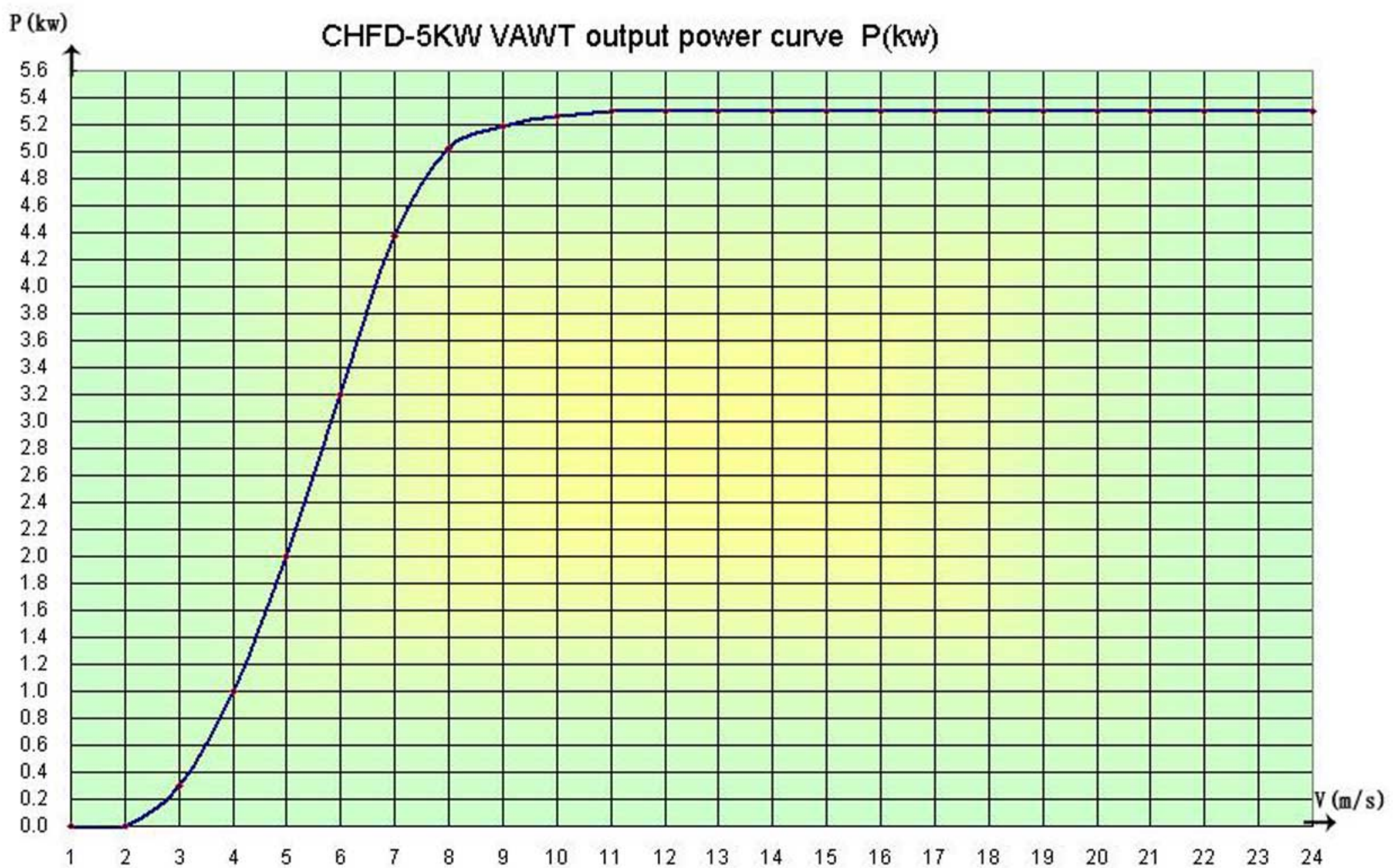# Technical Specifications

Power	5KW
Blade Material	Aluminum alloy
Size of blade(H*W) MM	2400*1200
Quantity of the blades	5
Diameter (MM)	5000
generator	PMG
output voltage from the generator	240VAC or 48VDC
Rated wind speed	10m/s
Rated power	5KW
Start up wind speed	4(m/s)
Operating wind speed	4.5-25(m/s)
Free stand tower	8m
Security wind speed	40(m/s)
Output controller system	off-grid charger and inverter(3-phases)
Capacity and quantity of battery(reference)	18PCS*200AH/12v

CHFD-5KW VAWT output power curve P(kw)

FEATURES

- Low speed, no need of speed reducer; generating higher voltage of electricity.
- Optimized design and structure.
- Blushless excitation, no sparkle.
- Protection Grade: IP44.
- With protection to prevent water or dust from entering into the generator.
- Long-term service life.
- Without field winding, and high speed.
- Without generator excitation controller, simple structure and reliable.
- Small size, light, suitable for certain circumstances.
- It can work highly effectively within the entire range of the speed.
- Tolerant for vibrant, repeatedly switching-on-and-off, and reverse speed .
- Made of imported high speed bearing and maintenance-free.
- The output voltage, speed and capacity of the generator are changeable.
- The shape of the generator can be made according to customer's specific need.

INVERTER & CONTROLLER

INVERTER:

- Super wide input voltage: 160V---280VAC;
- Completely controlled by CPU,
- Protection against output short-circuit; Against overload, and when you throw off its load, it will turn on the unit automatically.
- Functions that when the AC comes in, it will start the unit automatically.
- With charger built-in, its charging current is 10A----30A.
- Different DC voltage: 12V, 24V, 36V, 48V, 96V, 110V,192V, 240V for optional
- Output pure sine wave: 220V+-3%.
- It can drive loads, such as lightings, TV sets, fans, refrigerators and air-conditioner, wind power motor, solar panel etc.
- It's humanized design, when the AC comes, it will start the unit automatically; And when it overload, it will also close the unit automatically, when you cancel the load, then it will return to work automatically.
- ATM inverter, RS232 software, SNMP card for optional.
- Hybrid inverter for solar /wind and electricity. When no wind or no solar can charge the power from city power to battery bank.

CONTROLLER :

- Completely CPU control
- Rectification: to rectify AC power from wind turbine to stable DC power, feed to battery bank
- PWM constant voltage charging protects the storage batteries, make full use of the energy
- Over-charge and over-discharge, reverse connection, electronics brake protection
- Protect the generator and blades, it will yaw at a 90 degrees from the wind direction when the wind speed is higher than security wind speed
- Wind and Electricity hybrid function: have electricity charge function, when the wind speed is low, can charge the power from electricity to battery bank.