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GMV Multi VRF System



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2010

R410A COMMERCIAL AIR CONDITIONERS



VRF

GMV SERIES

GMV-Pd SERIES

GMV-R SERIES

GMV-RM SERIES

GMV INDOOR UNITS

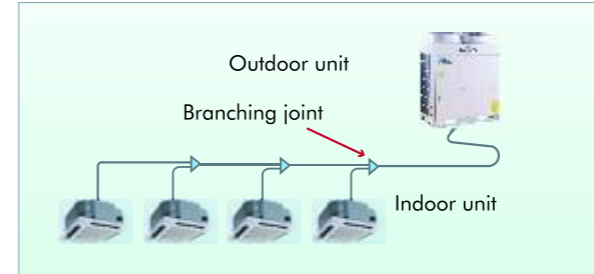
GMV-PDHM SERIES

GMV INDOOR UNITS



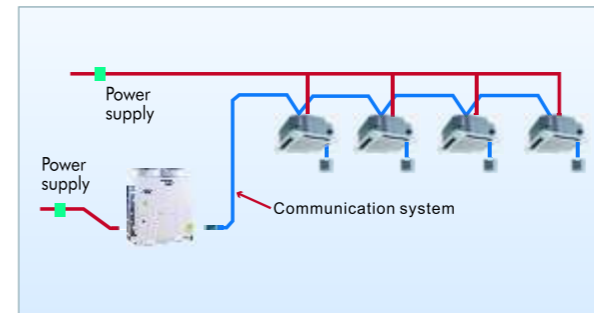
Shortest Route Design by Free Branching

Combination of line and branching pipe connection makes the shortest design route possible, thereby saving on installation time and cost.



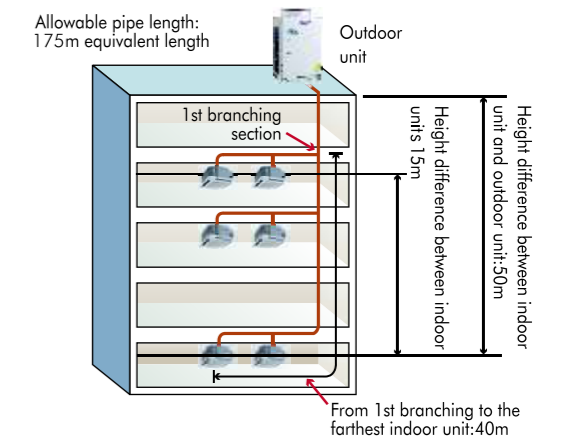
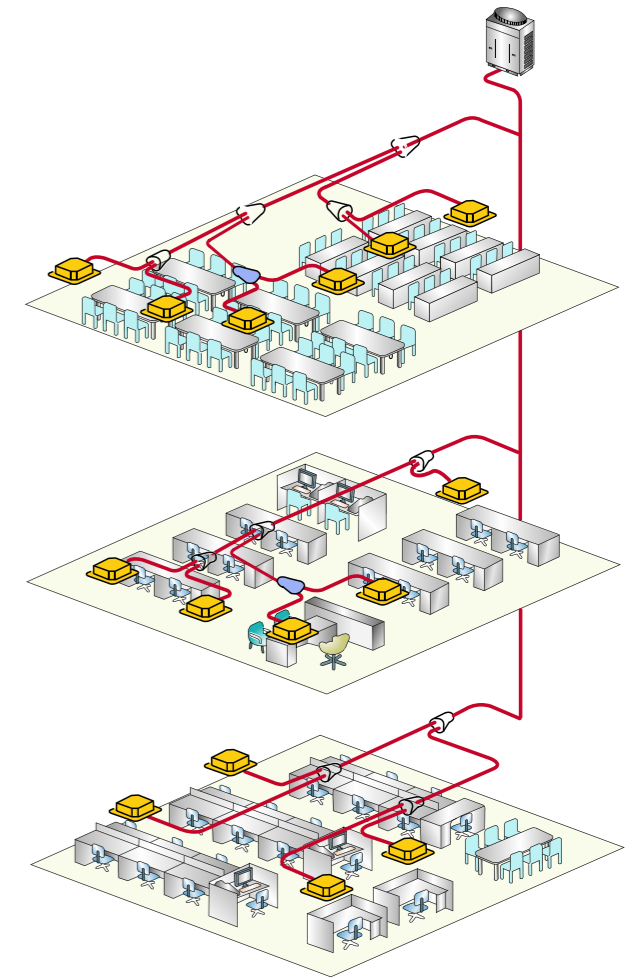
Simple Wiring

Multiplex communication system makes it possible to connect multiple indoor units to one outdoor unit with a 2-core wire, thus simplify the wiring operation.



High Lift Design

175 m Equivalent length and 50m Height difference is allowed of GREE GMV. Level difference between indoor units of 15m makes the location of the system more flexible.



Energy Saving

Each room can be controlled individually, so that only those rooms requiring air conditioning are cooled or heated. In addition, thanks to the digital technology and Exv applied in both indoor and outdoor units, the temperature of each room can be precisely controlled. High IPLV is achieved by employing cutting-edge technology, and contributing to smooth and economical operation. The highest IPLV value can reach 4.01 w/w (13.68 Btu/w-hr), compared with the conventional chiller fan coil system, a large energy saving can be realized.

GMV Multi VRF System

Self Diagnostics System

Comprehensive troubleshooting code was displayed when problems happened.

Self diagnostics examples

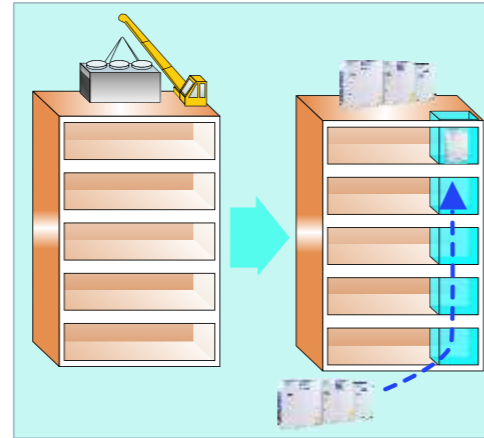
Malfunction code	Nature of malfunction
E1	Compressor high pressure protection
E2	Indoor unit anti-freeze protection
E3	Compressor low pressure protection
E4	Compressor discharge temperature protection
E5	Compressor over loading protection
E6	Communication error

Compact Unit Design

We offer a wide range of outdoor and indoor units to meet the needs of building size and interior design. Long refrigerant pipe is applicable to ensure better flexibility.

In most situation, no special cranes or conveyers is needed to life the outdoor unit to the roof for it can be carried by elevator in the building thanks to compact design connection.

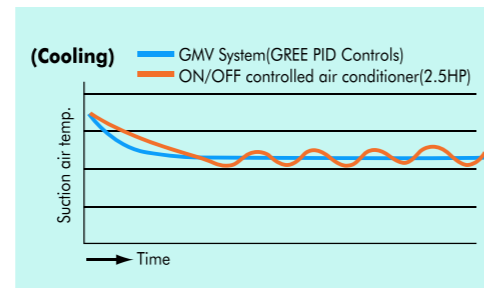
Compact connection refrigerant piping system ensures GMV with great advantage of saving ceiling space, especially in low profile buildings.



Intelligent Control

GREE GMV intelligent controls and modulating valves could deliver the required capacity, according to the load variation from 10% to 100%. The intelligent controls and modulating valves limit or increase the cooling capacity dynamically, so humidity and temperature are kept in the comfort range.

Electronic expansion valves respond to the changes in load of indoor units and continually control the flow rate of refrigerant. In this way, We can get a nearly constant room temperature with the GMV system without common temperature fluctuation that occurs with a conventional ON/OFF control system. The precise PID controls maintain the room temperature within $\pm 0.5^{\circ}\text{C}$ of the set temperature.



Wide Control Application

Intelligence Network system

- ◆ Central control available (provided with weekly timer function)
- ◆ Network monitoring system available
- ◆ Wireless remote controller or wired controller of indoor units
- ◆ Diagnosis software for service purpose
- ◆ Region wired controller

Larger capacity

Rm series and Pdm series are modular design that maximum 4 basic modules can be freely combined together to achieve max capacity of 72HP (201kW). With advanced controlling, the outdoor modules have no differences that no need to appoint master or slave units.

DC Inverter fan

Thanks to high-efficiency DC inverter fan motor, the outdoor units are high efficiency and low noise; the ESP (external static pressure) is up to 50Pa, that ducting installation for hot air exhaust can be satisfied in the device floor.

(Note: Only specified models equips with DC inverter fan motor, others is AC inverter motor, for more detail please contact with GREE Sales)

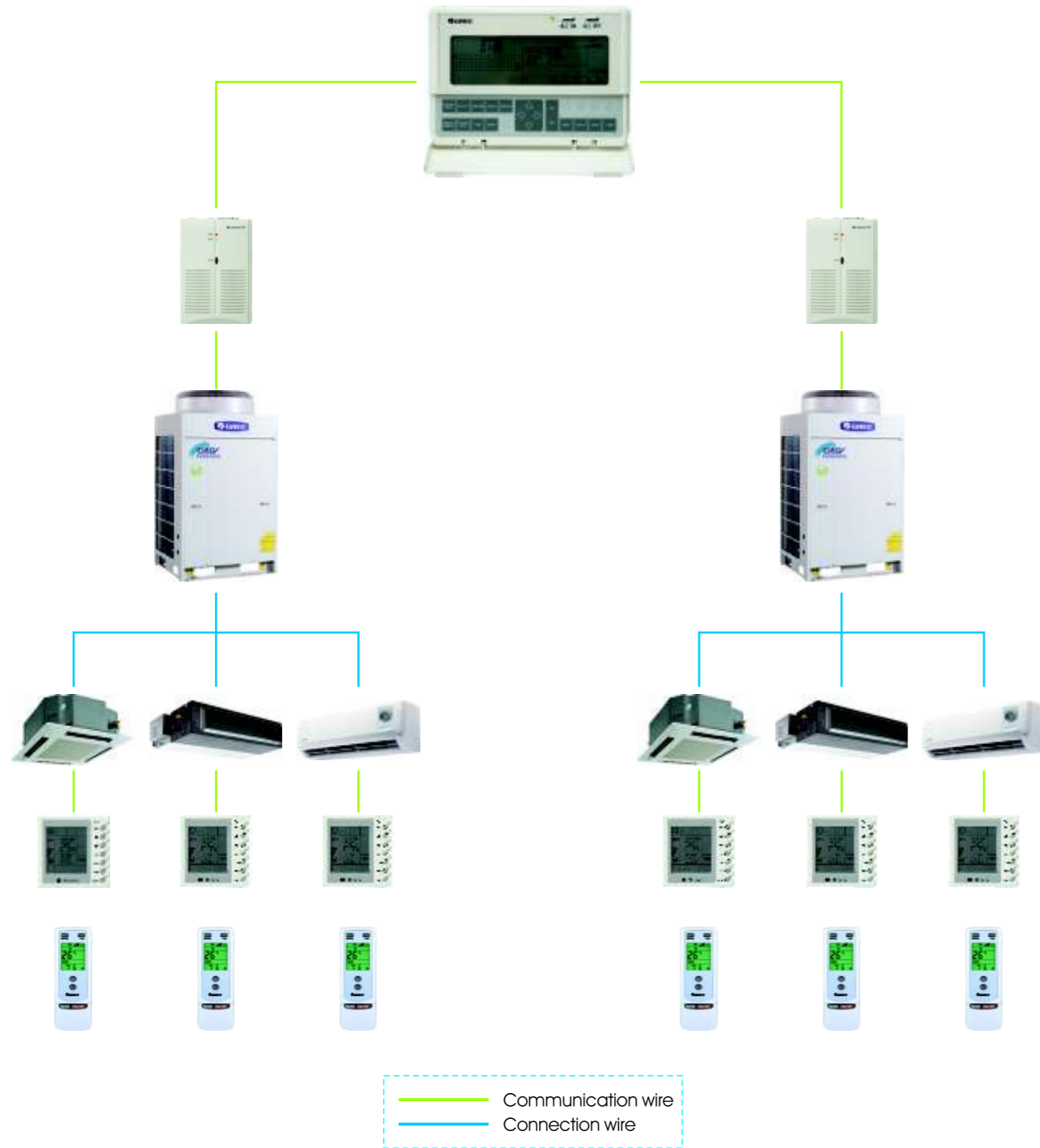
Powerful control function

With centralized controller, long distance monitoring controller system and BMS control system, intelligent control is realized; Selection software can provide maximum convenience for your project designed; portable debugger can debugging and maintenance the system automatically without any computer.



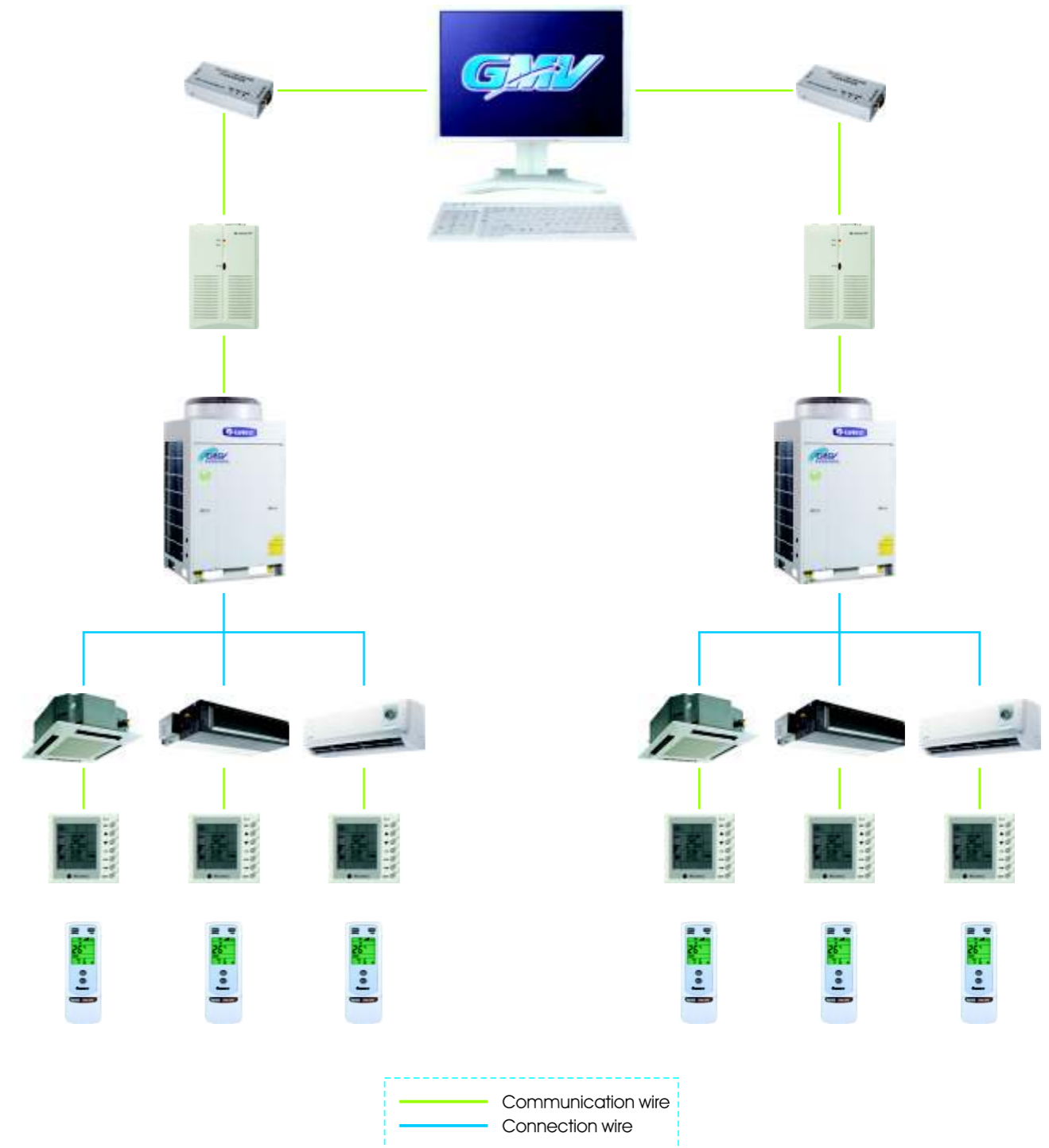
GMV Multi VRF System

Centralized controller (optional)



1. A set of centralized control can control 64 communication modules, that is connect with up to 1024 indoor units. It can conduct single control to optional region or unifying control to all units, and it can also monitor or control settings to functions of indoor units.
2. This system can realize centralized control, single control, or select control to all indoor units.
3. It can organize any several indoor units into group to conduct unifying control, which is group select control.
4. Several displays and functions, including: error code display, online auto detect, display, indication of operation state, timer, clock, and self diagnosis function.
5. The communication net that forms by centralized control and several communication modules can contain a communication wire that up to 1000 meter long (without using communication interrupter) .

Long distance monitoring (optional)

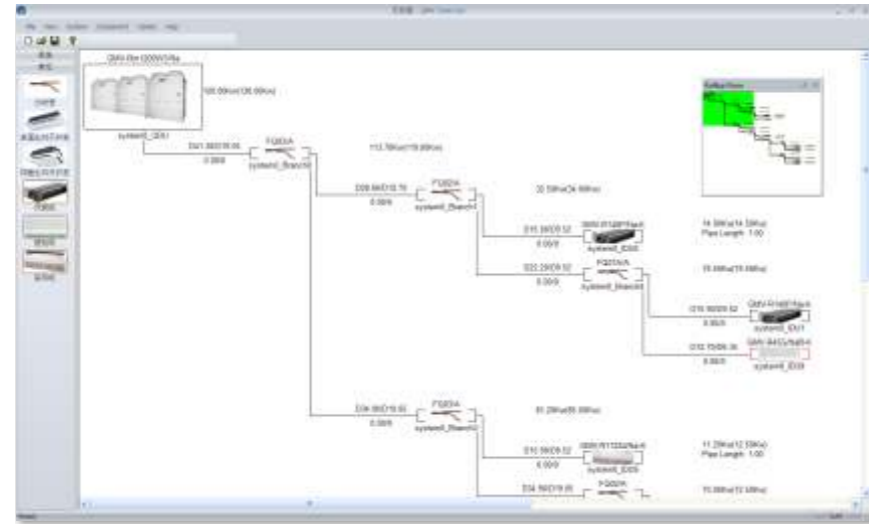


1. A simple computer can monitor and control an air conditioning system that includes 254 units totally 4064 indoor units.
2. Easy and visible for installation and adjustment, and it is a convenient and quality tool for air conditioner administrative part.
3. It saves operation cost for administrator could easily set proper operation mode for units.
4. It also saves maintenance cost for error could be easily found thanks to auto recorded air conditioner operation state data.

GMV Multi VRF System

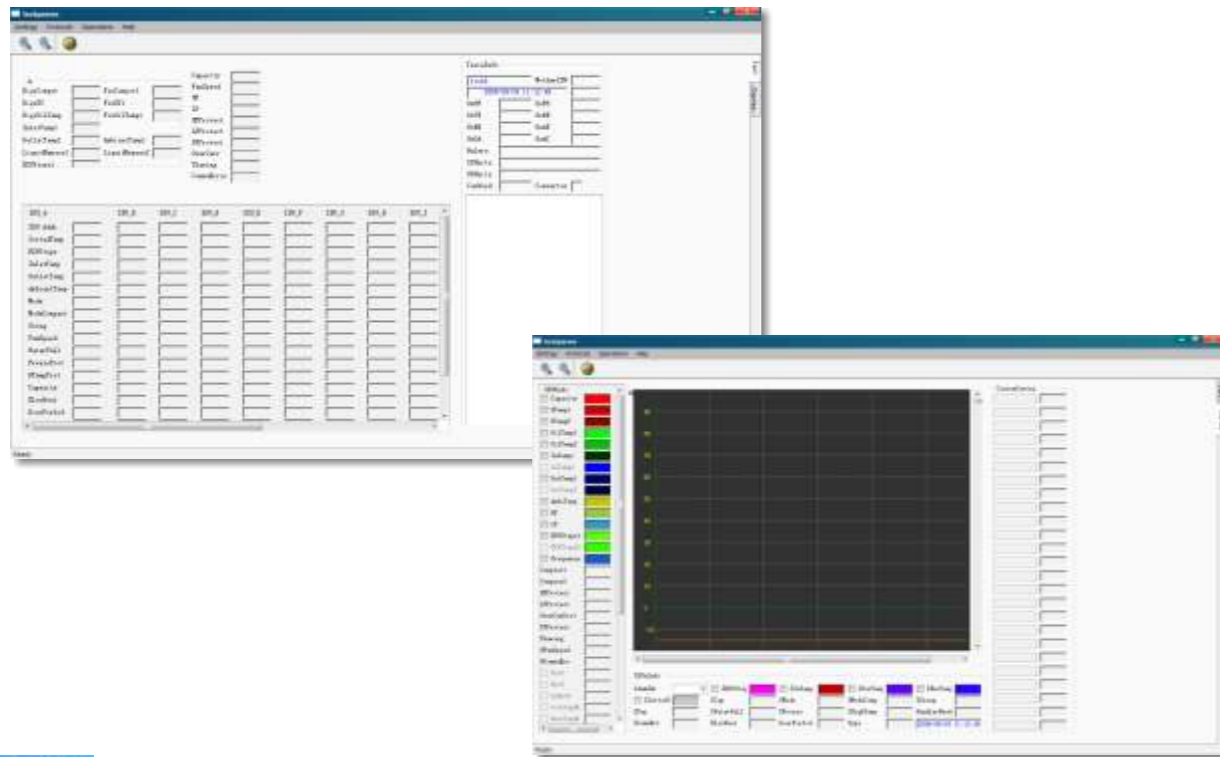
Model selection software

Design for VRF project is easy and interesting thanks to the professional model selection software from Gree. Not only project layout but quantity of copper pipe and additional refrigerant needed, as well as other information, can be calculated.

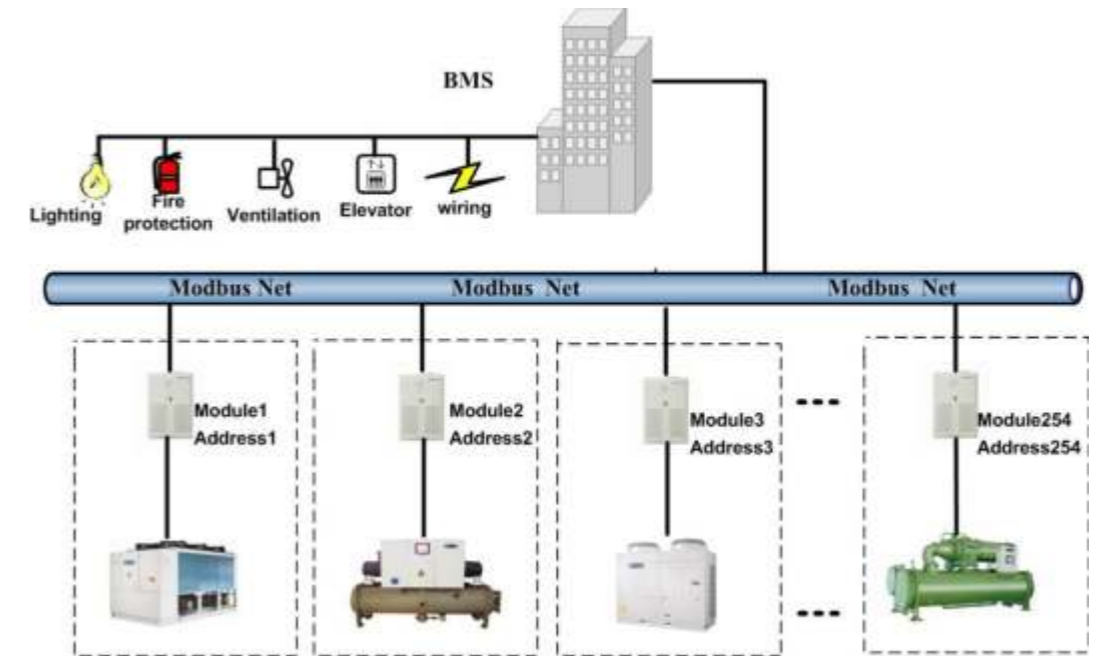


Diagnosis software

All data of the air conditioning system is easily obtained, recorded and analysed thanks to this professional project test software. It greatly improves testing efficiency.

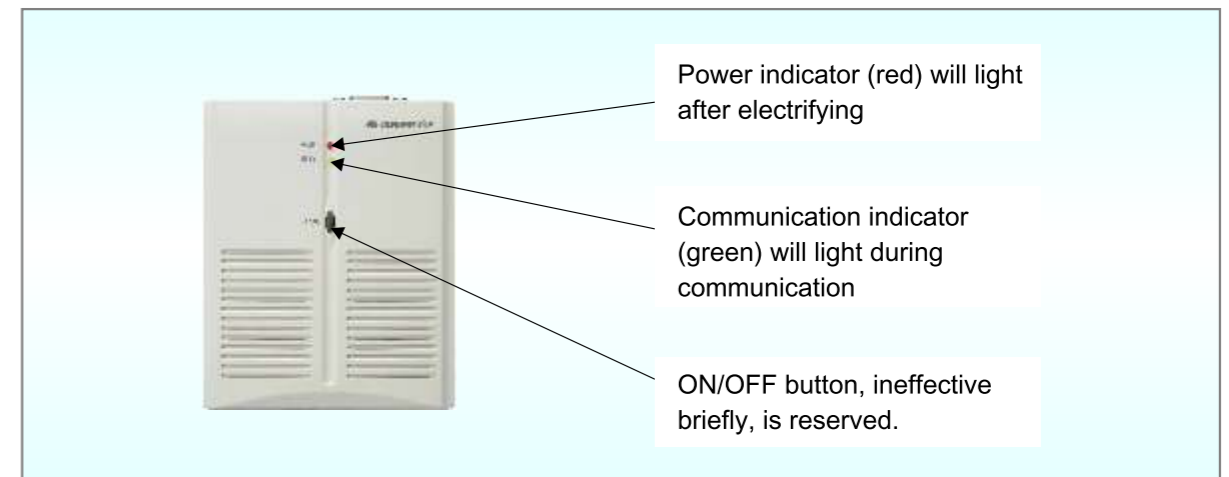


BMS interface



BMS interface of Gree Central AC is only for Gree central AC devices. There is BMS interface or multifunctional gateway in the hardware and standard communication protocol and BMS software plug-in in the software. Gree central AC can be centrally monitored and managed through BMS interface together with other devices in the building.

Communication Module (standard parts)



Function Introduction

Communication module is used for conversion and transfer of signal of BMS and air conditioner during the communication of them, making the role of communication controller. Refer to User Instruction to Communication Module for details.

PRODUCT LINE UP

Outdoor unit(cooling capacity)





Single unit

Series \ Capacity (kW)	10	12	14	16	22	26	28	30	34	40	45	50	56	60	67	73	80	85	90	
GMV-R		✓		✓		✓		✓			✓		✓	✓						✓
GMV-Rm					✓		✓		✓	✓	✓	✓								
GMV-Pd	✓	✓	✓	✓	✓		✓		✓	✓	✓									
GMV-Pdhm					✓		✓				✓	✓	✓							

Modular unit

Series \ Capacity (kW)	50	56	60	67	73	80	85	90	95	100	107	113	120	125	130	140	146	151	160	165	170	175	180	185	190	196	201	
GMV-Rm		✓	✓ (62)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GMV-Pd	✓	✓	✓	✓	✓	✓ (78.5)	✓	✓	✓	✓	✓	✓	✓ (118)	✓ (124)		✓	✓	✓	✓ (157)	✓	✓	✓	✓					

Indoor unit(cooling capacity)

	kW	2.2	2.5	2.8	3.6	4.5	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	14	22.4	28
	GMV-R	✓	✓	✓	✓	✓		✓		✓		✓		✓	✓	✓	✓
	GMV-Rm	✓	✓	✓	✓	✓		✓		✓		✓		✓	✓	✓	✓
	GMV-Pd	✓	✓	✓	✓	✓		✓		✓		✓		✓	✓	✓	✓
	GMV-Pdhm	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓			
	GMV-R			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ (12.5)		
	GMV-Rm			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ (12.5)		
	GMV-Pd			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ (12.5)		
	GMV-Pdhm			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ (12.5)		
	GMV-R	✓		✓	✓	✓											
	GMV-Rm	✓		✓	✓	✓											
	GMV-Pd	✓		✓	✓	✓											
	GMV-Pdhm	✓		✓	✓	✓	✓	✓		✓	✓						
	GMV-R	✓		✓	✓	✓	✓	✓		✓		✓		✓	✓ (12.5)		
	GMV-Rm	✓		✓	✓	✓	✓	✓		✓		✓		✓	✓ (12.5)		
	GMV-Pd	✓		✓	✓	✓	✓	✓		✓		✓		✓	✓ (12.5)		
	GMV-Pdhm	✓		✓	✓	✓	✓	✓		✓		✓		✓	✓ (12.5)		



GMV-Pd SERIES D.C. Inverter



- ◆ High COP value.
- ◆ Real time intelligent defrost technology.
- ◆ Wide capacity range from 10kW to 180kW.
- ◆ Low noise.
- ◆ outdoor unit with 22.4kw-45kw can be combined to get a max 180kw.
- ◆ Unique oil return patent design.
- ◆ Accurate refrigerate distributing technology.
- ◆ Space saving outdoor unit.
- ◆ Components optimum designed for R410a.



Operation Range	Cooling	°C	10~48
	Heating	°C	-15~27



Model	Heat pump		GMV-Pd100W/NaB-K	GMV-Pd120W/NaB-K	GMV-Pd140W/NaB-K	GMV-Pd160W/NaB-K
Capacity	Cooling	kW	10	12	14	16.0
	Heating	kW	11	14	15.4	17.6
Power supply		V-Ph-Hz	220~240, 1, 50			
Power input	Cooling	kW	3.1	3.8	4.5	5.1
	Heating	kW	2.9	3.6	4.3	4.8
IPLV	Cooling	W/W	3.80	3.80	4.40	4.20
Refrigerant charge volume		kg	5	5	7	8
Compressor quantity		unit	1	1	1	1
Sound pressure level		dB(A)	56	56	58	60
Outline dimension	W×D×H	mm	950×340×1250			
Package dimension	W×D×H	mm	1110×450×1370			
Net weight		kg	110		135	
Gross weight		kg	115		140	
Connecting pipe diameter	Gas	inch	5/8		3/4	
	Liquid	inch	3/8			
Maximum drive IDU NO.		unit	6	7	8	9
Maximum equivalent piping length		m	70			



basic module

Model	Heat pump		GMV-Pdm224W/NaB-M	GMV-Pdm280W/NaB-M	GMV-Pdm335W/NaB-M	GMV-Pdm400W/NaB-M	GMV-Pdm450W/NaB-M
Capacity	Cooling	kW	22.4	28	33.5	40	45
	Heating	kW	25	31.5	37.5	45	50
Power supply		V-Ph-Hz	380, 3, 50				
Power input	Cooling	kW	5.52	7.52	9.23	12.45	14.32
	Heating	kW	5.82	7.7	9.38	11.2	13.9
IPLV	Cooling	W/W	4.15	3.95	4.15	3.95	4.15
Refrigerant charge volume		kg	12	13	15	16	17
Compressor quantity		unit	2	2	3	3	3
Sound pressure level		dB(A)	58	58	60	61	61
Outline dimension	W×D×H	mm	930×770×1670			1340×770×1670	
Package dimension	W×D×H	mm	1010×850×1850			1420×850×1850	
Net weight		kg	255	255	350	350	370
Gross weight		kg	275	275	380	380	400
Connecting pipe diameter	Gas	inch	7/8	7/8	9/8	9/8	9/8
	Liquid	inch	3/8	3/8	1/2	1/2	1/2
Maximum drive IDU NO.		unit	16				
Maximum equivalent piping length		m	500				

GMV Multi VRF System

MODULE OUTDOOR UNIT LINE UP

	Model	GMV-Pdm224W/NaB-M	GMV-Pdm280W/NaB-M	GMV-Pdm335W/NaB-M	GMV-Pdm400W/NaB-M	GMV-Pdm450W/NaB-M
	GMV-Pdm224W/NaB-M	⬡				
	GMV-Pdm280W/NaB-M		⬡			
	GMV-Pdm335W/NaB-M			⬡		
	GMV-Pdm400W/NaB-M				⬡	
	GMV-Pdm450W/NaB-M					⬡
	GMV-Pdm504W2/NaB-M	⬡	⬡			
	GMV-Pdm560W2/NaB-M		⬡⬡			
	GMV-Pdm615W2/NaB-M		⬡	⬡		
	GMV-Pdm670W2/NaB-M		⬡		⬡	
	GMV-Pdm730W2/NaB-M		⬡			⬡
	GMV-Pdm785W2/NaB-M			⬡		⬡
	GMV-Pdm850W2/NaB-M				⬡	⬡
	GMV-Pdm900W2/NaB-M					⬡⬡
	GMV-Pdm950W3/NaB-M		⬡⬡		⬡	
	GMV-Pdm1008W3/NaB-M		⬡⬡			⬡

	Model	GMV-Pdm224W/NaB-M	GMV-Pdm280W/NaB-M	GMV-Pdm335W/NaB-M	GMV-Pdm400W/NaB-M	GMV-Pdm450W/NaB-M
	GMV-Pdm1065W3/NaB-M		⬡	⬡		⬡
	GMV-Pdm1130W3/NaB-M		⬡		⬡	⬡
	GMV-Pdm1180W3/NaB-M		⬡			⬡⬡
	GMV-Pdm1235W3/NaB-M			⬡		⬡⬡
	GMV-Pdm1300W3/NaB-M				⬡	⬡⬡
	GMV-Pdm1350W3/NaB-M					⬡⬡
	GMV-Pdm1405W4/NaB-M		⬡⬡		⬡	⬡
	GMV-Pdm1456W4/NaB-M		⬡⬡			⬡⬡
	GMV-Pdm1512W4/NaB-M		⬡	⬡	⬡	⬡
	GMV-Pdm1570W4/NaB-M		⬡		⬡	⬡⬡
	GMV-Pdm1650W4/NaB-M		⬡			⬡⬡
	GMV-Pdm1700W4/NaB-M			⬡		⬡⬡
	GMV-Pdm1750W4/NaB-M				⬡	⬡⬡
	GMV-Pdm1800W4/NaB-M					⬡⬡

GMV-PdSERIES outdoor units

GMV-PdSERIES outdoor units

GMV Multi VRF System

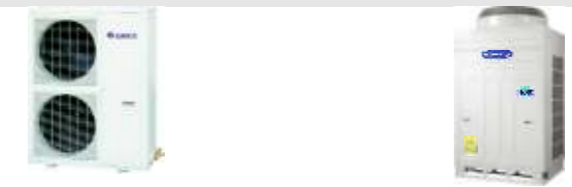
GMV-R SERIES Digital scroll VRF



- ◆ High COP value
- ◆ Stepless capacity adjustable range of 10-100% thanks to advanced digital scroll compressor technology.
- ◆ Unique refrigerant and oil balance patent design.
- ◆ Simplified electronic control system, increased operation reliability even on 10% load condition.
- ◆ High EER value of unit under partial load thanks to fan speed multi-step adjusting technology.
- ◆ Advance error self diagnosis.
- ◆ Excellent electromagnetic compatibility, no bad influence on the power supply system of user.
- ◆ Wide outdoor units range from 10kW to 90kW
- ◆ Wide range of indoor units available.
- ◆ Up to 32 indoor units are connectable to 56kW and above outdoor units.

Diagnosis displaying	Electromagnetic compatibility	Long life and washable filter	Compact design	Light weight	Quiet design	Easy installation

Operation Range	Cooling	℃	10~48
	Heating	℃	-15~27



Model	Cooling only		GMVL-R120W/Na-K	GMVL-R160W/Na-M	GMVL-R260W2/Na-M	GMVL-R300W2/Na-M
	Heat pump		GMV-R120W/Na-K	GMV-R160W/Na-M	GMV-R260W2/Na-M	GMV-R300W2/Na-M
Capacity	Cooling	kW	12.0	16.0	26.0	30.0
	Heating	kW	14.0	17.0	28.5	33.5
Power supply		V-Ph-Hz	220-240V-1ph-50Hz		380-415V-3ph-50Hz	
Power input	Cooling	kW	3.9	4.9	8.5	9.0
	Heating	kW	3.8	4.8	8.0	8.8
IPLV	Cooling	W/W	2.8	2.8	3.4	
Refrigerant charge volume		kg	6	8	14	
Compressor quantity		unit	1		2	
Sound pressure level		dB(A)	58			
Outline dimension	W×D×H	mm	1100×340×1250		990×880×1772	
Package dimension	W×D×H	mm	1260×450×1270		1162×980×1950	
Net weight		kg	140		280	300
Gross weight		kg	160		310	330
Connecting pipe diameter	Gas	inch	5/8		7/8	
	Liquid	inch	3/8		3/8	
Maximum drive IDU NO.		unit	7	10	16	
Maximum equivalent piping length		m	150		300	



Model	Cooling only		GMVL-R450W3/Na-M	GMVL-R560W4/Na-M	GMVL-R600W4/Na-M	GMVL-R900W6/Na-M
	Heat pump		GMV-R450W3/Na-M	GMV-R560W4/Na-M	GMV-R600W4/Na-M	GMV-R900W6/Na-M
Capacity	Cooling	kW	45	56	60	90
	Heating	kW	48	60	63	100
Power supply		V-Ph-Hz	380-415V-3ph-50Hz			
Power input	Cooling	kW	14.5	18.5	19.2	301
	Heating	kW	13.7	18.0	18.2	27.5
IPLV	Cooling	W/W	3.6	3.6	3.6	3.6
Refrigerant charge volume		kg	20	25	25	45
Compressor quantity		unit	3	4	4	6
Sound pressure level		dB(A)	60	60	60	62
Outline dimension	W×D×H	mm	1290×880×1772	1980×920×1760	1980×920×1760	2580×880×1772
Package dimension	W×D×H	mm	1370×980×1950	2152×980×1950	2152×980×1950	2660×980×1950
Net weight		kg	450	600	600	800
Gross weight		kg	490	640	640	850
Connecting pipe diameter	Gas	inch	1-1/8	1-1/8	1-1/8	1-3/8
	Liquid	inch	1/2	5/8	5/8	3/4
Maximum drive IDU NO.		unit	16	32		
Maximum equivalent piping length		m	300		500	

Refnet models

Y type refnet	Model	Total capacity of downstream indoor unit X
R410a indoor unit	FQ01A/A	X ≤ 200
	FQ01B/A	200 < X ≤ 300
	FQ02/A	300 < X ≤ 700
	FQ03/A	700 < X ≤ 1350
	FQ04/A	1350 < X

X=10 * cooling capacity(kW)

GMV Multi VRF System

GMV-Rm Series Modular digital multi VRF



- ◆ Wide ranges for both indoor and outdoor units, Max. cooling capacity can reach 201kw.
- ◆ Thanks to modular design, unit maintains stable operation even when one single unit is in error
- ◆ Compact design
- ◆ Easy installation
- ◆ Easy operation
- ◆ Wide intelligent network system for optional
- ◆ Excellent electromagnetic compatibility, no bad influence on the power supply system for users
- ◆ Up to 4 basic module unit can be combined together.



Operation Range	Cooling	°C	-5~43
	Heating	°C	-15~27



basic module

Model	Cooling only		GMVL-Rm224W/Na-M	GMVL-Rm280W/Na-M	GMVL-Rm335W/Na-M
	Heat pump		GMV-Rm224W/Na-M	GMV-Rm280W/Na-M	GMV-Rm335W/Na-M
Capacity	Cooling	kW	22.4	28	33.5
	Heating	kW	25	31	36.5
Power supply		V-Ph-Hz	380-415 V-3ph-50Hz		
Power input	Cooling	kW	8.3	10.7	12.6
	Heating	kW	7.8	9.1	10.2
IPLV	Cooling	W/W	3.40	3.45	3.55
Refrigerant charge volume		kg	14	16	17
Compressor quantity		unit	2	2	2
Sound pressure level		dB(A)	58	58	62
Outline dimension	W×D×H	mm	930×770×1670		1340×770×1670
Package dimension	W×D×H	mm	1030×850×1850		1420×850×1850
Net weight		kg	280	300	410
Gross weight		kg	310	330	450
Connecting pipe diameter	Gas	inch	7/8	7/8	9/8
	Liquid	inch	3/8	3/8	1/2
Maximum drive IDU NO.		unit	16		
Maximum equivalent piping length		m	175		



basic module

Model	Cooling only		GMVL-Rm400W/Na-M	GMVL-Rm450W/Na-M	GMVL-Rm504W/Na-M
	Heat pump		GMV-Rm400W/Na-M	GMV-Rm450W/Na-M	GMV-Rm504W/Na-M
Capacity	Cooling	kW	40	45	50.4
	Heating	kW	44	49.5	55
Power supply		V-Ph-Hz	380-415 V-3ph-50Hz		
Power input	Cooling	kW	16.1	18	18.8
	Heating	kW	12.6	14.7	15.0
IPLV	Cooling	W/W	3.60	3.60	3.60
Refrigerant charge volume		kg	18	20	20
Compressor quantity		unit	3	3	3
Sound pressure level		dB(A)	62	62	62
Outline dimension	W×D×H	mm	1340×770×1670		
Package dimension	W×D×H	mm	1420×850×1850		
Net weight		kg	450	450	450
Gross weight		kg	490	490	490
Connecting pipe diameter	Gas	inch	9/8	9/8	9/8
	Liquid	inch	1/2	1/2	5/8
Maximum drive IDU NO.		unit	16		
Maximum equivalent piping length		m	175		

Y type refnet	Model	Total capacity of outdoor unit X
Modular GMV outdoor unit	ML01	224 < X ≤ 2016

X=10 * cooling capacity(kW)








GMV Multi VRF System

MODULE OUTDOOR UNIT LINE UP

GMV-Rm Series outdoor units

Model	GMV-Rm224W/Na-M	GMV-Rm280W/Na-M	GMV-Rm335W/Na-M	GMV-Rm400W/Na-M	GMV-Rm450W/Na-M	GMV-Rm504W/Na-M
	1					
		1				
			1			
				1		
					1	
						1
		2				
		1	1			
			2			
			1	1		
				2		
				1	1	
					2	
					1	1
						2

GMV-Rm Series outdoor units

Model	GMV-Rm224W/Na-M	GMV-Rm280W/Na-M	GMV-Rm335W/Na-M	GMV-Rm400W/Na-M	GMV-Rm450W/Na-M	GMV-Rm504W/Na-M
			2	1		
			1	2		
				3		
				2	1	
				1	2	
					3	
					2	1
					1	2
						3
				3		
				2	1	
				2	2	
				1	3	
					4	
					3	1
					2	2
					1	3
						4

GMV Multi VRF System

GMV Indoor Units

Duct type split

- Fresh air entry reserved (for 7kW and above units).
- Air suction direction alterable from rear or bottom.
- Long life and washable filter.
- High ESP.
- Wired remote control.
- Wireless remote control.



Model	Cooling only		GMVL-R22P/NaB-K	GMVL-R25P/NaB-K	GMVL-R28P/NaB-K	GMVL-R36P/NaB-K	GMVL-R45P/NaB-K	GMVL-R56P/NaB-K
	Heat pump		GMVL-R22P/NaB-K	GMVL-R25P/NaB-K	GMVL-R28P/NaB-K	GMVL-R36P/NaB-K	GMVL-R45P/NaB-K	GMVL-R56P/NaB-K
Capacity	Cooling	kW	2.2	2.5	2.8	3.6	4.5	5.6
	Heating	kW	2.5	3.0	3.2	4.0	5.0	6.3
Power supply		V-Ph-Hz	220-240V-1ph-50Hz					
Motor power input		W	75		80		140	305
Air flow volume	m ³ /h		450		570		840	1400
	CFM		265		335		494	824
Standard Esp		Pa	40/20		50/20		60/30	
Sound pressure level		dB(A)	37		39		40	44
Outline dimension	W×D×H	mm	875×680×220			980×736×266		1112×756×300
Package dimension	W×D×H	mm	1012×780×275			1068×766×320		1245×785×360
Net Weight		kg	27		36		55	
Gross weight		kg	31		39		59	
Connecting pipe diameter	Gas	inch	3/8		1/2		5/8	
	Liquid	inch	1/4		3/8			



Model	Cooling only		GMVL-R71P/NaB-K	GMVL-R90P/NaB-K	GMVL-R112P/NaB-K	GMVL-R140P/NaB-K	GMV-R224P/Na-M	GMV-R280P/Na-M
	Heat pump		GMVL-R71P/NaB-K	GMVL-R90P/NaB-K	GMVL-R112P/NaB-K	GMVL-R140P/NaB-K		
Capacity	Cooling	kW	7.1	9.0	11.2	14.0	22.4	28
	Heating	kW	8.0	10.0	12.5	15.0	25	31
Power supply		V-Ph-Hz	220-240V-1ph-50Hz				380V-3ph-50Hz	
Motor power input		W	305	470	470	500	2000	2000
Air flow volume	m ³ /h		1400	2000	2000	2500	4000	4800
	CFM		824	1177	1177	1471	2354	2825
Standard Esp		Pa	60/30	80/40	80/40	100/50	120	120
Sound pressure level		dB(A)	44	48	48	50	54	57
Outline dimension	W×D×H	mm	1112×756×300	1425×756×300	1425×756×300	1463×756×300	1500×1000×500	1500×1000×500
Package dimension	W×D×H	mm	1245×785×360	1514×785×360	1514×785×360	1555×810×345	1840×1200×673	1840×1200×673
Net Weight		kg	55	75	75	78	150	170
Gross weight		kg	59	79	79	83	200	220
Connecting pipe diameter	Gas	inch	5/8				3/4	7/8
	Liquid	inch	3/8					

Cassette type

- Low noise thanks to ternary fan blade.
- Compact and light weight.
- Long life and washable filter.
- Drain pump with increased lift of 1100mm.
- Wired remote control.
- Wireless remote control.



Model	Cooling only		GMVL-R28T/Na-K	GMVL-R36T/Na-K	GMVL-R45T/Na-K	GMVL-R50T/Na-K	GMVL-R56T/Na-K	GMVL-R63T/Na-K
	Heat pump		GMVL-R28T/Na-K	GMVL-R36T/Na-K	GMVL-R45T/Na-K	GMVL-R50T/Na-K	GMVL-R56T/Na-K	GMVL-R63T/Na-K
Capacity	Cooling	kW	2.8	3.6	4.5	5.0	5.6	6.3
	Heating	kW	3.2	4.0	5.0	5.8	6.3	7.0
Power supply		V-Ph-Hz	220-240V-1ph-50Hz					
Motor power input		W	60		65		83	
Air flow volume	m ³ /h		400		680		1180	
	CFM		265		400		695	
Sound pressure level		dB(A)	37		39		44	
Main body	Outline W×D×H	mm	840×840×190				840×840×240	
	Package W×D×H	mm	960×960×257				960×960×310	
	Net weight	kg	25				30	
	Gross weight	kg	33				38	
Panel	Outline W×D×H	mm	950×950×60				950×950×60	
	Package W×D×H	mm	1040×1025×115				1040×1025×115	
	Net weight	kg	6.5				10.0	
	Gross weight	kg	10.0				13.5	
Connecting pipe diameter	Gas	inch	3/8	1/2		5/8		
	Liquid	inch	1/4	1/4		3/8		



Model	Cooling only		GMVL-R71T/Na-K	GMVL-R80T/Na-K	GMVL-R90T/Na-K	GMVL-R100T/Na-K	GMVL-R112T/Na-K	GMVL-R125T/Na-K
	Heat pump		GMVL-R71T/Na-K	GMVL-R80T/Na-K	GMVL-R90T/Na-K	GMVL-R100T/Na-K	GMVL-R112T/Na-K	GMVL-R125T/Na-K
Capacity	Cooling	kW	7.1	8.0	9.0	10.0	11.2	12.5
	Heating	kW	8.0	8.8	10.0	11.0	12.5	13.5
Power supply		V-Ph-Hz	220-240V-1ph-50Hz					
Motor power input		W	83		133		133	
Air flow volume	m ³ /h		1180		1860		1860	
	CFM		695		1095		1095	
Sound pressure level		dB(A)	39		40		44	
Main body	Outline W×D×H	mm	840×840×240			840×840×320		
	Package W×D×H	mm	960×960×310			960×960×394		
	Net weight	kg	30			38		
	Gross weight	kg	38			46		
Panel	Outline W×D×H	mm	950×950×60					
	Package W×D×H	mm	1040×1025×115					
	Net weight	kg	6.5					
	Gross weight	kg	10					
Connecting pipe diameter	Gas	inch	5/8					
	Liquid	inch	3/8					

GMV Multi VRF System

One-way cassette type

- Compact and light weight.
- Easy installation.
- Ultra quiet operation.
- Soft and even air discharge.
- Detachable and washable grill.
- Long life and washable filter.
- Drain pump with increased lift of 700mm.
- Wired remote control.
- Wireless remote control.



Model	Heat pump		GMV-R22T/NaA-K	GMV-R28T/NaA-K	GMV-R36T/NaA-K	GMV-R45T/NaA-K
Capacity	Cooling	kW	2.2	2.8	3.6	4.5
	Heating	kW	2.5	3.2	4.0	5.0
Power supply	V-Ph-Hz		220-240V-1ph-50Hz			
Motor power input	W		12			
Air flow volume	m ³ /h		600			
	CFM		353			
Sound pressure level	dB(A)		47			
Main body	Outline W×D×H	mm	570×570×230			
	Package W×D×H	mm	828×748×310			
	Net weight	kg	20			
	Gross weight	kg	27			
Panel	Outline W×D×H	mm	650×650×50			
	Package W×D×H	mm	730×670×102			
	Net weight	kg	5			
	Gross weight	kg	10			
Connecting pipe diameter	Gas	inch	3/8	3/8	1/2	1/2
	Liquid	inch	1/4			

Wall mounted type

- Wide discharge angle.
- Low noise design.
- Trinal air filter with anti-mildew, static electric dust capture and anti-bacteria function.
- Wired remote control.
- Wireless remote control.



Model	Cooling only		GMVL-R22G/NaB-K	GMVL-R28G/NaB-K	GMVL-R36G/NaB-K	GMVL-R45G/NaB-K
	Heat pump		GMV-R22G/NaB-K	GMV-R28G/NaB-K	GMV-R36G/NaB-K	GMV-R45G/NaB-K
Capacity	Cooling	kW	2.2	2.8	3.6	4.5
	Heating	kW	2.5	3.2	4	5
Power supply	V-Ph-Hz		220-240V-1ph-50Hz			
Motor power input	W		32		48	
Air flow volume	m ³ /h		360		500	
	CFM		212		294	
Sound pressure level(H/L)	dB(A)		37/28		43/28	
Outline dimension	W×D×H	mm	770×190×250		830×189×285	
Package dimension	W×D×H	mm	955×330×272		1006×385×265	
Net Weight	kg		8		11	
Gross weight	kg		14.3		15.8	
Connecting pipe diameter	Gas	inch	3/8		1/2	
	Liquid	inch	1/4			



Model	Cooling only		GMVL-R50G/NaB-K	GMVL-R56G/NaB-K	GMVL-R71G/Na-K	GMVL-R80G/Na-K
	Heat pump		GMV-R50G/NaB-K	GMV-R56G/NaB-K	GMV-R71G/Na-K	GMV-R80G/Na-K
Capacity	Cooling	kW	5.0	5.6	7.1	8.0
	Heating	kW	5.8	6.3	8.0	9.0
Power supply	V-Ph-Hz		220-240V-1ph-50Hz			
Motor power input	W		56	58	63	85
Air flow volume	m ³ /h		700	750	1200	
	CFM		412	441.5	706	
Sound pressure level(H/L)	dB(A)		45/40		49/42	
Outline dimension	W×D×H	mm	1020×228×310		1178×227×326	
Package dimension	W×D×H	mm	1178×325×390		1365×417×333	
Net Weight	kg		15.5		17.5	
Gross weight	kg		20.5		23	
Connecting pipe diameter	Gas	inch	1/2	5/8	5/8	
	Liquid	inch	1/4	3/8	3/8	

GMV Multi VRF System

Floor Ceiling type

- Ultra quiet operation.
- Compact and light weight.
- Detachable and washable grill
- Long life and washable filter.
- Wired remote control.
- Wireless remote control.

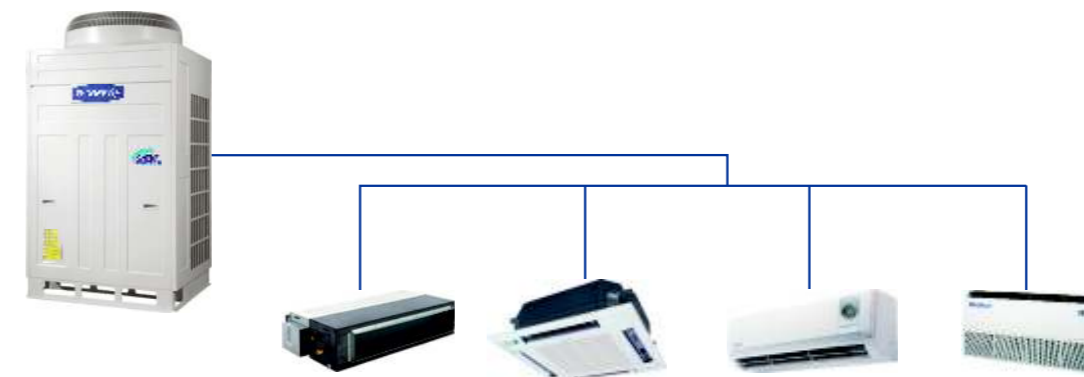


Model	Cooling only		GMVL-R28Zd/Na-K	GMVL-R36Zd/Na-K	GMVL-R50Zd/Na-K
	Heat pump		GMV-R28Zd/Na-K	GMV-R36Zd/Na-K	GMV-R50Zd/Na-K
Capacity	Cooling	kW	2.8	3.6	5
	Heating	kW	3.2	4	5.8
Power supply	V-Ph-Hz		220-240V-1ph-50Hz		
Motor power input	W		22	22	90
Air flow volume	m ³ /h		550	600	700
	CFM		324	353	412
Sound pressure level	dB(A)		43	44	50
Outline dimension	W×D×H	mm	840×238×695		
Package dimension	W×D×H	mm	1035×295×805		
Net Weight	kg		28		
Gross weight	kg		37		
Connecting pipe diameter	Gas	inch	3/8		1/2
	Liquid	inch	1/4		1/4



Model	Cooling only		GMVL-R71Zd/Na-K	GMVL-R90Zd/Na-K	GMVL-R112Zd/Na-K	GMVL-R125Zd/Na-K
	Heat pump		GMV-R71Zd/Na-K	GMV-R90Zd/Na-K	GMV-R112Zd/Na-K	GMV-R125Zd/Na-K
Capacity	Cooling	kW	7.1	9	11.2	12.5
	Heating	kW	8	10	12.5	13.5
Power supply	V-Ph-Hz		220-240V-1ph-50Hz			
Motor power input	W		220	330	390	390
Air flow volume	m ³ /h		1170	2100	2200	2300
	CFM		689	1236	1294	1353
Sound pressure level	dB(A)		48	51	54	55
Outline dimension	W×D×H	mm	1300×188×600		1590×238×695	
Package dimension	W×D×H	mm	1514×248×724		1814×330×830	
Net Weight	kg		34		44	
Gross weight	kg		38		53	
Connecting pipe diameter	Gas	inch		5/8		
	Liquid	inch		3/8		

GMV-Pdhm Series Heat Recovery & D.C Inverter



◆ Unique refrigerant control program

Special low-pressure liquid drainage pipe is provided between the module to realize the quick transfer of refrigerant in stop module and working module. This results in greatly enhanced comfort of system output.

By controlling the 4-way valve of the heat exchanger that is not involved in heat exchange indoor, it realizes effective control over the residual circulating refrigerant and under-refrigerant in the system. This has guaranteed the system reliability and also made full play of the system comfort.

◆ Minimized multi-module combination design leading to less space requirements and high engineering flexibility

◆ Refrigerant safety control program

Avoid abnormal rise of system pressure due to existence of enclosed dead area in the refrigerant pipe system.

◆ Maximum coefficient of performance under heat recycling mode is high up to 6.8

Under the following conditions, i.e. environment temperature for indoor unit under cooling mode is 27°C/19°C; environment temperature for indoor unit under heating mode is 20°C/—; and outdoor environment temperature 7°C/6°C, the maximum coefficient of performance when system enters into heat recycling mode is high up to 6.8.

◆ Quick switching of indoor unit mode within 3 minutes

Under any normal state, the indoor unit may quickly switch between different modes. The longest switching time is not longer than 3 minutes.

◆ Wide working range

Temperature range: Independent cooling -10~48°C; independent heating -20~27°C; and heat recycling -10 ~ 20°C.

Power range: 3N,320v~460v,50HZ。

◆ Wide capacity and free combination

a) GPdhm Heat Recycling DC Variable Series incorporates modular design to meet the needs of system loads through different combinations.

b) Maximum 4 modules may be connected in parallel. There is no division of main module and sub-module between basic modules.

c) The array of indoor units is complete, which can greatly meet the customer's requirements.

◆ Flexible configuration between indoor unit and outdoor unit

The total capacity of indoor unit may reach 135% of the outdoor unit capacity, so that the machine can easily deal with the change to the air conditioner system due to change of room layout and service region.

Operation Range	Cooling	°C	-10 ~ 48
	Heating	°C	-20 ~ 27
	Cooling and Heating	°C	-10 ~ 20

GMV Multi VRF System



Model	Heat pump		GMV-Pdhm224W/Na-M		GMV-Pdhm280W/Na-M	
	Capacity	Cooling	kW	22.4		28
Heating		kW	25		31.5	
Power supply		V-Ph-Hz	342-420V-3Ph-50Hz			
Power input	Cooling	kW	5.5		7.5	
	Heating	kW	5.8		7.7	
COP		W/W	4.07		3.73	
ECOP		cooling & heating	6.80		6.80	
Refrigerant charge volume		kg	12		12	
Compressor quantity		unit	2		2	
Sound pressure level		dB(A)	58		58	
Outline dimension	W×D×H	mm	930×770×1670			
Package dimension	W×D×H	mm	1030×850×1850			
Net weight		kg	280		280	
Gross weight		kg	320		320	
Connecting pipe diameter	Gas(High pressure)	inch	3/4		3/4	
	Gas(Low pressure)	inch	7/8		7/8	
	Liquid	inch	3/8		3/8	
Maximum drive IDU NO.		unit	16		16	
Maximum equivalent piping length		m	500			



Model	Heat pump		GMV-Pdhm450W2/Na-M	GMV-Pdhm504W2/Na-M	GMV-Pdhm560W2/Na-M	GMV-Pdhm850W3/Na-M
	Capacity	Cooling	kW	45	50.4	56
Heating		kW	50	56.5	63	95
Power supply		V-Ph-Hz	342-420V-3Ph-50Hz			
Power input	Cooling	kW	11	13	15	25.8
	Heating	kW	11.6	13.5	15.4	25.1
Refrigerant charge volume		kg	12+12	12+12	12+12	12+12+12
Compressor quantity		unit	4	4	4	6
Sound pressure level		dB(A)	60	62	62	62
Outline dimension	W×D×H	mm	930×770×1670+930×770×1670			
Package dimension	W×D×H	mm	1030×850×1850+1030×850×1850			
Net weight		kg	280+280	280+280	280+280	280+280+280
Gross weight		kg	320+320	320+320	320+320	320+320+320
Connecting pipe diameter	Gas(High pressure)	inch	7/8	7/8	7/8	9/8
	Gas(Low pressure)	inch	9/8	9/8	9/8	11/8
	Liquid	inch	1/2	5/8	5/8	3/4
Maximum drive IDU NO.		unit	26	29	32	50
Maximum equivalent piping length		m	500			

Y Type refnet

Model	Total capacity of downstream indoor unit X
FQ01Na/A	$X \leq 56$
FQ02Na/A	$56 < X \leq 220$
FQ03Na/A	$220 < X \leq 300$
FQ04Na/A	$300 < X \leq 680$
FQ05Na/A	$680 < X \leq 960$
FQ06Na/A	$960 < X \leq 1350$
FQ07Na/A	$1350 < X$

X:= i 0 * cooling capacity(kW)



GMV Indoor units

Duct type split

- Fresh air entry reserved (for 7kW and above units).
- Air suction direction alterable from rear or bottom.
- Long life and washable filter.
- High ESP.
- Wired remote control.
- Wireless remote control.



2.2kW-11.2kW



Model	Heat pump		GMV-Rh22P/Na-K	GMV-Rh25P/Na-K	GMV-Rh28P/Na-K	GMV-Rh36P/Na-K	GMV-Rh45P/Na-K	GMV-Rh50P/Na-K	
	Capacity	Cooling	kW	2.2	2.5	2.8	3.6	4.5	5.0
Heating		kW	2.5	3	3.2	4.0	5.0	5.8	
Power supply		V-Ph-Hz	220-240V-1ph-50Hz						
Motor power output		W	20				60		
Air flow volume	m³/h		450		570		700		
	CFM		265		335		412		
Standard Esp		Pa	10		10		20		
Sound pressure level		dB(A)	37		39		40		
Outline dimension	W×D×H	mm	875×680×220				980×736×266		
Package dimension	W×D×H	mm	1165×710×275				1220×776×320		
Net Weight		kg	27				36		
Gross weight		kg	31				39		
Connecting pipe diameter	Gas	inch	3/8			1/2			
	Liquid	inch	1/4						



Model	Heat pump		GMV-Rh56P/Na-K	GMV-Rh71P/Na-K	GMV-Rh80P/Na-K	GMV-Rh90P/Na-K	GMV-Rh112P/Na-K
	Capacity	Cooling	kW	5.6	7.1	8.0	9.0
Heating		kW	6.3	8.0	8.8	10.0	12.5
Power supply		V-Ph-Hz	220-240V-1ph-50Hz				
Motor power output		W	90	90	135		
Air flow volume	m³/h		1000	1100		1700	
	CFM		588	647		1000	
Standard Esp		Pa	25	25		30	
Sound pressure level		dB(A)	41	42		44	
Outline dimension	W×D×H	mm	1159×736×260			1385×736×260	
Package dimension	W×D×H	mm	1398×785×320			1682×796×310	
Net Weight		kg	37			49	
Gross weight		kg	41			60	
Connecting pipe diameter	Gas	inch	5/8				
	Liquid	inch	3/8				



GMV Multi VRF System

GMV Indoor units

Cassette type

- Low noise thanks to ternary fan blade.
- Compact and light weight.
- Long life and washable filter.
- Drain pump with increased lift of 1100mm.
- Wired remote control.
- Wireless remote control.



Model	Heat pump		GMV-Rh28T/Na-K	GMV-Rh36T/Na-K	GMV-Rh45T/Na-K	GMV-Rh50T/Na-K	GMV-Rh56T/Na-K	GMV-Rh63T/Na-K
	Capacity	Cooling	kW	2.8	3.6	4.5	5.0	5.6
Heating		kW	3.2	4.0	5.0	5.8	6.3	7.0
Power supply		V-Ph-Hz	220-240V-1ph-50Hz					
Motor power output		W	60		65		83	
Air flow volume		m ³ /h	680		1180			
		CFM	400		695			
Sound pressure level		dB(A)	37		39			
Main body	Outline W×D×H	mm	840×840×190		840×840×240			
	Package W×D×H	mm	960×960×257		960×960×310			
	Net weight	kg	25		30			
	Gross weight	kg	33		38			
Panel	Outline W×D×H	mm	950×950×60		1040×1025×115			
	Package W×D×H	mm	1040×1025×115		1040×1025×115			
	Net weight	kg	6.5		10			
	Gross weight	kg	10		10			
Connecting pipe diameter	Gas	inch	3/8	1/2		5/8		
	Liquid	inch	1/4	1/4		3/8		



Model	Heat pump		GMV-Rh71T/Na-K	GMV-Rh80T/Na-K	GMV-Rh90T/Na-K	GMV-Rh100T/Na-K	GMV-Rh112T/Na-K	GMV-Rh125T/Na-K
	Capacity	Cooling	kW	7.1	8.0	9.0	10.0	11.2
Heating		kW	8.0	8.8	10.0	11.0	12.5	13.5
Power supply		V-Ph-Hz	220-240V-1ph-50Hz					
Motor power input		W	83		133			
Air flow volume		m ³ /h	1180		1860			
		CFM	695		1095			
Sound pressure level		dB(A)	39		40			
Main body	Outline W×D×H	mm	840×840×240		840×840×320			
	Package W×D×H	mm	960×960×310		960×960×394			
	Net weight	kg	30		38			
	Gross weight	kg	38		46			
Panel	Outline W×D×H	mm	950×950×60		1040×1025×115			
	Package W×D×H	mm	1040×1025×115		1040×1025×115			
	Net weight	kg	6.5		10			
	Gross weight	kg	10		10			
Connecting pipe diameter	Gas	inch	5/8		5/8			
	Liquid	inch	3/8		3/8			

Wall mounted type

- Wide discharge angle.
- Low noise design.
- Trinal air filter with anti-mildew, static electric dust capture and anti-bacteria function.
- Wired remote control.
- Wireless remote control.



Model	Heat pump		GMV-Rh22G/Na-K	GMV-Rh28G/Na-K	GMV-Rh36G/Na-K	GMV-Rh45G/Na-K
	Capacity	Cooling	kW	2.2	2.8	3.6
Heating		kW	2.5	3.2	4.0	5.0
Power supply		V-Ph-Hz	220-240V-1ph-50Hz			
Motor power output		W	14		22	
Air flow volume		m ³ /h	360		500	
		CFM	212		294	
Sound pressure level		dB(A)	37		43	
Outline dimension	W×D×H	mm	770×190×250		830×189×285	
Package dimension	W×D×H	mm	860×272×478		905×265×533	
Net Weight		kg	8.5		11.0	
Gross weight		kg	15.6		18.5	
Connecting pipe diameter	Gas	inch	3/8		1/2	
	Liquid	inch	1/4		1/4	



Model	Heat pump		GMV-Rh50G/Na-K	GMV-Rh56G/Na-K	GMV-Rh71G/Na-K	GMV-Rh80G/Na-K
	Capacity	Cooling	kW	5.0	5.6	7.1
Heating		kW	5.8	6.3	8.0	9.0
Power supply		V-Ph-Hz	220-240V-1ph-50Hz			
Motor power output		W	20		26	
Air flow volume		m ³ /h	700		1200	
		CFM	412		707	
Sound pressure level		dB(A)	45		49	
Outline dimension	W×D×H	mm	1020×228×310		1178×227×326	
Package dimension	W×D×H	mm	1080×390×420		1415×333×475	
Net Weight		kg	14.7		18.2	
Gross weight		kg	23.6		27.3	
Connecting pipe diameter	Gas	inch	1/2		5/8	
	Liquid	inch	1/4		3/8	

GMV Indoor units

GMV Multi VRF System

Floor Ceiling type

- Ultra quiet operation.
- Compact and light weight.
- Detachable and washable grill
- Long life and washable filter.
- Wired remote control.
- Wireless remote control.



Model	Heat pump		GMV-Rh28Zd/Na-K	GMV-Rh36Zd/Na-K	GMV-Rh50Zd/Na-K
Capacity	Cooling	kW	2.8	3.6	5.0
	Heating	kW	3.2	4.0	5.8
Power supply	V-Ph-Hz		220-240V-1ph-50Hz		
Motor power output	W		10	10	40
Air flow volume	m ³ /h		550	600	700
	CFM		324	353	412
Sound pressure level	dB(A)		43	44	50
Outline dimension	W×D×H	mm	840×238×695		
Package dimension	W×D×H	mm	1035×295×805		
Net Weight	kg		26	26	27
Gross weight	kg		37	37	39
Connecting pipe diameter	Gas	inch	3/8	1/2	1/2
	Liquid	inch		1/4	



Model	Heat pump		GMV-Rh71Zd/Na-K	GMV-Rh90Zd/Na-K	GMV-Rh112Zd/Na-K	GMV-Rh125Zd/Na-K
Capacity	Cooling	kW	7.1	9.0	11.2	12.5
	Heating	kW	8.0	10.0	12.5	13.5
Power supply	V-Ph-Hz		220-240V-1ph-50Hz			
Motor power output	W		100	150	180	180
Air flow volume	m ³ /h		1170	2100	2200	2300
	CFM		689	1237	1296	1354
Sound pressure level	dB(A)		48	51	54	55
Outline dimension	W×D×H	mm	1300×188×600	1590×238×695		
Package dimension	W×D×H	mm	1514×248×724	1714×330×830		
Net Weight	kg		32	48		
Gross weight	kg		43	63		
Connecting pipe diameter	Gas	inch	5/8			
	Liquid	inch	3/8			

Y type branch

Model	Total capacity of downstream indoor unit X
FQ01Na/A	$X \leq 50$
FQ02Na/A	$50 < X \leq 220$
FQ03Na/A	$220 < X \leq 335$

X=10 * cooling capacity(kW)