

# Light Commercial Solar Air Conditioner

AC-DC HYBRID | CASSETTE TYPE

CB

- 100% Eco - Upto 100% Savings on Day Time
- Inbuilt Smart Hybrid Inverter
- Built In Solar MPPT
- Dual Power Mode
- Max Efficiency
- Grid AC Power Limiter
- Smart Wifi Control
- Wide Operating Temperature Range Between  $-10^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$
- Battery Free Operation
- Flexibility Auto Balance AC/DC
- Easy Installation Plug & Run
- Eco Friendly R32 Refrigerant
- Sustainability Reduces Carbon Footprint
- Durable
- Self Cleaning
- 360° Surround Cool
- Cost Saving-No Inverter + Battery & Charger Controller Required

**VOLTOVA**  
SOLAR HYBRID AC



VOLTOVA Hybrid AC-DC Solar Cassette Air Conditioner is the perfect solution for modern interiors, combining elegant design with sustainable and energy efficient technology. This state of the art Cassette AC unit is designed to seamlessly integrate into your sustainable lifestyle. Utilizing advanced hybrid technology, it delivers cutting-edge cooling performance powered by solar energy. With the VOLTOVA Hybrid AC-DC Solar Cassette Air Conditioner, you can effortlessly harness the power of the sun, reducing your carbon footprint while maintaining superior cooling comfort. Engineered for maximum efficiency and eco-friendly operation, the system runs partly or entirely on direct current (DC) from solar panels during the day. It seamlessly switches to alternating current (AC) from the grid at night or when solar energy is unavailable. This innovative design requires no batteries, inverters, or charge controllers—just dedicated PV panels, ensuring significant savings for the end user. Ideal for modern interiors, this cassette AC unit offers unparalleled efficiency, cleaner air, and sustainable cooling performance.

## 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.
- 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 R32 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	DEPENDS
App Smart Power Meter	Y	N
Soft Power Start	Y	N
Average Energy Saving	60% -100%	20%

# WiFi Smart Control







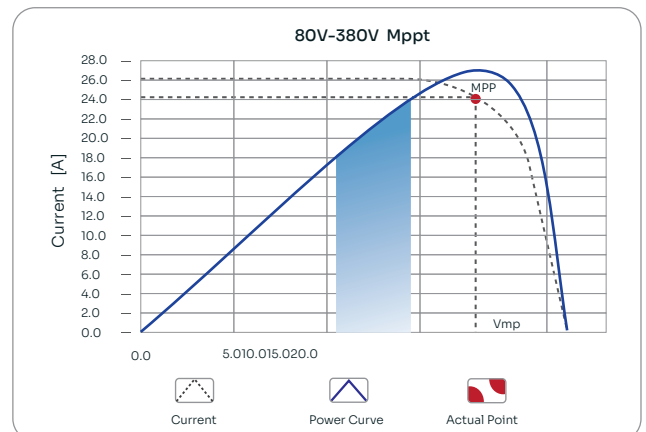
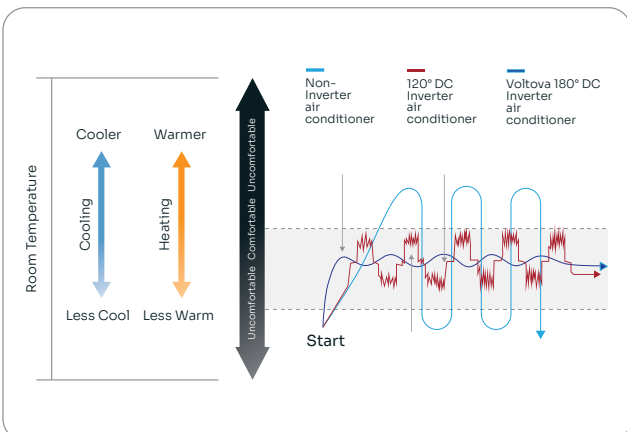
## System Components

### 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 Cassette Indoor unit



VOLTOVA cassette indoor unit operates on direct DC power, eliminating the energy losses associated with AC to DC conversion found in traditional systems. Its 360° surround cooling ensures uniform air distribution, delivering consistent and comprehensive cooling throughout the room. Equipped with self-cleaning technology, the unit remains free from dirt and debris, extending its lifespan and minimizing maintenance requirements. Its compact and sleek design is specifically crafted to integrate seamlessly into false ceilings, optimizing space while maintaining a modern aesthetic. The advanced multilayer air filter system effectively captures dust, allergens, and airborne particles, providing fresh, clean air for a healthier indoor environment.

### 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



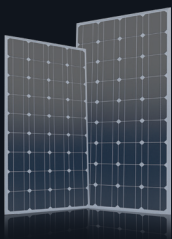
VOLTOVA Hybrid AC-DC Solar Air Conditioner are built with brushless fan motors both indoor and outdoor units and they have low energy consumption and operate quietly. The inclusion of a brushless permanent magnet motor driver enables a variable frequency drive, allowing the system to adjust its capacity 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
- Off Grid Location – Desert Camps & Site Offices
- Labour Camps • School
- Commercial Spaces – Restaurants, Hotels, Cafes & Hypermarkets



### Warranty

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



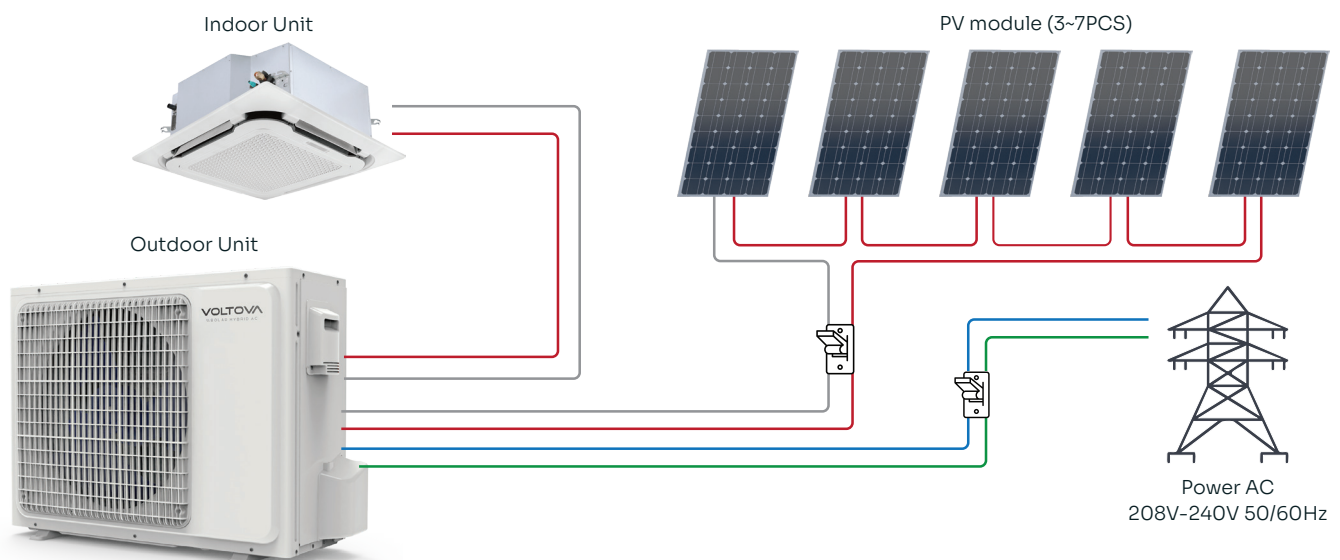
### Support Services include

- 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 Cassette Type

## Technical Specification

ITEMS	UNIT	18000BTU	24000BTU
Model	/	DX-CTA15-HYBAC-CHK-18K	DX-CTA20-HYBAC-YZN-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	900x 700x337
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**  
SOLAR HYBRID AC

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