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Guangdong EuroKlimat Air-conditioning & Refrigeration Co., Ltd. reserves the final right to interpret this document.
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.
All DC Frequency Conversion
Multi-Connected Central Air Conditioning

1. **Ultra high IPLV(C) value**
   - Some of IPLV(C) values of all series of the units are up to 9.60.

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

3. **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.

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

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.

7. **14 mute technologies**
   - 14 mute technologies of the unit are used to provide a quiet and comfortable environment.

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.

9. **Intelligent control**

10. **Multi-stage sub-cooling technology**

11. **Ultra high IPLV(C) value**

12. **Single super module**
   - Unconventional maximum 32 HP for a single module; Up to 96 HP for the combination of multiple modules.

13. **All DC Frequency Conversion Multi-Connected Central Air Conditioning**
Efficient And Energy-Saving
To Enjoy The Low-Carbon Life

Far beyond national primary energy efficiency

Industry-leading comprehensive coefficient of performance

<table>
<thead>
<tr>
<th>IPLV(C), up to 9.60, far beyond national standard for primary energy efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>12HP</td>
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<td>9.00</td>
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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.

**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 splattering 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.

**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.
- Frequency conversion 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.

**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.

**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.

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**High-voltage variation 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 straight design of heat exchanger**

**0.7mm efficient internal thread copper tube**

**Control surface provided with SMT surface mounted materials**
Inhibited high-order harmonics and electrical noise

Through multiple strict tests and with efficient components, EKRV-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.

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.

Face velocity

Normal heat exchanger

EK new heat exchanger

Stack loss

Reducing stack loss

Heat exchange efficiency

Normal heat exchanger

EK new heat exchanger
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.

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.

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.

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.

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.

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STC intelligent regulation technology

Indoor unit of air conditioning is just started up to realize fast cooling or heating. When approaching set temperature of indoor air conditioning, it’s necessary to avoid discomfort caused by direct blowing of cold air and warm air.

Dynamic distribution technology of refrigerant

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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.

Multistage oil control technology

High-capacity oil separator, cross balancing oil between compressors, 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.

Intelligent oil balancing between modules

Intelligent oil return of the system

No oil balancing piping is required between outdoor unit modules.

Intelligent defrosting technology

- 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.
Health and Fitness
Fully enjoy green technology

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 EKRV at 50°C or -20°C, so as to create a comfortable indoor environment for you.

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
Overload protection of the compressor
Intake-air pressure protection
Gas purge temperature protection
Gas purge pressure protection
IPM fault self-detection
IPM module protection of the inverter
Lightning protection
Communication fault protection
Protection of abnormal input power supply
Protection of insufficient refrigerant
Protection of excessive temperature of IPM module

Intelligent power-saving mode
As required by power peak and valley, EKRV-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.

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

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 noises of the compressor in the high, medium and low frequency bands. The complete machine has obvious noise reduction effect.
Auto-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 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.

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 ±0.5 °C, and control air outlet temperature in the most comfortable range of human body.

Creating a comfortable temperature

VIP function

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

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, PBB, or PBDE) are prohibited from being used in electrical and electronic equipment, 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

EK RV-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 in ozone-friendly and environmental air conditioning environment.

Comfortable and healthy air 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 eradicate 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.

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.
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
Outdoor unit is at lower
90m 110m

Maximum drop of indoor unit in
140m

Indoor unit

Outdoor unit is at upper
90m

Outdoor unit is at lower
110m

Height difference of indoor unit is 40m

Flexible application

Commissioning-efficient test run

ERPU-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 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.

Intelligent commissioning

-Checking wiring
-Piping supervision
-Detection of refrigerant fill amount
-Detection of locking valve

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.

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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.

Non-polar communication of outdoor unit and automatic addressing
Outdoor unit and indoor unit are communicated through non-polar communication protocol. During commissioning, there is no need to set address of each indoor unit. The controller can be used to automatically register the address of each indoor unit of the system, which requires no manual dial-up and is simple and safe.

Automatic recovery of the circuit
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.

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Automatic detection

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.
Convenient Maintenance

Automatic recycling of the refrigerant

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

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 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.

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 EKRV-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 rotate design to greatly facilitate commissioning and maintenance.

Electrical elements are protected by waterproof glue, waterproof copper pillar, waterproof sealant pad, surrounding enclosed waterproof wave, waterproof mounting bottom panel, waterproof cover plate.

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.

Fault storage and query (black box)

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.

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.

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

**Wireless controller**
- Automatic restoration of temperature settings
- Main wire controller function
- Temperature limits of the controller
- Prompt of clearing the strainer
- Controller locking
- Sleep function

**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

**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.

Note: Single set and single household charging system can be used to connect 128 sets of outdoor units at most.

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.)

BMS building self-control service center

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.

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.

User management
Automatic meter reading
Top-up management
Electric charge query
Step tariff
Apportionment setting
Intelligent backup
Task management
Permission settings
Print report

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.)
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Indoor and outdoor line-up

Category of indoor units

<table>
<thead>
<tr>
<th>Name</th>
<th>Specifications</th>
<th>Cooling capacity (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor unit of concealed mounted ceiling air conditioner (standard type)</td>
<td>![Image]</td>
<td>9.8, 12.5, 16.0, 22.8</td>
</tr>
<tr>
<td>Indoor unit of concealed mounted ceiling air conditioner (ultra-thin type)</td>
<td>![Image]</td>
<td>9.8, 12.5, 16.0, 22.8</td>
</tr>
<tr>
<td>Single discharge built-in type</td>
<td>![Image]</td>
<td>9.8, 12.5, 16.0, 22.8</td>
</tr>
<tr>
<td>Double discharge built-in type</td>
<td>![Image]</td>
<td>9.8, 12.5, 16.0, 22.8</td>
</tr>
<tr>
<td>Four-side discharge built-in type</td>
<td>![Image]</td>
<td>9.8, 12.5, 16.0, 22.8</td>
</tr>
<tr>
<td>Wall mounted type</td>
<td>![Image]</td>
<td>9.8, 12.5, 16.0, 22.8</td>
</tr>
<tr>
<td>Ducted air conditioning equipment</td>
<td>![Image]</td>
<td>9.8, 12.5, 16.0, 22.8</td>
</tr>
<tr>
<td>Open ceiling/standing type</td>
<td>![Image]</td>
<td>9.8, 12.5, 16.0, 22.8</td>
</tr>
</tbody>
</table>

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

Cooling capacity (kW)

<table>
<thead>
<tr>
<th>Model</th>
<th>Standard Static Pressure (Pa)</th>
<th>Optional Static Pressure (Pa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EKCC45B1</td>
<td>11.2</td>
<td>34/23/18</td>
</tr>
<tr>
<td>EKCC32B1</td>
<td>9.0</td>
<td>34/23/18</td>
</tr>
<tr>
<td>EKCC25B1</td>
<td>7.1</td>
<td>34/23/18</td>
</tr>
<tr>
<td>EKCC20B1</td>
<td>6.0</td>
<td>34/23/18</td>
</tr>
<tr>
<td>EKCC16B1</td>
<td>5.0</td>
<td>34/23/18</td>
</tr>
<tr>
<td>EKCC14B1</td>
<td>4.5</td>
<td>34/23/18</td>
</tr>
<tr>
<td>EKCC12B1</td>
<td>4.0</td>
<td>34/23/18</td>
</tr>
<tr>
<td>EKCC10B1</td>
<td>3.6</td>
<td>34/23/18</td>
</tr>
<tr>
<td>EKCC9B1</td>
<td>3.5</td>
<td>34/23/18</td>
</tr>
</tbody>
</table>

Condensate lifting pump (optional)

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 is recommended to use side supply and rear return method to effectively reduce operating noise. The access opening is set to ensure smooth maintenance.

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

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

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.

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. 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;
4. Supply requirements at different distances.
5. Multiple optional return air methods are optional.
6. 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;
7. Above server values are measured during operation in the rear return air way. In case of operated with lower return air method, server value is larger than the server value operational in the rear return air for about 5-10°C;
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 AIBS material is used to effectively prevent condensation at the air outlet during cooling.

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 during cooling.

Three-dimensional air supply panel (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.

Condensate lifting pump (optional)

Multiple optional return air methods

- Side supply and bottom return: It only requires small internal 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: It’s recommended to use side supply and rear return method to obliquely reduce operating noise. The access opening is set to ensure smooth maintenance.

Multiple optional return air methods

Condensate lifting Check valve

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.

Multi 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 fluctuations and improving indoor air quality.

Indoor unit of ducted air conditioner

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 rear return air method, noise value is larger than the noise value operated in the rear return air for about 5 dB (A).

<table>
<thead>
<tr>
<th>Unit model</th>
<th>Power supply</th>
<th>Air flow rate m³/h</th>
<th>Static pressure Pa</th>
<th>Dimensions</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EKDB160B1</td>
<td>220V~50Hz</td>
<td>31.5/28.0/25.0</td>
<td>57/54/51</td>
<td>1580×950×470</td>
<td>150</td>
</tr>
<tr>
<td>EKDB180B1</td>
<td>220V~50Hz</td>
<td>34.4/31.0/28.0</td>
<td>57/54/51</td>
<td>1611×655×350</td>
<td>180</td>
</tr>
<tr>
<td>EKDB250B1</td>
<td>220V~50Hz</td>
<td>52.0/49.0/47.0</td>
<td>57/54/51</td>
<td>1611×655×350</td>
<td>220</td>
</tr>
<tr>
<td>EKDB315B1</td>
<td>220V~50Hz</td>
<td>57.5/54.5/52.5</td>
<td>57/54/51</td>
<td>1611×655×350</td>
<td>250</td>
</tr>
</tbody>
</table>

Indoor unit of ducted air conditioner

Condensate lifting Check valve

Indoor unit of ducted air conditioner (EKDB-B1 series)
Effectively absorbing particles and hazardous floccules and Standard long-acting strainer
Indoor unit of four-side discharge built-in air conditioner

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.

Non-stop condensate lifting pump with 1.2m lift
Optional condensate lifting pump with 1.2m 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 (EKCK-B1 series)

**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 four-side discharge built-in air conditioner

<table>
<thead>
<tr>
<th>Unit model</th>
<th>Cooling capacity kW</th>
<th>Heating capacity kW</th>
<th>Air flow rate m³/h</th>
<th>Power supply</th>
<th>Noice dB(A)</th>
<th>Dimensions (W×D×H) mm</th>
<th>Mass kg</th>
<th>Connection pipe specification mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>EKCK80B1</td>
<td>8.0</td>
<td>16.0</td>
<td>187</td>
<td>220V~50Hz</td>
<td>42</td>
<td>830×830×290</td>
<td>29</td>
<td>Ф15.88</td>
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<td>EKCK90B1</td>
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<td>17.0</td>
<td>187</td>
<td>220V~50Hz</td>
<td>40</td>
<td>830×830×290</td>
<td>29</td>
<td>Ф15.88</td>
</tr>
<tr>
<td>EKCK100B1</td>
<td>10.0</td>
<td>19.0</td>
<td>187</td>
<td>220V~50Hz</td>
<td>38</td>
<td>830×830×290</td>
<td>29</td>
<td>Ф15.88</td>
</tr>
<tr>
<td>EKCK112B1</td>
<td>11.2</td>
<td>21.2</td>
<td>187</td>
<td>220V~50Hz</td>
<td>36</td>
<td>830×830×290</td>
<td>29</td>
<td>Ф12.7</td>
</tr>
<tr>
<td>EKCK125B1</td>
<td>12.5</td>
<td>23.5</td>
<td>187</td>
<td>220V~50Hz</td>
<td>29</td>
<td>830×830×290</td>
<td>29</td>
<td>Ф12.7</td>
</tr>
<tr>
<td>EKCK140B1</td>
<td>14.0</td>
<td>26.0</td>
<td>187</td>
<td>220V~50Hz</td>
<td>24</td>
<td>1200×1000×300</td>
<td>44</td>
<td>Ф16</td>
</tr>
<tr>
<td>EKCK160B1</td>
<td>16.0</td>
<td>30.0</td>
<td>187</td>
<td>220V~50Hz</td>
<td>24</td>
<td>1200×1000×300</td>
<td>44</td>
<td>Ф16</td>
</tr>
<tr>
<td>EKCK180B1</td>
<td>18.0</td>
<td>32.0</td>
<td>187</td>
<td>220V~50Hz</td>
<td>24</td>
<td>1200×1000×300</td>
<td>44</td>
<td>Ф16</td>
</tr>
</tbody>
</table>

### Indoor unit of wall mounted air conditioner

<table>
<thead>
<tr>
<th>Unit model</th>
<th>Cooling capacity kW</th>
<th>Heating capacity kW</th>
<th>Air flow rate m³/h</th>
<th>Power supply</th>
<th>Noice dB(A)</th>
<th>Dimensions (W×D×H) mm</th>
<th>Mass kg</th>
<th>Connection pipe specification mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>EKBG28B1</td>
<td>3.2</td>
<td>5.7</td>
<td>187</td>
<td>220V~50Hz</td>
<td>24</td>
<td>830×830×300</td>
<td>24</td>
<td>Ф9.52</td>
</tr>
<tr>
<td>EKBG32B1</td>
<td>4.0</td>
<td>6.4</td>
<td>187</td>
<td>220V~50Hz</td>
<td>24</td>
<td>830×830×300</td>
<td>24</td>
<td>Ф9.52</td>
</tr>
<tr>
<td>EKBG36B1</td>
<td>4.5</td>
<td>7.1</td>
<td>187</td>
<td>220V~50Hz</td>
<td>24</td>
<td>830×830×300</td>
<td>24</td>
<td>Ф9.52</td>
</tr>
<tr>
<td>EKBG40B1</td>
<td>5.0</td>
<td>8.0</td>
<td>187</td>
<td>220V~50Hz</td>
<td>24</td>
<td>830×830×300</td>
<td>24</td>
<td>Ф9.52</td>
</tr>
</tbody>
</table>

### 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. 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. 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.
5. Standard long-acting strainer
6. Effectively absorbing particles and hazardous floccules and improving indoor air quality.
7. Stereo-encircled air supply
8. Stere-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.
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

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

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.

Standard long-acting strainer
Effectively absorbing particles, improving indoor air quality and facilitating cleaning.

Indoor unit of double discharge built-in air conditioner

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.

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

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.

Standard long-acting strainer
Effectively absorbing particles, improving indoor air quality and facilitating cleaning.

Indoor unit of double discharge built-in air conditioner

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.
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.

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

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. The installation of refrigerant pipe, drain pipe and wiring can be performed efficiently on one side to reduce an installation period. The installation of refrigerant pipe, drain pipe and wiring can be performed efficiently on one side to reduce an installation period.

Horizontal swing
Vertical swing

Return air panel is easy to remove and strainer is easy to clean.

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

<table>
<thead>
<tr>
<th>Unit model</th>
<th>Cooling capacity kW</th>
<th>Heating capacity kW</th>
<th>Indoor air flow rate m³/h</th>
<th>Outdoor air flow rate m³/h</th>
<th>Power supply</th>
<th>Dimensions (L×W×H) mm</th>
<th>Noise dB(A)</th>
<th>Connection pipe specification mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>EKCE-B121</td>
<td>2.7</td>
<td>3.2</td>
<td>861</td>
<td>87</td>
<td>200V~50Hz</td>
<td>4A/15A</td>
<td>1640×760×1640</td>
<td>71</td>
</tr>
<tr>
<td>EKCE-B122</td>
<td>3.5</td>
<td>3.7</td>
<td>861</td>
<td>87</td>
<td>200V~50Hz</td>
<td>4A/15A</td>
<td>1640×760×1640</td>
<td>71</td>
</tr>
<tr>
<td>EKCE-B123</td>
<td>4.6</td>
<td>5.2</td>
<td>861</td>
<td>87</td>
<td>200V~50Hz</td>
<td>4A/15A</td>
<td>1640×760×1640</td>
<td>71</td>
</tr>
<tr>
<td>EKCE-B124</td>
<td>5.6</td>
<td>6.5</td>
<td>940</td>
<td>92</td>
<td>220V~50Hz</td>
<td>4A/15A</td>
<td>1920×835×1640</td>
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<tr>
<td>EKCE-B125</td>
<td>6.3</td>
<td>7.1</td>
<td>940</td>
<td>92</td>
<td>220V~50Hz</td>
<td>4A/15A</td>
<td>1920×835×1640</td>
<td>73</td>
</tr>
<tr>
<td>EKCE-B126</td>
<td>7.2</td>
<td>9.2</td>
<td>940</td>
<td>92</td>
<td>220V~50Hz</td>
<td>4A/15A</td>
<td>1920×835×1640</td>
<td>73</td>
</tr>
<tr>
<td>EKCE-B127</td>
<td>9.6</td>
<td>12.0</td>
<td>1060</td>
<td>104</td>
<td>220V~50Hz</td>
<td>4A/15A</td>
<td>2370×940×1640</td>
<td>75</td>
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<td>EKCE-B128</td>
<td>12.0</td>
<td>15.8</td>
<td>1060</td>
<td>104</td>
<td>220V~50Hz</td>
<td>4A/15A</td>
<td>2370×940×1640</td>
<td>75</td>
</tr>
<tr>
<td>EKCE-B129</td>
<td>14.0</td>
<td>17.3</td>
<td>1060</td>
<td>104</td>
<td>220V~50Hz</td>
<td>4A/15A</td>
<td>2370×940×1640</td>
<td>75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit model</th>
<th>EKVR-180ER1-FY</th>
<th>EKVR-200ER1-FY</th>
<th>EKVR-220ER1-FY</th>
<th>EKVR-240ER1-FY</th>
<th>EKVR-260ER1-FY</th>
<th>EKVR-280ER1-FY</th>
<th>EKVR-300ER1-FY</th>
<th>EKVR-320ER1-FY</th>
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</thead>
<tbody>
<tr>
<td>Rated cooling capacity kW</td>
<td>20.3</td>
<td>23.6</td>
<td>28.6</td>
<td>33.6</td>
<td>38.0</td>
<td>44.5</td>
<td>51.5</td>
<td>61.0</td>
</tr>
<tr>
<td>Rated heating capacity kW</td>
<td>28.0</td>
<td>32.5</td>
<td>37.5</td>
<td>40.0</td>
<td>45.0</td>
<td>50.5</td>
<td>57.0</td>
<td>65.0</td>
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<td>Rated cooling power kW</td>
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<td>6.05</td>
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<td>6.05</td>
<td>6.05</td>
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<tr>
<td>Rated heating power kW</td>
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<td>8.06</td>
<td>10.37</td>
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- 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 30/20°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 room; during actual operation, due to influence of external environment, noise value and the standard will be slightly higher;
- It is recommended to select the specifications of electric wirings according to maximum running current;
- 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 30/20°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

<table>
<thead>
<tr>
<th>Unit model (*FY)</th>
<th>EKVRV48ER1</th>
<th>EKVRV72ER1</th>
<th>EKVRV36ER1</th>
<th>EKVRV48ER1</th>
<th>EKVRV54ER1</th>
<th>EKVRV60ER1</th>
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<tr>
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<tr>
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<td>15.8</td>
<td>14.7</td>
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<td>18.0</td>
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<tr>
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<tr>
<td>Noise (dB(A))</td>
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<td>66</td>
<td>66</td>
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<td>Refrigerant</td>
<td>R410A</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions W×H×D</td>
<td>mm</td>
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<td>(1140×1178×935×1650)</td>
<td>(1140×1178×935×1650)</td>
<td>(1140×1178×935×1650)</td>
<td>(1140×1178×935×1650)</td>
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</table>

- 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

<table>
<thead>
<tr>
<th>Unit model (*FY)</th>
<th>EKVRV50ER1</th>
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<tr>
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<td>kW</td>
<td>17.0</td>
<td>15.2</td>
<td>15.2</td>
<td>15.2</td>
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<tr>
<td>Rated cooling power</td>
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<td>15.2</td>
<td>15.2</td>
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- 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

<table>
<thead>
<tr>
<th>Unit model (*FY)</th>
<th>EKDB560B1X</th>
<th>EKDB540B1X</th>
<th>EKDB450B1X</th>
<th>EKDB335B1X</th>
<th>EKDB280B1X</th>
<th>EKDB250B1X</th>
<th>EKDB210B1X</th>
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### Piping dimension

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<td>Gas piping</td>
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<td>EKDB140B1X</td>
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### 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 4 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-to-one, 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.

**Selection of branch pipe between outdoor units**

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

- **Outdoor unit capacity:** S2~54HP
- **Branch pipe model:** ACT/R-5DP5, ACT/R-6DP7, ACT/R-6DP9

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

- **Outdoor unit capacity:** S2~54HP, D6~61HP
- **Branch pipe model:** ACT/R-5DP5, ACT/R-6DP7, ACT/R-6DP9, ACT/R-7DP9, ACT/R-8DP7, ACT/R-8DP9

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Note: When outdoor units are installed in the combination of two or three modules, their arrangement sequence is as follows: An outdoor unit that is closer to the side of refrigerant pipe to indoor unit has a larger capacity.
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 74% 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.

### Table: Unit model and specification

<table>
<thead>
<tr>
<th>Unit model</th>
<th>Fresh air flow m³/h</th>
<th>External static pressure Pa</th>
<th>Enthalpy recovery rate %</th>
<th>Temperature recovery rate %</th>
<th>Power supply</th>
<th>Rated power W</th>
<th>Rated current A</th>
<th>Net weight kg</th>
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Note: 1. Running noise is measured at 1.4m below the center of the unit.
2. EHR300HH and above models can be used to realize three-speed regulation. EHR300~1200H 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 EHR series, please consult EK technology personnel.