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Cooling System Solutions  
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 **EUROKLIMAT**<sup>®</sup>  
SINCE 1963

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EKRVEY1802-Catalog-AA



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 **EUROKLIMAT**<sup>®</sup>  
SINCE 1963

**EKRV-**

**All DC Frequency Conversion  
Multi-Connected Central Air Conditioning**



**TAHVIEHSAM**  
Cooling System Solutions

Give life to building & bring us back to nature



# EK Air Conditioning

Energy-saving air-conditioning expert from Europe

Established in Italy in 1963 and after more than half century of development history, EUROKLIMAT Group is a famous manufacturer of refrigeration and air conditioning equipment in Europe. Through continuous innovation and development, EUROKLIMAT industry has become a pronoun of energy-saving air conditioning in the European market.

As an Asian manufacturing base and sales organization of Aerospace Science and Industry Corporation and EUROKLIMAT Group, Guangdong EuroKlimat Air-conditioning & Refrigeration Co., Ltd. has an Euroklimat industrial park with 100 thousand square meters in Dongguan, and an Euroklimat industrial park with 50 thousand square meters in Tianjin, and has introduced European leading air-conditioning design and R&D and manufacturing in all lines.

EK Air Conditioning has 34 service organizations in China to provide all customers with 24h direct service guarantee. All series of products of EK China have been successfully used by many customers in the Asian-Pacific region, Middle East, Africa and South America. As a pioneer of energy-saving air conditioning in Europe, adhering to the social commitment of energy conservation and environmental protection, EK Air Conditioning has continuously been working on researching and developing comfortable and energy-saving air conditioning products and going hand in hand with partners to create a better future.

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# All DC Frequency Conversion Multi-Connected Central Air Conditioning **R410A**

1

## Single super module

Unconventional maximum 32 HP for a single module; Up to 96 HP for the combination of multiple modules

2

## Ultra high IPLV(C) value

Some of IPLV(C) values of all series of the units are up to 9.60.

3

## Two-stage sub-cooling technology

Efficient economizer is used for secondary sub-cooling, so as to achieve a maximum 30°C of sub-cooling degree and greatly improve operation efficiency.

4

## Multi-stage oil return technology of the system

High efficiency compressor is provided with internal oil mist separation design, intelligent oil level control and other oil control technologies, so as to ensure the optimal operating state of the system.

5

## Intelligent backup operation technology

Multiple compressors and multiple fans of outdoor unit are mutually backup operation to ensure stability and reliability of the unit.

6

## Patented design of heat exchanger

The patented sub-cooling/anti-frosting heat exchanger is designed to greatly improve heating comfort in the winter.

9

## Intelligent control

A variety of intelligent centralized control plans are used to satisfy customer requirements for system control.

8

## All DC frequency conversion technology

180° sinusoidal wave output, control frequency accuracy is 0.01HZ and capacity output of the unit is more accurate.

7

## 14 mute technologies

14 mute technologies of the unit are used to provide a quiet and comfortable environment.



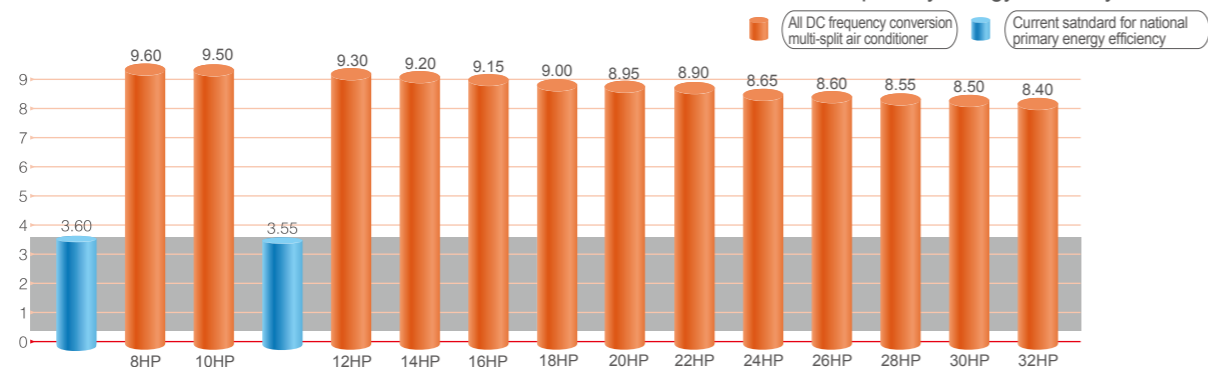
# Efficient And Energy-Saving To Enjoy The Low-Carbon Life



## Far beyond national primary energy efficiency

### Industry-leading comprehensive coefficient of performance

IPLV(C), up to 9.60, far beyond national standard for primary energy efficiency



Note: According to GB-21454-2008 The Minimum Allowable Values of the IPLV and Energy Efficiency Grades for Multi-Connected Air-Condition (Heat Pump) Unit, modular multi-connected air-condition (heat pump) unit is provided with IPLV(C) test for basic modules.

## Efficient outdoor unit

The unit is provided with efficient parts and components and the system is adjusted to the most optimal operation state to be energy-saving, so as to ensure reliability and comfort and improve energy-saving effect of the system.

- High-voltage cavity DC frequency conversion compressor
- Large diameter streamlined fan
- All DC frequency conversion fan motor
- 180° sinusoidal wave DC frequency conversion technology
- Efficient 2-1 circuit
- Subcooled circuit design
- Unique bend draught design of heat exchanger
- Φ7mm efficient internal thread copper tube

## Frequency conversion compressor with international brand

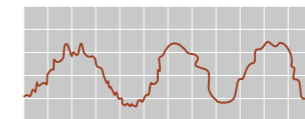
The unit is provided with all DC frequency conversion compressor, high rigid casing, anti-overcompression technology and anti-liquid striking design, in combination with advanced two-stage sub-cooling technology of the system, to increase cooling capacity and greatly improve operating efficiency of the system.

1. New central winding stator and six-grade neodymium magnetic material rotor are used to effectively improve motor efficiency and enable the compressor to be operated in a more stable and low aerated way.
2. The compressor with large displacement and oil pressure equalizing pipe are designed to achieve stable oil return of the compressor and the higher operating efficiency.
3. Oil and mist in the compressor are separated to reduce oil spitting rate at the exhaust opening and improve efficiency level at lower rotating speed.
4. Oil film mounted technology of the compressor is used to reduce leakage of the compressor and improve energy efficiency of the unit.

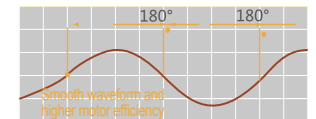
## Frequency conversion control technology

### Stepless frequency conversion technology

Advanced DC frequency conversion control technology is used to regulate stepless speed of the compressor. According to actual air conditioning load requirements, it's used to intelligently adjust linear output of the system from low load to high load capacity, so as to truly adjust the capacity of the unit as required.



Ordinary air conditioning: ordinary rectangular wave output, the motor has low efficiency



EK Air Conditioning: 180° sinusoidal wave output, the motor has high efficiency

### Intelligent frequency conversion control

- The powerful frequency conversion control main board researched and developed independently is used to control frequency conversion in the range of 0~420Hz and frequency accuracy is controlled to be 0.01Hz.
- High-speed DSP chip of American Texas Instruments and mature algorithm of double closed-loop feedback control of voltage and current are used for accurate control. Meanwhile, it's also integrated with multiple protection functions of over-voltage, over-current and over-temperature, so as to achieve a more stable performance and more reliable operation.
- Sensorless SVPWM sinusoidal wave control technology can be used to effectively reduce motor vibration of the compressor.
- Closed loop start control plan can be used to decrease starting current of the compressor, reduce impact on the grid, and effectively protect stable operation of the grid of the customer.



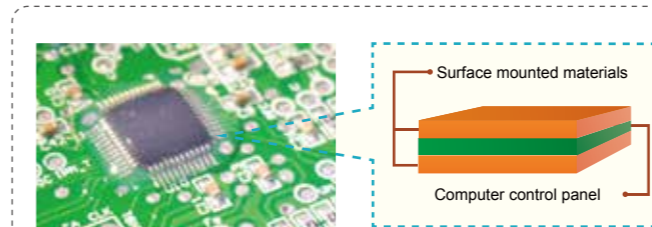
Control module



Frequency conversion module

### SMT mounted technology

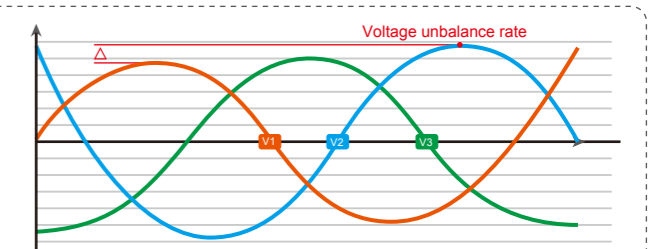
For SMT (surface mounted technology), mounted materials are painted on the surface of main board, so as to effectively improve anti-clutter interference performance of main board and protect it from being affected by high temperature, humidity, wind-blown sand and other severe weather and air environment.



Control surface provided with SMT surface mounted materials

### Floating adaptive pressure of the inverter

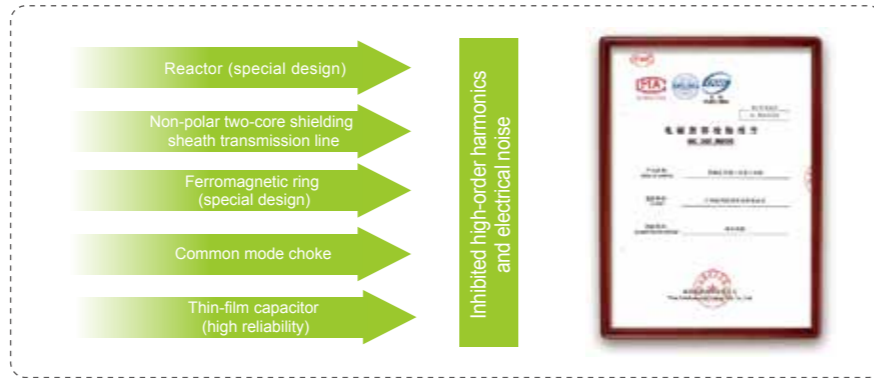
EK frequency conversion controller is provided with advanced unbalance control technology of power supply voltage. If unbalance rate of the voltage is up to 3%, it can be operated in a stable and efficient way.



EK inverter can be corresponding with the maximum phase voltage unbalance rate 3%.

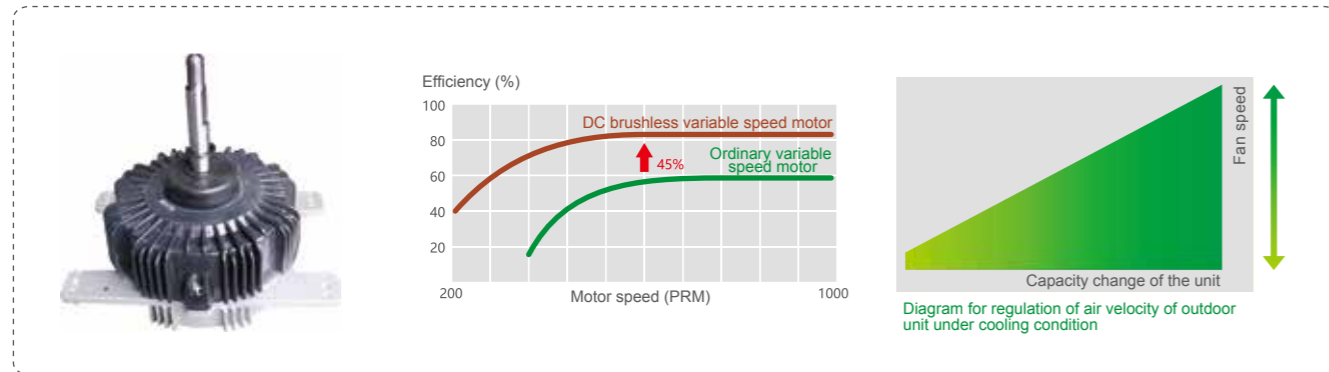
### Inhibited high-order harmonics and electrical noise

Through multiple strict tests and with efficient components, EKR-V-E multi-connected central air conditioning unit can be used to effectively inhibit occurrence of harmonics and electrical noise, and pass through national EMC test.



### DC frequency conversion motor

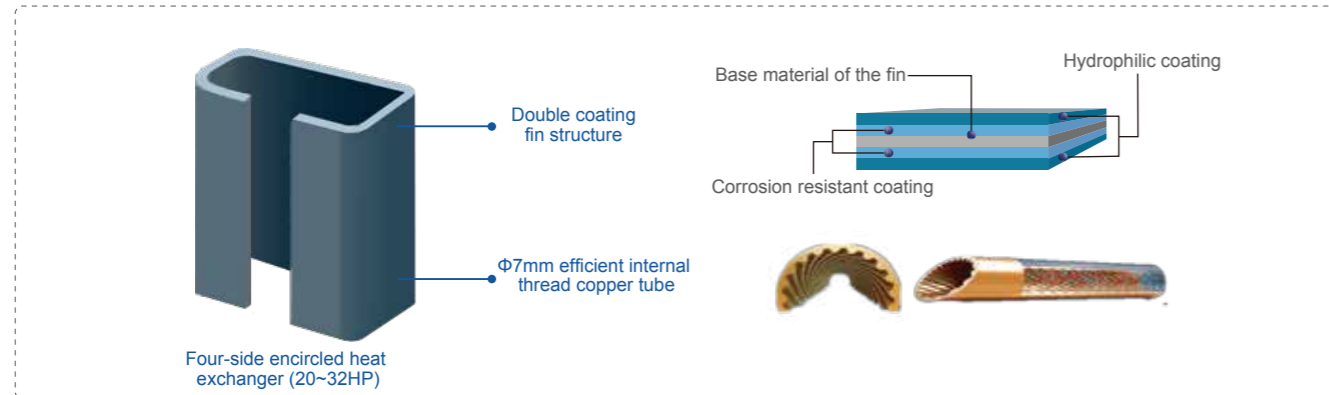
DC brushless variable speed motor is selected to effectively cope with various ambient temperatures and rapidly reflect and regulate rotation speed of the fan, so as to ensure stable air intake and air purge pressure of the system. Meanwhile, air flow rate and wind pressure of outdoor unit are automatically regulated according to load change conditions, so as to ensure stable and reliable operation of the system.



## Design of efficient heat exchanger

### Efficient and corrosion resistant heat exchanger

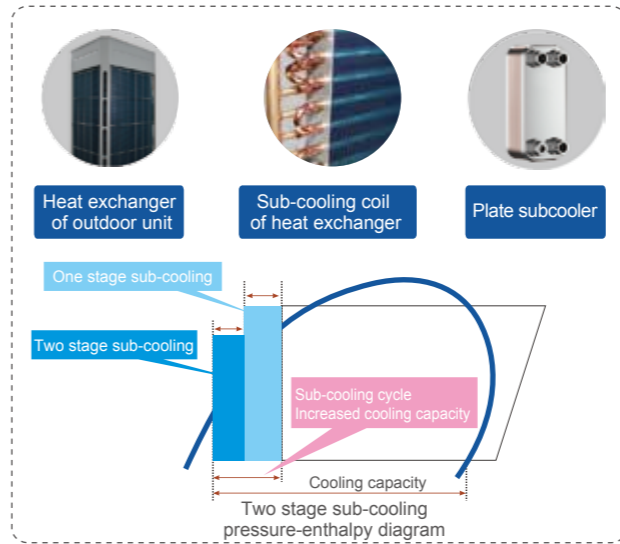
Indoor unit and outdoor unit are provided with hydrophilic anticorrosion aluminium foil to reduce corrosion of the fins by corrosive gases; damage surface tension of water drops and speed up rapid discharging of the condensate; be difficult to frost during heating and improve performance of air conditioning.



## Design of efficient heat exchanger

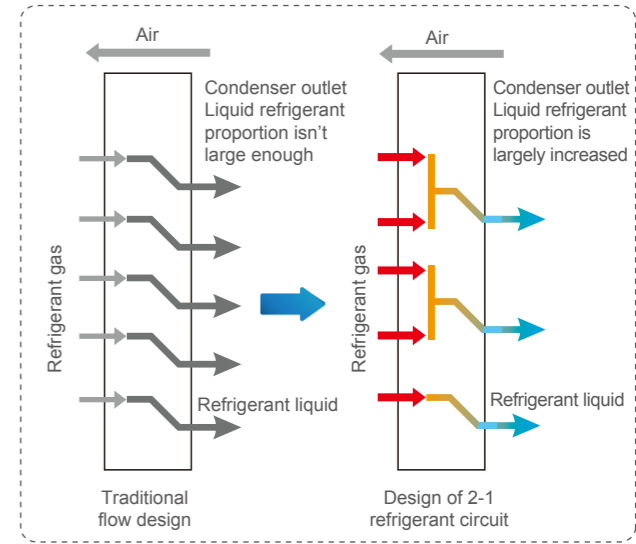
### Two stage sub-cooling cycle

The condenser is used to realize one stage sub-cooling and provided with independent plate type heat exchange to realize two-stage sub-cooling. The maximum designed sub-cooling degree of two stage sub-cooling can be up to 30°C to increase cooling capacity of the unit, effectively improve capacity attenuation of long connection pipe and efficiency of the unit, so as to achieve more stable operation.



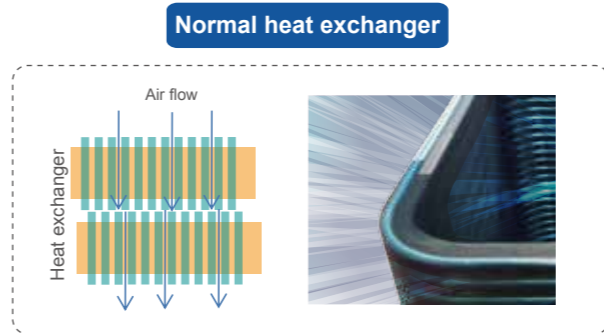
### Efficient 2-1 circuit

Efficient "2-1" cooling circuit is designed to increase liquid refrigerant quantity and greatly improve heat exchange efficiency.

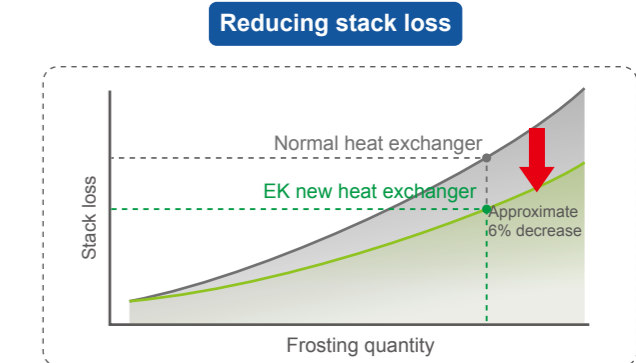
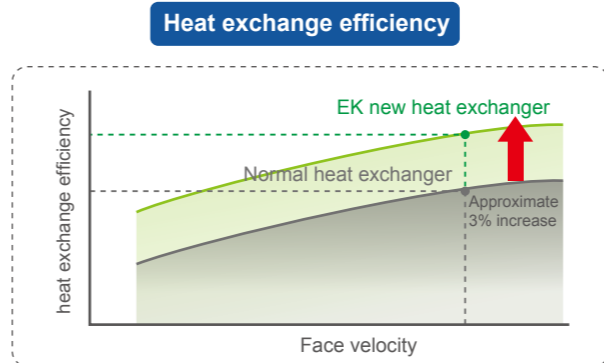


### Specific bend draught design of heat exchanger

- After ordinary heat exchanger is bent, fins at adjacent tube bundles are easy to be dislocated, causing a larger stack loss. Although the air is slowed down, heat exchange efficiency is reduced; during heating, fins can be easily blocked by the condensate.
- EK heat exchanger is provided with new bend ventilation design to reduce stack loss and improve heat exchange efficiency. During heating, condensate at the bend can be discharged smoothly.



- New heat exchanger can be used to obviously improve its performance of heat transfer efficiency and timely discharge condensate during defrosting, so as to prevent frost water from blockage and affecting heat exchange efficiency.



# Cutting-edge technology

## Stable and reliable operation

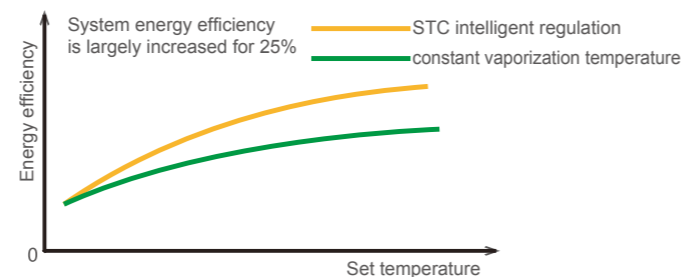
# NO.1

Leading

### Refrigerant control technology

#### STC intelligent regulation technology

The unit can predict and control the refrigerant, so as to intelligently judge ideal operating status of air conditioning system. Meanwhile, the unit is provided with STC (smart temperature control) intelligent regulation technology. In door unit can be used to intelligently regulate vaporization temperature according to corresponding load demand. If there is small cooling demand, it's necessary to intelligently increase vaporization temperature and reduce opening of electronic expansion valve; vice versa, so as to give a better indoor human comfort along with more efficient operation of the system.



Indoor unit of air conditioning is just started up to realize fast cooling or heating

Normal multi-split air conditioner is provided with constant vaporization temperature



With constant indoor vaporization speed, although temperature is reduced at a low speed, it's still hot in the room.

Vaporization temperature of indoor unit is intelligently reduced

EK multi-split air conditioner STC intelligent regulation technology



Vaporization temperature of indoor unit is intelligently reduced to realize fast cooling and achieve set indoor temperature.

When approaching set temperature of indoor air conditioning, it's necessary to avoid discomfort caused by direct blowing of cold air and warm air

Normal multi-split air conditioner is provided with constant vaporization temperature



When return air temperature of indoor unit is close to set temperature of air conditioning, vaporization temperature of indoor unit is low, which often causes discomfort caused by direct blowing of cold air.

Vaporization temperature of indoor unit is intelligently increased

EK multi-split air conditioner STC intelligent regulation technology



When return air temperature of indoor unit is close to set temperature of air conditioning, it's necessary to intelligently increase vaporization temperature of indoor unit, so as to avoid discomfort caused by direct blowing of cold air.

### Refrigerant control technology

#### Refrigerant pressure detection technology

Suction and discharge pressure sensors and temperature sensor are used to accurately detect refrigerant state of the system, so as to ensure that the unit can be operated in a stable and efficient way. Pressure changes are timely fed back by the sensor and indoor load is quickly answered by the unit, so as to avoid impact and influence of high and low pressure on the compressor.



#### New refrigerant liquid separator

Heat exchanger is provided with new refrigerant liquid separator to evenly shunt the refrigerant, reduce the pressure loss and the noise, and effectively increase heat exchange efficiency.



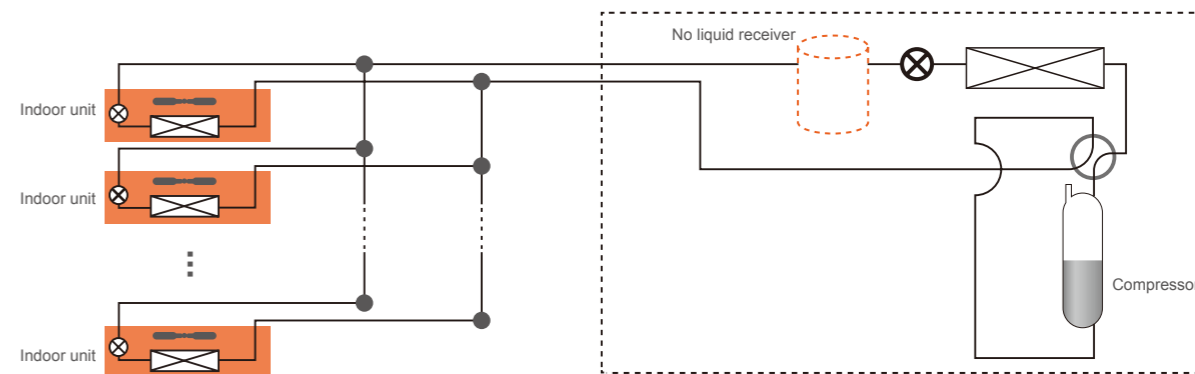
#### Control and accurate temperature control by multiple electronic expansion valves

Outdoor unit is provided with multiple electronic expansion valves to accurately regulate refrigerant flow according to the load of indoor unit, so as to create a more comfortable indoor environment.



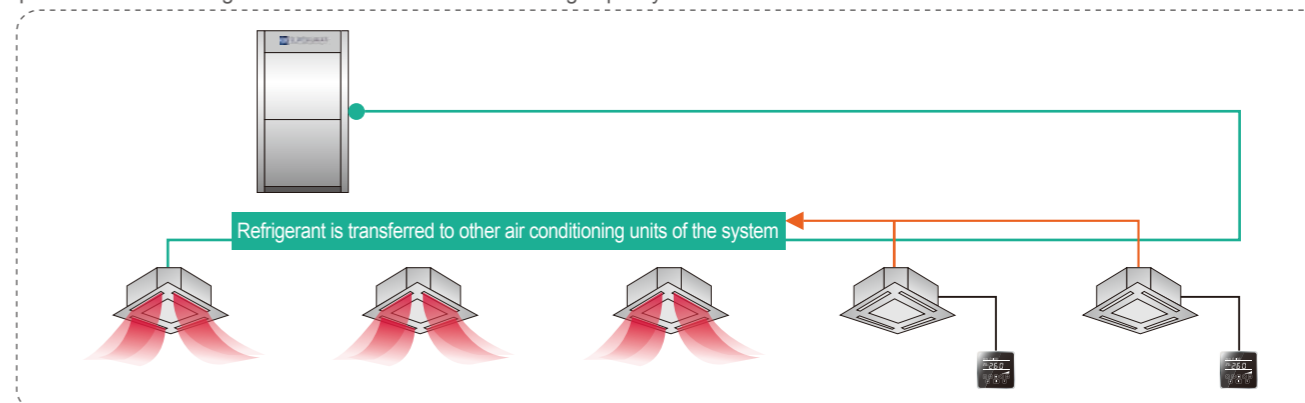
### Refrigerant piping storage technology

Refrigerant piping storage technology can be used to store surplus liquid refrigerant in the pipe line without special liquid receiver, so as to remove system circuit of liquid receiver, more accurately control the refrigerant and obvious improve operating efficiency of the system.



### Dynamic distribution technology of refrigerant

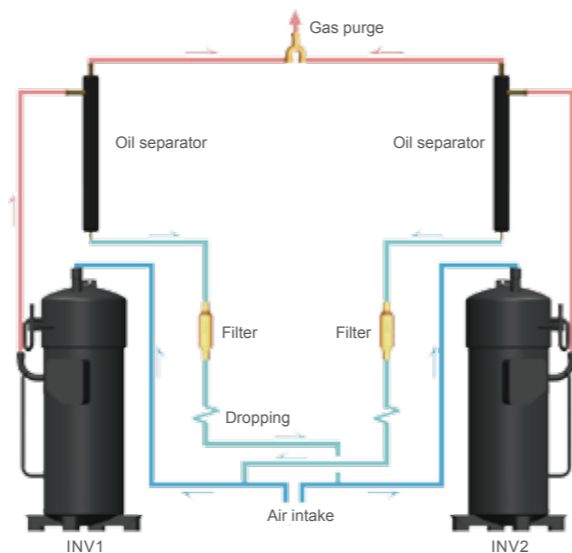
During heating, refrigerant in the stalled indoor unit is transferred and reasonably distributed to the running air conditioning unit, so as to provide sufficient refrigerant for the unit and ensure heating capacity.



## Multistage oil control technology

High-capacity oil separator, cross balancing oil between compressors, Intelligent oil return between modules, automatic oil return of the system and non-stop oil return during heating and other oil control technologies are used by the unit to keep effective oil return rate of the system above 99.99%, so as to ensure reliable and stable operation of the system and effectively extend life span of complete machine.

- Oil mist separation in the compressor
- Intelligent control of oil level of the compressor
- Cross balancing oil between compressors
- Differential pressure oil supply technology of the compressor
- Non-stop oil return during heating
- Intelligent oil balancing between modules
- Automatic oil return of the system
- Oil return of high-capacity oil separator



## Efficient oil control units

- Efficient oil separator

It can be used to effectively block refrigeration oil from entering the system along with refrigerant, timely send oil back to the compressor, and return oil efficiently.

- Patented and efficient gas liquid separator

U-shape bend of gas liquid separator is provided with double oil return holes. Column strainer is provided in the oil outlet to effectively increase filter area, ensure filter effect and oil return quantity of the compressor, prevent liquid impact and improve oil return performance.



## System oil return control technology

- Non-stop oil return during heating

There is no need to switch heating mode to cooling mode during oil return of the unit under heating, and the unit should be used to continuously supply heat during oil return.

- Automatic oil return of the system

Oil return instructions are automatically sent by the system through the controller according to operating time and state, so as to automatically return oil as required.

- No oil balancing piping is required between outdoor unit modules.



## Intelligent defrosting technology

### Intelligent defrosting technology, safe operation in the winter

- Dynamic intelligent defrosting function

Defrosting time can be dynamically and automatically corrected by the system according to real-time operating temperature and pressure state parameters of outdoor unit, so as to accurately grasp defrosting time; more, less or no defrost should be more, less and no removed respectively to effectively avoid heating loss under normal defrosting.

- Defrosting function at a low temperature

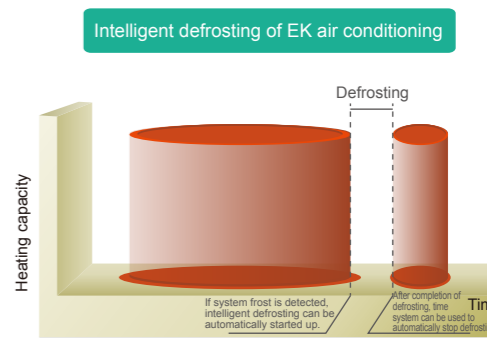
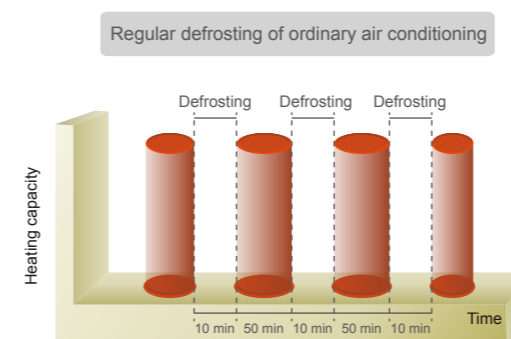
If outdoor temperature is low, the unit is used to automatically determine change trend of data measured by temperature and pressure sensors, so as to give a more accurate defrosting.

- Defrosting function in the high-humid environment

The unit can be used to automatically determine ambient humidity and defrost accurately, so as to avoid excessive or invalid defrosting.

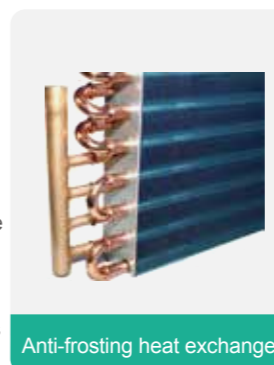
- Partial load defrosting function

During partial load operation of the unit, changes of heat exchange efficiency of outdoor unit can be automatically used for defrosting. According to different judgment rules under different load conditions, it's necessary to more accurately grasp the defrosting time.



## Anti-frosting heat exchanger

Heat exchanger of outdoor unit is provided with anti-frosting design. Under heating mode, refrigerant with medium temperature arising from the indoor unit can be used for further heat release in the anti-frosting heat exchanger, so as to ensure no frosting at the bottom of heat exchanger of outdoor unit. Anti-frosting design can be used to effectively avoid frosting and accumulated snow at the bottom of heat exchanger, so as to improve heating capacity of the system.



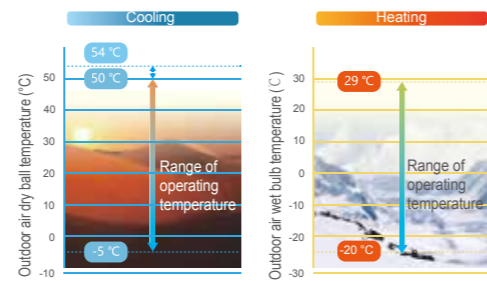
## Wide operating range

### Wide operating temperature, better coping with hostile environment

Wide operating temperature can be used to greatly improve adaptive capacity of the system to various environments. Advanced design of air conditioning system can be used to ensure reliable operation of EKR at 50°C or -20°C, so as to create a comfortable indoor environment for you.

Cooling operating range: -5°C~50°C

Heating operating range: -20°C~29°C



### Intelligent balance operating management

The system automatically records the operating time of every compressor. Based on this time, the system preferentially starts a compressor with the shorter operating time to balance the operating time of every compressor and extend their service life. The system automatically records the operating time of every module and preferentially starts a module with the shorter operating time to balance the operating time of every module and extend unit service life.

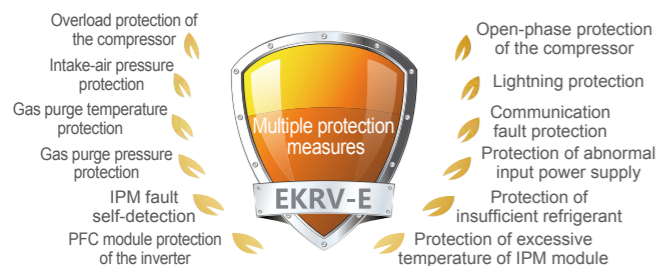


### Triplex backup operation function

The unit uses triplex backup operation design in which mutual backup exists between outdoor unit modules, between compressors in modules and between fans to ensure continual operation of the unit during accident protection/shutdown and reduce the maintenance waiting time.



### Multiple protection measures, protecting safe and reliable operation of the unit



### Intelligent power-saving mode

As required by power peak and valley, EKR-E central air conditioning can be used to intelligently detect the current and operate in the automatically power-saving mode, so as to reduce power consumption of the unit under the premise of ensuring comfort.

# Health and Fitness

## Fully enjoy green technology



## Creating a quiet atmosphere

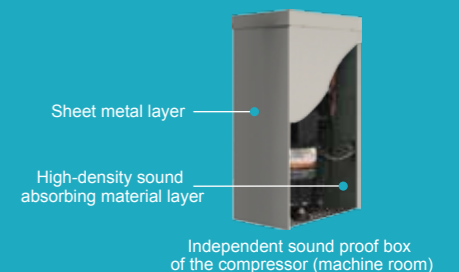
14 mute designs are used by the unit to realize mute operation of indoor unit and outdoor unit.

- Low-noise air outlet louver
- Streamlined fan with large diameter
- New design of air ducting
- DC brushless fan motor
- Low-noise DC frequency conversion compressor
- Design for avoid resonance between compressors
- Anti-vibration design of the base of the compressor
- Treatment of sound proof box of new compressor
- High-density sound absorbing material
- Refrigerant flow and noise reduction design
- Pipe line simulation and damping design
- Damping design of outdoor casing
- Night mute function
- The system is regulated as required to be automatically mute



### Sound proof box of patented new compressor

Outdoor unit is provided with independent sound proof box to effectively reduce noise and protect the compressor. High-density sound absorbing materials are attached to the inner wall of the box. Complete machine can be used to form three-layer noise reduction measures of the compressor, so as to effectively absorb and obstruct noise of the compressor in the high, medium and low frequency bands. The complete machine has obvious noise reduction effect.





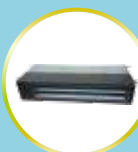
## Noise control of indoor unit

It's necessary to research on methods for reducing operating noise of indoor unit through operation place, structure features and operation control. Minimum noise can be as small as 23dB (A).



**20dB(A)**

Rustle of the leaves



**23dB(A)**

EK ducted-type air conditioner



**30dB(A)**

A quiet reading room



**40dB(A)**

A quiet language lab



**50dB(A)**

An office under working

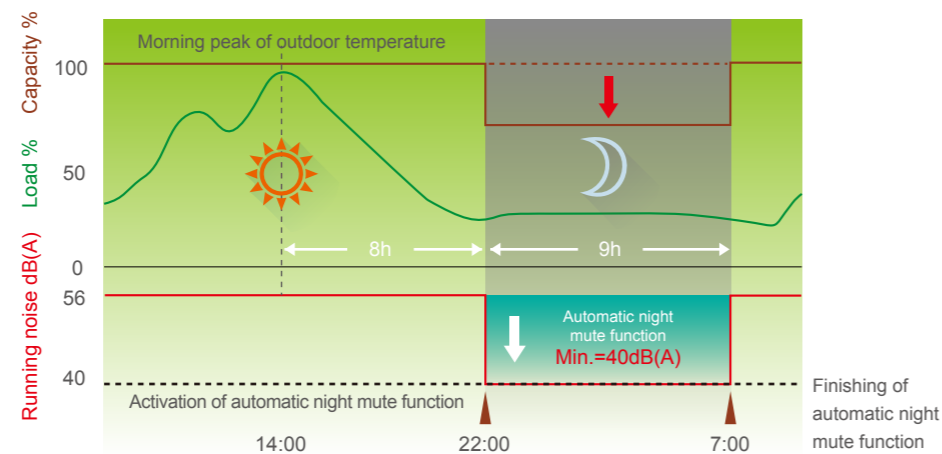
## Automatically mute in the whole day

When the system has partial load, outdoor fan can be operated at a reducing speed automatically according to the pressure and the unit is used to automatically regulate the capacity to perfectly match with the load of the room, so as to automatically reduce operation noise.



## Night mute mode

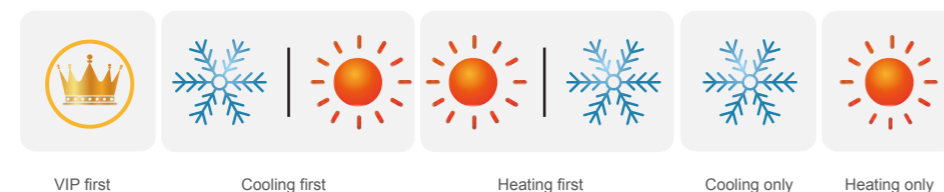
For night mute function of outdoor unit, if this mode is turned on, minimum noise of the unit is as small as 40 dB, so as to create a comfort and quiet night environment.



## Creating a comfortable temperature

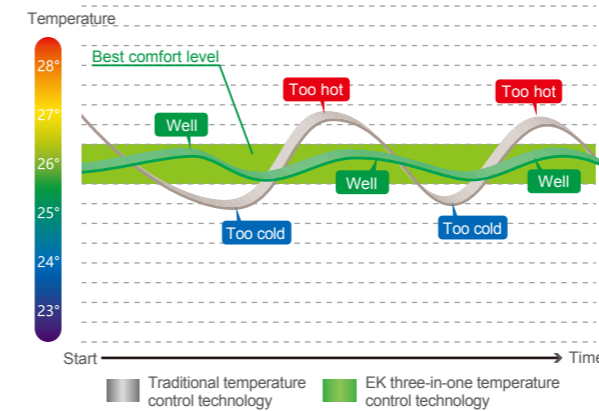
### VIP function

Multiple operating modes are optional: VIP users first, cooling first, heating first, cooling only, and heating only.



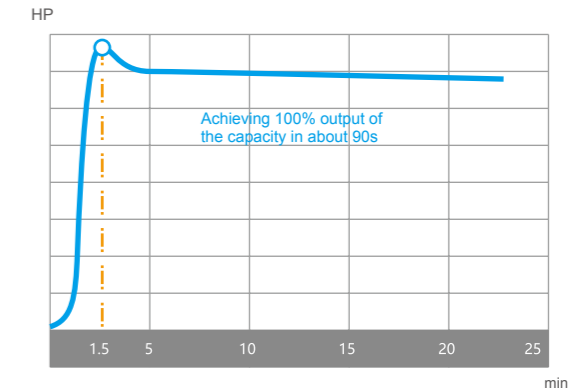
## Three-in-one temperature sensing design

Temperature sensor can be used to accurately detect air supply return, return air temperature and indoor temperature. Control chip of indoor unit can be used to intelligently detect temperature changes, automatically regulate actual cooling capacity or heating capacity of indoor unit, keep control precision of indoor temperature to be  $\pm 0.5^\circ\text{C}$ , and control air outlet temperature in the most comfortable range of human body.



## Quickly starting cooling (heating) to rapidly reach the set temperature

EK DC frequency conversion quick start technology can be used to realize 100% output of cooling/heating capacity of the unit and quickly satisfy the demand for air conditioning.



## Green and environmental, caring for the earth



### A positive and comprehensive response to European RoHS directive

Full name of RoHS is the restriction of the use of certain hazardous substances in electrical and electronic equipment. In this directive, it specifies that following six hazardous substances (lead, mercury, cadmium, chromium VI, PBDE or PBB) are prohibited from being used in electrical and electronic equipment. EK Air Conditioning positively responds to European RoHS directive and strictly controls usage of hazardous substances, so as to protect health of users and ensure that scrapped electrical and electronic equipment are recycled and disposed according to environmental requirements.

### Use R410A environmental refrigerant

EKRV-E series are fully provided with internationally-recognized, non-poisonous and stable R410 environmental refrigerant with excellent performance. Its ODP is 0, which means not damaging the atmospheric ozone layer. Along with being efficient and energy-saving, it can be used to give you a green and environmental air conditioning environment.

## Comfortable and healthy air solution

In recent years, metropolises of the country have suffered from haze frequently and worse and worse air quality, there is no time to delay for optimizing indoor air quality. EK is committed to provide users with professional air quality solutions:

### Ecological air purification technology (optional)

DecoTec™ technology is used to fully resolve formaldehyde absorbed on the filter surface in the air into water and carbon dioxide, so as to completely eradicating re-discharging of formaldehyde. Through inspection of the third-party authority, removal efficiency is up to 99%, so as to restore the most harmonious original ecology environment.



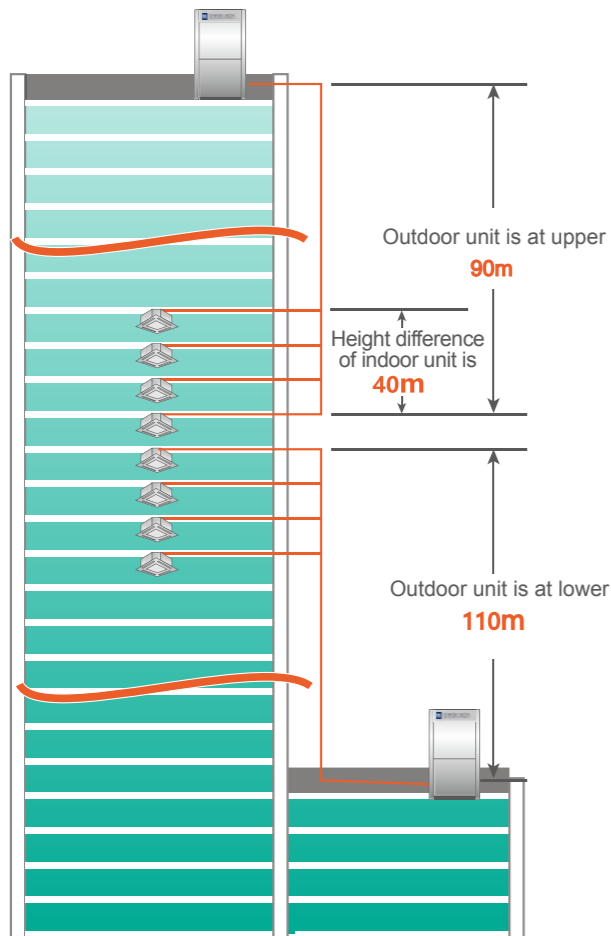
### PM2.5 electrostatic precipitation strainer (optional)

Optional PM2.5 electrostatic precipitation strainers are used in the return air inlet of indoor unit, so as to realize dedusting and cycle purification of indoor air and create a healthy and comfortable indoor space for you.

# Efficient And Energy-Saving To Enjoy The Low-Carbon Life



## Super long piping



Maximum total length of the piping is

**1000m**

Maximum equivalent length of single pipe is **200m**

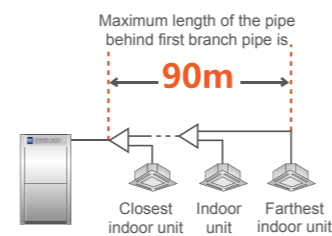
Maximum actual length of single pipe is **170m**

Maximum drop of indoor unit and outdoor unit

Outdoor unit is at upper **90m**

Outdoor unit is at lower **110m**

Maximum drop of indoor unit is **40m**



\*Note: in case of following conditions, please consult EK technology engineer.  
 1. Outdoor unit is at upper part and the drop between indoor unit and outdoor unit is beyond 50m;  
 2. Outdoor unit is at lower part and the drop between indoor unit and outdoor unit is beyond 40m;  
 3. The drop between indoor units is beyond 20m.

## Flexible application



Maximum external static pressure is up to 85Pa, so as to cope with layered arrangement of the system, adaptive control of static pressure and ensure heat dissipation effect of the unit.



360° all-directional gas fitting, so as to facilitate installation and regulation of pipeline.

## Intelligent commissioning

### Commissioning-efficient test run

EKR-V-E series multi-connected unit is provided with efficient test run function to improve construction speed and ensure construction quality at the construction site.

- Automatically checking various connection wirings between indoor unit and outdoor unit, so as to ensure correct connection.
- Automatically checking whether fill amount of refrigerant in the system is in a reasonable range according to configuration of indoor unit and outdoor unit, length of refrigerant piping and other actual conditions of the system.
- Automatically checking whether locking valve of each outdoor unit module is in the normal working state, so as to ensure normal operation of air conditioning system.
- Implementing test run to connect intelligent diagnosis and commissioning software, so as to rapidly diagnose air conditioning in all directions and facilitate commissioning and maintenance.

Automatic detection

Checking wiring

Piping supervision

Detection of refrigerant fill amount

Detection of locking valve

### Phase-sequence self-recognition and correction technology

DC motor is used by the compressor and fan motor. In case of errors in distribution phase-sequence, the unit can be used to recognize and automatically rectify the phase sequence, so as to realize normal operation.

### Automatically detecting abnormalities of the pipe line

According to configured temperature and pressure sensors, the system can be used to supervise operation conditions of the system in a real-time way and timely find out abnormal conditions (pipe connection errors and leakage etc.) of the system pipe line.

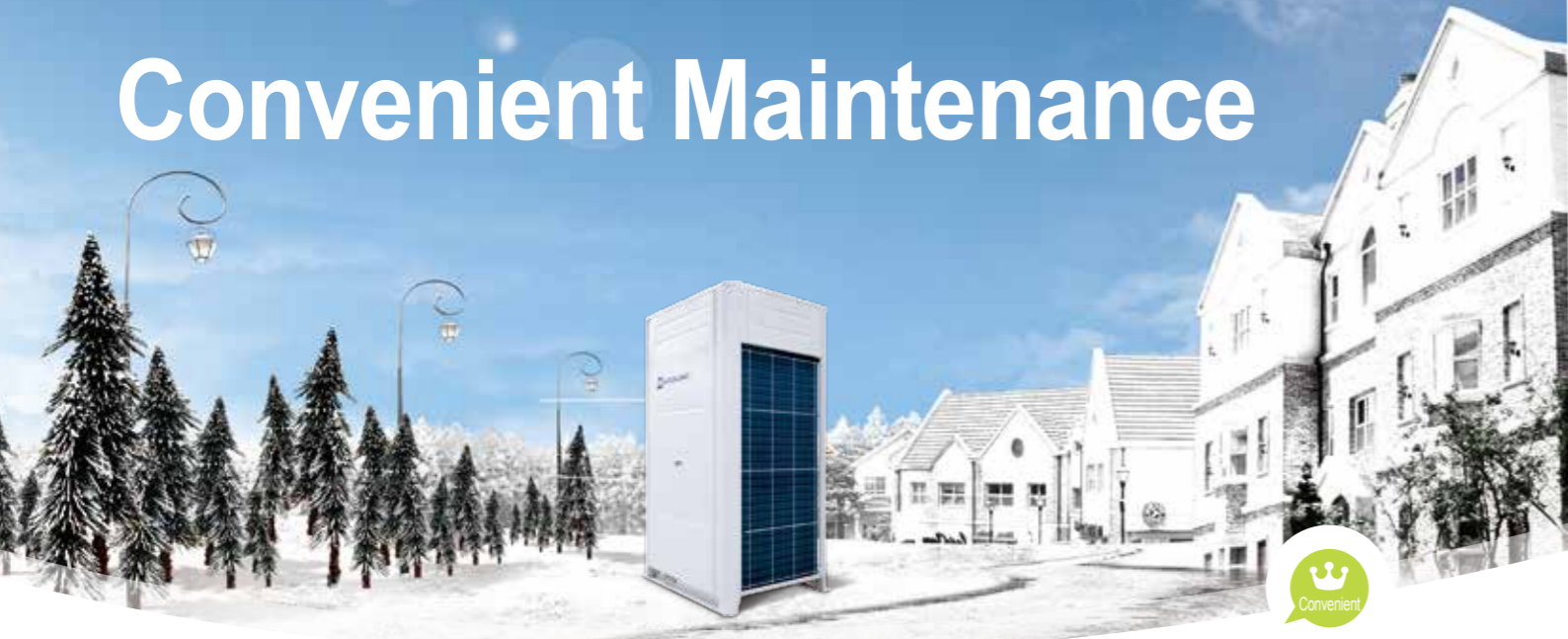
### Non-polar communication of outdoor unit and automatic addressing

Outdoor unit and indoor unit are communicated through non-polar shielding twisted pair. During commissioning, there is no need to set address of each indoor unit. The controller can be used to automatically register the address of all indoor unit of the system, which requires no manual dial-up and is simple and safe.

### Automatic recovery of the circuit

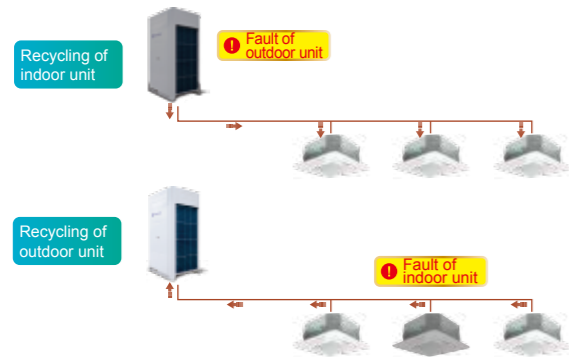
Excessive high temperature, excessive large current and excessive refrigerant pressure of the unit, if any, may damage the unit. Under such conditions, the system can give timely alarm and electronic control circuit can be used for automatic recovery.

# Convenient Maintenance



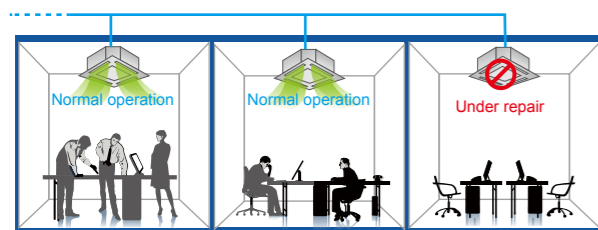
## Automatic recycling of the refrigerant

The refrigerant can be automatically recycled to outdoor unit side as required by maintenance, so as to save waste caused by discharging of refrigerant during maintenance.



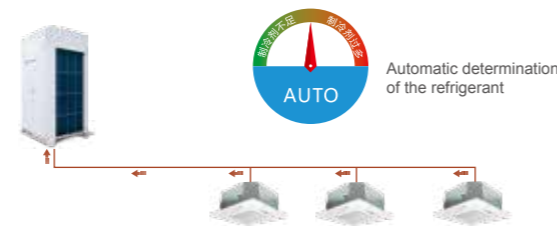
## Emergency maintenance of power down of indoor unit

If one indoor unit has fault, which requiring emergency power down for maintenance, this indoor unit can be independently powered down without affecting operation of the whole system.



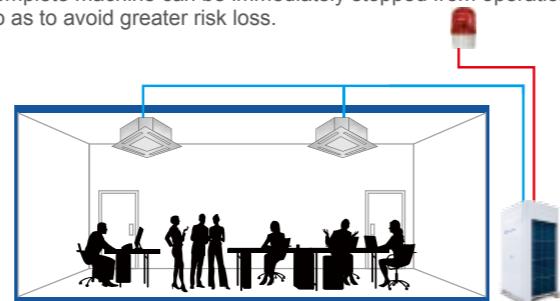
## Automatic determination of refrigerant charge

The unit can be used to automatically detect whether refrigerant charge in the system is proper according to configuration of indoor unit and actual length of refrigerant piping. If refrigerant charge is insufficient, a prompt of timely charging by technology personnel can be given to ensure stable and efficient operation of the system.



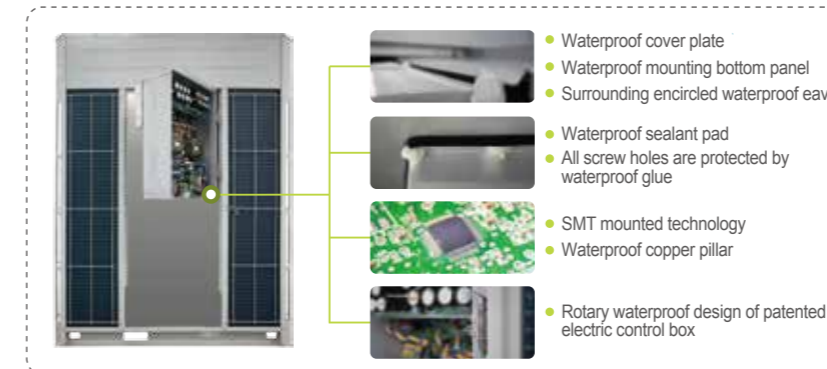
## Emergency shutdown

Without remote monitoring, outdoor unit can be directly connected to fire alarm linkage signal. Under emergency conditions, complete machine can be immediately stopped from operation, so as to avoid greater risk loss.



## Electric box rotation and waterproof design

As electrical element is very sensitive to water, electric control box of EKR-V-E series unit are provided with layered design and multiple waterproof measures to effectively protect electrical elements and extend life span of the unit. Electric box is provided with rotatable design to greatly facilitate commissioning and maintenance.



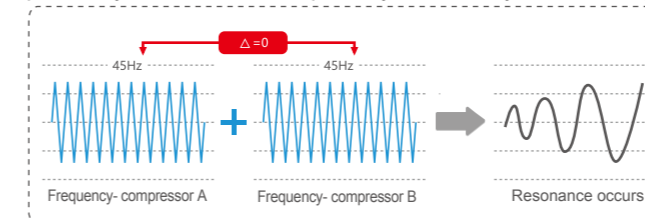
## Lightning protection function

Outdoor unit is designed with lightning protection function to avoid damaging the unit by lightning and effectively protect safe and reliable operation of the unit.

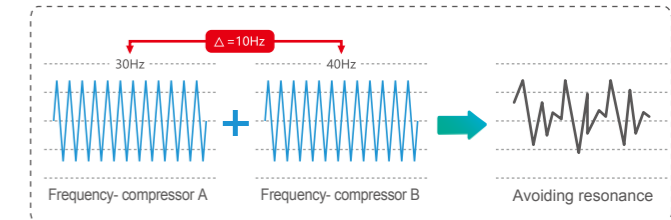


## Intelligent anti-resonance technology

Outdoor unit can be used to automatically regulate frequency difference between two compressors during operation, so as to prevent system resonance, improve system stability and reduce system noise.



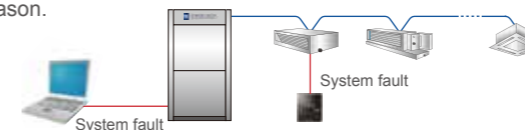
Traditional total frequency conversion unit: same frequency can cause resonance, so as to amplify the energy in times and increase the noise.



EK intelligent anti-resonance technology: different frequencies are used to mutually cancel vibration energy and reduce the noise.

## Fault storage and query (black box)

The system has fault storage function, which can be used to query and record fault data and facilitate after-sales service personnel in correctly and quickly judging and analyzing fault according to its reason.



## Power-on self-starting

In case of power-on again after accidental power off, the system can be used to automatically restore operating state before power off without manual operation.



## Automatic fault detection

7-section luminous digital tubes are directly used by the unit to display operating information of the system, so as to realize direct visualization of operating state and facilitate commissioning and after-sales services.



## Anti-salt fog function of outdoor unit (optional)

If used in the salt fog and acid environment on the sea, outdoor unit can be provided with customized anti-salt fog function.

# Smart control system

## Convenient and easy manipulate



### Wired controller

- Friendly man-machine interface and touch screen operation
- Power-on and power-off and temperature settings
- Air conditioning mode (cooling /heating/ dehumidification/air supply) settings
- Strong wind/medium wind/low wind/automatic/wind deflector swinging settings
- Timed power on and power off, and maximum timing time is 24h.
- Fault code display function
- Sub-control electric heating or auxiliary hot water coil control function
- Automatic restoration of temperature settings
- Main wire controller function
- Temperature limits of the controller
- Prompt of cleaning the strainer
- Controller locking
- Sleep function

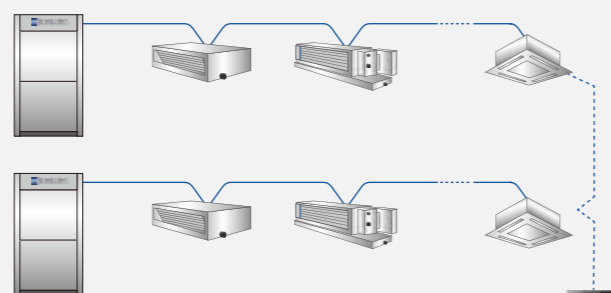
### Wireless controller



- Large screen LCD display
- Power-on and power-off and temperature settings
- Air conditioning mode (cooling /heating/ dehumidification/air supply) settings
- Strong wind/medium wind/low wind/automatic/ wind deflector swinging settings
- Timed power on and power off, and maximum timing time is 24h
- Intelligent one-key pass function
- Wired/wireless controller can be jointly used to control indoor unit

### Central controller

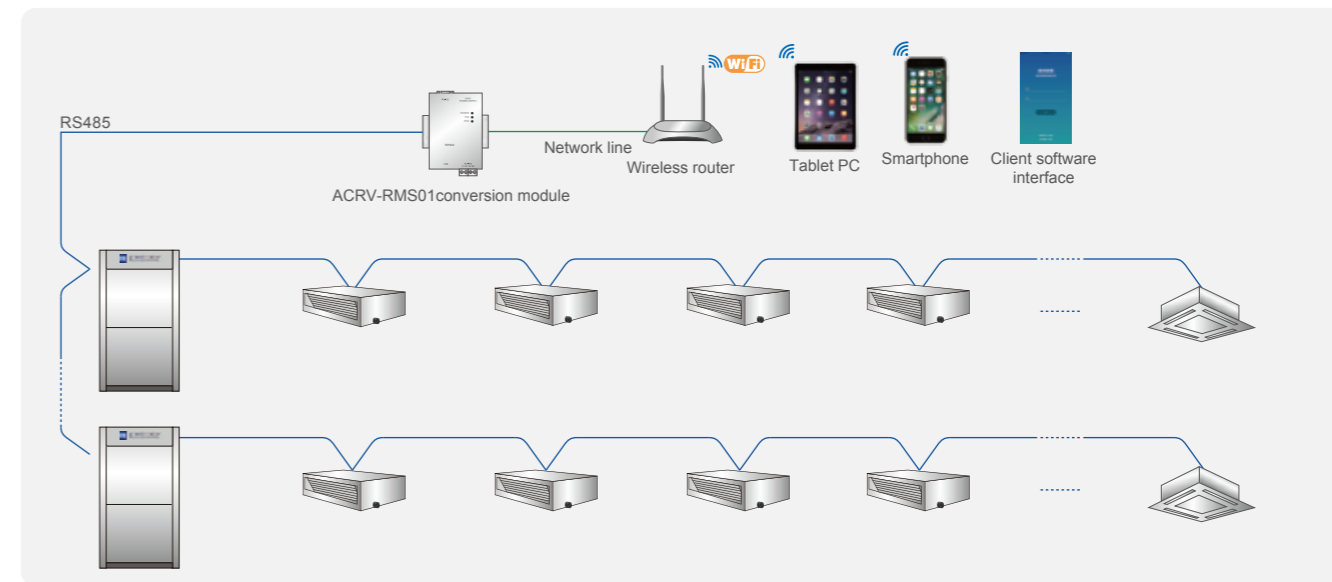
- Friendly man-machine interface and touch screen operation
- Controlling 16 indoor units at most (across the system)
- Stand-alone or group mode settings
- Power-on/power-off, temperature settings
- Air conditioning mode (cooling /heating/ dehumidification/air supply) settings
- Strong wind/medium wind/low wind/automatic/wind deflector swinging settings
- Timed power on and power off, and maximum timing time is 24h.
- Sleep function
- Sub-control electric heating or auxiliary hot water coil control function
- Operating state monitoring



Central controller can be used to control 16 indoor units at most (across the system)

### Remote monitoring

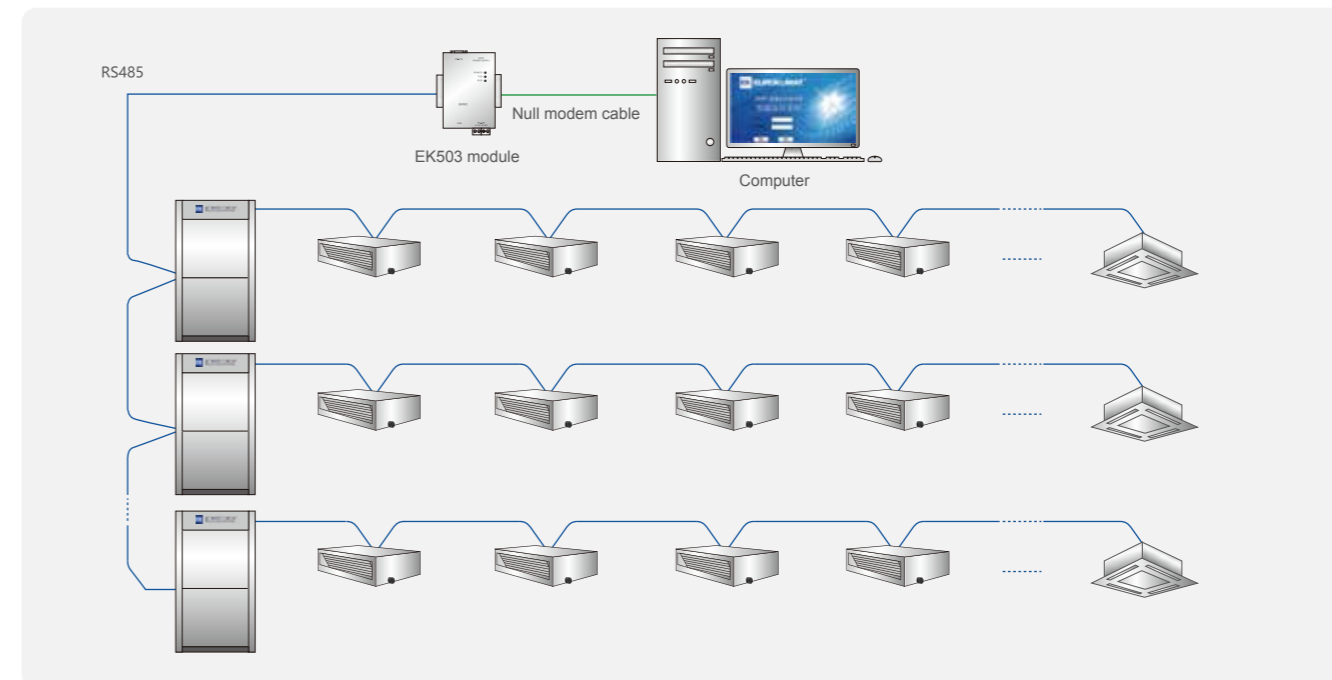
Smartphone or tablet PC can be used to operate air conditioning system in a remote way through EK software and monitor operating conditions of each indoor unit in an all-round way.



### Intelligent management system

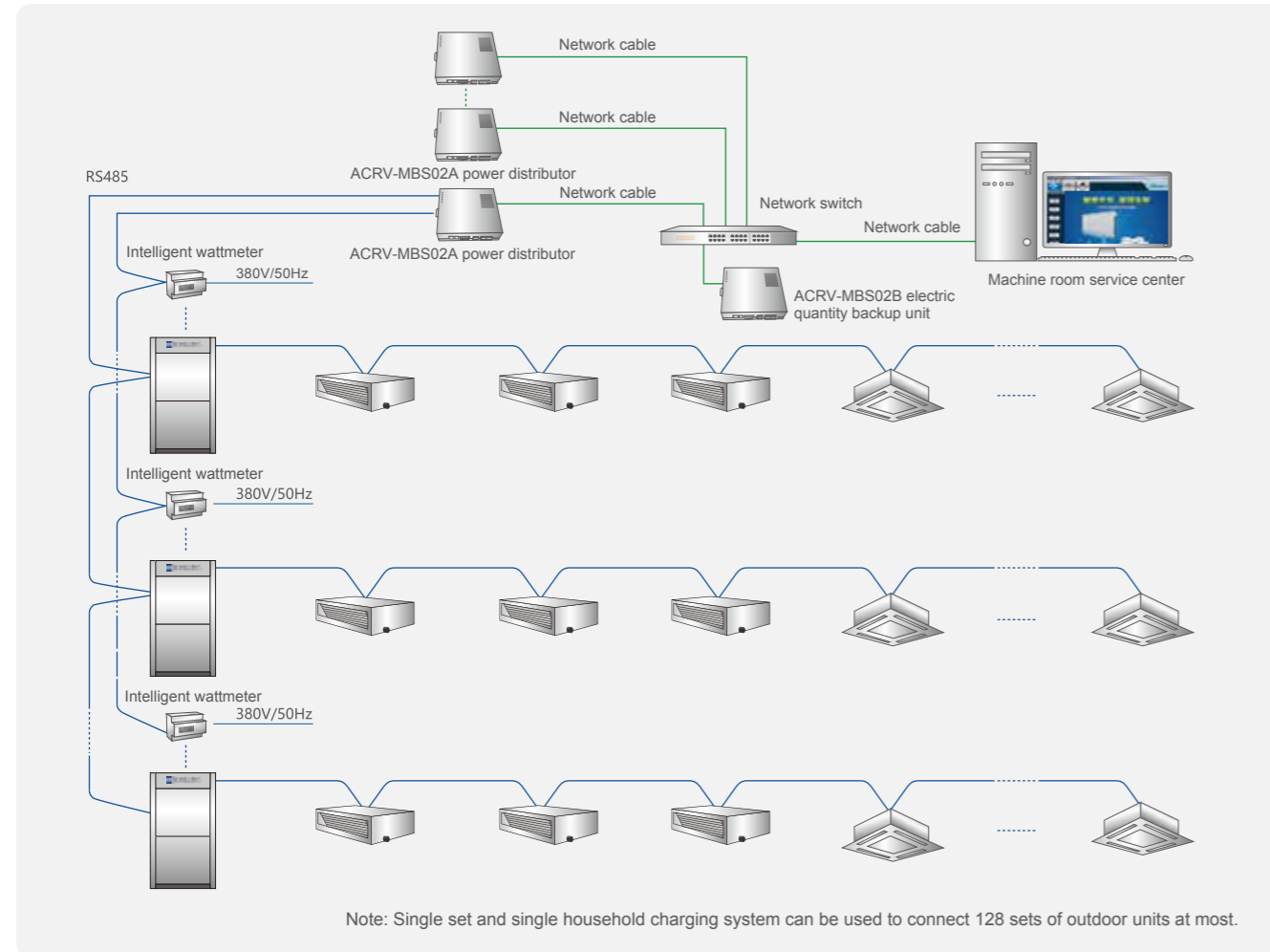
EK multi-split air conditioner management system is intelligent software especially developed according to management and control of EK multi-connected central air conditioning. With computer as centralized control center, it can be used to connect 4096 indoor units and 64 sets of outdoor units at most, so as to automatically and online manage the whole air conditioning system.

- Monitoring operating state of air conditioning system
- User controller locking function
- Power-on and power-off of each indoor unit, temperature settings, air velocity settings etc.
- Timing management
- User permissions settings
- Fault alarm



## Household charging function

Power distributor can be used to connect intelligent wattmeter and indoor unit and outdoor unit system, read data of intelligent wattmeter and real-time operating state of indoor unit and outdoor unit at a high speed, accurately distribute and store total consumed power according to refrigerant flow proportion corresponding with opening of electric expansion valve of indoor unit and in combination with air velocity and return air temperature of indoor unit, and defrosting of outdoor unit and other state parameters, and transfer them to PC machine through LAN switch. Then, electric quantity distributed to each indoor unit can be converted by PC machine to corresponding fees, so as to complete reports and statistics etc.



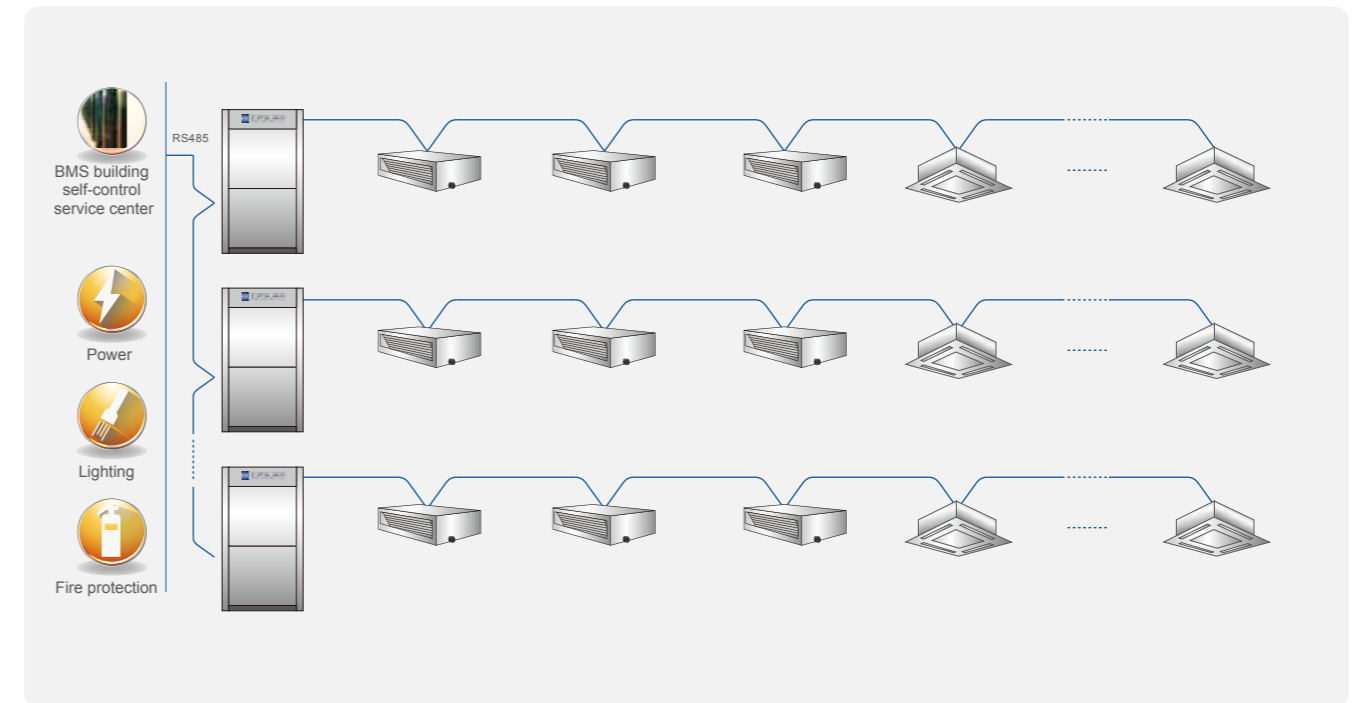
Floor visualization navigation interface can be used to monitor states of all units, manage permissions of the user, display and store operating records of all units, and automatically calculate and export electric quantity of indoor units, so as to generate report forms of electric quantity of each user.



## Open intelligent building control system

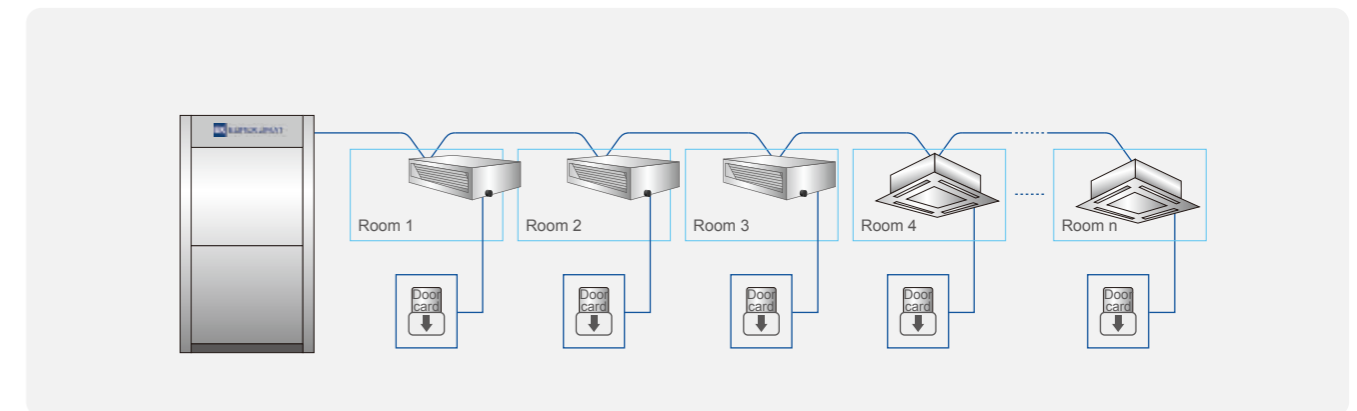
EK open intelligent building control system can apply to MODBUS communication protocol, switch air conditioning system of EK VRV air-conditioning system to intelligent building control system through network connection module, so as to realize following functions:

- Built-in protocol converter
- Monitoring operating state of air conditioning system in a real-time way
- Monitoring center gives operation instructions to air conditioning unit (power-on and power-off, temperature settings, air flow rate and wind direction settings, mode settings etc.)
- Fault alarm and fault code display
- Manageable user permission settings
- Chain control (fire alarm, door lock and lighting etc.)



## Door card control system

Door card signal interface can be pre-set on the control panel of indoor unit. Door card can be used to jointly control relevant indoor units. After removing the card, indoor unit is powered off. If the card is inserted again, indoor unit can be used to automatically restore operating mode before removing the card or restore to standby mode.



# Indoor and outdoor line-up

## Category of indoor units

Name	Specifications	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	25.0	28.0
Concealed mounted ceiling air conditioner (standard type)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Indoor unit of concealed mounted ceiling air conditioner (ultra-thin type)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Single discharge built-in type		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Double discharge built-in type		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Four-side discharge built-in type		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Wall mounted type		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ducted air conditioning equipment		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Open ceiling/standing type		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

## Indoor line-up with multiple choices



Concealed mounted ceiling indoor unit



Ceiling built-in indoor unit



High static pressure ducted indoor unit



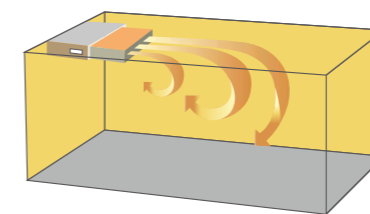
Wall mounted indoor unit

## Indoor unit of concealed mounted ceiling air conditioner (EKCC-B1 standard type)

### Adjustable multiple air supply distances

Multiple static pressures can be switched on the site to satisfy air supply requirements at different distances.

Model	Standard Static Pressure (Pa)	Optional Static Pressure (Pa)
EKCC22B1-EKCC71B1	10	10/30
EKCC80B1-EKCC160B1	10	10/30/50



### Auxiliary electric heating (optional)

PTC thermo-sensitive ceramic elements are optional for electric auxiliary heating.



### Condensate lifting pump (optional)

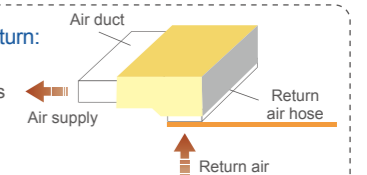
Condensate lifting pump with 1200mm high-lift and integrated drain pan are optional for preventing condensation and leakage.



### Multiple optional return air methods

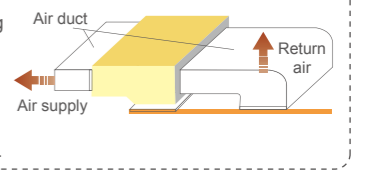
#### Side supply and bottom return:

It only requires small overall drop ceiling space and needs to be combined with indoor decoration to set a service port, so as to facilitate smooth maintenance.



#### Side supply and rear return:

In case of sufficient mounting space, it's recommended to use side supply and rear return method to effectively reduce operating noise. The access opening is set to ensure smooth maintenance.



## Indoor unit of concealed mounted ceiling air conditioner (standard type)

Unit model	Cooling capacity kW	Heating capacity kW	Auxiliary electric heating power kW (optional)	Air flow rate m³/h	External static pressure Pa	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Mass kg	Connection pipe specification mm				Control mode
											Liquid pipe	Gas piping	Drain pipe (self-drain)	Drain hose of water distribution pump	
EKCC22B1	2.2	2.5	1.0	500/400/300	10/30	54	220V~50Hz	34/31/27	1032x530x230	22	φ6.35	φ12.7	R3/4	φ16	Liquid crystal display remote controller (optional) Wire controller of touch screen (optional)
EKCC25B1	2.5	3.0	1.0	500/400/300	10/30	54	220V~50Hz	34/31/27	1032x530x230	22	φ6.35	φ12.7	R3/4	φ16	
EKCC28B1	2.8	3.2	1.0	500/400/300	10/30	54	220V~50Hz	34/31/27	1032x530x230	22	φ6.35	φ12.7	R3/4	φ16	
EKCC32B1	3.2	3.6	1.0	500/400/300	10/30	54	220V~50Hz	34/31/27	1032x530x230	22	φ6.35	φ12.7	R3/4	φ16	
EKCC36B1	3.6	4.0	1.2	580/500/400	10/30	64	220V~50Hz	36/34/31	1032x530x230	22	φ6.35	φ12.7	R3/4	φ16	
EKCC40B1	4.0	4.5	1.2	580/500/400	10/30	64	220V~50Hz	36/34/31	1032x530x230	22	φ6.35	φ12.7	R3/4	φ16	
EKCC45B1	4.5	5.0	2.0	900/750/550	10/30	102	220V~50Hz	36/34/31	1288x530x250	25	φ6.35	φ12.7	R3/4	φ16	
EKCC50B1	5.0	5.8	2.0	900/750/550	10/30	102	220V~50Hz	36/34/31	1288x530x250	25	φ6.35	φ12.7	R3/4	φ16	
EKCC56B1	5.6	6.3	2.0	900/750/550	10/30	102	220V~50Hz	36/34/31	1288x530x250	25	φ6.35	φ12.7	R3/4	φ16	
EKCC63B1	6.3	7.1	2.2	960/900/750	10/30	113	220V~50Hz	37/36/35	1288x530x250	27	φ9.52	φ15.88	R3/4	φ16	
EKCC71B1	7.1	8.0	2.2	960/900/750	10/30	113	220V~50Hz	37/36/35	1288x530x250	27	φ9.52	φ15.88	R3/4	φ16	
EKCC80B1	8.0	9.0	2.2	1200/950/800	10/30/50	158	220V~50Hz	39/37/35	1288x530x250	28	φ9.52	φ15.88	R3/4	φ16	
EKCC90B1	9.0	10.0	3.6	1400/1100/900	10/30/50	210	220V~50Hz	40/38/36	1642x530x250	39	φ9.52	φ15.88	R3/4	φ16	
EKCC100B1	10.0	11.2	3.6	1900/1520/1300	10/30/50	276	220V~50Hz	43/41/39	1642x530x250	39	φ9.52	φ15.88	R3/4	φ16	
EKCC112B1	11.2	12.5	3.6	1900/1520/1300	10/30/50	276	220V~50Hz	43/41/39	1642x530x250	39	φ9.52	φ15.88	R3/4	φ16	
EKCC125B1	12.5	14.0	3.6	1900/1520/1300	10/30/50	276	220V~50Hz	43/41/39	1642x530x250	39	φ9.52	φ15.88	R3/4	φ16	
EKCC140B1	14.0	16.0	3.6	2100/1750/1460	10/30/50	280	220V~50Hz	44/42/40	1903x530x250	45	φ9.52	φ15.88	R3/4	φ16	
EKCC160B1	16.0	18.0	3.6	2100/1750/1460	10/30/50	280	220V~50Hz	44/42/40	1903x530x250	45	φ9.52	φ15.88	R3/4	φ16	

Note: 1. Cooling capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
2. Heating capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
3. Above noise values are measured at 1.4m part below central part of air conditioner in the semi-anechoic room; during actual operation, due to influence of external environment, noise value is slightly higher than the standard;  
4. Dimensions marked above default to be lower return air mode. If indoor unit is provided with rear return air, the depth needs to be increased for 20mm;  
5. Above noise values are measured during operation in the rear return air way. In case of operated with lower return air method, noise value is larger than the noise value operated in the rear return air for about 5 dB (A).



## Indoor unit of concealed mounted ceiling air conditioner (EKCC-SA1 ultra-thin type)

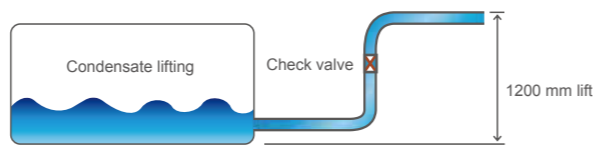
### Three-dimensional air supply panel (optional)

The horizontal and vertical swinging devices at the air outlet can be freely adjusted via remote control to create a comfortable three-dimensional air discharge effect. After the air conditioner is turned off, the swinging devices are automatically closed to restore the smooth panel. The indoor decoration is simple and beautiful and can prevent dust from entering the indoor unit. Advanced ABS material is used to effectively prevent condensation at the air outlet during cooling.



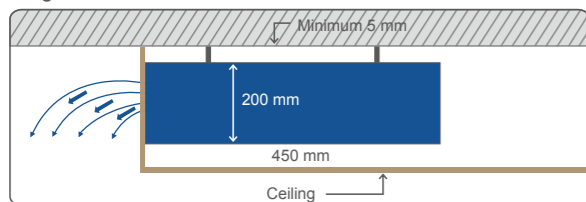
### Condensate lifting pump (optional)

Optional condensate lifting pump with 1200mm lift is optional provided with the check valve to prevent flow backward of the condensate, so as to be safer and realize more flexible mounting position.



### Ultra-thin fuselage

With small requirements for drop ceiling space, the unit with a depth of only 450mm and a height of only 200mm can be perfectly integrated with indoor decorations.



### Auxiliary electric heating (optional)

PTC thermo-sensitive ceramic elements are optional for electric auxiliary heating.

### Integrated drain pan for preventing condensation and leakage

### Indoor unit of concealed mounted ceiling air conditioner (ultra-thin type)

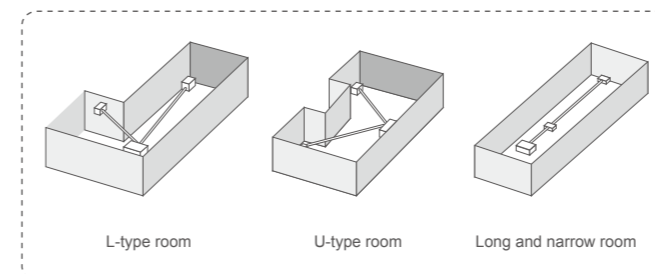
Unit model	Cooling capacity kW	Heating capacity kW	Auxiliary electric heating power kW (optional)	Air flow rate m³/h	External static pressure Pa	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Mass kg	Connection pipe specification mm				Control mode
											Liquid pipe	Gas piping	Drain pipe (self-drain)	Drain hose of water distribution pump	
EKCC18SA	1.8	2.2	1.0	460/390/330	10/30	40	220V~50Hz	28/26/23	700x450x200	17.5	Φ6.35	Φ12.7	R1/2	Φ16	Liquid crystal display remote controller (optional) Wire controller of touch screen (optional)
EKCC22SA	2.2	2.8	1.0	460/390/330	10/30	40	220V~50Hz	28/26/23	700x450x200	17.5	Φ6.35	Φ12.7	R1/2	Φ16	
EKCC25SA	2.5	3.0	1.0	460/390/330	10/30	40	220V~50Hz	28/26/23	700x450x200	17.5	Φ6.35	Φ12.7	R1/2	Φ16	
EKCC28SA	2.8	3.3	1.0	460/390/330	10/30	40	220V~50Hz	28/26/23	700x450x200	17.5	Φ6.35	Φ12.7	R1/2	Φ16	
EKCC32SA	3.2	3.6	1.0	460/390/330	10/30	40	220V~50Hz	29/27/25	700x450x200	18	Φ6.35	Φ12.7	R1/2	Φ16	
EKCC36SA	3.6	4.2	1.0	460/390/330	10/30	40	220V~50Hz	29/27/25	700x450x200	18	Φ6.35	Φ12.7	R1/2	Φ16	
EKCC40SA	4.0	4.5	1.0	550/450/390	10/30	55	220V~50Hz	33/30/27	700x450x200	18	Φ6.35	Φ12.7	R1/2	Φ16	
EKCC45SA	4.5	5.0	1.0	550/450/390	10/30	55	220V~50Hz	33/30/27	700x450x200	18	Φ6.35	Φ12.7	R1/2	Φ16	
EKCC50SA	5.0	5.8	2.0	870/750/630	10/30	83	220V~50Hz	35/32/28	1100x450x200	25	Φ6.35	Φ12.7	R1/2	Φ16	
EKCC56SA	5.6	6.5	2.0	1050/950/820	10/30	93	220V~50Hz	37/34/30	1100x450x200	25	Φ6.35	Φ12.7	R1/2	Φ16	
EKCC63SA	6.3	7.5	2.0	1050/950/820	10/30	93	220V~50Hz	37/34/30	1100x450x200	26	Φ9.52	Φ15.88	R1/2	Φ16	
EKCC71SA	7.1	8.5	2.0	1050/950/820	10/30	93	220V~50Hz	37/34/30	1100x450x200	26	Φ9.52	Φ15.88	R1/2	Φ16	

Notes: 1. Cooling capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
2. Heating capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
3. Above noise values are measured at 1.4m part below central part of air conditioner in the semi-anechoic room; during actual operation, due to influence of external environment, noise value is slightly higher than the standard;  
4. Dimensions marked above default to be lower return air mode. If indoor unit is provided with rear return air, the depth needs to be increased for 20mm;  
5. Above noise values are measured during operation in the rear return air way. In case of operated with lower return air method, noise value is larger than the noise value operated in the rear return air for about 5 dB (A).

## Indoor unit of ducted air conditioning equipment (EKDB-B1 series)

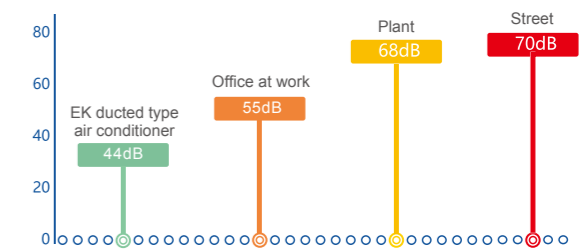
### High hydrostatic pressure design

Indoor unit is provided with high hydrostatic pressure design for air supply in a long distance and at multiple points, so as to satisfy air conditioning demand in a large space place.



### Low operating noise

Indoor unit is provided with efficient and low-noise centrifugal fan; inner wall is provided with sound-absorbing and thermal insulation materials and double aeration reduction design is used to ensure low-noise operation of indoor unit; what's more, indoor unit can be mounted at drop ceiling which is far away from air conditioning area, so as to satisfy requirements for indoor low-noise to the largest extent.



### Multiple tuyere choices

Air supply tuyere in different ways can be selected according to actual decoration requirements at the site, so as to satisfy requirements for air conditioning in different places.



### Long-acting strainer

Effectively absorbing the particles and harmful flocculates and improving indoor air quality.

## Indoor unit of ducted air conditioner

Unit model	Cooling capacity kW	Heating capacity kW	Air flow rate m³/h	External static pressure Pa	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Mass kg	Connection pipe specification mm			Control mode
										Liquid pipe	Gas piping	Drain pipe (self-drain)	
EKDB125B1	12.5	14.0	2550/2040/1650	100	583/480/380	220V~50Hz	48/46/44	1280×655×350	69	Φ9.52	Φ15.88	R3/4	Liquid crystal display remote controller (optional) Wire controller of touch screen (optional)
EKDB140B1	14.0	16.0	3000/2540/1920	100	742/640/550	220V~50Hz	50/48/46	1280×655×350	75	Φ9.52	Φ15.88	R3/4	
EKDB160B1	16.0	18.4	3440/2770/2330	100	938/692/577	220V~50Hz	51/49/47	1611×655×350	75	Φ9.52	Φ15.88	R3/4	
EKDB250B1	25.0	28.0	5200/4900/3900	100	1700/1540/1250	220V~50Hz	57/54/51	1580×950×470	100	Φ9.52	Φ19.05	R1	
EKDB280B1	28.0	31.5	5000	100	1800	220V~50Hz	57	1580×950×470	120	Φ9.52	Φ22.23	R1	
EKDB280B1	28.0	31.5	5000	150/200/300	1250/1500/1700	380V/3N~50Hz	57/58/61	1580×1020×520	150	Φ9.52	Φ22.23	R1	

Note: 1. Cooling capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
2. Heating capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
3. Above noise values are measured at 1.4m part below central part of air conditioner in the semi-anechoic room; during actual operation, due to influence of external environment, noise value is slightly higher than the standard;



## Indoor unit of four-side discharge built-in air conditioner (EKCK-B1 series)

### Mute, artistic, and high ceiling air supply design

There are brand new panel design and elegant and artistic appearance. The fan is provided with centrifugal scroll blades. Through static and dynamic equilibrium, its minimum operation noise is 34dB (A). It has smaller requirements for drop ceiling space of the unit. The air supply design of high ceiling is implemented to adapt to ceiling space of 3.5m high.

### Standard long-acting strainer

Effectively absorbing particles and hazardous floccules and improving indoor air quality.

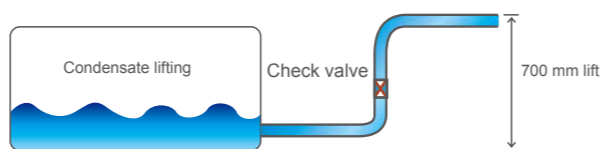
### Stereo-encircled air supply

Stereo-encircled air supply is used to give a more even air flow and effectively avoid blind angle for air supply; it also has specific swinging design to prevent cold air from directly blowing to the human body and improve comfort degree of human body.



### Optional condensate lifting pump with 1.2m lift

Optional condensate lifting pump with 1.2 m (standard 0.7m) lift is standard provided with the check valve to prevent flow backward of the condensate, so as to be safer and realize more flexible mounting position.



### Multi-angle swing settings

Indoor unit can be oriented or provided with angle interval for automatic swinging and random regulation. 8 swinging ways can be used to greatly satisfy individual demand.



## Indoor unit of four-side discharge built-in air conditioner

Unit model	Cooling capacity kW	Heating capacity kW	Air flow rate m³/h	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Panel dimension (W×D×H) mm	Mass kg	Connection pipe specification mm			Control mode
										Liquid pipe	Gas piping	Drain pipe	
EKCK28B1	2.8	3.2	500/420/350	45	220V~50Hz	34	582×582×265	680×680×30	24	Φ6.35	Φ12.7	Φ16	Liquid crystal display remote controller (optional) Wire controller of touch screen (optional)
EKCK32B1	3.2	3.6	500/420/350	45	220V~50Hz	34	582×582×265	680×680×30	24	Φ6.35	Φ12.7	Φ16	
EKCK36B1	3.6	4.0	500/420/350	45	220V~50Hz	34	582×582×265	680×680×30	24	Φ6.35	Φ12.7	Φ16	
EKCK40B1	4.0	4.5	800/670/560	86	220V~50Hz	38	582×582×265	680×680×30	24	Φ6.35	Φ12.7	Φ16	
EKCK45B1	4.5	5.0	800/670/560	86	220V~50Hz	38	582×582×265	680×680×30	24	Φ6.35	Φ12.7	Φ16	
EKCK50B1	5.0	5.6	800/670/560	86	220V~50Hz	38	582×582×265	680×680×30	24	Φ6.35	Φ12.7	Φ16	
EKCK56B1	5.6	6.3	800/670/560	86	220V~50Hz	38	582×582×265	680×680×30	24	Φ6.35	Φ12.7	Φ16	
EKCK63B1	6.3	7.1	1200/1000/840	117	220V~50Hz	40	712×712×290	830×830×30	29	Φ9.52	Φ15.88	Φ16	
EKCK71B1	7.1	8.0	1200/1000/840	117	220V~50Hz	40	712×712×290	830×830×30	29	Φ9.52	Φ15.88	Φ16	
EKCK80B1	8.0	9.0	1200/1000/840	117	220V~50Hz	40	712×712×290	830×830×30	31	Φ9.52	Φ15.88	Φ16	
EKCK90B1	9.0	10.0	1400/1150/980	130	220V~50Hz	42	712×712×290	830×830×30	31	Φ9.52	Φ15.88	Φ16	
EKCK100B1	10.0	11.2	1700/1360/1200	187	220V~50Hz	44	827×827×290	980×980×30	38	Φ9.52	Φ15.88	Φ16	
EKCK112B1	11.2	12.5	1700/1360/1200	187	220V~50Hz	44	827×827×290	980×980×30	38	Φ9.52	Φ15.88	Φ16	
EKCK125B1	12.5	14.0	1700/1360/1200	187	220V~50Hz	44	827×827×290	980×980×30	39	Φ9.52	Φ15.88	Φ16	
EKCK140B1	14.0	16.0	1700/1360/1200	194	220V~50Hz	44	827×827×290	980×980×30	39	Φ9.52	Φ15.88	Φ16	
EKCK160B1	16.0	18.0	1700/1360/1200	194	220V~50Hz	44	827×827×290	980×980×30	39	Φ9.52	Φ15.88	Φ16	

Note: 1. Cooling capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
2. Heating capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
3. Above noise values are measured at 1.4m part below central part of air conditioner in the semi-anechoic room; during actual operation, due to influence of external environment, noise value is slightly higher than the standard;



## Indoor unit of wall mounted air conditioner (EKBG-B1 series)

### Nice appearance

Super beautiful appearance newly designed can conform to various decoration styles, so as to achieve a more elegant decoration style.



### Convenient maintenance

All maintenance can be implemented in advance and horizontal baffle can be easily dismantled and cleaned.

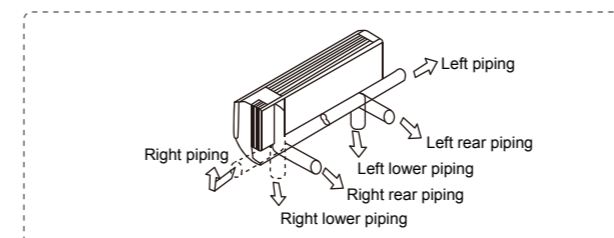
### Intelligence and comfort

Intelligent dehumidification; the air is dry and pleasant; low-noise operation; multiple automatic protection, being safe and more comfortable.



### Free design

Convenient mounting; pipes can be connected in multiple directions in the left and right; thin design; effectively saving mounting costs and space.



### Mildew resistant and washable strainer

The strainer can be easily and conveniently cleaned to keep clean indoor air.



## Indoor unit of wall mounted air conditioner

Unit model	Cooling capacity kW	Heating capacity kW	Air flow rate m³/h	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Mass kg	Connection pipe specification mm			Control mode
									Liquid pipe	Gas piping	Drain pipe (self-drain)	
EKBG22B1	2.2	2.5	450/360/270	30	220V~50Hz	35/31/28	876x228x300	11	Φ6.35	Φ12.7	Φ16	Liquid crystal display remote controller (optional) Wire controller of touch screen (optional)
EKBG28B1	2.8	3.2	450/360/270	30	220V~50Hz	35/31/28	876x228x300	11	Φ6.35	Φ12.7	Φ16	
EKBG32B1	3.2	3.6	500/400/300	35	220V~50Hz	36/33/29	876x228x300	11	Φ6.35	Φ12.7	Φ16	
EKBG36B1	3.6	4.0	500/400/300	35	220V~50Hz	36/33/29	876x228x300	11	Φ6.35	Φ12.7	Φ16	

Note: 1. Cooling capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
2. Heating capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
3. Above noise values are measured at 1.4m part below central part of air conditioner in the semi-anechoic room; during actual operation, due to influence of external environment, noise value is slightly higher than the standard;

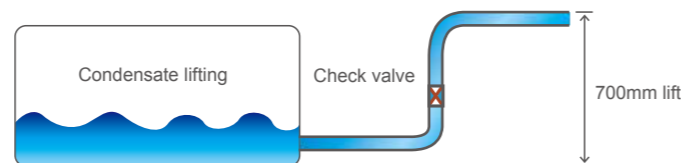




## Indoor unit of single discharge built-in air conditioner (EKCK-E1 series)

### Standard condensate lifting pump with 700mm lift

Standard condensate lifting pump with 700mm lift, standard check valve and water level switch are provided to prevent flow backward of condensate, so as to be safer and realize more flexible mounting position.



### Integrated design

The unit is provided with anti-aging ABS injection molding for molding at one time and water containing plate is externally provided with high-density insulation materials and has attractive appearance.

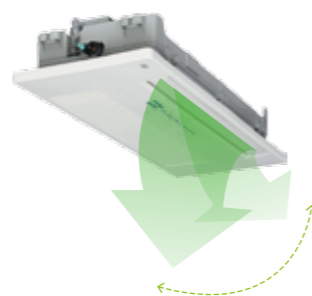
### Ultra-thin fuselage

With small requirements for drop ceiling space, the unit can be mounted without height limit of the room and can be perfectly integrated with the decorations.



### Ultra-wide air supply

Ultra-wide air supply, multiple swinging angles are set to increase air supply range.



### Standard long-acting strainer

Effectively absorbing particles, improving indoor air quality and facilitating cleaning.

## Indoor unit of single discharge built-in air conditioner

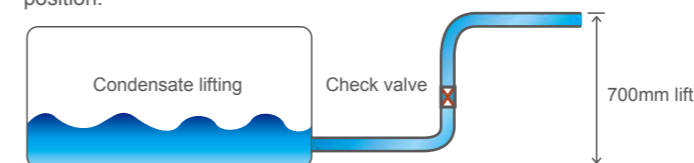
Unit model	Cooling capacity kW	Heating capacity kW	Air flow rate m³/h	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Panel dimension (W×D×H) mm	Mass kg	Connection pipe specification mm			Control mode
										Liquid pipe	Gas piping	Drain pipe	
EKCK22E1	2.2	2.8	510/400/300	45	220V~50Hz	37~31	1054×425×169	1180×465×25	14	Φ6.35	Φ12.7	Φ26	Liquid crystal display remote controller (optional) Wire controller of touch screen (optional)
EKCK25E1	2.5	3.0	510/400/300	45	220V~50Hz	37~31	1054×425×169	1180×465×25	14	Φ6.35	Φ12.7	Φ26	
EKCK28E1	2.8	3.2	510/400/300	45	220V~50Hz	37~31	1054×425×169	1180×465×25	14	Φ6.35	Φ12.7	Φ26	
EKCK32E1	3.2	3.6	510/400/300	45	220V~50Hz	37~31	1054×425×169	1180×465×25	14	Φ6.35	Φ12.7	Φ26	
EKCK36E1	3.6	4.0	680/520/400	50	220V~50Hz	39~32	1054×425×169	1180×465×25	14	Φ6.35	Φ12.7	Φ26	
EKCK40E1	4.0	4.5	680/520/400	50	220V~50Hz	39~32	1054×425×169	1180×465×25	14	Φ6.35	Φ12.7	Φ26	

Note: 1. Cooling capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
2. Heating capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
3. Above noise values are measured at 1.4m part below central part of air conditioner in the semi-anechoic room; during actual operation, due to influence of external environment, noise value is slightly higher than the standard;

## Indoor unit of double discharge built-in air conditioner (EKCK-G1 series)

### Standard condensate lifting pump with 700mm lift

Standard condensate lifting pump with 700mm lift, standard check valve and water level switch are provided to prevent flow backward of condensate, so as to be safer and realize more flexible mounting position.



### Ultra-thin fuselage

With small requirements for drop ceiling space, the unit can be mounted without height limit of the room and can be perfectly integrated with the decorations.



### Ultra-wide air supply

Ultra-wide air supply, multiple swinging angles are set to increase air supply range.



### Standard long-acting strainer

Effectively absorbing particles, improving indoor air quality and facilitating cleaning.

## Indoor unit of double discharge built-in air conditioner

Unit model	Cooling capacity kW	Heating capacity kW	Air flow rate m³/h	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Panel dimension (W×D×H) mm	Mass kg	Connection pipe specification mm			Control mode
										Liquid pipe	Gas piping	Drain pipe	
EKCK22G1	2.2	2.8	490/370/280	55	220V~50Hz	35~28	1140×575×290	1240×680×30	32	Φ6.35	Φ9.52	Φ26	Liquid crystal display remote controller (optional) Wire controller of touch screen (optional)
EKCK25G1	2.5	3.0	490/370/280	55	220V~50Hz	35~28	1140×575×290	1240×680×30	32	Φ6.35	Φ9.52	Φ26	
EKCK28G1	2.8	3.2	490/370/280	55	220V~50Hz	35~28	1140×575×290	1240×680×30	32	Φ6.35	Φ9.52	Φ26	
EKCK32G1	3.2	3.6	640/490/370	62	220V~50Hz	36~30	1140×575×290	1240×680×30	32	Φ6.35	Φ9.52	Φ26	
EKCK36G1	3.6	4.0	640/490/370	62	220V~50Hz	36~30	1140×575×290	1240×680×30	32	Φ6.35	Φ9.52	Φ26	
EKCK40G1	4.0	4.5	850/640/490	70	220V~50Hz	38~32	1140×575×290	1240×680×30	34	Φ6.35	Φ12.7	Φ26	
EKCK45G1	4.5	5.0	850/640/490	70	220V~50Hz	38~32	1140×575×290	1240×680×30	34	Φ6.35	Φ12.7	Φ26	
EKCK50G1	5.0	5.6	850/640/490	70	220V~50Hz	38~32	1140×575×290	1240×680×30	34	Φ6.35	Φ12.7	Φ26	
EKCK56G1	5.6	6.3	1360/1050/800	110	220V~50Hz	41~36	1140×575×290	1240×680×30	34	Φ9.52	Φ15.88	Φ26	
EKCK63G1	6.3	7.1	1360/1050/800	110	220V~50Hz	41~36	1140×575×290	1240×680×30	34	Φ9.52	Φ15.88	Φ26	
EKCK71G1	7.1	8.0	1360/1050/800	110	220V~50Hz	41~36	1140×575×290	1240×680×30	34	Φ9.52	Φ15.88	Φ26	

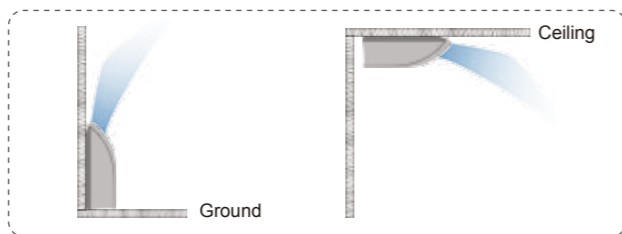
Note: 1. Cooling capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
2. Heating capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
3. Above noise values are measured at 1.4m part below central part of air conditioner in the semi-anechoic room; during actual operation, due to influence of external environment, noise value is slightly higher than the standard;



## Indoor unit of open mounted ceiling/floor type air conditioner (EKCE-B1 series)

### Floor mounted or ceiling mounted, stylish and beautiful

Unit uses streamlined integrated fuselage design and is beautiful and stylish. It can meet different decoration styles flexibly by being suspended under the ceiling and installed at an appropriate position on the floor, thus achieving omnidirectional air supply.

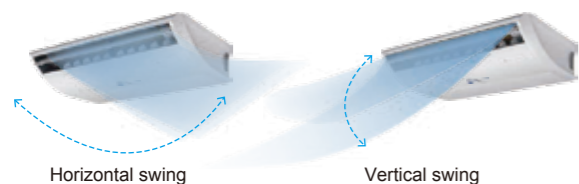


### Standard long-acting strainer

Effectively absorbing particles, improving indoor air quality and facilitating cleaning.

### Intelligent three-dimensional air supply

Unit uses wide wind guide vanes and horizontal and vertical swing guide vane design to achieve a wide air supply range, uniform temperature field and excellent comfort.



### Ease of installation and maintenance

The installation of refrigerant pipe, drain pipe and wiring can be performed efficiently on one side to reduce an installation period. Maintenance can be performed conveniently and quickly without the necessity of removing the ceiling.



## Indoor unit of open mounted ceiling/floor type air conditioner

Unit model	Cooling capacity kW	Heating capacity kW	Air flow rate m³/h	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Mass kg	Connection pipe specification mm			Control mode
									Liquid pipe	Gas piping	Drain pipe	
EKCE28B1	2.8	3.0	860	87	220V~50Hz	40/37/35	1055×675×235	24	Φ6.53	Φ12.7	Φ25	Liquid crystal display remote controller (optional) Wire controller of touch screen (optional)
EKCE32B1	3.2	3.6	860	87	220V~50Hz	40/37/35	1055×675×235	24	Φ6.53	Φ12.7	Φ25	
EKCE36B1	3.6	4.0	860	87	220V~50Hz	40/37/35	1055×675×235	24	Φ6.53	Φ12.7	Φ25	
EKCE40B1	4.0	4.5	860	87	220V~50Hz	40/37/35	1055×675×235	24	Φ6.53	Φ12.7	Φ25	
EKCE45B1	4.5	5.0	960	92	220V~50Hz	42/40/37	1055×675×235	24	Φ6.53	Φ12.7	Φ25	
EKCE50B1	5.0	5.6	960	92	220V~50Hz	42/40/37	1055×675×235	24	Φ6.53	Φ12.7	Φ25	
EKCE56B1	5.6	6.3	960	92	220V~50Hz	42/40/37	1055×675×235	24	Φ6.53	Φ12.7	Φ25	
EKCE63B1	6.3	7.1	1200	134	220V~50Hz	44/42/39	1055×675×235	25	Φ9.52	Φ15.88	Φ25	
EKCE71B1	7.1	8.0	1200	134	220V~50Hz	44/42/39	1055×675×235	25	Φ9.52	Φ15.88	Φ25	
EKCE80B1	8.0	9.0	1200	134	220V~50Hz	44/42/39	1055×675×235	25	Φ9.52	Φ15.88	Φ25	
EKCE90B1	9.0	10.0	1600	142	220V~50Hz	48/46/43	1275×675×235	29	Φ9.52	Φ19.05	Φ25	
EKCE100B1	10.0	11.2	1600	142	220V~50Hz	48/46/43	1275×675×235	29	Φ9.52	Φ19.05	Φ25	
EKCE112B1	11.2	12.5	2000	212	220V~50Hz	50/48/45	1635×675×235	38	Φ9.52	Φ19.05	Φ25	
EKCE125B1	12.5	14.0	2000	212	220V~50Hz	50/48/45	1635×675×235	38	Φ9.52	Φ19.05	Φ25	
EKCE140B1	14.0	16.0	2000	212	220V~50Hz	50/48/45	1635×675×235	38	Φ9.52	Φ19.05	Φ25	

Note: 1. Cooling capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
 2. Heating capacities marked above are test results under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
 3. Above noise values are measured at 1.4m part below central part of air conditioner in the semi-anechoic room; during actual operation, due to influence of external environment, noise value is slightly higher than the standard;

## Parameter table of outdoor unit

Unit model	EKRV080ER1-FY	EKRV100ER1-FY	EKRV120ER1-FY	EKRV140ER1-FY	EKRV160ER1-FY	EKRV180ER1-FY	
Rated cooling capacity	kW	25.2	28.0	34.0	40.0	45.0	51
Rated heating capacity	kW	28.0	31.5	37.5	45.0	50.5	57
Rated cooling power	kW	5.85	6.90	8.62	10.37	12.22	13.55
Rated heating power	kW	5.97	7.07	8.96	10.72	12.25	13.62
Power supply	380V/3N~/50Hz						
Air flow rate	m³/h	12000	12000	12000	16000	16000	16000
Liquid pipe	mm	9.52	9.52	12.7	12.7	12.7	15.88
Gas piping	mm	19.05	22.2	25.4	25.4	28.6	28.6
Unit quality	kg	205	215	235	315	325	345
Noise	dB(A)	56	57	60	60	60	61
Refrigerant	R410A						
Dimensions W×D×H	mm	920×760×1640			1140×835×1640		
Maximum running current	A	22.5	24.9	25.8	39.1	40.3	45.2

Unit model	EKRV200ER1-FY	EKRV220ER1-FY	EKRV240ER1-FY	EKRV260ER1-FY	EKRV280ER1-FY	EKRV300ER1-FY	EKRV320ER1-FY	
Rated cooling capacity	kW	56.5	62.0	68.0	74.0	79.0	85.2	90.0
Rated heating capacity	kW	63.0	69.0	75.0	82.5	88.0	95.0	100.5
Rated cooling power	kW	15.03	16.55	17.24	18.99	20.84	22.40	23.45
Rated heating power	kW	15.12	16.76	17.92	19.68	21.21	22.73	23.83
Power supply	380V/3N~/50Hz							
Air flow rate	m³/h	24000	24000	24000	28000	28000	32000	32000
Liquid pipe	mm	15.88	15.88	15.88	19.05	19.05	19.05	19.05
Gas piping	mm	28.6	28.6	28.6	31.8	31.8	31.8	31.8
Unit quality	kg	355	365	370	480	485	510	515
Noise	dB(A)	61	61	62	62	62	63	63
Refrigerant	R410A							
Dimensions W×D×H	mm	1655×760×1640			1780×835×1640			
Maximum running current	A	47.1	48.6	51.6	64.9	66.1	71.1	73.5

■ Cooling capacities marked above are under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
 ■ Heating capacities marked above are under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
 ■ Above noise values are obtained by measuring operating noise at four sides of the unit according to half of total height of the unit height plus 1m at 1m part surrounding the air conditioner in the semi-anechoic chamber; during actual operation, due to influence of external environment, noise value and the standard will be slightly higher;  
 ■ It's recommended to select the specifications of electric wirings according to maximum running current.

## Parameter table of outdoor unit

Unit model (*FY)		EKRV340ER1	EKRV360ER1	EKRV380ER1	EKRV400ER1	EKRV420ER1	EKRV440ER1	EKRV460ER1
Recommended combination mode (HP)		16+18	18+18	14+24	14+26	16+26	18+26	16+30
Rated cooling capacity	kW	96.0	102.0	108.0	114.0	119.0	125.0	130.2
Rated heating capacity	kW	107.5	114.0	120.0	127.5	133.0	139.5	145.5
Rated cooling power	kW	25.77	27.10	27.61	29.36	31.21	32.54	34.62
Rated heating power	kW	25.87	27.24	28.64	30.40	31.93	33.30	34.98
Power supply		380V/3N~/50Hz						
Air flow rate	m³/h	32000	32000	40000	44000	44000	44000	48000
Liquid pipe	(Φ)mm	19.05	19.05	19.05	19.05	19.05	19.05	19.05
Gas piping	(Φ)mm	31.8	38.1	38.1	38.1	38.1	38.1	38.1
Unit quality	kg	670	690	685	795	805	825	835
Noise	dB(A)	63	63	63	63	64	64	64
Refrigerant		R410A						
Dimensions W×D×H	mm	(1140+1140) × 835 × 1640			(1140+1780) × 835 × 1640			
Maximum running current	A	85.5	90.4	90.7	104.0	105.2	110.1	111.4

Unit model (*FY)		EKRV480ER1	EKRV500ER1	EKRV520ER1	EKRV540ER1	EKRV560ER1	EKRV580ER1
Recommended combination mode (HP)		18+30	18+32	16+18+18	18+18+18	26+30	28+30
Rated cooling capacity	kW	136.2	141.0	147.0	153.0	159.2	164.2
Rated heating capacity	kW	152.0	157.5	164.5	171.0	177.5	183.0
Rated cooling power	kW	35.95	37.00	39.32	40.65	41.39	43.24
Rated heating power	kW	36.35	37.45	39.49	40.86	42.41	43.94
Power supply		380V/3N~/50Hz					
Air flow rate	m³/h	48000	48000	48000	48000	60000	60000
Liquid pipe	(Φ)mm	19.05	19.05	19.05	19.05	19.05	19.05
Gas piping	(Φ)mm	38.1	38.1	38.1	38.1	41.3	41.3
Unit quality	kg	855	860	1015	1035	990	995
Noise	dB(A)	64	65	65	65	65	66
Refrigerant		R410A					
Dimensions W×D×H	mm	(1140+1780) × 835 × 1640		(1140+1140+1140) × 835 × 1640		(1780+1780) × 835 × 1640	
Maximum running current	A	116.3	118.7	130.7	135.6	136.0	137.2

- Cooling capacities marked above are under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;
- Heating capacities marked above are under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;
- Above noise values are obtained by measuring operating noise at four sides of the unit according to half of total height of the unit height plus 1m at 1m part surrounding the air conditioner in the semi-anechoic chamber; during actual operation, due to influence of external environment, noise value and the standard will be slightly higher;
- It's recommended to select the specifications of electric wirings according to maximum running current.

## Parameter table of outdoor unit

Unit model (*FY)		EKRV600ER1	EKRV620ER1	EKRV640ER1	EKRV640ER1(推荐)	EKRV660ER1	EKRV680ER1
Recommended combination mode (HP)		30+30	30+32	32+32	16+18+30	18+18+30	18+18+32
Rated cooling capacity	kW	170.4	175.2	180.0	181.2	187.2	192.0
Rated heating capacity	kW	190.0	195.5	201.0	202.5	209.0	214.5
Rated cooling power	kW	44.80	45.85	46.90	48.17	49.50	50.55
Rated heating power	kW	45.46	46.56	47.66	48.60	49.97	51.07
Power supply		380V/3N~/50Hz					
Air flow rate	m³/h	64000	64000	64000	64000	64000	64000
Liquid pipe	(Φ)mm	19.05	19.05	19.05	19.05	19.05	22.23
Gas piping	(Φ)mm	41.3	41.3	41.3	41.3	41.3	44.5
Unit quality	kg	1020	1025	1030	1180	1200	1205
Noise	dB(A)	66	66	66	66	66	66
Refrigerant		R410A					
Dimensions W×D×H	mm	(1780+1780) × 835 × 1640			(1140+1140+1780) × 835 × 1640		
Maximum running current	A	142.2	144.6	147.0	156.6	161.5	163.9

Unit model (*FY)		EKRV700ER1	EKRV720ER1	EKRV740ER1	EKRV760ER1	EKRV780ER1	EKRV800ER1	EKRV820ER1
Recommended combination mode (HP)		18+26+26	16+26+30	18+26+30	16+30+30	18+30+30	18+30+32	18+32+32
Rated cooling capacity	kW	199.0	204.2	210.2	215.4	221.4	226.2	231.0
Rated heating capacity	kW	222.0	228.0	234.5	240.5	247.0	252.5	258.0
Rated cooling power	kW	51.53	53.61	54.94	57.02	58.35	59.40	60.45
Rated heating power	kW	52.98	54.66	56.03	57.71	59.08	60.18	61.28
Power supply		380V/3N~/50Hz						
Air flow rate	m³/h	72000	76000	76000	80000	80000	80000	80000
Liquid pipe	(Φ)mm	22.23	22.23	25.4	25.4	25.4	25.4	25.4
Gas piping	(Φ)mm	44.5	44.5	50.8	50.8	50.8	50.8	50.8
Unit quality	kg	1305	1315	1335	1345	1365	1370	1375
Noise	dB(A)	66	66	66	66	66	66	66
Refrigerant		R410A						
Dimensions W×D×H	mm	(1140+1780+1780) × 835 × 1640						
Maximum running current	A	175.0	176.3	181.2	182.5	187.4	189.8	192.2

- Cooling capacities marked above are under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;
- Heating capacities marked above are under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;
- Above noise values are obtained by measuring operating noise at four sides of the unit according to half of total height of the unit height plus 1m at 1m part surrounding the air conditioner in the semi-anechoic chamber; during actual operation, due to influence of external environment, noise value and the standard will be slightly higher;
- It's recommended to select the specifications of electric wirings according to maximum running current.

## Parameter table of outdoor unit

Unit model (*FY)	EKR840ER1	EKR860ER1	EKR880ER1	EKR900ER1	EKR920ER1	EKR940ER1	EKR960ER1
Recommended combination mode (HP)	26+28+30	26+30+30	28+30+30	30+30+30	30+30+32	30+32+32	32+32+32
Rated cooling capacity	kW 238.2	244.4	249.4	255.6	260.4	265.2	270.0
Rated heating capacity	kW 265.5	272.5	278.0	285.0	290.5	296.0	301.5
Rated cooling power	kW 62.23	63.79	65.64	67.20	68.25	69.30	70.35
Rated heating power	kW 63.62	65.14	66.67	68.19	69.29	70.39	71.49
Power supply	380V/3N~/50Hz						
Air flow rate	m³/h 88000	92000	92000	96000	96000	96000	96000
Liquid pipe	(Φ)mm 25.4	25.4	25.4	25.4	25.4	25.4	25.4
Gas piping	(Φ)mm 50.8	50.8	50.8	50.8	50.8	50.8	50.8
Unit quality	kg 1475	1500	1505	1530	1535	1540	1545
Noise	dB(A) 66	66	66	66	66	66	66
Refrigerant	R410A						
Dimensions W×D×H	(1780+1780+1780)×835×1640						
Maximum running current	A 202.1	207.1	208.3	213.3	215.7	218.1	220.5

■ Cooling capacities marked above are under working conditions of indoor dry/wet bulb temperature 27/19°C and outdoor dry/wet bulb temperature 35/24°C;  
 ■ Heating capacities marked above are under working conditions of indoor dry/wet bulb temperature 20/15°C and outdoor dry/wet bulb temperature 7/6°C;  
 ■ Above noise values are obtained by measuring operating noise at four sides of the unit according to half of total height of the unit height plus 1m at 1m part surrounding the air conditioner in the semi-anechoic chamber; during actual operation, due to influence of external environment, noise value and the standard will be slightly higher;  
 ■ It's recommended to select the specifications of electric wirings according to maximum running current.

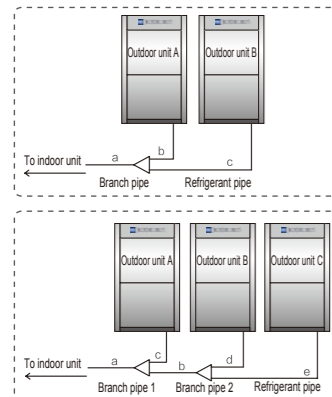
## Piping dimension

Unit: mm

Capacity of outdoor unit	Main pipe dimension (Equivalent piping length<90m)			Main pipe dimension (Equivalent piping length≥90m)			Downstream internal capacity A (kW)	Piping dimension		Applicable branch pipe
	Liquid pipe	Gas piping	First indoor branch pipe	Liquid pipe	Gas piping	First indoor branch pipe		Liquid pipe	Gas piping	
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<74kW	Φ15.88	Φ28.6	ACRV-BP05
26~34HP	Φ19.05	Φ31.8	ACRV-BP05	Φ22.23	Φ38.1	ACRV-BP06	74≤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	A≥205kW	Φ25.4	Φ50.8	ACRV-BP09

Note: For dimensions of main pipe and gas/liquid pipes of outdoor unit selected in above table, the larger pipe diameter should be used as main pipe dimension.

## Selection of branch pipe between outdoor units



### Combined model of two modules (outdoor unit capacity: A≥B)

Outdoor unit capacity	34~50HP	56~64HP
Branch pipe model	ACRV-BP05	ACRV-BP07

### Combined model of three modules (outdoor unit capacity: A≥B≥C)

Outdoor unit capacity	52~54HP	64~66HP	68~72HP	74~82HP	84~96HP
Branch pipe 1 model	ACRV-BP05	ACRV-BP07	ACRV-BP08	ACRV-BP09	ACRV-BP09
Branch pipe 2 model	ACRV-BP05	ACRV-BP05	ACRV-BP05	ACRV-BP05	ACRV-BP07

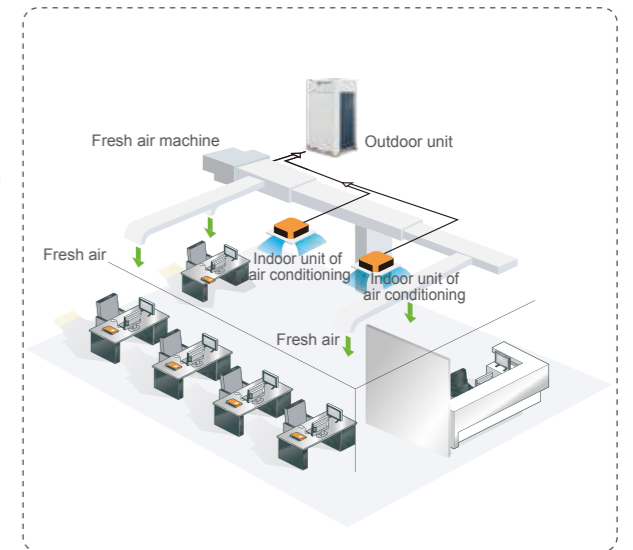
Note: When outdoor units are installed in the combination of two or three modules, their arrangement sequence is as follows: An outdoor unit that are closer to the side of refrigerant pipe to indoor unit has a larger capacity.

## Fresh air system

With annually increasing living standards, people have higher and higher requirements for indoor air quality, i.e. suitable indoor temperature and hoping to introduce outdoor fresh air to keep clean indoor air. EK provides two fresh air solutions of air conditioning, so as to bring about clean, fresh and healthy enjoyment for our valued customers focusing on air quality.

### Total fresh air treatment unit

- Total fresh air treatment unit is self-provided with cold and hot sources, which can be used to treat outdoor fresh air to approximately reach indoor temperature and then supply it to the indoor. Air flow rate is 1100~6000m³/h, which can satisfy requirements for fresh air on different occasions, so as to enable you to enjoy fresh and healthy air without going out.
- It also has automatic energy-saving operation mode. If outdoor temperature is 15°C~20°C, fresh air processor can automatically switch to air supply mode and stop outdoor unit (if in parallel serial, outdoor unit only needs to assume the capacity of indoor unit of air conditioning), so as to greatly reduce operation costs.
- Fresh air processing unit and ordinary indoor unit can be controlled through central wire controller.
- Fresh air processing unit can be connected to central control and management system of EK multi-split air conditioner and building automatic control system of the building.
- Capacity of fresh air processing unit connecting to same system as the ordinary indoor unit of air conditioning should not exceed 30% of those connecting to the outdoor unit; meanwhile, total capacity of fresh air processor and indoor unit of air conditioning should be no more than the capacity of outdoor unit.
- In the one-towing-more connection mode, multiple fresh air machines can be connected to the same system. Total capacity of fresh air processing units should be no more than the capacity of outdoor unit.



Unit model	Cooling capacity kW	Heating capacity kW	Air flow rate m³/h	External static pressure Pa	Input power W	Power supply	Noise dB(A)	Dimensions (W×D×H) mm	Mass kg	Connection pipe specification mm			Control mode
										Liquid pipe	Gas piping	Drain pipe	
EKDB140B1X	14.0	10.0	1100	200	297	220V~50Hz	44	798x950x470	65	Φ9.52	Φ15.88	R1	Wire controller of touch screen (standard)
EKDB250B1X	25.0	17.0	1700	150/200/250	550/600/650	220V~50Hz	45/47/49	1389x950x470	110	Φ9.52	Φ19.05	R1	
EKDB250B1X	25.0	17.0	2000	150/200/250	650/660/710	220V~50Hz	45/48/50	1389x950x470	110	Φ9.52	Φ19.05	R1	
EKDB280B1X	28.0	20.0	2100	150/200/250	700/770/800	220V~50Hz	45/48/50	1389x950x470	120	Φ9.52	Φ22.23	R1	
EKDB280B1X	28.0	20.0	2500	150/200/300	480/564/792	380V/3N~50Hz	52/55/58	1389x950x470	135	Φ9.52	Φ22.23	R1	
EKDB280B1X	28.0	20.0	3000	200	760	380V/3N~50Hz	56	1389x950x470	135	Φ9.52	Φ22.23	R1	
EKDB335B1X	33.5	26.4	2700	150/220	915/1100	220V~50Hz	52/55	1389x950x470	120	Φ12.7	Φ25.4	R1	
EKDB450B1X	45.0	32.0	4000	200/300	850/1250	380V/3N~50Hz	58/61	1580x1020x520	150	Φ12.7	Φ28.6	R1	
EKDB560B1X	56.0	39.0	5000	200/250/300/350	1250/1500/1700/2000	380V/3N~50Hz	58/58/61/61	1580x1020x520	150	Φ15.88	Φ28.6	R1	
EKDB560B1X	56.0	39.0	6000	200/250/300/350	1400/1600/1800/2200	380V/3N~50Hz	60/60/62/62	1580x1020x520	150	Φ15.88	Φ28.6	R1	

Note: • Rated cooling capacity is based on the followings: outdoor temperature 33°CDB, 28°CWB(68%RH) equivalent refrigerant pipe length: 7.5m (horizontal);  
 • Rated heating capacity is based on the followings: outdoor temperature 0°CDB, -2.9°CWB(50%RH) equivalent refrigerant pipe length: 7.5m (horizontal);  
 • Data of rated heating capacity are obtained without defrosting;

• Not all models of fresh air processing units are recommended to be parallel serial. For specific parallel serial requirements, please consult EK technology engineer;  
 • Noise value is measured before delivery. During actual usage, due to ambient noise or other reasons, measured noise may be different from values listed in the table.  
 • Default set temperature upon delivery is 22°C;



Spacious work area



Large meeting room



Luxurious corridor

## Total heat exchanger

- Bilateral ventilation function**

Indoor dirty air can be drained to the outdoor along with supplying outdoor fresh air into indoor, so as to create a healthy indoor environment.

- Total heat recovery function**

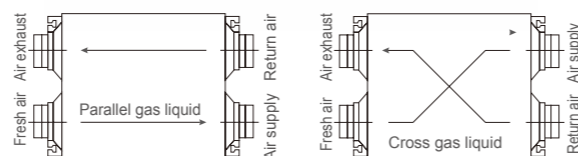
A special built-in total heat exchange element is provided to exchange heat without mixing between drain air and supplied outdoor fresh air. Maximum temperature recovery rate is up to 76% and maximum enthalpy exchange rate is up to 74%, so as to greatly reduce fresh air load of air conditioning system.

- Achieving combined control with indoor unit of air conditioning**

Total heat recovery fresh air unit and other EK air conditioning systems can be jointly and centrally controlled without affecting normal operation of other units.

- Various optional parts**

Activated carbon filter and ultraviolet sterilisation lamp can be selected as required to create a better healthy indoor environment.



Many tuyere forms are optional

Unit model	Fresh air flow rate m³/h		External static pressure Pa	Enthalpy recovery rate %		Temperature recovery rate %	Noise dB(A)	Power supply	Rated power W	Rated current A	Net weight kg
	High	Medium		Low	Summer						
EKHR020HH	High	200	75	55	59	70	27	220V~50Hz	105	0.5	23
	Medium	200	70	55	59	70	25				
	Low	150	60	60	63	75	22				
EKHR030HH	High	300	85	57	61	68	30		117	0.56	25
	Medium	300	82	57	61	68	27				
	Low	250	75	62	65	73	23				
EKHR040HH	High	400	90	57	60	69	32		150	0.72	31
	Medium	400	85	57	60	69	29				
	Low	350	80	62	65	74	25				
EKHR060HH	High	600	100	59	61	70	35		200	0.96	36
	Medium	600	92	59	61	70	31				
	Low	500	89	63	67	76	25				
EKHR080HH	High	800	100	55	58	68	39		355	1.7	60
	Medium	800	96	55	58	68	37				
	Low	700	92	58	63	74	32				
EKHR100HH	High	1000	100	58	62	70	40		440	2.1	70
	Medium	1000	85	58	62	70	36				
	Low	900	80	60	64	76	32				
EKHR130HH	High	1300	100	56	59	70	42		710	3.4	79
	Medium	1300	85	56	59	70	40				
	Low	1000	75	58	62	76	37				
EKHR150HH	High	1500	160	66	70	71	45		785	3.8	110
	Medium	1500	135	66	70	71	42				
	Low	1000	84	69	74	75	40				
EKHR200HH	High	2000	170	62	71	71	49		1020	4.8	112
	Medium	2000	132	62	71	71	46				
	Low	1200	110	65	73	75	44				
EKHR250HH	High	2500	200	61	70	70	53		1300	6.3	130
	Medium	2500	170	61	70	70	50				
	Low	2000	140	64	72	73	47				
EKHR300HH	High	3000	210	60	69	70	54	1950	9.0	142	
	Medium	3000	180	60	69	70	51				
	Low	2500	150	63	71	73	48				
EKHR400HH	4000		260	62	69	70	59	380V/3N~50Hz	3000	7.5	240
EKHR500HH	5000		260	61	64	70	68				
EKHR600HH	6000		300	60	62	68	70				

Note: 1. Running noise is measured at 1.4m below the center of the unit;  
 2. EKHR300HH and above models can be used to realize three-speed regulation; EKHR020~130HH has air flow rate bypass function;  
 3. Running noise of three-range air velocity of unit fan is measured by a nationally recognized noise laboratory. During actual operation, due to ambient noise, running noise value of the unit is generally higher than this value;  
 4. Above values are horizontal parameters of H series. For parameters of other EKHR series, please consult EK technology personnel.