CHV SOLAR MINI
SERIES

-20°C... +52°C | Energy Efficiency | Self-diagnostics | Auto-protection | Anti-corrosive Coating | DC-Inverter Compressor | Timer | Wired Controller | Intelligent Defrosting | Intelligent Control | 4G | BMS Control Systems

ENERGY EFFICIENCY TECHNOLOGIES & ENVIRONMENTAL PROTECTION

–5°C … +52°C

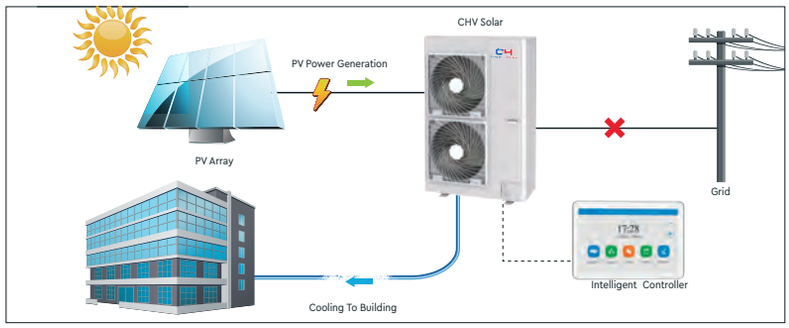
–20°C … +27°C

Photovoltaic power generation system is the power generation element in Photovoltaic Direct-driven Inverter Multi VRF System. The clean energy provided by this power generation system will supply power to the main unit and deliver residual power to the grid through converter.

PHOTOVOLTAIC AIR CONDITIONING MODE

1

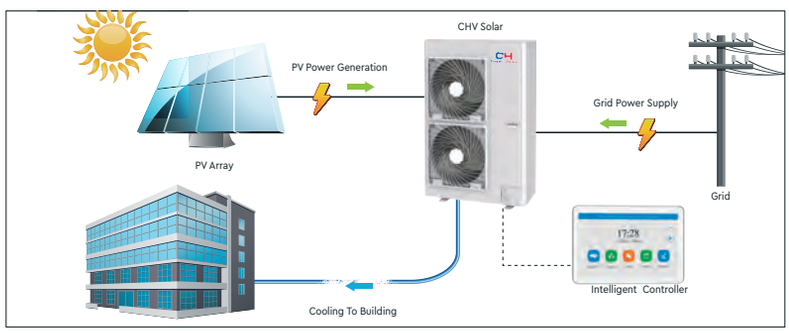
When photovoltaic generated power is equal to the air conditioner consumption demand, the air conditioner consumes photovoltaic power only.



PHOTOVOLTAIC AIR CONDITIONING & POWER CONSUMPTION MODE

2

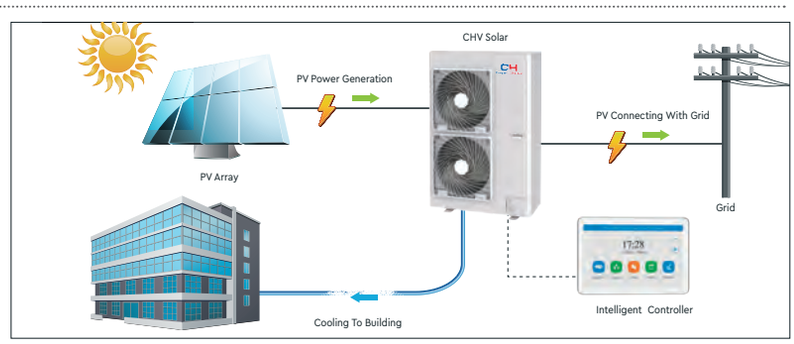
When photovoltaic generated power is less than the air conditioner consumption demand, air conditioner will draw power from the grid in addition to the photovoltaic power generation system.



PHOTOVOLTAIC AIR CONDITIONING & POWER GENERATION MODE

3

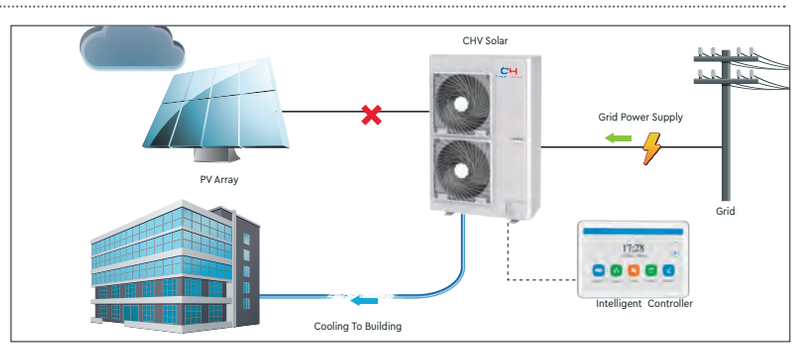
When photovoltaic generated power is more than air conditioner consumption demand, photovoltaic power will give priority to the air conditioner,
and then the residual power will be sent to the grid.



AIR CONDITIONING MODE

4

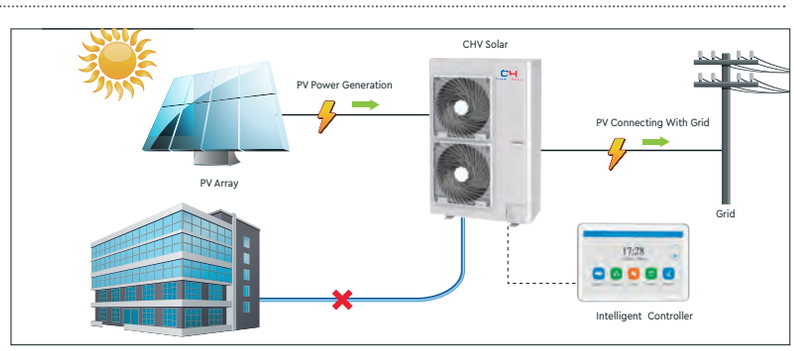
When photovoltaic power generation system doesn't work, the system is powered by commercial power. In this case, the system equals to an
inverter VRF system.



PHOTOVOLTAIC POWER GENERATION MODE

5

When the air conditioner stops operation, the power generated by the photovoltaic power generation system is sent to the grid. In this case, the system equals to a power station.



CHV SOLAR MINI
SERIES

INTELLIGENT MANAGEMENT SYSTEM

The centralized controller for power generation and consumption management is the brain of Photovoltaic Direct-driven Inverter Multi VRF System. It adopts the perfect combination of multi VRF intelligent network system and power generation and consumption management system based on CAN communication technology, so as to achieve intelligent management of multi VRF system.

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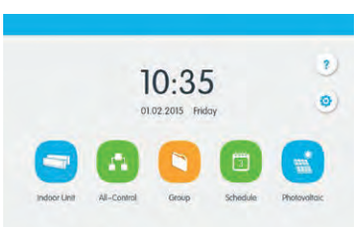
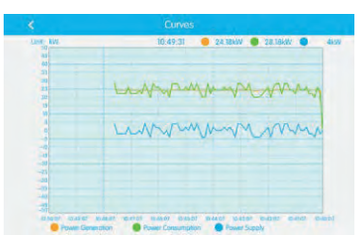
Centralized Controller for Power Generation and Consumption Management: One Screen for Convenient Operation

Centralized controller for power generation and consumption management combines photovoltaic power generation, unit power consumption and grid power supply for power management with centralized control of unit, achieving intelligent management of multi VRF system. Photovoltaic parameter inquiry and real-time display of power generation and consumption data are available. You can see photovoltaic power generation, unit power consumption, monthly electricity consumption and yearly electricity consumption. Power curve of the system is shown in real time and updated dynamically.



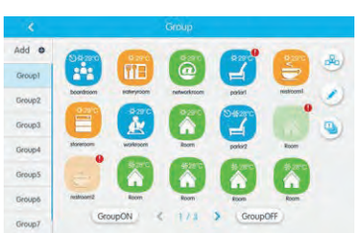


Reliable Multi VRF Intelligent Network System Based on CAN Bus Technology

The multi VRF intelligent network system adopts Cooper and Hunter patented multi VRF CAN non-polar bus communication technology, which features high stability, convenient networking and high communication efficiency.

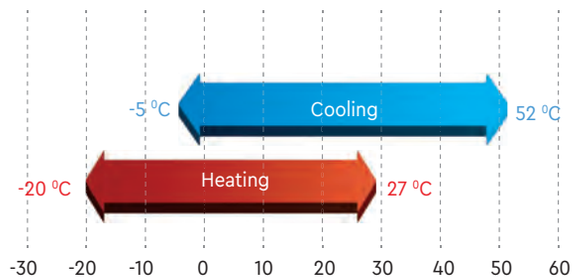
Intelligent Management of Air Conditioning System for Centralized Management and Convenience

Centralized controller for power generation and consumption management provides intelligent control management of the air conditioner of photovoltaic multi VRF system, with complete functions and convenient operation.



- By adopting advanced photovoltaic direct-driven technology, the system can achieve power generation by utilizing solar power while consuming electricity and ensure utilization of photovoltaic power in priority;
- Compared with traditional photovoltaic system, energy wastage during multiple commutation of alternating current and direct current is eliminated, with energy efficiency improved by 6 % – 8 % and photovoltaic utilization ratio up to 99 %;
- Besides, the innovative MPPT (Maximum Power Point Tracking) technology can track and control the maximum power point status of photovoltaic power generation, so as to achieve maximum utilization of photovoltaic power.

The operating temperature of the outside air is extended to - 5 °C ... 52 °C in the cooling mode and - 20 °C ... 24 °C in the heating mode.



TECHNICAL CHARACTERISTICS OF OUTDOOR UNITS CHV SOLAR MINI

Model			CHV-PV120NK	CHV-PV140NK	CHV-PV160NK
Cooling capacity		HP	4	5	6
Cooling capacity		kW	12.1	14	16
Max. heating capacity		kW	14	16	18
SEER	Duct IDU	kW/kW	6.59	6.55	6.51
	Cassette IDU	kW/kW	6.65	6.64	6.52
SCOP	Duct IDU	kW/kW	3.94	4.22	4.38
	Cassette IDU	kW/kW	3.82	3.77	4.01
Max. power input		kW	5.9	6.5	7
Max. current input		A	29.8	32.8	35.5
Max. connected IDU			7	8	9
Circulating air volume		m^3/h	3300	3850	4400
Sound power level		dB(A)	75	75	77
Refrigerant charge volume		kg	R410A/3.3		
Energy efficiency level		Level	1	1	1
Compressor			QXFS-F428Zx050E		
PV input voltage range		V	120–400		
Isc PV		A	15/15		
Max. continuous input current		A	12.5/12.5		
Max. PV input power		kW	3 kW*2		
MPPT voltage range		V	100–360		
Rated AC voltage			220–240Vac/50Hz/1Ph		
Operating voltage range			180–260Vac		
Operating frequency range		Hz	47–52		
Power factor (full load)			0.99		
Unit Dimensions (WxDxH)		mm	900×340×1345		
Package Dimensions (WxDxH)		mm	998×458×1500		
Suitable climite			T1		
Connection pipe	Gas	mm	Ø 15.9		
	Liquid	mm	Ø 9.52		
	Connection Method		Bell mouth connection		
Net weight		kg	124		
Gross weight		kg	135		