



# PRODUCT BROCHURES

**HORIZONTAL AXIS WIND TURBINE**

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**山东格林风新能源科技有限公司 青岛格林风新能源设备有限公司**  
SHANDONG GREEF NEW ENERGY TECHNOLOGY CO., LTD. QINGDAO GREEF NEW ENERGY EQUIPMENT CO., LTD.

## Company Introduction

GREEF NEW ENERGY is global supplier which focus on Wind, Solar and Hydro generation system solution .

We provide customized system solution which suitable for off-grid , grid-tied and hybrid system for renewable energy system. GREEF own our own factory manufacture permanent magnet generator from 300W to 5MW. Wind turbine Blades until 200kw, grid-tied wind turbine controllers until 2MW and own patent control system for controllers .

Our solar&wind turbines are installed all over the world. 50% staff in our engineer team have 12-20 years' experience in the field, we can help clients to customize overall system solution with strong flexibility and competitive capabilities, our service that can be delivered include but are not limited to: overall design plan, principle drawing, 3D renderings, sample physical, bulk product delivery, quality control, and after-sales service. With a fast service system, we can assist our customers to save cost and time.

GREEF Products have been export to all over the world, like Europe, South America, North America and other countries. All products have CE approvals with 3 to 5 years warranty, the quality and on-time delivery are guaranteed by Alibaba.

Since the start of the company, we have been passionate believers in our mission to provide cheaper, reliable electricity through the power of renewable energy. Your support and belief in what Greef lives for, starting with our motto "Power the world with green energy", has allowed us to rapidly innovate and become a responsible supplier in distributed renewable energy.



## Why Choose Us



Bureau, SGS, TUV Verified Supplier



Top 3 suppliers of generators products with all 5-star on Alibaba.com



Products quality and on time delivery are guaranteed by Alibaba.com



11 years' experience engineer & QC team



Focus on after-sales service



One-stop customized system solution



Trade experience with more than 60 countries



CE, RoHS certificated



OEM,ODM are accepted



## Automatic Speed Reduction Protection



# Horizontal Axis Wind Turbine Series

MODEL: GH-1KW



Scan The QR Code  
GH Products Introduction



Model	GH-1KW	Top Weight	46KG
Rated Power	1000W	Tower Height	6m(19.68ft) Free Stand Tower
Start Wind Speed	3M/S(6.72MPH)	<b>Generator Paramaters</b>	
Rated Wind Speed	9M/S(20.1MPH)	Generator Type	Permanent Magnet Generator
Working Wind Speed	4-25M/S(8.96-56MPH)	Rated Speed	360RPM
Safety Wind Speed	50M/S(112MPH)	Option Voltage	24-220VAC
<b>Physical Parameters</b>		Protection Method	Automatic Yawing Protection Electromagnetic Brake+PWM
Blades Rotor Diameter	2.8M(9.2FT)	Protection Grade	IP54
Blades Material&quantity	FRP/3PCS	Working Temperature	-40- +50°C

MODEL: GH-2KW

Model	GH-2KW	Top Weight	60kg
Rated Power	2000W	Tower Height	6M, 12M AVAILABLE
Start Wind Speed	3M/S(6.72MPH)	<b>Generator Paramaters</b>	
Rated Wind Speed	9M/S(20.1MPH)	Generator Type	Direct-drive permanent magnet generator 3-phase AC PM
Working Wind Speed	4-25M/S(8.96-56MPH)	Rated Speed	320RPM
Safety Wind Speed	50M/S(112MPH)	Option Voltage	24-220VAC
<b>Physical Parameters</b>		Protection Method	Wind pressure automatic yaw protection electromagnetic brake protection
Blades Rotor Diameter	3.6M(12.47FT)	Protection Grade	IP54
Blades Material&quantity	FRP/3PCS	Working Temperature	-25°C - 55°C

MODEL: GH-3KW



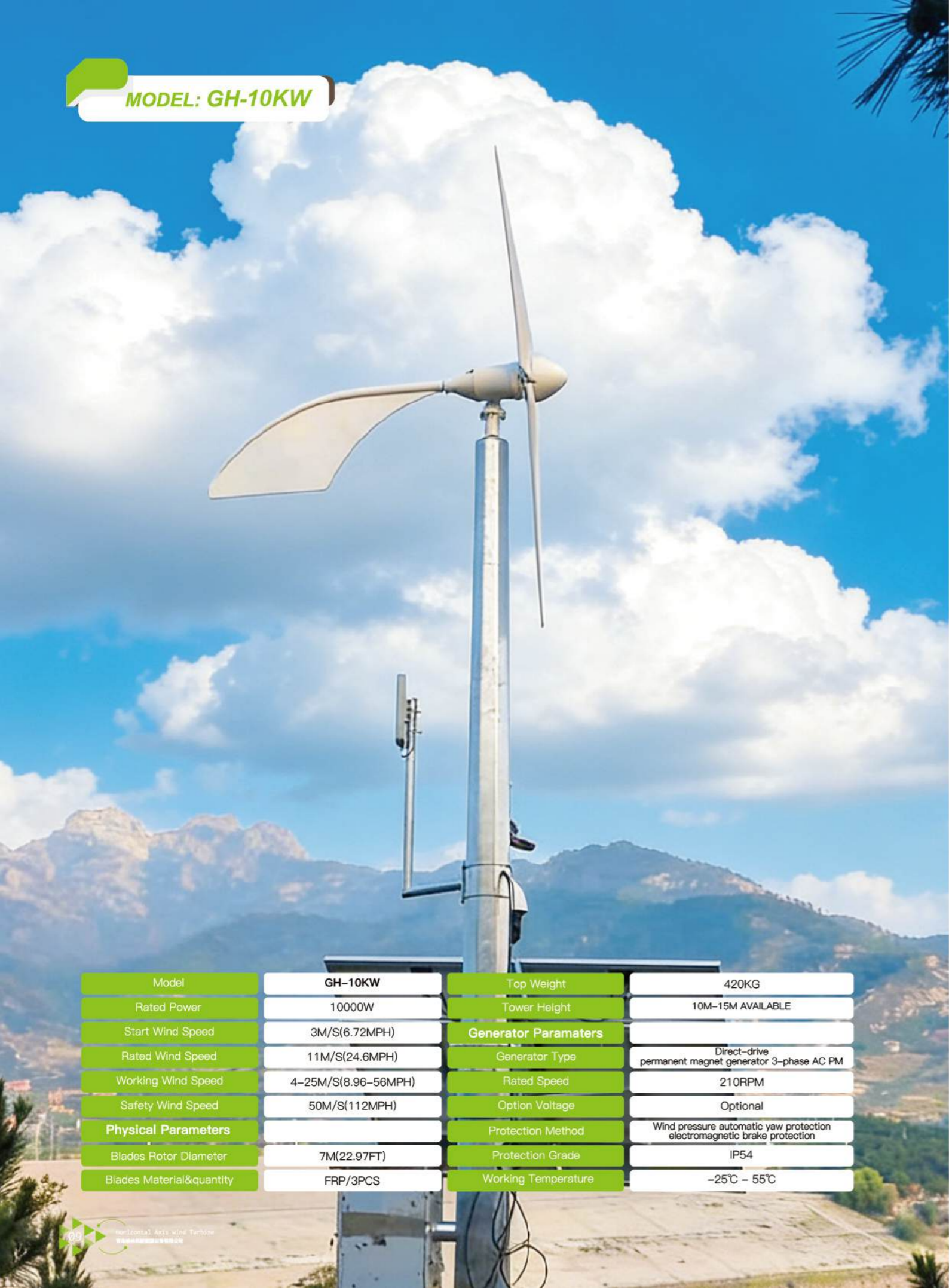
Model	GH-3KW	Top Weight	130KG
Rated Power	3000W	Tower Height	8M, 12M AVAILABLE
Start Wind Speed	3M/S(6.72MPH)	<b>Generator Parameters</b>	
Rated Wind Speed	9M/S(20.1MPH)	Generator Type	Direct-drive permanent magnet generator 3-phase AC PM
Working Wind Speed	4-25M/S(8.96-56MPH)	Rated Speed	240RPM
Safety Wind Speed	50M/S(112MPH)	Option Voltage	48-220VAC
<b>Physical Parameters</b>		Protection Method	Wind pressure automatic yaw protection electromagnetic brake protection
Blades Rotor Diameter	4.6M(15.1FT)	Protection Grade	IP54
Blades Material&quantity	FRP/3PCS	Working Temperature	-25°C - 55°C

MODEL: GH-5KW



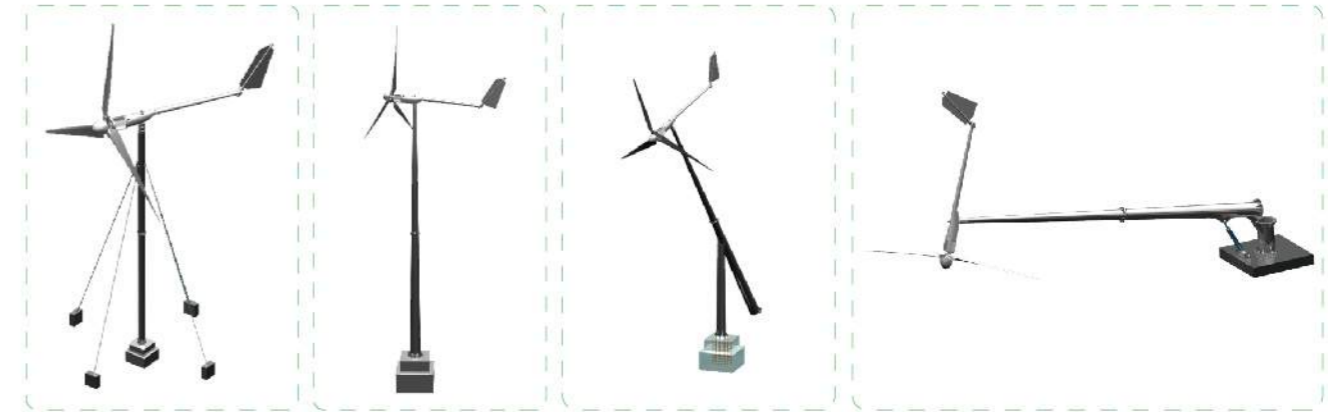
Model	GH-5KW	Top Weight	150KG
Rated Power	5000W	Tower Height	8M(26.24FT)Guy Wire Tower
Start Wind Speed	3M/S(6.72MPH)	<b>Generator Parameters</b>	
Rated Wind Speed	10M/S(22.4MPH)	Generator Type	Permanent Magnet Generator
Working Wind Speed	4-25M/S(8.96-56MPH)	Rated Speed	250RPM
Safety Wind Speed	50M/S(112MPH)	Option Voltage	24-220VAC
<b>Physical Parameters</b>		Protection Method	Electromagnetic Brake + PWM
Blades Rotor Diameter	5.4M(15.1FT)	Protection Grade	IP54
Blades Material&quantity	FRP/3PCS	Working Temperature	-40°C - 55°C

MODEL: GH-10KW



Model	GH-10KW	Top Weight	420KG
Rated Power	10000W	Tower Height	10M-15M AVAILABLE
Start Wind Speed	3M/S(6.72MPH)	<b>Generator Parameters</b>	
Rated Wind Speed	11M/S(24.6MPH)	Generator Type	Direct-drive permanent magnet generator 3-phase AC PM
Working Wind Speed	4-25M/S(8.96-56MPH)	Rated Speed	210RPM
Safety Wind Speed	50M/S(112MPH)	Option Voltage	Optional
<b>Physical Parameters</b>		Protection Method	Wind pressure automatic yaw protection electromagnetic brake protection
Blades Rotor Diameter	7M(22.97FT)	Protection Grade	IP54
Blades Material&quantity	FRP/3PCS	Working Temperature	-25℃ - 55℃

## Tower



Guy Wire Tower

Free Stand Tower

Folding Tower

Hydraulic Tower

## Blades



## Product Showcase





## OFF-GRID SYSTEM

Independent operation without relying on public power grid

### Applications

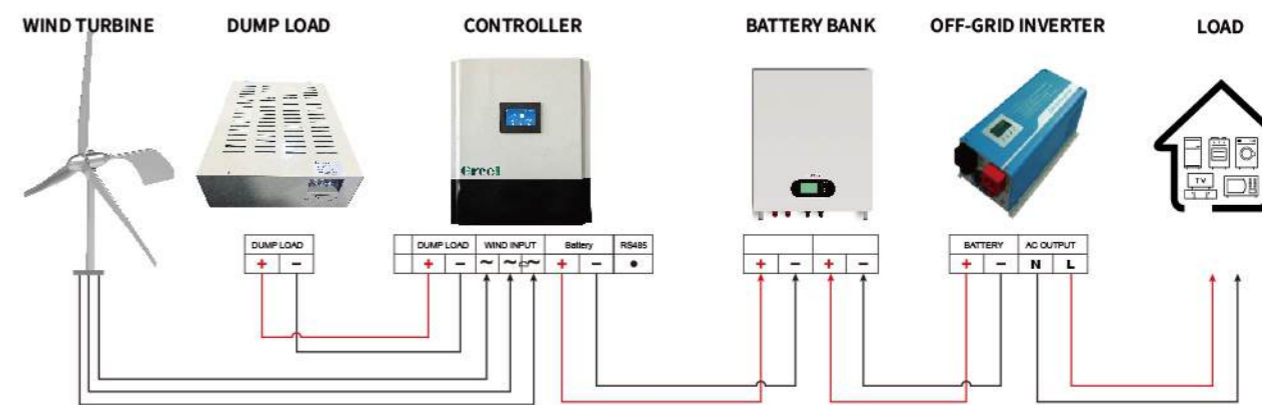
Remote mountainous areas, powerless areas, islands, communication base stations, street lights, etc.

#### Working Process

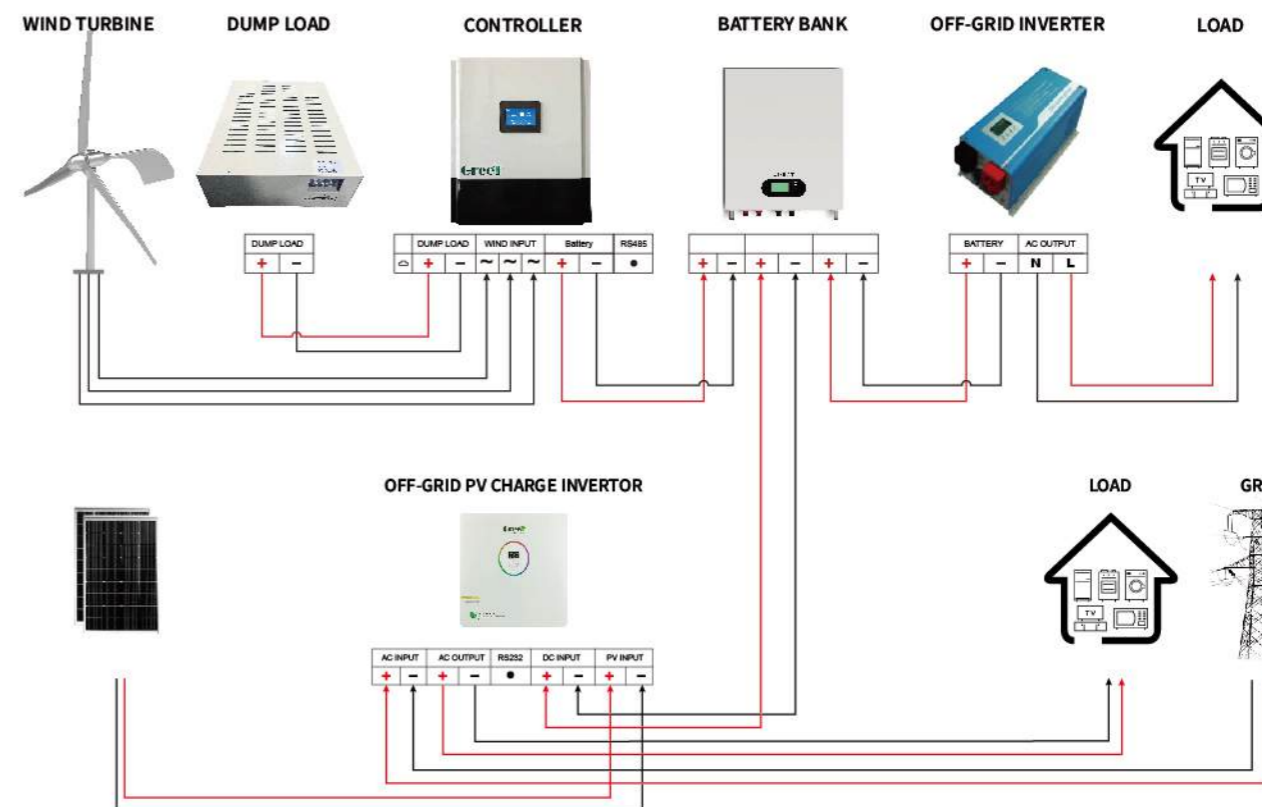
When there is sunshine and wind, power is supplied to the load through inverter and the battery is charged at the same time;

When there is no sunshine and wind, the battery controls the inverter to supply power to the load.

## Off-grid Wind Turbine System



## Off-grid Solar Wind Turbine System





## Grid-connected system

### On-grid Operation

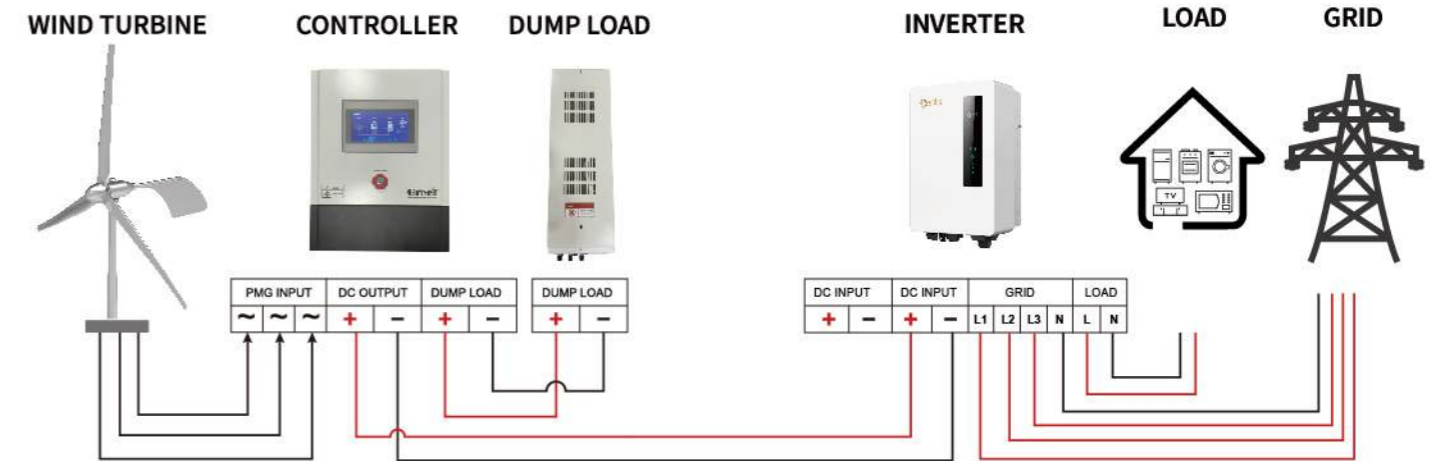
It is a system that utilizes wind power generation or solar power generation to transmit the generated electricity to the local power grid in order to receive the grid sale revenue and to offset the electricity bill.

The system is widely used in project areas such as family farm island business investment.

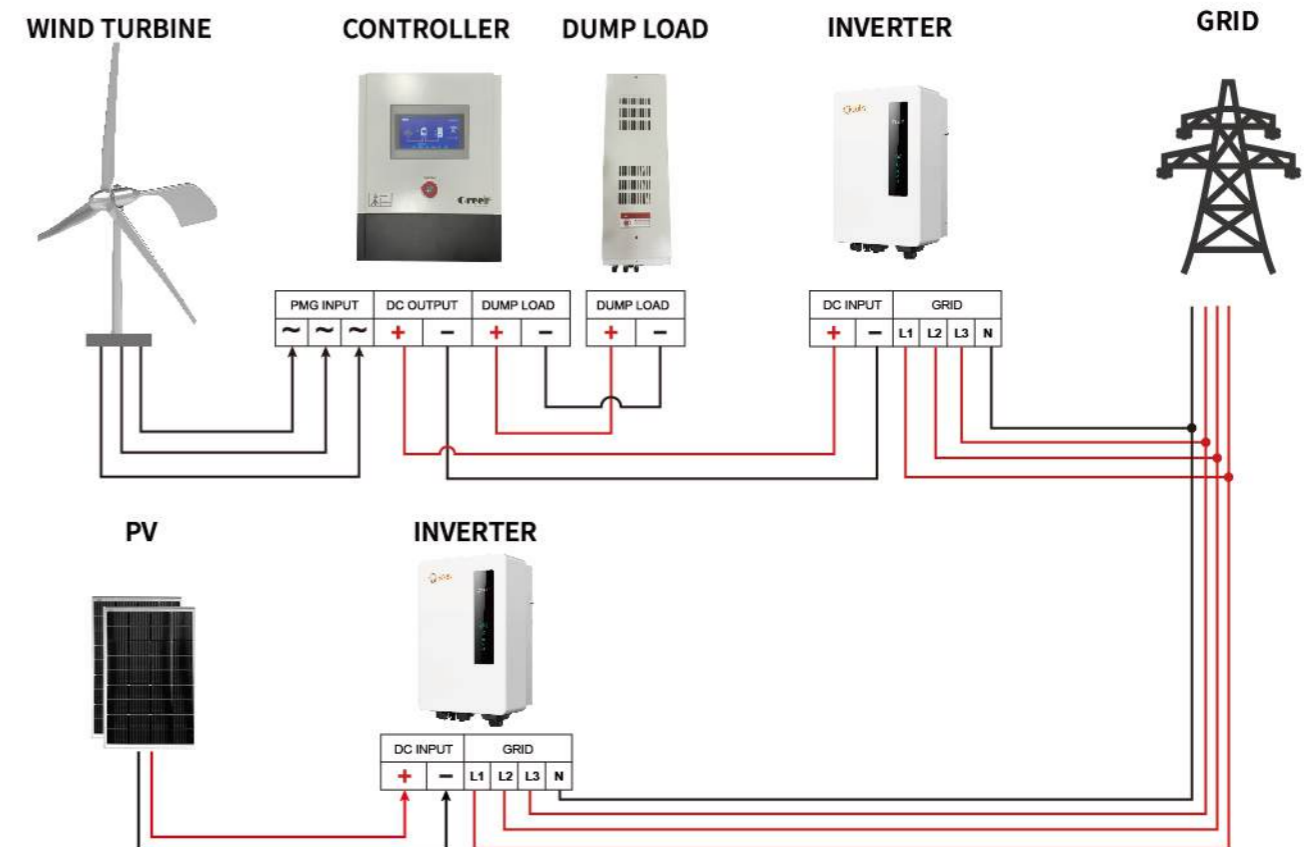
### Conditions of use

The power grid must be stable, and the system will be automatically disconnected if the power grid is disconnected.

## On-grid Wind Turbine System



## On-grid Wind Solar System



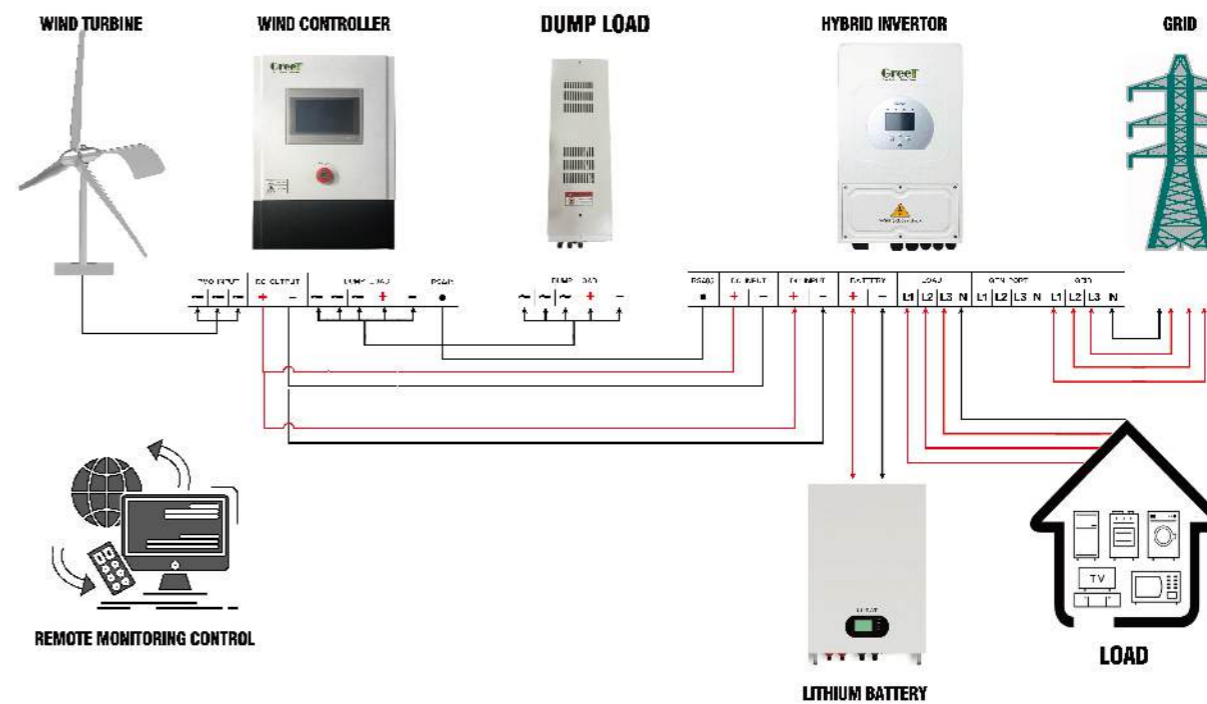


## Hybrid system

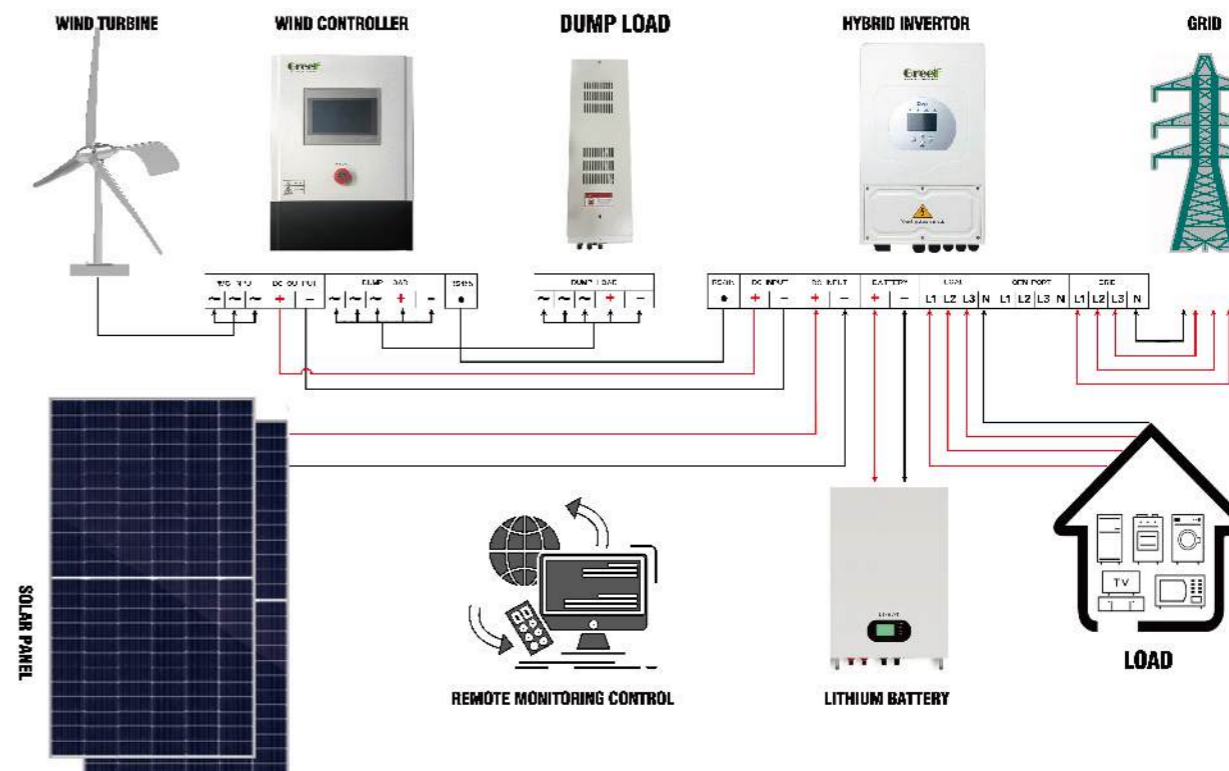
### Off-grid&On-grid hybrid

Converts decentralised energy into electricity for local loads in the vicinity  
 With perfect energy management system, it can realise  
 Grid-connected operation; off-grid operation;  
 Grid-connected to islanded; islanded to grid-connected;  
 Black start function, flatten the fluctuation of power grid, peak shaving and valley filling  
 Grid-friendly relationship, etc.

## Hybrid Wind Solution



## Hybrid Solar Wind Solution



# GREEF WIND TRACKER CONTROLLER

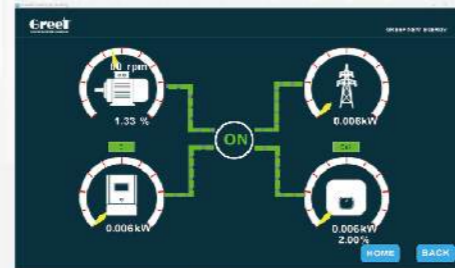
## Product Overview



Grid-Tied Controller is technologically the most important component in wind generator on-grid systems, which convert Three AC current from wind turbine into DC current then send to the grid-tie inverter.

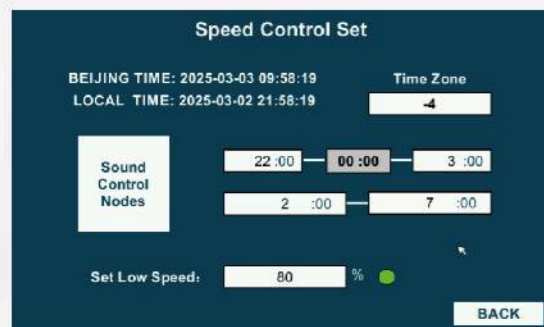
GT-PCTC series wind professional grid-tied controller which have Double safety control systems: PWM constant voltage system and three-phase dump load brake system, This innovative solution also interfaces with solar inverters from brands like Growatt, Deye, Solis, and Ivet, enabling solar inverters to adapt to wind turbine operating conditions.

## LCD Touch Screen



- Power curve control function  
**Speed vs Power**
- Monitoring of Wind Speed,  
**Wind Turbine Speed**
- Braking Systems  
**PMW & Dump Load & Manual**

## Remote Control



- Supports remote monitoring on  
**PC & APP**
- Communication with  
**Solar Inverter**
- Noise period** control function



Can work with following brand solar inverter:



# HYBRID CONVERTOR

- EMS smart energy management system
- Multiple configurable operating modes: off-grid, grid-tied, and grid charging
- Double LCD smart touch Screen Display
- Generator power curve tracking technology
- AC/DC dual backup for auxiliary power supply
- Control Technology for Unbalanced Loads
- Standard RS 485 modbus RTU protocol
- PMW dump load over voltage over speed protection function (optional)
- Water gate motor control function (optional)
- WiFi/ LAN Remote monitoring and control app available (optional)
- Support customized sensor control function (optional)
- Support add Static Transfer Switch (STS) for Grid-Tie/Off-Grid Applications (optional)



## Product Overview

GREEF ENERGY Hydro Grid-tied Converter integrates the capabilities of AC-to-DC rectification for Permanent Magnet (PM) generators, DC-to-AC inversion, and an intelligent energy management system. Equipped with a configurable dual LCD touchscreen, it utilizes advanced converter technology to control output power in real-time based on turbine rotational speed, achieving precise voltage/frequency regulation for Permanent Magnet Synchronous Generators (PMSGs).

The system now incorporates an intelligent water gate control function and integrates multiple sensors (including water level, flow, pressure, etc.) to establish a comprehensive safety control system, ensuring secure and stable operation. For grid connection, it supports direct grid-tied operation, enabling grid charging and energy feedback functionalities.

## Technical Specifications

Rated power(kW)	100/125/150/200/250/300/500/600/700/800/1000
Optimal generator rated voltage(Vac)	400/450
Input voltage range	180V -550Vac
Rated grid voltage(V)	400
Permissible grid voltage range(v)	300-460
Rated grid frequency(Hz)	50/60
Power factor	> 0.99
Power factor range	-1~1
Protection level	IP54
Display	LCD SMART Touch Screen
Communication mode	Ethernet, RS485, WIFI

## Waterproof Container



## After-sales Service

Thank you for choosing "GREEF" new energy products. We always provide a comprehensive range of services before, during and aftersales. "GREEF NEW ENERGY guarantee as follows:

### I. Warranty period:

Horizontal Axis Wind Turbine is Three years warranty.  
OFF-GRID controller & inverter & converter is Two years warranty.  
ON-GRID Wind inverter is Two years warranty.  
Battery is Four years warranty.

- (1) The warranty period is start from the date of on the guarantee card.
- (2) During the warranty period, the cost of maintenance services caused by our product's quality problems, be borne by our company, do not charge a fee from customers; if any maintenance outside the warranty period, our company will charge a fee from customers.
- (3) During the warranty period, the freight of maintenance service caused by our product's quality problems, be borne by our company, do not charge a fee from customers; if not under warranty or not quality problem, all the freight charges by the customer.

### II. Warranty:

We will provide the approved products for all customers to provide maintenance services. But in order to enable the two sides can enjoy fair Treatment, for the following reasons for failure or damage, we will not provide free warranty.

- (1) When beyond the warranty period;
- (2) Disasters, leaving damage to the product caused by accident;
- (3) The user-transport, carrying, falling, collision and damage caused by the failure;
- (4) The product as user-modification, and other failures caused by improper use and damage;
- (5) The users' un-normally operation, like test with other equipment, and caused by the failure;
- (6) Customer open and repair device without our guide and cause damage.

### III. Maintenance services implementation:

- (1) If your machine meet any problems, please take photos and videos send to our service department and explain the details of the problems. or send to the sales which you contact before.
- (2) Our engineers will check the problem, and give you suggestion to solve the problem. Most of the small problem can be solved after engineer guide.
- (3) If we find that any parts need to be replacement, we will send the parts to customers. Quality problem we afford all the charge within warranty period.
- (4) If a major problem in our products, we will send engineers to provide appropriate support.

### IV. Fees:

During the After-sale process, if we need charge fee form customers, the fees = replacement parts + technical service fees + freight + labor costs, we will provide timely material Price (cost).

