

**GIVE LIFE TO BUILDING &
BRING US BACK TO NATURE**

ALL DC INVERTER
EKRV-E
Full DC Variable-frequency

EKRVET2022-Catalog-AD

**Guangdong Euroklimat
Air-Conditioning & Refrigeration Co., Ltd.**

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EK AC

Energy-saving AC experts from Europe

Origin of EK — Guangdong Euroklimat Air-Conditioning & Refrigeration Co., Ltd. ("EUROKLIMAT" for short) was founded in 2009. Till now, EUROKLIMAT products are sold in many countries and regions such as China, India, Thailand, Indonesia, Myanmar, South Africa, United Arab Emirates, Chile, and Bangladesh. Driven by technical innovations and taking energy conservation-oriented approaches, EUROKLIMAT is committed to developing into a world-leading environmental system integrator and service provider. The six main air conditioning products of EUROKLIMAT are fluorine system products, water system products, air handling units, units for data centers, high-efficiency equipment rooms, and smart homes. Besides, EUROKLIMAT boasts core competencies in heat recovery, condenser and evaporator capacity, and precision control.

Development of EK — After years of development and endless exploration, now EUROKLIMAT has 1,200 employees in China working in many departments involving marketing, R&D, manufacturing, and after-sales services. EUROKLIMAT has over 10 testing laboratories accredited by CNAS, a technology R&D center in the Asia Pacific region, and the over-100,000m² EK industrial park. All products are manufactured through world-leading air conditioning technologies and processes. We have provided high-efficiency and energy-saving central air conditioners with an estimated value of RMB10 billion to the Chinese market. In the era of 5G, EUROKLIMAT keeps pace with development. We have established the EK-CLOUD platform that supports real-time monitoring of devices, to provide users with comprehensive industry solutions.

Honors of EK — National High-tech Enterprise, Testing Laboratory Accredited by CNAS, Chinese Standard Innovation Contribution, Enterprise of National Major Energy-Saving Electronic Products, Guangdong Energy-Saving and Environmental-Protection Air Conditioning Engineering Research Center, IPR Superior Enterprise in Guangdong, Guangdong Enterprise Technical Center, Guangdong Enterprise with AAAA Standardized Conduct, Guangdong Famous Enterprise, Guangdong Enterprise with High Reputation, Informatization and Industrialization Integration Management System Accreditation, and IPR Management System Accreditation. EUROKLIMAT led and participated in the preparation of a series of national standards such as GB/T25857-2010 Low Ambient Temperature Air Source Multi-connected Heat Pump (Air Conditioning) Unit, GB/T 18837-2015 Multi-connected Air-condition (Heat Pump) Unit, GB/T 33658-2017 Thermal Comfort Requirements and Evaluation for Indoor Environment, and JB-T 13515-2018 Positive Displacement Water Chilling (Heat Pump) Packages with Full Heat Recovery.

Message from EK — For EUROKLIMAT, energy efficiency is the relentless pursuit, and comfort and natural life is the eternal goal. Under the concept of "Give life to building & bring us back to nature", and adhering to the commitment of energy conservation and environmental protection, EK, to achieve harmony with nature, will keep developing comfortable and energy-saving air conditioners and join hands with partners to create a bright future.

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EKRV-E Full DC Variable-frequency • **EVI** Super Capacity

Central AC of Variable Refrigerant Flow **R410A**

1

Super Capacity

The maximum single module is 42HP, a breakthrough to achieve up to 126HP by module combination.

2

Technology of Enhanced Vapor Injection (EVI)

Significantly improve energy saving, powerful heating capacity, stable operation ultra-low temperature down to -30°C.

3

Technology of Full DC Variable-Frequency

Compressor and fan motors are in full DC variable-frequency, with a control accuracy of 0.01Hz, and more accurate unit capacity.

4

Ultra-high Energy Efficiency

The IPLV (C) of the full range unit is up to 10.0, exceeding national first-class energy efficiency standard.

5

Patent New Heat Exchanger

Patented design of heat exchanger with supercooling/defrosting with new curved ventilation structure to improve the cooling/heating performance.

6

16 Low-noise Technologies

16 low-noise technologies such as the patented compressor soundproof box and streamlined large-diameter blades, creating a quieter and more comfortable environment.

7

Multi-stage Oil Return Technology

Patented oil control technologies including cross oil return, smart oil equalization, ensuring the best system operation.

9

Smart Control

Smart control systems such as household billing, meeting the diverse control needs of customers.

8

Three-stage Supercooling Technology

The highly efficient economizer realizing three-stage supercooling up to 35°C, greatly improving operation efficiency.



Intelligent Cloud Management

New era of IOT

The era of IOT is coming. When the air conditioner is combined with the IoT, what convenience can it bring to our work and life?

- You can remotely view, adjust the operating status of any equipment in real time, or centrally control all equipment.
- You can also log in to the cloud to view the historical operating data of the equipment, and reduce the operating cost by setting the functions such as "one-click energy saving", "temperature limits", and "permission setting";
- You can also conduct schedule management to make the equipment operate as scheduled;
- You can even get faster and more accurate proactive after-sales service.

EK smart cloud VRF unit allows you to easily control your own air-conditioning equipment without learning complex expertise; it also enables you to get stronger service support without going through complex operational procedures.

EK CLOUD Intelligent Management System

New EK CLOUD intelligent management system has many important functions such as identity recognition, positioning, cloud data storage, big data analysis, remote assistance, IoT, and mobile monitoring.



EK CLOUD Service Support

Air conditioner operating report

By extracting and collecting more data, the EK cloud platform can generate a full-year air conditioner operating report, provide users with more detailed and professional suggestions for use to help save energy to the maximum.



Active after-sales service

In the past, the users report the faults by themselves, and it is time-consuming and difficult. When the EK smart VRF unit fails, the cloud platform can receive the fault information and error code immediately, reach out to the user, and arrange after-sales service.



Remote diagnosis

When the fault occurs, the technical team can analyze the operating status of the equipment 30 minutes before the fault occurs with the platform data, make a judgment in advance, carry the possible parts, and try to troubleshoot it at one time.



Remote repair support

The platform technical team can help the on-site technical personnel identify the fault and put forward a solution by analyzing the operating data of the equipment on the platform, bringing better and faster service experience to the users.



Spot check service

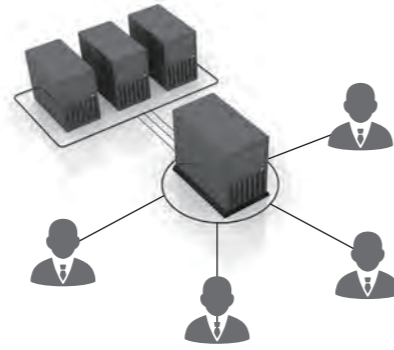
Regular spot check service can be provided to focus on the health of the equipment, and keep it always in the best operating status.



EK CLOUD Service Support

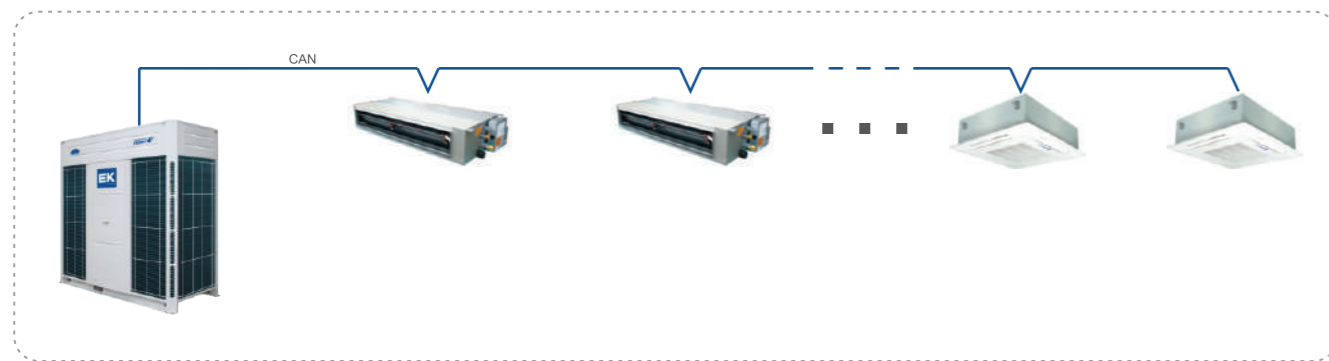
Multi-account management

EK CLOUD intelligent management system allows multiple administrators to log into it simultaneously to monitor and manage the air conditioning units under the same project.

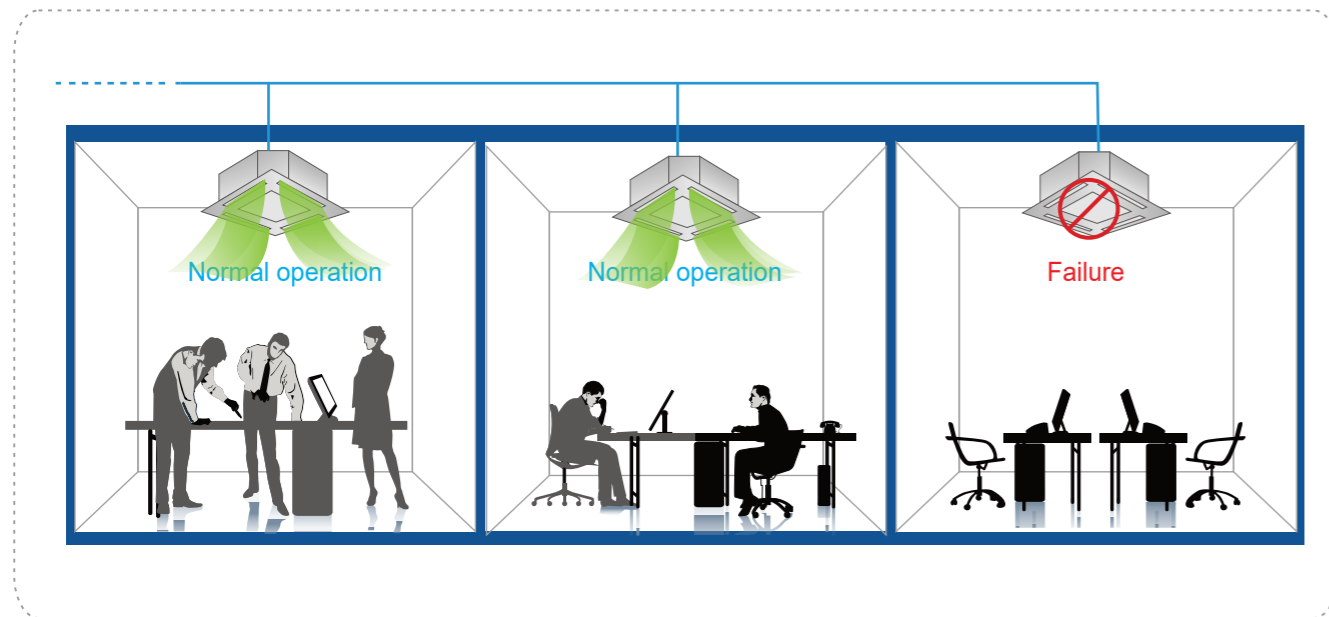


Efficient and reliable CAN communication

- With CAN communication, the transmission speed can reach 50Kbps and an ultra-long communication cable of 1500m is used to connect the IDU and ODU, easily solving the problem of unstable communication for the high-rise buildings.



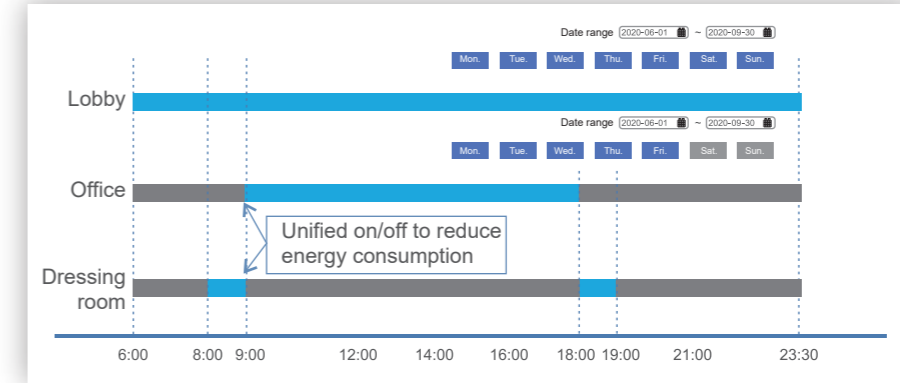
- With CAN communication, if an IDU has a communication fault, it automatically exits the communication system without affecting the communication between other IDUs and the ODU.



EK CLOUD Energy Saving Management

Schedule management

The schedule management, depending on needs for IDUs located in different places, allows group control of units operating during different time periods or in different modes. There is no need to switch on/off the unit manually every day, helping effectively avoid energy waste caused by forgetting to switch off the unit. It also allows the unit to automatically operate in the cooling mode or heating mode in advance to create a more comfortable indoor environment.



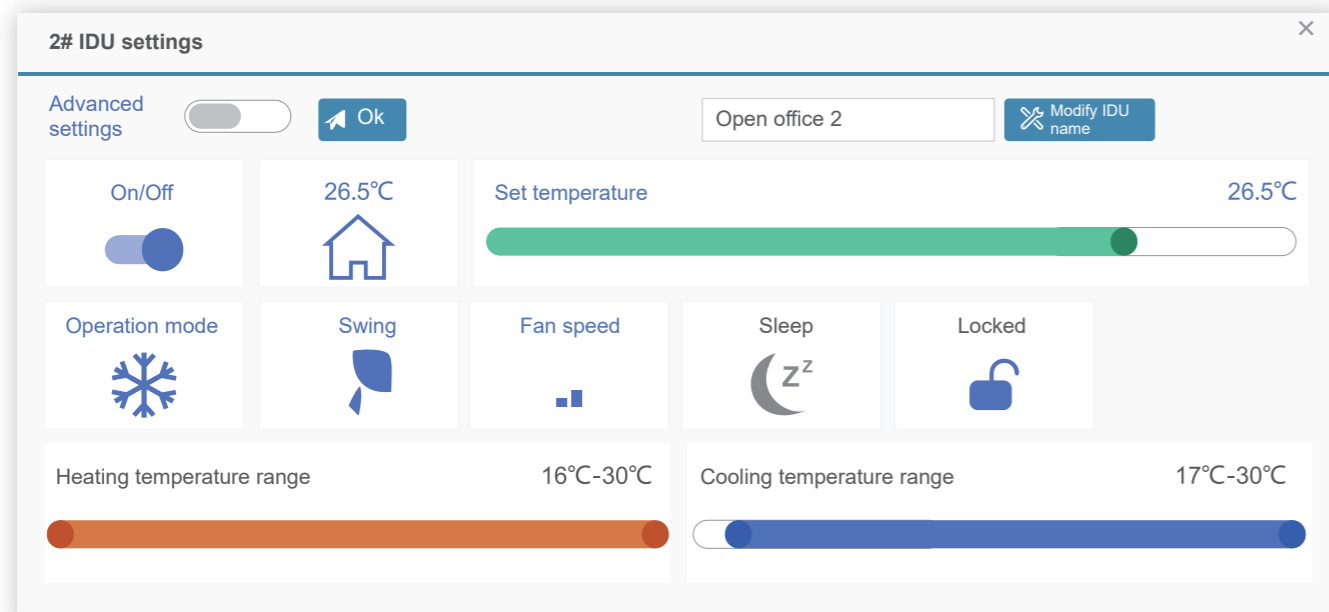
Convenient intelligent control

- Convenient independent control**
Switch on/off any IDU, adjust its operating mode, air flow, swing mode remotely, allowing users to easily operate the unit.
- Smart partition management**
Name and group all IDUs freely in the system, switch on/off all the units, and adjust their operating mode, temperature, fan speed and other parameters uniformly by partition management to achieve energy saving.
- One-click energy saving**
Optimize the operating status of all units by analyzing the data of EK CLOUD intelligent management system, and use the one-click energy-saving button to reduce the operating cost intelligently.

Area	Room	Temperature
Office area	Open office 1	26.9°C
	Open office 2	27°C
	Finance office	27.7°C
	Manager office	26.7°C
Lobby	Front desk reception room	26°C
	Lounge	25.1°C
	Product display area	25.8°C
Public area	Elevator hall	25.6°C
	Corridor	26.6°C
	Bathroom	26°C

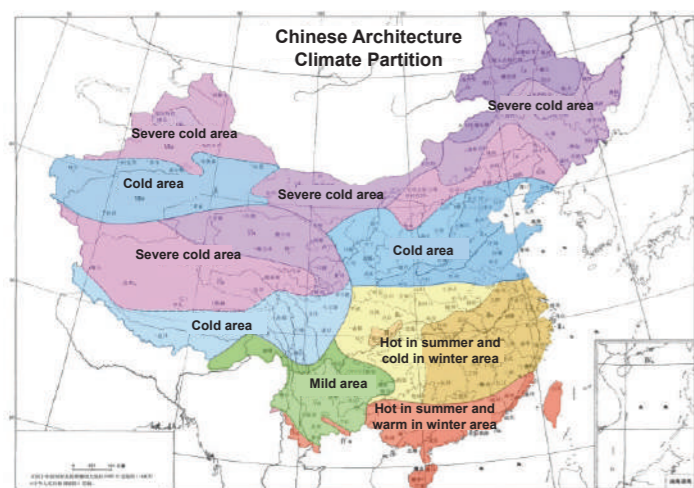
Multiple energy saving setting

- **Concise operating interface**
A visual and concise operating interface is provided for users to view various operating parameters of each IDU such as partition, on/off, mode, temperature and fan speed and its fault information at any time.
- **Temperature limit setting**
Set the minimum and maximum temperature of the IDU to ensure a comfortable indoor environment, and keep the equipment operate in the best energy-saving mode.
- **Control permission lock**
Conduct permission lock to any IDU in the system to avoid misoperation and reduce energy waste.
- **Sleep mode**
Adjust the sleep temperature scientifically to meet the body temperature change demand at night, and reduce the operating noise and energy consumption of the unit.

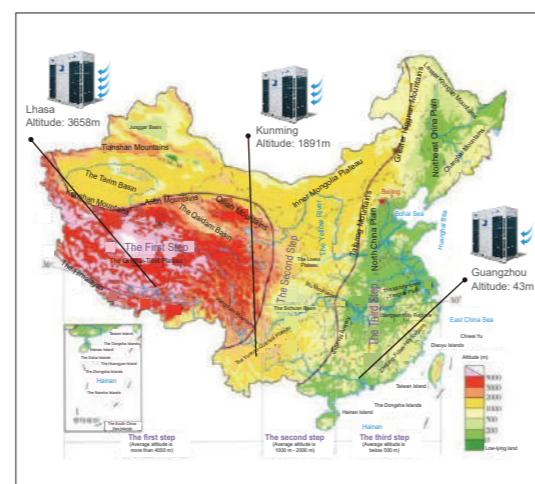


AI Energy Saving Operation Strategy

The CLOUD intelligent management system can automatically optimize and adjust the operation strategy according to the climate region, meteorological parameters, altitude and other information, to make the unit operate in a more energy-saving, convenient and reasonable way.



Identify the climate zone of the unit and adjust the operation strategy automatically



Identify the altitude of the unit, and adjust the fan rotating speed operation strategy automatically

The Core of Technology To ensure excellent performance

EK actively participates in formulating VRF standard

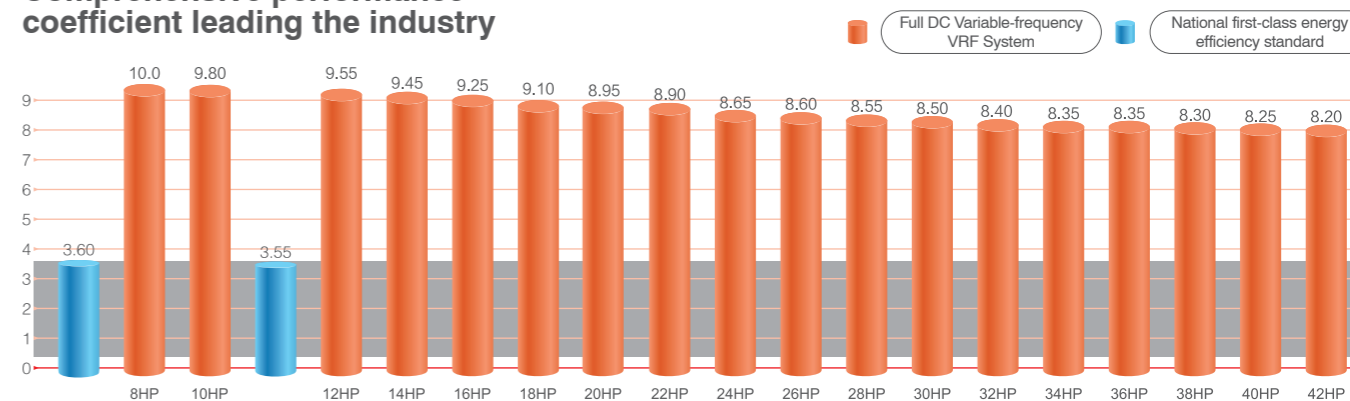
EK AC is a member of the drafting team with five leading VRF producers for "Low Ambient Temperature Air Source VRF Heat Pump (Air Conditioning) Units", as well as one of the drafter for the national standard of "VRF Air Conditioning (Heat Pump) Units".



Go beyond the national first-class energy efficiency

Comprehensive performance coefficient leading the industry

IPLV (C) up to 10.0, far exceeding the national first-class energy efficiency standard



Note: Test of IPLV (C) on the basic module of the modular VRF air conditioning (heat pump) units according to GB21454-2008 "Limits of Energy Efficiency and Energy Efficiency Grades for VRF Air Conditioning (Heat Pump) Units".

Efficient outdoor unit

The unit adopts high-efficiency parts and components, saving energy by tuning the system for the most reasonable operating state, while ensuring reliability and comfort to improve the energy-saving effect.

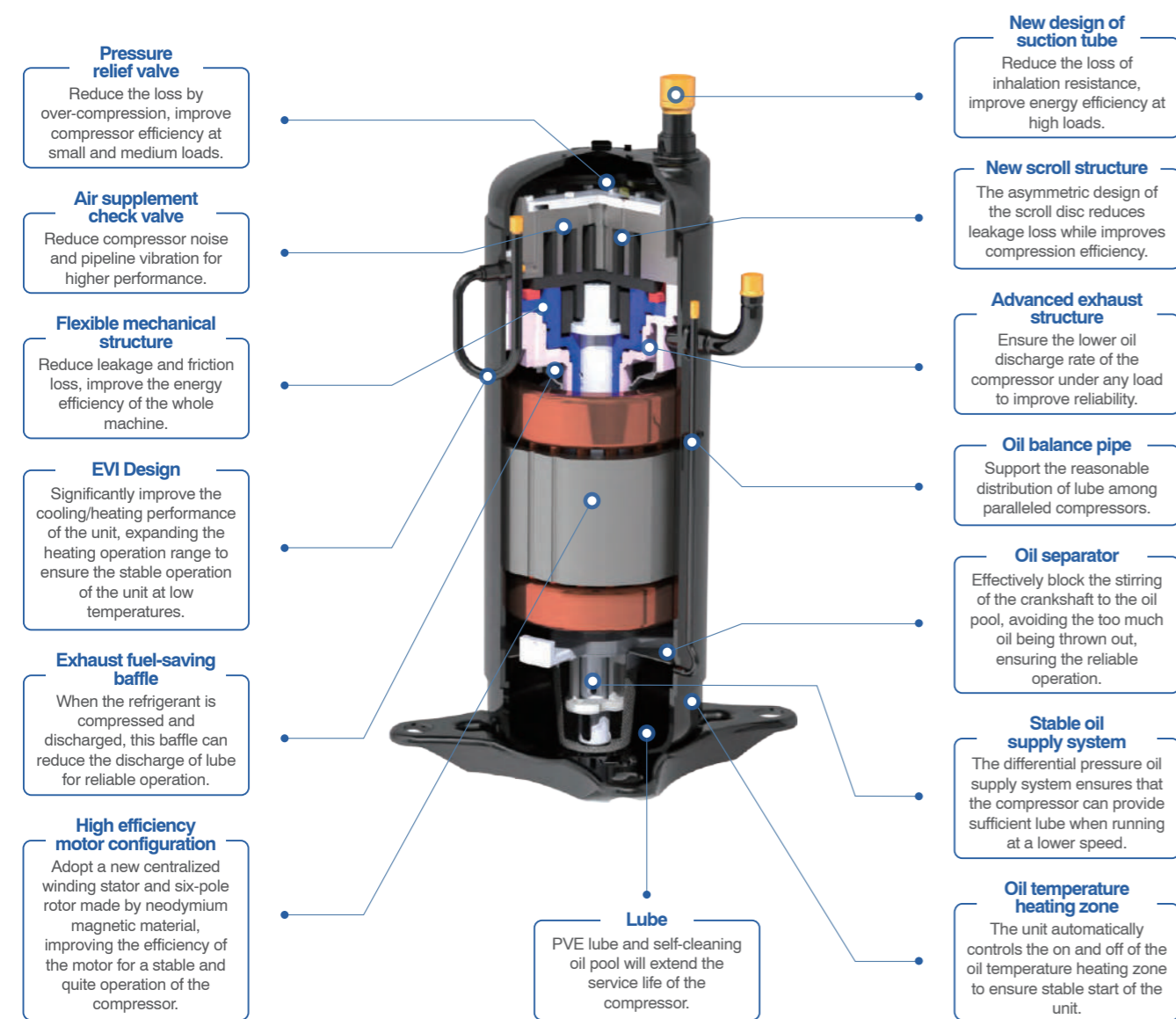


- DC VF compressor with high-pressure cavity
- Streamlined large-diameter fan
- Full DC VF fan motor
- 180° sine wave DC VF technology
- Highly efficient 2-1 loop
- Supercooling circuit design
- Unique curved ventilation design of heat exchanger
- 7mm high-efficiency internal thread copper pipe

Leading technology of low temperature and strong heat

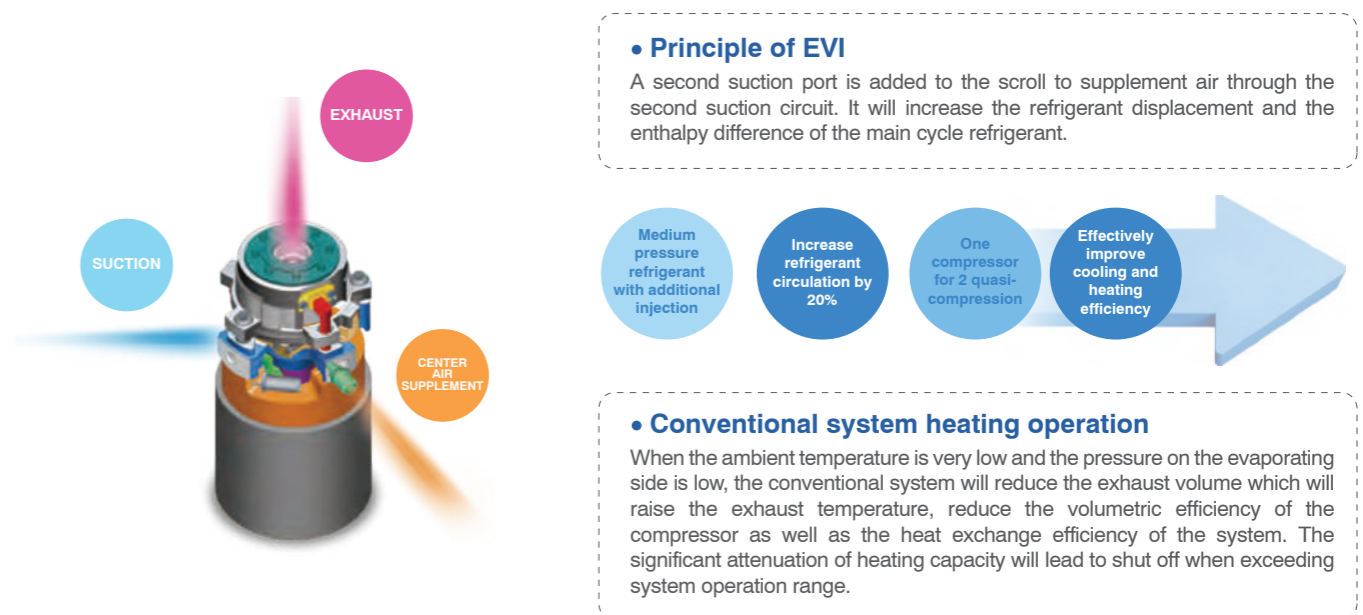
A new generation of EVI based scroll compressor

The unit adopts an imported DC VF scroll compressor with large displacement and high-pressure cavity, a high-rigidity casing, anti-overcompression system, anti-liquid hammer technology, suction the air direct into the compression chamber for higher volumetric efficiency. In addition, by combining the unique EVI technology and advanced three-stage supercooling technology, the compressor has a higher circulation of refrigerant in the system at low temperatures for highly efficient operating.



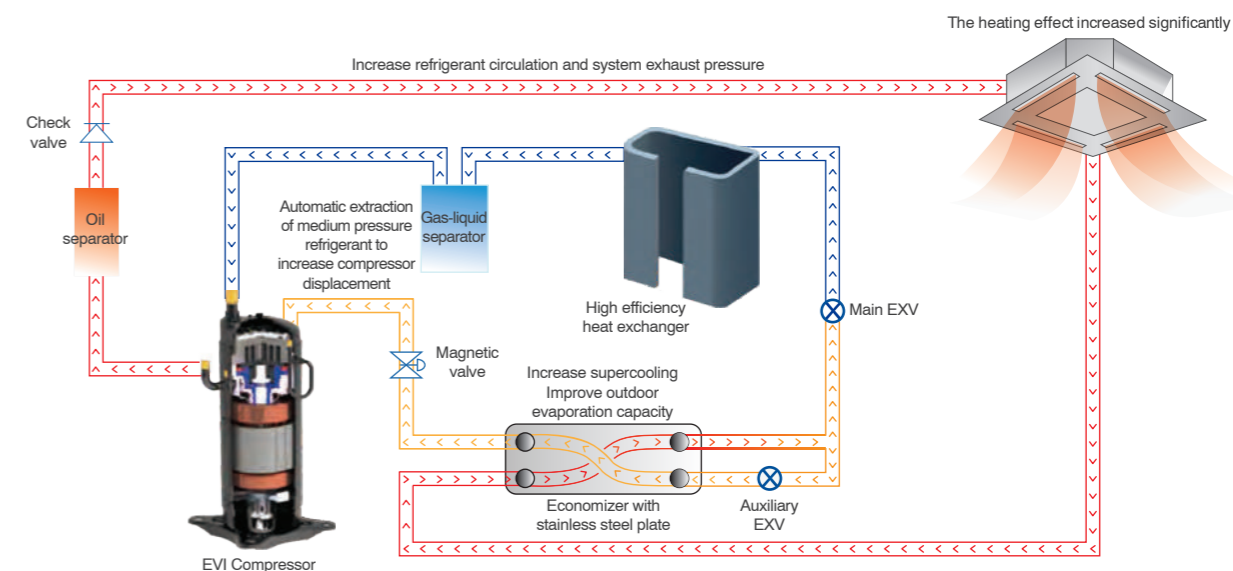
EVI technology

The new EVI system has a jet booster compressor and high-efficiency supercooler. An air suction port added to the medium-pressure cavity of the compressor scroll will supplement air in middle-pressure to boost the air displacement of the compressor for improved heating capacity in a low temperature environment. The main advantage of the system is that the unit will operate with high efficiency in cooling, while significantly raise the heating performance in severe cold environment for safe and reliable operation.



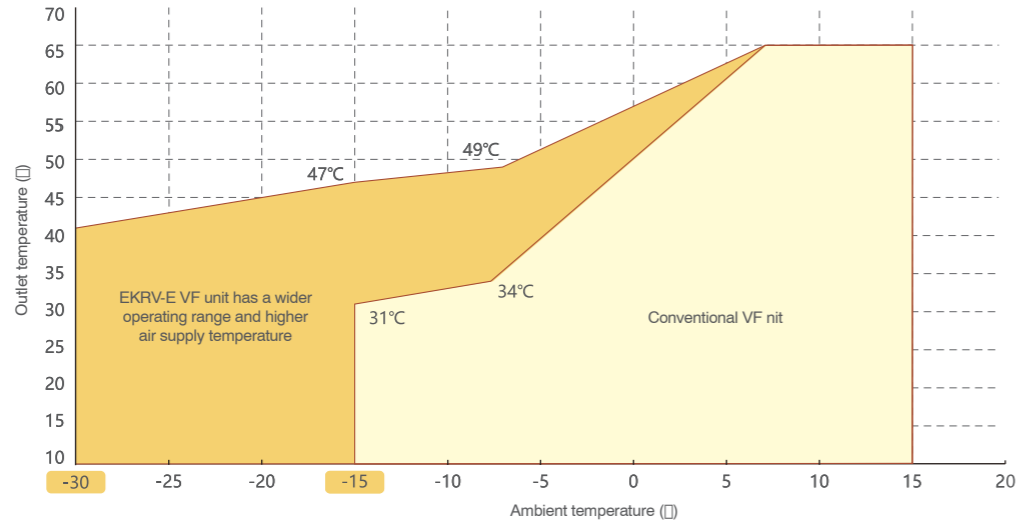
Advanced medium-pressure air supplement system

After the compressor exhaust passing through the indoor unit for sufficient heat exchange, the high-efficiency economizer will, on the one hand, supercool the refrigerant in the main circulation circuit before throttling, increasing the air temperature difference; and on the other hand, properly preheated the medium-pressure, low-temperature refrigerant passing through the auxiliary circuit and depressurized by the electronic expansion valve. It will enable the compressor for secondary compression, improving the heating capacity of the system as a perfect solution of winter heating in cold areas.



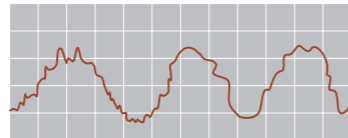
High temperature of air supply at low temperatures

By the wider operation range, the EVI and three-stage supercooling technology will break the limits of exhaust pressure and exhaust temperature at low ambient temperatures, greatly increase the unit heating capacity, and the air outlet temperature of the indoor unit.

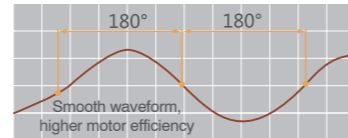


Stepless VF technology

The advanced DC VF control technology realizes stepless speed regulation of the compressor speed. According to the actual AC load requirements, the smart adjustment system enables linear transmission from low load to high load, allowing adjusting the unit capacity on demand.



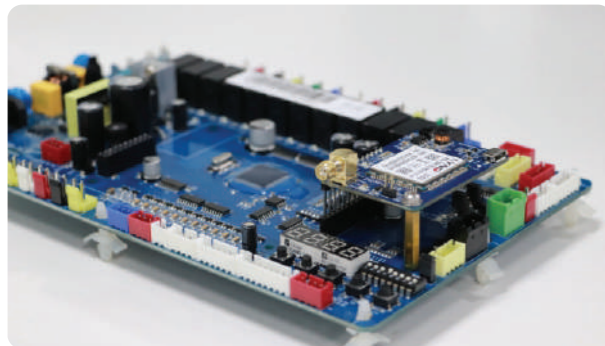
Ordinary AC: Ordinary rectangular wave output, low motor efficiency



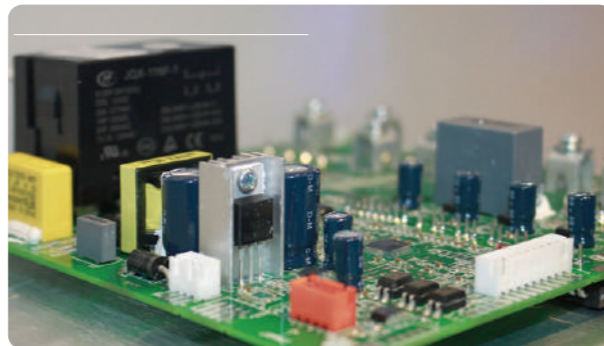
EK AC: 180° sine wave output, high motor efficiency

Smart VF control

- The powerful VF control motherboard independently developed by the company, realizing a wide VF control of 0~480Hz with the control frequency accuracy up to 0.01Hz.
- Precisely control by the high-speed DSP chip by Texas Instruments and mature algorithm that will control the double closed-loop feedback in voltage and current; integrates multiple protection functions against overvoltage, overcurrent, and overtemperature for more stable performance and more reliable operation.
- Effectively reduce compressor motor vibration by sensorless SVPWM sine wave control.
- Reduce the compressor start-up current and power grid impact by the closed-loop start-up control design, effectively ensures the stability of the customer's power grid.



Control module



VF module

SMT technology

With the SMT (Surface Mounted Technology), the entire motherboard surface is coated with sealing materials, effectively improving anti-clutter interference performance of the motherboard, protecting it from high temperature, humidity, wind, sand and other severe weather and air environments.

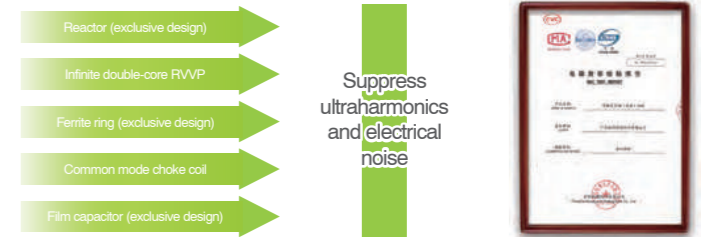
The surface of the control board uses surface mounting material

Voltage unbalance rate

EK inverter can work to the maximal unbalance rate of phase voltage up to 3%

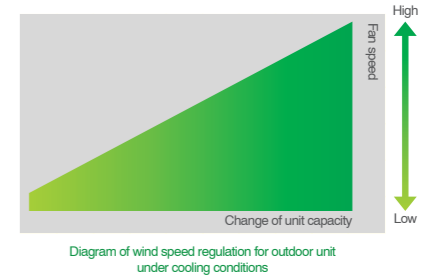
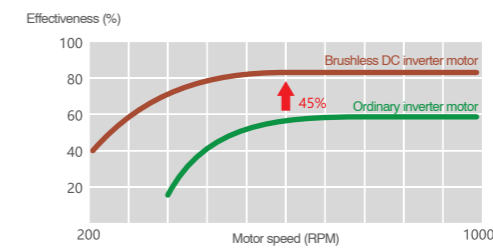
Suppress ultraharmonics and electrical noise

EKRVE series of VRF central AC units have been tested by high standards and passed the national EMC test. Combined with high-efficiency components, it effectively suppresses ultraharmonics and electrical noise.



DC inverter motor

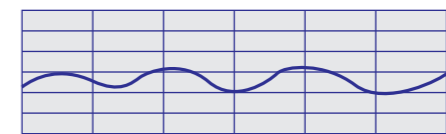
The DC brushless inverter motor will effectively operate in various environmental temperatures, quickly responding to adjust the fan speed, ensuring the stable suction and exhaust pressure of the system. Meanwhile, the air volume and pressure of the outdoor unit are automatically adjusted according to the load change, ensuring the stable and reliable operation of the system.



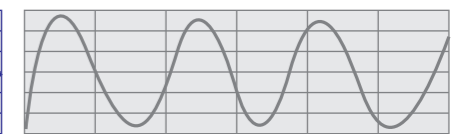
Steady fan control

FFT feedforward control enable smart control the fan speed, avoiding frequency fluctuations of the whole machine to save energy and electricity.

High pressure fluctuation of refrigeration



EK: Stepless control + feedforward control



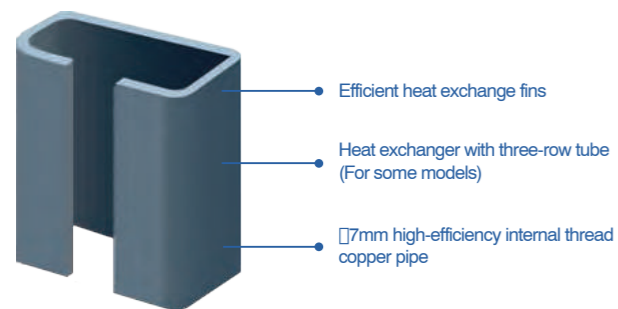
Conventional: hierarchical control + feedback control

High quality and efficient heat exchange technology

Design of high efficiency heat exchanger

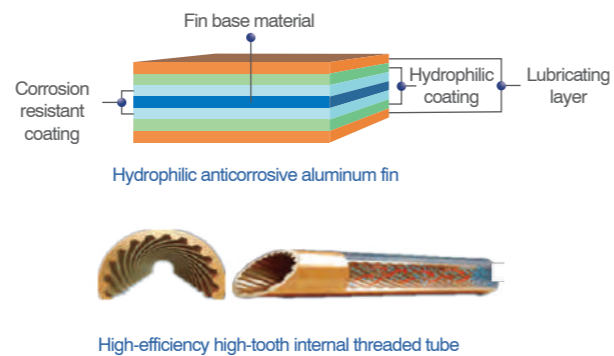
High-temperature heat exchanger against corrosion

Both the indoor and outdoor units use hydrophilic anticorrosive aluminum foil to slowdown the corrosion of corrosive gases on the fins. It will destroy the surface tension of water droplets and accelerate the rapid discharge of condensed water. Meanwhile, it will prevent frost during heating to enhance the AC performance (Copper fins and black anti-corrosion aluminum fins can be customized as required).



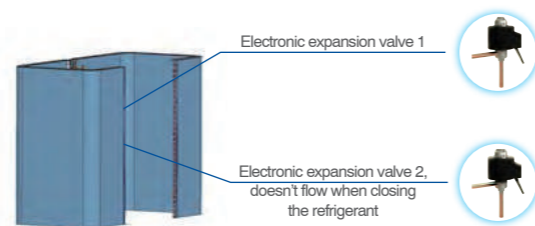
Four-side surrounding heat exchanger (20-42HP)

Note: To customize copper fins and black anti-corrosion aluminum fins, please consult EK technical engineers



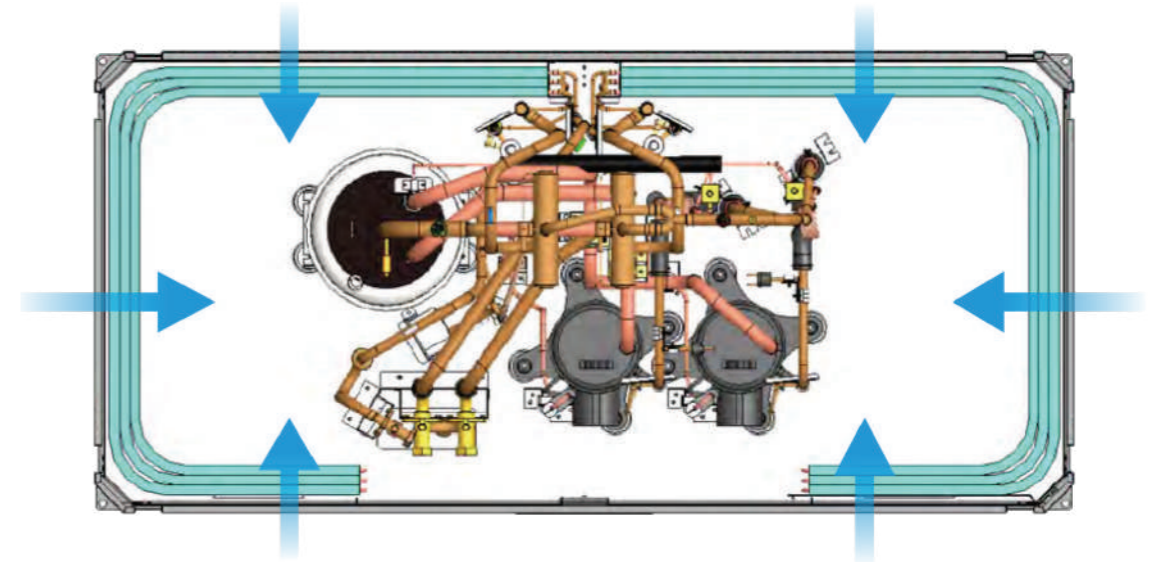
Automatic adjustment of heat exchange area of outdoor unit

The outdoor unit heat exchanger has dual electronic expansion valves, enabling automatic matching of heat exchange area according to the indoor load demand. It will accurately control the refrigerant flow for the effective heat exchange area, allowing more comfortable operation and improved efficiency of partial load operation.



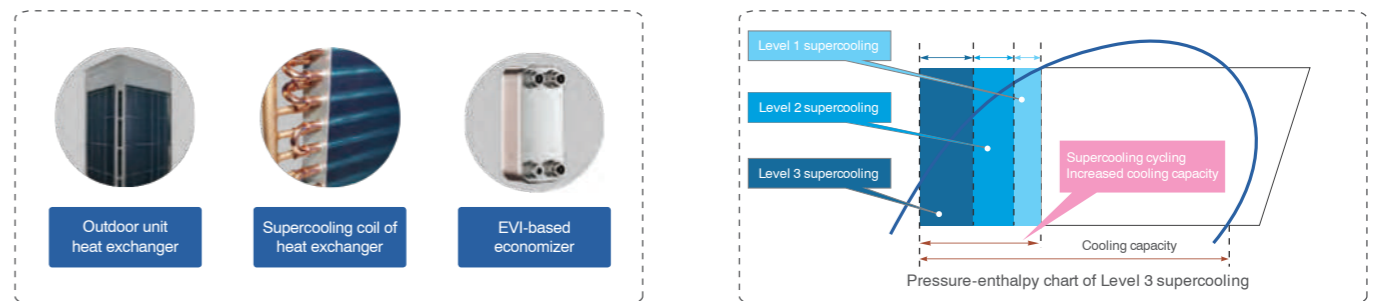
Compact 3-D design

The compressor, gas-liquid separator, oil separator and other components are compactly arranged in the center of the chassis. It will not only facilitates the maintenance, but also benefit to the smooth air intake from four directions to greatly improve the heat exchange efficiency.



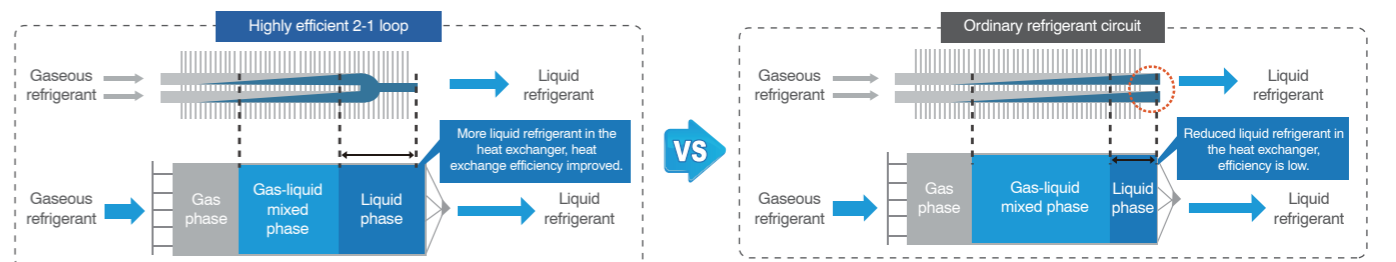
Three-stage supercooling

The condenser can achieve primary and secondary supercooling. A independent board heat exchanger is set to achieve three-stage supercooling up to 30°C. It will increase the cooling capacity of the unit, and effectively improves the capacity attenuation of the long connecting pipe. Therefore, the unit efficiency is improved with more stable operation.



Highly efficient 2-1 loop

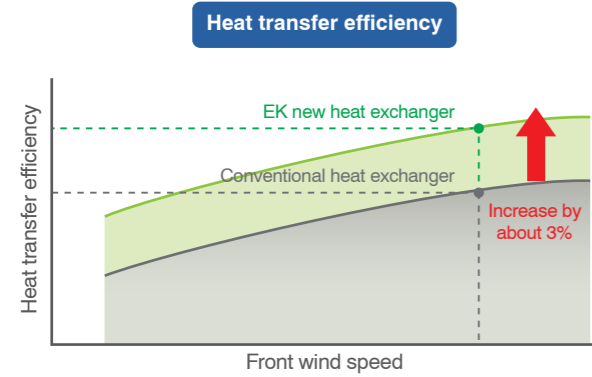
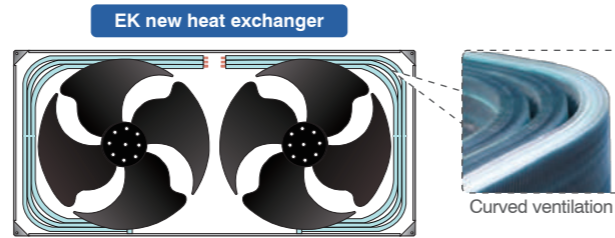
The highly efficient 2-1 refrigeration circuit is designed to increase the amount of liquid refrigerant for great improvement in heat exchange efficiency.



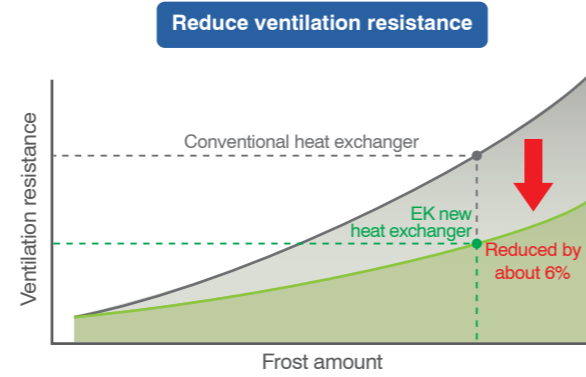
Unique curved ventilation design of heat exchanger

EKRV-E series of outdoor unit adopts a new curved ventilation design to improve the heat exchange efficiency of the outdoor unit, helping improve the performance of the AC system.

- Reduce ventilation resistance at bends, increase heat exchange ventilation.
- Easier for condensed water to be discharged through the bend during heating.



- The new design of heat exchanger reduces the ventilation resistance for higher front wind speed and heat exchange efficiency.

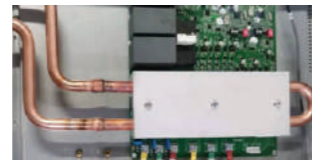


- The new design of heat exchanger has larger ventilation space at the bends to reduce the frost amount during heating in winter.

Heat dissipation design with various electric control box

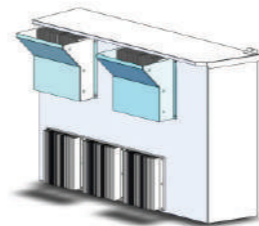
Inverter cooling technology

The new generation of EK inverter adopts advanced technology of "refrigerant cooling + air cooling", cooling the main board with low-temperature refrigerant, with air cooling as auxiliary heat dissipation. The dual heat dissipation ensures more stable system operation.



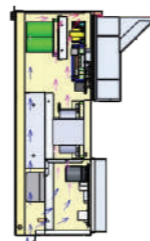
Highly efficient heat dissipation of wind scooper

The electric control has a wind scooper to quickly remove the heat generated by the VF drive based on the principle of aerodynamics. After the comparison test, the electric control box with wind scooper reduces the average temperature of the VF drive by 6°C.



Patented design of auxiliary heat dissipation for the electric control box

By the negative pressure effect, the heat in the box is continuously discharged through the opening on the top of the electric control box to ensure the stability of the system in a high-temperature environment and reduce energy consumption. (Patent No.: ZL201821647872.7)



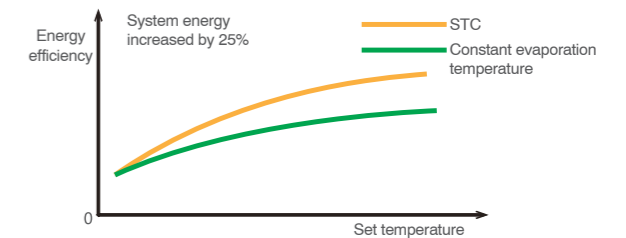
Cutting-edge technology Stable and reliable operation



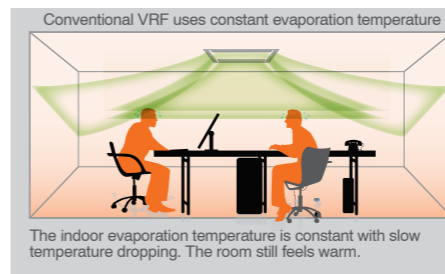
Refrigerant control technology

STC (Smart temperature Control)

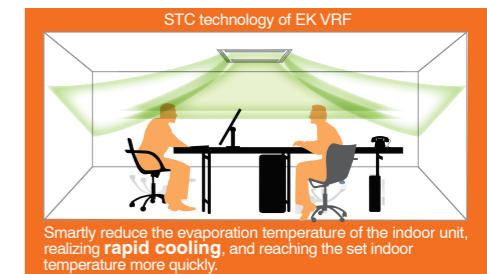
The unit can predict and control the refrigerant smartly about the ideal operating state of the AC system. With STC (Smart Temperature Control), the indoor unit can smartly adjust the evaporation temperature according to the corresponding load demand. When the cooling demand is low, it will increase the evaporation temperature and reduce the opening of the electronic expansion valve; vice versa. It will achieve both highly efficient system operation and body comfort in the space.



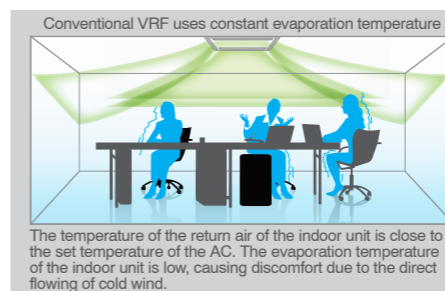
The indoor unit of the air conditioner will achieve rapid cooling or heating in a short time after being opened.



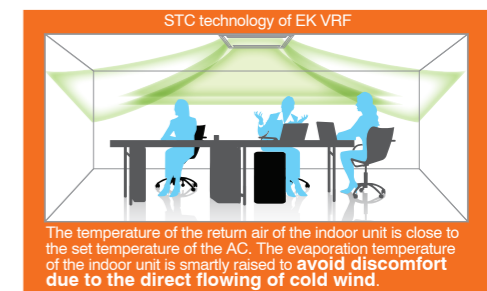
Smartly reduce the evaporation temperature of the indoor unit



When approaching the set temperature of the indoor unit, there will be no discomfort due to the cold and hot air blowing directly.



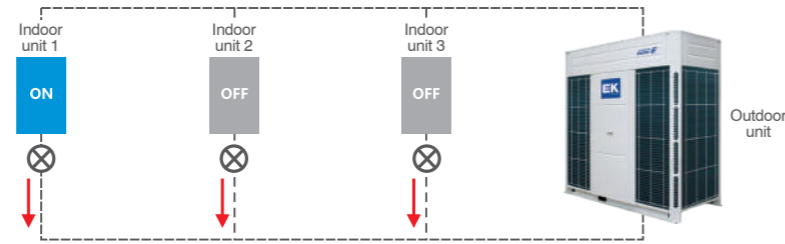
Smartly reduce the evaporation temperature of the indoor unit



Refrigerant control technology

Smart supplement of refrigerant

In the heating mode, the system will smartly identify when to supplement the circulating system with the refrigerant in the heat exchanger coil of the indoor unit in standby state. Through continuous turning, the heating effect of the system is improved, while the energy consumption is reduced.



Refrigerant control

Refrigerant pressure detection

With the sensors of suction and exhaust pressure and temperature sensors, the refrigerant status of the system can be accurately detected to ensure stable and efficient unit operation. The sensor feeds back pressure changes in time, while the unit quickly responds to the indoor load to avoid the impact of instantaneous high and low pressure on the compressor.



New type of refrigerant separator

With the venturi type separator with the highest processing precision in the industry, the refrigerant is evenly distributed with reduced pressure loss and noise to improve the heat exchange efficiency.



Accurate temperature control with multiple electronic expansion valves

The outdoor unit has multiple electronic expansion valves to accurately adjust the refrigerant flow of up to 3000 levels according to the load of the indoor unit, creating a more comfortable indoor environment.



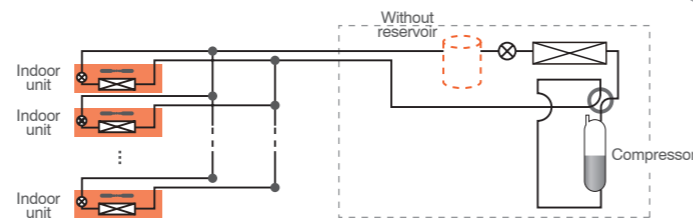
Liquid steam injection

For cooling, the refrigerant injection valve in the system will spray the liquid refrigerant into the compressor as mist to prevent the compressor from high temperature damage.



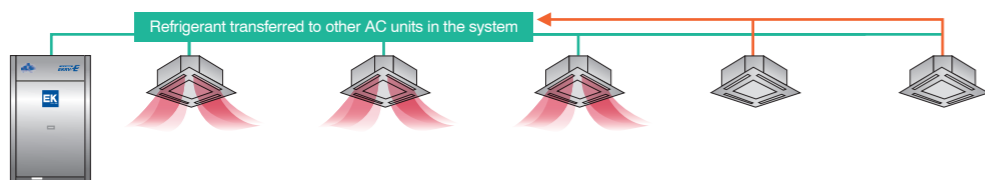
Refrigerant piping storage

The refrigerant piping storage will store the excess liquid refrigerant in the pipeline without a special reservoir. By eliminating the system loop of the accumulator, the refrigerant control is more accurate, while the system operation efficiency is significantly improved.



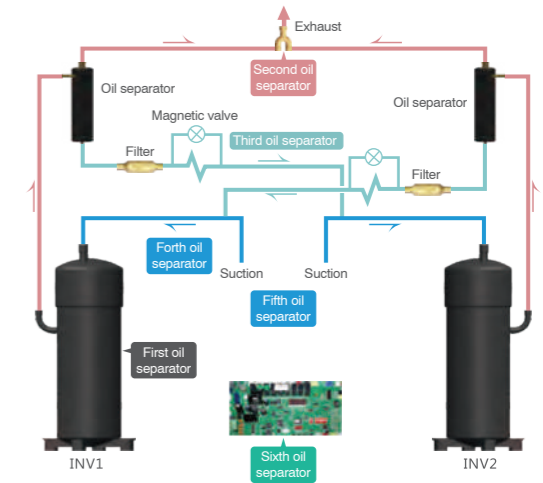
Dynamic distribution of refrigerant

In the heating mode, the refrigerant in the stopped indoor unit will be transferred and reasonably distributed to the running AC, ensuring sufficient refrigerant for heating.



Multi-stage oil control

By adopting several oil control technologies such as large-capacity oil separator, smart inter-module oil equalization, automatic oil return of the system, inter-compressor cross oil equalization (patent number: ZL201520458037.9), and non-stop heating oil return, EKR-V-E reaches an effective oil return rate as high as 99.99%. It ensures the reliable and stable operation of the system and effectively extends the service life of the whole machine.



First oil separator: oil separation inside the compressor;
 Second oil separator: efficient returns oil of oil separator;
 Third oil separator: magnetic valve + capillary double return oil;
 Forth oil separator: high-speed oil return in the suction pipe;
 Fifth oil separator: cross-equalizing oil between compressors;
 Sixth-stage oil: accurately controlled oil balance by program;

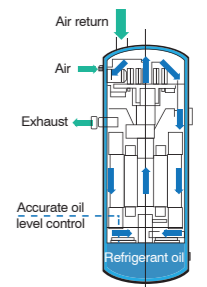
Efficient oil control components

- Efficient oil separator
Effectively block the refrigerant oil from entering the system with the refrigerant, sending the oil back to the compressor in time for efficient oil return.
- Efficient gas-liquid separator
The U-shaped bend of the gas-liquid separator is equipped with double oil return holes (patent number: ZL201520458001.0); the oil outlet has a cylindrical filter screen (patent number: ZL201520458032.6) to effectively increase the filtering area and secure the filtering effect, while ensuring the amount of oil return of the compressor, preventing liquid shock and improving oil return performance.



Automatic oil equalization for more stable compressor operation

- Oil cycles inside the compressor
The oil-mist separation design inside the compressor reduces the oil discharge rate at the air outlet, improving the heat exchange efficiency of the system.
- Oil supply technology of pressure difference between compressors
The oil supply design by the pressure difference of the high-pressure cavity scroll compressor to ensure sound lubrication of the compressor.
- Cross oil equalization between compressors
The method of cross oil return between the compressors realizes reasonable distribution of the refrigerating oil before returning to the compressor, while ensuring the system in good working condition.



Control technology of system oil return

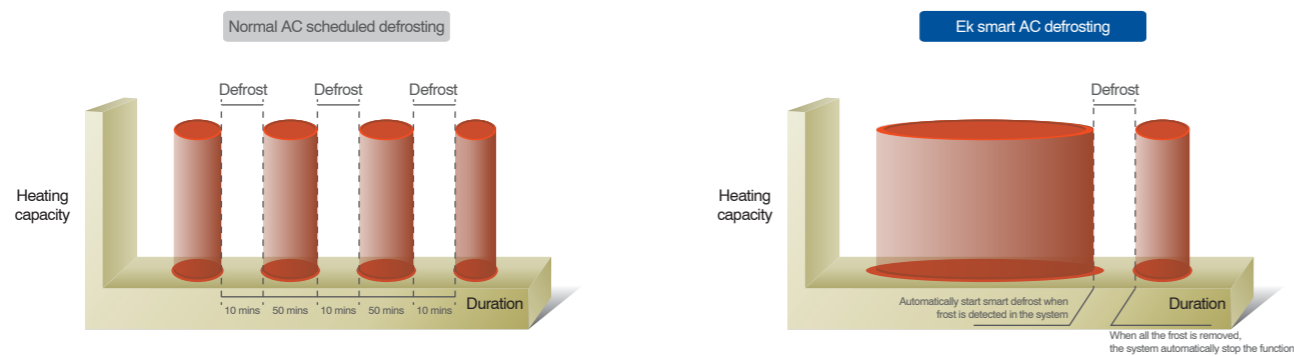
- Non-stop heating oil return
No need to switch the heating mode to the cooling mode for the oil return when heating. The unit continues to supply heat when the oil returns.
- Automatic return oil by system
The system sends the oil return command via the controller automatically according to the running time and status, and returns the oil on demand automatically.
- There is no need of equalizing oil pipes between outdoor unit modules



Intelligent defrost technology

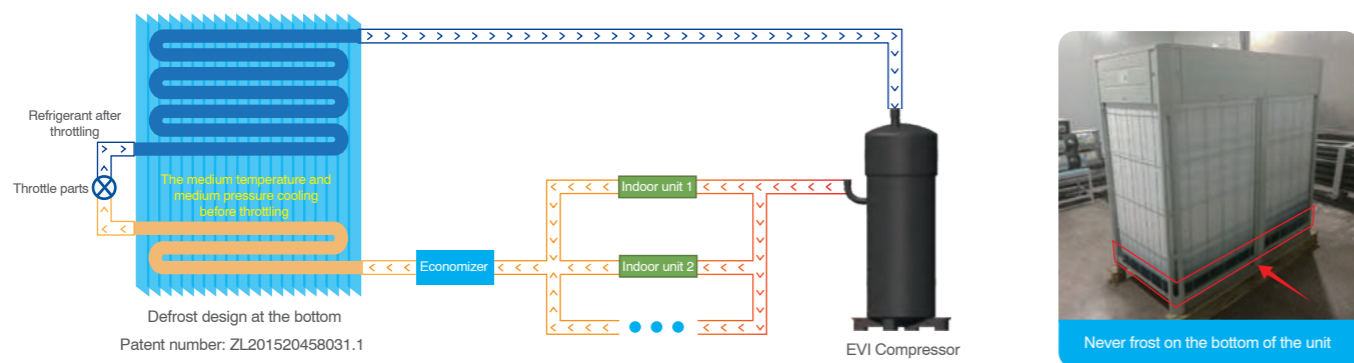
Intelligent defrost technology, smooth operation in winter

- **Dynamic smart defrost function**
The unit automatically corrects the defrost time according to the real-time operating temperature and pressure parameters of the outdoor unit. The frost will be removed accurately in time according to the actual amount to effectively avoid the heating loss commonly seen in conventional defrost mode.
- **Defrost function in low temperature environment**
When the outdoor temperature is low, the unit automatically judges the change trend of the temperature and the pressure sensor to ensure more accurate defrosting.
- **Defrost function in high humidity environment**
The unit automatically judge the humidity of the external environment, performing defrost function accurately to avoid excessive frosting or invalid defrosting action.
- **Partial load defrost function**
When the unit is running under partial load, it automatically performs defrosting accurately according to the change in the heat exchange efficiency of the outdoor unit. Under different load conditions and different judgment criteria, the timing of defrosting can be more accurately grasped.
- **Module rotated defrosting**
For the system of combined outdoor units, the deforesting function will rotate among units. It will reduce the indoor temperature field fluctuates, help shortening the system's defrosting cycle for more comfort.
- **Heat storage defrost of indoor unit**
Before entering defrost function, the system raises the refrigerant temperature, allowing the indoor heat exchanger to store heat. After the defrost function start, the heat from the indoor unit is released to the outdoor unit for faster defrosting of the outdoor unit. It shortens the defrosting time of the system, allowing the indoor unit to start heating to the set temperature.



Anti-frosting heat exchanger

The heat exchanger of outdoor unit has the defrost function. In the heating mode, the medium temperature cooling from the indoor unit first enters the defrost heat exchanger to further release heat, ensuring that no frost on the bottom of the outdoor unit heat exchanger. The defrost design effectively avoids any frost and snow accumulated at the bottom of the heat exchanger and improve the heating capacity of the system.

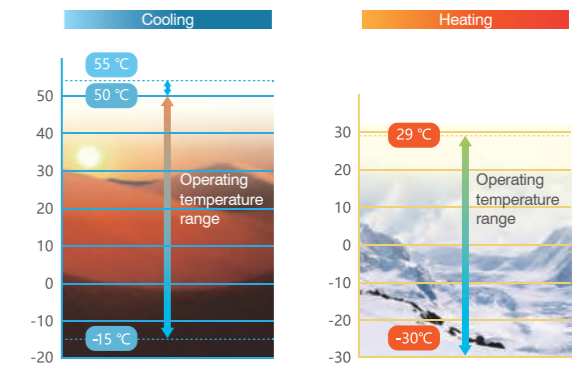


Wide operating range

Wide operating temperature to better response to any harsh environments

Advanced AC design greatly improve the adaptability of the unit to various environments. Whether it's 55°C or -30°C in the external environment, the unit can operate reliably for a comfortable indoor environment for users.

Operation temperature for cooling: -15°C~55°C
Operation temperature for heating: -30°C~29°C



Note: Please consult EK technical engineer for low temperature refrigeration/ low temperature heating/ high temperature cooling.

Reliable operation

Smart & balanced operation management

Based on the operation time of each compressor automatically recorded by the system, it starts the compressor with a short operating time as a priority to balance the operating time of each compressor, extend the life of each compressor; automatically records the operating time of each module. By giving priority to start modules with short running time, and balancing the running time of each module, the service life of the unit is extended.



Quadruple backup for operation

Designed with a quadruple backup operation, the outdoor unit modules, the compressors and inverters in the modules and fans are backups for each other respectively to ensure that the unit continues to run for accidental protection or in any shutdown.



Multiple protection measures to protect the safe and reliable operation of the unit

- Protection against compressor overload
- Suction pressure protection
- Exhaust temperature protection
- Exhaust pressure protection
- Self-check for IPM fault
- Inverter PFC protection
- Protection against compressor phase loss
- Lightning protection
- Protection against communication failure
- Protection against abnormal input power
- Protection against insufficient refrigerant
- Protection against IPM overheat



Health and Fitness Fully enjoy green technology



Creating a quiet space

With 16 designs to reduce noise of operation, the unit creates a quiet space both indoor and outdoor.



- Low-noise grid for air outlet
- Streamlined large-diameter fan
- New design of wind guide ring
- Brushless DC fan motor
- Vibration absorbing of the motor support cage



- Quiet DC VF compressor
- Anti-resonance between compressors
- Vibration absorbing of the compressor base
- New soundproof case of compressor
- High-density sound-absorbing material



- Quiet design of refrigerant flow
- Simulated vibration absorption of pipeline
- Vibration absorption of outdoor cabinet



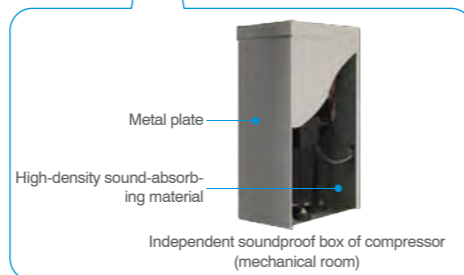
- Silent function at night
- Up-converting start with low noise
- Quiet design of EVI jet loop noise



New soundproof case of compressor

The outdoor unit adopts an independent soundproof box designed to effectively reduce noise and protect the compressor. With the high-density sound-absorbing material attached to the inner wall of the box, the whole machine has three layers of noise reduction which effectively absorb and block the noise of the compressor in the high, medium and low frequency bands, achieving great noise reducing result.

Patent number: ZL201420515518.4



Indoor unit noise control

The noise of indoor unit is reduced to as low as 23dB (A) with the method based on the research of operation venue, structure features, and operation control.



20dB(A)
The rustle of leaves



23dB(A)
EK duct machine



30dB(A)
Quiet reading room



40dB(A)
Quiet speech room



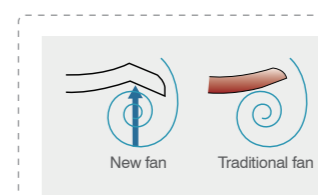
50dB(A)
Office

Streamlined large-diameter blade

The streamlined vortex fan in Ø750mm diameter will reduce pressure loss with lower noise and higher heat exchange efficiency.



—750mm—



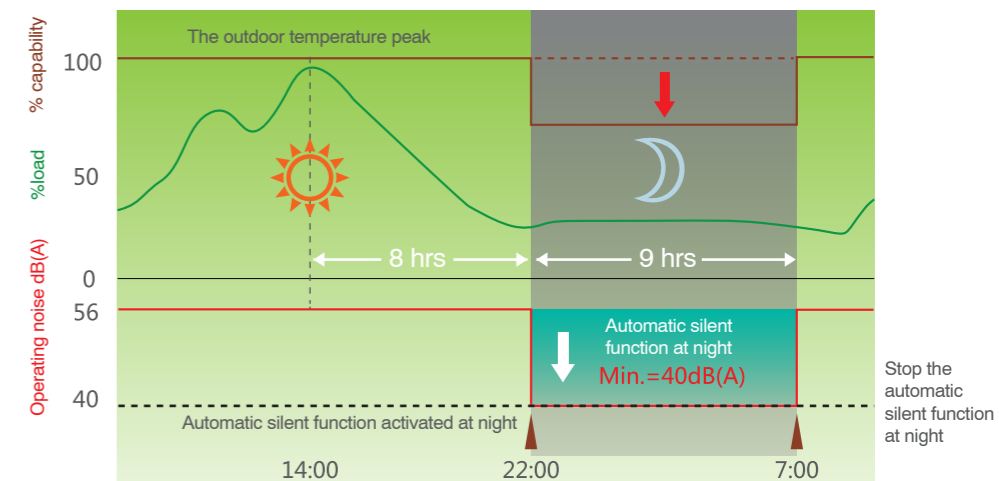
The sharp edges of the blade is optimized by CFD airflow analysis to reduce energy loss and noise.

Automatic silent mode all day

When the system is under partial load, the outdoor fan automatically reduces speed according to the pressure, the unit adjust automatically to perfectly matches the room load to reduce operating noise automatically.

Silent night mode

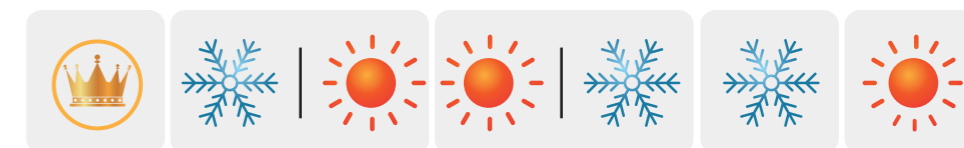
The silent night mode of outdoor unit has the lowest noise as low as 40 db to create a comfortable and quiet night environment.



Create a comfortable temperature

VIP function

Multiple operation modes: VIP priority, cooling priority, heating priority, cooling only, heating only.



VIP first

Cooling first

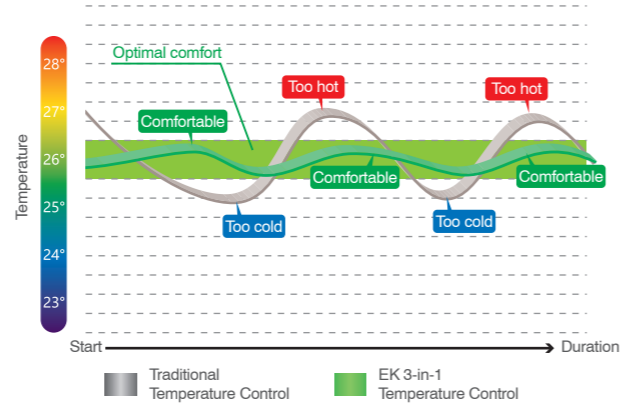
Heating first

Cooling only

Heating only

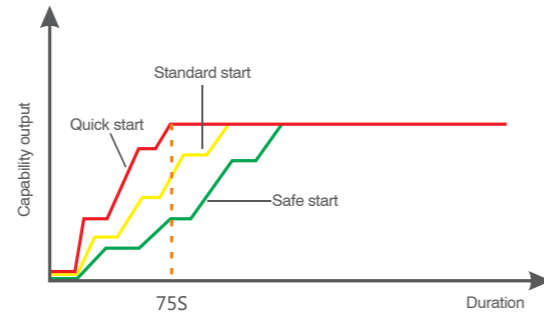
3-in-1 temperature sensing design

The temperature sensor will accurately detect the temperatures of air supply, the return air and the indoor environment. The control chip of indoor unit intelligently detects temperature changes, automatically adjusting the actual cooling or heating capacity of the indoor unit to maintaining the indoor temperature control as accurate as ±0.5°C, delivering the air in the most comfortable temperature range for users. The indoor air return port and the wire controller has one temperature sensors respectively, both are standby for each other. When one fails, the system automatically switch to another sensor to ensure the stable operation of the system.



Quick start cooling (heating) to reach the set temperature fast

By EK DC VF quick start design, the system can be started in different modes as fast as 75S based on the on-site installation and usage.



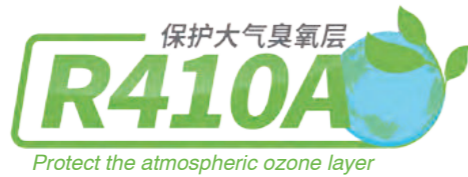
A green AC to support a green earth

Respond to the RoHS Directive

RoHS, or Restriction of Hazardous Substances Directive prohibits using the following six hazardous substances (lead, mercury, cadmium, hexavalent chromium, polybrominated diphenyl ether (PBDE) or (PBB) in electrical and electronic equipment. As a response to RoHS, EK AC actively and strictly controls the use of hazardous substances, aiming to protect the health of users to ensure the compliant recycling and processing of waste electrical and electronic equipment.

Create green buildings by energy saving and environmental protection

EKRV-E series adopts R410A green refrigerant with 0 ODP that is safe to the ozone layer. The product has passed the China Environmental Labeling and LEED, proving that it offers a green and environmentally friendly environment while being efficient and energy-saving.



Comfortable and clean air solution

In recent years, more and more attention has been paid to the indoor air quality, especially in places which require a cleaner and healthier environment such as hospitals. EK pays attention to air quality and brings fresh air with innovative technology. EK concealed air duct unit and duct-type high static pressure unit offer various air purification solutions to ensure indoor fresh air.

PM 2.5 + formaldehyde removal composite filter screen

EKCC IDU can be equipped with PM 2.5 + formaldehyde removal composite filter screen. The filter element is injected with static electricity through special materials. The static electricity on the filter material will last for a long time and easily capture PM 2.5. The synthetic fiber material is moisture-proof and mold-proof. The filter element of the other half is made of active composite material. The catalyst is used to absorb harmful volatile gases such as formaldehyde. The composite filter screen can filter 98 percent of PM 2.5 and 95 percent of formaldehyde according to the test result of a third party.



Photocatalyst filter screen

It is a TiO₂ screen, and irradiated with UV light to decompose harmful gases in the air such as formaldehyde and benzene and kill microorganisms such as molds and bacteria through catalysis.

High-voltage static electricity filter

According to the principle of high-voltage static electricity, the fine particles in the air are ionized in the electric field area. According to the principle of positive and negative attraction, the fine particles in the air are collected on the integrated board to achieve air purification. In addition, the microbes and molds in the air will have their biological structure destroyed under high-voltage ionization to achieve the effect of killing bacteria. The high-voltage static electricity is customized. For details, consult technical engineers.

IDU antibacterial fins

EKCC-F series air duct IDU and EKCK-H series surrounding air embedded IDU adopt silver ion coating fins, which can inhibit 99 percent of Escherichia coli and Staphylococcus and keep a healthy and comfortable indoor air environment.

- (1). The third party test report of the PM 2.5 + formaldehyde filter screen
- (2). The third party test report of IDU antibacterial fins



The third party test report of the PM 2.5 + formaldehyde filter screen

The third party test report of IDU antibacterial fins

Comfortable and clean air solution

EKCC-F series filter screen options

Model	G2 filter	Photocatalyst sterilization filter screen	PM 2.5 + formaldehyde filter screen	Remarks
	Calculated resistance 10Pa	Calculated resistance 20Pa	Calculated resistance 30Pa	
EKCC18-40F1-L	ACRV-G2-F1E	ACRV-PAP-F1E	x	When the low static pressure duct is not connected to the air supply pipe, the photocatalyst sterilization filter can be configured.
EKCC45-56F1-L	ACRV-G2-F2E	ACRV-PAP-F2E	x	
EKCC63-80F1-L	ACRV-G2-F3E	ACRV-PAP-F3E	x	
EKCC90-160F1-L	ACRV-G2-F5D	ACRV-PAP-F5D	x	
EKCC18-40F1-LE EKCC22-36F1-M	ACRV-G2-F1E	ACRV-PAP-F1E	ACRV-JQPM-F1E	
EKCC45-56F1-LE EKCC40-56F1-M	ACRV-G2-F2E	ACRV-PAP-F2E	ACRV-JQPM-F2E	
EKCC63-80F1-LE EKCC63-80F1-M	ACRV-G2-F3E	ACRV-PAP-F3E	ACRV-JQPM-F3E	
EKCC90-160F1-LE EKCC90-140F1-M EKCC71-112F1-H	ACRV-G2-F5D	ACRV-PAP-F5D	ACRV-JQPM-F5D	
EKCC160-180F1-M EKCC125-180F1-H	ACRV-G2-F5C	ACRV-PAP-F5C	ACRV-JQPM-F5C	

EKSL series and EKDB series

Series	Model	G2 filter	G4 filter	Remarks
		Calculated resistance 10Pa	Calculated resistance 70Pa	
Jet unit	EKSL050A1	ACDB-G2-1	ACDB-G4-1	
	EKSL065~090A1	ACDB-G2-2	ACDB-G4-2	
	EKSL100~115A1	ACDB-G2-3	ACDB-G4-3	
	EKSL130~140A1	ACDB-G2-4	ACDB-G4-4	
Fresh air unit	EKDB224-560C1X	ACDB-G2-1	ACDB-G4-1	
	EKDB680-790C1X	ACDB-G2-2	ACDB-G4-2	
Air return duct unit	EKDB250-280C1	ACDB-G2-1	ACDB-G4-1	
	EKDB335-500C1	ACDB-G2-2	ACDB-G4-2	
	EKDB560-615C1	ACDB-G2-3	ACDB-G4-3	
	EKDB680-790C1	ACDB-G2-4	ACDB-G4-4	

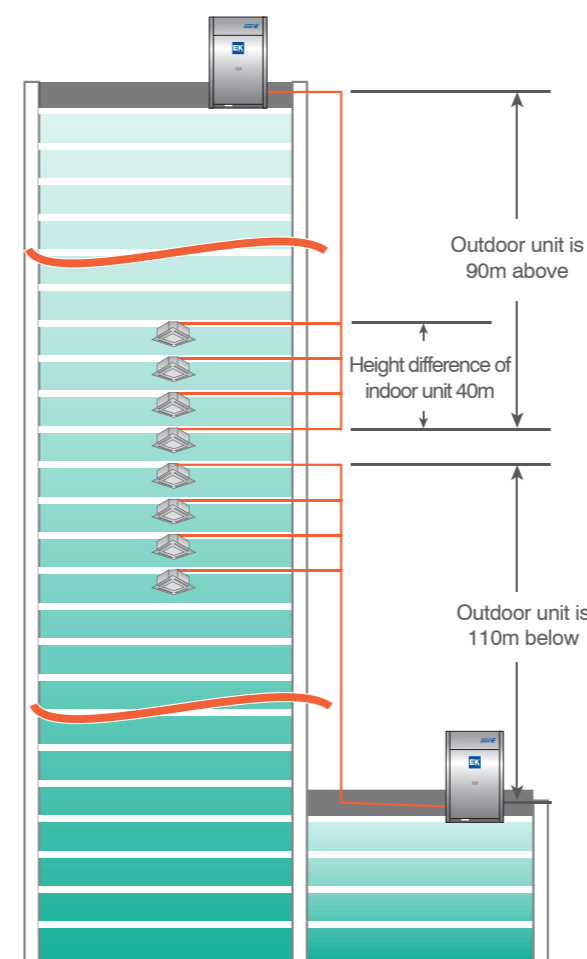
EKCK-H series DC ceiling unit filter screen options

Model	Photocatalytic filter	Electrostatic dedusting and sterilizing filter
Function	Conduct sterilization, and decompose formaldehyde	The pass rate of microorganism is not more than 10%, that of particulate matter is not more than 5% by weight, and the resistance is less than 50Pa
EKCK28-160H1	ACRV-CKH-Custom	ACRV-CKH-IFD

Time-saving without worrying
Human labor saving and
cost-saving for installation



Extra long piping



Max. piping length

1100m

Max. length of the equivalent single tube **220m**
Max. length of the actual single tube **190m**

Max. drop between indoor and outdoor units

Outdoor unit is **90m** above
Outdoor unit is **110m** below

Max. drop between indoor unit **40m**

Max. pipe length after the first branch pipe
90m

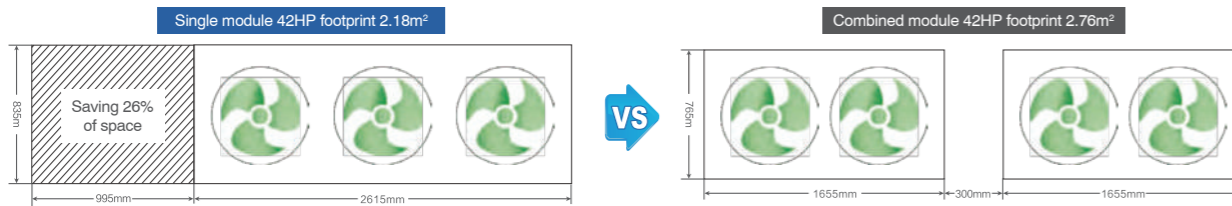


- *Note: Please consult EK engineer if:
1. The outdoor unit is on the top with a drop of more than 50m between the indoor and outdoor units;
 2. The outdoor unit is on the bottom with a drop of more than 40m between the indoor and outdoor units;
 3. The drop between indoor units exceeds 20m;
 4. The max. pipe length after the first branch pipe exceeds 40m.

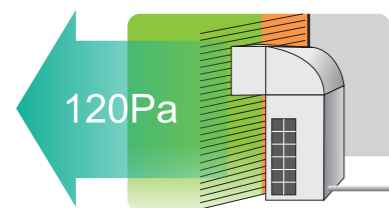
Small footprint

Space is important for modern buildings. EKR-V-E series of VRF central AC is highly integrated with the max. capacity of a single module can reach 42HP. It strives to use each inch of space in a building for more convenient AC construction and design.

- Single model reaches up to 42HP, a foot print of only 2.18m², saving more than 26% of the area compared to traditional combination models.
- Save the installation space of tube wells and reduce the difficulty of refrigerant pipeline connection and construction.



Flexible application



The external static pressure is adaptive to ensure the cooling effect of the unit.
Note: For static pressure above 85Pa, please consult the EK engineer.



The EKCC/EKCK internal unit has a float water level switch as standard. It will alarm when the drain pipe is dirty against any leakage.

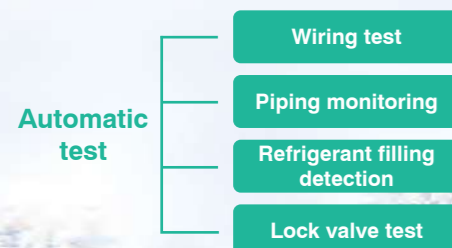


360° consideration for easy installation.

Smart debugging

The function of trial operation for EKR-V-E will not only improve the construction speed, but also guarantee the construction quality of the construction site.

- Automatically check the various connection wiring between indoor and outdoor units to confirm correctness.
- According to the actual system conditions such as the configuration of indoor and outdoor units, the length of refrigerant piping, etc., it automatically checks whether the refrigerant filling in the system is within a reasonable range.
- Automatically check whether the locking valve of each outdoor unit module is working properly to ensure the normal operation of the whole system.
- The trial operation can be connected to the smart diagnosis and debugging software, allowing a quick and comprehensive diagnosis of the AC for convenient debugging and maintenance.



Self-recognition and correction of phase sequence

Both the compressor and fan have DC motors. In case of wrong phase sequence of power distribution is wrong, the unit can identify the phase sequence and automatically correct it for normal operation.

Automatic test for abnormal pipeline function

The system monitors the operating status in real time according to the configured temperature and pressure sensors, locating any problem (takeover errors, leaks, etc.) in the system pipeline in time.

Non-polar communication and automatic addressing of outdoor unit

The communication between the outdoor and the indoor units is connected through a non-polar shielded twisted pair. Simple and safe control without address setting for each internal machine during debugging. The controller automatically register the addresses for all internal machines under the system without manual dialing.

Automatic circuit repair

The unit may be damaged by many factors such as excessive temperature, excessive current, and excessive refrigerant pressure. In such case, the system will alarm in time, while the electronic control circuit class can be automatically repaired.

Strong current protection

When the live and neutral wires of the outdoor unit are connected incorrectly, the circuit will be automatically protected to avoid impact and damage to the inverter and compressor.

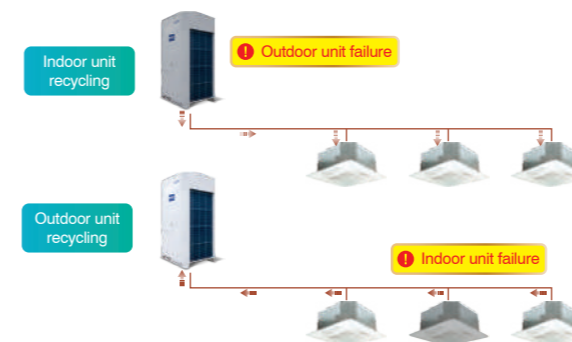
Protection against wrong connection of strong and weak current

The weak current part of the main control board has an "L" type crimping terminals as standard. Because the wire diameter of the strong wire is too large to be pressed onto the "L" terminal, the wrong connection of the strong current and the weak current from the root are avoided from the root.

Convenient Maintenance

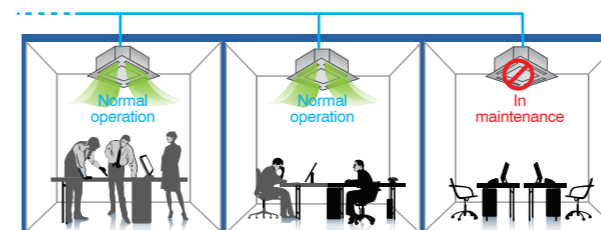
Automatic refrigerant recycling

According to the maintenance requirements, the refrigerant can be automatically recycled to the outdoor or the indoor unit side, reducing waste caused by refrigerant discharge during maintenance.



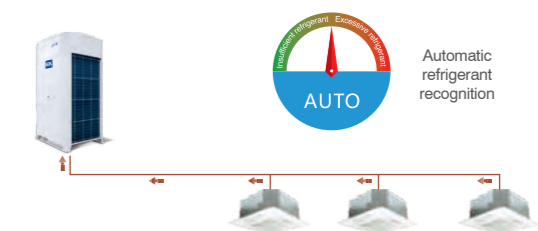
Emergency maintenance of power failure for indoor unit

When emergency power-off maintenance is required for an indoor unit, the unit can be powered off alone without affecting the operation of the entire system.



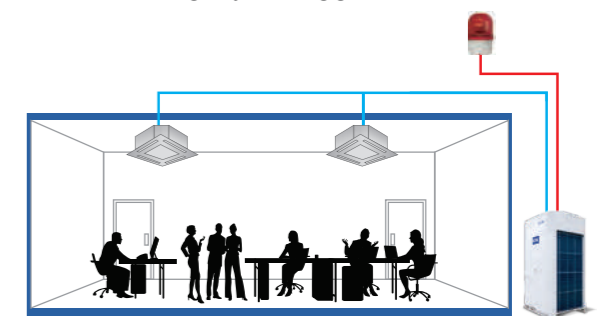
Automatic recognition of refrigerant charge

The unit will automatically detect whether the refrigerant charge in the system is appropriate according to the actual configuration of the indoor unit and the length of the refrigerant piping. When the charge is insufficient, it will remind the technicians to charge in time for stable and efficient operation.



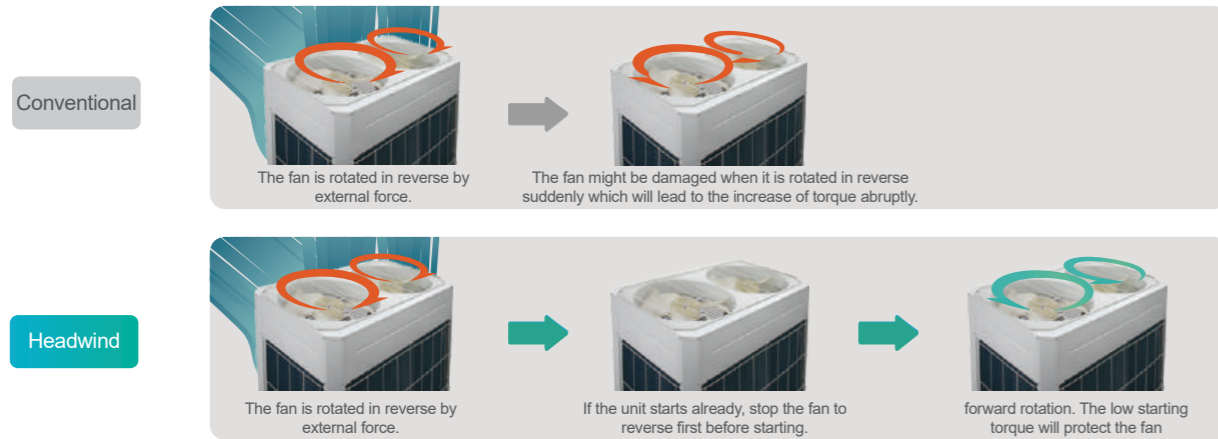
Emergency stop

Without remote monitoring, the outdoor unit can be directly connected to the connected fire alarm to immediately stop the operation of the whole unit in an emergency, avoiding greater risk losses.



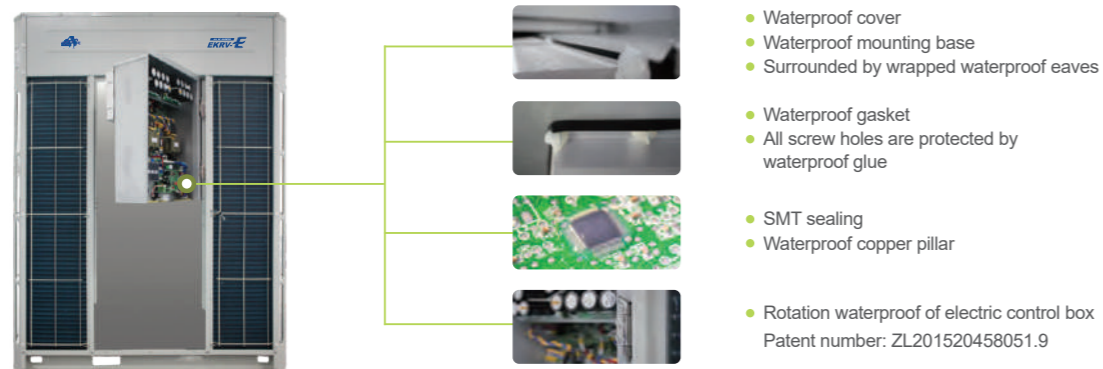
Against head wind of outdoor fan

If the fan of the outdoor unit rotates in the reverse direction under strong wind, turning on the AC in such case might damage the fan because a sudden start might lead to the increase of the motor torque in short time.



Electrical box rotating, waterproof design

Since electrical components are sensitive to water, the electrical control box of the EKR-E series adopts a layered design with multiple waterproof measures. Therefore the electrical components are effectively protected, while the service life of the unit will be extended. The rotation design of the electrical box brings great convenience to debugging and maintenance.



Anti-wind and snow & reverse cleaning

The outdoor unit has the anti-wind and snow function to prevent the unit from being covered by heavy snow when the unit is not running. It also has the reverse cleaning function to clean the heat exchanger to improve the heat exchange efficiency.

● Consult EK technicians for details of the above functions

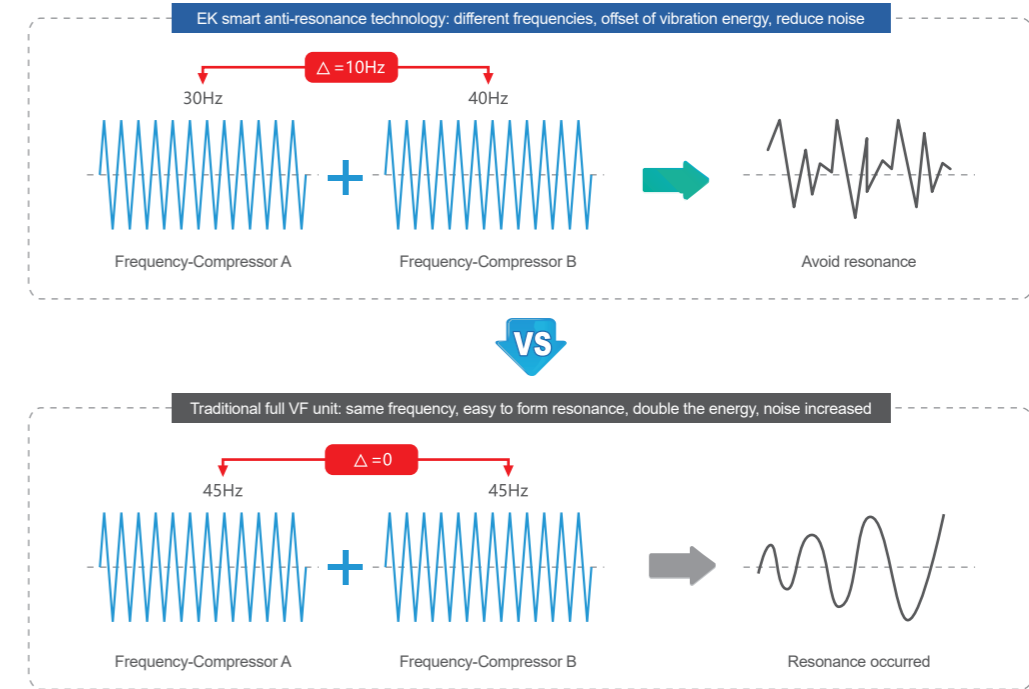


Lightning protection

The lightning protection function of the outdoor unit will protect the unit from damage by lightning strikes, effectively protecting safe and stable unit operation.

Smart anti-resonance technology

The outdoor unit can automatically adjust the frequency difference between the two compressors during operation to prevent system resonance, improving system stability, and reduce system noise.



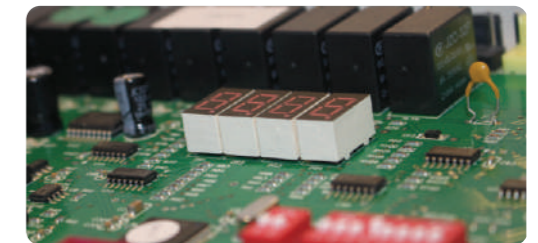
Black box function

The fault storage function of the system can query and record fault data, assist service staff to adjust and analyze the failure cause correctly and rapidly.



Automatic fault detection

With the 7-segment luminous digital tubes, the operation status is displayed visually and directly for more convenient debugging and after-sales service.



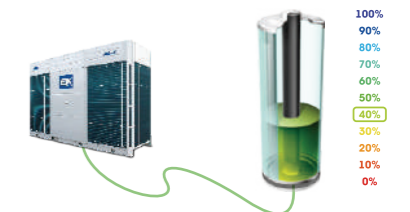
Self-start by power restoration

When the power is restored after an unexpected blackout, the system automatically restores the operating state before the power failure without manual intervene.



Smart power saving mode

The unit can set a variety of energy-saving operation modes according to regional power restriction requirements to save energy.














Smart Control System

Convenient and easy operations

EK smart control

EKR-V-E series VRF provides diversified control methods for customers to meet the requirements of different applications.

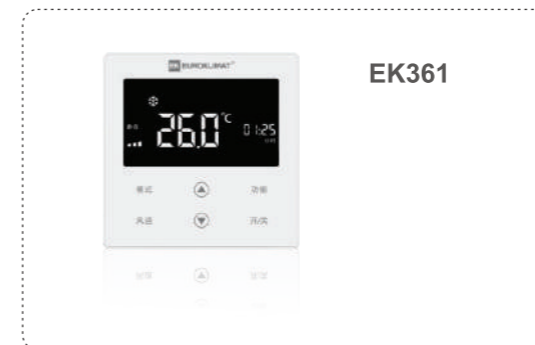
Controller	Design	Model	Features	Description
Remote controller		EK136	<ul style="list-style-type: none"> Controlled separately Applicable to IDUs of all series 	<ul style="list-style-type: none"> Battery-powered, placed freely, used flexibly
Receiver		EK238	<ul style="list-style-type: none"> Receiver is required when the IDU of EKCC/EKDB series is equipped with a remote controller 	<ul style="list-style-type: none"> No power supply, and connected to the main board of the IDU
Wire controller		EK361	<ul style="list-style-type: none"> Controlled separately, and applicable to IDUs of all series Equipped with EK136 wireless remote controller 	<ul style="list-style-type: none"> Installed on the wall, and not easy to lose No battery, and powered by the corresponding IDU Receive the signal from the remote controller
Gateway		EK510	<ul style="list-style-type: none"> Centralized control together with BAS One EK510 gateway for each ODU 	<ul style="list-style-type: none"> 220V single phase power supply with power adapter Connected to the ODU master unit with a communication cable
Touchscreen centralized controller		CMP03	<ul style="list-style-type: none"> Centrally monitor and manage a maximum of 8 sets of the VRF units 	<ul style="list-style-type: none"> Installed on the wall, and not easy to lose No battery, 220V to 12V adapter included Full touchscreen display
Household billing		MBS03C	<ul style="list-style-type: none"> Centralized control and billing of up to 128 sets of VRF systems 	<ul style="list-style-type: none"> Accurate billing for easy management Real-time monitoring of system operation status Authority limit, recharge management, user setting, and other strong functions Single or group control, easy to manage
Power distributor		MBS03A	<ul style="list-style-type: none"> 1 set of household billing can connect up to 16 power distributors 1 power distributor can connect up to 8 VRF systems 	<ul style="list-style-type: none"> Household billing accessories Power distributor, accurately distribute power consumption
Battery backup		MBS03B	<ul style="list-style-type: none"> 1 power backup device adapts to 8 power distributors at most 	<ul style="list-style-type: none"> Household billing accessories Power backup device, real-time backup data
Building control		MODBUS03	<ul style="list-style-type: none"> Provide MODBUS general protocol for building automation control 	<ul style="list-style-type: none"> Through the MODBUS protocol, the AC and other systems in the building can be centrally managed building automation control
Smart cloud control system		CLOUD03	<ul style="list-style-type: none"> Applicable to any Internet terminal such as mobile phones, tablets and PCs 	<ul style="list-style-type: none"> Remote networking and centrally monitor the VRF unit in real time A concise interface and an obvious status identification
Key card function		DCS03	<ul style="list-style-type: none"> The AC is connected to the key card control system for connected control 	<ul style="list-style-type: none"> Ideal for the key card system in hotels to facilitate management

Wired controller and remote controller



Remote controller

- Large LCD screen
- Power on/off, and temperature setting
- Air conditioning mode (cooling/heating/dry/air supply) settings
- Fan speed options (ultra-high/high/medium/low/auto) and air deflector swing settings
- Timed on/off for a maximum of 24 hours
- Intelligent PTT function
- Wired/wireless controller can control the IDU simultaneously



Wired controller

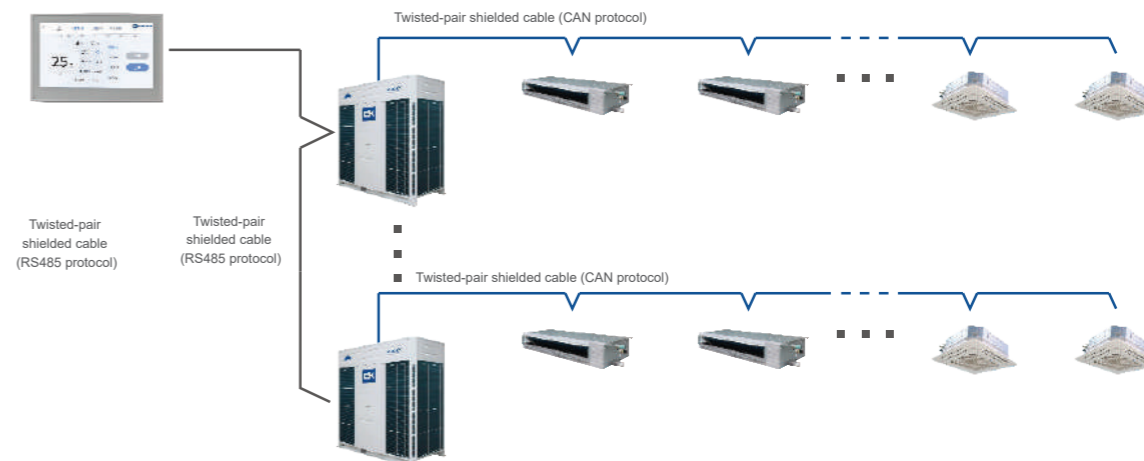
- User-friendly interfaces and touchscreen operation
- Power on/off, and temperature setting
- Cooling/heating/hot water coil heating/dry/air supply mode settings
- Seven fan speed options: ultra-high/high/medium-high/medium/medium-low/low/silent/auto (note: apply only to DC IDUs)
- Timed on/off for a maximum of 24 hours
- Error code display (note: The IDU with hot water coil shall be equipped with the EK361 wired controller)
- Receiver
- Main wired controller
- Controller temperature limit
- Filter screen cleaning prompt
- Controller locking
- ECO

Touchscreen centralized controller

Its interface is simple and easy to operate. It can control 8 sets of the VRF units, and meet various control requirements such as separate control, group centralized control and schedule management.

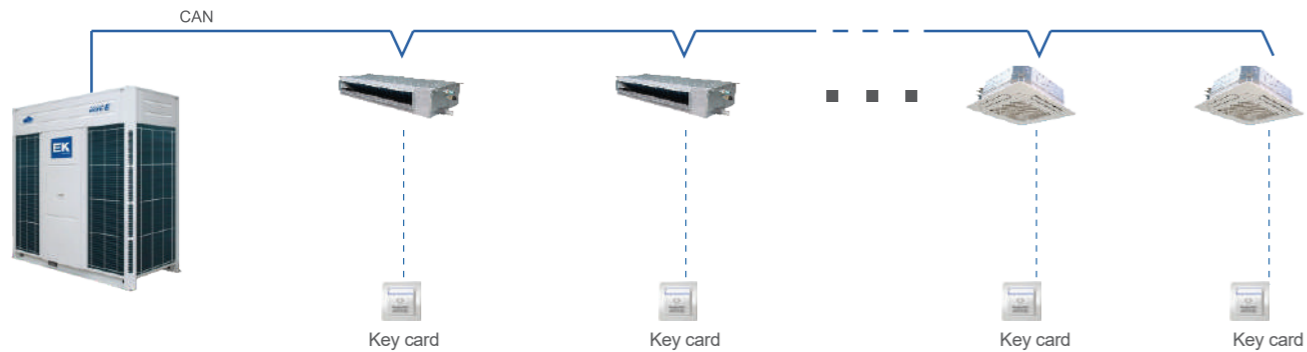


- Mode switching: Dry/cooling/heating/air supply
- Parameter setting: Fan speed, temperature, air deflector angle, auxiliary heat, etc.;
- Schedule management: Weekly and monthly management can be performed on the IDU
- Display function: Error code display



Smart control system of key card

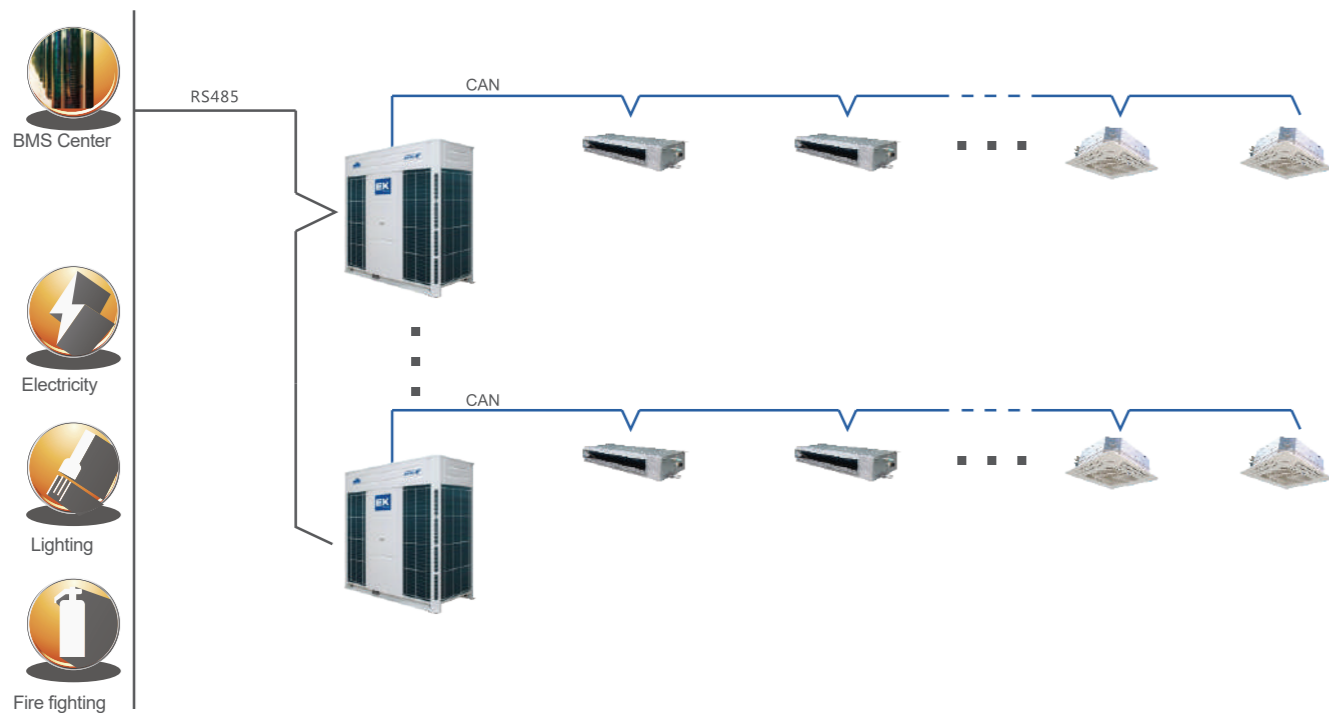
The key card signal interface can be preset on the indoor unit control board, while the relevant indoor unit can be controlled through the key card. Removing the card will shut down the indoor unit. Reinserting the card will turn on the indoor unit again automatically in the operating mode before the card is removed or in the standby mode.



Open smart building control system

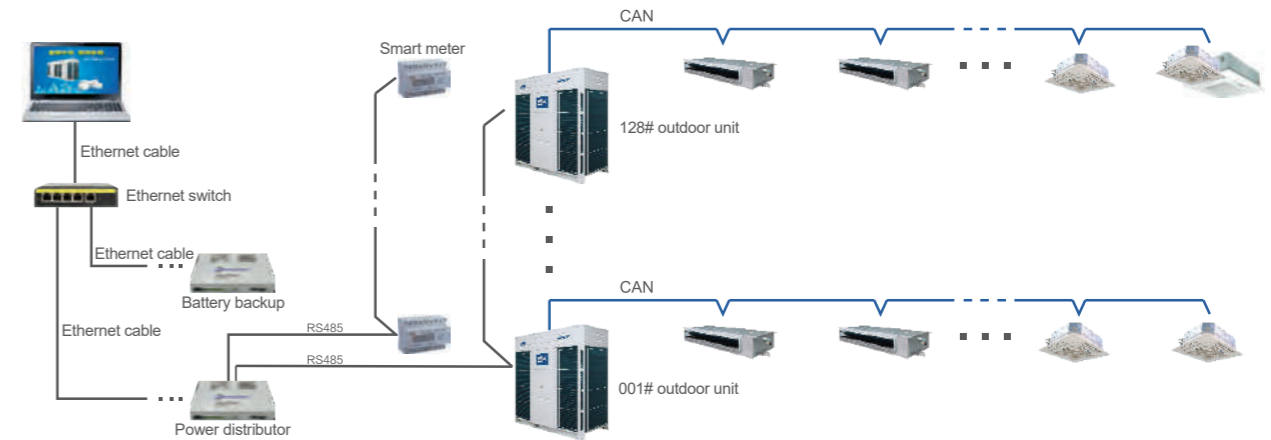
The EK open smart building control system can be applied to the MODBUS protocol. Through the network connection module, the EK VFR AC system is connected to the smart building control system to activate the following functions:

- The monitoring center order the AC by commands (turn on/off, temperature setting, air volume, direction setting, mode setting, etc.)
- Built-in protocol converter for outdoor unit
- Fault alarm and fault code display
- Real-time monitoring of the operation of AC
- Chain control (fire alarm, door lock, lighting, etc.)
- Manage the user authority settings
- Improve management reliability and save management costs



Household billing

The power distributor is connected to the smart meter and the indoor and the outdoor units to read the smart meter data and the real-time operation of both units quickly. According to the refrigerant flow ratio corresponding to the opening of the electronic expansion valve of each indoor unit, and combines the wind speed and return air of the indoor unit state parameters, such as temperature and outdoor unit defrosting, it will accurately distribute and store the total power consumption in real time, before transferring it to the PC through the Ethernet switch. The PC converts the power allocated by each indoor unit into the corresponding cost for features of report and statistics.



The visualized navigation interface of each floor can monitor all the units, implementing authority management for users, while display and save the operation records of all units. It can also automatically count and export the electricity data of indoor units to generate electricity reports for each user.

- User Management
- Smart meter
- Recharge management
- Electricity fee inquiry
- Tiered price
- Allocation setting
- Smart backup
- Schedule management
- Permission setting
- Report printing

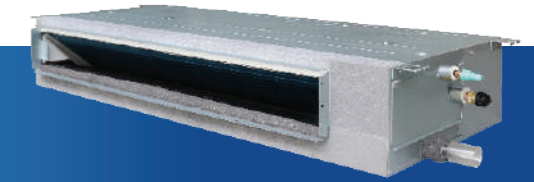
Indoor and Outdoor Line-up



Indoor unit lineup

Name	Specification	Cooling capacity (kW)																																			
		1.8	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0	18.0	25.0	28.0	33.5	45.0	50.0	56.0	61.5	68.0	79.0	90.0	108.0	119.0				
Ceiling concealed (DC) EKCC-F1-LE		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																	
Ceiling concealed (medium static pressure) EKCC-F1-M		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																	
Ceiling concealed (high static pressure) EKCC-F1-H												●	●	●	●	●	●	●	●	●																	
Duct-type air conditioner EKDB-C1																							●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Jet unit EKSL-A1																																					
Surrounding air cassette EKCK-H1					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																	
Two-way air outlet embedded unit EKCK-G1		●	●	●	●	●	●	●	●	●	●	●	●	●																							
Wall-mounted unit EKBG-D1		●	●	●				●	●	●	●	●	●	●																							

Ceiling-mounted concealed indoor unit (EKCC-F1-LE DC)



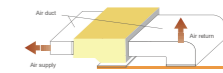
Compact and space saving design

The body thickness of the DC duct unit is minimized to 190mm, and the depth is minimized to 447mm to save you more living space.



Multiple air return modes available

Side air supply and back air return or side air supply and bottom air return, and the site return air mode of the full series can be adjusted.

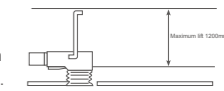


Seven fan speeds are available to create a more comfortable environment

The unit adopts the brushless DC motor with less vibration and lower noise; 7 fan speeds are available for precise adjustment and to create a more comfortable environment (note: EK361 wired controller is needed for the unit with 7 fan speeds). Ultra high - high - medium high - medium - medium low - low - silent - Auto

Condensate water lifting pump (optional)

It comes with a standard water level switch. An optional condensate water lifting pump with the 1200mm high lift (with the check valve) will ensure more flexible installation position.



Fresh air introducing function

A fresh air duct can be connected to introduce outdoor fresh air and ensure indoor ventilation.



9-level ESP is available for free adjustment

With the EK361 wired controller that comes with the DC air duct unit, the unit external static pressure can be adjusted at 9 levels. It helps debug the air duct after installation and makes installation easier.

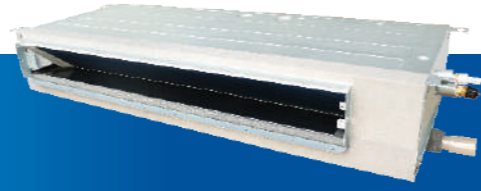
Efficient filter, ensuring fresh air

The sterilization return air filter or PM 2.5 and formaldehyde removal return air filter is available to ensure the indoor fresh and clean air.

Model	Cooling capacity (kW)	Heating capacity (kW)	Air flow (m³/h)	External static pressure (Pa)	Power input (W)	Power supply	Noise Db(A)	Dimensions (mm) (W x D x H)	Weight (kg)	Diameter of connecting pipe (mm)			Control mode
										Liquid pipe	Gas pipe	Drainage pipe (attachment)	
EKCC18F1-LE	1.8	2.2	420/360/310/260	10 (0~50)	18	220V ~ /50Hz	27/25/23/22	700×447×190	15	Φ6.35	Φ12.7		
EKCC22F1-LE	2.2	2.8	420/360/310/260	10 (0~50)	18	220V ~ /50Hz	27/25/23/22	700×447×190	15	Φ6.35	Φ12.7		
EKCC25F1-LE	2.5	3.0	460/400/350/310	10 (0~50)	20	220V ~ /50Hz	28/26/24/22	700×447×190	15	Φ6.35	Φ12.7		
EKCC28F1-LE	2.8	3.3	460/400/350/310	10 (0~50)	20	220V ~ /50Hz	28/26/24/22	700×447×190	15	Φ6.35	Φ12.7		
EKCC32F1-LE	3.2	3.6	550/450/400/350	10 (0~50)	28	220V ~ /50Hz	30/28/27/24	700×447×190	16.5	Φ6.35	Φ12.7		
EKCC36F1-LE	3.6	4.2	550/450/400/350	10 (0~50)	28	220V ~ /50Hz	30/28/27/24	700×447×190	16.5	Φ6.35	Φ12.7		
EKCC40F1-LE	4.0	4.5	600/500/450/400	10 (0~50)	35	220V ~ /50Hz	31/30/28/25	700×447×190	16.5	Φ6.35	Φ12.7		
EKCC45F1-LE	4.5	5.0	750/650/550/450	10 (0~50)	35	220V ~ /50Hz	32/30/28/25	910×447×190	19	Φ6.35	Φ12.7		
EKCC50F1-LE	5.0	5.8	820/700/600/500	10 (0~50)	44	220V ~ /50Hz	33/31/29/25	910×447×190	19	Φ6.35	Φ12.7		
EKCC56F1-LE	5.6	6.5	820/700/600/500	10 (0~50)	44	220V ~ /50Hz	33/31/29/25	910×447×190	19	Φ6.35	Φ12.7	Without pump: ID Φ32	With pump: OD Φ32
EKCC63F1-LE	6.3	7.5	1000/900/800/700	10 (0~50)	53	220V ~ /50Hz	34/32/29/26	1180×447×190	24	Φ9.52	Φ15.88		
EKCC71F1-LE	7.1	8.5	1100/980/860/740	10 (0~50)	57	220V ~ /50Hz	35/33/30/26	1180×447×190	24	Φ9.52	Φ15.88		
EKCC80F1-LE	8.0	9.0	1200/1050/900/800	10 (0~50)	75	220V ~ /50Hz	36/34/31/27	1180×447×190	24	Φ9.52	Φ15.88		
EKCC90F1-LE	9.0	10.0	1600/1400/1200/1050	30 (0~80)	96	220V ~ /50Hz	38/36/35/31	1140×720×268	37.5	Φ9.52	Φ15.88		
EKCC100F1-LE	10.0	11.2	1600/1400/1200/1050	30 (0~80)	96	220V ~ /50Hz	38/36/35/31	1140×720×268	37.5	Φ9.52	Φ15.88		
EKCC112F1-LE	11.2	12.5	1700/1520/1400/1200	30 (0~80)	110	220V ~ /50Hz	40/38/36/32	1140×720×268	37.5	Φ9.52	Φ15.88		
EKCC125F1-LE	12.5	14.0	1900/1700/1550/1300	30 (0~80)	140	220V ~ /50Hz	41/39/37/33	1140×720×268	37.5	Φ9.52	Φ15.88		
EKCC140F1-LE	14.0	16.3	2100/1900/1700/1400	30 (0~80)	170	220V ~ /50Hz	42/40/38/35	1140×720×268	37.5	Φ9.52	Φ15.88		
EKCC160F1-LE	16.0	18.0	2200/1950/1700/1450	30 (0~80)	185	220V ~ /50Hz	43/40/38/35	1140×720×268	37.5	Φ9.52	Φ15.88		

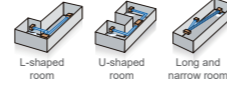
Note: 1. The cooling capacities above are the results of tests performed under the working condition where the indoor dry/wet bulb temperature is 27°C/19°C and the outdoor dry/wet bulb temperature is 35°C/24°C.
 2. The heating capacities above are the results of tests performed under the working condition where the indoor dry/wet bulb temperature is 20°C/15°C and the outdoor dry/wet bulb temperature is 7°C/6°C.
 3. The above noise values are measured in the semi-anechoic chamber, 1.4m below the air conditioner center. In practice, the value is a little higher than the standard value due to the influence of the ambient environment.
 4. The above noise values are measured during operation in the back air return mode; the noise value during operation in the bottom air return mode is about 5dB(A) greater than that during operation in the back air return mode.
 5. When selecting a remote controller, a receiver is also required.

Ceiling-mounted concealed indoor unit (EKCC-F1-M medium static pressure)



High static pressure design

The high static pressure design of the indoor unit can provide long-distance and multi-point air supply for the AC needs in large spaces.



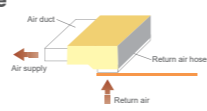
Multi-outlet options

Different types of air outlets can be selected to meet the actual decoration needs of the site according to the AC needs of different places. Various air purification devices are optional.

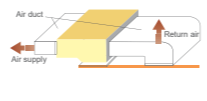


A variety of return air methods are available

Side entry & bottom return: Requires small mounting space on ceiling, and an inspection port shall be left with the indoor unit to ensure smooth service.

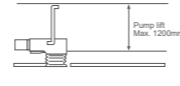


Side entry & back return: If enough installation space is available, recommend the side-entry and back-returning method for air returning to effectively reduce the running sound. Set up inspection ports to ensure smooth maintenance.



Condensate lifting pump (optional)

Optional condensate lifting pump with 1200mm high lift with a check valve to prevent the condensate from backlogging, allowing safer use and more flexible installation position.



Function of introducing new air

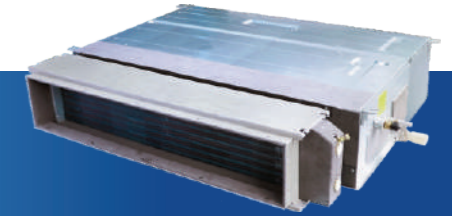
A fresh air duct can be connected for more fresh air from the outside to the inside room.



Efficient filtering, healthy air

Efficient filter accessories are optional which can filter impurities, formaldehyde, PM2.5, etc. in the air, allowing the user to breathe fresh, natural and healthy air anytime.

Dual heat source IDU (EKCC-F series)

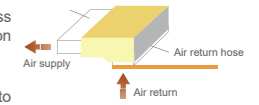


Air conditioning heating + hot water coil heating, double heating

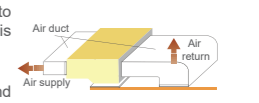
The EKCC-F series dual heat source IDUs support three heating modes: air conditioner heating, air conditioner + hot water coil heating, hot water coil heating, making the place more comfortable.

Multiple air return modes available

Side air supply and bottom air return: The required overall ceiling space is small, and the access port needs to be set in consideration of the indoor decoration to ensure smooth progress of the maintenance work.



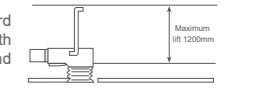
Side air supply and back air return: If the installation space is sufficient, it is recommended to adopt the side air supply and back air return mode to reduce the operation sound effectively. An access port is set to ensure smooth progress of the maintenance work.



Remarks: The back air return mode is configured before delivery, and it can be changed on site as required.

Condensate lifting pump (optional)

It comes with a standard water level switch. A standard condensate water lifting pump with the 1200mm high lift (with the check valve) will prevent condensed water intrusion and ensure safer use and a more flexible installation position.



Fresh air introducing function

A fresh air duct can be connected to introduce outdoor fresh air and ensure indoor ventilation.



Separate installation for easy disassembly

The air duct unit and the hot water coil are connected and installed on site to ensure easy detach for maintenance; In addition, the efficient insulation material is attached to the outer surface of the hot water coil to prevent condensation and water dripping.

Efficient filter, ensuring fresh air (optional)

An efficient filter can be selected to filter impurity, formaldehyde, PM 2.5, and other particles in the air, enabling you to breathe fresh air anytime.

Model	Cooling capacity kW	Heating capacity kW	Supporting electric heating Power kW (Optional)	Standard air volume m³/h	External static pressure Pa	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Weight kg	Specification of connecting pipe mm			Control method
											Liquid pipe	Gas pipe	Drain pipe	
EKCC22F1-M	2.2	2.8	0.9	500/360/280	50(30~50)	55	220V~/50Hz	33/25/24	700x447x190	16.5	Φ6.35	Φ12.7	Φ32	Optional Remote Wire control
EKCC25F1-M	2.5	3.0	0.9	500/360/280	50(30~50)	55	220V~/50Hz	33/25/24	700x447x190	16.5	Φ6.35	Φ12.7	Φ32	
EKCC28F1-M	2.8	3.3	0.9	550/380/290	50(30~50)	58	220V~/50Hz	34/25/24	700x447x190	16.5	Φ6.35	Φ12.7	Φ32	
EKCC32F1-M	3.2	3.6	0.9	550/380/290	50(30~50)	58	220V~/50Hz	34/25/24	700x447x190	16.5	Φ6.35	Φ12.7	Φ32	
EKCC36F1-M	3.6	4.2	0.9	550/380/290	50(30~50)	58	220V~/50Hz	34/25/24	700x447x190	16.5	Φ6.35	Φ12.7	Φ32	
EKCC40F1-M	4.0	4.5	1.4	800/500/420	50(30~50)	72	220V~/50Hz	35/26/25	910x447x190	19	Φ6.35	Φ12.7	Φ32	
EKCC45F1-M	4.5	5.0	1.4	800/500/420	50(30~50)	72	220V~/50Hz	35/26/25	910x447x190	19	Φ6.35	Φ12.7	Φ32	
EKCC50F1-M	5.0	5.8	1.4	800/500/420	50(30~50)	72	220V~/50Hz	35/26/25	910x447x190	19	Φ6.35	Φ12.7	Φ32	
EKCC56F1-M	5.6	6.5	1.4	800/500/420	50(30~50)	72	220V~/50Hz	35/26/25	910x447x190	19	Φ6.35	Φ12.7	Φ32	
EKCC63F1-M	6.3	7.5	1.8	1200/960/810	50(30~50)	97	220V~/50Hz	37/35/27	1180x447x190	24	Φ9.52	Φ15.88	Φ32	
EKCC71F1-M	7.1	8.5	1.8	1200/960/810	50(30~50)	97	220V~/50Hz	37/35/27	1180x447x190	24	Φ9.52	Φ15.88	Φ32	
EKCC80F1-M	8.0	9.0	1.8	1200/960/810	50(30~50)	97	220V~/50Hz	37/35/27	1180x447x190	24	Φ9.52	Φ15.88	Φ32	
EKCC90F1-M	9.0	10.0	3.6	2000/1640/1250	80(60~100)	194	220V~/50Hz (When supporting heat is on: 380V/3N~/50Hz)	43/38/36	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	
EKCC100F1-M	10.0	11.2	3.6	2000/1640/1250	80(60~100)	194		43/38/36	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	
EKCC112F1-M	11.2	12.5	3.6	2000/1640/1250	80(60~100)	194		43/38/36	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	
EKCC125F1-M	12.5	14.0	3.6	2280/1890/1470	80(60~100)	228		44/39/37	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	
EKCC140F1-M	14.0	16.3	3.6	2280/1890/1470	80(60~100)	228		44/39/37	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	
EKCC160F1-M	16.0	18.0	3.6	2520/2160/1720	80(60~100)	240		44/38/37	1300x800x350	54	Φ9.52	Φ15.88	Φ32	
EKCC180F1-M	18.0	20.0	3.6	2520/2160/1720	80(60~100)	240		44/38/37	1300x800x350	54	Φ9.52	Φ15.88	Φ32	

- Note: 1. The model name of the above indoor units will have a suffix "-D" if supporting electric heating is selected, for example "EKCC22F1-M-D";
- If supporting electric heating is selected, the unit weight will be changed, please consult EK engineer for details;
 - The above standard cooling capacity is the tested under the indoor dry/wet bulb temperature of 27/19 and outdoor dry/wet bulb temperature of 35/24;
 - The above standard heating capacity is the tested under the indoor dry/wet bulb temperature of 20/15 and outdoor dry/wet bulb temperature of 7/6;
 - The above noise values are measured in a semi-anechoic at a spot 1.4m below the center of the AC. The actual operation might have a higher value due to the external exposures;
 - The above noise value is that of the rear return air mode. The value of the bottom return air mode is about 5dB (A) higher than the value.

Coil type	Corresponding unit type	Standard air flow (m³/h)	Coil water flow (m³/h)	Coil heating capacity (kW)	Water resistance (kPa)	Coil air resistance (Pa)	Coil dimension (W x D x H) (mm)	Coil weight (kg)	Coil water inlet/outlet pipe
	EKCC25F1-M	500/360/280	0.46	3.5	14	14	658×238×233	8	
	EKCC28F1-M	550/380/290	0.49	3.7	15	16	658×238×233	8	
	EKCC32F1-M	550/380/290	0.49	3.7	15	16	658×238×233	8	
	EKCC36F1-M	550/380/290	0.49	3.7	15	16	658×238×233	8	
ACRV-WH-2	EKCC40F1-M	800/500/420	0.63	5.8	19	17	868×238×233	9.5	
	EKCC45F1-M	800/500/420	0.63	5.8	19	17	868×238×233	9.5	
	EKCC50F1-M	800/500/420	0.63	5.8	19	17	868×238×233	9.5	
	EKCC56F1-M	800/500/420	0.63	5.8	19	17	868×238×233	9.5	
ACRV-WH-3	EKCC63F1-M	1200/960/810	1.01	8.6	23	20	1138×238×233	11	
	EKCC71F1-M	1200/960/810	1.01	8.6	23	20	1138×238×233	11	
	EKCC80F1-M	1200/960/810	1.01	8.6	23	20	1138×238×233	11	
	EKCC90F1-M	2000/1640/1250	1.33	13.2	24	40	1104×238×275	13	
ACRV-WH-4	EKCC100F1-M	2000/1640/1250	1.33	13.2	24	40	1104×238×275	13	
	EKCC112F1-M	2000/1640/1250	1.33	13.2	24	40	1104×238×275	13	
	EKCC125F1-M	2280/1890/1470	1.44	14.2	28	48	1104×238×275	13	
	EKCC140F1-M	2280/1890/1470	1.44	14.2	28	48	1104×238×275	13	
ACRV-WH-5	EKCC160F1-M	2520/2160/1720	1.85	18.5	30	50	1323×238×275	15.5	
	EKCC180F1-M	2520/2160/1720	1.85	18.5	30	50	1323×238×275	15.5	

Note: The heating capacities above are the results of tests performed under the working condition where the indoor dry/wet bulb temperature is 20°C/15°C and the coil inlet water temperature is 60°C.

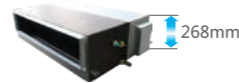
Ceiling-mounted concealed indoor unit (EKCC-F1-H high static pressure)



Save installation space

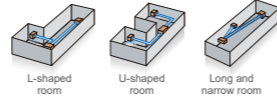
With a minimum height of 268mm, the unit needs a small space on the ceiling, ensuring more diversified use.

Note: The size data is slightly different subject to types. See the parameter table below for details.



High static pressure design

The high static pressure design of the indoor unit can provide long-distance and multi-point air supply for the AC needs in large spaces.



Multi-outlet options

Different types of air outlets can be selected to meet the actual decoration needs of the site according to the AC needs of different places.

Various air purification devices are optional.



Introduce fresh air, efficient filtration

The unit can introduce an appropriate amount of fresh air from outdoor to mix with the return air, ensuring more comfort AC experience. The ultra-high external static pressure guarantees more choices for indoor filtration devices, preparing fresh, natural and healthy air anytime you want.

Efficient filtering, healthy air

Efficient filter accessories are optional which can filter impurities, formaldehyde, PM2.5, etc. in the air, allowing the user to breathe fresh, natural and healthy air anytime.

Model	Cooling capacity (kW)	Heating capacity (kW)	Supporting electric heating Power (kW) (Optional)	Standard air volume (m³/h)	External static pressure (Pa)	Input power (W)	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Weight (kg)	Specification of connecting pipe (mm)			Control method
											Liquid pipe	Gas pipe	Drain pipe	
EKCC71F1-H	7.1	8.5	-	1680/1230/960	120(100~150)	248	220V~/50Hz	43/42/39	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	Optional Remote Wire control
EKCC80F1-H	8.0	9.0	-	1680/1230/960	120(100~150)	248	220V~/50Hz	43/42/39	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	
EKCC90F1-H	9.0	10.0	-	1840/1510/1230	120(100~150)	261	220V~/50Hz	44/42/40	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	
EKCC100F1-H	10.0	11.2	-	1840/1510/1230	120(100~150)	261	220V~/50Hz	44/42/40	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	
EKCC112F1-H	11.2	12.5	-	1840/1510/1230	120(100~150)	261	220V~/50Hz	44/42/40	1140x720x268	37.5	Φ9.52	Φ15.88	Φ32	
EKCC125F1-H	12.5	14.0	-	2500/2050/1780	120(100~150)	367	220V~/50Hz	45/43/41	1300x800x350	54	Φ9.52	Φ15.88	Φ32	
EKCC140F1-H	14.0	16.3	-	2500/2050/1880	120(100~150)	367	220V~/50Hz	45/43/41	1300x800x350	54	Φ9.52	Φ15.88	Φ32	
EKCC160F1-H	16.0	18.0	-	2620/2200/1950	120(100~150)	388	220V~/50Hz	46/44/42	1300x800x350	54	Φ9.52	Φ15.88	Φ32	
EKCC180F1-H	18.0	20.0	-	2620/2200/1950	120(100~150)	388	220V~/50Hz	46/44/42	1300x800x350	54	Φ9.52	Φ15.88	Φ32	
EKCC71F1-H-D	7.1	8.5	3.6	1680/1230/960	120(100~150)	248	380V/3N~/50Hz	43/42/39	1140x720x268	39	Φ9.52	Φ15.88	Φ32	
EKCC80F1-H-D	8.0	9.0	3.6	1680/1230/960	120(100~150)	248	380V/3N~/50Hz	43/42/39	1140x720x268	39	Φ9.52	Φ15.88	Φ32	
EKCC90F1-H-D	9.0	10.0	3.6	1840/1510/1230	120(100~150)	261	380V/3N~/50Hz	44/42/40	1140x720x268	39	Φ9.52	Φ15.88	Φ32	
EKCC100F1-H-D	10.0	11.2	3.6	1840/1510/1230	120(100~150)	261	380V/3N~/50Hz	44/42/40	1140x720x268	39	Φ9.52	Φ15.88	Φ32	
EKCC112F1-H-D	11.2	12.5	3.6	1840/1510/1230	120(100~150)	261	380V/3N~/50Hz	44/42/40	1140x720x268	39	Φ9.52	Φ15.88	Φ32	
EKCC125F1-H-D	12.5	14.0	3.6	2500/2050/1780	120(100~150)	367	380V/3N~/50Hz	45/43/41	1300x800x350	56	Φ9.52	Φ15.88	Φ32	
EKCC140F1-H-D	14.0	16.3	3.6	2500/2050/1880	120(100~150)	367	380V/3N~/50Hz	45/43/41	1300x800x350	56	Φ9.52	Φ15.88	Φ32	
EKCC160F1-H-D	16.0	18.0	3.6	2620/2200/1950	120(100~150)	388	380V/3N~/50Hz	46/44/42	1300x800x350	56	Φ9.52	Φ15.88	Φ32	
EKCC180F1-H-D	18.0	20.0	3.6	2620/2200/1950	120(100~150)	388	380V/3N~/50Hz	46/44/42	1300x800x350	56	Φ9.52	Φ15.88	Φ32	

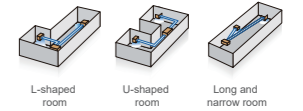
- Note: 1. The above standard cooling capacity is the test result under the indoor dry/wet bulb temperature of 27/19℃ and outdoor dry/wet bulb temperature of 35/24℃;
 2. The above standard heating capacity is the test result under the indoor dry/wet bulb temperature of 20/15℃ and outdoor dry/wet bulb temperature of 7/6℃;
 3. The above noise values are measured in a semi-anechoic at a spot 1.4m below the center of the AC. The actual operation might have a higher value due to the external exposures.

Duct-type indoor unit (EKDB-C1 series)



High static pressure design

With the high static pressure design, the IDU can implement multi-point air supply at a long distance to meet the air conditioning demand of a large space.



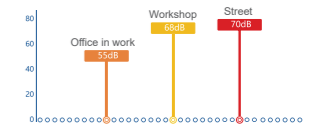
Selection of multiple air supply outlets

The air supply outlets of diversified forms can be selected according to actual decoration requirements on the field to satisfy the air conditioning demands of different sites.



Low operating noises

The IDU adopts the high efficiency and low noise centrifugal fan, sound-absorbing insulation material for the inner wall and dual noise reduction design to ensure low noise operation of the IDU; the IDU can be installed on the ceiling far from the air conditioning area to ultimately meet the indoor low noise demand.



Optional primary- or medium-efficiency filter screen

The long acting nylon filter screen or primary-efficiency G4 filter screen can be equipped to purify the indoor environment; the medium- or high-efficiency filter screen, or sterilization filter screen can also be customized.

Model	Cooling capacity (kW)	Heating capacity (kW)	Standard air flow (m³/h)	External static pressure (Pa)	Power input (W)	Power supply	Noise dB(A)	Dimensions (mm) (W x D x H)	Weight (kg)	Diameter of connecting pipe (mm)			Control mode
										Liquid pipe	Gas pipe	Drainage pipe	
EKDB250C1	25.0	28.0	5000	100/200	1700/1800	220V~/50Hz	60/60	1790×765×470	100	Φ9.52	Φ19.05	Optional remote controller or wired controller	
EKDB280C1	28.0	31.5	5000	100/200	1700/1800	220V~/50Hz	60/60	1790×765×470	100	Φ9.52	Φ22.23		
EKDB335C1	33.5	37.0	6500	150/200/300	1400/1400/1500	380V/3N~/50Hz	62/62/64	1960×895×735	185	Φ12.7	Φ25.4		
EKDB450C1	45.0	50.0	7800	300/400	2200/3000	380V/3N~/50Hz	67/68	1960×895×735	195	Φ12.7	Φ28.6		
EKDB500C1	50.0	56.0	9200	300/500	3000/4000	380V/3N~/50Hz	68/69	1960×895×735	200	Φ15.88	Φ28.6		
EKDB560C1	56.0	62.0	10000	350/500	3800/5000	380V/3N~/50Hz	70/71	2460×895×735	240	Φ15.88	Φ28.6		
EKDB615C1	61.5	69.0	12000	500	5800	380V/3N~/50Hz	74	2460×895×735	250	Φ15.88	Φ28.6		
EKDB680C1	68.0	75.0	13000	500	6000	380V/3N~/50Hz	75	2460×935×875	280	Φ15.88	Φ28.6		
EKDB790C1	79.0	88.0	14500	500	6800	380V/3N~/50Hz	76	2460×935×875	285	Φ19.05	Φ31.8		
EKDB900C1	90.0	100.0	17850	500	7500	380V/3N~/50Hz	78	2250×1380×1480	320	Φ19.05	Φ31.8		
EKDB1080C1	108.0	120.0	20400	500	8500	380V/3N~/50Hz	88	2250×1380×1480	330	Φ19.05	Φ38.1		
EKDB1190C1	119.0	135.0	24500	500	11000	380V/3N~/50Hz	90	2250×1380×1480	340	Φ19.05	Φ38.1		

- Note: 1. The cooling capacities above are the results of tests performed under the working condition where the indoor dry/wet bulb temperature is 27℃/19℃ and the outdoor dry/wet bulb temperature is 35℃/24℃.
 2. The heating capacities above are the results of tests performed under the working condition where the indoor dry/wet bulb temperature is 20℃/15℃ and the outdoor dry/wet bulb temperature is 7℃/6℃.
 3. The above noise value is measured in the semi-anechoic chamber, 1.4 m below the air conditioner center. In practice, the value is a little higher than the standard value due to the influence of the ambient environment.
 4. When selecting a remote controller, a receiver is also required.
 5. The unit of 25-79kW is horizontally ventilated without a long acting filter screen. A long acting filter screen shall be equipped;
 6. The unit of 90-119kW is ventilated at the top with a standard long acting filter screen equipped.

Surrounding air Cassette (EKCK-H1 series DC)

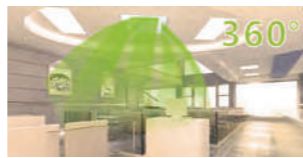


Brushless DC motor, 7 fan speeds

Brand-new panel design, beautiful and concise; the unit adopts the brushless DC motor and centrifugal vortex blades. The blades have undergone dynamic and static balance tests, and their operating noise is proved to be as low as 25 dB(A); the flexible high ceiling air supply design. Seven fan speeds are available to create a more comfortable environment (note: EK361 wired controller shall be used)

360° surrounding air supply

With the surrounding air outlet design, the air can cover more areas, the fan speed is more stable, and the environment is more comfortable. In addition, 4 detachable air outlets of the air duct are equipped for the unit, making it convenient to supply air, more flexible to use.

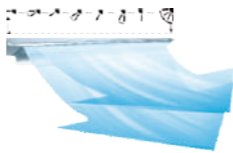


Introducing fresh air for a more comfortable environment

The unit has its own fresh air inlet, which can introduce the outdoor fresh air to improve comfort.

Multi-angle swing setting

The air flow direction can be fixed or set to swing within a certain range. Up to 8 options can meet diverse needs. The special swing design can prevent discomfort caused by direct blowing.



Standard condensate water lifting pump

It comes with a standard water level switch. A standard condensate water lifting pump with the 1200mm high lift (with the check valve) will ensure more flexible installation position.

A standard long acting filter screen is equipped and a dust removal and disinfection filter screen is optional

The return air outlet of the unit is equipped with a standard long acting filter screen to filter particles effectively and make the indoor air cleaner.

Model	Cooling capacity (kW)	Heating capacity (kW)	Air flow (m³/h)	Power input (W)	Power supply	Noise dB(A)	Dimensions (W x D x H) (mm)	Panel Dimensions (W x D x H) (mm)	Weight (kg)	Diameter of connecting pipe (mm)			Control mode
										Liquid pipe	Gas pipe	Drainage hose (attachment)	
EKCK28H1	2.8	3.3	800/700/580/450	20	220V~/50Hz	28/27/26/25	840×840×236	950×950×50	29	Φ6.35	Φ12.7		Optional remote controller or wired controller (Note: Do not select the EK135 remote controller)
EKCK32H1	3.2	3.6	800/700/580/450	20	220V~/50Hz	28/27/26/25	840×840×236	950×950×50	29	Φ6.35	Φ12.7		
EKCK36H1	3.6	4.2	850/720/600/480	24	220V~/50Hz	29/28/26/25	840×840×236	950×950×50	29	Φ6.35	Φ12.7		
EKCK40H1	4.0	4.5	960/800/650/550	26	220V~/50Hz	30/29/28/27	840×840×236	950×950×50	29	Φ6.35	Φ12.7		
EKCK45H1	4.5	5.0	960/800/650/550	26	220V~/50Hz	30/29/28/27	840×840×236	950×950×50	29	Φ6.35	Φ12.7		
EKCK50H1	5.0	5.8	1100/920/720/600	30	220V~/50Hz	32/31/29/27	840×840×236	950×950×50	29	Φ6.35	Φ12.7		
EKCK56H1	5.6	6.5	1100/920/720/600	30	220V~/50Hz	32/31/29/27	840×840×236	950×950×50	29	Φ6.35	Φ12.7		
EKCK63H1	6.3	7.5	1260/1050/850/700	45	220V~/50Hz	35/33/30/28	840×840×236	950×950×50	29.5	Φ9.52	Φ15.88	OD Φ32	
EKCK71H1	7.1	8.5	1260/1050/850/700	45	220V~/50Hz	35/33/30/28	840×840×236	950×950×50	29.5	Φ9.52	Φ15.88		
EKCK80H1	8.0	9.0	1400/1150/950/750	55	220V~/50Hz	38/35/32/30	840×840×236	950×950×50	29.5	Φ9.52	Φ15.88		
EKCK90H1	9.0	10.0	1500/1260/1000/850	60	220V~/50Hz	39/36/33/31	840×840×236	950×950×50	29.5	Φ9.52	Φ15.88		
EKCK100H1	10.0	11.2	1600/1350/1100/900	75	220V~/50Hz	40/37/35/33	840×840×272	950×950×50	33	Φ9.52	Φ15.88		
EKCK112H1	11.2	12.5	1700/1450/1200/900	80	220V~/50Hz	41/38/36/33	840×840×272	950×950×50	33	Φ9.52	Φ15.88		
EKCK125H1	12.5	14.0	1800/1500/1260/1050	100	220V~/50Hz	43/40/37/34	840×840×272	950×950×50	33	Φ9.52	Φ15.88		
EKCK140H1	14.0	16.3	1800/1500/1260/1050	100	220V~/50Hz	43/40/37/34	840×840×272	950×950×50	33	Φ9.52	Φ15.88		
EKCK160H1	16.0	18.0	2150/1900/1550/1260	120	220V~/50Hz	47/44/40/36	840×840×272	950×950×50	33	Φ9.52	Φ15.88		

Note: 1. The cooling capacities above are the results of tests performed under the working condition where the indoor dry/wet bulb temperature is 27°C/19°C and the outdoor dry/wet bulb temperature is 35°C/24°C.
 2. The heating capacities above are the results of tests performed under the working condition where the indoor dry/wet bulb temperature is 20°C/15°C and the outdoor dry/wet bulb temperature is 7°C/6°C.
 3. The above noise values are measured in the semi-anechoic chamber, 1.4m below the air conditioner center. In practice, the value is a little higher than the standard value due to the influence of the ambient environment.

Jet indoor unit (EKSL-A series)



Jet diffuser, back return air design

For places with a large span and poor air flow, the unit is equipped with a spherical air outlet with a long-distance air supply of 15 - 30m, and there is a beautiful design in the air outlet.

Anti-corrosion panel, high-efficiency heat insulation

The new PE material is attached to the inner wall of the unit panel, which can effectively reduce the noise and keep the heat insulation.

Multiple noise reduction technologies

The unit adopts the centrifugal fan that generates less noise. It has multiple nozzles, making the air flow more stable.

Energy-saving management and efficient operation

Switch on the air conditioners in different areas based on the demand, and the inverter makes the unit operate in a more energy-saving way; the flexible air duct can be installed at the air outlet to supply air to the fixed console.

Humidity and purification requirements

An optional humidity sensor can be equipped to realize automatic dry, and meet the requirements of cool warehouse for medicines. An optional primary-efficiency filter screen can be equipped to purify the indoor air, making the place healthier and more comfortable.

Model		EKSL050A1	EKSL065A1	EKSL075A1	EKSL090A1	EKSL100A1	EKSL115A1	EKSL130A1	EKSL140A1	
Return air condition	Cooling capacity	kW	28.0	33.5	45.0	51.0	56.5	62.0	68.0	79.0
	Heating Capacity	kW	31.5	37.5	50.5	57.0	63.0	69.0	75.0	88.0
Workshop condition	Cooling capacity	kW	34.0	45.0	56.5	68.0	79.0	85.2	96.0	108.0
	Heating Capacity	kW	37.5	45.0	57.0	63.0	69.0	75.0	82.5	95.0
Cool warehouse condition	Cooling capacity	kW	16.0	18.0	25.2	28.0	34.0	40.0	45.0	51.0
	Heating Capacity	kW	18.0	20.0	28.0	31.5	37.5	45.0	50.5	57.0
Fresh air condition	Model		EKSL050A1X	EKSL065A1X	EKSL075A1X	EKSL090A1X	EKSL100A1X	EKSL115A1X	EKSL130A1X	EKSL140A1X
	Cooling capacity	kW	45.0	56.5	68.0	79.0	90.0	102.0	114.0	119.0
	Heating Capacity	kW	32.0	40.0	48.5	56.0	64.0	77.0	84.5	96.0
Power input	kW	1.8	1.1	2.2	3.0	3.5	4.5	5.5	5.5	
Air flow	m³/h	5000	6500	7500	9000	10000	11500	13000	14000	
Number of nozzles		3	3	3	3	4	4	4	4	
Maximum range	m	15	20	20	25	25	25	30	30	
Noise	dB(A)	64	66	68	70	73	75	76	78	
Dimensions (W x D x H)	mm	1790×1115×470		1960×1320×735		2460×1315×735		2460×1350×875		
Weight	kg	130	220	230	235	280	290	325	330	
Power supply		220V~/50Hz				380V/3N~/50Hz				
Liquid pipe	mm	Φ9.52	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ19.05	
Gas pipe	mm	Φ22.23	Φ25.4	Φ28.6	Φ28.6	Φ28.6	Φ28.6	Φ28.6	Φ31.8	
Drainage pipe (self-drainage)		External thread R1								

Note: 1. Return air condition: The dry/wet bulb temperature of the cooling room is 27°C/19°C, and the outdoor dry/wet bulb temperature is 35°C/28°C; the dry/wet bulb temperature of the heating room is 20°C/-, and the outdoor dry/wet bulb temperature is 7°C/6°C;
 2. Workshop condition: The dry/wet bulb temperature of the cooling room is 30°C/24°C, and the outdoor dry/wet bulb temperature is 35°C/28°C; The dry/wet bulb temperature of the heating room is 18°C/-, and the outdoor dry/wet bulb temperature is 7°C/6°C;
 3. Fresh air condition: The outdoor dry/wet bulb temperature is 33°C/28°C; the dry/wet bulb temperature outside the heating room is 0°C/-2.9°C;
 4. Cool warehouse condition: The dry/wet bulb temperature of the cooling room is 18°C/14°C, the outdoor dry/wet bulb temperature is 35°C/-; the dry/wet bulb temperature of the heating room is 18°C/-, and the outdoor dry/wet bulb temperature is 7°C/6°C;
 5. The above noise value is measured in the semi-anechoic chamber, 1.4m below the air conditioner center. In practice, the value is a little higher than the standard value due to the influence of the ambient environment.
 6. The return air outlet of the unit is not equipped with the long acting (G2) filter screen, and it shall be purchased separately;
 7. The ODU of the same cooling capacity shall be equipped according to the cooling capacity of the unit under different working conditions;
 8. The model of the unit with fresh air is EKSL*A1X.

Indoor Unit Ceiling Cassette, Double Discharge EKCK-G1



Standard condensate lift pump

A standard condensate lift pump of 1200mm lift with check valve and water level switch to prevent condensate backflow. It is safer to use and more flexible in installation location.

Ultra-thin body

The footprint of the unit on ceiling is small, while the installation is not limited by the room height, ensure perfect integration with the decoration.



Air spread with ultra wide angle

The wide range of wind spread which can be set at various swing angles to increase the coverage.



Standard long-lasting filter mesh

Effectively absorb PMs and harmful flocs for easier cleaning.

Wall-mounted indoor unit (EKBG-D1 series DC)



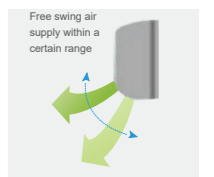
Pleasant appearance

The latest design of the concise and beautiful appearance can be harmonious with the interior decoration, making your decoration style more elegant.



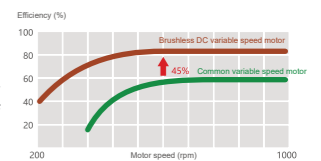
Smart 360° air supply

The air is supplied horizontally and vertically and it has various air supply angles to avoid the discomfort when cold air directly blows on you. The temperature is distributed reasonably in different areas, making people feel more comfortable.



More silent and comfortable

The new fan blade with low noise adopts brushless DC motor which can realize stepless speed change and smooth air supply. It reduces power consumption of the unit while providing a silent, comfortable indoor environment.



Seven fan speeds are available to create a more comfortable environment

The unit adopts the DC inverter motor with less vibration and lower noise; 7 fan speeds are available for precise adjustment and to create a more comfortable environment (note: EK361 wired controller shall be equipped for the unit with 7 fan speeds).

Standard long acting filter screen

The filter screen can absorb particulates effectively and improve indoor air quality. It is easy to clean.

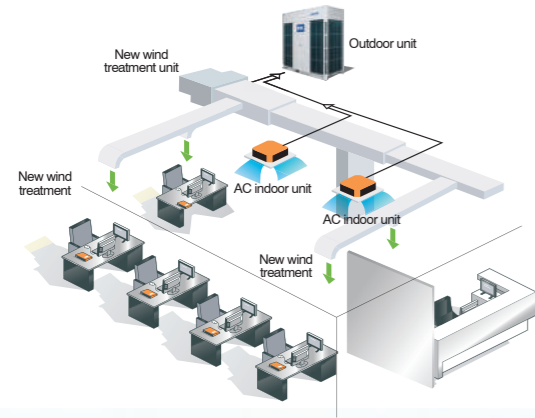
Unit type	Cooling capacity kW	Heating capacity kW	Standard air volume m³/h	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Panel Size (W×D×H) mm	Weight kg	Specification of connecting pipe mm			Control method
										Liquid pipe	Gas pipe	Drain pipe	
EKCK22G1	2.2	2.8	490/370/280	55	220V~/50Hz	35~28	1140×575×290	1240×680×30	32	Φ6.35	Φ12.7	Φ16	Optional Remote Wire control
EKCK25G1	2.5	3.0	490/370/280	55	220V~/50Hz	35~28	1140×575×290	1240×680×30	32	Φ6.35	Φ12.7	Φ16	
EKCK28G1	2.8	3.2	490/370/280	55	220V~/50Hz	35~28	1140×575×290	1240×680×30	32	Φ6.35	Φ12.7	Φ16	
EKCK32G1	3.2	3.6	640/490/370	62	220V~/50Hz	36~30	1140×575×290	1240×680×30	32	Φ6.35	Φ12.7	Φ16	
EKCK36G1	3.6	4.0	640/490/370	62	220V~/50Hz	36~30	1140×575×290	1240×680×30	32	Φ6.35	Φ12.7	Φ16	
EKCK40G1	4.0	4.5	850/640/490	70	220V~/50Hz	38~32	1140×575×290	1240×680×30	34	Φ6.35	Φ12.7	Φ16	
EKCK45G1	4.5	5.0	850/640/490	70	220V~/50Hz	38~32	1140×575×290	1240×680×30	34	Φ6.35	Φ12.7	Φ16	
EKCK50G1	5.0	5.6	850/640/490	70	220V~/50Hz	38~32	1140×575×290	1240×680×30	34	Φ6.35	Φ12.7	Φ16	
EKCK56G1	5.6	6.3	1360/1050/800	110	220V~/50Hz	41~36	1140×575×290	1240×680×30	34	Φ9.52	Φ15.88	Φ16	
EKCK63G1	6.3	7.1	1360/1050/800	110	220V~/50Hz	41~36	1140×575×290	1240×680×30	34	Φ9.52	Φ15.88	Φ16	
EKCK71G1	7.1	8.0	1360/1050/800	110	220V~/50Hz	41~36	1140×575×290	1240×680×30	34	Φ9.52	Φ15.88	Φ16	

Note: 1. The above standard cooling capacity is the test result under the indoor dry/wet bulb temperature of 27/19 and outdoor dry/wet bulb temperature of 35/24;
 2. The above standard heating capacity is the tested under the indoor dry/wet bulb temperature of 20/15 and outdoor dry/wet bulb temperature of 7/6;
 3. The above noise values are measured in a semi-anechoic at a spot 1.4m below the center of the AC. The actual operation might have a higher value due to the external exposures.

Model	Cooling capacity (kW)	Heating capacity (kW)	Air flow (m³/h)	Power input (W)	Power supply	Noise dB(A)	Dimensions (W x D x H) (mm)	Weight (kg)	Liquid pipe mm	Gas pipe mm	Drainage pipe	Control mode
EKBG22D1	2.2	2.5	580/500/460/400	19	220V~/50Hz	35/32/30/26	915×315×236	12.8	Φ6.35	Φ12.7	OD Φ18	Optional remote controller or wired controller
EKBG28D1	2.8	3.2	580/500/460/400	19	220V~/50Hz	35/32/30/26	915×315×236	12.8	Φ6.35	Φ12.7		
EKBG36D1	3.6	4.0	680/610/540/430	22	220V~/50Hz	40/37/33/29	915×315×236	12.8	Φ6.35	Φ12.7		
EKBG45D1	4.5	5.0	800/680/540/430	28	220V~/50Hz	43/38/33/29	915×315×236	12.8	Φ6.35	Φ12.7		
EKBG50D1	5.0	5.6	880/720/630/460	32	220V~/50Hz	44/42/35/30	915×315×236	12.8	Φ6.35	Φ12.7		
EKBG56D1	5.6	6.3	980/820/710/600	34	220V~/50Hz	41/39/35/30	1085×315×236	14	Φ9.52	Φ15.88		
EKBG63D1	6.3	7.1	980/820/710/600	34	220V~/50Hz	41/39/35/30	1085×315×236	14	Φ9.52	Φ15.88		
EKBG71D1	7.1	8.0	1130/990/820/650	39	220V~/50Hz	45/42/37/31	1085×315×236	14	Φ9.52	Φ15.88		
EKBG80D1	8.0	9.0	1200/1060/920/720	46	220V~/50Hz	47/44/39/32	1085×315×236	14	Φ9.52	Φ15.88		

Note:
 1. The cooling capacities above are the results of tests performed under the working condition where the indoor dry/wet bulb temperature is 27°C/19°C and the outdoor dry/wet bulb temperature is 35°C/-.
 2. The heating capacities above are the results of tests performed under the working condition where the indoor dry/wet bulb temperature is 20°C/- and the outdoor dry/wet bulb temperature is 7°C/6°C.
 3. The above noise values are measured in the semi-anechoic chamber, 1.4m below the air conditioner center. In practice, the value is a little higher than the standard value due to the influence of the ambient environment.

Indoor Unit Fresh Air Ducted AC



New wind treatment unit

- The new wind treatment unit has its own cold and heat source, which can process the outdoor fresh air to a temperature close to that of the indoor before spreading. The air volume ranges from 1100 to 9000m³/h, meeting the demand for fresh air in different occasions, presenting fresh and healthy air even indoor.
- With the automatic energy-saving mode, it will automatically switch to the air supply mode when the outdoor temperature is 15°C~20°C, and stops the outdoor unit (serving as an AC indoor unit only) to save operating costs.
- The new unit and traditional indoor unit can be controlled by a centralized line controller.
- The new unit can be connected to the EK VFR centralized control system and the building automation system.
- The capacity of the new unit connected to the same system as the traditional one shall not exceed 30% of that of the connected outdoor unit. The total capacity of the new and traditional units shall not exceed that of the outdoor unit.
- Connected by one-to-multiple method, allowing multiple new units connected to the same system. The total capacity of the new unit shall not exceed that of the outdoor unit.
- EKDB680B1X and EKDB790B1X has no multiple or series-parallel connection. Suggest one for one application.
- Various air purification devices are optional.



Model	Cooling capacity (kW)	Heating capacity (kW)	Standard air flow (m ³ /h)	External static pressure (Pa)	Power input (W)	Power supply	Noise dB(A)	Dimensions (W x D x H) (mm)	Weight (kg)	Diameter of connecting pipe (mm)			Control mode
										Liquid pipe	Gas pipe	Drainage pipe	
EKDB224C1X	22.4	17.0	1700	200(100~220)	780	220V~/50Hz	50	1790×765×470	115	Φ9.52	Φ19.05	External thread R1 Optional remote controller or wired controller	
EKDB224C1X	22.4	17.0	2100	250(150~300)	780	220V~/50Hz	52	1790×765×470	115	Φ9.52	Φ19.05		
EKDB280C1X	28.0	20.0	3000	200/300/500	700/800/1100	380V/3N~/50Hz	56/56/59	1790×850×470	125	Φ9.52	Φ22.23		
EKDB335C1X	33.5	26.4	3500	220/300/500	900/1100/1500	380V/3N~/50Hz	57/57/60	1790×850×470	130	Φ12.7	Φ25.4		
EKDB450C1X	45.0	32.0	4000	200/300/500	1000/1100/1500	380V/3N~/50Hz	61/61/64	1790×850×470	145	Φ12.7	Φ28.6		
EKDB560C1X	56.0	39.0	5000	200/300/450	1500/1500/2200	380V/3N~/50Hz	62/62/65	1790×850×470	150	Φ15.88	Φ28.6		
EKDB560C1X	56.0	39.0	6000	200/300/500	2000/2200/3000	380V/3N~/50Hz	63/63/66	1790×850×470	155	Φ15.88	Φ28.6		
EKDB680C1X	68.0	48.5	7000	200/300/500	2000/2200/3000	380V/3N~/50Hz	64/64/67	1960×895×735	190	Φ15.88	Φ28.6		
EKDB790C1X	79.0	56.5	9000	250/350/500	2800/3000/4000	380V/3N~/50Hz	66/66/69	1960×895×735	195	Φ19.05	Φ31.8		

- Note: 1. The rated cooling capacity is based on the following condition: The equivalent refrigerant pipe length at outdoor temperature 33°C for DB and 28°C for WB (68% RH) is 7.5m (horizontal).
 2. The rated heating capacity is based on the following condition: The equivalent refrigerant pipe length at outdoor temperature 0°C for DB and -2.9°C for WB (50% RH) is 7.5m (horizontal).
 3. The rated heating capacity is obtained in non-defrosting mode.
 4. Hybrid connection is not recommended for some models of fresh air processing units. For the specific hybrid connection requirement, consult the local EK technical support engineer.
 5. The noise value is measured before delivery. Due to environmental noises or other reasons during actual use, the actual noise value may differ from the values listed in the table.
 6. By default, the temperature is set to 22°C before product delivery.
 7. When selecting a remote controller, a receiver is also required.
 8. The whole series of units are not equipped with the long acting filter screen, and it shall be equipped separately.

Outdoor unit line-up

EKRV-E series has two types: parallel module combination and independent type. There are 18 basic models of 8~42HP for parallel module combination, 1~3 for independent type. Max. capacity 126HP, suitable for various places and applications. The commonly used capacity range is 8~42HP, which is ideal for the independent type to simplify the on-site installation workload and improve the construction efficiency.



Independent outdoor unit

Unit type		EKRV050ER1	EKRV060ER1	EKRV070ER1	EKRV080FR1	EKRV100FR1	EKRV120FR1
		Side Discharge (-AP*)			Side Discharge (-FP*)	Top Discharge (-FS*)	
Rated cooling capacity	kW	14.0	16.0	18.0	25.2	28.0	33.5
Rated heating capacity	kW	16.0	18.0	20.0	28.0	31.5	37.5
Rated input power of cooling	kW	3.88	4.54	5.21	7.50	8.35	9.85
Rated input power of heating	kW	3.92	4.65	5.29	7.53	8.38	9.91
Power supply		220V~50Hz			380V/3N~50Hz		
Air volume	m ³ /h	6500	6500	7000	11500	11500	11500
Liquid pipe	(Φ)mm	9.52	9.52	9.52	9.52	9.52	12.7
Gas pipe	(Φ)mm	15.88	15.88	19.05	19.05	22.23	25.4
Unit weight	kg	120	135	150	150	150	155
Noise	dB(A)	55	56	57	57	59	60
Max. operating current of outdoor unit	A	24.9	26.3	11.8	22.0	24.0	26.4
Integrated Part Load Value	IPLV(C)	6.50	6.30	6.00	6.80	6.70	6.55
Dimensions (WxDxH)	mm	900×350×1160	900×350×1290	900×350×1420	1100×390×1650		

Unit model (-FS*)		EKRV080ER1	EKRV100ER1	EKRV120ER1	EKRV140ER1	EKRV160ER1	EKRV180ER1	EKRV200ER1	EKRV220ER1	EKRV240ER1
		Rated cooling capacity	kW	25.2	28.0	34.0	40.0	45.0	51.0	56.5
Rated heating capacity	kW	28.0	31.5	37.5	45.0	50.5	57.0	63.0	69.0	75.0
Rated input power of cooling	kW	5.85	6.90	8.62	10.37	12.22	13.55	15.03	16.55	17.24
Rated input power of heating	kW	5.97	7.07	8.96	10.72	12.25	13.62	15.12	16.76	17.92
Power supply		380V/3N~50Hz								
Air volume	m ³ /h	12000	12000	12000	16000	16000	16000	24000	24000	24000
Liquid pipe	(Φ)mm	9.52	9.52	12.7	12.7	12.7	15.88	15.88	15.88	15.88
Gas pipe	(Φ)mm	19.05	22.23	25.4	25.4	28.6	28.6	28.6	28.6	28.6
Unit weight	kg	205	215	235	315	325	345	355	365	370
Noise	dB(A)	56	57	60	60	60	61	61	61	62
Max. operating current of outdoor unit	A	22.5	22.8	25.6	29.6	32.2	33.4	37.3	38.6	41.2
Integrated Part Load Value	IPLV(C)	10.0	9.80	9.55	9.45	9.25	9.10	8.95	8.90	8.70
Dimensions (WxDxH)	mm	920×760×1680			1140×835×1680			1655×835×1680		

Unit model (-FS*)		EKRV260ER1	EKRV280ER1	EKRV300ER1	EKRV320ER1	EKRV340ER1	EKRV360ER1	EKRV380ER1	EKRV400ER1	EKRV420ER1	
		Rated cooling capacity	kW	74.0	79.0	85.2	90.0	96.0	102.0	108.0	114.0
Rated heating capacity	kW	82.5	88.0	95.0	100.5	107.5	114.0	120.0	127.5	133.0	
Rated input power of cooling	kW	18.99	20.84	22.40	23.45	25.77	27.10	27.61	29.36	31.21	
Rated input power of heating	kW	19.68	21.21	22.73	23.83	25.87	27.24	28.64	30.40	31.93	
Power supply		380V/3N~50Hz									
Air volume	m ³ /h	28000	28000	32000	32000	32000	44000	48000	48000	48000	
Liquid pipe	(Φ)mm	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	
Gas pipe	(Φ)mm	31.8	31.8	31.8	31.8	31.8	38.1	38.1	38.1	38.1	
Unit weight	kg	480	485	510	515	520	550	575	580	585	
Noise	dB(A)	62	62	63	64	64	65	65	65	65	
Max. operating current of outdoor unit	A	50.3	54.5	60.4	62.2	72.9	73.6	74.8	75.2	78.5	
Integrated Part Load Value	IPLV(C)	8.60	8.55	8.50	8.40	8.35	8.35	8.30	8.25	8.20	
Dimensions (WxDxH)	mm	1780×835×1680					2615×835×1680				

- The above standard cooling capacity is the tested under the indoor dry/wet bulb temperature of 27/19°C and outdoor dry/wet bulb temperature of 35/24°C;
- The above standard heating capacity is the tested under the indoor dry/wet bulb temperature of 20/15°C and outdoor dry/wet bulb temperature of 7/6°C;
- The above noise values are measured in a semi-anechoic room at spots 1m around the air conditioner. Taking the unit height plus 1/2 of the total height of 1m, determine the running sound of the unit on all sides. The actual operation might be higher due to external exposures.
- It is recommended to select electrical wiring specifications based on the max. operating current.

Modular outdoor unit

Unit model (-FT*)	EKR080ER1	EKR100ER1	EKR120ER1	EKR140ER1	EKR160ER1	EKR180ER1
Rated cooling capacity	kW	25.2	28.0	34.0	40.0	45.0
Rated heating capacity	kW	28.0	31.5	37.5	45.0	57.0
Rated input power of cooling	kW	5.85	6.90	8.62	10.37	12.22
Rated input power of heating	kW	5.97	7.07	8.96	10.72	13.62
Power supply	380V/3N~/50Hz					
Air volume	m³/h	12000	12000	12000	16000	16000
Liquid pipe	(Φ)mm	9.52	9.52	12.7	12.7	15.88
Gas pipe	(Φ)mm	19.05	22.23	25.4	25.4	28.6
Unit weight	kg	205	215	235	315	345
Noise	dB(A)	56	57	60	60	61
Max. operating current of outdoor unit	A	22.5	22.8	25.6	29.6	33.4
Integrated Part Load Value	IPLV(C)	10.0	9.80	9.55	9.45	9.10
Dimensions (WxDxH)	mm	920 × 760 × 1680			1140 × 835 × 1680	

Unit model (-FT*)	EKR200ER1	EKR220ER1	EKR240ER1	EKR260ER1	EKR280ER1	EKR300ER1
Rated cooling capacity	kW	56.5	62.0	68.0	74.0	85.2
Rated heating capacity	kW	63.0	69.0	75.0	82.5	95.0
Rated input power of cooling	kW	15.03	16.55	17.24	18.99	22.40
Rated input power of heating	kW	15.12	16.76	17.92	19.68	22.73
Power supply	380V/3N~/50Hz					
Air volume	m³/h	24000	24000	24000	28000	32000
Liquid pipe	(Φ)mm	15.88	15.88	15.88	19.05	19.05
Gas pipe	(Φ)mm	28.6	28.6	28.6	31.8	31.8
Unit weight	kg	355	365	370	480	510
Noise	dB(A)	61	61	62	62	63
Max. operating current of outdoor unit	A	37.3	38.6	41.2	50.3	60.4
Integrated Part Load Value	IPLV(C)	8.95	8.90	8.65	8.60	8.50
Dimensions (WxDxH)	mm	1655 × 835 × 1680			1780 × 835 × 1680	

Unit model (-FT*)	EKR320ER1	EKR340ER1	EKR360ER1	EKR380ER1	EKR400ER1	EKR420ER1
Rated cooling capacity	kW	90.0	96.0	102.0	108.0	119.0
Rated heating capacity	kW	100.5	107.5	114.0	120.0	133.0
Rated input power of cooling	kW	23.45	25.77	27.10	27.61	31.21
Rated input power of heating	kW	23.83	25.87	27.24	28.64	31.93
Power supply	380V/3N~/50Hz					
Air volume	m³/h	32000	44000	44000	48000	48000
Liquid pipe	(Φ)mm	19.05	19.05	19.05	19.05	19.05
Gas pipe	(Φ)mm	31.8	31.8	38.1	38.1	38.1
Unit weight	kg	515	545	550	575	585
Noise	dB(A)	64	64	65	65	65
Max. operating current of outdoor unit	A	62.2	72.9	73.6	74.8	78.5
Integrated Part Load Value	IPLV(C)	8.40	8.35	8.35	8.30	8.20
Dimensions (WxDxH)	mm	1780 × 835 × 1680	2615 × 835 × 1680			

- The above standard cooling capacity is the tested under the indoor dry/wet bulb temperature of 27/19°C and outdoor dry/wet bulb temperature of 35/24°C;
- The above standard heating capacity is the tested under the indoor dry/wet bulb temperature of 20/15°C and outdoor dry/wet bulb temperature of 7/6°C;
- The above noise values are measured in a semi-anechoic room at spots 1m around the air conditioner. Taking the unit height plus 1/2 of the total height of 1m, determine the running sound of the unit on all sides. the actual operation might be higher due to external exposures.
- It is recommended to select electrical wiring specifications based on the max. operating current.

Combination methods of outdoor unit (I)

Unit model (-FT*)	EKR560ER1	EKR580ER1	EKR600ER1	EKR620ER1	EKR640ER1	EKR660ER1	EKR680ER1	EKR700ER1	EKR720ER1
Combination method (HP)	14+42	16+42	18+42	20+42	22+42	24+42	26+42	28+42	30+42
Rated cooling capacity	kW	159.0	164.0	170.0	175.5	181.0	187.0	193.0	198.0
Rated heating capacity	kW	178.0	183.5	190.0	196.0	202.0	208.0	215.5	221.0
Rated input power of cooling	kW	41.58	43.43	44.76	46.24	47.76	48.45	50.20	52.05
Rated input power of heating	kW	42.65	44.18	45.55	47.05	48.69	49.85	51.61	53.14
Power supply	380V/3N~/50Hz								
Air volume	m³/h	64000	64000	64000	72000	72000	72000	76000	76000
Liquid pipe	(Φ)mm	19.05	19.05	19.05	19.05	19.05	19.05	22.23	22.23
Gas pipe	(Φ)mm	41.3	41.3	41.3	41.3	41.3	41.3	44.5	44.5
Unit weight	kg	900	910	930	940	950	955	1065	1070
Noise	dB(A)	65	66	66	66	66	66	66	66
Max. operating current of outdoor unit	A	108.1	110.7	111.9	115.8	117.1	119.7	128.8	133.0
Dimensions (WxDxH)	mm	(1140+2615) × 835 × 1680			(1655+2615) × 835 × 1680			(1780+2615) × 835 × 1680	

Unit model (-FT*)	EKR740ER1	EKR760ER1	EKR780ER1	EKR800ER1	EKR820ER1	EKR840ER1	EKR860ER1	EKR880ER1	EKR900ER1
Combination method (HP)	32+42	16+18+42	18+18+42	16+22+42	18+22+42	42+42	22+22+42	18+28+42	16+32+42
Rated cooling capacity	kW	209.0	215.0	221.0	226.0	232.0	238.0	243.0	254.0
Rated heating capacity	kW	233.5	240.5	247.0	252.5	259.0	266.0	271.0	284.0
Rated input power of cooling	kW	54.66	56.98	58.31	59.98	61.31	62.42	64.31	66.88
Rated input power of heating	kW	55.76	57.80	59.17	60.94	62.31	63.86	65.45	68.01
Power supply	380V/3N~/50Hz								
Air volume	m³/h	80000	80000	80000	88000	88000	96000	96000	96000
Liquid pipe	(Φ)mm	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
Gas pipe	(Φ)mm	50.8	50.8	50.8	50.8	50.8	50.8	50.8	50.8
Unit weight	kg	1100	1255	1275	1275	1295	1170	1315	1425
Noise	dB(A)	66	66	66	66	66	66	66	66
Max. operating current of outdoor unit	A	140.7	144.1	145.3	149.3	150.5	157.0	155.7	172.9
Dimensions (WxDxH)	mm	(1780+2615) × 835 × 1680	(1140+1140+2615) × 835 × 1680		(1140+1655+2615) × 835 × 1680		(2615+2615) × 835 × 1680	(1655+1655+2615) × 835 × 1680	(1140+1780+2615) × 835 × 1680

Unit model (-FT*)	EKR920ER1	EKR940ER1	EKR960ER1	EKR980ER1	EKR1000ER1	EKR1020ER1	EKR1040ER1	EKR1060ER1	EKR1080ER1
Combination method (HP)	18+32+42	20+32+42	22+32+42	14+42+42	16+42+42	18+42+42	20+42+42	22+42+42	24+42+42
Rated cooling capacity	kW	260.0	265.5	271.0	278.0	283.0	289.0	294.5	306.0
Rated heating capacity	kW	290.5	296.5	302.5	311.0	316.5	323.0	329.0	341.0
Rated input power of cooling	kW	68.21	69.69	71.21	72.79	74.64	75.97	77.45	79.66
Rated input power of heating	kW	69.38	70.88	72.52	74.58	76.11	77.48	78.98	81.78
Power supply	380V/3N~/50Hz								
Air volume	m³/h	96000	104000	104000	112000	112000	112000	120000	120000
Liquid pipe	(Φ)mm	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
Gas pipe	(Φ)mm	50.8	50.8	50.8	54.0	54.0	54.0	54.0	54.0
Unit weight	kg	1445	1455	1465	1485	1495	1515	1525	1540
Noise	dB(A)	66	66	66	67	67	67	67	67
Max. operating current of outdoor unit	A	174.1	178.0	179.3	186.6	189.2	190.4	194.3	195.6
Dimensions (WxDxH)	mm	(1140+1780+2615) × 835 × 1680	(1655+1780+2615) × 835 × 1680		(1140+2615+2615) × 835 × 1680			(1655+2615+2615) × 835 × 1680	

- The above standard cooling capacity is the tested under the indoor dry/wet bulb temperature of 27/19°C and outdoor dry/wet bulb temperature of 35/24°C;
- The above standard heating capacity is the tested under the indoor dry/wet bulb temperature of 20/15°C and outdoor dry/wet bulb temperature of 7/6°C;
- The above noise values are measured in a semi-anechoic room at spots 1m around the air conditioner. Taking the unit height plus 1/2 of the total height of 1m, determine the running sound of the unit on all sides. the actual operation might be higher due to external exposures;
- When installing the one system, the distance between two adjacent single modules shall be ≥ 300mm. When multiple systems are installed, the distance between two adjacent systems is ≥ 1000mm;
- It is recommended to select electrical wiring specifications based on the max. operating current.

Combination methods of outdoor unit (I)

Unit model (-FT*)	EKR1100ER1	EKR1120ER1	EKR1140ER1	EKR1160ER1	EKR1180ER1	EKR1200ER1	EKR1220ER1	EKR1240ER1	EKR1260ER1	
Combination method (HP)	26+42+42	28+42+42	30+42+42	32+42+42	38+38+42	38+40+42	38+42+42	40+42+42	42+42+42	
Rated cooling capacity	kW	312.0	317.0	323.2	328.0	335.0	341.0	346.0	352.0	357.0
Rated heating capacity	kW	348.5	354.0	361.0	366.5	373.0	380.5	386.0	393.5	399.0
Rated input power of cooling	kW	81.41	83.26	84.82	85.87	86.43	88.18	90.03	91.78	93.63
Rated input power of heating	kW	83.54	85.07	86.59	87.69	89.21	90.97	92.50	94.26	95.79
Power supply		380V/3N~/50Hz								
Air volume	m³/h	124000	124000	128000	128000	144000	144000	144000	144000	144000
Liquid pipe	(Φ)mm	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
Gas pipe	(Φ)mm	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
Unit weight	kg	1650	1655	1680	1685	1735	1740	1745	1750	1755
Noise	dB(A)	67	67	67	67	67	67	67	67	67
Max. operating current of outdoor unit	A	207.3	211.5	217.4	219.2	228.1	228.5	231.8	232.2	235.5
Dimensions (WxDxH)	mm	(1780+2615+2615) × 835 × 1680				(2615+2615+2615) × 835 × 1680				

Combination methods of Outdoor unit (II)

Unit model (-FT*)	EKR200ER1	EKR220ER1	EKR240ER1	EKR260ER1	EKR280ER1	EKR300ER1	EKR320ER1	EKR340ER1	
Combination method (HP)	10+10	10+12	12+12	12+14	12+16	12+18	16+16	16+18	
Rated cooling capacity	kW	56.0	62.0	68.0	74.0	79.0	85.0	90.0	96.0
Rated heating capacity	kW	63.0	69.0	75.0	82.5	88.0	94.5	101.0	107.5
Rated input power of cooling	kW	13.80	15.52	17.24	18.99	20.84	22.17	24.44	25.77
Rated input power of heating	kW	14.14	16.03	17.92	19.68	21.21	22.58	24.50	25.87
Power supply		380V/3N~/50Hz							
Air volume	m³/h	24000	24000	24000	28000	28000	28000	32000	32000
Liquid pipe	(Φ)mm	15.88	15.88	15.88	19.05	19.05	19.05	19.05	19.05
Gas pipe	(Φ)mm	28.6	28.6	28.6	31.8	31.8	31.8	31.8	31.8
Unit weight	kg	430	450	470	550	560	580	650	670
Noise	dB(A)	61	61	62	62	62	63	63	63
Max. operating current of outdoor unit	A	45.0	48.4	51.2	55.2	57.8	59.0	64.4	65.6
Dimensions (WxDxH)	mm	(920+920) × 760 × 1680		(920 × 760 × 1680) + (1140 × 835 × 1680)			(1140+1140) × 835 × 1680		

Unit model (-FT*)	EKR360ER1	EKR380ER1	EKR400ER1	EKR420ER1	EKR440ER1	EKR460ER1	EKR480ER1	
Combination method (HP)	18+18	16+22	18+22	20+22	22+22	18+28	16+32	
Rated cooling capacity	kW	102.0	107.0	113.0	118.5	124.0	130.0	135.0
Rated heating capacity	kW	114.0	119.5	126.0	132.0	138.0	145.0	151.0
Rated input power of cooling	kW	27.10	28.77	30.10	31.58	33.10	34.39	35.67
Rated input power of heating	kW	27.24	29.01	30.38	31.88	33.52	34.83	36.08
Power supply		380V/3N~/50Hz						
Air volume	m³/h	32000	40000	40000	48000	48000	44000	48000
Liquid pipe	(Φ)mm	19.05	19.05	19.05	19.05	19.05	19.05	19.05
Gas pipe	(Φ)mm	38.1	38.1	38.1	38.1	38.1	38.1	38.1
Unit weight	kg	690	690	710	720	730	830	840
Noise	dB(A)	63	63	63	64	64	64	64
Max. operating current of outdoor unit	A	66.8	70.8	72.0	75.9	77.2	87.9	94.4
Dimensions (WxDxH)	mm	(1140+1140) × 835 × 1680	(1140+1655) × 835 × 1680		(1655+1655) × 835 × 1680		(1140+1780) × 835 × 1680	

- The above standard cooling capacity is the tested under the indoor dry/wet bulb temperature of 27/19°C and outdoor dry/wet bulb temperature of 35/24°C;
- The above standard heating capacity is the tested under the indoor dry/wet bulb temperature of 20/15°C and outdoor dry/wet bulb temperature of 7/6°C;
- The above noise values are measured in a semi-anechoic room at spots 1m around the air conditioner. Taking the unit height plus 1/2 of the total height of 1m, determine the running sound of the unit on all sides. the actual operation might be higher due to external exposures;
- When installing the one system, the distance between two adjacent single modules shall be ≥ 300mm. When multiple systems are installed, the distance between two adjacent systems is ≥ 1000mm;
- It is recommended to select electrical wiring specifications based on the max. operating current.

Combination methods of Outdoor unit (II)

Unit model (-FT*)	EKR500ER1	EKR520ER1	EKR540ER1	EKR560ER1	EKR580ER1	EKR600ER1	EKR620ER1	EKR640ER1	
Combination method (HP)	18+32	16+18+18	18+18+18	16+18+22	18+18+22	16+22+22	18+22+22	20+22+22	
Rated cooling capacity	kW	141.0	147.0	153.0	158.0	164.0	169.0	175.0	180.5
Rated heating capacity	kW	157.5	164.5	171.0	176.5	183.0	188.5	195.0	201.0
Rated input power of cooling	kW	37.00	39.32	40.65	42.32	43.65	45.32	46.65	48.13
Rated input power of heating	kW	37.45	39.49	40.86	42.63	44.00	45.77	47.14	48.64
Power supply		380V/3N~/50Hz							
Air volume	m³/h	48000	48000	48000	56000	56000	64000	64000	72000
Liquid pipe	(Φ)mm	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05
Gas pipe	(Φ)mm	38.1	38.1	38.1	41.3	41.3	41.3	41.3	41.3
Unit weight	kg	860	1015	1035	1035	1055	1055	1075	1085
Noise	dB(A)	65	65	65	65	66	66	66	66
Max. operating current of outdoor unit	A	95.6	99.0	100.2	104.2	105.4	109.4	110.6	114.5
Dimensions (WxDxH)	mm	(1140+1780) × 835 × 1680	(1140+1140+1140) × 835 × 1680		(1140+1140+1655) × 835 × 1680		(1140+1655+1655) × 835 × 1680		(1655+1655+1655) × 835 × 1680

Unit model (-FT*)	EKR660ER1	EKR680ER1	EKR700ER1	EKR720ER1	EKR740ER1	EKR760ER1	EKR780ER1	EKR800ER1	
Combination method (HP)	22+22+22	18+18+32	16+22+32	18+22+32	20+22+32	22+22+32	18+28+32	16+32+32	
Rated cooling capacity	kW	186.0	192.0	197.0	203.0	208.5	214.0	220.0	225.0
Rated heating capacity	kW	207.0	214.5	220.0	226.5	232.5	238.5	245.5	251.5
Rated input power of cooling	kW	49.65	50.55	52.22	53.55	55.03	56.55	57.84	59.12
Rated input power of heating	kW	50.28	51.07	52.84	54.21	55.71	57.35	58.66	59.91
Power supply		380V/3N~/50Hz							
Air volume	m³/h	72000	64000	72000	72000	80000	80000	76000	80000
Liquid pipe	(Φ)mm	19.05	22.23	22.23	22.23	25.4	25.4	25.4	25.4
Gas pipe	(Φ)mm	41.3	44.5	44.5	44.5	50.8	50.8	50.8	50.8
Unit weight	kg	1095	1205	1205	1225	1235	1245	1345	1355
Noise	dB(A)	66	66	66	66	66	66	66	66
Max. operating current of outdoor unit	A	115.8	129.0	133.0	134.2	138.1	139.4	150.1	156.6
Dimensions (WxDxH)	mm	(1655+1655+1655) × 835 × 1680	(1140+1140+1780) × 835 × 1680	(1140+1655+1780) × 835 × 1680		(1655+1655+1780) × 835 × 1680		(1140+1780+1780) × 835 × 1680	

Unit model (-FT*)	EKR820ER1	EKR840ER1	EKR860ER1	EKR880ER1	EKR900ER1	EKR920ER1	EKR940ER1	EKR960ER1	
Combination method (HP)	18+32+32	20+32+32	22+32+32	24+32+32	26+32+32	28+32+32	30+32+32	32+32+32	
Rated cooling capacity	kW	231.0	236.5	242.0	248.0	254.0	259.0	265.2	270.0
Rated heating capacity	kW	258.0	264.0	270.0	276.0	283.5	289.0	296.0	301.5
Rated input power of cooling	kW	60.45	61.93	63.45	64.14	65.89	67.74	69.30	70.35
Rated input power of heating	kW	61.28	62.78	64.42	65.58	67.34	68.87	70.39	71.49
Power supply		380V/3N~/50Hz							
Air volume	m³/h	80000	88000	88000	88000	92000	92000	96000	96000
Liquid pipe	(Φ)mm	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
Gas pipe	(Φ)mm	50.8	50.8	50.8	50.8	50.8	50.8	50.8	50.8
Unit weight	kg	1375	1385	1395	1400	1510	1515	1540	1545
Noise	dB(A)	66	66	66	66	66	66	66	66
Max. operating current of outdoor unit	A	157.8	161.7	163.0	165.6	174.7	178.9	184.8	186.6
Dimensions (WxDxH)	mm	(1140+1780+1780) × 835 × 1680	(1655+1780+1780) × 835 × 1680			(1780+1780+1780) × 835 × 1680			

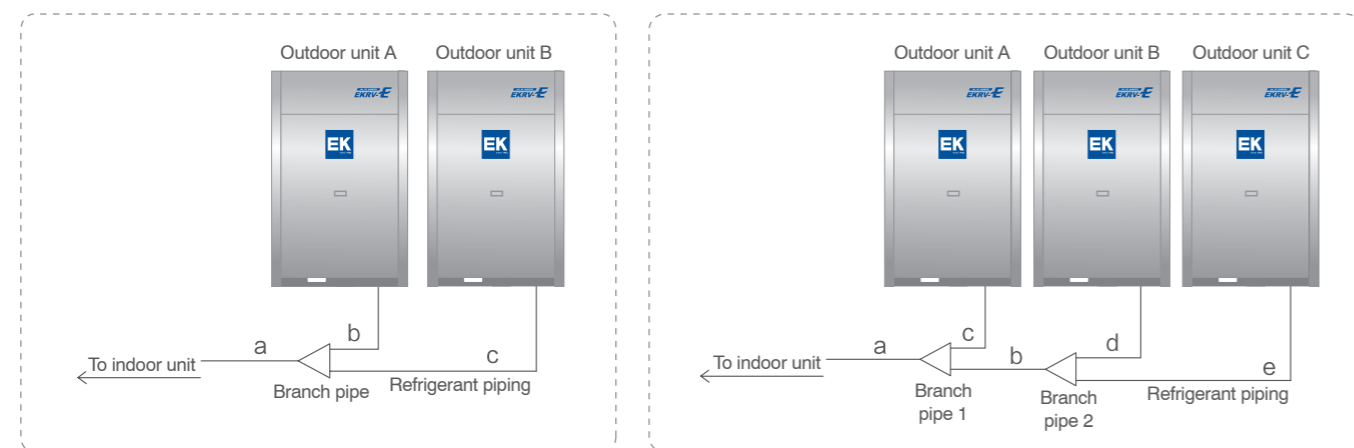
- The above standard cooling capacity is the tested under the indoor dry/wet bulb temperature of 27/19°C and outdoor dry/wet bulb temperature of 35/24°C;
- The above standard heating capacity is the tested under the indoor dry/wet bulb temperature of 20/15°C and outdoor dry/wet bulb temperature of 7/6°C;
- The above noise values are measured in a semi-anechoic room at spots 1m around the air conditioner. Taking the unit height plus 1/2 of the total height of 1m, determine the running sound of the unit on all sides. the actual operation might be higher due to external exposures;
- When installing the one system, the distance between two adjacent single modules shall be ≥ 300mm. When multiple systems are installed, the distance between two adjacent systems is ≥ 1000mm;
- It is recommended to select electrical wiring specifications based on the max. operating current.

Piping size

Outdoor unit capacity	Main pipe size (Max. length of the equivalent single tube ≤ 90m)			Main pipe size (Max. length of the equivalent single tube ≤ 90m)			Downstream Indoor Unit capacity A (kW)	Piping size		Applicable branch pipe
	Liquid pipe	Gas pipe	First branch pipe indoor	Liquid pipe	Gas pipe	First branch pipe indoor		Liquid pipe	Gas pipe	
8HP	Φ9.52	Φ19.05	ACRV-BP03	Φ12.7	Φ22.23	ACRV-BP03	A < 16kW	Φ9.52	Φ15.88	ACRV-BP01
10HP	Φ9.52	Φ22.23	ACRV-BP03	Φ12.7	Φ25.4	ACRV-BP04	16 ≤ A < 22kW	Φ9.52	Φ19.05	ACRV-BP02
12~14HP	Φ12.7	Φ25.4	ACRV-BP03	Φ15.88	Φ28.6	ACRV-BP04	22 ≤ A < 33kW	Φ9.52	Φ22.23	ACRV-BP03
16HP	Φ12.7	Φ28.6	ACRV-BP04	Φ15.88	Φ31.8	ACRV-BP05	33 ≤ A < 51kW	Φ12.7	Φ28.6	ACRV-BP04
18~24HP	Φ15.88	Φ28.6	ACRV-BP04	Φ19.05	Φ31.8	ACRV-BP05	51 ≤ A < 71kW	Φ15.88	Φ28.6	ACRV-BP04
26~34HP	Φ19.05	Φ31.8	ACRV-BP05	Φ22.23	Φ38.1	ACRV-BP06	71 ≤ A < 102kW	Φ19.05	Φ31.8	ACRV-BP05
36~54HP	Φ19.05	Φ38.1	ACRV-BP05	Φ22.23	Φ41.3	ACRV-BP07	102 ≤ A < 155kW	Φ19.05	Φ38.1	ACRV-BP05
56~66HP	Φ19.05	Φ41.3	ACRV-BP07	Φ22.23	Φ44.5	ACRV-BP08	155 ≤ A < 187kW	Φ19.05	Φ41.3	ACRV-BP07
68~72HP	Φ22.23	Φ44.5	ACRV-BP08	Φ25.4	Φ50.8	ACRV-BP09	187 ≤ A < 205kW	Φ22.23	Φ44.5	ACRV-BP08
74~96HP	Φ25.4	Φ50.8	ACRV-BP09	Φ28.6	Φ54	ACRV-BP09	205 ≤ A < 278kW	Φ25.4	Φ50.8	ACRV-BP09
98~108HP	Φ25.4	Φ54.0	ACRV-BP10	Φ28.6	Φ66.8	ACRV-BP10	278 ≤ A < 312kW	Φ25.4	Φ54.0	ACRV-BP10
110~126HP	Φ28.6	Φ54.0	ACRV-BP10	Φ28.6	Φ66.8	ACRV-BP10	A ≥ 312kW	Φ28.6	Φ54.0	ACRV-BP10

Note: For the sizes of main pipes and gas/liquid pipe of outdoor unit listed above, the larger one between the two diameters shall be size of main pipe.

Branch pipe between the indoor and outdoor units



Note: To install the outdoor unit combining two or three modules, the placement sequence shall be: the closer the outdoor unit is to the side leading to the indoor unit refrigerant pipe, the greater the capacity it is.

Combination of two modules

Outdoor unit capacity	20~24HP	26~50HP	56~66HP	68~72HP	74~84HP
Branch pipe model	ACRV-BP04	ACRV-BP05	ACRV-BP07	ACRV-BP08	ACRV-BP09

Combination of three modules

Outdoor unit capacity	52~54HP	56~66HP	68~72HP	74~96HP	98~108HP	110~126HP
Branch pipe 1 model	ACRV-BP05	ACRV-BP07	ACRV-BP08	ACRV-BP09	ACRV-BP10	ACRV-BP10
Branch pipe 2 model	ACRV-BP05	ACRV-BP05	ACRV-BP05	ACRV-BP05	ACRV-BP07	ACRV-BP09

Typical industry applications

Industrial plants			
	Wanhua Chemical Group Co., Ltd.	Changyang Aerospace City Electron Science Park	Inner Mongolia Yili Group
	Rail transport		
Metro Line 2, Changchun, Julin		Passenger Transport Terminal of Fengling, Nanning, Guangxi	Metro Line 5, Chengdu, Sichuan
Education and health			
	Chongqing Wuyi Senior Vestibule School	New building of urban center blood station, Dongguan Guangdong	Guolian Medical and Health Service Center, Hua'an, Jiangsu
	Commercial complex		
Liuzhou International Wealth Center, Liuzhou, Guangxi		Lianchuang International Software Park, Jiangsu	Zhongrun Jiaying Center, Zhejiang
Government building			
	Chongqing International Expo Center	Public Security Bureau, Changsha, Hunan	Qingfeng Base, Jiangxi, Shangrao