



Mammoth
The Leader In Custom HVAC & Energy Saving

MHV (T / MINI) R410A SERIES 50Hz&60Hz DC INVERTER VRF SYSTEM CAC Catalogue



Provide You With Fresh Air
V.RZQZ



ISO9001 ISO14001 OHSAS18001

Head Office: 11/F, HuaHong Business Center, No.5 388 Daduhe Road, Shanghai, China. Tel: 020-51097778
Manufacturing Base: No.818, South Lingfeng Road, Economic and Technical Development Zone, Anji County, Zhejiang Province.

www.mammothchina.com

Mammoth dedicates to continuous improvement of products and unit parameters are subject to change without notice.

Copyright reserved Printed in China

Mammoth

Mammoth (Shanghai) Air Conditioning Ltd.



Since 1988, Mammoth has been providing energy saving products to projects in China. In 2002, Mammoth invested US\$10 million to establish its manufacturing facility in Anji, China's #1 Ecological County, and its national sales headquarter in Shanghai to provide custom engineered air conditioning systems for projects in China and abroad.



Mammoth produces air conditioning equipment that leverages energy saving and innovative technologies. Our products include, but not limited to, geothermal & water source heat pumps, air & water cooled commercial air conditioning units, fan coils, AHU, VAV box, screw chillers, and energy recovery units.



Mammoth has been recognized as a leader in providing custom designed Total Energy Solution HVAC Systems. Our solutions can fit any design applications from WSHP systems to geothermal systems, from hybrid systems to various energy saving systems. Based on the needs of our customers, our recommendations help our customers assess the economic benefits of Mammoth solutions over alternative systems.



Mammoth has also brought its innovative design concepts to the industry. We have printed numerous technical design manuals and books to facilitate engineers in the design of Renewable Energy HVAC Systems. Together with industry associations and the commercial section of the US Embassy and Consulate General Offices, we have frequently conducted technical seminars in major cities in China and abroad. We have supplied our solutions to projects that amount to almost 10 million sq. m., and have been continuously recognized as the leader in Renewable Energy products in China.



Since 1935, Mammoth has been producing and installing air conditioning units with the most innovative technologies. Our solutions are found in some of the world's most important buildings for its unparalleled flexibility and efficiency. When performance and energy efficiency are important factors to a project, our products are often chosen as the final solution.



380~415V/3N/50Hz&60Hz
New generation Full DC
Inverter EVI VRF



26/28/30/32HP



24HP



22HP



18/20HP



14/16HP

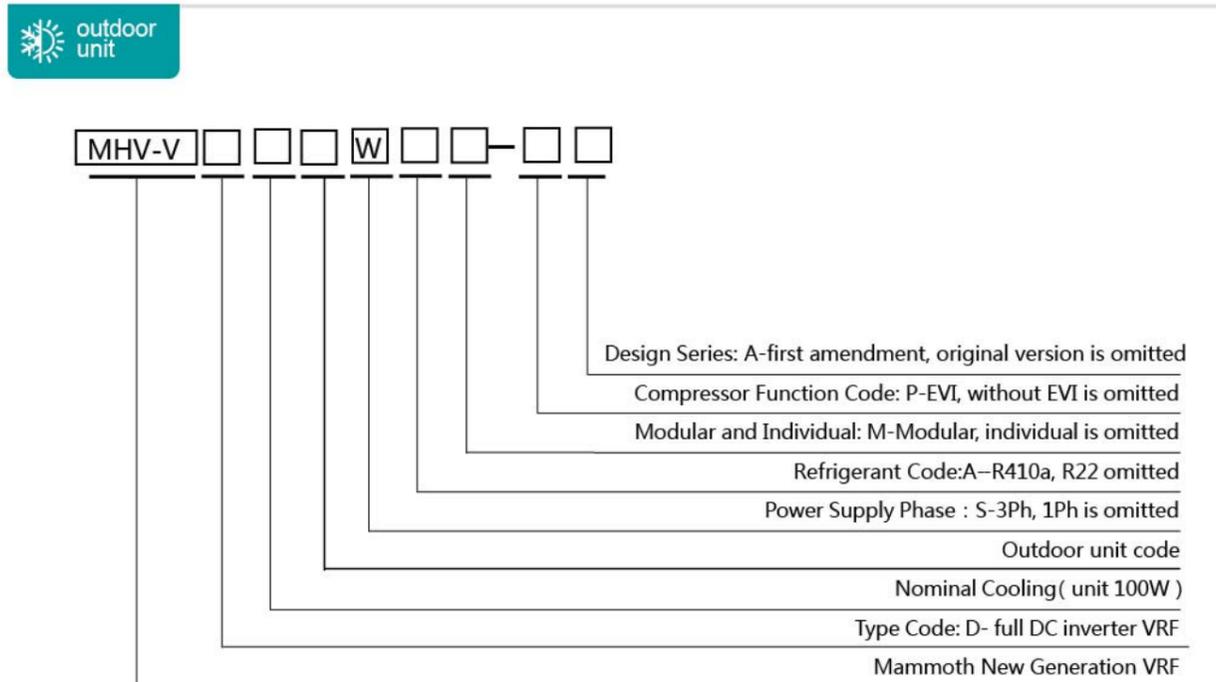
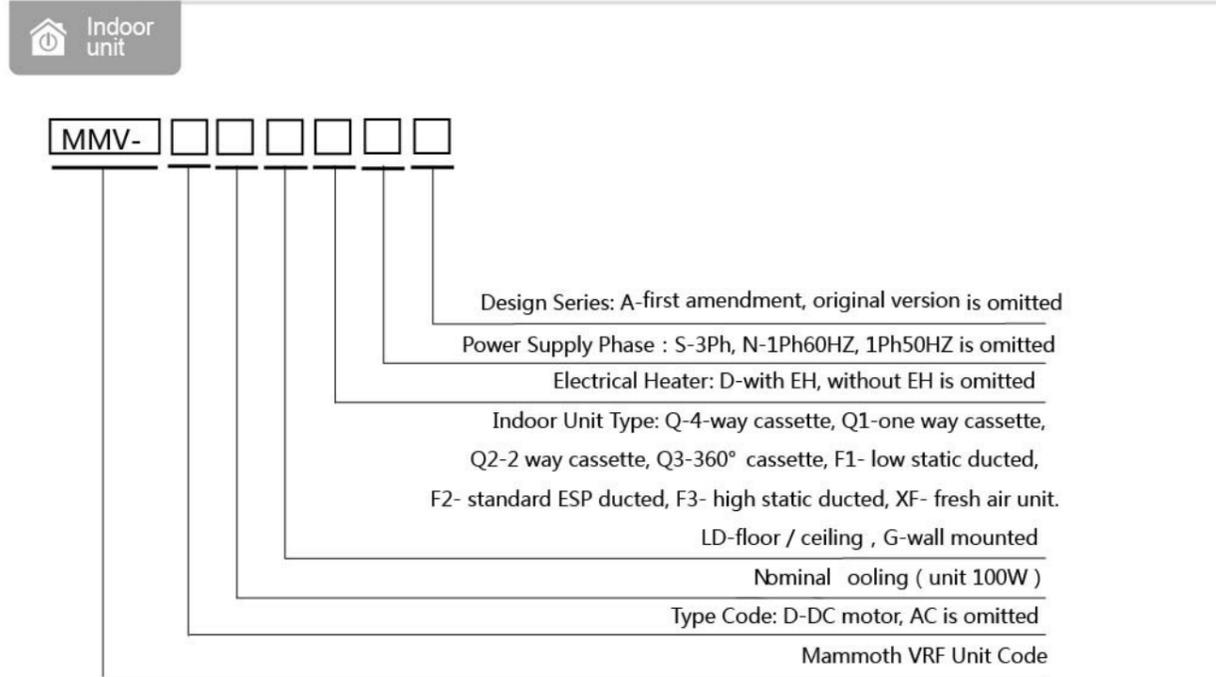


8/10/12HP

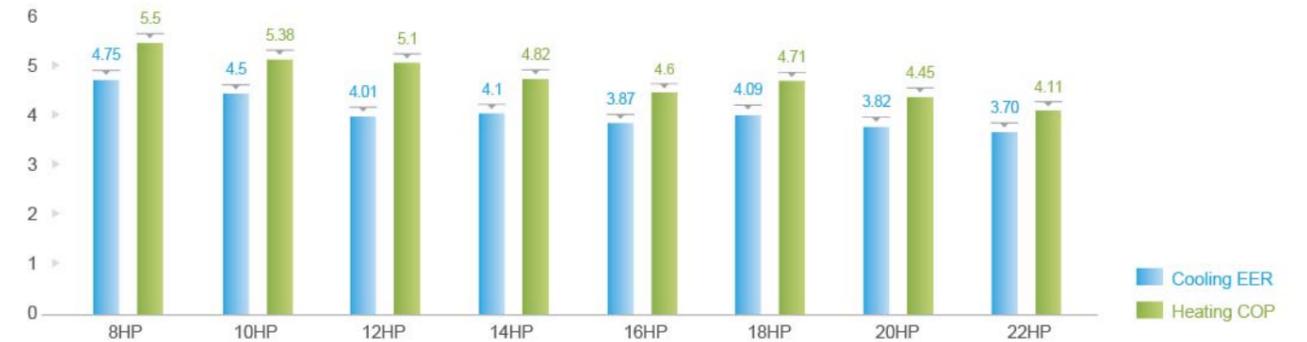
13 Basic Modules

Capacity	25.5kW	28.5kW	33.5kW	40kW	45kW	50.5kW	56kW	61.5kW
Compressor	DC	DC	DC	DC	DC	DC	DC	DC
Fan motor	DC	DC	DC	DC	DC	DC+DC	DC+DC	DC+DC

How To Read The Model Name



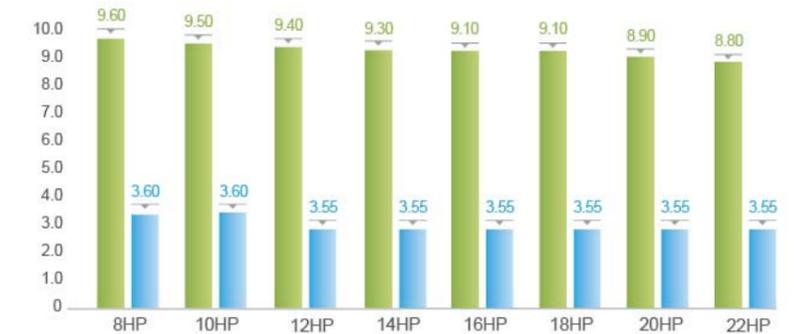
EER&COP



IPLV(C)

IPLV: Integrated Part Load Value (ARI 550/590)
(C): Cooling condition

The Integrated Part Load Value (IPLV) is a performance characteristic developed by the Air-Conditioning, Heating and Refrigeration Institute (AHRI). It is most commonly used to describe the performance of a AC system capable of capacity modulation. Unlike an EER (Energy Efficiency Ratio) or COP (coefficient of performance), which describes the efficiency at full load conditions, the IPLV is derived from the equipment efficiency while operating at various capacities. Since a VRF system does not always run at 100% capacity, the EER or COP is not an ideal representation of the typical equipment performance. The IPLV is a very important value to consider since it can affect energy usage and operating costs throughout the lifetime of the equipment.



• National Standard (GB 21454-2008) CHV Pro

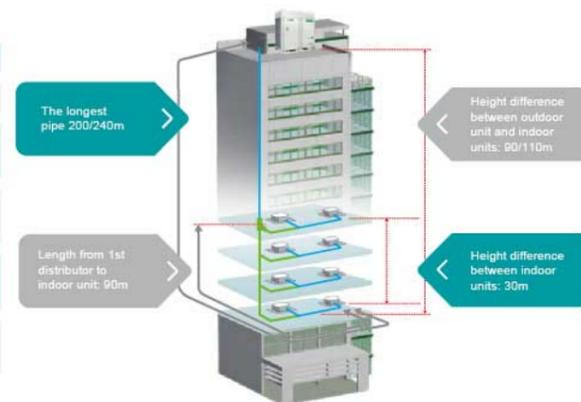
Combination Table

HP	Model	Cooling Capacity(KW)	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	Max. Connected Indoor Unit Quantity
8	MHV-VD255WSAM	25.5	●								13
10	MHV-VD285WSAM	28.5		●							16
12	MHV-VD335WSAM	33.5			●						16
14	MHV-VD400WSAM	40				●					20
16	MHV-VD450WSAM	45					●				20
18	MHV-VD505WSAM	50.5						●			20
20	MHV-VD560WSAM	56							●		24
22	MHV-VD615WSAM	61.5								●	24
24	MHV-VD670WSAM	67			●●						28
26	MHV-VD735WSAM	73.5		●			●				28
28	MHV-VD790WSAM	79		●				●			28
30	MHV-VD840WSAM	84			●			●			32
32	MHV-VD900WSAM	90		●						●	32
34	MHV-VD950WSAM	95			●					●	36
36	MHV-VD1010WSAM	101					●		●		36
38	MHV-VD1065WSAM	106.5					●			●	36
40	MHV-VD1120WSAM	112						●		●	42
42	MHV-VD1175WSAM	117.5							●	●	42
44	MHV-VD1230WSAM	123								●●	42
46	MHV-VD1285WSAM	128.5			●●					●	48
48	MHV-VD1350WSAM	135		●			●			●	48
50	MHV-VD1400WSAM	140			●		●			●	54
52	MHV-VD1455WSAM	145.5			●			●		●	54
54	MHV-VD1515WSAM	151.5		●						●●	54
56	MHV-VD1565WSAM	156.5			●					●●	58
58	MHV-VD1630WSAM	163				●				●●	58
60	MHV-VD1680WSAM	168					●			●●	58
62	MHV-VD1735WSAM	173.5						●		●●	64
64	MHV-VD1790WSAM	179							●	●●	64
66	MHV-VD1845WSAM	184.5								●●●	64
68	MHV-VD1900WSAM	190			●●					●●	64
70	MHV-VD1965WSAM	196.5		●			●			●●	64
72	MHV-VD2015WSAM	201.5			●		●			●●	64
74	MHV-VD2070WSAM	207			●			●		●●	64
76	MHV-VD2130WSAM	213		●						●●●	64
78	MHV-VD2180WSAM	218			●					●●●	64
80	MHV-VD2245WSAM	224.5				●				●●●	64
82	MHV-VD2295WSAM	229.5					●			●●●	64
84	MHV-VD2350WSAM	235						●		●●●	64
86	MHV-VD2405WSAM	240.5							●	●●●	64
88	MHV-VD2460WSAM	246								●●●●	64

*Note:Single modules can be freely combined to become a larger unit.Recommended maximum capacity of single system is 96HP.Maximum capacity of single system can be up to 128HP,table above listed combination to 88HP for your reference only.

Long Piping & Height Difference

The total pipe length	1000 m
The longest pipe length	200 /240m
Height difference	Outdoor unit above <90m Outdoor unit below <110m
Height difference between indoor units	30m
Length from first indoor distributor to last indoor unit	90 m
Communication wire length	can be up to 1000m.



What Is EVI VRF System



Enhanced Vapor Injection Compressor

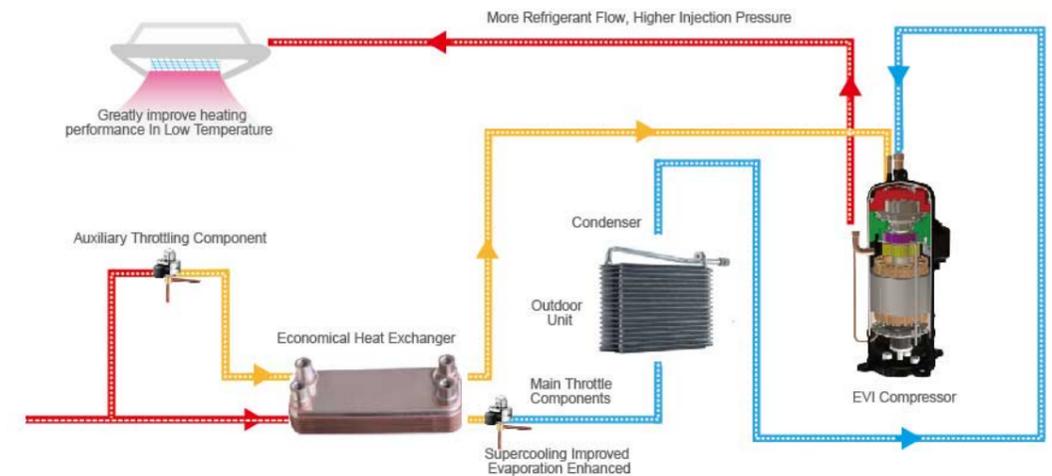
The Enhanced vapor injection compressor adopts two-stage throttling intermediate injection technology, which uses a flash vaporizer for gas-liquid separation to achieve the effect of increasing the enthalpy. It is cooled by vapor injection mixing at medium and low pressures while compressing, and then compressed normally at high pressure to increase the displacement of the compressor and achieve great heating performance improvement in a low temperature environment. This compressor could heating at -30 °C, and Heating capacity increased by nearly 20%-50% at -15 °C.



Theory of Enhanced Vapor Injection

With the help of high-efficiency heat exchanger, on the one hand, the refrigerant in main circulation super cooling before throttling to increase the enthalpy difference, on the other hand, the low temperature and low pressure refrigerant which has been depressurized by the electronic expansion valve in the auxiliary circuit is appropriately preheated to achieve a suitable medium pressure, provide to the compressor for secondary compression.

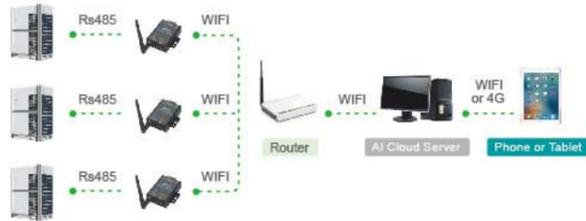
When the outdoor temperature is very low, the heat exchange capacity of the outdoor unit is reduced, so the normal air return volume of the compressor is reduced, which lead to the reduction of compressor capacity, and the best effect cannot be exerted. However, the refrigerant gas is replenished through the intermediate pressure air return injection port, increase the displacement of the compressor, and the refrigerant circulating amount of the indoor unit heat exchanger is increased to improve the heating capacity. Therefore, it is more suitable for cold regions.



Features

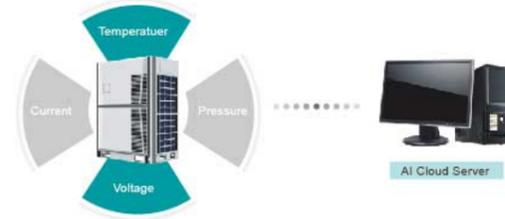
Long Distance Remote Control

Long distance remote control by phone or tablet.



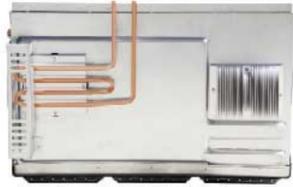
Malfunction Forecasting

- Thanks to the AI cloud server, malfunction can be forecasted when system running parameter is abnormal.
- Technician can be sent to site to check the system before it stops.



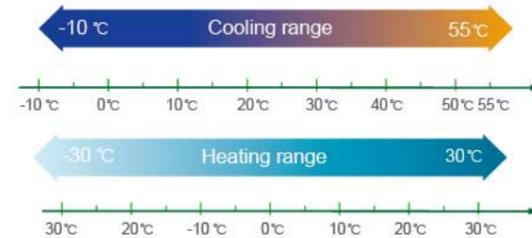
Refrigerant Cooling Design

We use refrigerant to cool down inverter modular board to keep it in a safe condition even when outdoor temperature is up to 55°C.



Wide Outdoor Operation Range

- Due to EVI technology, MHV PRO heating performance increased by 35% compare to conventional VRF system.
- Due to EVI technology, MHV PRO still has 85% of rated capacity even in -15°C.



Power Saving Mode

In the case of power shortage, MHV PRO can run power saving mode to ease generator's pressure.



Refrigerant Status Detection

- Built-in with smart refrigerant auto check function, which can give suggestion about refrigerant status.
- Different code means different refrigerant status:

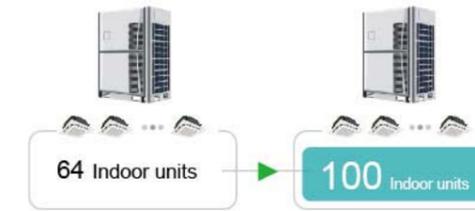


- 4 Extremely insufficient
- 12 Insufficient
- 11 Slightly insufficient
- 0 Normal
- 1 Slightly excess
- 2 Overmuch

Features

2 More indoor units

Max. 100 Indoor units can be connect in ONE system.



Electrical Lock Function(optional)

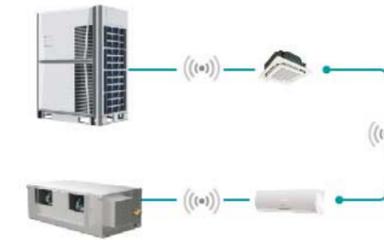


In case of end user doesn't pay as contract, electrical lock function can be used to stop VRF system, and end user can not start the system without permission.

System can be unlock with password by authorized technician.

Wireless Communication(optional)

Wireless communication between indoor units.
Wireless communication between indoor unit and outdoor unit.



On Site Diagnosis

Technician can do the commissioning & diagnosis by phone or tablet on site.



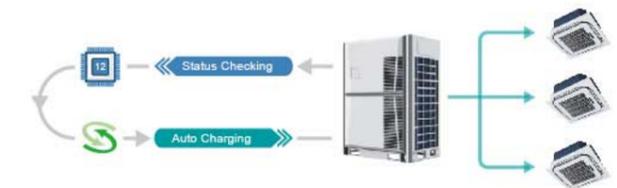
Service Window On Front Cover

Thanks to the service window, checking outdoor units status and setting is now easy, no need to remove the front cover.



Auto Charging Refrigerant(optional)

MHV PRO can customize with auto refrigerant charging function, additional solenoid valve will be added in gas pipe, and outdoor unit will control the valve to charge refrigerant.



13 Basic Modules



Maximum 128HP

Single modules can be freely combined to become a larger unit. Recommended maximum capacity of single system is 96HP. Maximum capacity of single system can be up to 128HP.



MHV Pro

1

High Efficiency

2

Benefits For Users

3

Benefits For Installers

Advantages



Provide You With Fresh Air

Mammoth (Shanghai) Air Conditioning Ltd
HTTP://WWW.MAMMOTHCHINA.COM

1

High Efficiency

Low carbon life advocate

Mammoth CAC always focus on low-carbon energy-saving products development, and spare no effort for technological research and development, to become a practitioner and advocate of low-carbon technology!



Core Technologies Make High Efficiency

Brushless DC Motor

- High efficiency
- Low noise

180° Sine Wave Control

- High precision rotor speed control

Stepless Control

- On-demand output, high efficiency and energy saving

CCT Inner-grooved Tube

- Excellent heat-exchanging efficiency

2-in-1 Refrigerant Flow Path

- Increase the liquid refrigerant volume proportion

Supercooling Design

- Enhance the supercool of refrigerant to increase system's efficiency

DC Inverter Compressors

- High pressure type
- Asymmetric scroll design
- Neodymium permanent magnet rotor

Cross Flow Fins

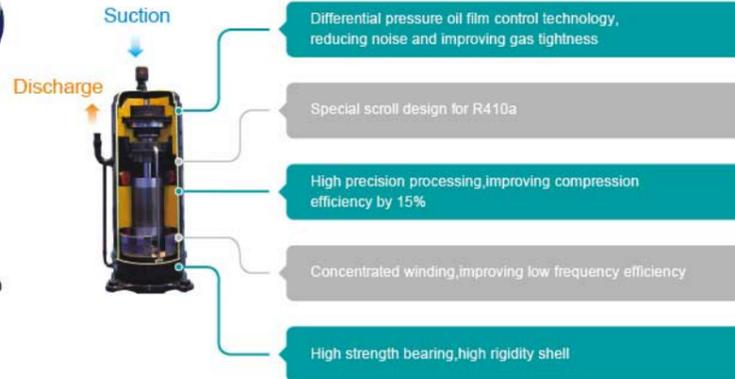
- Reduce air resistance
- Frosting improved





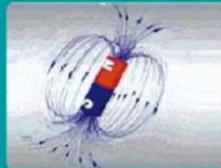
High Efficiency DC Inverter Compressor

- From Hitachi, famous inverter compressor manufacturer.
- R410a ECO friendly refrigerant.
- Small torque fluctuation, low vibration and quiet operation.
- High efficiency due to its patent internal structure design.
- Internal oil circulation structure.
- High reliability.
- Wide rotation speed range.
- Neodymium permanent magnet rotor, has powerful magnetic force, large torque and high efficiency.
- Concentrated winding, improving low frequency efficiency.
- High pressure chamber
- Has small suction superheat and high refrigerant volume efficiency
- Has large refrigerant discharge buffer volume, Low vibration and noise

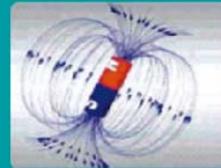


Neodymium permanent magnet rotor

Powerful magnetic force, large force moment and high efficiency.



Ferrite magnet



Neodymium permanent magnet

Concentrated winding

Magnetic efficiency is 12% higher than distributed winding



Concentrated winding



Distributed winding



High Efficiency DC Motor

High efficiency DC fan motor is from well-known brand.

Low noise and high efficiency because of high-density wire winding engineering.

Brushless with built-in sensor.



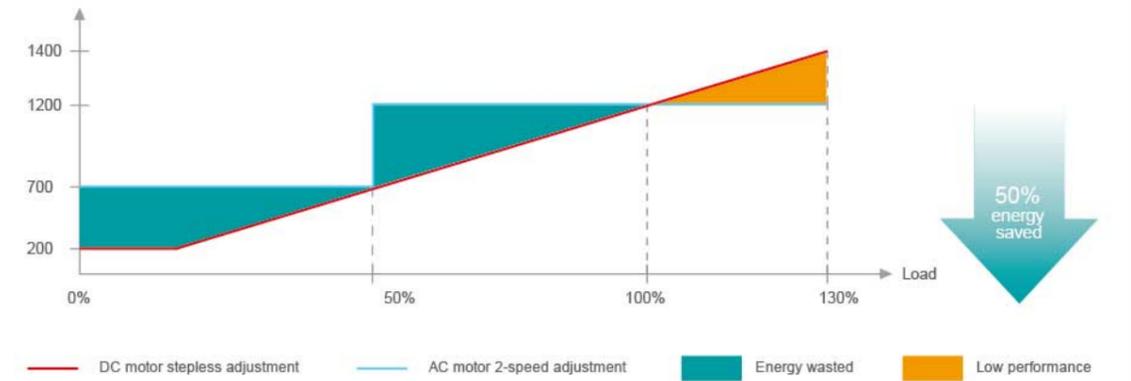
DC fan motor



Stepless Control

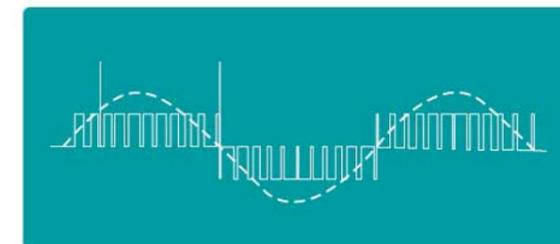
DC fan motor can be stepless controlled by outdoor PCB according to system's operating pressure. And it is able to reduce the energy consumption and maintain the system in the best performance.

Load-Revolution curve

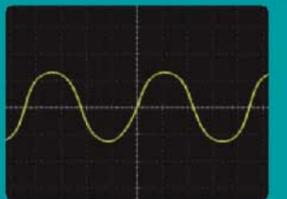


180° Sine Waveform Control

The perfect combination of 180° Sine waveform rotor frequency drive control technology and excellent IPM inverters, reduces the reactive loss of motor-driven, increases motor efficiency by 12%.



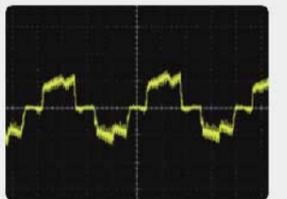
180° Sine Waveform vector Control



Increase efficiency by 12%



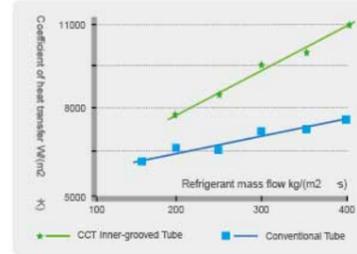
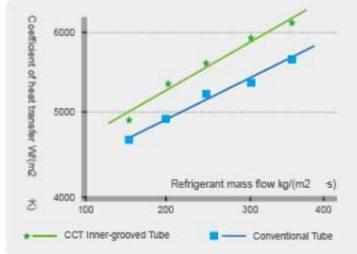
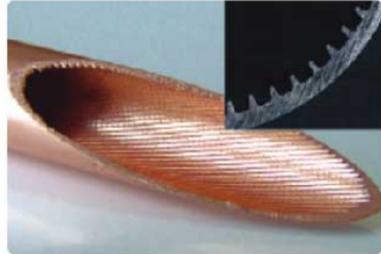
Conventional control waveform



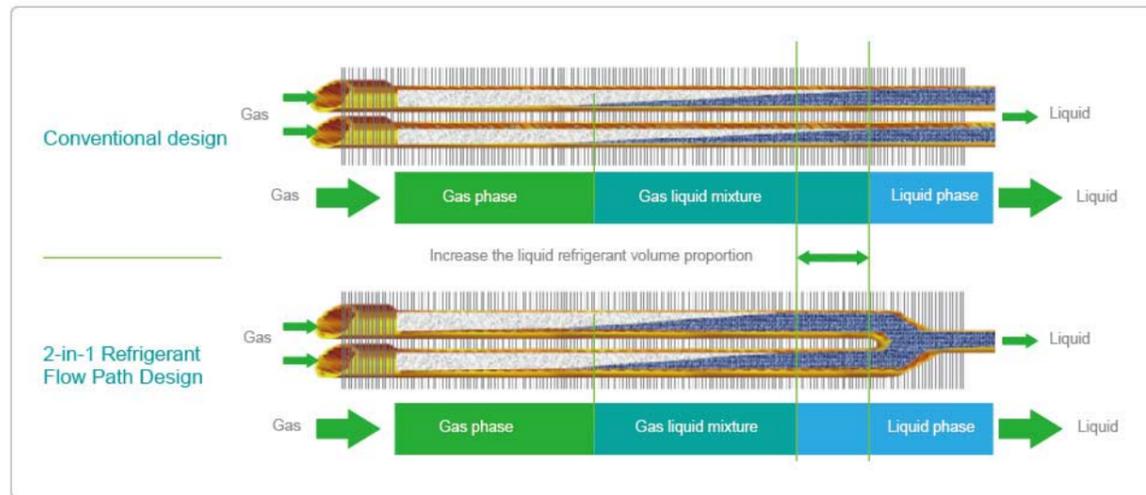
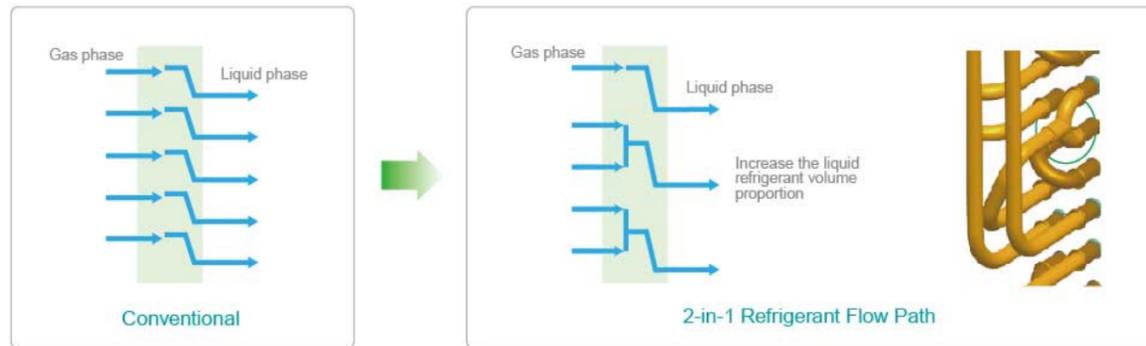


CCT Inner-grooved Tube

CCT (Continuous Cooling Transformation) inner-grooved copper tube has high thermometric conductivity. This inner-grooved fins break the refrigerant flow boundary layer to enhance refrigerant disturbance to increase heat-exchanging efficiency.

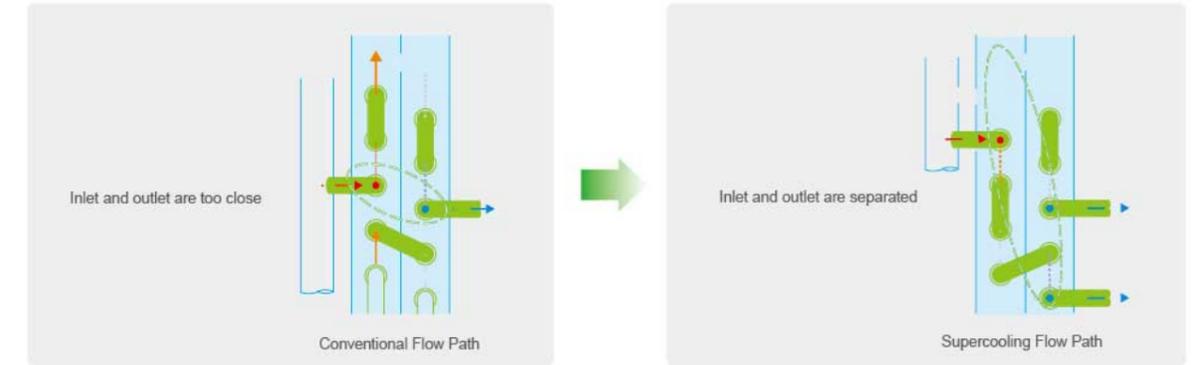


2-in-1 Refrigerant Flow Path Design



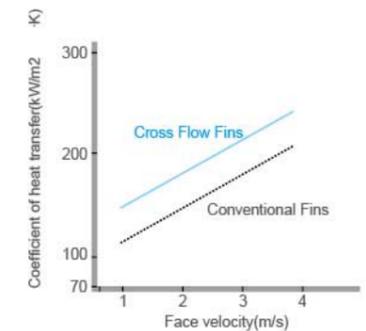
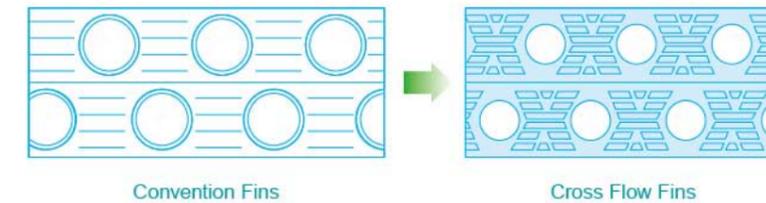
Supercooling Flow Path Design

Supercooling flow path design, separates the refrigerant inlet and outlet, increase the supercooling degree, reduce the effect of high temperature inlet gas refrigerant to low temperature outlet liquid refrigerant, therefore, the system efficiency will be greatly increased.



Cross Flow Fins

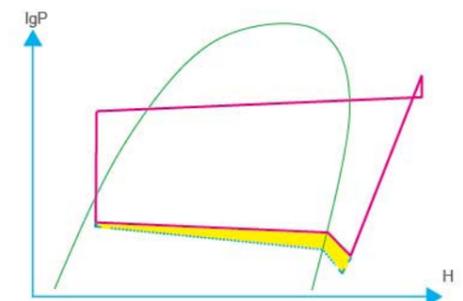
- Has low air resistance and great heat transfer coefficient.
- Frosting improved, frost on the heat-exchanger will be well-distributed, easy for defrosting.



Low Resistance Internal piping

- Thanks to the optimization pipeline design, 5% pressure drop are reduced.
- EER and COP increase, because of evaporating temperature increase and compressor work decrease.

— New structure cycle - - - - - Original compressing cycle



5% Pressure drop decrease

Benefits For Users

2

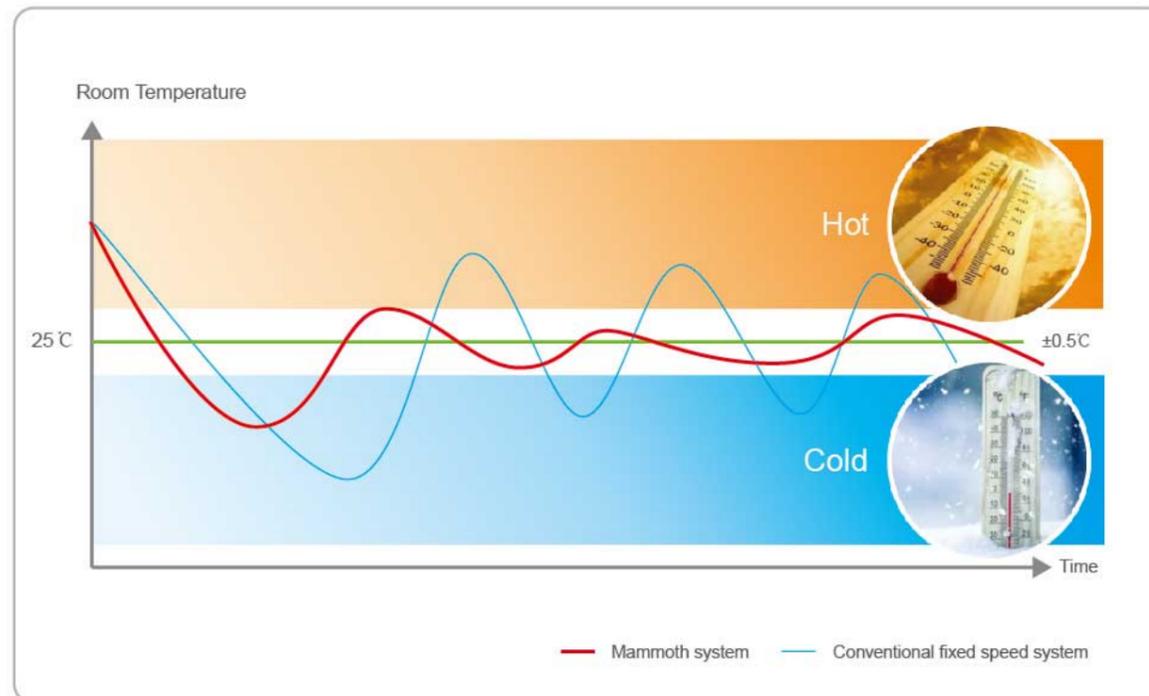
Livable environment creator

Mammoth focuses on starting point of CAC system: create a friendly, comfortable and pleasant living environment as always. DC inverter VRF system's comfort technologies include quick cooling and heating, precise temperature control, low noise, use environmental friendly refrigerant and so on, we strive to create livable environment for users.....



Outstanding Comfort Ability

- Mammoth VRF system have excellent cooling&heating performance, thanks to the high efficiency DC fan motor, DC compressor and optimized refrigerant flow control logic.
- Precisely room temperature control by adopting 2000 pulse EXV. Indoor temperature fluctuation can be maintain within 0.5 °C, offers outstanding comfort ability.



Improvements To Reduce Noise

- Maximum 10dB(A) of operating sound decrease.

Brushless DC motor

Night time silent operation

Low noise compressor

180° Sine Waveform Control



Streamline air duct design

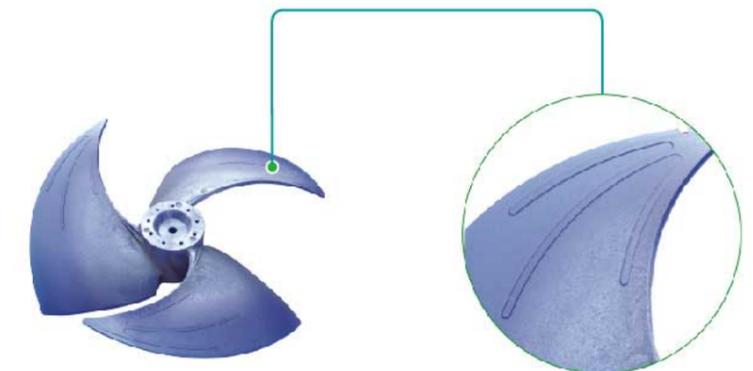
Anti-vibration fan blade

Circuit Silencer



Low Noise Fan Blade

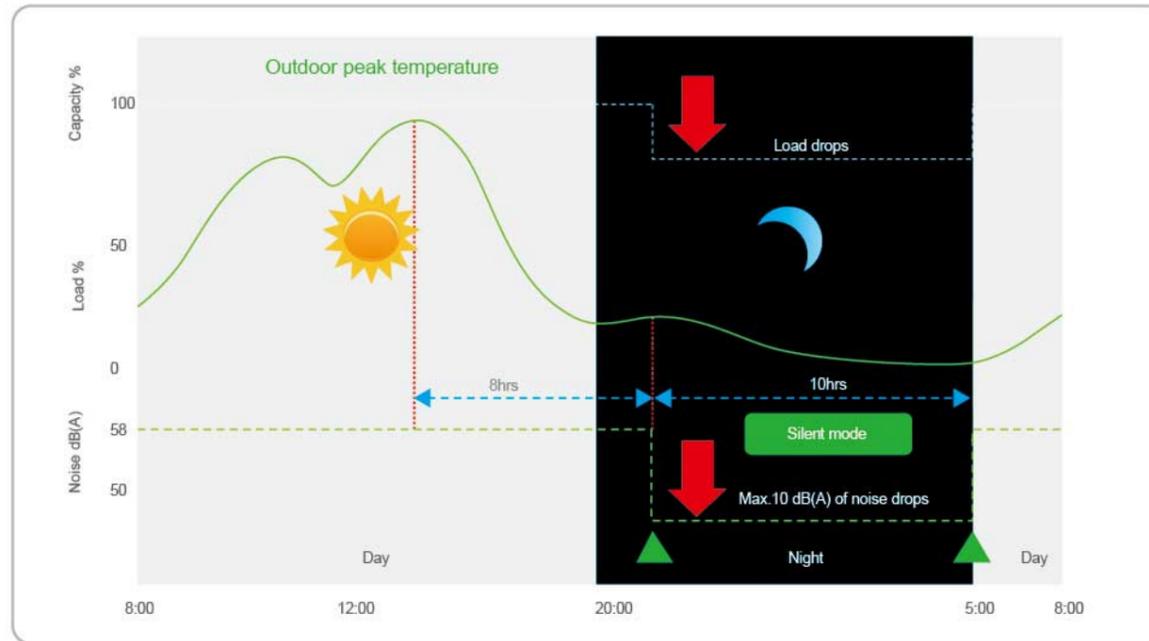
- Anti-vibration forward fan blade.
- Special design to reduce the air vibration and disturbance





Silent Mode, Night Time Noise Control

- Compressor and fan motor rotating speed can be reduced to lower the noise at night.
- Maximum 10dB(A) decrease.



Snow-proof Function

- In the cold weather, outdoor fan will start to run for a while at intervals, for preventing the snow to accumulate on fan blade. Because accumulated snow will freeze and block fan blade rotating, even worse it will damage the motor.
- It only start when temperature is lower than 0 °C



The PHE Economizer

- PHE Economizer technology provide an additional sub cooling..
- Improved heat exchanger+PHE economizer+Optimized control logic.
- Heating performance highly increased.



PHE Economizer

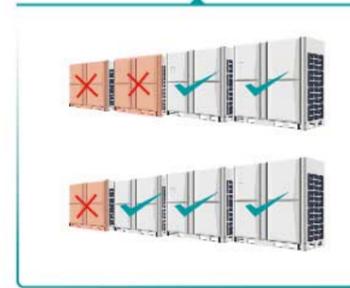
The PHE economizer need customization.



3-stage Back Up Function

Module back up function.

When some modules are failure, the others can keep running by simply settings.



Compressor back up function

When one compressor is failure, the other one can keep running by simply settings.

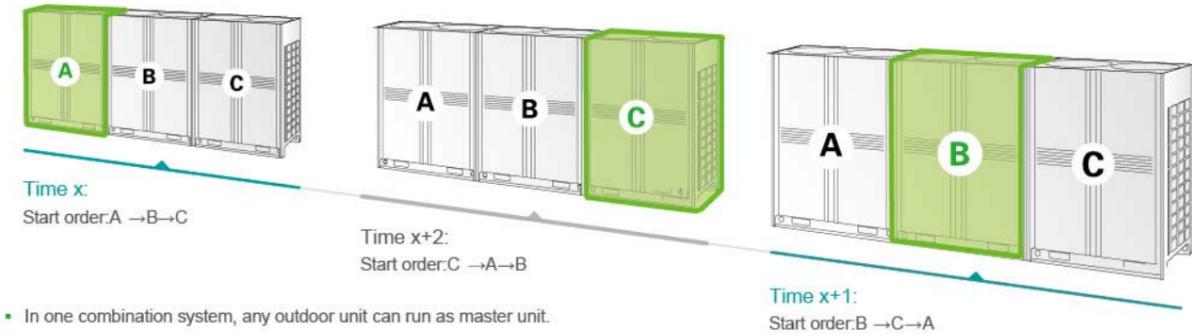


Fan motor back up function.

When one fan motor is failure, the other one can keep running by simply settings.



All Outdoor Units Cycle Operation



- In one combination system, any outdoor unit can run as master unit.
- Balance the lifespan among outdoor units in one system.

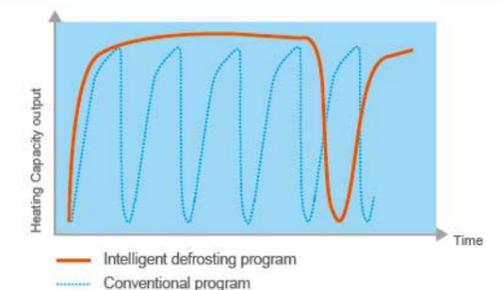


Intelligent Defrosting Program

Program starts only when unit needs to. Whereas conventional unit's defrosting timing & duration is fixed, causing fluctuations in temperature and personal comfort.

Defrost Curve

- Conventional unit's defrosting timing & duration is fixed
- Intelligent defrosting program starts according to heat exchanging efficiency & capacity change due to the frost. Less temperature fluctuations, people feel more comfortable





Remote ON/OFF Control Function

- Indoor units standard build in with ON/OFF control port.
- It can be used for hotel card control and also can be used for long distance remote ON/OFF control. And no need additional hotel VRF indoor unit control module.
- When contactor is open(card pulled out),indoor unit will be off can not be controlled, current running parameters will be saved in indoor PCB.
- When contactor is close(card insert),indoor unit will recover previous running state.



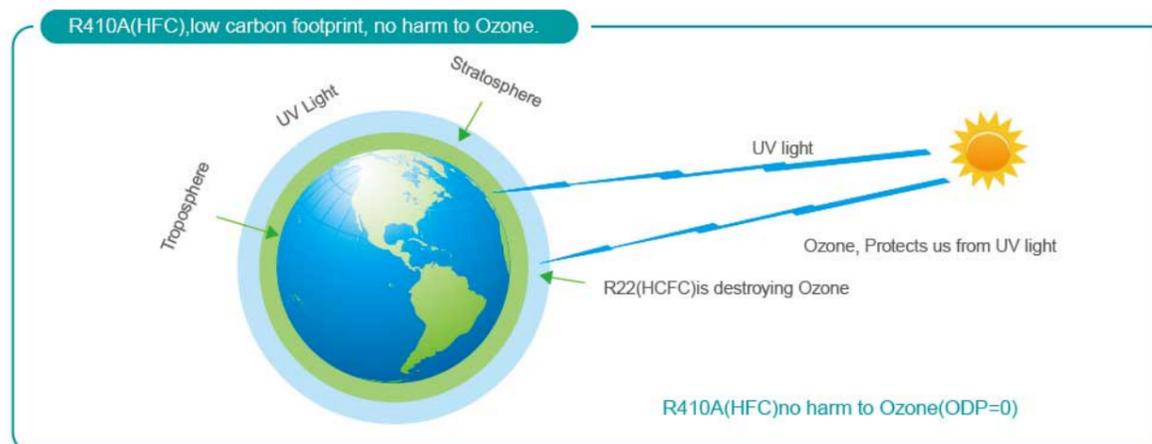
Emergency Stop Operation Function

Outdoor unit have a fire alarm linkage signal control function. When emergency situation can stop the whole AC system.



Environment Friendly

Refrigerant R410A(HFC),low carbon footprint, no harm to Ozone.



3

Benefits For Installers

Optimization for designer and installer

MHV DC inverter VRF system is designed with flexible modular combination concept,we keep optimizing the module size,reduce equipment on space occupied to meet the demand of designer and installer.Some unique technologies are used for our installers to reduce their working load,installation is becoming easier and easier!



Adjustable Outdoor Fan Static Pressure



- Thanks to DC fan motor, the external static pressure of outdoor fan is adjustable.
- Outdoor units can be installed in the service floor or facility room.
- Maximum ESP 85Pa.



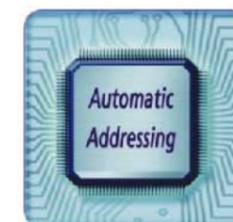
Touch Screen Wired Controller



- Air filter cleaning reminding function.
- Touch screen with black background and white light
- Ultra thin body and stylish design meet high-end environments.
- On/off,temperature setting, fan speed setting, mode setting,timer and check function.



Addressing Methods

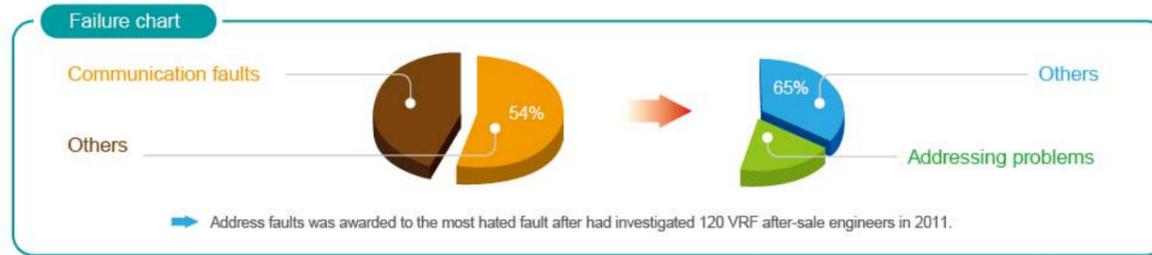


- 2 addressing methods:
 - Automatically addressing: system will distribute address to indoor unit automatically.
 - Manually setting by wireless remote controller.
- Addressing method can be selected easily by adjusting the switch on outdoor PCB.



Automatic Addressing

- Automatic addressing will reduce artificial faults by 35% and 5% manual works.
- 54% system failure were caused by communication faults.
- 65% communication faults were caused by address problems.
- Most of the address problems were: address setting forgotten, wrong settings, address repeat.

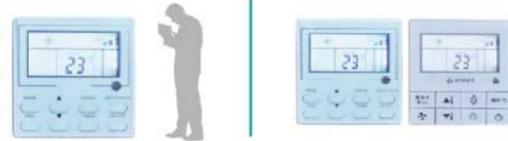


New Wired Controller

- Bidirectional communication. Indoor unit's operating parameters(error code, temperature, address) can be inquired and displayed on the controller.
- Compact design.
- Timer function.



- Easy
- Safe
- Convenient



User can check the error code and inquiry unit status very easy, safe and convenient.



LED Display On The PCB

- LED display on the PCB, it can show system's operation status and error codes.



Service Window

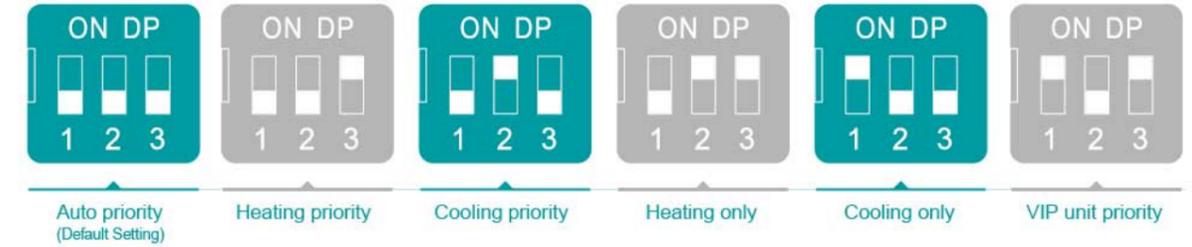
Thanks to the service window, checking outdoor unit's status and setting is now easy, no need to remove the electric control box cover.

Error Code Check

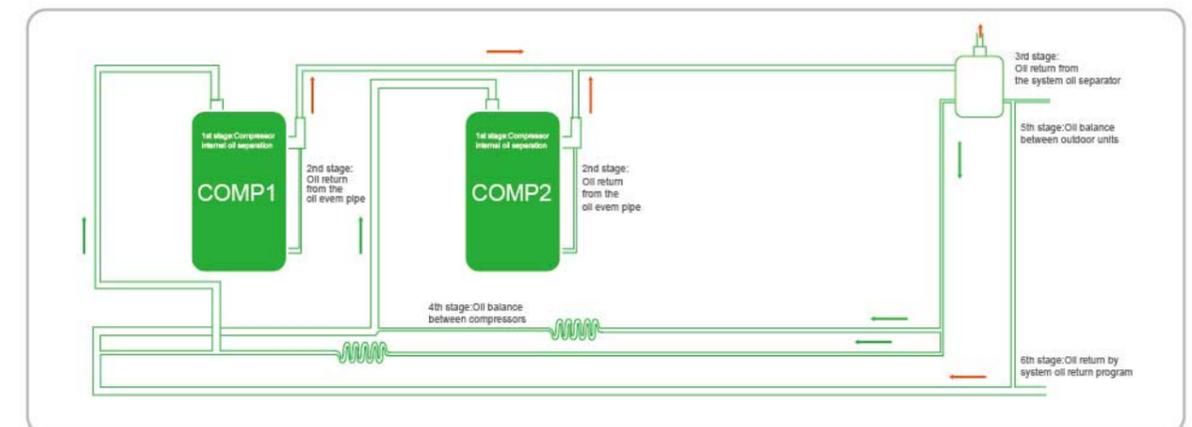
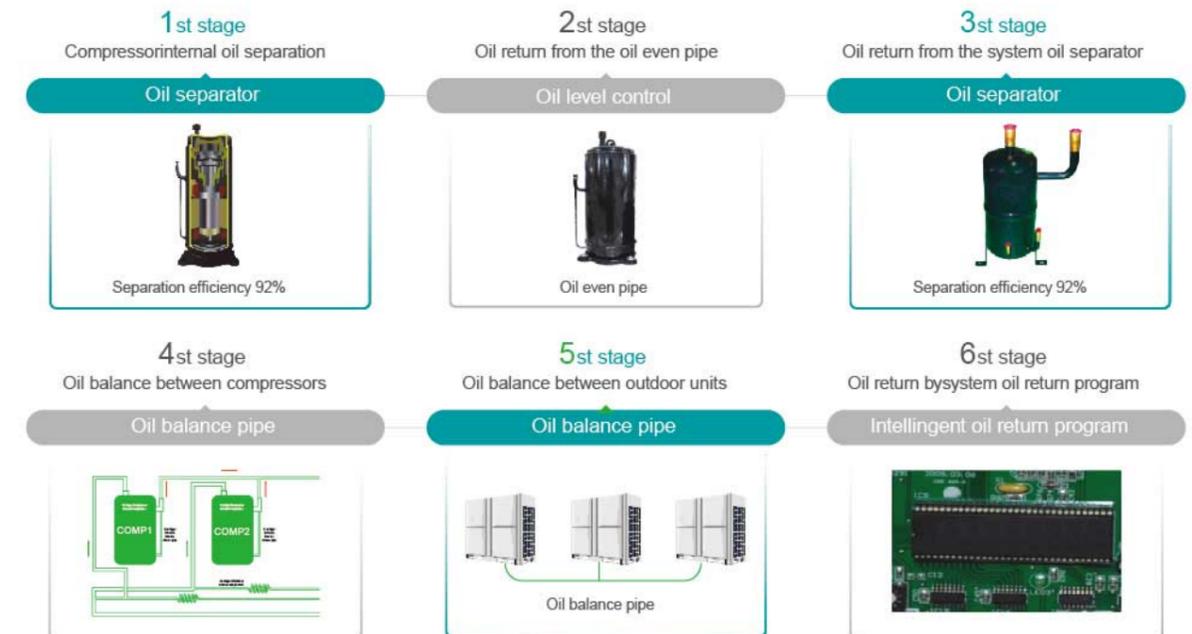


Mode Restriction

- 6 kinds of mode restriction
 - Auto priority(Default Setting)
 - Cooling(or heating)priority mode.
 - Cooling only(or heating only)mode.
 - VIP unit priority
- Mode restriction function can be selected on the outdoor PCB.



6-Stage Oil Control





Humanized Internal Structure

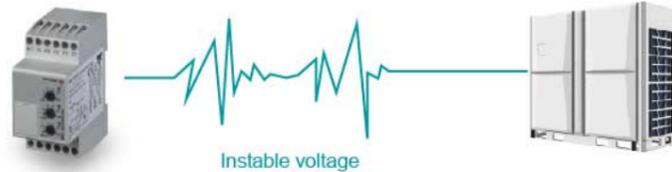


- All key components are designed to close to outside, it is convenient for repair and replacement.
- Thanks to the new balance technology, gas balance pipe does no longer exist, brazing points and leaking risk are decreased.



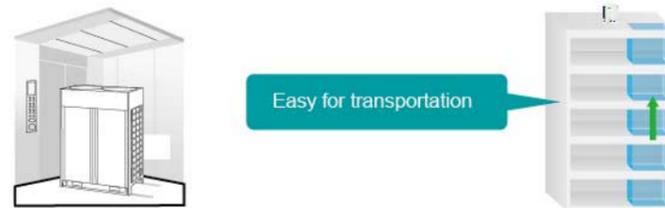
3-Phase Power Protector(Optional)

Protect the outdoor unit from instable voltage.



Easy Installation

- Easy for the outdoor unit to transport to roof floor by elevator due to its compact size.
- Communication wire length can be up to 1000m.



Use 2-Core Shielded Wire As Signal Wire

- Save installation cost.
- Reduce manual works.



380-415V/50&60Hz NEW DC INVERTER EVI VRF SYSTEM

Model name			MHV-VD255WSAM	MHV-VD285WSAM	MHV-VD335WSAM
Power supply			380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz
Performance Data					
Cooling	Capacity	HP	8HP	10HP	12HP
		kW	25.5	28.5	33.5
		Btu/h	86000	95500	114000
	Rated current	RT	7.2	8.0	9.5
		A	9.04	11.30	14.51
		kW	5.31	6.22	8.35
EER	W/W	4.75	4.50	4.01	
	kW	27.4	31.5	37.5	
	Btu/h	93500	107500	128000	
Heating	Capacity	RT	7.8	9.0	10.7
		A	8.93	11.25	14.34
	Power input	kW	4.98	5.86	7.35
	COP	W/W	5.50	5.38	5.10
Max. input consumption		kW	13.4	14.3	14.8
Max. Current		A	23.13	24.70	25.50
Capacity adjustment range			50%~130%		
Compressor Data					
Compressor	Quantity		1		
	Type		Scroll Compressor		
	Brand		HITACHI		
Physical data					
Refrigerant	Type		R410a		
	Volume	Kg	9		11
Dimension (WxHxD)	Throttle type		EXV		
	Net	mm	990x1740x840		
	Packing	mm	1060x1900x910		
Weight	Net	Kg	228		230
	Gross	Kg	240		242
Outdoor sound level		dB(A)	58		60
Max. operating range		Mpa	4.5		
Piping Data					
Pipe size	Liquid pipe	mm	Φ12.7		
	Gas pipe	mm	Φ25.4		
Max. pipe length	Total pipe length	m	1000		
	ODU to farthest IDU (Actual length)	m	190		
	ODU to farthest IDU (Equivalent length)	m	220		
	1st IDU distributor to farthest IDU	m	40/90		
Max. vertical length	Between ODU & IDU (ODU above IDU)	m	90		
	Between ODU & IDU (ODU below IDU)	m	110		
	Between IDUs	m	30		
	Between ODUs	m	0		
Operation temperature range					
Cooling	Outdoor side	℃	-5~55		
	Indoor side	℃	16~32		
Heating	Outdoor side	℃	-30~30		
	Indoor side	℃	16~32		

Note

1. Cooling operating temperature range is from -5 ℃ to 55 ℃ (It can be customized down to -10 ℃). Heating operating temperature range from -30 ℃ to 30 ℃.
2. The cooling conditions: indoor side 27 ℃ (80.6 ℉) DB, 19 ℃ (60 ℉) WB outdoor side 35 ℃ (95 ℉) DB.
3. The heating conditions: indoor side 20 ℃ (68 ℉) DB, 15 ℃ (44.6 ℉) WB outdoor side 7 ℃ (42.8 ℉) DB.
4. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
5. The above data may be changed without notice for future improvement on quality and performance.

MHV-VF400WSAM	MHV-VD450WSAM	MHV-VD505WSAM	MHV-VD560WSAM	MHV-VD615WSAM
380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz
14HP	16HP	18HP	20HP	22HP
40.0	45.0	50.5	56.0	61.5
136500	153500	170600	191000	209800
11.4	12.8	14.2	16.0	17.5
18.10	21.60	23.29	26.10	29.06
9.76	11.63	12.22	14.66	16.62
4.10	3.87	4.09	3.82	3.70
45.0	50.0	56.0	63.0	69.0
153500	170600	191000	214900	235400
12.8	14.2	16.0	18.0	19.7
18.00	20.25	22.61	25.70	28.4
9.34	10.87	11.89	14.16	16.8
4.82	4.60	4.71	4.45	4.11
18.3	18.8	22.0	24.4	25.0
30.89	31.70	37.40	41.10	42.10
50%~130%				
1				
Scroll Compressor				
HITACHI				
R410a				
14	15	16		
EXV				
1340x1740x840				
1410x1900x910				
275	285	290	297	
293	303	308	315	
60	61	62	63	63
4.5				
Φ15.88				
Φ31.8				
1000				
190				
220				
40/90				
90				
110				
30				
0				
-5~55				
16~32				
-30~30				
16~32				



380-415V/50&60Hz
NEW DC INVERTER VRF SYSTEM

Model Name	380~415V-3N-50Hz	MHV-VD255WSAM	MHV-VD285WSAM	MHV-VD335WSAM	MHV-VD400WSAM	MHV-VD450WSAM	MHV-VD505WSAM	MHV-VD560WSAM	MHV-VD615WSAM	
Performance data										
Cooling	Capacity	HP	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP
		KW	25.5	28.5	33.5	40	45	50.5	56	61.5
		Btu/h	86000	95500	114000	136500	153500	170600	191000	209800
	Power input	RT	7.2	8	9.5	11.4	12.8	14.2	16	17.5
		KW	5.34	6.29	7.98	9.98	12.10	12.56	14.66	16.36
EER	W/W	4.72	4.45	4.2	4.01	3.72	3.98	3.82	3.76	
Rated. input consumption		KW	14.1	14.6	14.8	18.6	18.7	19.1	27.8	28.5
Rated. current		A	25	25	25	32	32	32	49	49
Capacity adjustment range			50%~130%							
Compressor data										
DC Inverter compressor	Quantity		1				2			
	Type		DC /Twin-rotary							
	Brand		Mitsubishi							
	frequency range	Hz	20~102	20~106	20~108	20~106	20~108	20~110	20~106	20~110
Physical data										
Refrigerant	Type		R410a							
	Volume	Kg	10			12.5		16.5		
Dimension (DxHxW)	Net	mm	840x1740x990			840x1740x1340				
	Packing	mm	910x1900x1060			910x1900x1410				
Weight	Net	Kg	218	220	265		280			
	Gross	Kg	230	232	283		298			
Outdoor sound level		dB(A)	58	60		61	62	63		
Maximum operating pressure		MPa	4.5							
Piping & wiring data										
Pipe size	Liquid pipe	mm	Φ12.7			Φ15.9				
	Gas pipe	mm	Φ25.4			Φ31.8				
Max. pipe length	Total pipe length	m	1000							
	From OU to farthest IU (Actual length)	m	190							
	From OU to farthest IU (Equivalent length)	m	220							
	From 1st indoor distributor to farthest IU	m	90							
Max. Vertical length	Between OU & IU (OU above IU)	m	90							
	Between OU & IU (OU below IU)	m	110							
	Between IUs	m	30							
	Between Ous	m	0							
Operation temperature range										
Cooling	Outdoor side	℃	-15~55							
	Indoor side	℃	16~32							

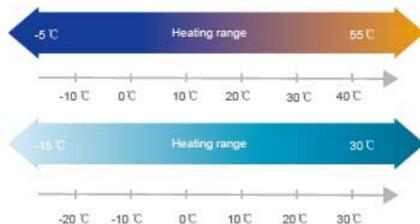
Note *The above data may be changed without notice for future improvement.



8 / 10 / 12.5 / 14 / 16kW
Smaller size, higher efficiency

Compact appearance

- The center of gravity has been reduced
- The vibration level is smaller
- It is suitable to be installed on terrace due to its compact appearance



Wide Outdoor Operation Range

- Due to global warming, cooling ambient temperature is designed up to 55 °C.
- Heating ambient temperature is down to -15 °C. In cold weather, CHV Mini VRF has capability to heat the room continuously.

Easy Maintenance Window

LED display on the PCB:
this is available to show operation status and error codes of the system.



MHV-mini Nomenclature

MHV-V [] [] W [] [] [] - [] []

- Design Series: A - first amendment, original version is omitted
- Special Function Code
- Modular or Individual: M - Modular, Individual is omitted
- Refrigerant : A-R410a , R22 is omitted
- Power Supply Phase : S-3Ph, 1Ph is omitted
- Outdoor unit code
- Nominal Cooling (unit 100W)
- Type Code: H-Rear Discharge , DC is omitted
- Mammoth VRF Unit Code

MHV-mini

Model name	MHV-V080WA-B	MHV-V100WA-B	MHV-V120WA-B	MHV-V140WA-B	MHV-V160WA-B																																																																																																																																															
Power supply	MHV-V080WNA-B 220~240V/1N/50Hz 220~240V/1N/60Hz	MHV-V100WNA-B 220~240V/1N/50Hz 220~240V/1N/60Hz	MHV-V120WNA-B 220~240V/1N/50Hz 220~240V/1N/60Hz	MHV-V140WNA-B 220~240V/1N/50Hz 220~240V/1N/60Hz	MHV-V160WNA-B 220~240V/1N/50Hz 220~240V/1N/60Hz																																																																																																																																															
Performance data	<table border="1"> <thead> <tr> <th></th> <th>8</th> <th>7.2</th> <th>10</th> <th>9.0</th> <th>12.0</th> <th>11.3</th> <th>14</th> <th>12.7</th> <th>16</th> <th>14.5</th> </tr> </thead> <tbody> <tr> <td>Cooling Capacity (kW)</td> <td>27300</td> <td>24570</td> <td>34100</td> <td>30690</td> <td>42800</td> <td>38340</td> <td>47800</td> <td>43020</td> <td>54600</td> <td>49140</td> </tr> <tr> <td>Cooling Capacity (Btu/h)</td> <td>93000</td> <td>84000</td> <td>116000</td> <td>105000</td> <td>146000</td> <td>131000</td> <td>163000</td> <td>146000</td> <td>187000</td> <td>167000</td> </tr> <tr> <td>Cooling Power input (kW)</td> <td>2.80</td> <td>2.81</td> <td>3.00</td> <td>3.25</td> <td>3.20</td> <td>3.46</td> <td>3.75</td> <td>4.06</td> <td>4.75</td> <td>5.14</td> </tr> <tr> <td>Cooling Power input (Btu/h)</td> <td>9500</td> <td>9500</td> <td>10100</td> <td>10800</td> <td>10700</td> <td>11600</td> <td>12600</td> <td>13700</td> <td>16000</td> <td>17200</td> </tr> <tr> <td>Cooling Rated current (A)</td> <td>11.8</td> <td>14.2</td> <td>13.6</td> <td>16.4</td> <td>14.5</td> <td>17.5</td> <td>17.0</td> <td>20.5</td> <td>21.8</td> <td>25.96</td> </tr> <tr> <td>Cooling EER (T1/T3)</td> <td>3.08</td> <td>2.56</td> <td>3.33</td> <td>2.77</td> <td>3.74</td> <td>3.27</td> <td>3.55</td> <td>3.13</td> <td>3.5</td> <td>2.82</td> </tr> <tr> <td>Heating Capacity (kW)</td> <td>9</td> <td>11</td> <td>14</td> <td>16</td> <td>17</td> <td>17</td> <td>17</td> <td>17</td> <td>17</td> <td>17</td> </tr> <tr> <td>Heating Capacity (Btu/h)</td> <td>30700</td> <td>37500</td> <td>47800</td> <td>54600</td> <td>58000</td> <td>58000</td> <td>58000</td> <td>58000</td> <td>58000</td> <td>58000</td> </tr> <tr> <td>Heating Power input (kW)</td> <td>2.85</td> <td>3.1</td> <td>3.52</td> <td>4</td> <td>4.4</td> <td>4.4</td> <td>4.4</td> <td>4.4</td> <td>4.4</td> <td>4.4</td> </tr> <tr> <td>Heating Power input (Btu/h)</td> <td>9700</td> <td>10500</td> <td>11900</td> <td>13400</td> <td>14900</td> <td>14900</td> <td>14900</td> <td>14900</td> <td>14900</td> <td>14900</td> </tr> <tr> <td>Heating Rated current (A)</td> <td>12</td> <td>14</td> <td>16.1</td> <td>18.2</td> <td>20</td> <td>20</td> <td>20</td> <td>20</td> <td>20</td> <td>20</td> </tr> <tr> <td>Heating COP</td> <td>3.39</td> <td>3.55</td> <td>3.83</td> <td>3.72</td> <td>3.61</td> <td>3.61</td> <td>3.61</td> <td>3.61</td> <td>3.61</td> <td>3.61</td> </tr> </tbody> </table>						8	7.2	10	9.0	12.0	11.3	14	12.7	16	14.5	Cooling Capacity (kW)	27300	24570	34100	30690	42800	38340	47800	43020	54600	49140	Cooling Capacity (Btu/h)	93000	84000	116000	105000	146000	131000	163000	146000	187000	167000	Cooling Power input (kW)	2.80	2.81	3.00	3.25	3.20	3.46	3.75	4.06	4.75	5.14	Cooling Power input (Btu/h)	9500	9500	10100	10800	10700	11600	12600	13700	16000	17200	Cooling Rated current (A)	11.8	14.2	13.6	16.4	14.5	17.5	17.0	20.5	21.8	25.96	Cooling EER (T1/T3)	3.08	2.56	3.33	2.77	3.74	3.27	3.55	3.13	3.5	2.82	Heating Capacity (kW)	9	11	14	16	17	17	17	17	17	17	Heating Capacity (Btu/h)	30700	37500	47800	54600	58000	58000	58000	58000	58000	58000	Heating Power input (kW)	2.85	3.1	3.52	4	4.4	4.4	4.4	4.4	4.4	4.4	Heating Power input (Btu/h)	9700	10500	11900	13400	14900	14900	14900	14900	14900	14900	Heating Rated current (A)	12	14	16.1	18.2	20	20	20	20	20	20	Heating COP	3.39	3.55	3.83	3.72	3.61	3.61	3.61	3.61	3.61	3.61
	8	7.2	10	9.0	12.0	11.3	14	12.7	16	14.5																																																																																																																																										
Cooling Capacity (kW)	27300	24570	34100	30690	42800	38340	47800	43020	54600	49140																																																																																																																																										
Cooling Capacity (Btu/h)	93000	84000	116000	105000	146000	131000	163000	146000	187000	167000																																																																																																																																										
Cooling Power input (kW)	2.80	2.81	3.00	3.25	3.20	3.46	3.75	4.06	4.75	5.14																																																																																																																																										
Cooling Power input (Btu/h)	9500	9500	10100	10800	10700	11600	12600	13700	16000	17200																																																																																																																																										
Cooling Rated current (A)	11.8	14.2	13.6	16.4	14.5	17.5	17.0	20.5	21.8	25.96																																																																																																																																										
Cooling EER (T1/T3)	3.08	2.56	3.33	2.77	3.74	3.27	3.55	3.13	3.5	2.82																																																																																																																																										
Heating Capacity (kW)	9	11	14	16	17	17	17	17	17	17																																																																																																																																										
Heating Capacity (Btu/h)	30700	37500	47800	54600	58000	58000	58000	58000	58000	58000																																																																																																																																										
Heating Power input (kW)	2.85	3.1	3.52	4	4.4	4.4	4.4	4.4	4.4	4.4																																																																																																																																										
Heating Power input (Btu/h)	9700	10500	11900	13400	14900	14900	14900	14900	14900	14900																																																																																																																																										
Heating Rated current (A)	12	14	16.1	18.2	20	20	20	20	20	20																																																																																																																																										
Heating COP	3.39	3.55	3.83	3.72	3.61	3.61	3.61	3.61	3.61	3.61																																																																																																																																										
Compressor data	<table border="1"> <thead> <tr> <th></th> <th>1</th> <th>1</th> <th>1</th> <th>1</th> <th>1</th> </tr> </thead> <tbody> <tr> <td>Quantity</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>Type</td> <td>Twin-rotary Compressor</td> <td>Twin-rotary Compressor</td> <td>Twin-rotary Compressor</td> <td>Twin-rotary Compressor</td> <td>Twin-rotary Compressor</td> </tr> <tr> <td>Brand</td> <td>Mitsubishi</td> <td>GMCC</td> <td>Mitsubishi</td> <td>Mitsubishi</td> <td>Mitsubishi</td> </tr> </tbody> </table>						1	1	1	1	1	Quantity	1	1	1	1	1	Type	Twin-rotary Compressor	Brand	Mitsubishi	GMCC	Mitsubishi	Mitsubishi	Mitsubishi																																																																																																																											
	1	1	1	1	1																																																																																																																																															
Quantity	1	1	1	1	1																																																																																																																																															
Type	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor																																																																																																																																															
Brand	Mitsubishi	GMCC	Mitsubishi	Mitsubishi	Mitsubishi																																																																																																																																															
Fan data	<table border="1"> <thead> <tr> <th></th> <th>1</th> <th>1</th> <th>1</th> <th>1</th> <th>1</th> </tr> </thead> <tbody> <tr> <td>Type</td> <td>DC</td> <td>DC</td> <td>DC</td> <td>DC</td> <td>DC</td> </tr> <tr> <td>Quantity</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>Power output (W)</td> <td>75</td> <td>90</td> <td>180</td> <td>180</td> <td>180</td> </tr> <tr> <td>Fan Quantity</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>Air flow (m³/h)</td> <td>3300</td> <td>4000</td> <td>8000</td> <td>8000</td> <td>8000</td> </tr> </tbody> </table>						1	1	1	1	1	Type	DC	DC	DC	DC	DC	Quantity	1	1	1	1	1	Power output (W)	75	90	180	180	180	Fan Quantity	1	1	1	1	1	Air flow (m³/h)	3300	4000	8000	8000	8000																																																																																																											
	1	1	1	1	1																																																																																																																																															
Type	DC	DC	DC	DC	DC																																																																																																																																															
Quantity	1	1	1	1	1																																																																																																																																															
Power output (W)	75	90	180	180	180																																																																																																																																															
Fan Quantity	1	1	1	1	1																																																																																																																																															
Air flow (m³/h)	3300	4000	8000	8000	8000																																																																																																																																															
Physical data	<table border="1"> <thead> <tr> <th></th> <th>Hydrophilic Aluminum</th> <th>Hydrophilic Aluminum</th> <th>Hydrophilic Aluminum</th> <th>Hydrophilic Aluminum</th> <th>Hydrophilic Aluminum</th> </tr> </thead> <tbody> <tr> <td>Fin type</td> <td>Hydrophilic Aluminum</td> <td>Hydrophilic Aluminum</td> <td>Hydrophilic Aluminum</td> <td>Hydrophilic Aluminum</td> <td>Hydrophilic Aluminum</td> </tr> <tr> <td>Number of rows</td> <td>3</td> <td>2</td> <td>2</td> <td>3</td> <td>3</td> </tr> <tr> <td>Tube type</td> <td>Inner-grooved copper tube</td> </tr> <tr> <td>Refrigerant</td> <td>R410a</td> <td>R410a</td> <td>R410a</td> <td>R410a</td> <td>R410a</td> </tr> <tr> <td>Volume (kg)</td> <td>2</td> <td>2.6</td> <td>3</td> <td>3.8</td> <td>3.8</td> </tr> <tr> <td>Dimension (W*H*D) (mm)</td> <td>935x702x383</td> <td>1032x810x445</td> <td>1100x870x528</td> <td>1100x870x528</td> <td>1100x870x528</td> </tr> <tr> <td>Packing (mm)</td> <td>975x770x420</td> <td>1075x875x495</td> <td>1140x965x540</td> <td>1140x965x540</td> <td>1140x965x540</td> </tr> <tr> <td>Weight (kg)</td> <td>47</td> <td>60</td> <td>85</td> <td>90</td> <td>90</td> </tr> <tr> <td>Gross (kg)</td> <td>60</td> <td>65</td> <td>95</td> <td>100</td> <td>100</td> </tr> <tr> <td>Outdoor sound level (dB(A))</td> <td>≤54</td> <td>≤56</td> <td>≤56</td> <td>≤57</td> <td>≤57</td> </tr> </tbody> </table>						Hydrophilic Aluminum	Fin type	Hydrophilic Aluminum	Number of rows	3	2	2	3	3	Tube type	Inner-grooved copper tube	Refrigerant	R410a	R410a	R410a	R410a	R410a	Volume (kg)	2	2.6	3	3.8	3.8	Dimension (W*H*D) (mm)	935x702x383	1032x810x445	1100x870x528	1100x870x528	1100x870x528	Packing (mm)	975x770x420	1075x875x495	1140x965x540	1140x965x540	1140x965x540	Weight (kg)	47	60	85	90	90	Gross (kg)	60	65	95	100	100	Outdoor sound level (dB(A))	≤54	≤56	≤56	≤57	≤57																																																																																									
	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum																																																																																																																																															
Fin type	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum																																																																																																																																															
Number of rows	3	2	2	3	3																																																																																																																																															
Tube type	Inner-grooved copper tube	Inner-grooved copper tube	Inner-grooved copper tube	Inner-grooved copper tube	Inner-grooved copper tube																																																																																																																																															
Refrigerant	R410a	R410a	R410a	R410a	R410a																																																																																																																																															
Volume (kg)	2	2.6	3	3.8	3.8																																																																																																																																															
Dimension (W*H*D) (mm)	935x702x383	1032x810x445	1100x870x528	1100x870x528	1100x870x528																																																																																																																																															
Packing (mm)	975x770x420	1075x875x495	1140x965x540	1140x965x540	1140x965x540																																																																																																																																															
Weight (kg)	47	60	85	90	90																																																																																																																																															
Gross (kg)	60	65	95	100	100																																																																																																																																															
Outdoor sound level (dB(A))	≤54	≤56	≤56	≤57	≤57																																																																																																																																															
Operation temperature range	<table border="1"> <thead> <tr> <th></th> <th>-5~55</th> <th>-5~55</th> <th>-5~55</th> <th>-5~55</th> <th>-5~55</th> </tr> </thead> <tbody> <tr> <td>Cooling Outdoor side (°C)</td> <td>-5~55</td> <td>-5~55</td> <td>-5~55</td> <td>-5~55</td> <td>-5~55</td> </tr> <tr> <td>Heating Outdoor side (°C)</td> <td>-15~30</td> <td>-15~30</td> <td>-15~30</td> <td>-15~30</td> <td>-15~30</td> </tr> </tbody> </table>						-5~55	-5~55	-5~55	-5~55	-5~55	Cooling Outdoor side (°C)	-5~55	-5~55	-5~55	-5~55	-5~55	Heating Outdoor side (°C)	-15~30	-15~30	-15~30	-15~30	-15~30																																																																																																																													
	-5~55	-5~55	-5~55	-5~55	-5~55																																																																																																																																															
Cooling Outdoor side (°C)	-5~55	-5~55	-5~55	-5~55	-5~55																																																																																																																																															
Heating Outdoor side (°C)	-15~30	-15~30	-15~30	-15~30	-15~30																																																																																																																																															

Note

1. The cooling conditions: indoor temp.:27 °C DB(80.6°F), 19°C WB(60 °F) outdoor temp.:35 °C DB(95 °F) equivalent pipe length:5m drop length:0m.
2. The heating conditions: indoor temp.:20 °C DB(68 °F), 15°C WB(44.6 °F) outdoor temp.:7 °C DB(42.8 °F) equivalent pipe length:5m drop length:0m.
3. Sound level: Anechoic chamber conversion value, measured at point 1 min front of the unit at a height of 1.2m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality at performance.

INDOOR UNITS

Provide you with fresh air



Indoor Units line Up

Capacity (KW)	1-way cassette	2-way cassette	4-way cassette	Round flow cassette	4-way cassette (compact type)	Floor Standing Unit
2.2	•				•	
2.8	•				•	
3.6	•				•	
4.5	•	•			•	
5.6	•	•	•	•		
7.1	•	•	•	•		
8.0		•	•	•		
9.0			•	•		
10.0			•	•		•
11.2			•	•		•
12.0			•	•		•
12.5			•	•		•
14.0			•	•		•
15.0				•		•
16.0			•	•		•

Capacity (KW)	Wall-mounted	Floor Ceiling	Short ceiling concealed ducted unit	Medium ESP ducted unit	High ESP ducted unit	Fresh air processor
2.2	•		•			
2.8	•		•			
3.6	•		•			
4.5	•	•	•			
5.6	•	•	•			
7.1	•	•	•	•	•	
8.0		•	•	•	•	
9.0		•	•	•	•	
10.0				•	•	
11.2		•			•	
12.0				•	•	
14.0		•				•
15.0				•		
16.0		•				
20.0					•	
22.4						•
25.0					•	•
28.0					•	•
45.0					•	•
56.0					•	•

1-way Cassette



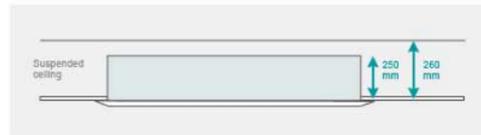
Features

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard(built-in)	Standard(built-in)	Standard	/

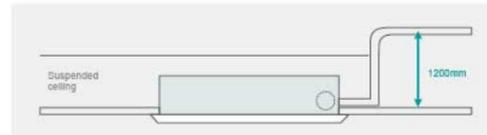
Slim body, easy to install

Has slim body with 250mm height, it is specially suitable for low suspended ceiling rooms.



Built-in with drainage pump

Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller	
		Cooling KW	Heating KW	Cooling Kbtu/h	Heating Kbtu/h		M3/h	CFM			DB(A)	Pa	Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm		Liquid mm
MHV-V22Q1B	50Hz	2.2	7.5	2.5	8.5						1180 x 275 x 655	994 x 250 x 532	1090 x 65 x 540	1070 x 50 x 520	24/3.6	30/5.0	φ9.53				
MHV-V28Q1B	50Hz	2.8	9.5	3.2	10.9	0.04	520	306	32-36												
MHV-V36Q1B	50Hz	3.6	12.2	4.0	13.8																
MHV-V45Q1B	50Hz	4.5	15.3	5.0	17.0	0.05	610	360	36-41	/	1180 x 315 x 655	994 x 290 x 532	1090 x 65 x 540	1070 x 50 x 520	26/3.6	32/5.0	φ12.7	φ6.35		Remote controller	
MHV-V56Q1B	50Hz	5.6	19.1	6.3	21.4	0.07	750	440	35-41		1470 x 305 x 660	1304 x 290 x 572	1390 x 70 x 560	1380 x 50 x 520	34/3.6	38/5.0					
MHV-V71Q1B	50Hz	7.1	24.2	8.0	27.2	0.09	950	550	38-45												

Notes:
 1. Power supply: 220-240V/1N for 50Hz;
 2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 4. The above data may be changed without notice for future improvement on quality and performance.

2-way Cassette



Features

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard(built-in)	Standard(built-in)	Standard	/

2 way air direction

Two direction air flow, flexibly install in various rooms or hallway



Built-in with drainage pump

Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling KW	Heating KW	Cooling Kbtu/h	Heating Kbtu/h		M3/h	CFM			DB(A)	Pa	Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm	
MHV-V45Q2B	50Hz	4.5	15.3	5.0	17						1215 x 365 x 630	1068 x 310 x 517	1235 x 70 x 655	1205 x 50 x 630	33/6.5	36/8.5	φ12.7	φ6.35		
MHV-V56Q2B	50Hz	5.6	19.1	6.3	21.4	0.07	800	470	36-42	/										
MHV-V71Q2B	50Hz	7.1	24.2	8.0	27.2						1455 x 365 x 630	1308 x 310 x 517	1475 x 70 x 655	1445 x 50 x 630	40/7.5	47/10.0	φ15.9	φ9.53	ODφ25	Remote controller
MHV-V80Q2B	50Hz	8.0	27.2	9.0	30.7	0.10	1120	650	40-46											

Notes:
 1. Power supply: 220-240V/1N for 50Hz;
 2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB.
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 4. The above data may be changed without notice for future improvement on quality and performance.

4-way Cassette/Round-flow Cassette



Features

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard(built-in)	Standard(built-in)	Standard	Optional

4 way air delivering

Air flow is soft and smooth, air can be delivered to every corner without dead angle, it makes the room temperature distribution more balance.



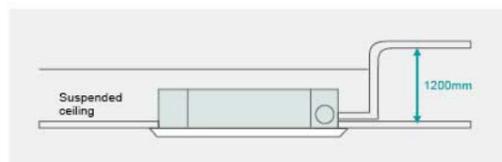
360° round panel is optional.



Built-in with drainage pump

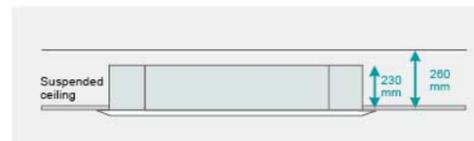
Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.

Note: The pumping head of 4-way cassette unit (compact type) is 700mm.



Slim body, easy to install

Has slim body with 230mm height, it is specially suitable for low suspended ceiling rooms.



DC fan motor is optional

Specification

4-way Cassette Unit

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling KW	Cooling KBTu/h	Heating KW	Heating KBTu/h		M³/h	CFM			Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm	
MHV-56QC	50Hz	5.6	19.1	6.3	21.4	0.054	810	470	35-39	/	920 x 265 x 985	833 x 232 x 900	1030 x 105 x 1030	950 x 50 x 950	24	30	Φ12.7	Φ6.35	Remote controller	
MHV-56QCN	60Hz																			
MHV-71QC	50Hz	7.1	24.2	8.0	27.2	0.093	1200	700	36-39	/	920 x 265 x 985	833 x 232 x 900	1030 x 105 x 1030	950 x 50 x 950	24	30			Remote controller	
MHV-71QCN	60Hz																			
MHV-80QC	50Hz	8	27.2	8.8	30	0.16	1600	940	37-41	/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030	950 x 50 x 950	28.5	35			Remote controller	
MHV-80QCN	60Hz																			
MHV-90QC	50Hz	9	30.7	10.0	34.1	0.16	1600	940	37-41	/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030	950 x 50 x 950	28.5	35			Remote controller	
MHV-90QCN	60Hz																			
MHV-100QC	50Hz	10	34.1	11.0	37.5	0.16	1600	940	37-41	/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030	950 x 50 x 950	28.5	35	Φ15.9	Φ9.53	Remote controller	
MHV-100QCN	60Hz																			
MHV-112QC	50Hz	11.2	38.2	12.5	42.6	0.16	1600	940	37-41	/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030	950 x 50 x 950	28.5	35			Remote controller	
MHV-112QCN	60Hz																			
MHV-125QC	50Hz	12.5	42.6	14.0	47.7	0.16	1600	940	37-41	/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030	950 x 50 x 950	28.5	35			Remote controller	
MHV-125QCN	60Hz																			
MHV-140QC	50Hz	14.0	47.7	15.0	51.1	0.16	1600	940	37-41	/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030	950 x 50 x 950	28.5	35			Remote controller	
MHV-140QCN	60Hz																			
MHV-160QC	50Hz	16.0	54.5	17.0	58	0.16	1600	940	37-41	/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030	950 x 50 x 950	28.5	35			Remote controller	
MHV-160QCN	60Hz																			

4-way Cassette Unit(Compact type)

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling KW	Cooling KBTu/h	Heating KW	Heating KBTu/h		M³/h	CFM			Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm	
MHV-22QC	50Hz	2.2	7.5	2.5	8.5	0.038	447	263	22-34	/	745 x 375 x 675	653 x 267 x 585	750 x 95 x 750	650 x 30 x 650	17.5	25			Remote controller	
MHV-22QCN	60Hz																			
MHV-28QC	50Hz	2.8	9.5	3.2	10.9	0.038	447	263	22-34	/	745 x 375 x 675	653 x 267 x 585	750 x 95 x 750	650 x 30 x 650	17.5	25			Remote controller	
MHV-28QCN	60Hz																			
MHV-36QC	50Hz	3.6	12.2	4.0	13.6	0.040	515	303	27-38	/	745 x 375 x 675	653 x 267 x 585	750 x 95 x 750	650 x 30 x 650	17.5	25			Remote controller	
MHV-36QCN	60Hz																			
MHV-45QC	50Hz	4.5	15.3	5.0	17	0.040	515	303	27-38	/	745 x 375 x 675	653 x 267 x 585	750 x 95 x 750	650 x 30 x 650	17.5	25			Remote controller	
MHV-45QCN	60Hz																			

Round-flow Cassette

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling KW	Cooling KBTu/h	Heating KW	Heating KBTu/h		M³/h	CFM			Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm	
MHV-56Q3	50Hz	5.6	19.1	6.3	21.4	0.09	860	500	32-39	/	920 x 265 x 985	833 x 232 x 900	1030 x 105 x 1030	950 x 50 x 950	24	30	Φ12.7	Φ6.5	Remote controller	
MHV-71Q3	50Hz	7.1	24.2	8.0	27.2	0.18	1200	700	35-39						/	920 x 265 x 985	833 x 232 x 900	1030 x 105 x 1030		950 x 50 x 950
MHV-80Q3	50Hz	8.0	27.2	8.8	30					0.18	1400	820	37-41	/					920 x 310 x 985	
MHV-90Q3	60Hz	9.0	30.7	10	34.1	0.27	1800	1050	38-42						/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030		950 x 50 x 950
MHV-100Q3	50Hz	10	34.1	11	37.5					0.27	1800	1050	38-42	/					920 x 310 x 985	
MHV-112Q3	50Hz	11.2	38.2	12.5	42.6	0.27	1800	1050	38-42						/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030		950 x 50 x 950
MHV-125Q3	50Hz	12.5	42.6	14	47.7					0.27	1800	1050	38-42	/					920 x 310 x 985	
MHV-140Q3	50Hz	14	47.7	15	51.1	0.27	1800	1050	38-42						/	920 x 310 x 985	833 x 286 x 900	1030 x 105 x 1030		950 x 50 x 950
MHV-160Q3	60Hz	16	54.5	17	58					0.27	1800	1050	38-42	/					920 x 310 x 985	

Notes:

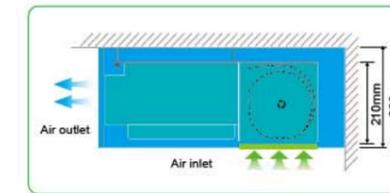
1. Power supply: 220-240V/1N for 50Hz;
2. Cooling test condition: indoor side 27 °C DB, 19°C WB outdoor side 35 °C DB. Heating test condition: indoor side 20 °C DB, 15°C WB outdoor side 7 °C DB
3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.

Short Ceiling Concealed Ducted Unit



✂ Slim body, easy to install

Has slim body with 210mm height, it is specially suitable for low suspended ceiling rooms.



🌀 DC fan motor is optional

Features

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Optional	Standard(built-in)	Optional	Standard	Optional

✂ Short body, easy to install.

Has short body, minimum 700mm width, It is specially suitable for installation location in entrance ceiling of hotel room. Low noise and light Weight.

🚰 Drain pump is optional

Pumping head is 750mm.

🌀 Big air flow low noise centrifugal fan wheel

Big air flow low noise centrifugal fan blade with special air tunnel system, and the unique shock absorption measures, making this series ducted units' running noise is as low as 24 dB(A), let users to enjoy the comfort, sleep without any disturbance.



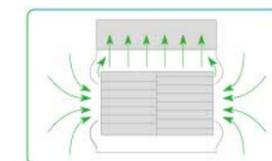
Special resin material fan wheel.



All vanes are dislocation distribution to offset sound wave, so that the noise can be reduced.



High efficiency low noise motor, motor and support frame with rubber ring isolation, can absorb vibration and reduce noise.



Air inlet of fan wheel casing is arch curved design; it can reduce air flow's disturbance, make if flow smoother to reduce noise.

Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller		
		Cooling KW	Heating KW	Cooling Kbtu/h	Heating Kbtu/h		M ³ /h	CFM			Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm			
MHV-22F1C	50Hz	2.2	7.5	2.5	8.5	0.05	450	280	24-29	30	910 x 240 x 510	814 x 210 x 487										
MHV-22F1CN	60Hz																					
MHV-28F1C	50Hz	2.8	9.5	3.2	10.9	0.07	550	324	25-32		910 x 240 x 510	814 x 210 x 487										
MHV-28F1CN	60Hz																					
MHV-38F1C	50Hz	3.6	12.2	4	13.8	0.07	550	324	25-32		910 x 240 x 510	814 x 210 x 487										
MHV-38F1CN	60Hz																					
MHV-45F1C	50Hz	4.5	15.3	5	17	0.08	620	360	32-37		910 x 240 x 510	814 x 210 x 487										
MHV-45F1CN	60Hz																					
MHV-58F1C	50Hz	5.6	19.1	6.3	21.4	0.09	800	520	28-38		1110 x 240 x 510	1010 x 210 x 487										
MHV-58F1CN	60Hz																					
MHV-71F1C	50Hz	7.1	24.2	8	27.2	0.11	1000	640	30-39	1310 x 240 x 510	1214 x 210 x 487											
MHV-71F1CN	60Hz																					

Notes:

1. Power supply: 220-240V/1N for 50Hz;

2. Cooling test condition: indoor side 27 °C DB, 19°C WB outdoor side 35 °C DB, Heating test condition: indoor side 20 °C DB, 15°C WB outdoor side 7 °C DB

3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

4. The above data may be changed without notice for future improvement on quality and performance.

Medium Static Pressure Ducted Unit



Features

Accessories

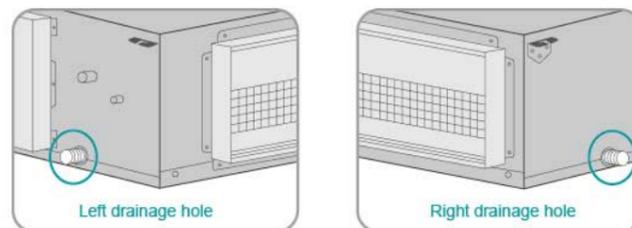
Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Standard	Standard(built-in)	Optional	Standard	Optional

Standard ESP is 70Pa , 30Pa can be customized



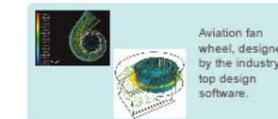
Convenient in drainage pipe install ation

Reserved drainage pipe outlet holes on left side and right side, installer can choose the outlet holes on site as per actual conditions, flexible for drainage pipe installation.



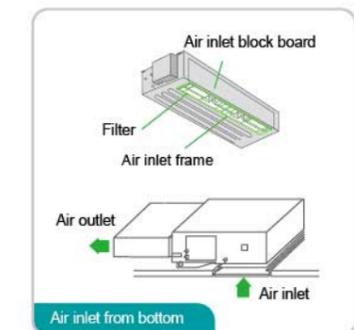
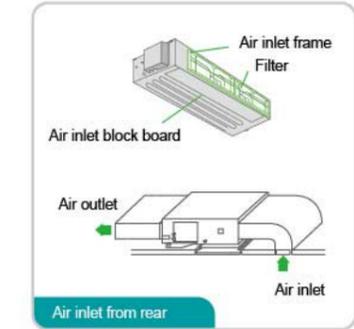
Whole unit low noise design, silent operation

Using multiple noise reduction technology, including the design of high efficiency low noise motor, aviation fan wheel, low vibration wheel casing, unique design, the inner wall configuration with high quality insulation materials, and so on, to make the units running in a low noise condition.



Two air return installation methods

Air return from rear or bottom is easy to change on site, convenient for installation.



DC fan motor is optional

Specification

Model name	Power type	Capacity				Motor input	Air flow	Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller		
		Cooling KW	Heating KW	Cooling KBTu/h	Heating KBTu/h					Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm			
MHV-71F2B	50Hz	7.1	24.2	8.0	27.2	0.30	1220	710	36-41	1255	1209	325	280	720	680	33	37	φ15.9	φ6.53	ODφ25	Wired controller
MHV-71F2BN	60Hz																				
MHV-80F2B	50Hz	8.0	27.2	9.0	30.7	0.34	1850	1080	38-43	1490	1445	325	280	720	680	46	50	φ15.9	φ6.53	ODφ25	Wired controller
MHV-80F2BN	60Hz																				
MHV-90F2B	50Hz	9.0	30.7	10.0	34.1	0.34	2000	1170	40-44	1490	1445	325	280	720	680	46	50	φ15.9	φ6.53	ODφ25	Wired controller
MHV-90F2BN	60Hz																				
MHV-100F2B	50Hz	10.0	34.1	11.0	37.5	0.34	2000	1170	40-44	1490	1445	325	280	720	680	46	50	φ15.9	φ6.53	ODφ25	Wired controller
MHV-100F2BN	60Hz																				
MHV-120F2B	50Hz	12.0	40.9	13.0	44.3	0.34	2000	1170	40-44	1490	1445	325	280	720	680	46	50	φ15.9	φ6.53	ODφ25	Wired controller
MHV-120F2BN	60Hz																				
MHV-150F2B	50Hz	15.0	51.1	17.0	58	0.34	2000	1170	40-44	1490	1445	325	280	720	680	46	50	φ15.9	φ6.53	ODφ25	Wired controller
MHV-150F2BN	60Hz																				

Notes:

- Power supply: 220-240V/1N for 50Hz; 208-230V/1N for 60Hz
- Cooling test condition: indoor side 27 °C DB, 19°C WB outdoor side 35 °C DB. Heating test condition: indoor side 20 °C DB, 15°C WB outdoor side 7 °C DB
- Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
- The above data may be changed without notice for future improvement on quality and performance.

High Static Pressure Ducted Unit



Features

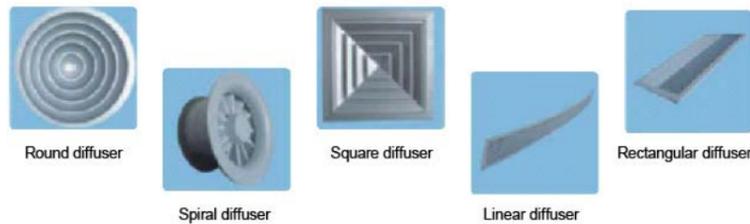
Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Standard	Standard(built-in)	Optional	Standard	/

Slim body, saving suspended ceiling spaces



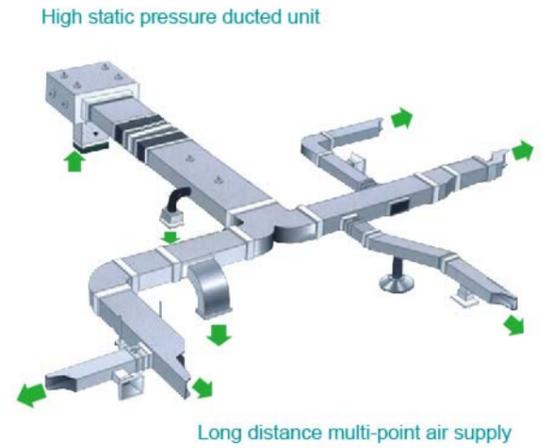
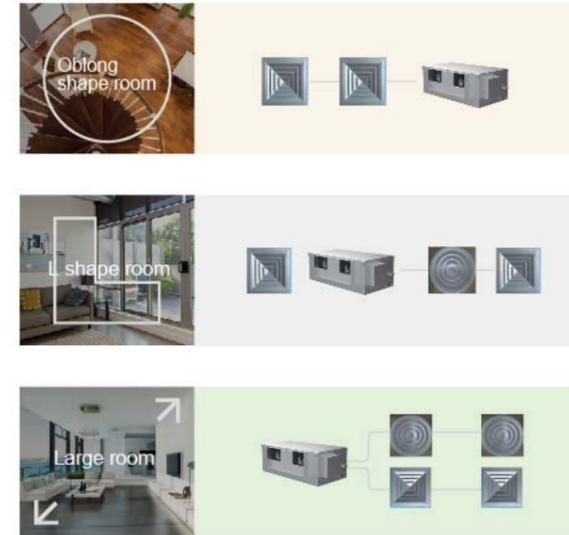
Can be used with various diffusers



Used with various diffusers, meet for different kinds of decoration.

High static pressure

Big air flow with high static pressure, easy for large rooms duct design. Suitable for different shape of rooms.



Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight			Connecting pipe			Standard controller
		Cooling	Heating	Cooling	Heating		M ³ /h	CFM			Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain		
		KW	KBtu/h	KW	KBtu/h	KW	M ³ /h	CFM	DB(A)	Pa	mm	mm	mm	mm	kg	kg	mm	mm	mm		
MHV-71F3B	50Hz	7.1	24.2	7.8	26.6									46	50						
MHV-71F3NB	60Hz													46	50						
MHV-80F3B	50Hz	8.0	27.2	8.8	30	0.34	1500	880	40-42		1490 x 325 x 720	1445 x 280 x 680		46	50						
MHV-80F3NB	60Hz													46	50						
MHV-90F3B	50Hz	9.0	30.7	10.0	34.1									46	50		φ15.0	φ6.53	ODφ25		
MHV-90F3NB	60Hz													46	50						
MHV-100F3B	50Hz	10.0	34.1	11.0	37.5									47	51						
MHV-100F3NB	60Hz													47	51						
MHV-120F3B	50Hz	12.0	40.9	13.0	44.3	0.45	2300	1350	44-52		1245 x 445 x 655	1190 x 370 x 620		47	51						
MHV-120F3NB	60Hz									150				47	51						
MHV-150F3B	50Hz	15.0	51.1	17.0	58.0									47	51						
MHV-150F3NB	60Hz													47	51						
MHV-200F3B	50Hz	20.0	68.2	22.0	75.0	1.2	4000	2350	45-53					102	113						
MHV-200F3NB	60Hz													102	113						
MHV-250F3B	50Hz	25.0	85.3	27.5	93.8	1.2	4200	2470	45-54		1510 x 580 x 870	1465 x 448 x 811		102	113	φ22.2	φ12.7	ODφ30			
MHV-250F3NB	60Hz													102	113						
MHV-280F3B	50Hz	28.0	95.5	30.8	105.0	1.2	4400	2580	45-55					102	113						
MHV-280F3NB	60Hz													102	113						
MHV-450F3SA	50Hz	45.0	153.5	50.0	170.6	1.6	6000	3520	60		2267 x 840 x 1050	2165 x 676 x 916		222	260		φ28.6	φ15.9	ODφ32		
MHV-450F3NA	60Hz													222	260						
MHV-560F3SA	50Hz	56.0	191.0	63.0	214.9	2.5	8000	4700	64	200				222	260						
MHV-560F3NA	60Hz													222	260						

Notes:

1. Power supply: 220-240V/1N for 50Hz;
2. Cooling test condition: indoor side 27 °C DB, 19°C WB outdoor side 35 °C DB. Heating test condition: indoor side 20 °C DB, 15°C WB outdoor side 7 °C DB
3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.

Wall Mounted Unit



Features

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard(built-in)	/	/	Standard

Air supply smoothly

Cross flow fan, In Cooling mode, cold air is blown from horizontal. In heating mode, warm air is blown from vertical.

Flexible in installation

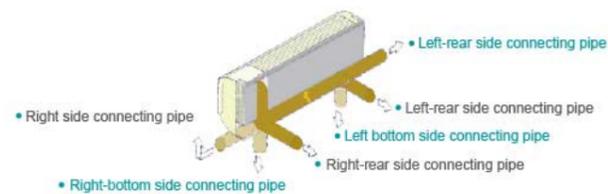
Refrigerant pipe can be connected from 3 directions.

6 panels can be chosen, suitable for all kinds of decoration style

Simple, elegant, stylish, mirror design, suitable for all kinds of decoration style.

Wide adjustable angle air supply

65° Wide angle air supply, louver angle can be fixed or set to auto-swing by controller.



Specification

Model	MHV-22GB	MHV-28GB	MHV-36GB	MHV-45GB	MHV-56GB	MHV-71GB	MHV-80GB
Power Supply	220-240V/1N/50Hz	220-240V/1N/50Hz	220-240V/1N/50Hz	220-240V/1N/50Hz	220-240V/1N/50Hz	220-240V/1N/50Hz	220-240V/1N/50Hz
Capacity	Cooling	2.2	2.8	3.6	4.5	5.6	7.1
	Heating	2.5	3.2	4.0	5.0	6.3	8.0
Power input	W	15	15	20	20	30	60
Fan motor	Type	DC	DC	DC	DC	DC	DC
	Speed (Hi/Med/Low)	r/min	950/850/800	950/850/800	900/800/750	900/800/750	1100/950/850
Air flow	m ³ /h	410/350/330	410/350/330	640/540/520	640/540/520	800/690/600	990/850/700
Sound Pressure level	dB(A)	24~33	24~33	27~36	29~38	32~42	35~43
Body dimension (WxHxD)	#170	mm	782x277x215	782x277x215	948x314x243	948x314x243	1050x314x246
	#166	mm	782x277x205	782x277x205	948x314x239	948x314x239	1050x314x239
	#165	mm	782x277x210	782x277x210	948x314x239	948x314x239	1050x314x242
	Packing	mm	870x365x280	870x365x280	1045x400x330	1045x400x330	1150x400x330
Body weight	Net/Gross weight	kg	8.5/10	8.5/10	13/15	13/15	13/15
Refrigerant type			R410A	R410A	R410A	R410A	R410A
Throttle type			EXV	EXV	EXV	EXV	EXV
Liquid pipe/Gas pipe	mm	φ6.35/φ9.53	φ6.35/φ9.53	φ6.35/φ12.7	φ6.35/φ12.7	φ6.35/φ12.7	φ9.52/φ15.9
Drainage water pipe (Outer diameter)	mm	φ20	φ20	φ20	φ20	φ20	φ20
Operation temperature	°C	16~32	16~32	16~32	16~32	16~32	16~32

Notes:
 1. Power supply: 220-240V/1N for 50Hz; 208-230V/1N for 60Hz
 2. Cooling test condition: indoor side 27 °C DB, 19°C WB outdoor side 35 °C DB. Heating test condition: indoor side 20 °C DB, 15°C WB outdoor side 7 °C DB
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 4. The above data may be changed without notice for future improvement on quality and performance.

Wall Mounted Unit



Floor Ceiling Unit



Features

Accessories

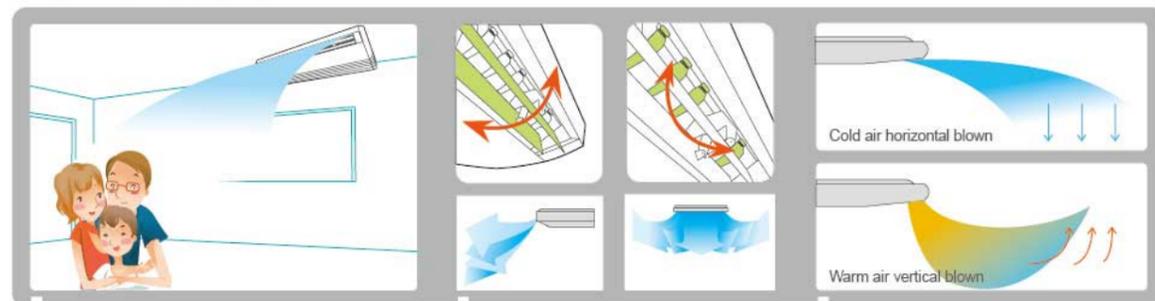
Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard(built-in)	Optional	Standard	/

Suspended installation, saves valuable floor space

- The use of ark effect: need to take up valuable floor position.
- The use of a hanging type indoor machine effect: Due to the adoption of a suspended installation, without occupying the ground position, will be valuable floor space to save up to add a set of dining table.



Wide angle air supply

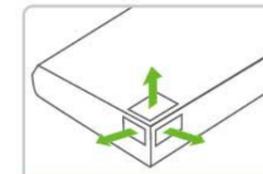


Configured with low noise high performance centrifugal fans, has big air flow and long distance air supply.

3 dimensional air supply, wide air supply angle, easily supply to every corners.

In Cooling mode, cold air is blown from horizontal. In heating mode, warm air is blown from vertical.

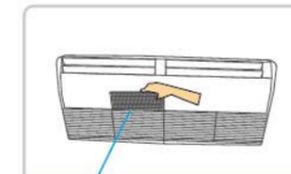
Easy for installation



Refrigerant pipe can be connected from 3 directions.



Electrical control box is in the rear of fan wheel casing, easy to remove, convenient for maintenance.



Long term filter can be removed from air inlet grille to clean



Water washable

Air inlet grille



Floor Ceiling Unit

Specification

Model name	Power type	Capacity				Motor input	Air flow	Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller	
		Cooling	Heating	Cooling	Heating					Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain		
		KW	KBtu/h	KW	KBtu/h	KW	M ³ /h	CFM	DB(A)	Pa	mm	mm	mm	mm	kg	kg	mm	mm	mm	
MHV-V45LDB	50Hz	4.5	15.3	6.0	17				37-46					36	42					
MHV-V45LDBN	60Hz					0.06	950	550									φ12.7	φ6.35	ODφ20	
MHV-V56LDB	50Hz	5.8	19.1	8.3	21.4				37-46					36	42					
MHV-V56LDBN	60Hz																			
MHV-V71LDB	50Hz	7.1	24.2	8.0	27.2				39-48		1325	1245		36	42					
MHV-V71LDBN	60Hz					0.15	1300	760			770	680								
MHV-V80LDB	50Hz	8.0	27.2	8.8	30				39-48		330	240		36	42					
MHV-V80LDBN	60Hz																			
MHV-V90LDB	50Hz	9.0	30.7	10.0	34.1	0.375	1500	880	44-50					38	44					
MHV-V90LDBN	60Hz																			
MHV-V112LDBN	50Hz	11.2	38.2	12.5	42.8				45-52					51	58					
MHV-V112LDBN	60Hz					0.26	2300	1350			1750	1670								
MHV-V140LDBN	50Hz	14.0	47.7	15	51.1				45-52		770	680		51	58					
MHV-V140LDBN	60Hz										330	240								
MHV-V160LDBN	50Hz	16.0	54.5	17	58	0.26	2300	1350	45-52					51	58					
MHV-V160LDBN	60Hz																			

Notes:

1.Power supply: 220-240V/1N for 50Hz;208-230V/1N for 60Hz

2.Cooling test condition: indoor side 27 °C DB,19°C WB outdoor side 35 °C DB.Heating test condition: indoor side 20 °C DB, 15°C WB outdoor side 7 °C DB

3.Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

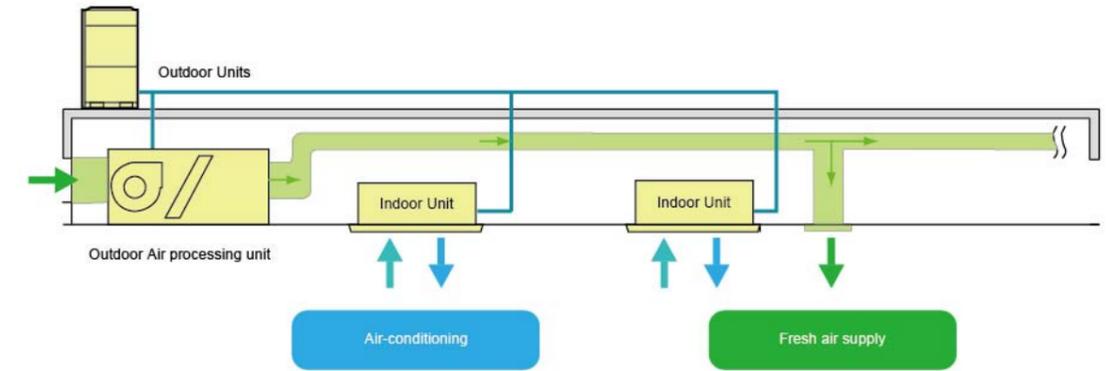
4.The above data may be changed without notice for future improvement on quality and performance.

Fresh Air Processor



Innovative air supply technology for excellent room temperature control

Fresh air unit can be connected with other type indoor units(only for 14/22.4/28kw fresh air unit).
Layout Example:



Notes:1. When VRF system connect fresh air indoor unit and other type indoor units together, the capacity combination ratio between indoor unit and outdoor unit should within 100%
2. Fresh air unit capacity can't bigger than 30% of total indoor units capacity.

Features

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Optional	Standard(built-in)	Optional	Standard	/

Healthy and comfortable

Fresh air is imported, provides a healthy and comfortable living environment.

100% Fresh air processing unit

Both fresh air filtration and heating/cooling can be achieved in a single system.
Indoor units and fresh air processing unit can be connected to the same refrigerant system, increase design flexibility and greatly reduce total system costs.

High external static pressure

External static pressure can be up to 300Pa for more flexible duct applications. The maximum distance of air supply is about 20m and the maximum height of air supply is about 6.5m.

Specification

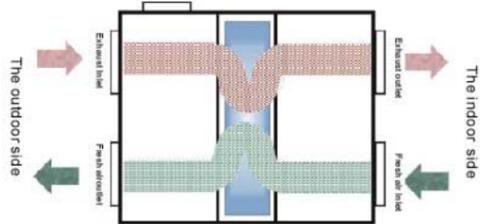
Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling KW	KBtu/h	Heating KW	KBtu/h		M ³ /h	CFM			Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm	
MHV-140XFB	50Hz	14.0	47.7	0.0	30.7	0.45	1400	820	42~48	220	1245	1190			47	51	Φ15.9	Φ6.53		
MHV-140XFNB	60Hz										445	370								
MHV-224XFB	50Hz	22.4	76.4	16.0	54.5	1.2	2000	1170	45~52	220	1510	1465			100	111			ODΦ25	
MHV-224XFNB	60Hz										580	448								
MHV-280XFB	50Hz	28.0	95.5	20.0	68.2	1.2	2800	1640	45~52	220	1510	1465			100	111	Φ22.2	Φ12.7		
MHV-280XFNB	60Hz										580	448								
MHV-450F3SA	50Hz	45.0	153.5	31.4	107.1	1.6	4000	3520	58	300	2267	2165			222	260				
MHV-450XFNA	60Hz										840	676								
MHV-600F3SA	50Hz	56.0	191.0	39.0	133.0	2.5	6000	4700	62	300	2267	2165			222	260	Φ28.6	Φ15.9	ODΦ32	
MHV-600XFNA	60Hz										840	676								

Notes:1.45kW & 56kW units' power supply are 380~415V/3N for 50Hz and 208~230V/3N for 60Hz, the others' power supply is 220~240V/1N for 50Hz and 208~230V/1N for 60Hz
2.Cooling test condition: Indoor and outdoor side 33℃ DB, 28℃ WB.Heating test condition: Indoor and outdoor side 0℃CB, -2.9℃ WB
3.Sound level: measured at a point 1 min front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4.The above data may be changed without notice for future improvement on quality and performance.

Heat Recovery Ventilator



Features



When air flow formed by exhaust air and outdoor air through the heat exchanged core in cross way, because of temperature difference in the two sides of flat partition board, the heat transmission is occurred.

In summer, outdoor air acquire cooling from air exhaust to decrease environment temperature; In winter, outdoor air acquire heating from air exhaust to increase temperature, that is to say, it realizing the energy recovery during air exhaust process to exchange the heating in heat exchanged core to outdoor air.

Application for: business office buildings, hotels, restaurants, meeting rooms, exhibition centres, leisure centres, workshop and other places.



Specification

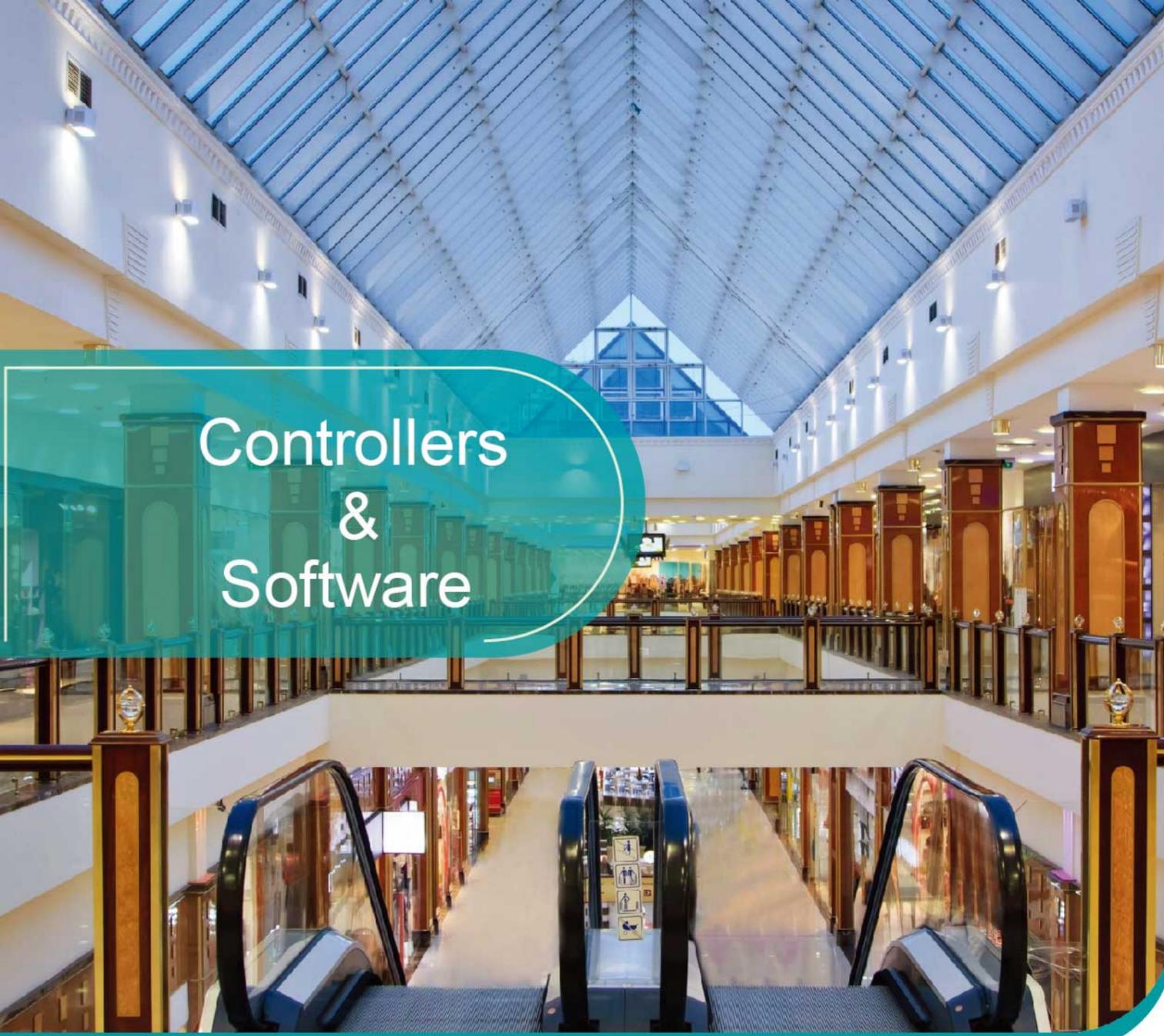
Suspended type specification

Model name	Air flow M ³ /h	ESP Pa	Power input W	Power supply (V)	Temperature exchanging efficiency(%)		Enthalpy exchanging efficiency(%)		Noise dB(A)	Body dimension (WxDxH) mm	Weight kg
					Cooling	Heating	Cooling	Heating			
QR-X02D	200	75	65	220V/1N/50Hz	80.0	65.0	50.0	55.0	30	666x580x264	25
QR-X03D	300	75	130		80.0	65.0	50.0	55.0	33	744x569x270	27
QR-X04D	400	80	200		80.0	65.0	50.0	55.0	35	744x804x270	30
QR-X05D	500	80	220		80.0	65.0	50.0	55.0	38	824x904x270	41
QR-X06D	600	90	242		80.0	65.0	50.0	55.0	40	824x904x270	42
QR-X08D	800	100	410		80.0	65.0	50.0	55.0	42	1116x884x388	68
QR-X10D	1000	150	510		80.0	65.0	50.0	55.0	43	1116x1134x388	82
QR-X13D	1300	150	530	80.0	65.0	50.0	55.0	45	1116x1134x388	82	
QR-X15DS	1500	160	1000	380V/3N/50Hz	80.0	65.0	50.0	55.0	51	1600x1200x540	200
QR-X20DS	2000	170	1200		80.0	65.0	50.0	55.0	53	1650x1400x540	225
QR-X25DS	2500	180	2000		80.0	65.0	50.0	55.0	55	1430x1610x600	240
QR-X30DS	3000	200	2100		80.0	65.0	50.0	55.0	57	1600x1700x640	270
QR-X40DS	4000	220	2400		80.0	65.0	50.0	55.0	60	1330x1725x1050	265
QR-X50DS	5000	240	3000		80.0	65.0	50.0	55.0	61	1660x1820x1050	280
QR-X60WS	6000	290	3600		80.0	65.0	50.0	55.0	70	1660x1820x1050	310
QR-X70WS	7000	310	4200		80.0	65.0	50.0	55.0	73	2060x1660x1168	360
QR-X80WS	8000	320	6000		80.0	65.0	50.0	55.0	74	2060x1660x1168	362
QR-X90WS	9000	340	7500		80.0	65.0	50.0	55.0	77	2310x1900x1200	500
QR-X100WS	10000	400	8000	80.0	65.0	50.0	55.0	78	2310x1900x1200	534	

Notes: 1.Cooling test condition: indoor side 27 °C DB, 19.5 WB ; outdoor fresh air 35 °C DB, 28°C ;
2.Heating test condition: indoor side 21 °C DB, 13, WB outdoor fresh air 5 °C DB, 2°C ;
3.The above data may be changed without notice for future improvement on quality and performance.

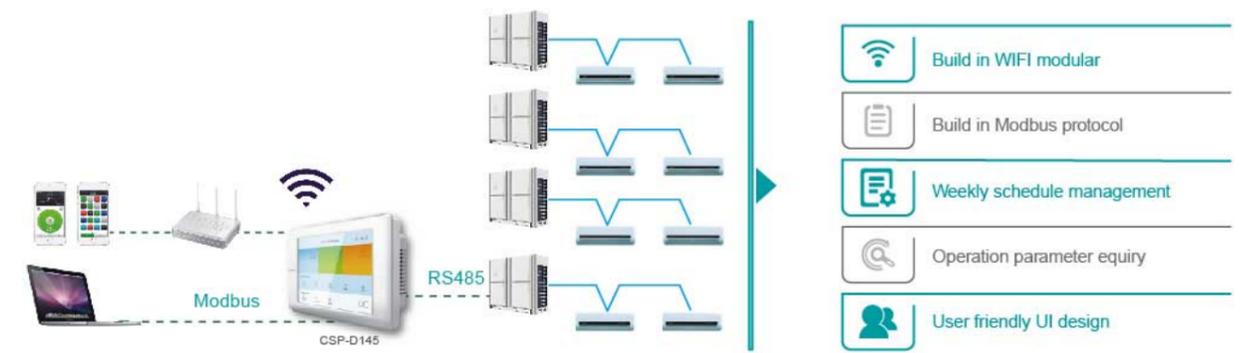
Heat Recovery Ventilator





Controllers & Software

Touch Screen Centralized Controller



MHV-NET (Centralized Control System)



Wireless remote controllers



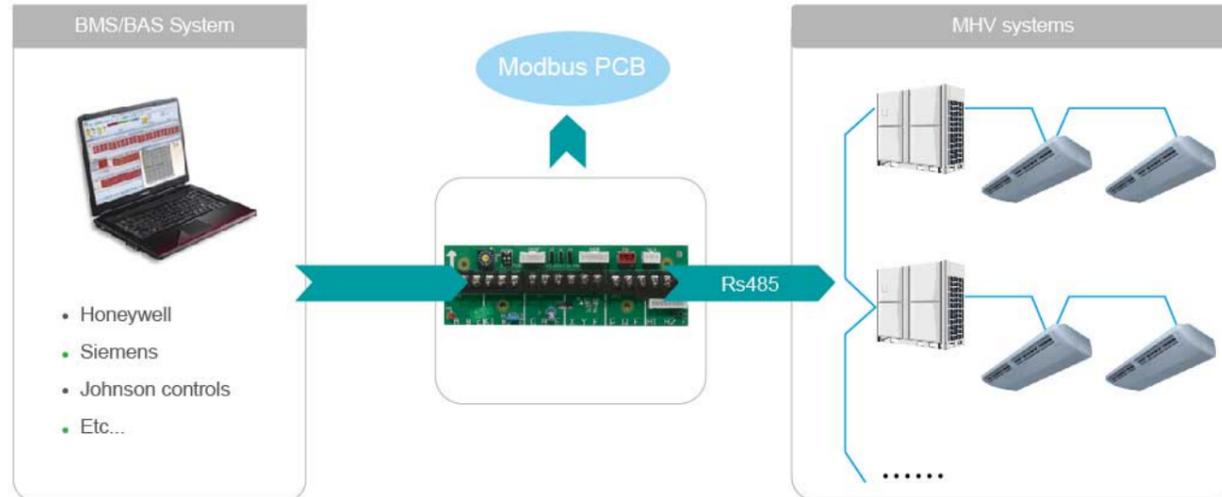
BMS Gateway

Modbus gateway

Outdoor unit built in with Modbus gateway can be customized

BACnet gateway

Verified by BACnet International, fully compatible with all BACnet protocol product



AHU Connection Kit

- Mammoth AHU connection kit is an interface to allow 3rd party manufacturer's AHU connecting to Mammoth VRF outdoor units.
- 4 basic modules: 5HP/10HP/20HP/30HP
- Can be combined into bigger capacity.

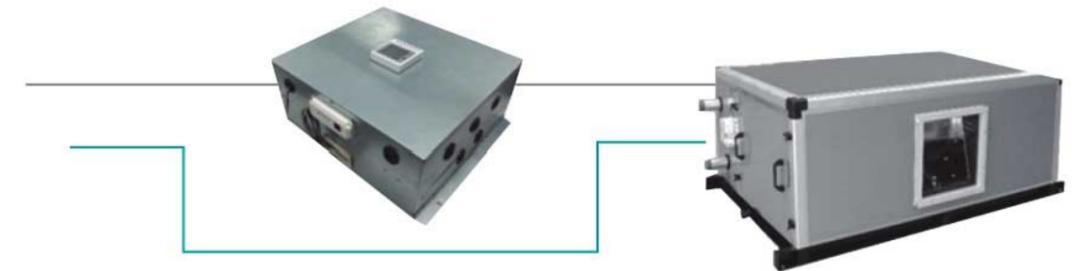


MHV outdoor unit

AHU kit

DX type AHU

Other supplier's indoor units



Doctor Kit Pro



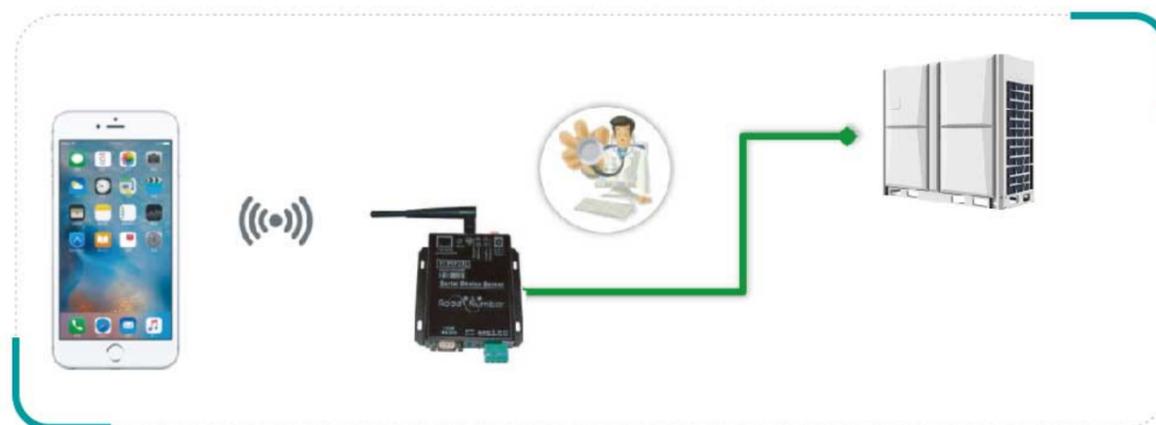
Fast to install, easy to use



All indoor/outdoor units data can be required



Indoor unit can be long distance remote controlled and diagnosed



VRF Selection Software Pro

