

10KW 3 Phase Off Grid Hybrid System

HY-10KW, 5KW wind & 5KW solar

A "hybrid" electric system that combines wind and solar technologies offers several advantages over either single system.

In many regions worldwide, wind speeds are relatively lower in the summer when the sun shines brightest and longest. The wind is strongest in the winter when less sunlight is available due to shorter days. Even during the same day, in many regions worldwide, there are different and opposite wind and solar resource patterns.

Because the peak operating times for wind and solar systems occur at different times of the day and year, hybrid systems are more likely to produce electricity consistently throughout the year. It combines the best of both worlds !

Our hybrid systems are a combination of stand-alone wind systems. For the times when neither the wind nor the solar system is producing, our hybrid systems provide power through batteries.



Performance: 1,200 – 1,630 AC Kilowatt-hours (kWh's) per month (depending on wind and solar resources)

This system includes:

1 set of WFD5KW/120V wind turbine generator with 12m tower

20 pieces of 270W/12V solar panel

1 pc of 10 KW Wind/Solar Hybrid Controller HCC-10KW-120

1 pc of 10 KW 3 phase inverter BNWA240-10KS

~~10 pieces of 12V/200Ah GEL cell batteries~~ which should be provided by user himself or buy from us

Mini order: 2 set

3% discount for order quantity >10 se

5KW/120V Wind Turbine



Model	WFD5KW
Rated Power	5 KW at wind speed 10m/s
Max Power	6 KW
Voltage Options	96V, 120V,240V & Grid Tie
Start Wind Speed	3m/s
Rated Wind Speed	10 m/s
MAX WIND SPEED	45m/s
Cut-Out Wind Speed	12m/second

Survival Wind Speed	45m/s
Kilowatt Hours Per Month	770 kWh/month /average 5.8m/s
Over speed Protection	Auto Furl and Dump Load
Temperature Range	-20 to +60 Deg. C
Rotor Diameter	5.04 m
Swept Area	20 m ²
Rotor speed at 5KW power	250 rpm
Blade number	3
Blade material	Reinforced fibreglass
Rotor thrust(at 20 meters/second)	3,950 Newton
Generator	3 phase Neodymium permanent magnet
Noise	Max 4-7 dB above background
Tower Top Weight	163 kg

270W Solar Panel

APPLICATIONS



Residential, industrial, commercial and agricultural



PV parks



Architectural Integration

FEATURES



Excellent performances even during low solar radiation (cloudiness, morning or evening)



3.2 mm solar-grade tempered prismatic glass



Heavy load mechanical resistance: TÜV certified (5.400 Pa tested against snow and 2.400 Pa test against wind)



Strict and continuous quality controls during all the production phases up to shipment



High efficiency level up to 15.37%



Custom-made modules even in "All Black" version



ASN300P-72 Series Polycrystalline Silicon PV Panel

ELECTRICAL FEATURES

STC: Irradiance 1000 W/m², 25°C, AM=1.5 according to EN 60904-3)

Module Type	270P-72	280P-72	290P-72	300P-72
Module Efficiency $\eta_m(\%)$	13,91	14,43	14,91	15,47
Cell Efficiency $\eta_c(\%)$	15,72	16,39	16,88	17,15
Power Peak $P_m(W)$	270	280	290	300
Maximum Power Voltage $V_m(V)$	34,69	35,23	36,19	36,78

Maximum Power Current Im(A)	7,78	7,94	8,02	8,16
Open Circuit Voltage Voc(V)	42,79	43,35	43,81	44,27
Short circuit current Isc(A)	8,32	8,56	8,78	8,93
Maximum System Voltage (VDC)	1000			
Power output tolerances (%)	±3			
Max-Series Fuse (A)	20			
Operating/Storage Temp. (°C)	-40 ~85			
Dielectric Insulation Voltage (VDC)	3000 max			
TEMPERATURE CHARACTERISTICS - STC				
NOCT–Nominal Operating Cell Temperature	45±2°C			
Pm Temperature Coefficient (%/°C)	-0.44			
Voc Temperature Coefficient (%/°C)	-0.36			
Isc Temperature Coefficient (%/°C)	0.033			
MECHANICAL FEATURES				
Cell Size (mm)	156 x 156			
Number of cells	6 x 10 – polycrystalline silicon cell			
Module Dimensions (mm)	1956 x 992 x 40			
Module Weight (kg)	22			

Front Glass	3.2mm tempered glass
Back Cover	TPT(Tedlar-PET-Tedlar)
Frame	Anodized aluminum alloy
Junction box	IP65-6 by-pass diodes serviceable
Connectors	IP67 type MC4
Output Cables (mm)	900
Container Loading	20GP : 190 pc, 40HQ : 506 pc

Hybrid Controller HCC-10KW



Model	HCC-10KW-120	
Rated output power	10 KW	
Input voltage range	100~150 V	
Rated battery voltage	120V	
Max input wind power	6 KW	
Max input solar power	6 KW	
Over charge protection	150V ±0.5V	
Recommended battery	120VDC/200AH	
Maximum Wind Turbine Input Current	40A	
Protection Function	over charge, battery reverse-connection Solar cells reverse charging, battery reverse, over load, load short-circuit, lightning, wind turbine current limiting, wind turbine automatic brake and manual brake.	
Self Consumption	< 10 mA	
Size	Controller : 560 x 400 x 240	22KG
	Dump load : 690 x 450 x 530 mm	35kg

10KW Pure Sine Wave 3 Phase Inverter PI-10KW-120



Model	PI-10KW-120	PI-10KW-	PI-10KW-240
Output power	10KW continuous power/20KW peak power		
Output voltage	3 Phase, 240VAC		
Optimum efficiency	up to 92%		
No-load drawing	< 2 A		
Output wave form	Pure Sine Wave		
Input voltage	120VDC		240VDC
Max Input current(A)	85A		45A
Over voltage shutdown	150V		300V

Under voltage shutdown	95V		190V
Output voltage precision	3 phase, AC240V \pm 3%		
Power factor(PF)	0.8		
Over load shutdown	15KW		
Low voltage alarm	Audible		
Total Harmonic	<5% (line load)		
Operating temperature	-25~+60°C		
Protection	Over voltage, Low voltage alarm, Over load, Over heat, Short circuit		
Electrical insulation	1500Vac, 1 minute		
Warranty	1 year		
Shipping Weight/Dimension	140 kg/650 x 460 x 1370 mm		

Maintenance free Lead-Crystal Battery

New Technology

The invention of the lead crystal battery is a breakthrough in battery history. Based on the composite electrolyte and proprietary intellectual property rights, makes the reaction of the electrolyte formation caused the forming for the crystal state.



Advantages

1. Ideal green and environmental protection battery:

Lead crystal battery is using special SiO₂ composite electrolyte to replace the sulfuric acid solution of traditional lead acid battery. The electrolyte is non-toxic, non-smell, to surrounding environment.

2. Excellent high and low temperature operating characteristics

Working temperature from -40°C~65°C

3. Easy for depth discharge

Working life of is no effected by the general over discharge. Excellent recovery capacity of charge-discharge.

5. Long working life

Lead crystal battery can work for 10 to 15 years, and charging time is 25% faster than normal lead acid batteries and gel batteries.

Item	6-CNFJ-150
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Nominal Voltage 12V

Packing

- 1) Wind Generator in wooden case: 766 x 44 x 52 cm 86 kg 0.151 m²
314 x 35 x 46 cm 30 kg 0.506 m²
- 2) 12 m wire guyed tower in case : 305 x 36x 36 cm 125 kg 0.395 m²
- 3) 5 KW solar panel in carton 210 x 105 x 130 cm 70 kg 2 m²
- 4) Controller in carton : Controller : 60 x 45 x 30 cm 24KG 0.081 m²
Dump load : 75 x 50 x 60 cm 40kg 0.225 m²
- 5) Inverter in wooden case: 65 x 46 x 140 cm 140 kg 0.462 m²
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3.82 m²