



Smart air for smarter living

GREE Photovoltaic Multi VRF System

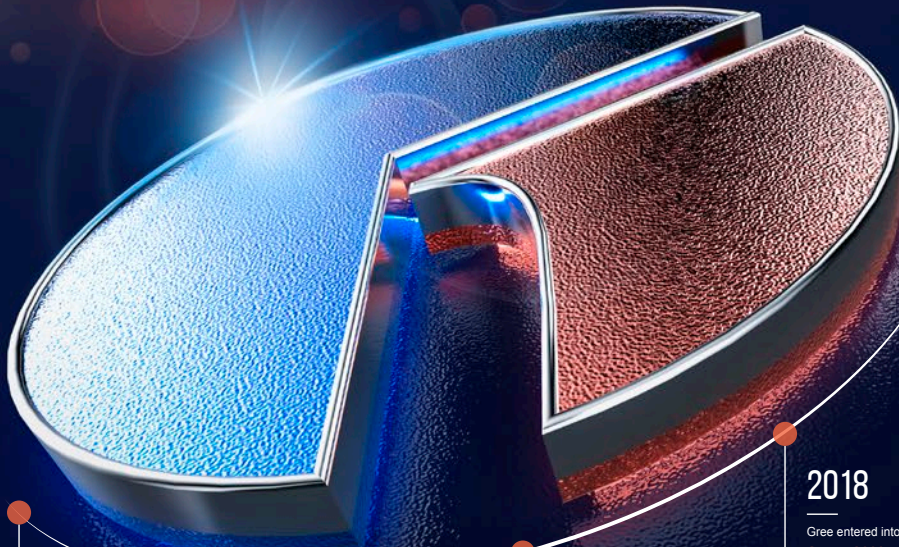


Find out more at www.greeac.co.nz



ABOUT GREE

Gree Electric Appliances, Inc. of Zhuhai was founded in 1991 and it was listed on the Shenzhen Stock Exchange in November 1996. At the beginning, Gree was only a company that assembled residential air conditioners. Now it has grown into a diversified technological global industrial group, whose brands including GREE, KINGHOME and TOSOT that has expanded its business to air conditioners, home appliances, high-end equipment and communication equipment. Gree products are sold widely to more than 200 countries and regions.



2005

Gree has topped **No.1** in production and sales volume of residential air conditioners for 13 consecutive years.

2015

Gree's sales revenue exceeded **15.08 billion USD.**

2016

Gree's sales revenue exceeded **16.51 billion USD.**

2017

Gree's sales revenue exceeded **22.21 billion USD.**

2018

Gree entered into the list of **Forbes Global 2000** again and ranked **No. 294**, moving up 70 places compared with the previous year.

Gree's sales revenue exceeded **30.23 billion USD.**

2019

Gree has ranked the 414th on the list of **Fortune Global 500.**

Thanks to 300 million users' choices, Gree products are widely sold in more than 200 countries and regions. Today Gree's annual production capacity of RAC and CAC is more than 60 million and 6 million sets respectively.

Action makes the future and innovation makes achievement. Looking forward, Gree will press ahead with its business philosophy of passion, innovation and realization. We aim to build a centenary air conditioning enterprise and create a better life for humankind.

Global Innovation Recognition



Spain International Quality Innovation Award



DE Geneva Salon International Des Inventions



UL Certificate



20th China Patent Gold Award

System Advantages

Seamless Integration of PV Power and Air Conditioner, with Power Generation Function

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.

Instant Switchover for Punctual Power Generation

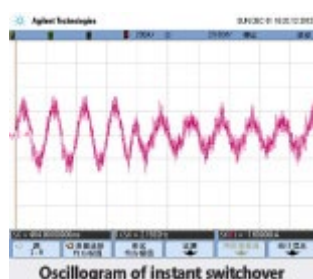
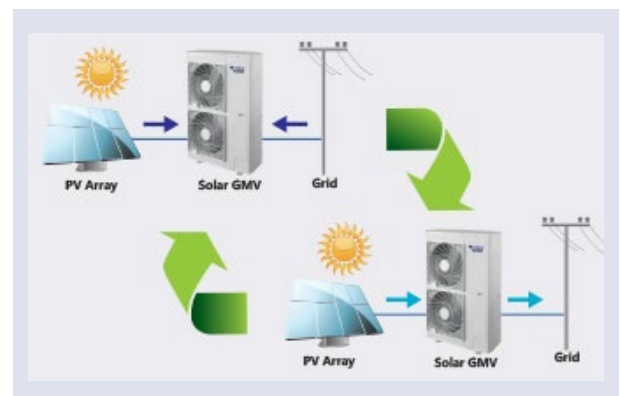
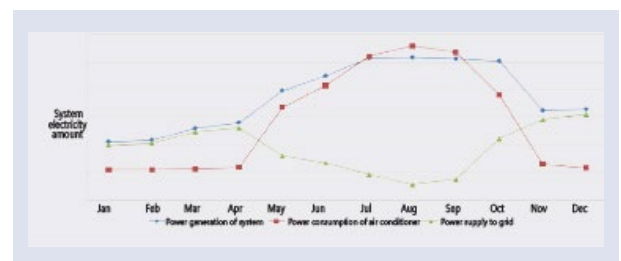
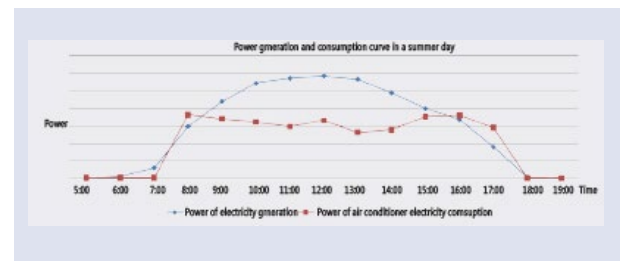
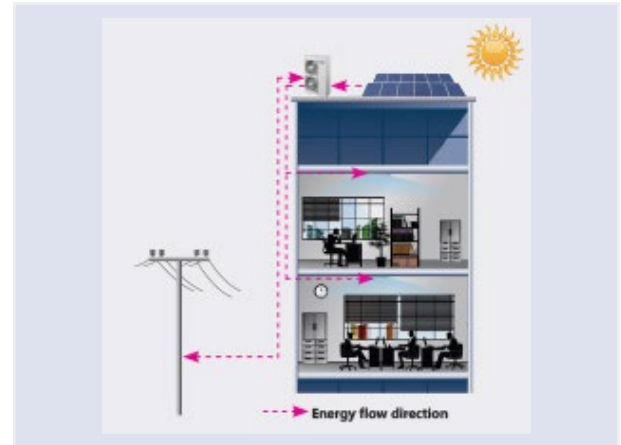
In summer, power consumption of air conditioner is large and photovoltaic power generation is relatively large as well. Gree Photovoltaic Direct-driven Inverter Multi VRF System, combining the characteristics of photovoltaic power, makes sure that the consumed electricity of units matches with the photovoltaic power generation so as to achieve zero electricity charge.

Zero Power Consumption from Grid

In rated engineering proportion, the power amount that Photovoltaic Direct-driven Inverter Multi VRF System gets from the grid is balanced with the power amount that the system delivers to the grid in each day, each month, each quarter and each year. Generally, power consumed from the grid is zero.

Instant Switchover for Punctual Power Generation

Ternary converting model, consisting of photovoltaic sub-assy, multi VRF system and grid, enables two-way flow and multiple-way integration of power at the direct current side. The switchover time among five operation modes is less than 10ms, avoiding power wastage due to switchover delay.



Five Working Modes

The system can realize real-time switchover for five working modes according to the actual status of photovoltaic power generation system and operation of multi VRF system.

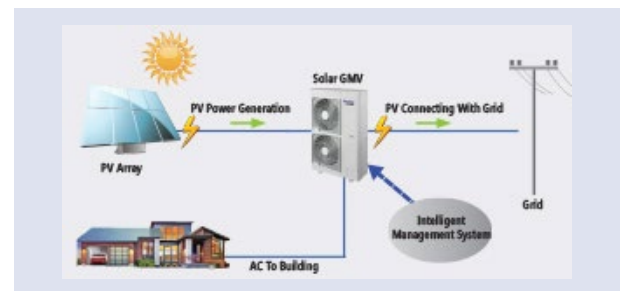
Air Conditioning Mode

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.



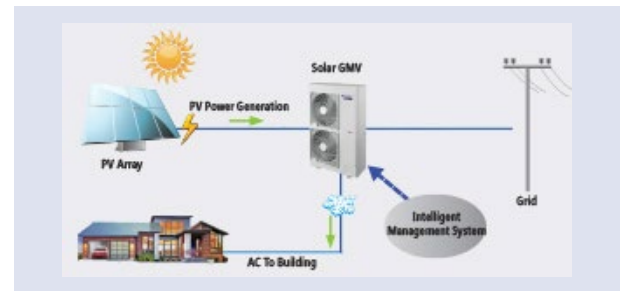
Photovoltaic Power Generation Mode

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.



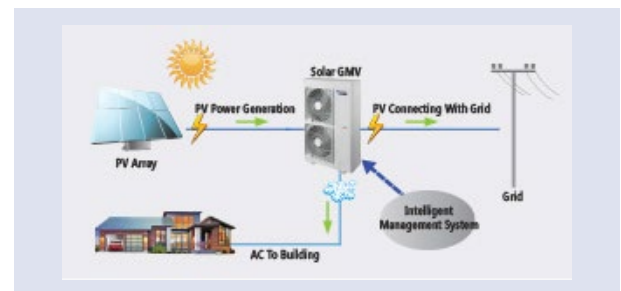
Photovoltaic Air Conditioning Mode

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



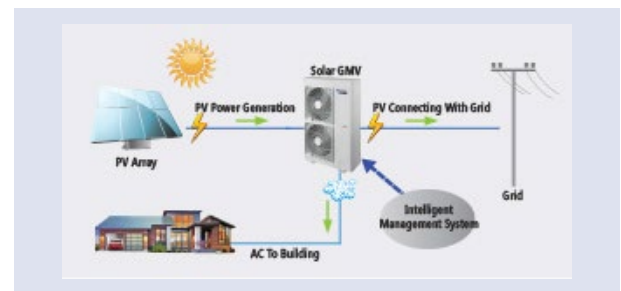
Photovoltaic Air Conditioning & Power Generation Mode

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.



Photovoltaic Air Conditioning & Power Consumption Mode

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.



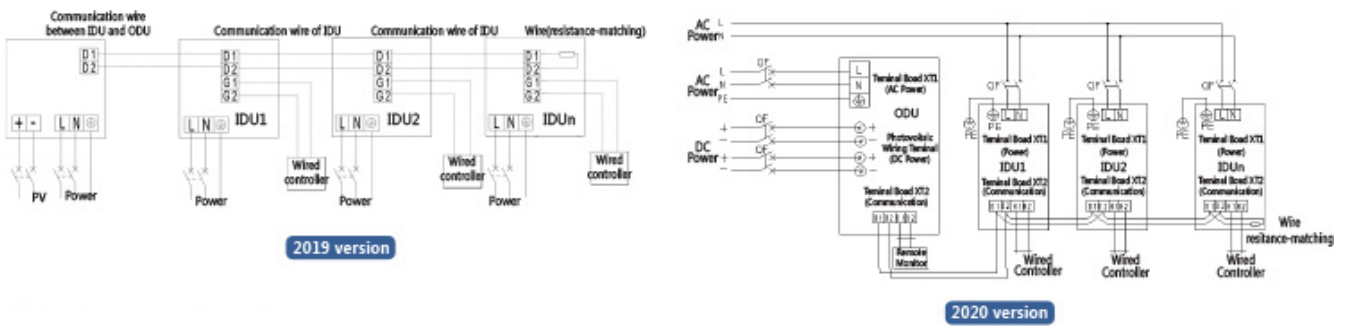
Gree Photovoltaic Direct-driven Inverter Multi VRF System can realize real-time switchover for five working modes according to the actual status of photovoltaic power generation system and operation of multi VRF system for ensuring high-efficiency utilization of photovoltaic power and reliable operation.

Note: The working modes will switch automatically according to the photovoltaic power generation amount.

Topology



Wiring Diagrams



Indoor Units Lineup

Type of Indoor Unit	Specification	22	25	28	32	36	40	45	50	56	63	71	72	80
High Static Pressure Duct Type Unit		•	•	•	•	•	•	•	•	•	•	•		•
Low Static Pressure Duct Type Unit		•	•	•	•	•	•	•	•	•	•	•		•
4-way Cassette Unit				•		•		•	•	•	•	•		•
360° Air Discharge Cassette Indoor Unit											•	•		•
360° Air Discharge Compact Cassette Indoor Unit		•		•		•		•	•	•				
Wall-mounted Type Unit		•		•		•		•	•	•	•	•		•
Console Indoor Unit		•		•		•		•	•					

Specification of Solar VRF Outdoor Units

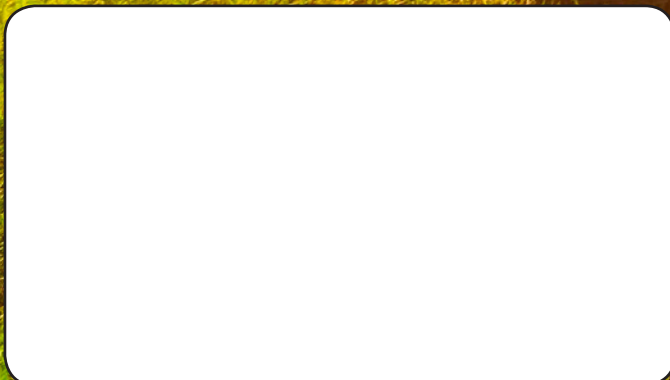
Model	Performance		Power Supply	Electrical Info				Physical info		Noise	Refrigerant	Piping Info (Flare Connection)						
	Cooling	Heating		Maximum Current	Maximum Input of PV Solar	Circuit Breaker	Power Cable	Dimension H*W*D	Net Weight			Sound Pressure	R410a	Liquid Pipe	Gas pipe	Maximum Pipe Length	Maximum Height Difference	Chargeless Pipe length
	kW	kW		(V/Ph/Hz)	A	kW	A	mm ²	mm			kg	dB(A)	kg	mm	mm	m	m
2020 Version																		
GMV-Y120WL/A-T (A)	12	14	220 ~ 240V - 1Ph - 50Hz	27	6.00	32	3*6.0	1345x900x340	123	62	5.0	Ø9.52	Ø15.9	120	40 (50)	20		
GMV-Y140WL/A-T (A)	14	16		33	6.00	40	3*6.0	1345x900x340	123	62	5.0	Ø9.52	Ø15.9	120	40 (50)	20		
GMV-Y160WL/A-T (A)	15.5	18		37	6.00	40	3*6.0	1345x900x340	123	62	5.0	Ø9.52	Ø19.05	120	40 (50)	20		
Operation range (Cooling: 5 °C ~48 °C ; Heating:- 20 °C ~ 27 °C)																		

Remark: The specification is subject to change by the manufacturer without prior notice.

Recommended PV Panel Selection	
Dimension (mm)	1658x992x(5 / 6 / 7.5)
weight	19.4 / 23.3 / 27.7
Peak Power	315
Open Circuit Voltage	40.01
Peak Power Voltage	33.04
Temperature Coefficient of Open Circuit Voltage (%/°C)	-0.00330
Temperature Coefficient of Peak Power Voltage (%/°C)	-0.00323
Temperature Coefficient of Peak Power Voltage (%/°C)	400
Temperature Coefficient of Peak Power Voltage (%/°C)	360
Minimum MPPT Voltage of Converter Unit (V)	100
Minimum Daytime Environmental Temperature (°C)	-5
Minimum Daytime Environmental Temperature (°C)	48
Minimum PV Panel Quantity for Single PV String	4
Maximum PV Panel Quantity for Single PV String	9
Optimal PV Panel Quantity for Single PV String	9



For Installation and Sales:



For Parts and Warranty:



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