

GMV5 MAX



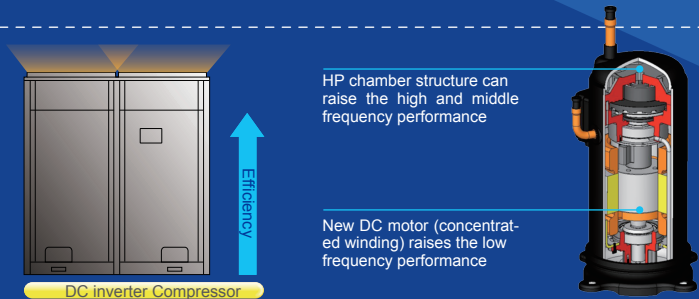
Key Features

DC Inverter Technology to Improve Compression Efficiency

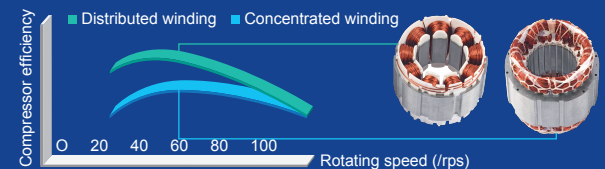
DC inverter compressor and high-performance high pressure chamber are adopted to reduce loss of overheat and improve compression efficiency from direct intake. Compared with low pressure chamber, the compression efficiency is improved. High-efficient permasyon motor is adopted to provide better performance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

DC Inverter Compressor

- High-performance high pressure chamber DC inverter compressor is adopted. High pressure chamber structure can directly reduce loss of overheat and improve compression efficiency, comparing with the compression efficiency of low pressure chamber.

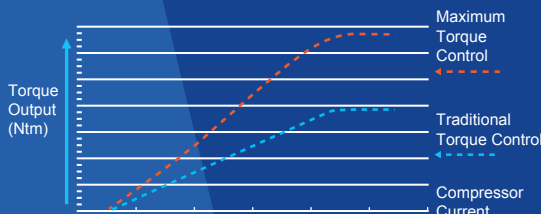


- High-efficient permasyon motor is adopted to provide better performance than traditional DC inverter compressor.



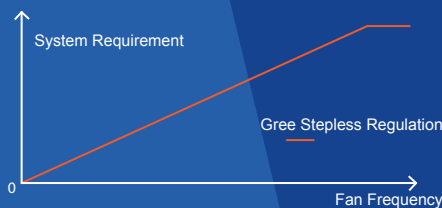
Technology of Maximum Torque Control with Minimum Current

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

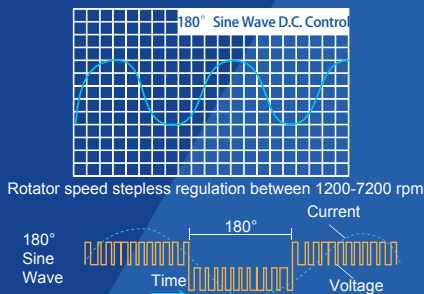
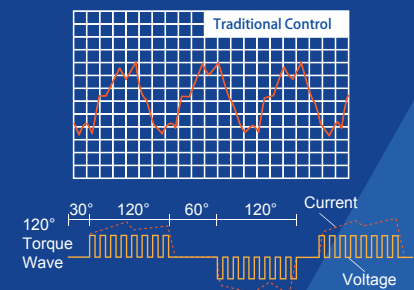


Low-frequency Torque Control

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.

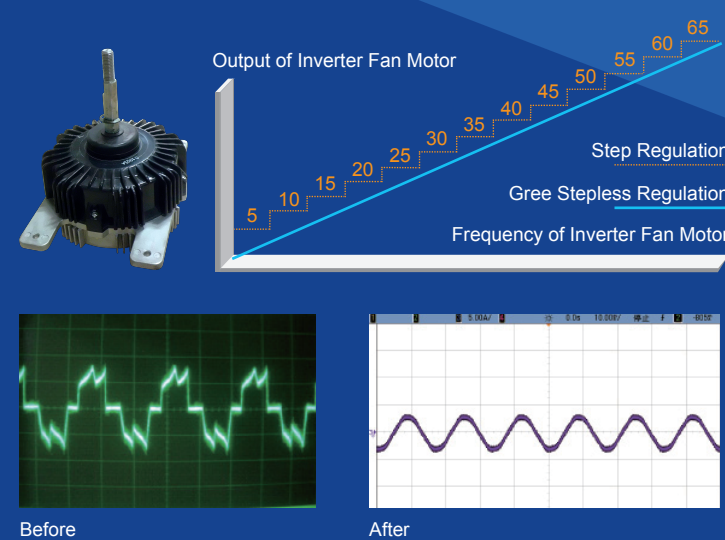


- 180° Sine Wave DC Speed Varying Technology
It can satisfy various places' demands for different temperature and is able to save a great deal of electricity and provide users with utmost comfort at the same time.



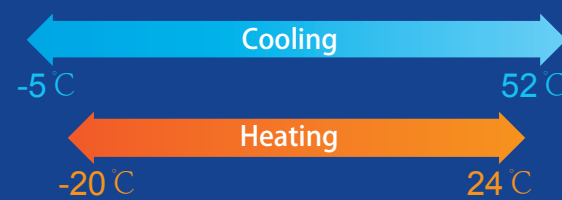
Sensorless DC Inverter Fan Motor

- 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.



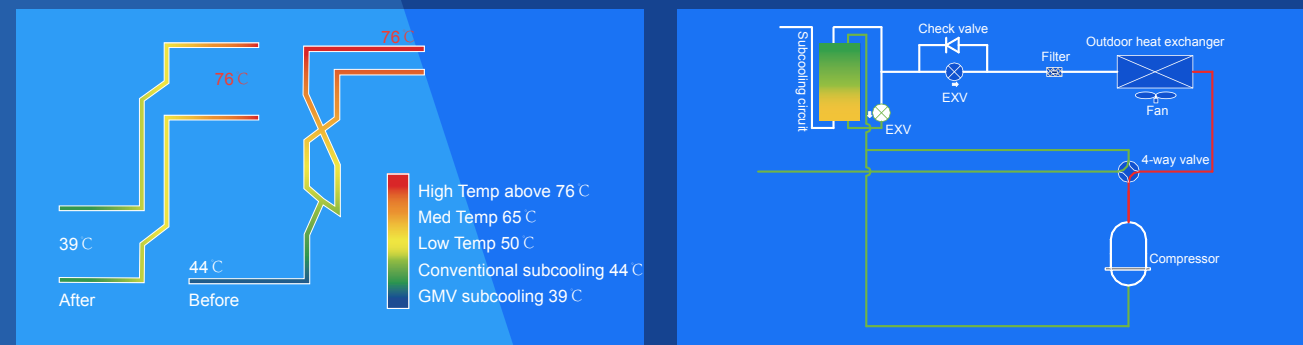
Wide Range of Operation Condition

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



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.



High Efficiency and More Energy Saving

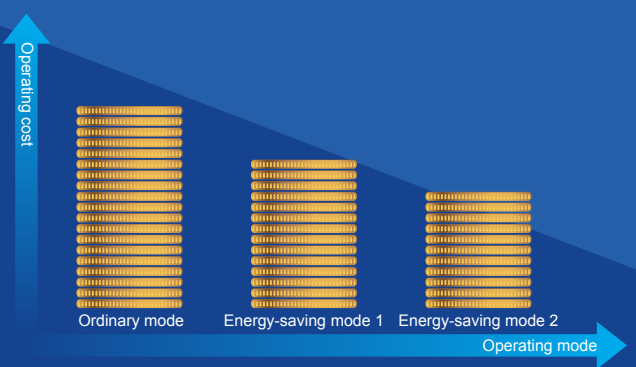
Thanks to the advanced DC inverter compressor and DC fan, optimized system design and accurate intelligent control technology, EER of GMV5 Max is up to 3.25 while COP is up to 3.82.



Energy-saving Operation Control Technology

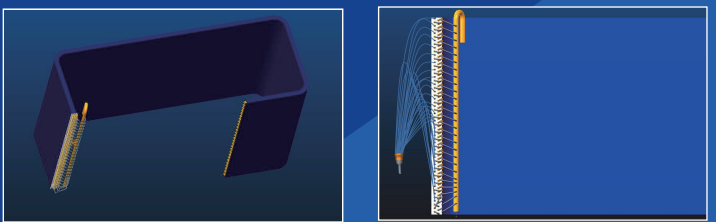
The GMV5 MAX system has 2 modes for energy saving, which can be chosen to meet different electricity demands.

- Mode 1:**
When unit is set in auto energy-saving mode, it will automatically adjust the parameters of control targets according to running status so as to achieve lower power consumption.
- Mode 2:**
When unit is set in compulsory energy-saving mode, it will limit system power output in a compulsory way.



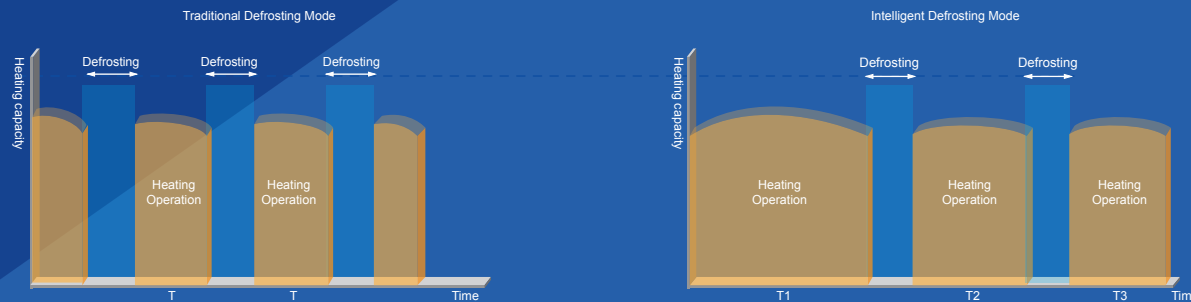
G-type Heat Exchanger

G-type heat exchanger fully utilizes the turning angle and vertical space to ensure sufficient heat exchange area. Stream heat exchange features high control precision and efficient heat exchange to guarantee satisfactory cooling and heating performance.



Intelligent Defrosting Control

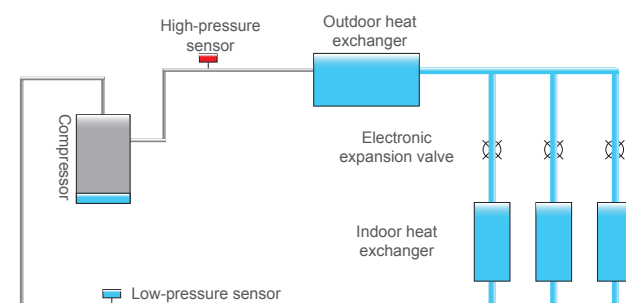
During the heating process, the frost status of the unit will be different after affecting by factors of outdoor ambient temperature, load status and operation time. Through real-time detection of operation parameters of the system, it can decide the defrosting time by intelligently estimating the thickness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



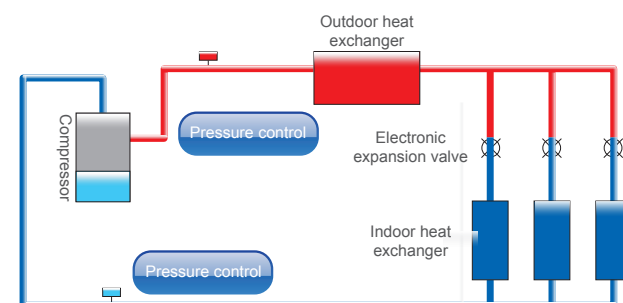
Oil Return Control Technology

• New Oil Return Control

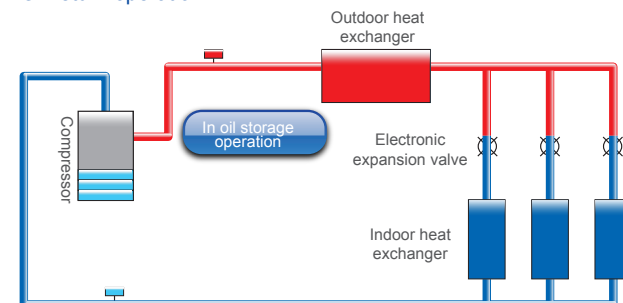
Gree new oil return control technology effectively controls system oil return and oil storage status of each compressor, which greatly improves the operation lifespan of compressor.



Oil storage status before oil return



Oil return operation



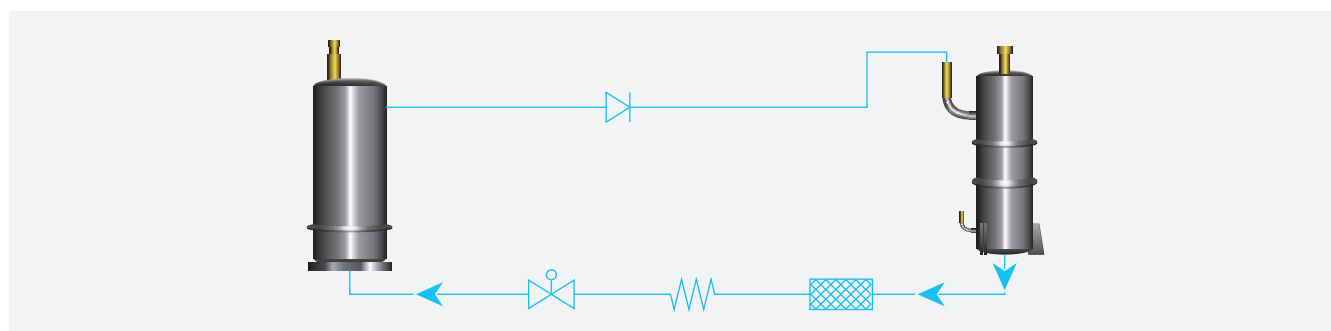
Oil storage operation

• Specialized Compressor Oil Storage Control

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

• Oil Circuit Malfunction Detection for Real-time Judgment and Protection

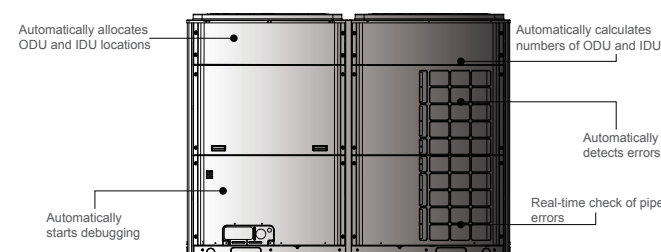
For GMV5 MAX, detection sensor is designed for the oil supply circuit of each compressor. This is to realize real-time judgment and detection for the oil supply circuit. When the compressor oil supply circuit is malfunctioning, shutdown protection will be enabled immediately to avoid further damage to the compressor. Maintenance cost for the system is reduced.



Engineering Debugging for Convenient Construction

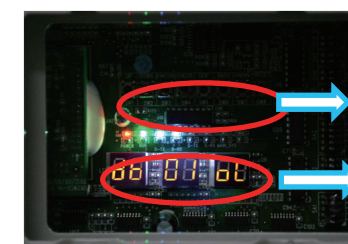
1) GMV5 MAX has five auto debugging features:

- 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



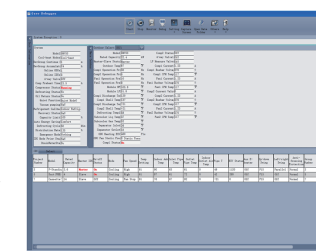
2) Diversified debugging methods for satisfying different requirements and improving debugging efficiency:

- ① Button debugging of outdoor unit
- ② Special GMV debugging system
- ③ CE41-24/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

Debugging button
Three dual 8 nixie tubes display debugging status with high readability



②

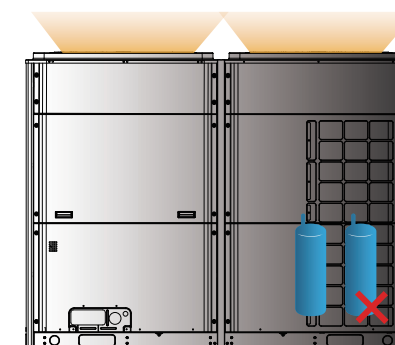


③

Excellent Emergency Operation Function to Ensure Reliable Operation

• Emergency Operation of Compressor

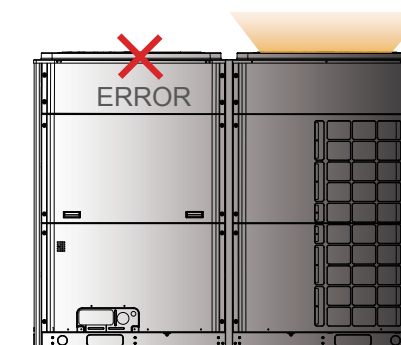
All the compressors in each single module are DC Inverter based, when one compressor has error, others will perform the emergency operation.



ERROR

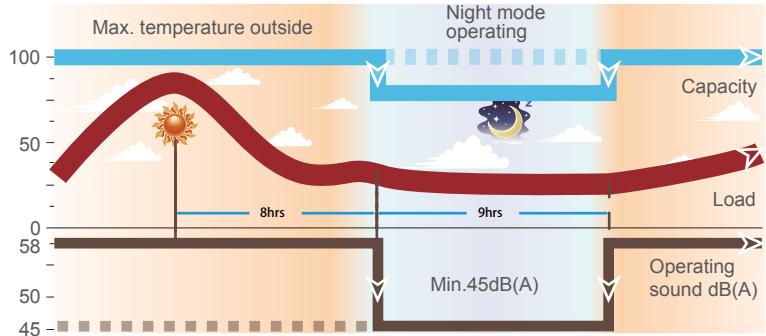
• Emergency Operation of Fan

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

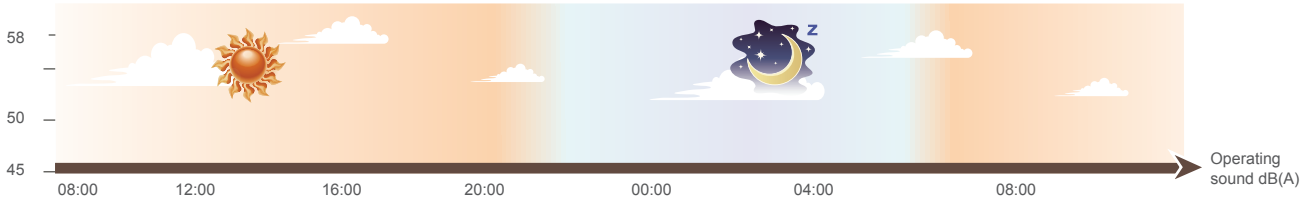


Outdoor Unit Quiet Mode and Quiet Control

- 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.

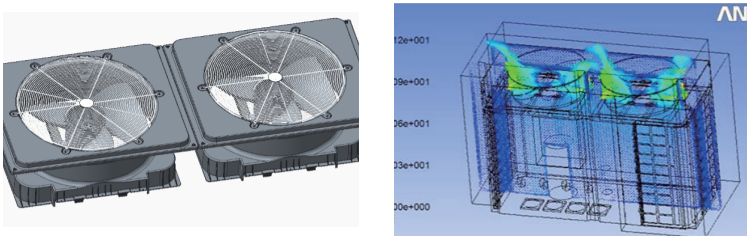


- Quiet in compulsion**
The system can also be set in this mode to ensure low noise as long as it is operating. Noise is as low as 45dB(A).

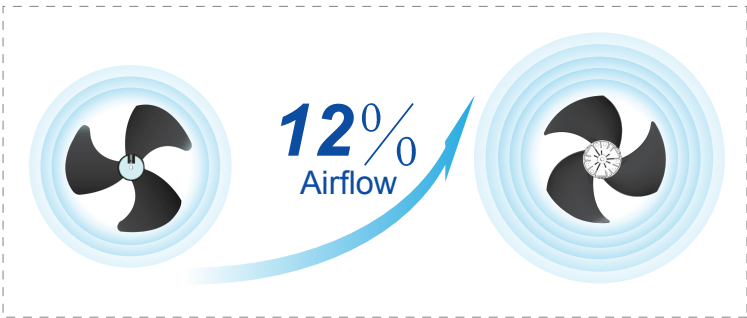


Quiet Control

- 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).



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



GMV5 MAX Lineup

HP	Model	Product
28	GMV-785W/A-M	
32	GMV-900W/A-M	

Specifications and Parameters

Model			GMV-785W/A-M	GMV-900W/A-M
Capacity range	HP		28	32
Capacity	Cooling	kW	78.5	90
	Heating	kW	87.5	100
EER	W/W		3.22	3.25
COP	W/W		3.74	3.82
Power supply	V/Ph/Hz		380-415V-3Ph-50Hz	
Max. Circuit/Fuse Current	A		57.2/63	71.5/80
Power consumption	Cooling	kW	24.4	27.7
	Heating	kW	23.4	26.2
Maximum drive IDU NO.	unit		46	53
Refrigerant Charge volume	kg		18.9	24
Sound pressure level	dB(A)		65	65
Connecting pipe	Liquid	mm	Φ19.05	Φ19.05
	Gas	mm	Φ31.8	Φ31.8
Dimension (WxDxH)	Outline	mm	2200x880x1675	
	Package	mm	2267x952x1867	
Net weight/Gross weight	kg		557/592	600/635
Loading quantity	40'GP	set	12	12
	40'HQ	set	12	12

Note:
Gree reserves the right to modify the specifications without prior notice. Please confirm the final specifications with sales representatives.