GREE
AIR CONDITIONER

ASGHARIAN
HOLDING

ONE STOP
SOLUTION

Gree Photovoltaic Direct-driven Inverter Multi VRF System

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

Gree Electric Appliances Inc. of Zhuhai, founded in 1991, is the world's largest air conditioner enterprise integrating R&D, manufacturing, marketing and service.

- *2012, Gree became the first listed electrical appliances enterprise in China with sales revenue over 16 billion USD (RMB 100 billion).*
- *2013, GREE's sales revenue exceeded 19 billion USD.*

Gree has been ranked on the Fortune Magazine as one of the Top 100 Chinese listed companies for 12 consecutive years.

Thanks to 300 million user's choices, Gree products are sold widely in more than 200 countries and regions. Today Gree's annual production capacity of RAC and CAC are more than 60 million sets and 5.5 million sets respectively.

Action makes the future and innovation makes achievement. Looking forward, Gree will firmly persist in the business philosophy of passion, innovation and realization. We aim to build a century's standing air conditioning enterprise, to create a better life for human.

For the Clearer Sky and Greener Earth.

Contents

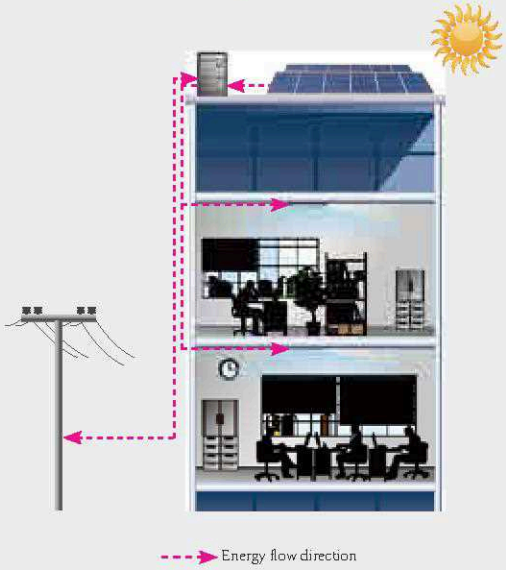
System Advantages

Zero Electricity Charge*——Photovoltaic Direct-Driven Technology

Gree has been working on the research and reformation of air conditioning technology. Gree Photovoltaic Direct-driven Inverter Multi VRF System breaks through tradition, combining photovoltaic power generation with power consumption of air conditioner for the first time.

*Condition of zero electricity charge: photovoltaic generated power ≥ air conditioner consumption demand.
Zero electricity charge means when the power generated by solar power photovoltaic battery sub-assy completely meets the load of unit in operation, grid power is not needed, so there is no electricity charge.

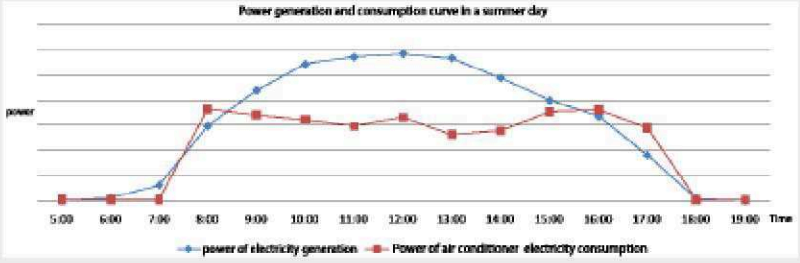
1 Seamless Integration of Photovoltaic Air Conditioning Air Conditioner with Power Generation Function



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.

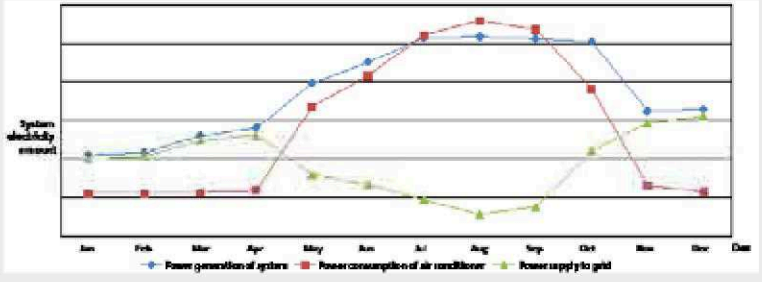
2 High Utilization Ratio

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



3 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. Comprehensive power consumed from the grid is zero.

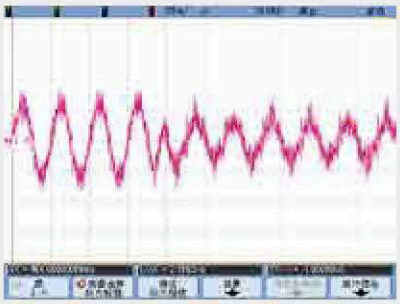


Zero Wastage--Ternary Converting Technology

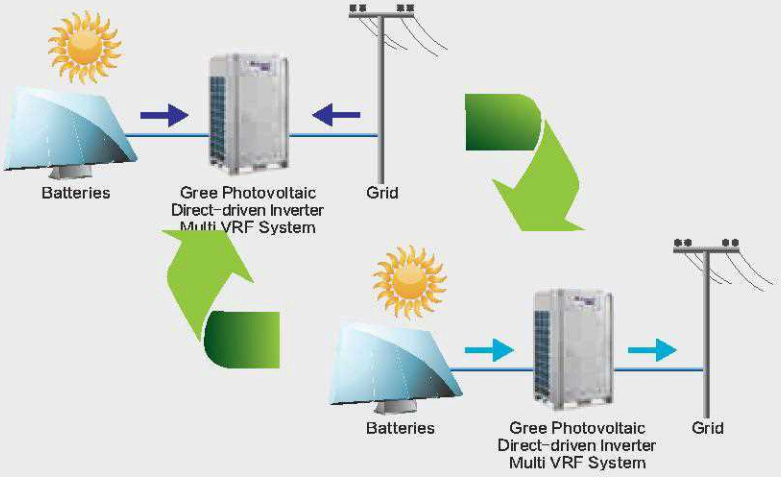
Gree Photovoltaic Direct-driven Inverter Multi VRF System can not only achieve zero electricity charge, but also generate power to the grid, benefiting energy conservation and emission reduction.

1 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.



Oscillogram of instant switchover



2 No Wastage of Residual Power

If there is residual power after meeting air conditioner consumption demand, the system can deliver the residual power to the grid in real time, so as to realize complete utilization of photovoltaic power.

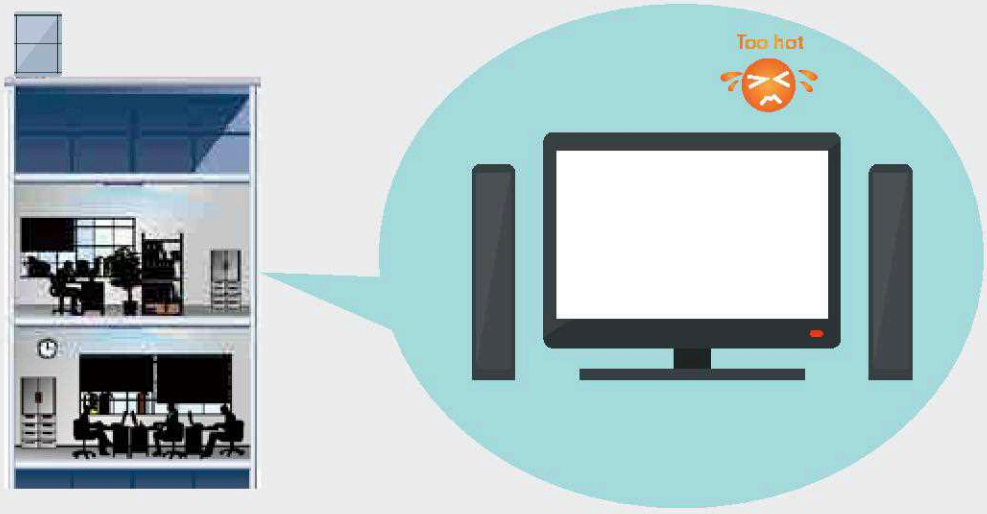
System Advantages

Green Inverter Technology

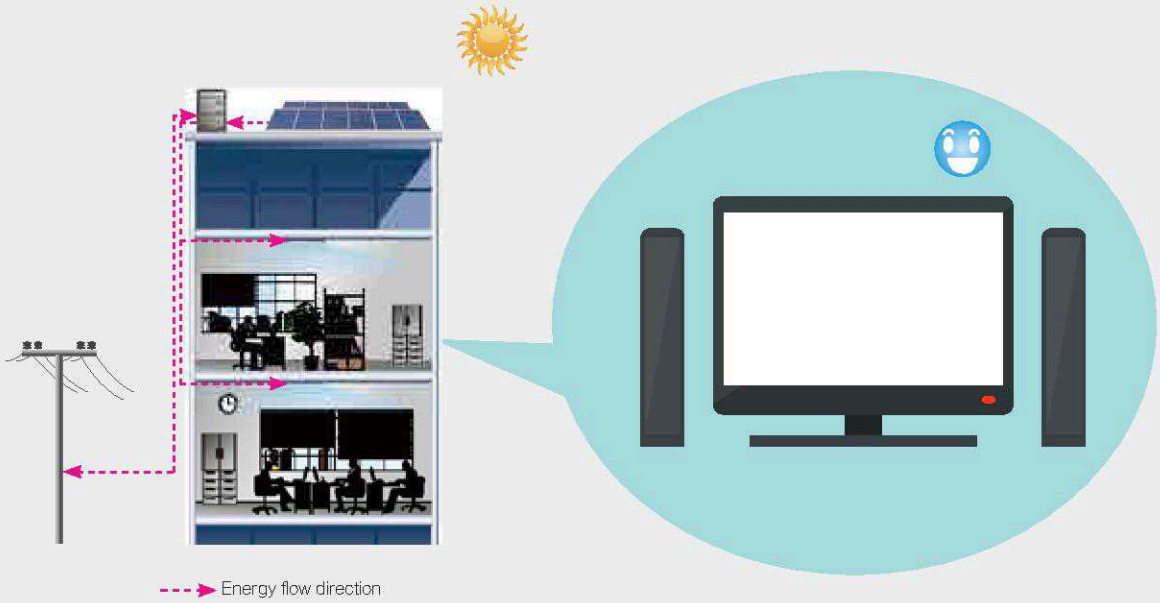
After many years of development and tests, Gree Photovoltaic Direct-driven Inverter Multi VRF System is capable of providing more reliable and more assured refrigeration service for its technological innovation.

1 No Interference from Other Electric Appliances in the Room

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.



Conventional system is applied



Four-quadrant commutation technology, low harmonic wave content and no interference

Three Components

Gree Photovoltaic Direct-driven Inverter Multi VRF System consists of photovoltaic power generation system, photovoltaic direct-driven inverter multi VRF and intelligent management system. This system is with high density of integration, which can be widely applicable for house, office building, factory, hospital, etc. Meanwhile, the building already with photovoltaic system and air conditioner can be integrated and reconstruct.

Zero Worry--Green Inverter Technology

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 power generation system is closely related to the installation site and user's building. Gree can design the most suitable photovoltaic power generation system for you according to local climate, user's building structure, cooling capacity demand and your special requirements.

Photovoltaic power generation system


Rooftop


Curtain wall


Floor

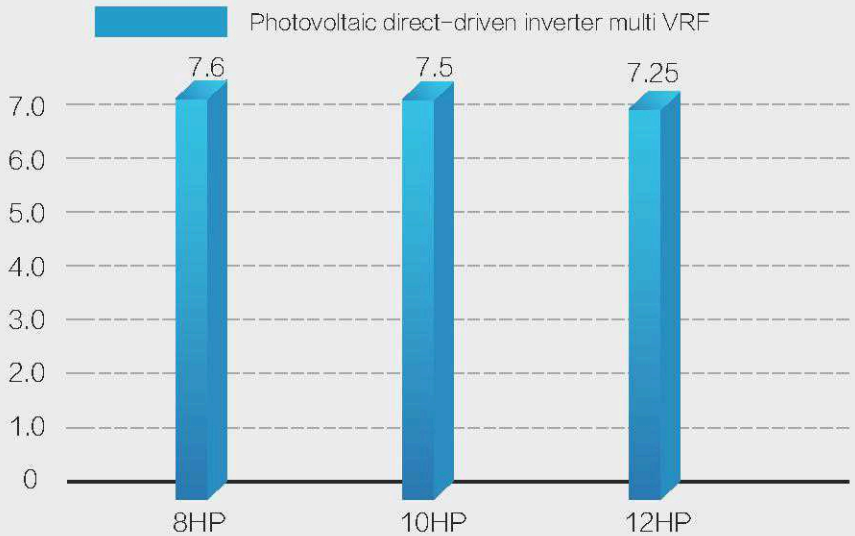

Building integration


Canopy

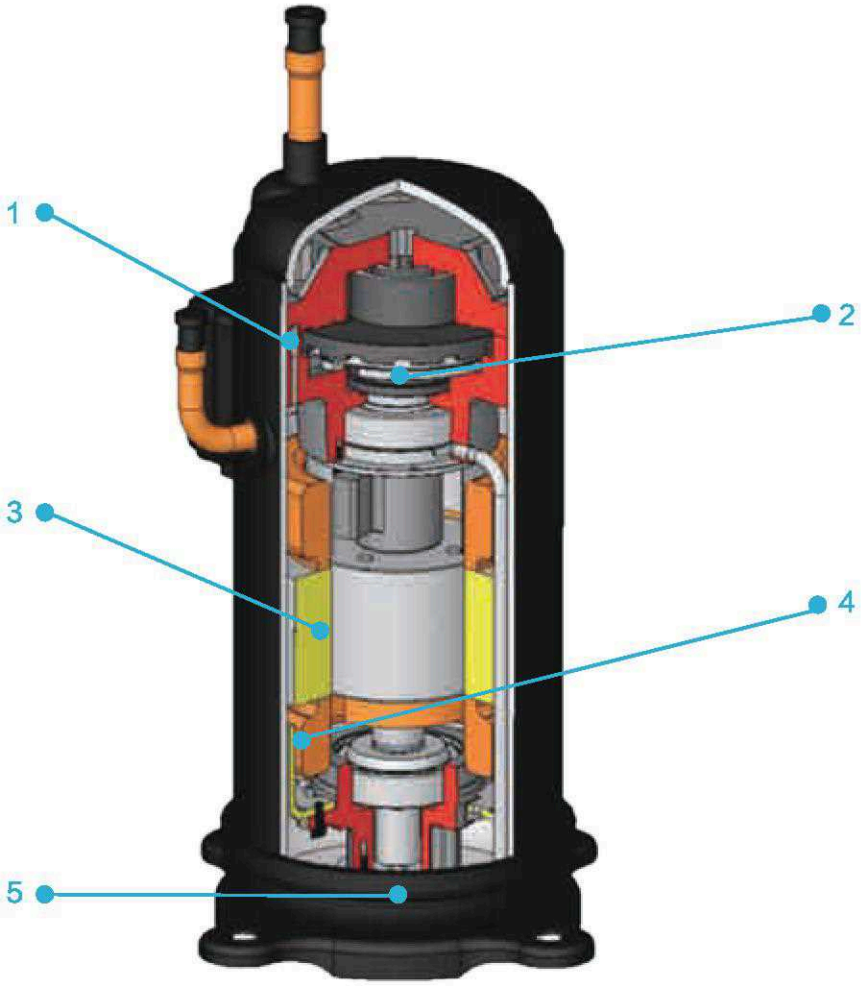
Photovoltaic Direct-Driven Inverter Multi VRF

1 Energy Saving in Priority. Greatly Reduce Electricity Charge

The multi VRF system in photovoltaic multi VRF system inherits the essence of multi VRF development in Gree for more than a decade. The system integrates the advanced 180 ° sine wave high-efficiency compressor driver technology, 1Hz PID capacity regulation technology, intelligent defrosting, precise refrigerant allocation technology, high-efficiency heating technology, quiet control technology and intelligent operation technology, etc. The system can be widely applied in various commercial places for providing energy-saving and comfortable air conditioning environment to global users.



High-efficiency All DC Inverter Compressor



1、Asymmetrical Vortex Line

Asymmetrical vortex line is adopted to reduce leakage loss and invalid suction overheating.

2、Non-Contact Oil Seal

Axial direction and radial direction of compression cavity adopts non-contact oil seal to reduce attrition and improve efficiency and reliability.

3、Permanent Magnet Synchronous Dc Motor

Rare earth is adopted in the rotor and the shape is optimized, so as to achieve wide frequency, high efficiency and low noise.

4、180° Sine Wave Dc Inverter Driver

Stepless sine wave output by inverter drives DC inverter to achieve high-efficiency stepless DC inverter, which improves motor efficiency.

5、Positive-Displacement Gear Oil Pump

Positive-displacement gear oil pump ensures necessary oil supply in high&low frequency and high reliability of compressor.

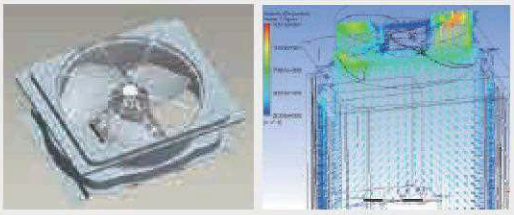
Three Components

2 Quiet Control for Building High-Quality Life

Gree Photovoltaic Direct-driven Inverter Multi VRF System sufficiently considers people's demand for comfort, upgrading comfort with humanized technology. The system is capable of wider operation range and lower operation noise.

▶ Optimized River Diversion Shell Design

After tens of thousands times of CFD simulation, new fan river diversion shell structure is developed to reduce vibration of river diversion ring in high-speed operation of fan. Compared with conventional design, noise value can be reduced by 3dB(A).



▶ High-Efficiency 3D Axial Blade

The new high-efficiency axial blade is designed with optimized blade outline and better edge curve. Compared with conventional blade, it can increase air volume by 12%, improving efficiency as well as lowering noise.

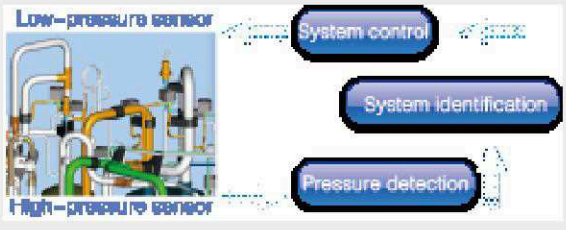
High-efficiency Blade

3 Excellent Performance Ensured by Advanced Technology

Gree Photovoltaic Direct-driven Inverter Multi VRF System provides reliable performance through serval mature technologies such as two-stage oil separation control technology, oil return control technology, oil balance control technology and sub-cooling control technology.

▶ Pressure Sensor Detection Control Technology

Pressure sensor can precisely detect system high pressure and low pressure, and adjust output of fan and compressor, so as to make sure the system can work under the most energy-saving pressure condition.



▶ Temperature Sensor Detection Control

Various temperature sensors are equipped to detect ambient temperature, indoor temperature and refrigerant's evaporating temperature, from which the operation status can be measured to ensure stable operation.

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.

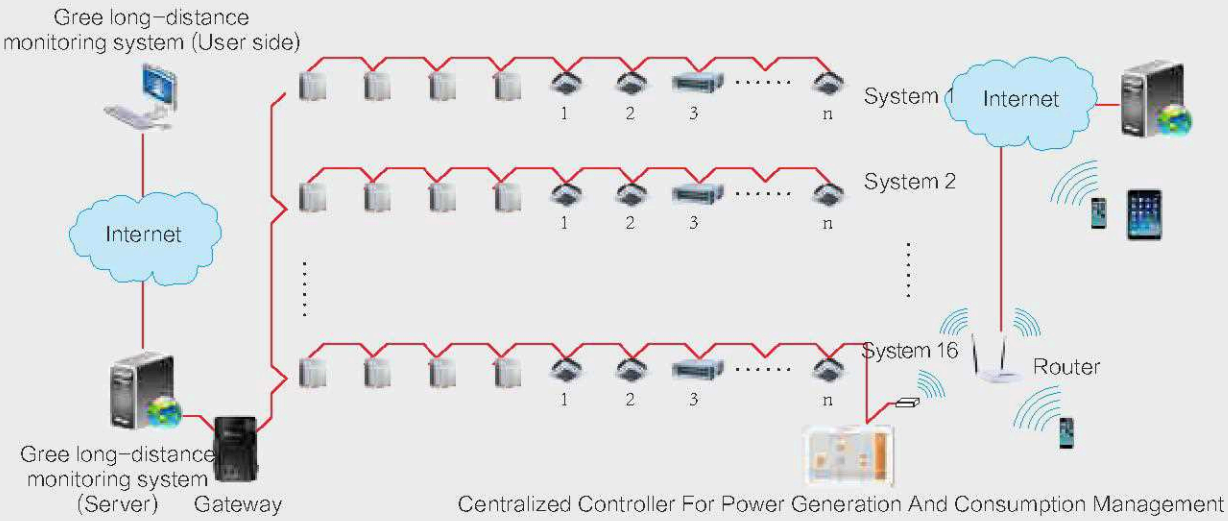
CC55-24/F(C)(optional)

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 Gree patented multi VRF CAN non-polar bus communication technology, which features high stability, convenient networking and high communication efficiency.



Intelligent Management Air Conditioning System For Centralized Management And Intelligent Convenience

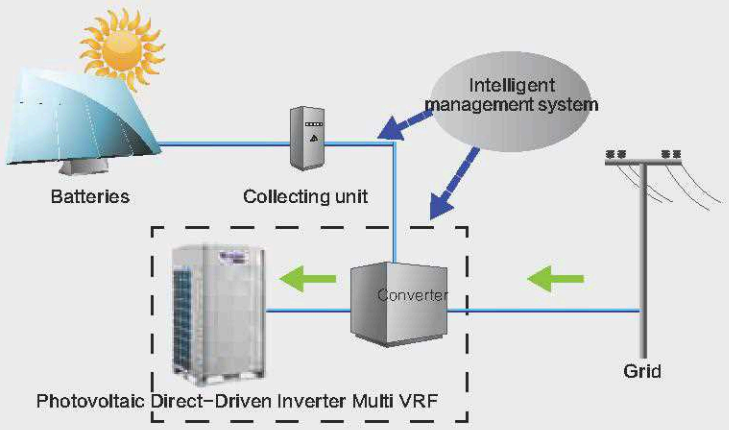
Centralized controller for power generation and consumption management provides intelligent control management of the air conditioner of photovoltaic multi VRF system, with complete functions and convenient operation.

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.system, photovoltaic direct-driven inverter multi VRF and intelligent management system. This system is with high density of integration, which can be widely applicable for house, office building, factory, hospital, etc. Meanwhile, the building already with photovoltaic system and air conditioner can be integrated and reconstruct.

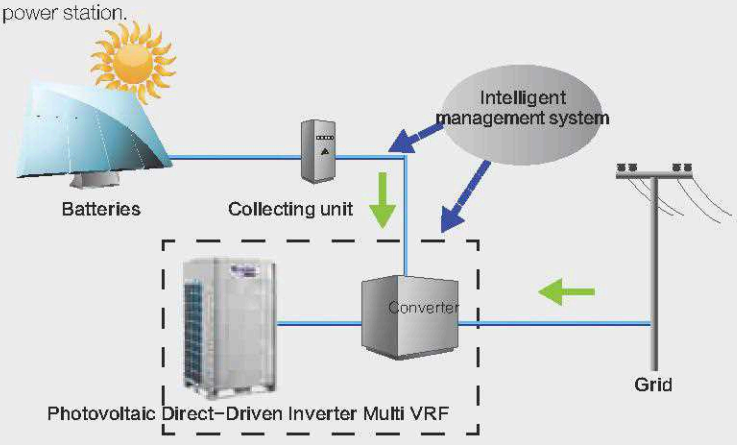
1 Air Conditioning Mode

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.



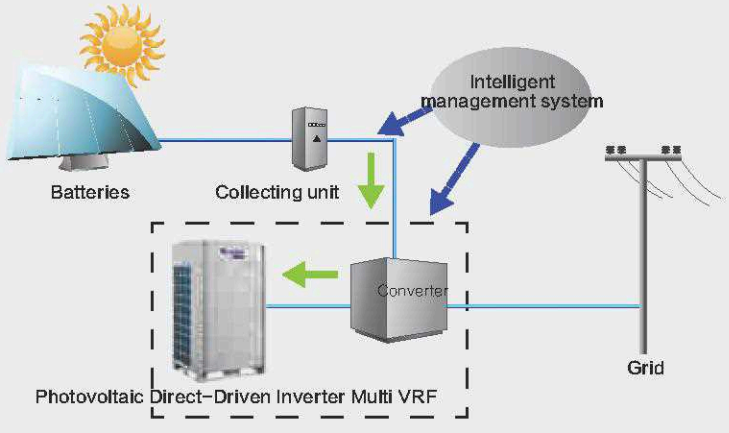
2 Photovoltaic Power Generation Mode

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.



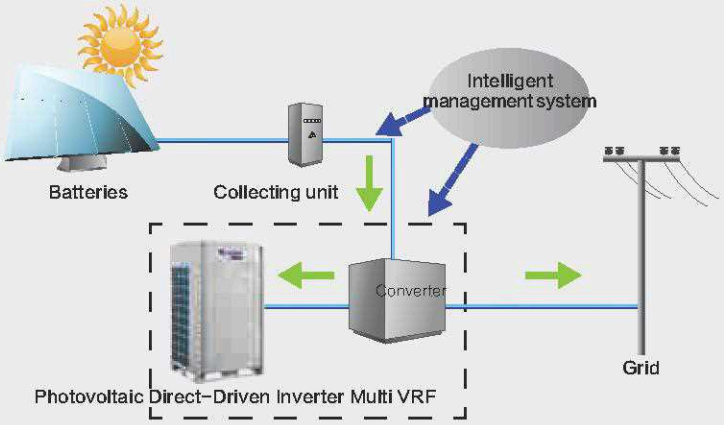
3 Photovoltaic Air Conditioning Mode

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



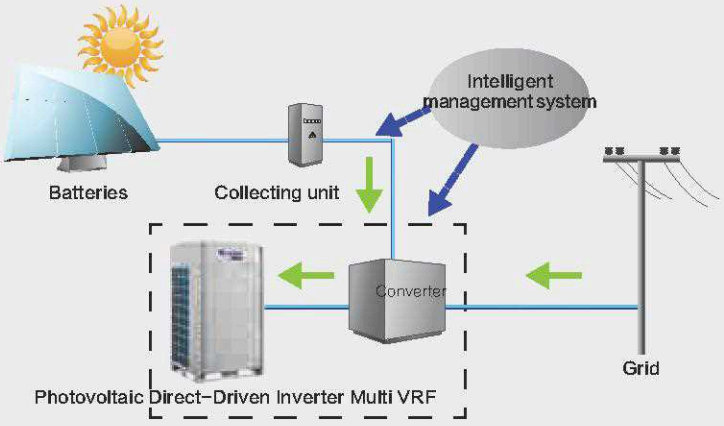
4 Photovoltaic Generation, Consumption & Air Conditioning Mode

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.



5 Photovoltaic Generation, Consumption & Air Conditioning Mode

When photovoltaic generated power is less than the air conditioner consumption demand, photovoltaic power will give priority to the air conditioner which at the same time will be supplied by the grid.



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Specifications

Outdoor Units Lineup

HP	Model	Combination	Product Outlook
8	GMV-Y252WM/A-X	——	
10	GMV-Y280WM/A-X	——	
12	GMV-Y335WM/A-X	——	
18	GMV-Y504WM/A-X	GMV-Y252WM/A+GMV-Y252WM/A-X	
20	GMV-Y560WM/A-X	GMV-Y280WM/A+GMV-Y280WM/A-X	
22	GMV-Y615WM/A-X	GMV-Y280WM/A+GMV-Y335WM/A-X	
24	GMV-Y670WM/A-X	GMV-Y335WM/A+GMV-Y335WM/A-X	
28	GMV-Y784WM/A-X	GMV-Y252WM/A+GMV-Y252WM/A+GMV-Y280WM/A-X	
30	GMV-Y840WM/A-X	GMV-Y280WM/A+GMV-Y280WM/A+GMV-Y280WM/A-X	
32	GMV-Y895WM/A-X	GMV-Y280WM/A+GMV-Y280WM/A+GMV-Y335WM/A-X	
34	GMV-Y950WM/A-X	GMV-Y280WM/A+GMV-Y335WM/A+GMV-Y335WM/A-X	
36	GMV-Y1005WM/A-X	GMV-Y335WM/A+GMV-Y335WM/A+GMV-Y335WM/A-X	
38	GMV-Y1092WM/A-X	GMV-Y252WM/A+GMV-Y280WM/A+GMV-Y280WM/A+GMV-Y280WM/A-X	
40	GMV-Y1120WM/A-X	GMV-Y280WM/A+GMV-Y280WM/A+GMV-Y280WM/A+GMV-Y280WM/A-X	
42	GMV-Y1175WM/A-X	GMV-Y280WM/A+GMV-Y280WM/A+GMV-Y280WM/A+GMV-Y335WM/A-X	
44	GMV-Y1230WM/A-X	GMV-Y280WM/A+GMV-Y280WM/A+GMV-Y335WM/A+GMV-Y335WM/A-X	
46	GMV-Y1285WM/A-X	GMV-Y280WM/A+GMV-Y335WM/A+GMV-Y335WM/A+GMV-Y335WM/A-X	
48	GMV-Y1340WM/A-X	GMV-Y335WM/A+GMV-Y335WM/A+GMV-Y335WM/A+GMV-Y335WM/A-X	

Note: 16HP unit refers the combination of 18HP; 26HP unit refers the combination of 28HP.

Specifications of Outdoor Units

Model	Power supply	Capacity		Power		Dimension(WxDxH)	Air volume	Noise (semi-silencing)	Dimension of connection pipe		Oil balance pipe	Weight
		Cooling	Heating	Cooling	Heating				Liquid pipe	Gas pipe		
		kW	kW	kW	kW	mm	m^3/h	dB(A)	mm	mm	mm	kg
GMV-Y252WM/A-X	*AC power supply: 380V 3~50Hz DC power supply: 370-800Vdc	25.2	27.0	5.93	5.95	930×765×1605	11400	60	Φ9.52	Φ19.05	Φ9.52	225
GMV-Y280WM/A-X		28.0	31.5	7.00	7.30	930×765×1605	11400	61	Φ9.52	Φ22.2	Φ9.52	225
GMV-Y335WM/A-X		33.5	37.5	8.41	9.00	1340×765×1605	14000	63	Φ12.7	Φ25.4	Φ9.52	285
GMV-Y504WM/A-X		50.4	54.0	11.86	11.90	2× (930×765×1605)	2×11400	64	Φ15.9	Φ28.6	Φ9.52	2×225
GMV-Y560WM/A-X		56.0	63.0	14.00	14.60	2× (930×765×1605)	2×11400	64	Φ15.9	Φ28.6	Φ9.52	2×225
GMV-Y615WM/A-X		61.5	69.0	15.41	16.30	(930×765×1605) + (1340×765×1605)	11400 + 14000	65	Φ15.9	Φ28.6	Φ9.52	225+285
GMV-Y670WM/A-X		67.0	75.0	16.82	18.00	2× (1340×765×1605)	2×14000	65	Φ15.9	Φ28.6	Φ9.52	2×285
GMV-Y784WM/A-X		78.4	85.5	18.86	19.20	3× (930×765×1605)	3×11400	66	Φ19.05	Φ31.8	Φ9.52	3×225
GMV-Y840WM/A-X		84.0	94.5	21.00	21.90	3× (930×765×1605)	3×11400	66	Φ19.05	Φ31.8	Φ9.52	3×225
GMV-Y895WM/A-X		89.5	100.5	22.41	23.60	2× (930×765×1605) + (1340×765×1605)	2×11400 + 14000	66	Φ19.05	Φ31.8	Φ9.52	2×225+285
GMV-Y950WM/A-X		95.0	106.5	23.82	25.30	(930×765×1605) + 2× (1340×765×1605)	11400 + 2×14000	67	Φ19.05	Φ31.8	Φ9.52	225+2×285
GMV-Y1005WM/A-X		100.5	112.5	25.23	27.00	3× (1340×765×1605)	3×14000	67	Φ19.05	Φ38.1	Φ9.52	3×285
GMV-Y1092WM/A-X		109.2	121.5	26.93	27.85	4× (930×765×1605)	4×11400	67	Φ19.05	Φ38.1	Φ9.52	4×225
GMV-Y1120WM/A-X		112.0	126.0	28.00	29.20	4× (930×765×1605)	4×11400	67	Φ19.05	Φ38.1	Φ9.52	4×225
GMV-Y1175WM/A-X		117.5	132.0	29.41	30.90	3× (930×765×1605) + (1340×765×1605)	3×11400 + 14000	67	Φ19.05	Φ38.1	Φ9.52	3×225+285
GMV-Y1230WM/A-X		123.0	138.0	30.82	32.60	2× (930×765×1605) + 2× (1340×765×1605)	2×11400 + 2×14000	68	Φ19.05	Φ38.1	Φ9.52	2×225+2×285
GMV-Y1285WM/A-X		128.5	144.0	32.23	34.30	(930×765×1605) + 3× (1340×765×1605)	11400 + 3×14000	68	Φ19.05	Φ38.1	Φ9.52	225+3×285
GMV-Y1340WM/A-X		134.0	150.0	33.64	36.00	4× (1340×765×1605)	4×14000	68	Φ19.05	Φ38.1	Φ9.52	4×285

*Note: The unit connects AC power supply and DC power supply simultaneously.

Specifications of Converting Units

Converting Unit of Multi VRF System	
Technical specifications	SGC15KTL/A
Efficiency	
Max. efficiency	97.6%
Input	
Max. input power	15kW
Max. input voltage	800V
Max. input current	28A
Max. short-circuit current for each MPPT	Short-circuit current of photovoltaic battery
Lowest operation voltage	500V
MPPT voltage range	500V-800V
Rated input voltage	620V
Output	
Rated power	12.5kW
Max. apparent power	12.5kVA
Max. active power(cos ϕ=1)	12.5kW
Rated output voltage	3*220V/380V+PE
Output voltage frequency	50Hz
Max. output current	25A
Allowable grid frequency	50Hz
Power factor	-0.8~0.8
Max. total harmonic distortion	<3%
Protection	
DC input switch	Support
Island effect protection	Support
Output overcurrent protection	Support
Protection of input opposite connection	Support
DC surge protection	Type Ⅱ
AC surge protection	Type Ⅱ
Insulation impedance detection	Support
RCD detection	Support
Conventional specifications	
Operation temperature	-25~60℃
Cooling way	Natural convection
Max. operation altitude	3000m
Relative humidity(no condensation)	0~100%

*Note: converting unit is a built-in accessory.

Indoor Units Lineup

Specifications of Indoor Units

Type of indoor unit	Specification	22	25	28	32	36	40	45	50	56	63	71	72	80	90	100	112	128	140	160	224	280	450
High Static Pressure Duct Type Unit										●	●	●		●	●	●	●	●	●	●	●	●	
Low Static Pressure Duct Type Unit		●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●				
Slim Ducted Type Indoor Unit		●	●	●	●	●	●	●	●	●	●		●										
4-way Cassette Unit				●		●		●	●	●	●	●		●	●	●	●	●	●	●			
Compact 4-way Cassette Indoor Unit		●		●		●		●	●	●													
2-way Cassette Indoor Unit				●		●		●	●	●	●	●											
1-way Cassette Unit		●		●		●		●	●														
Wall-mounted Type Unit		●		●		●		●	●	●	●	●											
Floor Ceiling Type Indoor Unit				●		●			●		●	●			●		●	●	●				
Console Indoor Unit		●		●		●		●	●														
Floor Standing Type Indoor Unit																●			●				
Fresh Air Processing Indoor Unit																			●		●	●	●

Specifications

High Static Pressure Duct Type Indoor Unit

50 Hz

Model			GMV-ND56PHS/A-T	GMV-ND63PHS/A-T	GMV-ND71PHS/A-T	GMV-ND80PHS/A-T	GMV-ND90PHS/A-T
Capacity	Cooling	kW	5.6	6.3	7.1	8.0	9.0
	Heating	kW	6.3	7.1	8.0	9.0	10.0
Power supply		V/Ph/Hz	220~240/1/50				
Power consumption		W	120	120	130	130	200
Airflow volume(H/M/L)		m^3/h	1000/800/600	1000/800/600	1100/900/700	1100/900/700	1700/1450/1100
		CFM	590/471/355	590/471/355	650/530/410	650/530/410	1000/853/650
Rated Current	Cooling	A	0.6	0.6	0.6	0.6	1.0
	Heating	A	0.6	0.6	0.6	0.6	1.0
	Water Heating	A	/	/	/	/	/
ESP		Pa	70/0~100				
Sound pressure level(H/M/L)		dB(A)	44/40/36	44/40/36	45/41/37	45/41/37	48/44/42
Connecting pipe diameter	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Drain pipe	External dia.	mm	Φ25	Φ25	Φ25	Φ25	Φ25
	Thickness	mm	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm	1271x558x288				1228x775x290
	Package	mm	1348x597x263				1338x877x305
Net weight/Gross weight		kg	35/40	35/40	35/40	35/40	47/54
Loading	40' GP	set	192	192	192	192	128
	40' HQ	set	216	216	216	216	128

Model			GMV-ND100PHS/A-T	GMV-ND112PHS/A-T	GMV-ND125PHS/A-T	GMV-ND140PHS/A-T	GMV-ND160PHS/A-T	GMV-ND224PH/A-T	GMV-ND280PH/A-T
Capacity	Cooling	kW	10.0	11.2	12.5	14.0	16.00	22.4	28.0
	Heating	kW	11.2	12.5	14.0	16.0	18.00	25.0	31.5
Power supply		V/Ph/Hz	220~240/1/50				220~240/1/50	220~240/1/50	
Power consumption		W	200	200	220	220	560	800	900
Airflow volume(H/M/L)		m^3/h	1700/1450/1100	1700/1450/1100	2000/1550/1200	2000/1700/1400	3100	4000	4400
		CFM	1000/853/650	1000/853/650	1175/912/706	1175/1000/824	1824	2355	2590
Rated Current	Cooling	A	1.0	1.0	1.0	1.0	4	4.1	4.6
	Heating	A	1.0	1.0	1.0	1.0	4	4.1	4.6
	Water Heating	A	/	/	/	/	/	/	/
ESP		Pa	70/0~100				50	150/50~200	150/50~200
Sound pressure level(H/M/L)		dB(A)	46/44/42	46/44/42	48/45/42	48/46/44	55.0	54.0	55.0
Connecting pipe diameter	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	φ19	Φ22.2	Φ22.2
Drain pipe	External dia.	mm	Φ25	Φ25	Φ25	Φ25	Φ30	Φ30	Φ30
	Thickness	mm	2.5	2.5	2.5	2.5	1.5	1.5	1.5
Dimension (WxDxH)	Outline	mm	1228x775x290				1497x799x389	1483×791×385	1686x870x450
	Package	mm	1338x877x305				1578x883x400	1758×883×470	1788x988x550
Net weight/Gross weight		kg	47/54	47/54	47/54	47/54	79/103	82/104	105/140
Loading	40' GP	set	128	128	128	128	75	65	52
	40' HQ	set	128	128	128	128	75	65	52

Low Static Pressure Duct Type Indoor Unit

50 Hz

Model			GMV-ND22PLS/A-T	GMV-ND25PLS/A-T	GMV-ND28PLS/A-T	GMV-ND32PLS/A-T	GMV-ND36PLS/A-T
Capacity	Cooling	kW	2.2	2.5	2.8	3.2	3.6
	Heating	kW	2.5	2.8	3.6	3.6	4.0
Power supply		V/Ph/Hz	220~240/1/50				
Power consumption		W	35	35	35	43	43
Airflow volume(H/M/L)		m^3/h	450/350/250	450/350/250	450/350/250	550/450/350	550/450/350
		CFM	265/206/147	265/206/147	265/206/147	325/265/206	325/265/206
Rated Current	Cooling	A	0.2	0.2	0.2	0.2	0.2
	Heating	A	0.2	0.2	0.2	0.2	0.2
	Water Heating	A	/	/	/	/	/
ESP		Pa	15/0~30				
Sound pressure level(H/M/L)		dB(A)	31/28/25	31/28/25	31/28/25	32/30/27	32/30/27
Connecting pipe diameter	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ9.52	Φ9.52	Φ12.7	Φ12.7
Drain pipe	External dia.	mm	25	25	25	25	25
	Thickness	mm	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm	700 x 615 x 200				
	Package	mm	883x743x305				
Net weight/Gross weight		kg	22/27	22/27	22/27	22/28	22/28
Loading	40' GP	set	192	192	192	192	192
	40' HQ	set	192	192	192	192	192

Model			GMV-ND40PLS/A-T	GMV-ND45PLS/A-T	GMV-ND50PLS/A-T	GMV-ND56PLS/A-T	GMV-ND63PLS/A-T
Capacity	Cooling	kW	4.0	4.5	5.0	5.6	6.3
	Heating	kW	4.5	5.0	5.6	6.3	7.1
Power supply		V/Ph/Hz	220-240/1/50				
Power consumption		W	52	52	52	99	99
Airflow volume(H/M/L)		m^3/h	700/600/450	700/600/450	700/600/450	1000/800/600	1000/800/600
		CFM	410/355/265	410/355/265	410/355/265	590/471/355	590/471/355
Rated Current*	Cooling	A	0.3	0.3	0.3	0.5	0.5
	Heating	A	0.3	0.3	0.3	0.5	0.5
	Water Heating	A	/	/	/	/	/
ESP		Pa	15/0-30				
Sound pressure level(H/M/L)		dB(A)	33/31/28	33/31/28	33/31/28	35/33/30	35/33/30
Connecting pipe diameter	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52
	Gas	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
Drain pipe	External dia	mm	25	25	25	25	25
	Thickness	mm	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm	900 x 615 x 200			1100 x 615 x 200	
	Package	mm	1123x743x305			1323x743x305	
Net weight/Gross weight		kg	27/33	27/33	27/33	31/38	31/38
Loading	40' GP	set	192	192	192	162	162
	40' HQ	set	192	192	192	162	162

Model			GMV-ND71PLS/A-T	GMV-ND80PLS/A-T	GMV-ND90PLS/A-T	GMV-ND100PLS/A-T	GMV-ND112PLS/A-T	GMV-ND125PLS/A-T	GMV-ND140PLS/A-T
Capacity	Cooling	kW	7.1	8.0	9.0	10.0	11.2	12.5	14.0
	Heating	kW	8.0	9.0	10.0	11.2	12.5	14.0	16.0
Power supply		V/Ph/Hz	220-240/1/50						
Power consumption		W	105	140	209	209	209	230	230
Airflow volume(H/M/L)		m^3/h	1000/800/600	1100/1000/800	1500/1250/950	1590/1350/1000	1700/1500/1100	2000/1500/1150	2000/1500/1150
		CFM	590/471/355	650/590/471	885/736/599	885/795/590	1000/885/650	1175/885/677	1175/885/677
Rated Current*	Cooling	A	0.5	0.7	1.0	1.0	1.0	1.1	1.1
	Heating	A	0.5	0.7	1.0	1.0	1.0	1.1	1.1
	Water Heating	A	/	/	/	/	/	/	/
ESP		Pa	30/0-50						
Sound pressure level(H/M/L)		dB(A)	35/33/30	36/34/31	40/38/32	40/38/32	40/38/32	42/40/37	42/40/37
Connecting pipe diameter	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Drain pipe	External dia	mm	25	25	25	25	25	25	25
	Thickness	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm	1200 x 655 x 280			1340 x 655 x 280			
	Package	mm	1448x858x315			1661x861x330			
Net weight/Gross weight		kg	40/47	40/47	46/55	46/55	46/55	47/56	47/56
Loading	40' GP	set	96	96	78	78	78	78	78
	40' HQ	set	96	96	78	78	78	78	78

Slim Ducted Type Indoor Unit

50 Hz

Model			GMV-ND22PL/B-T*	GMV-ND25PL/B-T*	GMV-ND28PL/B-T*	GMV-ND32PL/B-T*	GMV-ND36PL/B-T*
Capacity	Cooling	kW	2.2	2.5	2.8	3.2	3.6
	Heating	kW	2.5	2.8	3.2	3.6	4.0
Power supply		V/Ph/Hz	220-240/1/50				
Power consumption		W	25	25	25	30	30
Airflow volume(H/M/L)		m^3/h	450/400/320	450/400/320	450/400/320	550/450/340	550/450/340
		CFM	265/235/188	265/235/188	265/235/188	324/265/200	324/265/200
Rated Current*	Cooling	A	0.2	0.2	0.2	0.3	0.3
	Heating	A	0.2	0.2	0.2	0.3	0.3
	Water Heating	A	/	/	/	/	/
ESP		Pa	0/15				
Sound pressure level(H/M/L)		dB(A)	30/28/22	30/28/22	30/28/22	31/29/25	31/29/25
Connecting pipe diameter	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ12.7
Drain pipe	External dia	mm	25	25	25	25	25
	Thickness	mm	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm	710x450x200				
	Package	mm	1003x551x285				
Net weight/Gross weight		kg	18.5/22	18.5/22	18.5/22	18.5/23	18.5/23
Loading	40' GP	set	352	352	352	352	352
	40' HQ	set	352	352	352	352	352

Specifications

Model			GMV-ND40PL/B-T*	GMV-ND45PL/B-T*	GMV-ND50PL/B-T*	GMV-ND56PL/B-T*	GMV-ND63PL/B-T*	GMV-ND72PL/B-T*
Capacity	Cooling	kW	4.0	4.5	5.0	5.6	6.3	7.2
	Heating	kW	4.5	5.0	5.6	6.3	7.0	8.0
Power supply		V/Ph/Hz	220~240/1/50					
Power consumption		W	35	35	35	45	45	50
Airflow volume(H/M/L)		m³/h	750/660/540	750/660/540	750/660/540	850/700/610	850/700/610	1100/800/640
		CFM	441/388/318	441/388/318	441/388/318	500/412/359	500/412/359	647/471/377
Rated Current*	Cooling	A	0.3	0.3	0.3	0.3	0.3	0.5
	Heating	A	0.3	0.3	0.3	0.3	0.3	0.5
	Water Heating	A	/	/	/	/	/	/
ESP		Pa	0/15					
Sound pressure level(H/M/L)		dB(A)	33/30/27	33/30/27	33/30/27	35/33/29	35/33/29	37/34/30
Connecting pipe diameter	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
Drain pipe	External dia	mm	25	25	25	25	25	25
	Thickness	mm	2.5	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm	1010x450x200				1010x450x200	1310x450x200
	Package	mm	1303x551x285				1303x551x285	1603x551x285
Net weight/Gross weight		kg	23.5/28	23.5/28	23.5/28	24.5/29	24.5/29	30.5/36
Loading	40' GP	set	288	288	288	288	288	224
	40' HQ	set	288	288	288	288	288	224

Note:
* This series is without water pump.

4-way Cassette Indoor Unit

50 Hz

Model				GMV-ND28T/A-T	GMV-ND36T/A-T	GMV-ND45T/A-T	GMV-ND50T/A-T	GMV-ND56T/A-T	GMV-ND63T/A-T	GMV-ND71T/A-T
Capacity		Cooling	kW	2.8	3.6	4.5	5.0	5.6	6.3	7.1
		Heating	kW	3.2	4.0	5.0	6.6	6.3	7.1	8.0
Power supply			V/Ph/Hz	220~240/1/50						
Power consumption			W	48	48	48	50	59	59	68
Airflow volume(H/M/L)			m³/h	750/650/550	750/650/550	750/650/550	830/650/550	1000/900/750	1000/900/750	1180/950/850
			CFM	440/383/325	440/383/325	440/383/325	490/383/325	590/530/440	590/530/440	695/559/550
Rated Current*		Cooling	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3
		Heating	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3
		Water Heating	A	/	/	/	/	/	/	/
Sound pressure level(H/M/L)			dB(A)	36/34/31	36/34/31	36/34/31	36/34/31	37/35/32	37/35/32	38/36/33
Connecting pipe diameter		Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52
		Gas	mm	Φ9.52	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
Drain pipe		External dia	mm	25	25	25	25	25	25	25
		Thickness	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Main Body	Dimension (WxDxH)	Outline	mm	840x840x190	840x840x190	840x840x190	840x840x190	840x840x240	840x840x240	840x840x240
		Package	mm	963x963x272	963x963x272	963x963x272	963x963x272	963x963x325	963x963x325	963x963x325
	Net weight/Gross weight		kg	22.5/29.5	22.5/29.5	22.5/29.5	22.5/29.5	26.5/34.5	26.5/34.5	26.5/34.5
Panel	Dimension (WxDxH)	Outline	mm	950x950x65	950x950x65	950x950x65	950x950x65	950x950x65	950x950x65	950x950x65
		Package	mm	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133
	Net weight/Gross weight		kg	7/11	7/11	7/11	7/11	7/11	7/11	7/11
Loading quantity		40'GP	set	187	187	187	187	140	140	140
		40'HQ	set	171	171	171	171	156	156	156

Model				GMV-ND80T/A-T	GMV-ND90T/A-T	GMV-ND100T/A-T	GMV-ND112T/A-T	GMV-ND125T/A-T	GMV-ND140T/A-T	GMV-ND160T/A-T
Capacity		Cooling	kW	8.0	9.0	10.0	11.2	12.5	14.0	16.0
		Heating	kW	9.0	10.0	11.2	12.5	14.0	16.0	17.5
Power supply			V/Ph/Hz	220~240/1/50						
Power consumption			W	88	88	88	110	110	110	130
Airflow volume(H/M/L)			m³/h	1180/950/850	1500/1350/1100	1500/1350/1100	1700/1400/1100	1860/1500/1150	1860/1500/1150	2100/1700/1400
			CFM	695/559/550	883/795/650	883/795/650	1000/824/650	1095/883/677	1095/883/677	1235/1000/824
Rated Current*		Cooling	A	0.3	0.4	0.4	0.5	0.5	0.5	0.6
		Heating	A	0.3	0.4	0.4	0.5	0.5	0.5	0.6
		Water Heating	A	/	/	/	/	/	/	/
Sound pressure level(H/M/L)			dB(A)	38/36/33	40/37/35	40/37/35	41/38/36	43/41/38	43/41/38	47/44/42
Connecting pipe diameter		Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
		Gas	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ19.05
Drain pipe		External dia	mm	25	25	25	25	25	25	25
		Thickness	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Main Body	Dimension (WxDxH)	Outline	mm	840x840x240	840x840x320	840x840x320	840x840x320	840x840x320	840x840x320	910*910*293
		Package	mm	963x963x325	963x963x409	963x963x409	963x963x409	963x963x409	963x963x409	1023*993*375
	Net weight/Gross weight		kg	26.5/34.5	32.5/40.0	32.5/40.0	32.5/40.0	32.5/40.0	32.5/40.0	48.5/56.5
Panel	Dimension (WxDxH)	Outline	mm	950x950x65	950x950x65	950x950x65	950x950x65	950x950x65	950x950x65	1040x1040x65
		Package	mm	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1137x1137x140
	Net weight/Gross weight		kg	7/11	7/11	7/11	7/11	7/11	7/11	7.5/11.5
Loading quantity		40'GP	set	140	104	104	104	104	104	144
		40'HQ	set	156	119	119	119	119	119	144

Compact 4-way Cassette Indoor Unit

50 Hz

Model				GMV-ND22T/B-T	GMV-ND28T/B-T	GMV-ND36T/B-T	GMV-ND45T/B-T	GMV-ND50T/B-T	GMV-ND56T/B-T
Capacity		Cooling	kW	2.2	2.8	3.6	4.5	5	5.6
		Heating	kW	2.5	3.2	4	5	5.6	6.3
Power supply			V/Ph/Hz	220~240/1/50					
Power consumption			W	35	35	35	45	45	45
Airflow volume(H/M/L)			m³/h	600/500/400	600/500/400	600/500/400	700/600/480	700/600/480	700/600/480
			CFM	356/295/235	356/295/235	356/295/239	410/355/283	410/355/283	410/355/283
Rated Current		Cooling	A	0.4	0.4	0.4	0.5	0.5	0.5
		Heating	A	0.4	0.4	0.4	0.5	0.5	0.5
		Water Heating	A	/	/	/	/	/	/
Sound pressure level(H/M/L)			dB(A)	46/39/35	46/39/35	46/39/35	47/43/38	47/43/38	47/43/38
Connecting pipe diameter		Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52
		Gas	mm	Φ9.52	Φ9.52	Φ12.7	Φ12.7	Φ12.7	Φ15.9
Drain pipe		External dia	mm	25	25	25	25	25	25
		Thickness	mm	2.5	2.5	2.5	2.5	2.5	2.5
Main Body	Dimension (WxDxH)	Outline	mm	596x596x240	596x596x240	596x596x240	596x596x240	596x596x240	596x596x240
		Package	mm	773×733×300	773×733×300	733x733x300	733x733x300	733x733x300	733x733x300
	Net weight/Gross weight		kg	20.5/25.5	20.5/25.5	20.5/25.5	20.5/25.5	20.5/25.5	20.5/25.5
Panel	Dimension (WxDxH)	Outline	mm	650x650x50	650x650x50	650x650x50	650x650x50	650x650x50	650x650x50
		Package	mm	763x763x105	763x763x105	763x763x105	763x763x105	763x763x105	763x763x105
	Net weight/Gross weight		kg	3.5/5.0	3.5/5.0	3.5/5.0	3.5/5.0	3.5/5.0	3.5/5.0
Loading quantity		40'GP	set	267	267	267	267	267	267
		40'HQ	set	288	288	288	288	288	288

2-way Cassette Indoor Unit

50 Hz

Model				GMV-ND28TS/A-T	GMV-ND36TS/A-T	GMV-ND45TS/A-T	GMV-ND50TS/A-T	GMV-ND56TS/A-T	GMV-ND63TS/A-T	GMV-ND71TS/A-T
Capacity		Cooling	kW	2.8	3.6	4.5	5.0	5.6	6.3	7.1
		Heating	kW	3.2	4.0	5.0	5.6	6.3	7.1	8.0
Power supply			V/Ph/Hz	220~240/1/50						
Power consumption			W	55.0	55.0	55.0	55.0	103.0	103.0	103.0
Airflow volume(H/M/L)			m³/h	630/600/530	630/600/530	630/600/530	630/600/530	1100/820/760	1100/820/760	1100/820/760
			CFM	490/355/312	490/355/312	490/355/312	490/355/312	650/483/647	650/483/647	650/483/647
Rated Current		Cooling	A	0.3	0.3	0.3	0.3	0.7	0.7	0.7
		Heating	A	0.3	0.3	0.3	0.3	0.7	0.7	0.7
		Water Heating	A	/	/	/	/	/	/	/
Sound pressure level(H/M/L)			dB(A)	35/33/31	35/33/31	35/33/31	35/33/31	39/37/35	39/37/35	39/37/35
Connecting pipe diameter		Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52
		Gas	mm	Φ9.52	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
Drain pipe		External dia	mm	25	25	25	25	25	25	25
		Thickness	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Main Body	Dimension (WxDxH)	Outline	mm	1200x520x315	1200x520x315	1200x520x315	1200x520x315	1200x520x315	1200x520x315	1200x520x315
		Package	mm	1520x655x415	1520x655x415	1520x655x415	1520x655x415	1520x655x415	1520x655x415	1520x655x415
	Net weight/Gross weight		kg	40.5/52.5	40.5/52.5	40.5/52.5	40.5/52.5	43.0/55.0	43.0/55.0	43.0/55.0
Panel	Dimension (WxDxH)	Outline	mm	1443x630x33	1443x630x33	1443x630x33	1443x630x33	1443x630x33	1443x630x33	1443x630x33
		Package	mm	1575x765x105	1575x765x105	1575x765x105	1575x765x105	1575x765x105	1575x765x105	1575x765x105
	Net weight/Gross weight		kg	7.0/11.0	7.0/11.0	7.0/11.0	7.0/11.0	7.0/11.0	7.0/11.0	7.0/11.0
Loading quantity		40'GP	set	101	101	101	101	101	101	101
		40'HQ	set	115	115	115	115	115	115	115

1-way Cassette Indoor Unit

50 Hz

Model				GMV-ND22TD/A-T	GMV-ND28TD/A-T	GMV-ND36TD/A-T	GMV-ND45TD/A-T	GMV-ND50TD/A-T
Capacity		Cooling	kW	2.2	2.8	3.6	4.5	5.0
		Heating	kW	2.5	3.2	4.0	5.0	5.6
Power supply			V/Ph/Hz	220~240/1/50				
Power consumption			W	30	30	30	45	45
Airflow volume(H/M/L)			m³/h	600/500/450	600/500/450	600/500/450	830/600/500	830/600/500
			CFM	353/295/265	353/295/265	353/295/265	490/355/295	490/355/295
Rated Current		Cooling	A	0.2	0.2	0.2	0.3	0.3
		Heating	A	0.2	0.2	0.2	0.3	0.3
		Water Heating	A	/	/	/	/	/
Sound pressure level(H/M/L)			dB(A)	36/32/28	36/32/28	36/32/28	40/35/30	40/35/30
Connecting pipe diameter		Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
		Gas	mm	Φ9.52	Φ12.7	Φ12.7	Φ12.7	Φ12.7
Drain pipe		External dia	mm	25	25	25	25	25
		Thickness	mm	2.5	2.5	2.5	2.5	2.5
Main Body	Dimension (WxDxH)	Outline	mm	987x385x178	987x385x178	987x385x178	987x385x178	987x385x178
		Package	mm	1307x501x310	1307x501x310	1307x501x310	1307x501x310	1307x501x310
	Net weight/Gross weight		kg	20.0/27.0	20.0/27.0	20.0/27.0	21.0/28.5	21.0/28.5
Panel	Dimension (WxDxH)	Outline	mm	1200x480x55	1200x480x55	1200x480x55	1200x460x55	1200x460x55
		Package	mm	1265x538x118	1265x538x118	1265x538x118	1265x538x118	1265x538x118
	Net weight/Gross weight		kg	4.2/6.0	4.2/6.0	4.2/6.0	4.2/6.0	4.2/6.0
Loading quantity		40'GP	set	138	138	138	138	138
		40'HQ	set	138	138	138	138	138

Specifications

Wall-mounted Type Indoor Unit

50 Hz

Model			GMV-N22G/A3A-K*	GMV-N28G/A3A-K*	GMV-N36G/A3A-K*	GMV-N45G/A3A-K*	GMV-N50G/A3A-K*	GMV-N56G/A3A-K*	GMV-N63G/A3A-K*	GMV-N71G/A3A-K*
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.0	5.6	6.3	7.1
	Heating	kW	2.5	3.2	4.0	5.0	5.6	6.3	7.0	7.5
Power supply		V/Ph/Hz	220~240/1/50							
Power consumption		W	50	50	60	60	60	70	70	70
Airflow volume(H/M/L)		m³/h	500/420/350	500/420/350	630/550/480	630/550/480	630/550/480	750/600/500	750/600/500	750/600/500
		CFM	294/247/206	294/247/206	371/324/282	371/324/282	371/324/282	441/353/294	441/353/294	441/353/294
Rated Current	Cooling	A	0.2	0.2	0.31	0.31	0.31	0.31	0.31	0.31
	Heating	A	0.2	0.2	0.31	0.31	0.31	0.31	0.31	0.31
	Water Heating	A	/	/	/	/	/	/	/	/
Sound pressure level(H/M/L)		dB(A)	38/34/30	38/34/30	44/41/38	44/41/38	44/41/38	44/41/38	44/41/38	44/41/38
Connecting pipe diameter	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ9.52	Φ9.52	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
Drain pipe	External dia.	mm	Φ20	Φ20	Φ20	Φ20	Φ20	Φ30	Φ30	Φ30
	Thickness	mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Dimension (WxDxH)	Outline	mm	843x180x275			940x200x286			1108x221x319	
	Package	mm	973x258x370			1068x286x395			1131x388x328	
Net weight/Gross weight		kg	10/12.5	10/12.5	12.5/15.5	12.5/15.5	12.5/15.5	15/18.5	15/18.5	15/18.5
Loading	40' GP	set	702	702	567	567	567	441	441	441
	40' HQ	set	819	819	624	624	624	503	503	503

Floor Ceiling Type Indoor Unit

50 Hz

Model			GMV-ND23ZD/A-T	GMV-ND36ZD/A-T	GMV-ND50ZD/A-T	GMV-ND63ZD/A-T	GMV-ND71ZD/A-T	GMV-ND90ZD/A-T	GMV-ND112ZD/A-T	GMV-ND125ZD/A-T	GMV-ND140ZD/A-T
Capacity	Cooling	kW	2.8	3.6	5.0	6.3	7.1	9.0	11.2	12.5	14.0
	Heating	kW	3.2	4.0	5.6	7.1	8.0	10.0	12.5	14.0	16.0
Power supply		V/Ph/Hz	220~240/1/50								
Power consumption		W	40	40	50	75	75	140	180	180	180
Airflow volume(H/M/L)		m³/h	650/580/500	650/580/500	950/850/700	1400/1150/1000	1400/1150/1000	1600/1400/1200	2000/1800/1450	2000/1800/1450	2000/1800/1450
		CFM	380/341/294	380/341/294	560/500/410	825/677/590	825/677/590	940/824/706	1175/1059/853	1175/1059/853	1175/1059/853
Rated Current	Cooling	A	0.2	0.2	0.25	0.38	0.38	0.7	0.95	0.95	0.95
	Heating	A	0.2	0.2	0.25	0.38	0.38	0.7	0.95	0.95	0.95
	Water Heating	A	/	/	/	/	/	/	/	/	/
Sound pressure level(H/M/L)		dB(A)	36/34/32	36/34/32	42/38/33	44/42/39	44/42/39	50/47/43	51/47/42	52/49/45	52/49/45
Connecting pipe diameter	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ9.52	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Drain pipe	External dia.	mm	Φ17	Φ17	Φ17	Φ17	Φ17	Φ17	Φ17	Φ17	Φ17
	Thickness	mm	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Dimension (WxDxH)	Outline	mm	1220x700x225			1420x700x245			1700x700x245		
	Package	mm	1343x823x315			1548x828x345			1828x828x345		
Net weight/Gross weight		kg	40/49	40/49	40/49	50/58	50/58	50/58	60/68	60/68	60/68
Loading	40' GP	set	145	145	145	90	90	90	84	84	84
	40' HQ	set	158	158	158	98	98	98	98	98	98

Console Indoor Unit

50 Hz

Model			GMV-ND22C/A-T	GMV-ND28C/A-T	GMV-ND36C/A-T	GMV-ND45C/A-T	GMV-ND50C/A-T
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.0
	Heating	kW	2.5	3.2	4.0	5.0	5.6
Power supply		V/Ph/Hz	220-240/1/50				
Power consumption		W	15	15	20	40	40
Airflow volume(H/M/L)		m³/h	400/320/270	400/320/270	480/400/310	680/600/500	680/600/500
		CFM	235/188/159	235/188/159	282/235/182	400/353/294	400/353/294
Rated Current	Cooling	A	0.15	0.15	0.15	0.15	0.15
	Heating	A	0.15	0.15	0.15	0.15	0.15
	Water Heating	A	/	/	/	/	/
ESP		Pa	0	0	0	0	0
Sound pressure level(H/M/L)		dB(A)	38/33/27	38/33/27	40/37/32	46/43/39	46/43/39
Connecting pipe diameter	Liquid	mm	6.35	6.35	6.35	6.35	6.35
	Gas	mm	9.52	9.52	9.52	12.7	12.7
Drain pipe	External dia.	mm	17.2	17.2	17.2	17.2	17.2
	Thickness	mm	1	1	1	1	1
Dimension (WxDxH)	Outline	mm	700/215/600	700/215/600	700/215/600	700/215/600	700/215/600
	Package	mm	780x285x682	780x285x682	780x285x682	780x285x682	780x285x682
Net weight/Gross weight		kg	16/19	16/19	16/19	16/19	16/19
Loading	40' GP	set	387	387	387	387	387
	40' HQ	set	433	433	433	433	433

Fresh Air Processing Indoor Unit

50 Hz

Model			GMV-NX140P/A(X1.2)-K *	GMV-NX224P/A(X2.0)-M *	GMV-NX280P/A(X2.5)-M *	GMV-NX280P/A(X3.0)-M *	GMV-NX450P/A(X4.0)-M *
Capacity	Cooling	kW	14.0	22.4	28.0	28.0	45.0
	Heating	kW	10.0	16.0	20.0	20.0	32.0
Power supply		V/Ph/Hz	220~240/1/50		380~415/3/50		
Power consumption		W	360	740	760	1060	1240
Airflow volume(H/M/L)		m³/h	1200	2000	2500	3000	4000
		CFM	705	1175	1470	1765	2355
Rated Current	Cooling	A	1.82	1.32	1.36	1.89	2.22
	Heating	A	1.82	1.32	1.36	1.89	2.22
	Water Heating	A	/	/	/	/	/
ESP		Pa	150		200		
Sound pressure level(H/M/L)		dB(A)	42	47	48	51	52
Connecting pipe diameter	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ12.7
	Gas	mm	Φ15.9	Φ19.05	Φ22.2	Φ22.2	Φ28.6
Drain pipe	External dia	mm	25	25	25	25	25
	Thickness	mm	2.5	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline	mm	1483 x 756 x 300		1500 x 1000 x 500		1700 x 1100 x 650
	Package	mm	1514x785x360		1840x1200x673		1890x1460x835
Net weight/Gross weight		kg	83.5/71	130/182	134/188	134/188	208/266
Loading	40' GP	set	84.0	18.0	18.0	18.0	16.0
	40' HQ	set	98.0	18.0	18.0	18.0	18.0

Note: * This series can be matched with GMV5(Top discharge outdoor unit)only

Floor Standing Type

50 Hz

Model			GMV-ND100L/A-T	GMV-ND140L/A-T
Capacity	Cooling	kW	10	14
	Heating	kW	11	16
Power supply		V/Ph/Hz	220-240/1/50	
Power consumption		W	185	185
Airflow volume(H/M/L)		m³/h	1850/1600/1400	1850/1600/1400
		CFM	1089/942/824	1089/942/824
Rated Current	Cooling	A	1.5	1.5
	Heating	A	1.5	1.5
	Water Heating	A	/	/
ESP		Pa	0	0
Sound pressure level(H/M/L)		dB(A)	50/48/46	50/48/46
Connecting pipe diameter	Liquid	mm	9	9
	Gas	mm	16	16
Drain pipe	External dia	mm	31	31
	Thickness	mm	4.5	4.5
Dimension (WxDxH)	Outline	mm	1870x580x400	1870x580x400
	Package	mm	2083/738/545	2083/738/545
Net weight/Gross weight		kg	54/74	57/77
Loading	40' GP	set	67	67
	40' HQ	set	67	67

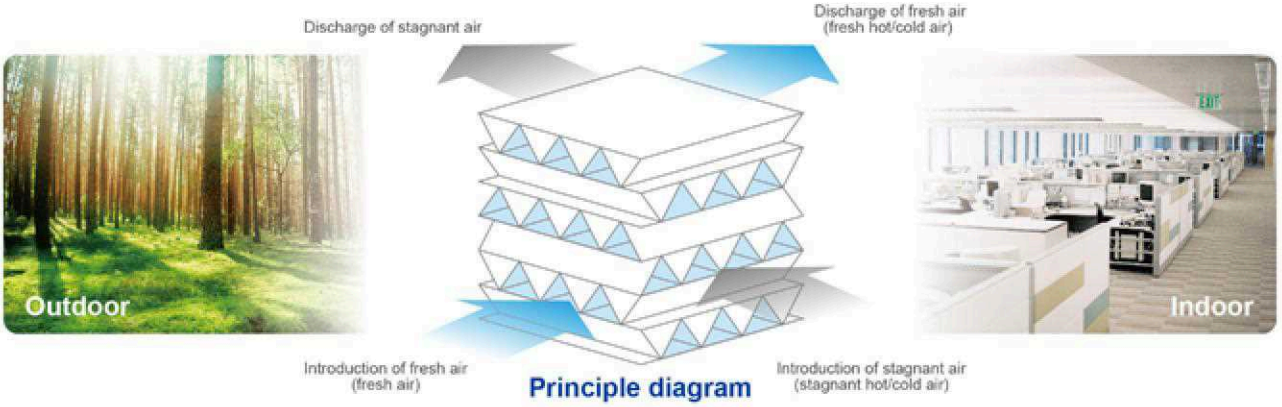
Energy Recovery Ventilation(ERV)

- Air flow: 350~3000m³/ h
- Energy Recovery Ventilation System can introduce the fresh air freely on the condition that all the windows closed or exhausted fan uninstalled. It can solve the problem of stagnant air effectively.

  It is usually installed in the ceiling of corridor and supplies fresh air to each room through ducts.

Adopt Advanced Heat Exchange Core

ERV adopts cross flow plate exchanger with air volume below 3000m3/h. Fresh air will be introduced and internal leakage is low, which effectively prevent pollution to fresh air.

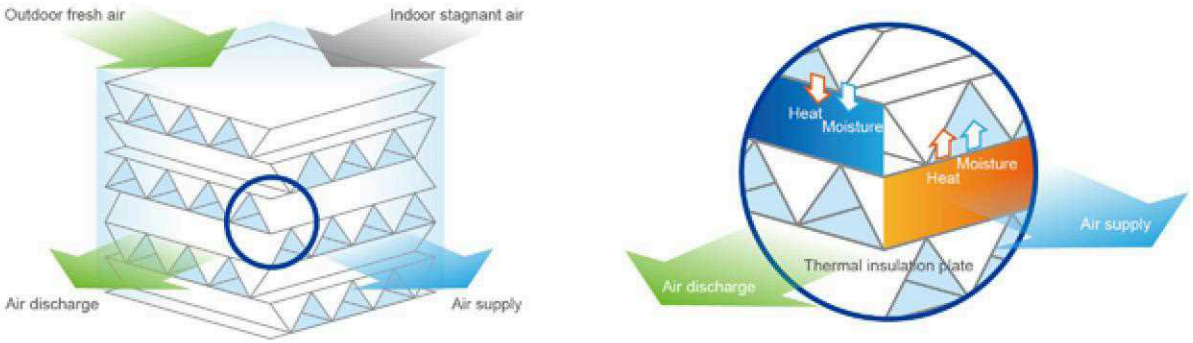


Double-way Ventilation for Fresh Air

ERV can not only introduce lots of fresh air, but also discharge the stagnant air at the same time, which effectively minimizes the toxic air from the inner and other materials. The ventilation effect is very obvious, ensuring enough supply of fresh air to the indoor space.

No Cross Contamination for Ensuring Healthy Fresh Air

The unique cross-flow heat exchange valve sub-assy is adopted. There is only energy exchange between indoor air and outdoor air with little exchange of air, which effectively prevents cross contamination and “air-condition” disease.



Pretreatment of Fresh Air for Energy-saving

When fresh air is introduced, its temperature and humidity will be exchanged with the discharged warm air. As the fresh air is preheated and humidified, energy is saved and load of unit is reduced.

Energy Recovery Ventilation(ERV)

Model			FHBQ-D3.5-K	FHBQ-D5-K	FHBQ-D8-K	FHBQ-D10-K	FHBQ-D15-M	FHBQ-D20-M	FHBQ-D30-M	FHBQ-D5-D	FHBQ-D8-D**	FHBQ-D10-D	FHBQ-D15-D**
Air flow volume	H/M/L	M3/h	350	500	800	1000	1500	2000	3000	500	800	1000	1500
ESP	H/M/L	Pa	100	100	110	110	150	150	220	100	100	110	150
Temperature exchange efficiency	H/M/L	%	71.00	68.00	70.00	73.00	73.00	71.00	70.00	68.00	70.00	75.00	73.00
Enthalpy exchange efficiency(H/M/L)	Heating	%	65.00	62.00	63.00	66.00	65.00	62.00	62.00	62.00	63.00	66.00	65.00
	Cooling	%	61.00	57.00	60.00	62.00	60.00	56.00	56.00	57.00	60.00	62.00	60.00
Power supply		Ph/V/Hz	1/220/50	1/220/50	1/220/50	1/220/50	3/380/50	3/380/50	3/380/50	1/220/60	1/220/60	1/220/60	3/220/60
Power input		KW	0.165	0.262	0.40	0.44	0.80	0.95	2.00	0.262	0.50	0.50	1.10
Sound Pressure Level		Db(A)	37	39	45	46	48	50	54	36	50	48	60
Dimension (W*D*H)	Outline	mm	800*879*306	800*879*306	832*1016*380	832*1016*380	1210*1215*452	1210*1215*452	1340*1550*572	800*879*306	832*1016*380	832*1016*380	1210*1215*452
	Package	mm	1050*1185*315	1050*1185*315	1087*1320*400	1087*1320*400	1540*1555*470	1540*1555*470	1610*1710*700	1050*1185*315	1087*1320*400	1087*1320*400	1540*1555*470
Net weight		kg	45	45.0	57.0	57.0	110.0	110.0	215.0	45.0	57.0	57.0	110.0
Gross weight		kg	53	53.0	66.5	66.5	130.0	130.0	236.0	53.0	66.5	66.5	130.0
Loading quantity	40'GP	set	147	147	85	59	37	37	24	147	59	99	37
	40'HQ	set	168	168	104	67	44	44	24	168	67	67	44
Standard wired remote controller			ZSN151	ZSN151	ZSN151	ZSN151	ZSN151	ZSN151	*	ZSN151	ZSN151	ZSN151	ZSN151

Note:
*) This product only gets CB certification.

Control System Lineup

Control system	Product series		ERV
Wired controller	ZSN151		•
Interface of the main board	BMS		•
Optoelectronic isolated converter	RS232/RS422/485		○
Optoelectronic isolated signal multiplier	RS-4Z2/485		○

Note: • means standard; ○ means optional.

Note

Note

Note

Note

Award and Certification









ISO 9001 Quality System Certificate

ISO 14001 Environment Management System Certificate

ISO 18001 Occupatio Healthy Safety System Certificate

Canadian CSA Certificate

German TÜV Certificate

3C Certificate

European Communities CE Certificate

American UL Certificate

Russian Safety Certificate

EGM

SASO Certificate

Mexico NOM Safety Certificate

German GS Certificate

European EMC Certificate

Argentina Safe Certificate

China EMC Certificate

Hongkong Energy-saving Certificate

Hongkong Safety Certificate

Australian SAA Safe Certificate

Australia SAA Certificate

CQC Certificate

America ETL Certificate

Canadian ETL Certificate

Thailand TIS Certificate

GREE

هلدینگ اصغریان

استان مازندران -آمل
خیابان امام خمینی (ره)-نبش آفتاب ۲۷ - پلاک ۶۱
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