GMV5

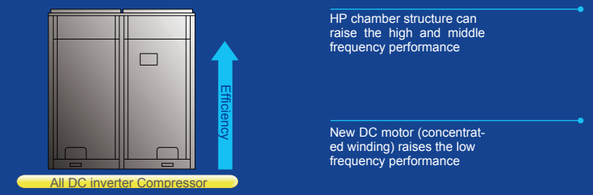
Key Features

All DC Inverter Technology to Improve Compression Efficiency

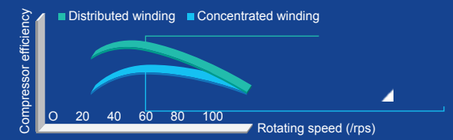
All DC inverter compressor and high-performance high pressure chamber are adopted to reduce loss of overheat and improve compression efficiency from direct intake. Compared with low pressure chamber, the compression efficiency is improved. High-efficient permasyn motor is adopted to provide better performance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

All DC Inverter Compressor

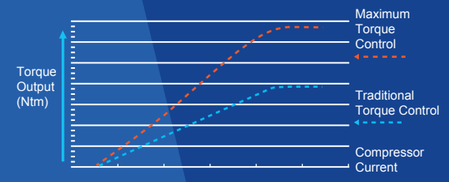
- All DC inverter compressor is used in this system. It can directly intake gas to reduce loss of overheat and improve efficiency.



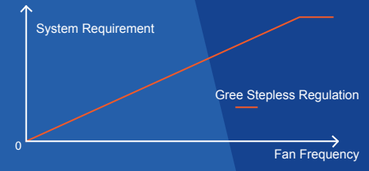
- High-efficient permasyn motor is adopted to provide better performance than traditional DC inverter compressor.



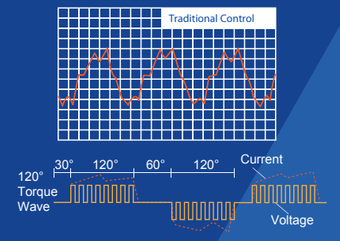
- **Technology of Maximum Torque Control with Minimum Current**
  It can reduce energy loss caused by device winding so as to realize higher efficiency.

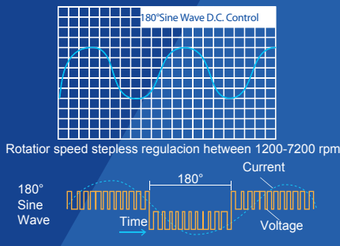


- **Low-frequency Torque Control**
  It can directly control motor torque, through which fan motor can run at a low speed. Users will feel more comfortable while requirements of the system are also met.



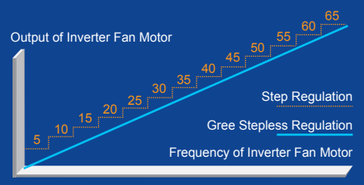
- 180° Sine Wave DC Speed Varying Technology
  It can satisfy various places' demands for different temperature and is able to save a great deal of electricity and provide users with utmost comfort at the same time.





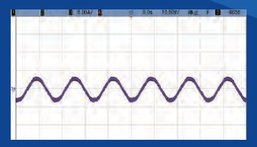
Sensorless DC Inverter Fan Motor

- 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.


Before


After

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


8/10 HP


12/14/16 HP

18/20/22 HP

88HP

Money is saved in system cost and piping

BEFORE

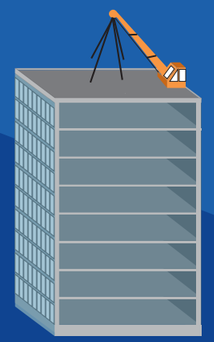

16HPx4+14HPx1+10HPx1=88HP

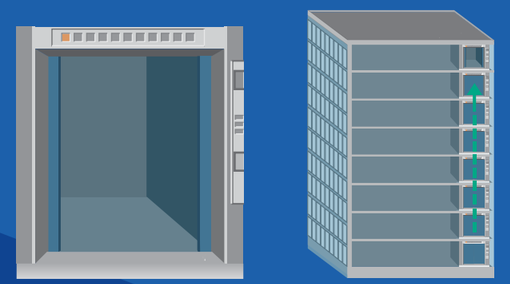
NOW

22HPx4=88HP

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.


Company A

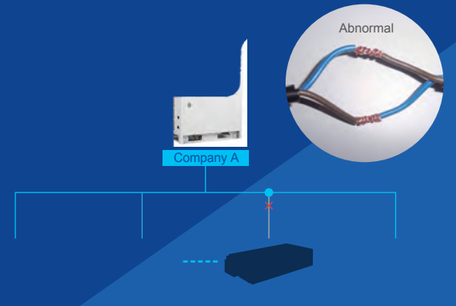

GMV 5

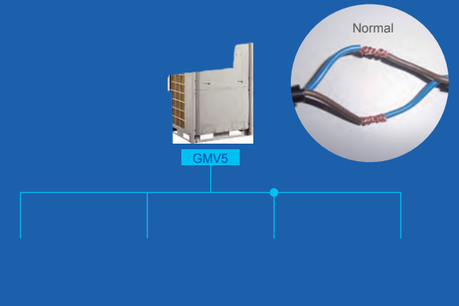
Non-polar CAN Technology to Improve Communication Efficiency

- 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.

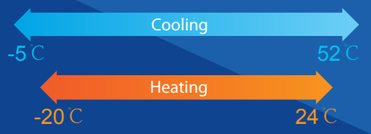




Wide Range of Voltage and Operation Condition

- 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℃~52℃ in cooling** and **-20℃~24℃ in heating**.



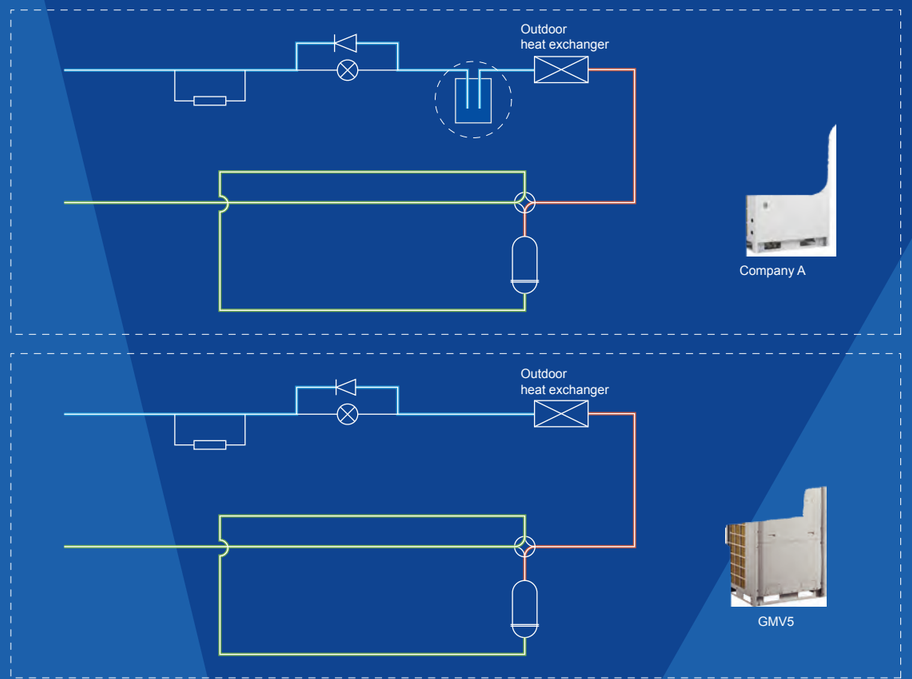
Wider Applicable Location

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.

Max.IDU Connection: **80** sets

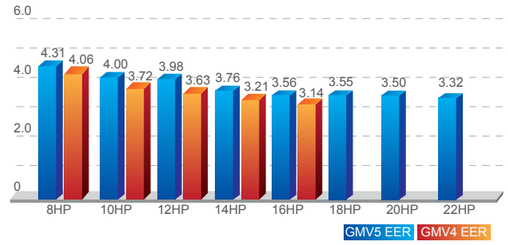
Refrigerant Storage and Distribution

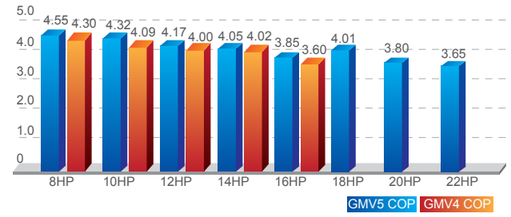
The GMV5 system is designed without liquid receiver and the excess refrigerant is stored in the piping, which can minimize the refrigerant charging volume and enhance the control accuracy of refrigerant.



High Efficiency and More Energy Saving

Thanks to the advanced all DC inverter technology, optimized system design and accurate intelligent control technology, EER of GMV5 is up to 4.31 while COP is up to 4.55.





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

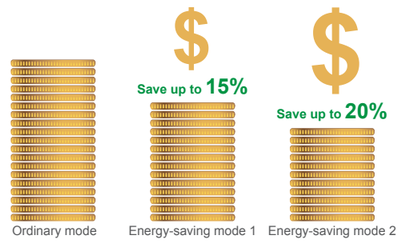
The GMV5 system has 2 modes for energy saving, which can be chosen to meet different electricity demands.

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:

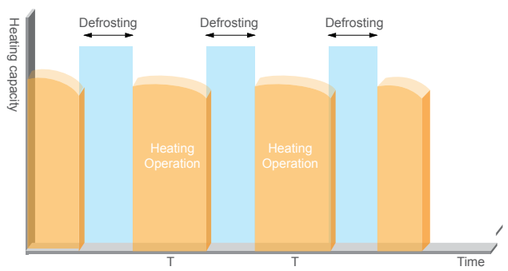
In compulsory energy-saving mode, the system will limit power output forcibly. Up to 20% of energy can be saved.



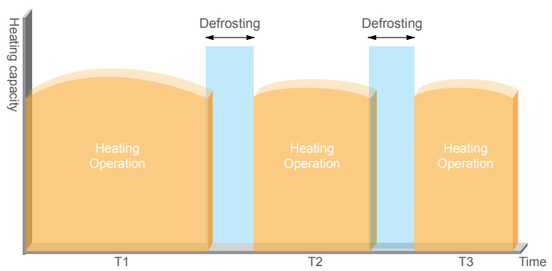
Intelligent defrosting control

During the heating process, the frost status of the unit will be different after affecting by factors of outdoor ambient temperature, load status and operation time. Through real-time detection of operation parameters of the system, it can decide the defrosting time by intelligently estimating the thickness of frost, high pressure of system and blockage status of heat exchanger.

Traditional Defrosting Mode



Intelligent Defrosting Mode



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

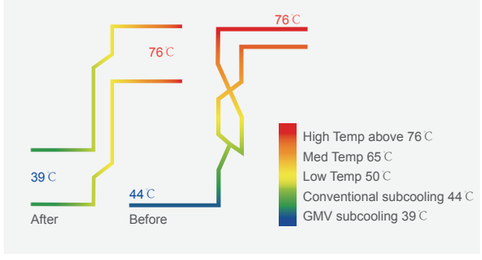
- When total load demands more than 75% of a running system's capacity, one more unit will automatically start;
- When total load demands less than 40% of a running system's capacity, one unit will automatically shut down;
- Therefore, each unit shares 40%-75% of the total load.
- Experiments show that 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.

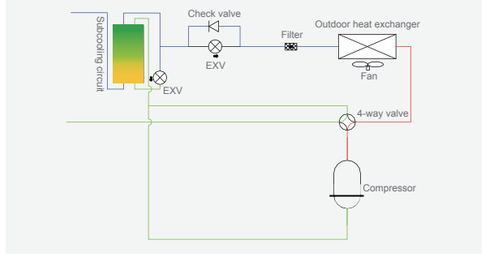
- **Output of Optimal Portion to Ensure Highest Efficiency**
  The best heating or cooling performance can be realized in the most energy-saving way. DC inverter compressor and DC inverter fan will also be operating in this way to ensure high efficiency.

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℃.



- Subcooling loop can realize 9℃ second subcooling to guarantee cooling and heating performance.



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

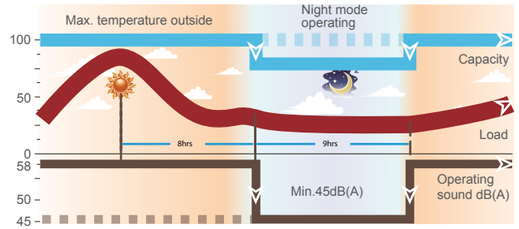
Through setting temperature lower limit in cooling or dry mode, and setting temperature upper limit in heating, 3D heating or heat supply mode, the system is able to operate in a smaller temperature range so as to achieve energy saving.

Comfortable Design for A Better Life

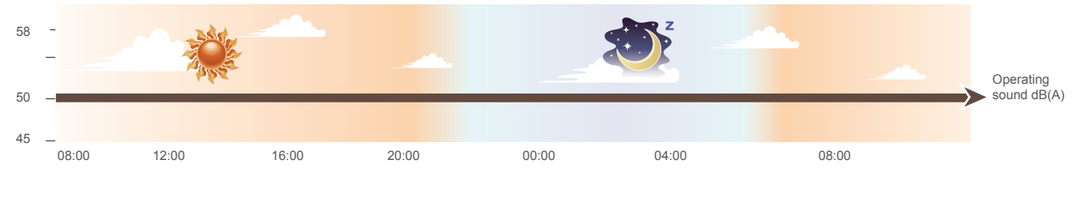
The GMV5 system has a wide range of working conditions. Whether it's in a cool winter or a hot summer, normal operation is guaranteed with the least noise, making users feel more comfortable.

Outdoor Unit Quiet Mode and Quiet Control

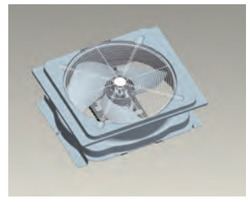
- **Quiet at night**
  The system can record the highest outdoor temperature. At night, the system will automatically turn to quiet mode. There are 9 quiet modes which can be set according to actual needs.

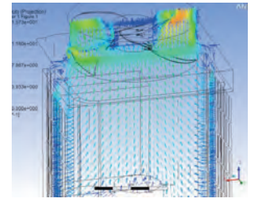


- **Quiet in compulsion**
  The system can also be set in this mode to ensure low noise as long as it is operating. Noise is as low as 45dB(A).

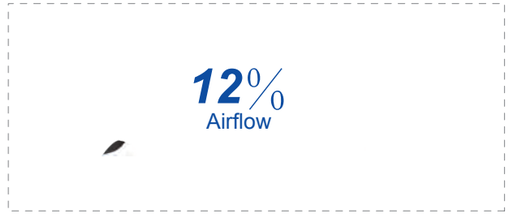


- **Quiet Control**
  1. Optimized Bossing Design
  After many times of CFD tests, a new fan bossing structure has been developed to reduce vibration of fan during running. Noise can be reduced by 3dB(A).



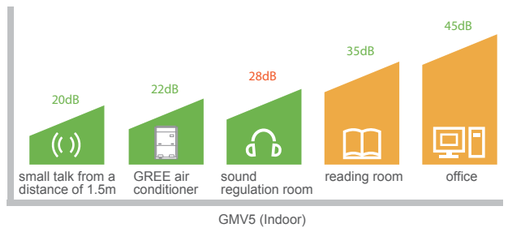


  2. Aerodynamics 3D Axial Fan
  Compared with conventional fan, it can increase air volume by 12%, improving efficiency as well as lowering noise.



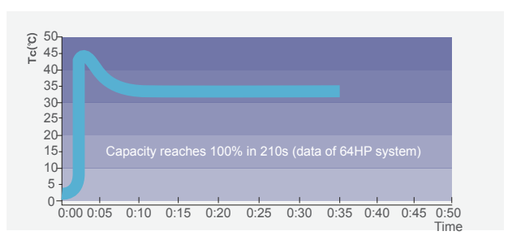
Quiet Indoor Unit

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).



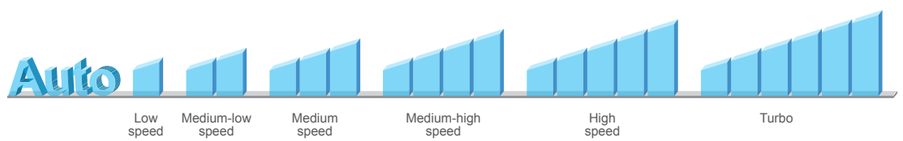
Fast Start-up in Heating

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

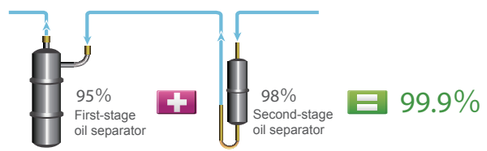
Indoor fan speed can be set in 7 levels by wired controller. They are auto, low speed, medium-low speed, medium speed, medium-high speed, high speed and turbo. When the wired controller is on, press "FAN" button to set indoor fan speed circularly as below:



Excellent Performance Ensured by Advanced Technology

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%.



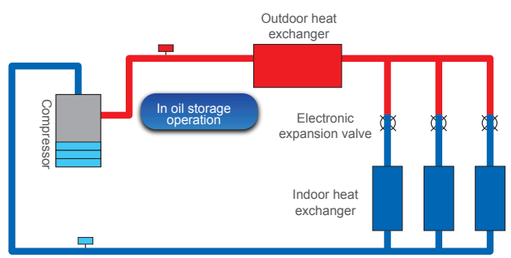
Oil Return Control Technology

- **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.

Oil storage status before oil return

Oil return operation

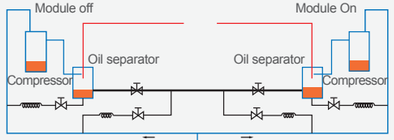
- **Specialized Compressor Oil Storage Control**
  The system applies specialized compressor oil storage technology, which can control the lowest oil level for compressor operation.



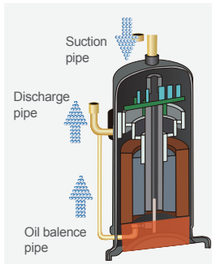
Oil storage operation

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.

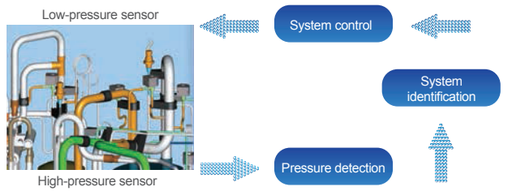


- **Oil Balance between Each Compressor**
  Refrigerant is taken into the compressor by the suction pipe and then runs through the cooling system. It can control the oil level and minimum oil volume required by each compressor so as to realize oil balance between each compressor.



Intelligent Detection Control

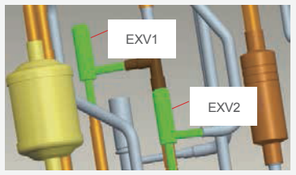
- **Pressure Sensor Detection Control**
  Pressure sensor can precisely detect system high pressure and low pressure, and adjust output of fan and compressor, so as to make sure the system can work under the most energy-saving pressure condition.



- **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.

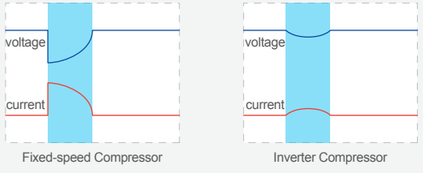
Multi Electronic Expansion Valves Control

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.



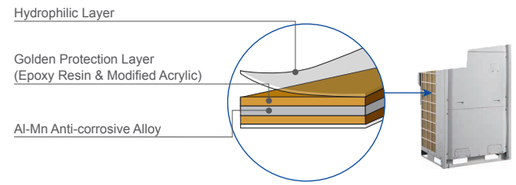
Modules Rotation Operating to Maximize Lifespan

- **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: Exoxy Resin & Modified Acrylic, Sillcon free), the anti-corrosice performance in salt-spray testing is 200%~300% higher than normal Blue Fin*.

Note: Satt-spary 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.

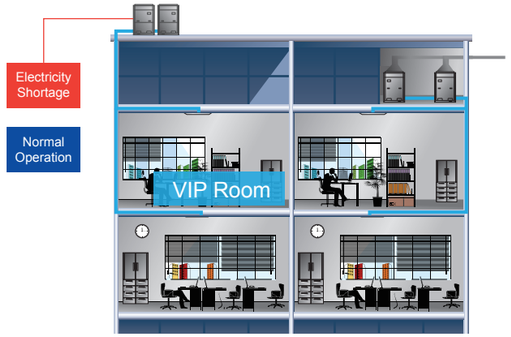
Lower Power Consumption Operation Mode

As for the area with power consumption limited time period, the maximum power consumption can be set for the operation. Basing on the power consumption of unit and user's requirement, power consumption limitation can be set according to 100%, 90% or80% of the capacity of complete unit. In this case, user can have more selection at the power consumption limited time period.

Intelligent Power Consumption Limit

Electricity Shortage Identification

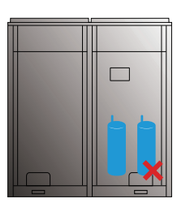
The outdoor unit can receive a power signal of electricity shortage. In some places like first-class hotels, if diesel generator is used temporarily for providing electricity, outdoor unit will send the electricity shortage signal to indoor unit. In this case, only VIP rooms can be provided with air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

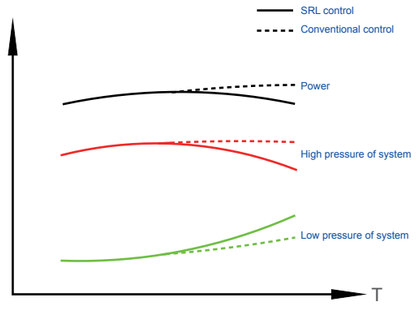
- **Emergency Operation of Compressor**
  All the compressors in each single module are DC Inverter based, when one compressor has error, others will perform the emergency operation.



- **Emergency Operation of Fan**
  Double-fan design fan ensures that one fan can still work even if the other one has error.

SRL (Self-reaction Load) Self-adaptive Control

SRL (Self-reaction Load) can intelligently detect and control system parameters and automatically adapt to indoor cold/heat load requirement to reducing unit's power and improve the energy efficiency.



ODU High Static Pressure Design

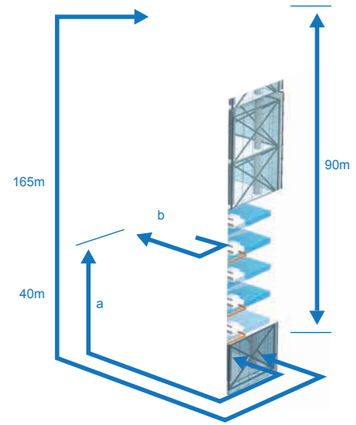
System has 4 levels of static pressure that can be set. Up to 82Pa pressure can be set for an outdoor unit. This design is especially useful when an outdoor unit needs to be placed indoor.

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

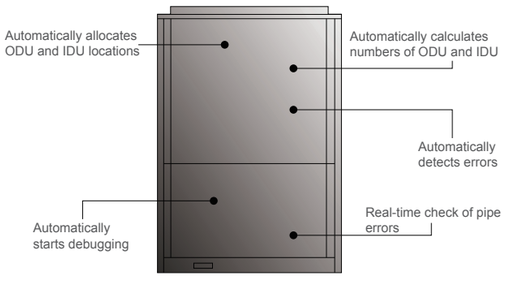
Note:
a: Distance between the first branch and the farthest indoor unit.
b: Distance between the frist branch and the nearest indoor unit.
a-b≤40m



Engineering Debugging for Convenient Construction

1）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

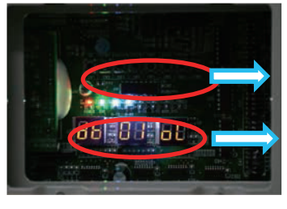


2）Diversified debugging methods for satisfying different requirements and improving debugging efficiency:

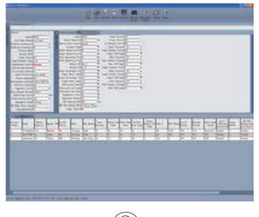
①Button debugging of outdoor unit

②Special GMV debugging system

③CE41-24/F(C) debugger* has functions of debugging of complete unit, independent debugging of indoor unit, malfunction display, data record and so on. It's no need to connect special software and PC. Moreover, it can connect external USB storage data.



①



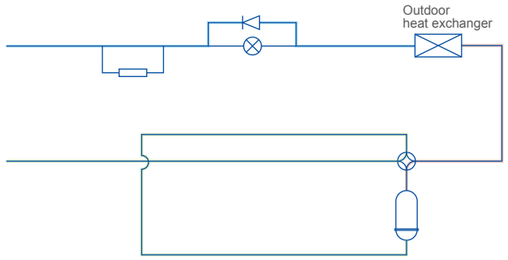
②

③

Note:* This debugger is under development.

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.

COMPANY A

VS

GMV5

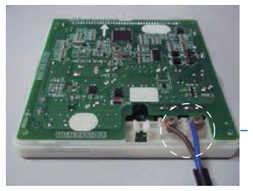
Inspection window

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.

COMPANY A

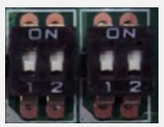
Common Plastic Electricity Wire



GMV5

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.



Manual Addressing
Company A

Auto Addressing
GMV5

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.

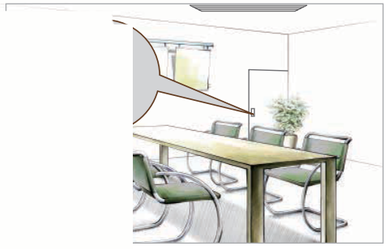
Heating mode is
deactivated in summer

Cooling mode is
deactivated in winter

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.

Wired controller for Hotel



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-504WM/B-X (18HP)	GMV-560WM/B-X (20HP)	GMV-615WM/B-X (22HP)
GMV-224WM/B-X	●							
GMV-280WM/B-X		●						
GMV-335WM/B-X			●					
GMV-400WM/B-X				●				
GMV-450WM/B-X					●			
GMV-504WM/B-X						●		
GMV-560WM/B-X							●	
GMV-615WM/B-X								●
GMV-680WM/B-X		●		●				
GMV-730WM/B-X		●			●			
GMV-785WM/B-X		●				●		
GMV-850WM/B-X		●					●	
GMV-900WM/B-X		●						●
GMV-960WM/B-X			●					●
GMV-1010WM/B-X				●				●
GMV-1065WM/B-X					●			●
GMV-1130WM/B-X						●		●
GMV-1180WM/B-X							●	●
GMV-1235WM/B-X								●●
GMV-1300WM/B-X		●			●		●	
GMV-1350WM/B-X		●			●			●
GMV-1410WM/B-X			●		●			●
GMV-1460WM/B-X		●					●	●
GMV-1515WM/B-X		●						●●
GMV-1580WM/B-X			●					●●
GMV-1630WM/B-X				●				●●
GMV-1685WM/B-X					●			●●
GMV-1750WM/B-X						●		●●
GMV-1800WM/B-X							●	●●
GMV-1845WM/B-X								●●●
GMV-1908WM/B-X		●			●		●	●
GMV-1962WM/B-X		●				●	●	●
GMV-2016WM/B-X		●					●●	●
GMV-2072WM/B-X		●					●	●●
GMV-2128WM/B-X		●						●●●
GMV-2184WM/B-X			●					●●●
GMV-2240WM/B-X				●				●●●
GMV-2295WM/B-X					●			●●●
GMV-2350WM/B-X						●		●●●
GMV-2405WM/B-X							●	●●●
GMV-2460WM/B-X								●●●●

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	GMV-560WM/B-X	GMV-615WM/B-X
Capacity range		HP	8	10	12	14	16	18	20	22
Capacity	Cooling	kW	22.4	28	33.5	40	45	50.4	56	61.5
	Heating	kW	25	31.5	37.5	45	50	56.5	63	69
EER		kW/kW	4.31	4	3.98	3.76	3.56	3.55	3.50	3.32
COP		kW/kW	4.55	4.32	4.17	4.05	3.85	4.01	3.80	3.65
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	33.2/40	44.7/50	50/63	52/63
Power comsumption	Cooling	kW	5.2	7	8.41	10.65	12.65	14.2	16.0	18.5
	Heating	kW	5.5	7.3	9	11.1	13	14.1	16.6	18.9
Maximum drive IDU NO.		unit	13	16	19	23	26	29	32	35
Refrigerant Charge volume		kg	5.9	6.7	8.2	9.8	10.3	11.3	14.3	14.3
Sound pressure level		dB(A)	60	61	63	63	63	63	63	64
Connecting pipe	Liquid	mm	Φ9.52		Φ12.7			Φ15.9		
	Gas	mm	Φ19.05	Φ22.2	Φ25.4		Φ28.6	Φ28.6		
	Oil balance	mm	Φ9.52					Φ9.52		
Dimension (W*D*H)	Outline	mm	930*765*1605		1340*765*1605			1340*765*1740		
	Package	mm	1010*840*1775		1420*840*1775			1420*840*1910		
Net weight/Gross weight		kg	225/235	225/235	285/300	360/375	360/375	360/375	385/400	385/400
Loading quantity	40' GP	set	24	24	16	16	16	16	16	16
	40' HQ	set	24	24	16	16	16	16	16	16

208/230V, 60Hz

Model		-	GMV-224 WM/B-F	GMV-280 WM/B-F	GMV-335 WM/B-F	GMV-400 WM/B-F	GMV-450 WM/B-F	GMV-504 WM/B-F*1	GMV-560 WM/B-F*1	GMV-615 WM/B-F*1
Capacity range		HP	8	10	12	14	16	18	20	22
Capacity	Cooling	kW	22.4	28	33.5	40	45	50.4	56	61.5
	Heating	kW	25	31.5	37.5	45	50	56	63	69
EER		kW/kW	4.31	4	3.98	3.76	3.56	3.38	2.97	2.75
COP		kW/kW	4.55	4.32	4.17	4.05	3.85	3.84	3.6	3.16
Power supply	Cooling	V/Ph/Hz	208/230V-3Ph-60Hz							
MCA		A	36	38	43	60	65	68	74	80
MOP		A	60	60	60	80	90	93	103	112
Power comsumption	Cooling	kW	5.2	7	8.41	10.65	12.65	14.9	18.9	22.3
	Heating	kW	5.5	7.3	9.0	11.1	13	14.6	17.5	21.8
Maximum drive IDU NO.		unit	13	16	19	23	26	31	34	38
Refrigerant Charge volume		kg	5.9	6.7	8.2	9.8	10.3	12.7	13	13.5
Sound pressure level		dB(A)	60	61	63	63	63	65	66	66
Connecting pipe	Liquid	mm	Φ9.52		Φ12.7			Φ15.9		
	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*1605			1340*765*1740		
	Package	mm	1010*840*1775		1420*840*1775			1420*840*1910		
Net weight/Gross weight		kg	225/235	225/235	285/300	360/375	360/375	400/415	400/415	400/415
Loading quantity	40' GP	set	24	24	16	16	16	16	16	16
	40' HQ	set	24	24	16	16	16	16	16	16

440~460V,60Hz

Model		-	GMV-224 WM/B-U	GMV-280 WM/B-U	GMV-335 WM/B-U	GMV-400 WM/B-U	GMV-450 WM/B-U	GMV-504 WM/B-U*1	GMV-560 WM/B-U*1	GMV-615 WM/B-F*1
Capacity range		HP	8	10	12	14	16	18	20	22
Capacity	Cooling	kW	22.4	28	33.5	40	45	50.4	56	61.5
	Heating	kW	25	31.5	37.5	45	50	56	63	69
EER		kW/kW	3.92	3.68	3.76	3.51	3.35	3.38	2.97	2.75
COP		kW/kW	4.17	3.91	3.91	3.91	3.68	3.84	3.6	3.16
Power supply	Cooling	V/Ph/Hz	440-460V-3Ph-60Hz							
MCA		A	19	20	24	32	35	37	40	43
MOP		A	30	30	35	40	40	45	50	55
Power comsumption	Cooling	kW	5.71	7.61	8.92	11.4	13.45	14.9	18.9	22.3
	Heating	kW	6.0	8.05	9.60	11.5	13.60	14.6	17.5	21.8
Maximum drive IDU NO.		unit	13	16	19	23	26	31	34	38
Refrigerant Charge volume		kg	6.5	6.7	8.2	9.8	10.3	12.7	13	13.5
Sound pressure level		dB(A)	60	61	63	63	63	65	66	66
Connecting pipe	Liquid	mm	Φ9.52		Φ12.7			Φ15.9		
	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*1605			1340*765*1740		
	Package	mm	1010*840*1775		1420*840*1775			1420*840*1910		
Net weight/Gross weight		kg	225/235	225/235	285/300	360/375	360/375	400/415	400/415	400/415
Loading quantity	40' GP	set	24	24	16	16	16	16	16	16
	40' HQ	set	24	24	16	16	16	16	16	16

Note:
*1: This product model is under development. Gree reserves the right to modify the specifications without prior notice. Please confirm the final specifications with sales representatives.

Specifications of ODU Combination

380~415V,50/60Hz

Model	Power Supply	Capacity		Power Input		Dimension(W×D×H)	Airflow Volume	ESP	Sound Pressure Level	Operation sound pressure level at night	Connecting pipe diameter			Min. circuit current	Max. fuse current	Weight
		Cooling	Heating	Cooling	Heating						Liquid	Gas	Oil Balance			
		kW	kW	kW	kW	mm	m^3/h	Pa	dB(A)	dB(A)	mm	mm	mm	A	A	kg
GMV-680WM/B-X	380~415V-3Ph-50/60Hz	68	76.5	17.65	18.4	(930×765×1605) +(1340×765×1605)	11400+14000	82	65	43	Φ15.9	Φ28.6	Φ9.52	49.7	63	225+360
GMV-730WM/B-X		73	81.5	19.65	20.3	(930×765×1605) +(1340×765×1605)	11400+14000	82	65	43	Φ19.05	Φ31.8	Φ9.52	54.1	63	225+360
GMV-785WM/B-X		78.4	88	21.2	21.4	(930×765×1605) +(1340×765×1740)	11400+16000	82	66	43	Φ19.05	Φ31.8	Φ9.52	65.6	80	225+360
GMV-850WM/B-X		84	94.5	23	23.9	(930×765×1605) +(1340×765×1740)	11400+16000	82	67	43	Φ19.05	Φ31.8	Φ9.52	70.9	80	225+385
GMV-900WM/B-X		89.5	100.5	25.5	26.2	(930×765×1605) +(1340×765×1740)	11400+16000	82	67	43	Φ19.05	Φ31.8	Φ9.52	72.9	80	225+385
GMV-960WM/B-X		95	106.5	26.91	27.9	(1340×765×1605) +(1340×765×1740)	14000+16000	82	68	43	Φ19.05	Φ31.8	Φ9.52	76.7	80	285+385
GMV-1010WM/B-X		101.5	114	29.15	30	(1340×765×1605) +(1340×765×1740)	14000+16000	82	68	43	Φ19.05	Φ38.1	Φ9.52	80.8	100	360+385
GMV-1065WM/B-X		106.5	119	31.15	31.9	(1340×765×1605) +(1340×765×1740)	14000+16000	82	68	43	Φ19.05	Φ38.1	Φ9.52	85.2	100	360+385
GMV-1130WM/B-X		111.9	125.5	32.7	33	(1340×765×1740) ×2	16000×2	82	68	43	Φ19.05	Φ38.1	Φ9.52	96.7	100	360+385
GMV-1180WM/B-X		117.5	132	34.5	35.5	(1340×765×1740) ×2	16000×2	82	69	43	Φ19.05	Φ38.1	Φ9.52	102	125	385+385
GMV-1235WM/B-X		123	138	37	37.8	(1340×765×1740) ×2	16000×2	82	69	43	Φ19.05	Φ38.1	Φ9.52	104	125	385+385
GMV-1300WM/B-X		129	144.5	35.65	36.9	(930×765×1605) +(1340×765×1605) +(1340×765×1740)	11400+14000+16000	82	69	45	Φ19.05	Φ38.1	Φ9.52	104.1	125	225+360+385
GMV-1350WM/B-X		134.5	150.5	38.15	39.2	(930×765×1605) +(1340×765×1605) +(1340×765×1740)	11400+14000+16000	82	69	45	Φ19.05	Φ38.1	Φ9.52	106.1	125	225+360+385
GMV-1410WM/B-X		140	156.5	39.56	40.9	(1340×765×1605) ×2+(1340×765×1740)	14000×2+16000	82	69	45	Φ19.05	Φ41.3	Φ9.52	109.9	125	285+360+385
GMV-1460WM/B-X		145.5	163.5	41.5	42.8	(930×765×1605) +(1340×765×1740) ×2	11400+16000×2	82	69	45	Φ19.05	Φ41.3	Φ9.52	122.9	125	225+385×2
GMV-1515WM/B-X		151	169.5	44	45.1	(930×765×1605) +(1340×765×1740) ×2	11400+16000×2	82	70	45	Φ19.05	Φ41.3	Φ9.52	124.9	125	225+385×2
GMV-1580WM/B-X		156.5	175.5	45.41	46.8	(1340×765×1605) +(1340×765×1740) ×2	14000+16000×2	82	70	45	Φ19.05	Φ41.3	Φ9.52	128.7	160	285+385×2
GMV-1630WM/B-X		163	183	47.65	48.9	(1340×765×1605) +(1340×765×1740) ×2	14000+16000×2	82	70	45	Φ19.05	Φ41.3	Φ9.52	132.8	160	360+385×2
GMV-1685WM/B-X		168	188	49.65	50.8	(1340×765×1605) +(1340×765×1740) ×2	14000+16000×2	82	70	45	Φ19.05	Φ41.3	Φ9.52	137.2	160	360+385×2
GMV-1750WM/B-X		173.4	194.5	51.2	51.9	(1340×765×1740) ×3	16000×3	82	70	45	Φ19.05	Φ41.3	Φ9.52	148.7	160	360+385×2
GMV-1800WM/B-X		179	201	53	54.4	(1340×765×1740) ×3	16000×3	82	71	45	Φ19.05	Φ41.3	Φ9.52	154	160	385×3
GMV-1845WM/B-X		184.5	207	55.5	56.7	(1340×765×1740) ×3	16000×3	82	71	45	Φ19.05	Φ41.3	Φ9.52	156	160	385×3
GMV-1908WM/B-X		190.5	213.5	54.15	55.8	(930×765×1605) +(1340×765×1605) +(1340×765×1740) ×2	11400+14000+16000×2	82	72	47	Φ22.2	Φ44.5	Φ9.52	156.1	160	225+360+385×2
GMV-1962WM/B-X		195.9	220	55.7	56.9	(930×765×1605) +(1340×765×1740) ×3	11400+16000×3	82	73	47	Φ22.2	Φ44.5	Φ9.52	167.6	200	225+360+385×2
GMV-2016WM/B-X		201.5	226.5	57.5	59.4	(930×765×1605) +(1340×765×1740) ×3	11400+16000×3	82	73	47	Φ22.2	Φ44.5	Φ9.52	172.9	200	225+385×3
GMV-2072WM/B-X		207	232.5	60	61.7	(930×765×1605) +(1340×765×1740) ×3	11400+16000×3	82	73	47	Φ22.2	Φ44.5	Φ9.52	174.9	200	225+385×3
GMV-2128WM/B-X		212.5	238.5	62.5	64	(930×765×1605) +(1340×765×1740) ×3	11400+16000×3	82	73	47	Φ22.2	Φ44.5	Φ9.52	176.9	200	225+385×3
GMV-2184WM/B-X		218	244.5	63.91	65.7	(1340×765×1605) +(1340×765×1740) ×3	14000+16000×3	82	74	47	Φ22.2	Φ44.5	Φ9.52	180.7	200	285+385×3
GMV-2240WM/B-X		224.5	252	66.15	67.8	(1340×765×1605) +(1340×765×1740) ×3	14000+16000×3	82	74	47	Φ22.2	Φ44.5	Φ9.52	184.8	200	360+385×3
GMV-2295WM/B-X		229.5	257	68.15	69.7	(1340×765×1605) +(1340×765×1740) ×3	14000+16000×3	82	74	47	Φ22.2	Φ44.5	Φ9.52	189.2	200	360+385×3
GMV-2350WM/B-X		234.9	263.5	69.7	70.8	(1340×765×1740) ×4	16000×4	82	75	47	Φ22.2	Φ44.5	Φ9.52	200.7	250	360+385×3
GMV-2405WM/B-X		240.5	270	71.5	73.3	(1340×765×1740) ×4	16000×4	82	75	47	Φ22.2	Φ44.5	Φ9.52	206	250	385×4
GMV-2460WM/B-X		246	276	74	75.6	(1340×765×1740) ×4	16000×4	82	75	47	Φ22.2	Φ44.5	Φ9.52	208	250	385×4

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	MCA	MOP	Weight
		Cooling	Heating	Cooling	Heating					Operation Noise	Liquid	Gas				
		kW	kW	kW	kW	mm	m^3 /h	Pa	dB(A)	dB(A)	mm	mm	mm	A	A	kg
GMV-504WM/B-F	208/230V-3Ph-60Hz	50.4	56.5	12.2	12.8	2×(930×765×1605)	2×11400	0~82	64	45	Φ15.9	Φ28.6	Φ9.52	69	90	225×2
GMV-560WM/B-F		56	63	14	14.6	2×(930×765×1605)	2×11400	0~82	64	45	Φ15.9	Φ28.6	Φ9.52	71	90	225×2
GMV-615WM/B-F		61.5	69	15.41	16.3	(930×765×1605)+(1340×765×1605)	11400+14000	0~82	65	45	Φ15.9	Φ28.6	Φ9.52	76	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	92	110	225+360
GMV-730WM/B-F		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	101	125	225+360
GMV-785WM/B-F		78.5	87.5	21.06	22	2×(1340×765×1605)	2×14000	0~82	66	45	Φ19.05	Φ31.8	Φ9.52	114	125	285+360
GMV-850WM/B-F		85	95	23.3	24.1	2×(1340×765×1605)	2×14000	0~82	66	45	Φ19.05	Φ31.8	Φ9.52	122	150	360×2
GMV-900WM/B-F		90	100	25.3	26	2×(1340×765×1605)	2×14000	0~82	66	45	Φ19.05	Φ31.8	Φ9.52	130	150	360×2
GMV-960WM/B-F		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	124	150	225×2+360
GMV-1010WM/B-F		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	133	150	225×2+360
GMV-1065WM/B-F		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	146	175	225+285+360
GMV-1130WM/B-F		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	154	175	225+360×2
GMV-1180WM/B-F		118	131.5	32.3	33.3	(930×765×1605)+2×(1340×765×1605)	11400+2×14000	0~82	67	45	Φ19.05	Φ38.1	Φ9.52	162	175	225+360×2
GMV-1235WM/B-F		123.5	137.5	33.71	35	3×(1340×765×1605)	3×14000	0~82	68	45	Φ19.05	Φ38.1	Φ9.52	175	200	285+360×2
GMV-1300WM/B-F		130	145	35.95	37.1	3×(1340×765×1605)	3×14000	0~82	68	45	Φ19.05	Φ38.1	Φ9.52	183	200	360×3
GMV-1350WM/B-F		135	150	37.95	39	3×(1340×765×1605)	3×14000	0~82	68	45	Φ19.05	Φ38.1	Φ9.52	191	200	360×3
GMV-1410WM/B-F		141	158	37.3	38.7	2×(930×765×1605)+2×(1340×765×1605)	2×11400+2×14000	0~82	69	47	Φ19.05	Φ41.3	Φ9.52	186	200	225×2+360×2
GMV-1460WM/B-F		146	163	39.3	40.6	2×(930×765×1605)+2×(1340×765×1605)	2×11400+2×14000	0~82	69	47	Φ19.05	Φ41.3	Φ9.52	194	200	225×2+360×2
GMV-1515WM/B-F		151.5	169	40.71	42.3	(930×765×1605)+3×(1340×765×1605)	11400+3×14000	0~82	69	47	Φ19.05	Φ41.3	Φ9.52	207	200	225+285+360×2
GMV-1580WM/B-F		158	176.5	42.95	44.4	(930×765×1605)+3×(1340×765×1605)	11400+3×14000	0~82	69	47	Φ19.05	Φ41.3	Φ9.52	215	200	225+360×3
GMV-1630WM/B-F		163	181.5	44.95	46.3	(930×765×1605)+3×(1340×765×1605)	11400+3×14000	0~82	69	49	Φ19.05	Φ41.3	Φ9.52	223	250	225+360×3
GMV-1685WM/B-F		168.5	187.5	46.36	48	4×(1340×765×1605)	4×14000	0~82	70	49	Φ19.05	Φ41.3	Φ9.52	237	250	285+360×3
GMV-1750WM/B-F		175	195	48.6	50.1	4×(1340×765×1605)	4×14000	0~82	70	49	Φ19.05	Φ41.3	Φ9.52	244	250	360×4
GMV-1800WM/B-F		180	200	50.6	52	4×(1340×765×1605)	4×14000	0~82	70	49	Φ19.05	Φ41.3	Φ9.52	252	250	360×4

440~460V,60 Hz

Model	Power Supply	Cooling Capacity		Power Input		Dimension(W*D*H)	Airflow Volume	ESP	Noise	Noise at Night	Connecting pipe diameter		Oil Balance Pipe	MCA	MOP	Weight
		Cooling	Heating	Cooling	Heating					Operation Noise	Liquid	Gas				
		kW	kW	kW	kW	mm	m^3 /h	Pa	dB(A)	dB(A)	mm	mm	mm	A	A	kg
GMV-504WM/B-U	440~460V-3Ph-60Hz	50.4	56.5	13.32	14.05	2×(930×765×1605)	2×11400	0~82	64	43	Φ15.9	Φ28.6	Φ9.52	36	40	225×2
GMV-560WM/B-U		56	63	15.22	16.1	2×(930×765×1605)	2×11400	0~82	64	43	Φ15.9	Φ28.6	Φ9.52	37	40	225×2
GMV-615WM/B-U		61.5	69	16.53	17.65	(930×765×1605)+(1340×765×1605)	11400+14000	0~82	65	43	Φ15.9	Φ28.6	Φ9.52	37	50	285+225
GMV-680WM/B-U		68	76.5	19.01	19.55	(930×765×1605)+(1340×765×1606)	11400+14000	0~82	65	43	Φ15.9	Φ28.6	Φ9.52	49	50	225+360
GMV-730WM/B-U		73	81.5	21.06	21.65	(930×765×1605)+(1340×765×1607)	11400+14000	0~82	65	43	Φ19.05	Φ31.8	Φ9.52	52	60	225+360
GMV-785WM/B-U		78.5	87.5	22.37	23.2	2×(1340×765×1605)	2×14000	0~82	66	43	Φ19.05	Φ31.8	Φ9.52	55	60	285+360
GMV-850WM/B-U		85	95	24.85	25.1	2×(1340×765×1605)	2×14000	0~82	66	43	Φ19.05	Φ31.8	Φ9.52	64	70	360×2
GMV-900WM/B-U		90	100	26.9	27.2	2×(1340×765×1605)	2×14000	0~82	66	43	Φ19.05	Φ31.8	Φ9.52	66	70	360×2
GMV-960WM/B-U		96	108	26.62	27.6	2×(930×765×1605)+(1340×765×1605)	2×11400+14000	0~82	67	45	Φ19.05	Φ31.8	Φ9.52	65	70	225×2+360
GMV-1010WM/B-U		101	113	28.67	29.7	2×(930×765×1605)+(1340×765×1605)	2×11400+14000	0~82	67	45	Φ19.05	Φ38.1	Φ9.52	67	80	225×2+360
GMV-1065WM/B-U		106.5	119	29.98	31.25	(930×765×1605)+2×(1340×765×1605)	11400+2×14000	0~82	67	45	Φ19.05	Φ38.1	Φ9.52	71	80	225+285+360
GMV-1130WM/B-U		113	126.5	32.46	33.15	(930×765×1605)+2×(1340×765×1605)	11400+2×14000	0~82	67	45	Φ19.05	Φ38.1	Φ9.52	80	90	225+360×2
GMV-1180WM/B-U		118	131.5	34.51	35.25	(930×765×1605)+2×(1340×765×1605)	11400+2×14000	0~82	67	45	Φ19.05	Φ38.1	Φ9.52	83	90	225+360×2
GMV-1235WM/B-U		123.5	137.5	35.82	36.8	3×(1340×765×1605)	3×14000	0~82	68	45	Φ19.05	Φ38.1	Φ9.52	86	90	285+360×2
GMV-1300WM/B-U		130	145	38.3	38.7	3×(1340×765×1605)	3×14000	0~82	68	45	Φ19.05	Φ38.1	Φ9.52	95	100	360×3
GMV-1350WM/B-U		135	150	40.35	40.8	3×(1340×765×1605)	3×14000	0~82	68	45	Φ19.05	Φ38.1	Φ9.52	97	110	360×3
GMV-1410WM/B-U		141	158	40.07	41.2	2×(930×765×1605)+2×(1340×765×1605)	2×11400+2×14000	0~82	69	47	Φ19.05	Φ41.3	Φ9.52	96	110	225×2+360×2
GMV-1460WM/B-U		146	163	42.12	43.3	2×(930×765×1605)+2×(1340×765×1605)	2×11400+2×14000	0~82	69	47	Φ19.05	Φ41.3	Φ9.52	99	110	225×2+360×2
GMV-1515WM/B-U		151.5	169	43.43	44.85	(930×765×1605)+3×(1340×765×1605)	11400+3×14000	0~82	69	47	Φ19.05	Φ41.3	Φ9.52	102	110	225+285+360×2
GMV-1580WM/B-U		158	176.5	45.91	46.75	(930×765×1605)+3×(1340×765×1605)	11400+3×14000	0~82	69	47	Φ19.05	Φ41.3	Φ9.52	111	110	225+360×3
GMV-1630WM/B-U		163	181.5	47.96	48.85	(930×765×1605)+3×(1340×765×1605)	11400+3×14000	0~82	69	49	Φ19.05	Φ41.3	Φ9.52	114	125	225+360×3
GMV-1685WM/B-U		168.5	187.5	49.27	50.4	4×(1340×765×1605)	4×14000	0~82	70	49	Φ19.05	Φ41.3	Φ9.52	117	125	285+360×3
GMV-1750WM/B-U		175	195	51.75	52.3	4×(1340×765×1605)	4×14000	0~82	70	49	Φ19.05	Φ41.3	Φ9.52	126	150	360×4
GMV-1800WM/B-U		180	200	53.8	54.4	4×(1340×765×1605)	4×14000	0~82	70	49	Φ19.05	Φ41.3	Φ9.52	128	150	360×4