HYUNDAI

DC INVERTER VRF SYSTEM

Product Catalogue

HYUNDAI

Production Capacity

HCHV 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

hasHCHVestablishedastrictandscientific 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 accreditedlabs 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


2000kg Transport Simulation


Professional Engineers


EMC Lab


Noise Test Lab


200HP Long-term Running Lab


Modular Chiller Test Lab


Electromagnetic Vibration Lab

The R&D center of HCHV 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 HCHV 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, HCHV 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.

Directory

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1. Overview

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.

How To Read The Model Name

outdoor unit

HCHV - E 280 W / H Z R1 - DK01

- HCHV/CHV:HCHV VRF system
- E:Full DC Inverter EVI
  D:Full DC Inverter
- Capacity(*100W)
- Outdoor unit
- H: Heat Pump
  C:Cooling Only
- Power supply
  Z:380-415V/3N/50Hz
  Y:380-415V/3N/60HZ
  X:208-230V/3N/60HZ
- Refrigerant type R1:R410a
- Case No.

Indoor unit

HCHV - V 36 UA / H N R1 - LDBA

- HCMV/HCHV:HCHV VRF system
- Motor code
  V:AC Fan Motor
  D: DC Fan Motor
- Capacity(*100W)
- Indoor unit code
  Q4:Compact 4-way Cassette
  QR:Roundflow Cassette
  G:Wall-mounted TA:Low ESP duct
  TB:Medium ESP duct TH:High ESP duct
  TF:Fresh Air Processor UA:Floor Ceiling
  AH:Air Handler
- Function code
  H:Heat pump C: Cooling Only
- Power supply
  Omit:220-240V/1N/50Hz
  N:208-230V/1N/60Hz
  Z:380-415V/3N/50Hz
- Refrigerant type R1:R410a
- Case No.

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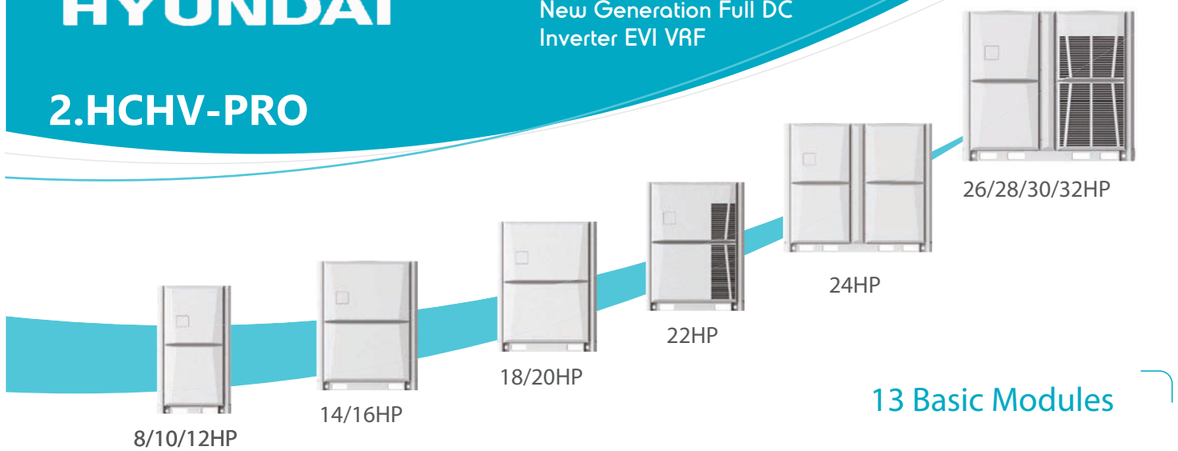
380~415V/3N/50Hz&60Hz
New Generation Full DC Inverter EVI VRF

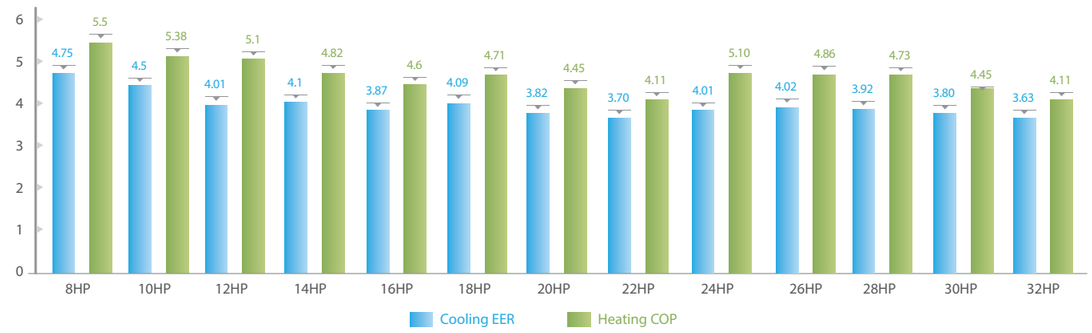
2.HCHV-PRO



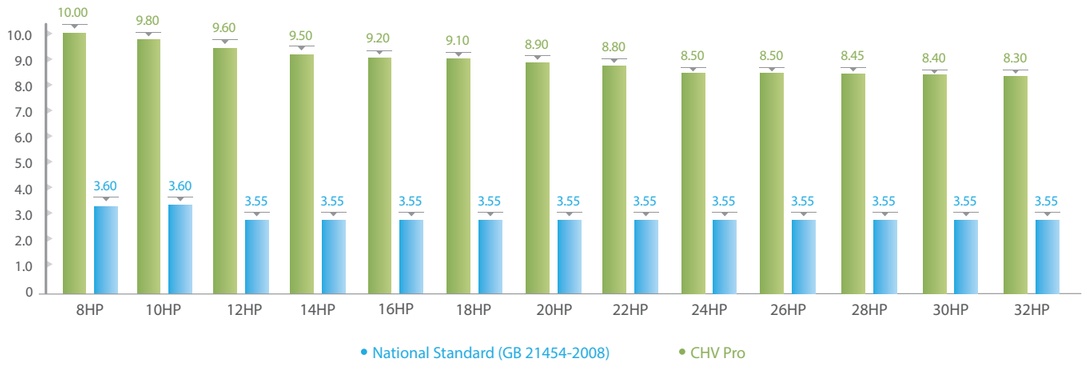
13 Basic Modules

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)



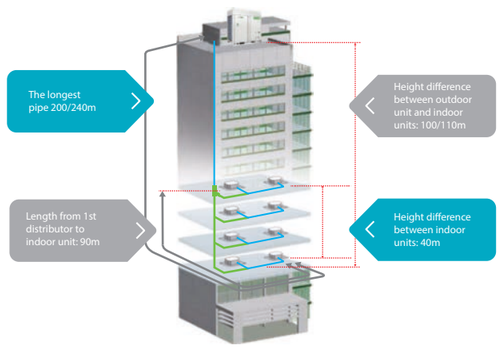
Combination Table

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.

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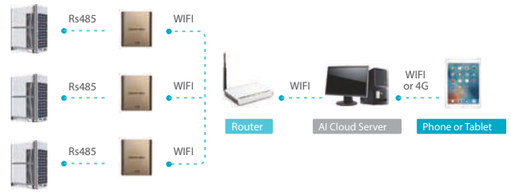
Features

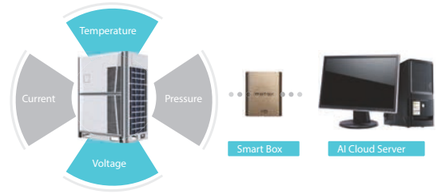
Long Distance Remote Control

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.

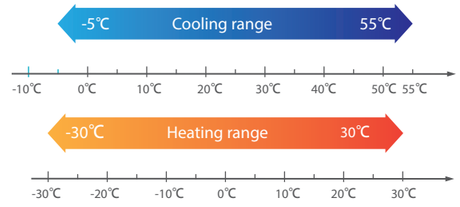


Refrigerant Cooling Design

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

Wide Outdoor Operation Range

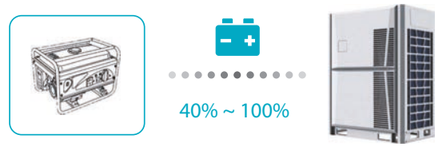
- Due to EVI technology, CHV PRO heating performance increased by 35% compare to conventional VRF system.
- Due to EVI technology, CHV PRO still has 85% of rated capacity even in -15℃.



*Based on GCHV internal test report

Power Saving Mode

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



Refrigerant Status Detection

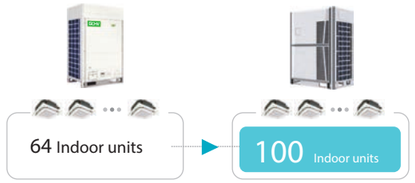
- Built-in with smart refrigerant auto check function, which can give suggestion about refrigerant status.
- Different code means different refrigerant status:

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

Features

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.

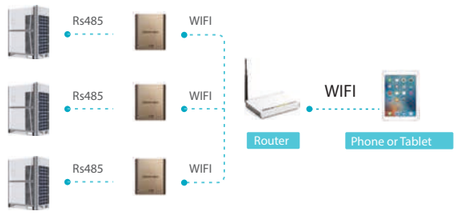
System can be unlock with password by authorized technician.

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.

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Advantages

1 High Efficiency

2 Benefits For Users

3 Benefits For Installers

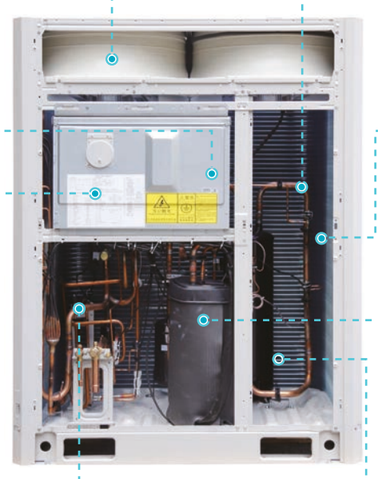
Provide You With Fresh Air

3. High Efficiency

Low carbon life advocate

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

Core Technologies Make High Efficiency



Brushless DC Motor
- High efficiency
- Low noise

180° Sine Wave Control
- High precision rotor speed control

Stepless Control
- On-demand output, high efficiency and energy saving

CCT Inner-grooved Tube
- Excellent heat-exchanging efficiency

2-in-1 Refrigerant Flow Path
- Increase the liquid refrigerant volume proportion

Cross Flow Fins
- Reduce wind resistance and improve heat exchange efficiency

DC Inverter Compressors
- High pressure type
- Asymmetric scroll design
- Neodymium permanent
- Magnet rotor

G Type Condenser
- Enlarge the heat exchange area, and the heat exchange effect is better (Available for 22/26/28/30/32HP)

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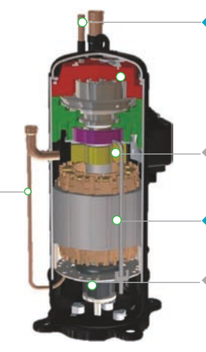
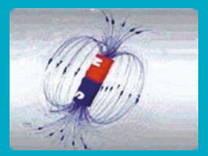
High Efficiency DC Inverter Compressor

- 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 effciency.
- High pressure chamber
  - Has small suction superheat and high refrigerant volume effciency
  - Has large refrigerant discharge buffer volume, low vibration and noise

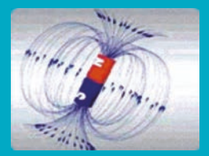


Neodymium permanent magnet rotor

Powerful magnetic force, large force moment and high efficiency



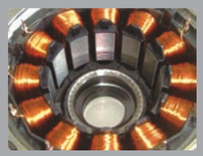
Ferrite magnet



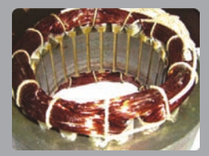
Neodymium permanent magnet

Concentrated winding

Magnetic efficiency is 12% higher than distributed winding



Concentrated winding



Distributed winding

High Efficiency DC Motor

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

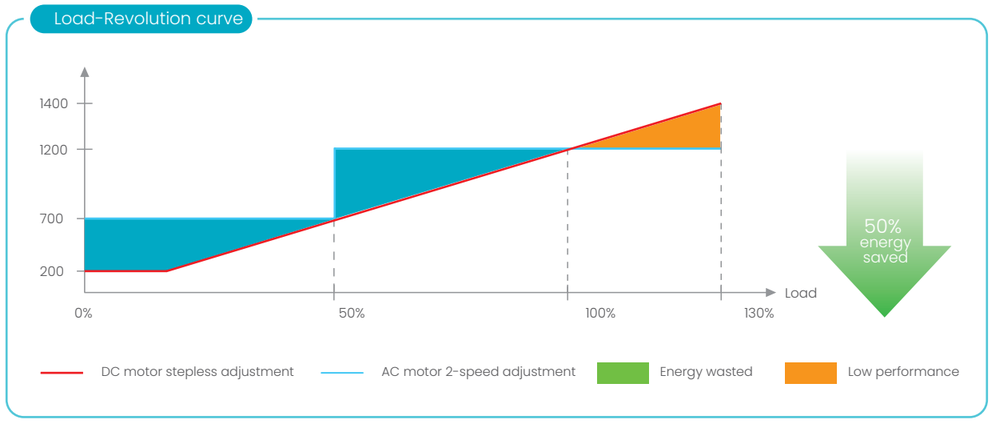
Low noise and high efficiency because of high-density wire winding engineering.

Brushless with built-in sensor.

DC fan motor

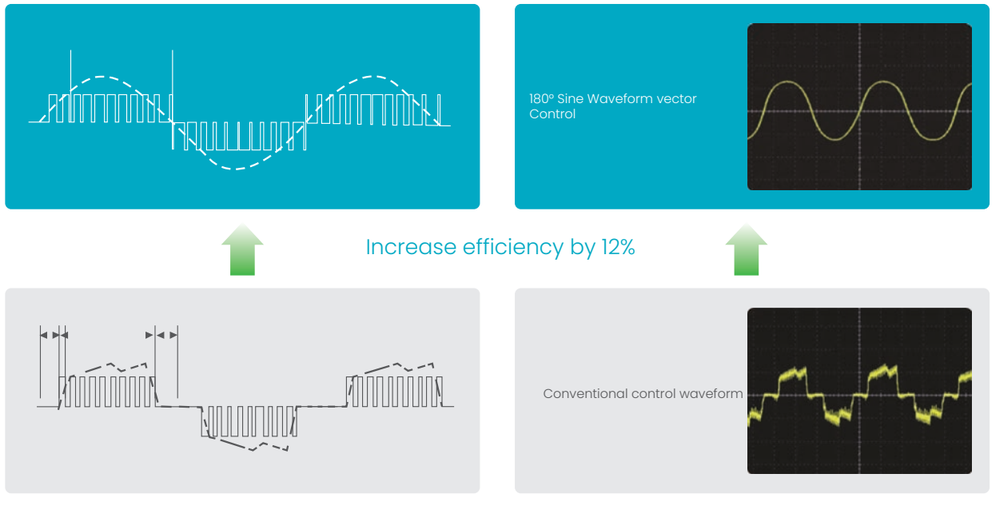
Stepless Control

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



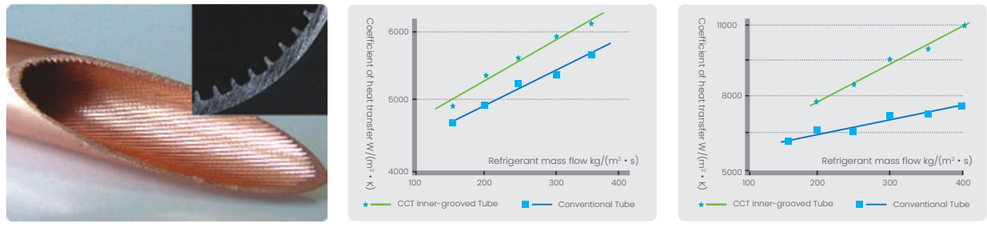
180° Sine Waveform Control

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%.

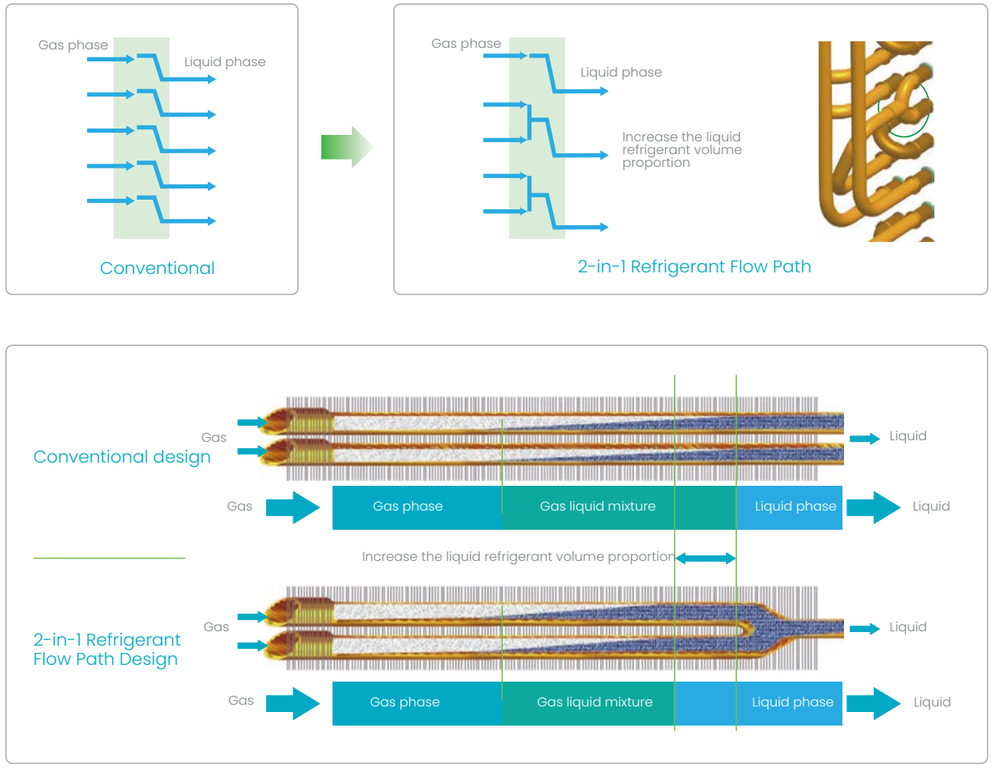


CCT Inner-grooved Tube

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

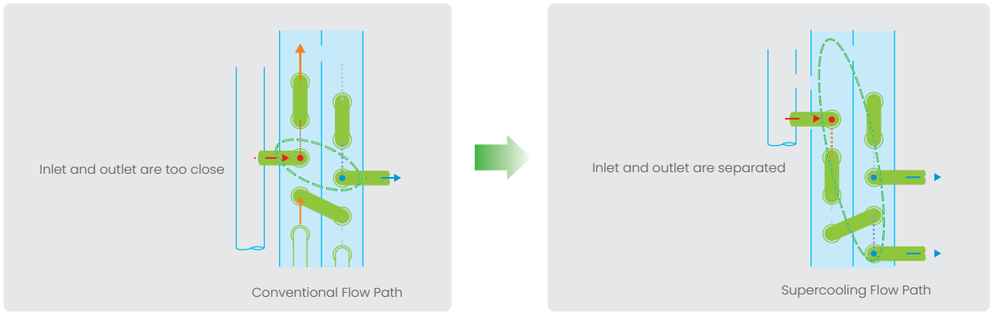


2-in-1 Refrigerant Flow Path Design



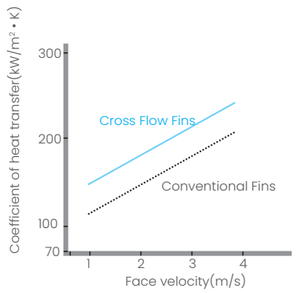
Supercooling Flow Path Design

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.



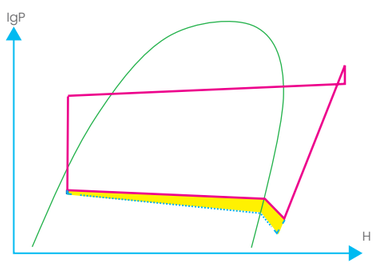
Cross Flow Fins

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



Low Resistance Internal piping

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



New structure cycle ..... Original compressing cycle 5% Pressure drop decrease

The PHE Economizer

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

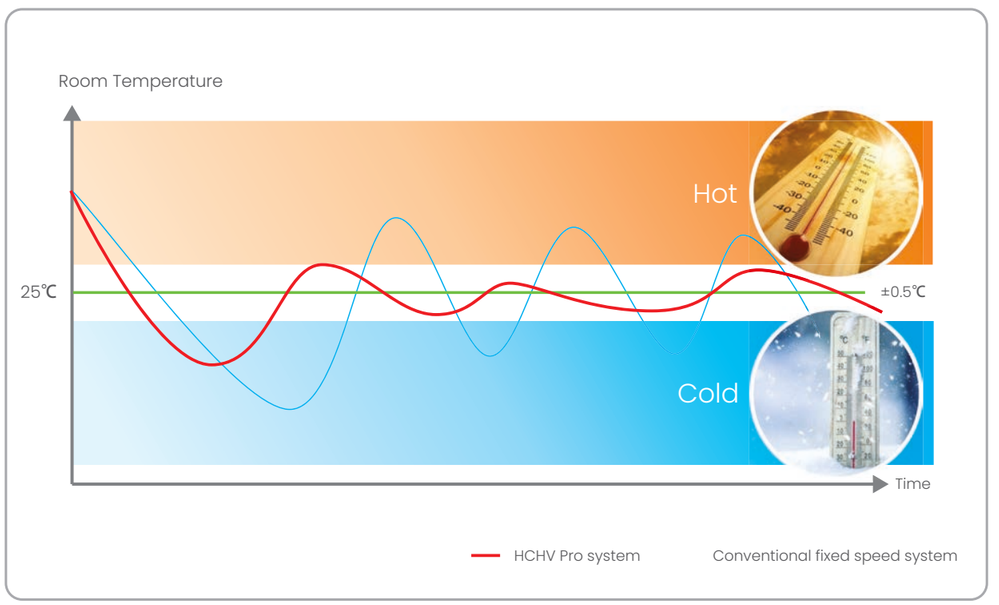
4. Benefits for Users 2

Livable environment creator

HCHV 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

- HCHV 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℃, offers outstanding comfort ability.



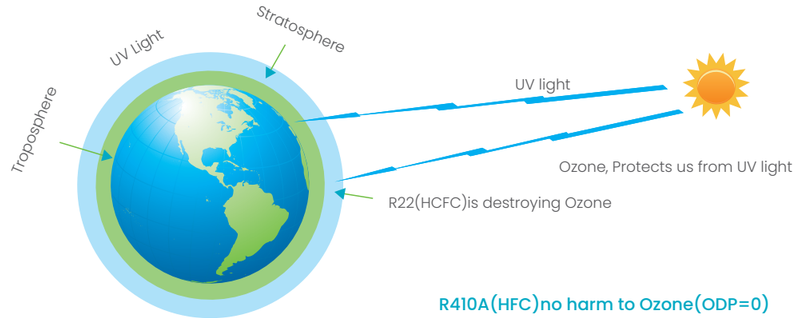
Wide Operation Range

HCHV pro has a wide ambient temperature operation range, cooling at -5-55℃, and heating at -30-30℃.

Environment Friendly

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

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



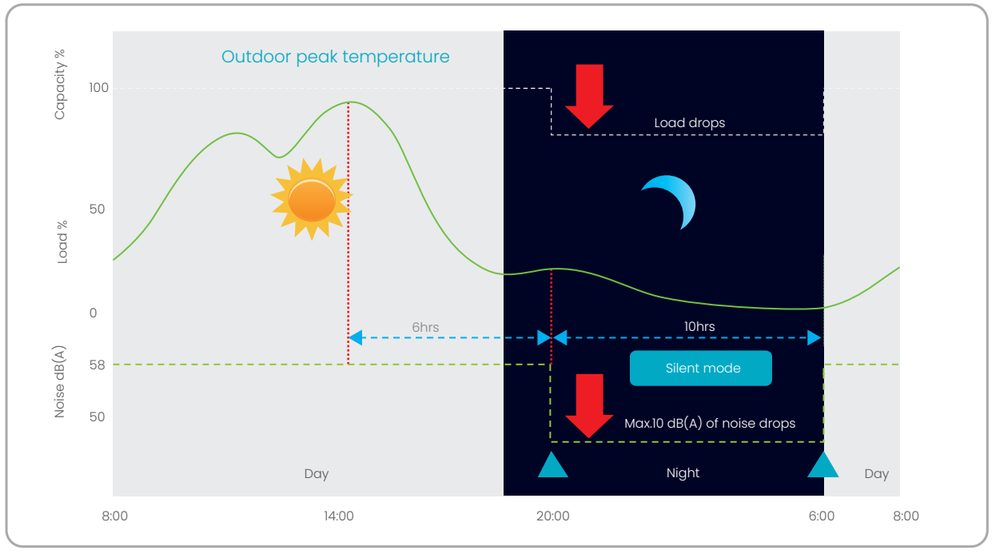
R410A(HFC)no harm to Ozone(ODP=0)

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

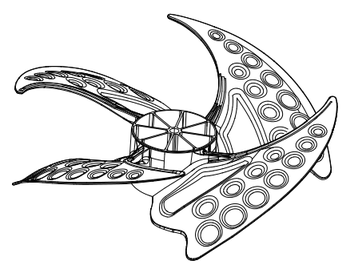
- Compressor and fan motor rotating speed can be reduced to lower the noise at night.
- Maximum 10dB(A) decrease.



Low Noise Fan Blade

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

- Front edge curve design
- Thickened front edge design
- Outer edge turn over design
- Tail edge cut design



- Bionic fan blade design
- Concave fan blade design
- Anti-resonance design

3-stage Back Up Function

Module back up function.

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

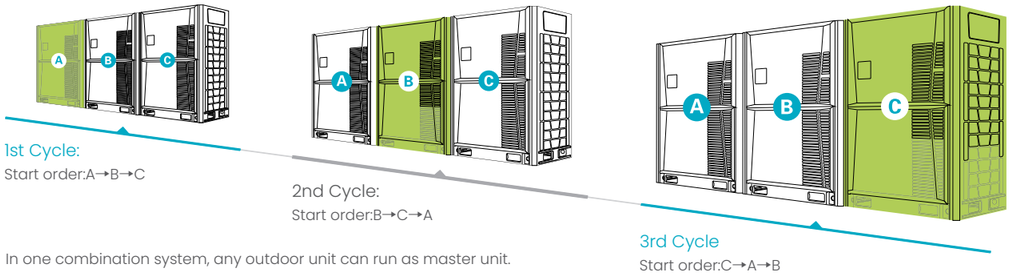
Compressor back up function

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.

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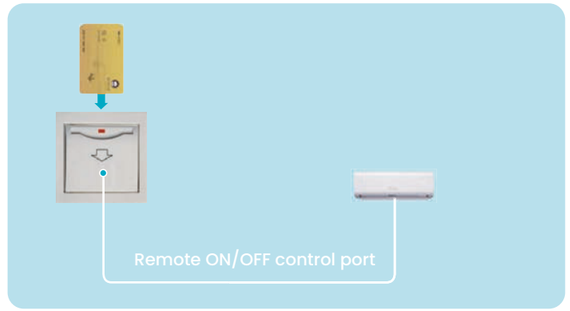
Remote ON/OFF Control Function

- 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

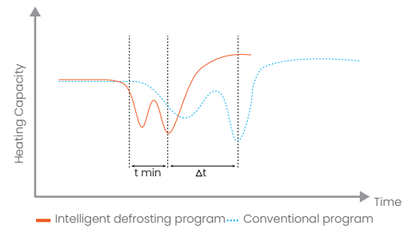
The dedicated temperature sensor monitors the temperature of the condenser coil of the outdoor unit in real time, intelligently selects the defrost mechanism and judges the timing of defrost, effectively prolongs the normal heating time, improves comfort, and achieves energy-saving effects.

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



5. Benefits For Installers

Optimization for designer and installer

HCHV Pro DC inverter VRF system is designed with flexible modular combination concept, we keep optimizing the module size, reduce equipment on space occtupied 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.

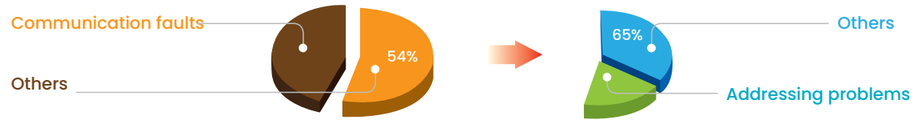
Addressing Methods

- 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.

Failure chart



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.

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

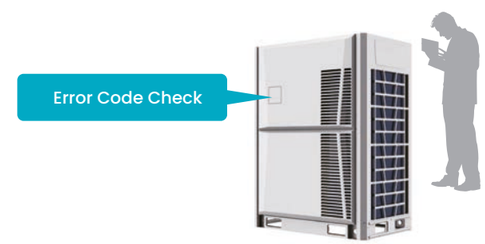
Digital Display On The PCB

- 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.

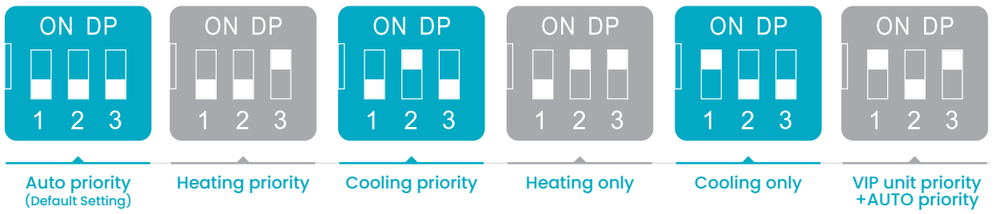
Service Window

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

1st stage
Compressor internal oil separation
Oil separator


Compressor

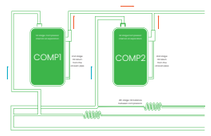
2nd stage
Oil return from the oil even pipe
Oil level control


Oil even pipe

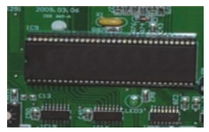
3rd stage
Oil return from the system oil separator
Oil separator

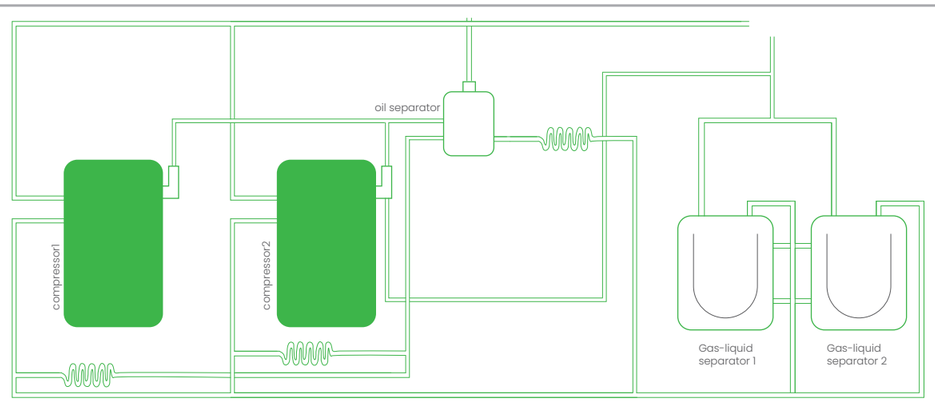

oil separator

4th stage
Oil balance between compressors
Oil balance pipe



5th stage
Oil return by system oil return program
Intellingent oil return program



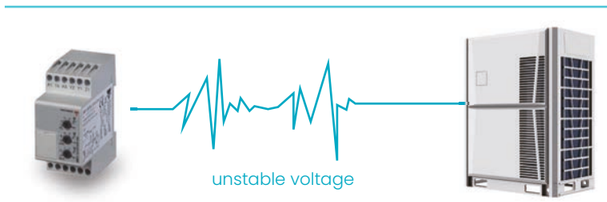


Humanized Internal Structure

- 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.

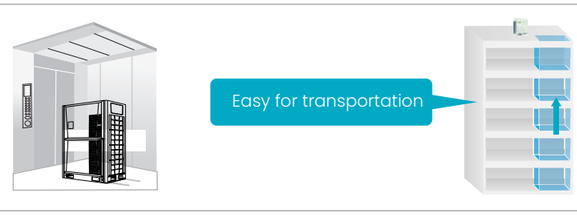
3-Phase Power Protector(Optional)

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;

6. Outdoor Units

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

HYUNDAI

Model Name			HCHV-E252W/	HCHV-E280W/	HCHV-E335W/	HCHV-E400W/	HCHV-E450W/
Power Supply 380~415V/3N/50&60Hz			HZR1-DK01	HZR1-DK01	HZR1-DK01	HZR1-DM01	HZR1-DM01
Performance Data							
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%				
Compressor Data							
Compressor	Quantity		1				
	Type		Scroll Compressor				
	Brand		HITACHI				
Physical Data							
Refrigerant	Type		R410a				
	Volume	Kg	9		11	14	
Dimension (WxHxD)	Throttle type		EXV				
	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				
Piping Data							
Pipe size	Liquid pipe	mm	Φ12.7			Φ15.88	
	Gas pipe	mm	Φ22.2			Φ28.6	
Max. pipe length	Total pipe length	m	1000			1000	
	ODU to farthest IDU (Acual length)	m	200			200	
	ODU to farthest IDU (Equivalent length)	m	240			240	
	1st IDU distributor to farthest IDU	m	40/90			40/90	
Max. vertical length	Between ODU & IDU (ODU above IDU)	m	100			100	
	Between ODU & IDU (ODU below IDU)	m	110			110	
	Between IDUs	m	40			40	
	Between ODUs	m	0			0	
Operation Temperature Range							
Cooling	Outdoor side	℃	-5~55			-5~55	
	Indoor side	℃	16~32			16~32	
Heating	Outdoor side	℃	-30~30			-30~30	
	Indoor side	℃	16~32			16~32	

HCHV-E500W/	HCHV-E560W/	HCHV-E615W/	HCHV-E670W/	HCHV-E730W/	HCHV-E785W/	HCHV-E850W/	HCHV-E900W/
HZR1-DM01	HZR1-DM01	HZR1-DM01	HZR1-DS01	HZR1-DS01	HZR1-DS01	HZR1-DS01	HZR1-DS01
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							
1340x1740x840			1990x1740x840				
1410x1900x910			2060x1900x910				
285	290	297	388	433		480	
303	308	315	406	452		498	
62	63		62	63		64	
4.5							
Φ15.88			Φ22.2				
Φ28.6			Φ35.0				
1000			1000				
200			200				
240			240				
40/90			40/90				
100			100				
110			110				
40			40				
0			0				
-5~55			-5~55				
16~32			16~32				
-30~30			-30~30				
16~32			16~32				

Note

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

Marked in red is available in stock

HYUNDAI 6.1 Small Capacity Full DC Inverter VRF Unit

12.5/14/16/18kW

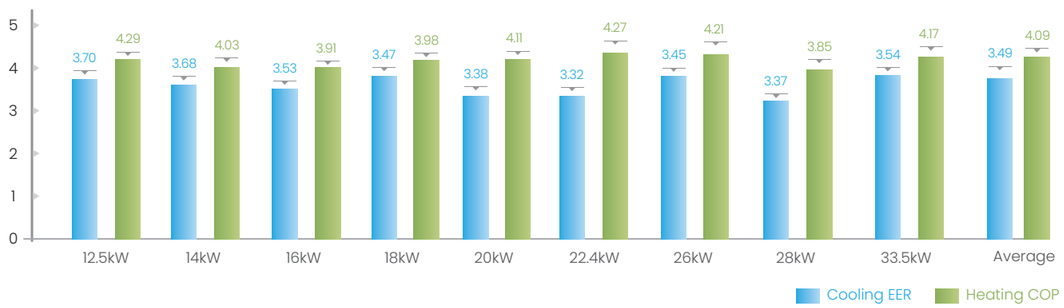
20/22.4kW

26/28/33.5kW

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

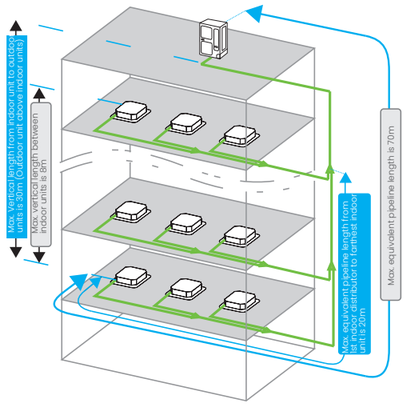
EER&COP



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

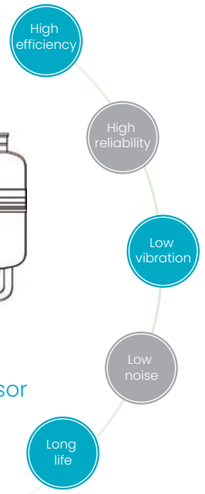
*Please refer to the installation manual for detailed length description.



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 alternativere frigerant which can protect environment.

Low Vibration

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

High Efficiency DC Motor

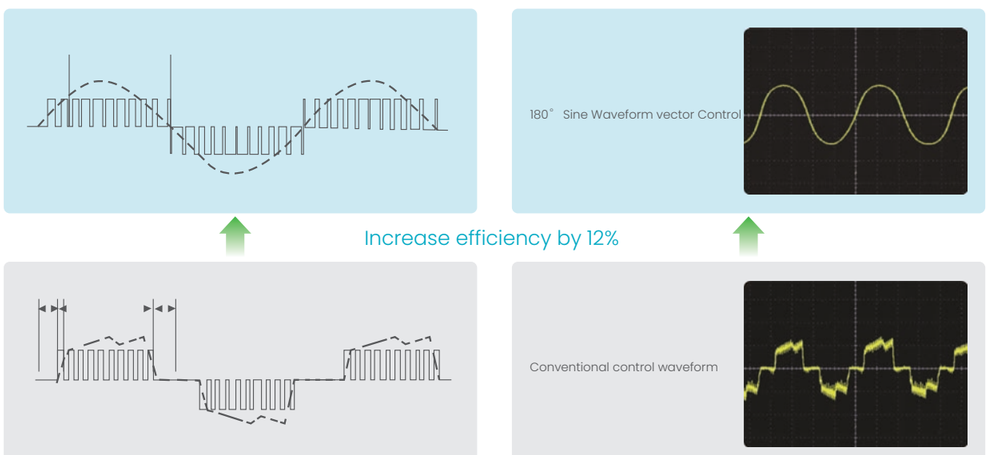
- High efficiency DC fan motor
- Low noise and high efficiency because of high-density wire winding engineering
- Brushless with built-in sensor

Space Saving Installation

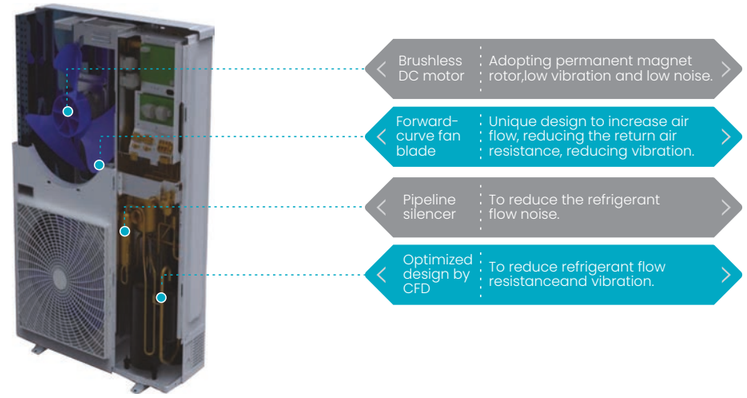
- Multiple indoor units can be connected to 1 outdoor unit, and long piping connection is also possible.
- Compare to one-drive-one type, the outdoor unit can be installed in various places to realize the space-saving installation.

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%.

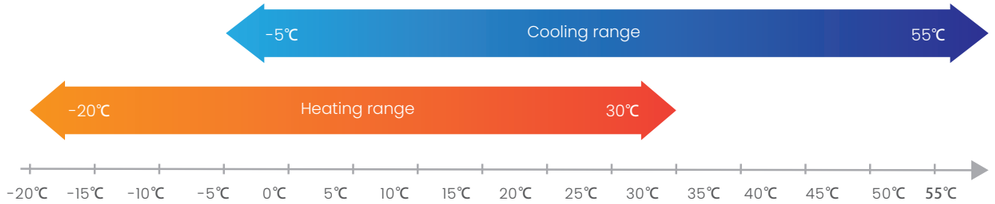


Silent Technology



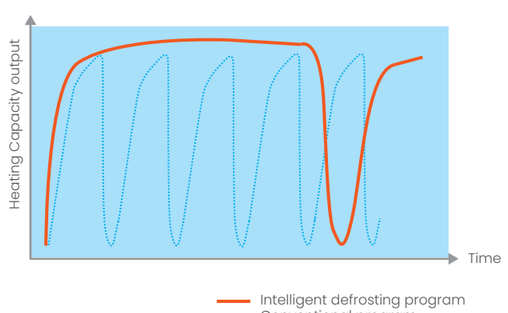
Wide Outdoor Operation Range

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



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

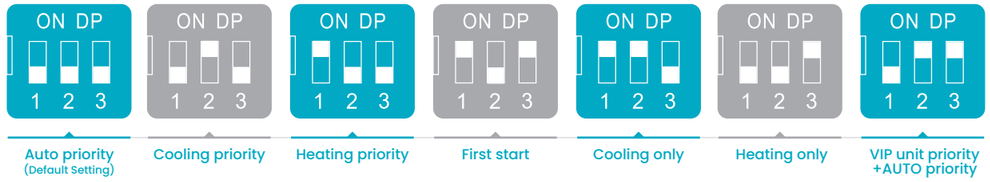
- Conventional unit's defrosting timing & duration is fixed.
- Intelligent defrosting program starts according to heat exchanging efficiency & capacity change due to the frost. Less temperature fluctuations, people feel more comfortable.

Fan Reversal Protection

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
  - Cooling priority mode
  - Heating only mode
  - Heating priority mode.
  - VIP unit priority+AUTO priority mode
  - First start mode
- Mode restriction function can be selected on the outdoor PCB.



High Efficiency

NEW TECHNOLOGY

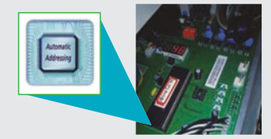
Refrigerant cooling technology for PCB

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℃ ambient temperature.

HYUNDAI

Automatically Addressing

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



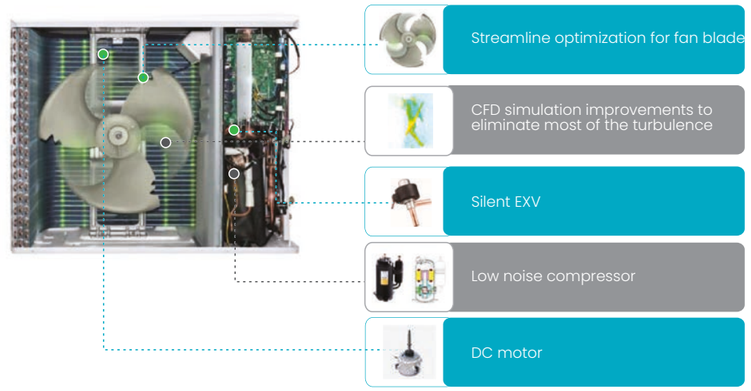
Independent Display Board

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

Lower Noise

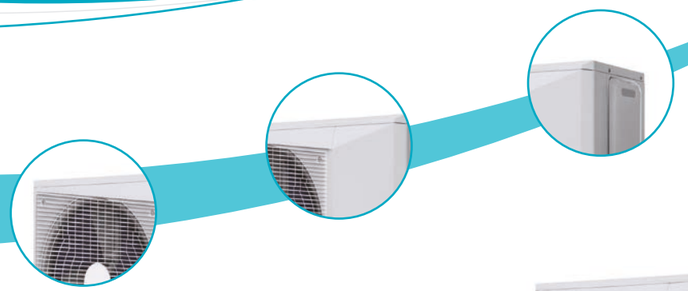
5 Major Technology Leads to Lower Noise

The Min. noise level is 54 dB(A)



HYUNDAI

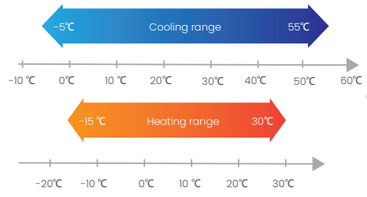
6.2 New Generation HCHV-Mini Small Capacity DC Inverter VRF



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℃.

Heating ambient temperature is down to -15 ℃, 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.

Marked in red is available in stock

HCHV-Mini

Model name	Power type (V/N/Hz)	Cooling				Heating				Compressor		Motor		Refrigerant		Sound pressure Level	Dimension (WxHxD)		Weight		Connecting		Max Connected indoor units quantity
		Capacity		Power input	EER	Capacity		Power input	COP	Type	Qty	Type	Qty	Type	Volume		Packing	Body	Net	Gross	Gas	Liquid	
		kW	Btu/h	kW		kW	Btu/h	kW							kg	DB(A)	mm	mm	kg	kg	mm	mm	
HCHV-D125W/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
HCHV-D140W/HZRI-050D	380-415/3/50	14	47800	3.80	3.68	16	54000	3.97	4.03						3.8				86.6	96.4			8
HCHV-D160W/HZRI-050D	380-415/3/50	16	54000	4.53	3.53	18	61000	4.61	3.91						3.8	58			90.1	100			9
HCHV-D180W/HZRI-050D	380-415/3/50	18	61000	5.18	3.47	20	68000	5.02	3.98						4.2				94.7	104.4	Φ19.05		10
HCHV-D200W/HZRI-080	380-415/3/50	20	68200	5.92	3.38	22	75000	5.35	4.11						5.3		1095x 1545x 485	1015x 1430x 450	112.7	126.8			11
HCHV-D224W/HZRI-080	380-415/3/50	22.4	76400	6.75	3.32	24	81800	5.62	4.27						5.3				112.7	126.8			13
HCHV-D260W/HZRI-100	380-415/3/50	26	88700	7.54	3.45	28.5	97200	6.77	4.21						6.1	60	1278 x 1703 x 560	1120 x 1549 x 528	142	162	Φ22.2	Φ12.7	15
HCHV-D280W/HZRI-100	380-415/3/50	28	95500	8.31	3.37	31.5	107500	8.18	3.85						8.0				154	174			16
HCHV-D335W/HZRI-100	380-415/3/50	33.5	114300	9.46	3.54	37.5	128000	8.99	4.17						8.0				154	174			19

Note

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

HCHV-Mini

Model name			HCHV-DH080W/R1	HCHV-DH100W/R1	HCHV-DH125W/R1	HCHV-D125W/HZRI-D01	HCHV-DH140W/R1	HCHV-D140W/HZRI-F01	HCHV-DH160W/R1	HCHV-D160W/HZRI-F01
			HCHV-DH080W/NR1	HCHV-DH100W/NR1	HCHV-DH125W/NR1	HCHV-D125W/HYRI-D01	HCHV-DH140W/NR1	HCHV-D140W/HYRI-F01	HCHV-DH160W/NR1	HCHV-D160W/HYRI-F01
Power supply			220~240 V/1N/50 Hz	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										
Cooling	Capacity	kW	8	10	12.5	12.5	14	14	16	16
		Btu/h	27300	34100	42600	42600	47800	47800	54600	54600
	Power input	kW	2.60	3.00	3.20	3.20	3.75	3.75	4.75	4.75
	Rated current	A	11.8	13.6	14.5	6.0	17.0	7.0	21.8	8.8
	EER	W/W	3.08	3.33	3.91	3.91	3.73	3.73	3.37	3.37
Heating	Capacity	kW	9	11	14	14	16	16	17	17
		Btu/h	30700	37500	47800	47800	54600	54600	58000	58000
	Power input	kW	2.65	3.1	3.52	3.52	4	4	4.4	4.4
	Rated current	A	12	14	16.1	6.6	18.2	7.5	20	8.2
	COP	W/W	3.40	3.55	3.98	3.98	4.00	4.00	3.86	3.86
Compressor data										
DC Inverter compressor	Quantity		1	1	1	1	1	1	1	1
	Type		Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary
	Brand		Mitsubishi	GMCC	Mitsubishi	Highly	Mitsubishi	Highly	Mitsubishi	Mitsubishi
Fan data										
Fan motor	Type		DC	DC	DC	DC	DC	DC	DC	DC
	Quantity		1	1	1	1	1	1	1	1
	Power output	W	75	90	180	90	180	170	180	170
Fan blade	Fan Quantity		1	1	1	1	1	1	1	1
	Air flow	m³/h	3300	4000	5500	4000	5500	5500	5500	5500
Physical data										
Outdoor coil	Fin type		Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil	Hydrophilic Foil
	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	3.80
Dimension (WxHxD)	Net	mm	935x702x383	1032x810x445	1100x870x528	1032×810×445	1100x870x528	1100x870x528	1100x870x528	1100x870x528
	Packing	mm	975x770x420	1075x875x495	1140x965x540	1075×875×495	1140x965x540	1140x965x540	1140x965x540	1140x965x540
Weight	Net	kg	47	60	85	67.4	90	87.5	90	90
	Gross	kg	50	65	95	72.2	100	97.4	100	100
ODU sound level		dB(A)	≤54	≤56	≤56	≤56	≤57	≤57	≤57	≤57
Operation temp. range										
Cooling	Outdoor side	℃	-5-55	-5-55	-5-55	-5-55	-5-55	-5-55	-5-55	-5-55
Heating	Outdoor side	℃	-15-30	-15-30	-15-30	-15-30	-15-30	-15-30	-15-30	-15-30

Note

1. The cooling conditions: indoor temp.:27℃ DB(80.6℉), 19℃ WB(60℉), outdoor temp.: 35℃ DB(95℉)equivalent pipe length:5m drop length:0m.
2. The heating conditions: indoor temp.:20℃ DB(68℉), 15℃ WB(44.6℉), outdoor temp.:7℃ DB(42.8℉)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.

HYUNDAI
7.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					●	●

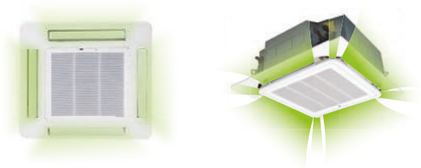
Features

Accessories

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

Wide air delivering

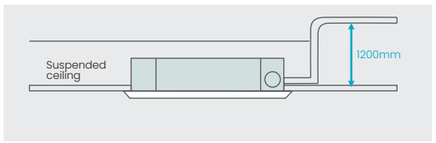
Air flow is soft and smooth, air can be delivered to every corner without dead angle, it makes the room temperature distribution more balance.



Built-in with drainage pump

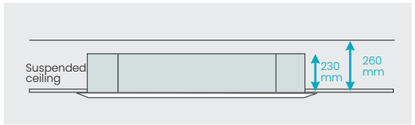
Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.

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



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.

Marked in red is available in stock

Specification

4-way Cassette Unit(Compact type)

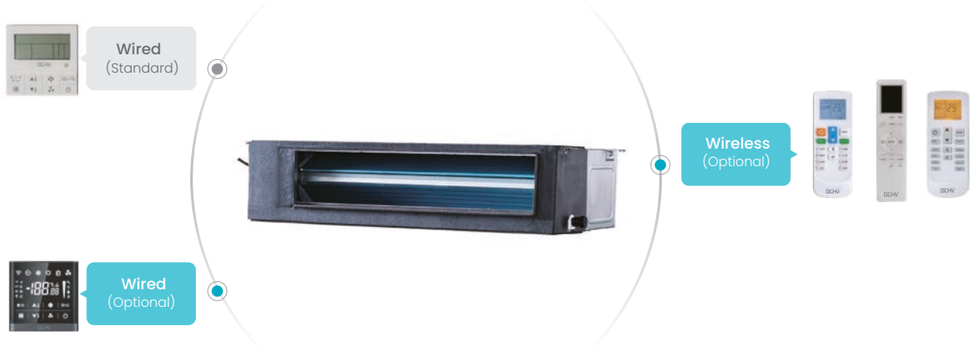
Model name	Power type	Capacity Cooling kW	Capacity Cooling kBtu/h	Capacity Heating kW	Capacity Heating kBtu/h	Power input kW	Air flow M³/h	Air flow CFM	Sound Level DB(A)	ESP Pa	Dimension(WxHxD) Packing mm	Dimension(WxHxD) Body mm	Dimension(WxHxD) Panel packing mm	Dimension(WxHxD) Panel mm	Body Weight Net kg	Body Weight Gross kg	Connecting pipe Gas mm	Connecting pipe Liquid mm	Connecting pipe Drain mm	Standard controller
HMV-V22Q4/HR1-C	50Hz	2.2	7.5	2.5	8.5	0.038	447	263	22-34	/	755 x 375 x 680	653 x 267 x 585	750 x 95 x 750	650 x 30 x 650	17.5	23	Φ9.52	Φ6.35	ODΦ25	Remote controller
HMV-V22Q4/HNR1-C	60Hz																			
HMV-V28Q4/HR1-C	50Hz	2.8	9.5	3.2	10.9	0.038	447	263	22-34						17.5	23				
HMV-V28Q4/HNR1-C	60Hz																			
HMV-V36Q4/HR1-C	50Hz	3.6	12.2	4.0	13.6	0.040	515	303	27-38						17.5	23	Φ12.7			
HMV-V36Q4/HNR1-C	60Hz																			
HMV-V45Q4/HR1-C	50Hz	4.5	15.3	5.0	17	0.040	515	303	27-38						17.5	23				
HMV-V45Q4/HNR1-C	60Hz																			

Round-flow Cassette

Model name	Power type	Capacity Cooling kW	Capacity Cooling kBtu/h	Capacity Heating kW	Capacity Heating kBtu/h	Power input kW	Air flow M³/h	Air flow CFM	Sound Level DB(A)	ESP Pa	Dimension(WxHxD) Packing mm	Dimension(WxHxD) Body mm	Dimension(WxHxD) Panel packing mm	Dimension(WxHxD) Panel mm	Body Weight Net kg	Body Weight Gross kg	Connecting pipe Gas mm	Connecting pipe Liquid mm	Connecting pipe Drain mm	Standard controller
HMV-V56QR/HR1	50Hz	5.6	19.1	6.3	21.4	0.043	860	500	32-39	/	920 x 265 x 985	833 x 232 x 900	1030 x 100 x 1030	950 x 50 x 950	24	30	Φ12.7	Φ6.35	Φ25	Remote controller
HMV-V56QR/HNR1	60Hz																			
HMV-V71QR/HR1	50Hz	7.1	24.2	8.0	27.2	0.093	1200	700	35-39						24	30	Φ15.88	Φ9.52		
HMV-V71QR/HNR1	60Hz																			
HMV-V80QR/HR1	50Hz	8.0	27.2	8.8	30										24	30				
HMV-V80QR/HNR1	60Hz																			
HMV-V90QR/HR1	50Hz	9.0	30.7	10.0	34.1	0.160	1400	820	37-41		920 x 310 x 985	833 x 286 x 900			28.5	35				
HMV-V90QR/HNR1	60Hz																			
HMV-V100QR/HR1	50Hz	10.0	34.1	11.0	37.5										28.5	35				
HMV-V100QR/HNR1	60Hz																			
HMV-V112QR/HR1	50Hz	11.2	38.2	12.5	42.6										28.5	35				
HMV-V112QR/HNR1	60Hz																			
HMV-V125QR/HR1	50Hz	12.5	42.6	14.0	47.7										28.5	35				
HMV-V125QR/HNR1	60Hz																			
HMV-V140QR/HR1	50Hz	14.0	47.7	15.0	51.1		1800	1050	38-46						28.5	35				
HMV-V140QR/HNR1	60Hz																			
HMV-V160QR/HR1	50Hz	16.0	54.5	17.0	58										28.5	35				
HMV-V160QR/HNR1	60Hz																			

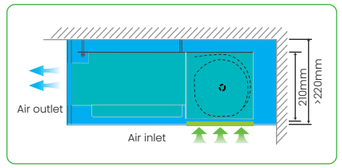
Notes:
1.Power supply: 220-240V/1N for 50Hz; 208-230V/1N for 60Hz, the above data is for AC motor model.
2.Cooling test condition: indoor side 27℃ DB, 19℃ WB outdoor side 35℃ DB. Heating test condition: indoor side 20℃ DB, 15℃ WB outdoor side 7℃ DB.
3.Sound level: measured at a point 1 m in front of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

7.2 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.

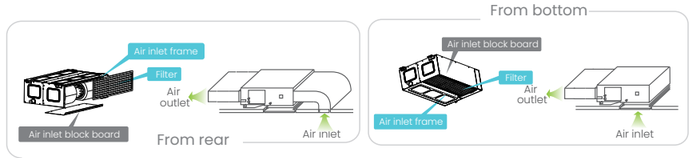
Features

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.



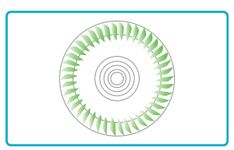
Big air flow low noise centrifugal fan wheel

20dB(A) — 30dB(A)

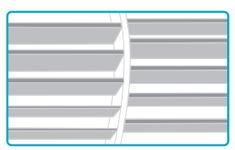
Big air flow low noise centrifugal fan blade with special air tunnel system, and the unique shock absorption measures, making this series ducted units' running noise is as low as 24 dB(A),let users to enjoy the comfort, sleep without any disturbance.

Rustled leaves

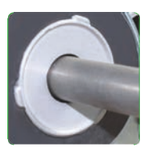
Silent reading room



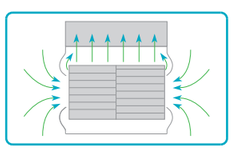
Special resin material fan wheel.



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.

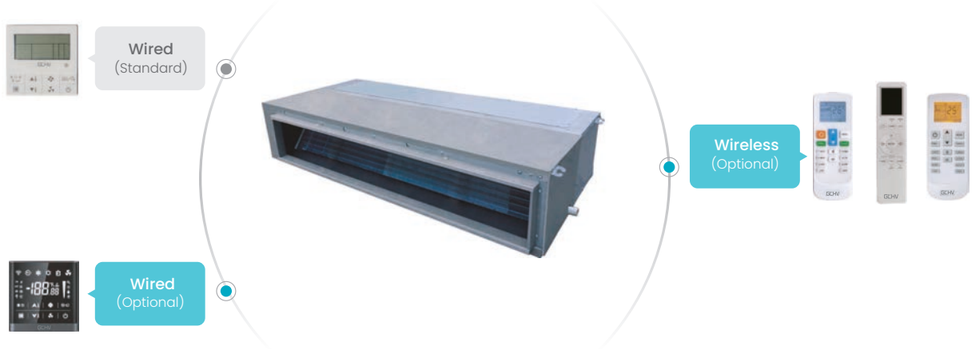
Specification

Model name	Power type	Capacity				Rated input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling		Heating							Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	kW	M³/h	CFM	DB(A)	Pa	mm	mm	mm	mm	kg	kg	mm	mm	mm	
HMV-V22TA/HR1-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	Φ6.35	OD Φ25	Wired controller
HMV-V22TA/HNR1-C	60Hz														16.0	18.5				
HMV-V28TA/HR1-C	50Hz	2.8	9.5	3.2	10.9										16.5	19.0	Φ12.7			
HMV-V28TA/HNR1-C	60Hz														16.5	19.0				
HMV-V36TA/HR1-C	50Hz	3.6	12.2	4.0	13.6	0.11	550	324	25-32											
HMV-V36TA/HNR1-C	60Hz																			
HMV-V45TA/HR1-C	50Hz	4.5	15.3	5.0	17		620	360	32-37											
HMV-V45TA/HNR1-C	60Hz																			
HMV-V56TA/HR1-C	50Hz	5.6	19.1	6.3	21.4	0.16	800	520	28-38		1110 x 240 x 510	1010 x 210 x 467			21.0	24.0				
HMV-V56TA/HNR1-C	60Hz																			
HMV-V71TA/HR1-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		
HMV-V71TA/HNR1-C	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℃ DB, 19℃ WB outdoor side 35℃ DB. Heating test condition: indoor side 20℃ DB, 15℃ WB outdoor side 7℃ DB.
3.Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4.The above data may be changed without notice for future improvement on quality and performance.

Marked in red is available in stock

7.3 Medium ESP Ducted Unit



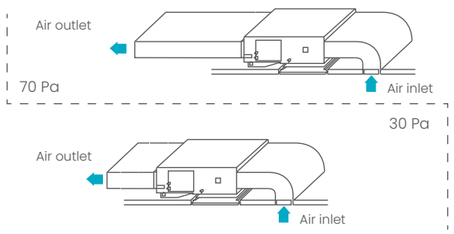
Features

Accessories

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

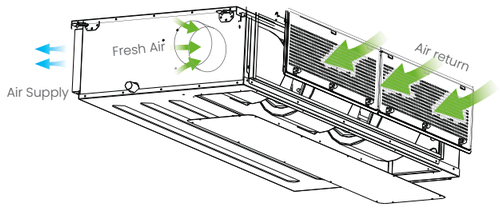
Static pressure

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



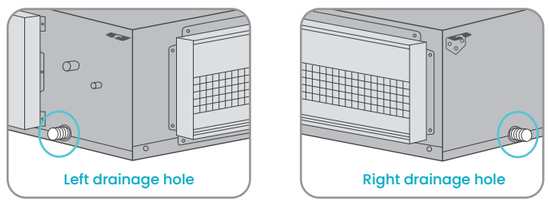
Fresh air intake

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

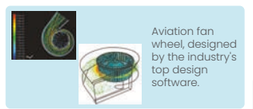


Marked in red is available in stock

HYUNDAI

Whole unit low noise design, silent operation

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

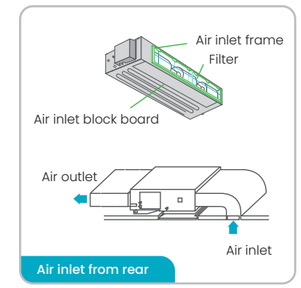


DC fan motor is optional

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

Two air return installation methods

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

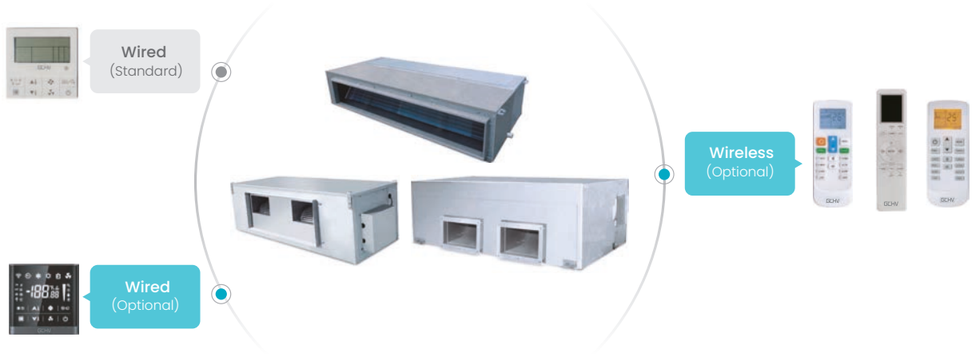


Specification

Model name	Power type	Capacity				Rated input	Air flow		Sound Level	ESP	Dimension(WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling		Heating							Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	kW	M³/h	CFM	DB(A)	Pa	mm	mm	mm	mm	kg	kg	mm	mm	mm	
HMV-V71TB/HR1-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	Φ15.88	Φ9.52	ODΦ25	Wired controller
HMV-V71TB/HNR1-B	60Hz														33	37				
HMV-V80TB/HR1-B	50Hz	8.0	27.2	9.0	30.7										46	50				
HMV-V80TB/HNR1-B	60Hz																			
HMV-V90TB/HR1-B	50Hz	9.0	30.7	10.0	34.1		1850	1080	38-43		1490 x 325 x 720	1445 x 260 x 680			46	50				
HMV-V90TB/HNR1-B	60Hz																			
HMV-V100TB/HR1-B	50Hz	10.0	34.1	11.0	37.5		2000	1170	40-44						46	50				
HMV-V100TB/HNR1-B	60Hz																			
HMV-V120TB/HR1-B	50Hz	12.0	40.9	13.0	44.3										46	50				
HMV-V120TB/HNR1-B	60Hz																			
HMV-V150TB/HR1-B	50Hz	15.0	51.1	17.0	58										46	50				
HMV-V150TB/HNR1-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℃ DB, 19℃ WB outdoor side 35℃ DB. Heating test condition: indoor side 20℃ DB, 15℃ WB outdoor side 7℃ DB.
3.Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4.The above data may be changed without notice for future improvement on quality and performance.

7.4 High Static Pressure Ducted Unit



Features

Accessories

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

Optional water pump

Slim body, saving suspended ceiling spaces. And water pump is optional, pump head up to 700mm

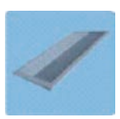
Can be used with various diffusers


Round diffuser


Spiral diffuser


Square diffuser


Linear diffuser


Rectangular diffuser

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

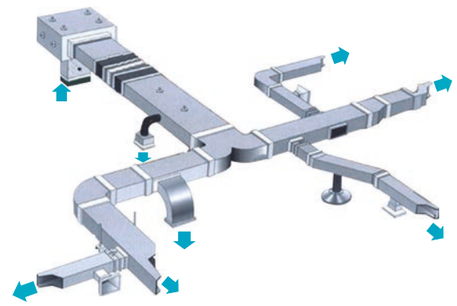
Marked in red is available in stock

HYUNDAI

High static pressure

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

High static pressure ducted unit



Long distance multi-point air supply

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	M³/h	CFM	DB(A)	Pa	mm	mm	kg	kg	mm	mm	mm	
HMV-V71TH/HR1-B	50Hz	7.1	24.2	7.8	26.6	0.40	1500	880	40-42	150	1490 x 325 x 720	1445 x 260 x 680	46	50	Φ15.88	Φ9.52	ODΦ25	Wired controller
HMV-V71TH/HNR1-B	60Hz																	
HMV-V80TH/HR1-B	50Hz	8.0	27.2	8.8	30													
HMV-V80TH/HNR1-B	60Hz																	
HMV-V90TH/HR1-B	50Hz	9.0	30.7	10.0	34.1													
HMV-V90TH/HNR1-B	60Hz																	
HMV-V100TH/HR1-B	50Hz	10.0	34.1	11.0	37.5	0.50	2300	1350	44-52		1245 x 445 x 655	1190 x 370 x 620	47	51				
HMV-V100TH/HNR1-B	60Hz																	
HMV-V120TH/HR1-B	50Hz	12.0	40.9	13.0	44.3													
HMV-V120TH/HNR1-B	60Hz																	
HMV-V150TH/HR1-B	50Hz	15.0	51.1	17.0	58.0													
HMV-V150TH/HNR1-B	60Hz																	
HMV-V200TH/HR1-B	50Hz	20.0	68.2	22.0	75.0	1.72	4000	2350	45-53		1510x580x870	1465x448x811	102	113	Φ22.2	Φ12.7	ODΦ30	
HMV-V200TH/HNR1-B	60Hz																	
HCHV-D200TH/HR1-F310	50/60Hz	20.0	68.2	22.0	75.0	1.20	3750	2200	45-50		1515x885x580	1440x811x448						
HMV-V250TH/HR1-B	50Hz	25.0	85.3	27.5	93.8	1.72	4200	2470	45-54		1510x580x870	1465x448x811						
HMV-V250TH/HNR1-B	60Hz																	
HCHV-D250TH/HR1-F310	50/60Hz	25.0	85.3	27.5	93.8	1.20	3750	2200	46-51		1515x885x580	1440x811x448						
HMV-V280TH/HR1-B	50Hz	28.0	95.5	30.8	105.0	1.72	4400	2580	45-55		1510x580x870	1465x448x811						
HMV-V280TH/HNR1-B	60Hz																	
HCHV-D280TH/HR1-F310	50/60Hz	28.0	95.5	30.8	105.0	1.30	4100	2400	48-52		1515x885x580	1440x811x448						
HMV-V450TH/HZR1-B	50Hz	45.0	153.5	50.0	170.6	2.60	6000	3520	60	200	2267 x 840 x 1050	2165 x 676 x 916	222	260	Φ28.6	Φ15.88	ODΦ32	
HMV-V450TH/HXR1-B	60Hz																	
HMV-V560TH/HZR1-B	50Hz	56.0	191.0	63.0	214.9	3.40	8000	4700	64									
HMV-V560TH/HXR1-B	60Hz																	

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

7.5 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

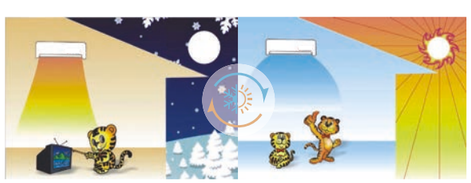
Simple, elegant, stylish, mirror design, suitable for all kinds of decoration style.

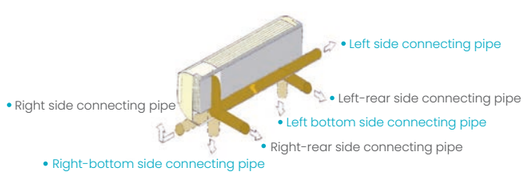
Flexible in installation

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			HCHV-D22G/HR1-GSB	HCHV-D28G/HR1-GSB	HCHV-D36G/HR1-GSB	HCHV-D45G/HR1-GSC	HCHV-D56G/HR1-GSC	HCHV-D71G/HR1-GSC
Power Supply			220-240V/1N/50&60Hz	220-240V/1N/50&60Hz	220-240V/1N/50&60Hz	220-240V/1N/50&60Hz	220-240V/1N/50&60Hz	220-240V/1N/50&60Hz
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Heating	kW	2.5	3.2	4.0	5.0	6.3	8.0
Power input		W	15	15	18	20	23	35
Fan motor	Type		DC	DC	DC	DC	DC	DC
	Speed (Hi/Med/Low)	r/min	1000/900/870/850	1000/900/870/850	1100/1000/950/900	1050/950/900/850	1100/1000/950/900	1300/1200/1100/1000
Air flow		m^3/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		℃	16-32	16-32	16-32	16-32	16-32	16-32

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

Wall Mounted Unit

Marked in red is available in stock

7.6 Floor Ceiling Unit

Features

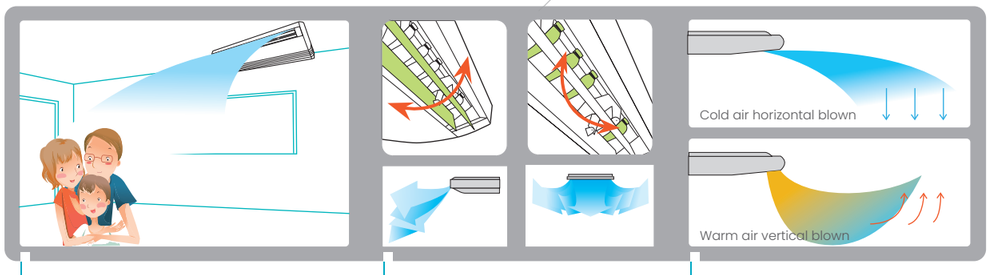
Accessories

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



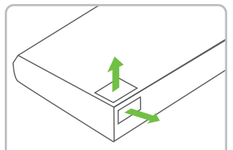
Configured with low noise high performance centrifugal fans, has big air flow and long distance air supply.

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

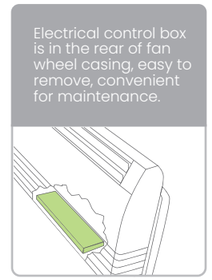
In Cooling mode, cold air is blown from horizontal. In heating mode, warm air is blown from vertical.

Marked in red is available in stock

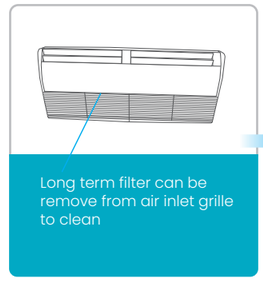
Easy for installtion



Refrigerant pipe can be connected from 2 directions.

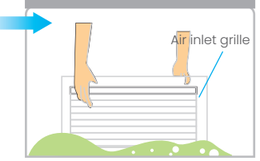


Electrical control box is in the rear of fan wheel casing, easy to remove, convenient for maintenance.



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

Water washable



Two kinds of grilles for selection

Horizontal Type Grill
(Standard)

Honeycomb Type Grill
(Optional)

Specification

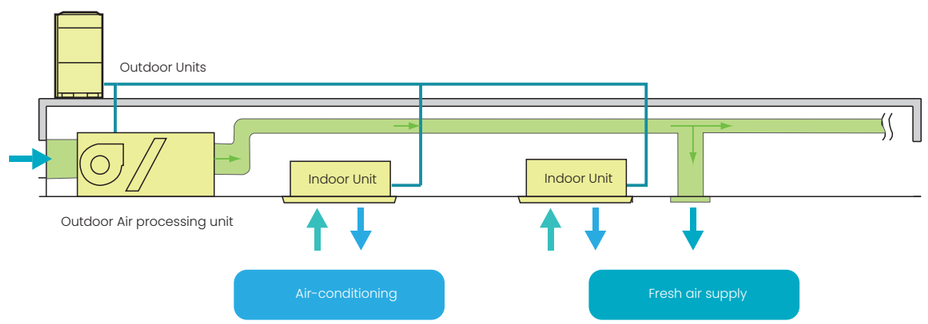
Model name	Power type	Capacity				Power input	Air flow		Sound Level	Dimension(WHxD)		Body Weight		Connecting pipe			Standard controller
		Cooling		Heating						Packing	Body	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	kW	M³/h	CFM	DB(A)	mm	mm	kg	kg	mm	mm	mm	
HCHV-V36UA/HR1-LDBA	50Hz	3.6	12.3	4.0	13.7	0.085	620	360	37-42	1130 x 765 x 330	1050 x 675 x 235	26.5	31.0	Φ12.7	Φ6.35	DN20	Remote controller
HCHV-V36UA/HNR1-LDBA	60Hz																
HCHV-V45UA/HR1-LDBA	50Hz	4.5	15.3	5.0	17												
HCHV-V45UA/HNR1-LDBA	60Hz																
HCHV-V56UA/HR1-LDBA	50Hz	5.6	19.1	6.3	21.4	0.110	800	470	37-47								
HCHV-V56UA/HNR1-LDBA	60Hz																
HCHV-V71UA/HR1-LDBB	50Hz	7.1	24.2	8.0	27.2	0.095	1200	706	45-51	1380 x 765 x 325	1300 x 675 x 235	32.0	37.0	Φ15.88	Φ9.52	DN20	
HCHV-V71UA/HNR1-LDBB	60Hz																
HCHV-V80UA/HR1-LDBB	50Hz	8.0	27.2	8.8	30												
HCHV-V80UA/HNR1-LDBB	60Hz																
HCHV-V90UA/HR1-LDBC	50Hz	9.0	30.7	10.0	34.1	0.160	1600	940	45-50	1750 x 765 x 325	1670 x 675 x 235	41.0	47.0				
HCHV-V90UA/HNR1-LDBC	60Hz																
HCHV-V112UA/HR1-LDBC	50Hz	11.2	38.2	12.5	42.6												
HCHV-V112UA/HNR1-LDBC	60Hz																
HCHV-V140UA/HR1-LDBC	50Hz	14.0	47.7	15.0	51.1	0.200	2000	1177	45-54								
HCHV-V140UA/HNR1-LDBC	60Hz																
HCHV-V160UA/HR1-LDBC	50Hz	16.0	54.5	17.0	58												
HCHV-V160UA/HNR1-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℃ DB, 19℃ WB outdoor side 35℃ DB. Heating test condition: indoor side 20℃ DB, 15℃ WB outdoor side 7℃ DB.
3.Sound level: measured at a point 1 m in front of the unit at a height of 1.5m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4.The above data may be changed without notice for future improvement on quality and performance.

7.7 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		Heating							Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	kW	M³/h	CFM	DB(A)	Pa	mm	mm	mm	mm	kg	kg	mm	mm	mm	
HMV-V140TF/HR1-B	50Hz	14.0	47.7	9.0	30.7	0.45	1400	820	42-48	220	1245 x 445 x 655	1190 x 370 x 620	/	/	47	51	Φ15.88	Φ9.52	ODΦ25	Wired controller
HMV-V140TF/HNR1-B	60Hz																			
HMV-V224TF/HR1-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	Φ22.2	Φ12.7	ODΦ30	
HMV-V224TF/HNR1-B	60Hz																			
HMV-V280TF/HR1-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				
HMV-V280TF/HNR1-B	60Hz																			
HMV-V450TF/HZR1	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	Φ28.6	Φ15.88	ODΦ32	
HMV-V450TF/HXR1	60Hz																			
HMV-V560TF/HZR1	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				
HMV-V560TF/HXR1	60Hz																			

Notes:1.45kW & 56kW units' power supply are 380-415V/3N for 50Hz and 208-230V/3N for 60Hz, the others' power supply is 220-240V/1N for 50Hz and 208-230V/1N for 60Hz
2.Cooling test condition: Indoor and outdoor side 33℃ DB, 28℃ WB. Heating test condition: Indoor and outdoor side 0℃CB, -2.9℃ WB.
3.Sound level: measured at a point 1 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.

Marked in red is available in stock

8. Controller and Software

Wired Controller

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
- °F/°C 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

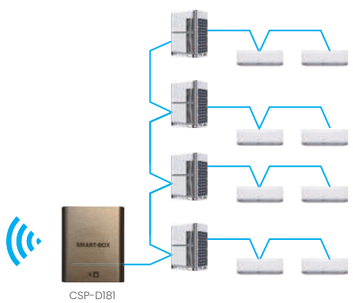
- Easy to install. Controller connects to outdoor units only.
- 1 Controller can control max. 100 indoor units.
- Mode lock function, user can lock the running mode of indoor unit.
- Build in Modbus protocol.

Smart Manager

- Available on iOS and Android

- Remote control via cloud server

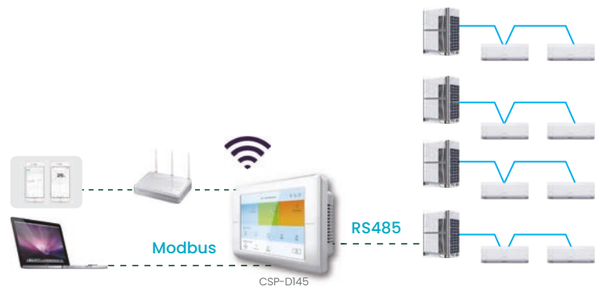
- Single unit controller or group control
- Weekly schedule management
- 100 indoor units can be controlled
- Operation parameter enquiry



CSP-D181

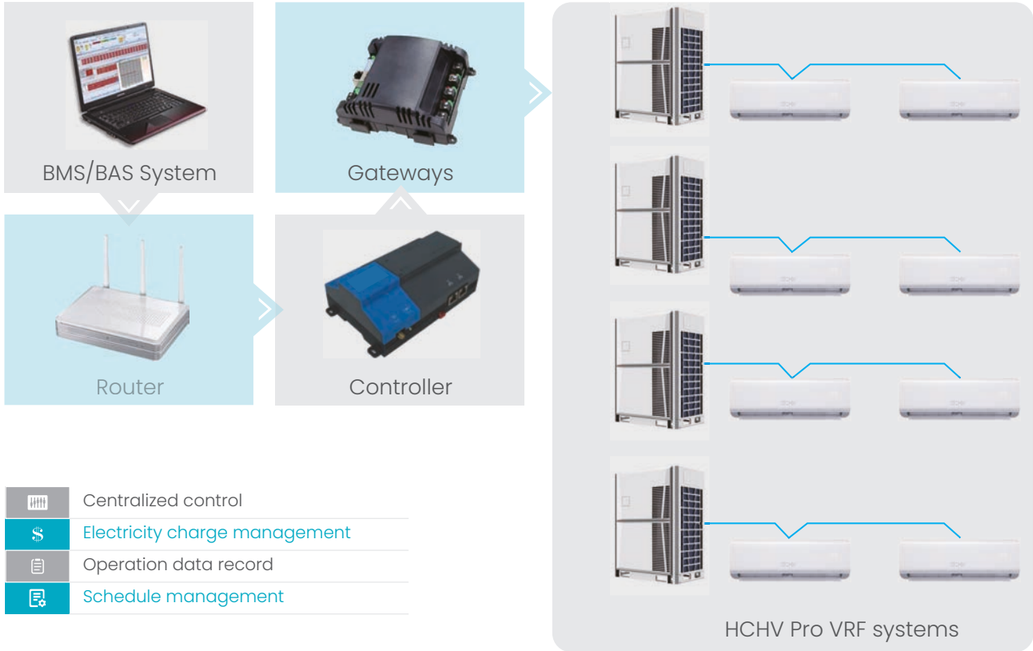
HYUNDAI

Touch Screen Centralized Controller



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

HCHV-NET(Centralized Control System)

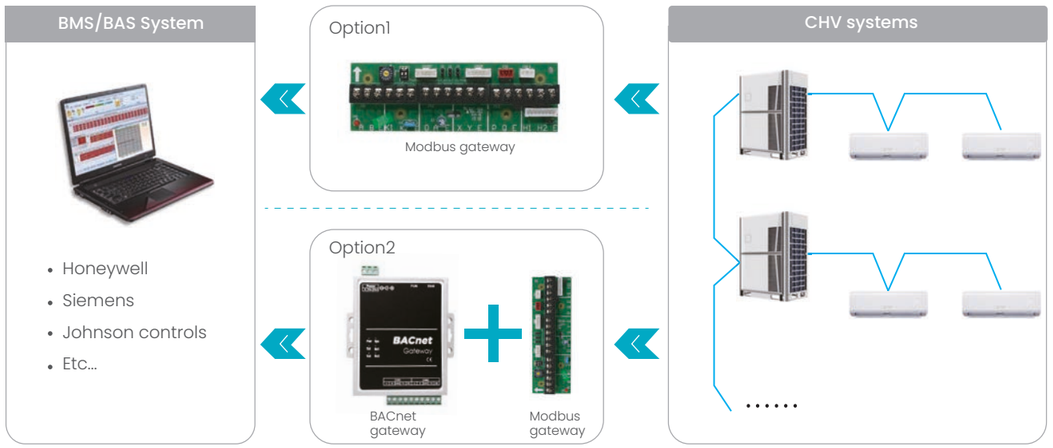


- Centralized control
- Electricity charge management
- Operation data record
- Schedule management

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

- HCHV 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.

HCHV AHU Kit

Electrical part

- PCB
- Power terminals
- Communication terminals

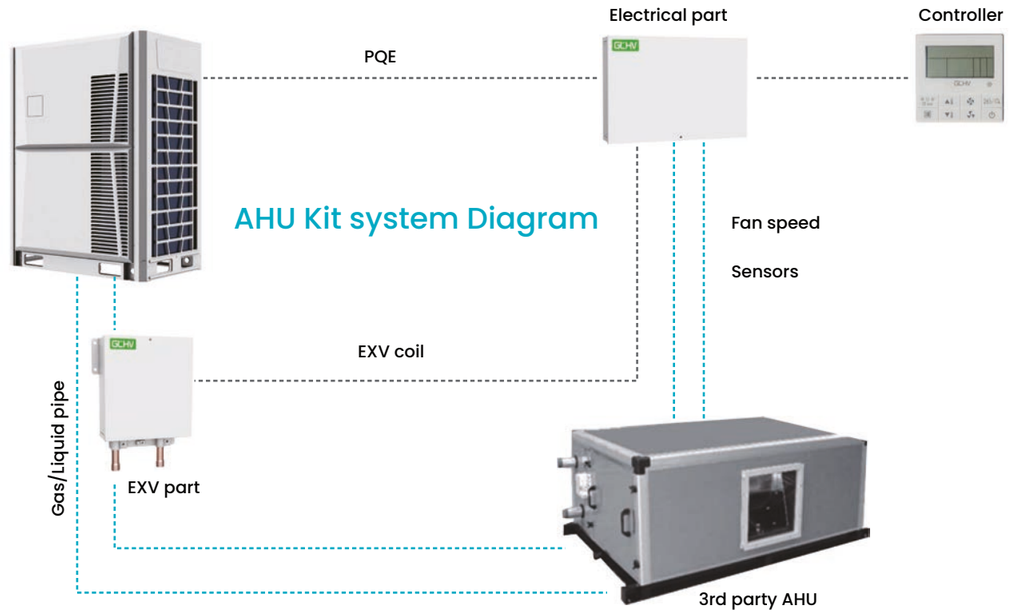
EXV part

- Outlet pipe
- Inlet pipe
- EXV

Sensors & wires

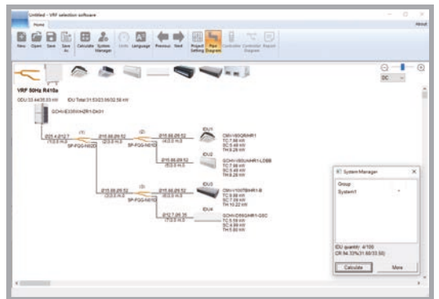
- T1 sensor and wire
- T2 sensor and wire
- T2B sensor and wire
- Controller wire

Controller

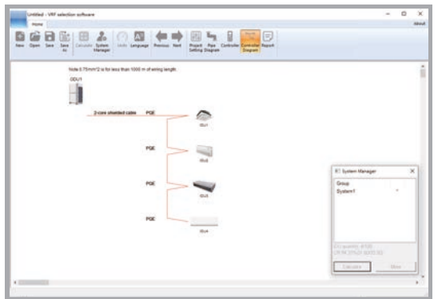


VRF Selection Software

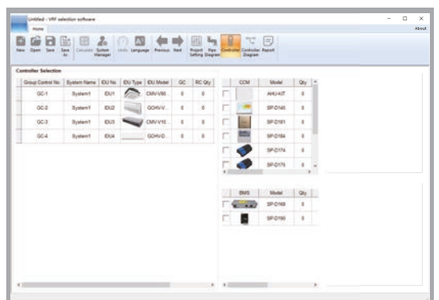
The selection software provides a comprehensive selection of system design reports and calculations. Base on the units selected, the software produces detailed system layout and piping requirement calculations, greatly improves the work efficiency.



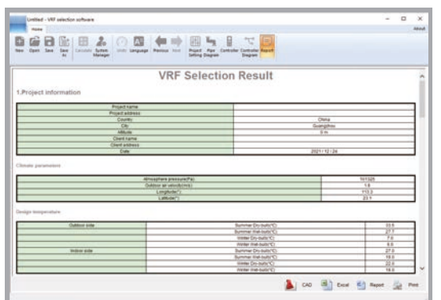
Piping diagram



Wiring diagram



Controller selection



Report