

ONE STOP SOLUTION



GREE Multi VRF 5



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Note:

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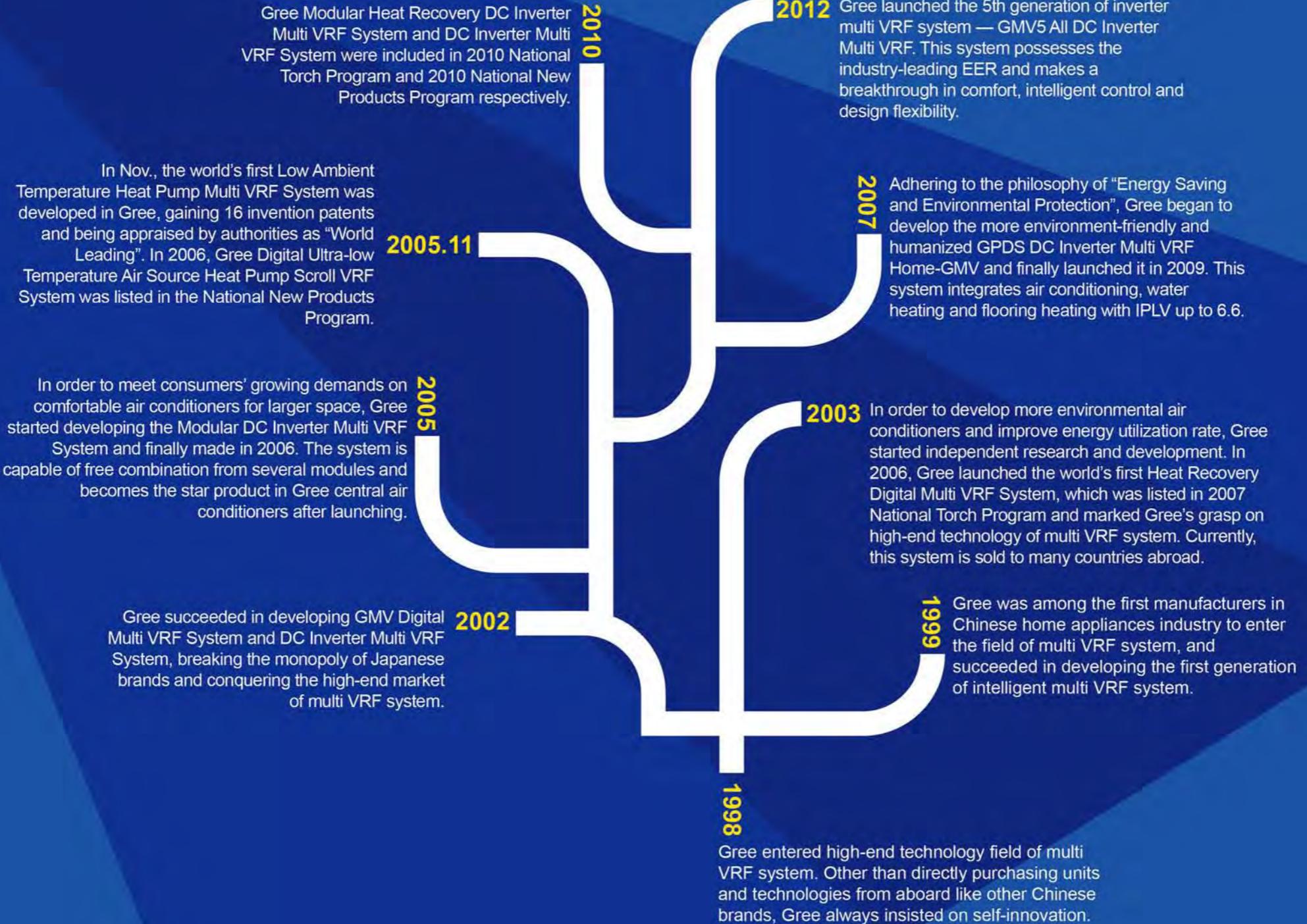
GC-1412-02



Distributor information



Gree GMV- History of Development





GMV5 DC Inverter Multi VRF System with its high-efficient inverter compressors has four exciting features which are different from those found on traditional inverter air conditioners: excellent energy-saving effect, more reliable and precise operation, smarter network control, providing users with best air conditioning experience.

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Key Features

All DC Inverter Technology to Improve Compression Efficiency

All DC inverter compressor and high-performance high pressure chamber are adopted to reduce loss of overheat and improve compression efficiency from direct intake. Compared with low pressure chamber, the compression efficiency is improved. High-efficient permashield motor is adopted to provide better performance than traditional DC inverter compressor.

All DC Inverter Compressor

- All DC inverter compressor is used in this system. It can directly intake gas to reduce loss of overheat and improve efficiency.



HP chamber structure can raise the high and middle frequency performance

New DC motor (concentrated winding) raises the low frequency performance

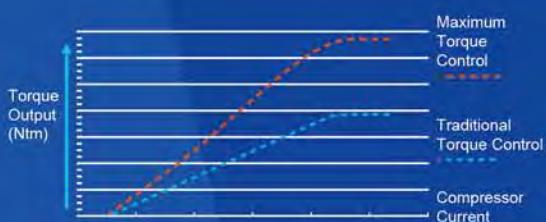


- High-efficient permashield motor is adopted to provide better performance than traditional DC inverter compressor.



Technology of Maximum Torque Control with Minimum Current

It can reduce energy loss caused by device winding so as to realize higher efficiency.

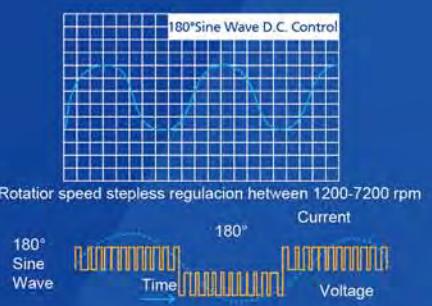
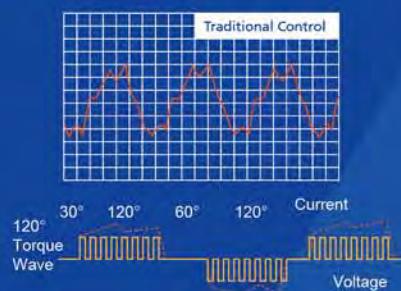


Low-frequency Torque Control

It can directly control motor torque, through which fan motor can run at a low speed. Users will feel more comfortable while requirements of the system are also met.

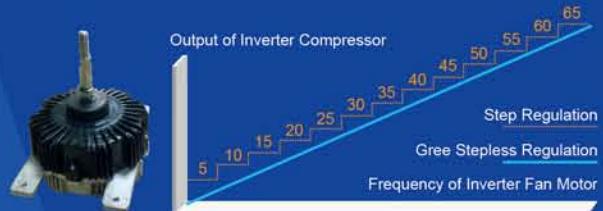


- 180° Sine Wave DC Speed Varying Technology
It can satisfy various places' demands for different temperature and is able to save a great deal of electricity and provide users with utmost comfort at the same time.

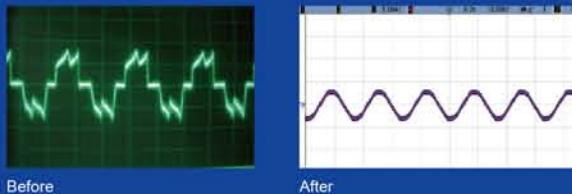


Sensorless DC Inverter Fan Motor

- Stepless speed regulation ranges from **5Hz** to **65Hz**. Compared with traditional inverter motors, the operation is more energy-saving.



- Sensorless control technology guarantees lower noise, less vibration and steadier operation.



88HP Max Capacity-The Largest Free Combination

Max capacity of single outdoor unit reaches **22HP** and max combination capacity is even up to **88HP**, in an industry leading level.

Max combination capacity is extended to 88HP



Money is saved in system cost and piping



Compact design

With compact design, the outdoor unit can be carried to the roof of building through elevator, with no need of crane. It is easier for delivery and installation.



Non-polar CAN Technology to Improve Communication Efficiency

- Gree is the first one to adopt non-polar CAN communication technology in the industry. CAN communication technology provides quicker system response speed, more convenient installation debugging and more reliable communication data.

Performance Index	Company A Multi-VRF Network	GMV5 DC Inverter CAN Network
Reliability	Software check	Hardware check, more reliable
	One unit's communication error may lead to a breakdown of the whole network	If one unit has errors, it will exit from the network without any influence to other units.
Communication Efficiency	Low utilization	High utilization
	Communication speed is about 10Kbps.	Communication speed is 20Kbps.
Compatibility	One main network, difficult to add new equipment	Multiple main networks, easy to add new equipment.
Communication Distance	1000m	1500m

- The non-polar CAN communication technology is applied to support flexible wiring installation, greatly reducing construction difficulties.



Wide Range of Voltage and Operation Condition

- Working voltage range of GMV5 system has been improved to **320V~460V**, which surpasses the national standard of 342V~420V. For places with unsteady voltage, this system can still be running well.



- Outdoor operation temperature range is improved to **-5°C~52°C in cooling** and **-20°C~24°C in heating**.



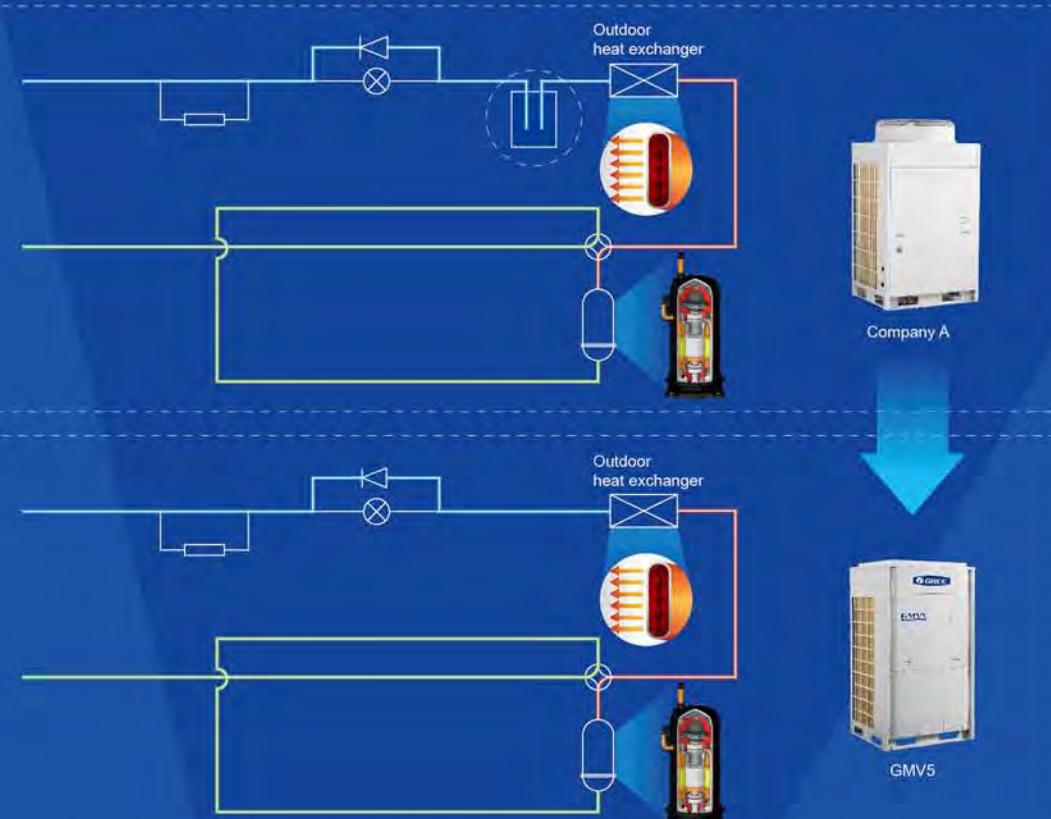
Wider Applicable Location

GMV5 can realize a combination of 4 outdoor unit modules connecting with as many as **80** indoor units. It's especially applicable for business building or hotels.



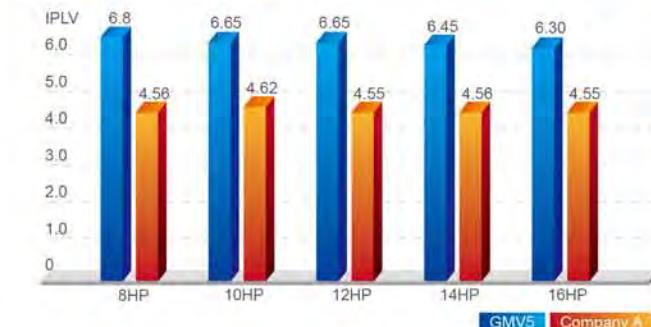
Refrigerant Storage and Distribution

The GMV5 system is designed without liquid receiver and the excess refrigerant is stored in the piping, which can minimize the refrigerant charging volume and enhance the control accuracy of refrigerant.



High Efficiency and More Energy Saving

Thanks to the advanced all DC inverter technology, optimized system design and accurate intelligent control technology, IPLV of GMV5 All DC Inverter Multi VRF System is up to 6.8.



New Generation of Energy-saving Operation Control Technology with Energy Saving Up to 20%

The GMV5 system has 2 modes for energy saving, which can be chosen to meet different electricity demands.

Mode 1:

In auto energy-saving mode, the system will self-adjust parameters according to the operation status, thus to lower the cost of electricity. Up to 15% of energy can be saved.

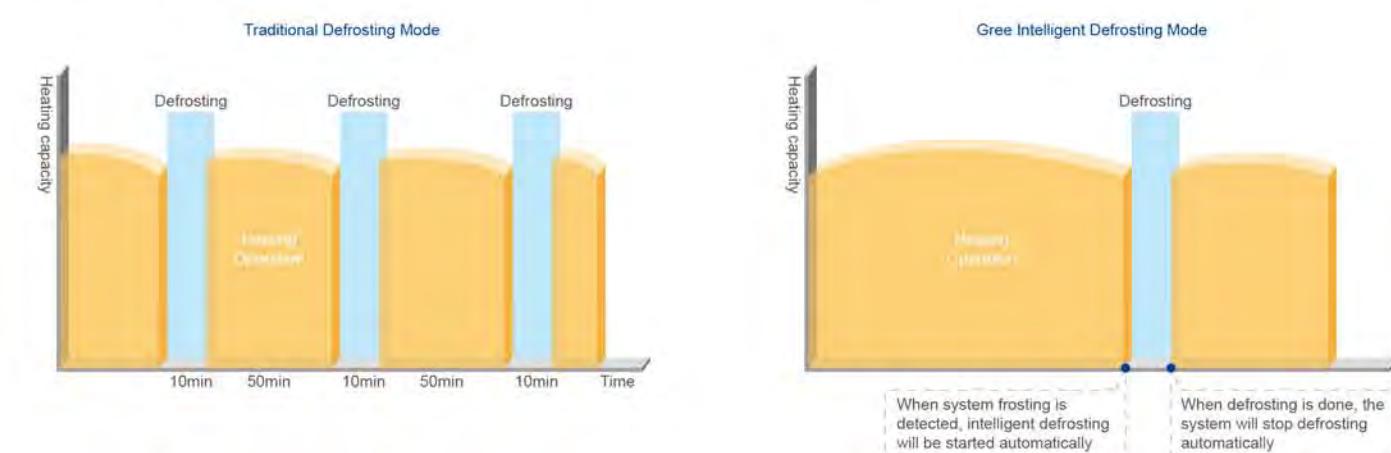
Mode 2:

In compulsory energy-saving mode, the system will limit power output forcibly. Up to 20% of energy can be saved.



Comfortable Heating

Advanced intelligent defrosting mode is adopted. Gree advanced intelligent defrosting mode will choose the best defrosting way according to outdoor temperature and operation status to realize intelligent defrosting, effectively improving heating effect and performance. While in traditional defrosting mode, timing defrosting is adopted, which not only affects comfort but also reduces energy efficiency.



Accurate Intelligent Allocation Technology of Capacity and Output of Optimal Portion to Ensure Highest Efficiency

- When total load demands more than 75% of a running system's capacity, one more unit will automatically start;
- When total load demands less than 40% of a running system's capacity, one unit will automatically shut down;
- Therefore, each unit shares 40%-75% of the total load.
- Experiments show that an air conditioner costs the least energy when it's operating within 40%-75% of its capacity.

	Company A	Gree GMV
Allocation Method	10HP(full load) + 2HP(low load)	6HP(partial load) + 6HP(partial load)
Performance Compared	Unit costs more energy and may be soon damaged.	Unit costs less energy and can always be kept in good condition.

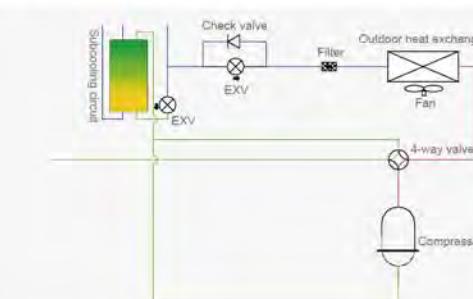
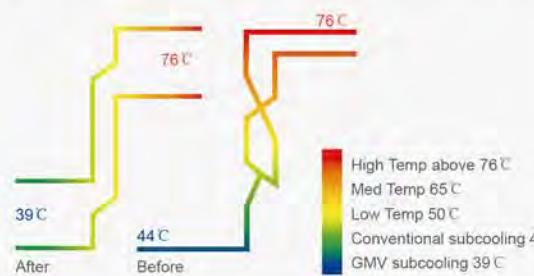
Output of Optimal Portion to Ensure Highest Efficiency

The best heating or cooling performance can be realized in the most energy-saving way. DC inverter compressor and DC inverter fan will also be operating in this way to ensure high efficiency.



Sub-cooling Control Technology to Ensure Optimal Cooling and Heating

- Heat exchange loop can control the first subcooling process of heat exchanger. Subcooling degree can reach 11°C.
- Subcooling loop can realize 9°C second subcooling to guarantee cooling and heating performance.



Temperature Controlled by Wired Controller with Higher Efficiency and More Energy Saving

Through setting temperature lower limit in cooling or dry mode, and setting temperature upper limit in heating, 3D heating or heat supply mode, the system is able to operate in a smaller temperature range so as to achieve energy saving.

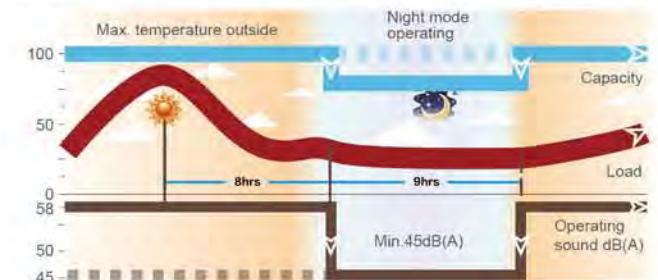
Comfortable Design for A Better Life

The GMV5 system has a wide range of working conditions. Whether it's in a cool winter or a hot summer, normal operation is guaranteed with the least noise, making users feel more comfortable.

Outdoor Unit Quiet Mode and Quiet Control

Quiet at night

The system can record the highest outdoor temperature. At night, the system will automatically turn to quiet mode. There are 9 quiet modes which can be set according to actual needs.



Quiet in compulsion

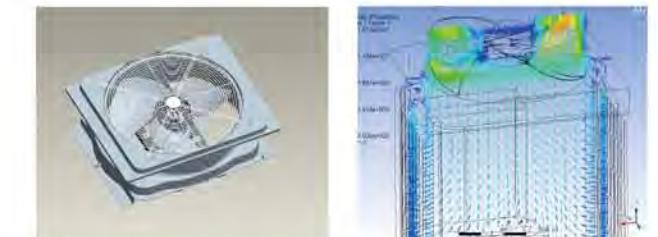
The system can also be set in this mode to ensure low noise as long as it is operating. Noise is as low as 45dB(A).



Quiet Control

1. Optimized Bossing Design

After many times of CFD tests, a new fan bossing structure has been developed to reduce vibration of fan during running. Noise can be reduced by 3dB(A).



2. Aerodynamics 3D Axial Fan

Compared with conventional fan, it can increase air volume by 12%, improving efficiency as well as lowering noise.



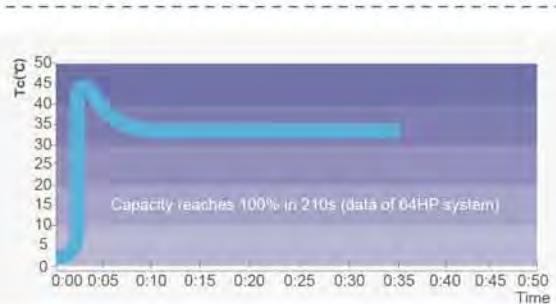
Quiet Indoor Unit

The indoor unit of the GMV5 system also adopts DC inverter motors to realize stepless regulation. According to indoor temperature or people's needs, users can set this mode through wired controller. Noise is as low as 22dB(A).



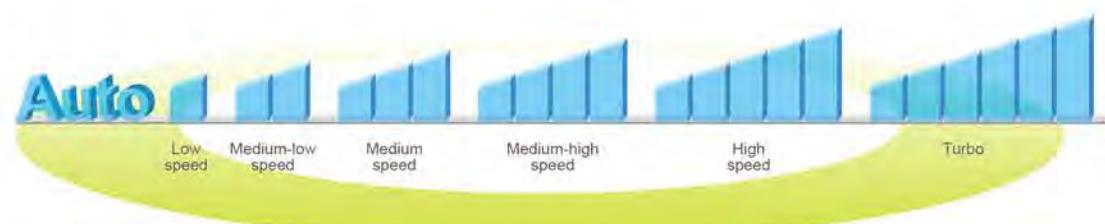
Fast Start-up in Heating

DC Compressor is first started to avoid too much electric current. Inverter compressor can operate in high frequency once starts up, so as to produce more heat.



7 Speeds Indoor Fan

Indoor fan speed can be set in 7 levels by wired controller. They are auto, low speed, medium-low speed, medium speed, medium-high speed, high speed and turbo. When the wired controller is on, press "FAN" button to set indoor fan speed circularly as below:

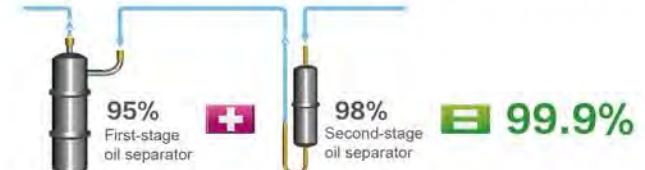


Excellent Performance Ensured by Advanced Technology

Through 10 years of research and development, Gree GMV5 has been further upgraded to a high level from electrical components, mechanical parts, control technology to communication technology.

Two-stage Oil Separation Control Technology (Patented)

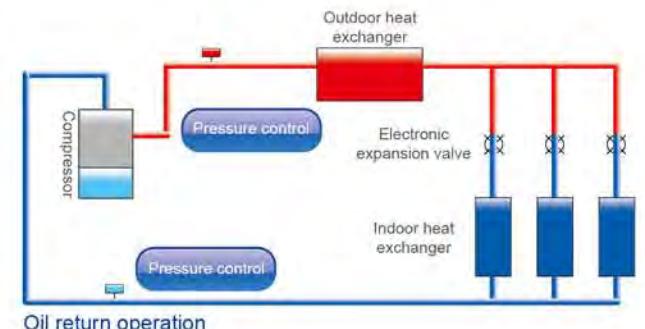
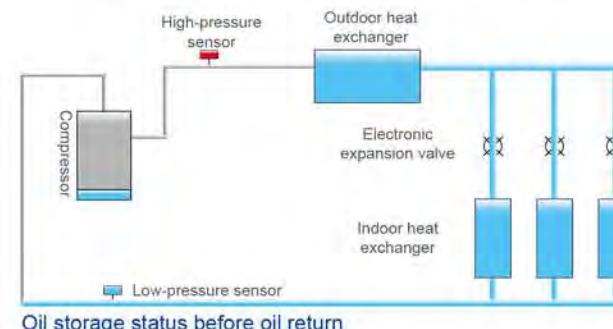
First-stage oil separator adopts a filtration expansion valve with separation efficiency of 98%; Second-stage oil separator will separate the remained 2% refrigerant oil with separation efficiency of 95%. General oil separation efficiency reaches 99.9%.



Oil Return Control Technology

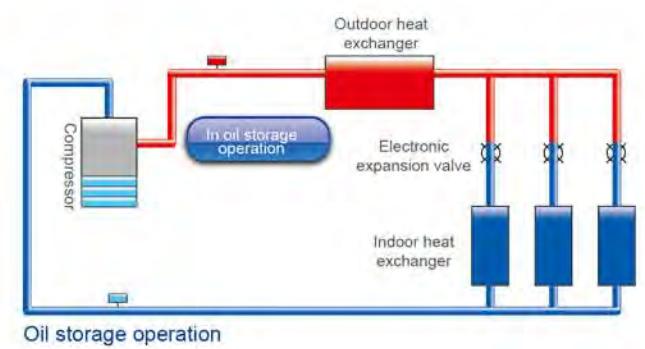
New Oil Return Control

Gree new oil return control technology effectively controls system oil return and oil storage status of each compressor, which greatly improves the operation lifespan of compressor.



Specialized Compressor Oil Storage Control

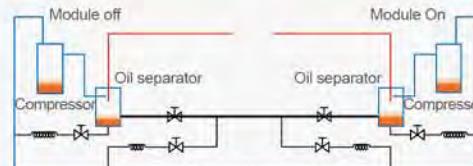
The system applies specialized compressor oil storage technology, which can control the lowest oil level for compressor operation.



Oil Balance Control Technology

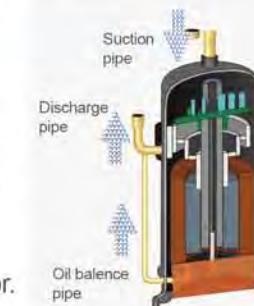
Oil Balance between Each Module

Based on the actual status of each module and compressor, the system can regulate compressor's operation and realize oil balance of each module.



Oil Balance between Each Compressor

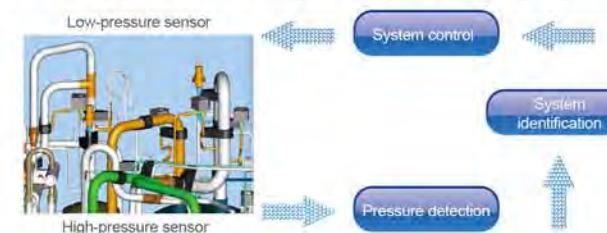
Refrigerant is taken into the compressor by the suction pipe and then runs through the cooling system. It can control the oil level and minimum oil volume required by each compressor so as to realize oil balance between each compressor.



Intelligent Detection Control

Pressure Sensor Detection Control

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.

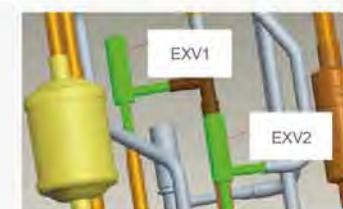


Temperature Sensor Detection Control

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

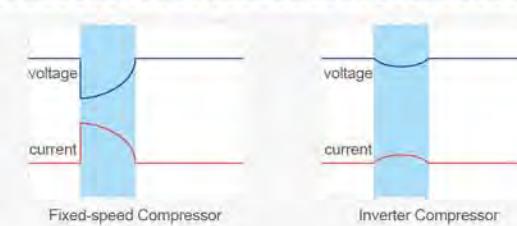
Multi Electronic Expansion Valves Control

Outdoor electronic expansion valve not only has throttling effect, but also control refrigerant flow. The system adopts multi electronic expansion valves control with total 960 grades regulated by two electronic expansion valves, so as to regulate refrigerant flow precisely and ensures reliable operation of system.



Smaller Impact to Power Grid

The start-up frequency of inverter compressor is gradually increased from 0Hz to the appointed operation frequency. The start-up current of compressor rotor is decreased by reducing load torque, hence impact to power grid during start-up is reduced and electromagnetic impact to compressor is reduced too.



Modules Rotation Operating to Maximize Lifespan

Modules 8h rotation operating

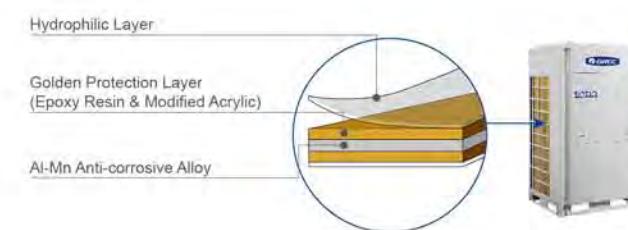
The operating priority sequence of the outdoor unit modules will be changed without restart when the system accumulatively operates for 8 hours, which can maximize the service life of the system.



Highly Anticorrosive Golden Fins

The primary material of Golden Fin is Al-Mn(Aluminum-Manganese) anti-rust alloy, which is coated with the Golden Protection Layer(Components: Epoxy Resin & Modified Acrylic, Silicon free), the anti-corrosive performance in salt-spray testing is 200%~300% higher than normal Blue Fin*.

Note: Salt-spray testing result is from GREE materials chemistry testing laboratory.



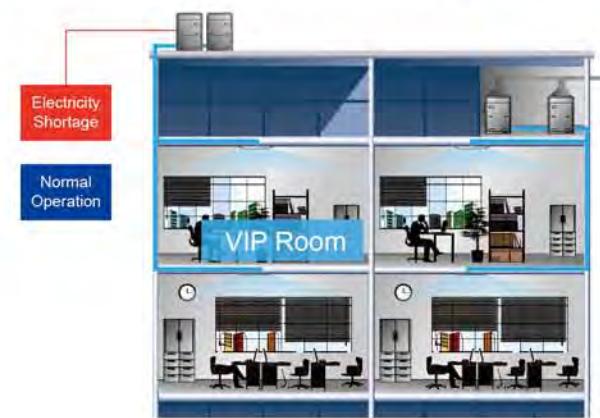
Emergency Auto-Off Control

The outdoor unit can be linked with a fire alarm signal. In case of emergency, unit can automatically turn off to avoid risk or further loss.



Electricity Shortage Identification

The outdoor unit can receive a power signal of electricity shortage. In some places like first-class hotels, if diesel generator is used temporarily for providing electricity, outdoor unit will send the electricity shortage signal to indoor unit. In this case, only VIP rooms can be provided with air conditioning service.



Excellent Emergency Operation Function to Ensure Reliable Operation

Emergency Function

The GMV 5 system can realize a combination of 4 outdoor unit modules. When error is occurred to one of the modules, the others will perform the emergency operation to sustain the air conditioning.



Emergency Operation of Compressor

All the compressors in each single module are DC Inverter based, when one compressor has error, others will perform the emergency operation.



Emergency Operation of Fan

Double-fan design fan ensures that one fan can still work even if the other one has error.



Easy Installation for Various Kinds of Construction

ODU High Static Pressure Design

System has 4 levels of static pressure that can be set. Up to 82Pa pressure can be set for an outdoor unit. This design is especially useful when an outdoor unit needs to be placed indoor.

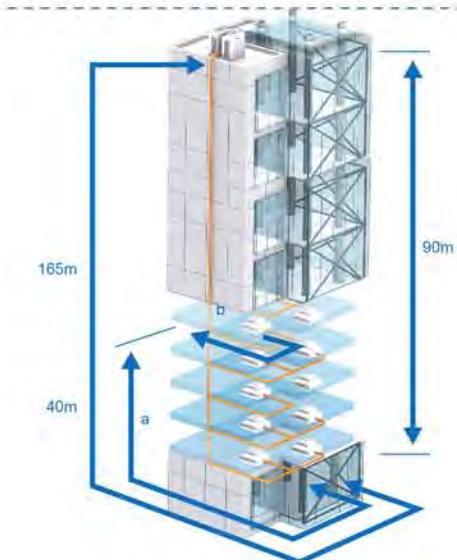


1000m Pipe Design for Flexible Installation

GMV5 system can be applied in different types of building construction. One of its advantages is the simple pipe design, which will simplify the installation and reduce installation cost.

- Max total pipe length reaches 1000m (with limitation)
- Actual pipe length between the outdoor unit and the farthest indoor unit: 165m
- Max height difference between indoor unit and outdoor unit: 90m

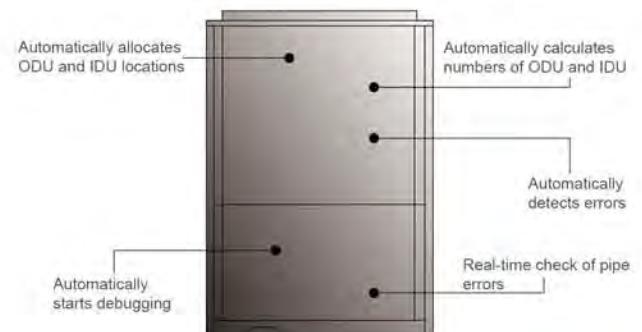
Note:
a: Distance between the first branch and the farthest indoor unit.
b: Distance between the first branch and the nearest indoor unit.
a-b≤40m



Intelligent Debugging for Convenient Construction

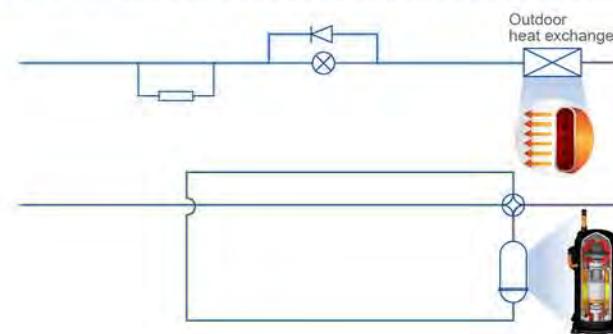
GMV5 has five auto debugging features:

- Automatic allocation of IDU and ODU addresses
- Automatic detection of IDU and ODU quantity
- Automatic detection of errors
- Automatic start-up of debugging
- Real-time judgment of pipe errors



Auto-refrigerant Recovery for Easy Maintenance

When auto refrigerant recovery function is set and cut-off valve of liquid pipe is closed during maintenance, the system will automatically operate compressor, EXV, solenoid valve and fan, etc. Taking advantage of compressor power, the refrigerant is recovered at the condensing side of outdoor unit to achieve environmental effect. Meanwhile, system low pressure is displayed simultaneously during refrigerant recovery.



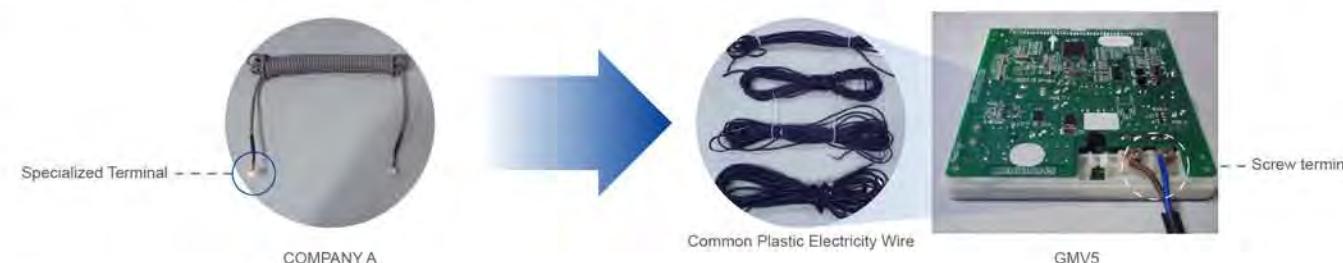
Inspection Window for Convenient Checking

Inspection window is available for quick checking of system operation status. No need to open panel for checking, which will be more time-saving and easier for maintenance.



Flexible Wiring

Common wire can meet the communication demand with no need of specialized communication wire. Common sheath twisted pair cable can be used as there is no polarity requirement.



Auto Addressing of Outdoor and Indoor Unit

CAN network is adopted to achieve auto addressing of outdoor and indoor unit. It can allocate IDU and ODU addresses and detect IDU and ODU quantity, which greatly improves construction efficiency.

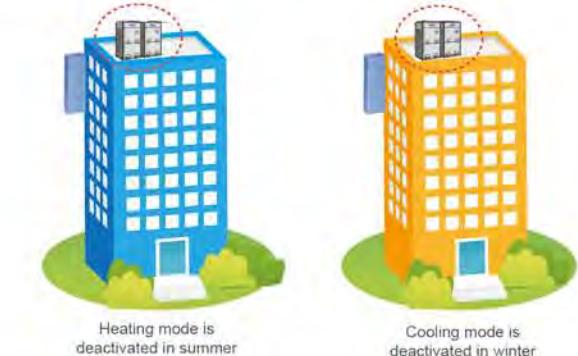


Professional Hotel Functions

Gree GMV5 provides hotels with unique season setting function and key-card control function.

Season Setting

Cooling or heating mode can be deactivated during a certain season to avoid affecting unit's normal operation due to mode conflict.



Key-card Control for Hotel Management

The unit can be turned on or off by inserting or removing the key-card. When the key-card is removed, the system can remember all the setting and stop operation. When the key-card is inserted back, the system will be under standby mode or operate according to the status before removing key-card. It is well suited to hotels, restaurants, etc.



SPECIFICATIONS & PARAMETER OF OUTDOOR UNITS

Outdoor Units Lineup

MODEL	GMV-224WM/B-X (8HP)	GMV-280WM/B-X (10HP)	GMV-335WM/B-X (12HP)	GMV-400WM/B-X (14HP)	GMV-450WM/B-X (16HP)
	GMV-224WM/B-X (8HP)				
	GMV-280WM/B-X (10HP)				
			GMV-335WM/B-X (12HP)		
				GMV-400WM/B-X (14HP)	
					GMV-450WM/B-X (16HP)
	GMV-504WM/B-X (18HP)				
	GMV-560WM/B-X (20HP)				
	GMV-615WM/B-X (22HP)				
	GMV-880WM/B-X (24HP)				
	GMV-730WM/B-X (26HP)				
	GMV-785WM/B-X (28HP)				
	GMV-850WM/B-X (30HP)				
	GMV-900WM/B-X (32HP)				
	GMV-960WM/B-X (34HP)				
	GMV-1010WM/B-X (36HP)				
	GMV-1085WM/B-X (38HP)				
	GMV-1130WM/B-X (40HP)				
	GMV-1180WM/B-X (42HP)				
	GMV-1235WM/B-X (44HP)				
	GMV-1300WM/B-X (46HP)				
	GMV-1350WM/B-X (48HP)				
	GMV-1410WM/B-X (50HP)				
	GMV-1460WM/B-X (52HP)				
	GMV-1515WM/B-X (54HP)				
	GMV-1580WM/B-X (56HP)				
	GMV-1630WM/B-X (58HP)				
	GMV-1685WM/B-X (60HP)				
	GMV-1750WM/B-X (62HP)				
	GMV-1800WM/B-X (64HP)				

Specifications of Outdoor Units

380~415V,50/60Hz

Model	GMV-224WM/B-X	GMV-280WM/B-X	GMV-335WM/B-X	GMV-400WM/B-X	GMV-450WM/B-X	GMV-504WM/B-X ¹	GMV-560WM/B-X ¹	GMV-615WM/B-X ¹
Capacity range	HP	8	10	12	14	16	18	20
Capacity	Cooling kW	22.4	28	33.5	40	45	50.4	56
	Heating kW	25	31.5	37.5	45	50	56	63
EER	kW/kW	4.31	4	3.98	3.76	3.56	3.38	2.97
COP	kW/kW	4.55	4.32	4.17	4.05	3.85	3.84	3.16
Power supply	V/Ph/Hz							
Max. Circuit/Fuse Current	A	15.7/20	20.9/25	24.7/32	28.8/40	33.2/40	36.8/40	43.8/50
Power consumption	Cooling kW	5.2	7	8.41	10.65	12.65	14.9	18.9
	Heating kW	5.5	7.3	9	11.1	13	14.6	21.8
Maximum drive IDU NO.	unit	13	16	19	23	26	31	38
Refrigerant Charge volume	kg	5.9	6.7	8.2	9.8	10.3	12.7	13.5
Sound pressure level	dB(A)	60	61	63	63	65	66	66
Connecting pipe	Liquid mm	Φ9.52						
	Gas mm	Φ19.05	Φ22.2		Φ25.4		Φ28.6	
Oil balance	mm					Φ9.52		
Dimension (W*D*H)	Outline mm	930*765*1605						1340*765*1740
	Package mm	1010*840*1775						1420*840*1910
Net weight/Gross weight	kg	225/235	225/235	285/300	360/375	360/375	400/415	400/415
Loading quantity	40' GP set	24	24	16	16	16	16	16
	40' HQ set	24	24	16	16	16	16	16

208/230V, 60Hz

Model	GMV-224WM/B-F	GMV-280WM/B-F	GMV-335WM/B-F	GMV-400WM/B-F	GMV-450WM/B-F	GMV-504WM/B-F ¹	GMV-560WM/B-F ¹	GMV-615WM/B-F ¹
Capacity range	HP	8	10	12	14	16	18	20
Capacity	Cooling kW	22.4	28	33.5	40	45	50.4	56
	Heating kW	25	31.5	37.5	45	50	56	63
EER	kW/kW	4.31	4	3.98	3.76	3.56	3.38	2.97
COP	kW/kW	4.55	4.32	4.17	4.05	3.85	3.84	3.16
Power supply	Cooling V/Ph/Hz							
MCA	A	36	38	43	60	65	68	74
MOP	A	60	60	60	80	90	93	103
Power consumption	Cooling kW	5.2	7	8.41	10.65	12.65	14.9	18.9
	Heating kW	5.5	7.3	9.0	11.1	13	14.6	21.8
Maximum drive IDU NO.	unit	13	16	19	23	26	31	38
Refrigerant Charge volume	kg	5.9	6.7	8.2	9.8	10.3	12.7	13.5
Sound pressure level	dB(A)	60	61	63	63	65	66	66
Connecting pipe	Liquid mm	Φ9.52						
	Gas mm	Φ19.05	Φ22.2		Φ25.4		Φ28.6	
Oil balance	mm					Φ9.52		
Dimension (W*D*H)	Outline mm	930*765*1605						1340*765*1740
	Package mm	1010*840*1775						1420*840*1910
Net weight/Gross weight	kg	225/235	225/235	285/300	360/375	360/375	400/415	400/415
Loading quantity	40' GP set	24	24	16	16	16	16	16
	40' HQ set	24	24	16	16	16	16	16

440~460V,60Hz

Model	GMV-224WM/B-U<

Specifications of ODU Combination

380~415V, 50/60Hz

Model	Power Supply	Cooling Capacity		Power Input		Dimension(W*D*H)		Airflow Volume	ESP	Noise	Connecting pipe diameter		Oil Balance Pipe	Min. circuit current	Max. fuse current	Weight	
		Cooling	Heating	Cooling	Heating	mm	mm				Liquid	Gas					
		kW	kW	kW	kW	mm	m³/h	Pa	dB(A)	dB(A)	mm	mm	A	A	kg		
GMV-504WM/B-X		50.4	56.5	12.2	12.8	2×(930×765×1605)		2×11400	0~82	64	45	Φ15.9	Φ28.6	Φ9.52	38.6	40	225×2
GMV-560WM/B-X		56	62.5	14	14.6	2×(930×765×1605)		2×11400	0~82	64	45	Φ15.9	Φ28.6	Φ9.52	41.8	50	225×2
GMV-615WM/B-X		61.5	69	15.4	16.3	(930×765×1605)+(1340×765×1605)		11400+14000	0~82	65	45	Φ15.9	Φ28.6	Φ9.52	49.7	50	285+225
GMV-680WM/B-X		68	76.5	17.65	18.4	(930×765×1605)+(1340×765×1605)		11400+14000	0~82	65	45	Φ15.9	Φ28.6	Φ9.52	90.79	125	225+360
GMV-730WM/B-X		73	81.5	19.65	20.3	(930×765×1605)+(1340×765×1605)		11400+14000	0~82	65	45	Φ19.05	Φ31.8	Φ9.52	98.95	110	225+360
GMV-785WM/B-X		78.5	87.5	21.06	22	2×(1340×765×1605)		2×14000	0~82	66	45	Φ19.05	Φ31.8	Φ9.52	105.81	125	285+360
GMV-850WM/B-X		85	95	23.3	24.1	2×(1340×765×1605)		2×14000	0~82	66	45	Φ19.05	Φ31.8	Φ9.52	113.32	125	360×2
GMV-900WM/B-X		90	100	25.3	26	2×(1340×765×1605)		2×14000	0~82	66	45	Φ19.05	Φ31.8	Φ9.52	121.48	125	360×2
GMV-960WM/B-X		96	108	24.65	25.7	2×(930×765×1605)+(1340×765×1605)		2×11400+14000	0~82	67	45	Φ19.05	Φ31.8	Φ9.52	129	125	225×2+360
GMV-1010WM/B-X		101	113	26.65	27.6	2×(930×765×1605)+(1340×765×1605)		2×11400+14000	0~82	67	45	Φ19.05	Φ38.1	Φ9.52	137.6	150	225×2+360
GMV-1065WM/B-X	380~415V, 3Ph-50/60Hz	106.5	119	28.06	29.3	(930×765×1605)+2×(1340×765×1605)		11400+2×14000	0~82	67	45	Φ19.05	Φ38.1	Φ9.52	144.02	150	225+285+360
GMV-1130WM/B-X		113	126.5	30.3	31.4	(930×765×1605)+2×(1340×765×1605)		11400+2×14000	0~82	67	45	Φ19.05	Φ38.1	Φ9.52	151.53	175	225+360×2
GMV-1180WM/B-X		118	131.5	32.3	33	(930×765×1605)+2×(1340×765×1605)		11400+2×14000	0~82	67	45	Φ19.05	Φ38.1	Φ9.52	159.07	175	225+360×2
GMV-1235WM/B-X		123.5	137.5	33.71	35	3×(1340×765×1605)		3×14000	0~82	68	45	Φ19.05	Φ38.1	Φ9.52	166.55	175	285+360×2
GMV-1300WM/B-X		130	145	35.95	37.1	3×(1340×765×1605)		3×14000	0~82	68	45	Φ19.05	Φ38.1	Φ9.52	174.05	175	360×3
GMV-1350WM/B-X		135	150	37.95	39	3×(1340×765×1605)		3×14000	0~82	68	45	Φ19.05	Φ38.1	Φ9.52	182.22	200	360×3
GMV-1410WM/B-X		141	158	37.3	38.7	2×(930×765×1605)+2×(1340×765×1605)		2×11400+2×14000	0~82	69	47	Φ22.2	Φ44.5	Φ9.52	189.74	200	225×2+360×2
GMV-1460WM/B-X		146	163	39.3	40.6	2×(930×765×1605)+2×(1340×765×1605)		2×11400+2×14000	0~82	69	47	Φ22.2	Φ44.5	Φ9.52	197.9	200	225×2+360×2
GMV-1515WM/B-X		151.5	169	40.71	42.3	(930×765×1605)+3×(1340×765×1605)		11400+3×14000	0~82	69	47	Φ22.2	Φ44.5	Φ9.52	204.76	200	225+285+360×2
GMV-1580WM/B-X		158	176.5	42.95	44.4	(930×765×1605)+3×(1340×765×1605)		11400+3×14000	0~82	69	47	Φ22.2	Φ44.5	Φ9.52	212.27	225	225+360×3
GMV-1630WM/B-X		163	181.5	44.95	46.3	(930×765×1605)+3×(1340×765×1605)		11400+3×14000	0~82	69	49	Φ22.2	Φ44.5	Φ9.52	220.43	225	225+360×3
GMV-1685WM/B-X		168.5	187.5	46.36	48	4×(1340×765×1605)		4×14000	0~82	70	49	Φ22.2	Φ44.5	Φ9.52	227.29	225	285+360×3
GMV-1750WM/B-X		175	195	48.6	50.1	4×(1340×765×1605)		4×14000	0~82	70	49	Φ22.2	Φ44.5	Φ9.52	234.8	250	360×4
GMV-1800WM/B-X		180	200	50.6	52	4×(1340×765×1605)		4×14000	0~82	70	49	Φ22.2	Φ44.5	Φ9.52	242.96	250	360×4

208/230V, 60Hz

Model	Power Supply	Cooling Capacity		Power Input		Dimension(W*D*H)				Airflow Volume	ESP	Noise	Noise at Night		Connecting pipe diameter		Oil Balance Pipe	Min. circuit current	Max. fuse current	Weight
		Cooling	Heating	Cooling	Heating	mm	mm	mm	mm				Pa	dB(A)	dB(A)	mm	mm	A	A	
		kW	kW	kW	kW	mm	Pa	dB(A)	dB(A)				kg	kg	kg	kg	kg	kg	kg	
GMV-504WM/B-F		50.4	56.5	12.2	12.8	2×(930×765×1605)		2×11400	0~82	64	45	Φ15.9	Φ28.6	Φ9.52	68.95	90	225×2			
GMV-580WM/B-F		56	62.5	14	14.6	2×(930×765×1605)		2×11400	0~82	64	45	Φ15.9	Φ28.6	Φ9.52	76.47	90	225×2			
GMV-615WM/B-F		61.5	69	15.4	16.3	(930×765×1605)+(1340×765×1605)		11400+14000	0~82	65	45	Φ15.9	Φ28.6	Φ9.52	83.28	110	285+225			
GMV-680WM/B-F		68	76.5	17.65	18.4	(930×765×1605)+(1340×765×1605)		11400+14000	0~82	65	45	Φ15.9	Φ28.6	Φ9.52	90.79	125	225+360			
GMV-730WM/B-F		73	81.5	19.65	20.3	(930×765×1605														

GMV5 Mini & Slim



Key Features

All DC Inverter Technology to Improve Compression Efficiency

All DC inverter compressor and high-performance high pressure chamber are adopted to reduce loss of overheat and improve compression efficiency from direct intake. Compared with low pressure chamber, the compression efficiency is improved. High-efficient permashield motor is adopted to provide better performance than traditional DC inverter compressor.

All DC Inverter Compressor

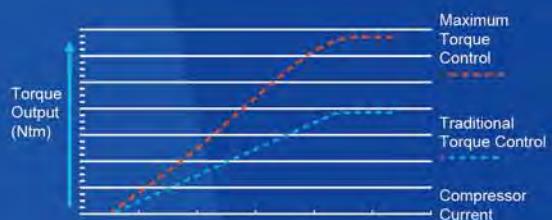
- All DC inverter compressor is used in this system. It can directly intake gas to reduce loss of overheat and improve efficiency.



- High-efficient permashield motor is adopted to provide better performance than traditional DC inverter compressor.

Technology of Maximum Torque TControl with Minimum Current

It can reduce energy loss caused by device winding so as to realize higher efficiency.

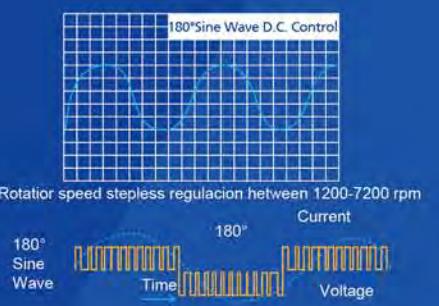
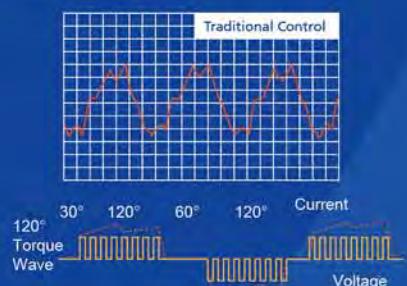


Low-frequency Torque Control

It can directly control motor torque, through which fan motor can run at a low speed. Users will feel more comfortable while requirements of the system are also met.

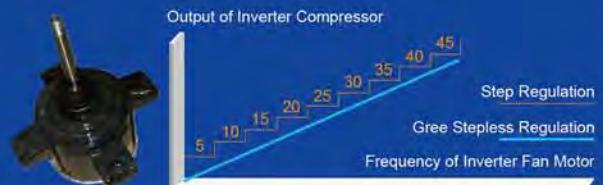


- 180° Sine Wave DC Speed Varying Technology
It can satisfy various places' demands for different temperature and is able to save a great deal of electricity and provide users with utmost comfort at the same time.

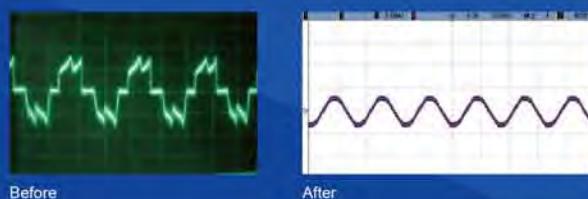


Sensorless DC Inverter Fan Motor

- Stepless speed regulation ranges from **5Hz** to **44Hz**. Compared with traditional inverter motors, the operation is more energy-saving.

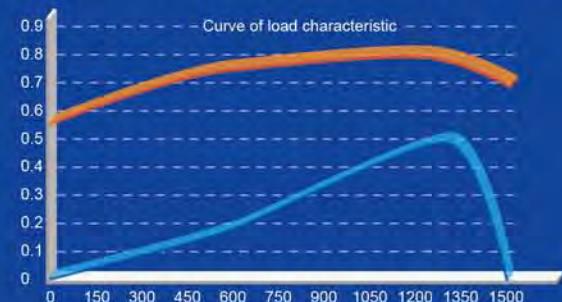


- Sensorless control technology guarantees lower noise, less vibration and steadier operation.



Sensorless DC Inverter Fan Motor

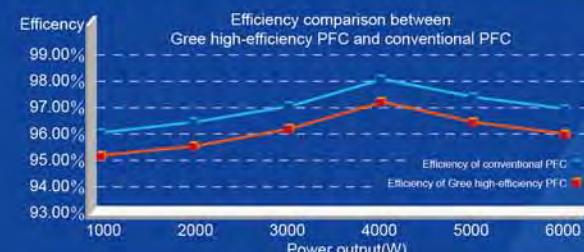
The indoor unit adopts high-efficiency brushless DC motor. Compared with conventional motor, the efficiency of brushless DC motor is improved by more than **30%**. Meanwhile, the design of evaporation capacity flow is optimized through emulation software of refrigeration system and the heat exchange amount of evaporator is greatly improved.



High-efficiency Digital PFC Control *

High-efficiency PFC control technology is adopted with efficiency improved by about 1% compared with conventional PFC. For the air conditioner with rated power of 5kW, **50W** of electricity can be saved every hour and **1.2kW** of electricity can be saved every day.

*This feature is applicable for GMV5 Mini only.



Wider Operation Condition Range

The unit adopts DC motor with more accurate high pressure control, which effectively solves the high pressure control problem in low ambient temperature cooling. So the operation range in cooling is wider.

Company A	Gree GMV5 Mini	Gree GMV5 Slim
Cooling: 10~48°C Heating: -20~27°C	Cooling: -5~48°C Heating: -20~27°C	Cooling: -5~50°C Heating: -20~27°C

Comfortable and Quiet Mode

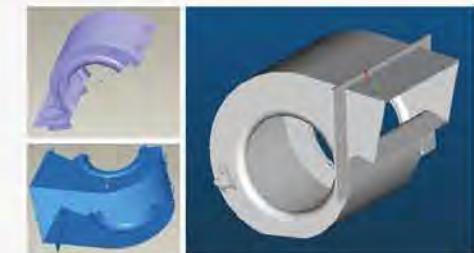
Low Noise of Outdoor Unit

- The advanced sub-cooling control technology is applied to reduce the liquid flow noise of indoor unit in cooling operation.
- Noise of outdoor unit can be as low as **45dB** thanks to noise optimized design or fan system and compressor system, and multiple kinds of quiet modes of outdoor unit.



Low Noise of Indoor Unit

- The pioneering and patented high-efficiency centrifugal fan blade and low-noise volute are adopted. Meanwhile, the imported silent valve is adopted to reduce noise of entire unit as low as 22db(A).
- By adopting the optimal inlet angle of centrifugal fan blade and optimal diameter ratio between internal and external circles of impeller, the air volume is increased and fan noise is decreased greatly.
- The advanced supercooling control technology and the oil-return technology under heating mode has efficiently solved the problem of liquid flow noise of indoor unit, which improved the sound quality of indoor unit.



Intelligent Temperature Control Technology

Intelligent temperature control technology is adopted for super fast cooling or heating, so that indoor temperature will reach set temperature more quickly.

Fast Cooling

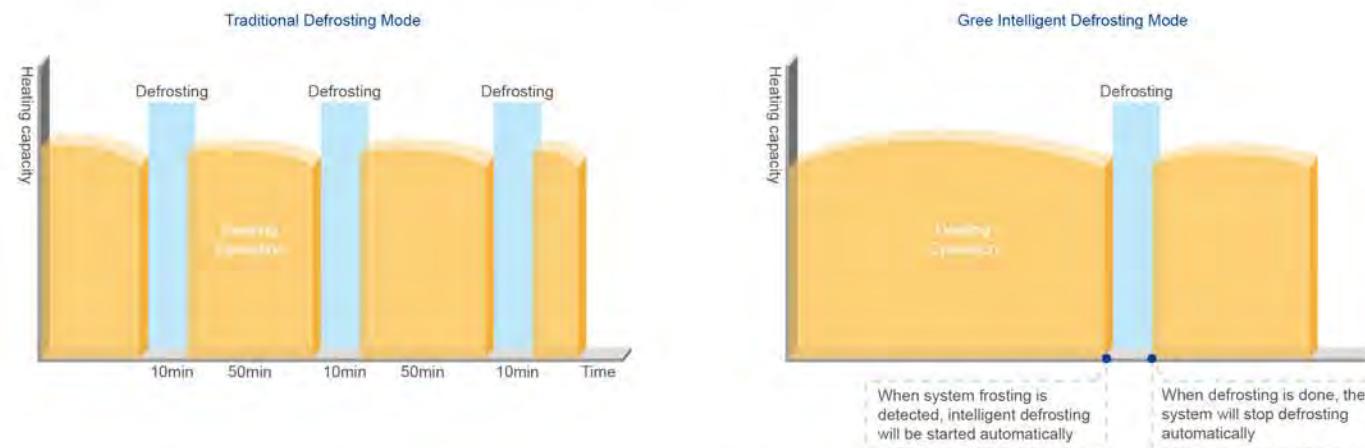


Fast Heating



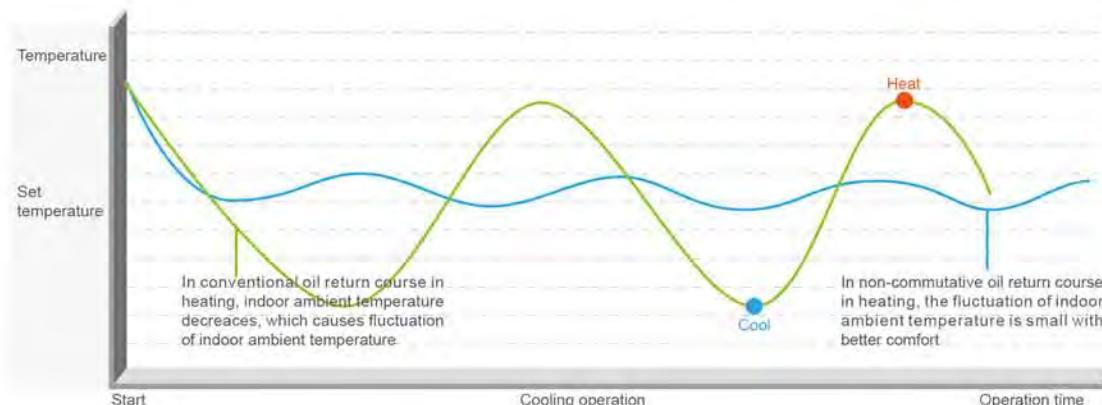
Comfortable Heating

Advanced intelligent defrosting mode is adopted. Gree advanced intelligent defrosting mode will choose the best defrosting way according to outdoor temperature and operation status to realize intelligent defrosting, effectively improving heating effect and performance. While in traditional defrosting mode, timing defrosting is adopted, which not only affects comfort but also reduces energy efficiency.



Non-commutative Oil Return Technology in Heating

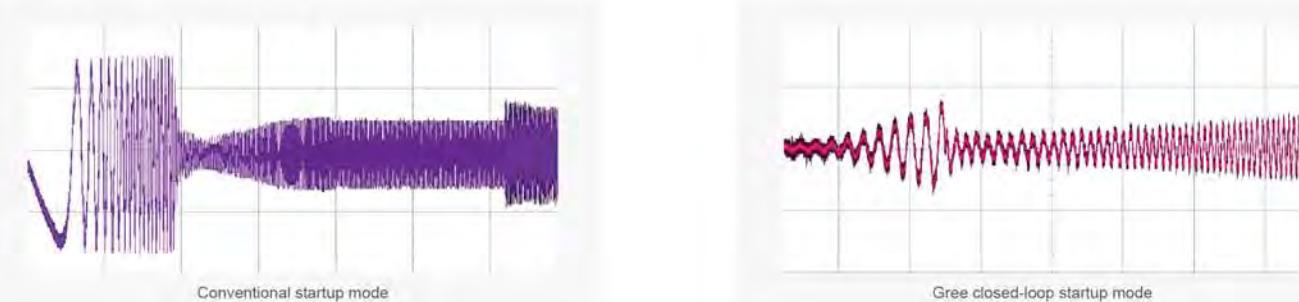
The unit can achieve non-commutative oil return in heating when outdoor ambient temperature is within 0~20°C. Thanks to this technology, indoor ambient temperature is more stable and comfort is improved in heating mode.



Reliable Operation

Compressor Closed-loop Startup Technology with More Reliable Startup

The self-innovative closed-loop startup control technology is adopted. Thanks to this technology, the startup current is small and startup is more reliable.



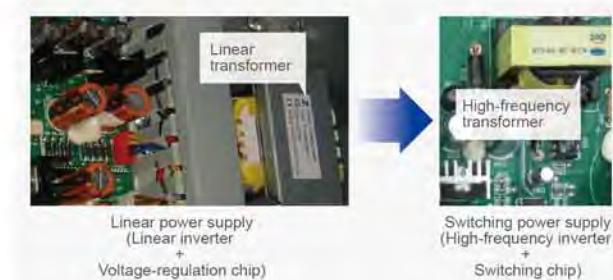
High Anti-interference Ability

The latest CAN bus communication technology is adopted, with non-polar communication and high anti-interference ability. Common communication wire can meet the communication demand with no need of specialized shielded wire. The customers can buy the communication wire by themselves, greatly reducing installation difficulties.



Advanced High-frequency Transformer with More Stable Voltage

- The advanced switching power supply is adopted with lower power consumption and higher power efficiency.
- Wide voltage-regulation range ensures stable voltage output when the voltage of grid fluctuates.
- Compared with conventional transformer, the size of high-frequency transformer is small and the weight is light.



Ultra-long Connection Pipe for More Convenient Connection

Under the subcooling control technology gained by adding subcooler, the indoor unit and outdoor unit of GMV5 mini can operate reliably with longer connection pipe.

	Company A	Gree GMV5 Slim	Gree GMV5 Mini
Total piping length	150m	300m	300m
Equivalent piping length	70m	100m	150m

Top Advanced Light and Compact Size

GMV5 slim adopts small and compact size design. The dimension of the unit is 1430(H)×940(W) ×320(D). Compared with the normal product with the same capacity, size and weight are reduced a lot.



Easy Installation with Lower Construction Cost

The outdoor unit of GMV5 slim is with small size and light weight. No need fork lifter and crane for movement and installation



Movement by Stairs and Elevator

The outdoor unit of GMV5 slim is with compact and small size for saving space and easy movement. It can be carried by elevator or stairs.

GMV5 Mini & Slim Line Up

Mini Line up

HP	Model	Product Outlook
4	GMV-120WL/A-T	
5	GMV-140WL/A-T	
6	GMV-160WL/A-T	

Slim Line up

HP	Model	Product Outlook
7	GMV-H200WL/A-X	
8	GMV-H224WL/A-X	
9	GMV-H250WL/A-X	
10	GMV-H280WL/A-X	
11	GMV-H308WL/A-X	
12	GMV-H335WL/A-X	

Mini

50/60 Hz

Model	GMV-120WL/A-T ¹	GMV-140WL/A-T ¹	GMV-160WL/A-T ¹
Capacity range	HP	4	5
Capacity	Cooling kW	12.1	14
	Heating kW	14	16.5
EER	W/W	3.97	3.52
COP	W/W	4.28	4.14
Power supply	V/Ph/Hz	220~240V-1Ph-50Hz&208~230V-1Ph-60Hz	
Max. Circuit/Fuse Current	A	28.1/32	31.8/32
Power consumption	Cooling kW	3.05	3.98
	Heating kW	3.27	3.99
Maximum drive IDU NO.	unit	7	8
Refrigerant Charge volume	kg	5	5
Sound pressure level	dB(A)	55	56
Connecting pipe	Liquid mm		Φ9.52
	Gas mm		Φ15.87
Dimension	Outline mm		900*340*1345
(W*D*H)	Package mm		998*458*1515
Net weight/Gross weight	kg	110/120	110/120
Loading quantity	40' GP set	57	57
	40' HQ set	57	57

*1: This series outdoor unit cannot match with US air handler, fresh air processing unit and high static ESP duct type unit.

Slim

50/60 Hz

Model	GMV-H200WL/A-X ²	GMV-H224WL/A-X ²	GMV-H250WL/A-X ²	GMV-H280WL/A-X ²	GMV-H308WL/A-X ²	GMV-H335WL/A-X ²
Capacity range	HP	7	8	9	10	11
Capacity	Cooling kW	20.0	22.4	24.5	28.0	30.8
	Heating kW	22.4	25.0	26.0	31.5	33.9
EER	W/W	3.1	3.1	3.1	2.97	2.99
COP	W/W	4.0	4.1	3.7	3.66	3.59
IPLV	Cooling kW/kW	6.1	6.1	6.0	6.0	6.0
Power supply	V/Ph/Hz				380~415~3Ph~50/60Hz	
Max. Circuit/Fuse Current	A	25	25	25	25	25
Power consumption	Cooling kW	6.5	7.2	8.0	9.4	10.3
	Heating kW	5.6	6.1	7.0	8.6	9.6
Maximum drive IDU NO.	unit	12	13	15	17	18
Refrigerant Charge volume	kg	5.5	5.5	6.0	7.5	8.0
Sound pressure level	Cooling dB(A)	57	58	59	59	59
	Heating dB(A)	58	59	60	60	60
Connecting pipe	Liquid mm	Φ9.52	Φ9.52	Φ9.52	Φ12.7	Φ12.7
	Gas mm	Φ19.05	Φ19.05	Φ19.05	Φ25.4	Φ25.4
Dimension	Outline mm	940*320*1430	940*320*1430	940*320*1430	940*460*1615	940*460*1615
(W*D*H)	Package mm	1033*433*1580	1033*433*1580	1033*433*1580	1033*573*1765	1033*573*1765
Net weight/Gross weight	kg	133/144	133/144	133/144	160/175	165/180
Loading quantity	40' GP set	54	54	54	44	44
	40' HQ set	54	54	54	44	44

Note:

① Testing conditions of rated cooling capacity: indoor 27°CDB/19°CWB, outdoor 35°CDB, connection pipe length of 5m, no height difference between units.

② Testing conditions of rated heating capacity: indoor 20°CDB, outdoor 7°CDB/6°CWB, connection pipe length of 5m, no height difference between units.

③ The total indoor unit capacity shall be within 50% to 130% of outdoor unit capacity. Correction of other parameters can be referred to the unit capacity correction sheet.

④ The above-mentioned parameters are tested with standard connection pipe length. In actual engineering, please arrange correction according to the capacity correction with long connection pipe.

*2: This product is under development. The parameters are estimated, please refer to the value on the nameplate.

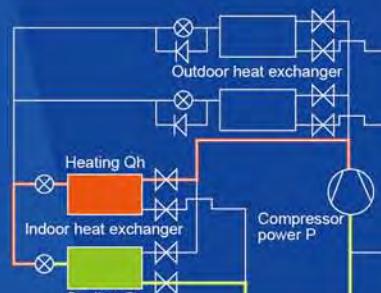
GMV5 Heat Recovery



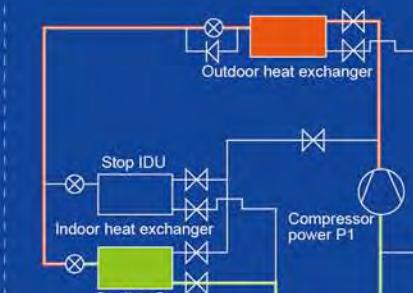
Key Features

High Efficiency

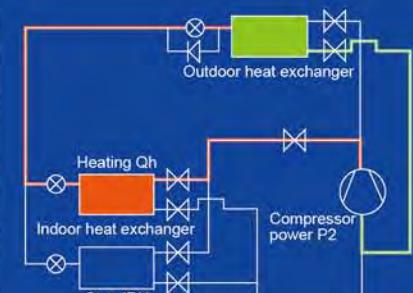
GMV5 Heat Recovery System embodies the excellent features of GMV5 (DC inverter technology, DC fan linkage control, precise control of capacity output, balancing control of refrigerant, original oil balancing technology with high pressure chamber, high-efficiency output control, low-temperature operation control technology, super heating technology, high adaptability for project, environmental refrigerant). Its energy efficiency is improved by 78% compared with conventional multi VRF.



$$\text{ECOP of heat recovery system} \\ \xi = (13.0 + 17.0) / 4.5 = 6.67$$



$$\text{EER of common system} \\ \xi_1 = 13.0 / 3.0 = 4.33$$



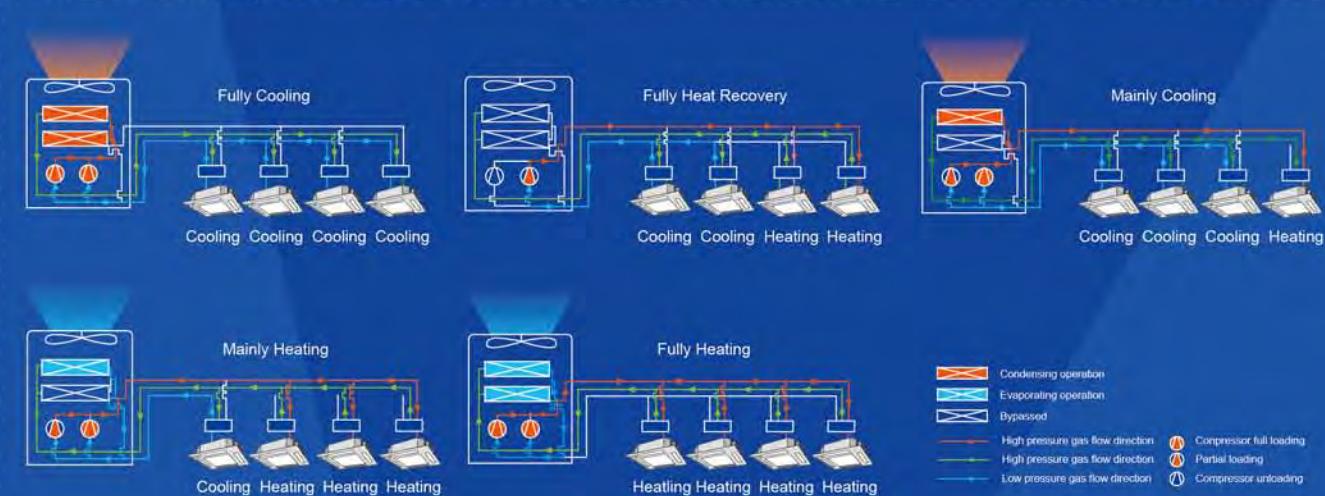
$$\text{COP of common system} \\ \xi_2 = 17.0 / 5.0 = 3.4$$

When the cooling capacity and heating capacity of common system are equivalent to the capacity of heat recovery system, its energy efficiency ratio is:
 $\xi_2 = (13.0 + 17.0) / (3.0 + 5.0) = 30.0 / 8.0 = 3.75$

The energy efficiency ratio of heat recovery system is higher than common system:
 $(6.67 - 3.75) \times 100\% / 3.75 = 78\%$

Note: Working conditions of above-mentioned test: outdoor temperature 7°C/6°C, indoor temperature in cooling 27°C/19°C, indoor temperature in heating 20°C/15°C.

• Five Efficient Operation Modes



All DC Inverter Technology to Improve Compression Efficiency

- All DC inverter compressor is used in this system. It can directly intake gas to reduce loss of overheat and improve efficiency.



- High-efficient permashield motor is adopted to provide better performance than traditional DC inverter compressor.



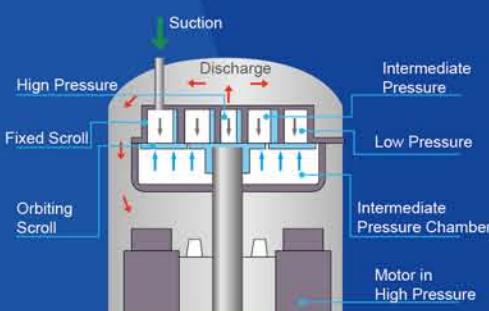
High Pressure Chamber Design

What's high pressure chamber?

The low-temperature and low-pressure refrigerant gas inhaled from the suction inlet of compressor will change to high-temperature and high-pressure gas after compression by scroll plate. Then the gas will go out from the exhaust at the center of fixed scroll and get into the lower chamber of compressor, so that the chamber of compressor is in high temperature and high pressure.

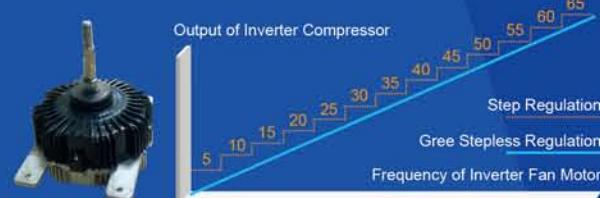
What's the benefits of high pressure chamber?

High pressure chamber compressor inhales directly to reduce overheat suction loss and improve compression efficiency.



Sensorless DC Inverter Fan Motor

Stepless speed regulation ranges from **5Hz** to **65Hz**. Compared with traditional inverter motors, the operation is more energy-saving.



Sensorless control technology guarantees lower noise, less vibration and steadier operation.



Wide Range of Voltage to Ensure a Steady System Running

Working voltage range of GMV5 system has been improved to **320V-460V**, which surpasses the national standard of 342V-420V. For places with unsteady voltage, this system can still be running well.



Wider Applicable Location

GMV5 can realize a combination of 4 outdoor unit modules connecting with as many as **80** indoor units. It's especially applicable for business building or hotels.

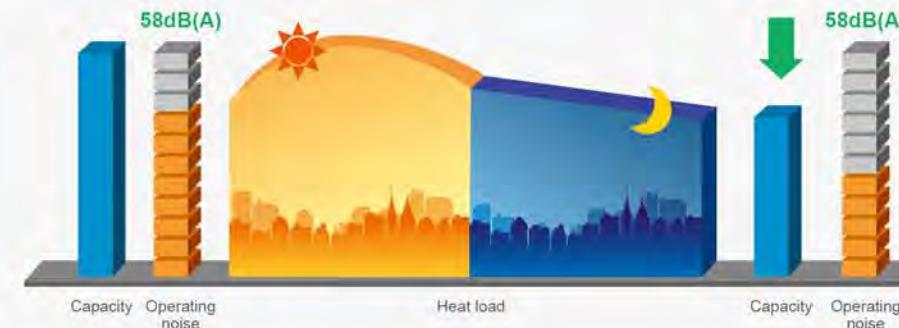


Comfortable Design for A Better Life

Intelligent Quiet Function at Night

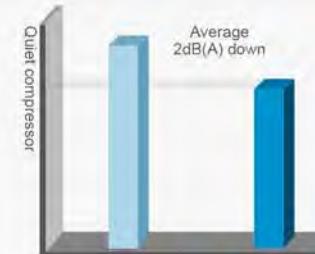
- Quiet at night**

Intelligently adjustment of outdoor fan control can minimize the noise during night time. Up to 8dB(A) can be reduced and operation noise at night is as low as 50dB(A).



- Low noise design**

HP Chamber compressor has lower exhaust pressure fluctuation so that noise is lower.



The optimized design of condensing fan blade reduces the air flow turbulence among blades, so that the noise is lower.



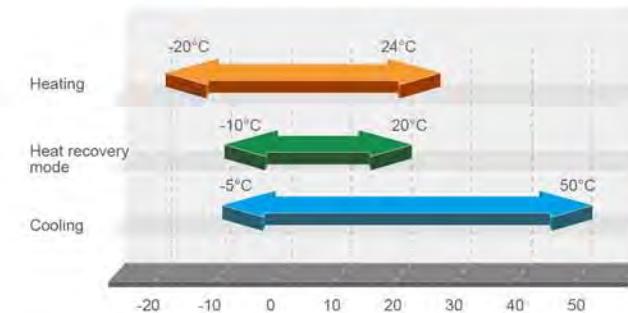
Wide Operation Range

The unit can operates in wide range, greatly reducing the ambient temperature limitation.

Note:

If the required capacity of indoor units is 50% higher than outdoor unit,cooling range may be lower to -15°C.

If the required capacity of indoor units is 50% higher than outdoor unit,cooling range may be up to -5°C



Comfortable Heating

Advanced intelligent defrosting mode is adopted. Gree advanced intelligent defrosting mode will choose the best defrosting way according to outdoor temperature and operation status to realize intelligent defrosting, effectively improving heating effect and performance. While in traditional defrosting mode, timing defrosting is adopted, which not only affects comfort but also reduces energy efficiency.



Individual Control for More Energy Saving

The set temperature of each room may vary by the individual thermostat control of each indoor unit.
The cooling and heating operation can be performed at the same time.



Excellent Performance Ensured by Advanced Technology

Modules Rotation Operating to Maximize Lifespan

Modules 8h rotation operating

The operating priority sequence of the outdoor unit modules will be changed without restart when the system accumulatively operates for 8 hours, which can maximize the service life of the system.



Excellent Emergency Operation Function to Ensure Reliable Operation

Emergency Function

The GMV 5 system can realize a combination of 4 outdoor unit modules. When error is occurred to one of the modules, the others will perform the emergency operation to sustain the air conditioning.



Emergency Operation of Compressor

All the compressors in each single module are DC Inverter based, when one compressor has error, others will perform the emergency operation.

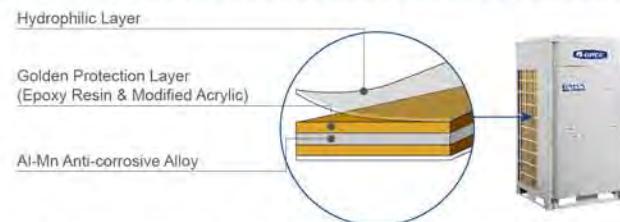


Emergency Operation of Fan

Double-fan design ensures that one fan can still work even if the other one has error.

Highly Anticorrosive Golden Fins

The primary material of Golden Fin is Al-Mn(Aluminum-Manganese) anti-rust alloy, which is coated with the Golden Protection Layer (Components: Epoxy Resin & Modified Acrylic, Silicon free), the anti-corrosive performance in salt-spray testing is 200%~300% higher than normal Blue Fin*.

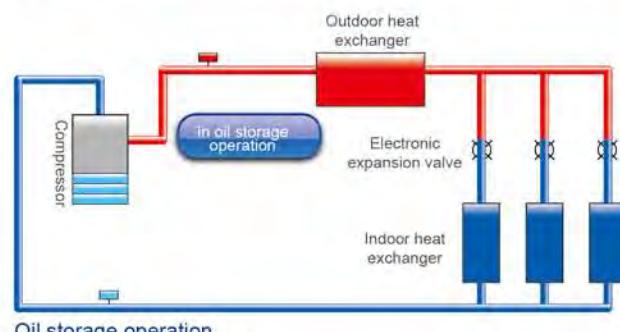
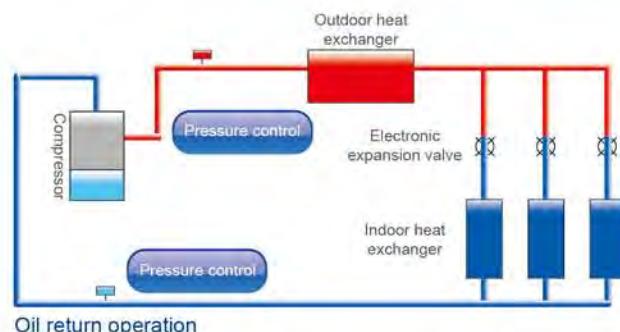
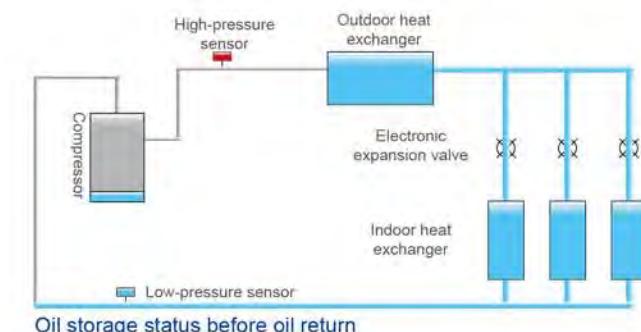


Note: Salt-spray testing result is from GREE materials chemistry testing laboratory.

Oil Return Control Technology

New Oil Return Control

Gree new oil return control technology effectively controls system oil return and oil storage status of each compressor, which greatly improves the operation lifespan of compressor.

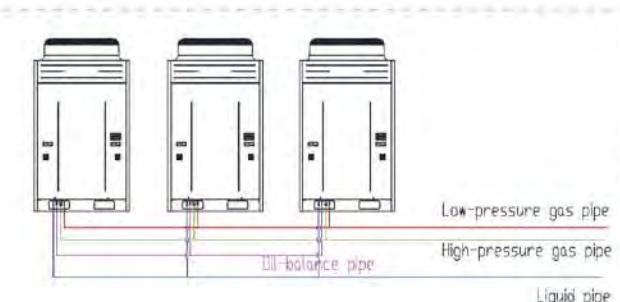
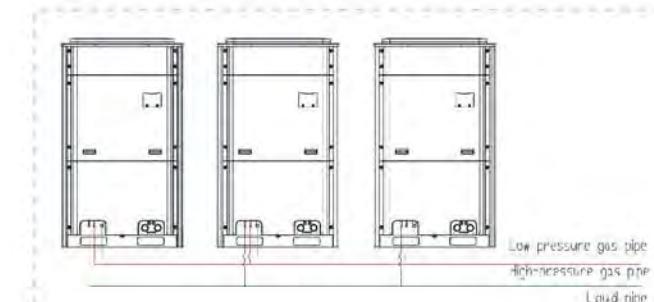


Specialized Compressor Oil Storage Control

The system applies specialized compressor oil storage technology, which can control the lowest oil level for compressor operation.

Without External Oil-balanced Pipe Design

The unit is without external oil-balanced pipe design, reducing system pipeline connection and easy for engineering installation. The system will allocate lubricating oil of each module according to its demand, which is more intelligent, more efficient and more equal.



Easy Installation and Maintenance

Compact Design

With compact design, the outdoor unit can be carried to the roof of building through elevator, with no need of crane. It is easier for delivery and installation.



Easy Transportation

Optimized base frame

Optimized base frame, the locating and fixing of the outdoor unit during installation is more convenient and reliable.



Transportable by forklift



Five-way piping connection

Piping and wiring are available to the front and back, left and right, and bottom.

The five-way piping connection reduces installation difficulty and cost, improves the installation efficiency.



Easy Maintenance

- Inspection window is available for quick checking of system operation status. No need to open panel for checking, which will be more time-saving and easier for maintenance.



Error Display & Self-diagnostic Function

Through LED display(different combinations of ON, OFF, or BLINK) on the main board, the malfunction can be judged.



GMV5 HR Line Up

HR Line up

HP	Model	Product Outlook
8HP	GMV-Q224WM/B-X	
10HP	GMV-Q280WM/B-X	
12HP	GMV-Q335WM/B-X	
14HP	GMV-Q400WM/B-X	
16HP	GMV-Q450WM/B-X	

Model	Product Outlook
NCHS1B	
NCHS4B	
NCHS8B	

Specifications and Parameters

50/60 Hz

Model	GMV-Q224WM/B-X	GMV-Q280WM/B-X	GMV-Q335WM/B-X	GMV-Q400WM/B-X	GMV-Q450WM/B-X
Capacity range	HP	8	10	12	14
Capacity	Cooling kW	22.4	28	33.5	40
	Heating kW	25	31.5	37.5	45
EER	W/W	4.07	3.73	3.76	3.54
COP	W/W	4.17	3.89	3.68	3.85
IPLV	Cooling kW/kW	/	/	/	/
Power Supply	V/Ph/Hz		380~415V-3Ph-50/60Hz		
Max. circuit/fuse current	A	15.7/20	20.9/25	24.7/32	28.8/40
Power consumption	Cooling kW	5.5	7.5	8.9	11.3
	Heating kW	6	8.1	10.2	11.7
Maximum drive IDU NO.	unit	13	16	19	23
Refrigerant Charge volume	kg	6.2	7.1	8.6	10.2
Sound pressure level	dB(A)	60	61	63	63
Connecting pipe	Liquid mm	Φ9.52		Φ12.7	
	Gas(Low pressure) mm	Φ19.05	Φ22.2	Φ25.4	Φ28.6
	Gas(High pressure) mm		Φ19.05		Φ22.2
Dimension (W*D*H)	Outline mm	930*765*1605		1340*765*1605	
	Package mm	1010*840*1775		1420*840*1775	
Net weight/Gross weight	kg	233/243	233/243	303/318	360/375
Loading quantity	40' GP set	24	24	16	16
	40' HQ set	24	24	16	16

50 Hz

Model	NCHS1B	NCHS4B	NCHS8B	
Max.IDU Branches	unit	1	4	8
No. of connectable IDU of each branch	unit	8	8	8
Total Connectable IDU	unit	8	32	64
Max. Capacity of each branch	kW/kW	14	14	14
Max. Capacity of connectable IDU	kW/kW	14	45	65
Power supply	V/Ph/Hz	220-240V-1Ph-50Hz		
Power consumption	W	20	30	30
Maximum drive IDU NO.	unit	1	4	8
Outdoor Unit Piping Connection	Liquid mm	Φ9.52	Φ12.7	Φ15.9
	Gas(Low pressure) mm	Φ15.9	Φ22.2	Φ22.2
	Gas(High pressure) mm	Φ19.05	Φ28.6	Φ28.6
Indoor Unit Piping Connection	Liquid mm	Φ9.5	Φ9.5	Φ9.5
	Gas mm	Φ15.9	Φ15.9	Φ15.9

Key Features of Indoor Units

High Static Pressure Duct Type Indoor Unit



High static pressure design

Static pressure can be up to 150Pa, especially suitable for places in need of long distance airflow.

Easy maintenance

The system has maintenance port for easy maintenance.

Convenient installation

You can choose circular air duct or rectangular air duct according to actual needs. Or you can choose different ways of air return.

Protection function

Anti-freezing protection, fan motor overload protection, temperature sensor malfunction protection.

Low Static Pressure Duct Type Indoor Unit



• Low static pressure, low noise

Especially suitable for rooms of compact structure or small installation space. Also, it provides you with a comfortable and quiet living environment.

• Intelligent drainage device

Water height difference up to 1.0m, which can effectively drain out condensing water and save space.

Note: Please specify if you need this function.

• Convenient installation

Tab type plastic filter, detachable fan motor, independent water pump assembly and electric box assembly, all for convenient maintenance.

• Protection function

Water overflow protection, anti-freezing protection, fan motor overload protection, temperature sensor malfunction protection.

Slim Ducted Type Indoor Unit



• Highly Efficient & Energy-saving

High-efficiency DC brushless motor is used. Its efficiency is improved by over 30% compared with common motor. Evaporator flow path adopts simulating optimized design via the refrigeration system simulation software, which has greatly increased the heat exchange capacity of evaporator.

• Slim & Small

The unit is only 200mm's thick and 450mm's deep. Suspended ceiling doesn't have to be very high. It is suitable for ordinary rooms.

• Wiring of Electric Control Box

Mounting board of electric control box elements are arranged at both sides of the mounting board of fan motor. There is a wire-cross notch on each side so that wiring at both sides of the mounting board of fan motor is convenient and efficient. Strong and weak current are also separated to ensure the effectiveness of weak current signal transmission.

• Protection Functions

Anti-freezing protection, fan motor built-in overload protection, temperature sensor error protection

• Ultra-quiet

High-efficiency centrifugal fan and ultralow noise volute are developed with ANSYS and Fluent. They have also gained national patents. Meanwhile, inlet mute valve is adopted so that noise of the complete unit is greatly reduced.

• Fast & Strong

Intelligent temperature control technology is adopted. Cooling/ Heating function is fast and strong so that room temperature can quickly reach set temperature.

• Flexible Installation

Based on the requirements of building and utilization, different ways of air return and different air supply static pressure can be selected.

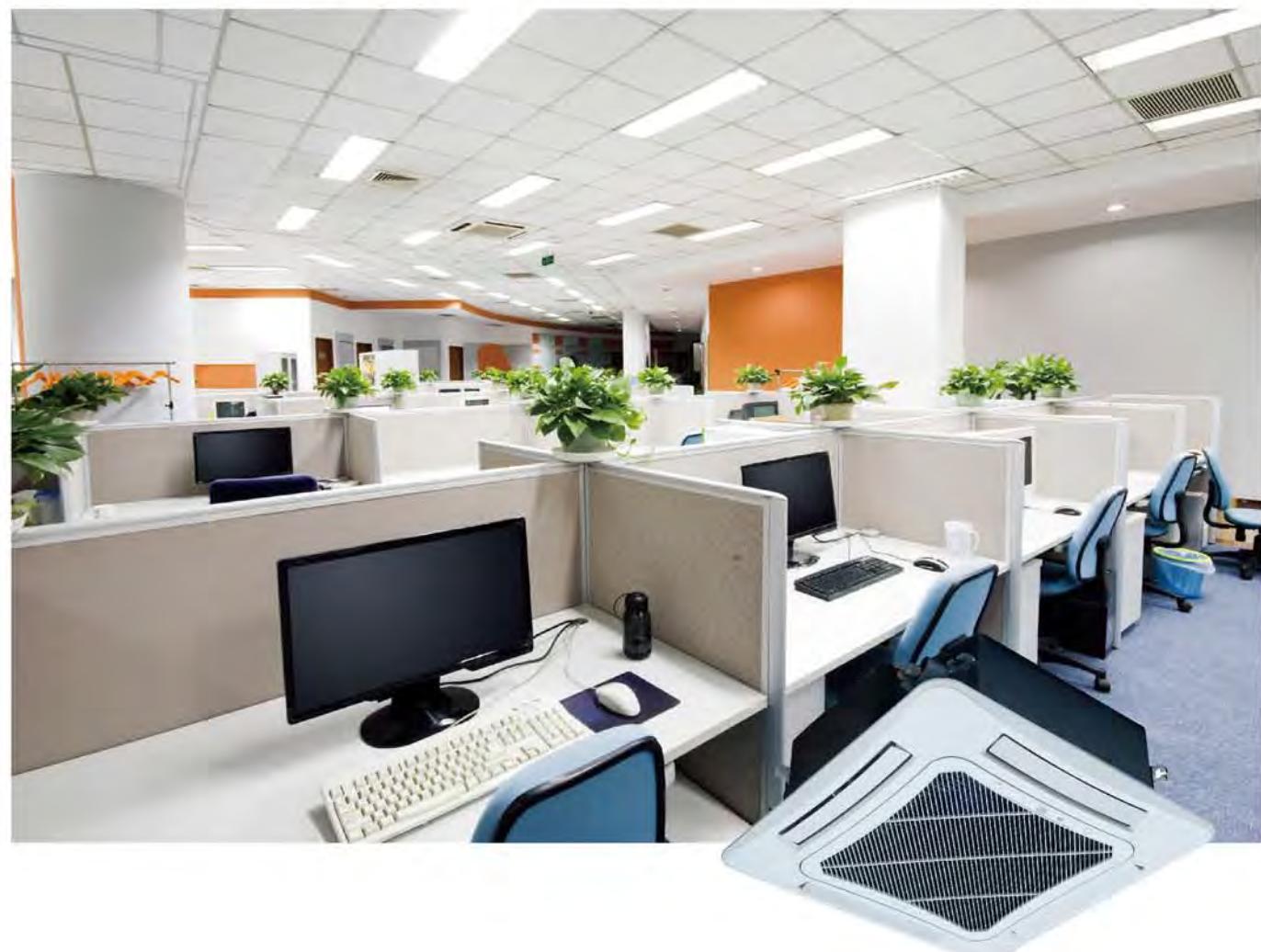
• CAN Bus Communication Technology

System response speed is faster and communication is more reliable. Auto addressing, non-polar communication, free wire matching

• Convenient Operation & Maintenance

Electric control box is attached independently so that it can be detached as a whole, which is convenient for maintenance. The installation and maintenance of fan and motor is also convenient.

4-way Cassette Indoor Unit



Strong and balanced airflow

Unit features auto operation, 4-way airflow, 7 fan speeds and strong circulating airflow.

Ultra-low noise operation

DC inverter motor can realize stepless speed regulation to lower noise. Indoor unit can be set to work under auto quiet mode via wired controller.

Intelligent drainage device

Water height difference up to 1.0m, which can effectively drain out condensing water and save space.

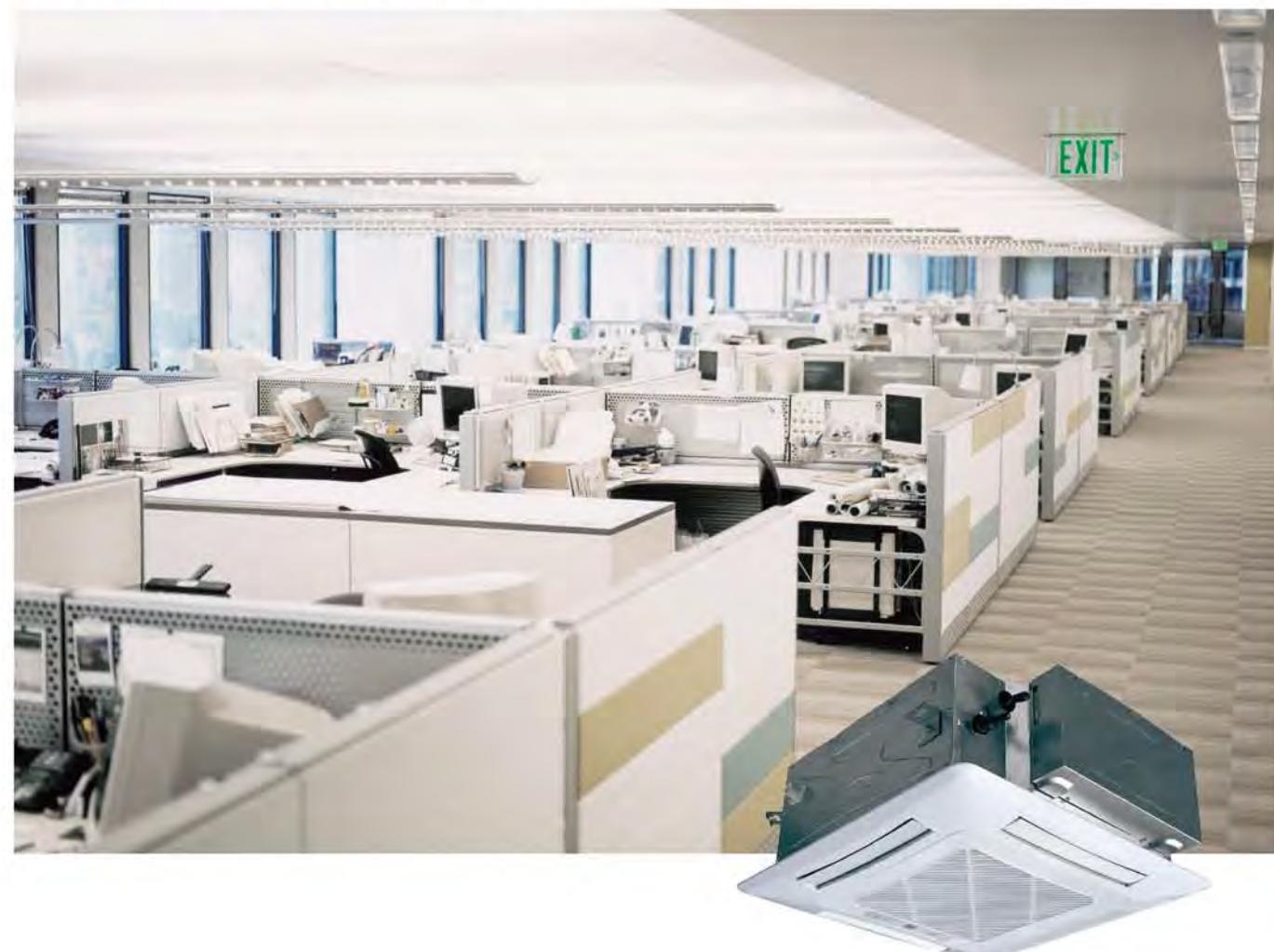
DC inverter motor

With good speed regulation performance, motor efficiency improved by 30% v.s. normal motor.

Protection function

Water overflow protection, anti-freezing protection, temperature sensor malfunction protection, fan motor overload protection.

Compact 4-way Cassette Indoor Unit



Compact Design for Easy Installation

Units maintain the uniform length and width with consistent ceiling opening and panel dimension, convenient for design and installation;

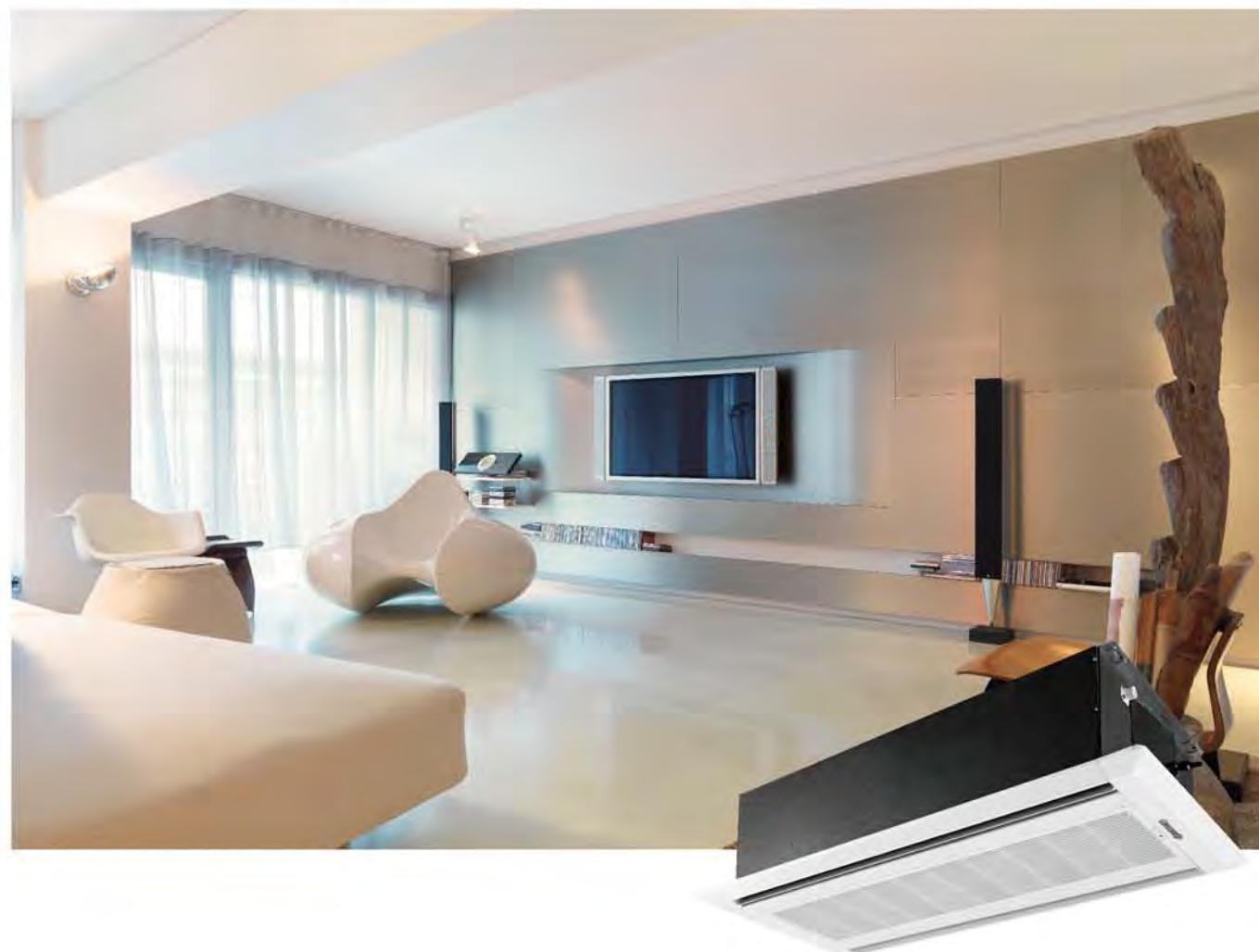
Ultra-low noise operation

DC inverter motor can realize stepless speed regulation to lower noise. Indoor unit can be set to work under auto quiet mode via wired controller.

Intelligent drainage device

Water height difference up to 1.0m, which can effectively drain out condensing water and save space.

2-way Cassette Indoor Unit



• Beautiful Appearance

With beautiful and elegant front panel, it is congenial to the indoor surroundings.

• Intelligent drainage device

Water height difference up to 1.0m, which can effectively drain out condensing water and save space.

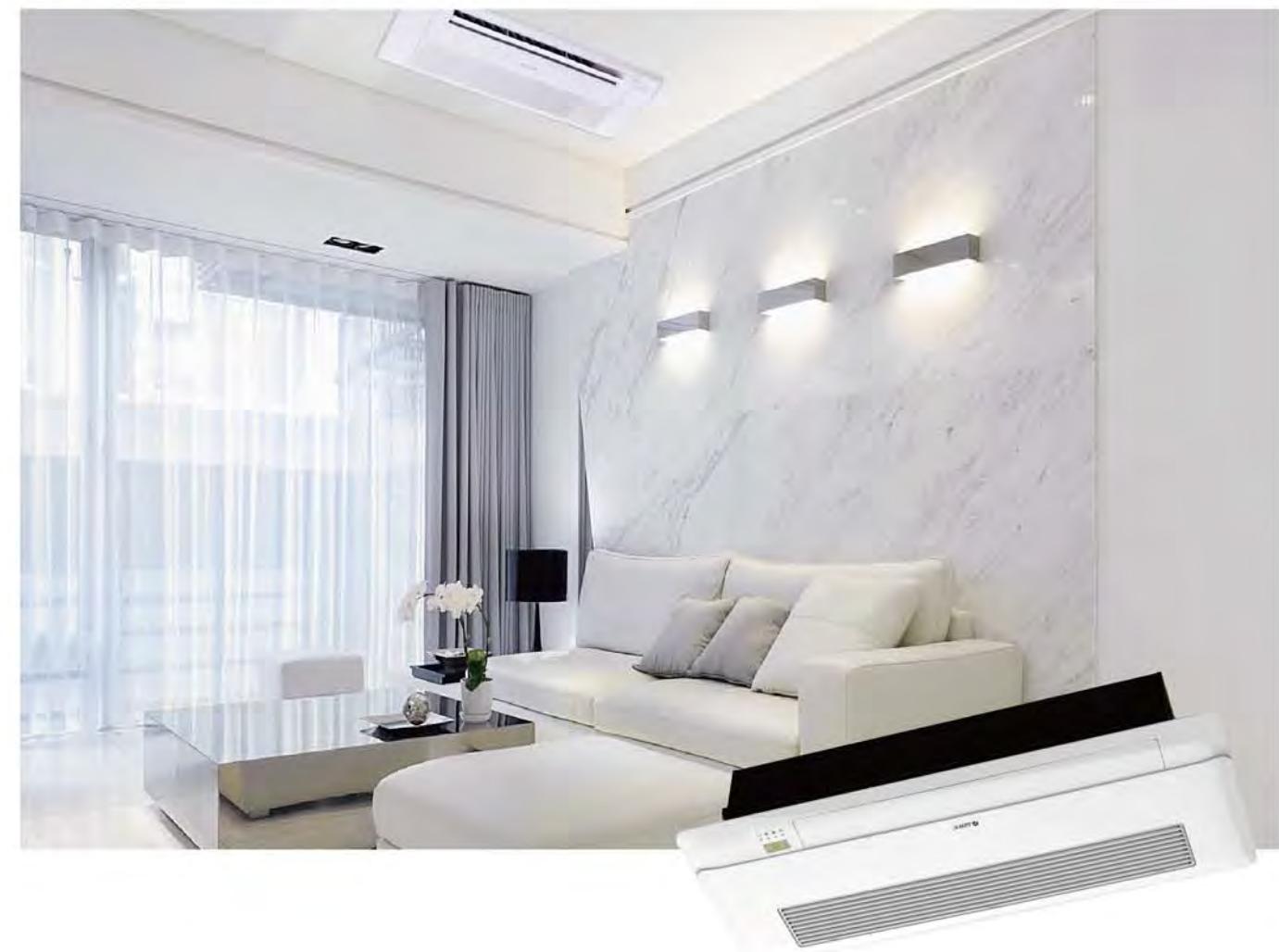
• Two-way air flow design

Two-way air outlet, to stretch air outlet distance and solve air supply problem of elongated room

• Multiple protections

Anti-freezing protection, temperature malfunction protection, fan motor overload and humidity sensor protection.

1-way Cassette Indoor Unit



• Small installation space

With 185mm ultrathin design, unit can be installed in the ceiling of 19cm deep.

• Detachable grille and long life filter

Grille is detachable for easy cleaning. With durable filter, cleaning cycle is 20 times longer.

• High drain pump lift

Drain pump lift reaches 1.0m, which can effectively drain out water.

• Protection function

Water overflow protection, anti-freezing protection, fan motor overload protection, temperature sensor malfunction protection.

Wall-mounted Indoor Unit



• Comfortable and balanced airflow, up&down air outlet

Up air outlet: In cooling, cool air blows out horizontally and then gradually drops.

Down air swing: In heating, warm air blows downward and then gradually climbs up.

• Triple defenders for better purification

Mildew-proof filter, electrostatic fibre and anti-biotic fibre adopted to remove dust, smell, bacteria and mildew.

• Cold air prevention design

During heating in winter, cold air prevention function is enabled so that air won't be blown out until it's warm.

• Multiple protections

Anti-freezing protection, temperature sensor malfunction protection, fan motor overload protection.

Floor Ceiling Type Indoor Unit



• Hoisted or seated, flexible installation

Unit can be hoisted or seated. When seated, suspended ceiling is not needed.

• Beautiful appearance

With beautiful and elegant front panel, it is congenial to the indoor surroundings.

• Protection function

Anti-freezing protection, temperature sensor malfunction protection, fan motor overload protection.

• Horizontal and vertical air swing

Wider air swing range for your comfortable working and living environment.

Console Indoor Unit



● Multiple fan speed

The fan can operate in multiple speed and satisfy different air flow volume requirements.

● Detachable grille and long life filter

Grille is detachable for easy cleaning. With long life filter, cleaning cycle is 20 times longer.

● High drain pump lift

Drain pump lift reaches 1.0m, which can effectively drain out water.

● Protection function

Water overflow protection, anti-freezing protection, fan motor overload protection, temperature sensor malfunction protection, auxiliary electric heating overheat protection (This function is not included in pure heat pump unit).

Floor Standing Indoor Unit



● Wide Application

It can be widely adopted in hotels, restaurants, office, etc.

● Auto clean to ensure a healthy life

After turning off the unit, the indoor fan will keep running in low speed for a moment to dry the inner components and parts, in order to prevent mildew and keep user healthy.

Fresh Air Processing Indoor Unit

Airflow volume: 1200~4000m³/h
Applicable range: Residential houses, villas, business buildings, hotels, apartments, etc.



One system, two functions

- Adopted with DC inverter technology, Fresh Air DC Inverter Multi VRF System features air conditioning function and fresh air function.



Enjoy fresh air

- Airflow volume: 1200~4000m³/h, cooling capacity: 14-45kW
Applicable for all kinds of structure.
- Direct evaporative cooling adopted, air conditioning+fresh air can be realized accurately and precisely.
- DC inverter technology adopted, constant humidity is enabled with less power consumption.
- Integrated system control with Gree GMV Multi VRF System.



Air conditioning and fresh air, two in one

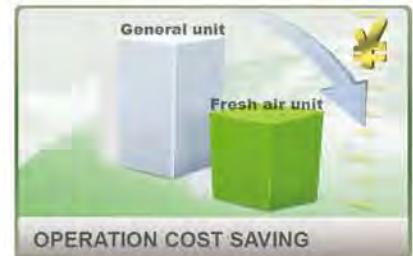
● Less investment

Fresh Air DC Inverter Multi VRF System can be combined with Gree GMV5. For a same room, if the same amount of fresh air is to be taken, then the cost of GMV5+Fresh air unit is equivalent to the cost of GMV+Air exchange fan.



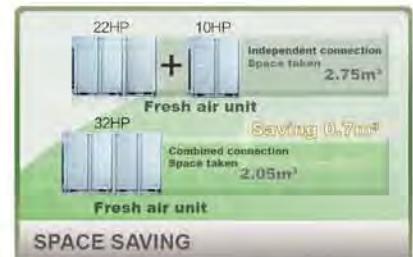
● Less operation cost

Unit can control refrigerant output according to actual needs to ensure constant airflow temperature. By adjusting power output, light-load but high power operation can be avoided. Thus, operation cost can be greatly reduced.



● Less installation space

Save installation space for outdoor units. Especially suitable for places that have restricted installation space.



Air Handler

● Highly Flexible Installation

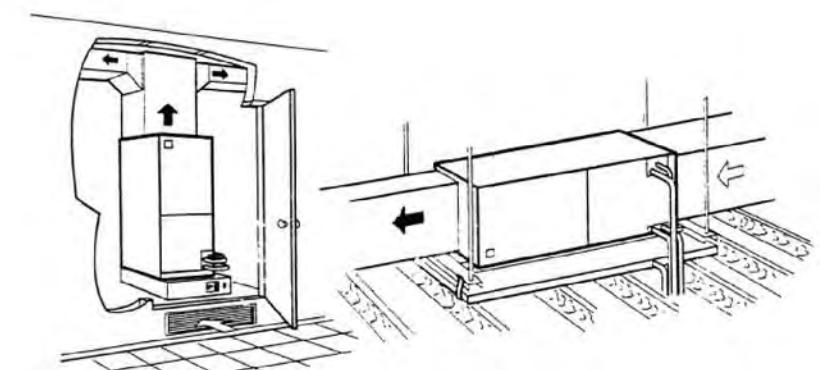
The unit is designed for outdoor installation and less indoor space taking, allowing easy installation and maintenance. The unit can be installed on the ground or on the roof of the building, which means the installation is totally flexible depending on the project requirement.

● Cold Air Prevention Design

When heating in winter, cold air prevention function is enabled so that air won't be blown out until it's warm.

● Long life and Washable Filter

The filter is easy to be dismantled and installed. You can use dust collector or water to clear away the dust.



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	125	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														●		●	●	●	●	●	●	●	●	
Air handler										●				●	●	●	●	●	●	●	●	●	●	

High Static Pressure Duct Type Indoor Unit

50/60 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
	Heating kW	6.3	7.1	8.0	9.0
Power supply	V/Ph/Hz		220~240/1/50 & 208~230/1/60		
Power consumption	W	120	120	130	200
Airflow volume(H/M/L)	m³/h	1000/800/600	1000/800/600	1100/900/700	1100/900/700
	CFM	590/471/355	590/471/355	650/530/410	650/530/410
Rated Current ²	Cooling A	0.6	0.6	0.6	1.0
	Heating A	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
Connecting pipe diameter	Liquid mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Drain pipe	External dia. mm	Φ25	Φ25	Φ25	Φ25
	Thickness mm	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline mm		1271x558x268		1229x775x290
	Package mm		1348x597x283		1338x877x305
Net weight/Gross weight	kg	35/40	35/40	35/40	47/54
Loading	40' GP set	192	192	192	128
	40' HQ set	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
	Heating kW	11.2	12.5	14.0	16.0	18.00	31.0
Power supply	V/Ph/Hz		220~240/1/50 & 208~230/1/60		220~240/1/50/60	220~240/1/50 & 208~230/1/60	
Power consumption	W	200	200	220	220	800	900
Airflow volume(H/M/L)	m³/h	1700/1450/1100	1700/1450/1100	2000/1550/1200	2000/1700/1400	3100	4400
	CFM	1000/853/650	1000/853/650	1175/912/706	1175/1000/824	1824	2590
Rated Current ²	Cooling A	1.0	1.0	1.0	1.0	4	4.6
	Heating A	1.0	1.0	1.0	1.0	4	4.6
	Water Heating A	/	/	/	/	/	/
ESP	Pa		70/0~100			50	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	55.0
Connecting pipe diameter	Liquid mm	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
Drain pipe	External dia. mm	Φ25	Φ25	Φ25	Φ30	Φ30	Φ30
	Thickness mm	2.5	2.5	2.5	2.5	1.5	1.5
Dimension (WxDxH)	Outline mm		1229x775x290		1497x799x389	1483x791x385	1686x870x450
	Package mm		1338x877x305		1578x883x400	1758x883x470	1788x968x580
Net weight/Gross weight	kg	47/54	47/54	47/54	47/54	79/103	82/104
Loading	40' GP set	128	128	128	128	75	65
	40' HQ set	128	128	128	128	75	52

Low Static Pressure Duct Type Indoor Unit

50/60 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
	Heating kW	2.5	2.8	3.6	4.0
Power supply	V/Ph/Hz		220~240/1/50 & 208~230/1/60		
Power consumption	W	35	35	43	43
Airflow volume(H/M/L)	m³/h	450/350/250	450/350/250	450/350/250	550/450/350
	CFM	265/206/147	265/206/147	265/206/147	325/265/206
Rated Current ²	Cooling A	0.2	0.2	0.2	0.2
	Heating A	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
Connecting pipe diameter	Liquid mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	Gas mm	Φ9.52	Φ9.52	Φ9.52	Φ12.7
Drain pipe	External dia. mm	25	25	25	25
	Thickness mm	2.5	2.5	2.5	2.5
Dimension (WxDxH)	Outline mm		700 x 615 x		

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 & 208~230/1/60								
Power consumption		W	52		52		52		99		99
Airflow volume(H/M/L)		m³/h	700/600/450		700/600/450		700/600/450		1000/800/600		1000/800/600
Rated Current ^a	Cooling	CFM	410/355/265		410/355/265		410/355/265		590/471/355		590/471/355
	Heating	A	0.3		0.3		0.3		0.5		0.5
	Water 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-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 & 208~230/1/60								
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 ²	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	/		/		/		/		/		/	
SP	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.

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
	Heating	kW	8.0	9.0	10.0	11.2	12.5	14.0
Power supply		V/Ph/Hz	220~240/1/50 & 208~230/1/60					
Power consumption		W	105	140	209	209	209	230
Airflow volume(H/M/L)	m³/h	1000/800/600	1100/1000/800	1500/1250/950	1500/1350/1000	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 ²	Cooling	A	0.5	0.7	1.0	1.0	1.1	1.1
	Heating	A	0.5	0.7	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	40/36/32	40/36/32	40/36/32	42/40/37
Connecting pipe diameter	Liquid	mm	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
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	1200 x 655 x 260				1340 x 655 x 260	
	Package	mm	1448x858x315				1591x861x330	
Net weight/Gross weight		kg	40/47	40/47	46/55	46/55	46/55	47/56
Loading	40' GP	set	96	96	78	78	78	78
	40' HQ	set	96	96	78	78	78	78

4-way Cassette Indoor Unit

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	5.6	6.3	7.1	8.0						
Power supply		V/Ph/Hz	220~240/1/50 & 208~230/1/60												
Power consumption	W	48	48	48	50	59	59	59	68						
	m³/h	750/650/550	750/650/550	750/650/550	830/650/550	1000/900/750	1000/900/750	1000/900/750	1180/950/850						
Airflow volume(H/M/L)		CFM	440/383/325	440/383/325	440/383/325	490/383/325	590/530/440	590/530/440	695/559/550						
Rated Current ²	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	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	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	167	167	167	167	140	140						
40'HO		set	171	171	171	171	156	156	156						

◀ Slim Ducted Type Indoor Unit

50/60 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
	Heating	kW	2.5	2.8	3.2	4.0
Power supply		V/Ph/Hz	220~240/1/50 & 208~230/1/60			
Power consumption		W	25	25	25	30
Airflow/volume(H/M/L)		m³/h	450/400/320	450/400/320	450/400/320	550/450/340
		CFM	265/235/188	265/235/188	265/235/188	324/265/200
Rated Current*	Cooling	A	0.2	0.2	0.2	0.3
	Heating	A	0.2	0.2	0.2	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
Connecting pipe diameter	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ9.52	Φ9.52	Φ12.7
Drain pipe	External dia.	mm	25	25	25	25
	Thickness	mm	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	19.5/23
Loading	40' GP	set	352	352	352	352
	40' HQ	set	352	352	352	352

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
	Heating	kW	9.0	10.0	11.2	12.5	14.0	16.0
Power supply		V/Ph/Hz	220~240/1/50 & 208~230/1/60					
Power consumption		W	68	98	98	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
		CFM	695/559/550	880/795/650	880/795/650	1000/824/650	1095/880/677	2100/1700/1400
Rated Current ²	Cooling	A	0.3	0.4	0.4	0.5	0.5	0.6
	Heating	A	0.3	0.4	0.4	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
Connecting pipe diameter	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ19.05
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	840x840x240	840x840x320	840x840x320	840x840x320	840x840x320
		Package	mm	963x963x325	963x963x409	963x963x409	963x963x409	963x963x409
	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	46.5/56.5
Panel	Dimension (WxDxH)	Outline	mm	950x950x65	950x950x65	950x950x65	950x950x65	950x950x65
		Package	mm	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133	1033x1038x133
	Net weight/Gross weight	kg	7/11	7/11	7/11	7/11	7/11	7.5/11.5
Loading quantity		40'GP	set	140	104	104	104	104
		40'HQ	set	156	119	119	119	119

Compact 4-way Cassette Indoor Unit

50/60 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												
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	355/295/235		355/295/235		355/295/235		410/355/283		410/355/283		410/355/283	
Rated Current ²	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
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		Φ9.52		
	Gas	mm	Φ9.52		Φ9.52		Φ12.7		Φ12.7		Φ15.9		
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	596x596x240		596x596x240		596x596x240		596x596x240		596x596x240	
	Package	mm	773x733x300		773x733x300		733x733x300		733x733x300		733x733x300		
Panel	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		
	Dimension (WxDxH)	Outline	mm	650x650x50		650x650x50		650x650x50		650x650x50		650x650x50	
Net weight/Gross weight	Package	mm	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		
Loading quantity		40'GP	set	267		267		267		267		267	
40'HQ		set	288		288		288		288		288		

2-way Cassette Indoor Unit

50/60 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														
Power consumption															
	W	55.0		55.0		55.0		103.0		103.0		103.0			
	m³/h	830/600/530		830/600/530		830/600/530		1100/820/760		1100/820/760		1100/820/760			
	CFM	490/355/312		490/355/312		490/355/312		850/483/647		850/483/647		850/483/647			
Rated Current ²	Cooling	A	0.3		0.3		0.3		0.7		0.7		0.7		
	Heating	A	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		39/37/35		39/37/35		39/37/35			
Connecting pipe diameter	Liquid	mm	Φ6.35		Φ6.35		Φ6.35		Φ9.52		Φ9.52				
	Gas	mm	Φ9.52		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				
Main Body	Dimension (WxDxH)	Outline	mm	1200x520x315		1200x520x315		1200x520x315		1200x520x315		1200x520x315			
	Package	mm	1520x655x415												
Panel	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		
	Dimension (WxDxH)	Outline	mm	1443x630x33		1443x630x33		1443x630x33		1443x630x33		1443x630x33			
Net weight/Gross weight	Package	mm	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		
Loading quantity		40'GP	set	101		101		101		101		101			
40'HQ		set	115		115		115		115		115		115		

1-way Cassette Indoor Unit

50/60 Hz

Model		GMV-ND22TD/A-T		GMV-ND28TD/A-T		GMV-ND36TD/A-T
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Console Indoor Unit 50/60 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		5.5
Power supply	V/Ph/Hz		220-240/1/50 & 208-230/1/60								
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 ²	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		18/19		16/19
Loading	40' GP	set	387		387		387		387		387
	40' HQ	set	433		433		433		433		433

Air Handler 60 Hz

Model		GMV-NR71A/A-T		GMV-NR90A/A-T		GMV-NR100A/A-T		GMV-NR112A/A-T		GMV-NR140A/A-T	
Capacity	Cooling	kW	7.1		9.0		10.0		11.2		14.0
	Heating	kW	7.1		10.0		11.0		12.5		15.0
Power supply	V/Ph/Hz		208-230/1/60								
Power consumption	W		140		170		245		245		368
Airflow volume(H/M/L)	m³/h		1400		1660		1940		2210		2380
	CFM		825		980		1140		1300		1400
Rated Current ²	Cooling	A	1.52		1.35		2.00		2.00		2.50
	Heating	A	1.52		1.35		2.00		2.00		2.50
	Water Heating	A	/		/		/		/		/
ESP	Pa		25		37		37		37		50
Sound pressure level(H/M/L)	dB(A)		48		50		52		53		54
Connecting pipe diameter	Liquid	mm	ø9.52		ø9.52		ø9.52		ø9.52		ø9.52
	Gas	mm	ø15.9		ø15.9		ø15.9		ø15.9		ø15.9
Drainage Connection Size (Outer Diameter*Wall Thickness)	mm		ø19		ø19		ø19		ø19		ø19
Dimension (WxDxH)	Outline	mm	460*540*1105		460*540*1105		540*540*1224		540*540*1224		630*540*1224
	Package	kg	514*617*1155		514*617*1155		594*617*1274		594*617*1274		684*618*1280
Net weight/Gross weight	set		53/57		55.5/59		65/70		67/72		79/84
Loading	40' GP	set	164		164		85		85		85
	40' HQ	set	172		172		114		114		114

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 ²	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	ø9.52		ø9.52		ø9.52		ø12.7				
	Gas	mm	ø15.9		ø19.05		ø22.2		ø22.6				
Drain pipe	External dia.	mm	25		25		25		25				
	Thickness	mm	2.5		2.5		2.5		2.5				
Dimension (WxDxH)	Outline	mm	1463 x 756 x 300		1500 x 1000 x 500			1700 x 1100 x 850					
	Package	mm	1514x785x360		1840x1200x673			1890x1460x835					
Net weight/Gross weight	kg		63.5/71		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		16.0		

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

Floor Standing Type 50/60 Hz

Model		GMV-ND100L/A-T				GMV-ND140L/A-T			
Capacity	Cooling	kW			10				14
	Heating	kW			11				15
Power supply									

Control System



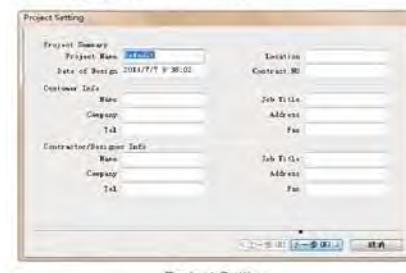
Smart Model Selection Software and Debugging Software

Model Selection Software

Gree multi VRF selection software is a kind of advanced computer program for selecting models automatically in sales and project bidding. It integrates multi VRF selection logic and computer software to provide a user-friendly interactive interface, which is able to automatically recommend suitable models to user according to ambient condition of project and user's demand. It is applicable for GMV5.

Flexible Setting of Project Design Conditions

When setting up a new model selection project, the information of customer, designer, unit series and working conditions, etc. can be set as relevant parameters of model selection, and then sent to data report for checking during project design.



Project Setting



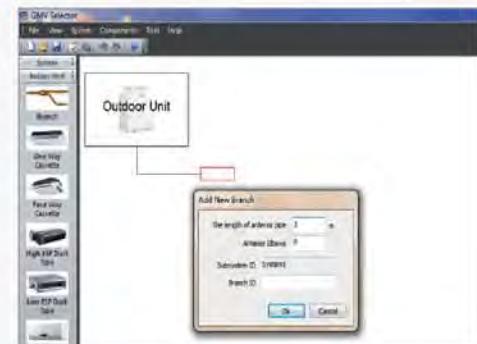
Project Design Conditions



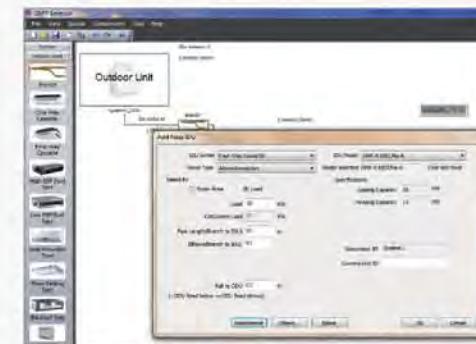
Confirmation

Accurate Recommendation of Indoor Unit and Outdoor Unit

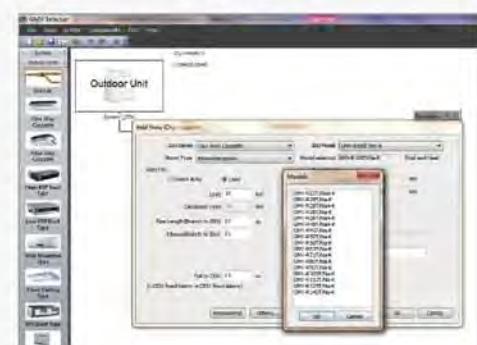
When selecting indoor unit model with the software, you can use automatic recommendation way only by inputting the required air conditioning load and indoor unit series. Then the software will recommend the suitable indoor unit model automatically according to model selection logic. When selecting outdoor unit model, you can use automatic recommendation way directly to select the suitable outdoor unit model.



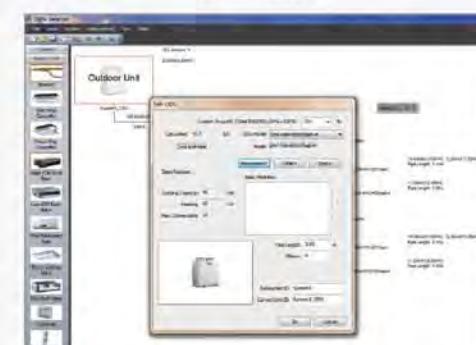
Add New Branch



Add New IDU (1)



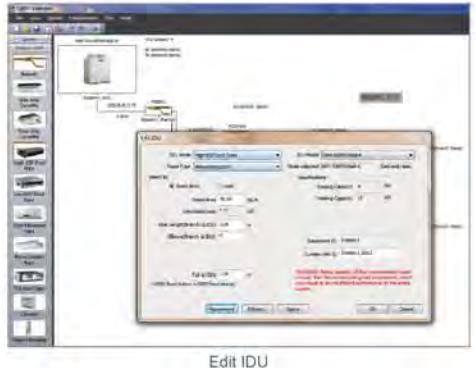
Add New IDU (2)



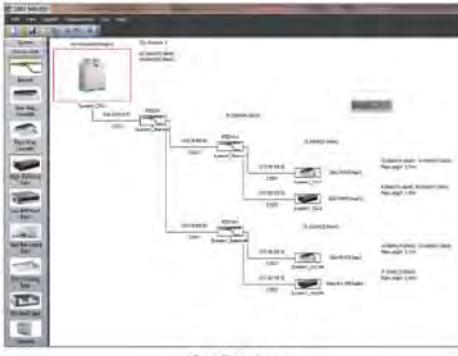
Add New ODU

Free Modification of Selected Models

If you are not satisfied with the system recommended by the software, you can select or adjust indoor unit model through alternate selection function.



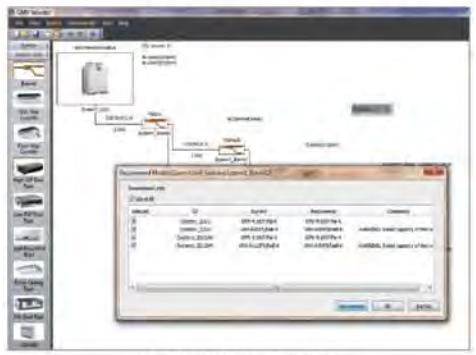
Edit IDU



Confirmation

One-click Modification and System Validation

When reselection is needed due to major changes of indoor units, one-click recommendation function can be adopted to reselect all indoor units with simple operation; after finishing model selection, you can use one-click system validation function to check various parameters requirements of air conditioning system.



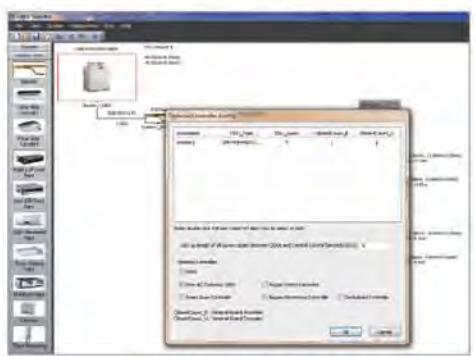
One-click Recommendation



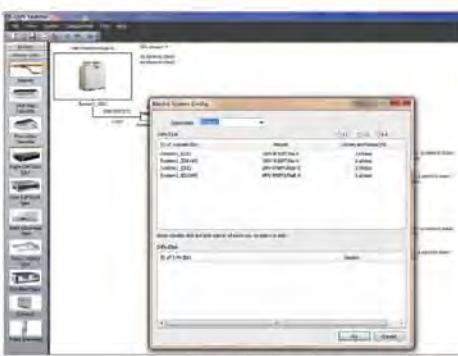
System Validation

Optional Controller Configuration and Electric System Configuration

The software will offer controller model matched with the system. The user only needs to choose controller type and then the software will output the controller model into the report.



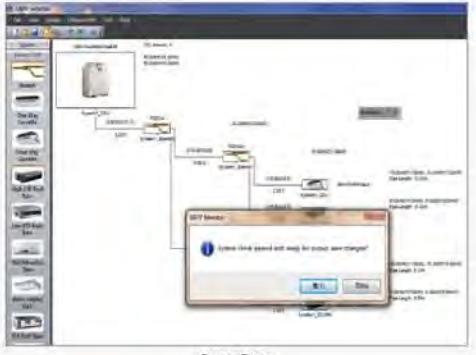
Optional Controller Configuration



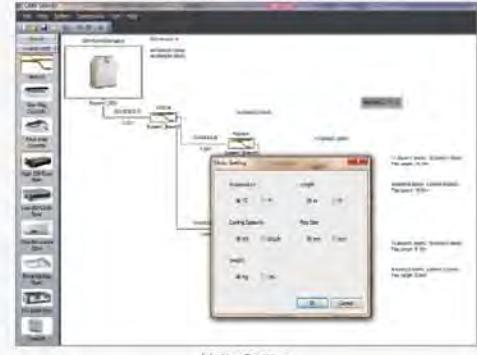
Electric System Configuration

Save Model Selection Project, Output Data Report and System Wiring Diagram

After finishing system selection and various system configurations, the user can save model selection project freely for future reference. Then the user can output relevant parameters of selected project in an excel form and output system wiring CAD diagram for reference in installation.



Save Data



Units Setting

Part 3 - System			
Link Output		Indoor Unit Capacity Status	
Total capacity of ODU		Total capacity of CPU	Total Previous Capacity Status
ODU Capacity	ODU Capacity	CPU Capacity	Previous Capacity
0	(Standard) 10.00~12.00	10.00~12.00	10.00~12.00
1	(Standard) 11.00~11.00	11.00~11.00	11.00~11.00
2	(Standard) 13.00~15.00	13.00~15.00	13.00~15.00
3	(Standard) 15.00~17.00	15.00~17.00	15.00~17.00
4	(Standard) 17.00~20.00	17.00~20.00	17.00~20.00
5	(Standard) 20.00~25.00	20.00~25.00	20.00~25.00
6	(Standard) 25.00~30.00	25.00~30.00	25.00~30.00
7	(Standard) 30.00~35.00	30.00~35.00	30.00~35.00
8	(Standard) 35.00~40.00	35.00~40.00	35.00~40.00
9	(Standard) 40.00~45.00	40.00~45.00	40.00~45.00
10	(Standard) 45.00~50.00	45.00~50.00	45.00~50.00
11	(Standard) 50.00~55.00	50.00~55.00	50.00~55.00
12	(Standard) 55.00~60.00	55.00~60.00	55.00~60.00
13	(Standard) 60.00~65.00	60.00~65.00	60.00~65.00
14	(Standard) 65.00~70.00	65.00~70.00	65.00~70.00
15	(Standard) 70.00~75.00	70.00~75.00	70.00~75.00
16	(Standard) 75.00~80.00	75.00~80.00	75.00~80.00
17	(Standard) 80.00~85.00	80.00~85.00	80.00~85.00
18	(Standard) 85.00~90.00	85.00~90.00	85.00~90.00
19	(Standard) 90.00~95.00	90.00~95.00	90.00~95.00
20	(Standard) 95.00~100.00	95.00~100.00	95.00~100.00
21	(Standard) 100.00~105.00	100.00~105.00	100.00~105.00
22	(Standard) 105.00~110.00	105.00~110.00	105.00~110.00
23	(Standard) 110.00~115.00	110.00~115.00	110.00~115.00
24	(Standard) 115.00~120.00	115.00~120.00	115.00~120.00
25	(Standard) 120.00~125.00	120.00~125.00	120.00~125.00
26	(Standard) 125.00~130.00	125.00~130.00	125.00~130.00
27	(Standard) 130.00~135.00	130.00~135.00	130.00~135.00
28	(Standard) 135.00~140.00	135.00~140.00	135.00~140.00
29	(Standard) 140.00~145.00	140.00~145.00	140.00~145.00
30	(Standard) 145.00~150.00	145.00~150.00	145.00~150.00
31	(Standard) 150.00~155.00	150.00~155.00	150.00~155.00
32	(Standard) 155.00~160.00	155.00~160.00	155.00~160.00
33	(Standard) 160.00~165.00	160.00~165.00	160.00~165.00
34	(Standard) 165.00~170.00	165.00~170.00	165.00~170.00
35	(Standard) 170.00~175.00	170.00~175.00	170.00~175.00
36	(Standard) 175.00~180.00	175.00~180.00	175.00~180.00
37	(Standard) 180.00~185.00	180.00~185.00	180.00~185.00
38	(Standard) 185.00~190.00	185.00~190.00	185.00~190.00
39	(Standard) 190.00~195.00	190.00~195.00	190.00~195.00
40	(Standard) 195.00~200.00	195.00~200.00	195.00~200.00
41	(Standard) 200.00~205.00	200.00~205.00	200.00~205.00
42	(Standard) 205.00~210.00	205.00~210.00	205.00~210.00
43	(Standard) 210.00~215.00	210.00~215.00	210.00~215.00
44	(Standard) 215.00~220.00	215.00~220.00	215.00~220.00
45	(Standard) 220.00~225.00	220.00~225.00	220.00~225.00
46	(Standard) 225.00~230.00	225.00~230.00	225.00~230.00
47	(Standard) 230.00~235.00	230.00~235.00	230.00~235.00
48	(Standard) 235.00~240.00	235.00~240.00	235.00~240.00
49	(Standard) 240.00~245.00	240.00~245.00	240.00~245.00
50	(Standard) 245.00~250.00	245.00~250.00	245.00~250.00
51	(Standard) 250.00~255.00	250.00~255.00	250.00~255.00
52	(Standard) 255.00~260.00	255.00~260.00	255.00~260.00
53	(Standard) 260.00~265.00	260.00~265.00	260.00~265.00
54	(Standard) 265.00~270.00	265.00~270.00	265.00~270.00
55	(Standard) 270.00~275.00	270.00~275.00	270.00~275.00
56	(Standard) 275.00~280.00	275.00~280.00	275.00~280.00
57	(Standard) 280.00~285.00	280.00~285.00	280.00~285.00
58	(Standard) 285.00~290.00	285.00~290.00	285.00~290.00
59	(Standard) 290.00~295.00	290.00~295.00	290.00~295.00
60	(Standard) 295.00~300.00	295.00~300.00	295.00~300.00
61	(Standard) 300.00~305.00	300.00~305.00	300.00~305.00
62	(Standard) 305.00~310.00	305.00~310.00	305.00~310.00
63	(Standard) 310.00~315.00	310.00~315.00	310.00~315.00
64	(Standard) 315.00~320.00	315.00~320.00	315.00~320.00
65	(Standard) 320.00~325.00	320.00~325.00	320.00~325.00
66	(Standard) 325.00~330.00	325.00~330.00	325.00~330.00
67	(Standard) 330.00~335.00	330.00~335.00	330.00~335.00
68	(Standard) 335.00~340.00	335.00~340.00	335.00~340.00
69	(Standard) 340.00~345.00	340.00~345.00	340.00~345.00
70	(Standard) 345.00~350.00	345.00~350.00	345.00~350.00
71	(Standard) 350.00~355.00	350.00~355.00	350.00~355.00
72	(Standard) 355.00~360.00	355.00~360.00	355.00~360.00
73	(Standard) 360.00~365.00	360.00~365.00	360.00~365.00
74	(Standard) 365.00~370.00	365.00~370.00	365.00~370.00
75	(Standard) 370.00~375.00	370.00~375.00	370.00~375.00
76	(Standard) 375.00~380.00	375.00~380.00	375.00~380.00
77	(Standard) 380.00~385.00	380.00~385.00	380.00~385.00
78	(Standard) 385.00~390.00	385.00~390.00	385.00~390.00
79	(Standard) 390.00~395.00	390.00~395.00	390.00~395.00
80	(Standard) 395.00~400.00	395.00~400.00	395.00~400.00
81	(Standard) 400.00~405.00	400.00~405.00	400.00~405.00
82	(Standard) 405.00~410.00	405.00~410.00	405.00~410.00
83	(Standard) 410.00~415.00	410.00~415.00	410.00~415.00
84	(Standard) 415.00~420.00	415.00~420.00	415.00~420.00
85	(Standard) 420.00~425.00	420.00~425.00	420.00~425.00
86	(Standard) 425.00~430.00	425.00~430.00	425.00~430.00
87	(Standard) 430.00~435.00	430.00~435.00	430.00~435.00
88	(Standard) 435.00~440.00	435.00~440.00	435.00~440.00
89	(Standard) 440.00~445.00	440.00~445.00	440.00~445.00
90	(Standard) 445.00~450.00	445.00~450.00	445.00~450.00
91	(Standard) 450.00~455.00	450.00~455.00	450.00~455.

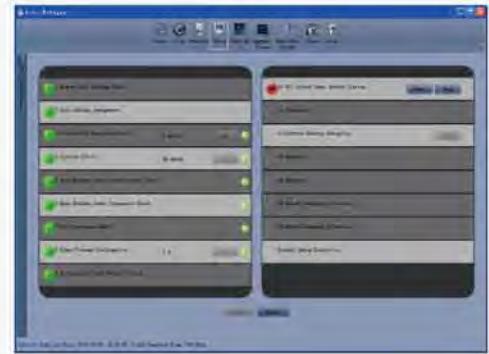
Control Functions

- Control the operation of unit as you like;
- Comprehensive control of outdoor unit, indoor unit, water tank, hydro box, etc.;
- Real-time display of current status or status after being controlled;
- Both single control and group control are available.



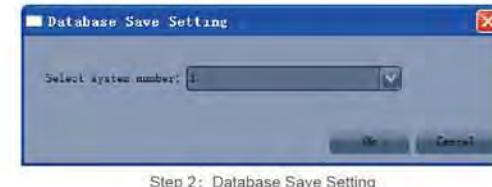
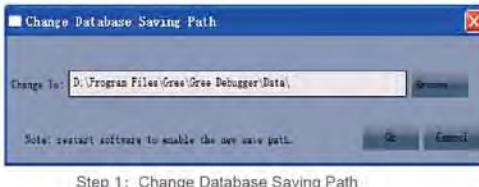
Project Debugging Functions

- One-click and automatic project debugging;
- Project debugging is arranged step by step from left to right;
- Manual intervention and skipping of some debugging phases are available.
- Green icons will be displayed for the items finishing debugging; red icons will be displayed for the items having debug exception; light yellow icons display debugging information;



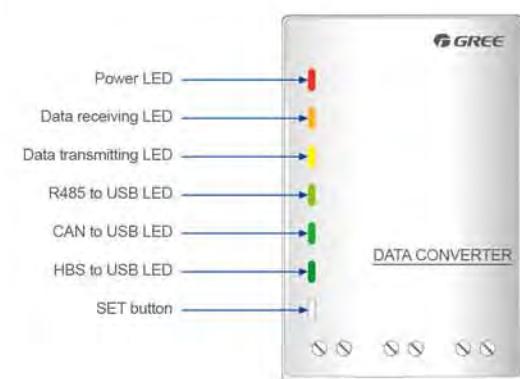
Auto Data-Saving Function

Data will be saved automatically. Database saving path can be changed or data document can be generated repeatedly.



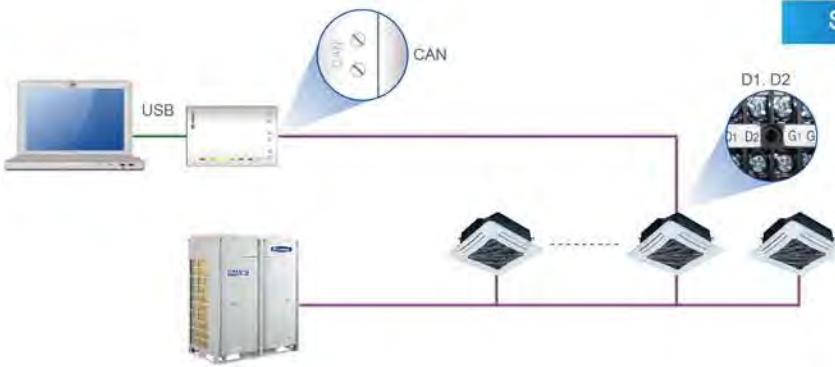
USB Data Converter

Users can use USB data converter to freely convert CAN/HBS/RS485 data into USB data, achieving data interchange between computer and air conditioner.



Auto Direction of Connection Way

The wiring diagram will direct connection way automatically, so that the user can get the connection way quickly.



Single System Network



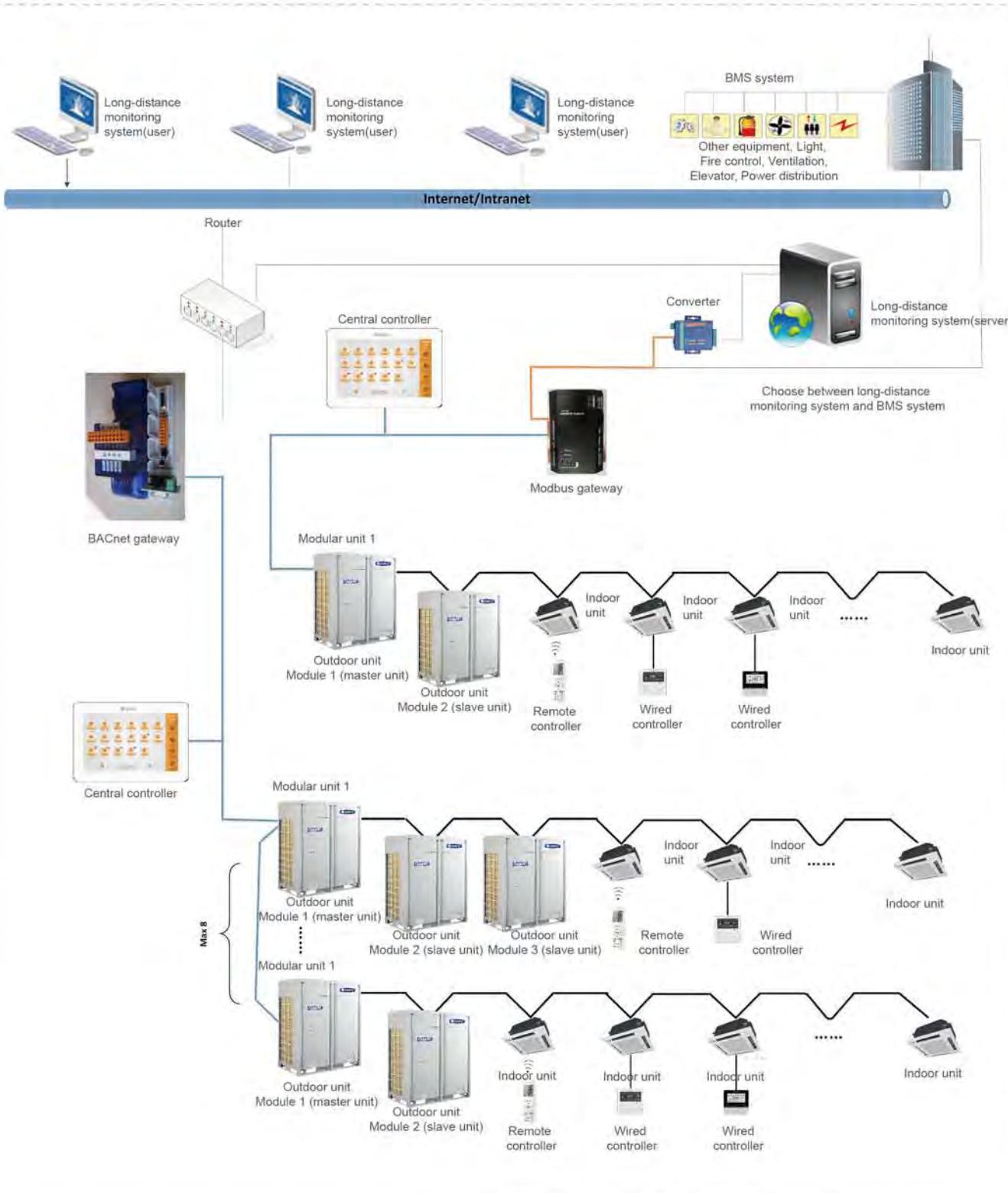
Single System Network



Multi System Network

Multiple Intelligent Remote Control Management

Gree GMV5 provides multiple intelligent controls in order to satisfy all demands. It can control both a room and a building at the same time.



Visualized Management

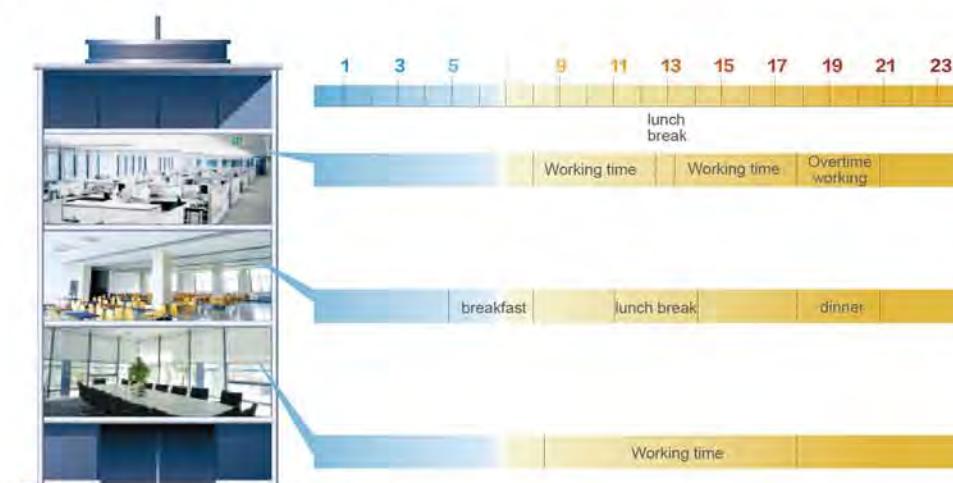
- System has a map that can display air conditioners' locations in rooms and buildings.
- System is able to measure the status and number of air conditioners in different levels



Everyday Management

- Setting for daily operation
 - a. Management in days/weeks/months/years
 - b. Management in each unit
 - c. Simple display for management
- Other functions
 - a. Power on/off, modes, humidity, fan speed
 - b. Waste of energy that may be caused by forgetting to turn off the air conditioner can be avoided

- Everyday Management at different locations
 - a. Management for overtime working
 - b. Management for meal breaks
 - c. Management for working time



Group Management

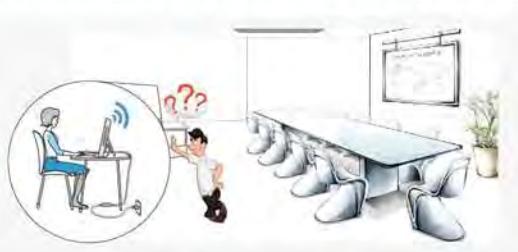
- Central management in groups
 - a. Free choices of dividing groups
 - b. Central control over power on/off
 - c. Central control over temperature
 - d. Central control over modes
 - e. Central control over user authority



Authority Management

- Only for indoor units

- Limited control over power on/off
- Limited control over temperature
- Limited control over modes



Statistics Analysis

- Recording statistics

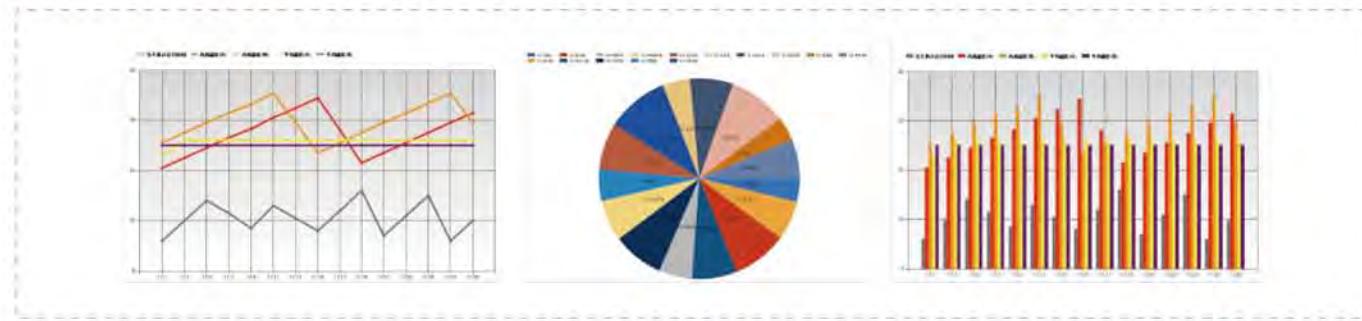
System can self generate graphs of statistics for easy management and analysis.

- Recording errors

System can show the information of errors in charts and send alarms of errors through emails.

- Recording operation

System can record users' daily operation.

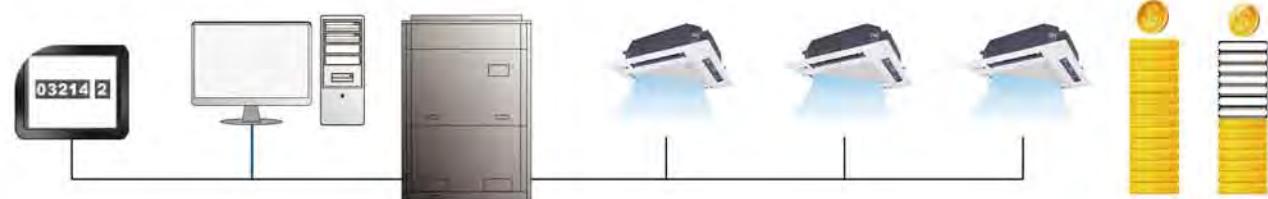


Calculating Cost of Electricity

Auto calculation according to users

a.According to the operating time, modes, flow of refrigerant, humidity and other factors, system can calculate the cost of electricity for users in different locations.

b.Detailed information of bills and operation can be provided.



Energy Management

- Analysis of energy cost

- Air conditioners that cost much energy
- Air conditioners that are set in low temperature
- Air conditioners with bad cooling performance

- Ways to save energy based on the following aspects:

- Operating time
- Unit is on too early
- Unit is off too late
- Comfort
- Cost of electricity/cost of electricity per square meter

Energy saving

- Limits on electricity

- Analysis on the cost of electricity
- Set the maximum cost of electricity and unit will be operating in limited conditions when the maximum number is reached.
- System can remind users the cost of electricity during operation and give suggestions on energy saving.



- Economic operation

System is able to operate under an energy-saving condition

VIP Management

System can provide independent and unique service to VIP users.



Wired Controller and Remote Controller

There are two kinds of controllers: wired controller and remote controller. The system provides various controls for users, such as cooling, heating, dehumidifying and fan etc., users can select it flexibly according to their own using methods.

Wired controller XK46



- LCD with black background and white words; touch buttons;
- Clock can be displayed and set; 24 hours timer setting for on/off;
- 7 levels of fan speed, up & down swing and left&right swing;
- Can be switched in auto, cooling, dehumidifying, fan, heating, floor heating, 3D heating and space heating operation modes;
- Master and slave wired controllers can be set; simultaneous control over several IDUs is available;
- Available functions: sleep, ventilation, quiet/auto quiet, light, energy saving, auxiliary heating, drying, memory, low-temperature dehumidifying, absence in heating, controllable auxiliary heating in dehumidifying, filter cleaning reminder, etc.;
- Detect ambient temperature; receive infrared remote controller signal;
- With project parameters viewing and setting functions.

Wired controller XK49 (For hotel)



- With simplified functions, mechanical buttons, back lighting LCD and convenient operation;
- Can be switched in auto, cooling, dehumidifying, fan and heating operation modes;
- Master and slave wired controllers can be set; simultaneous control over several IDUs is available;
- Detect ambient temperature; receive infrared remote controller signal;
- With system parameters viewing and setting functions;
- 7 levels of fan speed, up&down swing;
- Door control system can be connected.

Remote controller YAP1F



- Can be switched in auto, cooling, dehumidifying, fan and heating operation modes;
- Besides turbo,6 levels of fan speed can be set;
- Available functions: child lock, drying, health, ventilation, turbo, sleep, light, absence, I-feel and timer;
- Clock display and indoor/outdoor ambient temperature viewing functions;
- Up & down swing and left & right swing.

Remote Controller YV1L1



- Back lighting LCD;
- Can be switched in auto, cooling, dehumidifying, fan, heating, floor heating, 3D heating and space heating operation modes;
- 7 levels of fan speed, up&down swing and left&right swing;
- Available functions: child lock, energy saving, drying, health, ventilation, quiet/auto quiet, sleep, light, absence, low-temperature dehumidifying, I-feel and timer;
- With clock display, system parameters viewing and setting functions.

Wired controller XK55

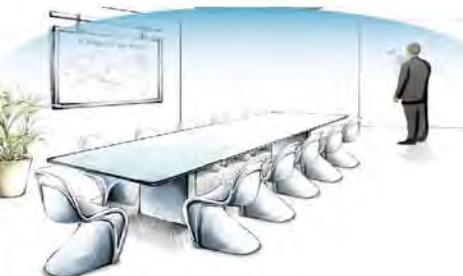


- Elegant appearance;
- High-resolution color LCD;
- Capacitive touch control; receive infrared remote controller signal;
- Various timing functions: three weekly timers and one countdown timer can be set simultaneously; mode, temperature and fan speed can be preset in weekly timer;
- Complete system functions; each function will be implemented in an individual page with interactive and humanized interface;
- Various personalized functions, e.g. setting brightness and backlight time;
- Sufficient viewing functions, e.g. viewing on/off status and after-sales service hot line.



- **Single control of one unit**

Each indoor unit has an independent controller.



- **Multiple control of one unit**

One indoor unit can be controlled by several wired controllers at different places.



- **Central control of several indoor units**

One wired controller can control as many as 16 indoor units.



- **Joint control of remote controller and wired controller**

Users can control one unit with two types of controllers: a remote controller which is convenient and flexible; or a wired controller which includes every function of an air conditioner.



Smart Zone Controller and Central Controller

Smart zone controller CE53-24/F(C)



- 1280*800 high-resolution color LCD;
- 7" capacitive touch screen for easy operation;
- Shielding function of single unit, group and all IDUs (shielding on/off, mode, temp setting, etc.);

- With various functions: centralized control(control all indoor units), group management(support DIY grouping), schedule management(setting of several schedules) and single unit control(on/off, mode, temp setting, fan speed, quiet, swing control, etc.);
- Provide naming of indoor units, selection of icons and personalized settings(setting background, backlight, etc);
- Up to 32 units can be centrally controlled;
- Elegant and fashionable appearance;
- Embedded installation in wall with projecting thickness only of 11mm;
- Connectable with network of indoor units or outdoor units;
- Independent power supply in 110~240V wide voltage range;
- With project setting, parameter viewing, malfunction record and access management functions.

Central controller CE52-24/F(C)



- 1280*800 high-resolution color LCD;
- 7" capacitive touch screen for easy operation;
- With project setting, parameter viewing, malfunction record and access management functions.

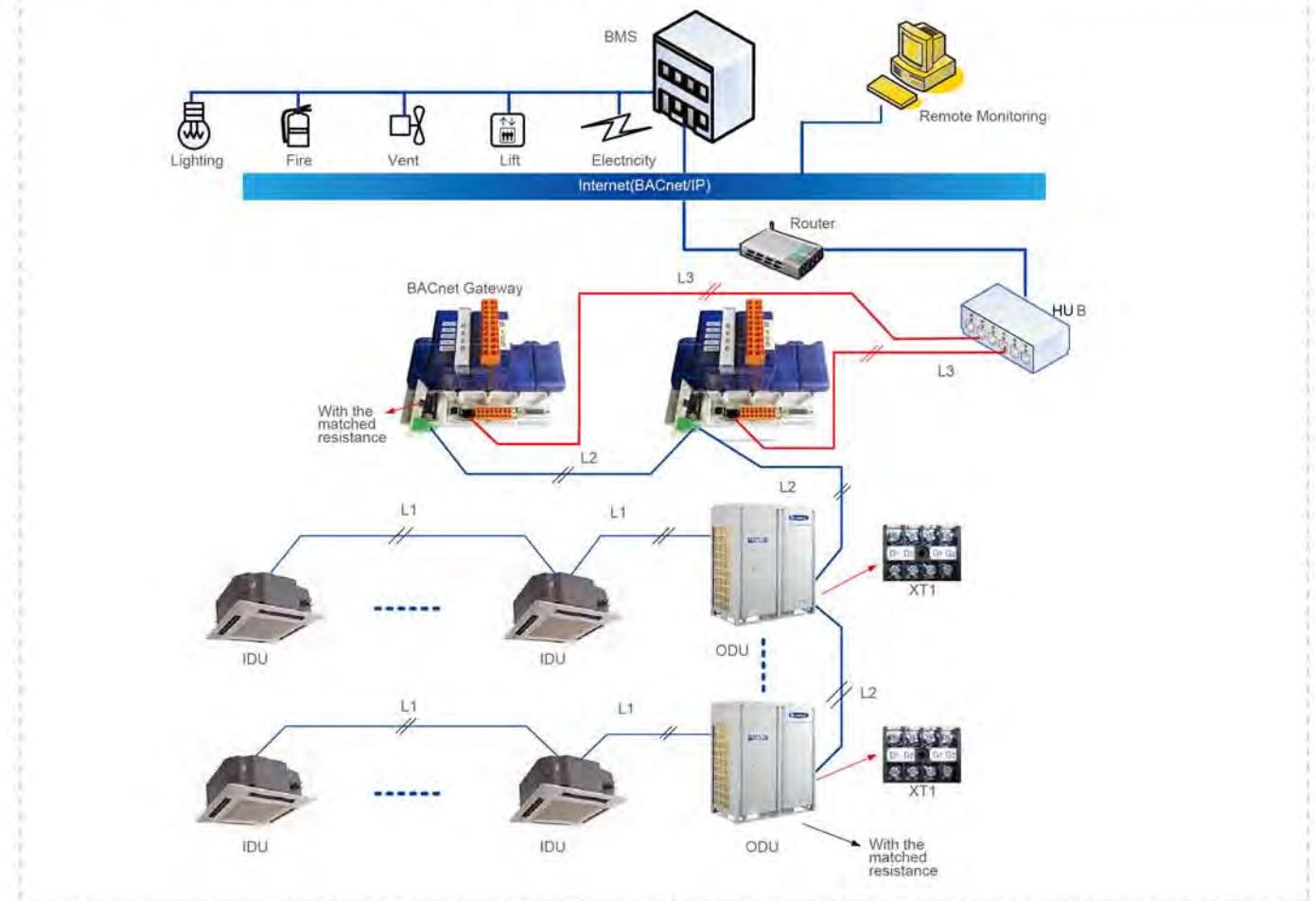
- With various functions: centralized control(control all indoor units), group management(support DIY grouping), schedule management(setting of several schedules) and single unit control(on/off, mode, temp setting, fan speed, quiet, swing control, etc.);
- Shielding function of single unit, group and all IDUs (shielding on/off, mode, temp setting, etc.);
- Provide naming of indoor units, selection of icons and personalized settings(setting background, backlight, etc);
- Up to 128 units can be centrally controlled;
- Elegant and fashionable appearance;
- Embedded installation in wall with projecting thickness only of 11mm;
- Connectable with network of indoor units or outdoor units;
- Independent power supply in 110~240V wide voltage range;

BACnet Gateway

BACnet gateway kits MG30-24/D2(B) are intended to realize the data exchange between the air conditioning unit and BAS, and providing the standard BACnet/IP building interface and 8 I/O interfaces, one of which is the fire alarm signal interface. The status of the other 7 I/O interfaces is mapped to the specific objects of the BACnet/IP bus and can be defined by the user.



Applicable models: GMV5 All DC Inverter Multi VRF System, GMV5 DC Inverter Multi VRF System, GMV DC Inverter Water Cooled Heat Pump Multi VRF System.

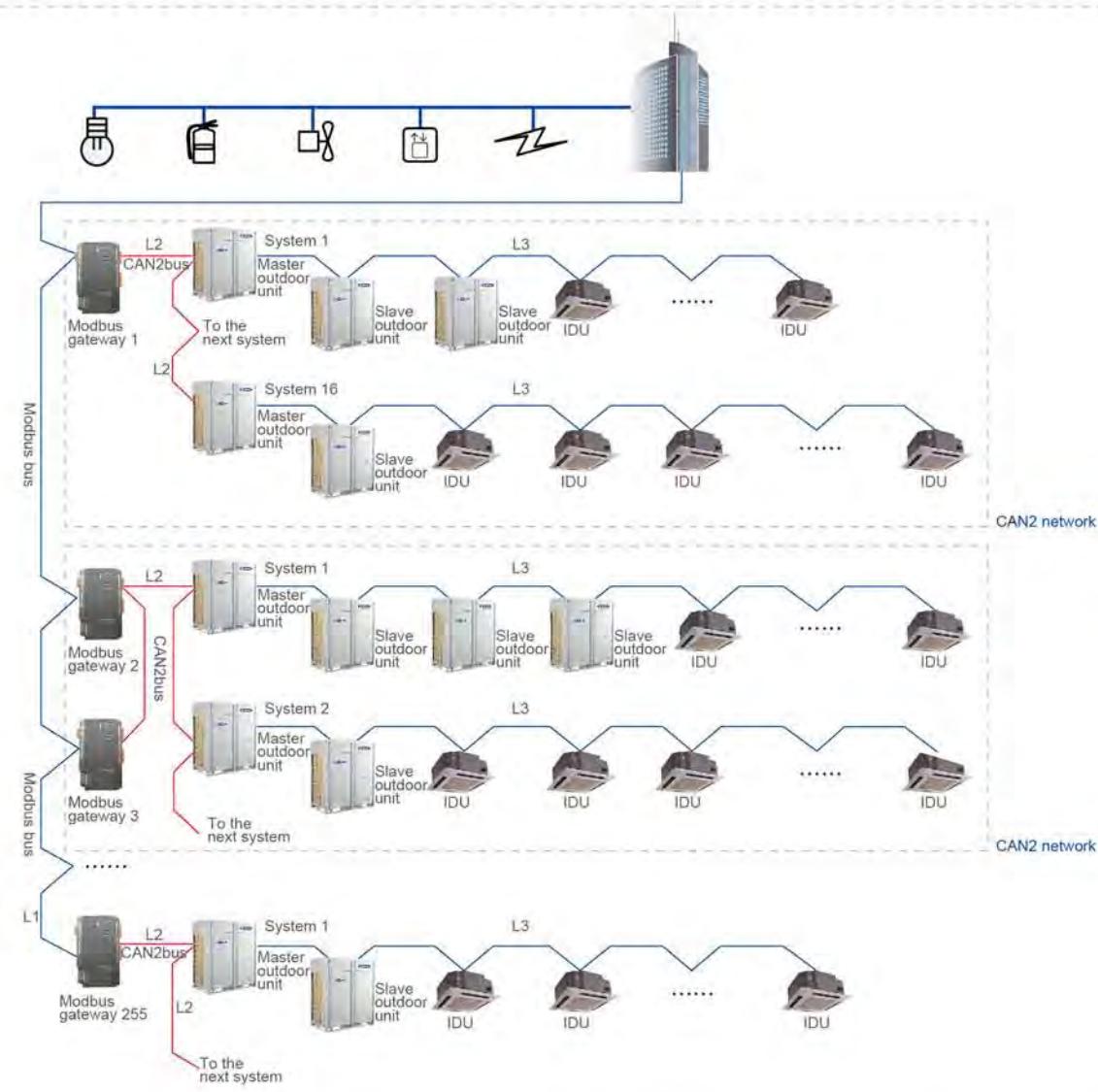


- International standard BACnet/IP interface, which has passed BTL certification;
- Real-time monitoring of unit operation status, e.g. on/off, mode, temperature;
- Real-time response to the control of unit (on/off, mode setting and speed setting, etc.) by monitoring software;
- Monitor unit errors;

- Lock unit operation statuses, directing at all control functions of unit itself or a certain setting function;
- Achieve cooling and heating temperature limitation functions;
- 8 DI/DO interfaces for receiving fire alarm signal and user's definition logic;
- Big storage capacity of unit operation data for 6 months.

Modbus Gateway

Modbus Gateway provides GMV5 system with the Modbus protocol interface when connecting to the Building Management System(BMS) in order to achieve central control and remote control over GMV5 system by BMS.



Applicable models: GMV5 All DC Inverter Multi VRF System, GMV5 DC Inverter Multi VRF System, GMV DC Inverter Water Cooled Heat Pump Multi VRF System.

- Real-time monitoring of unit operation status, e.g. on/off, mode, temperature;
- Real-time response to the control of unit (on/off, mode setting and speed setting, etc.) by monitoring software;
- Control all the units switches of on and off.
- Monitor unit errors;
- One Modbus bus can support up to 255 gateways. One Modbus gateway can support at most 16 outdoor units(up to 64 modular outdoor units) and 128 indoor units;
- Lock unit operation statuses, directing at all control functions of unit itself or a certain setting function;
- Linkage control, supporting 5 DI and 5 DO for receiving fire alarm signal and user's definition logic;
- CAN, RS485 communication ports are non-polar, convenient for construction wiring;
- Achieve cooling and heating temperature limitation functions;
- 100-240 VAC,50/60Hz wide voltage range, adapted to the power supply of each country and region.

Control System Lineup

Controlling system	Product series	Cassette Type	(High ESP, Low ESP, Slim Ducted Duct Type)	Fresh Air Processing	Wall mounted Type	Floor Ceiling Type	Console Type	Floor Standing Type	Air Handler
Wireless Controller	YAP1F	●	○	○	●	●	●	●	○
	YV1L1	○	○	○	○	○	○	○	○
Wired controller	XK48	○	●	●	○	○	○	○	●
	XK49	○	○	○	○	○	○	○	○
Centralized Controller	XK55	○	○	○	○	○	○	○	○
	JS05(receiver)		○	○					
Smart Zone Controller	CE52-24/F(C)	○	○	○	○	○	○	○	○
	CE53-24/F(C)	○	○	○	○	○	○	○	○
Long-distance monitoring software	FE31-00/AD(BM)	○	○	○	○	○	○	○	○
	ME30-24/E4(M)	○	○	○	○	○	○	○	○
BMS Accessories	MG30-24/D2(B)	○	○	○	○	○	○	○	○
	Optoelectronic isolated converter	RS232-RS422/485	○	○	○	○	○	○	○
Other modules	Optoelectronic isolated signal multiplier	RS-422/485	○	○	○	○	○	○	○

Note: ● means standard, ○ means optional.

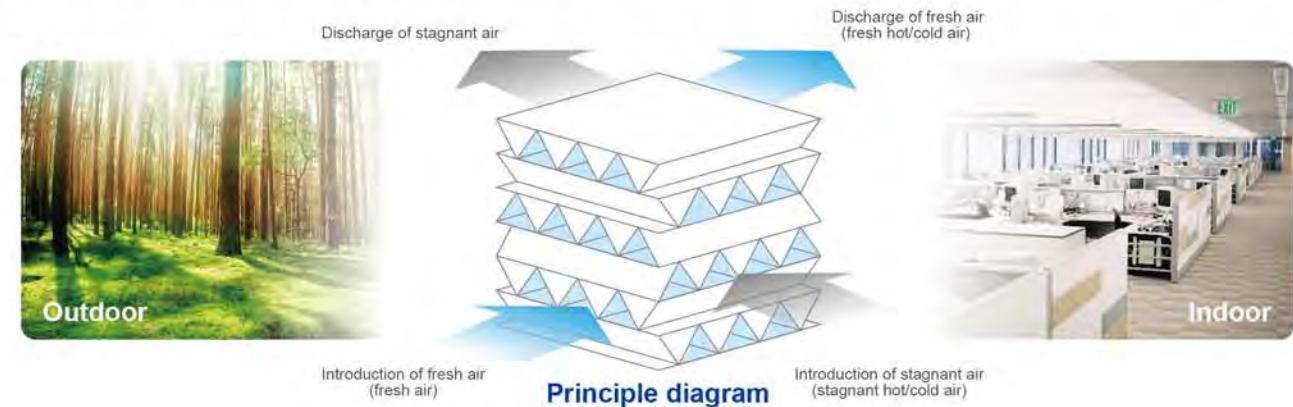
Energy Recovery Ventilation(ERV)



- 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	
Temperaturer 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	63.00	66.00	65.00		
	Cooling	%	61.00	57.00	60.00	62.00	60.00	58.00	58.00	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	2.80	0.262	0.50	0.50	1.10		
Sound Pressure Level	Db(A)	37	39	45	46	48	50	54	39	50	46	60		
Dimension (W*D*H)	Outline	mm	800*879*306	800*879*308	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*1165*315	1050*1165*315	1087*1320*400	1087*1320*400	1540*1550*470	1540*1550*470	1610*1710*700	1050*1165*315	1087*1320*400	1087*1320*400	1540*1550*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	59	37	
	40'HQ	set	168	168	104	87	44	44	24	168	67	67	44	
Standard wired remote controller		Z5N151	Z5N151	Z5N151	Z5N151	Z5N151	Z5N151	/	Z5N151	Z5N151	Z5N151	Z5N151		

Note:
*1:This product only gets CB certification.

Control System Lineup

Product series		ERV
Control system		
Wired controller	Z5N151	
Interface of the main board	BMS	
Optoelectronic isolated converter	RS232-RS422485	
Optoelectronic isolated signal multiplier	RS-422485	

Note: ● means standard, ○ means optional.

Note

Award and Certification

