



DC INVERTER VRF SYSTEM
Product Catalogue



GIWEE | GCHV
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Guangdong Chigo Heating & Ventilation Equipment Co.,Ltd.

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About GIWEE | GCHV

Established in 2011, Guangdong Chigo Heating & Ventilation Equipment Co., Ltd. (GCHV) is a professional central air conditioning equipment manufacture and supply enterprise integrating R&D, testing, manufacturing, marketing, project design, sales and after sales service. GCHV covers an area of 167,000 square meters, with more than 120,000 square meters of plants and 14 modern first class production lines.

GCHV's annual output of central air conditioners exceeds 2 million sets, which including VRF, modular chiller, light commercial air conditioners, air source heat pumps and other products. GCHV's products are in great demand on 100 countries and regions and has accomplished thousands of reference projects worldwide, which enabled it become the top 3 central air conditioner supplier in china.

In 2020, Guangdong Giwee Group Co., Ltd. Established, Guangdong Giwee Technology Co., Ltd and Guangdong Chigo Heating & Ventilation Equipment Co., Ltd are its subsidiaries.

Chigo commercial air conditioning division established

2004

Honored of "National high-tech enterprises"

2012

Full DC inverter VRF CMV-X series launched

2014

Mechanical and Electrical Installation Level 2 Qualification

2017

GCHV starts operating independently from Chigo Holding

2019

2002

Chigo enter central air conditioning industry

2011

Guangdong Chigo Heating & Ventilation Equipment Co., Ltd. Established

2013

New R&D office building and VRF plant put into operation

2015

Honored of "Provincial engineering research and development center"

2018

2018 Russia World Cup HVAC Supplier Test center certificated by CNAS

2020

Giwee Group established Guangdong Giwee Technology Co., Ltd. established



Production Capacity

GCHV has 14 advanced production lines and an annual production capacity of over 1.5 million sets.

Introduce lean production management, improve production efficiency. By the use of various robots, AGV system and other equipment, improving the online, offline process, optimizing the logistics distribution technology, improving product quality and production efficiency. Adopts MES(Manufacturing Execution System) system, it helps a lot in tracking production schedule, inventory status, work schedule and other operations management to improve. Product quality and productivity.

Robotic
Assembly Arm



Automatic
Packing Robot



AGV System



MES System



Quality Superiority



GCHV has established a strict and scientific quality management system with supplier quality assurance, incoming quality control, process quality control and final quality control to ensure the highest quality of the products.

The industry-leading testing center has been certified by CNAS in 2018, With a full range of professional incoming inspection labs, enthalpy difference labs, EMC labs, 27 national accredited labs for testing and verification.

Certification

ISO9001 quality management system, ISO14001 environmental management system, OHSAS18001 occupational health and safety management system, QC080000 electronic and electrical components and products harmful substances process management system certification

Main product certified by CCC, energy-saving certification, ETL, AHRI, DOE, CE, CB, SASO, ESMA, MEW and others.





Enthalpy Difference Lab



Laboratory Control Room

R&D Strength



200kg Transport Simulation Platform



Professional Engineers



EMC Lab



Noise Test Lab



200HP Long-term Running Lab



Modular Chiller Test Lab



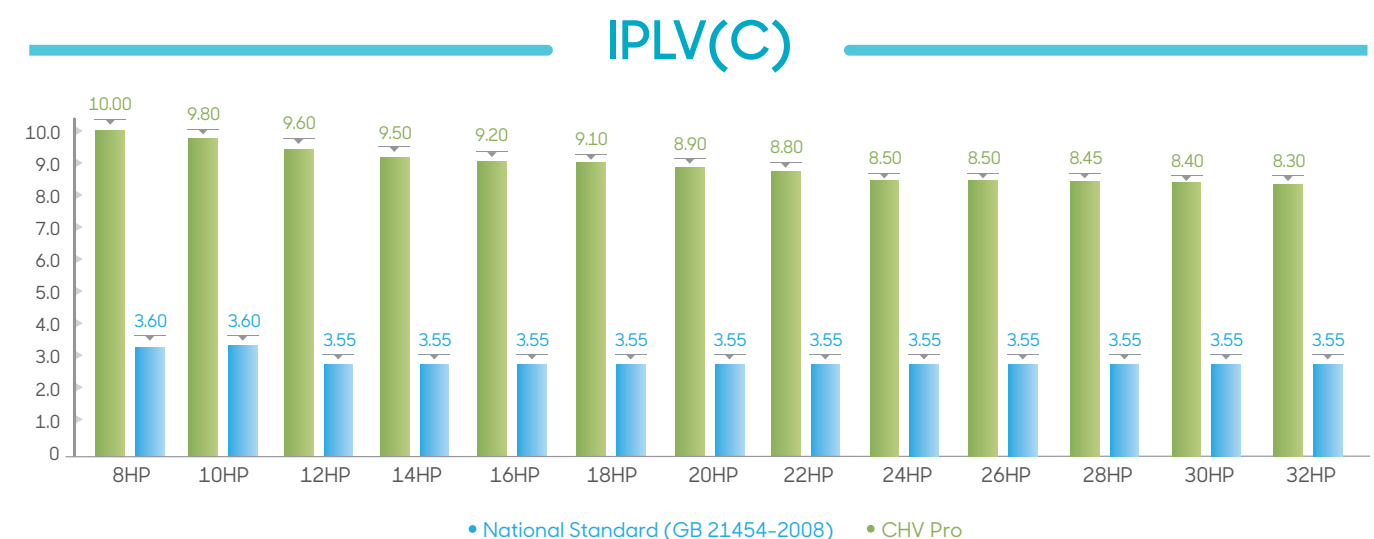
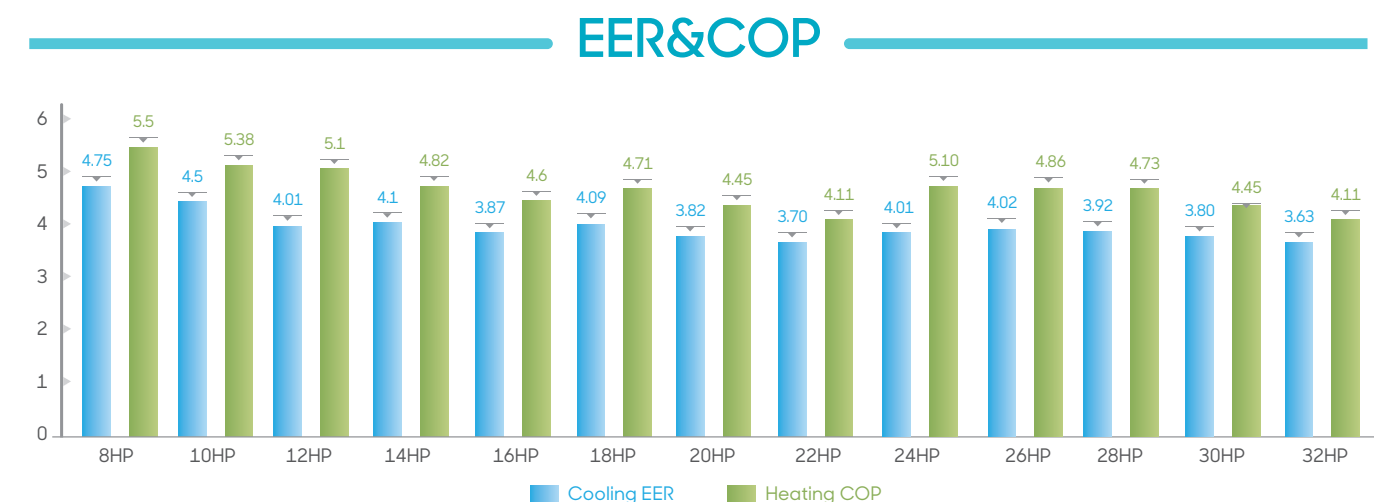
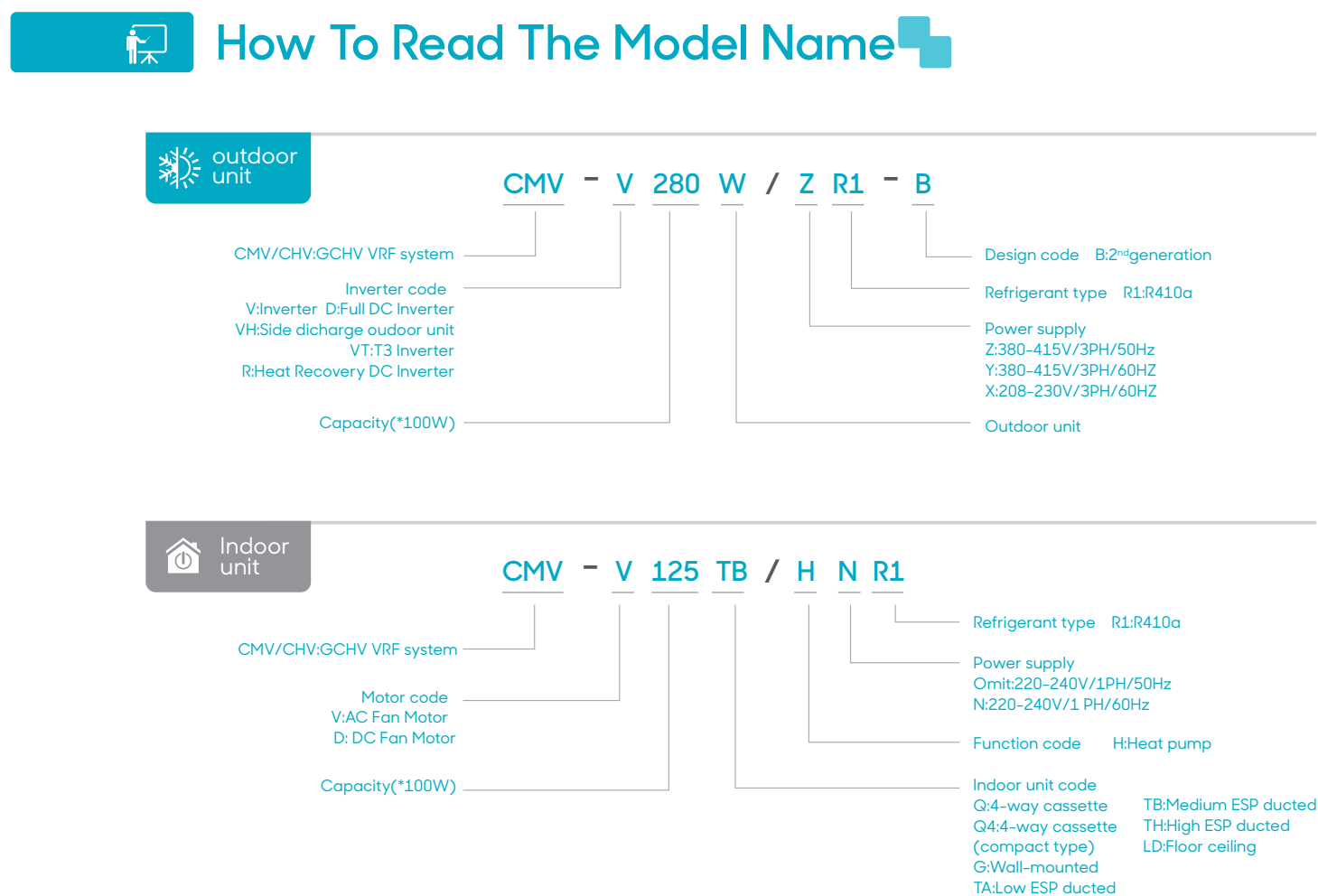
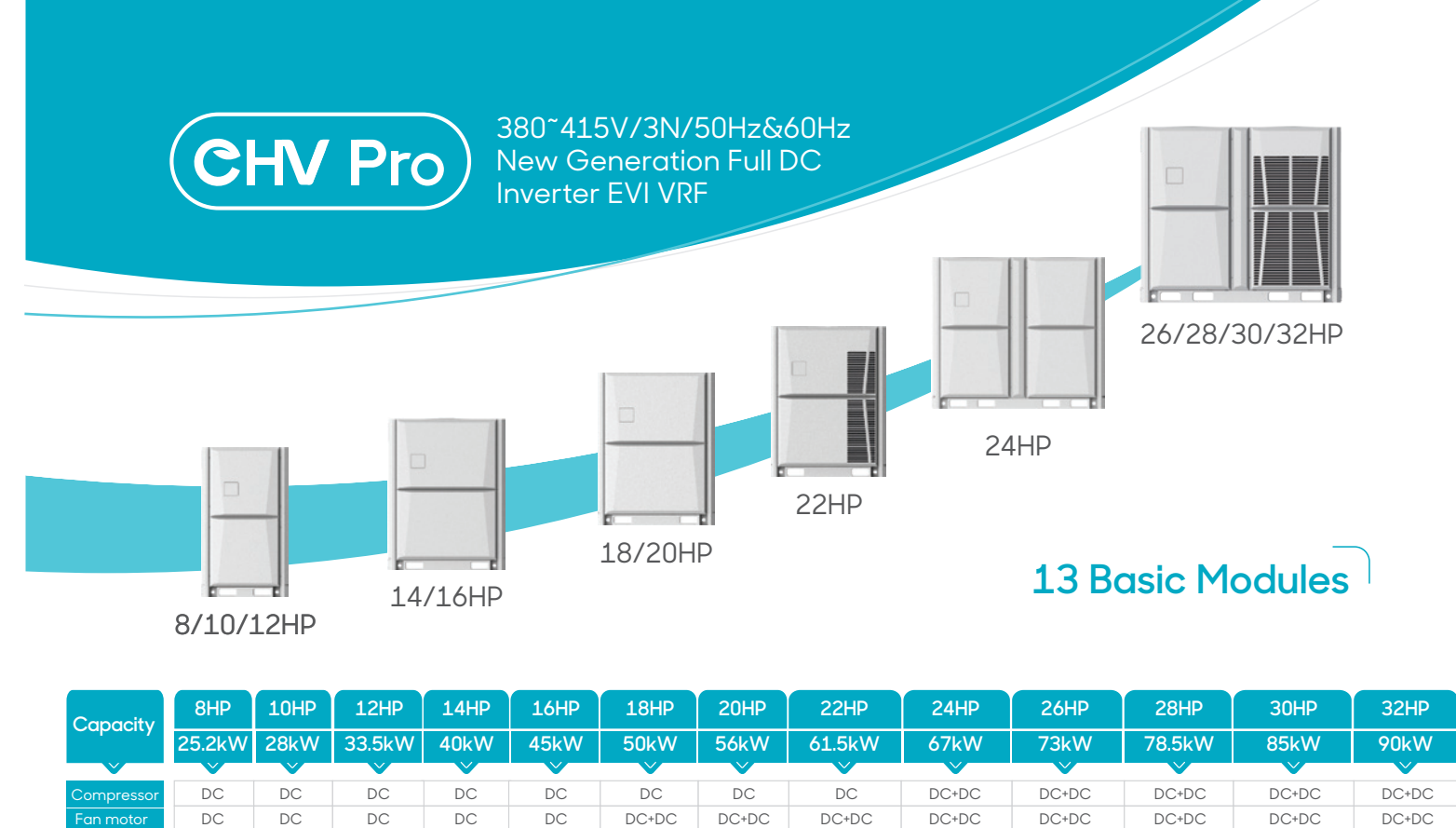
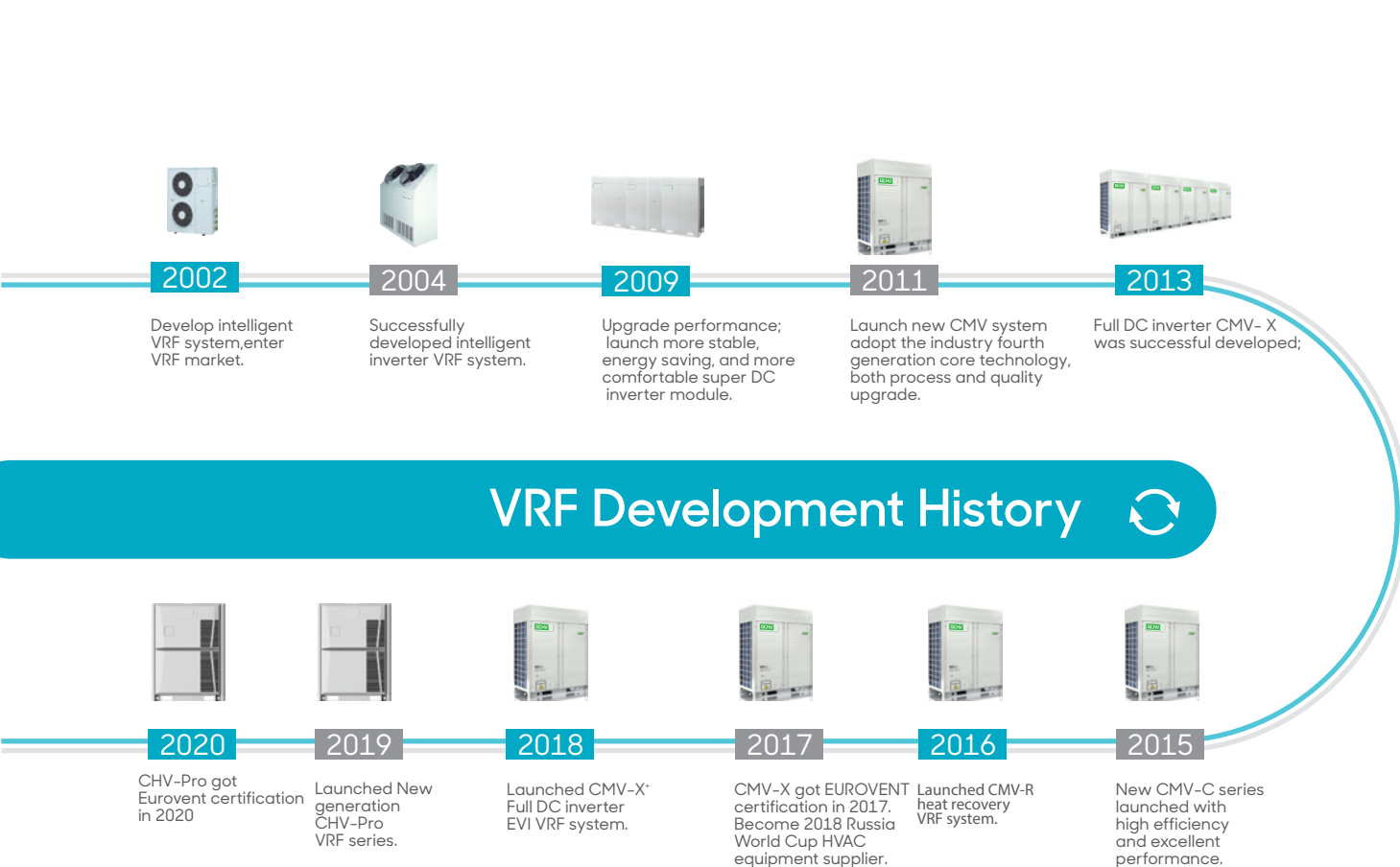
Electromagnetic Vibration Lab

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The R&D center of GCHV has more than 200 technical engineers. And carry out technology collaboration and joint research with postdoctoral research workstations and Guangdong enterprise workstations, at the same time, introducing senior technical experts from Japan to join GCHV and served as senior technical consultants, GCHV pay great attention in R&D and invest 4.5% of annual income every year to develop new technology, by continuous innovation, GCHV has established a solid development foundation and strength in performance, structure, electronic control, industrial design and other professional aspects.

The test center covers an area of more than 6,000 square meters. It has a series of industry-leading professional laboratories. In 2010, it passed the consistency check of the National Energy Efficiency Label Management Center and obtained certificate, in 2018, the test center obtained CNAS national certification.



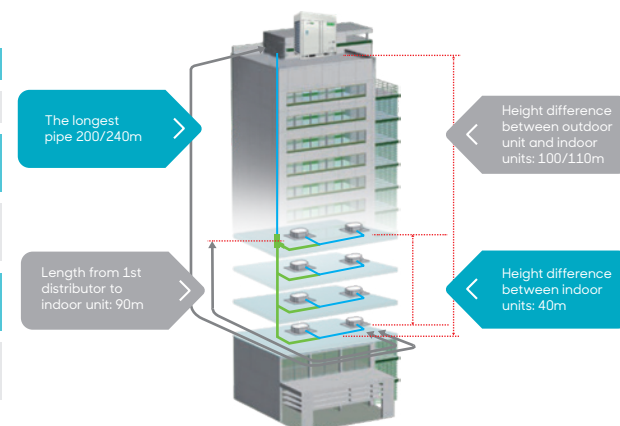
Combination Table

HP	Cooling Cap.(kW)	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP
8	25.2	●												
10	28		●											
12	33.5			●										
14	40				●									
16	45					●								
18	50						●							
20	56							●						
22	61.5								●					
24	67									●				
26	73										●			
28	78.5											●		
30	85												●	
32	90													●
34	95					●	●							
36	100						●	●						
38	106.5					●			●					
40	111.5						●			●				
42	117.5							●			●			
44	123								●			●		
46	128.5									●			●	
48	134										●			●
50	140											●		
52	145.5												●	
54	152													●
56	157													
58	163						●	●						
60	168.5					●			●					
62	175						●			●				
64	180							●			●			
66	184.5								●			●		
68	190									●			●	
70	195.5										●			●
72	201.5											●		
74	207						●						●	
76	212.5									●				●
78	218.5										●			
80	224											●		
82	230										●			
84	235.5											●		
86	242												●	
88	247													●
90	253													●
92	258.5													●
94	265													●
96	270													●

*Note:Max.4 outdoor units can be freely combined to become a larger unit,the maximum capacity of single system is 96HP, when 4 outdoor units are combined,the single unit capacity can not exceed 24HP.

Long Piping & Height Difference

The total pipe length	1000 m
The longest pipe length	200 /240m
Height difference	Outdoor unit above <100m Outdoor unit below <110m
Height difference between indoor units	40m
Length from first indoor distributor to last indoor unit	90 m
Communication wire length	can be up to 1000m.

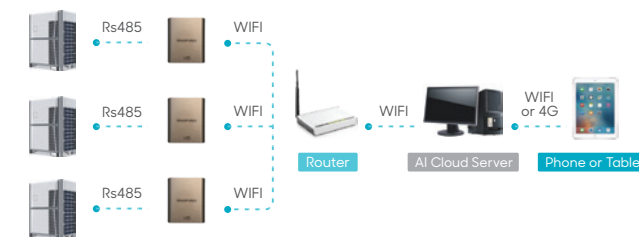


Features



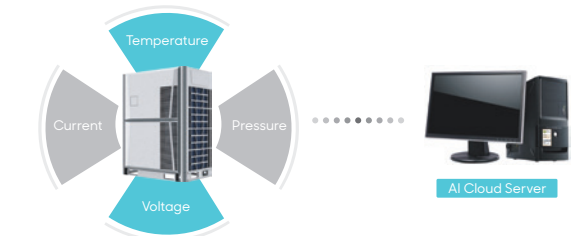
Long Distance Remote Control

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.



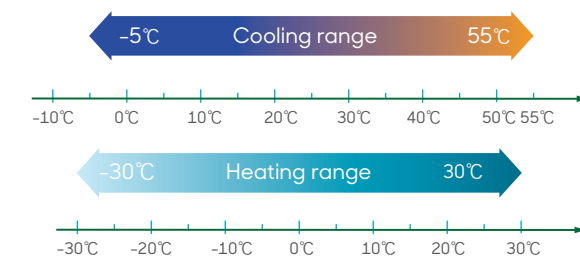
Refrigerant Cooling Design

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.



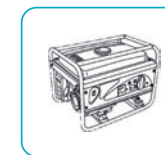
Wide Outdoor Operation Range

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



Power Saving Mode

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



40% ~ 100%



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)

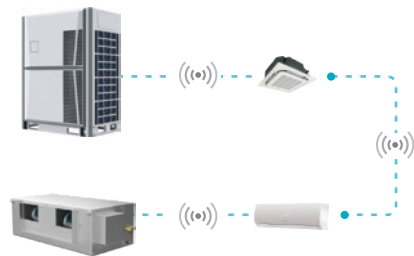


In case of end user doesn't pay as contract, electrical lock function can be used to stop VRF system, and end user can not start the system without permission.

System can be unlock with password by authorized technician.

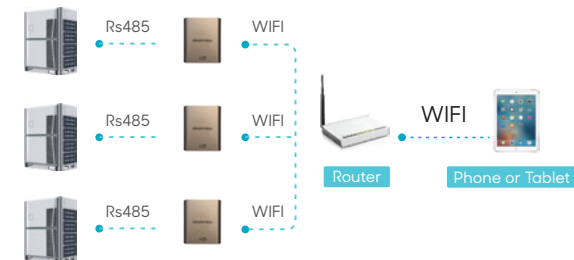
📶 Wireless Communication(optional)

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



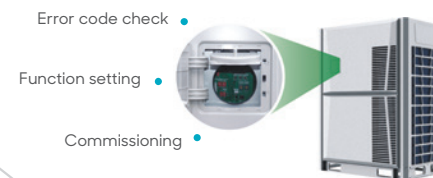
🩺 On Site Diagnosis

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



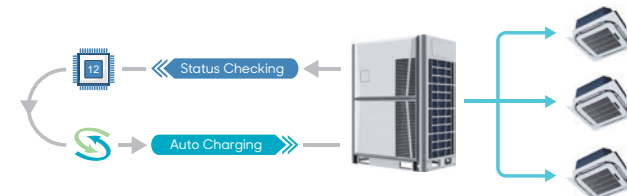
👉 Service Window On Front Cover

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)

CHV 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 96HP



Max.4 outdoor units can be freely combined to become a larger unit.the maximum capacity of single system is 96HP.

*:when 4 outdoor units are combined,the single unit capacity can not exceed 24HP.

1 High Efficiency

2 Benefits For Users

3 Benefits For Installers

Advantages

Provide You With Fresh Air

1

High Efficiency

Low carbon life advocate

GCHV 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

Cross Flow Fins

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

DC Inverter Compressors

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

Supercooling Design

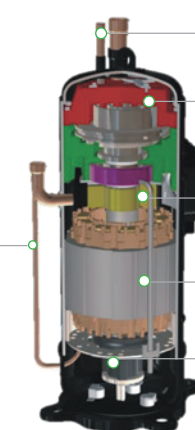
- Reduce air resistance
- Frosting improved



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

Oil balance design, pump extra oil to other compressor.



Vapor injection pipe, better performance in low temperature.

Vapor injection pipe, better performance in low temperature.

High strength bearing, high rigidity shell.

Wide frequency range.

Build in oil pump, active oil supply when compressor is running.

• Has large refrigerant discharge buffer volume, Low vibration and noise

Neodymium permanent magnet rotor

Powerful magnetic force, large force moment and high efficiency.



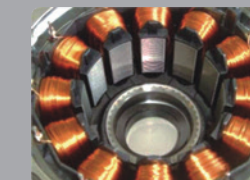
Ferrite magnet



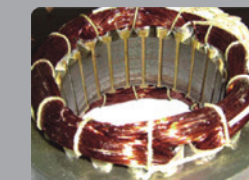
Neodymium permanent magnet

Concentrated winding

Magnetic efficiency is 12% higher than distributed winding



Concentrated winding



Distributed winding

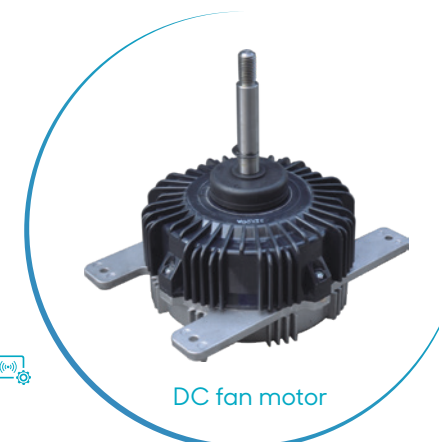


High Efficiency DC Motor

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.

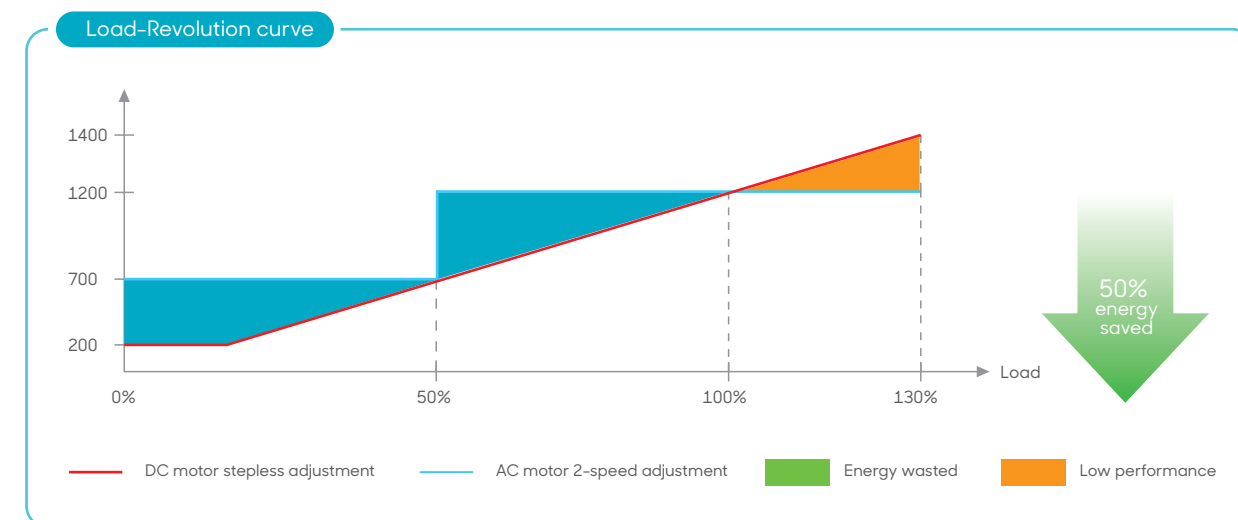


DC fan motor



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.



180°

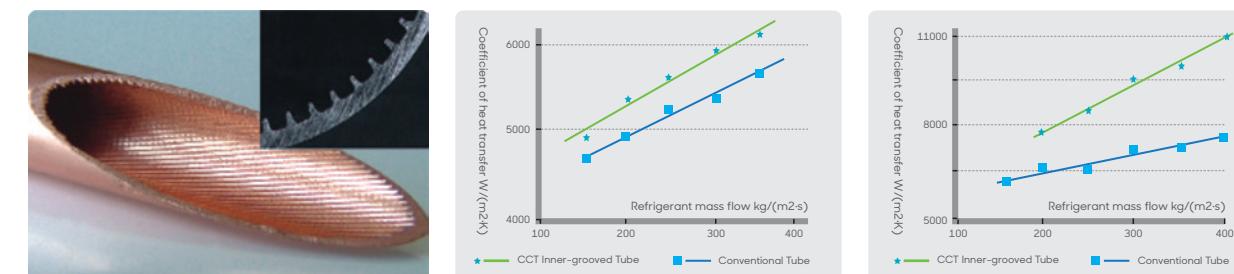
180° Sine Waveform Control

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%.

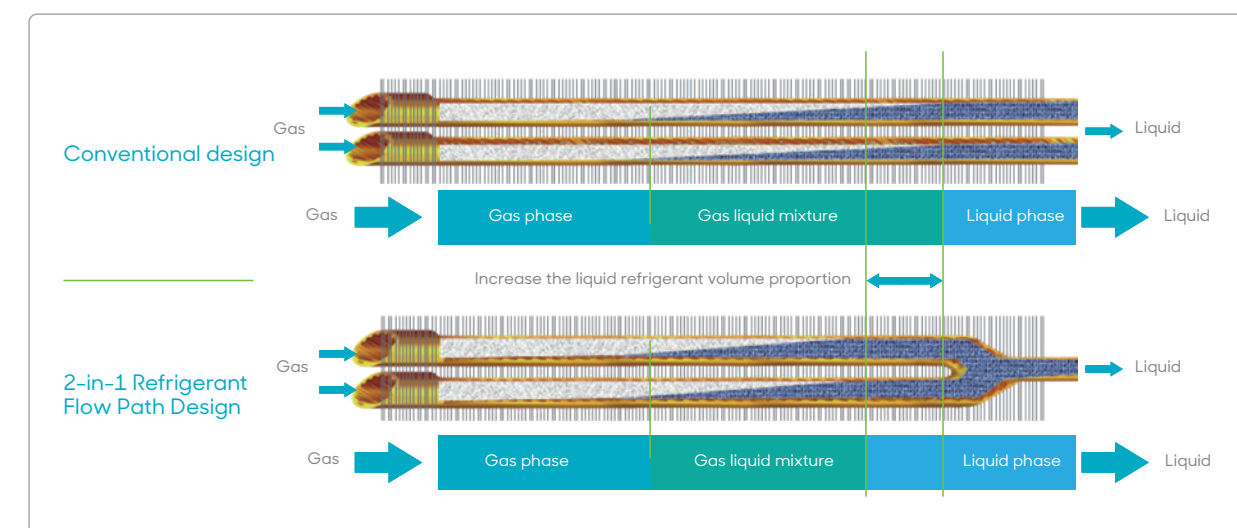
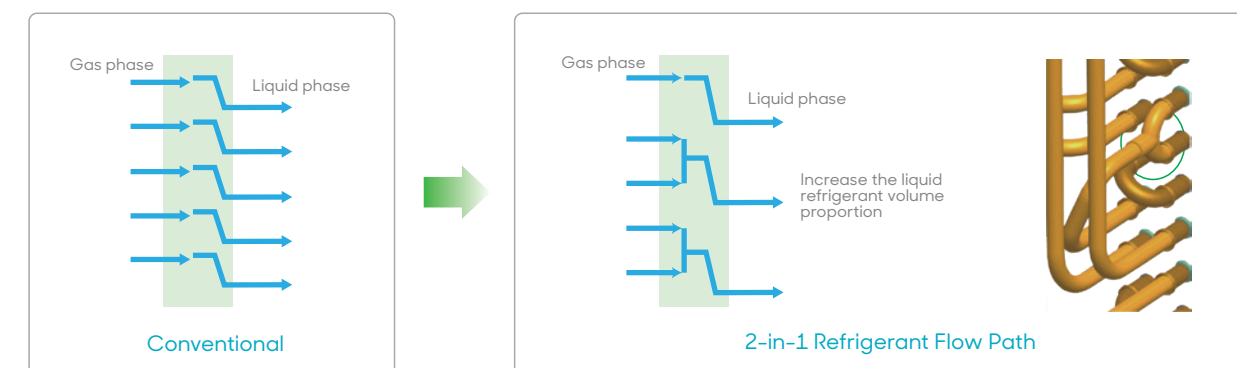


CCT Inner-grooved Tube

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.



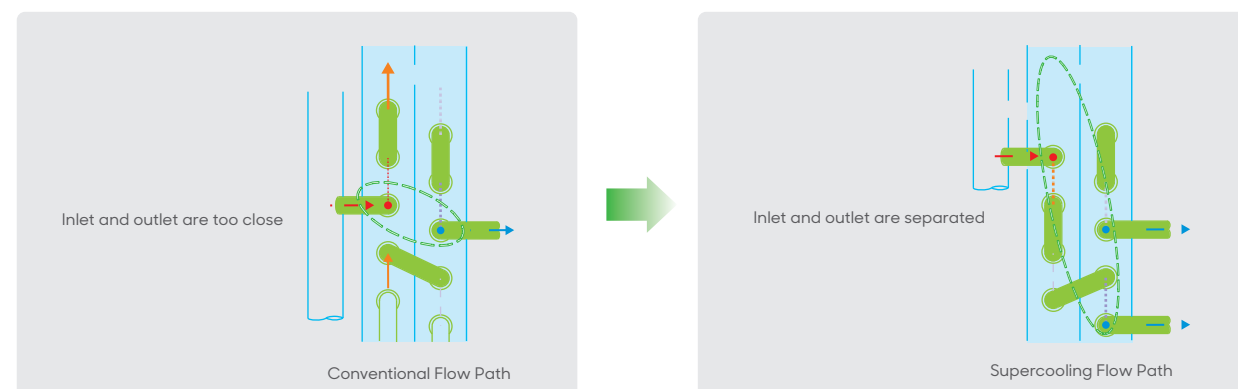
2-in-1 Refrigerant Flow Path Design





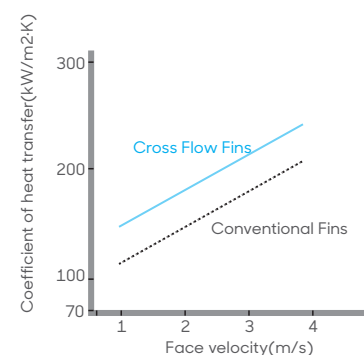
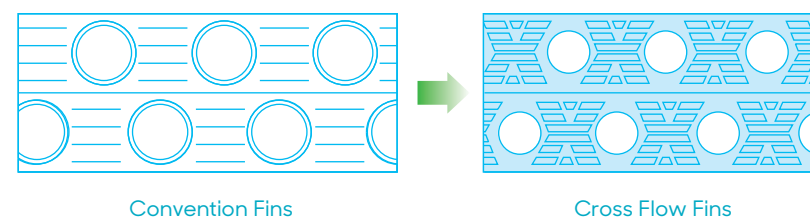
Supercooling Flow Path Design

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.



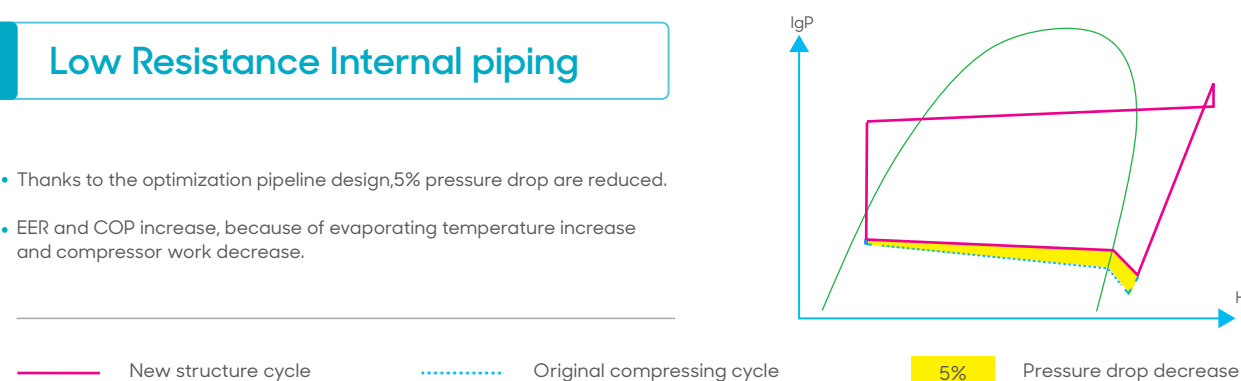
Cross Flow Fins

- 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.



2

Benefits For Users

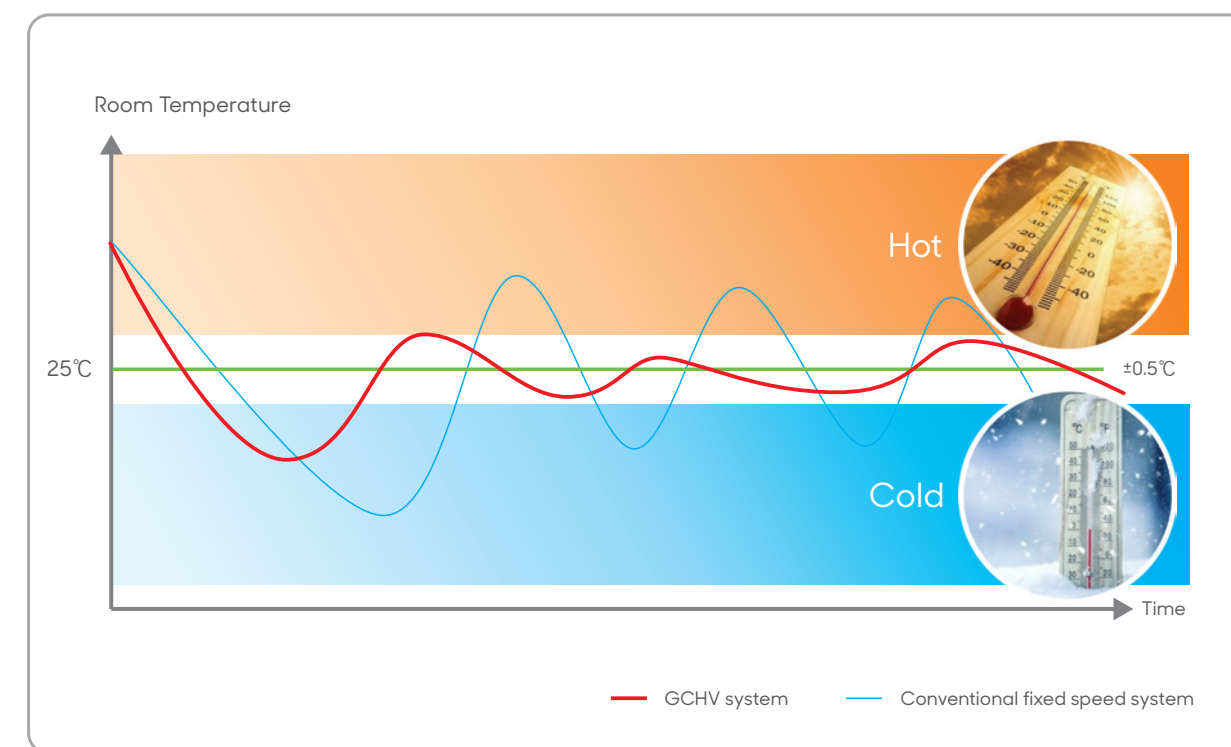
Livable environment creator

GCHV 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

- GCHV 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.





Wide Operation Range

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



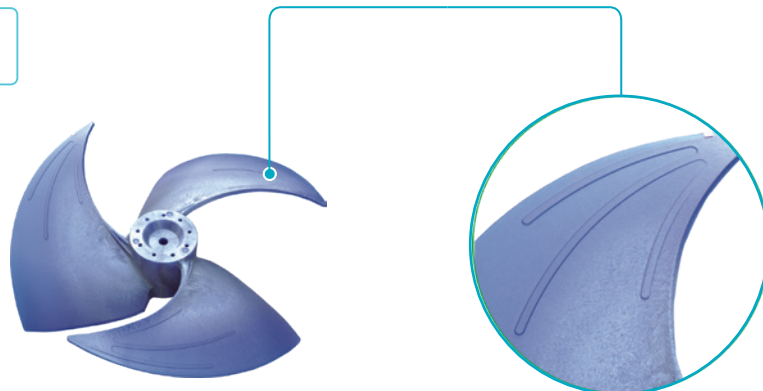
7 Improvements To Reduce Noise

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



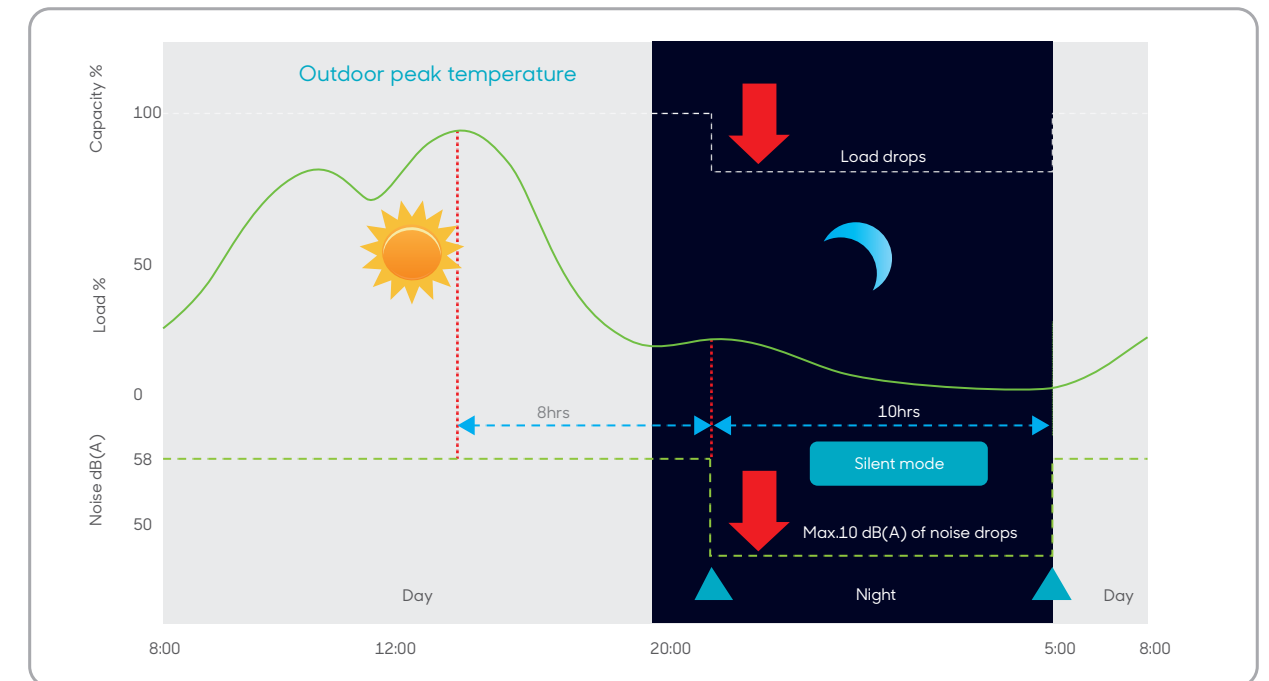
Low Noise Fan Blade

- 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.



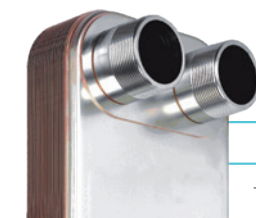
Snow-proof Function

- 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.

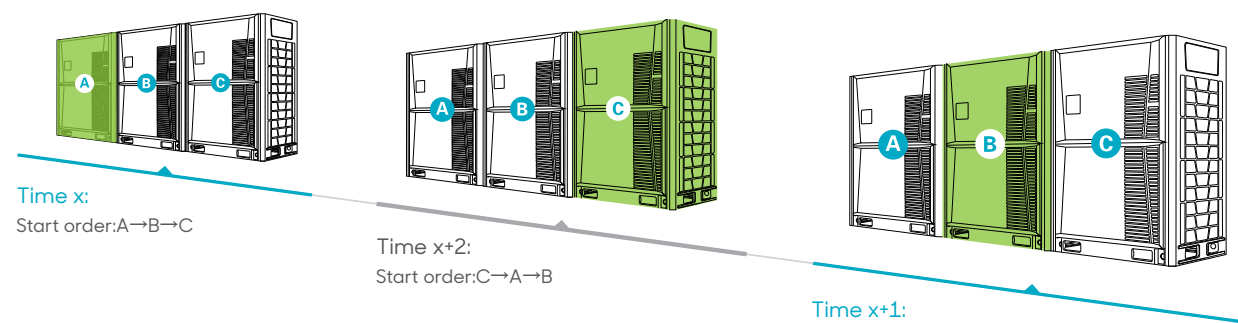


Fan motor back up function.

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.

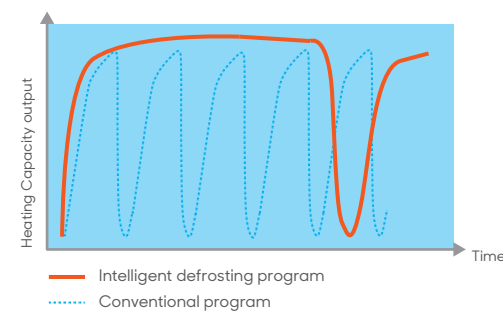


Intelligent Defrosting Program

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

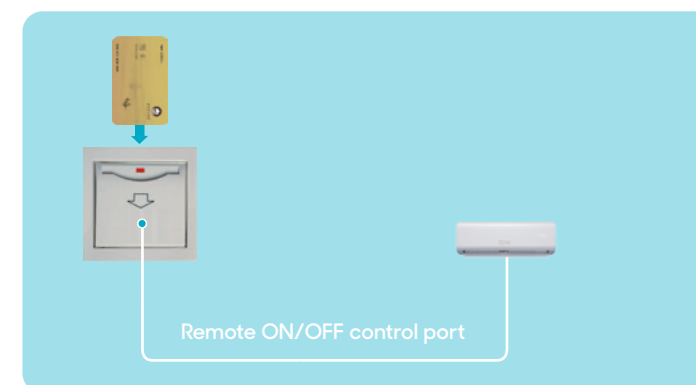
Defrost Curve

- 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



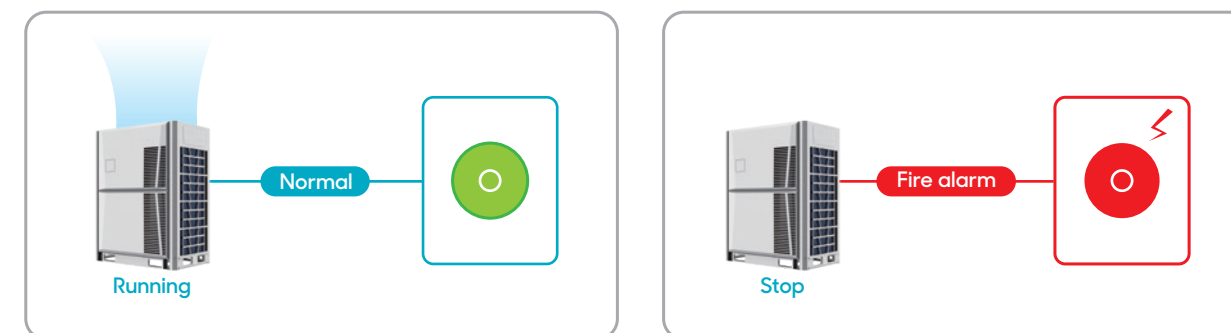
Remote ON/OFF Control Function

- 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.



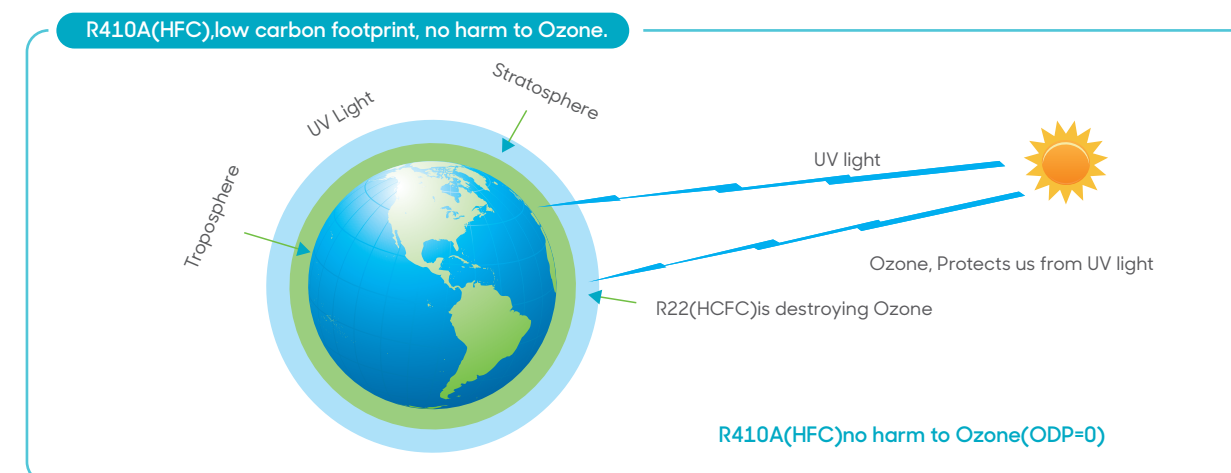
Emergency Stop Operation Function

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.





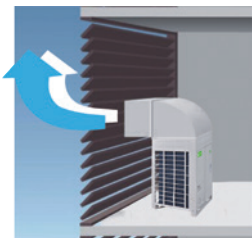
3 Benefits For Installers

Optimization for designer and installer

CMV 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

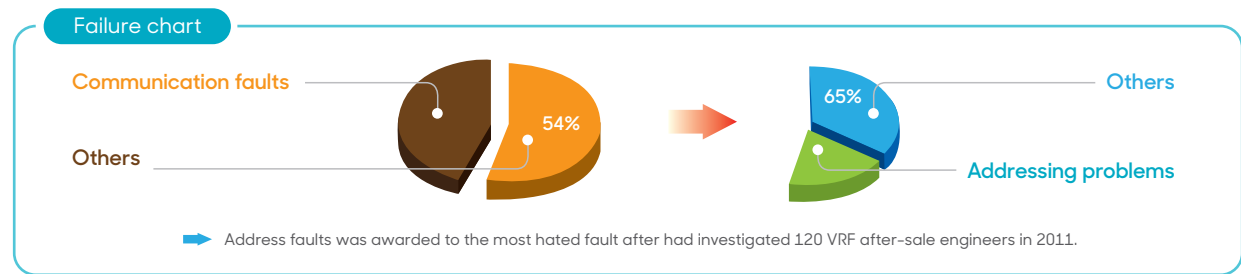


- 2 addressing methods:
 - Automatically addressing: system will distribute address to indoor unit automatically.
 - Manually setting by wireless remote controller.
- Addressing method can be selected easily by adjusting the switch on outdoor PCB.



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



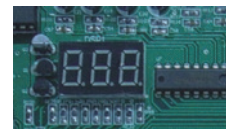


User can check the error code and inquiry unit status very easy, safe and convenient.



LED Display On The PCB

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



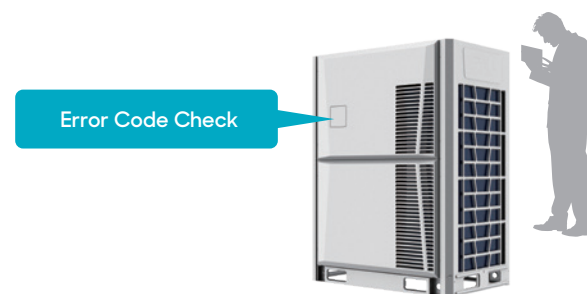
- Record error code list at main PCB chip, easy for service people to check.





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.

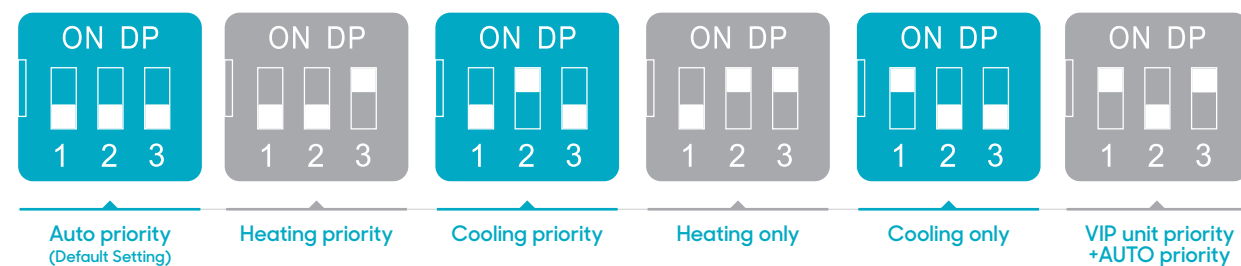




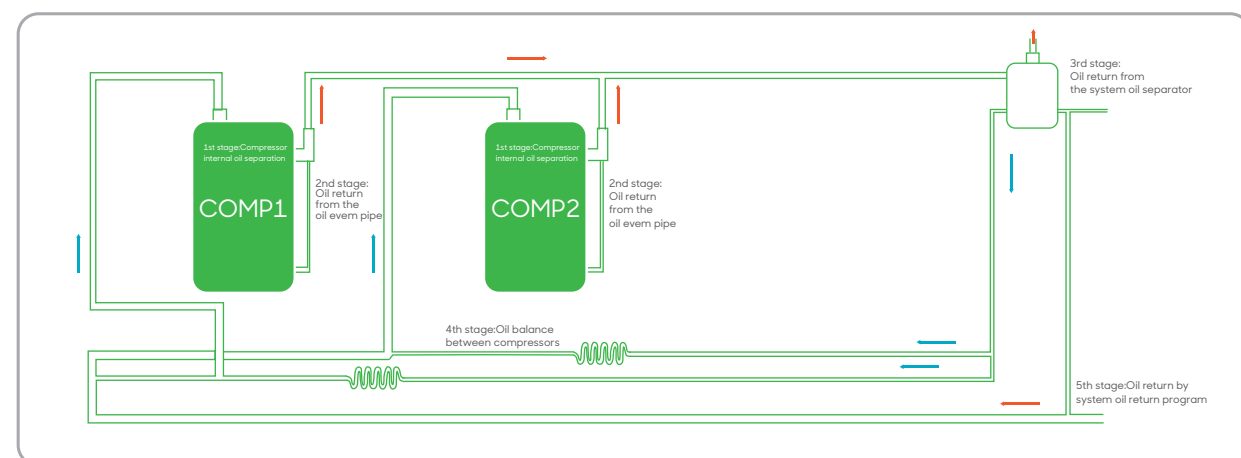
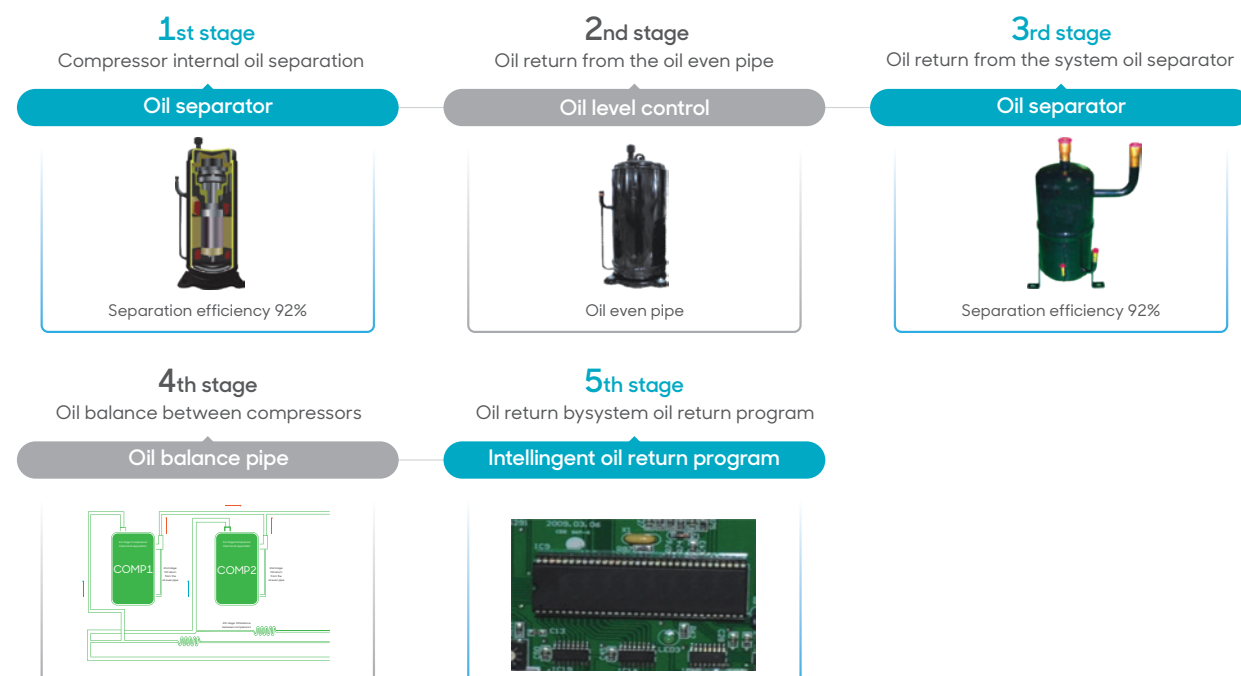
Mode Restriction

- 6 kinds of mode restriction
- Auto priority(Default Setting)
- Cooling(or heating)priority mode.
- Cooling only(or heating only)mode.
- VIP unit priority+AUTO priority mode

• Mode restriction function can be selected on the outdoor PCB.



5-Stage Oil Control



Humanized Internal Structure

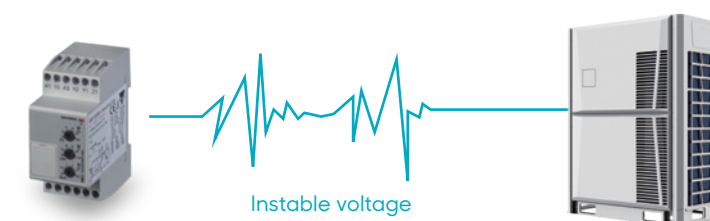


- All key components are designed to close to outside, it is convenient for repair and replacement.
- Thanks to the new balance technology, gas balance pipe does no longer exist, brazing points and leaking risk are decreased.



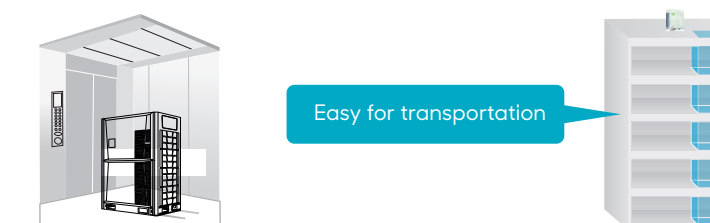
3-Phase Power Protector(Optional)

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/3N/50&60Hz
NEW DC INVERTER EVI VRF SYSTEM

Model Name			GCHV-E252W/HZR1-DK01	GCHV-E280W/HZR1-DK01	GCHV-E335W/HZR1-DK01	GCHV-E400W/HZR1-DM01	GCHV-E450W/HZR1-DM01
Power Supply			380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz
Performance Data							
Cooling	Capacity	HP	8HP	10HP	12HP	14HP	16HP
		kW	T1:25.2/T3:22.2	T1:27.9/T3:24.6	T1:33.3/T3:28.2	T1:39.9/T3:33.6	T1:45/T3:37.2
		Btu/h	T1:86000/T3:76000	T1:95000/T3:84000	T1:114000/T3:96000	T1:136000/T3:114000	T1:154000/T3:126000
		RT	T1:7.2/T3:6.4	T1:8.0/T3:7.03	T1:9.5/T3:8.06	T1:11.4/T3:9.6	T1:12.8/T3:10.6
	Rated current	A	T1:10.9/T3:12.0	T1:12.2/T3:13.6	T1:14.7/T3:16.1	T1:17.6/T3:19.4	T1:20.6/T3:21.8
	Power input	kW	T1:6.8/T3:7.5	T1:7.6/T3:8.5	T1:9.2/T3:10.05	T1:11.0/T3:12.10	T1:13.0/T3:13.60
	EER	W/W	T1:3.71/T3:2.97	T1:3.66/T3:2.89	T1:3.63/T3:2.80	T1:3.62/T3:2.75	T1:3.47/T3:2.71
Heating	Capacity	kW	27.4	31.5	37.5	45.0	50.0
		Btu/h	93500	107500	128000	153500	170600
		RT	7.8	9.0	10.7	12.8	14.2
	Rated current	A	8.93	11.25	14.34	18.00	20.25
	Power input	kW	4.98	5.86	7.35	9.34	10.87
COP		W/W	5.50	5.38	5.10	4.82	4.60
Max. input consumption		kW	13.4	14.3	14.8	18.3	18.8
Max. Current		A	23.1	24.7	25.5	30.8	31.7
Capacity adjustment range			50%~130%				
Compressor Data							
Compressor	Quantity		1				
	Type		Scroll Compressor				
	Brand		HITACHI				
Physical Data							
Refrigerant	Type		R410a				
	Volume	kg	9	11	14		
	Throttle type		EXV				
Dimension (WxHxD)	Net	mm	990x1740x840			1340x1740x840	
	Packing	mm	1060x1900x910			1410x1900x910	
Weight	Net	kg	228	230	275		
	Gross	kg	240	242	293		
Outdoor sound level		dB(A)	58	60	60	61	
Max. operating range			4.5				
Piping Data							
Pipe size	Liquid pipe	mm	Φ12.7			Φ15.88	
	Gas pipe	mm	Φ22.2			Φ28.6	
Max. pipe length	Total pipe length	m	1000			1000	
	ODU to farthest IDU (Actual length)	m	200			200	
	ODU to farthest IDU (Equivalent length)	m	240			240	
	1st IDU distributor to farthest IDU	m	40/90			40/90	
Max. vertical length	Between ODU & IDU (ODU above IDU)	m	100			100	
	Between ODU & IDU (ODU below IDU)	m	110			110	
	Between IDUs	m	40			40	
	Between ODUs	m	0			0	
Operation Temperature Range							
Cooling	Outdoor side	℃	-5~55			-5~55	
	Indoor side	℃	16~32			16~32	
Heating	Outdoor side	℃	-30~30			-30~30	
	Indoor side	℃	16~32			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°F) DB, 19℃(60°F)WB outdoor side 35℃(95°F) DB.
3. The heating conditions: indoor side 20℃(68°F) DB, 15℃(44.6°F)WB outdoor side 7℃(42.8°F) 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.

GCHV-E500W/HZR1-DM01	GCHV-E560W/HZR1-DM01	GCHV-E615W/HZR1-DM01	GCHV-E670W/HZR1-DS01	GCHV-E730W/HZR1-DS01	GCHV-E785W/HZR1-DS01	GCHV-E850W/HZR1-DS01	GCHV-E900W/HZR1-DS01
380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz
18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP
T1:50/T3:41.5	T1:56/T3:46	T1:61.5/T3:49	T1:67/T3:53.4	T1:73/T3:57.9	T1:78.5/T3:61.8	T1:85/T3:66.7	T1:90/T3:70.4
T1:170000/T3:142000	T1:192000/T3:156000	T1:208000/T3:168000	T1:228600/T3:182000	T1:249100/T3:197700	T1:267800/T3:21090	T1:290000/T3:227500	T1:307100/T3:240000
T1:14.3/T3:11.6	T1:16/T3:13.1	T1:17.6/T3:14	T1:19.1/T3:15.10	T1:20.8/T3:16.5	T1:22.3/T3:17.6	T1:24.2/T3:19.0	T1:25.6/T3:20
T1:22.9/T3:24.6	T1:25.7/T3:27.3	T1:28.2/T3:28.9	T1:34.3/T3:35.6	T1:37.4/ T3:38.7	T1:40.0/T3:41.4	T1:43.5/T3:44.9	T1:46.3/T3:47.5
T1:14.3/T3:15.5	T1:16.2/T3:17.05	T1:17.55/T3:18.16	T1:21.48/T3:22.3	T1:23.43/T3:24.26	T1:25.2/ T3:25.9	T1:27.2/ T3:28.1	T1:28.97/T3:29.7
T1:3.49/T3:2.68	T1:3.47/T3:2.68	T1:3.47/T3:2.71	T1:3.12/T3: 2.39	T1:3.11/T3: 2.39	T1:3.11/T3:2.39	T1:3.10/T3: 2.37	T1:3.10/T3: 2.37
56.0	63.0	69.0	75.0	81.5	87.5	95.0	100.0
191000	214900	235400	255900	278100	298600	324100	341200
16.0	18.0	19.7	21.3	23.2	24.86	27.0	28.4
22.61	25.70	28.40	28.65	30.28	33.38	38.52	43.9
11.89	14.16	16.80	14.72	16.78	18.50	21.35	24.33
4.71	4.45	4.11	5.10	4.86	4.73	4.45	4.11
22.0	24.4	25.0	26.2	30.7	30.7	35.8	37.7
37.4	41.1	42.1	43.2	50.8	51.8	60.4	63.6
50%~130%							
1		2					
Scroll Compressor			Scroll Compressor				
HITACHI			HITACHI				
R410a							
15	16	20	23				
EXV			EXV				
1340x1740x840			1990x1740x840				
1410x1900x910			2060x1900x910				
285	290	297	388	433		480	
303	308	315	406	452		498	
62	63		62	63		64	
4.5							
Φ15.88				Φ22.2			
Φ28.6				Φ35.0			
1000				1000			
200				200			
240				240			
40/90				40/90			
100				100			
110				110			
40				40			
0				0			
-5~55				-5~55			
16~32				16~32			
-30~30				-30~30			
16~32				16~32			

Model Name			GCHV-D252W/CZR1-DK01	GCHV-D280W/CZR1-DK01	GCHV-D335W/CZR1-DK01	GCHV-D400W/CZR1-DM01	GCHV-D450W/CZR1-DM01
Power Supply			380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz	380~415V/3N/50&60Hz
Performance Data							
Cooling	Capacity	HP	8HP	10HP	12HP	14HP	16HP
		kW	T1:25.2/T3:21.5	T1:28/T3:23.8	T1:33.5/T3:28.4	T1:40/T3:34.1	T1:45/T3:38.3
		Btu/h	T1:86000/T3:73106	T1:95500/T3:81229	T1:114000/T3:97184	T1:136500/T3:116041	T1:153500/T3:130546
		RT	T1:7.2/T3:6.09	T1:8/T3:6.77	T1:9.5/T3:8.10	T1:11.4/T3:9.67	T1:12.8/T3:10.9
	Power input	kW	T1:5.86/T3:6.46	T1:6.79/T3:7.59	T1:9.18/T3:10.01	T1:10.50/T3:11.55	T1:12.20/T3:12.76
EER		W/W	T1:4.3/T3:3.31	T1:4.12/T3:3.13	T1:3.65/T3:2.85	T1:3.8/T3:2.94	T1:3.68/T3:3.00
Rated. input consumption		kW	13.90	14.10	14.60	17.96	18.34
Rated. current		A	24.0	24.5	25.2	30.2	31.0
Capacity adjustment range			50%~130%				
Compressor Data							
DC Inverter compressor	Quantity		1				
	Type		DC /Twin-rotary				
	Brand		Mitsubishi				
	Frequency range	Hz	20~102	20~106	20~108	20~106	20~108
Physical Data							
Refrigerant	Type		R410a				
	Volume	kg	10		12.5		
Dimension (DxHxW)	Net	mm	840x1740x990			840x1740x1340	
	Packing	mm	910x1900x1060			910x1900x1410	
Weight	Net	kg	210			260	
	Gross	kg	220			278	
Outdoor sound level		dB(A)	58		60		61
Maximum operating pressure		MPa	4.5				
Piping & Wiring Data							
Pipe size	Liquid pipe	mm	Φ12.7			Φ15.9	
	Gas pipe	mm	Φ22.2			Φ28.6	
Max. pipe length	Total pipe length	m	1000				
	From OU to farthest IU(Actual length)	m	200				
	From OU to farthest IU (Equivalent length)	m	240				
	From 1st indoor distributor to farthest IU	m	90				
Max. Vertical length	Between OU & IU (OU above IU)	m	100				
	Between OU & IU (OU below IU)	m	110				
	Between IUs	m	40				
	Between Ous	m	0				
Operation Temperature Range							
Cooling	Outdoor side	℃	-15~55				
	Indoor side	℃	16~32				

Note

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

GCHV-D500W/CZR1-DM01	GCHV-D560W/CZR1-DM01	GCHV-D615W/CZR1-DM01	GCHV-D670/CZR1-DM01	GCHV-D730/CZR1-DS01	GCHV-D800/CZR1-DS01	GCHV-D850/CZR1-DS01
380°415V/3N/50&60Hz	380°415V/3N/50&60Hz	380°415V/3N/50&60Hz	380°415V/3N/50&60Hz	380°415V/3N/50&60Hz	380°415V/3N/50&60Hz	380°415V/3N/50&60Hz
▽	▽	▽	▽	▽	▽	▽
18HP	20HP	22HP	24HP	26HP	28HP	30HP
T1:50/T3:42.4	T1:56/T3:47.7	T1:61.5/T3:52.28	T1:67/T3:57	T1:73/T3:62	T1:78.5/T3:66.73	T1:85/T3:72.3
T1:170600/T3:145051	T1:191000/T3:162457	T1:209800/T3:178413	T1:228600/T3:194369	T1:249100/T3:211775	T1:267800/T3:227730	T1:290000/T3:246587
T1:14.2/T3:12.08	T1:16/T3:13.53	T1:17.5/T3:14.86	T1:19.1/T3:16.19	T1:20.8/T3:17.64	T1:22.3/T3:18.97	T1:24.2/T3:20.54
T1:15.1/T3:16.37	T1:17.6/T3:18.52	T1:20.36/T3:21.09	T1:20.80/T3:21.60	T1:23.10/T3:23.92	T1:25.49/T3:26.19	T1:29.11/T3:30.07
T1:3.31/T3:2.60	T1:3.18/T3:2.57	T1:3.02/T3:2.48	T1:3.22/T3:2.64	T1:3.16/T3:2.59	T1:3.08/T3:2.55	T1:2.92/T3:2.40
18.74	25.90	27.80	29.50	32.00	32.00	36.50
32.0	46.6	47.5	51.0	53.00	53.00	63.00
50°~130%						
▽	▽	▽	▽	▽	▽	▽
1	2					
DC /Twin-rotary						
Mitsubishi						
20°~110	20°~106	20°~110				
▽	▽	▽	▽	▽	▽	▽
R410a						
12.5	16.5		18.0	20.0		25.0
840x1740x1340				840x1740x1990		
910x1900x1410				910x1900x2060		
260	298		306	358		410
278	316		324	376		428
62	63		65	66		67
4.5						
▽	▽	▽	▽	▽	▽	▽
Φ15.9						Φ22.2
Φ28.6						Φ35
1000						
200						
240						
90						
100						
110						
40						
0						
▽	▽	▽	▽	▽	▽	▽
-15°~55						
16°~32						

Model Name			GCHV-D252W/CXR1-DK01	GCHV-D280W/CXR1-DK01	GGCHV-D335W/CXR1-DK01	GCHV-D400W/CXR1-DM01
Power Supply			208~230V/3N/60Hz	208~230V/3N/60Hz	208~230V/3N/60Hz	208~230V/3N/60Hz
Performance Data						
Cooling	Capacity	HP	8HP	10HP	12HP	14HP
		kW	25.2	28	33.5	40
		Btu/h	86000	95500	114000	136500
		RT	7.2	8	9.5	11.4
	Power input	kW	5.82	6.83	8.57	10.08
	EER	W/W	4.33	4.10	3.91	3.97
Rated. input consumption		kW	13.50	14.10	14.20	16.90
Rated. current		A	40.0	42.0	45.0	50.0
Capacity adjustment range			50%~130%			
Compressor Data						
DC Inverter compressor	Quantity		1			
	Type		DC /Twin-rotary			
	Brand		Mitsubishi			
	Frequency range	rps	10~120			
Physical Data						
Refrigerant	Type		R410a			
	Volume	kg	10		12	
Dimension (DxHxW)	Net	mm	840x1740x990			840x1740x1340
	Packing	mm	910x1900x1060			910x1900x1410
Weight	Net	kg	208			260
	Gross	kg	218			278
Outdoor sound level		dB(A)	58		60	
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	℃	-5~50			
	Indoor side	℃	16~32			

Note

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

GCHV-D450W/CXR1-DM01	GCHV-D500W/CXR1-DM01	GCHV-D560W/CXR1-DM01	GCHV-D615W/CXR1-DM01	GCHV-D670/CXR1-DM01
208~230V/3N/60Hz	208~230V/3N/60Hz	208~230V/3N/60Hz	208~230V/3N/60Hz	208~230V/3N/60Hz
▼	▼	▼	▼	▼
16HP	18HP	20HP	22HP	24HP
45	50.0	56.0	61.5	67.0
153500	170600	191000	209800	228600
12.8	14.2	16.0	17.5	19.0
11.75	13.37	15.73	18.25	19.59
3.83	3.74	3.56	3.37	3.42
17.30	24.00	26.50	27.00	27.00
53.0	70.0	78.0	80.0	80.0
50%~130%				
▼	▼	▼	▼	▼
1	2			
DC /Twin-rotary				
Mitsubishi				
10~120				
▼	▼	▼	▼	▼
R410a				
12	13	14	14	15
840x1740x1340				
910x1900x1410				
260	288	296	296	306
278	306	314	314	324
61	62	63	63	63
4.5				
▼	▼	▼	▼	▼
Φ15.9				
Φ31.8				
1000				
190				
220				
90				
90				
110				
30				
0				
▼	▼	▼	▼	▼
-5~50				
16~32				

GCHV-Mini

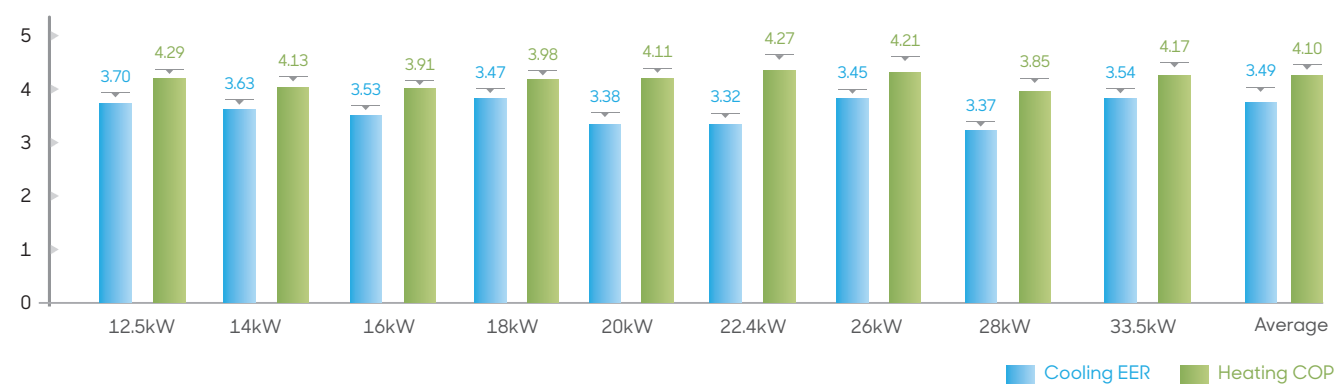
Small Capacity Full DC
Inverter VRF Unit



9 Models

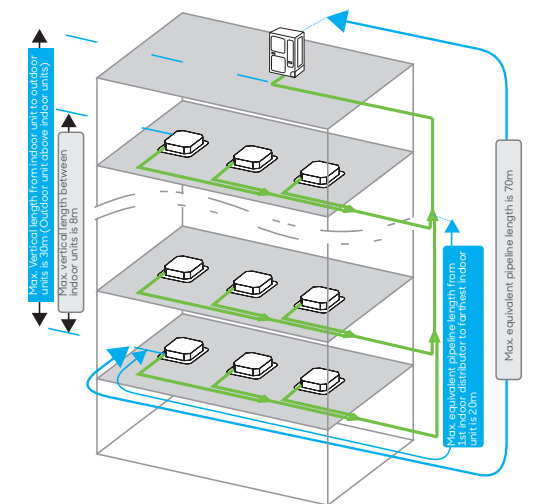
Capacity	12.5kW	14kW	16kW	18kW	20kW	22.4kW	26kW	28kW	33.5kW
Compressor	DC	DC	DC	DC	DC	DC	DC	DC	DC
Fan motor	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC

EER&COP



Long Piping & Height Difference

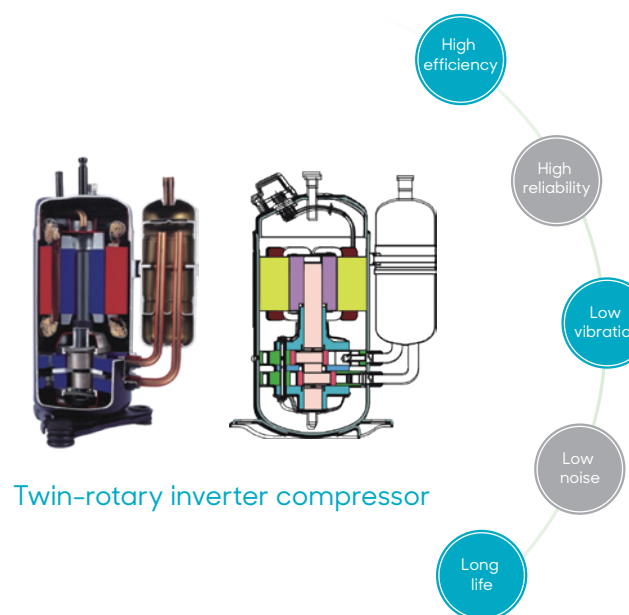
The total pipe length	100m(12.5-18kW),120m(22.4-33.5kW)
The longest pipe length	Actual length 60m Equivalent length 70m
Equivalent length from first indoor distributor to last indoor unit	20m
Height difference between indoor and outdoor unit:	Outdoor unit above<30m Outdoor unit below<20m
Height difference between indoor units	8m



Advantage - GCHV-Mini



High Efficiency DC Inverter Compressor



Twin-rotary DC inverter compressor/

- Use high efficiency and reliability compressor
- Has very good efficiency in part load condition

High Efficiency, Low Noise

- Optimized the efficiency and noise during operation with the latest technology.

Environmental Protection

- Developed the compressor with alternative frigerant which can protect environment.

Low Vibration

- Reduced the vibration during compressor start and operation by using 2CYL Structure, simplified the match of air-conditioning.

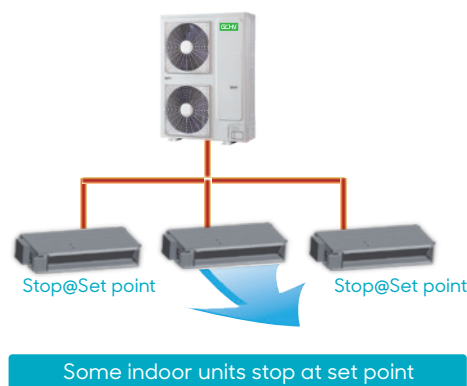
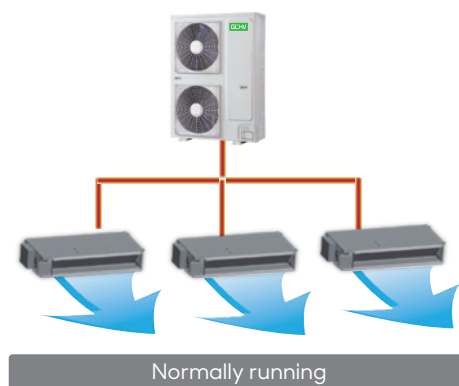
High Efficiency DC Motor



- ◆ High efficiency DC fan motor
- ◆ Low noise and high efficiency because of high-density wire winding engineering
- ◆ Brushless with built-in sensor

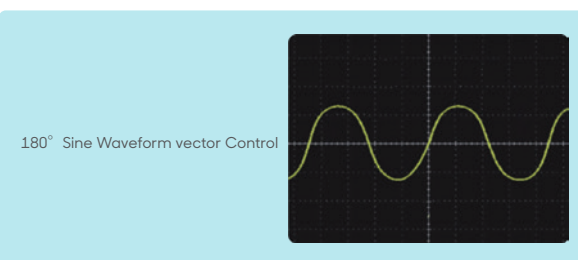
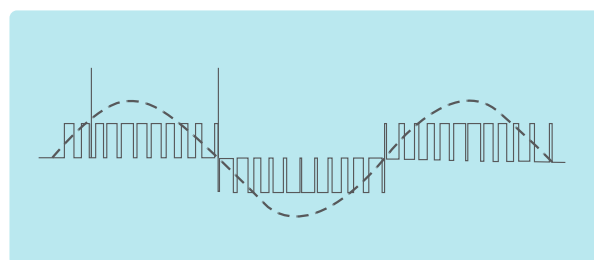
Fast Cooling And Heating

Every rooms meet set point most quickly and comfortably by optimized refrigerant control.

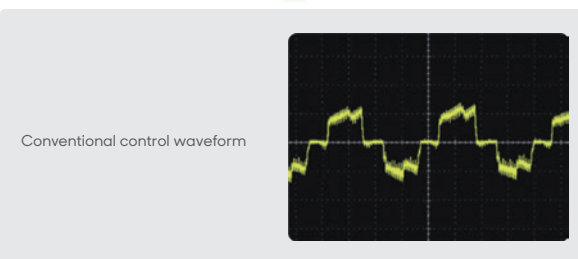
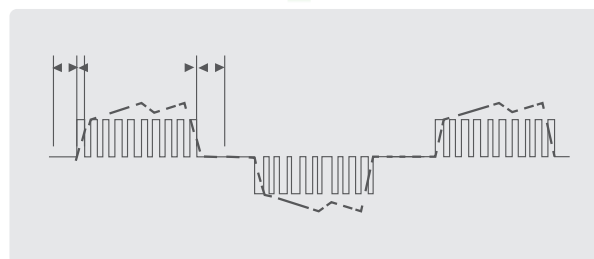


180° Sine Wave Control

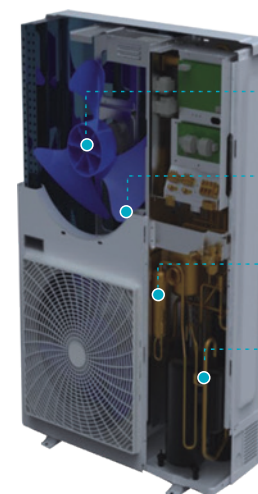
The perfect combination of 180° Sine wave rotor frequency drive control technology and excellent IPM inverters, reduces the reactive loss of motor-driven, increases motor efficiency by 12%.



Increase efficiency by 12%



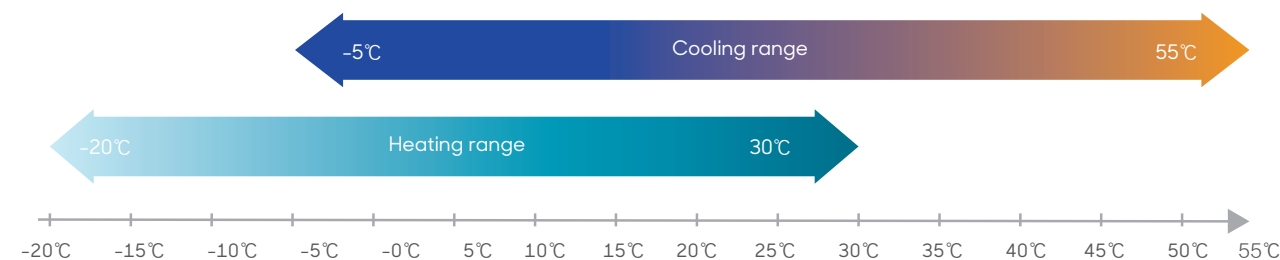
Silent Technology



- Brushless DC motor: Adopting permanent magnet rotor, low vibration and low noise.
- Forward-curve fan blade: Unique design to increase air flow, reducing the return air resistance, reducing vibration.
- Pipeline silencer: To reduce the refrigerant flow noise.
- Optimized design by CFD: To reduce refrigerant flow resistance and vibration.

Wide Outdoor Operation Range

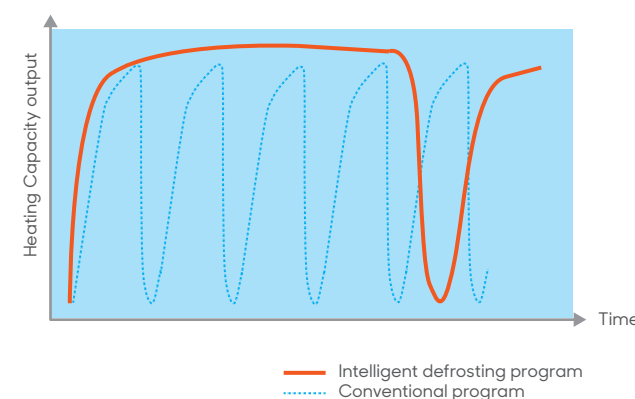
Because global warming is getting worse, Max. cooling operating temperature is designed up to 50°C. Heating operating temperature is down to -20°C. In the cold winter, system can heat the room continuously.



Outdoor unit running at temperature above 50°C need customized in factory, please consult to sales engineer.

Intelligent Defrosting Program

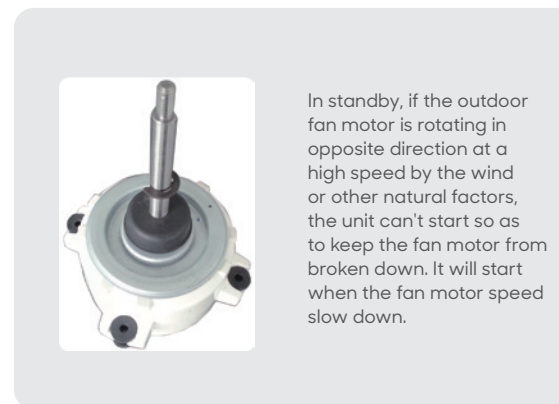
Program starts only when unit needs to. Whereas conventional unit's defrosting timing & duration is fixed, causing fluctuations in temperature and personal comfort.



Defrost curve

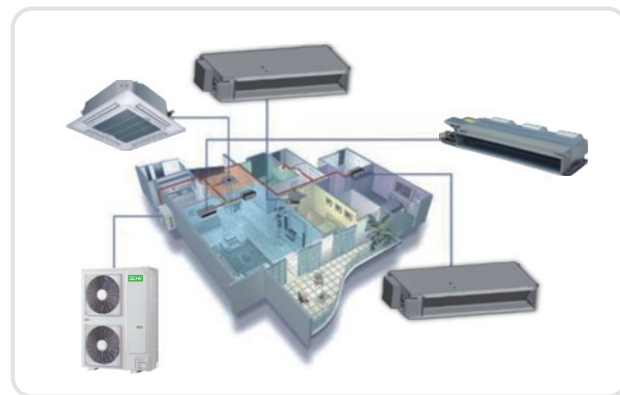
- Conventional unit's defrosting timing & duration is fixed.
- Intelligent defrosting program starts according to heat exchanging efficiency & capacity change due to the frost. Less temperature fluctuations, people feel more comfortable.

Fan Reversal Protection



Space Saving Installation

- Multiple indoor units can be connected to 1 outdoor unit, and long piping connection is also possible.
- Compare to one-drive-one type, the outdoor unit can be installed in various places to realize the space-saving installation.



High Efficiency



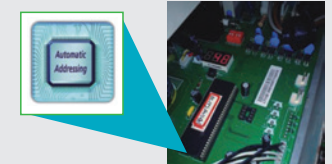
Refrigerant cooling technology for PCB

- The radiation fin is made of aluminum panels fitting together seamlessly.
- This helps to cool down the IPM, it has better performance compared to air cooling for PCB.
- The outdoor unit has capability to run in max. 55°C ambient temperature.

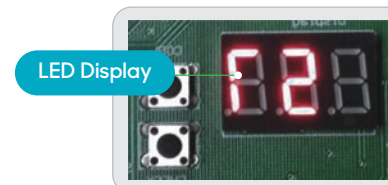
NEW TECHNOLOGY

Automatically Addressing

- Automatically addressing: system will distribute address to indoor unit automatically
- Automatic addressing will reduce artificial faults and manual works.



LED Display On PCB

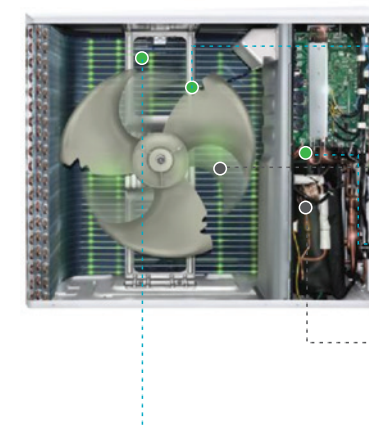


LED display on the PCB, it can show system's operation status and error codes.

Lower Noise

5 Major Technology Leads to Lower Noise

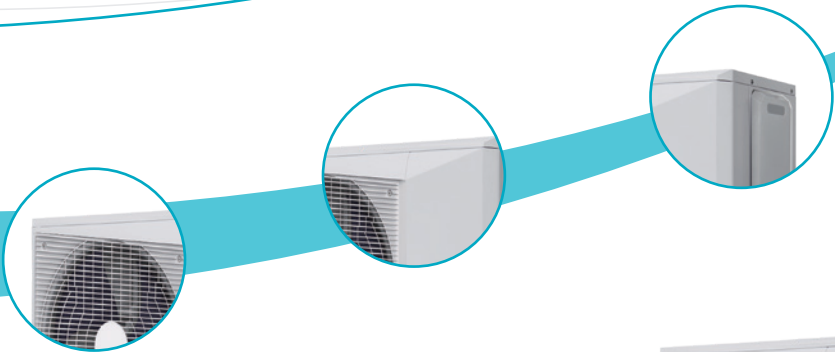
The Min. noise level is 54 dB(A)



- Streamline optimization for fan blade
- CFD simulation improvements to eliminate most of the turbulence
- Silent EXV
- Low noise compressor
- DC motor



New Generation CHV-Mini
Small Capacity DC Inverter VRF



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



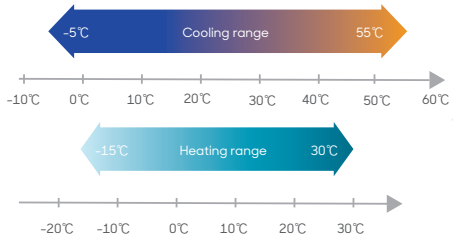
Compact appearance

- 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.



GCHV-Mini

Model name	Power type (V/N/Hz)	Cooling(T1/T3)				Heating				Refrigerant		Sound pressure Level DB(A)	Dimension (WxHxD)		Weight		Connecting		Max Con- nected indoor units quantity																
		Capacity		Power input	EER	Capacity		Power input	COP	Type	Volume kg		Packing	Body	Net	Gross	Gas	Liquid																	
		kW	kBtu/h	kW		kW	kBtu/h	kW					mm	mm	kg	kg	mm	mm																	
GCHV-D125W/HZR1-050D	380-415/3/50	T1:12.5/T3:10	T1:42/T3:33.6	T1:3.38/T3:3.48	T1:3.70/T3:2.87	14	47	3.26	4.29	R410a	3.45	56	1010 x 1445 x 415	975 x 1335 x 400	86.6	96.4	Φ15.88	6																	
GCHV-D140W/HZR1-050D	380-415/3/50	T1:14/T3:11.48	T1:47.8/T3:39.2	T1:3.80/T3:4.04	T1:3.68/T3:2.84	16	54	3.97	4.03		3.8				86.6	96.4			Φ15.88	7															
GCHV-D160W/HZR1-050D	380-415/3/50	T1:16/T3:13.12	T1:54/T3:44.3	T1:4.53/T3:4.69	T1:3.53/T3:2.80	18	61	4.61	3.91		3.8				90.1	100					Φ9.52	8													
GCHV-D180W/HZR1-050D	380-415/3/50	T1:18/T3:14.76	T1:61/T3:50	T1:5.18/T3:5.37	T1:3.47/T3:2.75	20	68	5.02	3.98		4.2				94.7	104.4							Φ9.52	9											
GCHV-D200W/HZR1-080	380-415/3/50	T1:20/T3:16.4	T1:68.2/T3:55.9	T1:5.92/T3:6.13	T1:3.38/T3:2.70	22	75	5.35	4.11		5.3				1095x 1545x 485	1015x 1430x 450									112.7	126.8	Φ19.05	10							
GCHV-D224W/HZR1-080	380-415/3/50	T1:22.4/T3:19	T1:76.4/T3:64.8	T1:6.85/T3:7.05	T1:3.27/T3:2.69	24	81.8	5.62	4.27		5.3				112.7	126.8									Φ19.05	10									
GCHV-D260W/HZR1-100	380-415/3/50	T1:26/T3:21	T1:88.7/T3:70.9	T1:7.72/T3:7.95	T1:3.37/T3:2.72	28.5	97.2	6.77	4.21		6.1				1278 x 1703	1120 x 1549													142	162	Φ22.2	12			
GCHV-D280W/HZR1-100	380-415/3/50	T1:28/T3:23.4	T1:95.5/T3:79.3	T1:8.54/T3:8.66	T1:3.28/T3:2.70	31.5	107.5	8.18	3.85		8				60	1278 x 1703													1120 x 1549	154			174	Φ22.2	15
GCHV-D335W/HZR1-100	380-415/3/50	T1:33.5/T3:27.5	T1:114.3/T3:93.3	T1:9.77/T3:10.05	T1:3.43/T3:2.75	37.5	128	8.99	4.17		8																		154	174			Φ12.7		

Note

- 1.Cooling Operation Conditions:
Indoor Air Inlet Temperature: 27°C DB / 19°C WB,T1: Outdoor Air Inlet Temperature: 35°C DB,T3: Outdoor Air Inlet Temperature: 46°C DB
- 2.Heating Operation Conditions:
Indoor Air Inlet Temperature: 20.0°C DB,Outdoor Air Inlet Temperature: 7°C DB / 6°C WB

CHV-Mini

Model name	CHV-DH080W/R1	CHV-DH100W/R1	CHV-DH125W/R1	GCHV-D125W/HZR1-D01	CHV-DH140W/R1	GCHV-D140W/HZR1-F01	CHV-DH160W/R1	GCHV-D160W/HZR1-F01
	CHV-DH080W/NR1	CHV-DH100W/NR1	CHV-DH125W/NR1	GCHV-D125W/HZR1-D01	CHV-DH140W/NR1	GCHV-D140W/HZR1-F01	CHV-DH160W/NR1	GCHV-D160W/HZR1-F01
Power supply	220~240V/1N/50Hz	220~240V/1N/50Hz	220~240V/1N/50Hz	380~415V/3N/50Hz	220~240V/1N/50Hz	380~415V/3N/50Hz	220~240V/1N/50Hz	380~415V/3N/50Hz
	220~240V/1N/60Hz	220~240V/1N/60Hz	220~240V/1N/60Hz	380~415V/3N/60Hz	220~240V/1N/60Hz	380~415V/3N/60Hz	220~240V/1N/60Hz	380~415V/3N/60Hz

Performance data			T1		T3		T1		T3		T1		T3		T1		T3		T1		T3	
Operation condition			8	7.2	10	9.0	12.5	11.3	12.5	11.3	14	12.7	14	12.7	16	14.5	16	14.5	16	14.5	16	14.5
Cooling	Capacity	kW	27300	24570	34100	30690	42600	38340	42600	38340	47800	43020	47800	43020	54600	49140	54608	49140	54608	49140	54608	
	Power input (T1/T3)	kW	2.60	2.81	3.00	3.25	3.20	3.46	3.20	3.46	3.75	4.06	3.75	4.06	4.75	5.14	4.75	5.14	4.75	5.14	4.75	5.14
	Rated current(T1/T3)	A	11.8	14.2	13.6	16.4	14.5	17.5	6.0	7.2	17.0	20.5	7.0	8.4	21.8	25.96	8.8	10.5	8.8	10.5	8.8	10.5
	EER (T1/T3)	W/W	3.08	2.56	3.33	2.77	3.91	3.27	3.91	3.27	3.73	3.13	3.73	3.13	3.37	2.82	3.37	2.82	3.37	2.82	3.37	2.82
Heating	Capacity	kW	9		11		14		14		16		16		17		17		17		17	
	Power input	Btu/h	30700		37500		47800		47780		54600		54600		58000		58020		58000		58020	
	Power input	kW	2.65		3.1		3.52		3.52		4		4		4.4		4.4		4.4		4.4	
	Rated current	A	12		14		16.1		16.1		18.2		18.2		20		20		20		20	
	COP	W/W	3.40		3.55		3.98		3.98		4.00		4.00		3.86		3.86		3.86		3.86	
Compressor data			T1		T3		T1		T3		T1		T3		T1		T3		T1		T3	
DC Inverter compressor	Quantity		1		1		1		1		1		1		1		1		1		1	
	Type		Twin-rotary		Twin-rotary		Twin-rotary		Twin-rotary		Twin-rotary		Twin-rotary		Twin-rotary		Twin-rotary		Twin-rotary		Twin-rotary	
	Brand		Mitsubishi		GMCC		Mitsubishi		Highly		Mitsubishi		Highly		Mitsubishi		Highly		Mitsubishi		Mitsubishi	
Fan data			T1		T3		T1		T3		T1		T3		T1		T3		T1		T3	
Fan motor	Type		DC		DC		DC		DC		DC		DC		DC		DC		DC		DC	
	Quantity		1		1		1		1		1		1		1		1		1		1	
	Power output	W	75		90		180		90		180		180		180		180		180		180	
Fan blade	Fan Quantity		1		1		1		1		1		1		1		1		1		1	
	Air flow	m³/h	3300		4000		5500		5500		5500		5500		5500		5500		5500		5500	
Physical data			T1		T3		T1		T3		T1		T3		T1		T3		T1		T3	
Outdoor coil	Fin type		Hydrophilic Foil		Hydrophilic Foil		Hydrophilic Foil		Hydrophilic Foil		Hydrophilic Foil		Hydrophilic Foil		Hydrophilic Foil		Hydrophilic Foil		Hydrophilic Foil		Hydrophilic Foil	
	Number of rows		3		2		2		3		3		3		3		3		3		3	
	Tube type		Inner-grooved copper tube		Inner-grooved copper tube		Inner-grooved copper tube		Inner-grooved copper tube		Inner-grooved copper tube		Inner-grooved copper tube		Inner-grooved copper tube		Inner-grooved copper tube		Inner-grooved copper tube		Inner-grooved copper tube	
Refrigerant	Type		R410a		R410a		R410a		R410a		R410a		R410a		R410a		R410a		R410a		R410a	
	Volume	kg	2.00		2.60		3.00		3.00		3.45		3.45		3.45		3.45		3.45		3.45	
Dimension (WxHxD)	Net	mm	935x702x383		1032x810x445		1100x870x528		1032x810x445		1100x870x528		1100x870x528		1100x870x528		1100x870x528		1100x870x528		1100x870x528	
	Packing	mm	975x770x420		1075x875x495		1140x965x540		1075x875x495		1140x965x540		1140x965x540		1140x965x540		1140x965x540		1140x965x540		1140x965x540	
Weight	Net	kg	47		60		85		67.4		90		90		90		90		90		90	
	Gross	kg	50		65		95		72.2		100		100		100		100		100		100	
ODU sound level		dB(A)	≤54		≤56		≤56		≤56		≤57		≤57		≤57		≤57		≤57		≤57	
Operation temperature range			T1		T3		T1		T3		T1		T3		T1		T3		T1		T3	
Cooling	Outdoor side	℃	-5~55		-5~55		-5~55		-5~55		-5~55		-5~55		-5~55		-5~55		-5~55		-5~55	
Heating	Outdoor side	℃	-15~30		-15~30		-15~30		-15~30		-15~30		-15~30		-15~30		-15~30		-15~30		-15~30	

INDOOR UNITS

Provide you with fresh air



Indoor Units line Up

Capacity (kW)	1-way cassette	2-way cassette	Round flow cassette	4-way cassette (Compact type)	Air Handler
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



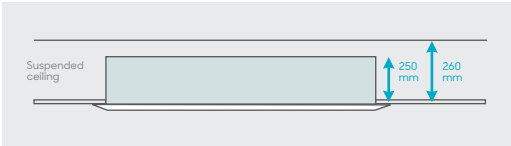
Features

Accessories

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

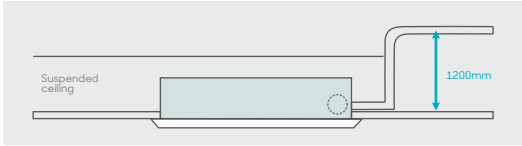
Slim body, easy to install

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.



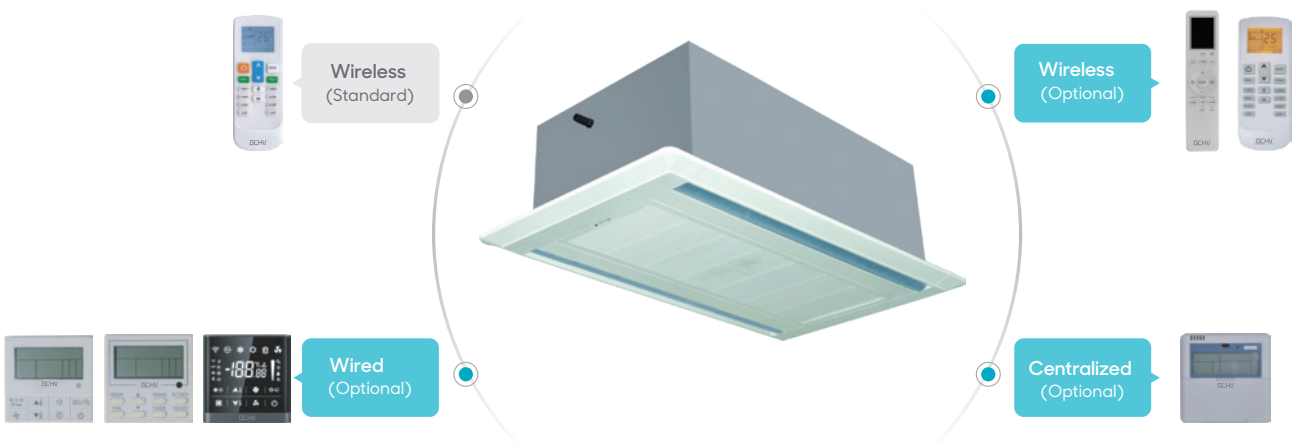
Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling	Heating	Heating	Heating						Packing	Body	Panel packing	Panel			Gas	Liquid	Drain	
CMV-V22Q1/HR1-B	50Hz	2.2	7.5	2.5	8.5	0.04	520	306	32~36	/	1160	994	1090	1070	24/3.6	30/5.0	Φ9.53	Φ6.35	ODΦ25	Remote controller
CMV-V28Q1/HR1-B	50Hz	2.8	9.5	3.2	10.9						275	250	65	50						
CMV-V36Q1/HR1-B	50Hz	3.6	12.2	4.0	13.6						655	532	540	520						
CMV-V45Q1/HR1-B	50Hz	4.5	15.3	5.0	17.0						1160	994	1090	1070						
CMV-V56Q1/HR1-B	50Hz	5.6	19.1	6.3	21.4	0.07	750	440	35~41	/	1470	1304	1390	1380	34/3.6	39/5.0	Φ15.9	Φ9.53	ODΦ25	Remote controller
CMV-V71Q1/HR1-B	50Hz	7.1	24.2	8.0	27.2						305	290	70	50						
CMV-V71Q1/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.09	950	550	38~45		690	572	560	520						

Notes:

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

2-way Cassette



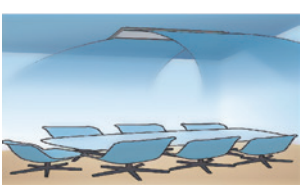
Features

Accessories

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

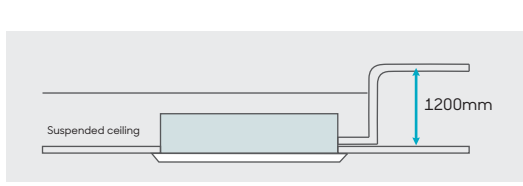
2 way air direction

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.



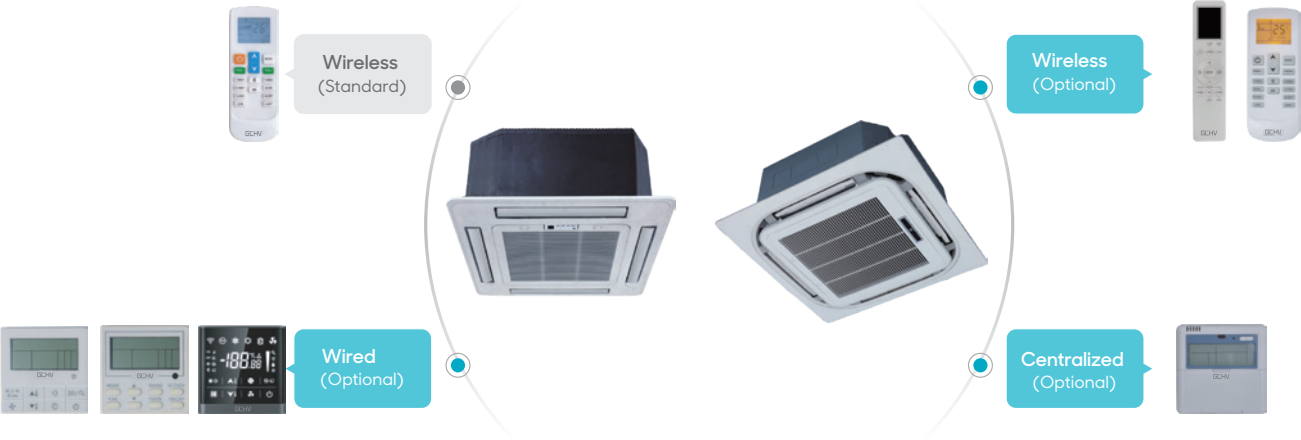
Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling	Heating	Heating	Heating						Packing	Body	Panel packing	Panel			Gas	Liquid	Drain	
CMV-V45Q2/HR1-B	50Hz	4.5	15.3	5.0	17	0.07	800	470	36~42	/	1215	1068	1235	1205	33/6.5	36/8.5	Φ12.7	Φ6.35	ODΦ25	Remote controller
CMV-V56Q2/HR1-B	50Hz	5.6	19.1	6.3	21.4						365	310	70	50						
CMV-V71Q2/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.10	1120	650	40~46	/	1455	1308	1475	1445	40/7.5	47/10.0	Φ15.9	Φ9.53	ODΦ25	Remote controller
CMV-V80Q2/HR1-B	50Hz	8.0	27.2	9.0	30.7						365	310	70	50						
CMV-V80Q2/HR1-B	50Hz	8.0	27.2	9.0	30.7						630	517	655	630						

Notes:

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

4-way Cassette(Compact Type)/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.



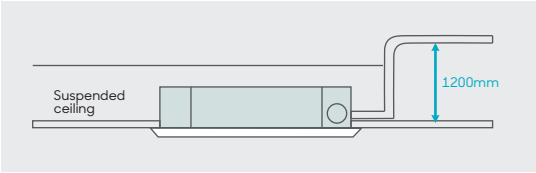
360° round panel is standard.



Built-in with drainage pump

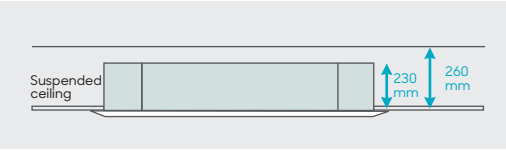
Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.

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(Compact type)

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling	Heating	Cooling	Heating		M³/h	CFM			Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain	
CMV-V22Q/HR1-C	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	Φ9.53	Φ6.35	ODΦ25	Remote controller
CMV-V22Q/HR1-C	60Hz																			
CMV-V28Q/HR1-C	50Hz	2.8	9.5	3.2	10.9	0.038	447	263	22~34						17.5	25				
CMV-V28Q/HR1-C	60Hz																			
CMV-V36Q/HR1-C	50Hz	3.6	12.2	4.0	13.6	0.040	515	303	27~38						17.5	25				
CMV-V36Q/HR1-C	60Hz																			
CMV-V45Q/HR1-C	50Hz	4.5	15.3	5.0	17	0.040	515	303	27~38						17.5	25				
CMV-V45Q/HR1-C	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	Heating	Cooling	Heating		M³/h	CFM			Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain	
CMV-V56QR/HR1	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			24	30	Φ12.7	Φ6.5		Remote controller
CMV-V56QR/HR1	60Hz																			
CMV-V71QR/HR1	50Hz	7.1	24.2	8.0	27.2		1200	700	35~39						24	30				
CMV-V71QR/HR1	60Hz																			
CMV-V80QR/HR1	50Hz	8.0	27.2	8.8	30								1030 x 105 x 1030	950 x 50 x 950	24	30				
CMV-V80QR/HR1	60Hz																			
CMV-V90QR/HR1	50Hz	9.0	30.7	10	34.1	0.18									28.5	30				
CMV-V90QR/HR1	60Hz																			
CMV-V100QR/HR1	50Hz	10	34.1	11	37.5		1400	820	37~41	/	920 x 310 x 985	833 x 286 x 900			28.5	35	Φ15.9	Φ9.52	Φ25	Remote controller
CMV-V100QR/HR1	60Hz																			
CMV-V112QR/HR1	50Hz	11.2	38.2	12.5	42.6										28.5	35				
CMV-V112QR/HR1	60Hz																			
CMV-V125QR/HR1	50Hz	12.5	42.6	14	47.7										28.5	35				
CMV-V125QR/HR1	60Hz																			
CMV-V140QR/HR1	50Hz	14	47.7	15	51.1	0.27	1800	1050	38~42						28.5	35				
CMV-V140QR/HR1	60Hz																			
CMV-V160QR/HR1	50Hz	16	54.5	17	58										28.5	35				
CMV-V160QR/HR1	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.

Short Ceiling Concealed Ducted Unit



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.

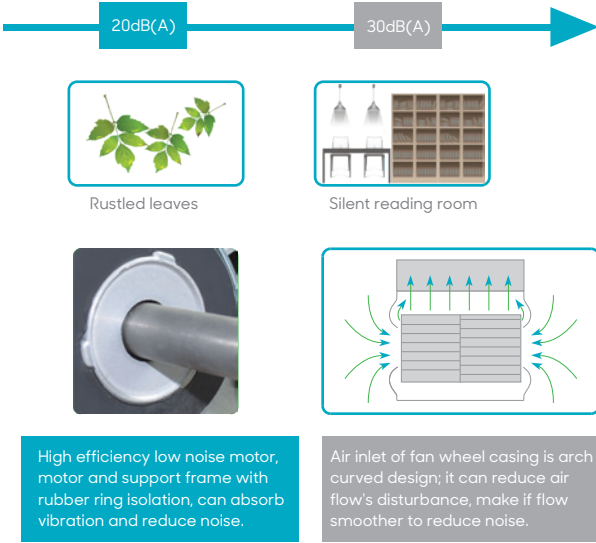
Has short body, minimum 700mm width, It is specially suitable for installation location in entrance ceiling of hotel room. Low noise and light Weight.

Drain pump is optional

Pumping head is 700mm.

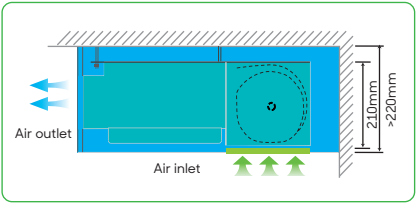
Big air flow low noise centrifugal fan wheel

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.



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

Integrated design of motor and motor bracket, lower noise



Specification

Model name	Power type	Capacity				Motor input kW	Air flow		Sound Level dB(A)	ESP Pa	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller			
		Cooling		Heating			MP/h	CFM			Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm				
		kW	kBtu/h	kW	kBtu/h																		
CMV-V22TA/HR1-C	50Hz	2.2	7.5	2.5	8.5	0.05	450	260	24~29	30	910 x 240 x 510	814 x 210 x 467	/	/	16	18.5	Φ9.53	Φ6.35	ODΦ25	Wired controller			
CMV-V22TA/HNR1-C	60Hz														16	18.5							
CMV-V28TA/HR1-C	50Hz	2.8	9.5	3.2	10.9										16	18.5	Φ6.35						
CMV-V28TA/HNR1-C	60Hz																						
CMV-V36TA/HR1-C	50Hz	3.6	12.2	4	13.6	0.07	550	324	25~32						16.5	19	Φ6.35						
CMV-V36TA/HNR1-C	60Hz																						
CMV-V45TA/HR1-C	50Hz	4.5	15.3	5	17	0.08	620	360	32~37						16.5	19	Φ12.7				ODΦ25	Wired controller	
CMV-V45TA/HNR1-C	60Hz																						
CMV-V56TA/HR1-C	50Hz										1110 240 x 510	1010 210 x 467					21						24
CMV-V56TA/HNR1-C	60Hz	5.6	19.1	6.3	21.4	0.09	800	520	28~38														
CMV-V71TA/HR1-C	50Hz	7.1	24.2	8	27.2	0.11	1000	640	30~39		1310 240 x 510	1214 210 x 467			25.5	28.5	Φ15.9	Φ9.53					
CMV-V71TA/HNR1-C	60Hz																						

Notes:
1.Power supply: 220~240V/1N for 50Hz;208~230V/1N for 60Hz
2.Cooling test condition: indoor side 27℃ DB,19℃ WB outdoor side 35℃ DB;Heating test condition: indoor side 20℃ DB,15℃ WB outdoor side 7℃ 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.
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Medium Static Pressure Ducted Unit

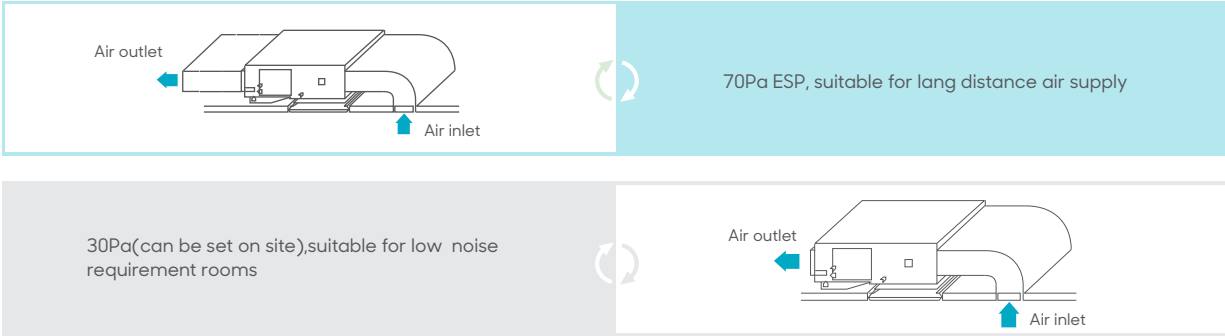


Features

Accessories

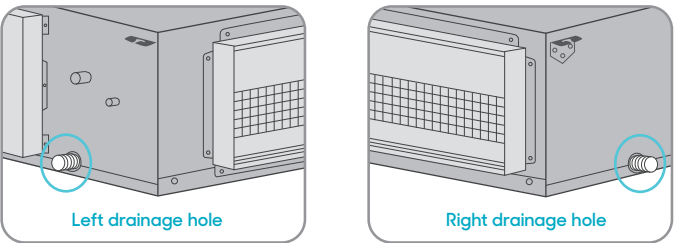
Plenum box	Air filter	EXV	Drain pump	AC motor	DC motor
Standard	Standard	Standard(built-in)	Optional	Standard	Optional

Standard ESP is 70Pa , 30Pa can be customized



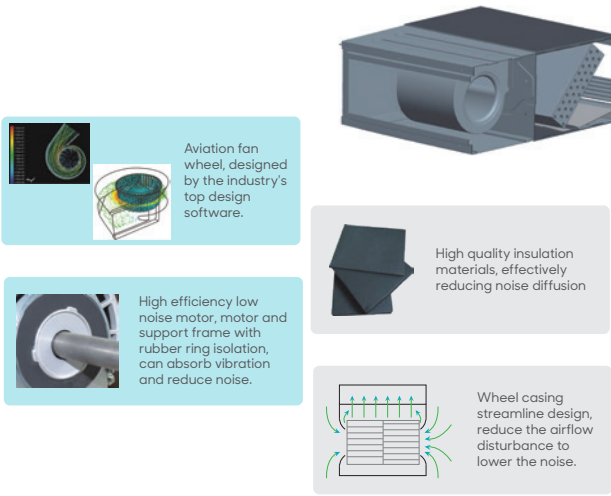
Convenient in drainage pipe install ation

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.

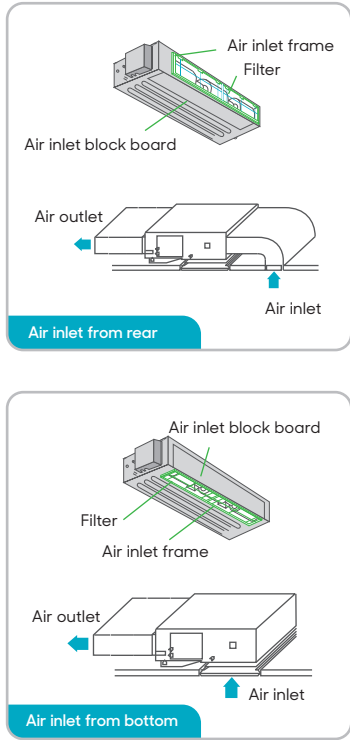


DC fan motor is optional

Integrated design of motor and motor bracket, lower noise

Two air return installation methods

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



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	kW	kW	kW	kW	M³/h	CFM	DB(A)	Pa	mm	mm	mm	kg	kg	mm	mm	mm	
CMV-V71TB/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.30	1220	710	36~41	70	1255 x 325 x 720	1209 x 260 x 680		33	37				Wired controller
CMV-V71TB/HNR1-B	60Hz																		
CMV-V80TB/HR1-B	50Hz	8.0	27.2	9.0	30.7									33	37				
CMV-V80TB/HNR1-B	60Hz																		
CMV-V90TB/HR1-B	50Hz	9.0	30.7	10.0	34.1		1850	1080	38~43	70				46	50				
CMV-V90TB/HNR1-B	60Hz																		
CMV-V100TB/HR1-B	50Hz													46	50				
CMV-V100TB/HNR1-B	60Hz	10.0	34.1	11.0	37.5														
CMV-V120TB/HR1-B	50Hz									70									Wired controller
CMV-V120TB/HNR1-B	60Hz																		
CMV-V150TB/HR1-B	50Hz	12.0	40.9	13.0	44.3		2000	1170	40~44					46	50				
CMV-V150TB/HNR1-B	60Hz	15.0	51.1	17.0	58									46	50				

Notes:

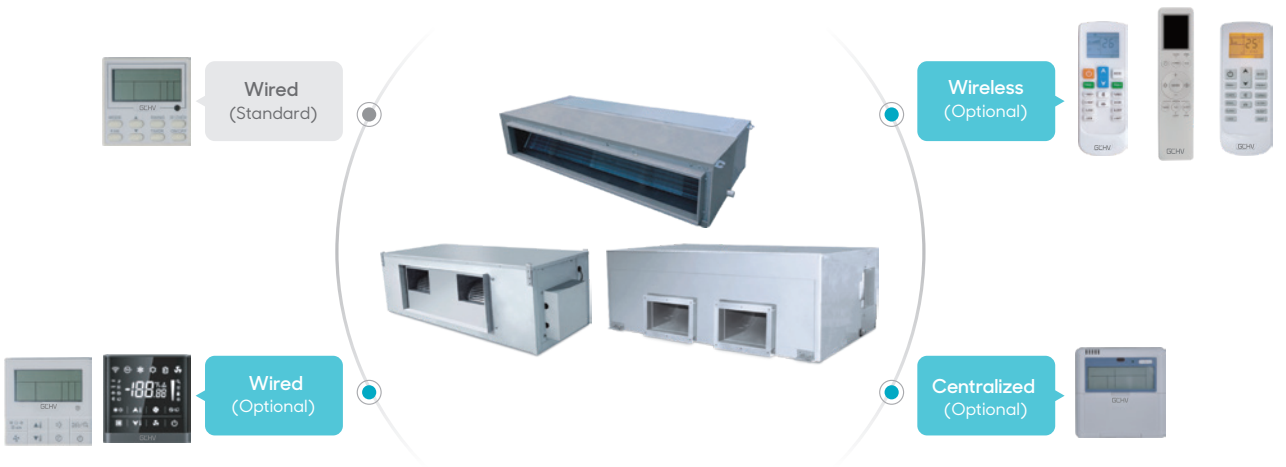
1.Power supply: 220~240V/1N for 50Hz;208~230V/1N for 60Hz

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

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High Static Pressure Ducted Unit

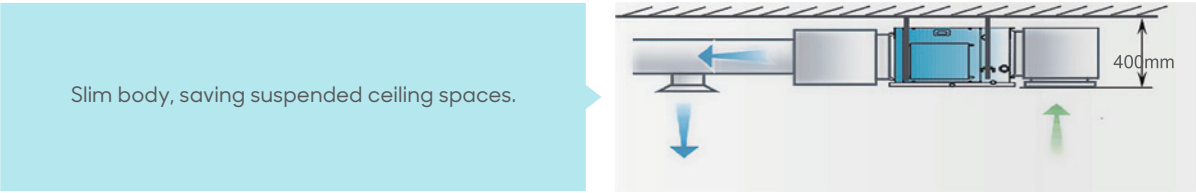


Features

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



Round diffuser



Spiral diffuser



Square diffuser



Linear diffuser



Rectangular diffuser

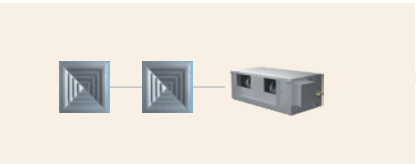
Used with various diffusers, meet for different kinds of decoration.

High static pressure

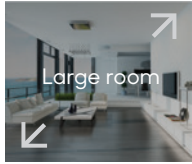
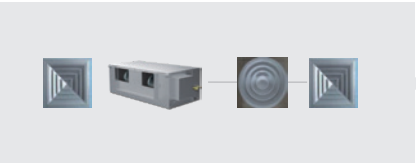
Big air flow with high static pressure, easy for large rooms duct design. Suitable for different shape of rooms.



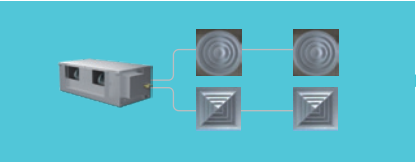
Oblong shape room



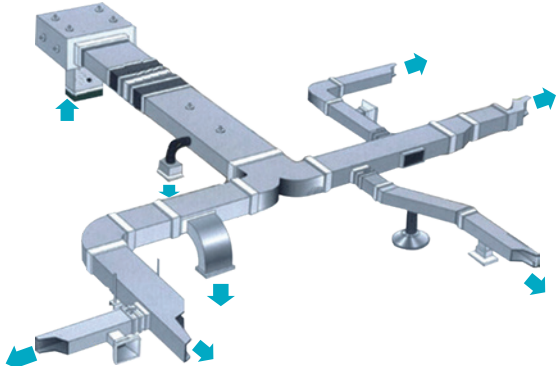
L shape room



Large room



High static pressure ducted unit



Long distance multi-point air supply

Specification

Model name	Power type	Capacity				Motor input kW	Air flow		Sound Level dB(A)	ESP Pa	Dimension(WxHxD)		Body Weight		Connecting pipe			Standard controller							
		Cooling		Heating			M³/h	CFM			Packing mm	Body mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm								
		kW	kBtu/h	kW	kBtu/h																				
CMV-V71TH/HR1-B	50Hz	7.1	24.2	7.8	26.6	0.34	1500	880	40~42	150	1490 x 325 x 720	1445 x 260 x 680	46	50	Φ15.9	Φ9.53	ODΦ25	Wired controller							
CMV-V71TH/HNR1-B	60Hz																								
CMV-V80TH/HR1-B	50Hz	8.0	27.2	8.8	30																46	50			
CMV-V80TH/HNR1-B	60Hz																				46	50			
CMV-V90TH/HR1-B	50Hz	9.0	30.7	10.0	34.1	0.45	2300	1350	44~52		1245 x 445 x 655	1190 x 370 x 620	46	50											
CMV-V90TH/HNR1-B	60Hz																								
CMV-V100TH/HR1-B	50Hz	10.0	34.1	11.0	37.5																47	51			
CMV-V100TH/HNR1-B	60Hz																				47	51			
CMV-V120TH/HR1-B	50Hz	12.0	40.9	13.0	44.3																				
CMV-V120TH/HNR1-B	60Hz																								
CMV-V150TH/HR1-B	50Hz	15.0	51.1	17.0	58.0														47	51					
CMV-V150TH/HNR1-B	60Hz																								
CMV-V200TH/HR1-B	50Hz	20.0	68.2	22.0	75.0					1.2	4000	2350	45~53	1510x580x870	1465x448x811										
CMV-V200TH/HNR1-B	60Hz																								
GCHV-D200TH/HR1-F310	50/60Hz	20.0	68.2	22.0	75.0					1.2	4000	2350	45~50	1515x885x580	1440x811x448										
CMV-V250TH/HR1-B	50Hz	25.0	85.3	27.5	93.8					1.2	4200	2470	45~54	1510x580x870	1465x448x811	102	113	Φ22.2	Φ12.7	ODΦ30					
CMV-V250TH/HNR1-B	60Hz																								
GCHV-D250TH/HR1-F310	50/60Hz	25.0	85.3	27.5	93.8	1.2	4400	2580	46~51	1515x885x580	1440x811x448														
CMV-V280TH/HR1-B	50Hz	28.0	95.5	30.8	105.0	1.2	4400	2580	45~55	1510x580x870	1465x448x811														
CMV-V280TH/HNR1-B	60Hz																								
GCHV-D280TH/HR1-F310	50/60Hz	28.0	95.5	30.8	105.0	1.3	4800	2820	48~52	1515x885x580	1440x811x448														
CMV-V450TH/HZR1-B	50Hz	45.0	153.5	50.0	170.6	1.6	6000	3520	60	200	2267 x 840 x 1050	2165 x 676 x 916	222	260	Φ28.6	Φ15.9	ODΦ32								
CMV-V450TH/HXR1-B	60Hz																								
CMV-V560TH/HR1-B	50Hz	56.0	191.0	63.0	214.9	2.5	8000	4700	64																
CMV-V560TH/HXR1-B	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.

Wall Mounted Unit



Features

Accessories

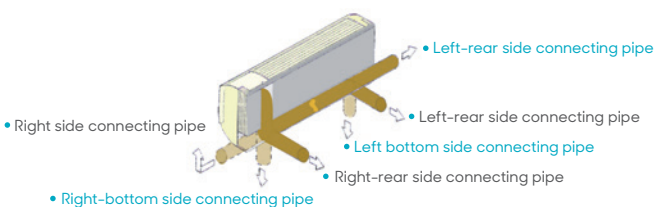
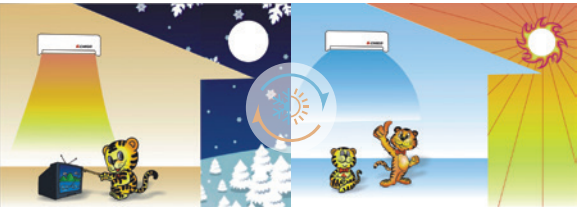
Plenum box	Air filter	EXV	Drain pump	AC motor	DC motor
/	Standard	Standard(built-in)	/	/	Standard

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

2 panels can be chosen, suitable for all kinds of decoration style
Simple, elegant, stylish, mirror design, suitable for all kinds of decoration style.

Flexible in installation
Refrigerant pipe can be connected from 3 directions.

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



Specification

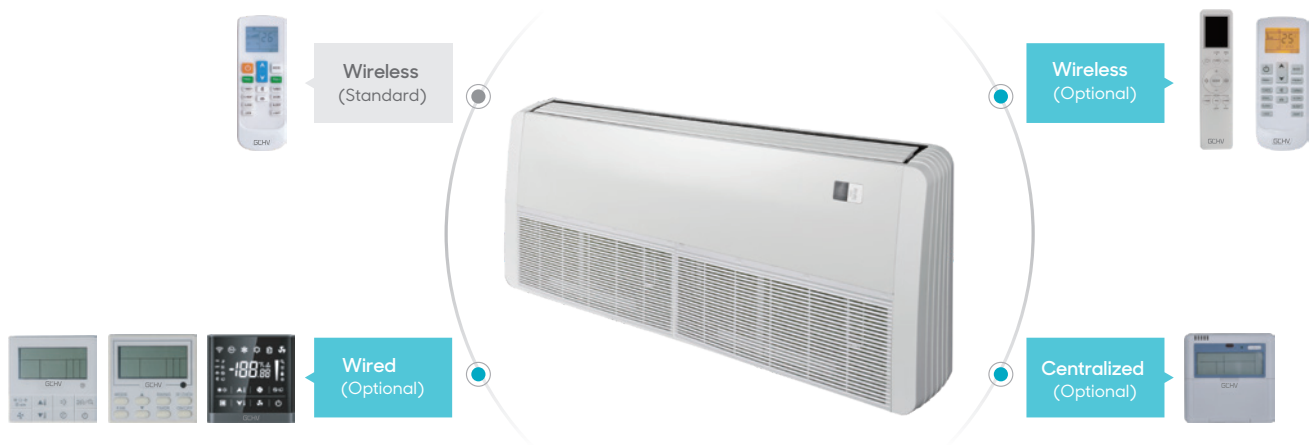
Model			GCHV-D22G/HR1-GSB	GCHV-D28G/HR1-GSB	GCHV-D36G/HR1-GSB	GCHV-D45G/HR1-GSC	GCHV-D56G/HR1-GSC	GCHV-D71G/HR1-GSC
Power Supply			220-240V/1N/50&60Hz	220-240V/1N/50&60Hz	220-240V/1N/50&60Hz	220-240V/1N/50&60Hz	220-240V/1N/50&60Hz	220-240V/1N/50&60Hz
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Heating	kW	2.5	3.2	4.0	5.0	6.3	8.0
Power input		W	15	15	18	20	23	35
Fan motor	Type		DC	DC	DC	DC	DC	DC
	Speed (Hi/Med/Low)	r/min	1000/900/870/850	1000/900/870/850	1100/1000/950/900	1050/950/900/850	1100/1000/950/900	1300/1200/1100/1000
Air flow		m³/h	440/380/360/350	440/380/360/350	500/440/415/380	655/610/565/525	720/645/580/560	890/805/720/645
Sound Pressure level		dB(A)	24~33	24~33	27~36	29~38	32~42	35~43
Body dimension (WxHxD)	Net	mm	864x300x200	864x300x200	864x300x200	972x320x215	972x320x215	972x320x215
	Packing	mm	945x375x290	945x375x290	945x375x290	1060x400x310	1060x400x310	1060x400x310
Body weight	Net/Gross	kg	9.5/12	9.5/12	9.5/12	11.5/14	11.5/14	11.5/14
Refrigerant type			R410A	R410A	R410A	R410A	R410A	R410A
Throttle type			EXV	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/Φ15.88
Drainage water pipe (Outer diameter)		mm	Φ20	Φ20	Φ20	Φ20	Φ20	Φ20
Operation temperature		℃	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℃ DB,19℃ WB outdoor side 35℃ DB.Heating test condition: indoor side 20℃ DB,15℃ WB outdoor side 7℃ 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

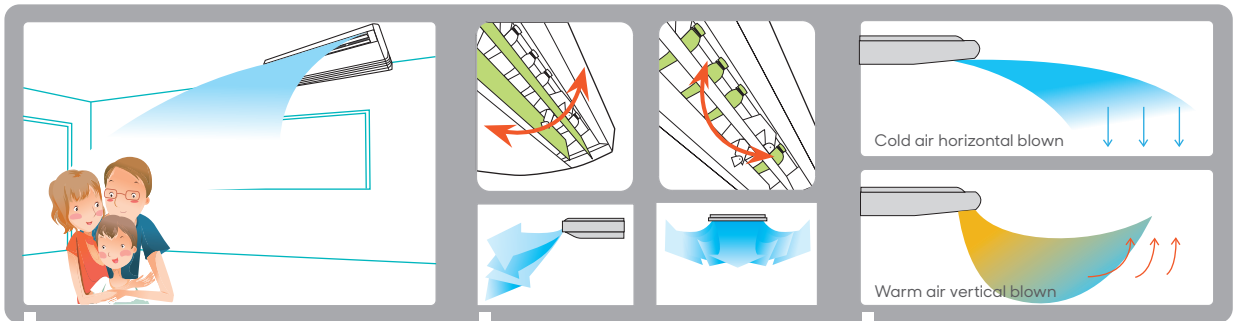
Plenum box	Air filter	EXV	Drain pump	AC motor	DC motor
/	Standard	Standard(built-in)	Optional	Standard	/

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

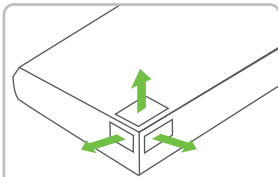


Configured with low noise high performance centrifugal fans, has big air flow and long distance air supply.

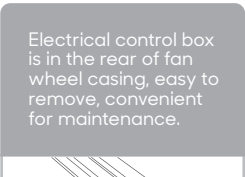
3 dimensional air supply, wide air supply angle, easily supply to every corners.

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

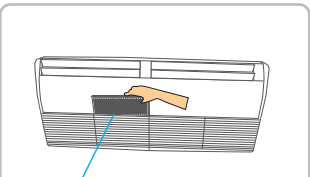
Easy for installtion



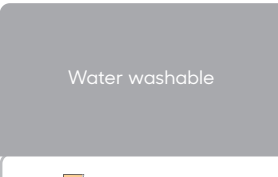
Refrigerant pipe can be connected from 3 directions.



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



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



Water washable

Air inlet grille

Two kinds of grilles for selection



Horizontal Type Grill (Standard)



Honeycomb Type Grill (Optional)

Floor Ceiling Unit



Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	Dimension(WxHxD)		Body Weight		Connecting pipe			Standard controller	
		Cooling		Heating			M³/h	CFM		DB(A)	Packing	Body	Net	Gross	Gas	Liquid		Drain
		kW	kBtu/h	kW	kBtu/h						mm	mm	kg	kg	mm	mm		mm
GCHV-V36UA/HR1-LDBA	50Hz	3.6	12.3	4.0	13.7	0.09	800	470	32~46	1130 x 765 x 330	1050 x 675 x 235	26.5	31.5	Φ12.7	Φ6.35	DN20	Remote controller	
GCHV-V36UA/HNR1-LDBA	60Hz																	
GCHV-V45UA/HR1-LDBA	50Hz	4.5	15.3	5.0	17													
GCHV-V45UA/HNR1-LDBA	60Hz																	
GCHV-V56UA/HR1-LDBA	50Hz	5.6	19.1	6.3	21.4	0.10	1200	706	41~48	1380 x 765 x 330	1300 x 675 x 235	32.5	37.5					
GCHV-V56UA/HNR1-LDBA	60Hz																	
GCHV-V71UA/HR1-LDBB	50Hz	7.1	24.2	8.0	27.2													
GCHV-V71UA/HNR1-LDBB	60Hz																	
GCHV-V80UA/HR1-LDBB	50Hz	8.0	27.2	8.8	30	0.20	2000	1177	38~53	1750 x 765 x 330	1670 x 675 x 235	41.0	47.0					
GCHV-V80UA/HNR1-LDBB	60Hz																	
GCHV-V90UA/HR1-LDBC	50Hz	9.0	30.7	10.0	34.1									Φ15.9	Φ9.52	DN20		
GCHV-V90UA/HNR1-LDBC	60Hz																	
GCHV-V112UA/HR1-LDBC	50Hz	11.2	38.2	12.5	42.6													
GCHV-V112UA/HNR1-LDBC	60Hz																	
GCHV-V140UA/HR1-LDBC	50Hz	14.0	47.7	15	51.1													
GCHV-V140UA/HNR1-LDBC	60Hz																	
GCHV-V160UA/HR1-LDBC	50Hz	16.0	54.5	17	58													
GCHV-V160UA/HNR1-LDBC	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



Features

Accessories

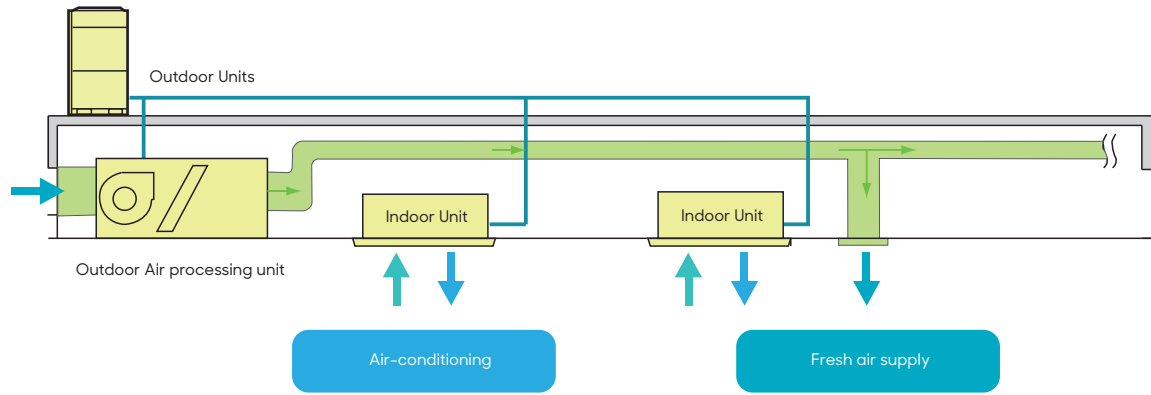
Plenum box	Air filter	EXV	Drain pump	AC motor	DC motor
Standard	Optional	Standard(built-in)	Optional	Standard	/

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.

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.

Specification

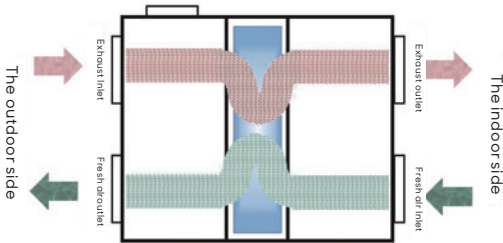
Model name	Power type	Capacity		Motor input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling	Heating		M³/h	CFM			Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW			DB(A)	Pa	mm	mm	mm	mm	kg	kg	mm	mm	mm	
CMV-V140TF/HR1-B	50Hz	14.0	47.7	9.0	30.7	0.45	1400	820	42~48	220	1245 x 445 x 655	1190 x 370 x 620	47	51	Φ15.9	Φ9.53		Wired controller
CMV-V140TF/HNR1-B	60Hz																	
CMV-V224TF/HR1-B	50Hz	22.4	76.4	16.0	54.5	1.2	2000	1170	45~52	220	1510 x 580 x 870	1465 x 448 x 811	100	111			ODΦ25	
CMV-V224TF/HNR1-B	60Hz																	
CMV-V280TF/HR1-B	50Hz	28.0	95.5	20.0	68.2	1.2	2800	1640	45~52	220	1510 x 580 x 870	1465 x 448 x 811	100	111	Φ22.2	Φ12.7		
CMV-V280TF/HNR1-B	60Hz																	
CMV-V450TF/HZR1-B	50Hz	45.0	153.5	31.4	107.1	1.6	4000	3520	58	300	2267 x 840 x 1050	2165 x 676 x 916	222	260				
CMV-V450TF/HXR1-B	60Hz																	
CMV-V560TF/HZR1-B	50Hz	56.0	191.0	39.0	133.0	2.5	6000	4700	62	300	2267 x 840 x 1050	2165 x 676 x 916	222	260	Φ28.6	Φ15.9	ODΦ32	Wired controller
CMV-V560TF/HXR1-B	60Hz																	

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 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.

Heat Recovery Ventilator



Features

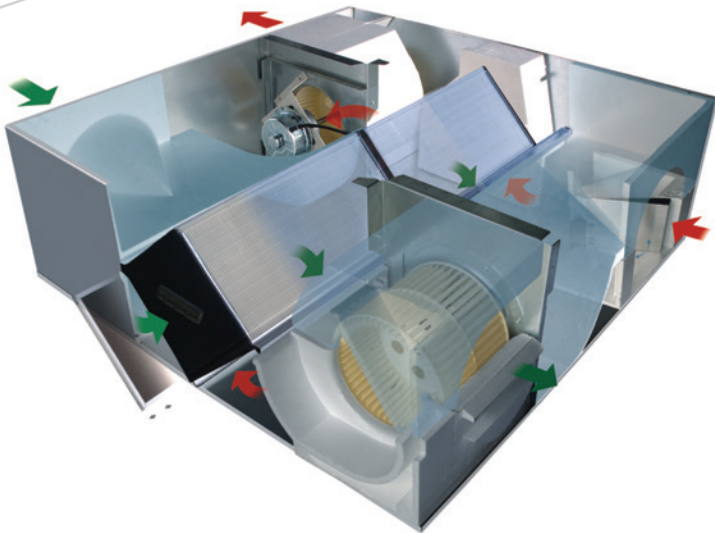


How it works

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

Suppended 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	60.0	65.0	50.0	55.0	30	666x580x264	25
QR-X03D	300	75	130		60.0	65.0	50.0	55.0	33	744x599x270	27
QR-X04D	400	80	200		60.0	65.0	50.0	55.0	35	744x804x270	30
QR-X05D	500	80	220		60.0	65.0	50.0	55.0	38	824x904x270	41
QR-X06D	600	90	242		60.0	65.0	50.0	55.0	40	824x904x270	42
QR-X08D	800	100	410		60.0	65.0	50.0	55.0	42	1116x884x388	68
QR-X10D	1000	150	510		60.0	65.0	50.0	55.0	43	1116x1134x388	82
QR-X13D	1300	150	530		60.0	65.0	50.0	55.0	45	1116x1134x388	82
QR-X15DS	1500	160	1000	380V/3N/50Hz	60.0	65.0	50.0	55.0	51	1600x1200x540	200
QR-X20DS	2000	170	1200		60.0	65.0	50.0	55.0	53	1650x1400x540	225
QR-X25DS	2500	180	2000		60.0	65.0	50.0	55.0	55	1430x1610x600	240
QR-X30DS	3000	200	2100		60.0	65.0	50.0	55.0	57	1600x1700x640	270
QR-X40DS	4000	220	2400		60.0	65.0	50.0	55.0	60	1330x1725x1050	265
QR-X50DS	5000	240	3000		60.0	65.0	50.0	55.0	61	1660x1820x1050	280
QR-X60WS	6000	290	3600		60.0	65.0	50.0	55.0	70	1660x1820x1050	310
QR-X70WS	7000	310	4200		60.0	65.0	50.0	55.0	73	2060x1660x1168	360
QR-X80WS	8000	320	6000		60.0	65.0	50.0	55.0	74	2060x1660x1168	382
QR-X90WS	9000	340	7500		60.0	65.0	50.0	55.0	77	2310x1900x1200	500
QR-X100WS	10000	400	8000		60.0	65.0	50.0	55.0	78	2310x1900x1200	534

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

Heat Recovery Ventilator



Air Handler Unit



Features

Insulated cabinet

Galvanized steel with paint on all panels. Thermal insulator cover all inside panels to reduce heat and cooling losses and prevent condensed water accumulation.

Motor & Blower

Direct drive motors, 3-speed, provide selections of air flow to meet desired applications. Φ10" big fan, powerful wind.

Coil

"A" shape coils, constructed with copper tubing and enhanced aluminum fins.

Filter optional

Detachable air filter for cleaning or renewal.

Multi-position installation

Versatile 4-way convertible design for vertical up airflow, horizontal right airflow.

Specification

Model name	Power type	Capacity				Power input	Air flow		Sound Level	ESP	Dimension(WxHxD)		Body Weight		Connecting pipe			Standard controller
		Cooling	Heating	Cooling	Heating										Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	W	M ³ /h	CFM	DB(A)	Pa	Body mm	Packing mm	Net kg	Gross kg	mm	mm	mm	
CMV-V71AH/HNR1	60Hz	7.1	24.1	8.0	27.2	290	1500	882.3	51~54	25	774x520x460	834x520x565	36	39	Ø15.88	Ø9.52	Ø20	Wired Controller
CMV-V105AH/HNR1	60Hz	10.5	35.7	11.5	39.1	290	1500	882.3	51~54	37	774x520x460	834x520x565	36	39	Ø15.88	Ø9.52	Ø20	Wired Controller
CMV-V160AH/HNR1	60Hz	16.0	54.4	18.0	61.2	517	2500	1470.6	57~60	50	970x550x500	1030x560x595	48	52	Ø15.88	Ø9.52	Ø20	Wired Controller

Notes:1.Power supply:208-230V/1N/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 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.

Controllers & Software

Wireless Remote Controllers

Indoor unit address inquiry

Indoor unit address setting

Temperature setting

Operation mode setting

Fan speed setting

Timer function

Wired Controllers



ZKX-C/TE-05 ZKX-C/TE-06

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

Touch Screen Wired Controller



ZKX-C/T-07

- 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.

Simple Centralized Controller



SP-D099

- Indoor unit operation state
- Indoor unit control order

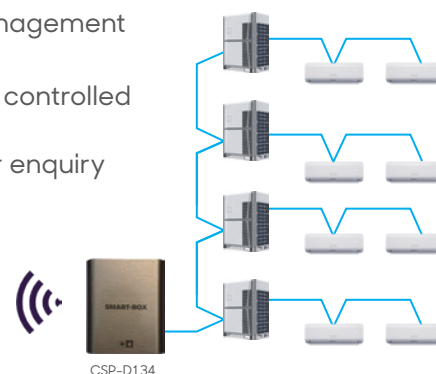
- Easy to install. Controller connects to outdoor units only.
- Able to install this controller after building decoration.
- 1 Controller can control max. 100 indoor units.
- Mode lock function, user can lock the running mode of indoor unit.
- Build in Modbus protocol.

Smart Manager

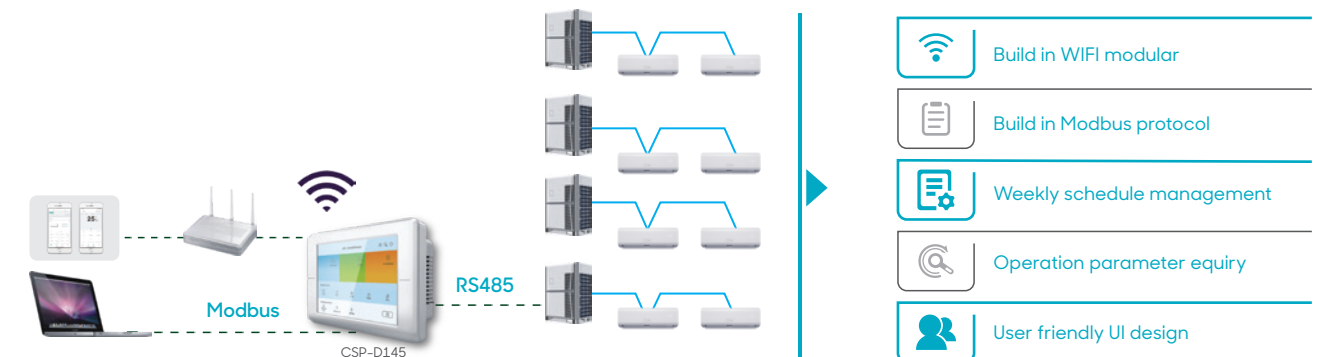
- Available on iOS and Android
- Remote control via cloud server



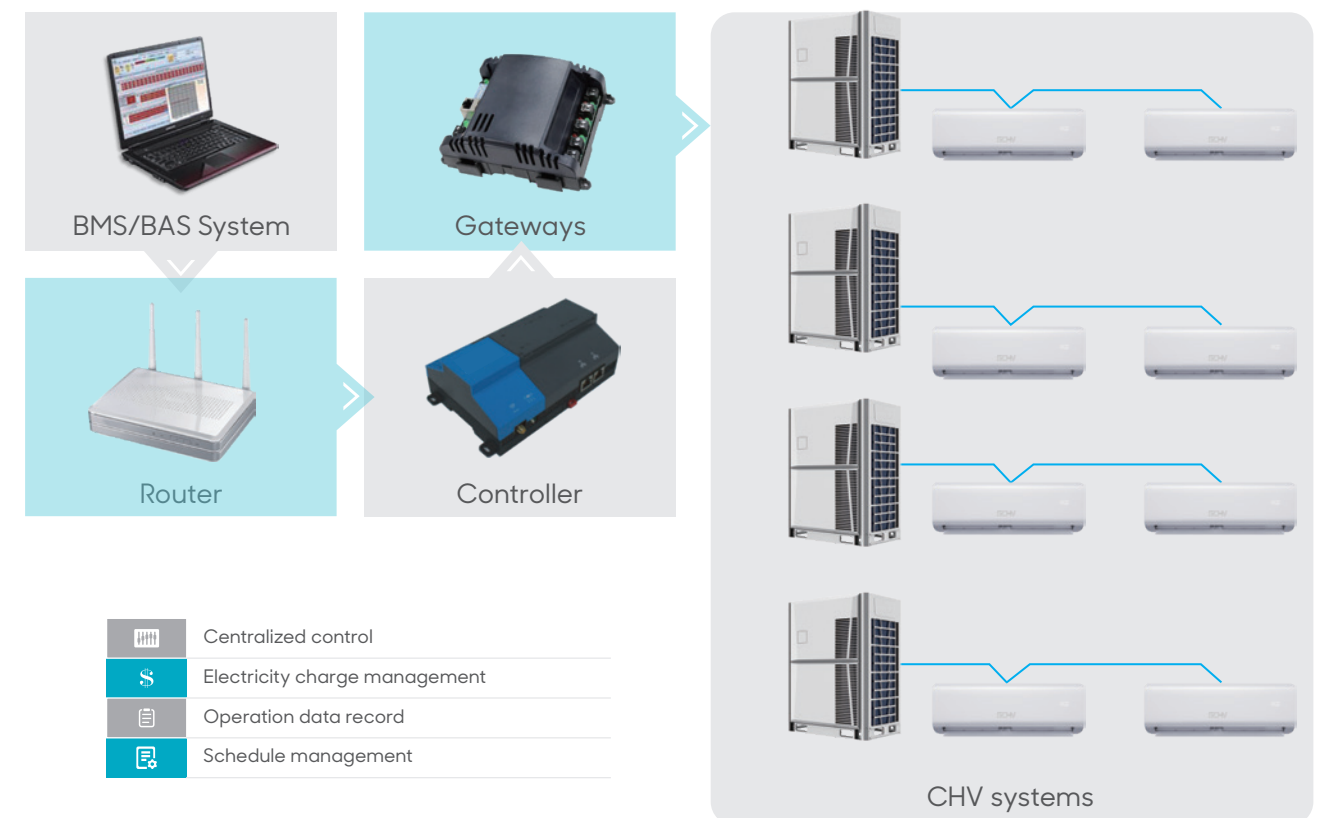
- Single unit controller or group control
- Weekly schedule management
- 64 indoor unit can be controlled
- Operation parameter enquiry



Touch Screen Centralized Controller

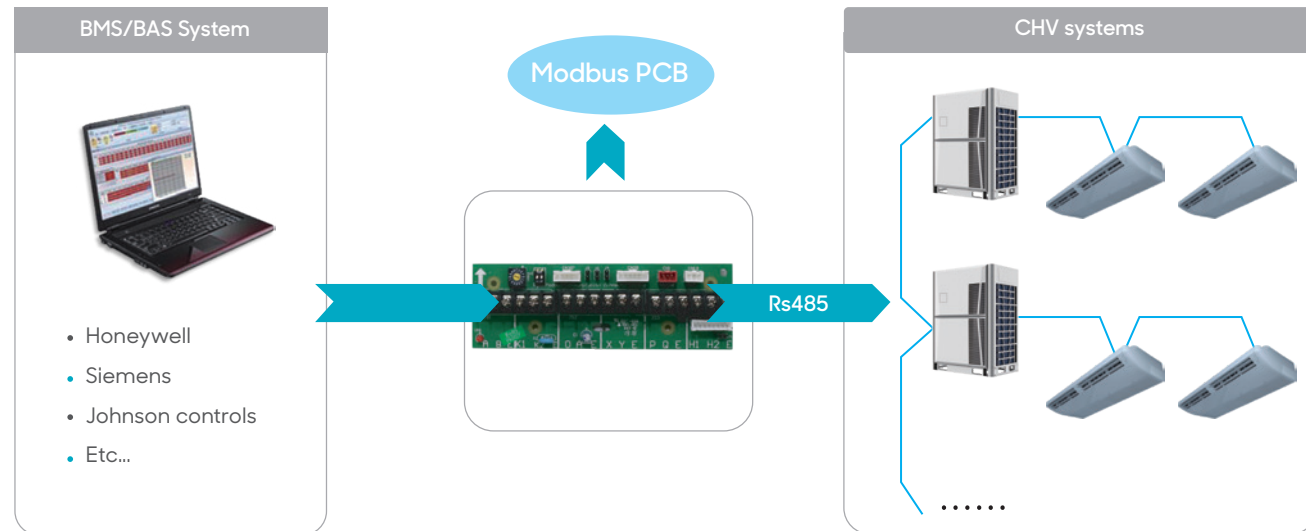


CHV-NET (Centralized Control System)



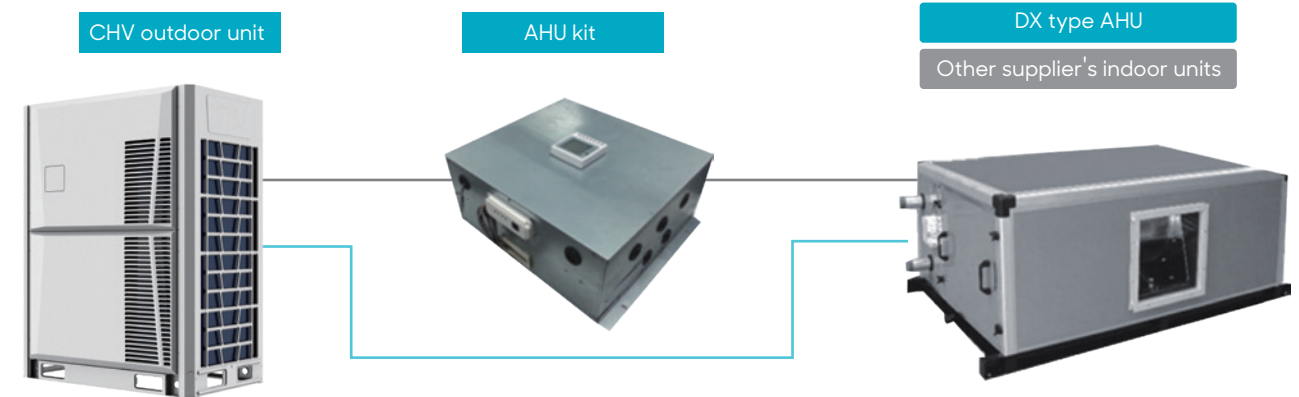
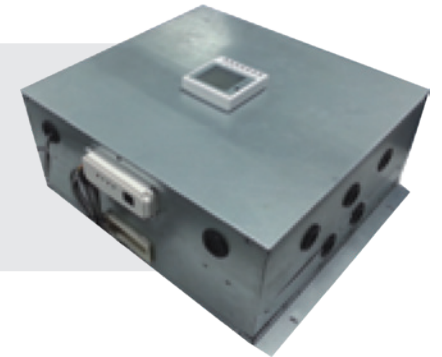
BMS Gateway

- 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



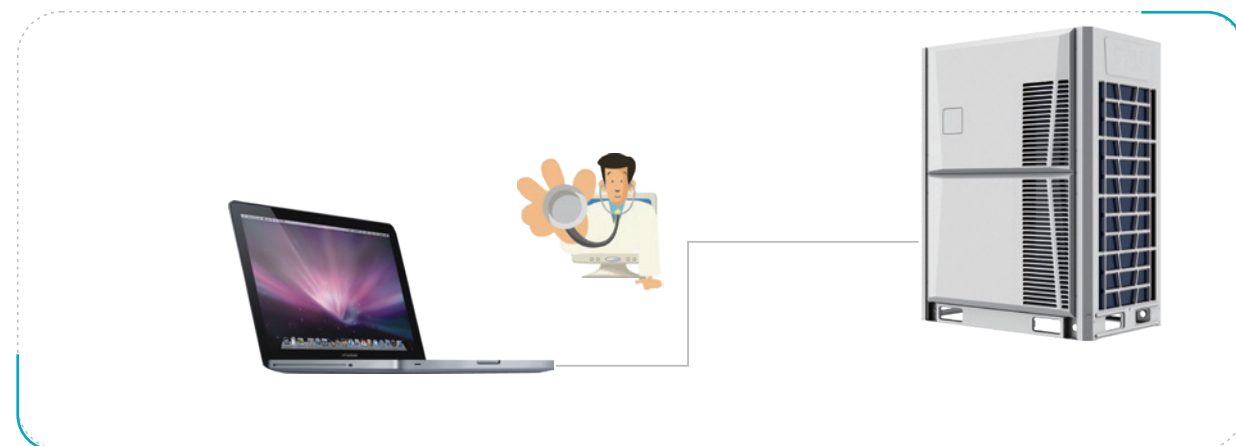
AHU Connection Kit

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

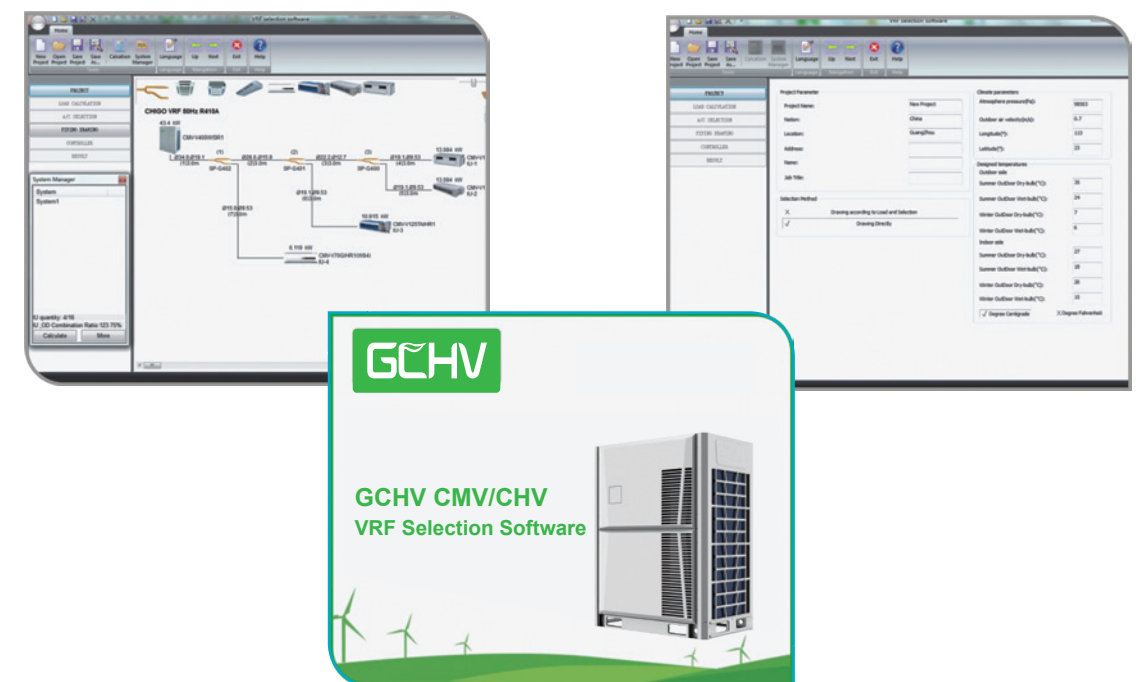


Doctor Kit Pro

- Fast to install, easy to use
- All indoor/outdoor units data can be enquired
- Using the computer to check the parameters



VRF Selection Software Pro



PROJECTS



Volgograd Arena ,Important venue of the 2018 Russia World Cup, total VRF capacity 2400KW.



Murtala Muhammed Airport Lagos , total VRF capacity 800KW.



Nizhny Novgorod Stadium, Important venue of the 2018 Russian World Cup, total VRF capacity 1600KW.



SEB Bank in Kaunas, Lithuania with CMV-R/CMV-X/CMV-MINI VRF system

PROJECTS



Main venue of the Universiade in Shenzhen, total VRF capacity 8000kW.



Mauritania International Conference Center, CMV-C & CMV-mini, total VRF capacity 3640KW.



Double Tree(Hilton) in Russia, with 3-pipe VRF system.



Montego bay resort in Jemaica, with DC inverter VRF system.