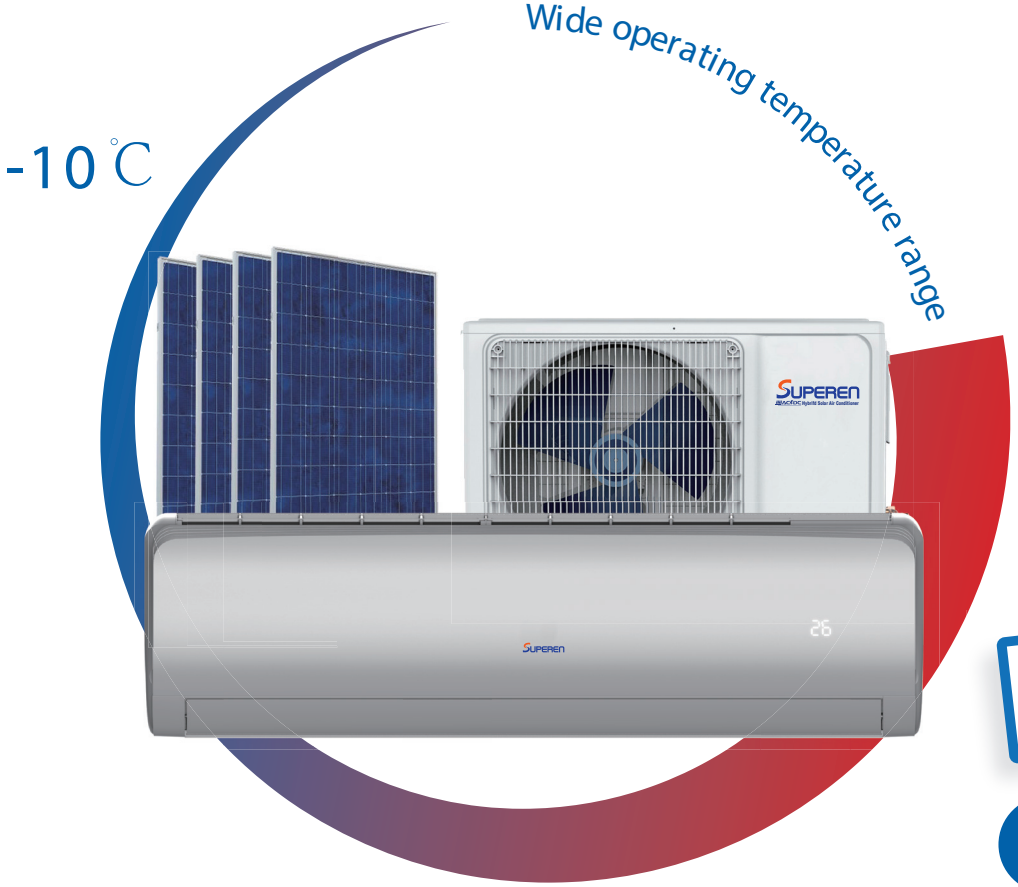
US Standard

SUPEREN®
New Energy Technology

Solar Air Conditioner / ACDC Hybrid

SuperEn New Energy Technology



PVfit inside

40% Fast cooling

high temperature resistant

» The latest advancement proving the superiority of the PVFit® technology «

Energy Anytime Anywhere

ACDC Hybird Solar Air Conditioner

Technical data, Applications, Dimensions

Applications

The hybrid ACDC solar air conditioners need no batteries, and only a few PV panels to deliver a huge savings. During the day, when air conditioning is needed the most, you can operate this unit up to 100% by solar panel. At night, you continue to save due to the >SEER 21 rating on this unit. The mini-split air conditioner design allows you to put solar cooling into the area where it's needed the most and avoid the security issues of an unsightly and noisy window unit.

Your benefits:

> High-SEER Brushless inverter DC permanent magnet compressors

> Runs on up to 100% solar power directly in daytime

> Fast Cooling around 30s / Powerful heating with 1min Provide comfort in time

> Wide operating temperature range: -10°C to +52°C

> Anti-Corrosion Technology giving greater corrosion resistance for both outdoor and indoor unit

> Eco-Friendly R410a Refrigerant

> Solar connector terminal - Easy connection and maintenance plug and play

> Low energy consumption

> Quiet Indoor Unit (As Low As 26dB)

Faster Cooling

Energy Saving

Eco-friendly Refrigerant

Technical characteristics and data

Type	Part number	Nom. solar input voltage V DC	Capacity Cooling Btu/h	Capacity Heating Btu/h	Power Input Cooling W	Power Input Heating W	SEER without solar input W/W	HSPF without solar input W/W	Net Weight Indoor/ Outdoor Kg	Net Size Indoor mm	Net Size Outdoor mm
ACDC Hybrid	HYBRID-ACDC24-US	100~300	24,000	24,000	370~2142	580~2426	20	11	17/62	1100/330/235	900/795/330
ACDC Hybrid	HYBRID-ACDC18-US	100~300	18,000	18,000	280~2020	410~2350	21	10	14/55	970/315/235	900/700/350
ACDC Hybrid	HYBRID-ACDC12-US	100~300	12,000	12,000	250~1050	315~1114	22	11	11/47	850/300/180	800/545/315
ACDC Hybrid	HYBRID-ACDC09-US	100~300	9,000	9,000	225~700	280~735	23	10	9/41	800/300/198	730/545/285

Specification

> Up to 24,000Btu capacity, 97% energy saving
> Wide operating temperature range: -10°C to +52°C
> Low energy consumption: SEER 20~23 (North America)
> Pay back your money in 2~3 years time
> Designed in accordance with UL and CSA standard
> Approval: ETL, AHRI
> Design life "> 12 Years - Very Long Life" according to normal installation conditions
> Super Cooling performance is ensured by big compressor together with the greatest heat exchange system
> 15m over long distance air flow design

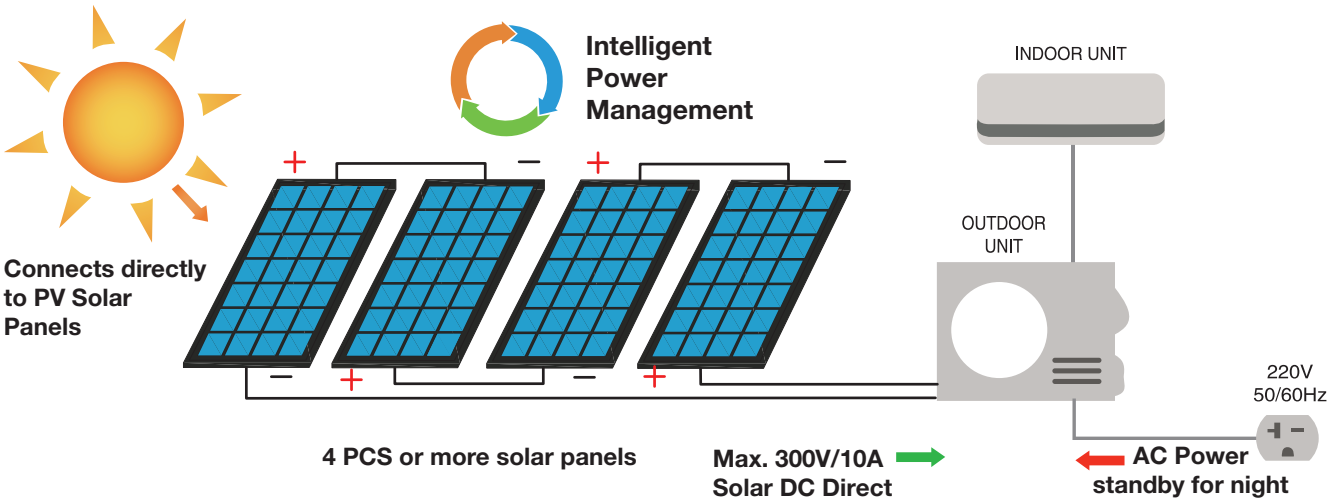
ACDC Hybrid Solar Air Conditioner

System Diagram & Component

System Diagram

Do not like regular DC-Inverter air conditioners, the hybrid solar air conditioner compressor runs on DC power directly from solar power during the day. With the Intelligent Power Management technology this system accept DC power directly from solar panels, without needing an inverter, controller, or batteries.

In daytime, the ACDC hybrid solar air conditioner can get most of its power from solar resulting in an efficiency above SEER 35 when using four >/= 270W solar panels. The unit can be connected with up to 300V/10A solar DC power. The system is designed for hybrid operation with solar providing all of the energy needed during daylight hours. This air conditioner can be connected only by solar panels during daytime, and to a 220/240VAC power source at night time.



System Component

> DC Powered Indoor unit
One reason that a DC Air Conditioner makes the best use of solar power is because there is no loss associated with converting DC power from solar panels into AC power to run a standard air conditioner

> ACDC Hybrid Outdoor unit
During the day it runs primarily on solar power and only uses small amounts of power from the utility company as needed. When it comes to night time, it will auto switch to 220V AC power

> DC Brushless fan motor
DC brushless fan motors are used for both indoor and outdoor units. It can greatly reduce energy consumption, and run with super low noise. Plus, the use of a brushless permanent magnet motor driver provides a variable frequency drive that allows the system to dynamically adjust its capacity based on conditions

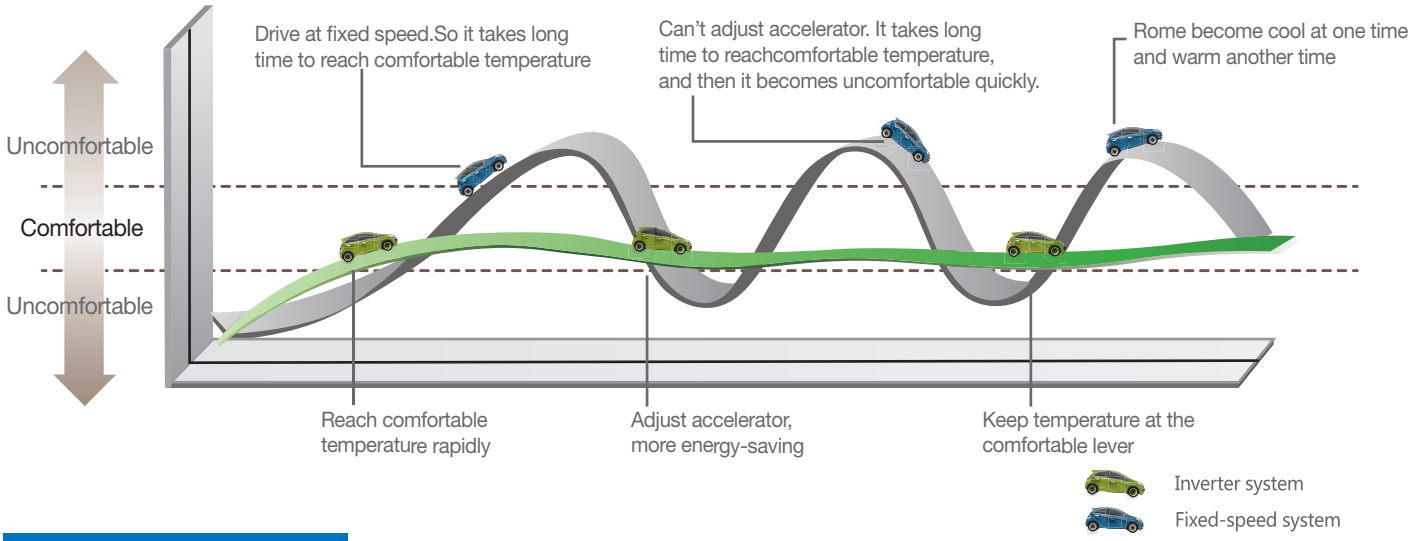
> Solar Panel
Using the latest innovative cell technology, increasing module power output and system reliability, ensured by 15 years of experience in module manufacturing, well-engineered module design, stringent BOM quality testing, an automated manufacturing process and 100% EL testing

ACDC Hybrid Solar Air Conditioner
Outstanding Feature

Energy Saving

Our system is engineered from the ground up for use with solar. Special electronics anticipate and smoothly handle voltage fluctuations of up to 38% without affecting the operation. In addition to the compressor and control circuits, all other electrical components are DC powered including high efficiency DC fan motors, DC valves & solenoids, etc.

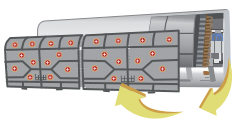
The system uses a VRF (Variable Refrigerant Flow) controller and frequency driver in conjunction with multiple sensors and an algorithmic control circuit to raise and lower the units capacity in real time based on conditions as they change. The VRF controller manages the compressor speed, refrigerant flow, fan speed, etc., which can all be precisely matched to the immediate cooling requirements. As the set-point is closely approached, the system will lower its capacity and power consumption, running at a very low energy draw as needed to maintain proper temperature rather than overshooting the set-point and then cycling on and off like a standard air conditioner. The VRF feature alone saves 40-50% compared to a standard air conditioner.



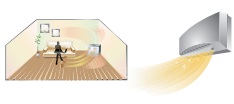
Other Features

> Using 4 x Solar Panels
The hybrid solar air conditioner system using standard solar panels in series connection. The input voltage from solar panel array is 100~300V DC, it gives flexible for using different model of solar panels.

> Full Installation
We provide complete solar system with air conditioners, our local distributor can give full installation to all customers



> Air Purify Filters
Several optional healthy filters provide more protection for your family health.



> Advanced Airflow Design
4D air flow design helps to improve air distribution and flow, makes you feel more comfortable. The air flow distance could reach 15m. The highest level in the market is just 12m.

Service – We Provide Complete Energy Solutions

Keeping your business on the move

We are the Expert

With more than 10 years of experience in solar air conditioner development, production and application, our team is trying to not only supply quality product but also providing complete energy solutions for our clients.

Leave the responsibility for the maintenance of your air conditioner and solar system to the professionals: our experienced service contract provides you with exceptional economic advantages through time savings, cost savings and safety!

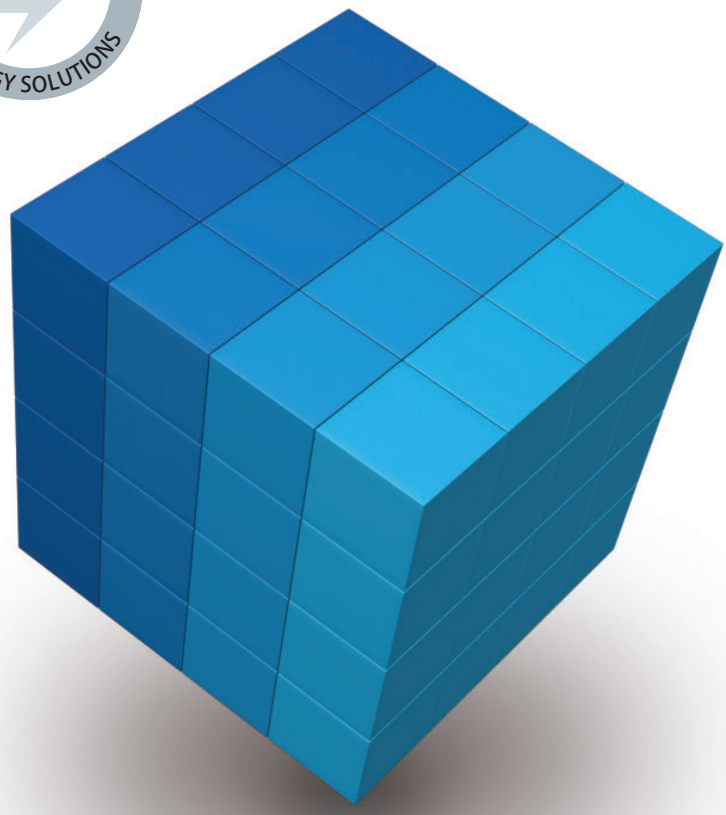
Installation of Solar Air Conditioner System

> Development of complete turnkey solutions from the design concept to installation and commissioning.

> Installation according to legal and safety regulations including UL certification by approved installation technicians.

> Training and certification of external installation technicians according to UL regulations.

SOLAR A/C SERVICE ENERGY SOLUTIONS



- **Inspection Contract**
- **Maintenance Contract**
- **Lifetime Warranty Contract**
- **Full Service Contract**

» Energy Anytime Anywhere «

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We are a Energy Solution Provider, supplying AC/DC Solar Air conditioners, 100% Off Grid Air Conditioners, solar panels, and solar power systems. Our vision is to protect the environment by manufacturing and designing products that utilize solar energy and to give all countries of the world a sustainable quality of life.

We Invent – we don't copy!

We introduce a range of innovative solar energy saving products that are cost effective, clean and green.

SuperEn® New Energy Technology devises enduring energy concepts that convince with efficiency, flexibility and profitability.