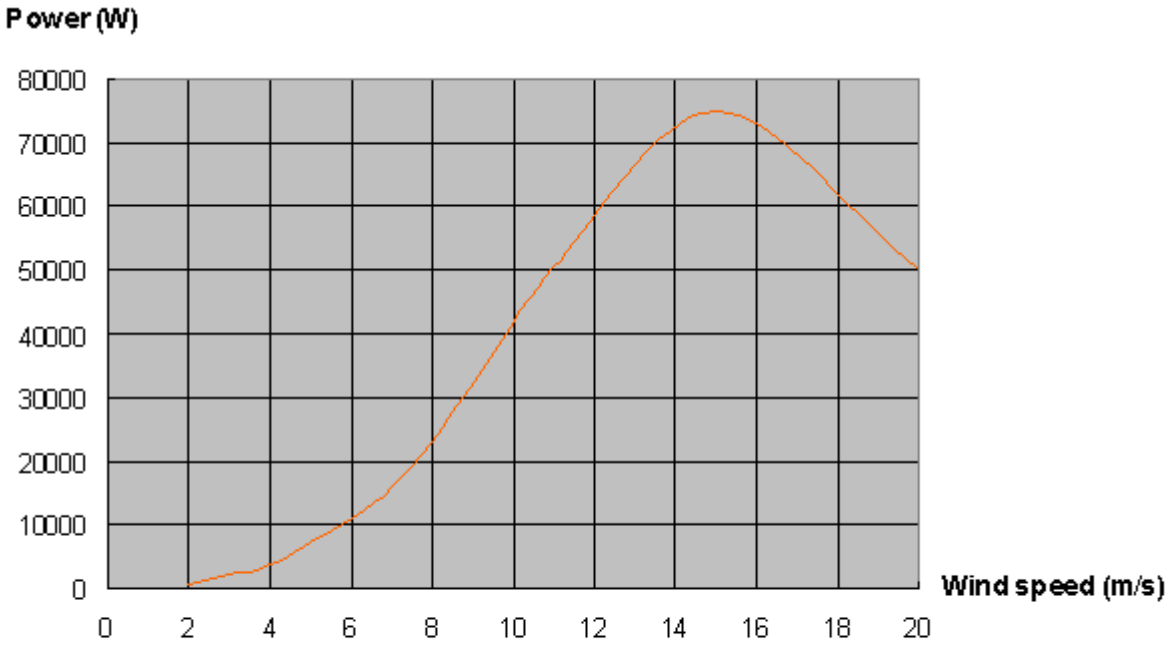
WIND TURBINE-50KW

1.Panorama Pictures

2. Curve



HUMMER-50KW Wind Generator

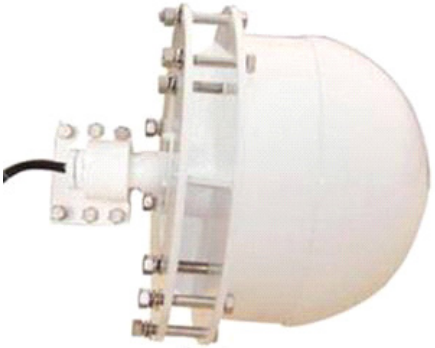
website: www.allwindturbine.com; http://chinahummer.en.alibaba.com
E-mail: hummerchina@yahoo.com
Tel: 0086-5515314300
Fax: 0086-5513442991

3. Specifications

Rated Output (W)	50000
Max output (W)	75000
Charge Voltage(V)	DC 400
Numbers of blade	3
Blade material	GRP
Blade diameter (ft.)	39 (12.0m)
Start up wind speed (mph)	5 (2.0m/s)
Rated wind speed (mph)	25 (11.0m/s)
Rated rotate speed (r/min)	140
Wind Utilize Ratio (Cp)	0.42
Generator output	Frequency conversion AC
Rated charging current(A)	125
The maximum charging current(in a short time)(A)	190
Output AC Frequency(Hz)	0 ~400
Generator Efficiency	>0.92
Free Standing tower diameter(in.)	Φ53.1*Φ20.9 (Φ1350*Φ530mm)
Tower Height (ft.)	59 (18m)
Generator weight (lb)	2646 (1200kg)
Suggested Battery (Ah)	800/1500
Noise Index	LAeq=34 dBA 5m behind turbine@5m/s gusting
Speed regulation method	Yawing + Electromagnetism braking
Shutting down method	Manual & Automatic

4. Structural Pictures and Description

Generator body: mainly including generator, nose cone, and protection cover
Hummer generator, the most advanced in the world, wins 7 proprietary intellectual property rights. It is made of high-efficiency magnetic materials, special copper alloy, high-strength stainless steel and aeronautic aluminum alloys. It is extremely light and small but with high power generating efficiency.



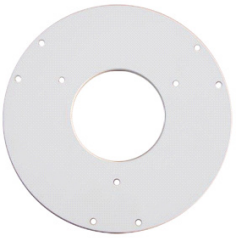
Nose cone
Made of reinforced aluminum alloy, it locates in front of blades to reduce the wind resistance. The generator is enclosed in the nose cone, which is favorable for heat dispersion.

Protection cover
Made of reinforced aluminum alloy, it locates between blades and nose cone to further reduce the wind resistance and protect the generator.

SKF Bearings: two SKF bearings, famous in the world with good quality and a long history, make sure the system in reliable, safe and steady operation status.

Flange

Made of fine steel parts, it is used to fix the blades.

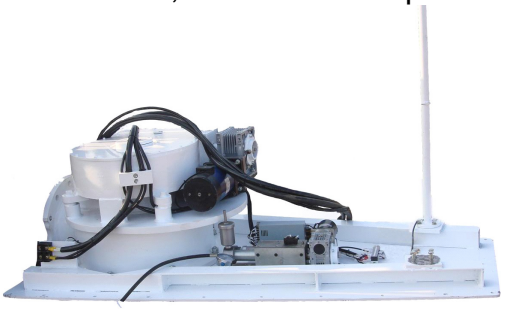


Blades

Made of glass reinforced plastic, they receive wind energy and convert it into mechanical energy. Every 3 blades compose one set and pass strict balance test before delivery, so please don't disorderly use.

Yaw shaft

Made of fine steel parts, it is used to connect generator and blades with tower together. With 24V power supply and gear box included, it controls the operation of wind turbine.



Dogvane

It receives wind signal, measures and indicates wind direction. It will read the average angle of dogvane every 120s. If the angle degree between dogvane and wind generator axes is more than 10 degree, the 24VDC generator will drive yaw shaft to seek wind automatically.

Anemometer

It measures wind speed. If the wind speed is over 3m/s continuously within 20s, automatic wind direction tracking system will start to make the blades face wind correctly, if the wind speed is less than 3m/s the system will keep in standby situation.

Off grid inverter

Adopting SPWM technology, it will inverter with high converting efficiency, output stable frequency and stable voltage, filter out noise. It is used in the off grid system and power the electric loads.

Grid tied inverter

Adopting MPPT and IGBT technologies, It inverters with high power generating capacity and wide AC voltage range. It connect with state grid and the energy storing device isn't needed.

PLC controller

As adopting Siemens CPU the technology of touch screen, it will alarm automatically and regulate the operation situation of wind generator. Users can also set the parameters according to actual needs.

Rectifier/ dumping controller

It rectifies AC current generated by wind generator into DC current and charge the battery bank. It also controls the dumping load.

Dumping load

With metal dumping box, it quickly dissipates heat by air convection. A fan isn't needed.