

# GCHV

## DC INVERTER VRF SYSTEM Product Catalogue

T1 Condition



### Giwee Company

📍 No. 28, Eastern Industrial Park, Lishui Town, Nanhai District, Foshan City, Guangdong Province, China, P.C:528244

✉ giwee.vip@giwee.com 🌐 www.giwee.com

☎ 86-757-88781037 📠 86-757-88789825

A Carrier Company

Note: The specifications of this catalog may change for further improvement on quality and performance without prior notice to allow us to incorporate the latest innovations for its customers. The information contained in this catalog is merely informative.

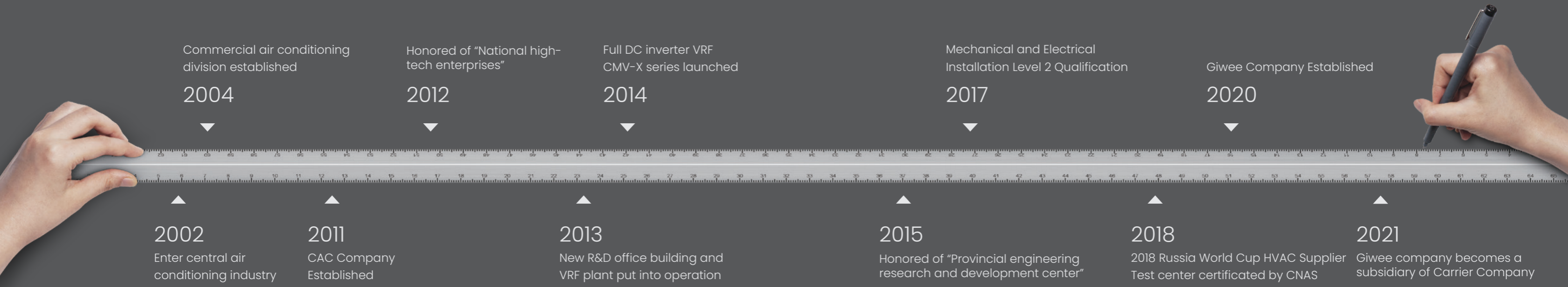
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## About Giwee Company

Giwee is a global supplier with integrated advantages in R&D, production and sales in the HVAC field, brand name is GCHV. Giwee has been deeply involved in the air-conditioning field for more than ten years with a rich product lineup and excellent market competitiveness, mainly engaged in RAC, CAC, heat pump and ventilation systems. Giwee is a Carrier company, and Carrier is the leading global provider of innovative healthy, safe, sustainable and intelligent building and cold chain solutions.

Giwee covers an area of 167,000 square meters, with more than 120,000 square meters of plants and 17 modern first class production lines. Annual output exceeds 2.5 million sets, includes VRF, modular chiller, light commercial air conditioners, air source heat pumps and other products. Products are in great demand on 100 more countries and regions and has accomplished thousands of reference projects worldwide.





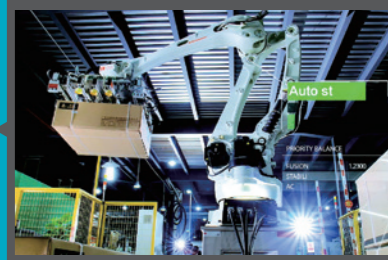
## Production Capacity

Giwee has 17 advanced production lines and an annual production capacity of over 2.5 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 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

Giwee 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 certificated by CCC, energy-saving certification, ETL, AHRI, DOE, CE, CB, SASO, ESMA, MEW and others.



ISO9001

ISO14001

ISO45001

QC 080000

AEO



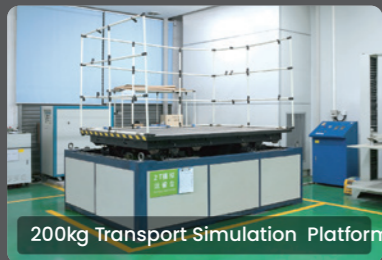


Enthalpy Difference Lab



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

## Directory

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The R&D center of Giwee has more than 200 technical engineers, 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 Giwee and served as senior technical consultants, Giwee pay great attention in R&D and invest 4.5% of annual income every year to develop new technology, by the continuous innovation, Giwee 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.



**2002** Develop intelligent VRF system, enter VRF market.

**2004** Successfully developed intelligent inverter VRF system.

**2009** Upgrade performance; launch more stable, energy saving, and more comfortable super DC inverter module.

**2011** Launch new CMV system adopt the industry fourth generation core technology, both process and quality upgrade.

**2013** Full DC inverter CMV-X was successful developed;

## VRF Development History



**2020** CHV-Pro got Eurovent certification in 2020

**2019** Launched New generation CHV-Pro VRF series.

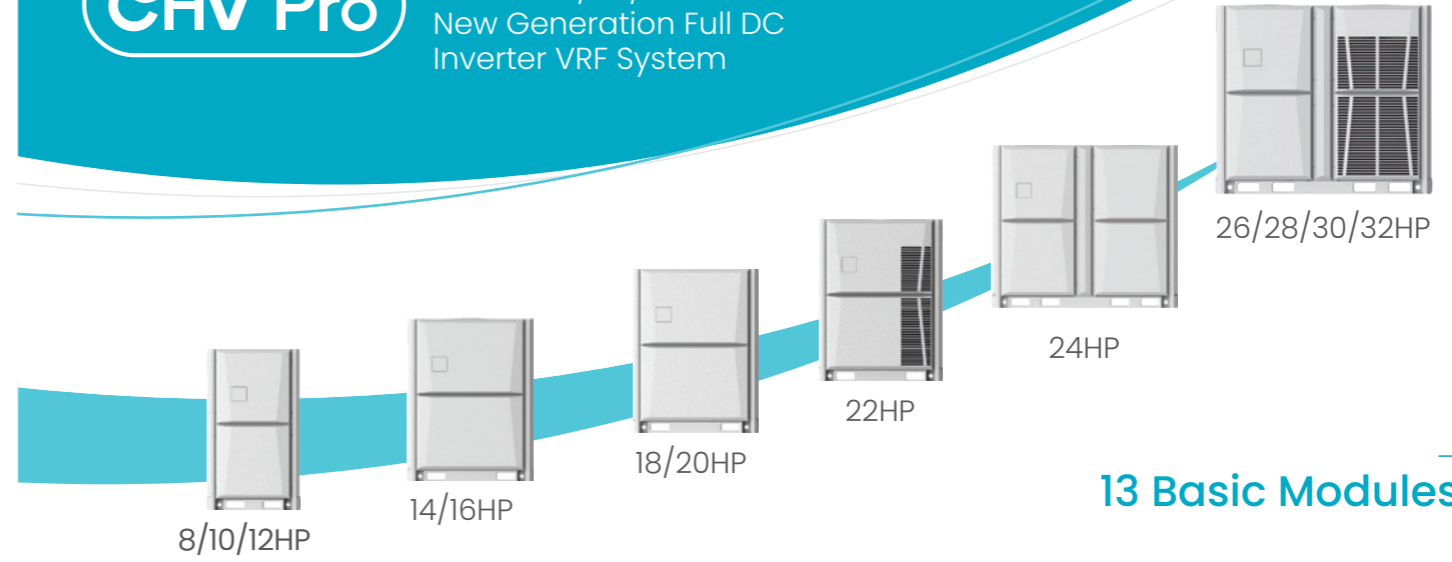
**2018** Launched CMV-X\* Full DC inverter EVI VRF system.

**2017** CMV-X got EUROVENT certification in 2017. Become 2018 Russia World Cup HVAC equipment supplier.

**2016** Launched CMV-R heat recovery VRF system.

**2015** New CMV-C series launched with high efficiency and excellent performance.

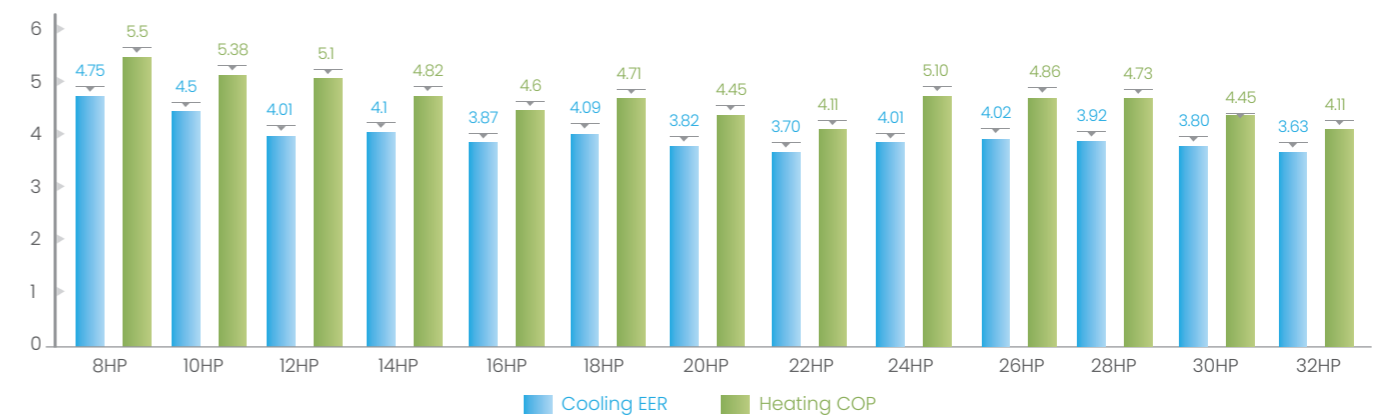
**CHV Pro**  
380~415V/3N/50Hz&60Hz  
208~230V/3N/60Hz  
New Generation Full DC  
Inverter VRF System



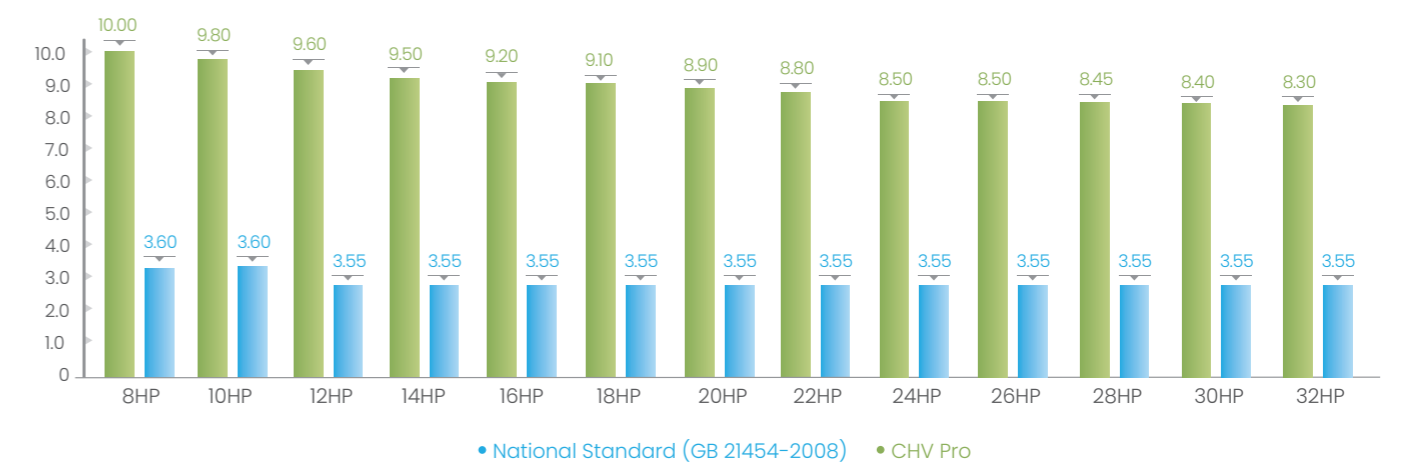
13 Basic Modules

Capacity	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP
	25.2kW	28kW	33.5kW	40kW	45kW	50kW	56kW	61.5kW	67kW	73kW	78.5kW	85kW	90kW
Compressor	DC	DC	DC	DC	DC	DC	DC	DC	DC+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+DC	DC+DC

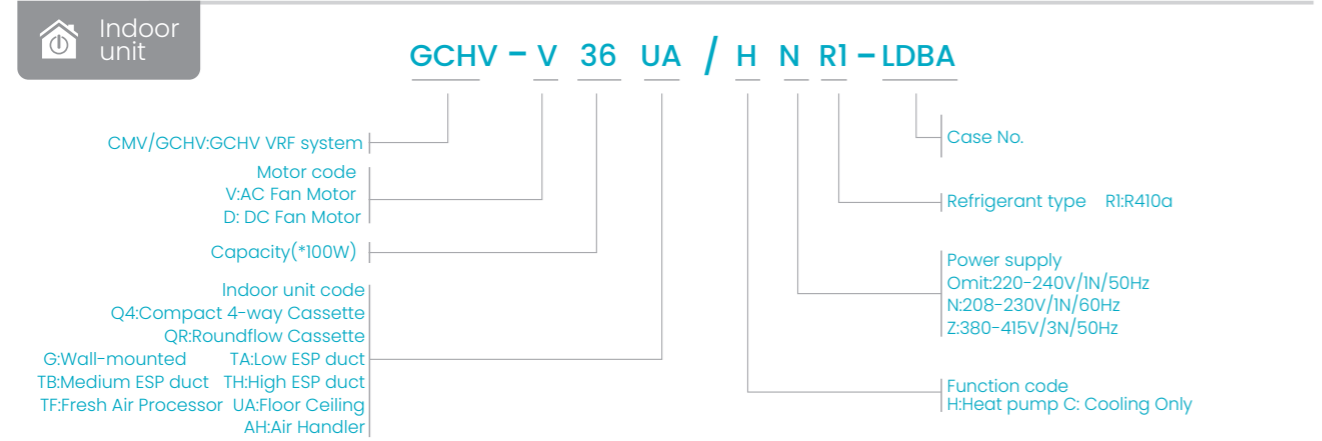
## EER&COP



## IPLV(C)



## How To Read The Model Name



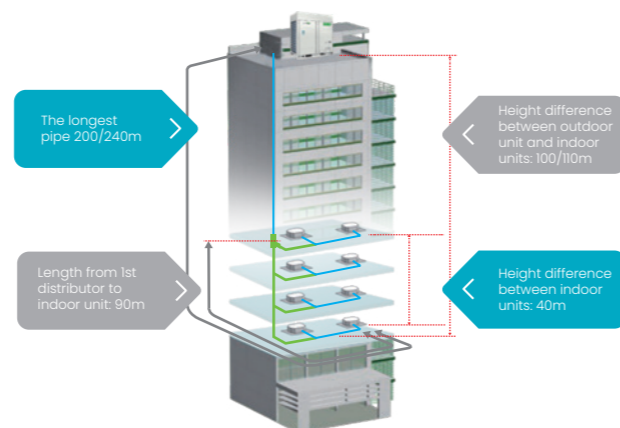
## Combination Table

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.

## Refrigerant Piping

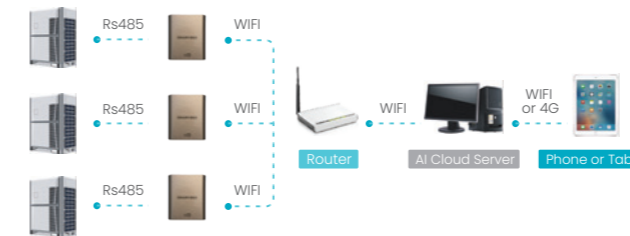
The total pipe length	1000 m
The longest pipe length	200 / 240m
Height difference	Outdoor unit above <100m Outdoor unit below <110m
Height difference between indoor units	40m
Length from first indoor distributor to last indoor unit	90 m
Communication wire length	can be up to 1000m.



\*Please refer to the installation manual for detailed length description.

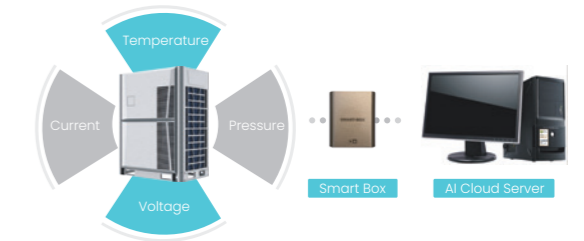
## Features

**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.



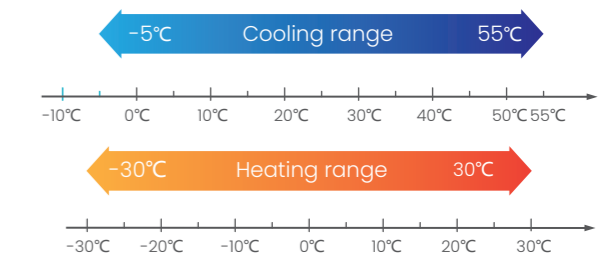
**Refrigerant Cooling Design**

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**

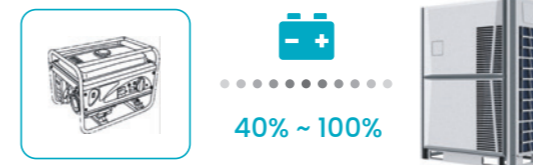
- Due to EVI technology, CHV PRO heating performance increased by 35% compare to conventional VRF system.
- Due to EVI technology, CHV PRO still has 85% of rated capacity even in -15°C.



\*Based on GCHV internal test report

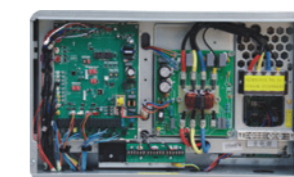
**Power Saving Mode**

According to power usage, realize 7-level power limit setting.



**Refrigerant Status Detection**

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

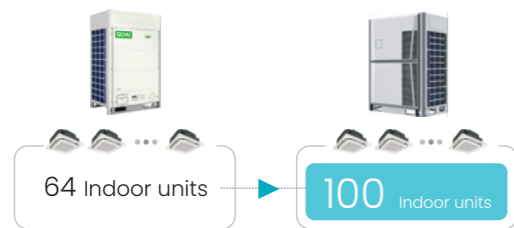


- 13 Extremely insufficient
- 12 Insufficient
- 11 Slightly insufficient
- 0 Normal
- 1 Slightly excess
- 2 Overmuch

## Features

### ② More indoor units

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



### 🔒 Electrical Lock Function(optional)

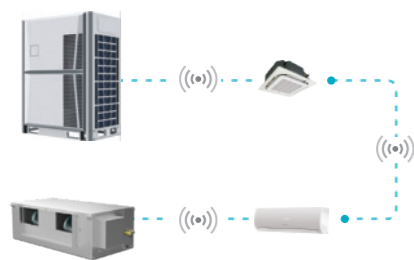


In case of end user doesn't pay as contract, electrical lock function can be used to stop VRF system, and end user can not start the system without permission.

System can be unlock with password by authorized technician.

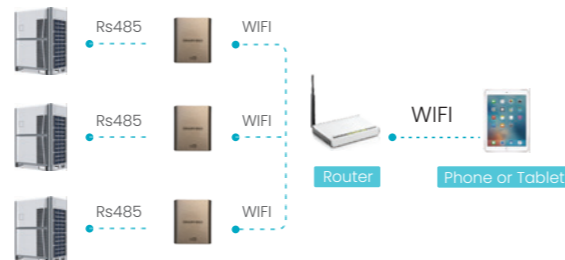
### 📶 Wireless Communication(optional)

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



### 🏠 Online Diagnosis

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



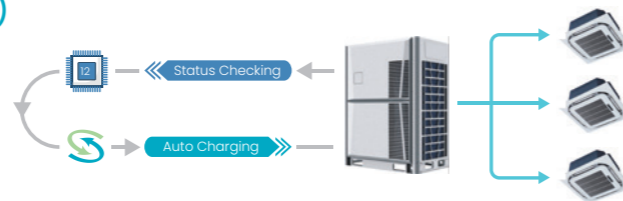
### 👤 Service Window On Front Cover

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.3 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.

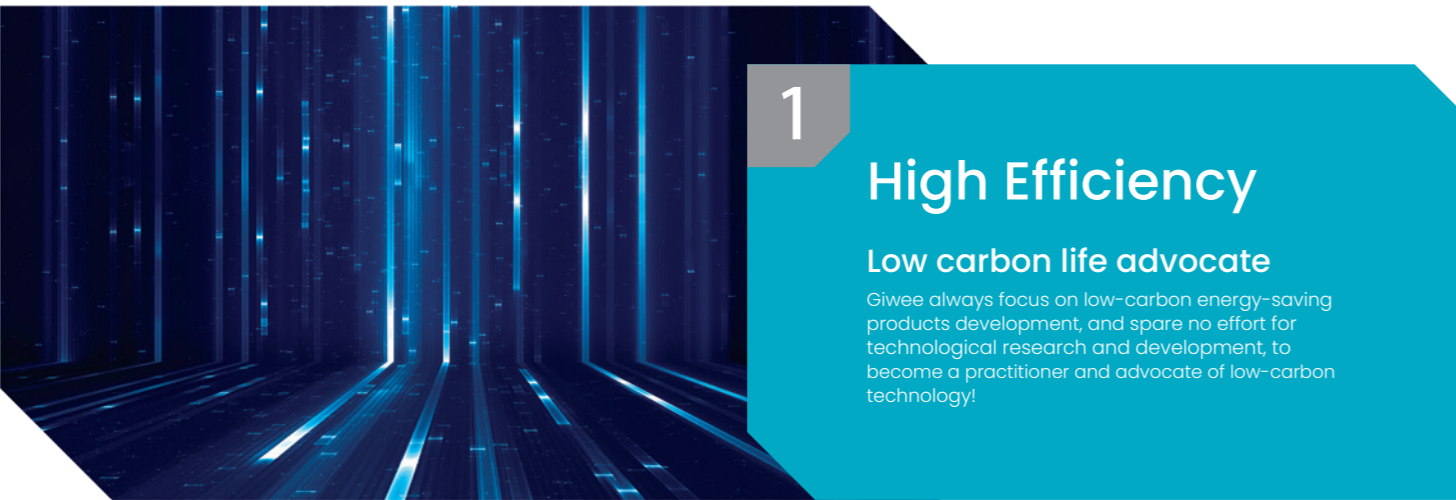
## 1 High Efficiency

## 2 Benefits For Users

## 3 Benefits For Installers

# Advantages

Provide You With Fresh Air

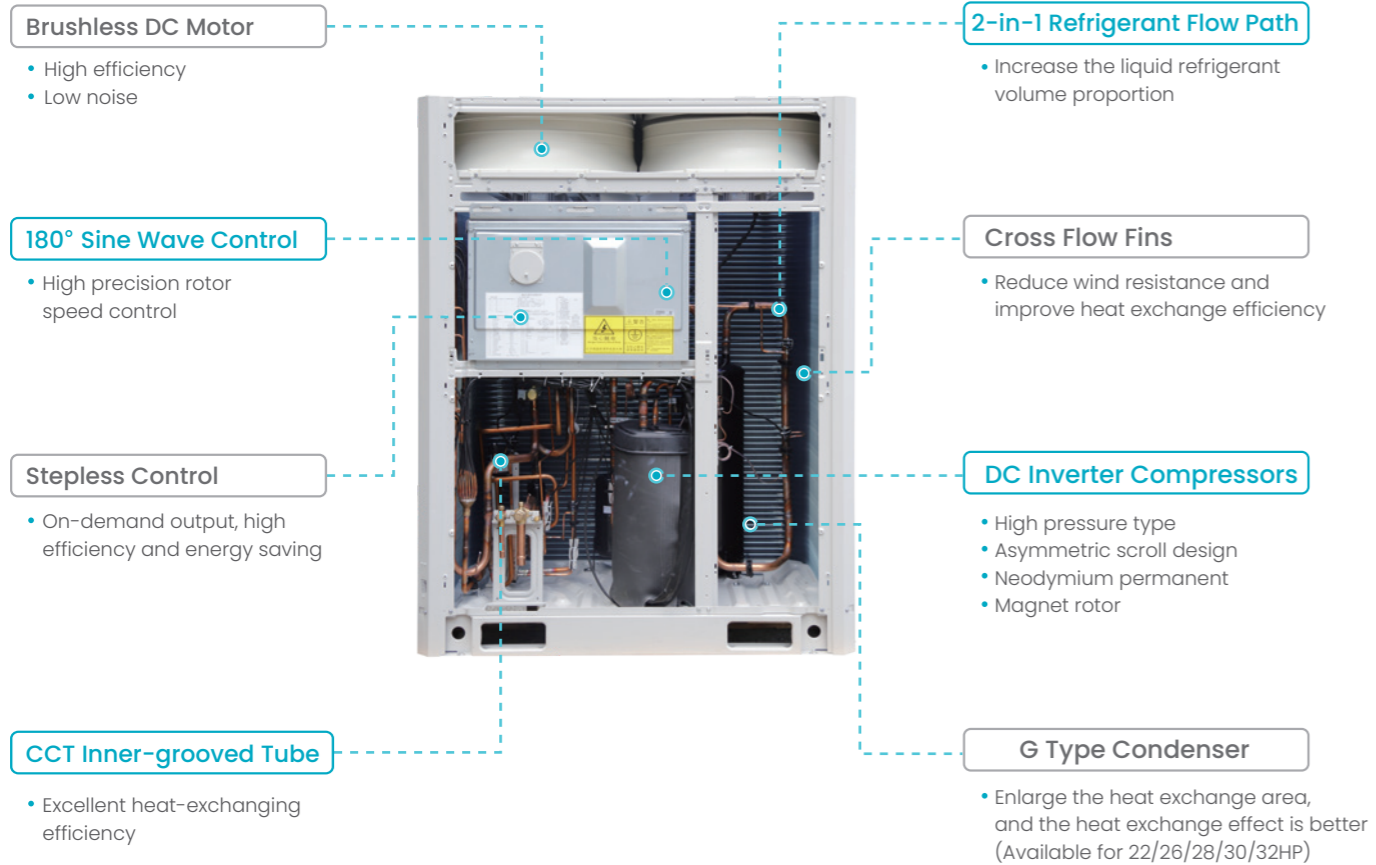


# 1 High Efficiency

## Low carbon life advocate

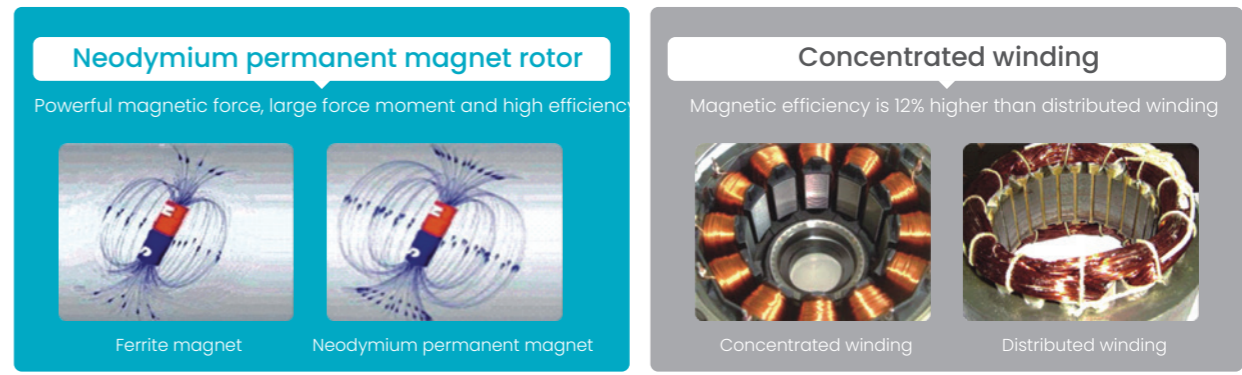
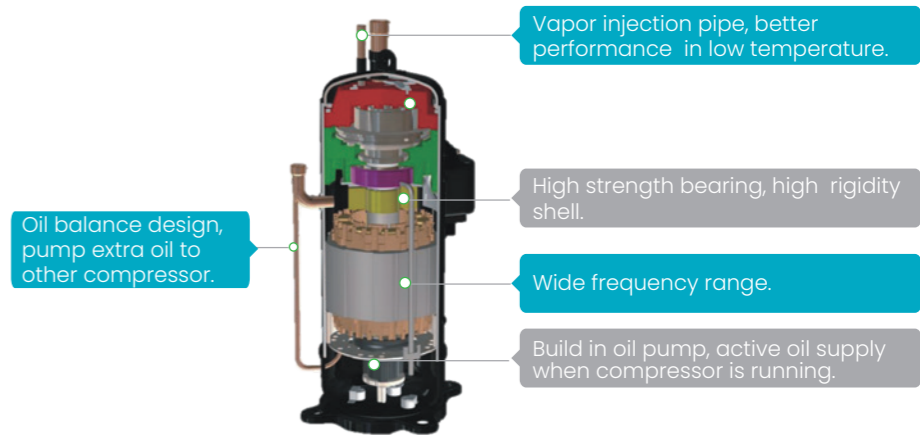
Giwee always focus on low-carbon energy-saving products development, and spare no effort for technological research and development, to become a practitioner and advocate of low-carbon technology!

### Core Technologies Make High Efficiency



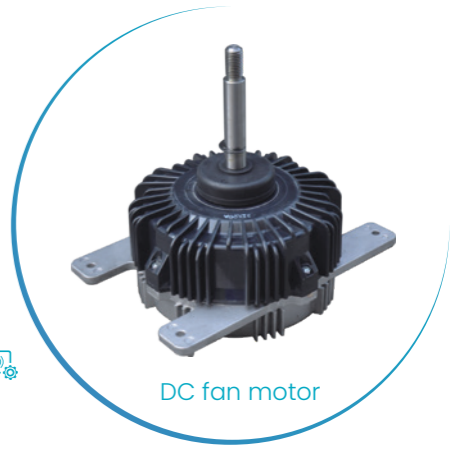
### High Efficiency DC Inverter Compressor

- 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



### 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.

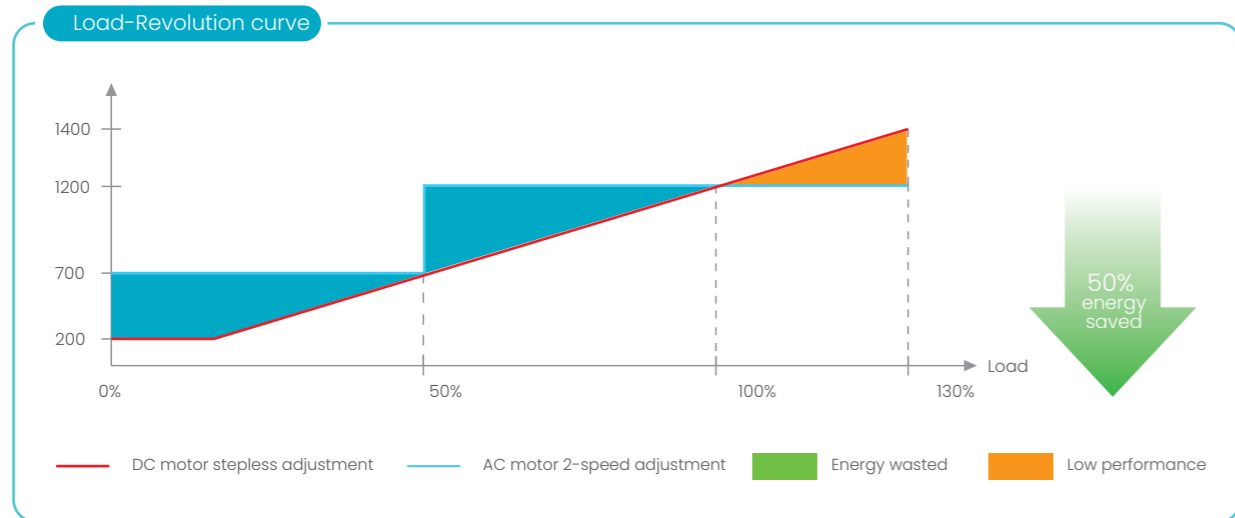






## Stepless Control

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°

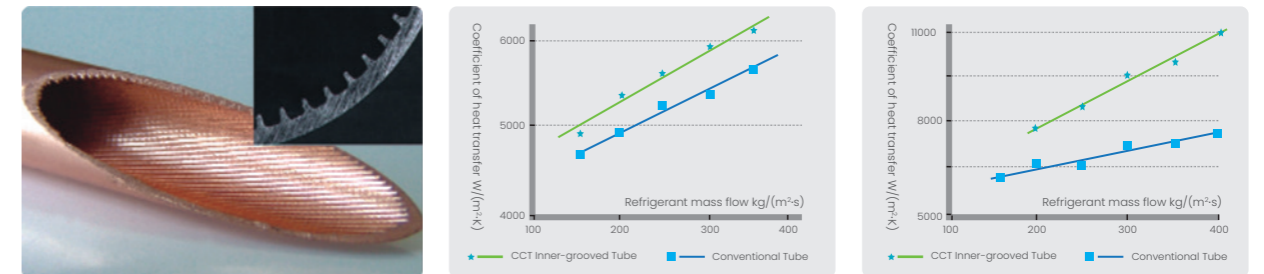
## 180° Sine Waveform Control

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%.

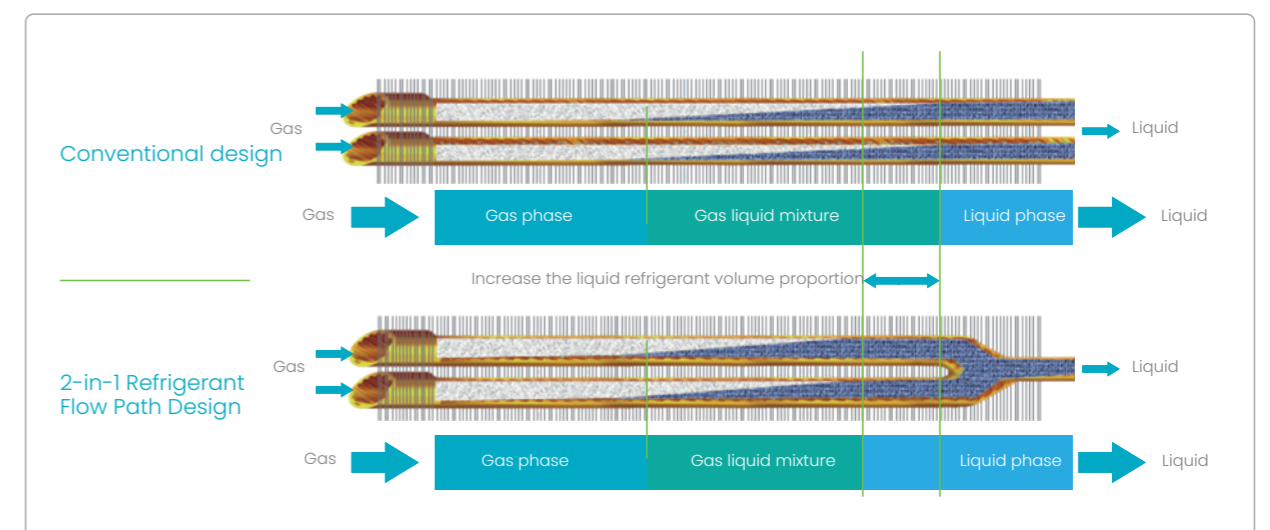
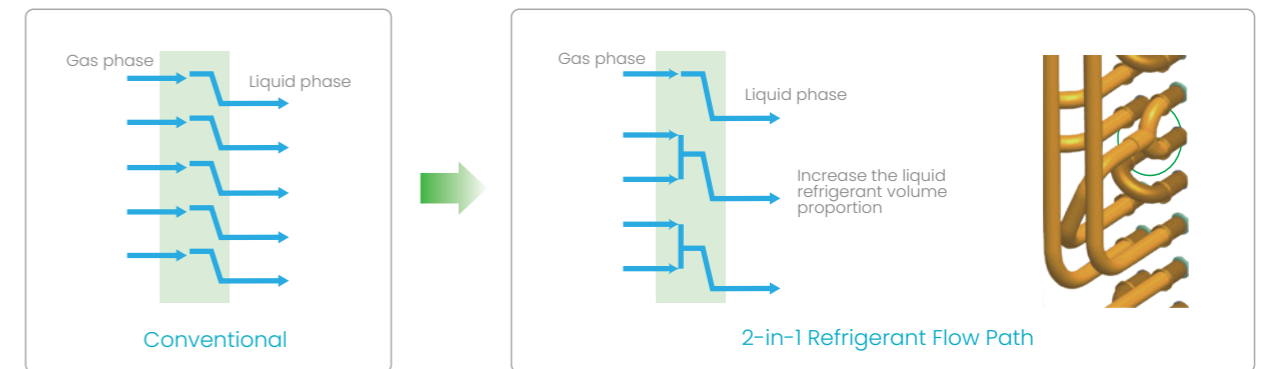


## CCT Inner-grooved Tube

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.



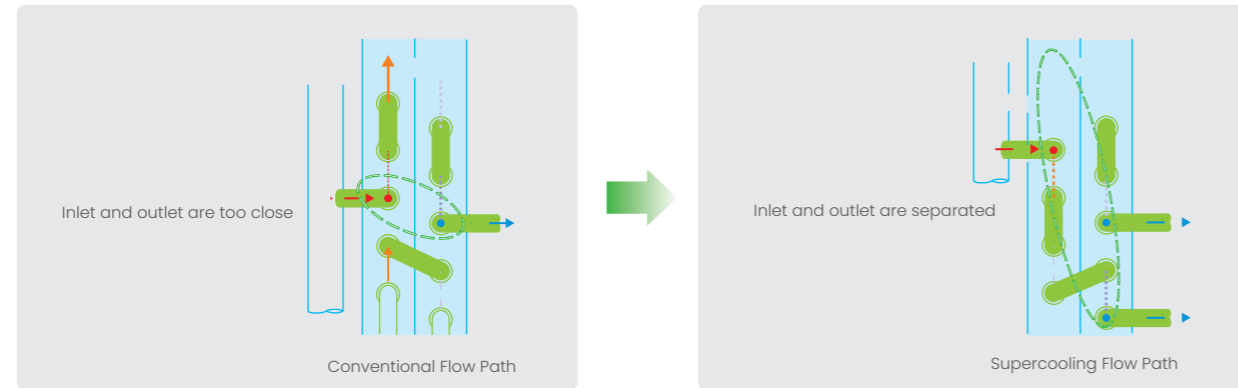
## 2-in-1 Refrigerant Flow Path Design





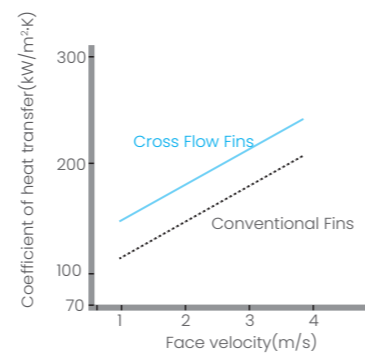
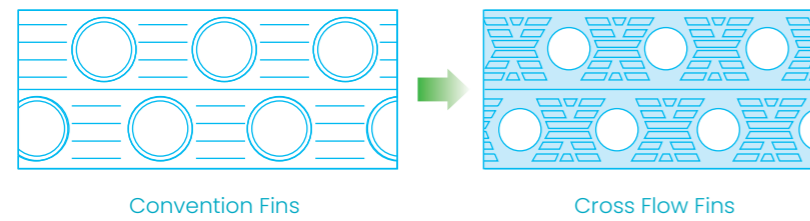
## Supercooling Flow Path Design

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.



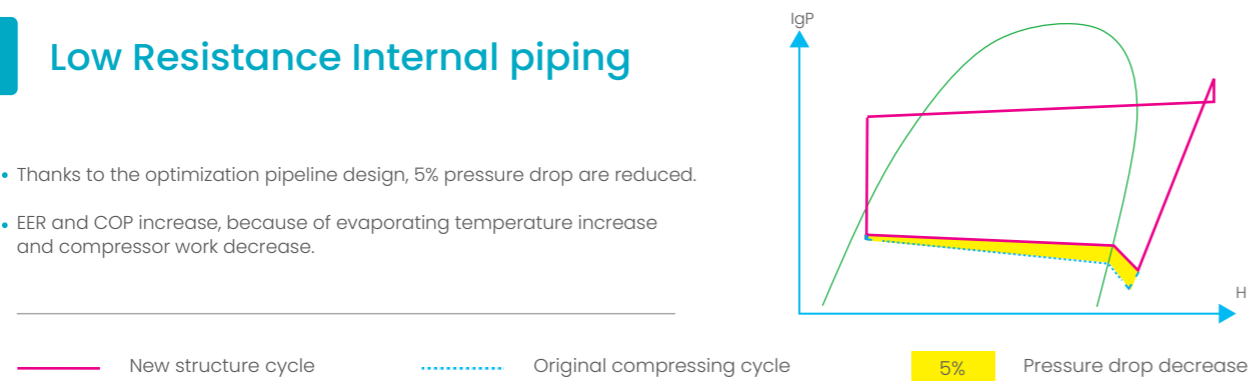
## Cross Flow Fins

- 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.



## The PHE Economizer

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



2

## Benefits For Users

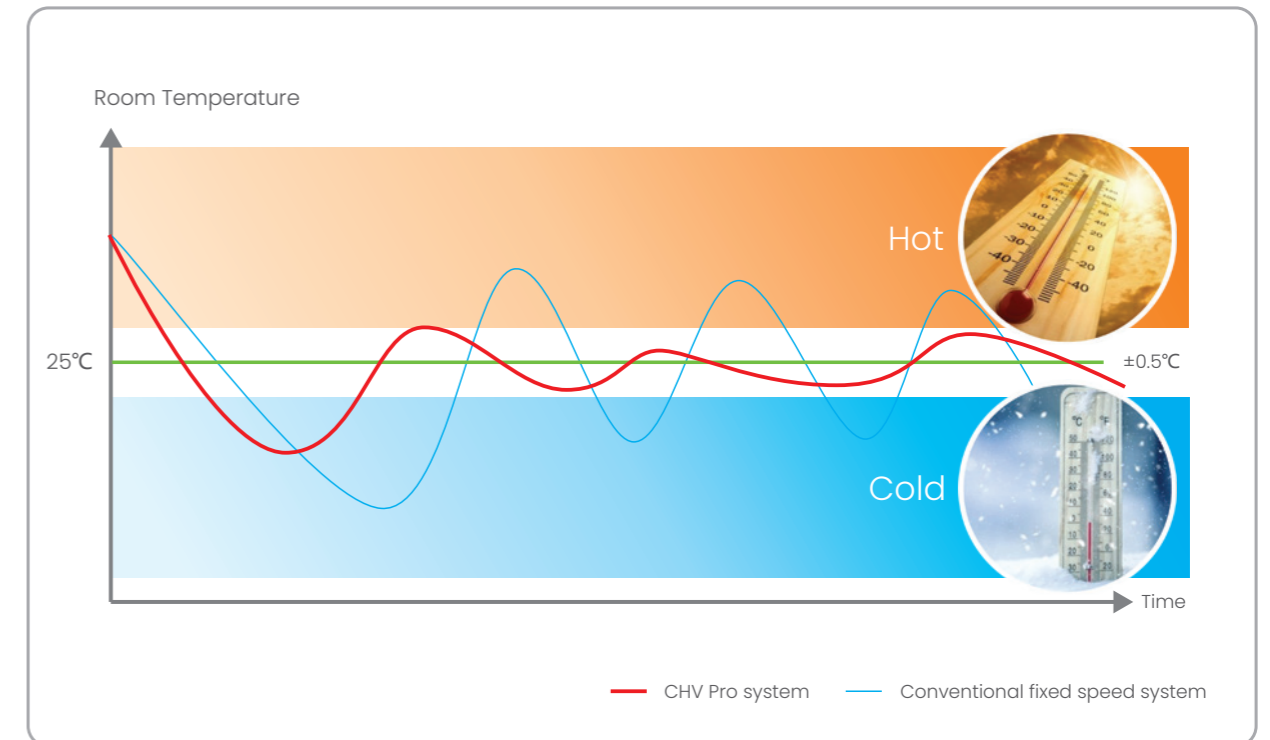
### Livable environment creator

Giwee 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

- CHV Pro 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.





## Wide Operation Range

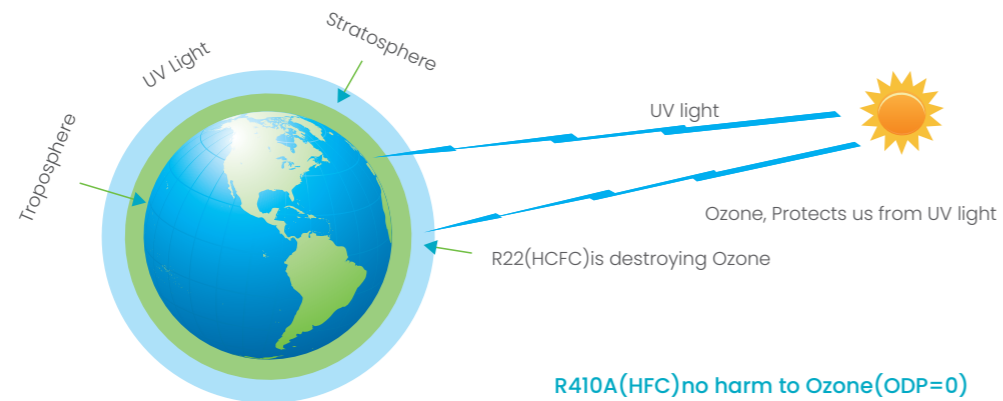
CHV pro has a wide ambient temperature operation range, cooling at -5-55°C, and heating at -30-30°C.



## Environment Friendly

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

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



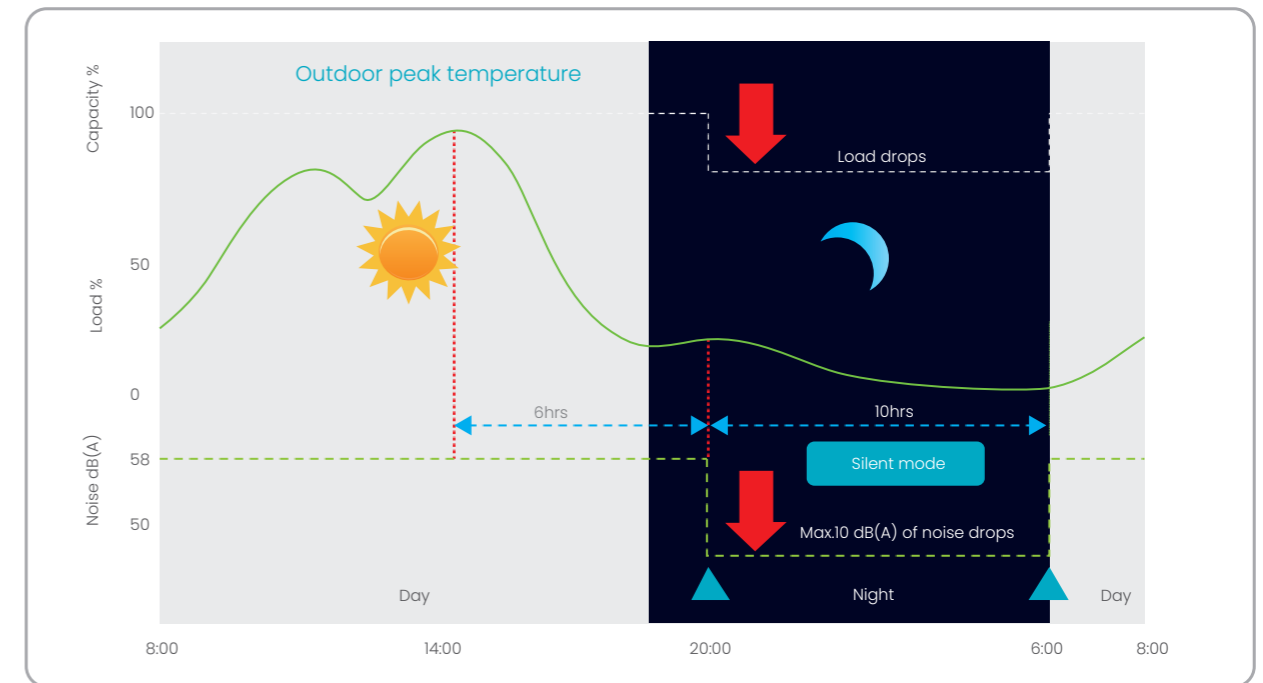
## Snow-proof Function

- In the cold weather, outdoor fan will start to run for a while at intervals to prevent the snow to accumulate on fan blade, because accumulated snow will freeze and block fan blade rotating, even worse it will damage the motor.



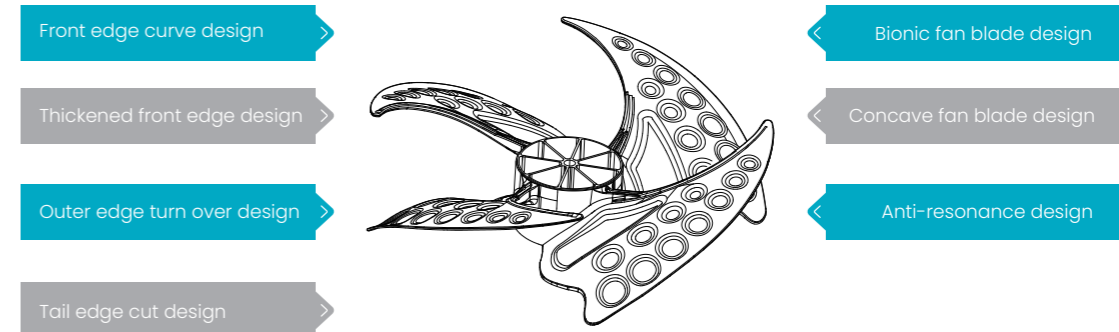
## Silent Mode, Night Time Noise Control

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



## Low Noise Fan Blade

Fan blade with 7 noise reduction design, effectively reduce the noise while operation.

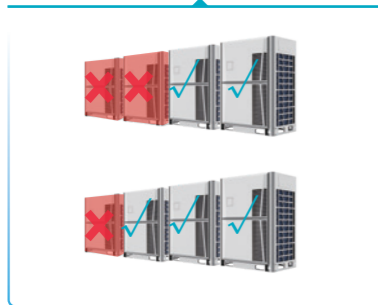




## 3-stage Back Up Function

### 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.

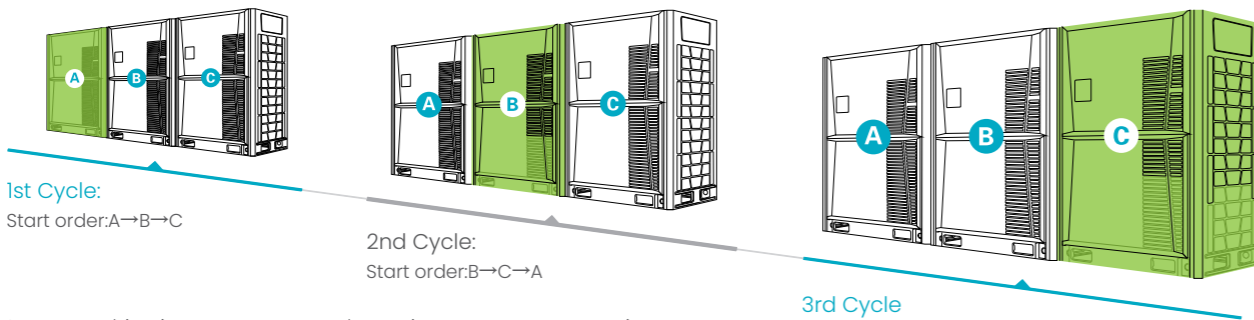


### Fan motor back up function.

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.
- Cycle operation equalizes the running time of the outdoor units, greatly extending the lifespan of outdoor units in one system.



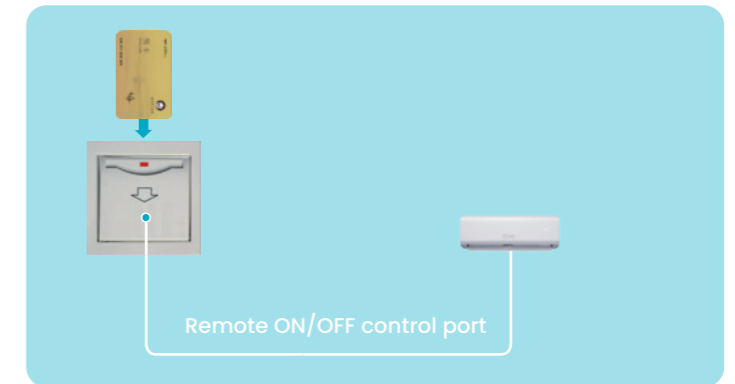
## IDU and ODU Positioning Function

Turn on the positioning function through the controller, and all the IDU and ODU of the same system will beep through the built-in buzzer, which is convenient for quick positioning during system commissioning, troubleshooting and after sales maintenance.



## 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.



## Intelligent Defrosting Program

### 5 special defrosting mechanisms

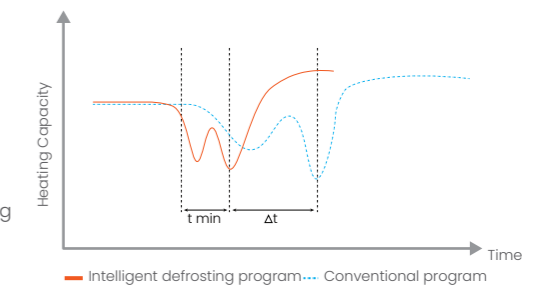
The dedicated temperature sensor monitors the temperature of the condenser coil of the outdoor unit in real time, intelligently selects the defrost mechanism and judges the timing of defrost, effectively prolongs the normal heating time, improves comfort, and achieves energy-saving effects.

- Normal temperature and low humidity defrosting mechanism
- Normal temperature and high humidity defrosting mechanism
- Low temperature and low humidity defrosting mechanism
- Low temperature and high humidity defrosting mechanism
- Ultra-low temperature environment defrosting mechanism

### Defrost Curve

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

- 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





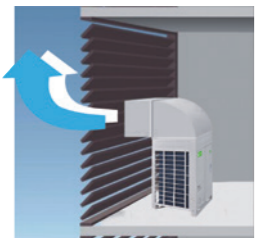
### 3 Benefits For Installers

#### Optimization for designer and installer

CHV Pro 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 80 Pa.



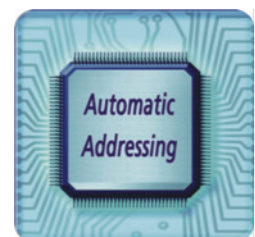
### Touch Screen Wired Controller



- Air filter cleaning reminding function.
- Touch screen with black background and blue 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

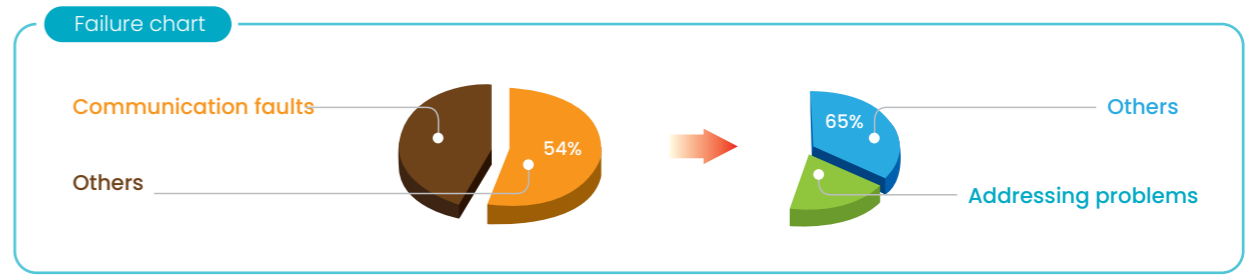


- 2 addressing methods:
  - Automatically addressing: system will distribute address to indoor unit automatically.
  - Manually setting by wired controller or wireless remote controller.
- Addressing method can be selected easily by adjusting the switch on outdoor PCB.



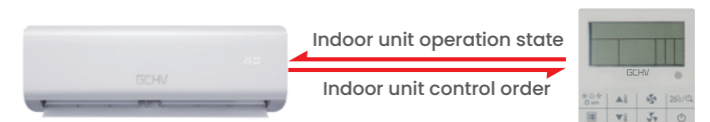
### Automatic Addressing

- 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.



### Digital Display On The PCB

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

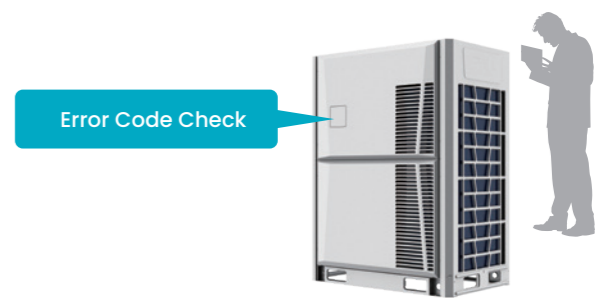


- Record error code list at main PCB chip, easy for service people to check.



### Service Window

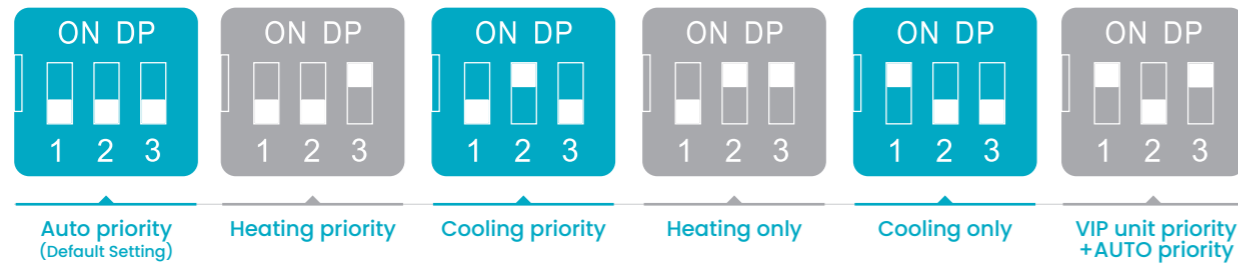
Thanks to the service window, checking outdoor unit's status and setting is now easy, no need to remove the electric control box cover.



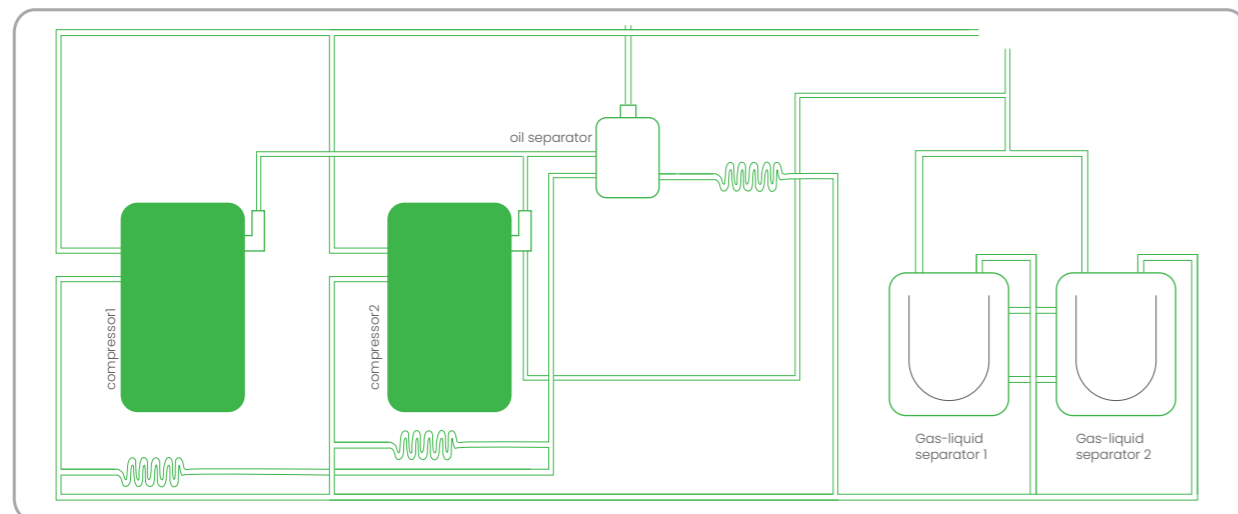
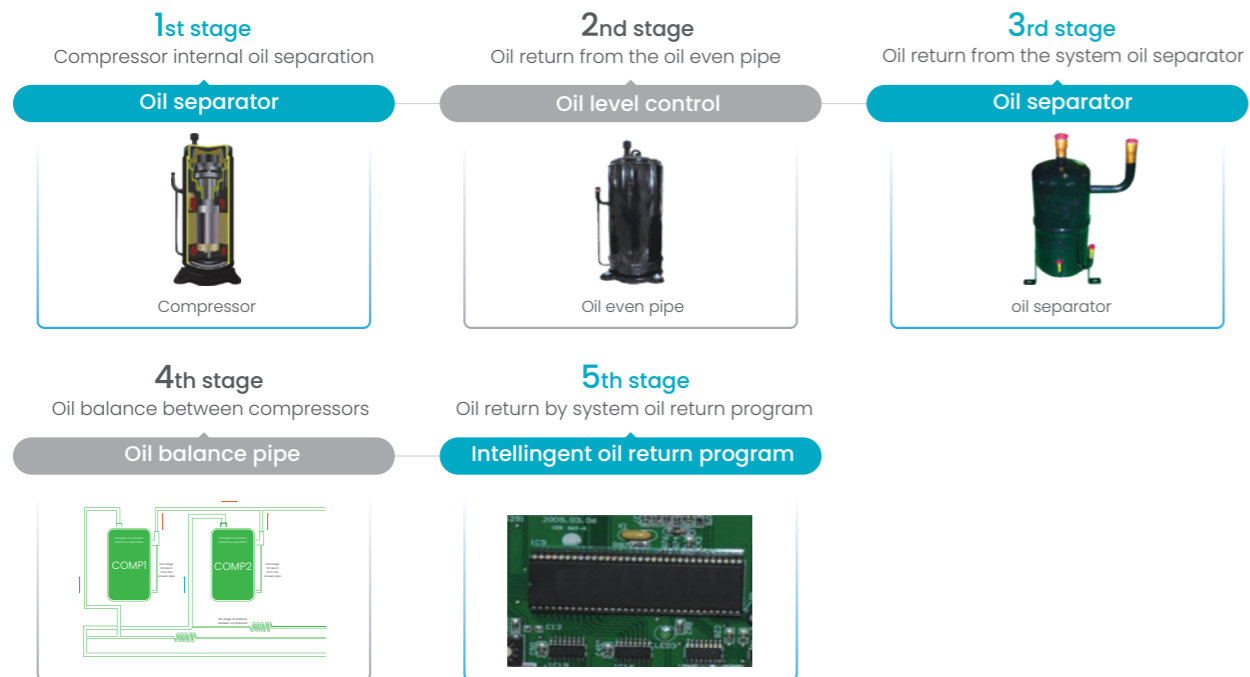


## Mode Restriction

- 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

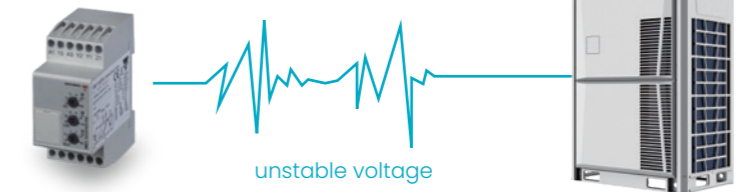


- All key components are designed to close to outside, it is convenient for repair and replacement.
- Thanks to the new balance technology, gas balance pipe does no longer exist, brazing points and leaking risk are decreased.



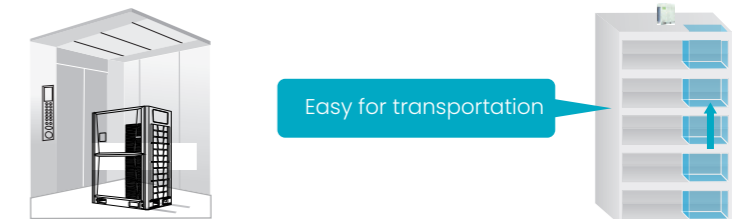
## 3-Phase Power Protector(Optional)

Protect the outdoor unit from instable voltage.



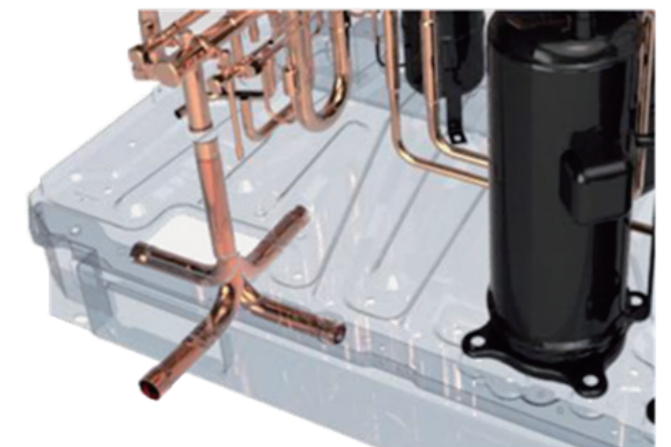
## Easy Installation

- Easy for the outdoor unit to transport to roof floor by elevator due to its compact size.



## 360° Pipe Connection

- The outlet pipe of the outdoor unit can be extended to all directions through the bottom space;
- No outlet pipe on the front can improve the aesthetics of installation;





**380-415V/3N/50&60Hz  
NEW DC INVERTER EVI VRF SYSTEM**

Model Name			GCHV-E252W/HZRI-DK01	GCHV-E280W/HZRI-DK01	GCHV-E335W/HZRI-DK01	GCHV-E400W/HZRI-DM01	GCHV-E450W/HZRI-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
<b>Performance Data</b>							
Cooling	Capacity	HP	8HP	10HP	12HP	14HP	16HP
		kW	25.2	28.0	33.5	40.0	45.0
		Btu/h	86000	95500	114000	136500	153500
		RT	7.2	8.0	9.5	11.4	12.8
	Rated current	A	9.04	11.30	14.51	18.10	21.60
	Power input	kW	5.31	6.22	8.35	9.76	11.63
EER	W/W	4.75	4.50	4.01	4.10	3.87	
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%						
<b>Compressor Data</b>							
Compressor	Quantity	1					
	Type	Scroll Compressor					
	Brand	HITACHI					
<b>Physical Data</b>							
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	Mpa		4.5				
<b>Piping Data</b>							
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	
<b>Operation Temperature Range</b>							
Cooling	Outdoor side	°C	-5-55			-5-55	
	Indoor side	°C	16-32			16-32	
Heating	Outdoor side	°C	-30-30			-30-30	
	Indoor side	°C	16-32			16-32	

**Note**

- Cooling operating temperature range is from -5°C to 55°C (It can be customized down to -10°C). Heating operating temperature range from -30°C to 30°C.
- The cooling conditions: indoor side 27°C (80.6°F) DB, 19°C (66°F) WB outdoor side 35°C (95°F) DB.
- The heating conditions: indoor side 20°C (68°F) DB, 15°C (44.6°F) WB outdoor side 7°C (42.8°F) DB.
- 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.
- The above data may be changed without notice for future improvement on quality and performance.

GCHV-E500W/HZRI-DM01	GCHV-E560W/HZRI-DM01	GCHV-E615W/HZRI-DM01	GCHV-E670W/HZRI-DS01	GCHV-E730W/HZRI-DS01	GCHV-E785W/HZRI-DS01	GCHV-E850W/HZRI-DS01	GCHV-E900W/HZRI-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
50.0	56.0	61.5	67.0	73.0	78.5	85.0	90.0
170600	191000	209800	228600	249100	267800	290000	307100
14.2	16.0	17.5	19.1	20.8	22.3	24.2	25.6
23.29	26.10	29.06	29.09	32.59	36.13	40.36	44.73
12.22	14.66	16.62	16.71	18.18	20.03	22.37	24.79
4.09	3.82	3.70	4.01	4.02	3.92	3.80	3.63
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	24.88	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	30.1	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	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	25.2	28	33.5	40	45
		Btu/h	86000	95500	114000	136500	153500
		RT	7.2	8	9.5	11.4	12.8
	Power input	kW	5.86	6.79	9.18	10.50	12.20
	EER	W/W	4.30	4.12	3.65	3.80	3.68
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	10-120				
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	°C	-5-55				
	Indoor side	°C	16-32				

**Note** \*The above data may be changed without notice 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
Performance Data						
18HP	20HP	22HP	24HP	26HP	28HP	30HP
50.0	56.0	61.5	67.0	73.0	80.0	85.0
170600	191000	209800	228600	249100	273038	290000
14.2	16.0	17.5	19.1	20.8	22.75	24.2
15.10	17.60	20.36	20.81	23.10	25.97	29.11
3.31	3.18	3.02	3.22	3.16	3.08	2.92
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%						
Compressor Data						
1						2
DC /Twin-rotary						
Mitsubishi						
10-120						
Physical Data						
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						
Piping & Wiring Data						
		Φ15.9	Φ22.2			
		Φ28.6	Φ35			
1000						
200						
240						
90						
100						
110						
40						
0						
Operation Temperature Range						
-5-55						
16-32						



Model Name			GCHV-D252W/CXR1-DK01	GCHV-D280W/CXR1-DK01	GCHV-D335W/CXR1-DK01	GCHV-D400W/CXR1-DM01
Power Supply			208-230V/3N/60Hz			
<b>Performance Data</b>						
Cooling	Capacity	HP	8HP	10HP	12HP	14HP
		kW	25.2	28.0	33.5	40.0
		Btu/h	86000	95500	114000	136500
		RT	7.2	8.0	9.5	11.4
	Power input	kW	5.82	6.81	9.05	10.47
	EER	W/W	4.33	4.11	3.70	3.82
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%			
<b>Compressor Data</b>						
DC Inverter compressor	Quantity		1			
	Type		DC /Twin-rotary			
	Brand		Mitsubishi			
	Frequency range	rps	10-120			
<b>Physical Data</b>						
Refrigerant	Type		R410a			
	Volume	Kg	8		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			
<b>Piping &amp; Wiring Data</b>						
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			
<b>Operation Temperature Range</b>						
Cooling	Outdoor side	°C	-5-50			
	Indoor side	°C	16-32			

**Note** \*The above data may be changed without notice 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				
16HP	18HP	20HP	22HP	24HP
45.0	50.0	56.0	61.5	67.0
153500	170600	191000	209800	228600
12.8	14.2	16.0	17.5	19.0
12.13	14.62	17.13	19.84	22.11
3.71	3.42	3.27	3.10	3.03
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

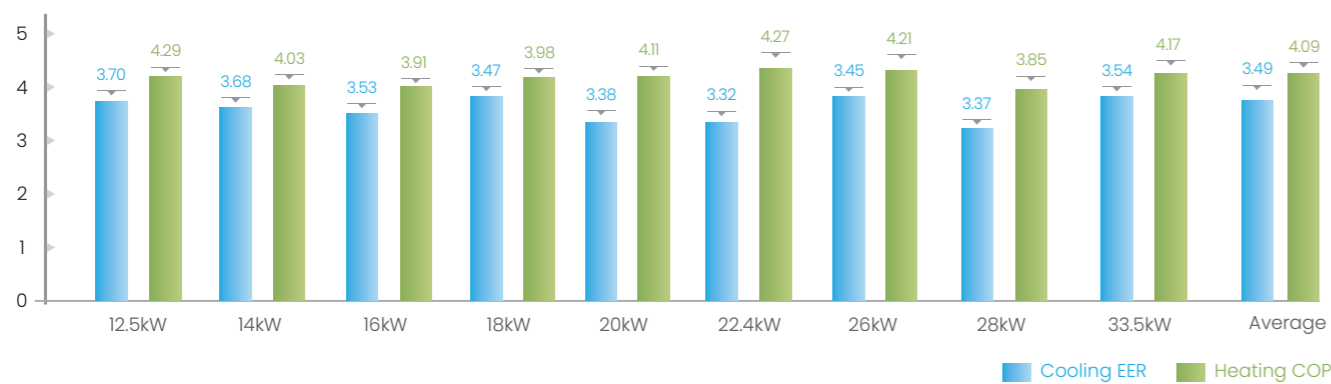
Small Capacity Full DC Inverter VRF Unit



## 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

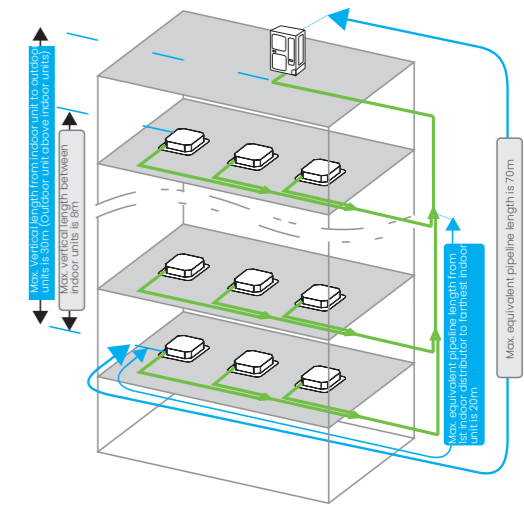
## EER&COP



## Refrigerant Piping

The total pipe length	100m(12.5-22.4kW),120m(26-33.5kW)
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

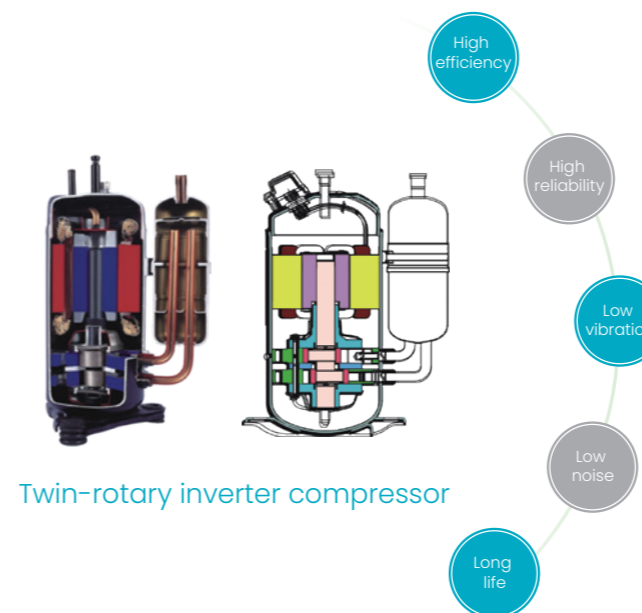
\*Please refer to the installation manual for detailed length description.



## Features



### High Efficiency DC Inverter Compressor



Twin-rotary 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 refrigerant 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

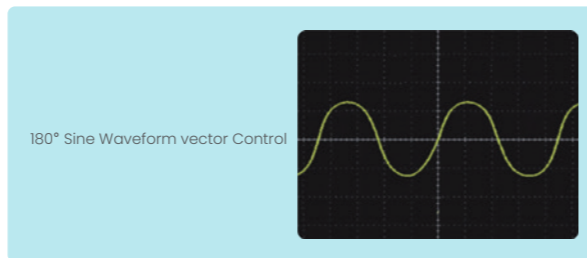
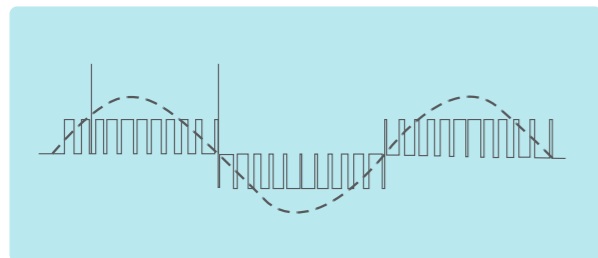
## Space Saving Installation

- 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.

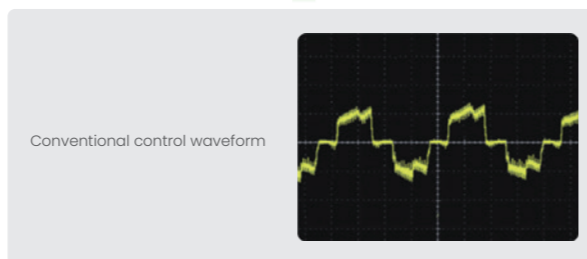
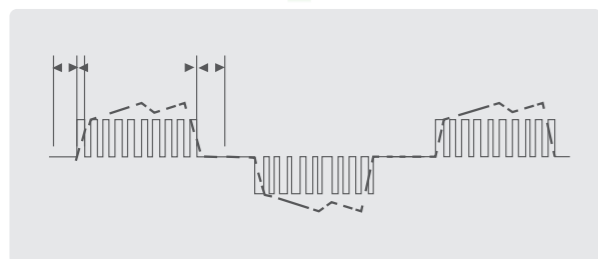


## 180° Sine Wave Control

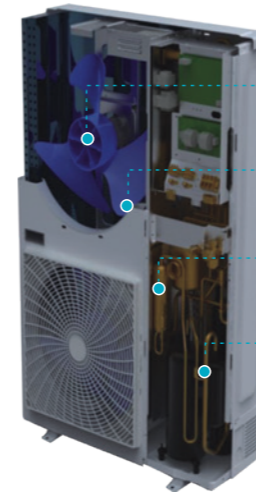
The perfect combination of 180° Sine wave rotor frequency drive control technology and excellent IPM inverters, reduces the reactive loss of motor-driven, increases motor efficiency by 12%.



Increase efficiency by 12%



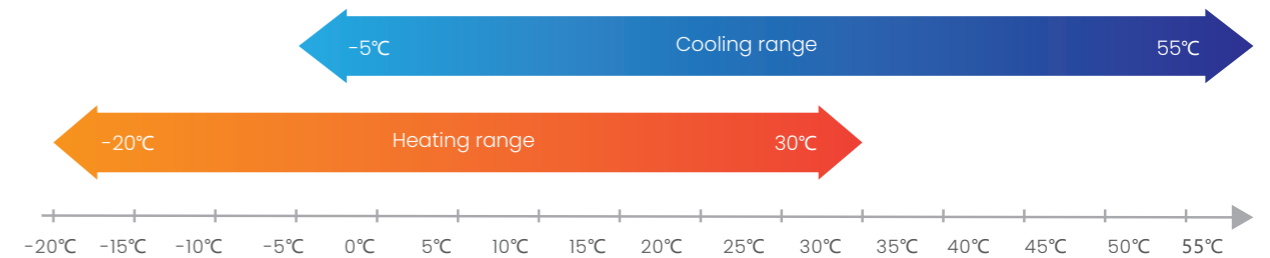
## Silent Technology



- 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.

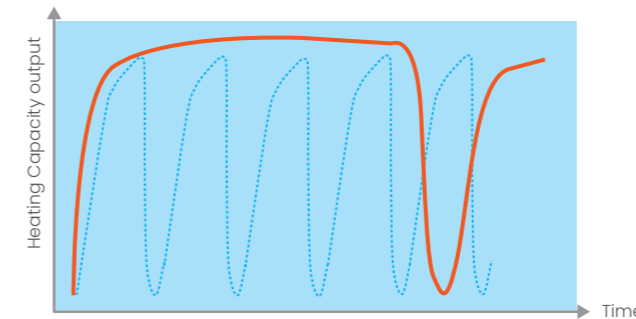
## Wide Outdoor Operation Range

Max. cooling operating temperature is designed up to 55°C. Heating operating temperature is down to -20°C.



## 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

**Strong Wind**

Rotation correct  
Can startup

**Strong Wind**

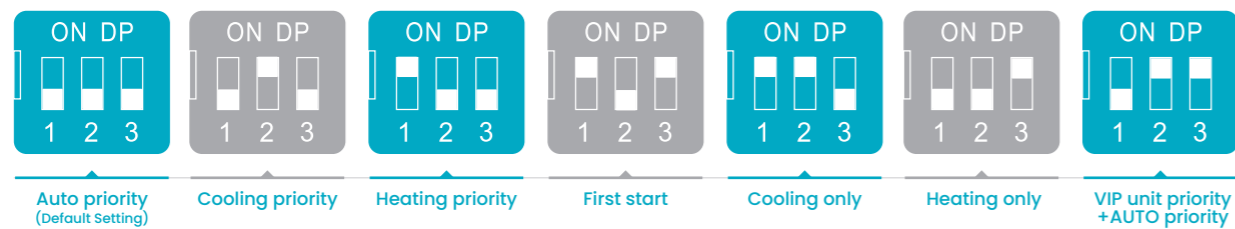
Rotation incorrect  
Under protection  
Can not start

In standby, if the outdoor fan motor is rotating in opposite direction at a high speed by the wind or other natural factors, the unit can't start so as to keep the fan motor from broken down, it will start when the fan motor speed slow down.



## Mode Restriction

- 7 kinds of mode restriction
- Auto priority(Default Setting)
- Cooling only mode
- Mode restriction function can be selected on the outdoor PCB.
- Cooling priority mode
- Heating only mode
- Heating priority mode.
- VIP unit priority+AUTO priority mode
- First start mode



## High Efficiency

**Refrigerant cooling technology for PCB**

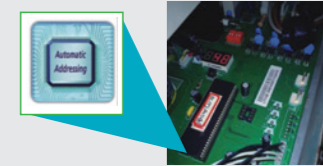
- 1 The radiation fin is made of aluminum panels fitting together seamlessly.
- 2 This helps to cool down the IPM, it has better performance compared to air cooling for PCB.
- 3 The outdoor unit has capability to run in max. 55°C ambient temperature.

NEW TECHNOLOGY



## Automatically Addressing

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



## Independent Display Board

**Digital display**

Digital 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

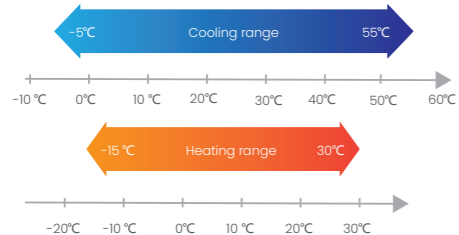


8 / 10 / 12.5 / 14 / 16kW  
Smaller size, higher efficiency



### Compact appearance

- Easy for transportation.
- It is suitable to be installed on terrace due to its compact appearance.

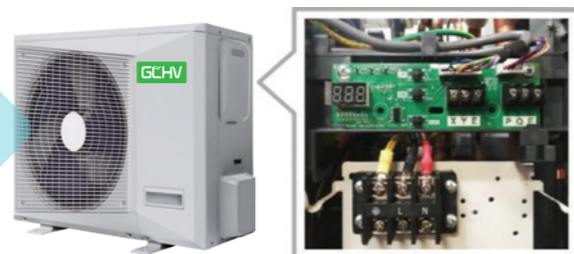


### Wide Outdoor Operation Range

Because of refrigerant cooling design, the cooling ambient temperature range is 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				Heating				Compressor		Motor		Refrigerant		Sound pressure Level dB(A)	Dimension (WxHxD)			Weight		Connecting		Max connected indoor units quantity
		Capacity kW	Btu/h	Power input kW	EER	Capacity kW	Btu/h	Power input kW	COP	Type	Qty	Type	Qty	Type	Volume kg		Packing mm	Body mm	Net kg	Gross kg	Gas mm	Liquid mm		
GCHV-DI25W/HZRI-050D	380-415/3/50	12.5	42000	3.38	3.70	14	47000	3.26	4.29	DC/ Twin - rotary	1	DC/ fan motor	2	R410a	3.45	56	1010 x 1445 x 415	975 x 1335 x 400	86.6	96.4	Φ15.88	Φ9.52	7	
GCHV-DI40W/HZRI-050D	380-415/3/50	14	47800	3.80	3.68	16	54000	3.97	4.03						3.8		8							
GCHV-DI60W/HZRI-050D	380-415/3/50	16	54000	4.53	3.53	18	61000	4.61	3.91						3.8		9							
GCHV-DI80W/HZRI-050D	380-415/3/50	18	61000	5.18	3.47	20	68000	5.02	3.98						4.2	10								
GCHV-D200W/HZRI-080	380-415/3/50	20	68200	5.92	3.38	22	75000	5.35	4.11						5.3	11								
GCHV-D224W/HZRI-080	380-415/3/50	22.4	76400	6.75	3.32	24	81800	5.62	4.27						5.3	13								
GCHV-D260W/HZRI-100	380-415/3/50	26	88700	7.54	3.45	28.5	97200	6.77	4.21						6.1	15								
GCHV-D280W/HZRI-100	380-415/3/50	28	95500	8.31	3.37	31.5	107500	8.18	3.85						8.0	16								
GCHV-D335W/HZRI-100	380-415/3/50	33.5	114300	9.46	3.54	37.5	128000	8.99	4.17						8.0	19								

### Note

1. Cooling Operation Conditions:  
Indoor Air Inlet Temperature: 27°C DB / 19°C WB, Outdoor Air Inlet Temperature: 35°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-DI25W/HZRI-D01	CHV-DH140W/R1	GCHV-DI40W/HZRI-F01	CHV-DH160W/R1	GCHV-DI60W/HZRI-F01
	CHV-DH080W/NR1	CHV-DH100W/NR1	CHV-DH125W/NR1	GCHV-DI25W/HZRI-D01	CHV-DH140W/NR1	GCHV-DI40W/HZRI-F01	CHV-DH160W/NR1	GCHV-DI60W/HZRI-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
	208-230V/1N/60Hz	208-230V/1N/60Hz	208-230V/1N/60Hz	380-415V/3N/60Hz	208-230V/1N/60Hz	380-415V/3N/60Hz	208-230V/1N/60Hz	380-415V/3N/60Hz

Performance data		8	10	12.5	12.5	14	14	16	16
Cooling	Capacity	kW	8	10	12.5	12.5	14	14	16
		Btu/h	27300	34100	42600	42600	47800	47800	54600
	Power input	kW	2.60	3.00	3.20	3.20	3.75	3.75	4.75
	Rated current	A	11.8	13.6	14.5	6.0	17.0	7.0	21.8
	EER	W/W	3.08	3.33	3.91	3.91	3.73	3.73	3.37
Heating	Capacity	kW	9	11	14	14	16	16	17
		Btu/h	30700	37500	47800	47800	54600	54600	58000
	Power input	kW	2.65	3.1	3.52	3.52	4	4	4.4
	Rated current	A	12	14	16.1	6.6	18.2	7.5	20
	COP	W/W	3.40	3.55	3.98	3.98	4.00	4.00	3.86
Compressor data		Quantity		1	1	1	1	1	1
DC Inverter compressor	Type	Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary
	Brand	Mitsubishi	GMCC	Mitsubishi	Highly	Mitsubishi	Highly	Mitsubishi	Mitsubishi
Fan data		Type		DC	DC	DC	DC	DC	DC
Fan motor	Quantity	1	1	1	1	1	1	1	1
	Power output	W	75	90	180	90	180	170	170
Fan blade	Fan Quantity	1	1	1	1	1	1	1	1
	Air flow	m³/h	3300	4000	5500	4000	5500	5500	5500
Physical data		Fin type		Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil
Outdoor coil	Number of rows	3	2	2	2.5	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
Refrigerant	Type	R410a	R410a	R410a	R410a	R410a	R410a	R410a	R410a
	Volume	kg	2.00	2.60	3.00	3.00	3.80	3.45	3.80
Dimension (WxHxD)	Net	mm	935x702x383	1032x810x445	1100x870x528	1032x810x445	1100x870x528	1100x870x528	1100x870x528
	Packing	mm	975x770x420	1075x875x495	1140x965x540	1075x875x495	1140x965x540	1140x965x540	1140x965x540
Weight	Net	kg	47	60	85	67.4	90	87.5	90
	Gross	kg	50	65	95	72.2	100	97.4	100
ODU sound level		dB(A)	≤54	≤56	≤56	≤56	≤57	≤57	≤57
Operation temp. range		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	-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	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



# 2-way Cassette



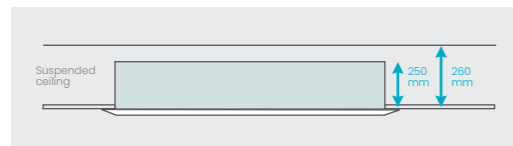
## Features

### Accessories

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

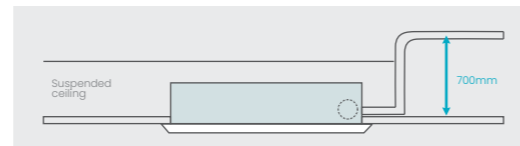
### Slim body, easy to install

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 700mm, 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		M <sup>3</sup> /h	CFM			DB(A)	Pa	Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm		Liquid mm
CMV-V22Q1/HRI-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	/	/	/	Remote controller
CMV-V28Q1/HRI-B	50Hz	2.8	9.5	3.2	10.9						1160	994	1090	1070							
CMV-V36Q1/HRI-B	50Hz	3.6	12.2	4.0	13.6	0.05	610	360	36-41	/	1160	994	1090	1070	26/3.6	32/5.0	Φ12.7	Φ6.35	/	/	Remote controller
CMV-V45Q1/HRI-B	50Hz	4.5	15.3	5.0	17.0						1160	994	1090	1070							
CMV-V56Q1/HRI-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	/	/	/	/	Remote controller
CMV-V71Q1/HRI-B	50Hz	7.1	24.2	8.0	27.2						1470	1304	1390	1380							
CMV-V80Q1/HRI-B	50Hz	8.0	27.2	9.0	30.7	0.09	950	550	38-45	/	1590	1390	1475	1445	34/3.6	39/5.0	Φ15.9	Φ9.53	/	/	Remote controller

Notes:  
 1. Power supply: 220-240V/IN for 50Hz, the above data is for AC motor model.  
 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 1m 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.

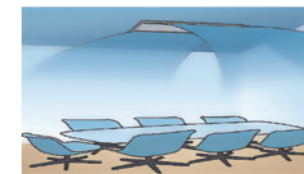
## Features

### Accessories

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

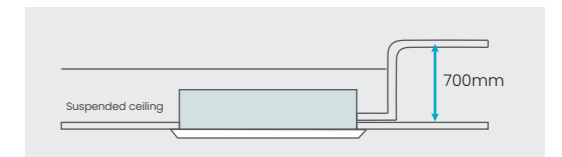
### 2 way air direction

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 700mm, 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		M <sup>3</sup> /h	CFM			DB(A)	Pa	Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm		Liquid mm
CMV-V45Q2/HRI-B	50Hz	4.5	15.3	5.0	17	0.07	800	470	36-42	/	1215	1068	1235	1205	26/3.6	32/5.0	Φ12.7	Φ6.35	/	/	Remote controller
CMV-V56Q2/HRI-B	50Hz	5.6	19.1	6.3	21.4						1215	1068	1235	1205							
CMV-V71Q2/HRI-B	50Hz	7.1	24.2	8.0	27.2	0.10	1120	650	40-46	/	1455	1308	1475	1445	34/3.6	39/5.0	Φ15.9	Φ9.53	/	/	Remote controller
CMV-V80Q2/HRI-B	50Hz	8.0	27.2	9.0	30.7						1455	1308	1475	1445							

Notes:  
 1. Power supply: 220-240V/IN for 50Hz, the above data is for AC motor model.  
 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 1m 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 (Compact Type) / Round-flow Cassette



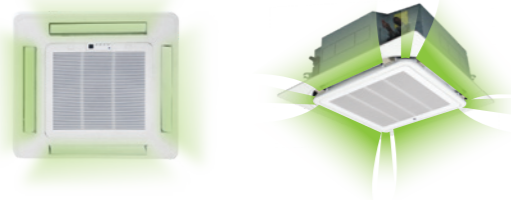
## Features

### Accessories

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

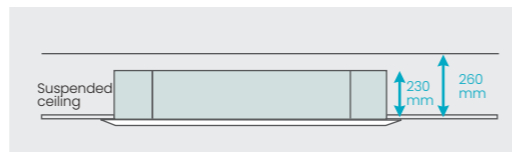
### Wide air delivering

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



### Space saving installation

it has a slim body with 230mm height, it is specially suitable for low suspended ceiling rooms.(5.6-8.0kw)



### Fresh air intake

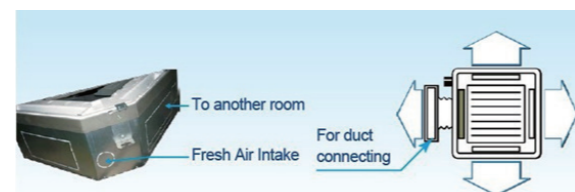
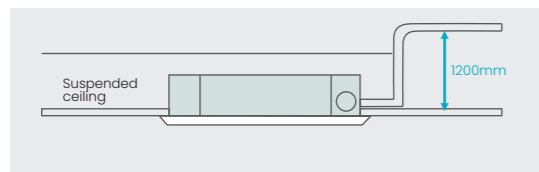
Four interfaces to connect with duct to another room. Fresh air intake, more healthy and comfortable.



### 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.



## Specification

### 4-way Cassette Unit (Compact type)

Model name	Power type	Capacity				Power input	Air flow		Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			M <sup>3</sup> /h	CFM			Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	kW	M <sup>3</sup> /h	CFM	DB(A)	Pa	mm	mm	mm	mm	kg	kg	mm	mm	mm	
CMV-V22Q4/HRI-C	50Hz	2.2	7.5	2.5	8.5	0.038	447	263	22-34					17.5	23					
CMV-V22Q4/HNRI-C	60Hz																			
CMV-V28Q4/HRI-C	50Hz	2.8	9.5	3.2	10.9	0.038	447	263	22-34					17.5	23					
CMV-V28Q4/HNRI-C	60Hz																			
CMV-V36Q4/HRI-C	50Hz	3.6	12.2	4.0	13.6	0.040	515	303	27-38		755	653	750	650	17.5	23				
CMV-V36Q4/HNRI-C	60Hz										x 375	x 267	x 95	x 30						
CMV-V45Q4/HRI-C	50Hz	4.5	15.3	5.0	17	0.040	515	303	27-38		x 680	x 585	x 750	x 650						
CMV-V45Q4/HNRI-C	60Hz																			

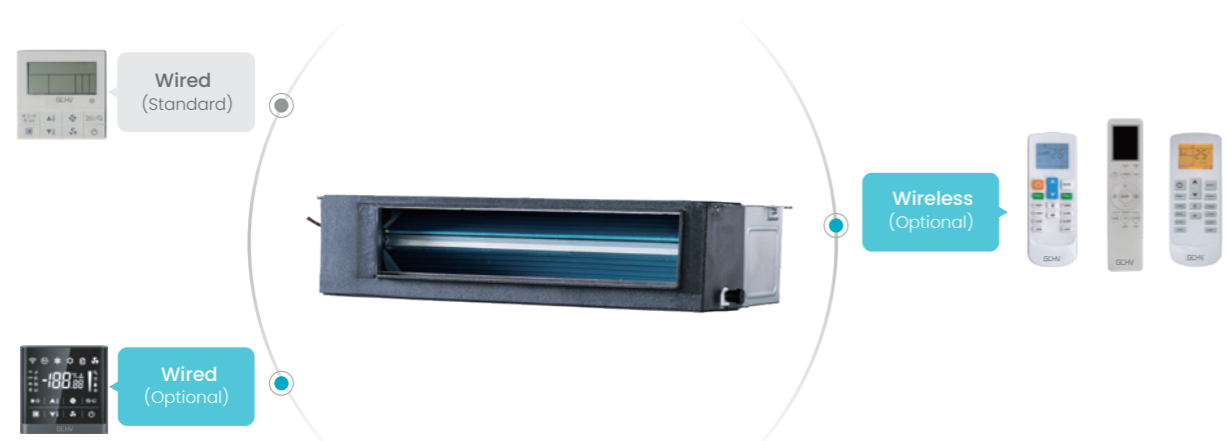
### Round-flow Cassette

Model name	Power type	Capacity				Power input	Air flow		Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			M <sup>3</sup> /h	CFM			Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	kW	M <sup>3</sup> /h	CFM	DB(A)	Pa	mm	mm	mm	mm	kg	kg	mm	mm	mm	
CMV-V56QR/HRI	50Hz	5.6	19.1	6.3	21.4	0.043	860	500	32-39					24	30					
CMV-V56QR/HNRI	60Hz																			
CMV-V71QR/HRI	50Hz	7.1	24.2	8.0	27.2						920	833		24	30					
CMV-V71QR/HNRI	60Hz					0.093	1200	700	35-39		x 265	x 232								
CMV-V80QR/HRI	50Hz	8.0	27.2	8.8	30						x 985	x 900		24	30					
CMV-V80QR/HNRI	60Hz																			
CMV-V90QR/HRI	50Hz	9.0	30.7	10.0	34.1									28.5	35					
CMV-V90QR/HNRI	60Hz																			
CMV-V100QR/HRI	50Hz	10.0	34.1	11.0	37.5									28.5	35					
CMV-V100QR/HNRI	60Hz																			
CMV-V112QR/HRI	50Hz	11.2	38.2	12.5	42.6									28.5	35					
CMV-V112QR/HNRI	60Hz																			
CMV-V125QR/HRI	50Hz	12.5	42.6	14.0	47.7	0.160					920	833		28.5	35					
CMV-V125QR/HNRI	60Hz										x 310	x 286								
CMV-V140QR/HRI	50Hz	14.0	47.7	15.0	51.1									28.5	35					
CMV-V140QR/HNRI	60Hz																			
CMV-V160QR/HRI	50Hz	16.0	54.5	17.0	58		1800	1050	38-46					28.5	35					
CMV-V160QR/HNRI	60Hz																			

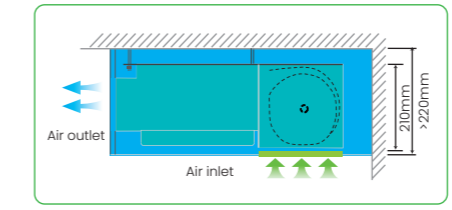
Notes:  
 1. Power supply: 220-240V/IN for 50Hz; 208-230V/IN for 60Hz, the above data is for AC motor model.  
 2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB.  
 3. Sound level: measured at a point 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**
- Integrated design of motor and motor bracket, lower noise**
- Drain pump is optional**  
Pumping head is 700mm.



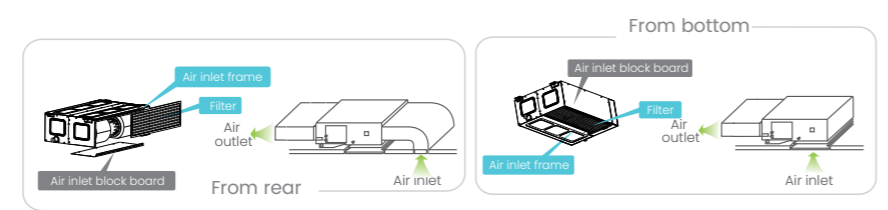
## Features

### Accessories

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

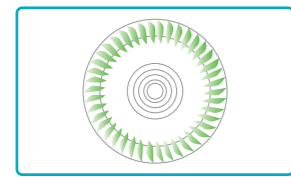
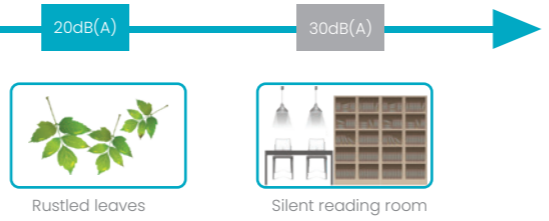
### Flexible installation

Air return method is optional by actual installation, from rear or from bottom.

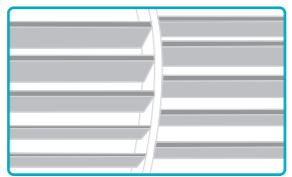


### Big air flow low noise centrifugal fan wheel

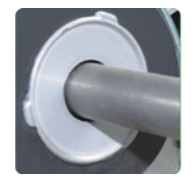
Big air flow low noise centrifugal fan blade with special air tunnel system, and the unique shock absorption measures, making this series ducted units' running noise is as low as 24 dB(A), let users to enjoy the comfort, sleep without any disturbance.



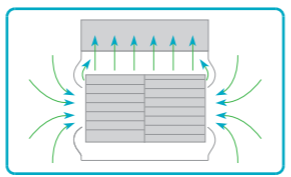
Special resin material fan wheel.



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.



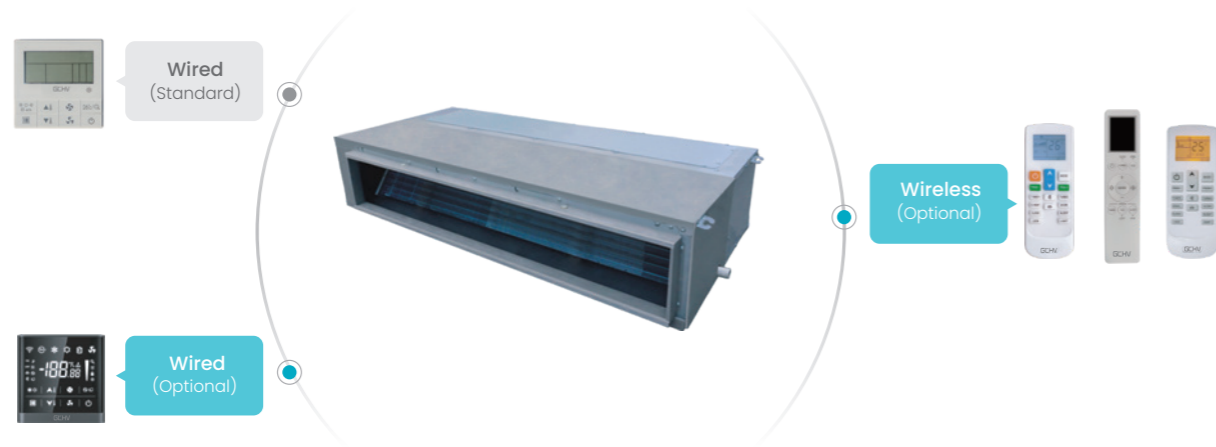
Air inlet of fan wheel casing is arch curved design; it can reduce air flow's disturbance, make if flow smoother to reduce noise.

## Specification

Model name	Power type	Capacity				Rated 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																		
CMV-V22TA/HRI-C	50Hz	2.2	7.5	2.5	8.5	0.08	450	260	24-29	30	910 x 240 x 510	814 x 210 x 467	/	/	16.0	18.5	Φ9.52	/	/	Wired controller																
CMV-V22TA/HNRI-C	60Hz																																			
CMV-V28TA/HRI-C	50Hz	2.8	9.5	3.2	10.9	0.11	550	324	25-32						1110 x 240 x 510	1010 x 210 x 467					/	/	16.0	18.5	Φ6.35	/	/	Wired controller								
CMV-V28TA/HNRI-C	60Hz																																			
CMV-V36TA/HRI-C	50Hz	3.6	12.2	4.0	13.6	0.11	620	360	32-37														1310 x 240 x 510	1214 x 210 x 467					/	/	16.5	19.0	Φ12.7	/	/	Wired controller
CMV-V36TA/HNRI-C	60Hz																																			
CMV-V45TA/HRI-C	50Hz	4.5	15.3	5.0	17	0.16	800	520	28-38		1310 x 240 x 510	1214 x 210 x 467	/	/			16.5	19.0	Φ12.7	/											/	Wired controller				
CMV-V45TA/HNRI-C	60Hz																																			
CMV-V56TA/HRI-C	50Hz	5.6	19.1	6.3	21.4	0.18	1000	640	30-39						1310 x 240 x 510	1214 x 210 x 467	/	/			21.0	24.0			Φ15.88	Φ9.52	/	Wired controller								
CMV-V56TA/HNRI-C	60Hz																																			
CMV-V71TA/HRI-C	50Hz	7.1	24.2	8.0	27.2	0.18	1000	640	30-39												1310 x 240 x 510	1214 x 210 x 467	/	/					25.5	28.5			Φ15.88	Φ9.52	/	Wired controller
CMV-V71TA/HNRI-C	60Hz																																			

Notes:  
1.Power supply: 220-240V/IN for 50Hz;208-230V/IN for 60Hz, the above data is for AC motor model.  
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 1m 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 ESP Ducted Unit



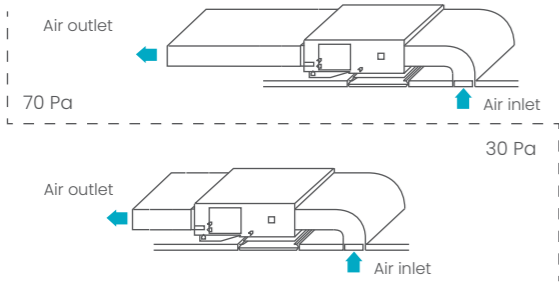
## Features

### Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC motor
Standard	Standard	Standard	Optional	Standard	Optional

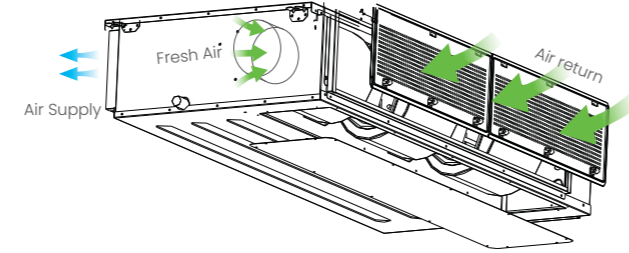
### Static pressure

70Pa ESP is standard, suitable for long distance air supply, 30Pa is optional (can be set on site), suitable for low noise requirement rooms.



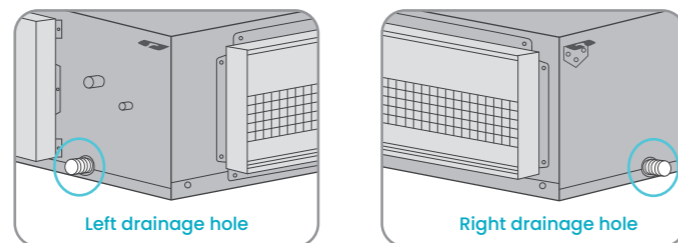
### Fresh air intake

A reserved outside air intake port allows outdoor air to be introduced directly into the unit, no need for a separate ventilation system.



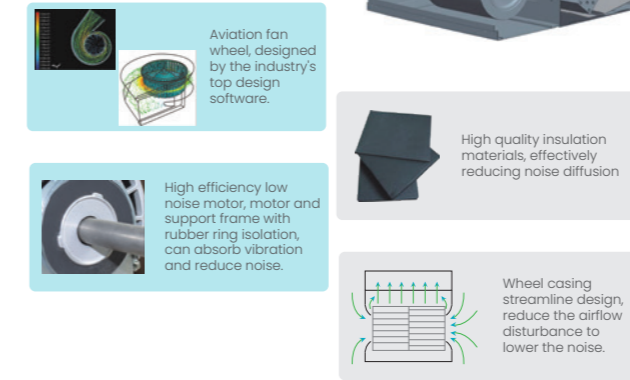
### Convenient in drainage pipe installation

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.



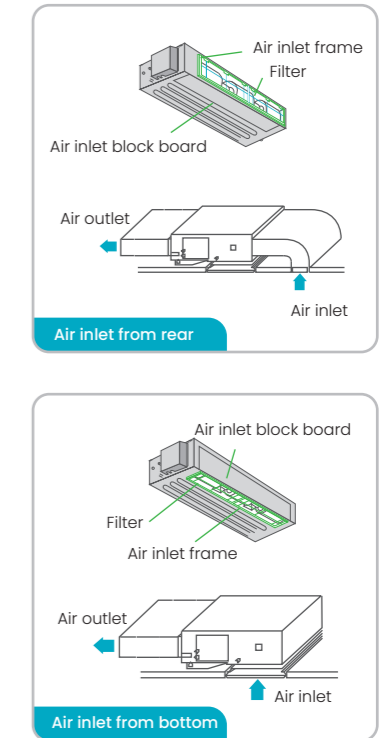
### Whole unit low noise design, silent operation

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

The power consumption of DC fan motor can be reduced greatly in comparison to corresponding AC type.

## Specification

Model name	Power type	Capacity				Rated 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																										
CMV-V71TB/HNRI-B	50Hz	7.1	24.2	8.0	27.2	0.40	1220	710	36-41	70	1255 x 325 x 720	1209 x 260 x 680	/	/	33	37	ø15.88	ø9.52	ODø25	Wired controller																								
CMV-V71TB/HNRI-B	60Hz																																											
CMV-V80TB/HNRI-B	50Hz	8.0	27.2	9.0	30.7										1850	1080					38-43	70	1490 x 325 x 720	1445 x 260 x 680	/	/	33	37	ø15.88	ø9.52	ODø25	Wired controller												
CMV-V80TB/HNRI-B	60Hz																																											
CMV-V90TB/HNRI-B	50Hz	9.0	30.7	10.0	34.1																						2000	1170					40-44	70	1490 x 325 x 720	1445 x 260 x 680	/	/	46	50	ø15.88	ø9.52	ODø25	Wired controller
CMV-V90TB/HNRI-B	60Hz																																											
CMV-V100TB/HNRI-B	50Hz	10.0	34.1	11.0	37.5		2000	1170	40-44	70	1490 x 325 x 720	1445 x 260 x 680	/	/			46	50	ø15.88	ø9.52																			ODø25	Wired controller				
CMV-V100TB/HNRI-B	60Hz																																											
CMV-V120TB/HNRI-B	50Hz	12.0	40.9	13.0	44.3										2000	1170	40-44	70			1490 x 325 x 720	1445 x 260 x 680	/	/	46	50			ø15.88	ø9.52	ODø25	Wired controller												
CMV-V120TB/HNRI-B	60Hz																																											
CMV-V150TB/HNRI-B	50Hz	15.0	51.1	17.0	58																				2000	1170	40-44	70					1490 x 325 x 720	1445 x 260 x 680	/	/	46	50			ø15.88	ø9.52	ODø25	Wired controller
CMV-V150TB/HNRI-B	60Hz																																											

Notes:

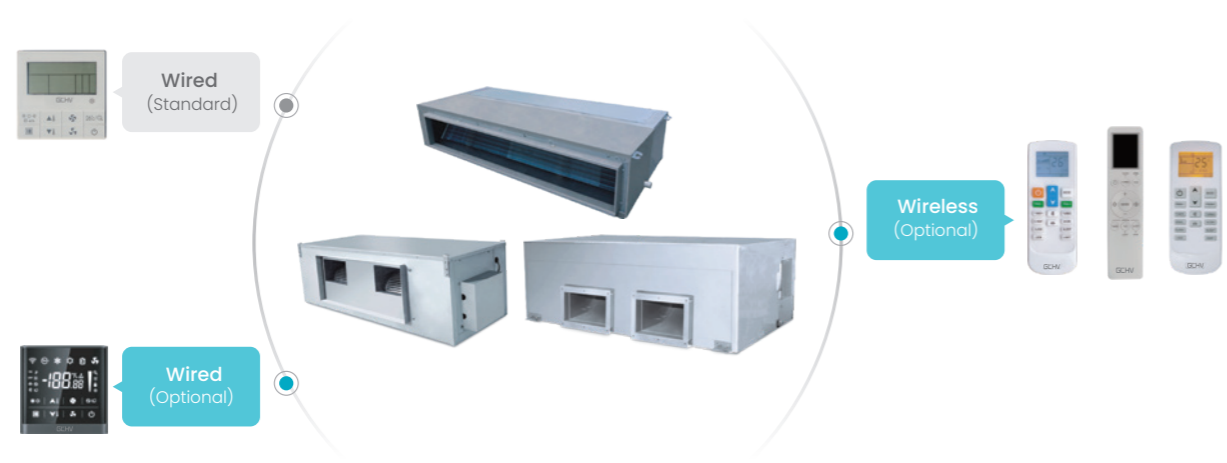
1.Power supply: 220-240V/1N for 50Hz; 208-230V/1N for 60Hz, the above data is for AC motor model.

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.

# High ESP Ducted Unit

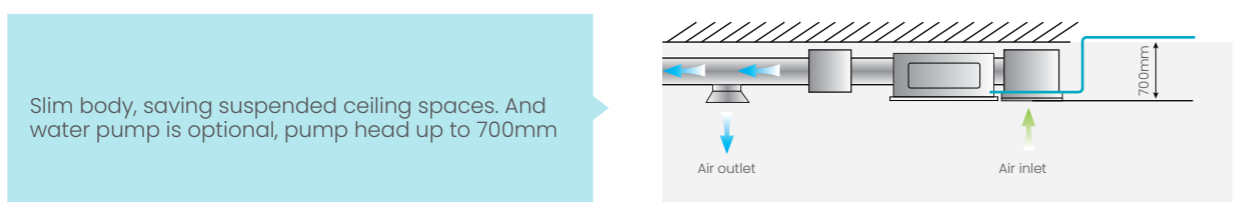


## Features

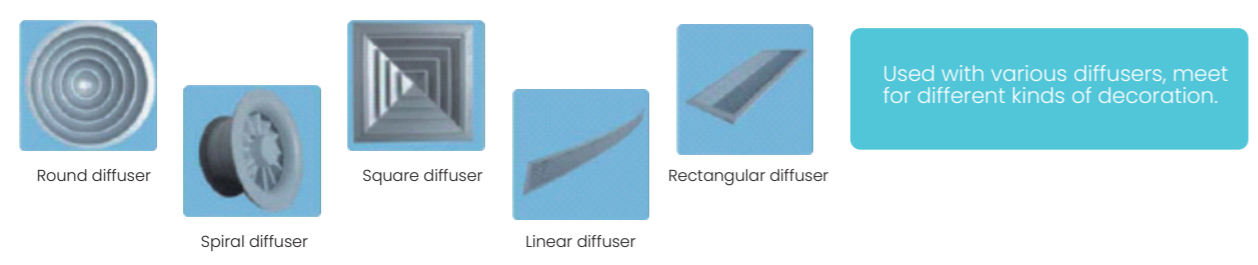
### Accessories

Plenum box	Air filter	EXV	Drain pump	AC motor	DC motor
Standard	Standard	Standard	Optional	Standard	/

### Optional water pump

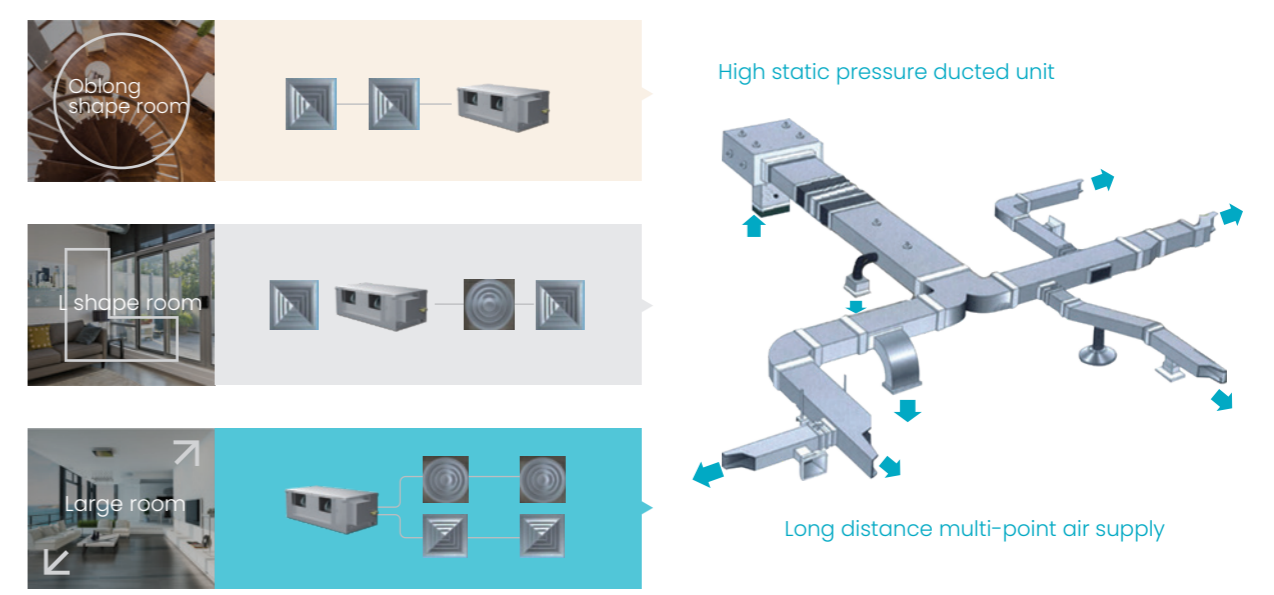


### Can be used with various diffusers



### 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		Power input	Air flow	Sound level	ESP	Dimension (WxHxD)		Body Weight		Connecting pipe			Standard controller			
		Cooling	Heating					Packing	Body	Net	Gross	Gas	Liquid	Drain				
		kW	kBtu/h	kW	kBtu/h	kW	M <sup>3</sup> /h	CFM	DB(A)	Pa	mm	mm	kg	kg	mm	mm	mm	
CMV-V71TH/HRI-B	50Hz	7.1	24.2	7.8	26.6													
CMV-V71TH/HNRI-B	60Hz					0.40	1500	880	40-42									
CMV-V80TH/HRI-B	50Hz	8.0	27.2	8.8	30													
CMV-V80TH/HNRI-B	60Hz																	
CMV-V90TH/HRI-B	50Hz	9.0	30.7	10.0	34.1													
CMV-V90TH/HNRI-B	60Hz																	
CMV-V100TH/HRI-B	50Hz	10.0	34.1	11.0	37.5													
CMV-V100TH/HNRI-B	60Hz																	
CMV-V120TH/HRI-B	50Hz	12.0	40.9	13.0	44.3	0.50	2300	1350	44-52									
CMV-V120TH/HNRI-B	60Hz																	
CMV-V150TH/HRI-B	50Hz	15.0	51.1	17.0	58.0													
CMV-V150TH/HNRI-B	60Hz																	
CMV-V200TH/HRI-B	50Hz	20.0	68.2	22.0	75.0	1.72	4000	2350	45-53									
CMV-V200TH/HNRI-B	60Hz																	
GCHV-D200TH/HRI-F310	50/60Hz	20.0	68.2	22.0	75.0	1.20	3750	2200	45-50									
CMV-V250TH/HRI-B	50Hz	25.0	85.3	27.5	93.8	1.72	4200	2470	45-54									
CMV-V250TH/HNRI-B	60Hz																	
GCHV-D250TH/HRI-F310	50/60Hz	25.0	85.3	27.5	93.8	1.20	3750	2200	46-51									
CMV-V280TH/HRI-B	50Hz	28.0	95.5	30.8	105.0	1.72	4400	2580	45-55									
CMV-V280TH/HNRI-B	60Hz																	
GCHV-D280TH/HRI-F310	50/60Hz	28.0	95.5	30.8	105.0	1.30	4100	2400	48-52									
CMV-V450TH/HZRI-B	50Hz	45.0	153.5	50.0	170.6	2.60	6000	3520	60									
CMV-V450TH/HXRI-B	60Hz																	
CMV-V560TH/HRI-B	50Hz	56.0	191.0	63.0	214.9	3.40	8000	4700	64									
CMV-V560TH/HXRI-B	60Hz																	

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

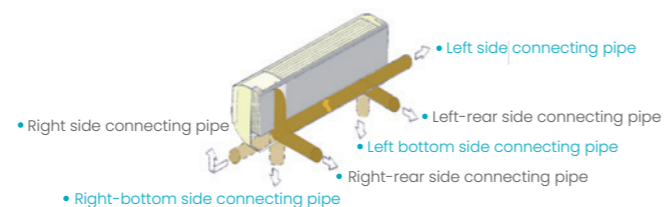
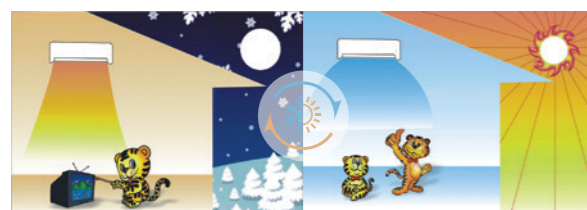
Simple, elegant, stylish, mirror design, suitable for all kinds of decoration style.

### Flexible in installation

Refrigerant pipe can be connected from 3 directions.

### Hotel card function

Hotel card interface is standard, which are designed to save energy by only running appliances while guest are present in their room.



## Specification

Model	GCHV-D22G/HRI-GSB	GCHV-D28G/HRI-GSB	GCHV-D36G/HRI-GSB	GCHV-D45G/HRI-GSC	GCHV-D56G/HRI-GSC	GCHV-D71G/HRI-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	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	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	m <sup>3</sup> /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/Φ9.52	Φ6.35/Φ9.52	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	°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



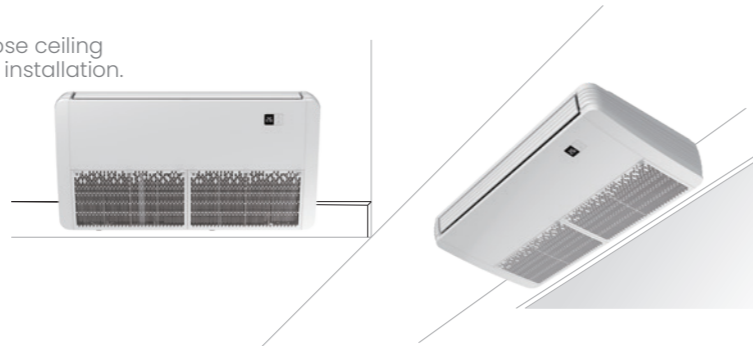
## Features

### Accessories

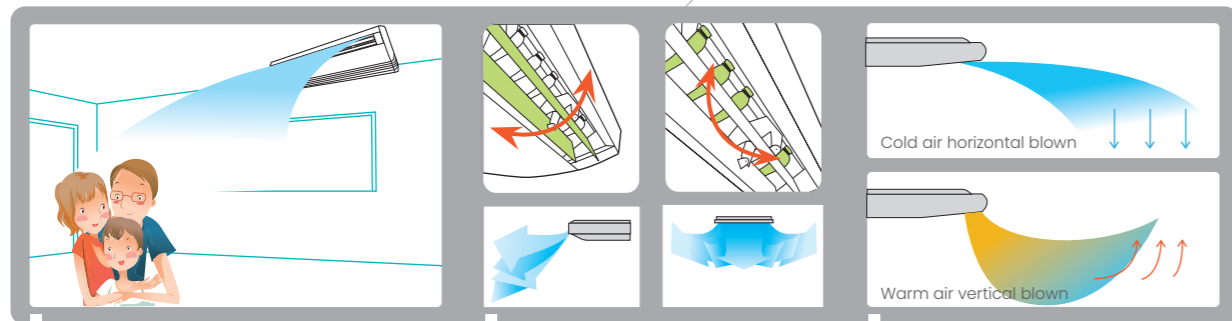
Plenum box	Air filter	EXV	Drain pump	AC motor	DC motor
/	Standard	Standard(built-in)	Optional	Standard	Optional

### Flexible installation

According to actual project needs, choose ceiling suspended installation or floor standing installation.



### Wide angle air supply

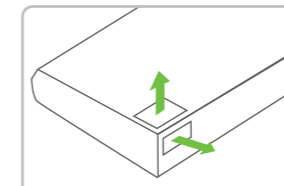


Configured with low noise high performance centrifugal fans, has big air flow and long distance air supply.

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.

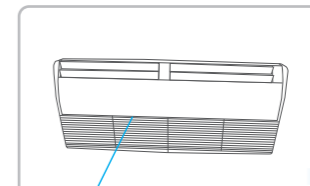
### Easy for installation



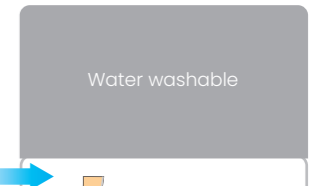
Refrigerant pipe can be connected from 2 directions.



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)



## Specification

Model name	Power type	Capacity				Power input	Air flow		Sound Level	Dimension (WxHxD)		Body Weight		Connecting pipe			Standard controller
		Cooling	Heating	Cooling	Heating		M <sup>3</sup> /h	CFM		Packing	Body	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	kW			DB(A)	mm	mm	kg	kg	mm	mm	mm	
GCHV-V36UA/HRI-LDBA	50Hz	3.6	12.3	4.0	13.7	0.085	620	360	37-42	1130 x 765 x 330	1050 x 675 x 235	265	31.0	Φ12.7	Φ6.35	DN20	Remote controller
GCHV-V36UA/HNRI-LDBA	60Hz																
GCHV-V45UA/HRI-LDBA	50Hz	4.5	15.3	5.0	17	0.110	800	470	37-47	1380 x 765 x 325	1300 x 675 x 235	32.0	37.0	Φ15.88	Φ9.52	DN20	
GCHV-V45UA/HNRI-LDBA	60Hz																
GCHV-V56UA/HRI-LDBA	50Hz	5.6	19.1	6.3	21.4	0.095	1200	706	45-51	1750 x 765 x 325	1670 x 675 x 235	41.0	47.0	Φ15.88	Φ9.52	DN20	
GCHV-V56UA/HNRI-LDBA	60Hz																
GCHV-V71UA/HRI-LDBB	50Hz	7.1	24.2	8.0	27.2	0.160	1600	940	45-50	1750 x 765 x 325	1670 x 675 x 235	41.0	47.0	Φ15.88	Φ9.52	DN20	
GCHV-V71UA/HNRI-LDBB	60Hz																
GCHV-V80UA/HRI-LDBB	50Hz	8.0	27.2	8.8	30	0.200	2000	1177	45-54	1750 x 765 x 325	1670 x 675 x 235	41.0	47.0	Φ15.88	Φ9.52	DN20	
GCHV-V80UA/HNRI-LDBB	60Hz																
GCHV-V90UA/HRI-LDBC	50Hz	9.0	30.7	10.0	34.1	0.200	2000	1177	45-54	1750 x 765 x 325	1670 x 675 x 235	41.0	47.0	Φ15.88	Φ9.52	DN20	
GCHV-V90UA/HNRI-LDBC	60Hz																
GCHV-V112UA/HRI-LDBC	50Hz	11.2	38.2	12.5	42.6	0.200	2000	1177	45-54	1750 x 765 x 325	1670 x 675 x 235	41.0	47.0	Φ15.88	Φ9.52	DN20	
GCHV-V112UA/HNRI-LDBC	60Hz																
GCHV-V140UA/HRI-LDBC	50Hz	14.0	47.7	15.0	51.1	0.200	2000	1177	45-54	1750 x 765 x 325	1670 x 675 x 235	41.0	47.0	Φ15.88	Φ9.52	DN20	
GCHV-V140UA/HNRI-LDBC	60Hz																
GCHV-V160UA/HRI-LDBC	50Hz	16.0	54.5	17.0	58	0.200	2000	1177	45-54	1750 x 765 x 325	1670 x 675 x 235	41.0	47.0	Φ15.88	Φ9.52	DN20	
GCHV-V160UA/HNRI-LDBC	60Hz																

Notes:

1.Power supply: 220-240V/IN for 50Hz; 208-230V/IN for 60Hz, the above data is for AC motor model.

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 1m 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.

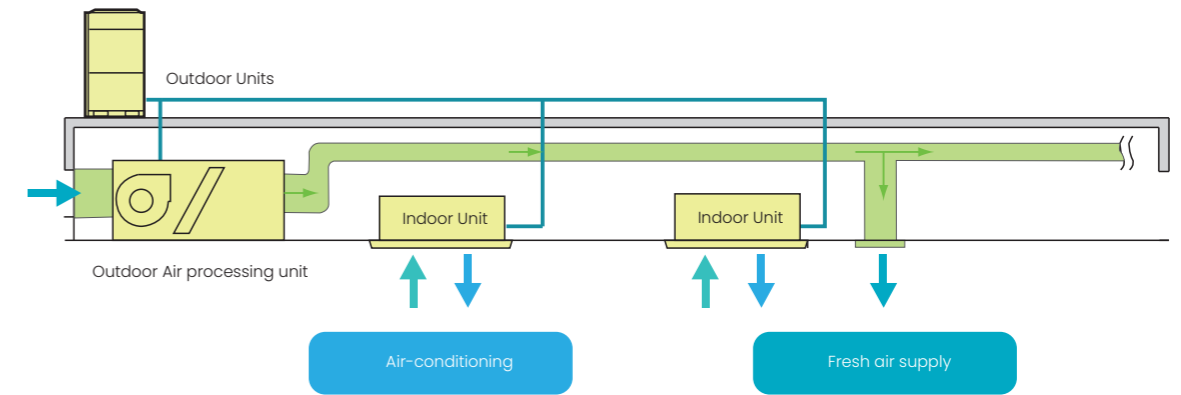
4.The above data may be changed without notice for future improvement on quality and performance.

# Fresh Air Processor



## Innovative air supply technology for excellent room temperature control

Fresh air unit can be connected with other type indoor units.  
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	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.

## Specification

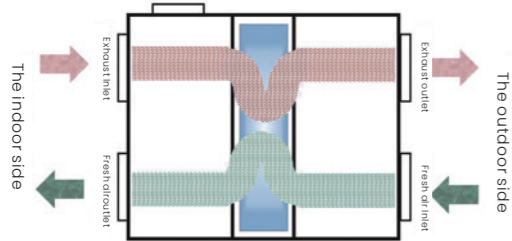
Model name	Power type	Capacity		Power input	Air flow	Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller	
		Cooling kW	Heating kW					Packing mm	Body mm	Panel packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm		
CMV-V140TF/HRI-B	50Hz	14.0	47.7	9.0	30.7	0.45	1400	820	42-48	220	1245 x 445 x 655	1190 x 370 x 620	47	51	Φ15.88	Φ9.52	ODΦ25	Wired controller
CMV-V140TF/HNRI-B	60Hz																	
CMV-V224TF/HRI-B	50Hz	22.4	76.4	16.0	54.5	1.20	2000	1170	45-52	220	1510 x 490 x 870	1465 x 448 x 811	102	106				
CMV-V224TF/HNRI-B	60Hz																	
CMV-V280TF/HRI-B	50Hz	28.0	95.5	20.0	68.2	1.20	2800	1640	45-52	220	1510 x 490 x 870	1465 x 448 x 811	102	106	Φ22.2	Φ12.7	ODΦ30	
CMV-V280TF/HNRI-B	60Hz																	
CMV-V450TF/HZRI	50Hz	45.0	153.5	31.4	107.1	1.60	4000	3520	58	300	2200 x 710 x 1018	2165 x 676 x 916	222	260				
CMV-V450TF/HXR1	60Hz																	
CMV-V560TF/HZRI	50Hz	56.0	191.0	39.0	133.0	2.50	6000	4700	62	300	2200 x 710 x 1018	2165 x 676 x 916	222	260	Φ28.6	Φ15.88	ODΦ32	
CMV-V560TF/HXR1	60Hz																	

Notes: 1. 145kW & 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°C DB, 28°C WB. Heating test condition: Indoor and outdoor side 0°C CB, -2.9°C 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

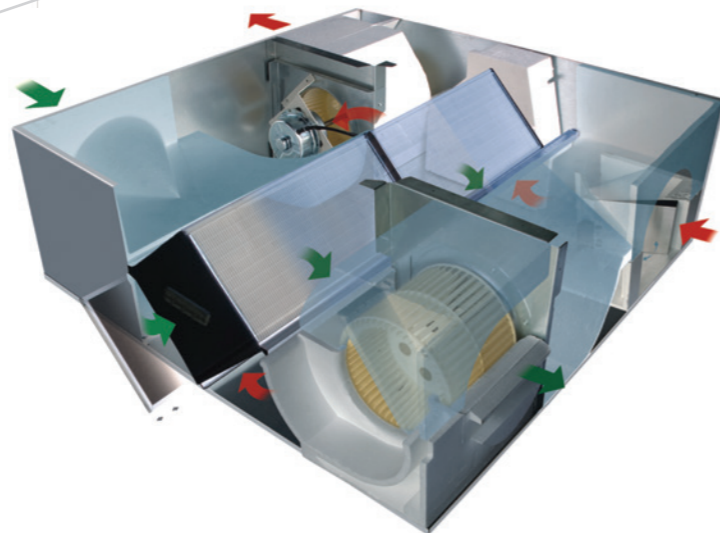


## How it works

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

### Suspended type specification

Model name	Air flow M <sup>3</sup> /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°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



# 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.



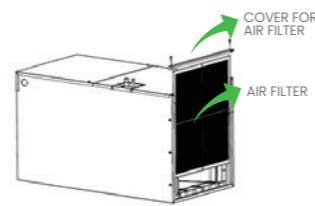
### Coil

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



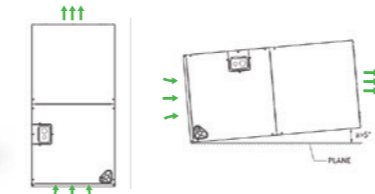
### Filter optional

Detachable air filter for cleaning or renewal.



### Multi-position installation

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



\*Note: Installation of vertical up airflow and horizontal right airflow needs to be customized.

## Specification

Model name	Power type	Capacity				Power input	Air flow	Sound level	ESP	Dimension (WxHxD)		Body Weight		Connecting pipe			Standard controller	
		Cooling kW	Heating kW	Cooling kBTu/h	Heating kBTu/h					Body mm	Packing mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm		
CMV-V71AH/HNRI	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/HNRI	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/HNRI	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 Controllers



Indoor unit address inquiry



Indoor unit address setting



Temperature setting




Operation mode setting

Fan speed setting

Timer function



## Wired Controllers




ZKX-C/T/A-06

- Bidirectional communication. Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller.
- Compact design
- Timer function
- Fahrenheit/Centigrade setting
- Address setting
- Press button tone setting

## Touch Screen Wired Controller

- Air filter cleaning reminding function.
- Touch screen with black background and blue 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



CSP-D184

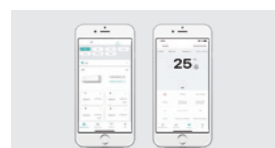
- Easy to install. Controller connects to outdoor units only.
- 1 Controller can control max. 100 indoor units.
- Mode lock function, user can lock the running mode of indoor unit.
- Build in Modbus protocol.

## Smart Manager

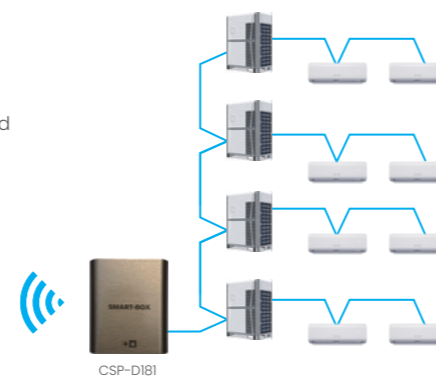
- Available on iOS and Android



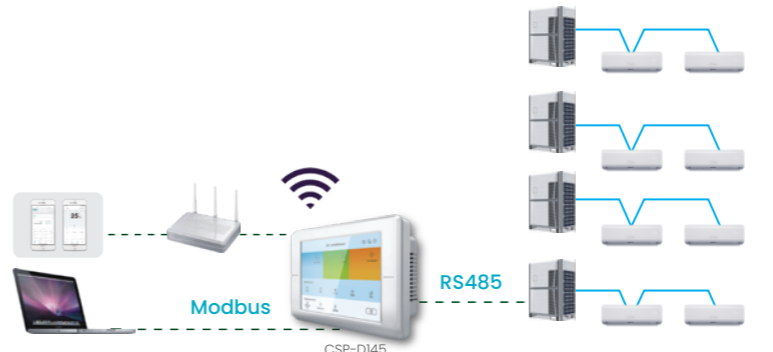
- Remote control via cloud server



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



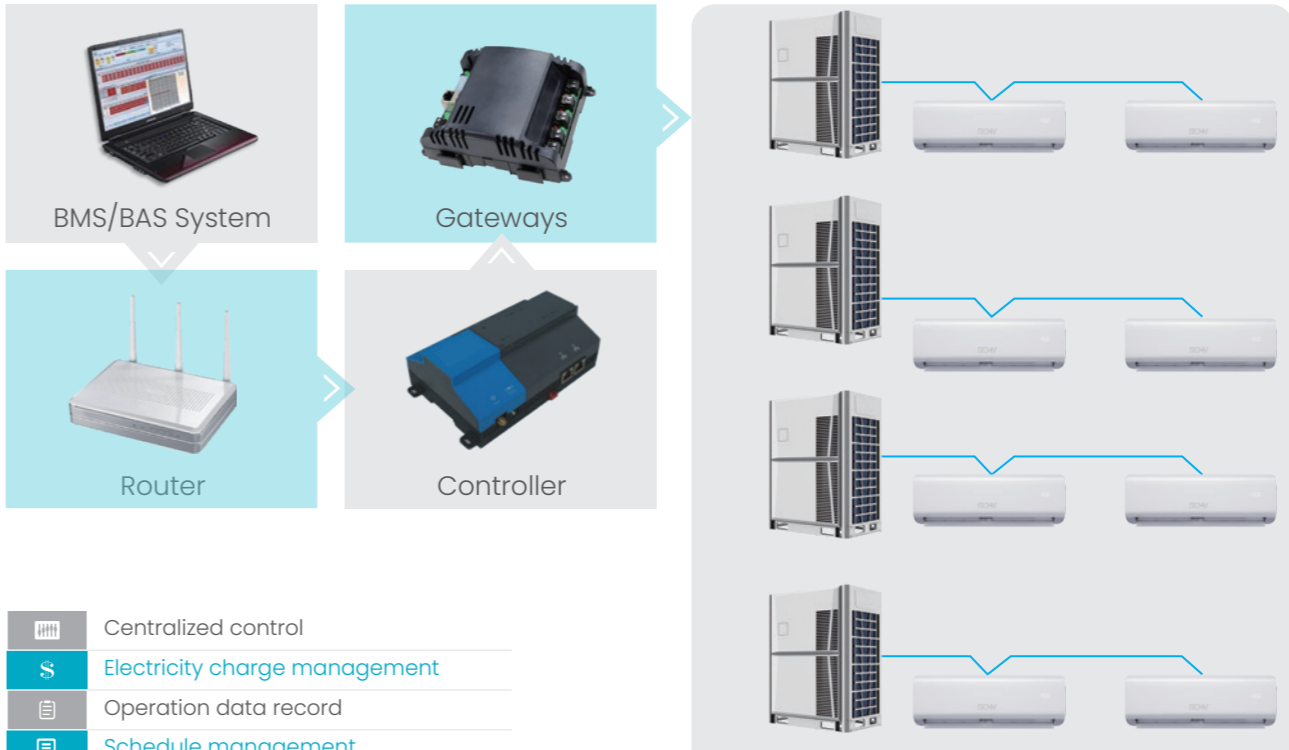
## Touch Screen Centralized Controller



CSP-D145

- Build in WIFI modular
- Build in Modbus protocol
- Weekly schedule management
- Operation parameter enquiry
- User friendly UI design

## CHV-NET (Centralized Control System)



BMS/BAS System

Gateways

Router

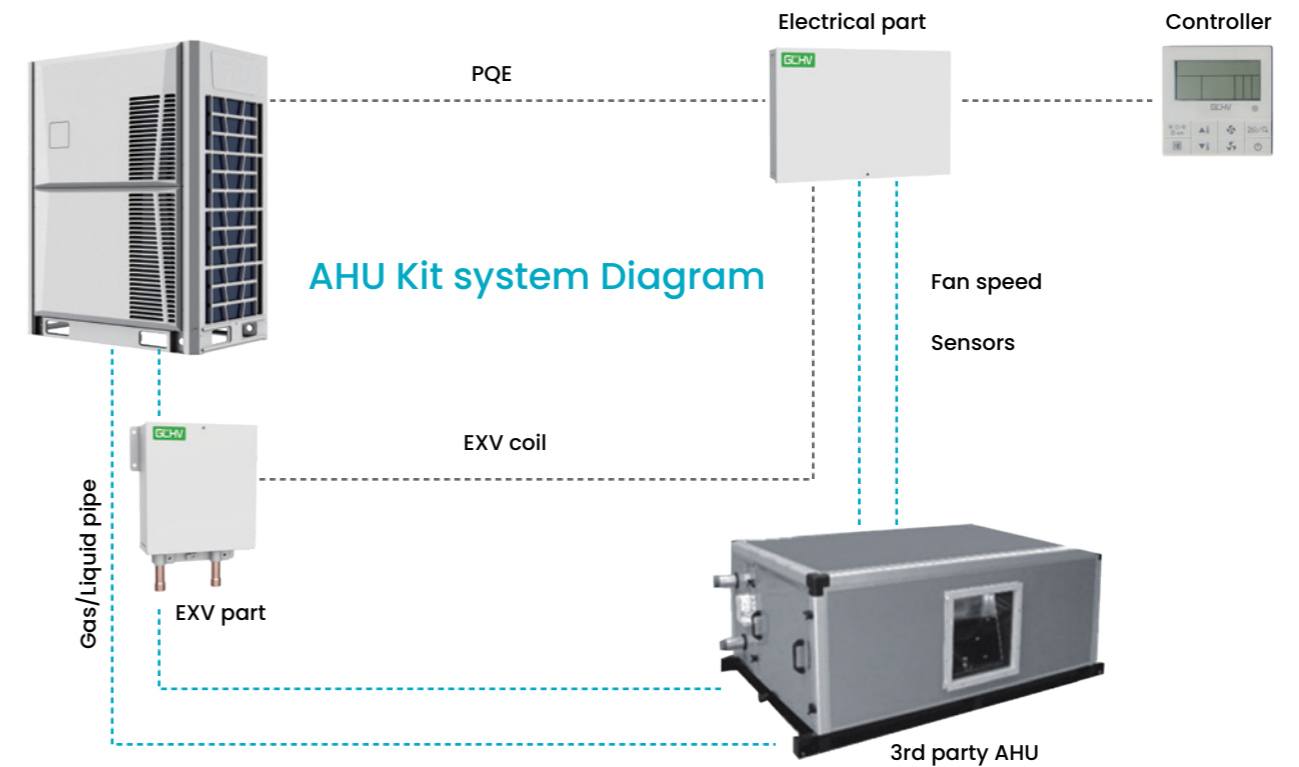
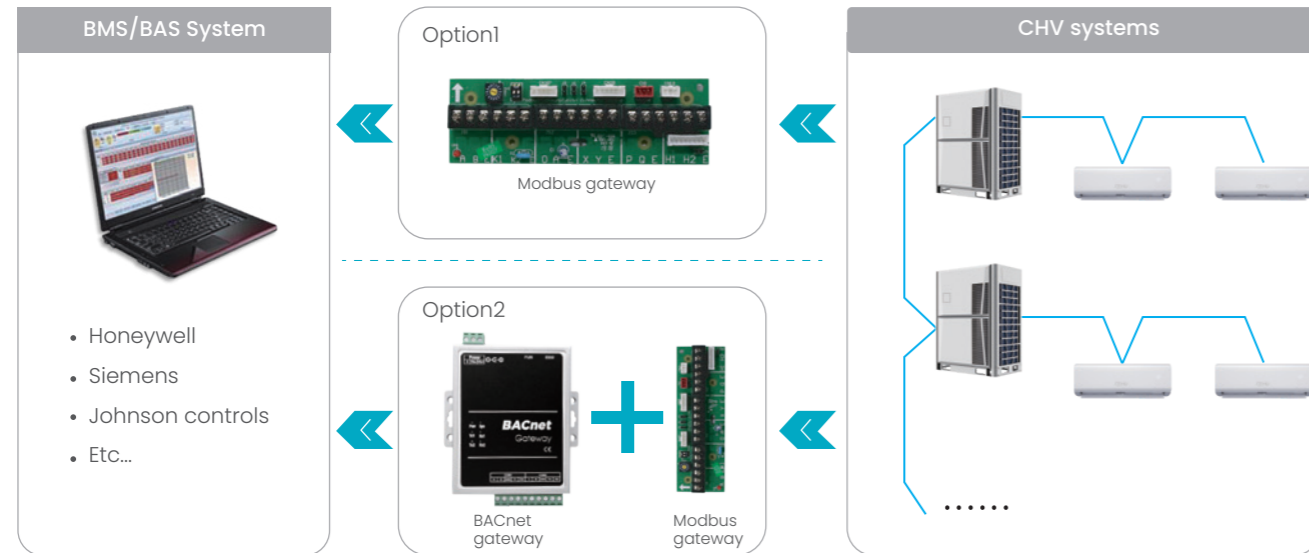
Controller

CHV Pro VRF systems

- Centralized control
- Electricity charge management
- Operation data record
- Schedule management

# BMS Gateway

- Modbus gateway | Independent Modbus Box or built-in with outdoor unit.
- BACnet gateway | Connect with Modbus gateway, use BACnet IP protocol.



# AHU Connection Kit

- GCHV AHU kit is an interface that allows 3rd party manufacturer's AHU connecting to GCHV VRF outdoor units.
- No address limit and automatic addressing.
- Split type, convenient for installation.
- One electrical part has one address and can max. connect 4 EXV parts.
- One AHU kit can max. connect up to 120HP.

## GCHV AHU Kit

Electrical part	EXV part	Sensors & wires	Controller
<ul style="list-style-type: none"> <li>PCB</li> <li>Power terminals</li> <li>Communication terminals</li> </ul>	<ul style="list-style-type: none"> <li>Outlet pipe</li> <li>Inlet pipe</li> <li>EXV</li> </ul>	<ul style="list-style-type: none"> <li>T1 sensor and wire</li> <li>T2 sensor and wire</li> <li>T2B sensor and wire</li> <li>Controller wire</li> </ul>	

# VRF Selection Software

The selection software provides a comprehensive selection of system design reports and calculations. Base on the units selected, the software produces detailed system layout and piping requirement calculations, greatly improves the work efficiency.

**Piping diagram**

**Wiring diagram**

**Controller selection**

Group Control No.	System Name	CU No.	EXV Type	EXV Model	SEC	SEC Qty	EXV	Model	Qty
GC1	System	CU1	DOE	DOE-V05	E	1	SP-D104	SP-D104	1
GC2	System	CU2	DOE	DOE-V05	E	1	SP-D104	SP-D104	1
GC3	System	CU3	DOE	DOE-V05	E	1	SP-D104	SP-D104	1
GC4	System	CU4	DOE	DOE-V05	E	1	SP-D104	SP-D104	1

**Report**

**VRF Selection Result**

1. Project Information

Project Name	123456789
Project Address	123456789
Client	123456789
Designer	123456789
Date	2023/10/27

Design Information

System Name	System Name	123456789
System Capacity	System Capacity	123456789
System Type	System Type	123456789
System Model	System Model	123456789
System Qty	System Qty	123456789

# 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 Jamaica, with DC inverter VRF system.