



# POWERWIND

[www.powerwindservice.com](http://www.powerwindservice.com)

*to tomorrow*

*a cleaner world...*



# POWERWIND SOLAR PANELS

Our solar panels are manufactured using Class A high efficiency cells. Our solar panels are available in monocrystalline, polycrystalline and flexible types. Both types of panels provide many advantages according to the way of use. We have solar panels with different output voltage and power values. In addition, the production line established for solar panels between 5W-455W has been put into service of our customers.

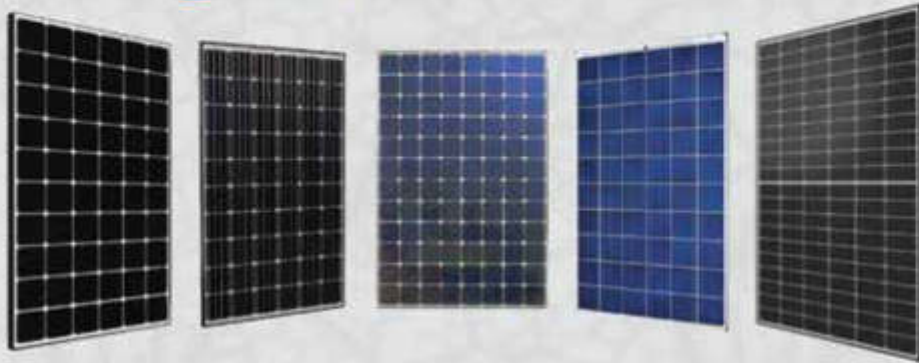






# POWERWIND

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POWER	CRYSTAL ST.	TOLERANCE	MAX POWER VOLT (VMP)	MAX POWER CURRENT (IMP)	OPEN CIRCUIT VOLT (VOC)	SHORT CIRCUIT CURRENT (ISC)	PANEL DIMEN.	MAX. SYSTEM VOLTAGE
5 W -1	POLYKRISTAL	+5 %	13.2	0.32 A	14.5 V	0.32 A	255*185*15	600 VDC
5 W -2	POLYKRISTAL	+5 %	18	0.16 A	21.6 V	0.32 A	255*185*15	600 VDC
10 W -1	POLYKRISTAL	+5 %	18	0.61 A	21.6 V	0.67A	300*300*25	1000 VDC
10 W -2	POLYKRISTAL	+5 %	18	0.61 A	21.6 V	0.67A	300*300*25	1000 VDC
20 W	POLYKRISTAL	+5 %	18	1.11 A	21.6 V	0.32 A	360*430*25	1000 VDC
40 W	POLYKRISTAL	+5 %	18	1.11 A	21.6 V	0.32 A	670*430*25	1000 VDC
60 W	POLYKRISTAL	+5 %	18	1.11 A	21.6 V	0.32 A	670*600*25	1000 VDC
110 W	POLYKRISTAL	+5 %	18	1.11 A	21.6 V	0.32 A	670*970*25	1000 VDC
170 W	POLYKRISTAL	+5 %	18.61	1.11 A	21.6 V	0.32 A	1480*670*30	1000 VDC
280 W	POLYKRISTAL	+5 %	18.61	1.11 A	21.6 V	0.32 A	1640*990*35	1000 VDC
340 W	MONOKRISTAL	+5 %	34.50	9.85 A	39.68 V	9.9 A	1660*1001*35	1000 VDC
400 W	MONOKRISTAL	+5 %	41.70	9.59 A	47.95 V	9.9 A	1660*1001*35	1000 VDC
410 W	MONOKRISTAL	+5 %	41.70	9.59 A	47.95 V	9.9 A	1660*1001*35	1000 VDC
455 W	MONOKRISTAL	+5 %	41.60	10.94 A	49.40 V	11.67 A	2095*1039*40	1000 VDC





## SMART INVERTER

We have full sine and modified sine wave inverters. Our smart inverters with full sine function have a built-in charge controller. In this way, there is no need to use an external charge controller. Undervoltage shutdown, overload shutdown and short circuit shutdown are common features available on all our inverters.



MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	POWER (VA/W)	AC CHAR. CURR.(A)	CHAR. CURR.(A)	WEIGHT	DIMENSIONS(mm)
1 KW	12	230	1000/1000	20	50	5	88X225X320
3 KW	24	230	3000/3000	25	50	6.3	100X285X334
5 KW	48	230	5000/5000	60	50	8.5	100X300X440
1 KW - MPPT	12	230	1000/1000	20	40	5.1	88X225X320
3 KW - MPPT	24	230	3000/3000	25	40	6.5	100X285X334
5 KW - MPPT	48	230	5000/5000	60	60	9.7	100X300X440
5.5 KW - MPPT	48	230	5500/5500	80	100	10	100X300X440
7.2 KW - MPPT	48	230	15000	120	120	18.4	147X432X553



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## MODIFIED SINE INVERTERS

MODEL	INPUT	POWER (VA/W)	OUTPUT VOLTAGE
MOD.SİNÜS	12	150	200 - 240
MOD.SİNÜS	12	300	200 - 240
MOD.SİNÜS	12	600	200 - 240
MOD.SİNÜS	24	600	200 - 240
MOD.SİNÜS	12	1000	200 - 240
MOD.SİNÜS	24	1000	200 - 240
MOD.SİNÜS	12	1800	200 - 240
MOD.SİNÜS	24	1800	200 - 240
MOD.SİNÜS	12	2500	200 - 240
MOD.SİNÜS	24	2500	200 - 240
MOD.SİNÜS	24	3000	200 - 240



## FULL SINE INVERTERS

MODEL	INPUT	POWER (VA/W)	OUTPUT VOLTAGE
TAM SİNÜS	12	600	200 - 240
TAM SİNÜS	12	700	200 - 240
TAM SİNÜS	24	700	200 - 240
TAM SİNÜS	12	1000	200 - 240
TAM SİNÜS	24	1000	200 - 240
TAM SİNÜS	12	1500	200 - 240
TAM SİNÜS	24	1500	200 - 240
TAM SİNÜS	12	2000	200 - 240
TAM SİNÜS	24	2000	200 - 240
TAM SİNÜS	24	2500	200 - 240
TAM SİNÜS	24	3000	200 - 240







## ON-GRID INVERTERS



MODEL/DIMENSION(mm)	AC OUTPUT POWER(kV)	Max. PV POWER (kW)	MPPT DC CURRENT (A)	MPPT VOLT. RANGE(V)
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1 KW ON GRID/Tek MPPT-Monofaze	1	1.3	10	80-450
2 KW ON GRID/Tek MPPT-Monofaze	2	2.6	10	80-450
3 KW ON GRID/Tek MPPT-Monofaze	3	3.9	18	80-450
3,6 KW ON GRID/Tek MPPT-Monofaze	3,6	4,6	22	80-550
4,2 KW ON GRID/Tek MPPT-Monofaze	4,2	5,4	22	80-550
5 KW ON GRID/Tek MPPT-Monofaze	5	6,5	22	80-550
3,6 KW ON GRID/Çift MPPT-Monofaze	3,6	4,6	11*11	80-550
4,2 KW ON GRID/Çift MPPT-Monofaze	4,2	5,4	11*11	80-550
5 KW ON GRID/Çift MPPT-Monofaze	5	6,5	11*11	80-550
4 KW ON GRID/Çift MPPT-Trifaze	4	5,2	11*11	200-800
5 KW ON GRID/Çift MPPT-Trifaze	5	6,2	11*11	200-800
6 KW ON GRID/Çift MPPT-Trifaze	6	7,8	11*11	200-800
8 KW ON GRID/Çift MPPT-Trifaze	8	9,6	11*11	200-850
10 KW ON GRID/Çift MPPT-Trifaze	10	12	11*11	200-850
15 KW ON GRID/Çift MPPT-Trifaze	15	19,5	22*22	200-850
20 KW ON GRID/Çift MPPT-Trifaze	20	26	22*22	200-850
25 KW ON GRID/Çift MPPT-Trifaze	25	32,5	27*27	200-850
50 KW ON GRID/Dört MPPT-Trifaze	50	60	28*28*19*19	200-850
60 KW ON GRID/Dört MPPT-Trifaze	60	72	28*28*28*28	200-850
65 KW ON GRID/Dört MPPT-Trifaze	65	75	28*28*28*28	200-850



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## CHARGE CONTROLLERS



Our solar charge controllers are of two types, PWM and MPPT. It is the equipment used to control the correct charging of the electricity produced by the solar panel to the battery. Charge controllers extend battery life by constantly checking battery status. Thanks to the design of MPPT charge controllers following the maximum power point, the energy obtained is used at the maximum level.



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## BATTERIES



PRODUCT NAME	DIMENSIONS
OUTDO 12V 65AH JEL AKÜ	350x167x173 23,1kg
OUTDO 12V 100AH JEL AKÜ	331x173x216 32,5 kg
OUTDO 12V 120AH JEL AKÜ	406x172x208 38kg
OUTDO 12V 150AH JEL AKÜ	484x170x241 47,5kg
OUTDO 12V 200AH JEL AKÜ	522x239x217 64,1kg

Our gel batteries, which have proven their quality to the whole world, are used safely in harmony with solar and wind energy systems with their deep discharge plate structure, long life, 100% maintenance-free and environmentally friendly structure. Ideal for daily cyclical use. They show excellent performance on long discharges. General usage areas; solar and wind powered systems, signaling systems, industrial machinery and large UPS systems.

PRODUCT NAME	DIMENSIONS
ORTEC 12V 7AH JEL AKÜ	151x65x94 1,85kg
ORTEC 12V 22AH JEL AKÜ	181x76x166 7kg
ORTEC 12V 24AH JEL AKÜ	181x76x166 7kg
ORTEC 12V 40AH JEL AKÜ	196x166x175 12,25kg
ORTEC 12V 100AH JEL AKÜ	329x172x215 30kg
ORTEC 12V 150AH JEL AKÜ	484x171x241 44kg
ORTEC 12V 200AH JEL AKÜ	522x239x217 63kg







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**BATTERIES**



PRODUCT NAME	DIMENSIONS
PANTEC 12V 100AH JEL AKÜ	331x173x216 32,5 kg
PANTEC 12V 150AH JEL AKÜ	484x170x241 47,5 kg
PANTEC 12V 200AH JEL AKÜ	522x239x217 64,1 kg
ORBUS 12V 100AH JEL AKÜ	331x173x216 32,5 kg
ORBUS 12V 200AH JEL AKÜ	522x239x217 64,1 kg

**LITHIUM BATTERIES**

Electricity stored with lithium-ion batteries is much more than with conventional batteries. Thanks to the technology used, these batteries, which are light and very small in size, also have a large share in space saving. These are batteries suitable for use in hybrid cars, the use of renewable energy sources, telecommunication technology and many more.

Product Name	Explanation	Image
48V x 50Ah 2.4Kwh LiFePo4	48v 50A, Lithium battery with a capacity of 2.4 Kwh. IP21 protection level, 10 years warranty. More than 6000 cycle life. Discharge up to 90%. Touch screen, aesthetic design.	
48V x 50Ah 2.4Kwh LiFePo4	48v 50A, Lithium battery with a capacity of 2.4 Kwh. IP21 protection level, 10 years warranty. More than 6000 cycle life. Discharge up to 90%. Rack type design.	
48V x 50Ah 2.4Kwh LiFePo4	48v 74A, Lithium battery with a capacity of 3.55 Kwh. IP21 protection level, 10 years warranty. More than 6000 cycle life. Discharge up to 90%. Rack type design.	



## IRRIGATION DRIVERS

Solar pump drives regulate the energy received from the sun in solar irrigation systems. It converts DC energy from solar panels to AC energy to run irrigation pumps. There is no battery usage in these systems. The quenching rates of the pumps are adjusted according to the intensity of sunlight. Maximum power points are monitored with advanced MPPT control technology.



MODEL/DIMENSION	POWER(W)	DC INPUT VOLTAGE(V)	AC OUTPUT VOLTAGE(V)	AC OUTPUT CURRENT(A)
FC-51/176*75*168	1.5	450	3*200-240	6.8
FC-51/239*90*194	2.2	450	3*200-240	9.6
FC-51/239*90*194	3	850	3*380-480	7.2
FC-51/239*90*195	4	850	3*380-480	9
FC-51/239*90*196	5.5	850	3*380-480	12
FC-51/239*90*197	7.5	850	3*380-480	15,5
FC-51/292*125*241	11	850	3*380-480	23
FC-51/292*125*242	15	850	3*380-480	31
FC-51/335*165*248	18.5	850	3*380-480	37
FC-51/335*165*249	22	850	3*380-480	43





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## IRRIGATION SYSTEMS

Solar-powered irrigation systems have recently been preferred over fossil fuel-consuming systems such as generators in regions where there is no electricity. There is no battery usage in the systems. With irrigation packages, you can easily operate your water pumps without the need for batteries and meet the energy needs of all your irrigation systems. With the MPPT technology used, the efficiency from solar energy is maximized. Solar systems automatically operate the used submersible pump when sufficient energy is received from the solar energy. Automatically turns it off at night. There may be changes in the panels given in the table according to the operating times of the pumps in the systems.







## IRRIGATION PACKAGES

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 3kW (4HP) Irrigation Pump	Solar Panel	270W Polikristal	18
	Driver	4kW Panolu	1
	Construction	18 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 4kW (5,5HP) Irrigation Pump	Solar Panel	270W Polikristal	22
	Driver	5,5 kW Panolu	1
	Construction	22 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 5,5kW (7,5HP) Irrigation Pump	Solar Panel	270W Polikristal	36
	Driver	7,5 kW Panolu	1
	Construction	36 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 55kW (75HP) Irrigation Pump	Solar Panel	270W Polikristal	320
	Driver	75 kW Panolu	1
	Construction	320 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 75kW (100HP) Irrigation Pump	Solar Panel	270W Polikristal	440
	Driver	90 kW Panolu	1
	Construction	440 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 90kW (125HP) Irrigation Pump	Solar Panel	270W Polikristal	520
	Driver	110 kW Panolu	1
	Construction	520 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 110kW (150HP) Irrigation Pump	Solar Panel	270W Polikristal	640
	Driver	132 kW Panolu	1
	Construction	640 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 132kW (175HP) Irrigation Pump	Solar Panel	270W Polikristal	800
	Driver	22 kW Panolu	1
	Construction	114 Panel için	1

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## IRRIGATION PACKAGES

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 30kW (40HP) Irrigation Pump	Solar Panel	270W Polikristal	180
	Driver	37 kW Panolu	1
	Construction	180 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 37kW (50HP) Irrigation Pump	Solar Panel	270W Polikristal	220
	Driver	45kW Panolu	1
	Construction	220 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 45kW (60HP) Irrigation Pump	Solar Panel	270W Polikristal	260
	Driver	55 kW Panolu	1
	Construction	260 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 55kW (75HP) Irrigation Pump	Solar Panel	270W Polikristal	320
	Driver	75 kW Panolu	1
	Construction	320 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 75kW (100HP) Irrigation Pump	Solar Panel	270W Polikristal	440
	Driver	90 kW Panolu	1
	Construction	440 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 90kW (125HP) Irrigation Pump	Solar Panel	270W Polikristal	520
	Driver	110 kW Panolu	1
	Construction	520 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 110kW (150HP) Irrigation Pump	Solar Panel	270W Polikristal	640
	Driver	132 kW Panolu	1
	Construction	640 Panel için	1

CAPACITY	PRODUCTS	FEATURES	QUANTITY
For 132kW (175HP) Irrigation Pump	Solar Panel	270W Polikristal	800
	Driver	22 kW Panolu	1
	Construction	114 Panel için	1





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## HOUSEHOLD NEEDS PACKAGES

In areas where there is no mains line, where it is difficult or uneconomic to install the mains line, and where the electricity is cut off frequently, the most accurate solution is to install an off-grid system that is calculated correctly according to the needs. Since solar energy is accessible from anywhere, it helps you to provide a self-sufficient source. The installation of battery-powered systems in places where there is an electric line increases the cost of the system and the depreciation period of the system is prolonged. For this reason, it is recommended for places where there is no electricity or about 1km from the transmission line. It can be used in your vineyard houses, plateaus, farms, signaling systems, remote information systems, base stations, street and garden lighting systems.







## 1

### VINEYARD HOUSE PACKAGE

#### PACKAGE FEATURES

4 pcs 7-12w Lamp	8 hours/day
Mini Refrigerator	24 hours/day
Mini LED TV	6 hours/day
Chargers	Unlimited

#### PACKAGE INCLUDED

165 w Solar Panel	3 Pcs
12 v 1000 w Smart Inverter	1 Pcs
12 v 100 Ah Jel Battery	2 Pcs
Connecting Equipment	Set

## 2

### VINEYARD HOUSE PACKAGE

#### PACKAGE FEATURES

6 pcs 7-12w Lamp	8 hours/day
Big Refrigerator	24 hours/day
Medium LED TV	8 hours/day
Chargers	Unlimited

#### PACKAGE INCLUDED

270 w Solar Panel	3 Pcs
12 v 2400 w Smart Inverter	1 Pcs
12 v 100 Ah Jel Battery	4 Pcs
Connecting Equipment	Set



## 3

### CLEAN HOUSE PACKAGE

#### PACKAGE FEATURES

6 pcs 7-12w Lamp	8 hours/day
Big Refrigerator	24 hours/day
Washing Machine	2 times/week
Big LED TV	8 hours/day
Chargers	Unlimited

#### PACKAGE INCLUDED

270 w Solar Panel	4 Pcs
48 v 4000 w Smart Inverter	1 Pcs
12 v 150 Ah Jel Battery	4 Pcs
Connecting Equipment	Set

## 4

### CLEAN HOUSE PACKAGE

#### PACKAGE FEATURES

6 pcs 7-12w Lamp	8 hours/day
Big Refrigerator	24 hours/day
Washing Machine	2 times/week
Big LED TV	8 hours/day
Vacuum Cleaner	15 min. /day
Fan	6 hours/day
Chargers	Unlimited

#### PACKAGE INCLUDED

270 w Solar Panel	6 Pcs
48 v 4000 w Smart Inverter	1 Pcs
12 v 200 Ah Jel Battery	4 Pcs
Connecting Equipment	Set



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## PORTABLE POWER BOXES



### PACKAGE INCLUDED

- \* 2 Pcs 235W Monocrystalline Solar Panel
- \* 2 Pcs 100 AJ Gel Battery
- \* 1 Pc 1000W Full Sine Inverter
- \* 1 Pc 30A Charge Controller

This is our portable power pack with 220v output. With this package, you can run your TV, refrigerator, lighting, computer, tablet and phone charges. We design packages according to every need and offer them to your use.



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## SOLAR LIGHTING PRODUCTS

**15 w**  
LED BAĞCE VE  
CEVRE AYDINLATMA



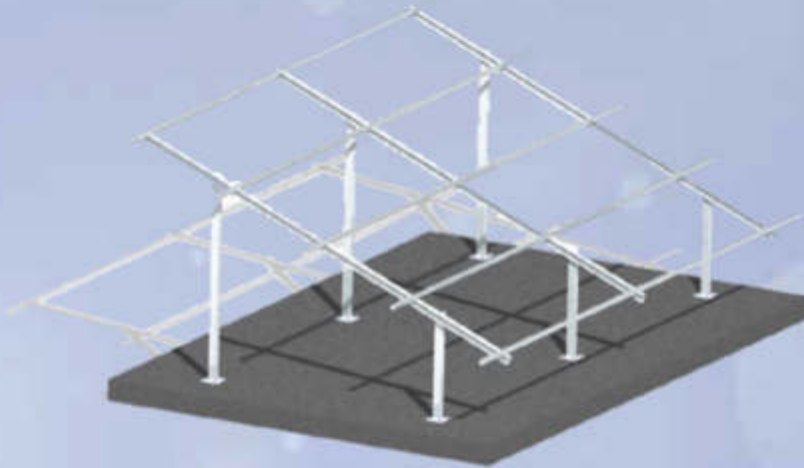




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## INFRASTRUCTURE AND ADDITIONAL MATERIALS





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**FRECON**



**CW Enerji**



**ELIZLER**  
Yenilenebilir Enerji Sistemleri

**LEXRON**

**Linetech**



**CapTech**

**abax**

**ORBUS**



**HİS**  
we connect solar energy







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