ALPICAIR

VRF6E

VRF INVERTER MULTI-SYSTEM

AIR-CONDITIONERS

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

COMFORT FOR YOU

HIGH-EFFICIENCY AND ENERGY-SAVING

HPAC HIGH-EFFICIENCY ALTERNATE CONTROL

VRF6 adopts high-efficiency alternate control method to intelligently adjust the distributing method according to the demand of indoor load, which has ensured the service life of the integrated module, and improved the overall operating energy efficiency at the same time.

The best matching features exist among the compressor, indoor heat exchanger, and outdoor heat exchanger. It can automatically match the capacity of indoor and outdoor heat exchangers, and adjust in real time according to operating situation.

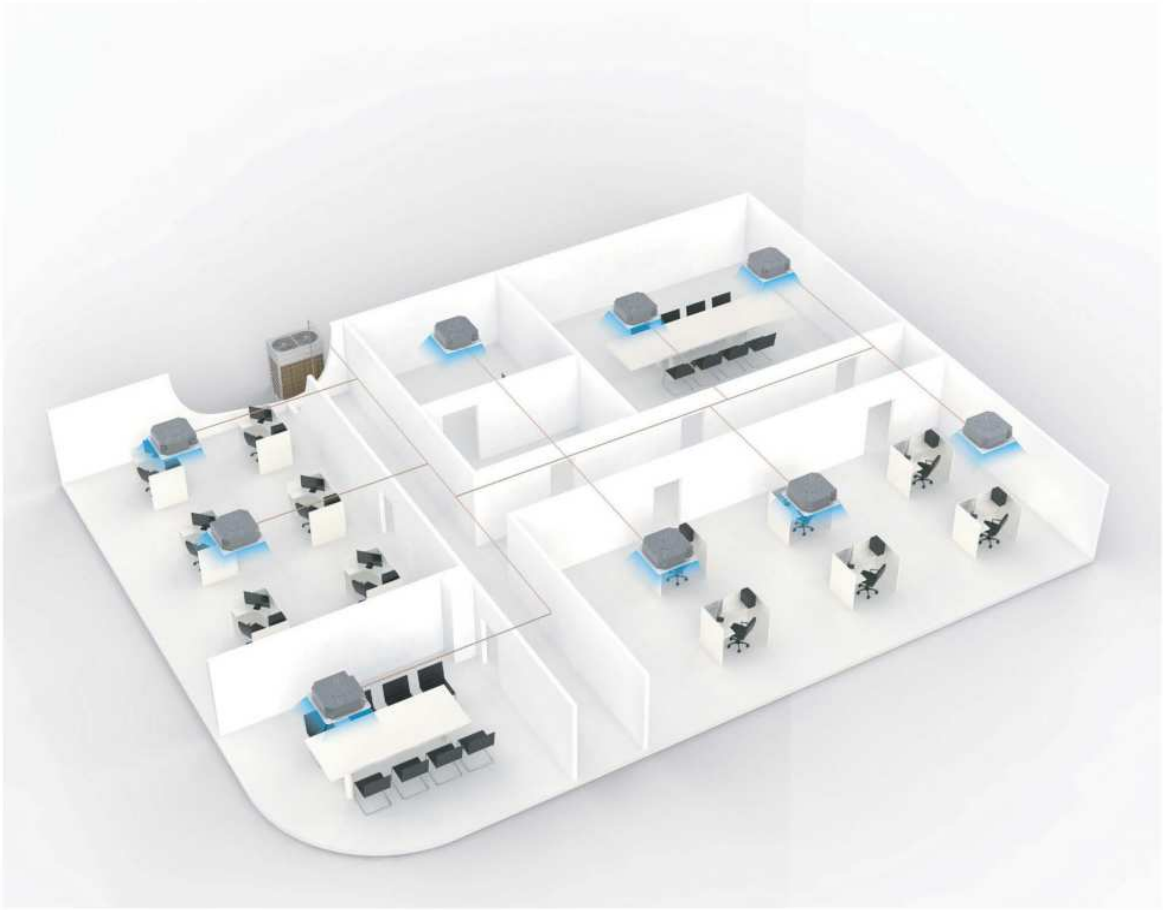
CONTENTS

VRF6E	04
VRF6E SPECIFICATIONS	44
VRF6HR	46
VRF6HR SPECIFICATIONS	64
INDOOR UNITS	66
CONTROLLERS	90
BRANCHING JOINTS	96
VRF5 MINI AND SLIM	100
VRF5 MINI AND SLIM SPECIFICATIONS	105

WHY CHOOSE VRF HEAT PUMP SYSTEM

DEMAND

In a system without external constraints, if user requires only cooling or heating, then the heat pump system is a good choice.



LOW COST

If there is only cooling or heating demand, a VRF heat pump system is recommended for it is cost-saving and easy to maintain.

FLEXIBLE

Because of the characteristics of the VRF system (One outdoor unit can be connected to multiple indoor units), indoor units in different areas can be controlled independently, which is very flexible in use compared to common air conditioners.


VRF6E
ALPICAIR
VRF6E
ALPICAIR
VRF6E

HIGH-EFFICIENCY EVI COMPRESSOR

1 HIGH-EFFICIENCY EVI CONTROL TECHNOLOGY

High-efficiency EVI compressor, which is developed according to the features of VRF unit, its 0-420Hz adjusting range can perfectly match with the whole unit, so as to excel the performance to the greatest extent.

2 RELEASE VALVE

Improving partial load energy efficiency, adapting to the condition of variable pressure ratio, upgrading compressor performance.

3 IMPROVED ASYMMETRIC WRAP

New asymmetric wrap is adopted and compressor efficiency is improved by reducing leakage and invalid suction superheat.

4 DYNAMIC OIL BALANCE STRUCTURE

Advanced oil balance technology, with high reliability and flexible design without installation limit, which can realize parallel connection of compressors with different delivery capacity and revolving speed.

5 HIGH SPEED

0~420Hz stepless inverter operation, wide adjustment range of capacity, precision can be up to 1Hz.

6 OIL PUMP FILTER

Filtrate the impurities to ensure the supplied oil is clean.

7 POSITIVE DISPLACEMENT GEAR PUMP

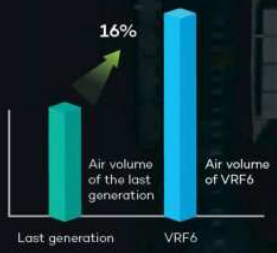
Ensure necessary oil supply under the revolving speed, improve reliability of compressor.

LARGE AIR VOLUME AND LOW NOISE FAN

The “Reverse-S shape” tail design can effectively increase the working area of fan blades and greatly improve the air volume. The tail of the blade adopts the aircraft winglet design, which can effectively suppress the tip vortex caused by wing tip pressure difference and reduce noise.

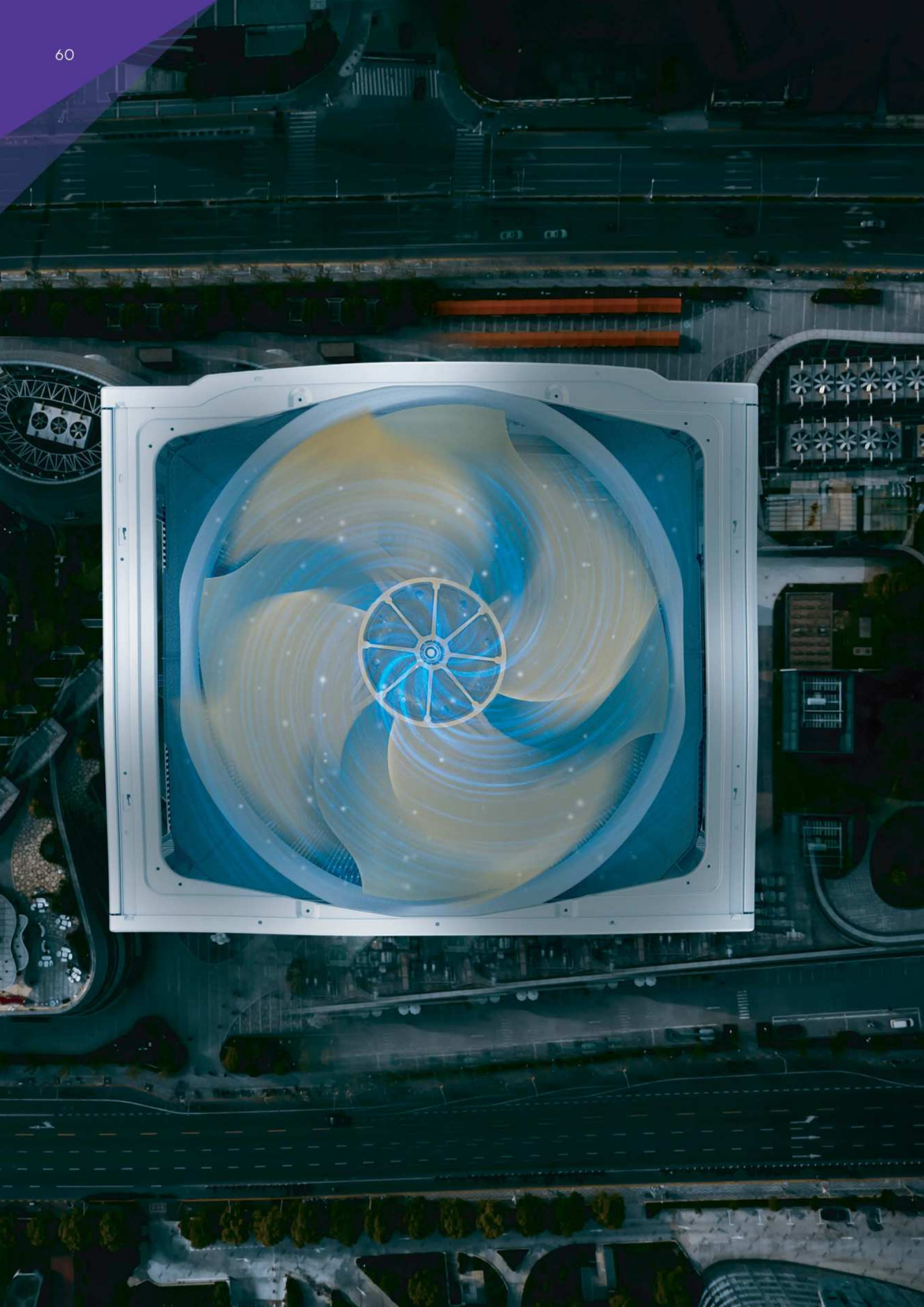
The new air-out grille design increases the air supply area by 7.8%.

The "Reverse-S shape" tail design, with 4-blade control and separate design of blade pressure surface and suction surface, effectively increases the working area of fan blades and greatly improves the air volume.



*The above data are measured under rated conditions

Note: Applicable for some models.



MULTIPLE PREVENTION TECHNOLOGIES

Multiple prevention technologies: to protect the unit from corrosion, dust, wind, lightning and snow; to prolong the service life of the unit; to suit different environmental conditions.

1. The heat exchanger adopts acid-proof and highly anticorrosive black aluminum fins.
   Neutral salt spray time is up to 2000 hours.

2. The sheet metal of the casing is coated with high weather resistance powder for corrosion prevention.
   Neutral salt spray time is up to 1000 hours.

3. The surface of controller is coated with special protection material, which has good dampproof, mildewproof and anticorrosive performance.

4. The grille received the treatment of phosphating and electrophoresis, and iscoated with high weather resistance powder to prevent corrosion.

5. The external part adopts fasteners made of zinc-nickel alloy for better anticorrosive performance.

6. The anti-corrosion motor adopts stainless steel shaft, and electrophoresis for the outer case, with IP55 protection level*2.

7. Outer sealing material of the coil adopts stainless steel and electrophoresis*2.

8. The surface of the pressure vessel adopts the treatment of phosphating and is coated with high weather resistance powder to prevent corrosion.

Note:
1. Applicable to VRF6 (AOU-**VRDC3C1) series. For special environments with acid, alkali and salt corrosion, the unit can be customized to provide more comprehensive protection. Please consult our sales representatives for more information.
2. Standard models VRF6 (AOU-**VRDC3C) do not have this anti-corrosion treatment but can be customized if needed.

Corrosion Prevention

MULTIPLE PREVENTION TECHNOLOGIES

DUST PREVENTION FUNCTION*

According to operating time of unit and real-time operating parameters, situation of heat exchanger can be estimated. When the accumulative dust of heat exchanger impacts the heat exchange efficiency, activating the backward operating function of fan can effectively remove the dust.

Normal operation status

Auto-clean status

*This function should be customized.

WIND PREVENTION FUNCTION

Before the unit is turned on, if the fan conducts backward operation due to adverse wind, it will adopt dynamic braking to stop the backward fan, and then turn on the unit according to normal program.

LIGHTNING PREVENTION FUNCTION

Central air conditioning system has lightning protectionand anti-surge function, which can effectively prevent the impact on air conditioning system due to instant overvoltage or overcurrent, so as to protect the personal and property safety of user.

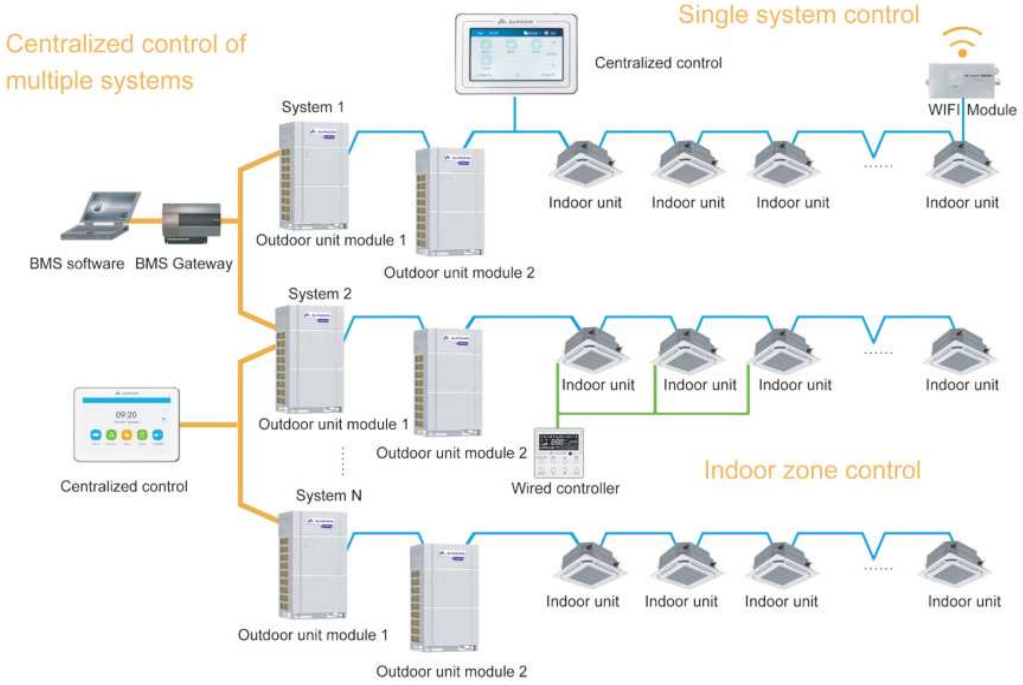
SNOW PREVENTION FUNCTION

In order to prevent the influence of snow accumulated on the top of the outdoor fan, the unit will automatically turn on the fan to clear the snow and ensure normal operation.

CAN+ COMMUNICATION TECHNOLOGY

INNOVATIVE STRATIFICATION CAN+ STRUCTURE WITH MULTIPLE MASTER NETWORKS

Considering that the application of an air conditioning system requires multiple nodes, multistep control and intelligent expansion, we originally developed the stratification CAN+ structure with multiple master networks, which makes it possible for the number of nodes in a single system to be increased relatively by 56% and the response time for centralized control to be shortened by hundreds of times.



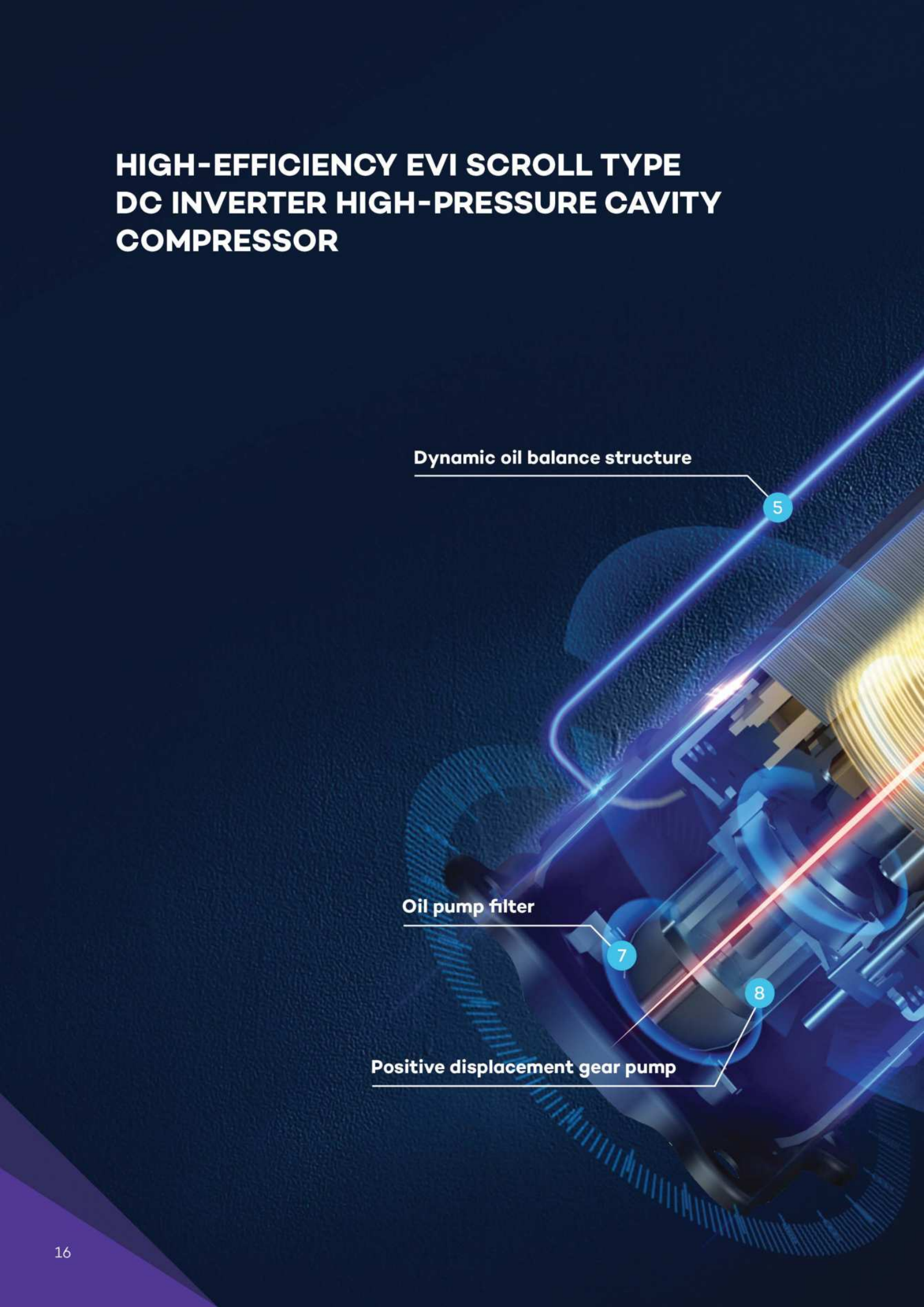
FIRST FORMULATED CAN+ COMMUNICATION PROTOCOL

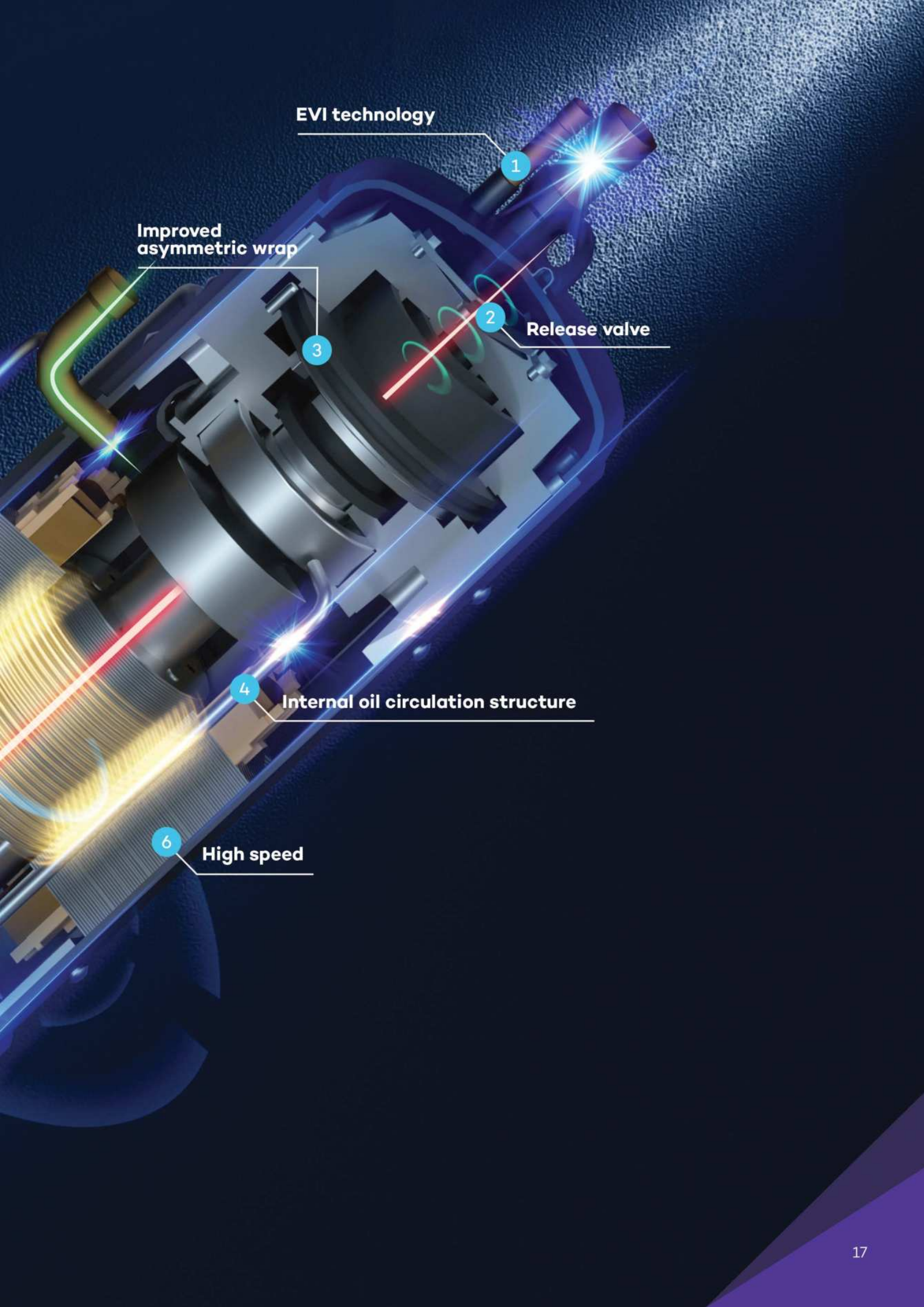
It is the first time to formulate and standardize CAN+ communication protocol: two-stage network universal design, data can be directly transferred; functional code, network address, data field and related core concepts are developed, realizing grading, classification and real-time transfer of communication data, satisfying the demand of intelligent expansion.

THE FIRST NONPOLARITY CAN+ COMMUNICATION CHIP

CAN+ self-adaptive networking technology includes single chip automatic nonpolarity technology and all network automatic address distribution technology, which can realize automatic networking for hundreds of nodes of large multi VRF unit within 10 seconds, the newly increased nodes can be activated instantly once it is inserted, greatly improving the networking speed and expansion capability.

HIGH-EFFICIENCY EVI SCROLL TYPE DC INVERTER HIGH-PRESSURE CAVITY COMPRESSOR

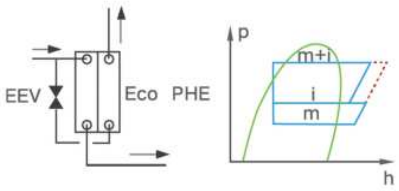



EVI technology
1
Improved
asymmetric wrap
3
2
Release valve
4
Internal oil circulation structure
6
High speed

HIGH-EFFICIENCY ENTHALPY CONTROL TECHNOLOGY

HIGH-EFFICIENCY ENTHALPY COMPRESSOR

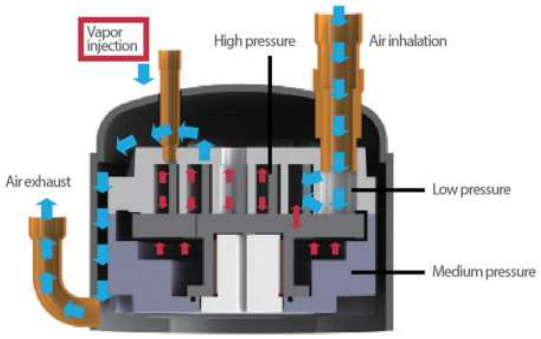
High-efficiency enthalpy compressor is developed according to the features of VRF unit, its 0-420Hz adjusting range can perfectly match with the whole unit; so as to excel the performance to the greatest extent.



HIGH-EFFICIENCY EVI SCROLL TYPE DC INVERTER HIGH-PRESSURE CAVITY COMPRESSOR

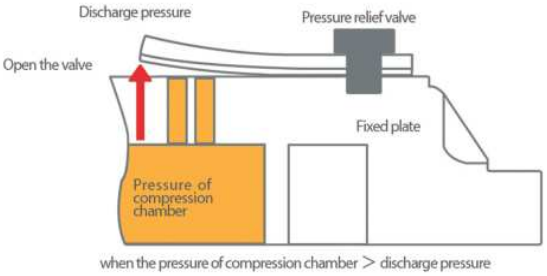
1 EVI TECHNOLOGY

Reinforce system capacity, widen operating range and accelerate heating.



2 RELEASE VALVE

Improving partial load energy efficiency, adapting to the condition of variable pressure ratio and upgrading compressor performance.



3 IMPROVED ASYMMETRIC WRAP

New asymmetric wrap is adopted and compressor efficiency is improved by reducing leakage and invalid suction superheat.

4 INTERNAL OIL CIRCULATION STRUCTURE

Internal circulation of lubricating oil to reduce over-heat losses and oil discharge rate and to improve efficiency and reliability.

5 DYNAMIC OIL BALANCE STRUCTURE

Advanced oil balance technology, with high reliability and flexible design without installation limit, which can realize parallel connection of compressors with different delivery capacity and revolving speed.

6 HIGH SPEED

0 ~ 420Hz stepless inverter operation, wide adjustment range of capacity and precision can be up to 1Hz.

5 OIL PUMP FILTER

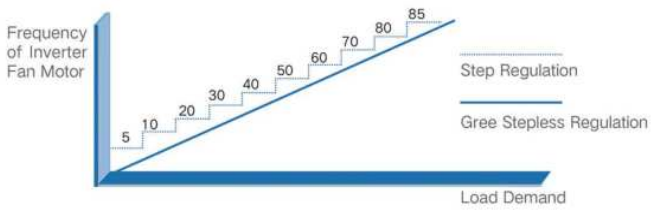
Filtrate the impurities to ensure the supplied oil is clean.

6 POSITIVE DISPLACEMENT GEAR PUMP

Ensure necessary oil supply under the revolving speed to improve the reliability of compressor.

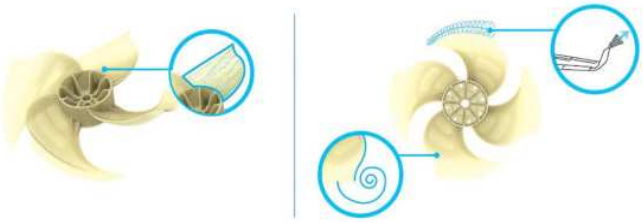
SENSORLESS DC INVERTER FAN MOTOR

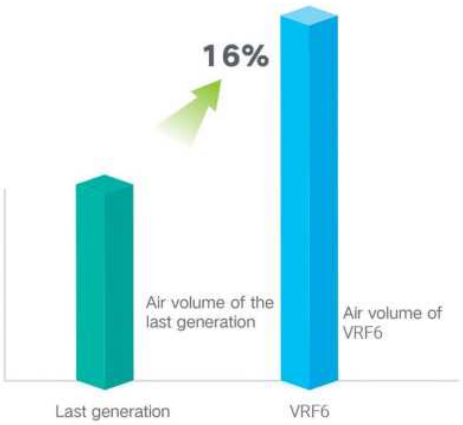
Adopt the DC inverter motor with high back electromotive force to realize stepless speed adjustment within 5~85Hz, the precision is 1Hz, with low operating current, low motor input power, and high efficiency.



LARGE AIR VOLUME AND LOW NOISE AIR DUCT

"Reverse-S shape"tail design can effectively increase the working area of fan blade, greatly improving the air volume. The blade tail adopts winglet design of the aircraft to effectively suppress the blade tip vortex caused by the pressure difference of wing tip and reduce the noise.





*China Patent 201820495665.8 Axial Fan Blade and Air Conditioner

*Applicable for some models.

*The above data are measured under rated conditions of unit

HIGH-EFFICIENCY HEAT EXCHANGER DESIGN

G-SHAPE INTEGRATED HEAT EXCHANGER

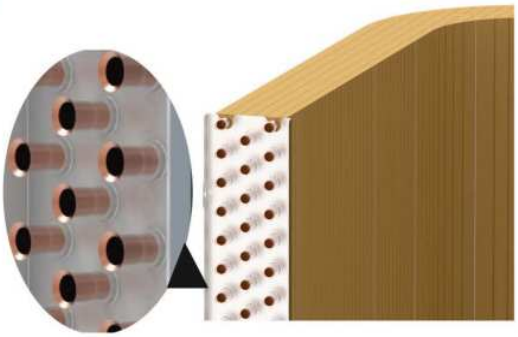
Molded at one time, the G shape integrated heat exchanger can improve space utilization and increase heat exchanger area and heat exchange efficiency.

*Note: Applicable for some models.

MULTI-ROW SMALL DIAMETER DESIGN

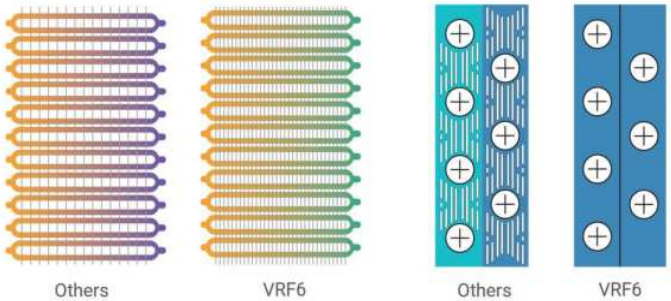
The refrigerant pipe adopts φ7mm and 3-row design, which can reduce the flowing resistance of refrigerant inside the pipe and effectively increase the heat exchange area of refrigerant, so as to optimize and improve the heat exchange efficiency.

*Note: Applicable for some models.



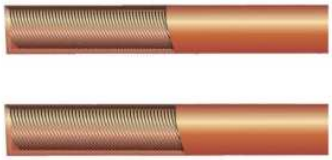
SMALL PITCH CORRUGATED HEAT EXCHANGER FINS

Small pitch corrugated fins are used to increase the effective area between fins and the air, for more sufficient heat exchange of refrigerant and higher heat exchange efficiency.



INTERNAL SCREW THREAD DESIGN OF COPPER TUBE

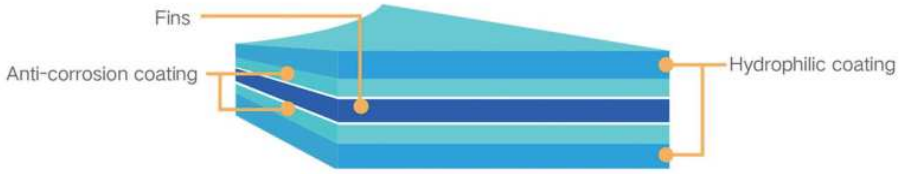
The refrigerant pipe adopts internal screw thread design to increase the contact area with the refrigerant, optimize the turbulent state of refrigerant flow and improve the heat exchange efficiency.



Internal screw thread high-efficiency heat exchange tube

MULTI-FUNCTIONAL HEAT EXCHANGER FINS

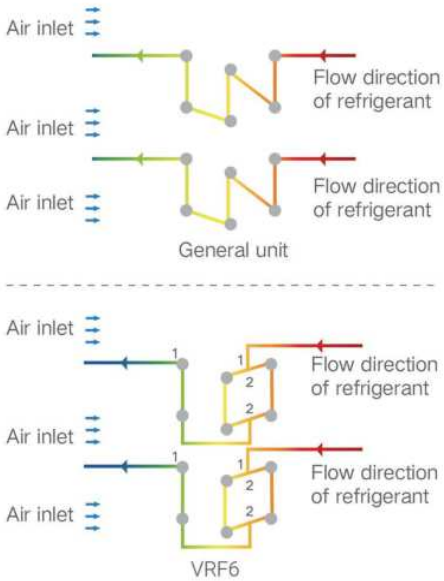
The heat exchanger fins adopt double-sided double-effect coating and hydrophilic membrane design so that the unit is not easy to get frosted and the condensate water or water from defrosting can flow down more quickly; the anti-corrosion coating isolates the pollutants and dust from air to protect the fins, with stronger corrosion resistance and better heat exchange effect.

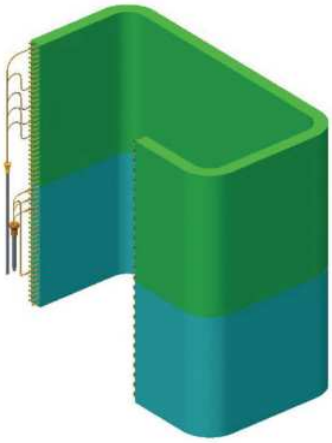


Double coating heat exchange fins structure

DIVISIONAL HEAT EXCHANGE FLOW PATH

According to the feature of wind field, the flow path of heat exchanger adopts divisional design for more reasonable flow division. Design according to 1-2-2-1 flow path for higher exchange efficiency.





MULTIPLE ENERGY-SAVING MODES

With the deepening of energy conservation and emission reduction, and the increasing requirements for urban electricity consumption, especially during the peak season of electricity consumption in summer, many cities will issue corresponding electricity curtailment measures. VRF6 has a variety of operating modes for users to choose, to meet the city's peak power consumption and power limit requirements.

CAPACITY PRIORITY MODE

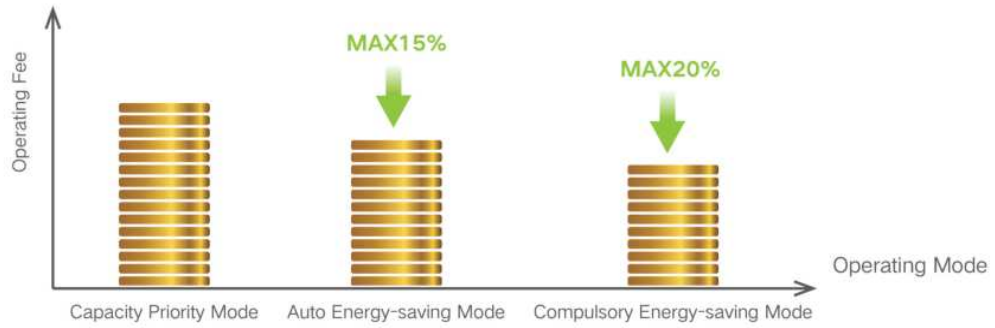
When the power supply is sufficient, it will satisfy the using capacity demand in priority. This mode is default mode.

AUTO ENERGY-SAVING MODE

When this mode is activated, the system will automatically adjust the control parameters according to operating status, and automatically balance the capacity and energy consumption to realize the minimization of bilateral impact.

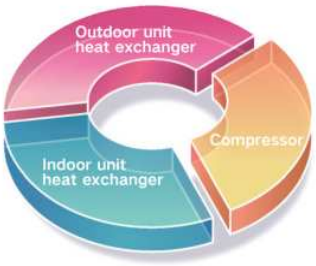
COMPULSORY ENERGY-SAVING MODE

Compulsorily limit the output of outdoor unit to satisfy the using capacity demand in priority. 90% and 80% capacity proportion can be selected to limit the output according to the power consumption of unit and user demand.



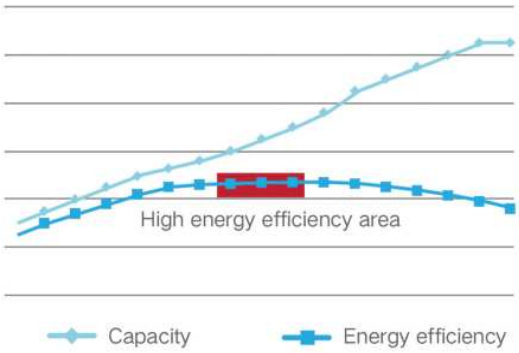
HPAC HIGH-EFFICIENCY ALTERNATE CONTROL

VRF6 adopts high-efficiency alternate control method to intelligently adjust the distributing method according to the demand of indoor load, which has ensured the service life of the integrated module, and improved the overall operating energy efficiency at the same time.



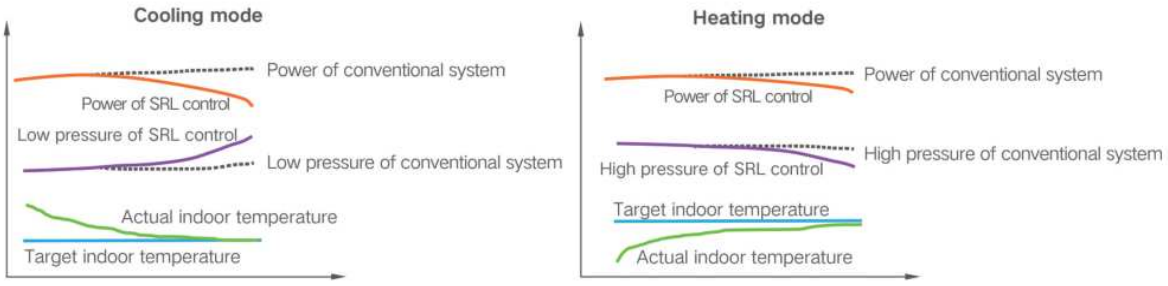
The best matching features exist among the compressor, indoor heat exchanger, and outdoor heat exchanger. It can automatically match the capacity of indoor and outdoor heat exchangers, and adjust in real time according to operating situation.

VRF5 VRF6-HPAC control



SRL(SELF-REACTION LOAD)SELF-ADAPTIVE CONTROL

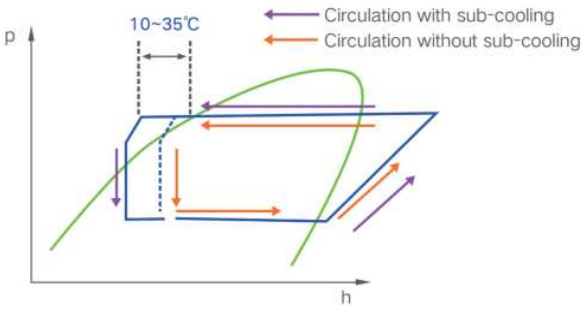
SRL (Self-reaction Load) can intelligently detect and control pressure and temperature of system refrigerant according to user status and indoor temperature variation, so as to automatically adapt to indoor cold/heat load balance control of energy conservation.



VARIABLE SUB-COOLING DESIGN

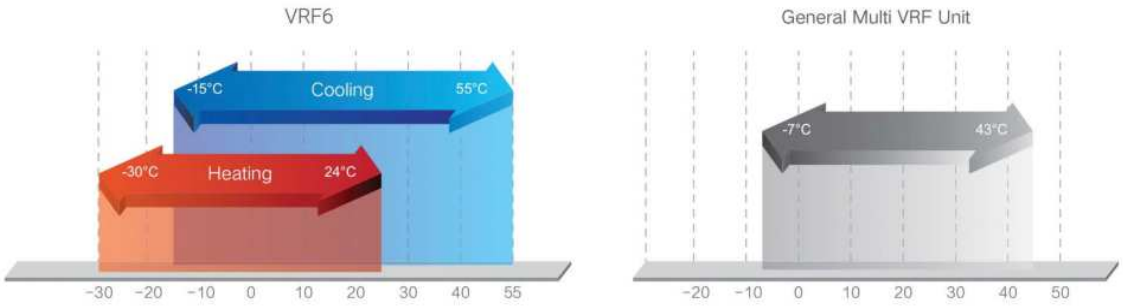
With new generation of high-efficiency plate type sub-cooler and variable super-cooling degree control method, the maximum sub-cooling degree can reach 35℃ , the unit's operation and engineering matching are greatly improved, and the effect is more obvious.

Problems with fixed sub-cooling and excessive sub-cooling:
With fixed sub-cooling degree, output of the unit cannot adapt to changes in load. When the system conducts excessive sub-cooling, performance of the whole unit is reduced, degree of superheat for the exhaust of compressor is insufficient, and the reliability is reduced.



WIDE OPERATION RANGE

-30℃-55℃ stable operation to provide users with comfortable environment in both cold and hot weather, operating ambient temperature for cooling can be as low as -15℃ .



Note:

1. The maximum operating temperature in cooling is 55°C while the minimum operating temperature in heating is -30°C. As different series have different operating ranges, please refer to the cor responding technical information.

2. Cooling at -15~-5°C is conditional. Please inquire our engineers for more information. Generally, the lowest operating temperature for cooling is -5°C.

INTEGRATED MAINBOARD

Adopt miniaturized design and new high-efficiency process to reduce the area of main board by 40% and the occupied space, increase the power density of inverter, and realize the diversification of functions.

Intelligent Design

Low power consumption control, auto address allocation, auto commissioning, error memory and inquiry.

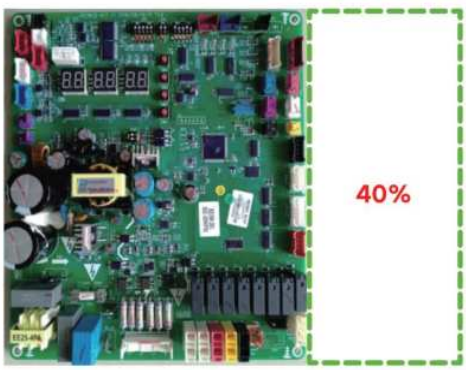
High Reliability Design

It is designed with wide voltage protection, default phase protection, overload protection, anti-surge protection, anti-static protection and so on. Together with advanced moisture-proof, dust-proof and anticorrosion design, the system is more stable and reliable.

Advanced Production and Inspection Technology

The controller mainboard undergoes a series of strict production inspection processes such as SMT processing—AOI optical inspection—ICT online inspection—FCI functional test—DCT test and vibration and stress test. The rigorous manufacturing and inspection process ensure that the control mainboard can withstand high temperature and high humidity, abrasion and drop and other harsh environments.

VRF5



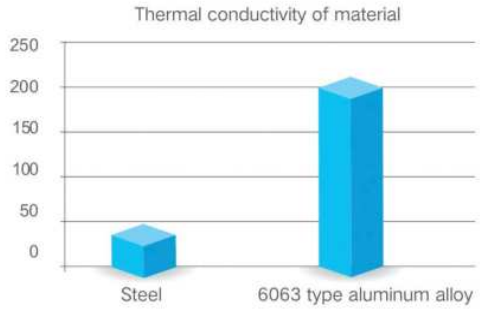
VRF6

INTEGRATED HIGH-EFFICIENCY HEAT DISSIPATION ELECTRIC CONTROLLER

Main body of electric box is made of 6063T5 aluminum alloy material with high thermal conductivity (the heat dissipation capacity is 4.5 times that of conventional steel plates). The integrated structure design reduces the overall volume by 35%. Installation and maintenance are more convenient.

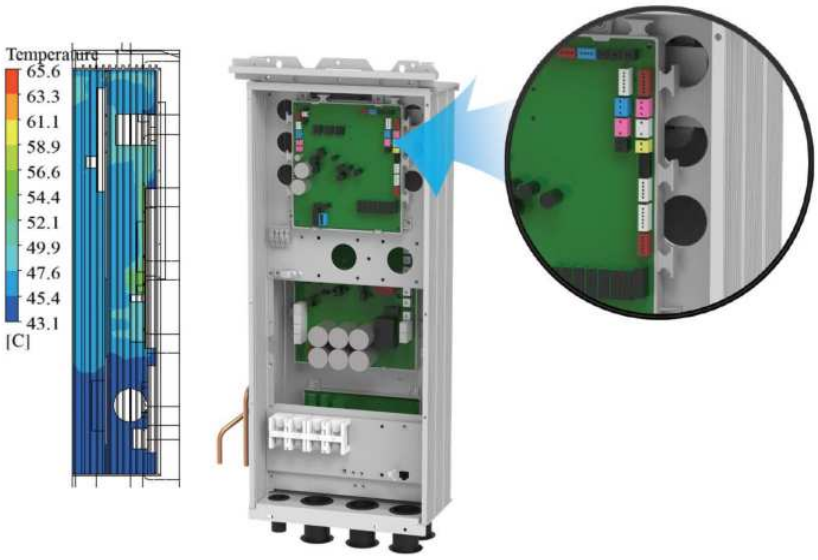
Other (sheet metal structure)

VRF6(Aluminum alloy)



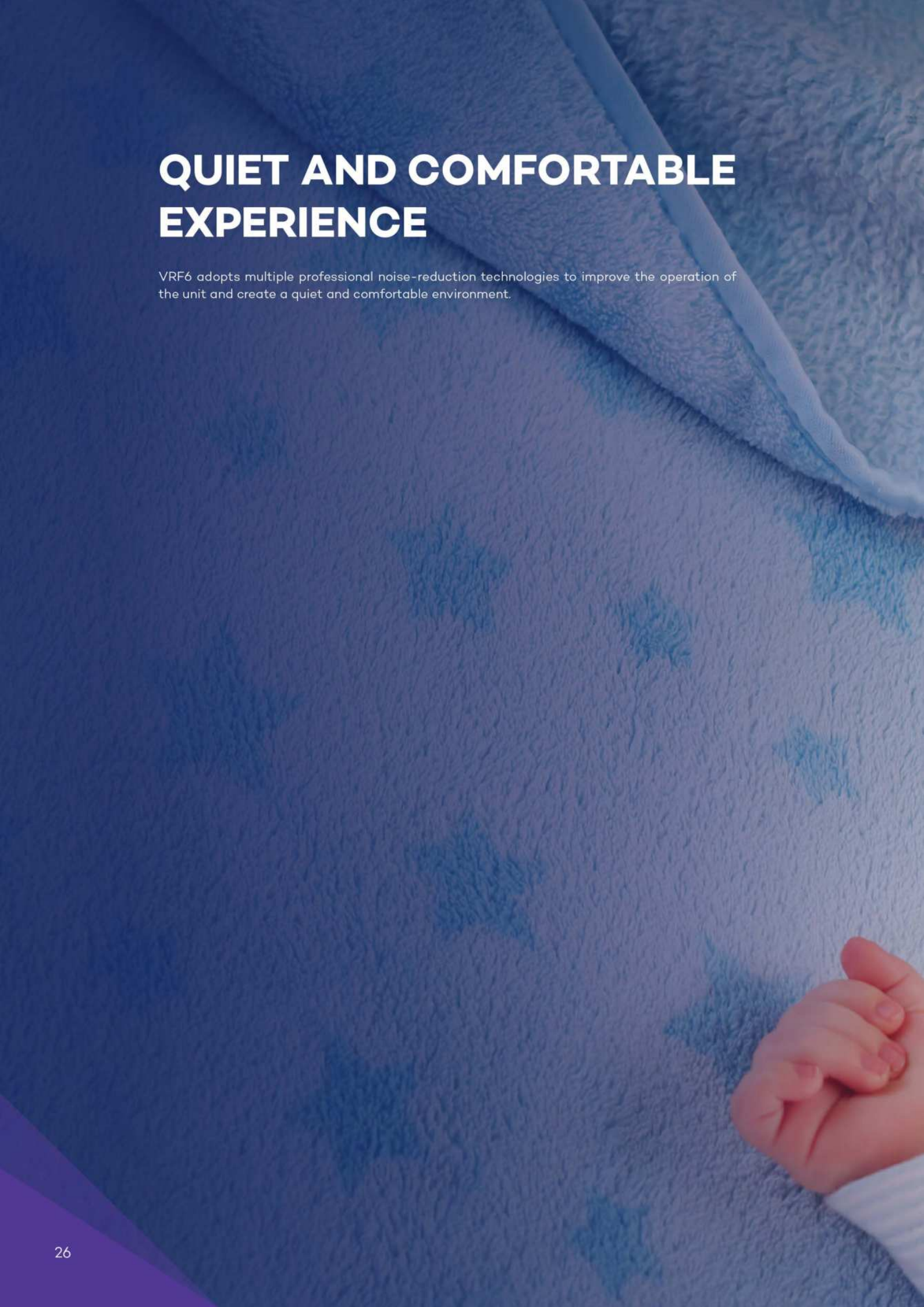
*Chinese Patent for Utility Model No. ZL201720497732.5 Outdoor unit, Electric Box and its Box Subassembly of Air Conditioner.
Note: Aluminum control box is not applicable for VRF6 (AOU-**VRDC3F).

The main body of electric box adopts refrigerant for heat dissipation, cooperates with high thermal conductivity aluminum alloy material, and uses thermal simulation design to optimize the layout of inverter power components, thus reducing the internal temperature of inverter electric box by about 8℃, and improving the reliability of inverter components of large-capacity inverter compressor.



QUIET AND COMFORTABLE EXPERIENCE

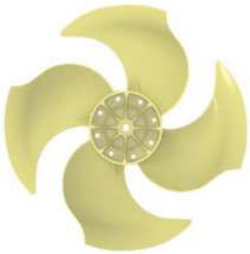
VRF6 adopts multiple professional noise-reduction technologies to improve the operation of the unit and create a quiet and comfortable environment.



MULTIPLE PROFESSIONAL NOISE REDUCTION TECHNOLOGIES

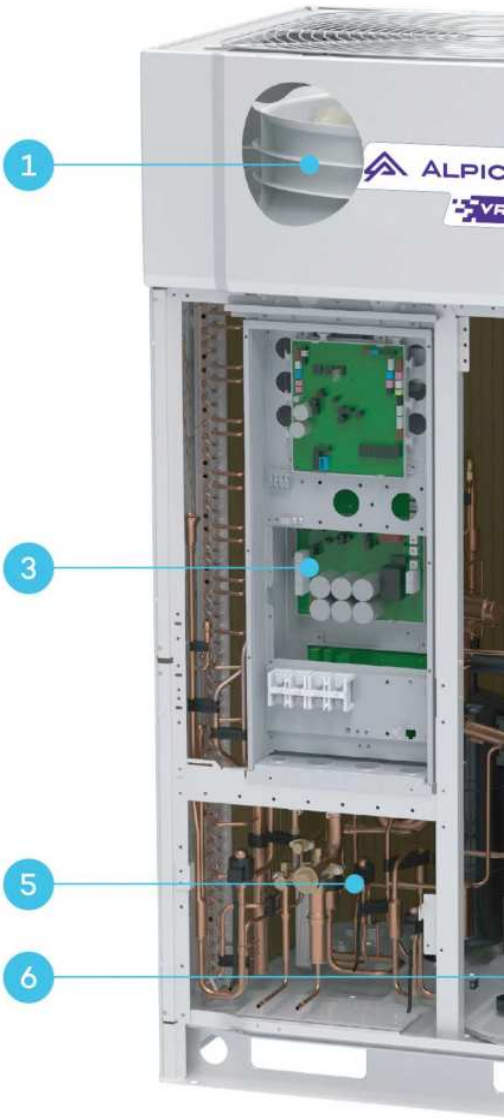
1 LARGE AIR VOLUME AND LOW NOISE FAN BLADE

Reverse S-shape tail design and aircraft winglet 4-blade design to achieve large air volume and low noise.



3 INTELLIGENT NOISE REDUCTION CONVERTER

IGBT adopts exciting voltage and control carrier frequency switching technology to actively reduce electromagnetic noise.

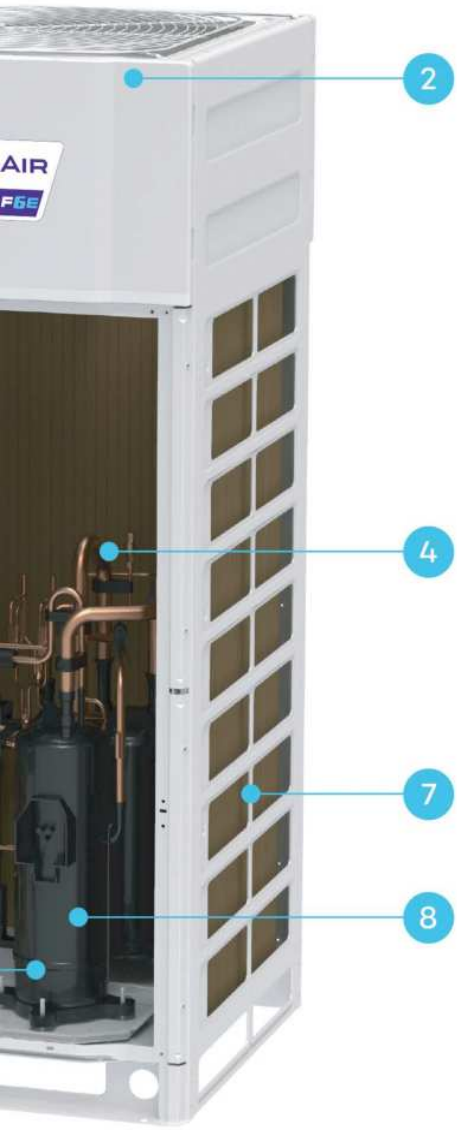


5 QUIET THROTTLING COMPONENT

The quiet expansion valve with special structural design meets the needs of pressure-reducing flow distribution and can minimize the throttle noise.

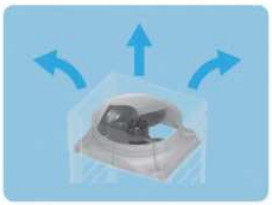
6 ENTHALPY-ADDING PULSATION NOISE REDUCTION

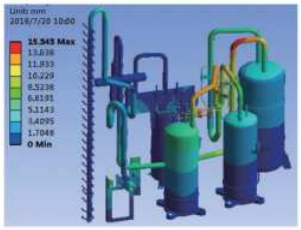
Design a special buffer to reduce the impact noise of refrigerant pulsation on the pipeline when spraying enthalpy by 90%.



2 NEW STREAMLINE GRILL AND IMMERSED LAYOUT AIR DUCT

The general air duct system of unit goes down to form an immersed layout, which can effectively reduce the fan noise.



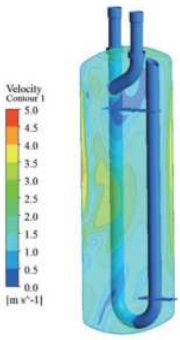


4 PIPELINE SIMULATION SHOCK ABSORPTION DESIGN

Pipeline is designed based on ANSYS to effectively reduce the vibration of pipes.

7 QUIET GAS-LIQUID SEPARATOR

It is a special low-noise and large-capacity gas liquid separator. The shape and angle of the gas-in and gasout tubes are specially designed to reduce noise.



8 SOUND ABSORPTION AND SOUND INSULATION DESIGN OF COMPRESSOR

Adopt compound material with high sound absorption and insulation effect to reduce the noise of compressor effectively.

Sound absorption material

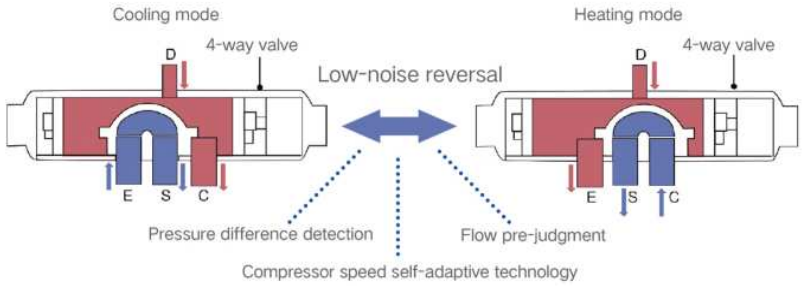
Metal sound insulation cover

*Configuration of some models

LOW-NOISE OPERATING TECHNOLOGY

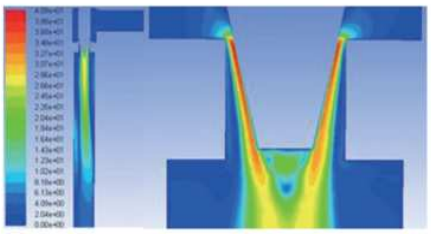
LOW-NOISE REVERSING CONTROL TECHNOLOGY

The 4-way valve adopts low-frequency reversing design. Through the detection of reversing pressure difference and the prediction of flow, the compressor speed is adjusted accordingly during reversing, for small pulsation of refrigerant flow and effective noise reduction. The reversing control technology cannot only improve the reliability of the 4-way valve action but also improve the comfort degree of the unit.



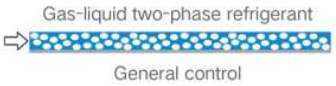
REFRIGERANT FLOW NOISE REDUCTION TECHNOLOGY

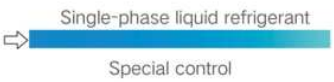
VRF6 adopts three refrigerant flow noise reduction technologies for overall control to further improve the operation. The gas-liquid two-phase refrigerant encounters throttling parts or elbows and abrupt cross-sectional areas of the flow channel during the flow process, turbulence will increase due to pressure changes and vortex shedding, cavitation noise and vortex noise are easily generated in the pipeline, and the abnormal sound of the noise will accelerate and deteriorate with the increase of the two-phase status.



REFRIGERANT FLOW NOISE REDUCTION TECHNOLOGY

According to the mechanism of refrigerant flow noise, high-efficiency sub-cooling and sub-heating technologies are used in cooling and heating operation to fundamentally control the single-phase state of the refrigerant in the flow process.



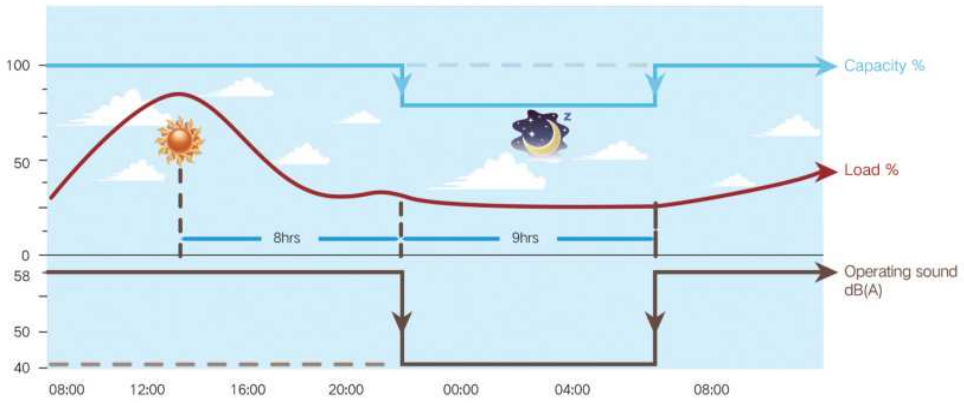


QUIET TECHNOLOGY

13 QUIET MODES

NIGHT QUIET FUNCTION

The system can record the highest outdoor temperature. At night, the system will automatically turn to quiet mode. There are 9 quiet modes which can be set according to actual needs. For example, the unit can automatically enter night mode after working for 8 hours, and resume to normal operating mode after 9 hours.

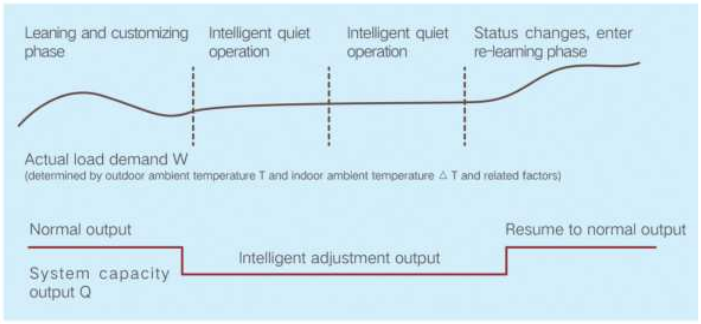


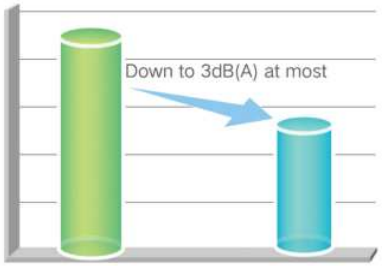
MANDATORY QUIET FUNCTION

When the unit is installed in an environment with high noise requirements, it needs to operate silently during the day or night. Then you can choose three mandatory settings of quiet modes to ensure that the unit operates in low noise mode at any time, and the noise value can be as low as 40dB(A).

INTELLIGENT QUIET FUNCTION

The unit can learn and customize user habits, and at the same time memorize the characteristics of user's habits. According to the user's using habit and actual load, it can automatically determine the output capacity of the system in the next 24 hours to achieve automatic quiet operation.



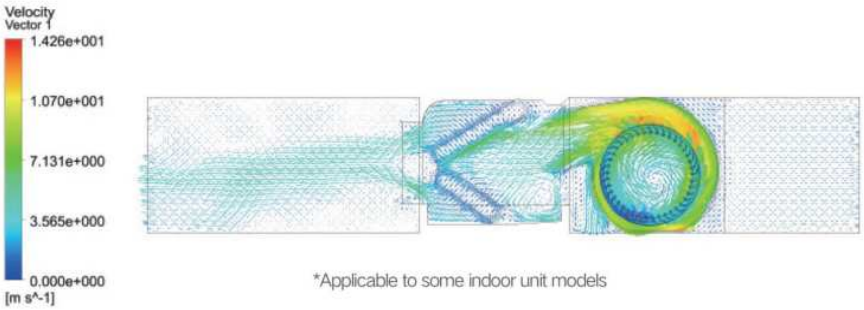


* Internal measurement value.

INDOOR UNIT QUIET TECHNOLOGY

INDOOR QUIET AIR DUCT DESIGN

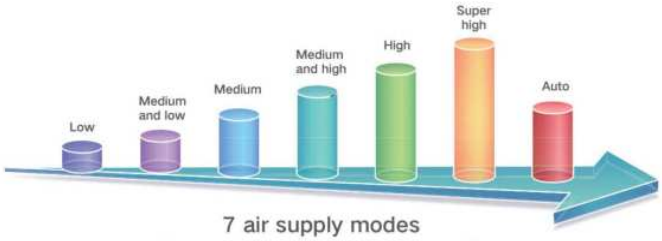
Heat exchanger of indoor unit adopts V-shape design for even and smooth air flow to create a quiet and comfortable environment.



*Applicable to some indoor unit models

7 FAN SPEEDS FOR SELECTION

The indoor unit has 6 fan speeds (super high, high, medium and high, medium, medium and low, low) and auto fan speed for selection to satisfy different user demands.

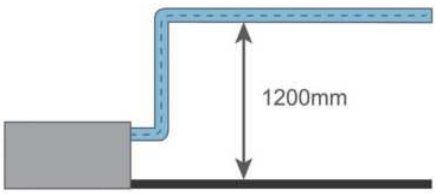


7 air supply modes

Note: applicable to partial DC motor models

LOW-NOISE HIGH DELIVERY LIFT WATER PUMP DESIGN

The indoor unit is equipped with a quiet water pump with delivery lift up to 1200mm, solving the drain problem of unit in low floors, with high engineering adaptability.



DC MOTOR DESIGN

The indoor unit of VRF6 adopts DC motor design to realize stepless adjustment of revolving speed for lower noise operation. Auto quiet mode of indoor unit can be set via the wired controller and the unit will activate auto quiet function according to indoor temperature and the activity of occupants. Noise is as low as 22dB(A).

small talk from a distance of 1.5m | during quiet operation | sound regulation room | reading room | office

STABLE AND RELIABLE OPERATION

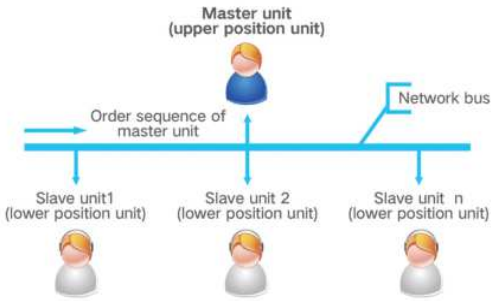
VRF6 adopts CAN+ communication, multiple oil circuits control and other technologies, which greatly improve the stability and reliability of the unit.

CAN+ COMMUNICATION TECHNOLOGY

CURRENT SITUATION FOR COMMUNICATION TECHNOLOGY OF MULTI VRF UNIT INDUSTRY

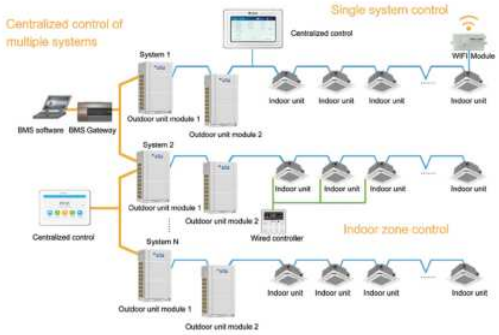
In the field of commercial VRF, as the installed capacity of the system increases, the number of connected indoor units also increases. Thus, the multi-system integrated control requires a highly stable communication network.

The current air conditioning communication technology adopts master-slave polling mechanism, which has the technical bottlenecks with low reliability, poor real-time performance, and poor extendibility, which restrict the development of intelligence; slow response of centralized control and low efficiency of control; communication is susceptible to interference, resulting in abnormal operation; expansion of functions and number of nodes are difficult.



INNOVATIVE STRATIFICATION CAN+ STRUCTURE WITH MULTIPLE MASTER NETWORKS

Considering that the application of an air conditioning system requires multiple nodes, multistep control and intelligent expansion, we originally developed the stratification CAN+ structure with multiple master networks, which makes it possible for the number of nodes in a single system to be increased relatively by 56% and the response time for centralized control to be shortened by hundreds of times.

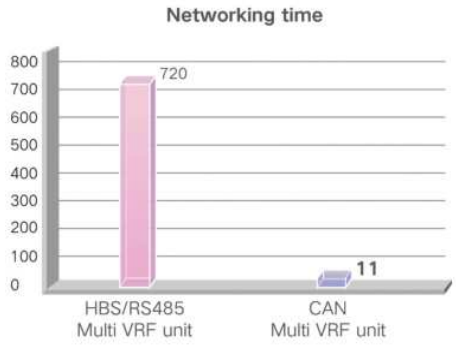


Technical Effect		CAN+ Network Structure	Traditional Network Structure
Real-time capability of interaction	Communication cycle of single system	<500ms	About 5s
	Preferential response	Microseconds	Seconds
	Centralized control response time	6s	10min
Reliability of interaction	Error isolation	Automatic	No
	Impact of node malfunction	Not rely on any node	Totally rely on master unit
	Sub-net scale	80 (it should be customized if over 80, 100 sets can be customized at most)	64
Expansibility	Intelligent equipment	Free access	Require bridge connection

FIRST FORMULATED CAN+ COMMUNICATION PROTOCOL

It is the first time to formulate and standardize CAN+ communication protocol: two-stage network universal design, data can be directly transferred; functional code, network address, data field and related core concepts are developed, realizing grading, classification and real-time transfer of communication data, satisfying the demand of intelligent expansion.

Full network automatic address allocation technology: the protocol supports dynamic IP automatic allocation and full network addresses automatic offset, which realizes large-scale air conditioning network automatic networking without commissioning. The networking time is relatively shortened by more than 60 times, ensuring fast network distribution and free access to multiple online devices.



THE FIRST NONPOLARITY CAN+ COMMUNICATION CHIP

GOOD EXPANSIBILITY

- Instant use: new device can be accessed freely, with flexible engineering configuration;
- Centralized control: two-stage CAN+ communication network structure, no bridge device is needed between the systems, and the centralized control equipment can control up to 16 systems.

HIGH-EFFICIENCY AND RELIABLE

- Innovatively integrate the air conditioning control business with the bus arbitration mechanism to achieve second-level response of large centralized control system;
- With fault isolation function, the faulty node quits actively, and the network is not affected by the faulty node.

CONVENIENT INSTALLATION COMMISSIONING

- With automatic addressing function, the system automatically assigns addresses without manual DIP switch setting and networking, saving time and effort;
- The interface adopts non-polar design. Engineering wiring does not need to consider the positive and negative poles, which is safe and reliable.

HONORS

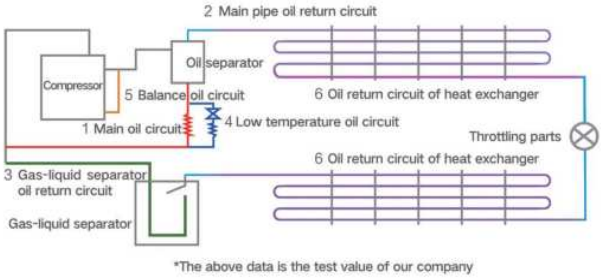
- In 2017, the project "Research and Application of CAN + Communication Technology Based on Multi VRF Unit" was accredited by the Chinese Association of Refrigeration and reached the "international leading" level;
- In 2018, the project "Research and Application of CAN + Communication Technology for Mult VRF Unit" won the Gold Medal at the 70th Nuremberg International Invention Exhibition in Germany;
- In 2018, the core patent of CAN + communication technology "Mult VRF Air Conditioning System ZL201410312939.1" won the Silver Award of China Invention Patent.

PRECISE OIL CONTROL FOR STABLE OPERATION OF COMPRESSOR

OIL RETURN CONTROL TECHNOLOGY

MULTIPLE OIL CIRCUITS MANAGEMENT

Six oil circuits ensure smooth and reliable oil passage.



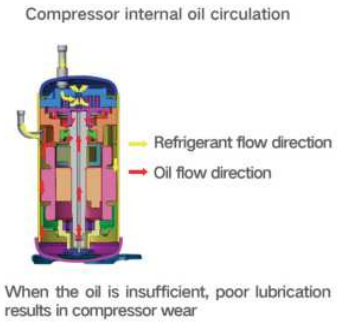
SELF-BALANCING CONTROL WITHOUT OIL BALANCING TUBE

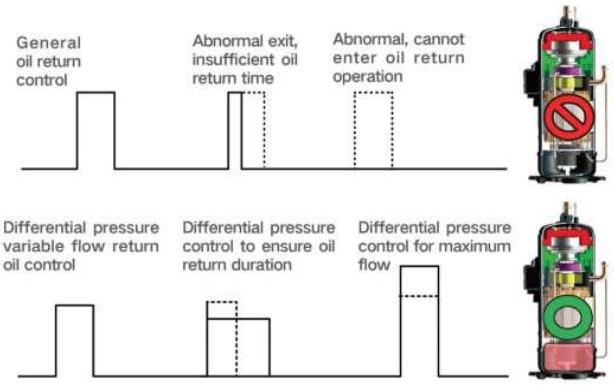
Advanced oil balancing control method, no external oil balancing pipeline is required between modules, and the installation is simple and fast. By collecting and calculating the capacity output and threshold conditions between each module, the distribution of refrigeration oil between the modules is automatically controlled to ensure stable operation of the system.

China Patent No. 201510307364.9 " Oil Balancing Control Method of Air Conditioning System "

PRESSURE DIFFERENCE TYPE VARIABLE FLOW OIL RETURN TECHNOLOGY

According to different operating conditions of the unit, on the premise of ensuring the reliability of the unit, the pressure difference control factor is introduced to conduct intelligent variable flow oil return operation according to the real-time operating parameters of the unit, to ensure the maximum return flow rate and duration, and to improve the reliability of unit again.

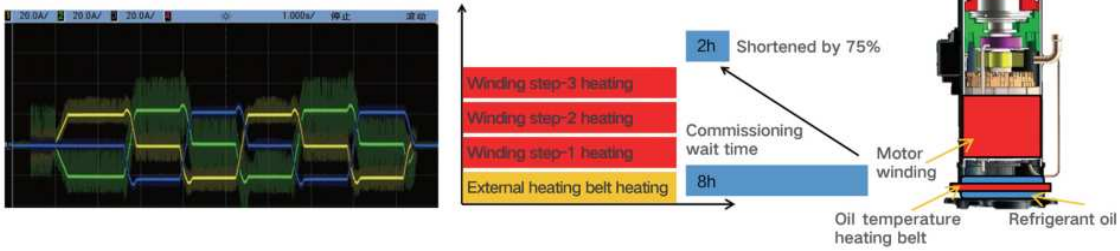




DOUBLE HEATING SOURCE OIL TEMPERATURE CONTROL TECHNOLOGY

Under standby status, the compressor winding and external electric heating belt can independently or simultaneously conduct heating control of the refrigerant oil.

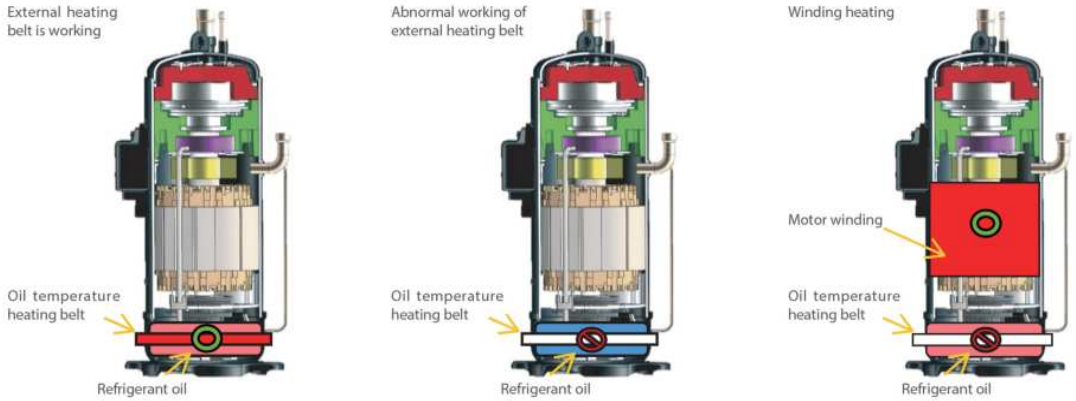
Variable control of motor winding heating power enables fast and safe start-up under different environmental conditions, and the preheating time is shortened from 8 hours to 2 hours.



BACKUP HEATING

Under the condition that the external heating belt works abnormally in the VRF6 unit, the winding heating can also work normally to ensure the reliability of compressor.

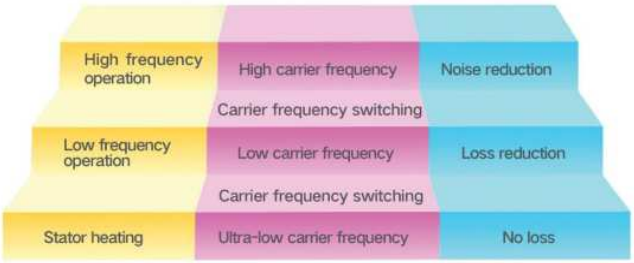
Ordinary units only have external electric heating control. Once the electric heating is faulted, the probability of damage to the compressor is greatly increased.



SELF-ADAPTIVE DRIVE TECHNOLOGY

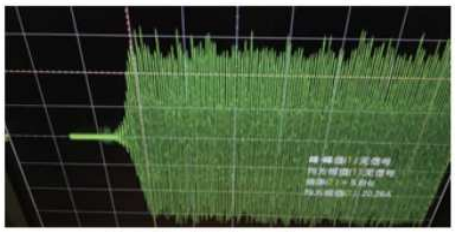
VARIABLE CARRIER FREQUENCY CONTROL TECHNOLOGY

According to the operating characteristics of compressor, the carrier frequency is automatically switched, and then high-frequency noise reduction and low-frequency loss reduction are realized, which can maximize the efficiency and reliability.

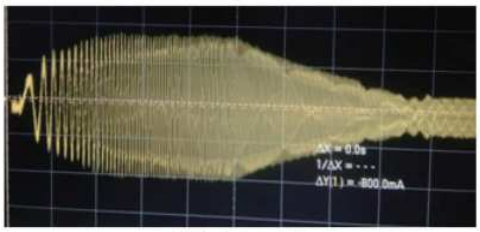


STRONG TORQUE START CONTROL

No external balancing device is needed, and the compressor torque self-feedback and adjustment control are adopted. The compressor can be started during the system operation with a high pressure difference, effectively ensuring the continuity and stability of system operation.



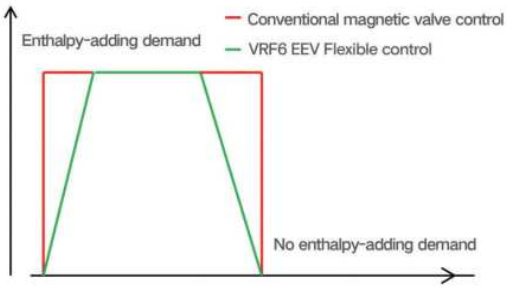
Conventional startup mode

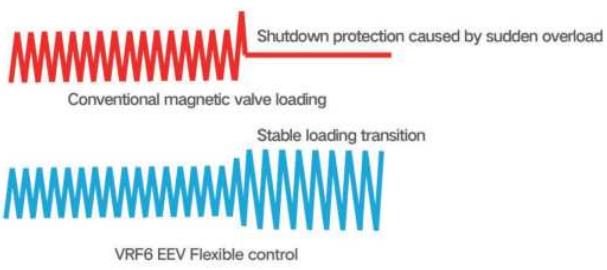


VRF6 startup mode

FLEXIBLE ENTHALPY LOADING CONTROL

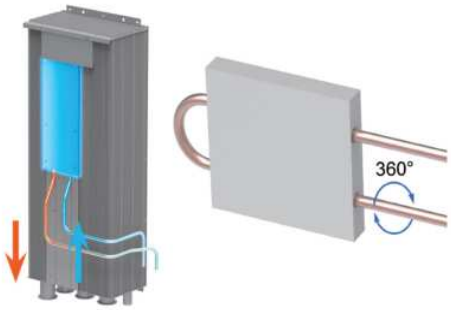
The general enthalpy-adding system adopts "0 ←→ 1" on-off method to switch between enthalpy-adding mode and non-enthalpy-adding mode. This will cause the compressor load to change drastically, which may lead to runaway and shutdown. In serious cases, the compressor may be damaged. The VRF6 unit uses the linear flow change feature of EEV to gradually increase the load during enthalpy-adding control to achieve flexible transition and ensure stable and continuous operation of the system.





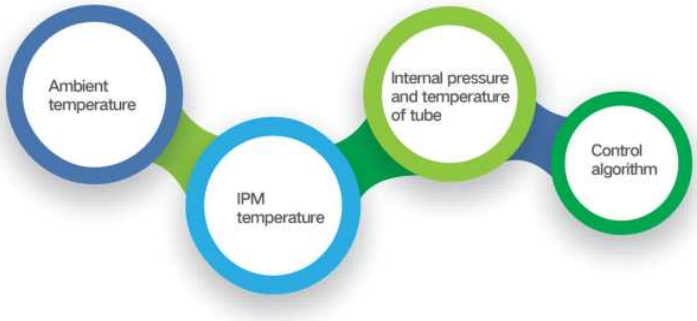
SUB-COOLING MODULE COOLING TECHNOLOGY

The compressor drive IPM high-power device adopts sub-cooling 360°ring-shaped heat dissipation structure module cooling technology to ensure that the internal components work under relatively low temperature conditions. Compared with ordinary air-cooled heat dissipation, the internal temperaturecan be reduced by up to 8°C, and reliability raised dramatically.



ANTI-CONDENSATION CONTROL ALGORITHM FOR HIGH HUMIDITY ENVIRONMENT

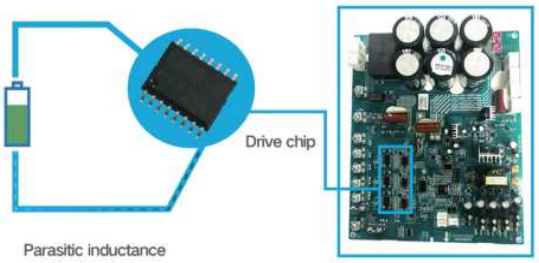
By detecting the ambient temperature, internal pressure and temperature of the tube, IPM temperature, etc., the anti-low temperature control algorithm for the high humidity environment is determined to prevent the condensation of internal components and avoid damage to the devices.

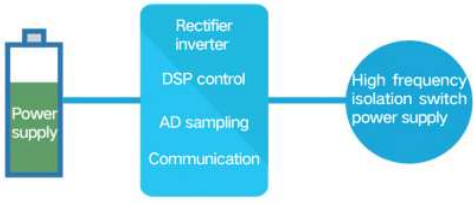


ANTI-HIGH VOLTAGE IMPACT TECHNOLOGY

The greater the compressor capacity is, the greater the unit current will be, and influence of the parasitic inductance of the wiring will also increase; operating reliability of unit will decrease, and even the components will be damaged.

With high-voltage switch power supply and fully isolated drive technology, multiple output electromagnetic isolation is adopted to avoid mutual interference. The circuit protection function is synchronously isolated, and the desat setting can suppress transient peak current. Industrial-grade performance and high-power drive greatly improve safety and reliability.



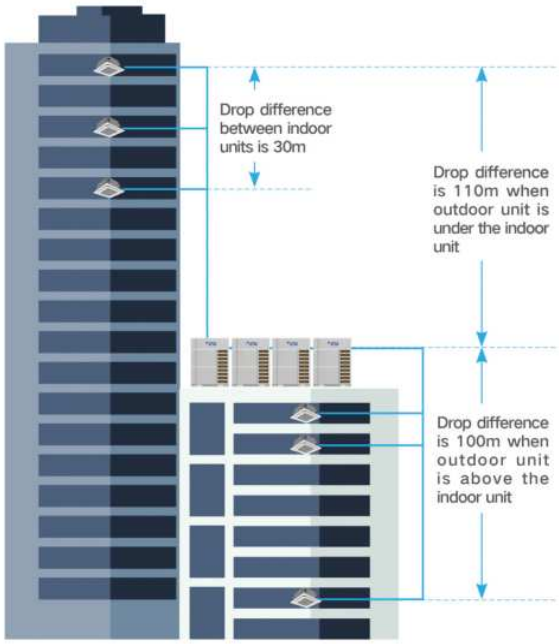


FLEXIBLE ENGINEERING DESIGN

Ultra-long connection pipe, convenient maintenance and other designs are adopted. The engineering adaptability of the unit is strong, which satisfies various engineering demands.

SUPER LONG REFRIGERANT PIPE DESIGN

VRF6 combines high drop pressure control technology, indoor unit drop identification technology, intermediate pressure adjustment technology, tube length self-correction technology, and deep subcooling technology to increase the length of piping and improve the air conditioning effect.



- The maximum actual single pipe length is 200m, the maximum equivalent single pipe length is 240m, and the maximum piping length is 1,000m.
- The maximum length after the first branch pipe is 120m *.
- The maximum drop of indoor and outdoor units is 110m * (100m when the outdoor unit is in upper position) *.
- The maximum drop between indoor units is 30m.

*Please consult technical staff for details.

HIGH STATIC PRESSURE DESIGN

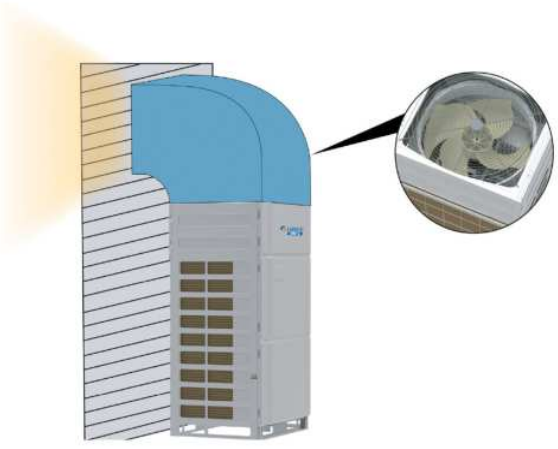
New diversion cover: effectively coupled with fan blades, the flow field is more uniform.

New diversion cover: effectively coupled with fan blades to make the flow distribution more uniform.

High external static pressure design facilitates engineering application and mechanical floor design.

The air-out grille with vortex streamline distribution, less wind resistance.

High-efficiency motor, powerful output and highest static pressure up to 110Pa (ex-factory standard).



INTELLIGENT COMMISSIONING

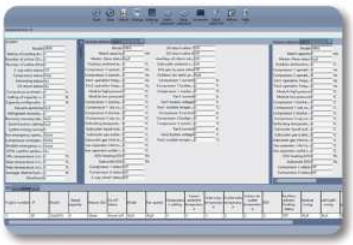
QUICK INSTALLATION

- Automatic address allocation: the system automatically allocates addresses to the indoor units, no DIP switch is required for commissioning, which is convenient.
- Five-side outlet pipes connection method: pipes can be lead out from five sides--front side, left and right sides, back and lower sides, which is suitable for various installation occasions.
- No external oil balancing pipe: advanced oil balancing control, no need to connect external oil balancing pipe, for fast and convenient installation and higher efficiency.
- Highly versatile design: VRF6 and VRF5 are universal for indoor and outdoor mounting holes, universal for supporting terminal controllers, and universal for commissioning.

EFFICIENT MULTIPLE COMMISSIONING METHODS

Diversified commissioning methods to meet different needs of project for higher commissioning efficiency.

One button commissioning
One button to enter commissioning, no other operations, simple and fast



VRF commissioning system
Clear interface, detailed data, and more professional analysis

Multi-functional debugger
Quick connection, no special PC required; data storage space (4GB), no external storage required

DEBUGGING BEFORE INSTALLING WIRED CONTROLLER

Before the completion of the project, in order to avoid damage to the wired controller during the construction process, the system can be debugged without installing the wired controller. After the entire project construction is completed, the wired controller can be installed and put in use, which can reduce unnecessary engineering loss.

VRF6 OUTDOOR UNITS SPECIFICATIONS

ODU SPECIFICATIONS

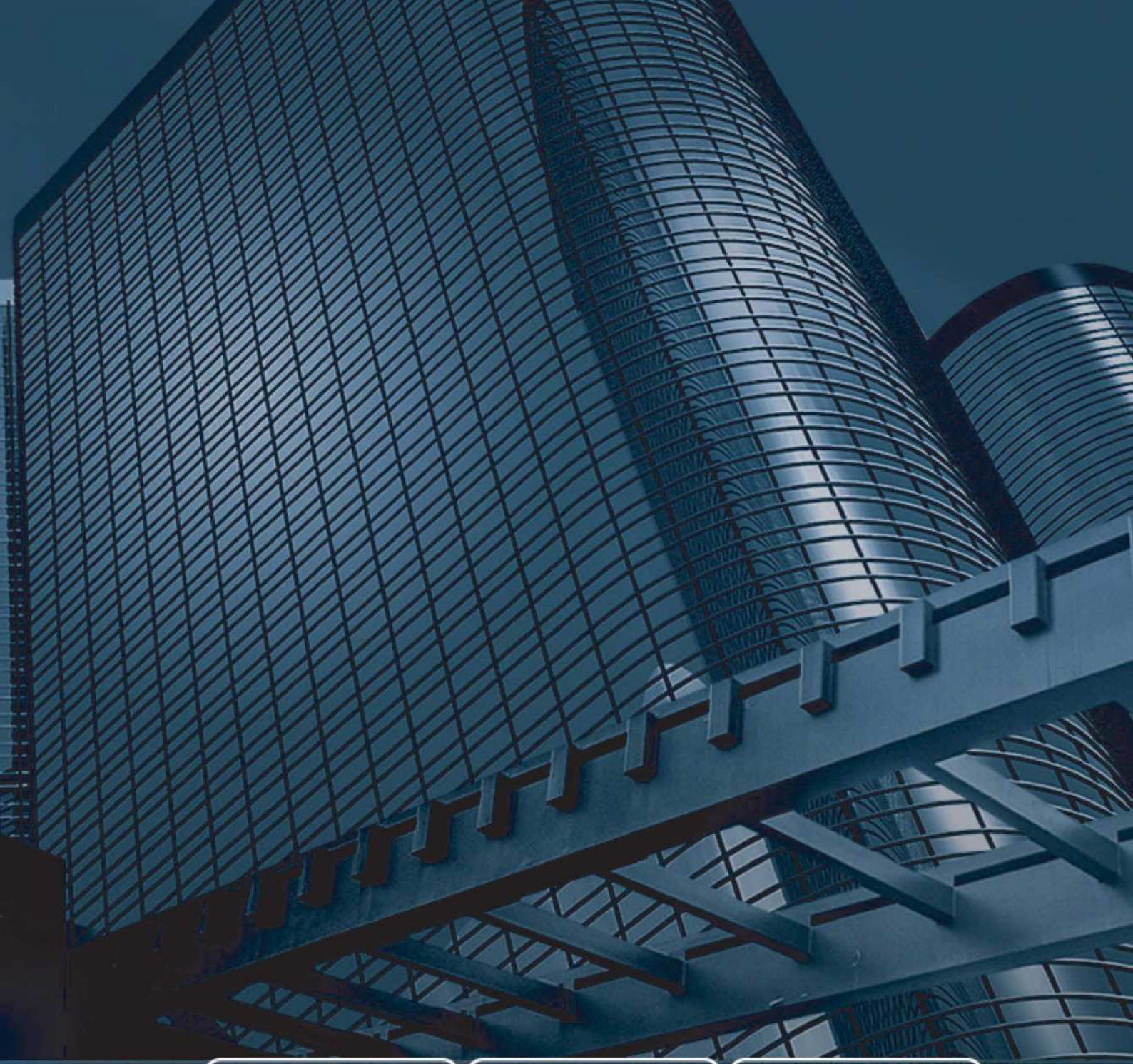
VRF6E

Model			AOU-224VRDC3C	AOU-280VRDC3C	AOU-335VRDC3C	AOU-400VRDC3C
Capacity range		HP	8	10	12	14
Cooling capacity	Rated *	kW	22.4	28.0	33.5	40.0
	Max.	kW	22.4	28.0	33.5	40.0
Heating capacity	Rated *	kW	22.4	28.0	33.5	40.0
	Max.	kW	25.0	31.5	37.5	45.0
SEER	Ducted *	-	7.10	6.66	6.31	6.75
	Cassette *	-	7.80	6.33	6.58	6.74
SCOP	Ducted *	-	4.62	4.80	4.40	4.80
	Cassette *	-	4.50	4.75	4.66	4.44
Power supply		V/Ph/Hz	380-415V 3N~ 50/60Hz			
Min. circuit/Max. fuse current		A	23.0/25	23.5/25	24.1/25	37.5/40
Max. power input		kW	12.87	13.15	13.50	21.00
Maximum drive IDU NO.		unit	13	16	19	23
Refrigerant charge volume		kg	5.5	5.5	7.5	7.5
Sound pressure level (cooling)		dB(A)	56	57	59	59
Sound power level (cooling)	Ducted *	dB(A)	80	84	86	90
	Cassette *	dB(A)	82	86	86	88
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52	Φ12.7	Φ12.7
	Gas	mm	Φ19.05	Φ22.2	Φ25.4	Φ25.4
Dimension(W×D×H)	Outline	mm	930×775×1690	930×775×1690	930×775×1690	1340×775×1690
	Package	mm	1000×830×1855	1000×830×1855	1000×830×1855	1400×830×1855
Net weight/Gross weight		kg	220/230	220/230	240/250	300/315
Max refrigerant pipe length		m	1000	1000	1000	1000
Max height difference (indoor-indoor unit)		m	30	30	30	30
Max height difference (outdoor unit is under the indoor unit)		m	110	110	110	110
Max height difference (outdoor unit is above the indoor unit)		m	100	100	100	100
Operating conditions in cooling mode		°C	-5 - +55	-5 - +55	-5 - +55	-5 - +55
Operating conditions in heating mode		°C	-30 - +24	-30 - +24	-30 - +24	-30 - +24

Model			AOU-450VRDC3C	AOU-504VRDC3C	AOU-560VRDC3C	AOU-615VRDC3C
Capacity range		HP	16	18	20	22
Cooling capacity	Rated *	kW	45.0	50.4	52.0	52.0
	Max.	kW	45.0	50.4	56.0	61.5
Heating capacity	Rated *	kW	45.0	50.4	56.0	61.5
	Max.	kW	50.0	56.5	63.0	69.0
SEER	Ducted *	-	6.24	6.12	5.97	6.02
	Cassette *	-	6.41	6.44	5.67	5.75
SCOP	Ducted *	-	4.84	4.19	4.10	4.10
	Cassette *	-	4.44	3.71	3.71	3.71
Power supply		V/Ph/Hz	380-415V 3N~ 50/60Hz			
Min. circuit/Max. fuse current		A	39.3/40	47.0/50	48.0/50	49.0/50
Max. power input		kW	22.00	26.30	26.85	27.41
Maximum drive IDU NO.		unit	26	29	33	36
Refrigerant charge volume		kg	7.5	8.3	8.3	8.3
Sound pressure level (cooling)		dB(A)	60	61	62	63
Sound power level (cooling)	Ducted *	dB(A)	93	93	93	93
	Cassette *	dB(A)	93	88	94	94
Connecting pipe	Liquid	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	Gas	mm	Φ28.6	Φ28.6	Φ28.6	Φ28.6
Dimension(W×D×H)	Outline	mm	1340×775×1690	1340×775×1690	1340×775×1690	1340×775×1690
	Package	mm	1400×830×1855	1400×830×1855	1400×830×1855	1400×830×1855
Net weight/Gross weight		kg	300/315	350/365	350/365	355/370
Max refrigerant pipe length		m	1000	1000	1000	1000
Max height difference (indoor-indoor unit)		m	30	30	30	30
Max height difference (outdoor unit is under the indoor unit)		m	110	110	110	110
Max height difference (outdoor unit is above the indoor unit)		m	100	100	100	100
Operating conditions in cooling mode		°C	-5 - +55	-5 - +55	-5 - +55	-5 - +55
Operating conditions in heating mode		°C	-30 - +24	-30 - +24	-30 - +24	-30 - +24

Note：The data is Eurovent certified.

EVERYTHING IS IN VRF6 HEAT RECOVERY



Simultaneous cooling and heating

Hot water and floor heating

Fresh air

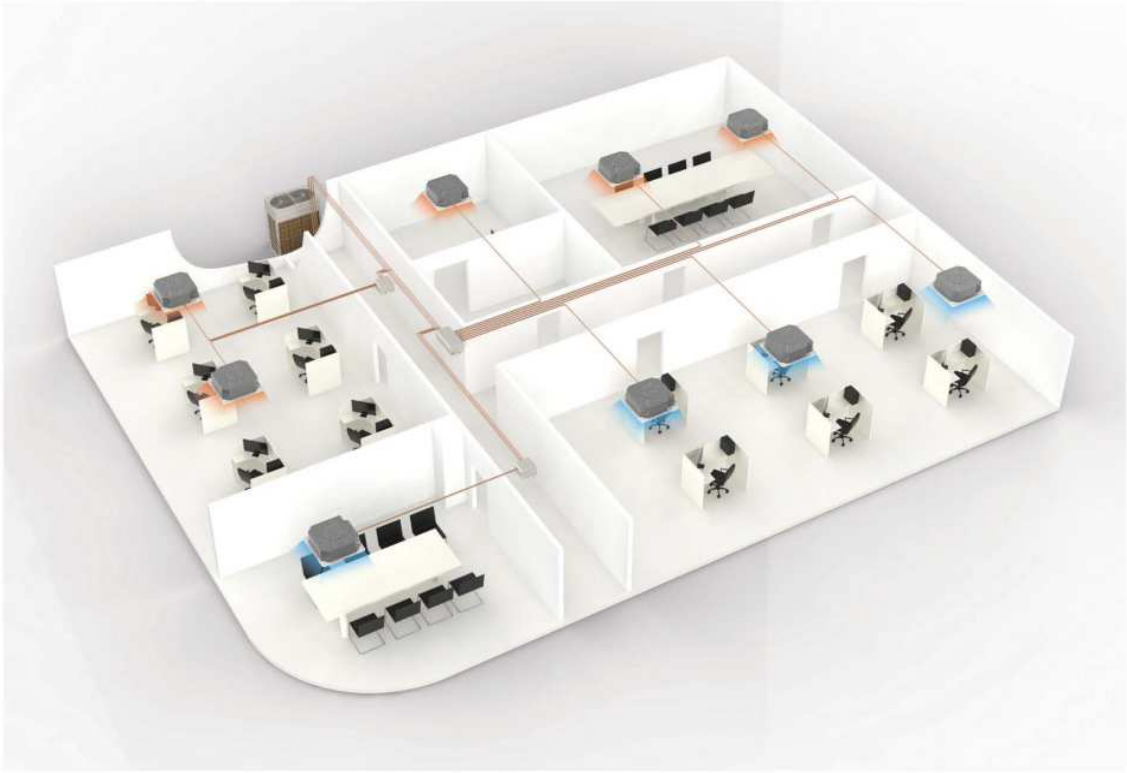
SCHE
Max. 9.0

Continuous heating

WHY CHOOSE VRF HEAT RECOVERY SYSTEM

DEMAND

In a large open space (such as an office), there may be different demands for cooling and heating due to locations, personal preferences or special requirements (For example, the living area requires heating while the storage room requires constant cooling). The heat recovery system can set up cooling and heating simultaneously in different areas of the same system based on user demands.



ENERGY SAVING

The heat recovery system has multiple operating modes, among which the main unit cooling, main unit heating and total heat recovery can realize the heat recovery function. Under heat recovery mode, the system will provide the cooling energy absorbed by the heating side directly to the cooling side, which can reduce the capacity output of the outdoor unit and greatly improve the energy saving effect. Under total heat recovery mode, the system can achieve the optimal energy-saving performance and the energy efficiency of the system will be 3~4 times higher compared to other conventional operating modes.

FLEXIBLE

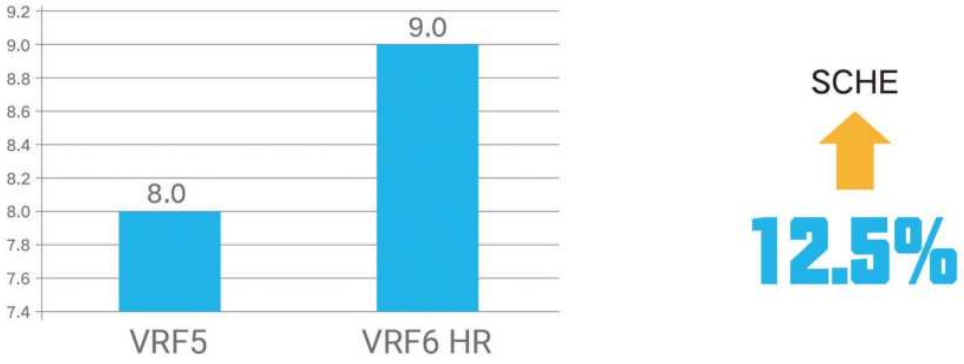
The heat recovery system is designed to have the features of a heat pump system with unique heat recovery function. It can run in cooling, heating or other operating modes flexibly according to a specific installation location, environmental changes and comfort requirements, so as to meet user demands in real time.

MULTIPLE FUNCTIONS IN ONE UNIT

This unit can perform air cooling, air heating, and water heating simultaneously, satisfying customers' various needs for air conditioning, hot water and floor heating. It is a comprehensive solution for customers.

HIGH ENERGY EFFICIENCY – SCHE UP TO 9.0

It adopts heat recovery energy-saving control technology, high-efficiency enthalpy-adding DC inverter compressor and high-efficiency DC motor to optimize its capabilities. In the state of heat recovery, its comprehensive energy efficiency (SCHE*) can be 9.0, which is more energy-saving.



*SCHE (Simultaneous Cooling & Heating Efficiency): the ratio of the total capacity of the system (heating and cooling capacity) to the effective power when operating in heat recovery mode.


ALPICAIR
ALPICAIR
ALPICAIR
ALPICAIR

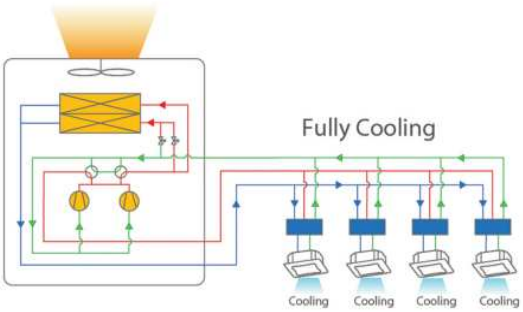
CONTINUOUS HEATING

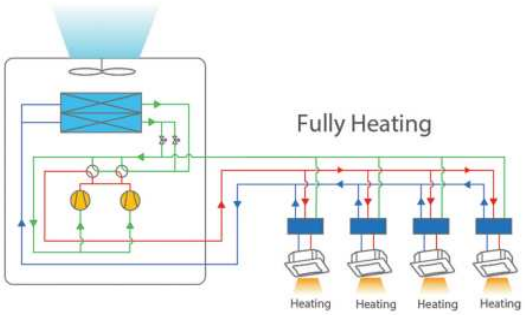
VRF6 HR is designed with a continuous heating system. In case of modular combination, different modules can defrost in turn to reduce indoor temperature fluctuation, which will further improve the level of heating comfort.

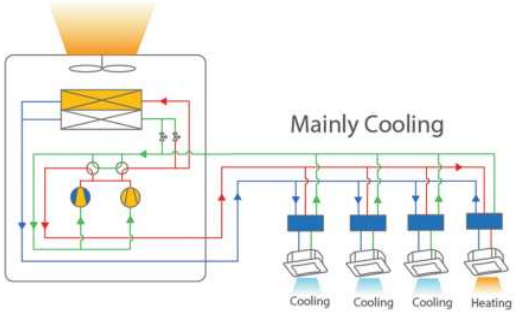
HIGH ENERGY EFFICIENCY

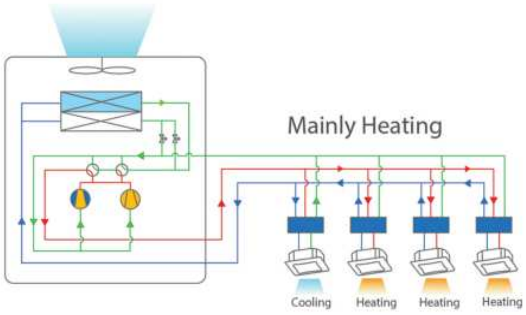
FIVE OPERATING MODES

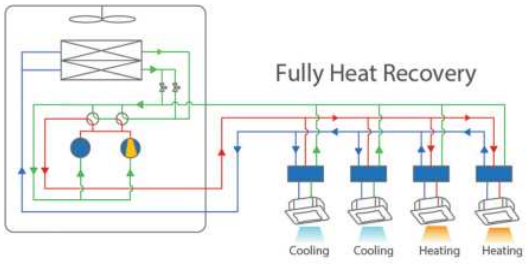
VRF6 heat recovery system enables multiple operation modes for meeting various needs of users. Among them, mainly cooling, mainly heating and fully heat recovery modes include heat recovery function. Under the heat recovery mode, the system can directly offer the cooling capacity absorbed at the heating side to the cooling side for reducing outdoor unit's capacity output to greatly improve the energy-saving effect.

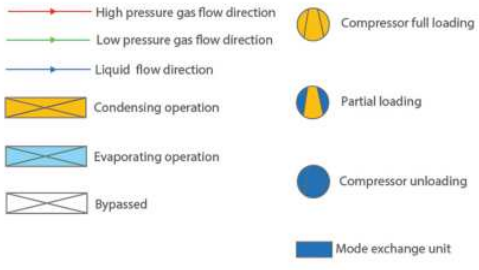




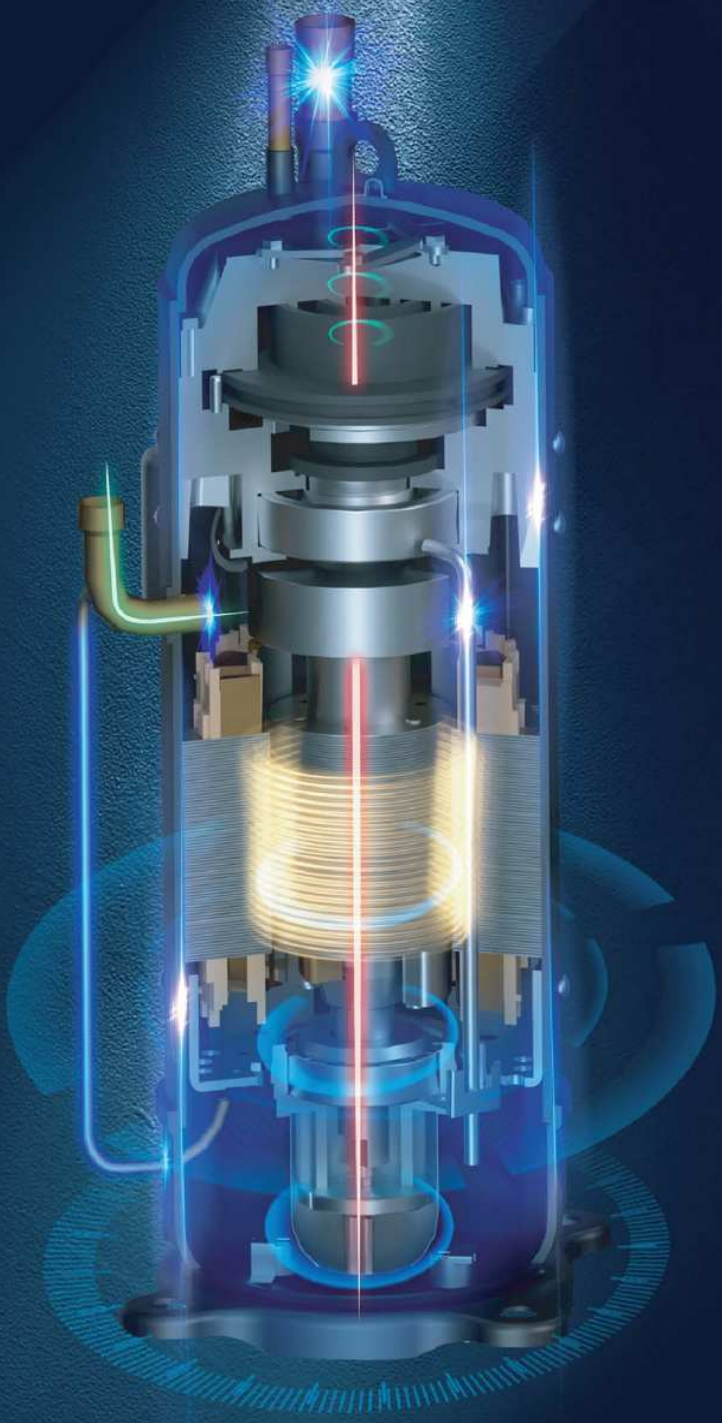








HIGH-EFFICIENCY EVI DC INVERTER HIGH-PRESSURE CAVITY SCROLL TYPE COMPRESSOR

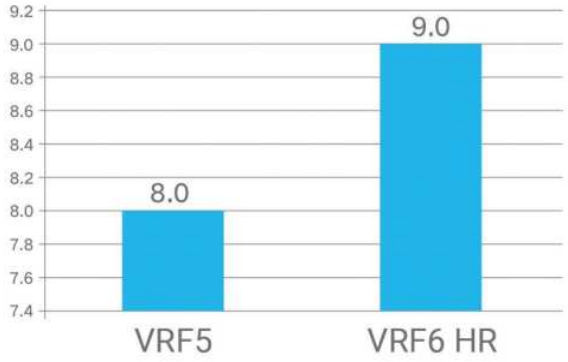


Low-temperature enthalpy-adding compressor is developed according to the features of VRF units. With a regulation range of 0-420Hz, it can perfectly coordinate with the machine so as to excel the performance to the greatest extent.

Dual EEV enthalpy-adding control: Compressor enthalpy increase can be controlled flexibly to realize the maximum enthalpy increase.

SCHE UP TO 9.0

It adopts heat recovery energy-saving control technology, high-efficiency enthalpy-adding DC inverter compressor and high-efficiency DC motor to optimize its capabilities. In the state of heat recovery, its comprehensive energy efficiency (SCHE*) can be 9.0, which is more energy-saving.



*SCHE (Simultaneous Cooling & Heating Efficiency): The ratio of the total capacity of the system (heating and cooling capacity) to the effective power when operating in heat recovery mode.

G-SHAPE INTEGRATED HEAT EXCHANGER

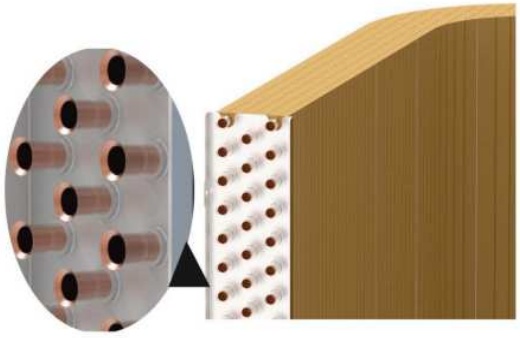
Molded at one time, the G-shape integrated heat exchanger can improve space utilization, and increase heat exchanger area and heat exchange efficiency.

*Note: Applicable for some models.

MULTI-ROW SMALL DIAMETER DESIGN

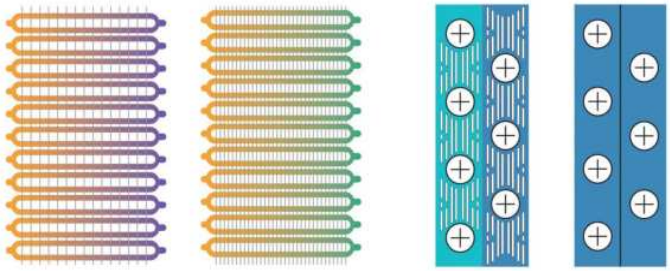
The refrigerant pipe adopts φ7mm and 3-row design, which can reduce the flowing resistance of refrigerant inside the pipe and effectively increase the heat exchange area of refrigerant, so as to opt imize and improve the heat exchange efficiency.

*Note: Applicable for some models.



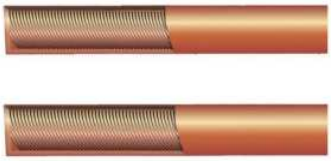
SMALL PITCH CORRUGATED HEAT EXCHANGER FINS

Small pitch corrugated fins are used to increase the effective area between fins and the air, for more sufficient heat exchange of refrigerant and higher heat exchange efficiency.



INTERNAL SCREW THREAD DESIGN OF COPPER TUBE

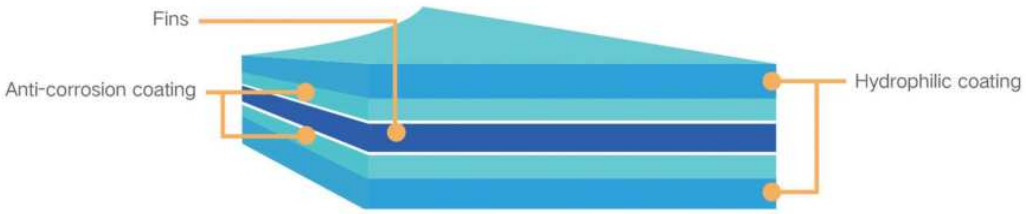
The refrigerant pipe adopts internal screw thread design to increase the contact area with the refrigerant, optimize the turbulent state of refrigerant flow and improve the heat exchange efficiency.



Internal screw thread high-efficiency heat exchange tube

MULTI-FUNCTIONAL HEAT EXCHANGER FINS

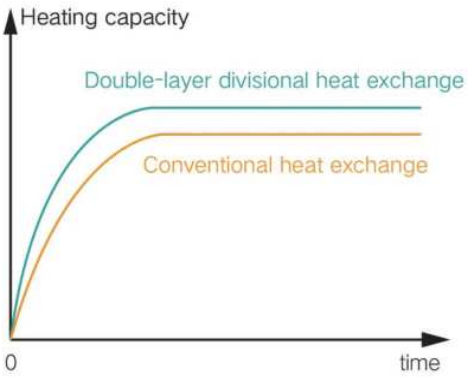
The heat exchanger fins adopt double-sided double-effect coating and hydrophilic membrane design so that the unit is not easy to get frosted and the condensate water or water from defrosting can flow down more quickly; the anti-corrosion coating isolates the pollutants and dust from air to protect the fins, thus stronger corrosion resistance and better heat exchange effect.

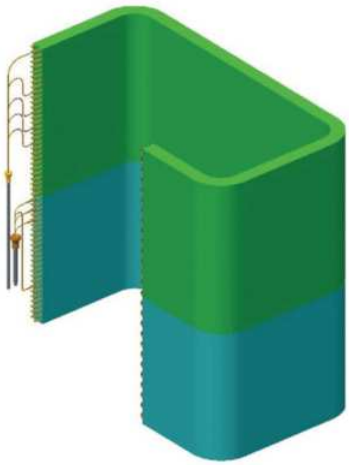


Double coating heat exchange fins structure

DOUBLE-LAYER INDEPENDENT DIVISIONAL CONTROL FOR HEAT EXCHANGER

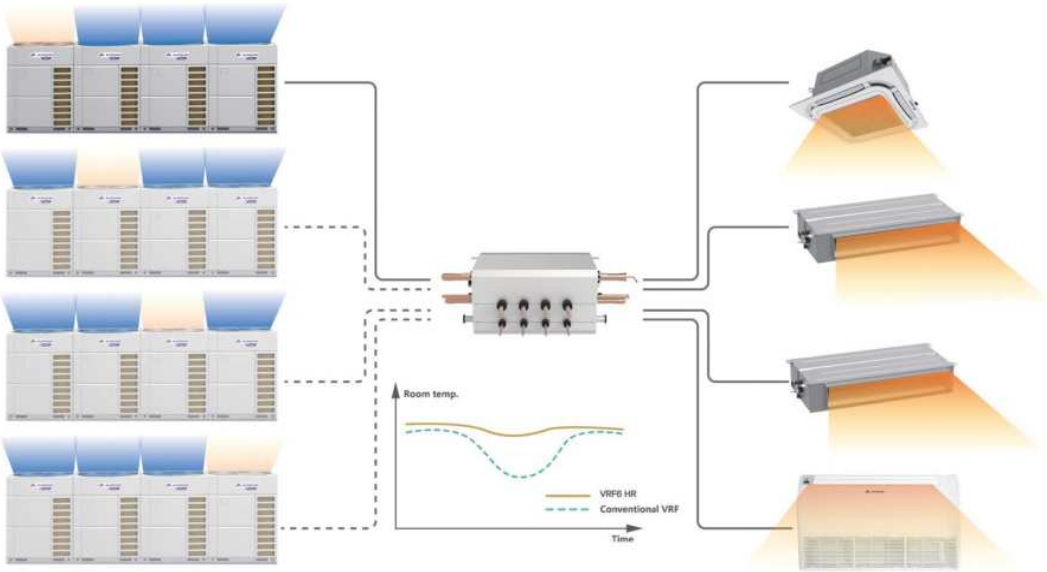
According to the features of the wind field, the heat exchanger has a divisional design for the flow paths. The upper and lower heat exchangers are designed with independent EEV control to realize more reasonable flow distribution, which can optimize the heat exchange performance.





CONTINUOUS HEATING

VRF6 HR is designed with a continuous heating system. In case of modular combination, different modules can defrost in turn to reduce indoor temperature fluctuation, which will further improve the level of heating comfort.

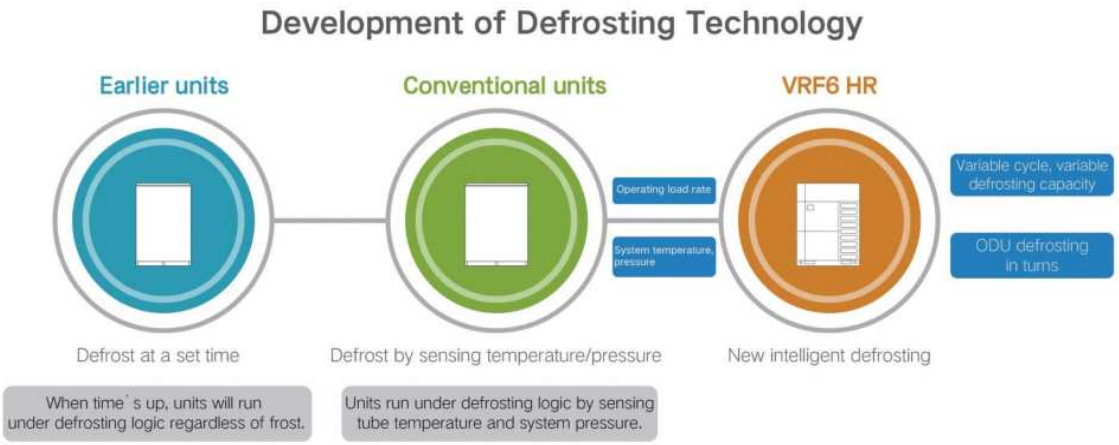


*Applicable to partial models

*This function must be set in the field. When this function is set, continuous heating will be activated under certain ambient temperature conditions.

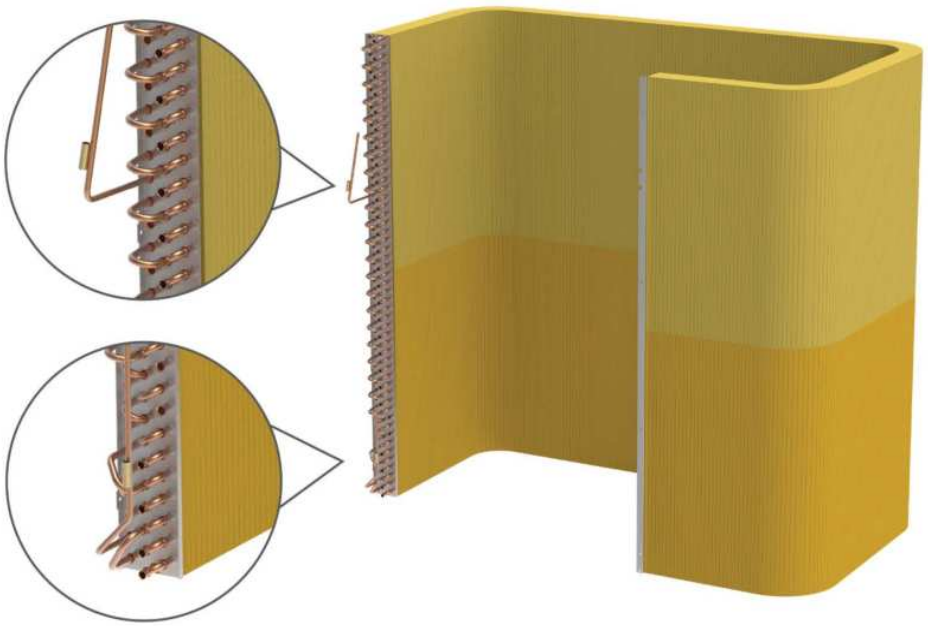
MULTI-DIMENSIONAL INTELLIGENT DEFROSTING

VRF6 HR is equipped with multiple defrosting technologies. It adopts the control method of variable temperature difference and variable load rate to achieve efficient and rapid defrosting. Under certain conditions, the outdoor units can defrost in turn to make sure the indoor units can continue with heating.



TWO TEMPERATURE SENSORS FOR UPPER AND LOWER HEAT EXCHANGERS

The upper and lower heat exchangers are independently controlled by two defrosting temperature sensors, which can accurately judge the thickness of frost on heat exchangers so as to carry out thorough defrosting.



PROJECT SELF-ADAPTIVE CONTROL

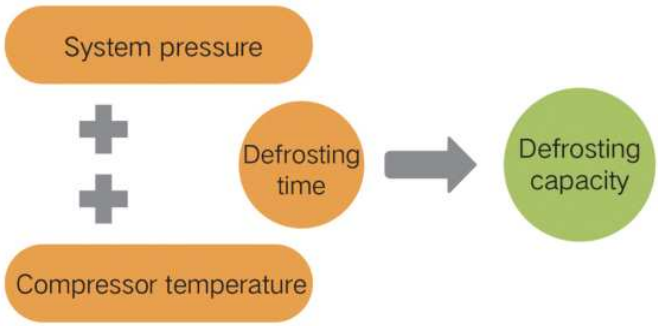
VARIABLE DEFROSTING CYCLE CONTROL

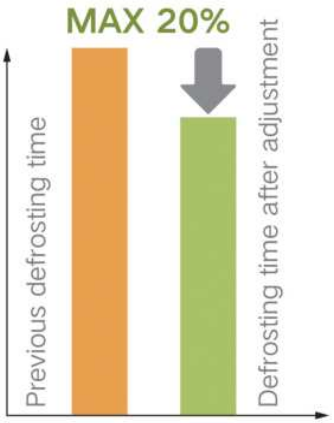
The unit can define the frost degree according to the defrosting time change under different circumstances and then adjust the defrosting cycle automatically to improve the accuracy of defrosting.

VARIABLE DEFROSTING CAPACITY CONTROL

The speed of defrosting is closely related to the output of compressor. Generally, when the unit is defrosting, the output capacity of compressor is fixed, which may lead to long defrosting time or failure to defrost normally in actual use.

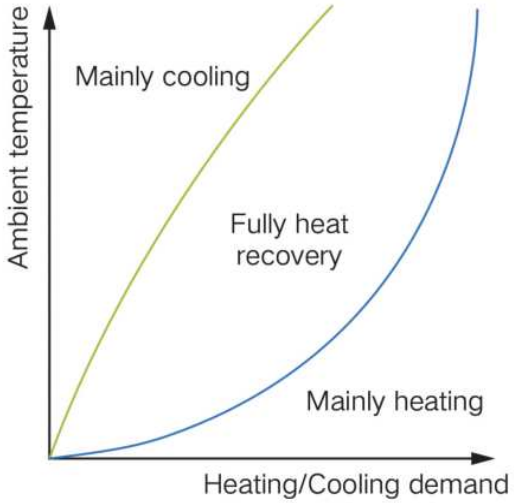
In order to realize stable and rapid defrosting, VRF6 HR can automatically change the output capacity during defrosting through real-time parameter learning and judgment.





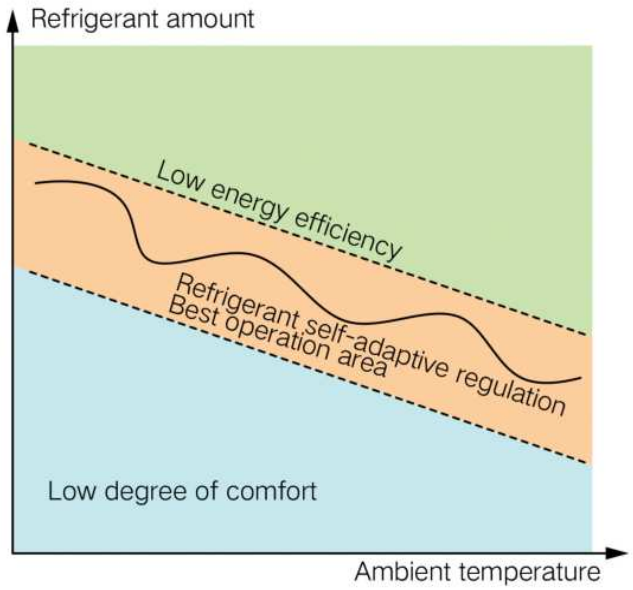
INTELLIGENT HEAT RECOVERY CONTROL

VRF6 HR adopts intelligent heat recovery control technology. Under heat recovery mode, it can intelligently switch among mainly cooling mode, fully heat recovery mode and mainly heating mode according to the operating condition and load. Under high temperature, the operation of indoor units in cooling mode will be given priority; under low temperatures, the operation of indoor units in heating mode will be given priority. This is to achieve the best energy efficiency while ensuring user comfort.



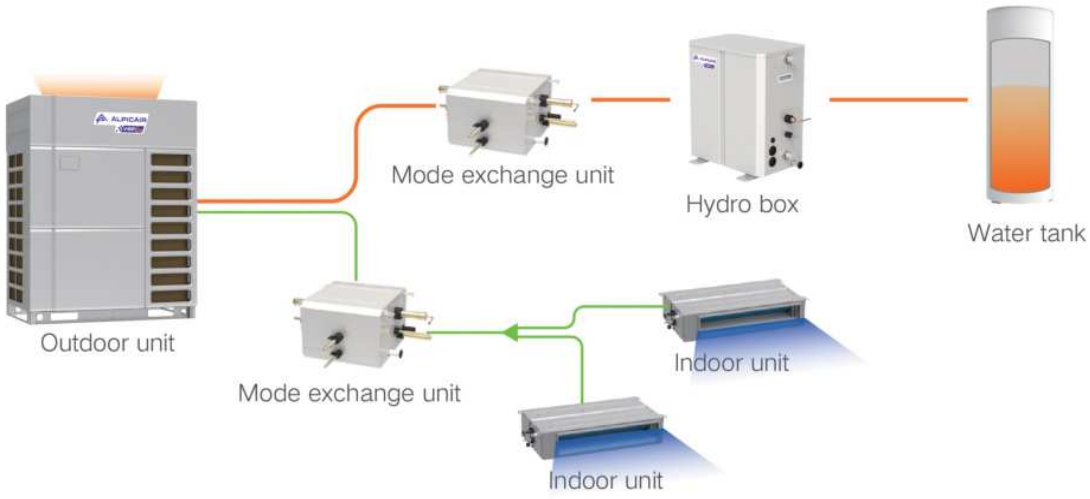
REFRIGERANT SELF-ADAPTIVE REGULATION TECHNOLOGY

VRF6 HR adopts refrigerant self-adaptive regulation technology. When the ambient temperature or the load of indoor unit changes, it will automatically adjust the amount of system refrigerant circulation according to the output demand of outdoor units. This technology can prevent energy efficiency decrease in cooling caused by excess refrigerant and maintain the comfort degree in heating by preventing refrigerant insufficiency so that the unit can always run in a healthy, energy-saving and comfortable state.



AUTO HEAT RECOVERY FUNCTION OF COOLING

In summer, when the unit is in cooling mode, even if the hydro box is shut down, it can still recover waste heat according to the water temperature of the water tank, and transfer the heat to the water rather than discharge it into the atmosphere. In summer, you can enjoy not only cool air but also free hot water.



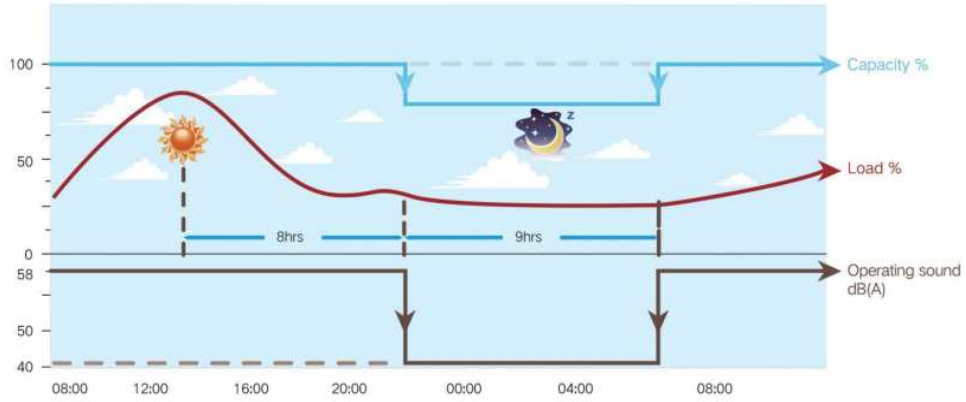
Note: This function defaults to be on before ex-factory. It can be turned off in setting.

QUIET TECHNOLOGY

13 QUIET MODES

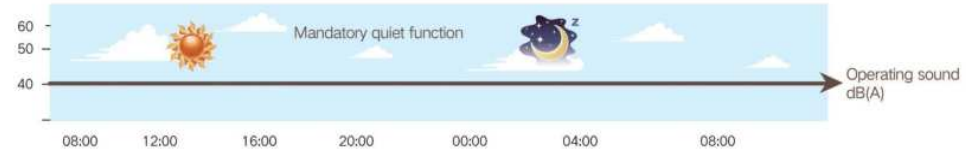
NIGHT QUIET FUNCTION

The system can record the highest outdoor temperature. At night, the system will automatically turn to quiet mode. There are 9 quiet modes which can be set according to actual needs. For example, the unit can automatically enter night mode after working for 8 hours, and resume to normal operating mode after 9 hours.



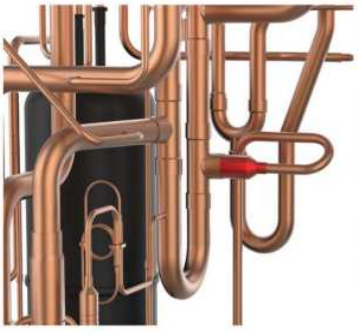
MANDATORY QUIET FUNCTION

When the unit is installed in an environment with high noise requirements, it needs to operate silently during the day or night. Then you can choose three mandatory settings of quiet modes to ensure that the unit operates in low noise mode at any time, and the noise value can be as low as 40dB (A).

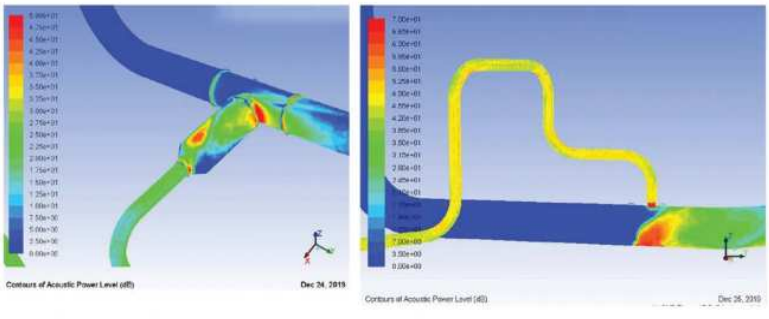


SPINNING AND VARIABLE PIPE DIAMETER DESIGN FOR NOISE REDUCTION

The inlet pipe from sub-cooler to gas separator adopts a spinning structure with variable diameter, which can slow down the refrigerant flow in the pipeline, greatly reduce the flow noise of the pipe, and significantly lower the broadband noise.



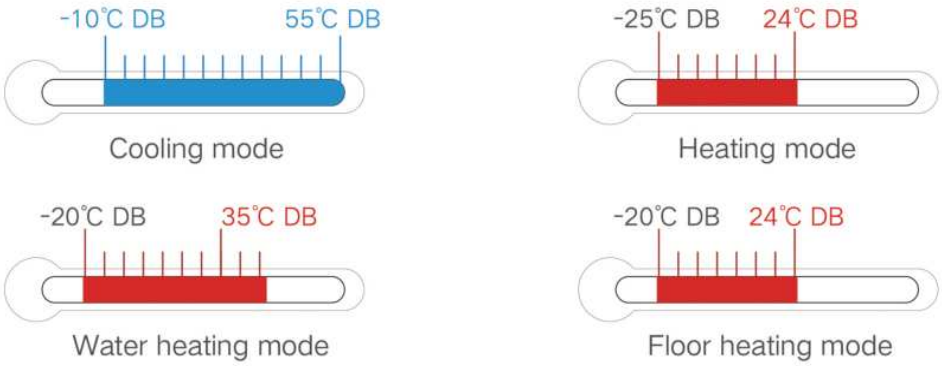
Small pipe direct inserting structure



Spinning and variable diameter structure

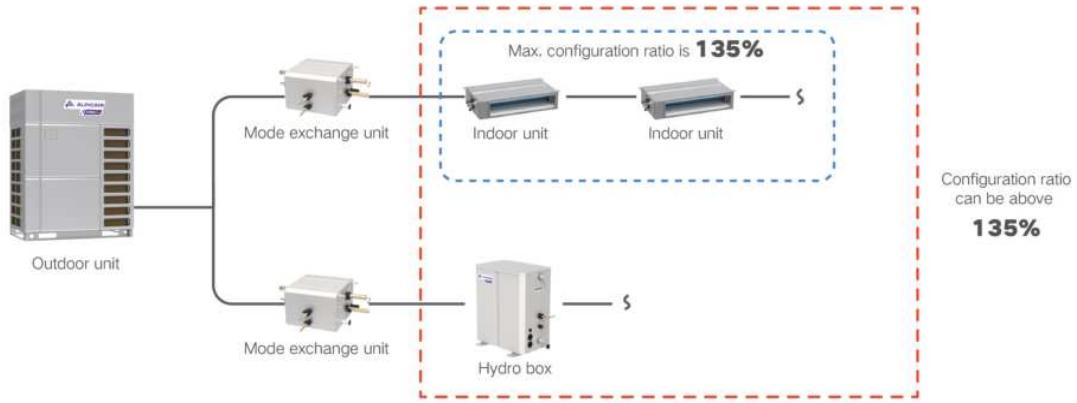
STABLE AND RELIABLE OPERATION

SUPER WIDE OPERATING RANGE



HIGH CONFIGURATION RATIO

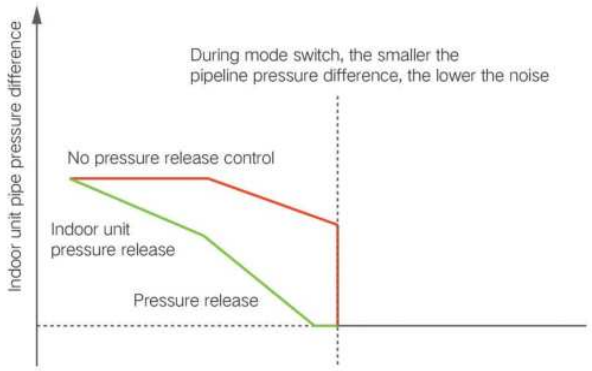
Conventionally, we use the total capacity of indoor units and the hydro box to calculate the indoor and outdoor unit configuration ratio, without taking the use mode into consideration. In summer, users need air conditioners for cooling and hot water for bathing; while in winter, floor heating is also needed. VRF6 HR is designed in an unconventional way, for it has optimized the capacity allocation method in different modes and the hydro box can calculate the configuration ratio independently. The configuration ratio of indoor units is not counted and the cost of outdoor units is reduced.



Note: If indoor units and hydro box run in heating at the same time, heating performance will be affected.

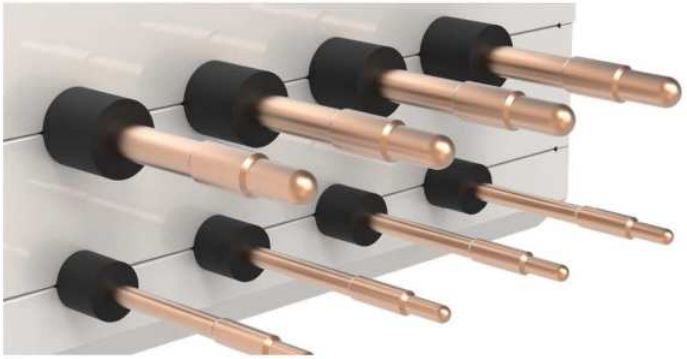
NOISE REDUCTION DESIGN OF MODE EXCHANGE UNIT

The noise of mode exchange unit is mostly caused by the large pressure difference between the indoor unit pipeline and the outdoor unit pipeline during mode switch. The new generation mode exchange unit adopts preliminary pressure release control technology. By combining preliminary indoor unit pressure release control with preliminary bypass pressure release control, the indoor unit pipeline pressure can be quickly balanced during the mode switch of indoor units, avoiding the noise caused by the switching pressure difference and ensuring the quiet and rapid mode switch of indoor units.



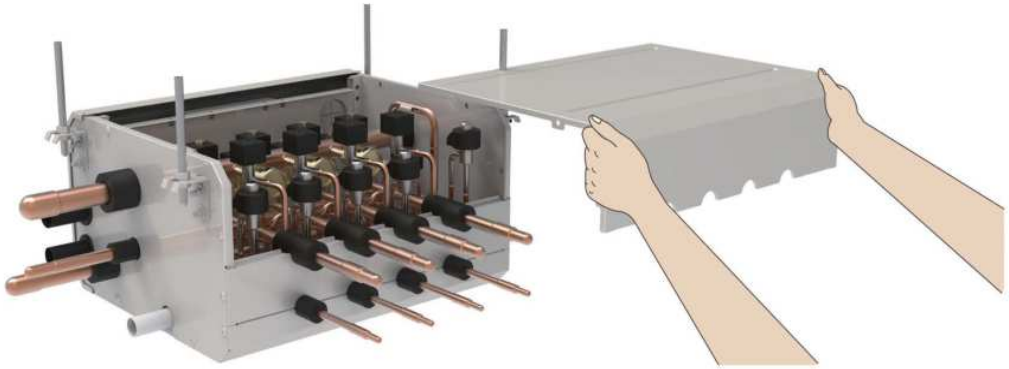
ONE-PIECE CONNECTION PIPE DESIGN, EFFICIENT AND SAFE

The connection pipe is designed with a variable diameter spinning sealing, for easy installation and less installation time. It can satisfy requirements for different pipe size in engineering pipe connection. There's no need to remove the sealing cap through welding, which is safer. Less oxide is produced, and the system is cleaner.



STRUCTURE FOR EFFICIENT MAINTENANCE

The L-shape integrated upper cover plate is designed so that there's a better view and enough operation space for the inspection and maintenance of pipes and valves when the upper cover plate is removed.



HYDRO BOX

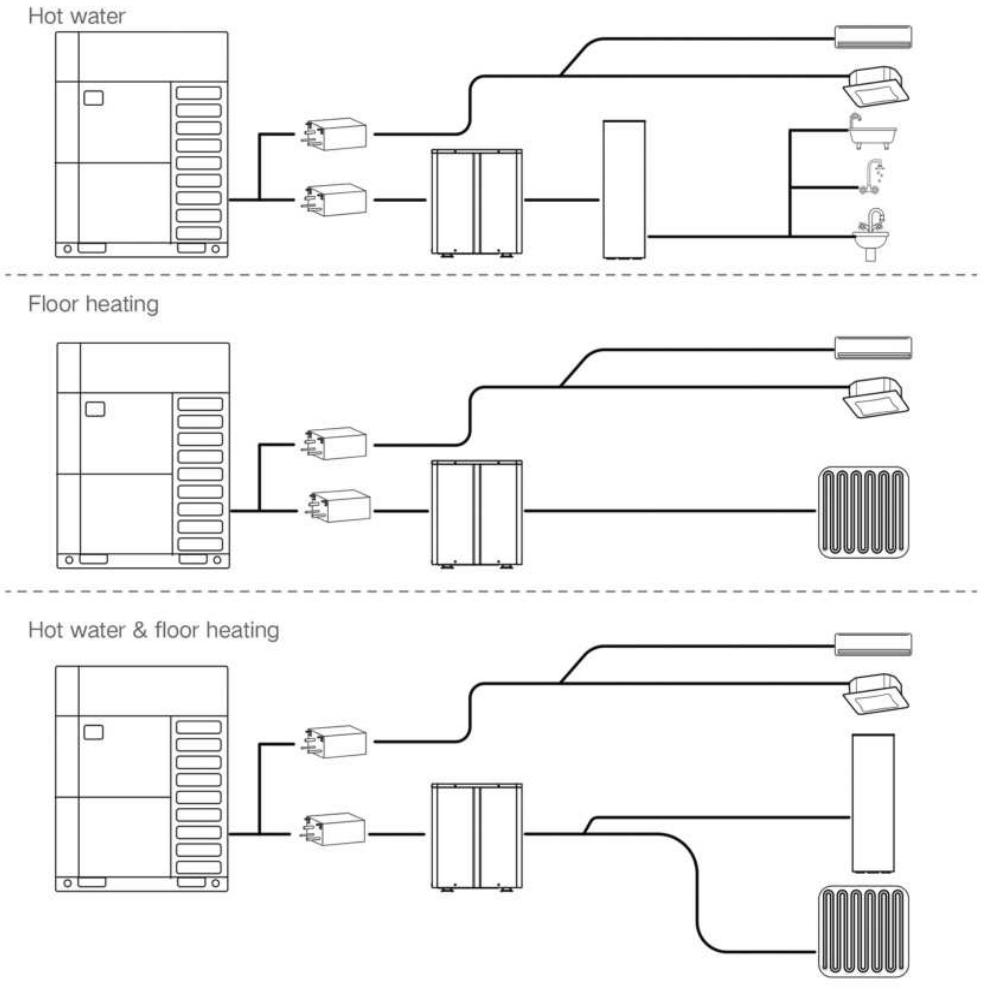
WIDE CAPACITY RANGE

There are two capacity options for a single unit: 16/30 kWm, which can satisfy different engineering requirements.

16/30kW

DOUBLE FUNCTIONS

The hydro box can be connected to the water tank and floor heating independently or simultaneously. It is equipped with a new generation matrix wired controller, through which you can set hot water function or floor heating function. Two functions in one machine, satisfying customers' various needs.



*Note: Wired controller model: XE70-11/H.

MODE EXCHANGE UNIT

Model	Product Appearance	Model	Product Appearance
ACHS1D		ACHS4D	
ACHS2D		ACHS8D	

HYDRO BOX

Model	Product Appearance
ARQR16L/A-T	
ARQR30L/A-T	

OUTDOOR UNIT

Model			AOU-224VRDC3RC	AOU-280VRDC3RC	AOU-335VRDC3RC	AOU-400VRDC3RC	AOU-450VRDC3RC	AOU-504VRDC3RC	AOU-560VRDC3RC	AOU-615VRDC3RC
Capacity range		HP	8	10	12	14	16	18	20	22
Cooling capacity	Rated *	kW	22.4	28.0	33.5	40.0	45.0	50.4	52.0	52.0
	Max.	kW	22.4	28.0	33.5	40.0	45.0	50.4	56.0	61.5
Heating capacity	Rated *	kW	22.4	28.0	33.5	40.0	45.0	50.4	56.0	56.0
	Max.	kW	25.0	31.5	37.5	45.0	50.0	56.5	63.0	69.0
SEER	Ducted *	-	7.00	6.76	6.61	6.97	6.53	6.54	6.38	6.32
	Cassette *	-	7.25	6.49	6.73	6.25	6.22	6.78	6.42	6.36
SCOP	Ducted *	-	4.32	4.58	4.74	4.44	4.42	4.25	4.15	4.15
	Cassette *	-	4.30	4.44	4.37	4.44	4.51	4.34	4.34	4.34
Power supply		V/Ph/Hz	380-415V 3N~ 50/60Hz							
Min. circuit/Max. fuse current		A	23.0/25	23.5/25	24.1/25	37.5/40	39.3/40	47.0/50	48.0/50	49.0/50
Max. power input		kW	12.87	13.15	13.50	21.00	22.00	26.30	26.85	27.41
Maximum drive IDU NO.		unit	13	16	19	23	26	29	33	36
Refrigerant charge volume		kg	8.2	8.5	9.6	11.1	11.6	12.8	12.8	13.3
Sound pressure level (cooling)		dB(A)	60	61	63	63	63	63	63	64
Sound power level (cooling)	Rated *	dB(A)	80	82	84	91	91	88	88	88
	Cassette *	dB(A)	22.4	28.0	33.5	40.0	45.0	50.4	56.0	61.5
Dimension (W×D×H)	Outline	mm	930×775×1690	930×775×1690	930×775×1690	1340×775×1690	1340×775×1690	1340×775×1690	1340×775×1690	1340×775×1690
	Package	mm	1000×830×1855	1000×830×1855	1000×830×1855	1400×830×1855	1400×830×1855	1400×830×1855	1400×830×1855	1400×830×1855
Net weight/Gross weight		kg	243/253	243/253	256/266	325/340	325/340	385/400	385/400	385/400
Max refrigerant pipe length		m	1000	1000	1000	1000	1000	1000	1000	1000
Max height difference (indoor-indoor unit)		m	30	30	30	30	30	30	30	30
Max height difference (outdoor unit is under the indoor unit)		m	110	110	110	110	110	110	110	110
Max height difference (outdoor unit is above the indoor unit)		m	100	100	100	100	100	100	100	100
Operating conditions in cooling mode		°C	-10 - +55	-10 - +55	-10 - +55	-10 - +55	-10 - +55	-10 - +55	-10 - +55	-10 - +55
Operating conditions in heating mode		°C	-25 - +24	-25 - +24	-25 - +24	-25 - +24	-25 - +24	-25 - +24	-25 - +24	-25 - +24

Note: The data is Eurovent certified.

MODE EXCHANGE UNIT

Model				ACHS1D	ACHS2D	ACHS4D	ACHS8D
Number of branches			unit	1	2	4	8
Max. number of connectable IDUs		Per branch	unit	8	8	8	8
		Total	unit	8	16	32	64
Max.capacity of connectable IDUs		Per branch	kW	16	16	16	16
		Total	kW	16	28	45	85
Power supply			V/Ph/Hz	220-240V ~ 50/60Hz			
Power comsumption		Cooling	mm	14	25	32	90
		Heating	mm	14	25	32	90
Piping connections	ODU	Liquid	mm	Φ9.52	Φ9.52	Φ12.7	Φ15.9
		High pressure gas	mm	Φ19.05	Φ19.05	Φ22.2	Φ22.2
		Low pressure gas	mm	Φ22.2	Φ22.2	Φ28.6	Φ28.6
	IDU	Liquid	mm	Φ6.35/9.52	Φ6.35/9.52	Φ6.35/9.52	Φ6.35/9.52
		Gas	mm	Φ12.7/15.9	Φ12.7/15.9	Φ12.7/15.9	Φ12.7/15.9
Dimension(W×D×H)		Outline	mm	340×388×250	340×388×250	460×388×250	784×388×250
		Package	mm	863×624×298	863×624×298	979×624×303	1300×624×288
Net weight/Gross weight			kg	12/17.5	14.5/20.5	20.6/27	33/42

HYDRO BOX

Model				ARQR16L/A-T	ARQR30L/A-T
Hot water heating capacity			kW	4.5 (3.6~16)	4.5 (3.6~30)
Max. setting temperature of domestic hot water			°C	55 (35~55)	55 (35~55)
Floor heating capacity			kW	16	30
Max. setting temperature of floor heating			°C	45 (25~45)	45 (25~45)
Power supply			V/Ph/Hz	220~240V-1ph-50Hz	220~240V-1ph-50Hz
				208~230V-1ph-60Hz	208~230V-1ph-60Hz
Heat exchanger		Type	-	Plate heat exchanger	Plate heat exchanger
		Quantity	-	1	1
		Rated water flow	L/min	46	86
		Pressure drop	kPa	27.5	38.5
Water system connection	Diameter of inlet/outlet water pipe		mm	Φ25	Φ25
	Thread specification		-	G1	G1
Refrigerant system connection	Gas pipe		mm	Φ15.9	Φ22.2
	Liquid pipe		mm	Φ9.52	Φ9.52
Outline dimension (W×D×H)			mm	515×330×606	515×330×606
Net weight			kg	36	40

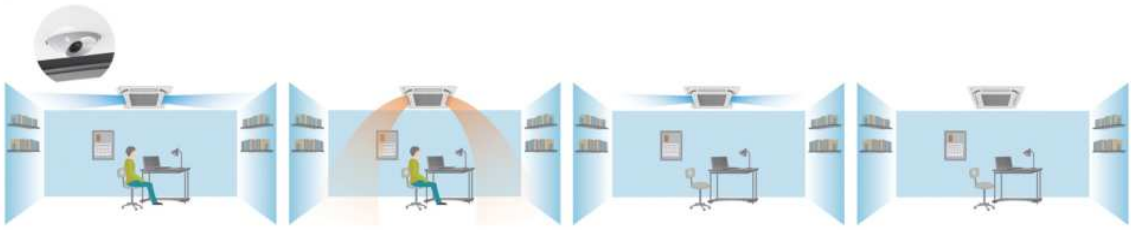
SPECIFICATIONS OF INDOOR UNITS

360° AIR DISCHARGE CASSETTE INDOOR UNIT

360° air discharge cassette, with 360° air discharge, which is suitable for different places such as hotels, office buildings, shopping malls, apartments, villas, and families. The all-round discharge cassette type indoor unit's air louver can be independently controlled to realize a new air flow form. The air supply range is wide and temperature distribution is more uniform, bringing a comfortable environment experience. With optional human sensory function, the control is more intelligent and user-friendly.

○ 360° OVERALL TEMPERATURE FIELD IDENTIFICATION

Intelligent sensory function control and high temperature field recognition accuracy can avoid cold wind blowing people, make warm wind follow people and prevent direct blowing to the human body; when it detects that no one is indoors, it automatically adjusts the set temperature; if there is no one indoors for long, the unit will be automatically shut off.



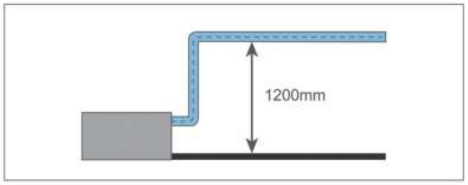
*This function should be customized and needs to be used with wired controller XE70-33/H.

○ 360° SURROUNDING AIRFLOW

Wide air supply range, more uniform temperature distribution and more comfortable experience.

○ DC QUIET CONDENSATE PUMP

The pump drainage lifting height can be up to 1,200mm, and vertical installation height of the unit can be flexibly adjusted, with high engineering adaptability.



Model				ACMI-22VRDC1D	ACMI-28VRDC1D	ACMI-36VRDC1D	ACMI-45VRDC1D	ACMI-56VRDC1D	ACMI-71VRDC1D	ACMI-80VRDC1D
Capacity		Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0
		Heating	kW	2.5	3.2	4.0	5.0	6.3	8.0	9.0
Power supply			V/Ph/Hz	220-240V~ 50Hz						
Power consumption			W	26	26	26	26	35	60	85
Airflow volume (H/M/L)			m³/h	800/700/600	800/700/600	800/700/600	800/700/600	950/850/750	1150/950/850	1250/1000/900
Rated current		Cooling	A	0.2	0.2	0.2	0.2	0.2	0.4	0.4
		Heating	kW	0.2	0.2	0.2	0.2	0.2	0.4	0.4
Sound pressure level (H/M/L)			dB(A)	33/30/28	33/30/28	33/30/28	33/30/28	37/33/30	37/34/31	39/37/34
Connecting pipe		Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52
		Gas	mm	Φ9.52	Φ9.52	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
	Dimension	(W×D×H)	mm	840×840×240	840×840×240	840×840×240	840×840×240	840×840×240	840×840×240	840×840×240
	Net weight/Gross weight		kg	27/35	27/35	27/35	27/35	28/36	28/36	29/37
Panel	Model			TF06	TF06	TF06	TF06	TF06	TF06	TF06
		(W×D×H)	mm	950×950×65	950×950×65	950×950×65	950×950×65	950×950×65	950×950×65	950×950×65
	Net weight/Gross weight		kg	6 / 9.5	6 / 9.5	6 / 9.5	6 / 9.5	6 / 9.5	6 / 9.5	6 / 9.5

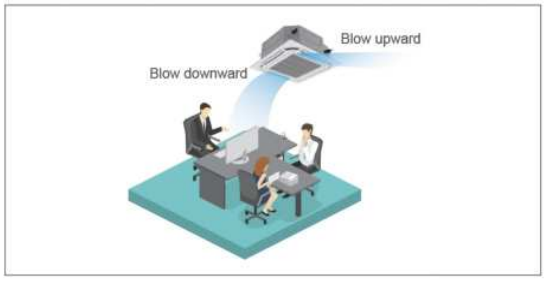
Model				ACMI-90VRDC1D	ACMI-100VRDC1D	ACMI-112VRDC1D	ACMI-125VRDC1D	ACMI-140VRDC1D	ACMI-160VRDC1D
Capacity		Cooling	kW	9.0	10.0	11.2	12.5	14.0	16.0
		Heating	kW	10.0	11.2	12.5	14.0	16.0	18.0
Power supply			V/Ph/Hz	220-240V~ 50Hz					
Power consumption			W	85	85	115	115	115	170
Airflow volume (H/M/L)			m³/h	1250/1000/900	1250/1000/900	1650/1300/1100	1650/1300/1100	1650/1300/1100	2000/1800/1430
Rated current		Cooling	A	0.4	0.4	0.6	0.6	0.6	1.0
		Heating	A	0.4	0.4	0.6	0.6	0.6	1.2
Sound pressure level (H/M/L)			dB(A)	39/37/34	39/37/34	43/41/39	43/41/39	43/41/39	51/48/42
Connecting pipe		Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
		Gas	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ19.05
	Dimension	(W×D×H)	mm	840×840×240	840×840×240	840×840×290	840×840×290	840×840×290	840×840×290
	Net weight/Gross weight		kg	29/37	29/37	33/42	33/42	33/42	36/44
Panel	Model			TF06	TF06	TF06	TF06	TF06	TF06
		(W×D×H)	mm	950×950×65	950×950×65	950×950×65	950×950×65	950×950×65	950×950×65
	Net weight/Gross weight		kg	6 / 9.5	6 / 9.5	6 / 9.5	6 / 9.5	6 / 9.5	6 / 9.5

360° AIR DISCHARGE COMPACT CASSETTE INDOOR UNIT

360° air discharge compact cassette, 6 models in the whole series, capacity range: 1.5kW ~ 5.6kW. Newly designed 360° air outlet panel can achieve 360° surrounding airflow, for wider air supply range, more uniform air distribution and temperature field, and more comfortable user experience. It can be widely used in households, hotels, restaurants, offices, meeting rooms and other places.

○ 360° SURROUNDING AIRFLOW

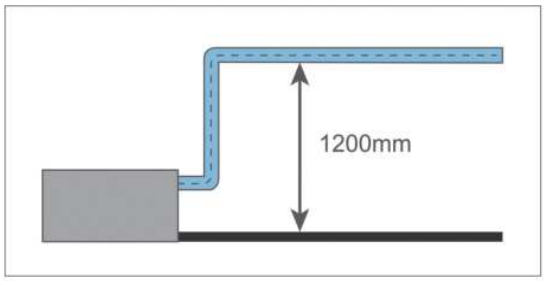
The newly designed 360° surrounding airflow has a wide air supply range, more uniform airflow organization and temperature distribution, avoiding partial hot and cold, and providing a more comfortable user experience.



○ INDEPENDENT SWING CONTROL

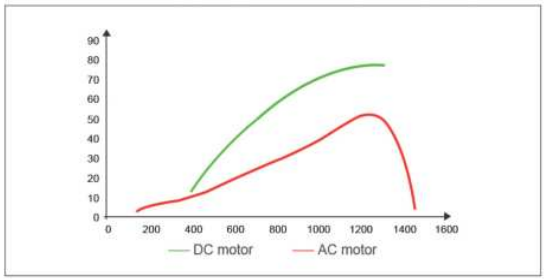
The four air louvers can be controlled independently, and direction of air supply can be regulated independently to achieve different angles of air supply and avoid direct wind blowing to people.

* This function needs to be used with wired controller XE70-33/H.



○ DC QUIET CONDENSATE PUMP

The high-lift DC quiet condensate pump is adopted, which has lower operating power and better sound quality. The maximum lifting height is 1,200mm, the installation design is more flexible, and it is convenient for the layout of engineering drain pipe.



○ DC MOTOR DESIGN

The fan adopts high-efficiency DC motor to realize stepless speed regulation. Compared with ordinary AC motor, it can achieve effective energy conservation of about 30%.

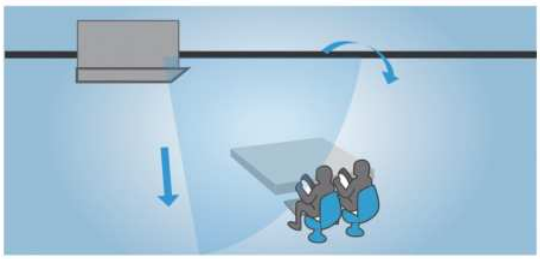
Model				ACCMI-15VRDC1D	ACCMI-22VRDC1D	ACCMI-28VRDC1D	ACCMI-36VRDC1D	ACCMI-45VRDC1D	ACCMI-56VRDC1D
Capacity		Cooling	kW	1.5	2.2	2.8	3.6	4.5	5.6
		Heating	kW	1.8	2.5	3.2	4.0	5.0	6.3
Power supply			V/Ph/Hz	220-240V~ 50Hz					
Power consumption			W	30	30	30	30	45	45
Airflow volume (H/M/L)			m^3/h	460/420/370	500/460/370	570/480/420	620/550/480	730/650/560	730/650/560
Rated current		Cooling	A	0.15	0.15	0.15	0.15	0.23	0.23
		Heating	A	0.15	0.15	0.15	0.15	0.23	0.23
Sound pressure level (H/M/L)			dB(A)	33/30/25	36/31/25	36/33/28	39/37/35	43/41/39	43/41/39
Connecting pipe		Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
		Gas	mm	Φ9.52	Φ9.52	Φ9.52	Φ12.7	Φ12.7	Φ15.9
	Dimension	(W×D×H)	mm	570×570×265	570×570×265	570×570×265	570×570×265	570×570×265	570×570×265
	Net weight/Gross weight		kg	17.5 /22.5	17.5 /22.5	17.5 /22.5	17.5 /22.5	17.5 /22.5	17.5 /22.5
Panel	Model			TF05	TF05	TF05	TF05	TF05	TF05
		(W×D×H)	mm	620×620×47.5	620×620×47.5	620×620×47.5	620×620×47.5	620×620×47.5	620×620×47.5
	Net weight/Gross weight		kg	3 / 4.5	3 / 4.5	3 / 4.5	3 / 4.5	3 / 4.5	3 / 4.5

1-WAY CASSETTE UNIT

The 1-way cassette unit, with ultra-thin and compact body, effectively saves installation space, meeting the air supply requirements of narrow rooms, walkways and other applications. It can be applied to households, hotels, small offices and other delicate and compact spaces.

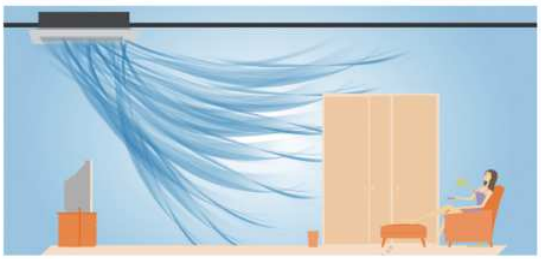
ULTRA WIDE ANGLE AIR SUPPLY

The left and right swing angles can be up to 75°, covering a wide range of air-conditioning spaces and providing a comfortable environment.

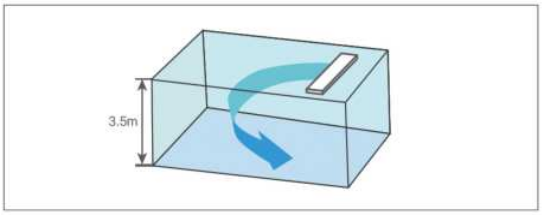


UNIFORM TEMPERATURE DISTRIBUTION AND HIGH LEVEL OF COMFORT

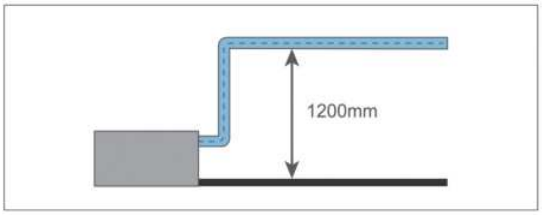
The temperature field is evenly and reasonably distributed, and the heating airflow directly reaches the ground, warming the entire room and greatly improving user comfort.



HIGH CEILING DESIGN, UP TO 3.5M SPACE



STANDARD FITTING 1,200MM CONDEN-SATE WATER LIFT PUMP



Model				ACQMI-22VRDC1A	ACQMI-28VRDC1A	ACQMI-36VRDC1A	ACQMI-45VRDC1A	ACQMI-50VRDC1A	ACQMI-56VRDC1A
Capacity		Cooling	kW	2.2	2.8	3.6	4.5	5.0	5.6
		Heating	kW	2.5	3.2	4.0	5.0	5.6	6.3
Power supply			V/Ph/Hz	220-240V~ 50Hz					
Power consumption			W	30	30	30	45	45	45
Airflow volume (H/M/L)			m^3/h	600/500/450	600/500/450	600/500/450	830/600/500	830/600/500	890/667/564
Rated current		Cooling	A	0.2	0.2	0.2	0.3	0.3	0.3
		Heating	A	0.2	0.2	0.2	0.3	0.3	0.3
Sound pressure level (H/M/L)			dB(A)	36/32/28	36/32/28	36/32/28	40/35/30	40/35/30	41/38/35
Connecting pipe		Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52
		Gas	mm	Φ9.52	Φ9.52	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Dimension	(W×D×H)	mm	987×385×178	987×385×178	987×385×178	987×385×178	987×385×178	987×385×178
	Net weight/Gross weight		kg	20/27	20/27	20/27	21/28.5	21/28.5	21/28.5
Panel	Model			TD01	TD01	TD01	TD01	TD01	TD01
		(W×D×H)	mm	1200×460×55	1200×460×55	1200×460×55	1200×460×55	1200×460×55	1200×460×55
	Net weight/Gross weight		kg	4.2/6	4.2/6	4.2/6	4.2/6	4.2/6	4.2/6

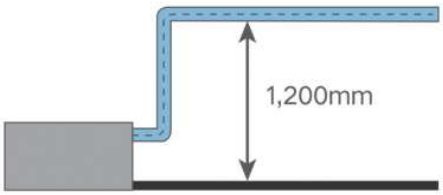
Model				ACQMI-63VRDC1A	ACQMI-71VRDC1A	ACQMI-80VRDC1A
Capacity		Cooling	kW	6.3	7.1	8.0
		Heating	kW	7.1	8.0	9.0
Power supply			V/Ph/Hz	220-240V~ 50Hz		
Power consumption			W	57	83	83
Airflow volume (H/M/L)			m^3/h	880/680/600	1000/680/600	1000/680/600
Rated current		Cooling	A	0.55	0.86	0.86
		Heating	A	0.55	0.86	0.86
Sound pressure level (H/M/L)			dB(A)	42/39/36	44/39/36	44/39/36
Connecting pipe		Liquid	mm	Φ9.52	Φ9.52	Φ9.52
		Gas	mm	Φ15.9	Φ15.9	Φ15.9
	Dimension	(W×D×H)	mm	1200×470×200	1200×470×200	1200×470×200
	Net weight/Gross weight		kg	26/31.5	26/31.5	26/31.5
Panel	Model			TD03	TD03	TD03
		(W×D×H)	mm	1350×555×64	1350×555×64	1350×555×64
	Net weight/Gross weight		kg	7.8/13.5	7.8/13.5	7.8/13.5

DUCT TYPE INDOOR UNIT

Duct type indoor unit adopts DC motor, multi-stage air volume and static pressure adjustable design, free choices of air supply and return modes, flexible and convenient installation, meeting requirements for different locations such as hotels, office buildings, shopping malls, apartments, villas, families, etc.

○ STANDARD FITTING 1,200MM CONDENSATE WATER LIFT PUMP

Pump drainage height can be up to 1,200mm; vertical installation height of the unit can be flexibly adjusted, with high engineering adaptability.

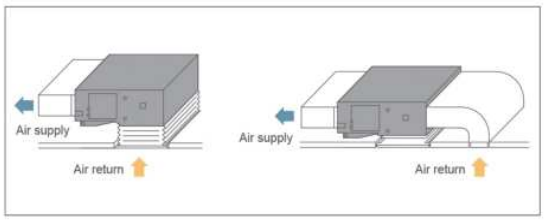


○ FRESH AIR INTRODUCTION FUNCTION

It can be connected to the fresh air duct to introduce fresh air from outside to ensure fresh indoor air.

○ FLEXIBLE INSTALLATION

According to the construction and use requirements, flexibly choose different return air ways and supply static pressure.



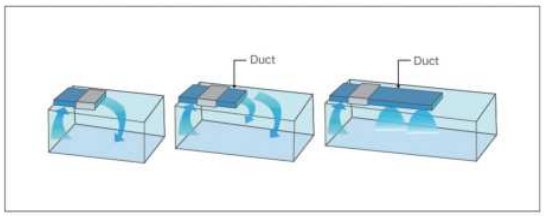
○ 7-SPEED AIR VOLUME SETTING TO MEET DIVERSE NEEDS

The DC motor can adjust up to 7 steps of air volume, accurately divide the air volume interval, reduce the noise value, and can set automatic quiet mode of indoor unit through wired controller, and enable the automatic quiet function according to the indoor temperature and personnel activities. Super high step and strong air volume, cooperating with outdoor compressor operation, it can enter strong cooling/heating mode; indoor unit motor can be adjusted to the highest step for rapid cooling/heating to reach the required temperature.

Model			ATMI-28VRDC1E	ATMI-36VRDC1E	ATMI-45VRDC1E	ATMI-56VRDC1E	ATMI-71VRDC1E	ATMI-90VRDC1D	ATMI-112VRDC1D	ATMI-140VRDC1D
Capacity	Cooling	kW	2.8	3.6	4.5	5.0	7.1	9.0	11.2	14.0
	Heating	kW	3.2	4.0	5.0	5.6	8.0	10.0	12.5	16.0
Power supply		V/Ph/Hz	220-240V~ 50Hz							
Power consumption		W	28	37	40	55	55	130	130	170
Airflow volume (H/M/L)		m^3/h	450/350/200	550/400/300	750/550/400	850/700/550	1100/850/650	1500/1250/900	1700/1500/1100	2000/1700/1400
Rated current	Cooling	A	0.2	0.3	0.3	0.4	0.5	0.63	0.63	0.8
	Heating	A	0.2	0.3	0.3	0.4	0.5	0.63	0.63	0.8
ESP		Pa	15/0 ~ 30	15/0 ~ 30	15/0 ~ 30	15/0 ~ 30	15/0 ~ 30	50/0 ~ 80	50/0 ~ 80	50/0 ~ 80
Sound pressure level (H/M/L)		dB(A)	30/25/22	31/27/25	33/29/27	35/31/29	37/32/30	40/36/32	40/36/32	42/40/37
Connecting pipe	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ9.52	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	(W×D×H)	mm	710×462×200	710×462×200	1010×462×200	1010×462×200	1310×462×200	1340x655x260	1340x655x260	1340x655x260
Net weight/Gross weight		kg	18.5/23.5	19/24	24/30	25/31	31/37.5	45.5/54.5	45.5/54.5	46.5/55.5

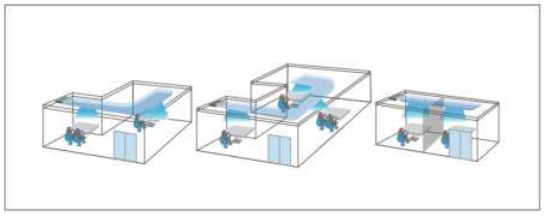
HIGH STATIC PRESSURE DUCT TYPE INDOOR UNIT

High static pressure duct type unit, with large air volume, wide static pressure adjustment range and maximum static pressure, can be up to 200Pa; long air supply distance can be widely used in places where it is necessary to connect air pipes to achieve long-distance air supply, such as hotels, office buildings, shopping malls, factories.



○ HIGH STATIC PRESSURE DESIGN, MULTI-STAGE STATIC PRESSURE TO ADJUST

There are 9-stage adjustable external static pressure. The highest static pressure can reach 200Pa. Engineering design and engineering application is more convenient and fast.



○ LONG-DISTANCE AIR SUPPLY

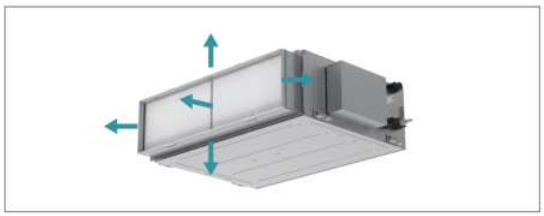
Support long-distance air supply to serve multiple air supply areas and satisfy complicated layout and locations, creating comfortable environment.

○ FRESH AIR INTRODUCTION FUNCTION

It can be connected to the fresh air duct to introduce fresh air from outside to ensure fresh indoor air.

○ HIGH EFFICIENCY FILTRATION

Optional high-efficiency filter device can effectively filtrate PM2.5, with small performance attenuation.



○ MULTI-DIRECTIONAL REMOVABLE FILTER

The filter can be disassembled from 5 directions (the arrow below shows the direction of the removable filter). Installation and maintenance are convenient and fast.

Model			ATMI-160VRDC1D	ATMI-224VRDC1A	ATMI-280VRDC1A
Capacity	Cooling	kW	16.0	22.4	28.0
	Heating	kW	18.0	25.0	31.0
Power supply		V/Ph/Hz	220-240V~ 50Hz		
Power consumption		W	230	800	900
Airflow volume (H/M/L)		m^3/h	2500/2000/1750	4000/3600/3200	4400/4000/3600
Rated current	Cooling	A	1.5	3.7	4.1
	Heating	A	1.5	3.7	4.1
ESP		Pa	90/0 ~ 200	100/50 ~ 200	100/50 ~ 200
Sound pressure level (H/M/L)		dB(A)	44/41/38	54/52/49	55/52/50
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ19.05	Φ19.05	Φ22.2
	(W×D×H)	mm	1400×700×300	1483×791×385	1686×870×450
Net weight/Gross weight		kg	58/67	82/104	105/140

WALL-MOUNTED TYPE INDOOR UNIT

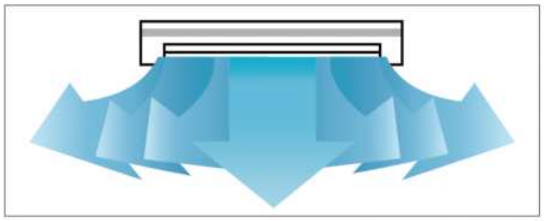
The whole series adopt high-efficiency DC motor, stylish design, simple and easy panel disassembly, convenient cleaning design, uniform air flow distribution, and wide air supply range. It can blow the wind to every corner of the room. It is widely used in various places such as houses, hotels, apartments, offices and meeting rooms.

○ EASY INSTALLATION

It adopts wall-mounted installation, no need occupying floor space and no need to suspend the ceiling. Refrigerant pipe can be installed flexiblely.

○ AUTOMATIC UP AND DOWN SWING DESIGN

With up and down swing function, air louver can realize automatic control, air supply range is increased and air supply is uniform, creating a comfortable working and living environment.



○ WIDE AIR SUPPLY

The wind can be naturally and evenly distributed to all corners of the room.

○ UNIFORM TEMPERATURE DISTRIBUTION AND HIGH COMFORT

The temperature field is evenly and reasonably distributed, the heating airflow can directly reach the ground, warming the entire room, greatly improving human comfort.

○ WASHABLE FILTER

With long-term filter, which can be disassembled and cleaned for easy maintenance.

○ REMOVABLE PANEL

Panel of the indoor unit can be easily slid in or out, disassembly is simple and easy, which is easy to clean and the appearance of indoor unit can be kept clean and new. Besides, there are many optional panels can be chosen.

○ POWERFUL AND FAST

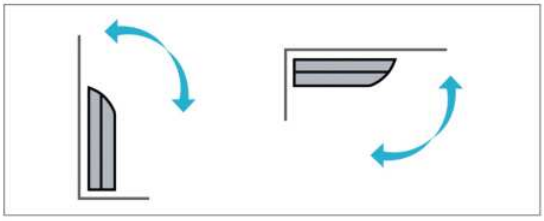
Using intelligent temperature control technology, with powerful and rapid cooling/heating function, can make the indoor temperature quickly reach the set temperature.

Model			AWMI-15VRDC1C	AWMI-22VRDC1C	AWMI-28VRDC1C	AWMI-36VRDC1C	AWMI-45VRDC1C
Capacity	Cooling	kW	1.5	2.2	2.8	3.6	4.5
	Heating	kW	1.8	2.5	3.2	4.0	5.0
Power supply		V/Ph/Hz	220-240V~ 50Hz				
Power consumption		W	20	20	20	25	35
Airflow volume (H/M/L)		m^3/h	500/440/300	500/440/300	500/440/300	630/460/320	850/580/500
Rated current	Cooling	A	0.1	0.1	0.1	0.12	0.17
	Heating	A	0.1	0.1	0.1	0.12	0.17
Sound pressure level (H/M/L)		dB(A)	35/33/30	35/33/30	35/33/30	38/35/31	43/40/37
Connecting pipe	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ12.7	Φ12.7	Φ12.7	Φ12.7
Dimension	(W×D×H)	mm	845×209×289	845×209×289	845×209×289	845×209×289	970×224×300
Net weight/Gross weight		kg	10.5/12.5	10.5/12.5	10.5/12.5	10.5/12.5	12.5/15.5

Model			AWMI-56VRDC1C	AWMI-63VRDC1C	AWMI-71VRDC1C	AWMI-100VRDC1C
Capacity	Cooling	kW	5.6	6.3	7.1	9.5
	Heating	kW	6.3	7.1	7.5	10.5
Power supply		V/Ph/Hz	220-240V~ 50Hz			
Power consumption		W	50	50	65	100
Airflow volume (H/M/L)		m^3/h	1100/850/650	1100/850/650	1100/850/650	1650/1100/900
Rated current	Cooling	A	0.24	0.24	0.31	0.41
	Heating	A	0.24	0.24	0.31	0.41
Sound pressure level (H/M/L)		dB(A)	43/41/37	43/41/37	44/41/37	52/48/40
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Dimension	(W×D×H)	mm	1078×246×325	1078×246×325	1078×246×325	1350×258×326
Net weight/Gross weight		kg	16/19	16/19	16/19	18.5/23.5

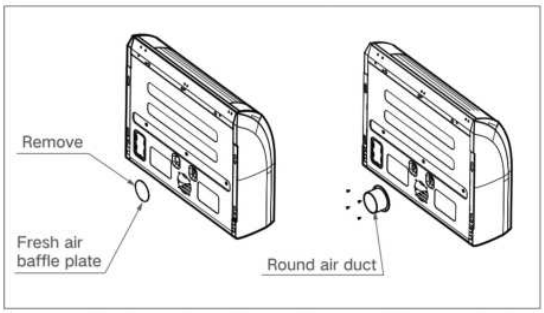
FLOOR CEILING TYPE INDOOR UNIT

Floor ceiling type indoor unit has two installation methods: floor mounted and ceiling mounted. It is suitable to multiple applications such as hotels, office buildings, shopping malls, apartments, villas, households, etc.



FLEXIBLE INSTALLATION

The unit can be floor mounted or ceiling mounted; the flexible and convenient installation method can give customers more installation choices. When floor mounted, the installation is more convenient.

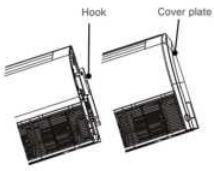


FRESH AIR INTAKE

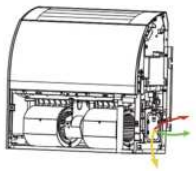
Fresh air duct can be connected to introduce fresh air into the room from the outside.

EASY INSTALLATION

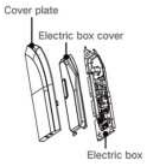
Adjust the angle of the air deflector to avoid affecting the ceiling near the air outlet.



1) Concealed hook design, beautiful appearance;



2) Multi-directional outlet method can adapt to different installation sites;



3) The concealed design of the side electrical box, Wire can be connected by disassembling the cover.

Model			AFMI-28VRDC1D	AFMI-36VRDC1D	AFMI-50VRDC1D	AFMI-56VRDC1D	AFMI-63VRDC1D	AFMI-71VRDC1D
Capacity	Cooling	kW	2.8	3.6	5.0	5.6	6.3	7.1
	Heating	kW	3.2	4.0	5.6	6.3	7.1	8.0
Power supply		V/Ph/Hz	220-240V~ 50Hz					
Power consumption		W	35	35	55	55	80	80
Airflow volume (H/M/L)		m^3/h	600/500/450	600/500/450	750/650/600	750/650/600	1350/1200/1050	1350/1200/1050
Rated current	Cooling	A	0.2	0.2	0.3	0.3	0.4	0.4
	Heating	A	0.2	0.2	0.3	0.3	0.4	0.4
Sound pressure level (H/M/L)		dB(A)	36/32/29	36/32/29	42/39/36	42/39/36	44/41/38	44/41/38
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ9.52	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
Dimension	(W×D×H)	mm	870×665×235	870×665×235	870×665×235	870×665×235	1200×665×235	1200×665×235
Net weight/Gross weight		kg	24/29	24/29	25/30	25/30	32/38	32/38

Model			AFMI-112VRDC1D	AFMI-140VRDC1D	AFMI-160VRDC1D
Capacity	Cooling	kW	11.2	14.0	16.0
	Heating	kW	12.5	16.0	18.0
Power supply		V/Ph/Hz	220-240V~ 50Hz		
Power consumption		W	120	150	175
Airflow volume (H/M/L)		m^3/h	1800/1600/1400	2000/1750/1600	2150/1850/1650
Rated current	Cooling	A	0.7	0.8	0.9
	Heating	A	0.7	0.8	0.9
Sound pressure level (H/M/L)		dB(A)	47/44/42	49/45/43	52/48/45
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ19.05
	(W×D×H)	mm	1570×665×235	1570×665×235	1570×665×235
Net weight/Gross weight		kg	41/48	43/50	43/50

CONSOLE INDOOR UNIT

Console indoor unit features easy installation without suspended ceiling, which will not affect the integrated indoor decoration. It can be widely applied in villas, offices, meeting rooms, etc., providing users with a comfortable living and working environment.

○ QUIET FAN BLADE DESIGN, LOW NOISE OPERATION

By adopting DC motor and large diameter centrifugal fan blade design, low speed can achieve large air volume, uniform air distribution and low noise, providing quiet and comfortable space.

○ UNIFORM TEMPERATURE DISTRIBUTION AND HIGH LEVEL OF COMFORT

The temperature field is evenly and reasonably distributed, and the heating airflow directly reaches the ground, warming the entire room to greatly improve user comfort.

○ REMOVABLE PANEL

Panel of the indoor unit can be easily slid in or out for easy disassembly and convenient cleaning; the appearance of indoor unit can be kept clean and new.

○ MULTIPLE PROTECTION FUNCTIONS

Anti-freezing protection, fan motor built-in overload protection and temperature sensor error protection.

○ STRONG AND FAST

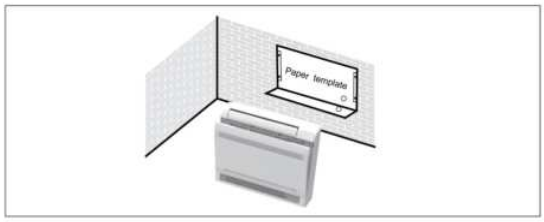
By adopting intelligent temperature control technology, with powerful and rapid cooling/heating function, it can make indoor temperature quickly reach the set temperature.

○ WASHABLE FILTER

The long-life filter can be disassembled and cleaned, for easier maintenance.

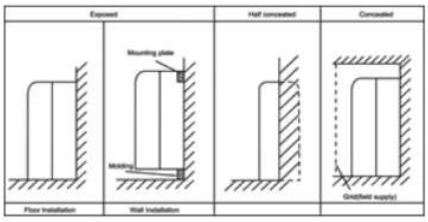
○ TWO-WAY AIR SUPPLY

With the upper and lower air outlets, the unit can realize 3D air supply, which means the air will flow naturally and evenly to every corner of the room.

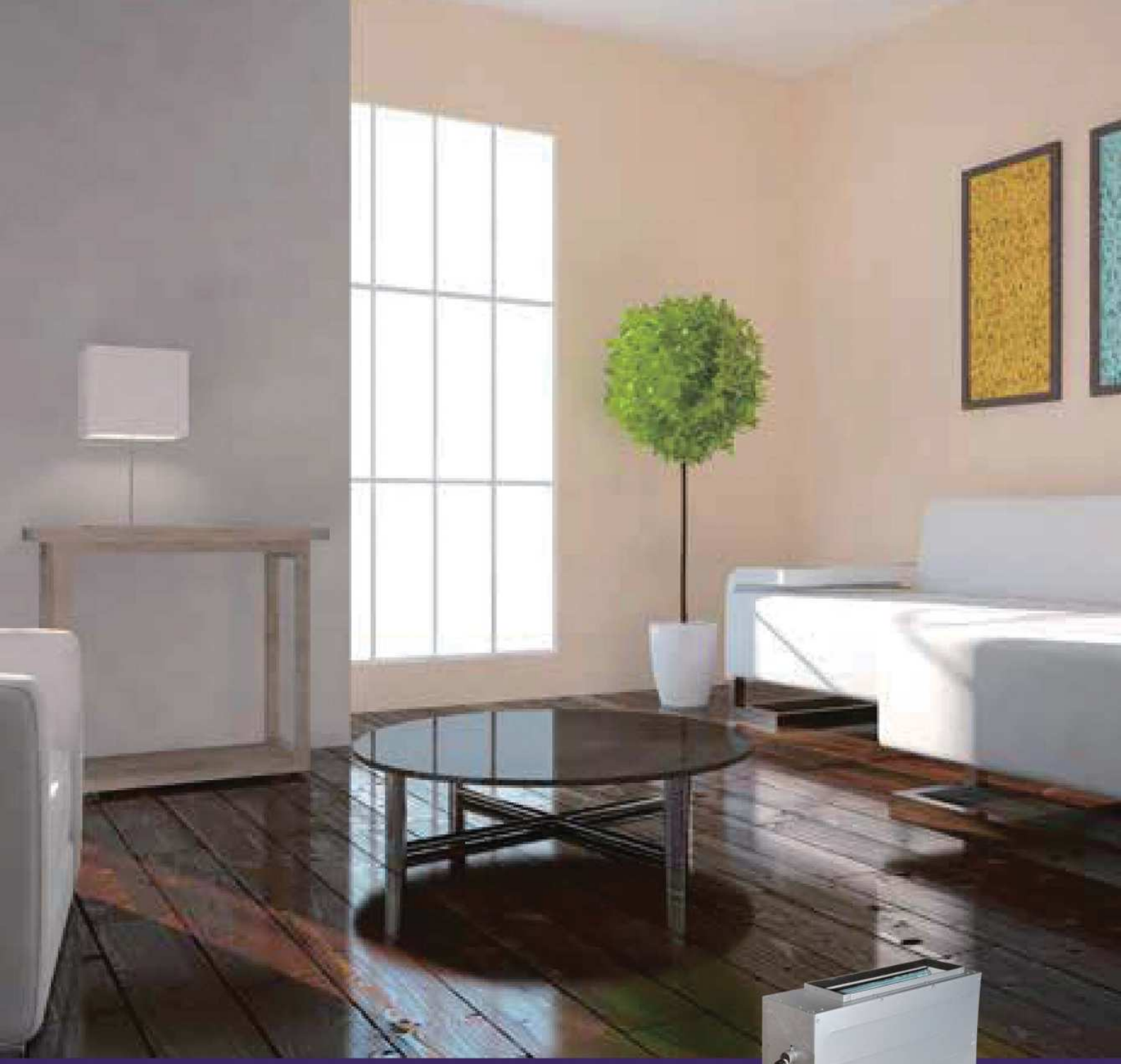


○ EASY INSTALLATION

It can be installed on the floor without the need to cooperate with ceiling, and arrangement of refrigerant pipe is flexible and free.



Model			AFKMI-22VRDC1A	AFKMI-28VRDC1A	AFKMI-36VRDC1A	AFKMI-50VRDC1A
Capacity	Cooling	kW	2.2	2.8	3.6	5.0
	Heating	kW	2.5	3.2	4.0	5.5
Power supply		V/Ph/Hz	220-240V~ 50Hz			
Power consumption		W	15	15	20	40
Airflow volume (H/M/L)		m^3/h	400/320/270	400/320/270	480/400/310	680/600/500
Rated current	Cooling	A	0.17	0.17	0.25	0.4
	Heating	A	0.17	0.17	0.25	0.4
Sound pressure level (H/M/L)		dB(A)	38/33/27	38/33/27	40/37/32	46/43/39
Connecting pipe	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ9.52	Φ12.7	Φ12.7
	(W×D×H)	mm	700×215×600	700×215×600	700×215×600	700×215×600
Net weight/Gross weight		kg	16/19	16/19	16/19	16/19



CONCEALED FLOOR STANDING TYPE

This unit adopts floor standing concealed installation method. With small occupation space, it will not impact the integrated indoor decoration. Cooling capacity ranges from 2.2kW to 7.1kW. It can be widely used in hotels, schools, villas, offices and meeting rooms, providing users with a comfortable living and working environment.

○ DC MOTOR DESIGN, LOW NOISE OPERATION

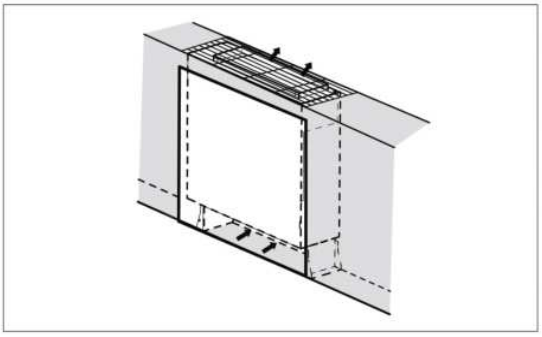
The brushless DC motor realizes stepless speed adjustment, and can set the automatic quiet mode through wired controller to make the operation quieter.

○ ULTRA-THIN BODY DESIGN, SAVING INSTALLATION SPACE

The structure is compact, thickness of the unit body is only 200mm, and the installation space and decoration space are greatly saved when adopting seated installation.

○ HIGH STATIC PRESSURE DESIGN, MULTI-STAGE STATIC PRESSURE FOR ADJUSMENT

On the basis of the limited vertical return air space structure, the 5-stage external static pressure can be adjusted, and the maximum static pressure can reach 60Pa. It meets the engineering design and application of air duct installation requirements, which is more convenient and fast.



○ FLEXIBLE INSTALLATION

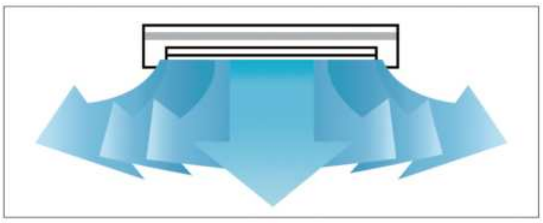
The front detachable air return structure can realize the flexible switch between side air return and the bottom air return. Different height support foot designs to meet the user's choice of different air volume and different decoration space.

Model			AFLMI-22VRDC1B	AFLMI-28VRDC1B	AFLMI-36VRDC1B	AFLMI-45VRDC1B	AFLMI-56VRDC1B	AFLMI-63VRDC1B	AFLMI-71VRDC1B
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	6.3	7.1
	Heating	kW	2.5	3.2	4.0	5.0	6.3	7.1	8.0
Power supply		V/Ph/Hz	220-240V~ 50Hz						
Power consumption		W	35	35	43	45	80	80	90
Airflow volume (H/M/L)		m^3/h	450/350/250	450/350/250	550/450/350	650/500/400	900/750/600	900/750/600	1100/900/700
Rated current	Cooling	A	0.18	0.18	0.22	0.23	0.41	0.41	0.46
	Heating	A	0.18	0.18	0.22	0.23	0.41	0.41	0.46
Sound pressure level (H/M/L)		dB(A)	30/28/25	30/28/25	33/31/28	33/31/28	35/33/30	35/33/30	37/35/33
Connecting pipe	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ9.52	Φ9.52	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
Dimension	(W×D×H)	mm	700×200×615	700×200×615	700×200×615	900×200×615	1100×200×615	1100×200×615	1100×200×615
Net weight/Gross weight		kg	23/30	23/30	23/30	27/36	32/41	32/41	32/41

FLOOR STANDING TYPE

With large cooling capacity and a space-saving vertical structure, it is widely applied in houses, hotels, restaurants, chain stores, offices, and meeting rooms to provide users with a comfortable and pleasant living and working environment.

○ UP AND DOWN SWING, LONG AIR SUPPLY DISTANCE



○ WASHABLE FILTER

The long-term filter can be disassembled and cleaned, for easier maintenance.

○ QUIET DESIGN

By adopting high-efficiency centrifugal fan blades and quiet valves, noise of the complete unit is greatly reduced.

* Work with remote control YAP1F

○ STRONG AND FAST

By adopting intelligent temperature control technology, with powerful and rapid cooling/heating function, it can make indoor temperature quickly reach the set temperature.

○ I FEEL FUNCTION

After the user turns on this function, the unit can detect the temperature of user's location in real time and adjust to improve user comfort.

* Work with remote control YAP1F

○ MULTIPLE PROTECTION FUNCTIONS

Anti-freezing protection, fan motor built-in overload protection and temperature sensor error protection.

Model			AFTMI-100VRDC1A	AFTMI-140VRDC1A
Capacity	Cooling	kW	10.0	14.0
	Cooling	kW	11.0	15.0
Power supply		V/Ph/Hz	220-240V~ 50Hz	
Power consumption		W	200	200
Airflow volume (H/M/L)		m^3/h	1850/1600/1400	1850/1600/1400
Sound pressure level (H/M/L)		dB(A)	50/48/46	50/48/46
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9
	(W×D×H)	mm	580×400×1870	580×400×1870
Net weight/Gross weight		kg	54/74	57/77

AHU-KIT

[Constitution]: Electronic expansion valve components, control components.

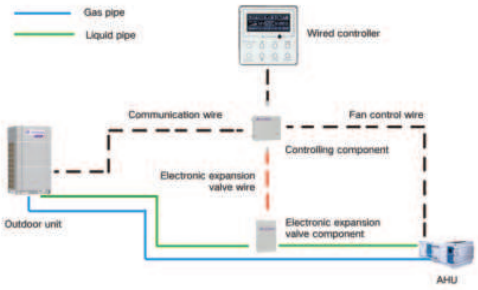
[Function]: Connect the direct-expansion air handling unit (AlpicAir's or third-party's direct-expansion air handling unit) to the AlpicAir multi VRF system, so that the air handling unit has the functional advantages of multi VRF unit.

◦ CONNECTION

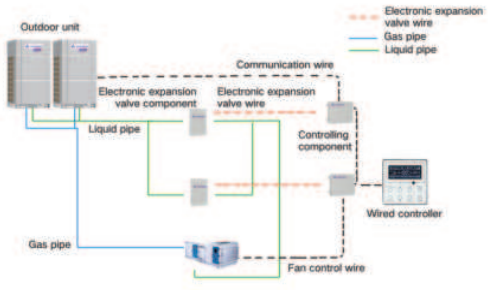
The AHU-KIT with the air handling unit can be used as a multi VRF indoor unit to connect to a multi VRF outdoor unit. The connection is limited by the outdoor unit. There are the following three types of connections:

ONE TO ONE

The AHU-KIT with the air handling unit can be connected with multi VRF outdoor units in one-to-one way. Total capacity of the AHU-KIT should be between 50% and 110% of the outdoor unit's capacity.



AHU-KIT one to one (single unit) connection (7.1kW≤capacity≤84kW)



AHU-KIT one to one (parallel) connection (84kW < capacity≤252kW)

ONE TO MANY (ONLY DX AHU UNIT)

Multiple sets of AHU-KIT-air handling units can be connected to one multi VRF outdoor unit. Total capacity of the AHU-KIT should be between 50% and 110% of the outdoor unit's capacity. (Take one for two as an example)

ONE TO MANY (DX AHU UNIT + VRF INDOOR UNIT)

The AHU-KIT and ordinary multi VRF indoor unit can be connected into the same multi VRF outdoor unit. Total capacity of the AHU-KIT and the ordinary multi VRF indoor unit is between 50% and 110% of the outdoor unit's capacity, and total capacity of the AHU-KIT cannot exceed 30% of the outdoor unit's capacity.

Model				AXV-35VRDC1B		AXV-70VRDC1B			AXV-140VRDC1B			AXV-280VRDC1B					AXV-560VRDC1B		
Defaulted capacity of exfactory	Cooling		kW	3.6		7.1			14.0			28.0					56.0		
	Heating		kW	4.0		8.0			16.0			31.5					63.0		
Adjustable capacity	Cooling		kW	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	22.4	28.0	33.5	40.0	45.0	50.4	56.0	84.0
	Heating		kW	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	25.0	31.5	37.5	45.0	50.0	56.5	63.0	94.5
Power supply			V/Ph/Hz	220-240V~ 50Hz & 208-230V~ 60Hz															
Power input			W	8		8			8			8					8		
Size of connection pipe	AHU-KIT (exfactory pipe size)		mm	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ15.9	Φ15.9	Φ15.9
	Air handling unit	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ19.05
		Gas	mm	Φ9.52	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ19.05	Φ22.2	Φ25.4	Φ25.4	Φ28.6	Φ28.6	Φ28.6	Φ31.8
	Connection method			Brazing Connection															
Outline dimension (W×D×H)	EXV box		mm	203×326×85		203×326×85			203×326×85			203×326×85					246×500×120		
	Control box		mm	334×284×111		334×284×111			334×284×111			334×284×111					334×284×111		
Net weight/Gross weight			kg	10/13		10.5/13.5			10.5/13.5			10.5/13.5					13/17.5		

INTELLIGENT CONTROL

CONTROLLERS

CONTROLLER YAP1F

- Can be switched in auto, cooling, dry, fan and heating modes;
- Besides turbo mode, 6 fan speeds can be set;
- Up & down swing and left & right swing;
- Available functions: child lock, drying, health, turbo, sleep, light, absence, I-feel and timer;
- Clock display and indoor/outdoor ambient temperature viewing functions;
- I-feel function can be set for the unit. When I-feel is turned on, the unit can monitor the temperature at the location of user (around the remote controller) at real time to adjust indoor temperature for improving the comfort.

REMOTE CONTROLLER YAP1F7

- Switch among auto, cooling, dry, fan and heating modes;
- Except turbo fan, six fan speeds can be adjusted;
- Set up&down swing and left&right swing;
- Available functions: child lock, drying, health, turbo, sleep, light, absence, I-feel and timer;
- With child lock, X-fan, health, turbo, sleep, light, absence, I-FEEL, clock timer and auto clean functions;
- With clock time display and indoor/outdoor ambient temperature check functions;
- Set temperature is adjustable under auto mode (set temperature under auto mode of multi VRF unit is fixed and can't be adjusted by the remote controller)

Note: Auto clean function is available for some models.

WIRED CONTROLLER XK46

- LCD with black background and white words; touch buttons;
- Clock can be displayed and set; 24 hours timer setting for on/off;
- 7 levels of fan speed, up & down swing and left & right swing;
- Can be switched in auto, cooling, dehumidifying, fan, heating, floor heating, 3D heating and pace heating operation modes;
- Master and slave wired controllers can be set; simultaneous control over several indoor units is available;
- Available functions: sleep, ventilation, quiet/auto quiet, light, energy saving, auxiliary heating, drying, memory, low-temperature dehumidifying, absence in heating, controllable auxiliary heating in dehumidifying, filter cleaning reminder, etc.;
- Detect ambient temperature; receive infrared remote controller signal;
- With project parameters viewing and setting functions;
- Dampproof structure design.

WIRED CONTROLLER XK79 (FOR HOTEL)

- Small and fashionable appearance with thickness only of 12 mm and back lighting LCD with black background and white words;
- Eight touch buttons;
- Clock can be displayed and set in countdown and clock timer;
- Besides normal functions, other functions such as low-temperature dehumidifying, absence in heating, controllable auxiliary heating in dehumidifying and filter cleaning reminder can also be set;
- Door control system can be connected.

E-SMART ZONE CONTROLLER CE54-24/F(C)

- Colorful LCD;
- Elegant and fashionable appearance;
- 4.3-inch capacitive touch screen for easy operation;
- Support maximum 32 indoor units, with powerful function;
- Indoor or outdoor unit network can be connected, simple and flexible;
- Embedded installation in wall with projecting thickness only of 11mm;
- 100~240V super wide voltage for independent power supply, stable and reliable;
- Support naming for indoor units, and icon selection, realizing individuation management;
- With long-distance shield function (shield on/off, mode, temperature, etc.) for single unit, group and all indoor units;
- With functions of engineering setting, parameters view, malfunction view and authority management, easy for debugging and maintenance;
- With single indoor unit control (including general functions and advanced functions), group indoor units control (including general functions and advanced functions), group management (supporting DIY group), single indoor unit and group indoor units timer functions; (general functions: ON/OFF, Mode, Temperature, Fan, Swing, etc; advanced functions: Save, Sleep, Absence, Quiet, Turbo, etc.).

CENTRALIZED CONTROLLER CE52-24/F(C)

- Elegant and fashionable appearance;
- Color LCD, fine display and true color;
- 7-inch capacitive touch screen for easy operation;
- Up to 255 units can be centrally controlled;
- Connectable with network of indoor units or outdoor units;
- Independent power supply in 100~240V wide voltage range;
- Embedded installation in wall with projecting thickness only of 11mm;
- With project setting, parameter viewing, malfunction record and access management functions;
- Shielding function of single unit, group and all IDUs (shielding on/off, mode, temp setting, etc.), long-distance control at will; Provide naming of indoor units, selection of icons and personalized settings of centralized controller (setting background, backlight, etc.);
- With various functions: centralized control (control all indoor units), group management (support DIY grouping), schedule management (setting of several schedules, support special schedule setting such as holiday) and single indoor unit control (on/off, mode, temp setting, fan speed, quiet, swing control, etc.).

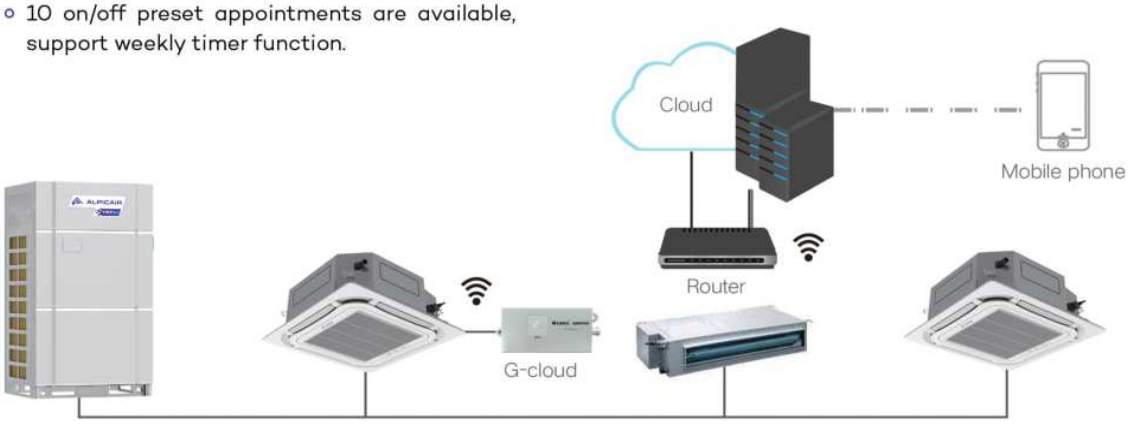
CENTRALIZED CONTROLLER CE58-00/EF(CM)

- Black 2.5D panel, space gray arc frame, high-end and elegant;
- 7" capacitive color touch screen;
- With smooth and convenient interactive interface design, sliding operation is supported;
- With high-definition screensaver display, automatic cyclic display of screensaver picturesis supported;
- Light sensing automatic brightness adjustment, and temperature and humidity detection display are equipped;
- Timer control, intelligent control, grouping, calendar control, one-button control, batch control, single unit control and other control modes are available;
- Single unit, group units and all IDUs shielding function (shielding on/off, mode, temperature setting, etc.) are equipped;
- IDU naming and personalized settings (big and small card setting, brightness setting, sound selection, etc.) are supported, to achieve personalized air conditioning management;
- Simultaneous control of 255 multi VRF indoor units and 80 unitary units are supported;
- 2.4GHz WiFi can be connected, and online upgrade and "EWPE smart" APP linkage control are supported;
- 100~240V ultra-wide voltage independent power supply, stable and reliable;
- OTA online upgrade is supported, to quickly get the latest version and get the ultimate experience;
- With setting, historical error inquiry, error report and permission management functions, for convenient debugging and maintenance;
- 17 languages are supported (Simplified Chinese, Traditional Chinese, English, Spanish, Dutch, French, German, Italian, Portuguese, Russian, Czech, Turkish, Lithuanian, Polish, Estonian, Greek, Hungarian).

G-CLOUD

G-cloud is a compact WiFi controller, which connects G-cloud to the corresponding interface of any one of the multi VRF indoor units. Use mobile phone to download the "EWPE smart" APP; after simple network configuration, the multi VRF air conditioner can be easily controlled by the mobile phone anytime and anywhere. One set of multi VRF system only requires one G-cloud to realize the control of all indoor units under the system via mobile phone.

- Easy control of on-off, mode and temperature.
- Ventilation, drying, sleep, energy saving functions can be set.
- 10 on/off preset appointments are available, support weekly timer function.
- 8-step fan speed control (quiet, automatic, low, medium and low, medium, medium and high, high, turbo).



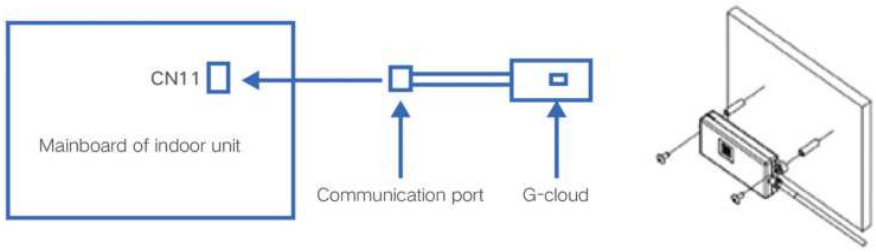
One G-could can realize the control of up to 80 sets of indoor units in a system

"EWPE SMART" APP CONTROL

The "EWPE smart" APP of mobile phone can easily control the air conditioner anytime and anywhere. It can be controlled in the house or remotely when going out. You are no longer worried about where to find the remote controller or forgetting to turn off the air conditioner when you go out.

SMALL SIZE AND CONVENIENT INSTALLATION

G-cloud is small in size and flexible in installation. You can connect the G-cloud to the CAN interface of any indoor unit in the multi VRF system (it is recommended to be close to the router) and fix it.



PRODUCT INFORMATION

Name	Model	Product code
G-Cloud	ME31-00/F13	NC20000280

BUILDING PROTOCOL GATEWAY

MODBUS GATEWAY

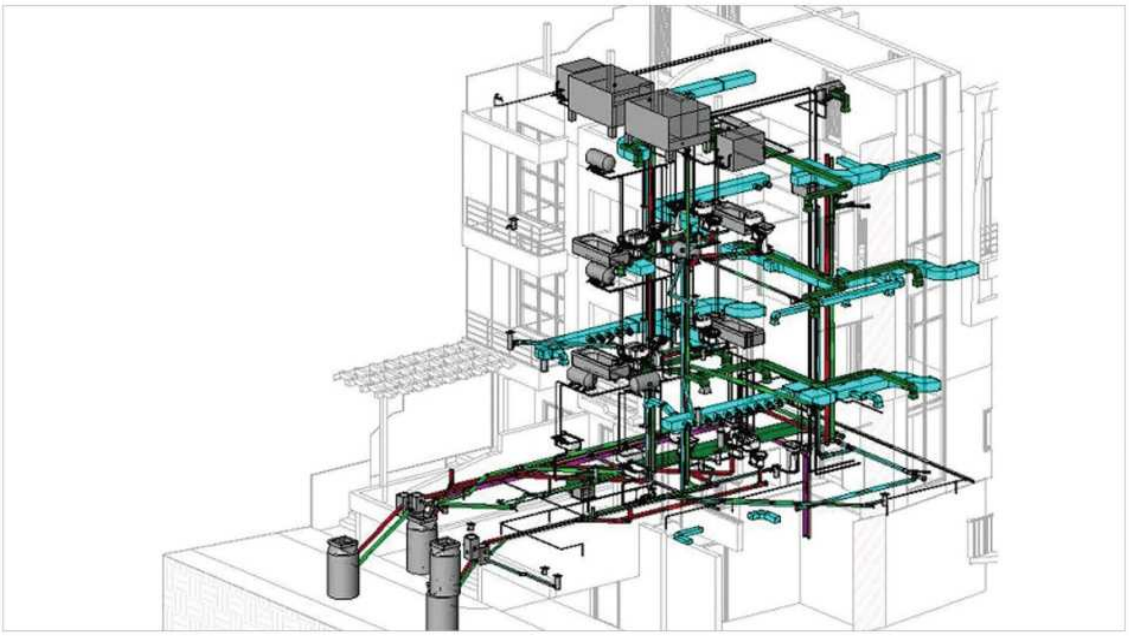
Name	Model	Key Parameters	Application	Photo
VRF Protocol Gateway	ME30-24/D1(BM)	Capacity: 255 sets of indoor unit (within 16 systems) Protocol: Modbus RTU Modbus TCP	It is generally used in large buildings such as office buildings, commercial streets, hospitals, and rail transits to connect to BAS to achieve centralized management of air conditioner.	
Modbus Gateway Mini)	ME30-24/E6(M)	Capacity: 128 sets of indoor units (within 16 systems) Expansion port: No Protocol: Modbus RTU	It is generally used for small and medium-sized projects such as villas and apartment buildings. It is used for docking with BAS systems or smart home systems. Since there is no I/O interface, the capacity is small, and it is a low-cost solution.	

BACNET GATEWAY

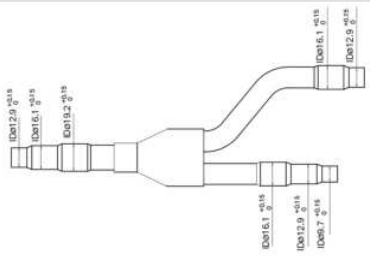
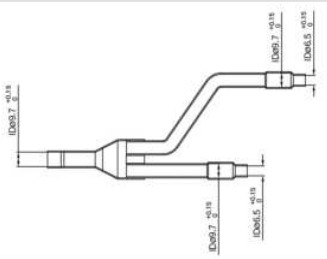
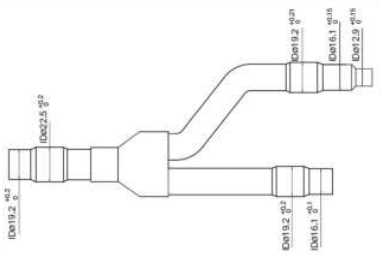
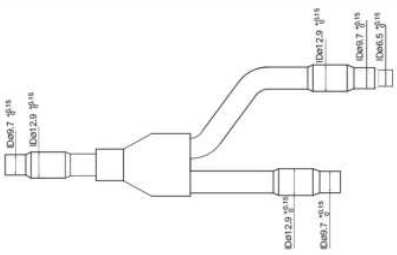
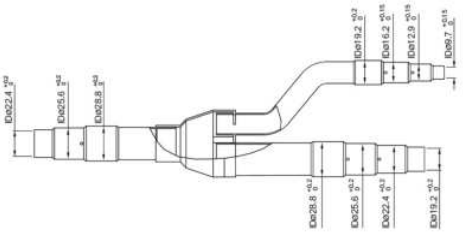
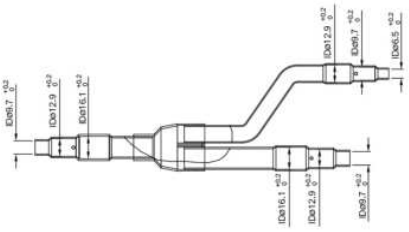
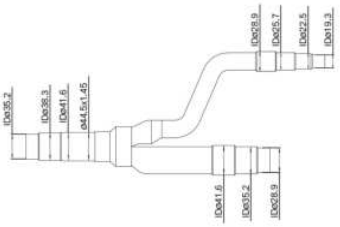
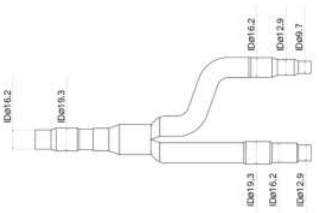
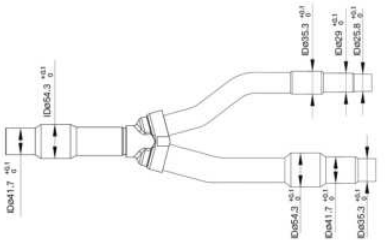
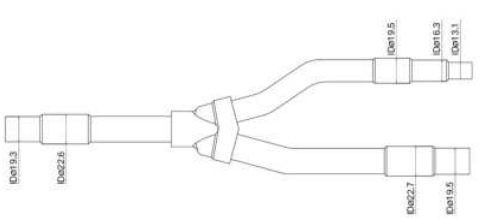
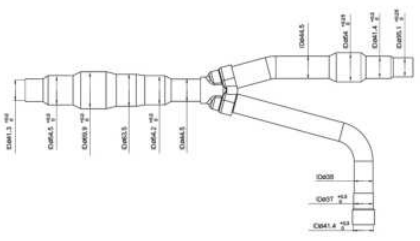
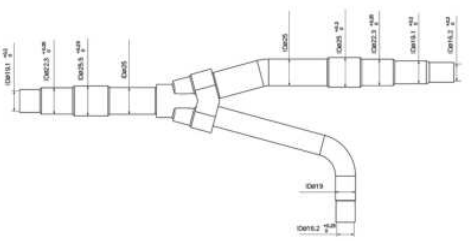
BACnet features high communication efficiency, flexible protocol and convenient debugging. AlpicAir BACnet gateway can realize the conversion of multi VRF unit's CAN protocol data into BACnet protocol data, as a bridge for data exchange between air conditioner and BAS.

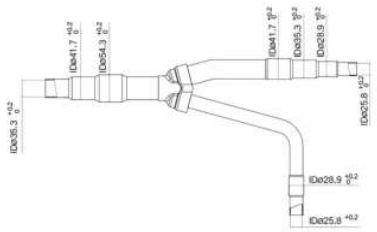
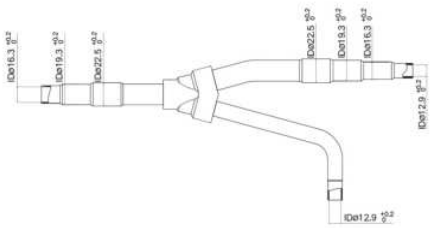
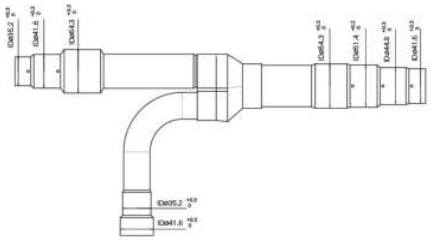
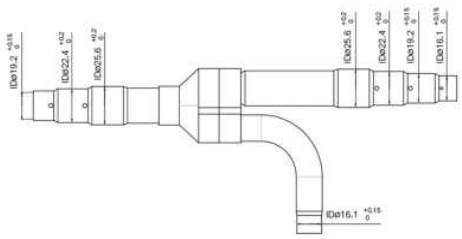
Name	Model	Key Parameters	Application	Photo
VRF Protocol Gateway	ME30-24/D1(BM)	Capacity: 255 sets of indoor unit Protocol: BACnet	Mainly used in the docking of medium and large building automatic control projects.	

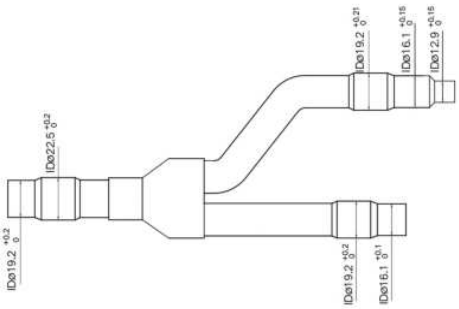
BIM (BUILDING INFORMATION MODEL)



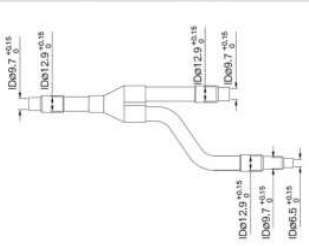
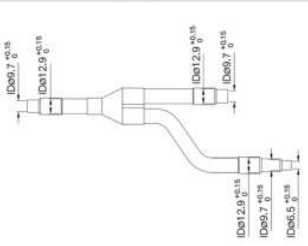
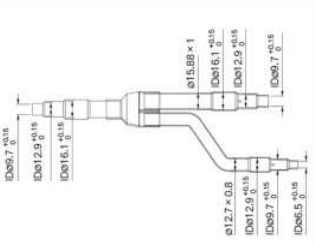
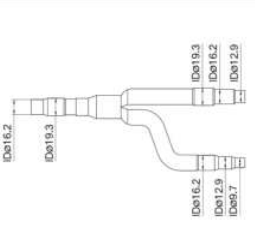
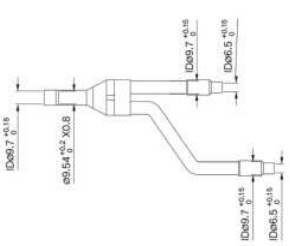
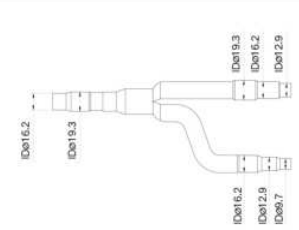
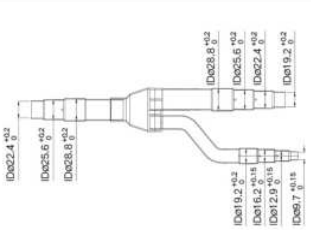
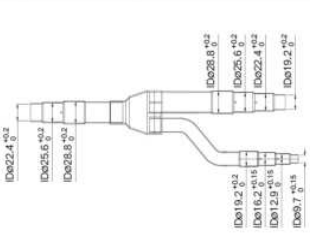
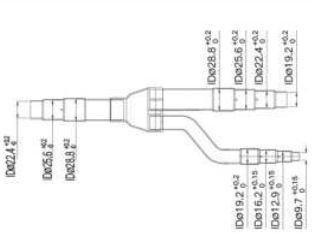
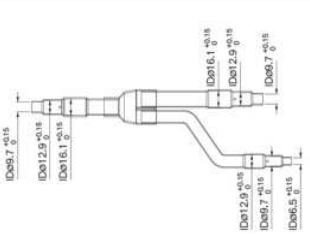
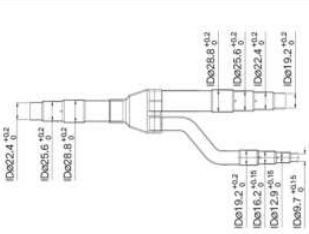
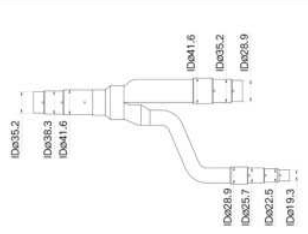
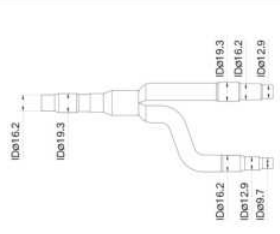
BRANCHING JOINT (FOR VRF6 UNITS)

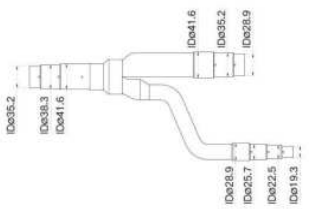
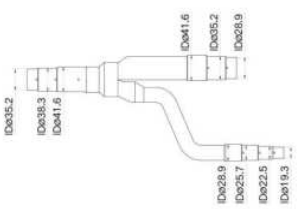
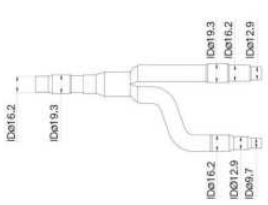
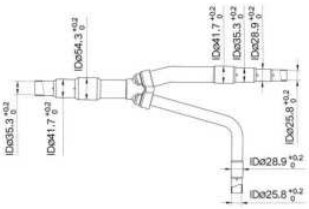
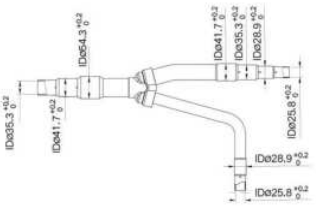
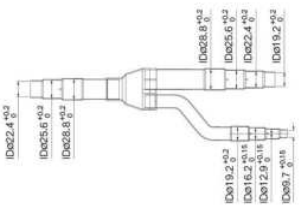
For Indoor & Outdoor Units			
Model	Total capacity X(kW)	Appearance	
		Gas pipe	
FQ01A/A	X < 20		
FQ01B/A	0≤X≤30		
FQ02/A	30 < X≤70		
FQ03/A	70<X≤136		
FQ04/A	136< X ≤ 272		
FQ05/A	X > 272		

For Outdoor Units		
Model	Appearance	
	Gas pipe	
ML01/A		
ML02/A		

Branching Joint (For AHU KIT)	
Model	Appearance
	Liquid pipe
FQ02U/A	

BRANCHING JOINT (FOR VRF6 HR UNITS)

For Outdoor Units and Mode Exchanger				
Model	Total capacity of the downstream indoor units X(kW)	Appearance		
		High-pressure gas pipe	Low-pressure gas pipe	Liquid pipe
FQ01Na/A	X≤5.0			
FQ02Na/A	5.0<X≤22.4			
FQ03Na/A	22.4<X≤28.0			
FQ04Na/A	28.0<X≤68			
FQ05Na/A	68<X≤96			

For Outdoor Units and Mode Exchanger				
Model	Total capacity of the downstream indoor units X(kW)	Appearance		
		High-pressure gas pipe	Low-pressure gas pipe	Liquid pipe
FQ06Na/A	96<X≤135			
FQ07Na/A	135.0<X			

VRF5E MINI & SLIM

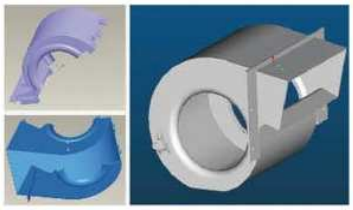
COMFORTABLE AND QUIET MODE

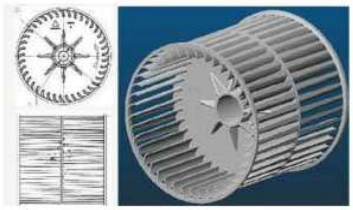
LOW NOISE OF OUTDOOR UNIT

- The advanced sub-cooling control technology is applied to reduce the liquid flow noise of indoor unit in cooling operation.
- Noise of outdoor unit can be as low as 45 dB thanks to noise optimized design or fan system and compressor system, and multiple kinds of quiet modes of outdoor unit.

LOW NOISE OF INDOOR UNIT

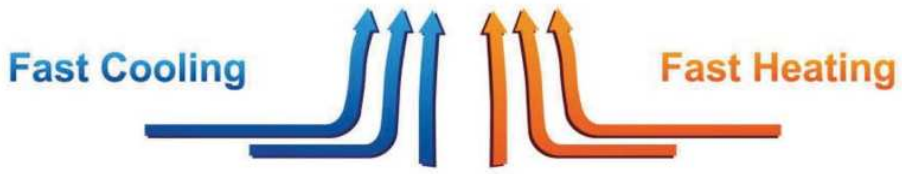
- The pioneering and patented high-efficiency centrifugal fan blade and low-noise volute are adopted. Meanwhile, the imported silent valve is adopted to reduce noise of entire unit as low as 22 db(A).
- By adopting the optimal inlet angle of centrifugal fan blade and optimal diameter ratio between internal and external circles of impeller, the air volume is increased and fan noise is decreased greatly.
- The advanced super-cooling control technology and the oil-return technology under heating mode has efficiently solved the problem of liquid flow noise of indoor unit, which improved the sound quality of indoor unit.





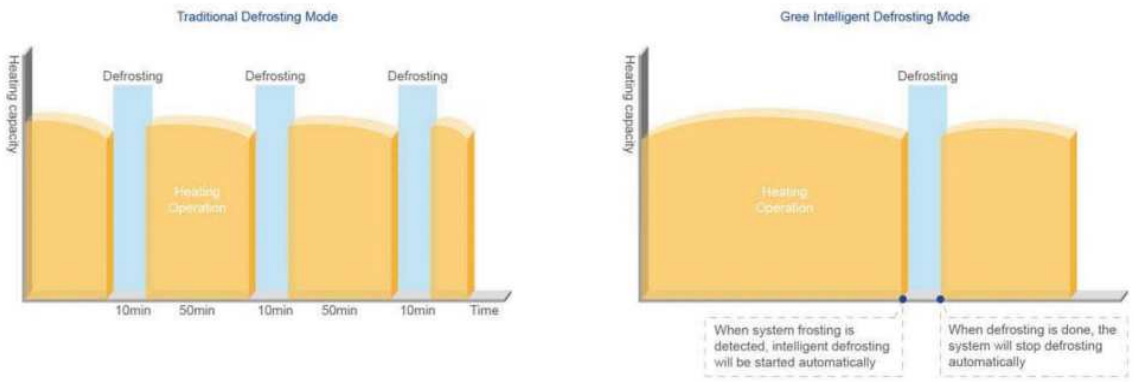
INTELLIGENT TEMPERATURE CONTROL TECHNOLOGY

Intelligent temperature control technology is adopted for superfast cooling or heating, so that indoor temperature will reach set temperature more quickly.



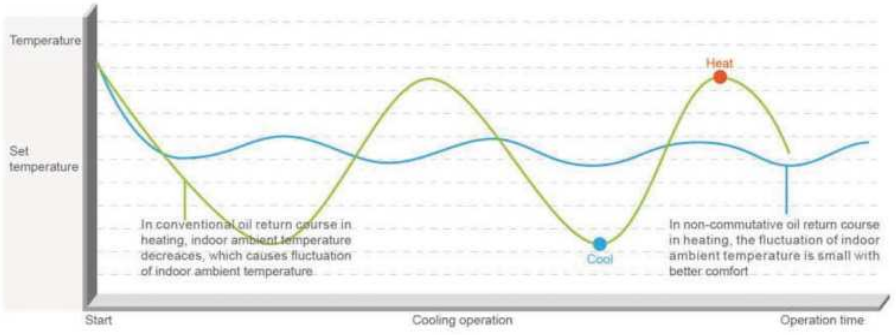
COMFORTABLE HEATING

Advanced intelligent defrosting mode is adopted. AlpicAir advanced intelligent defrosting mode will choose the best defrosting way according to outdoor temperature and operation status to realize intelligent defrosting, effectively improving heating effect and performance. While in traditional defrosting mode, timing defrosting is adopted, which not only affects comfort but also reduces energy efficiency.



NON-COMMUTATIVE OIL RETURN TECHNOLOGY IN HEATING

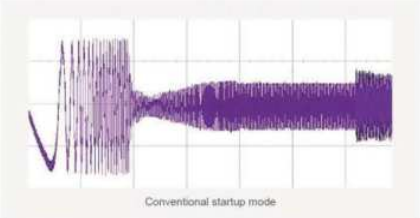
The unit can achieve non-commutative oil return in heating when outdoor ambient temperature is within 0-20 °C. Thanks to this technology, indoor ambient temperature is more stable and comfort is improved in heating mode.



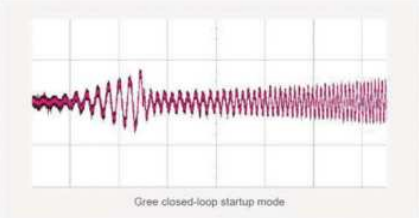
RELIABLE OPERATION

COMPRESSOR CLOSED-LOOP STARTUP TECHNOLOGY WITH MORE RELIABLE STARTUP

The self-innovative closed-loop startup control technology is adopted. Thanks to this technology, the startup current is small and startup is more reliable.



Conventional startup mode



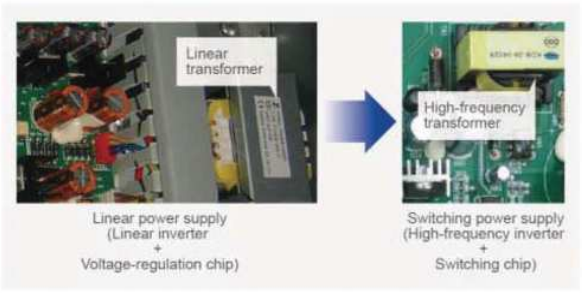
Gree closed-loop startup mode

HIGH ANTI-INTERFERENCE ABILITY

The latest CAN bus communication technology is adopted, with non-polar communication and high anti-interference ability. Common communication wire can meet the communication demand with no need of specialized shielded wire. The customers can buy the communication wire by themselves, greatly reducing installation difficulties.

ADVANCED HIGH-FREQUENCY TRANSFORMER WITH MORE STABLE VOLTAGE

- The advanced switching power supply is adopted with lower power consumption and higher power efficiency.
- Wide voltage-regulation range ensures stable voltage output when the voltage of grid fluctuates.
- Compared with conventional transformer, the size of high-frequency transformer is small and the weight is light.

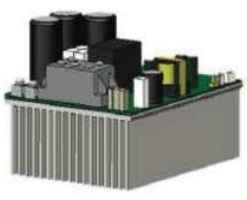


Linear power supply
(Linear inverter
+
Voltage-regulation chip)

Switching power supply
(High-frequency inverter
+
Switching chip)

REFRIGERANT COOLING TECHNOLOGY

- Usually, air-cooled fins are adopted for heat radiation. Due to large size and passive radiation, heat radiating effect is unsatisfactory; with refrigerant cooling technology, heat radiating effect is much better because of compact structure and active radiation. Module temperature is dropped from 80 °C to 65 °C, which will increase module life and stability.



Common heat radiation

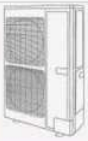
Refrigerant cooling

Note: This feature is applicable for VRF5 Slim series only.

EASY INSTALLATION AND TRANSPORTATION

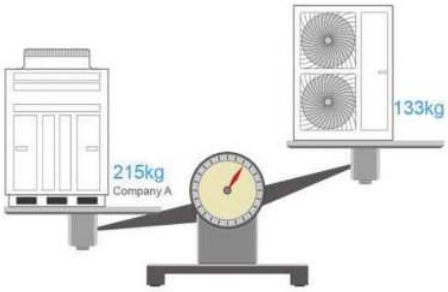
ULTRA-LONG CONNECTION PIPE FOR MORE CONVENIENT CONNECTION

Under the sub-cooling control technology gained by adding sub-cooler, the indoor unit and outdoor unit of VRF5 Mini can operate reliably with longer connection pipe.

	 Company A			
Total piping length	150m	300m	300m	250m
Equivalent piping length	70m	150m	150m	120m

TOP ADVANCED LIGHT AND COMPACT SIZE

VRF5 Slim adopts small and compact size design. The dimension of the unit is 940(W,mm)×1430(H,mm)×320(D,mm). Compared with the normal product with the same capacity, size and weight are reduced a lot.

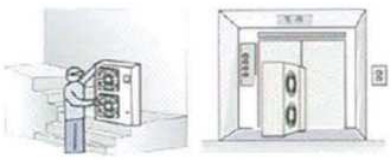


EASY INSTALLATION WITH LOWER CONSTRUCTION

The outdoor unit of VRF5 Slim is with small size and light weight. No need fork lifter and crane for movement and installation.

MOVEMENT BY STAIRS AND ELEVATOR

The outdoor unit of VRF5 Slim series is with compact and small size for saving space and easy movement. It can be carried by elevator or stairs.



VRF5 MINI & SLIM LINE UP

MINI LINE UP

HP	Model	
4	AOU-120VRDC1B AOU-120VRDC3B	
5	AOU-140VRDC1B AOU-140VRDC3B	
6	AOU-160VRDC1B AOU-160VRDC3B	

SLIM LINE UP

HP	Model	
8	AOU-226VRDC3B	
10	AOU-281VRDC3B1	
12	AOU-336VRDC3B1	

MINI

Model			AOU-120VRDC3B	AOU-140VRDC3B	AOU-160VRDC3B	AOU-120VRDC1B	AOU-140VRDC1B	AOU-160VRDC1B
Capacity range		HP	4	5	6	4	5	6
Cooling capacity		kW	12.1	14.0	16.0	12.1	14.0	16.0
Heating capacity		kW	14.0	16.5	18.0	14.0	16.5	18.0
SEER	Ducted *	-	6.7	6.88	6.96	6.7	6.88	6.96
	Cassette *	-	6.7	6.79	6.55	6.7	6.79	6.55
SCOP	Ducted *	-	3.97	4.24	4.04	3.97	4.24	4.04
	Cassette *	-	3.93	4.11	4.06	3.93	4.11	4.06
Power supply		V/Ph/Hz	380-415V 3N~ 50/60Hz			220-240V~ 50Hz & 208-230V~ 60Hz		
Min. circuit/fuse current		A	16	16	16	32	40	40
Power input	Cooling	kW	3.03	3.59	4.75	3.03	3.59	4.75
	Heating	kW	3.27	3.95	4.65	3.27	3.95	4.65
Maximum drive IDU NO.		unit	7	8	9	7	8	9
Refrigerant charge volume		kg	3.3	3.3	3.3	3.3	3.3	3.3
Sound pressure level (cooling)		dB(A)	57	58	58	57	58	58
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ19.5	Φ15.9	Φ15.9	Φ19.5
Dimension (W×D×H)		mm	900×340×1345	900×340×1345	900×340×1345	900×340×1345	900×340×1345	900×340×1345
Net weight/Gross weight		kg	122/133	122/133	122/133	122/133	122/133	122/133
Operating conditions in cooling mode		°C	-5 ~ +52	-5 ~ +52	-5 ~ +52	-5 ~ +52	-5 ~ +52	-5 ~ +52
Operating conditions in heating mode		°C	-20 ~ +27	-20 ~ +27	-20 ~ +27	-20 ~ +27	-20 ~ +27	-20 ~ +27

SLIM

Model			AOU-226VRDC3B	AOU-281VRDC3B1	AOU-336VRDC3B1
Capacity range		HP	8	10	12
Cooling capacity		kW	22.4	28.0	33.5
Heating capacity		kW	24.0	30.0	33.5
SEER	Ducted *	-	6.85	6.36	7.16
	Cassette *	-	6.82	6.28	6.29
SCOP	Ducted *	-	4.27	4.68	4.69
	Cassette *	-	4.31	4.53	4.16
Power supply		V/Ph/Hz	380-415V 3N~ 50/60Hz		
Min. circuit/fuse current		A	20	25	32
Power input	Cooling	kW	6.12	13.02	12.88
	Heating	kW	4.90	8.0	10.47
Maximum drive IDU NO.		unit	13	17	20
Refrigerant charge volume		kg	5.5	7.1	8.5
Sound pressure level (cooling)		kg	60	63	64
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52	Φ12.7
	Gas	mm	Φ19.5	Φ22.2	Φ25.4
Dimension (W×D×H)		mm	940×320×1430	940×460×1615	940×460×1615
Net weight/Gross weight		kg	133/144	163/175	174/187
Operating conditions in cooling mode		°C	-5 ~ +52	-5 ~ +52	-5 ~ +52
Operating conditions in heating mode		°C	-20 ~ +27	-20 ~ +27	-20 ~ +27

ALPICAIR

ALPICAIR AIR CONDITIONING

Note: AlpicAir is commited to continuosly improving its products to ensure the highest quality and reliabilty standards and to meet local regulations and market requirements.

V 3.15.0 * Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. www.alpicair.com

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Distributor information