

Light Commercial Solar Air Conditioner

AC-DC HYBRID | DUCT TYPE



- 100% Eco-Upto 100% Savings on Day Time
- Built In Solar MPPT
- Inbuilt Smart Hybrid Inverter
- Max Efficiency
- Dual Power Mode
- Smart Wifi Control
- Grid AC Power Limiter
- Flexibility Auto Balance AC/DC
- Wide Operating Temperature Range Between -10°C to +60°C
- Battery Free Operation
- Wired Controller
- Easy Installation Plug & Run
- Eco Friendly R410A Refrigerant
- Sustainability Reduces Carbon Footprint
- Durable
- Self Cleaning
- Adjustable Static Pressure
- Cost Saving-No Inverter + Battery & Charger Controller Required



VOLTOVA
SOLAR HYBRID AC



Product Overview

Introducing the revolutionary VOLTOVA Hybrid AC-DC duct type Solar Air Conditioner, designed to complement your sustainable lifestyle with advanced energy-saving technology. The VOLTOVA Hybrid AC-DC Solar Air Conditioner provides cutting-edge cooling solutions powered by solar energy, allowing you to harness the sun's power effortlessly. Enjoy optimal cooling performance while significantly reducing your carbon footprint. Engineered for maximum efficiency and eco-friendly operation, the VOLTOVA Hybrid air conditioner runs partially or entirely on direct current (DC) from solar panels during the day. When solar energy is unavailable, it seamlessly switches to alternating current (AC) from the grid, ensuring uninterrupted performance. This innovative system requires no batteries, inverters, or charge controllers—just dedicated PV panels, delivering substantial savings and convenience for the end user. Experience smarter, greener cooling with VOLTOVA.

Key Features

- Can operate independently without grid power (Off Grid) by utilizing solar power. Our hybrid Solar AC units can run on 100% solar power during the daytime.
- Hybrid functionality with solar (DC) and grid Power (AC).
- High-Efficiency Smart Inverter Technology.
- Adjustable Static Pressure.
- Features efficient Brushless DC motors in both indoor and outdoor units for quiet operation.
- Wide ambient operating temperature range from -10°C to +60°C.
- Low energy consumption.
- Utilizes solar power for one of the highest energy consuming appliances.
- Grid AC Power Limiter restricts AC power consumption from 0-300W when DC power is available.
- Anti-Corrosion Technology provides greater corrosion resistance for both indoor and outdoor units.
- Easy plug and run with direct connection of solar panels to MC4 solar terminals.
- Uses eco-friendly R410A refrigerant gas, which is non-flammable and have minimal environmental impact.
- SMART WIFI functionality allows full control, daily and weekly timers, complete visibility with AC and DC consumption and complete history of all power consumption.
- Easy and convenient installation, just like a traditional air conditioner.
- Quiet Indoor Unit.

Advantages

- **Battery-Free Operation:**-Eliminates the cost, space, and maintenance requirements of battery system.
- **Reduced Energy Cost:**-Direct solar utilization minimizes reliance on grid electricity reducing electricity bills.
- **Cost Saving:** No additional inverter, battery or charger controller required bring huge cost savings.
- **Sustainability:**-Promotes the use of clean energy, reducing carbon footprint.
- **Durability:**-Robust design for long-term performance in diverse climates.
- **Flexibility:** Operates efficiently on various power sources, including off-grid systems and Instant switching between solar and grid power.
- No utility company authorization required.
- Best Energy Saving Solution with high investment return.

| Item | Hybrid solar AC | Conventional inverter AC |
|--|-----------------|--------------------------|
| AC Power supply (220V 50/60 Hz) | Y | Y |
| DC Power supply (80VDC-380VDC) | Y | N |
| Hybrid Operation (AC+DC MIX) | Y | N |
| Off Grid Operation | Y | N |
| App Smart Control | Y | N |
| App smart Power meter Soft Power start | Y | N |
| Average Energy saving | 60% -100% | 20% |

WiFi Smart Control



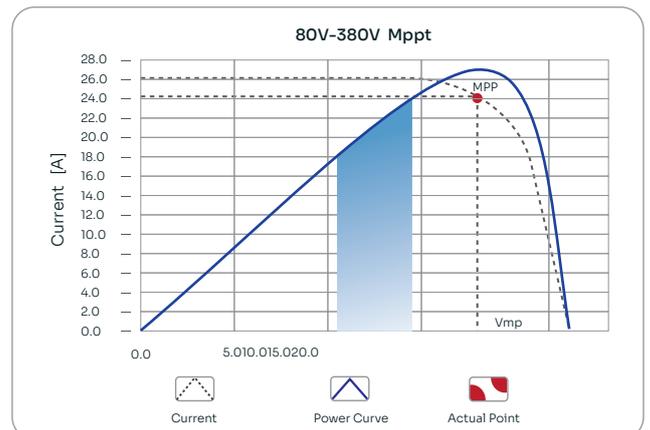
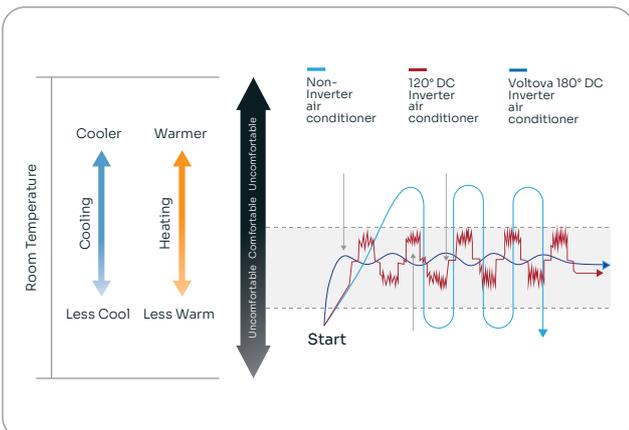
System Components

SVPWM Technology

- 180° sine wave controller technology
- Operate even during 50% voltage drop
- Compressor can operate below 1.1Hz

Build in Solar MPPT

- Intelligent control for detection and adjustment
- Efficiency 99.9%
- 10+ Years life design
- DC to DC 0% convert lose



DC Powered Duct Indoor unit

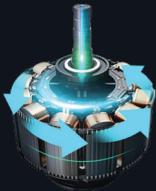


VOLTOVA indoor duct unit is engineered for ultra-quiet operation, providing a comfortable environment without noise disruptions. It runs directly on DC power, reducing energy loss typically associated with AC to DC conversion systems. Its sleek, compact, and space-saving design allows for easy installation in various indoor false ceilings and duct setups, ensuring optimal comfort without taking up excess spaces. The unit features self-cleaning function and wired controller with digital display for real-time energy usage and performance monitoring.

AC-DC Hybrid Outdoor unit



VOLTOVA outdoor unit features with hybrid inverter technology and eco-friendly twin rotary DC compressors for quiet and efficient performance. It is designed to be highly efficient, even when subjected to fluctuating power inputs. The body is built with high strength Zinc coated material and after anticorrosion process treatment makes the outdoor unit long-term performance in diverse climates.



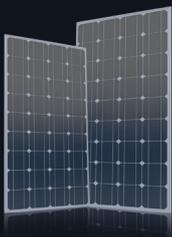
DC Brushless fan motor

VOLTOVA Hybrid AC-DC Solar Air Conditioner are built with brushless fan motors both indoor and outdoor units and they have low energy consumption and operate quietly. The inclusion of a brushless permanent magnet motor driver enables a variable frequency drive, allowing the system to adjust its capacity dynamically according to the prevailing conditions.



Twin Rotary Compressor

The Twin Rotary DC Compressor is engineered to deliver powerful cooling capacity while consuming less energy, making it an ideal choice for our Hybrid AC-DC Solar Air Conditioner. With its innovative design and high-quality construction, this compressor ensures reliable and consistent operation, providing you with peace of mind and long-lasting performance.



Solar Panel

Our Hybrid solar air conditioners can easily be connected to any solar panels by wiring them in series with a maximum of 380V DC

*Solar Panel not Included and to be purchased separately



MC4 Connectors

The outdoor unit comes equipped with built-in MC4 connectors, ensuring a hassle-free connection with your solar panels. Just Plug & Run"

WiFi Smart Control



- Designed for End-User
- Easy setting
- Wifi Enabled remote control via Smartphone apps
- Programmable settings for temperature and energy optimization
- Convenient & long-range remote control

Applications



- Residential Villas & Buildings
- Offices
- Hospitals & Clinics
- Commercial Spaces – Restaurants, Hotels, Cafes & Hypermarkets
- School



Warranty

- 1 Year Warranty for all other components
- 5 Year Warranty for Compressor



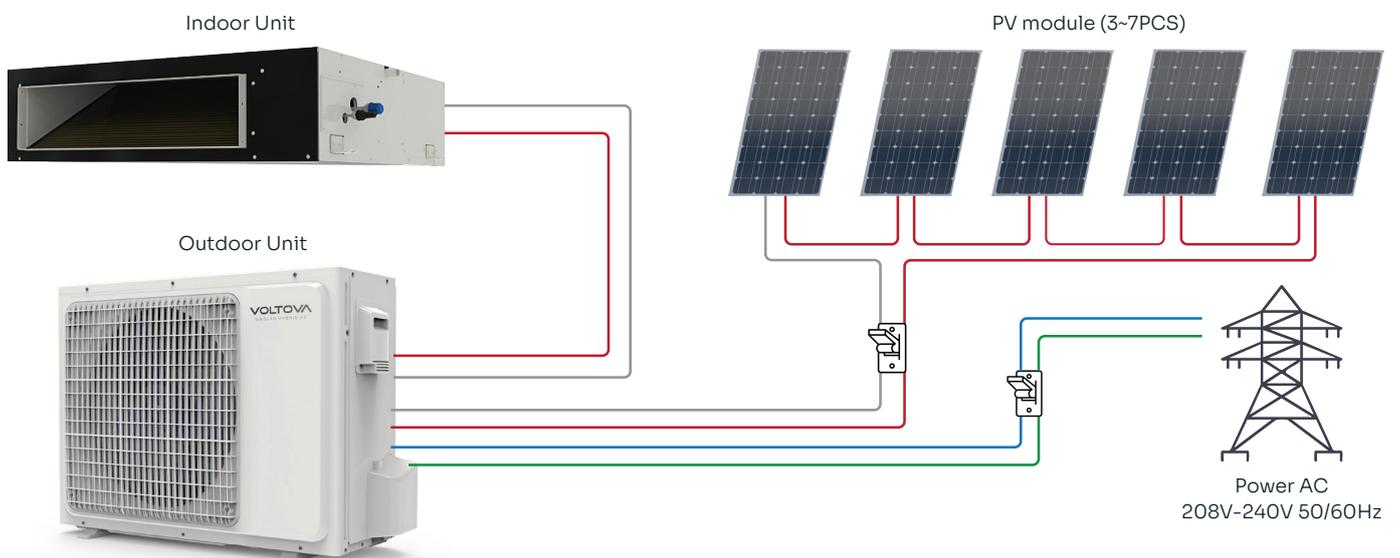
Support Services include

- Providing installation guidelines for solar panels and air conditioning units.
- Offering troubleshooting and technical support through phone or online channels.
- Providing onsite assistance when needed.

Light Commercial Solar Air Conditioner Hybrid AC-DC Duct Type

Technical Specification

| ITEMS | UNIT | 18000BTU | 24000BTU |
|--------------------------------|------|------------------------|------------------------|
| Model | / | DX-DTA15-HYBAC-JML-18K | DX-VTA20-HYBAC-SZN-24K |
| Solar Power Voltage/ISC | V/A | 80~380V/≤14A | 80~380V/≤14A |
| Grid Power Voltage | V/Hz | 208V~240V/50~60Hz | 208V~240V/50~60Hz |
| Cooling Capacity | BTU | 17600(4050~19800) | 24000(6100~26600) |
| Cooling power input | W | 1400(220~1750) | 2000(300~2500) |
| Heating Capacity | BTU | 17600(4050~19800) | 24000(6100~26600) |
| Heating power input | W | 1310(220~1400) | 1900(320~2200) |
| Indoor unit Dimension (WxHxD) | mm | 830x830x230 | 830x830x230 |
| Indoor unit Packing (WxHxD) | mm | 925x925x230 | 925x925x230 |
| Indoor panel Dimension(WxHxD) | mm | 950x950x45 | 950x950x45 |
| Indoor panel Packing(WxHxD) | mm | 1030x1030x90 | 1030x1030x90 |
| Outdoor unit Dimension (WxHxD) | mm | 802x564x323 | 900x700x337 |
| Outdoor unit Packing (WxHxD) | mm | 910x622x405 | 1006x755x418 |



Vision

Our vision is to spearhead the creation of high-quality, sustainable, and innovative eco-friendly products that enhance quality of life and protect our planet for future generations to come. We are committed to revolutionizing the home appliance industry by incorporating hybrid technology that combines the efficiency of DC systems with the essential reliability of AC power.



VOLTOVA
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Imported & Marketed by :-



PO. Box:2417 Pin 133
Al Khuwayr, Sulatnate of Oman

+968 97673743
+968 22852395
www.voltova.co
info@voltova.co