POWEREGION™

PRODUCT BROCHURE

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SOLAR AIR CONDITIONER

Poweregion solar air conditioner utilizes solar energy as the power source and is an environmentally friendly and energy saving product. It can help people enjoy cooling and heating freely and economically in areas where there is a shortage of power supply or there is a problem of high electricity rates.

Technical Features

Poweregion solar air conditioner adopts the Full DC (6 DC components) and inverter technology, which greatly improves the reliability and efficiency of the solar air conditioner.

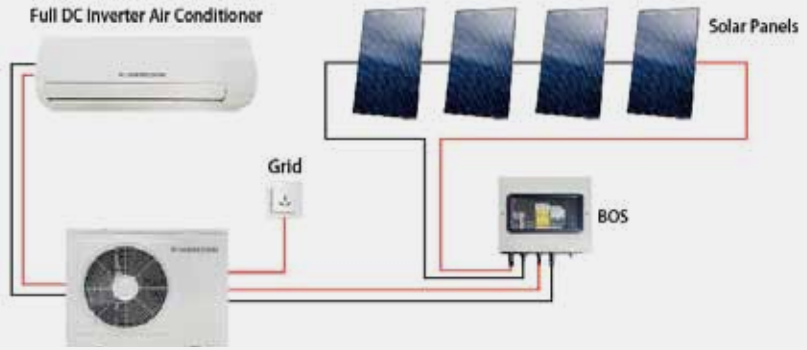
- Low power consumption and high energy saving efficiency
- Variable speed air compressor to achieve soft starting and quick cooling / heating
- Wider working frequency and voltage range
- Silent operation with low noise level
- Booster and MPPT controller are integrated in the solar air conditioner controller
- Safety protection arrangements included
- APP control and power saving indicator are optional

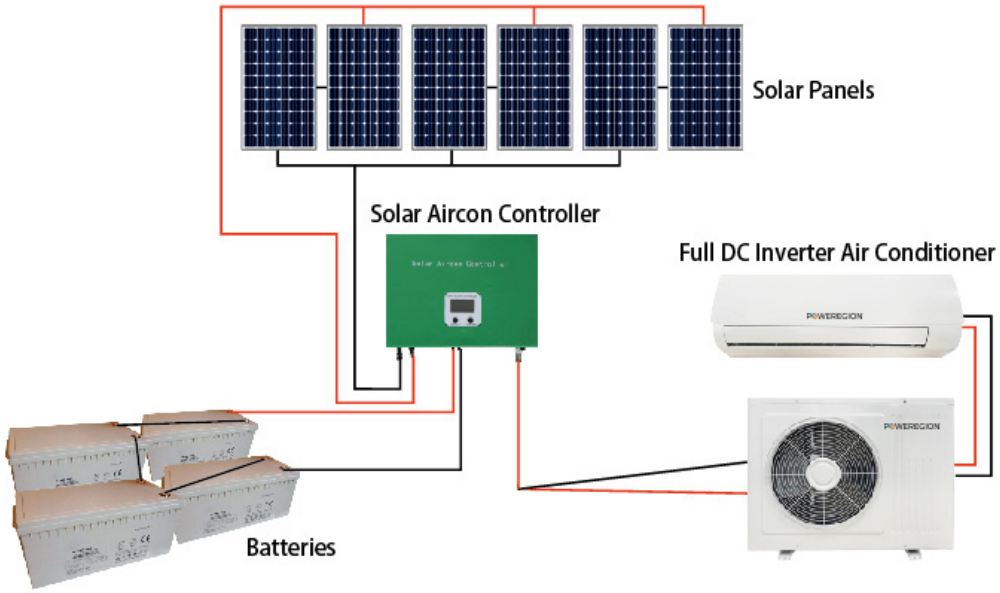
Hybrid Solar Air Conditioner System

In hybrid solar air conditioner system, the air conditioner is powered by solar energy and grid power is used as the backup power. In the daytime, the system draws power from the solar panels as the preference and when the solar power is not sufficient to satisfy the needs of the air conditioner, the grid power complements. At night, the system is driven by grid.

Components:

- Full DC Inverter Air Conditioner
- Solar Panels
- Grid Power
- BOS





Off Grid Solar Air Conditoner System

In off grid solar air conditioner system, the power generated from the solar panels drives the solar air conditioner and charges the battery bank for backup at the same time. The MPPT controller serves the purpose of both controlling and boosting 48V voltage of the battery to 310V DC for the DC inverter air conditioner. The power stored in the battery bank is used for the solar air conditioner at night.

Components:

- Full DC Inverter Air Conditioner
- Solar Panels
- Solar Controler
- Gel Batteries

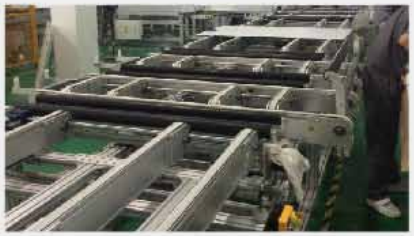
Pure Solar Air Conditioner System

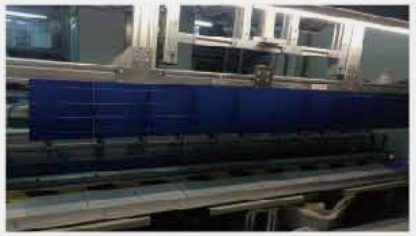
In pure solar air conditioner system, the air conditioner is powered by the solar panel array when solar radiation is strong enough, which should generally be higher than 750W/M2. When solar radiation is lower than 700W/M2, the solar air conditioner switches off Fan mode and changes to Cooling mode automatically when the solar radiation becomes strong enough.

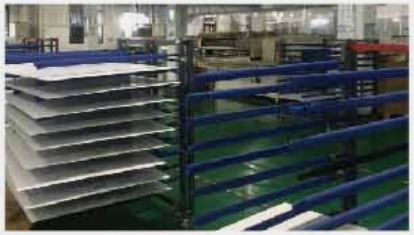
Components:

- Full DC Inverter Air Conditioner
- Solar Panels
- BOS

High Voltage Solar Panels







SOLAR PUMPS

Advantages

- Full stainless steel impeller centrifugal pump for big flow and full stainless steel helical rotor pump for high lift. Longer operation life.
- High efficient DC brushless motor requires less solar array. Rich social benefits.
- High efficient semiconductor device used in main circuit. High reliability. Up to 98% conversion efficiency of inverter.
- Independent intellectual property of dynamic VI maximum power point tracking (MPPT) algorithm. Fast response and good stability. 99% MPPT efficiency.
- Full automatic operation. Complete protection functions. Integrated with water level monitor to prevent overflow and dry running.
- Full aluminum alloy case. IP52 protection grade. Ambient temperature: -20 / +60°C.

BATTERIES

LEAD-CARBON BATTERY

Technical Features

- ✓ High performance, low cost and safe
- ✓ Multi-application for energy storage of solar, wind power and smart grid
- ✓ Next Generation power for automobiles

AUTOMOTIVE BATTERIES

Technical Features

- ✓ Durability and frost resistance of the battery body
- ✓ Enhanced working and storage capacity
- ✓ Shock resistance
- ✓ Enhanced reliability
- ✓ Extended service life
- ✓ Unique technology for production of the plate active mass
- ✓ Maintenance-free

GENERATORS

Poweregion diesel generator range is designed to combine maximum choice with exceptional reliability. Open-type, Closed-type, Portable, Soundproof, Super Silent (65dBA at 1 meter) and Containerized enclosures are available.

From primary to critical backup power needs, Poweregion generators are designed for optimal performance in the most demanding conditions. Designed for application in healthcare, manufacturing, utilities, technology, telecom, financial and government. The range is subject to extreme testing for both components and the assembled units.

Advantages

- ✓ Outstanding performance under the most challenging conditions, including wind, sand, high temperature and humidity
- ✓ Equipped with high-quality alternators (Class H insulation)
- ✓ Deep Sea Electronics (DSE) controllers
- ✓ Open-type, Closed-type, Portable, Soundproof, Super Silent (65dBA at 1 meter) and Containerized enclosures are available
- ✓ 60Hz 1800rpm generator variants are available upon request
- ✓ Generators are easy to move and convenient to service
- ✓ International Warranty. Qualified and efficient service to POWEREGION customers through a worldwide service network

FIRMAN 1-250KVA

PERKINS RANGE 9-2250KVA

CUMMINS 30-1500KVA

MTU 250-3000KVA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