

High Performance Air-Conditioning 2019



KXZ

VRF inverter multi-system Air-Conditioners

50Hz

19KX02E
ASIA

High Performance Air-Conditioning 2019



KXZ

The Mitsubishi Heavy Industries Thermal Systems KXZ VRF series delivers high performance in cooling and heating for all commercial applications. It offers the highest level of design flexibility, improved efficiency as well as enhanced operational functions.



Line Up



Micro model



KXZ Lite



KXZ

NEW

RC-EX3A

Simple use with advanced setting Remote control



Contents

| | |
|---------------------------------------|---------|
| Introduction | 4~29 |
| Outdoor units | 30~65 |
| Micro model | 30~33 |
| KXZ Lite | 34·35 |
| KXZ Standard series | 36~43 |
| KXZ Hi-COP series | 44~47 |
| KXZ Standard large connection series | 48~51 |
| Corrosion Protection Treatment series | 52·53 |
| Water cooled series | 54·55 |
| High head series | 56~59 |
| Refresh series | 60·61 |
| Indoor units | 66~105 |
| EEV-KIT | 106·107 |
| Control systems | 108~117 |



KXZ system is the best solution to Air-condition "Sophisticated" buildings

KX VRF series delivers high cooling/heating performance for all commercial applications.



High Efficiency & Comfort

- High energy efficiency with advanced technology
- Energy saving control by VTCC (Variable Temperature & Capacity Control)
- Individual, centralized and customized comfort control

Design Flexibility

- Long piping length and wide limitation of piping
- Various indoor units to each application
- Easy selection and design software

Easy & Customized Control

- Individual advanced control by wired and wireless remote controller
- Various options for BMS & Centralized controller

Good Serviceability

- Easy access for maintenance
- Engineering and monitoring tool available

"Micro series" for small offices, shops and residential applications

Industry leading compact design, energy efficiency, and high reliability from our high technology



Specific cases of VRF system installation from Mitsubishi Heavy Industries Thermal Systems

Case study: Hotel and Leisure



VRF heat recovery systems from Mitsubishi Heavy Industries Thermal Systems KX range are part of the exacting specification for luxury hotels and airport-style bus station. Mitsubishi Heavy Industries Thermal Systems VRF systems feature advanced inverter technology which adjusts compressor output to match the cooling or heating demands of the indoor units to save energy and eliminate temperature fluctuations. Simultaneous heating or cooling can be provided in different areas as required, with heat gain in sunnier, south facing rooms providing useful energy for rooms on the cooler, shadier side of the buildings.



Case study: Education



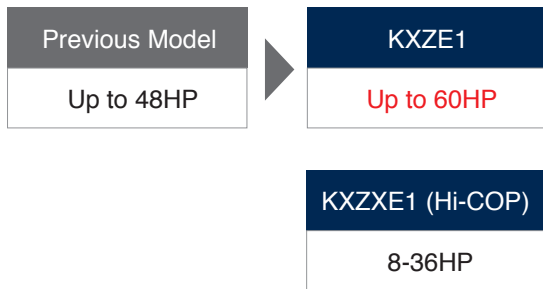
A VRF system with inverter control from Mitsubishi Heavy Industries Thermal Systems is helping to make Crossways Academy in Lewisham a cool place to learn for 500 students. Comfortable temperatures need to be maintained as economically as possible in rooms where large numbers of students will enter or leave at the same time. IT equipment being switched on and off and the use of electric blinds to control glare will all contribute to substantial fluctuations in heat load. A VRF KX system from Mitsubishi Heavy Industries Thermal Systems provides an ideal solution. Much of the building was designed to rely on natural ventilation, with windows operated electronically. The air conditioning system is linked to this control system to close down when windows are opened. Mitsubishi Heavy Industries Thermal Systems KX is particularly appropriate for many such retrofit applications.





KXZ

The KXZ product lineup has been extended to offer solutions delivering up to 60 horsepower (60HP) when using a combination of 3 outdoor units. Furthermore with the addition of the Hi-COP series, installation options have been greatly increased.



By combining 3 outdoor units 60HP can be achieved

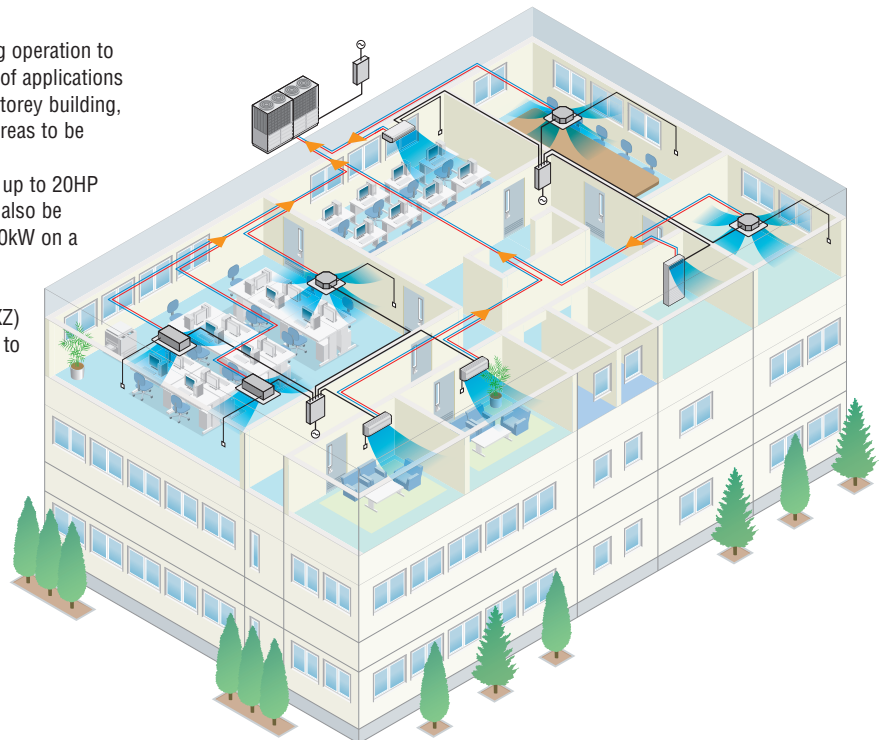
Heat pump systems

The heat pump systems operate with 2 inter-connecting pipes, thus commonly referred to as a '2-pipe system'.

These systems provide either a heating or cooling operation to all indoor units and are suitable for a wide range of applications from an individual apartment to an entire multi storey building, especially where there are significant open plan areas to be controlled.

The range starts with a 11.2kW cooling capacity, up to 20HP with 56.0kW cooling capacity. Outdoor units can also be "twinned" or "tripled" providing up to 60HP/168.0kW on a single system.

The range has a total piping length of 1000m (KXZ) and the furthest indoor unit can be connected up to 160m (KXZ) from the outdoor unit.




Capacity Range

| | | | | | | | | | | | |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Capacity | 4HP | 5HP | 6HP | 8HP | 10HP | 12HP | 14HP | 16HP | 17HP | 18HP | 20HP |
| Model Code : kW | 11.2 | 14 | 15.5 | 22.4 | 28 | 33.5 | 40.0 | 45.0 | 47.5 | 50.0 | 56.0 |
| BTU / h | 38,200 | 47,800 | 52,900 | 76,400 | 95,500 | 114,300 | 136,500 | 153,500 | 162,100 | 170,600 | 191,100 |
| Capacity | 22HP | 24HP | 26HP | 28HP | 30HP | 32HP | 34HP | 36HP | 38HP | 40HP | |
| Model Code : kW | 61.5 | 67.0 | 73.5 | 80.0 | 85.0 | 90.0 | 95.0 | 100.0 | 106.0 | 112.0 | |
| BTU / h | 209,800 | 228,600 | 250,800 | 273,000 | 290,000 | 307,100 | 324,100 | 341,200 | 361,700 | 382,100 | |
| Capacity | 42HP | 44HP | 46HP | 48HP | 50HP | 52HP | 54HP | 56HP | 58HP | 60HP | |
| Model Code : kW | 120.0 | 125.0 | 130.0 | 135.0 | 142.5 | 145.0 | 150.0 | 156.0 | 162.0 | 168.0 | |
| BTU / h | 409,400 | 426,500 | 443,600 | 460,600 | 486,200 | 494,700 | 511,800 | 532,200 | 552,700 | 573,200 | |


Product Line Up

<Outdoor units>

Micro model




| | | |
|---------------|---------------|---------------|
| 11.2kW 4HP | 14.0kW 5HP | 15.5kW 6HP |
| FDC112KXEN6 | FDC140KXEN6 | FDC155KXEN6 |
| FDC112KXES6 | FDC140KXES6 | FDC155KXES6 |




| | | |
|---------------|----------------|----------------|
| 22.4kW 8HP | 28.0kW 10HP | 33.5kW 12HP |
| FDC224KXE6G | FDC280KXE6G | FDC335KXE6G |

KXZ Lite




| | |
|---------------|----------------|
| 22.4kW 8HP | 28.0kW 10HP |
| FDC224KXZPE1 | FDC280KXZPE1 |

Standard model KXZE1



| | | | | | | |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 28.0kW 10HP | 33.5kW 12HP | 40.0kW 14HP | 45.0kW 16HP | 47.5kW 17HP | 50.0kW 18HP | 56.0kW 20HP |
| FDC280KXZE1 | FDC335KXZE1 | FDC400KXZE1 | FDC450KXZE1 | FDC475KXZE1 | FDC500KXZE1 | FDC560KXZE1 |

FDC280,335 FDC400~560




| | | | | | | | | | |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
| 61.5kW 22HP | 67.0kW 24HP | 73.5kW 26HP | 80.0kW 28HP | 85.0kW 30HP | 90.0kW 32HP | 95.0kW 34HP | 100.0kW 36HP | 106.0kW 38HP | 112.0kW 40HP |
| FDC615KXZE1 | FDC670KXZE1 | FDC735KXZE1 | FDC800KXZE1 | FDC850KXZE1 | FDC900KXZE1 | FDC950KXZE1 | FDC1000KXZE1 | FDC1060KXZE1 | FDC1120KXZE1 |
| FDC280KXZE1 | FDC335KXZE1 | FDC335KXZE1 | FDC400KXZE1 | FDC400KXZE1 | FDC450KXZE1 | FDC475KXZE1 | FDC500KXZE1 | FDC500KXZE1 | FDC560KXZE1 |
| FDC335KXZE1 | FDC335KXZE1 | FDC400KXZE1 | FDC400KXZE1 | FDC450KXZE1 | FDC450KXZE1 | FDC475KXZE1 | FDC500KXZE1 | FDC560KXZE1 | FDC560KXZE1 |

FDC615,670



FDC735 FDC800~1120



| | | | | | | | | | |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 120.0kW 42HP | 125.0kW 44HP | 130.5kW 46HP | 135.0kW 48HP | 142.5kW 50HP | 145.0kW 52HP | 150.0kW 54HP | 156.0kW 56HP | 162.0kW 58HP | 168.0kW 60HP |
| FDC1200KXZE1 | FDC1250KXZE1 | FDC1300KXZE1 | FDC1350KXZE1 | FDC1425KXZE1 | FDC1450KXZE1 | FDC1500KXZE1 | FDC1560KXZE1 | FDC1620KXZE1 | FDC1680KXZE1 |
| FDC400KXZE1 | FDC400KXZE1 | FDC400KXZE1 | FDC450KXZE1 | FDC475KXZE1 | FDC475KXZE1 | FDC500KXZE1 | FDC500KXZE1 | FDC500KXZE1 | FDC560KXZE1 |
| FDC400KXZE1 | FDC400KXZE1 | FDC450KXZE1 | FDC450KXZE1 | FDC475KXZE1 | FDC475KXZE1 | FDC500KXZE1 | FDC500KXZE1 | FDC560KXZE1 | FDC560KXZE1 |
| FDC400KXZE1 | FDC450KXZE1 | FDC450KXZE1 | FDC450KXZE1 | FDC475KXZE1 | FDC500KXZE1 | FDC500KXZE1 | FDC560KXZE1 | FDC560KXZE1 | FDC560KXZE1 |

FDC1200~1680

Hi-COP model KXZXE1



FDC224 FDC280,335

| | | |
|---------------|----------------|----------------|
| 22.4kW 8HP | 28.0kW 10HP | 33.5kW 12HP |
| FDC224KXZXE1 | FDC280KXZXE1 | FDC335KXZXE1 |



FDC450



FDC500



FDC560~670

| | | | | |
|----------------|----------------|----------------|----------------|----------------|
| 45.0kW 16HP | 50.0kW 18HP | 56.0kW 20HP | 61.5kW 22HP | 67.0kW 24HP |
| FDC450KXZXE1 | FDC500KXZXE1 | FDC560KXZXE1 | FDC615KXZXE1 | FDC670KXZXE1 |
| FDC224KXZXE1 | FDC224KXZXE1 | FDC280KXZXE1 | FDC280KXZXE1 | FDC335KXZXE1 |
| FDC224KXZXE1 | FDC280KXZXE1 | FDC280KXZXE1 | FDC335KXZXE1 | FDC335KXZXE1 |



FDC735



FDC800













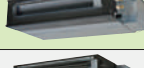






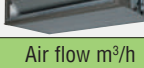




FDC850~1000

| | | | | | |
|----------------|----------------|----------------|----------------|----------------|-----------------|
| 73.5kW 26HP | 80.0kW 28HP | 85.0kW 30HP | 90.0kW 32HP | 95.0kW 34HP | 100.0kW 36HP |
| FDC735KXZXE1 | FDC800KXZXE1 | FDC850KXZXE1 | FDC900KXZXE1 | FDC950KXZXE1 | FDC1000KXZXE1 |
| FDC224KXZXE1 | FDC224KXZXE1 | FDC280KXZXE1 | FDC280KXZXE1 | FDC280KXZXE1 | FDC335KXZXE1 |
| FDC280KXZXE1 | FDC280KXZXE1 | FDC280KXZXE1 | FDC335KXZXE1 | FDC335KXZXE1 | FDC335KXZXE1 |



<Indoor units> A range of 17 types of exposed or concealed indoor units available in a wide range of capacities (total 93 indoor models).
The best solution of indoor units for all applications is available from our full lineup.

| | | | | 1.5kW <0.5HP> | 2.2kW <0.8HP> | 2.8kW <1HP> | 3.6kW <1.25HP> | | |
|---|-----------------------------------|---------------|---|------------------|--|----------------|-------------------|--|--|
| Micro model (4~6HP) | | |  | | ← | | | | |
| Micro model (8~12HP) | | |  | ← | | | | | |
| KXZ Lite | | |  | ← | | | | | |
| Standard model KXZE1 | | |  | ← | | | | | |
| Hi-COP model KXZZXE1 | | |  | ← | | | | | |
| Ceiling Cassette | 4way | FDT |  | | | FDT28KXZE1 | FDT36KXZE1 | | |
| | 4way Compact | FDTC |  | FDTC15KXZE1 | FDTC22KXZE1 | FDTC28KXZE1 | FDTC36KXZE1 | | |
| | 2way | FDTW |  | | | FDTW28KXE6F | | | |
| | 1way | FDTS |  | | | | | | |
| | 1way Compact | FDTQ |  | | FDTQ22KXE6F | FDTQ28KXE6F | FDTQ36KXE6F | | |
| Duct Connected | High Static Pressure | FDU |  | | | | | | |
| | Low/Middle Static Pressure | FDUM |  | | FDUM22KXE6F | FDUM28KXE6F | FDUM36KXE6F | | |
| | Low Static Pressure(thin) | FDUT |  | FDUT15KXE6F-E | FDUT22KXE6F-E | FDUT28KXE6F-E | FDUT36KXE6F-E | | |
| | Compact & Flexible | FDUH |  | | FDUH22KXE6F | FDUH28KXE6F | FDUH36KXE6F | | |
| Wall Mounted | | FDK |  | FDK15KXZE1 | FDK22KXZE1 | FDK28KXZE1 | FDK36KXZE1 | | |
| Ceiling Suspended | | FDE |  | | | | FDE36KXZE1 | | |
| Floor Standing | 2way | FDW |  | | | FDW28KXE6F | | | |
| | With Casing | FDL |  | | | | | | |
| | Without Casing | FDU |  | | | FDU28KXE6F | | | |
| OA Processing unit | | FDU-F |  | | • FDU-F series are not connectable to Micro model (4~6HP), KXZ | | | | |
| | | | Air flow m ³ /h | 150 | 250 | 350 | 500 | | |
| Fresh Air Ventilation and Heat Exchange unit | | SAF |  | SAF150E7 | SAF250E7 | SAF350E7 | SAF500E7 | | |
| Fresh Air Assembly | | SAF-DX |  | | SAF-DX250E6 | SAF-DX350E6 | SAF-DX500E6 | | |

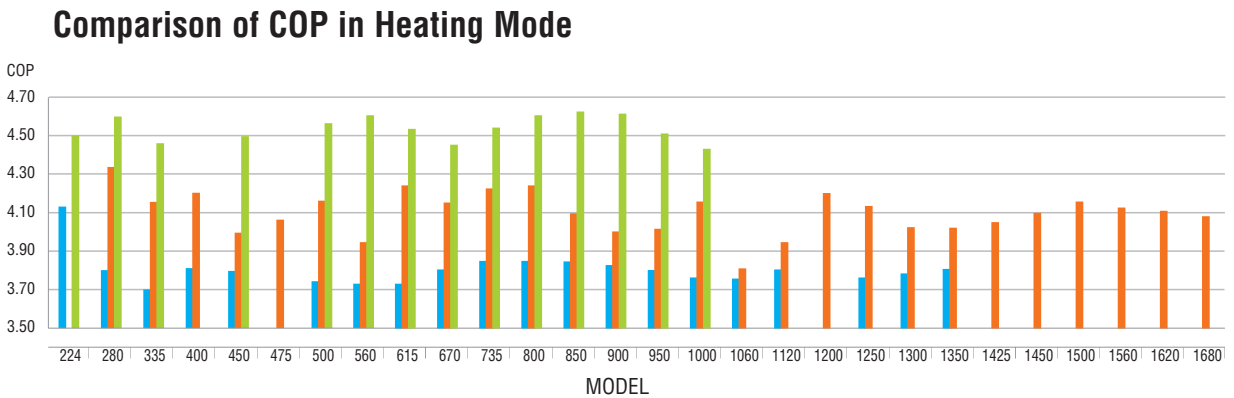
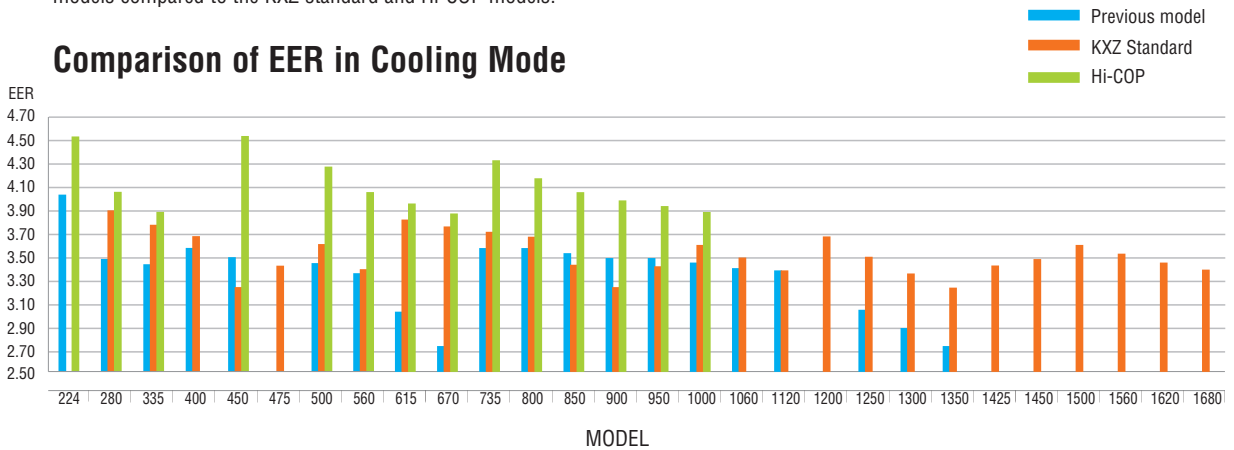
| | 4.5kW <1.6HP> | 5.6kW <2HP> | 7.1kW <2.5HP> | 9.0kW <3.2HP> | 11.2kW <4HP> | 14.0kW <5HP> | 16.0kW <6HP> | 22.4kW <8HP> | 28.0kW <10HP> |
|-------|------------------|----------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|------------------|
| | → | | | | | | | | |
| | → | | | | | | | | |
| | → | | | | | | | | |
| | → | | | | | | | | |
| | FDT45KXZE1 | FDT56KXZE1 | FDT71KXZE1 | FDT90KXZE1 | FDT112KXZE1 | FDT140KXZE1 | FDT160KXZE1 | | |
| | FDTC45KXZE1 | FDTC56KXZE1 | | | | | | | |
| | FDTW45KXE6F | FDTW56KXE6F | FDTW71KXE6F | FDTW90KXE6F | FDTW112KXE6F | FDTW140KXE6F | | | |
| | FDTS45KXE6F | | FDTS71KXE6F | | | | | | |
| | | | | | | | | | |
| | FDU45KXE6F | FDU56KXE6F | FDU71KXE6F | FDU90KXE6F | FDU112KXE6F | FDU140KXE6F | FDU160KXE6F | FDU224KXZE1 | FDU280KXZE1 |
| | FDUM45KXE6F | FDUM56KXE6F | FDUM71KXE6F | FDUM90KXE6F | FDUM112KXE6F | FDUM140KXE6F | FDUM160KXE6F | | |
| | FDUT45KXE6F-E | FDUT56KXE6F-E | FDUT71KXE6F-E | | | | | | |
| | | | | | | | | | |
| | FDK45KXZE1 | FDK56KXZE1 | FDK71KXZE1 | FDK90KXZE1 | | | | | |
| | FDE45KXZE1 | FDE56KXZE1 | FDE71KXZE1 | | FDE112KXZE1 | FDE140KXZE1 | | | |
| | FDFW45KXE6F | FDFW56KXE6F | | | | | | | |
| | | | FDFL71KXE6F | | | | | | |
| | FDFU45KXE6F | FDFU56KXE6F | FDFU71KXE6F | | | | | | |
| Lite. | | | | FDU650FKXZE1 | | FDU1100FKXZE1 | | FDU1800FKXZE1 | FDU2400FKXZE1 |
| | | 800 | 1000 | | | | | | |
| | | SAF800E7 | SAF1000E7 | | | | | | |
| | | SAF-DX800E6 | SAF-DX1000E6 | | | | | | |



1. High Efficiency & Comfort

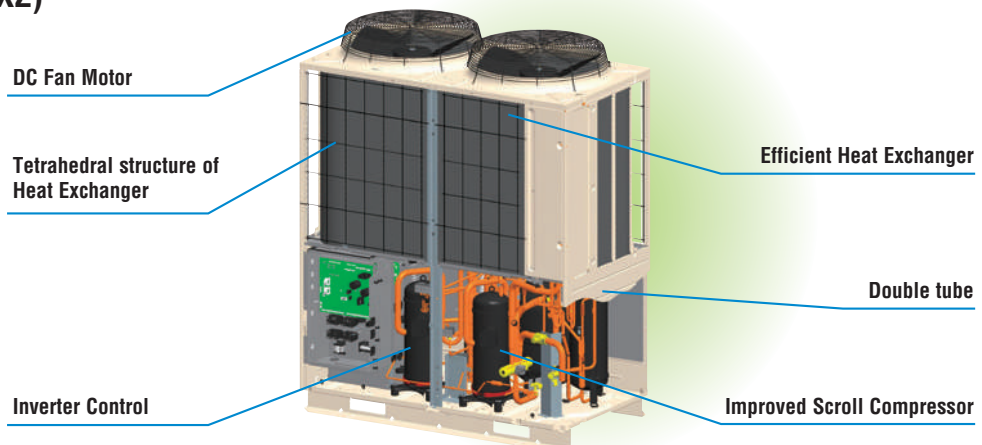
Improved Efficiency

The below graphs highlight the improved efficiencies between the previous models compared to the KXZ standard and Hi-COP models.



High efficiency and compact design are realized by applying various advanced components

10~60HP (KXZ)



Variable Temperature and Capacity Control (KXZ)

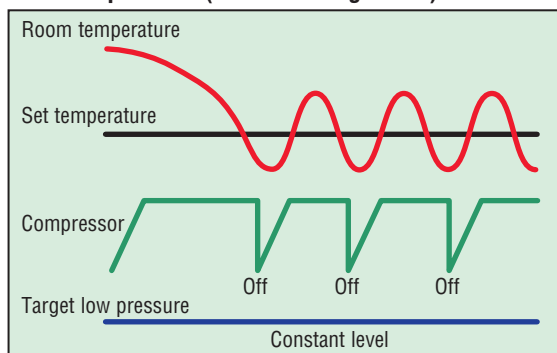
VTCC

- The VTCC is a newly developed energy saving function designed by Mitsubishi Heavy Industries Thermal Systems.
- A new feature to all our KXZ ranges which provides up to 34%* energy savings in both cooling and heating mode.
- VTCC is a function specifically designed to maximise energy savings in partial load conditions throughout all seasons.



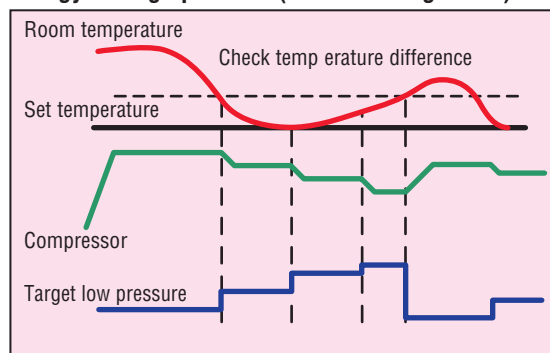
*34% energy savings are based on comparison with a KXZ standard model with VTCC vs. a KXZ standard model both under partial load condition.

Normal operation (in the cooling mode)



VTCC adjusts the target pressure of the refrigerant cycle in the outdoor unit automatically according to the demand of the indoor units in partial load conditions. These smooth adjustments ensure an optimal capacity usage of the indoor units as well as maximised energy savings. Ultimately this also increases comfort for the user.

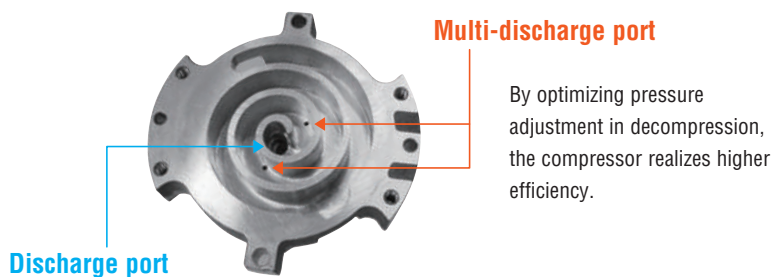
Energy saving operation (in the cooling mode)



For example, in partial load conditions where you have low cooling and heating requirements, VTCC reduces the compressor frequency and controls the actuators in the outdoor unit. Overall with the VTCC functionality you will always have an additional energy saving of up to 34% (depending on configuration and usage of system) in low cooling and heating load requirements.

Multiport compressor that achieves high efficiency (KXZ, KXZ Lite)

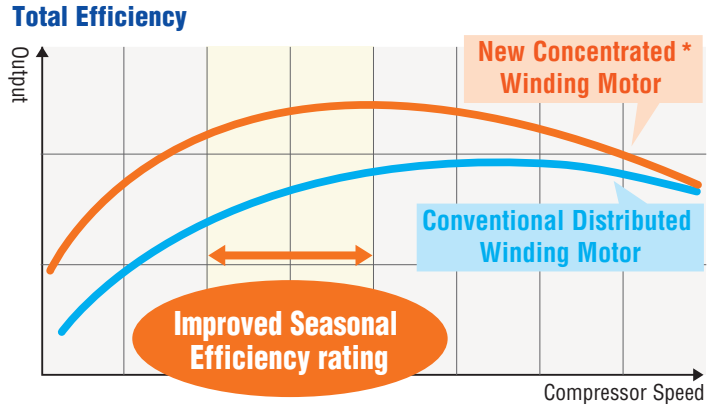
The new multiport discharge area in the compressor has optimized pressure control with better balancing. The performance improvement at medium Hz has resulted in higher annual efficiencies.





Concentrated winding motor achieves "High Output" and "Total Efficiency Improvement"

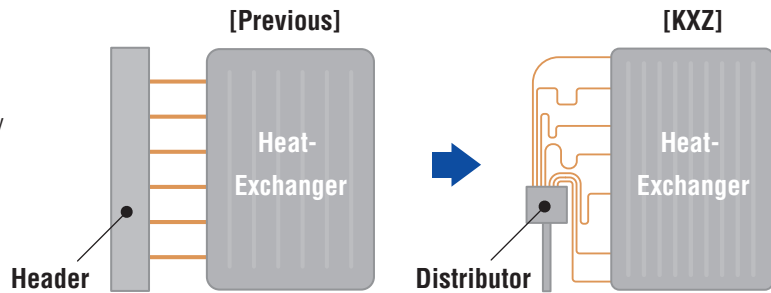
The newly designed high performance CPU enables high precision optimization for compressor speed, which leads to concentrated winding motor use. Our product achieves high output and better energy saving effects and in particular improves seasonal efficiency rating.



* Applied for KXZE1:10/12/17/18/20HP, KXZXE1:8HP & KXZ Lite:8/10HP

Improved Heat-exchanger

With piping layout rearranged from header to heat exchanger, refrigerant distribution flow has improved and maximum energy efficiency has been achieved. Heat exchanger has improved refrigerant distribution and increased effectiveness. Furthermore due to expansion of effective heat transfer area in heat exchanger, energy efficiency has increased.



Strengthened resistance against frost

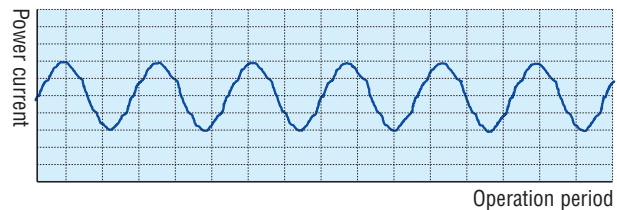
Resistance against frost has been strengthened by achieving improved heat-exchanger.

Vector control

New applied Vector control has a high efficiency and many new advanced features.

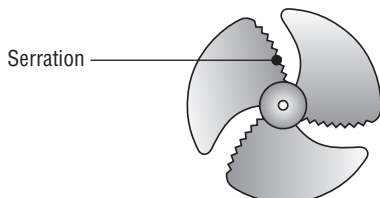
- Smooth operation from low speed to high speed
- Smooth Sine Voltage Wave form are attained
- Energy efficiency is further improved in low speed range

Vector Control



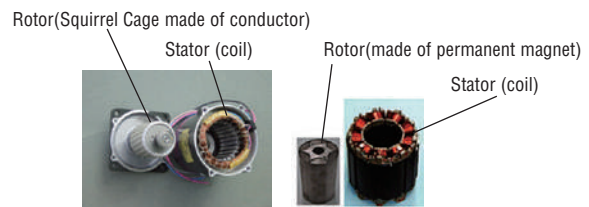
Long-chorded 3 propeller fan with serration

Fan blade design adapted from Mitsubishi Heavy Industries aerospace division - with serrated edges that deliver increased air volume with less power input.



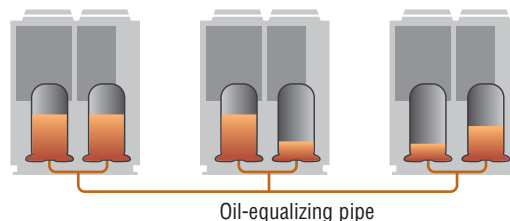
DC Fan Motor

Employment of DC fan motor has enabled to realize an excellent efficiency of approximate 60% higher than previous models.



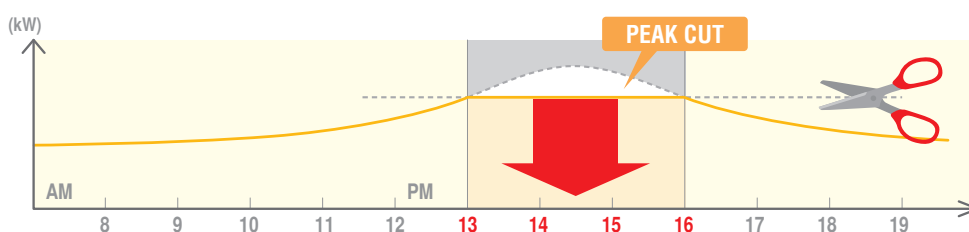
Oil level control capability

Our proprietary technology of adjusting oil level for combination of two or three outdoor units has realized leveled operation rate, keeping performance of the units and ensuring long life of the system.

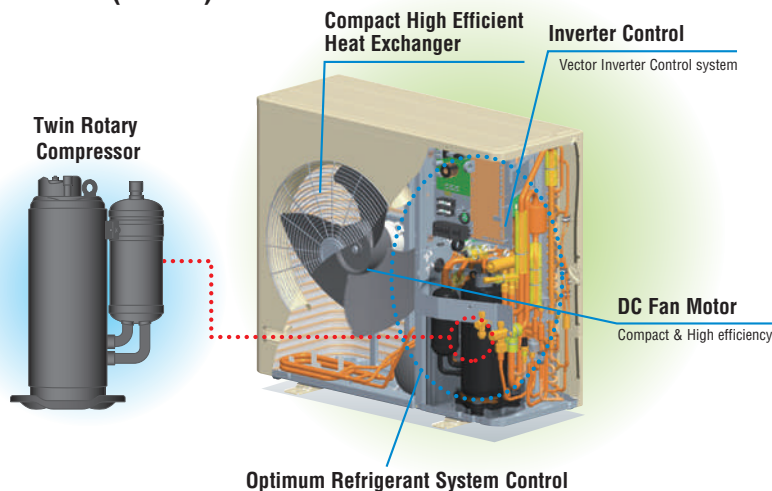


Capacity control (KXZ)

Capacity control can be set by peak cut function with RC-EX3A for better energy saving. Five-step capacity control is available. (100-80-60-40-0%)

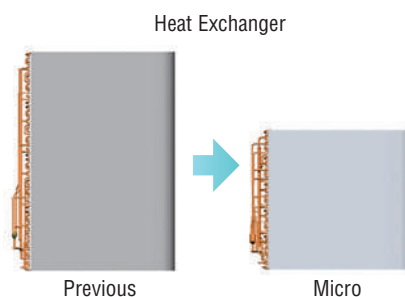


4~6HP (Micro)

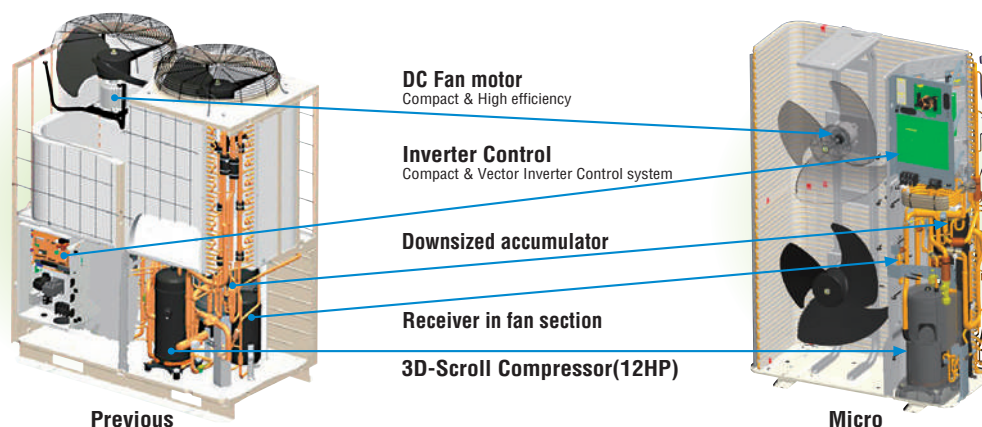


Compact high efficiency Heat Exchanger

- Optimizing relationship of the air flow velocity & fin pattern
- Improvement of air distribution Maximizing efficiency of heat exchanger

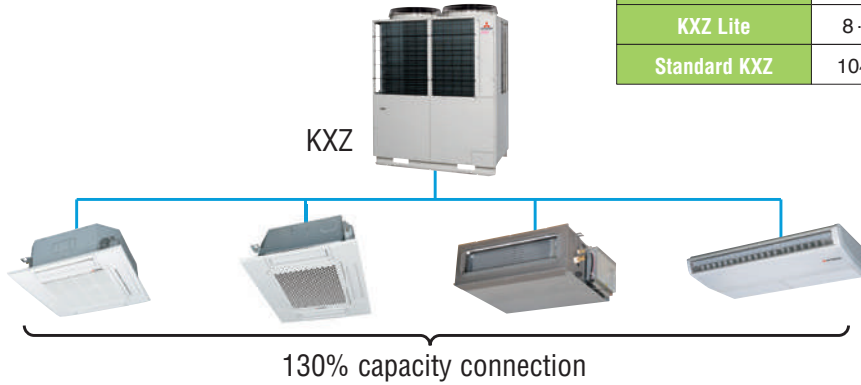


8~12HP (Micro)



2. Design Flexibility

Indoor unit capacity connection



| | HP | Capacity connection |
|--------------|--------|---------------------|
| Micro model | 4~12 | 150% |
| KXZ Lite | 8 · 10 | 120% |
| Standard KXZ | 10~60 | 130% |

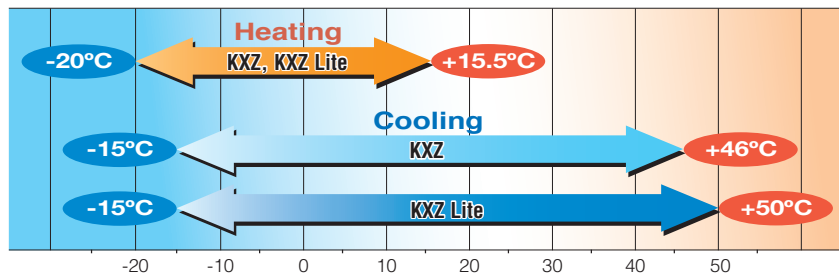
Connectable indoor units

| Micro model | HP | 4 | 5 | 6 | 8 | 10 | 12 | KXZ Lite | HP | 8 | 10 |
|-------------|---------|---|---|---|----|----|----|----------|---------|---|----|
| | Numbers | 6 | 8 | 8 | 22 | 24 | 24 | | Numbers | 8 | 8 |

| Standard KXZ | HP | 10 | 12 | 14 | 16 | 17 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 |
|--------------|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | Numbers | 24 | 29 | 34 | 39 | 41 | 43 | 48 | 53 | 58 | 63 | 69 | 73 | 78 | 80 |
| | HP | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 | |
| | Numbers | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |

Wide Range of Operation (KXZ, KXZ Lite)

KXZ series permits an extensible system design considering a heating range operation under a low temperature condition down to -20°C and a cooling range operation up to 46°C (previous model : 43°C) Furthermore KXZ Lite extends a cooling range operation up to 50°C.



Control Systems

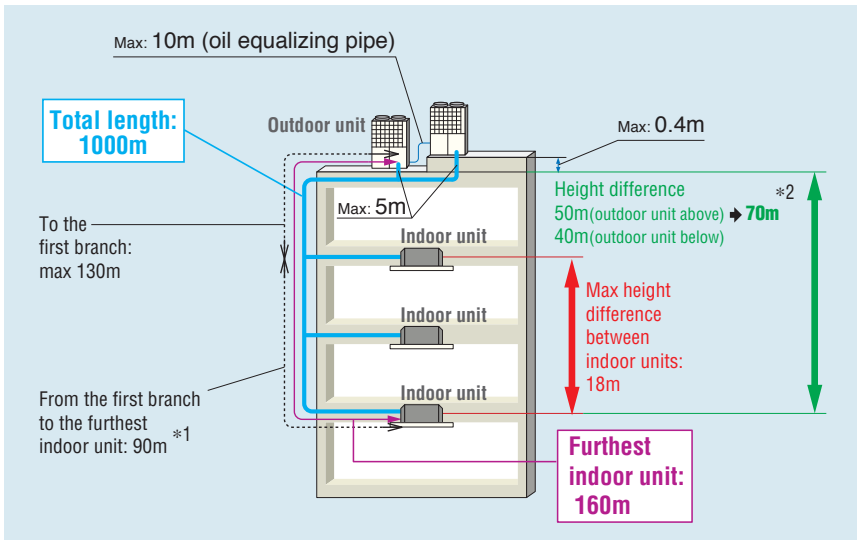
All series offer wide variation of control system and provide the best solution.

[Control system units with SUPERLINK- II]

| Classification | Type | Model | Connectable Indoor units (Maximum) | Electric power calculation | |
|-----------------------|---------------------|----------------------|------------------------------------|----------------------------|---|
| Individual controller | Wired | RC-E5 | 16 | — | |
| | | RC-EX3A, RC-EX3 | 16 | — | |
| | Wireless | RCN-T-5AW-E2 etc. | 16 | — | |
| Center Console | Push buttons | SC-SL1N-E | 16 | — | |
| | | SC-SL2NA-E | 64 | — | |
| | Touch screen | SC-SL4-AE | 128 | — | |
| | | SC-SL4-BE | 128 | ● | |
| | BMS interface units | Web gateway & BACnet | SC-WBGW256 | 256(128x2) | ● |
| | | Lonworks | SC-LGWNB | 96(48x2) | — |

Long Pipe Length 10~60HP(KXZ)

Piping length has extended max height difference between indoor units up to 18m and enables us to put indoor units on extra three floors. The furthest indoor unit: 160m or total length: 1000m contributes to system design flexibility.

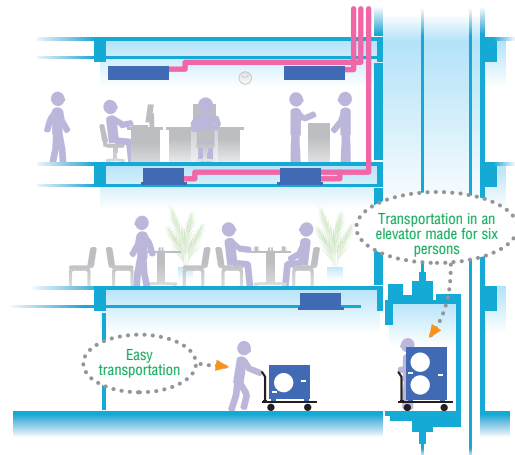
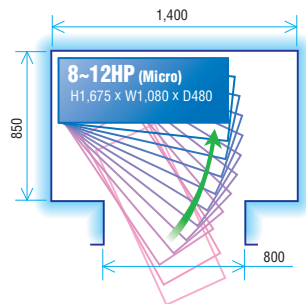


*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)

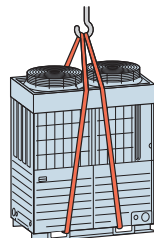
*2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page 56.

Easy Transportation & Installation

Due to realization of significant reduction in size and foot print which is one of the smallest in the industry, transportation in an elevator made for six persons (Width:1400mm, Depth:850, Open area:800mm) is possible, eliminating cost of a crane and reducing labor.

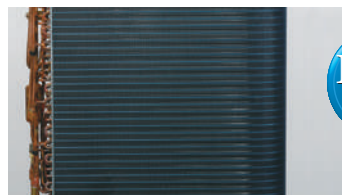


KXZ is portable and the uniform reduced footprint allows neat, continuous installation.



Blue Fin

Due to application of blue coated fins for the heat exchanger of new outdoor unit, corrosion resistance has been improved compared to current models.





Automatic Select functions for capacity control (KXZ Lite)

The following 3 items are available for capacity control function. User can select one item individually or select 2or3 items at the same time. In case of selecting 2or3 items, the unit will operate with the most effective function automatically.

- **Compressor speed control**

User can set compressor speed at 100%-80%-60%-40% before starting operation with PWB in the outdoor unit or with a demand controller (procured locally).

- **Capacity control timer**

User can set capacity control with RC-EX3 up to 4 times per day maximum. The timer setting can be changed using 5 minute intervals.

※Please refer to page 13.

- **Silent mode**

Considering noise regulations or surrounding circumstances, you can now select 4 levels of silent mode. Setting the combination of silent mode is available by using timer function of RC-EX3.

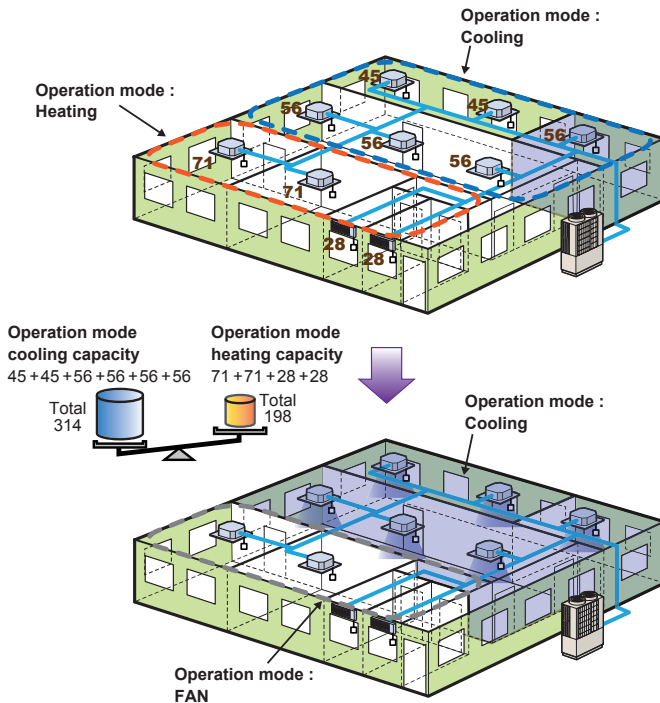
Priority operation mode rule (KXZ, KXZ Lite)

User can select the following priority operation mode. (for whole system)

1. First unit's operation mode (by default setting)
2. Last unit's operation mode
3. Majority operation mode (see below)
4. Master operation mode (see below)

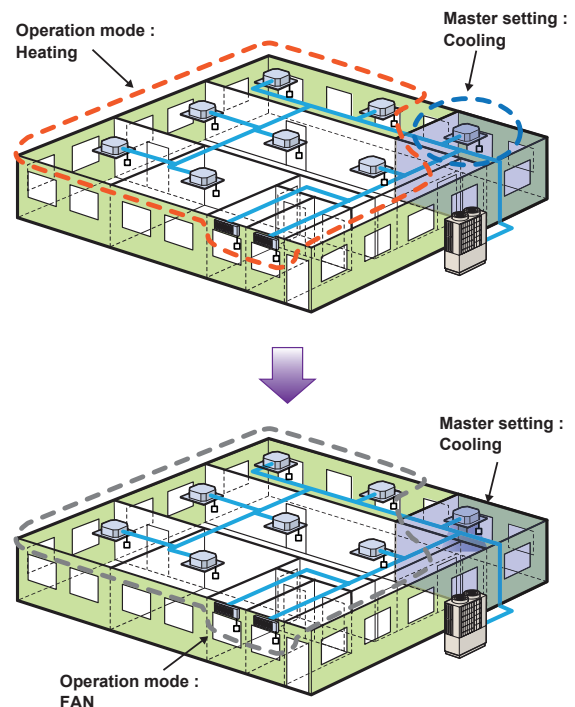
<Majority operation mode>

The system is operated according to the mode selected by the majority of units in operation (whichever greater capacity between the sums of cooling mode and heating mode). The operation mode in minority is set to fan mode automatically.



<Master operation mode>

The system is operated according to master operation mode. When master operation mode is set at cooling mode, units selected as heating mode is set to fan mode automatically.



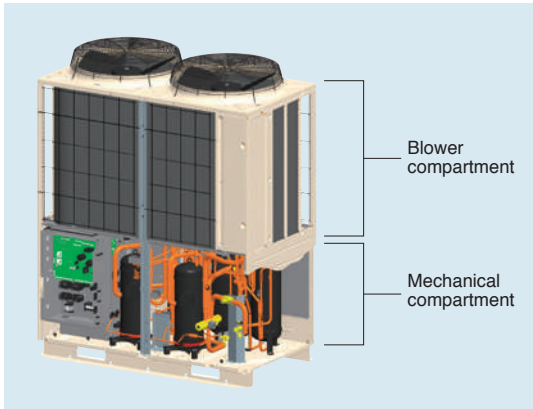
Fixed Cooling mode/fixed heating mode (summer/winter switch)

It is possible to fix the operational mode of the system (either cooling or heating) using a switch (SW3-7) on the outdoor unit PC board - this enables the building user to decide the operation of the system (e.g. cooling only in summer/heating only in winter), to avoid unnecessary energy wastage. It is also possible to wire the control switch to a remote location (inside the building) to a control room, or even linked to an ambient thermostat.

3. Serviceability

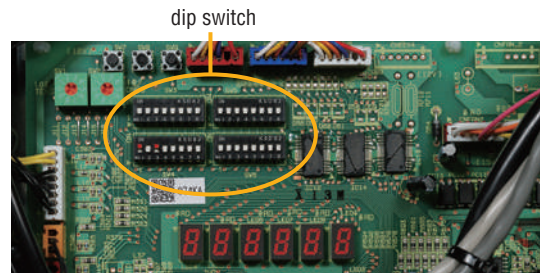
Easy Service

Quick and easy access to service parts by separation of compartments.



Check Operation (10~60HP)

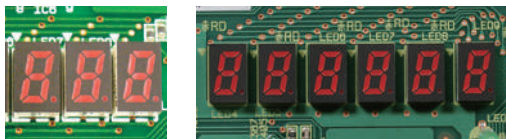
Closing of Service valve, crossing connection of refrigerant piping and electrical wiring, proper operation of EEV (Electrical Expansion Valve) can be checked automatically in cooling operation. This check operation can be done at 0~43°C outdoor temperature and 10~32°C indoor temperature by use of outdoor unit dip switch. The check should be done in one refrigerant system. It takes 15~30 minutes and avoids frequent failure by preventing careless mistakes during installation.



Monitoring Function

All series includes feature to assist with servicing and trouble shooting. Various data can be monitored through 3-digit or 6-digit display on the outdoor unit PCB.

Detailed fault diagnosis and operation history memory via 7-segment display.

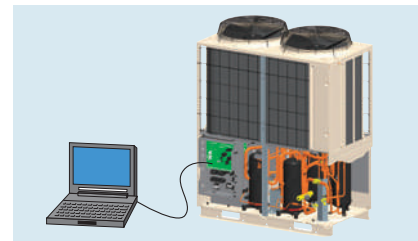


4~6HP
8~10HP(KXZ Lite)

8~60HP

Equipped with RS232C for connection directly to your PC monitoring and service tasks made simple with our service software ("Mente PC").

All series



Automatically produced test-run report

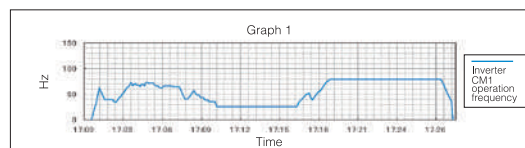
KXS series operation data sheet (Outdoor unit)

Customer name: trading company Test run date: Aug. 7, 2003 Test run operator: Taro Mitsubishi
 Delivery date: July 25, 2003 Weather: cloudy

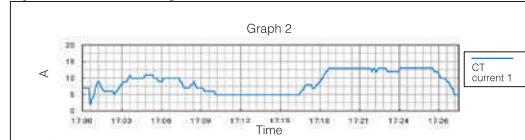
| Order No. | Unit No. | Model | Serial No. | Phase | V1 | V2 | V3 | I1 | I2 | I3 | W | Hz | Compressor | Condenser | Evaporator | Flow | Oil | Other | Remarks |
|-----------|----------|--------|------------|-------|-----|-----|-----|----|----|----|------|----|------------|-----------|------------|------|-----|-------|---------|
| 00000001 | 001 | KXS250 | 00000001 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |
| 00000002 | 002 | KXS250 | 00000002 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |
| 00000003 | 003 | KXS250 | 00000003 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |
| 00000004 | 004 | KXS250 | 00000004 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |
| 00000005 | 005 | KXS250 | 00000005 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |
| 00000006 | 006 | KXS250 | 00000006 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |
| 00000007 | 007 | KXS250 | 00000007 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |
| 00000008 | 008 | KXS250 | 00000008 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |
| 00000009 | 009 | KXS250 | 00000009 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |
| 00000010 | 010 | KXS250 | 00000010 | 3 | 200 | 200 | 200 | 10 | 10 | 10 | 1000 | 50 | OK | OK | OK | OK | OK | OK | OK |

Mitsubishi Heavy Industries Sales Company

Operation data storage during servicing

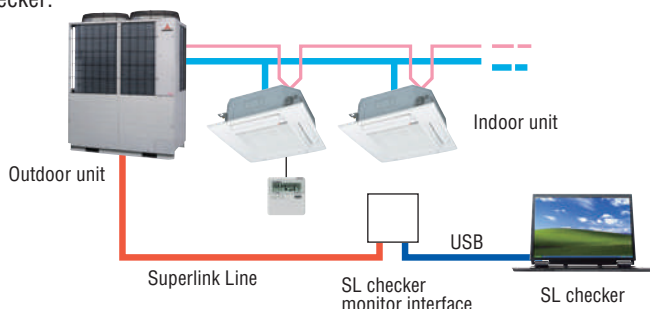


Operation data storage when a fault occurs



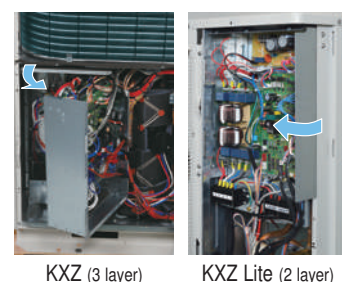
SL Checker II

Remote Control can be operated function from setting Superlink checker.



3 Layer Construction

Thanks to control box structure with 3 layer/2 layer construction using hinge connection, service and maintenance has been made much easier for inverter components.

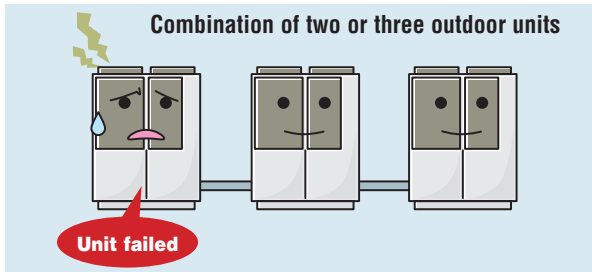


KXZ (3 layer)

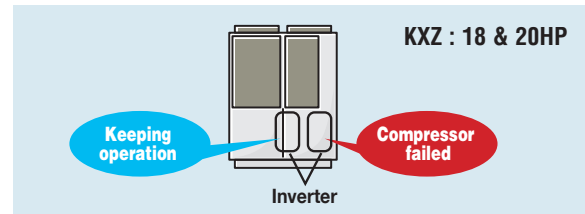
KXZ Lite (2 layer)

Back-up Operation

In the event that one unit has a failure, the system will keep operating with the other good units.



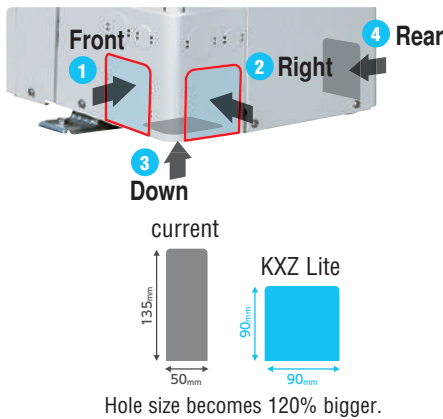
In the event that one compressor has a failure, the unit will keep operating with the another good compressor.



This operation is an emergency measure for a limited time and a necessary repair should be done as soon as possible.

Improved features (KXZ Lite)

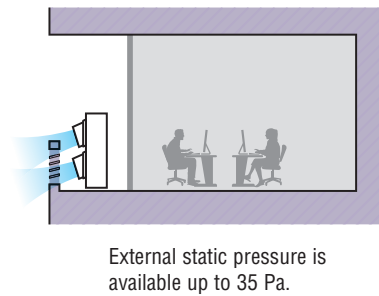
Improved freedom of piping layout



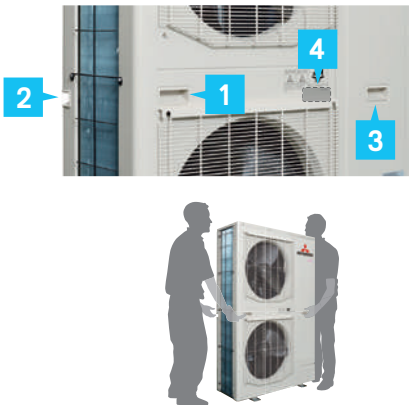
Wire insertion holes for fall prevention



External static pressure

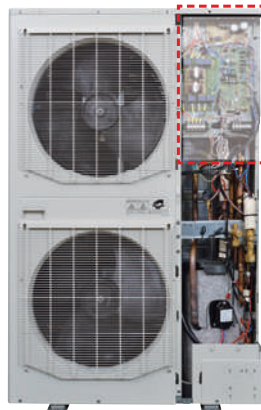


Four handles



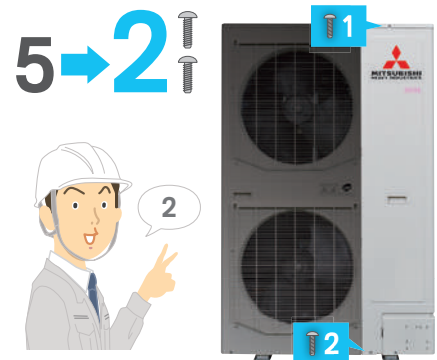
Located at the same level for easy transport and transfer.

A transparent rain cover



Attached as a standard for easy maintenance.

Fixing screws to service panel



Decreasing number of screws from 5 to 2, installation & service speed is improved.



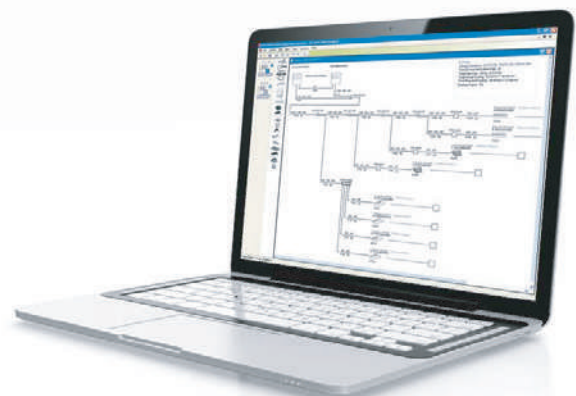
Easy Selection Tool E-solution

E-Solution is a design software tool which includes specification details of the latest KXZ VRF systems. By using E-Solution this simplifies the process and enables engineers to select the most cost-effective and energy efficient mix of indoor units, outdoor units, pipework and controls.

Engineers must register and download the E-solution software to ensure they are automatically sent updates as they become available and this can be done by simply visiting www.mhia.com/support-downloads/e-solution

Furthermore it is also developed to cater for the design of two and three pipe systems and specifies appropriate models and sizes. It also generates wiring diagrams and engineering drawings which can be exported to AutoCAD or saved in PDF format. This flexibility enables engineers to print select design information and comprehensive operation and maintenance manuals for presentations to clients.

Engineers can also incorporate design information into their own formats and documents for personalised proposals.





New Generation **FDT**

Automatic energy saving control

Keep maximum comfort with minimal draft

Quiet operation

Draft Prevention Panel (Option)

- Brand new function in the market
- Flexible flap control for draft prevention

4 additional flaps are to be controlled individually at each operation mode. They change air flow direction and prevents draft feeling. This new function also achieve more flexible control for air flow direction.

User can position Draft Prevention Panel panels by using the remote controller only (RC-EX3A, RCN-T-5AW-E2).

When the unit is turned off, the additional flaps close in.



※It can also prevent user from being directly blown by hot drafts in heating mode.

Motion Sensor (Option)

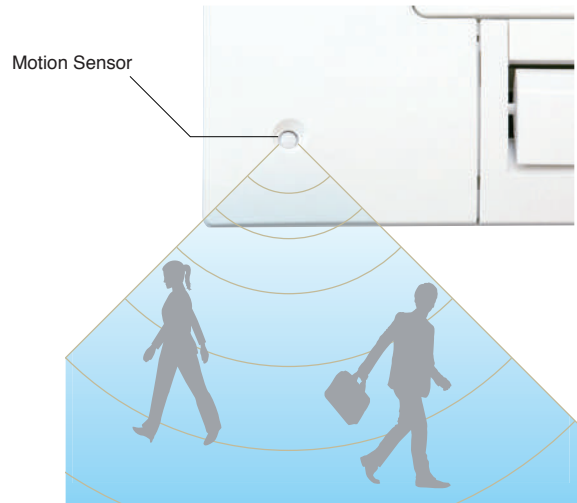
Two energy saving control by detecting human moving

Power Control

New motion sensor (option) detects human activity. Energy saving control is achieved by shifting set temperature according to detected amount of activity.

Auto-off

Unit will go off automatically when no activity is detected for 12 hours.



New Generation **FDTC**

More comfort and More energy saving
New European Design
Lower noise



European design & Flat panel

Thin Panel

FDTC thin panel fit within 10mm from the ceiling.

Big Louver

Improved directionally

Unique Grille Design

Honeycomb grille

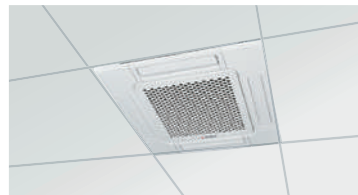


Compact Design

□700mm → □620mm

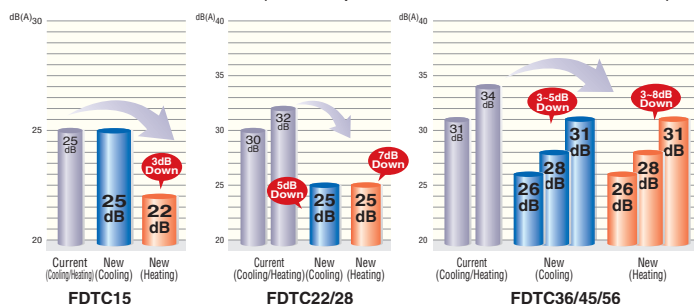
A weight of only 14kg.
Height of thin panel and main body is only 248 mm allowing it to be a very easy installation.

Integrated ceiling system design



More quiet operation

Adopting new turbo fan and improving new heat exchanger enable to reduce noise. (Sound pressure level in the Lo mode.)



Draft Prevention Panel and Motion Sensor (option)



It is available to set draft prevention panel and motion sensor as well as FDT.



Ceiling cassette
FDT series

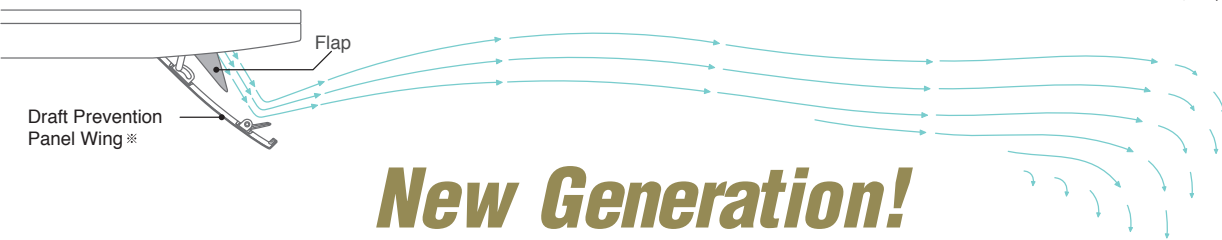


Ceiling cassette Compact
FDTC series

Draft Prevention Panel

Keep maximum comfort with minimal draft:
New FDT & FDTC control flaps with more flexibility.

Draft Prevention Panel Operating Image

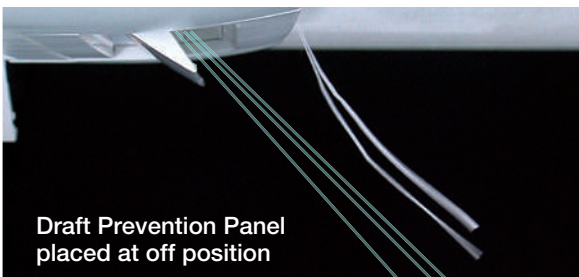
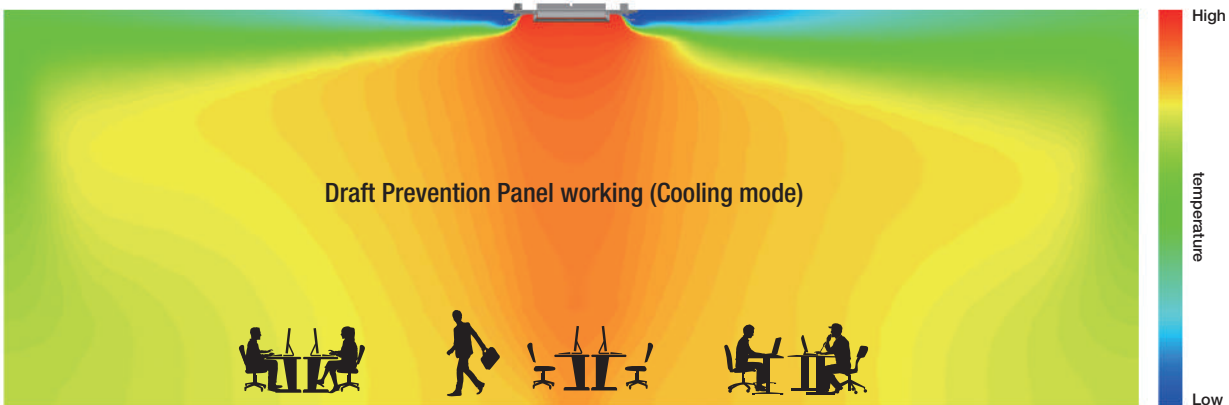


User

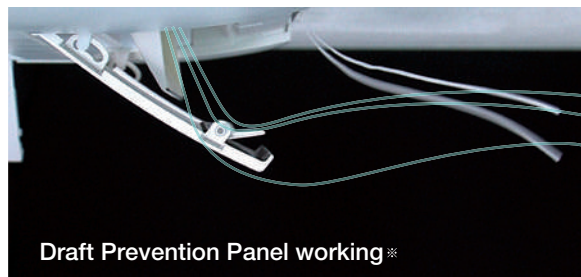


The Good Design Award is Japan's only comprehensive design evaluation and recommendation initiative, originating with the "Good Design Products Selection System" founded in 1957. It is now a global design award with participation from numerous Japanese and international companies and organizations. The "G Mark", the symbol of the Good Design Award, is known widely as a symbol of excellent design. (FDT)

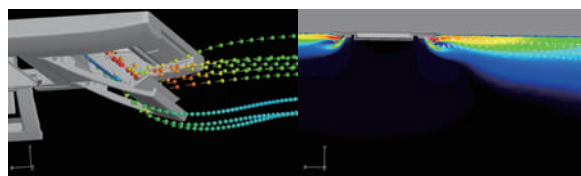
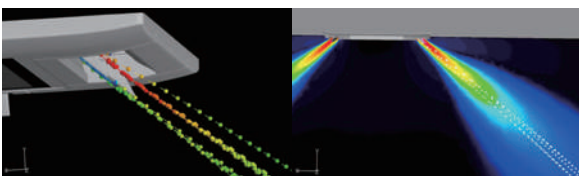
New Generation!



Draft Prevention Panel placed at off position



Draft Prevention Panel working ※



Draft Prevention Panel provides a comfortable airflow without any draft feeling. Whether cooling or heating a room, the remote control can be used to instantly suppress any warm or cool drafts. This accurately assists how air flow is directed out of the indoor unit. ※ These are images of FDT. The panel structure of FDTC slightly differ from FDT.

Motion sensor

Energy saving control by detecting human moving



3 Step Control

Power Control

New motion sensor (option) detects human activity. Energy saving control is achieved by shift set temperature according to detected amount of activity.

Stand by

Unit will go on stand-by mode when no activity is detected. When unit will detect activity again, unit will re-start operation automatically.

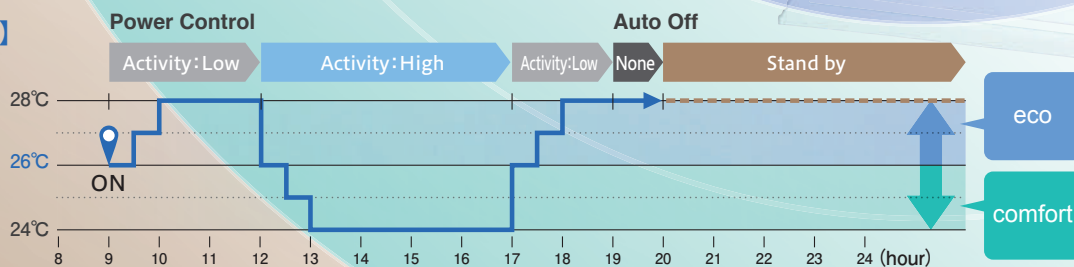
Auto Off

Unit will go off automatically when no activity is detected for 12 hours.

[temperature]

26°C

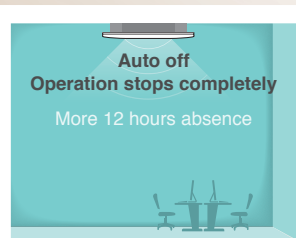
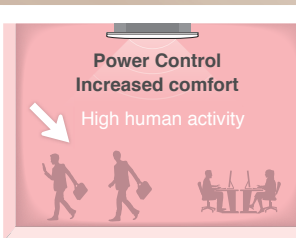
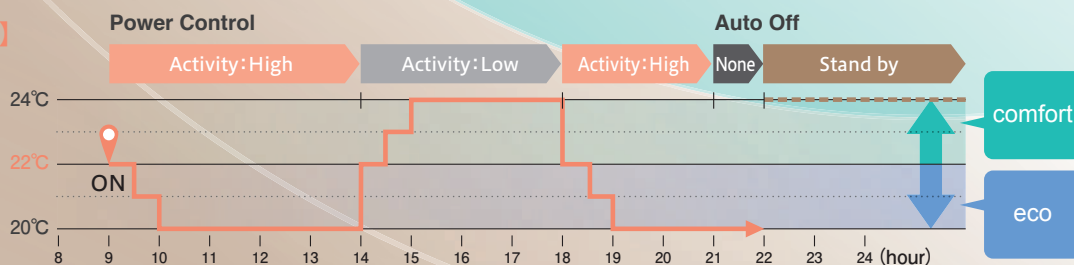
in cooling



[temperature]

22°C

in heating



Operation mode and Control of Motion sensor

eco operation
comfort operation

Operation mode

Auto Cool Heat Dry Fan

Power Control ※1

Human activity

Low

High

| | |
|---------|------|
| Cooling | +2°C |
| Heating | +2°C |
| Cooling | -2°C |
| Heating | -2°C |

+2°C

+2°C

-2°C

-2°C

Auto Off ※2

●

●

●

●

●

※1 Set temperature is revised maximum 2°C at Cooling/Heating mode by detecting heat volume movement.
 ※2 Absence for 1 hour ⇒ Operation stops ("Stand-by") More 12 hours absence ⇒ Operation stops completely



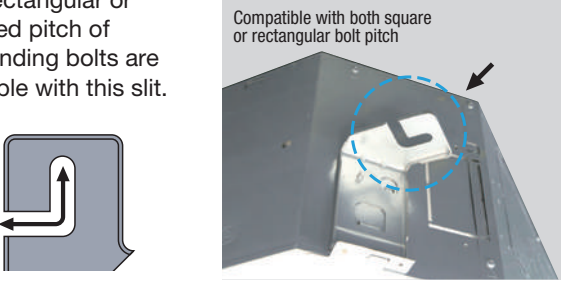
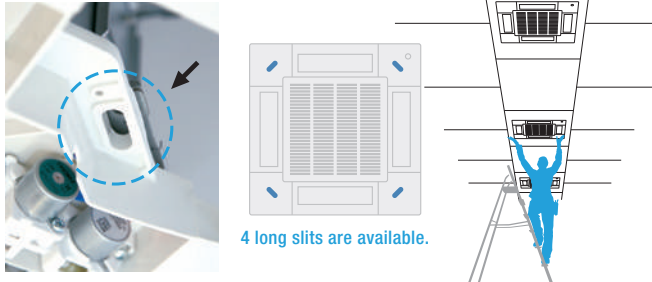
Serviceability & workability

Easy and quick installation and maintenance Indoor unit is easily positioned and installed

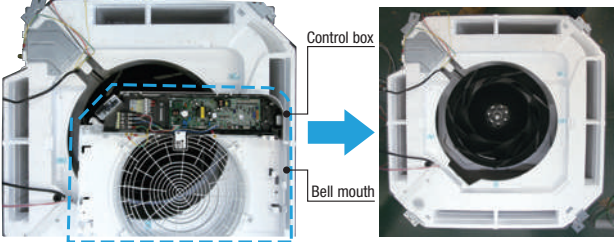
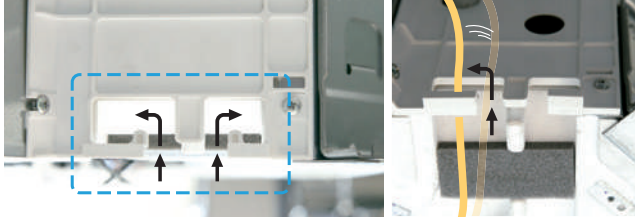
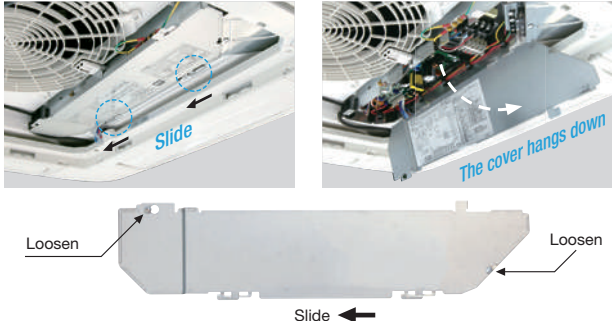
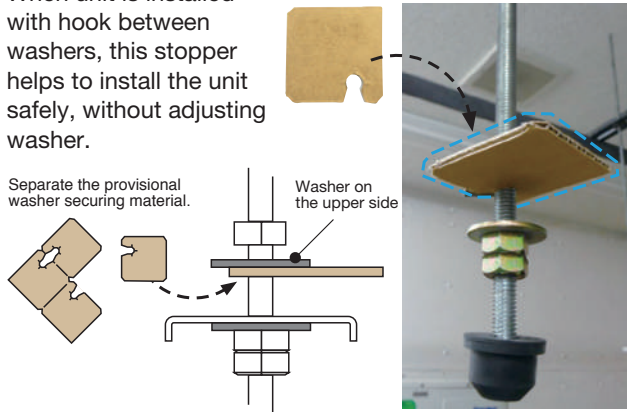
Builder Maintenance



Quick positioning !

| | |
|--|---|
| <p>1 Adjustable easier positioning of unit by new slits FDT</p> | <p>2 New slit in panel allows easier installation on site. FDT FDC</p> |
| <p>New shape of slit is suitable to install the unit with more flexibility, according to many kinds of suspending bolt pitch on site. Any rectangular or squared pitch of suspending bolts are available with this slit.</p>  | <p>Flexible positioning is available, which helps adjusting the direction of panel according to lines or pattern on the ceiling.</p>  |

Quick installation and maintenance

| | |
|--|--|
| <p>1 Easy access to component part for easy maintenance. FDT</p> | <p>2 New shape of path of wiring FDT</p> |
| <p>1 The control box and bell mouth can be removed together. 2 Easy access to impeller and fan motor.</p>  | <p>New shape of path gives easy wiring work for installation.</p>  |
| <p>3 No need to remove screws to take off the controller cover. FDT</p> | <p>4 More safe installation by stopper of washer FDT FDC</p> |
| <p>It is possible to loose and slide open the cover without remove of the screws. This prevents the cover from falling and damaging to stuffs on site.</p>  | <p>When unit is installed with hook between washers, this stopper helps to install the unit safely, without adjusting washer.</p>  |

Builder Maintenance

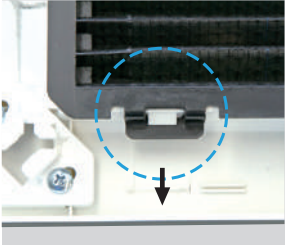


For smooth and easy working

Good help for installation and maintenance

1 Easy and flexible hook to remove the filter FDT
FDTC

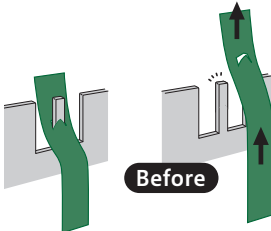

Hook of soft material helps to remove the filter without dust spreading.



Press the filter tab to the outside and remove the filter.

2 Securely fix the corner lid by strap FDT

The direction of the strap hook part has been changed from longitudinal to lateral. Furthermore, a barb has been added to the hook pin to prevent the strap from coming off.

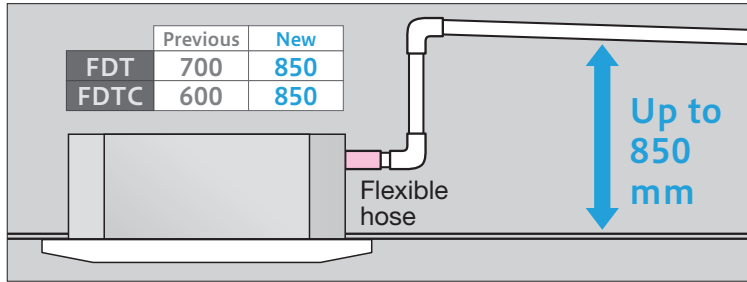



Easy to hook but not easy to loose

3 Drain-up-lift increases up to 850 mm FDT
FDTC

The drain can be lifted up to 850 mm from the ceiling surface.

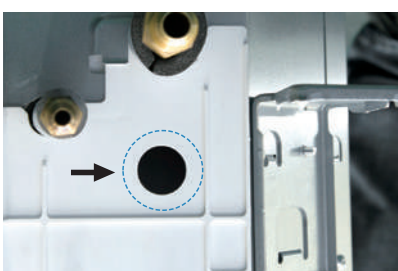
| | Previous | New |
|------|----------|-----|
| FDT | 700 | 850 |
| FDTC | 600 | 850 |



Up to 850 mm

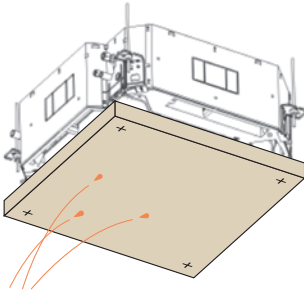
4 New port to check drain water flow FDT

A water supply port has been provided in the piping lid for easier testing of the drain water flow. (The port is usually sealed with a rubber cap.)



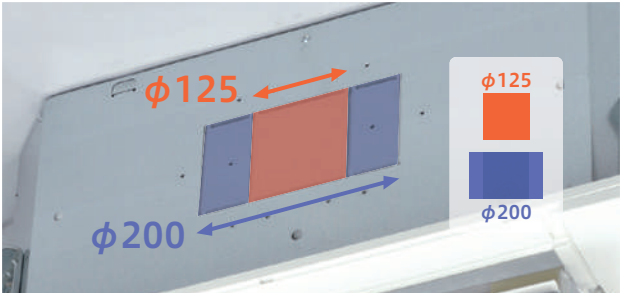
5 Re-use of packages during construction work FDT
FDTC

Package material (carton) help to protect the unit from unexpected welding spatter or coming dust to the new unit.



6 More flexible outlet for ducting FDT
FDTC

Both $\phi 125$ and $\phi 200$ (oval shaped) are available.





Simple use with advanced settings REMOTE CONTROL

Easy touch and Easy view with full dot Liquid Crystal display



Add new function

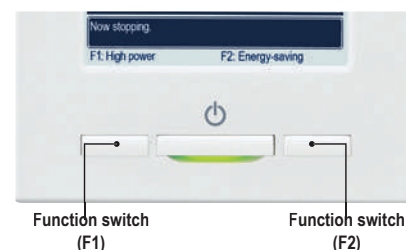
RC-EX3A

functions

Function Switch

The function switch allows you to select and set two functions that you desire among the six available functions shown.

These functions can be used by simply pressing the button after they are set, allowing you to use your preferable functions immediately.



1 High Power Mode

High Power Mode achieve excessive cooling / heating capacity for 15 minutes to quickly adjust the room temperature to a comfortable level.



2 Energy Saving Mode

Temperature is set to optimized to save energy without losing comfort.



3 Quiet Mode

Outdoor unit starts to operate quietly by activating this mode. The time of this mode can be set in conjunction with Indoor Silent Timer.



4 Home Leave Mode

Home leave mode maintains the room temperature at a moderate level.



5 Favorite Mode

Operation mode, set temperature, fan speed and air flow direction are automatically adjusted to the programmed favorite setting.



6 Filter Sign

Announces the due time for cleaning the air filter.

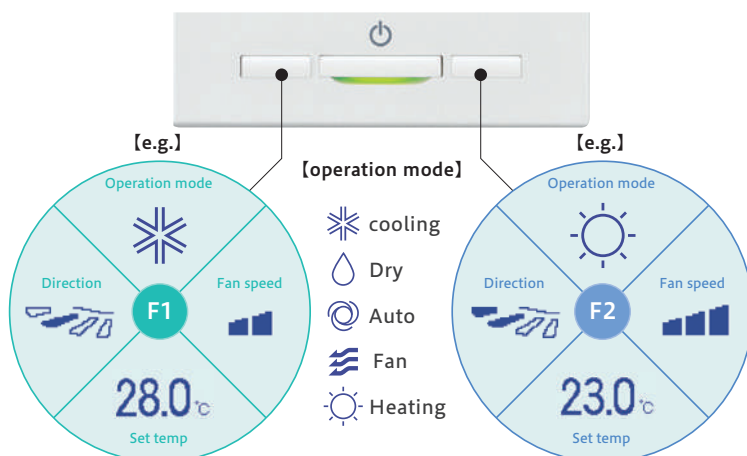


7 Anti draft ON/OFF

Anti draft can be turned ON/OFF with a single tap of the button.

Favorite Mode

Operation mode, set temperature, fan speed and air flow direction are memorized and allocated to two buttons that can be operated by one touch.



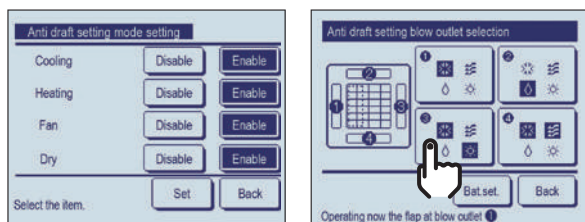
Adjusting Brightness of the Operation lamp

The brightness of the operation lamp behind Run/Stop switch can be adjusted by 10 stages.



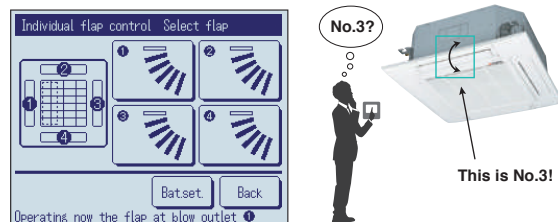
Draft prevention setting (only FDT/FDTC series)

User can enable/disable the motion of panel with anti draft for each blow outlet for each operation mode. This function can be set while operating. **NEW**



Easy modification of Air Flow

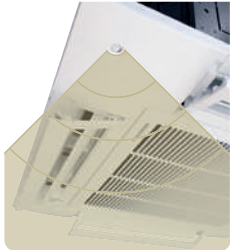
User can visually confirm and set the direction of louvres using the visual display on the remote controller.



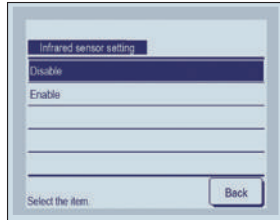
Motion sensor control

Presence of humans and the amount of motion are detected by a motion sensor to perform various controls.

1 Select Enable / Disable Motion sensor control



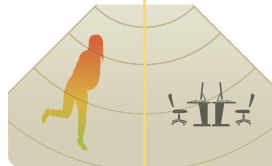
Enable / Disable



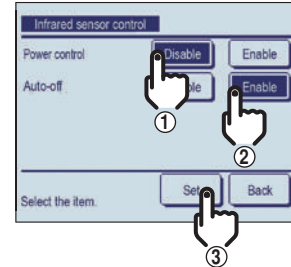
Select [Enable] / [Disable] for the motion sensor of the indoor unit connected to the R/C.

2 Select Enable / Disable per control

- Power control
- Auto-off



Enable / Disable



Backup Control

Control restricted to two indoor units (two groups)

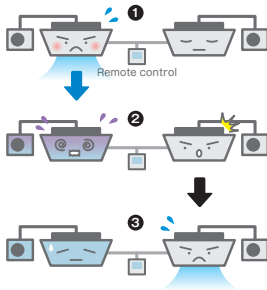


Fault backup control



Keep back up all the time!

If one of the two indoor units malfunctions and stops its operation, the other starts backup operation so that users' comfort will not be compromised.

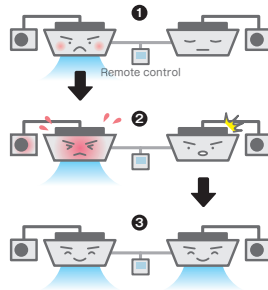


Capacity backup control



Maintains users' comfort!

When the control system detects either of two units is operating with overload, the other unit cover the capacity.

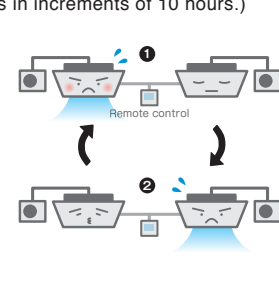


Rotational operation control



Energy saving and longer life!

By operating two indoor units alternately, their chronological changes are equalized. (The alternate operation cycle can be specified in a range from 10 hours to 990 hours in increments of 10 hours.)



Additional functions of External Input / Output

The external input/output of indoor unit by remote controller can set input/output based on user's demand.



Remote surveillance system



Card key on-off

External Input

| CNT (1-6) CNTA (1-2) | |
|-------------------------|---|
| Input | On/Off Permission/Prohibition Cooling/Heating Emergency Stop |
| Newly added | <div style="border: 1px dashed red; padding: 5px;"> Sei temp. shift Forced thermo-off IU operation stop Silent mode </div> |

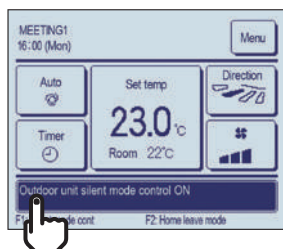
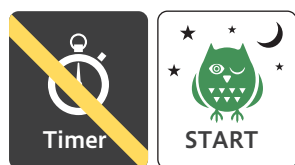
External Output

| CNT (New) | |
|-----------|---|
| 2 | Output - Operation - Heating - Compressor ON (thermo-ON) |
| 3 | Output - Inspection |
| 4 | Output - Cooling (defrosting) - Fan operation - Fan operation with Phi or Hi - Fan operation with Me or Lo - Defrosting (oil return in heating operation) |
| 5 | Output - Ventilation - Heater ON - Free cooling - IU overload alarm |

Newly added

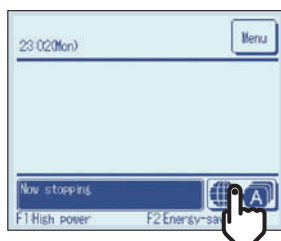
Silent mode control

The Outdoor unit is controlled with priority on quietness. Silent mode control must be set to the F1 or F2 switch. User can start/stop the silent mode control with a single tap of a button.



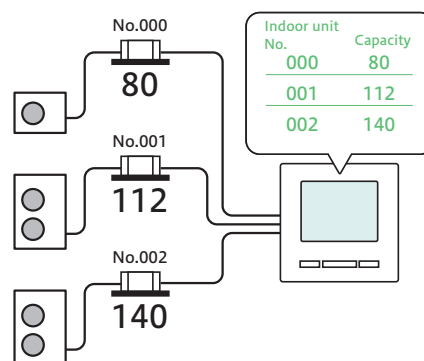
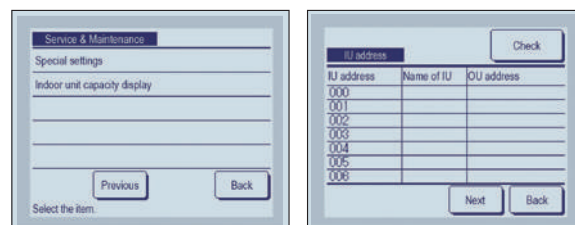
Language Switching NEW

User can select from the following languages and also switch them on the top display.



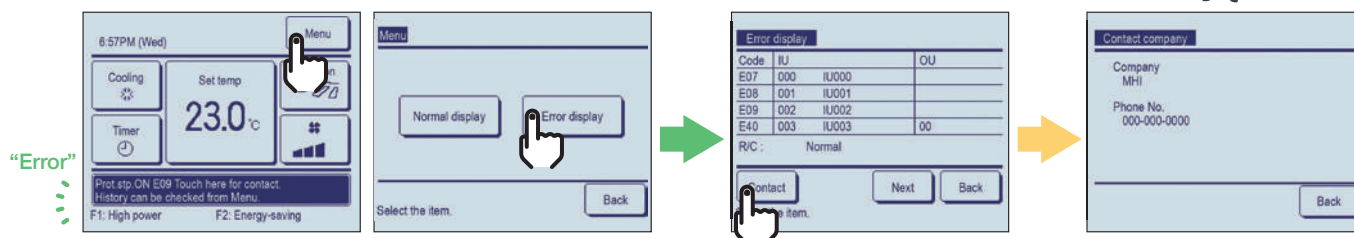
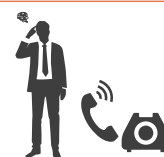
Indoor unit capacity display

Capacities of Indoor units connected to the RC-EX3A are displayed.



Contact company & Error display

If any error occurs on the air conditioner, the "Unit protection stop" is indicated on the message display.



Wireless Kit & Wireless Remote Controller

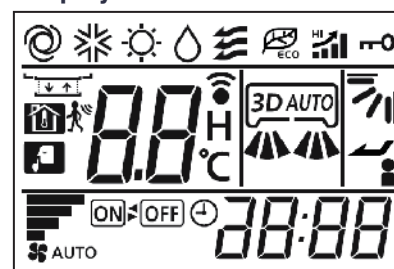
Line-up

| Model | Wireless kit |
|--|----------------------|
| FDT | RCN-T-5AW-E2 |
| FDTC | RCN-TC-5AW-E2 |
| FDTW | RCN-TW-E2 |
| FDTS | RCN-TS-E2 |
| FDK | RCN-K-E2, RCN-K71-E2 |
| FDE | RCN-E-E3 |
| PDFW | RCN-FW-E2 |
| FDTQ, FDU, FDUM, FDUT, FDUH, FDFL, FDFU, FDU-F | RCN-KIT4-E2 |

The functions and the operations will be improved.



Display



Function added

- 1) High power
- 2) Energy-saving
- 3) ON/OFF Timer by clock
- 4) Child lock
- 5) Silent mode control for Outdoor unit
- 6) Home leave mode



Outdoor units

Micro model Heat pump systems

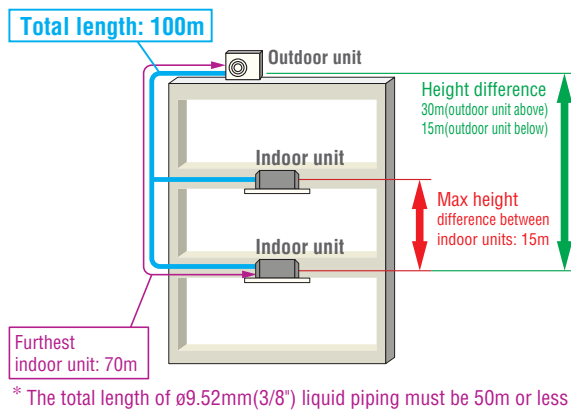
4, 5, 6HP (11.2kW~15.5kW)

| Model No. | Nominal Cooling Capacity |
|-------------|--------------------------|
| FDC112KXEN6 | 11.2kW (220V) |
| FDC140KXEN6 | 14.0kW (220V) |
| FDC155KXEN6 | 15.5kW (220V) |
| FDC112KXES6 | 11.2kW (380V) |
| FDC140KXES6 | 14.0kW (380V) |
| FDC155KXES6 | 15.5kW (380V) |

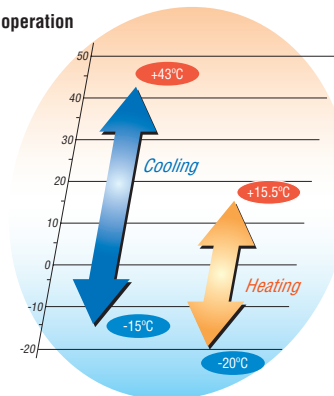
- Connect up to 8 indoor units/up to 150% capacity.
- High efficiency with COP (in cooling) up to 4.0.
- KX6 employs DC inverter compressors ONLY.
- Industry leading total piping length up to 100m and a maximum pipe run of 70m.



Note: FDUT15KXE6F-E, FDC15KXE1 and FDK15KXE1 can not be connected to the above systems.



Range of operation



Specifications

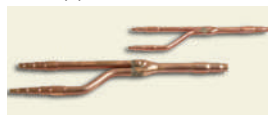
| Item | Model | FDC112KXEN6 | FDC140KXEN6 | FDC155KXEN6 | FDC112KXES6 | FDC140KXES6 | FDC155KXES6 |
|------------------------------------|-------------------|------------------------------------|-------------|-------------|------------------------|-------------|-------------|
| Nominal horse power | | 4HP | 5HP | 6HP | 4HP | 5HP | 6HP |
| Power source | | 1 Phase 220-240V, 50Hz | | | 3 Phase 380-415V, 50Hz | | |
| Starting current | A | | | | 5 | | |
| Max current | A | 23 | | | 13.5 | | |
| Nominal capacity | Cooling | 11.2 | 14.0 | 15.5 | 11.2 | 14.0 | 15.5 |
| | Heating | 12.5 | 16.0 | 16.3 | 12.5 | 16.0 | 16.3 |
| Electrical characteristics | Power consumption | Cooling | 2.80 | 4.17 | 4.71 | 2.80 | 4.17 |
| | | Heating | 2.89 | 4.31 | 4.38 | 2.89 | 4.31 |
| Exterior dimensions | HxWxD | mm 845x970x370 | | | | | |
| Net weight | kg | 85 | | | 87 | | |
| Sound pressure level | Cooling/Heating | 52/54 | 53/57 | 53/57 | 52/54 | 53/57 | 53/57 |
| Refrigerant | Type / GWP | R410A / 2088 | | | | | |
| | Charge | kg/TCO ₂ Eq 5.0 / 10.44 | | | | | |
| Refrigerant piping size | Liquid line | mm(in) ø9.52(3/8") | | | | | |
| | Gas line | mm(in) ø15.88(5/8") | | | | | |
| Capacity connection | % | 80~150 | | | | | |
| Number of connectable indoor units | | 6 | 8 | 8 | 6 | 8 | 8 |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.

Refrigerant piping

| | | | | |
|-------------------|-------------------------------|--------|---|---|
| Outdoor unit (HP) | | 4 | 5 | 6 |
| Gas pipe | Furthest indoor unit =<70m | ø15.88 | | |
| Liquid pipe | | ø9.52 | | |

Branch pipes



DIS-22-1G
DIS-180-1G

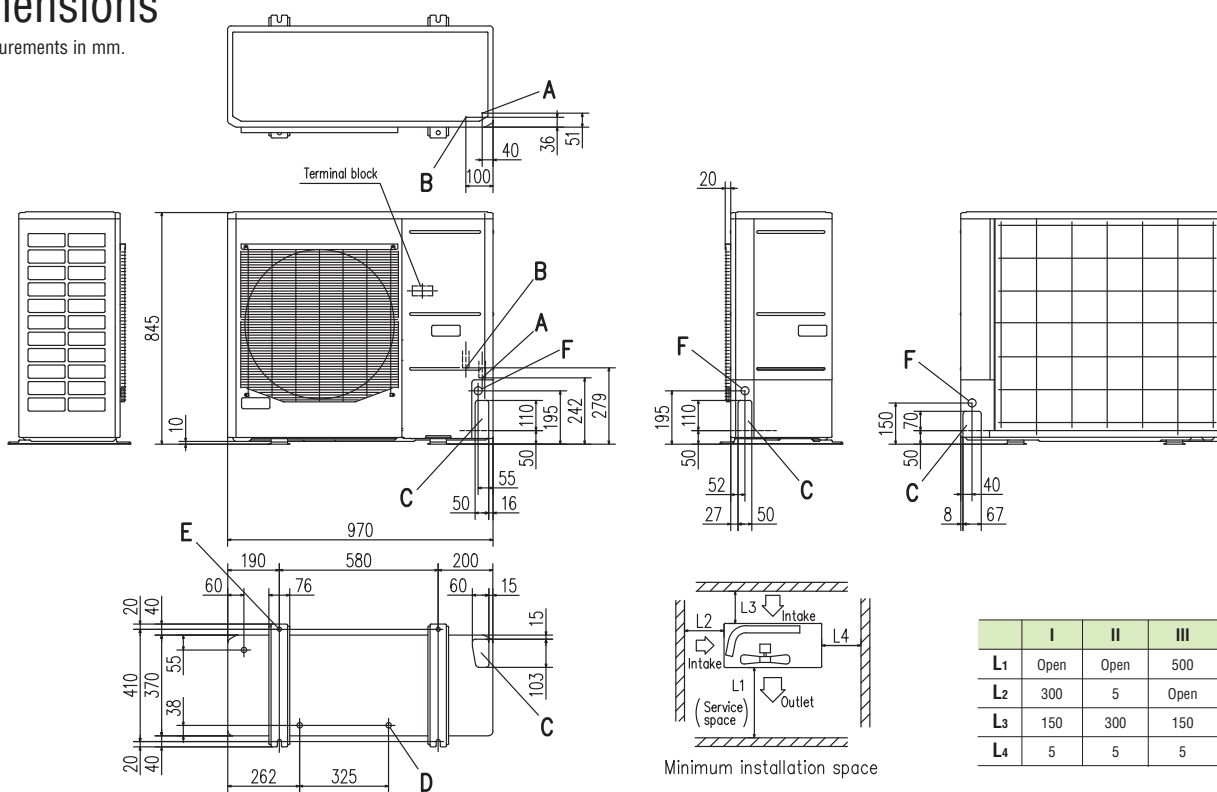
Header pipe



HEAD4-22-1G
HEAD6-180-1G

Dimensions

All measurements in mm.



| | I | II | III |
|----|------|------|------|
| L1 | Open | Open | 500 |
| L2 | 300 | 5 | Open |
| L3 | 150 | 300 | 150 |
| L4 | 5 | 5 | 5 |

| Mark | Content | |
|------|--|-----------------------|
| A | Service valve connection (gas side) | ø15.88 (5/8") (Flare) |
| B | Service valve connection (liquid side) | ø9.52 (3/8") (Flare) |
| C | Pipe/cable draw-out hole | |
| D | Drain discharge hole | ø20 x 3 places |
| E | Anchor bolt hole | M10 x 4 places |
| F | Cable draw-out hole | ø30 x 3 places |

Notes:

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front panel.

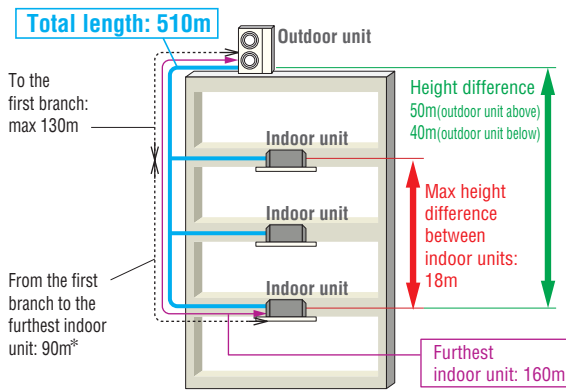


Micro model Heat pump systems

8, 10, 12HP (22.4kW~33.5kW)

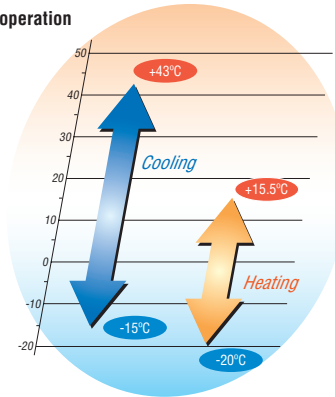
| Model No. | Nominal Cooling Capacity |
|-------------|--------------------------|
| FDC224KXE6G | 22.4kW |
| FDC280KXE6G | 28.0kW |
| FDC335KXE6G | 33.5kW |

- Connect up to 24 indoor units/up to 150% capacity.
- High efficiency with COP (in cooling) up to 4.0.
- These units employ DC inverter compressors ONLY.
- Industry leading total piping length up to 510m and a maximum pipe run of 160m.



* The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m.

Range of operation



Specifications

| Item | Model | FDC224KXE6G | FDC280KXE6G | FDC335KXE6G |
|------------------------------------|-------------------|--------------------------------------|--------------|--------------------------|
| Nominal horse power | | 8HP | 10HP | 12HP |
| Power source | | 3 Phase 380-415V, 50Hz | | |
| Starting current | A | 5 | | |
| Max current | A | 20 | | |
| Nominal capacity | Cooling | 22.4 | 28.0 | 33.5 |
| | Heating | 25.0 | 31.5 | 37.5 |
| Electrical characteristics | Power consumption | Cooling | 5.60 | 8.09 |
| | | Heating | 6.03 | 8.21 |
| Exterior dimensions | HxWxD | mm 1675x1080x480 | | |
| Net weight | kg | 221 | | |
| Sound pressure level | Cooling/Heating | 58/58 | 59/60 | 61/61 |
| Refrigerant | Type / GWP | R410A / 2088 | | |
| | Charge | kg/TCO ₂ Eq 11.5 / 24.012 | | |
| Refrigerant piping size | Liquid line | mm(in) ø9.52(3/8") | | |
| | Gas line | ø19.05(3/4") | ø22.22(7/8") | ø25.4(1") [ø22.22(7/8")] |
| Capacity connection | % | 50~150 | | |
| Number of connectable indoor units | | 22 | 24 | 24 |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.
 4. [] : Pipe sizes applicable to European installations are shown in parentheses.

Refrigerant piping

| Outdoor unit (HP) | | 8 | 10 | 12 |
|-------------------|-------------------------------|--------|---------------|---------------|
| Gas pipe | Furthest indoor unit =<90m | ø19.05 | ø22.22 | ø25.4(ø22.22) |
| Liquid pipe | | ø9.52 | | ø12.7 |
| Gas pipe | 90m | ø22.22 | ø25.4(ø22.22) | |
| Liquid pipe | =<Furthest indoor unit | ø12.7 | | |

Branch pipes



DIS-22-1G
DIS-180-1G



DIS-371-1G

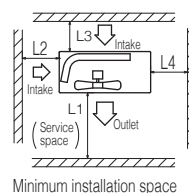
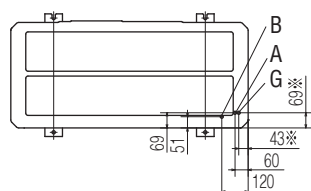
Header pipe



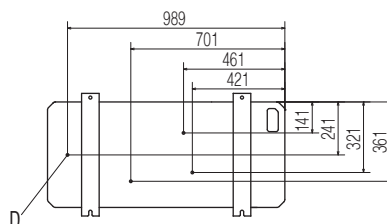
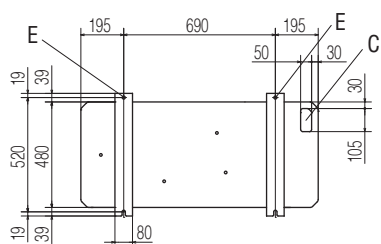
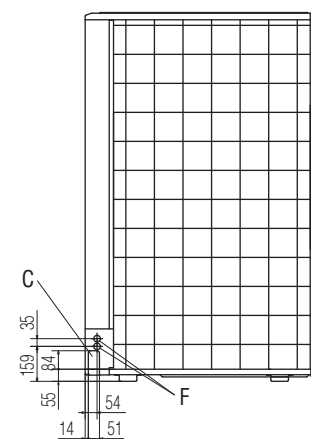
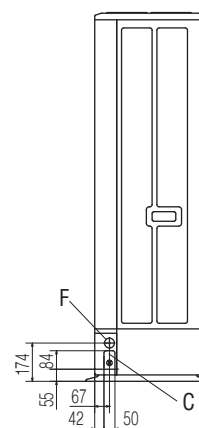
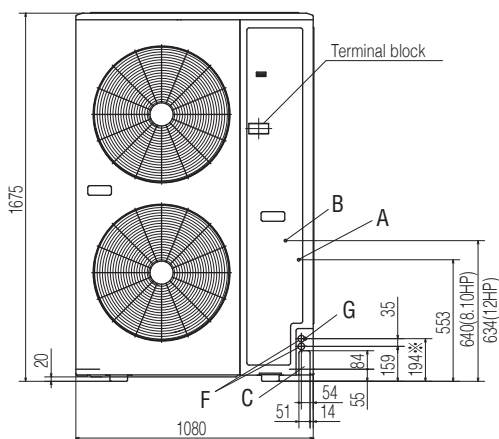
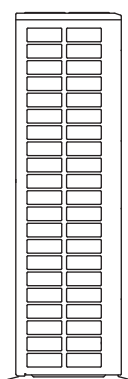
HEAD4-22-1G
HEAD6-180-1G
HEAD8-371-2

Dimensions

All measurements in mm.



| | I | II | II |
|----|------|------|------|
| L1 | Open | Open | 1500 |
| L2 | 300 | 5 | Open |
| L3 | 300 | 300 | 300 |
| L4 | 5 | 5 | 5 |



| Mark | Content | 224 | 280 | 335 |
|------|---|---|---|---|
| A | Service valve connection of the attached connecting pipe (gas side) | ø19.05 (3/4") (Flare) | ø19.05 (3/4") (Flare) | ø19.05 (3/4") (Flare) |
| B | Service valve connection (liquid side) | ø9.52 (3/8") (Flare) | ø9.52 (3/8") (Flare) | ø12.7 (1/2") (Flare) |
| C | Pipe/cable draw-out hole | 4places | 4places | 4places |
| D | Drain discharge hole | ø20 × 4places | ø20 × 4places | ø20 × 4places |
| E | Anchor bolt hole | M10 × 4places | M10 × 4places | M10 × 4places |
| F | Cable draw-out hole | ø30 × 2places (front) ø45 (side) ø30 × 2places (back) | ø30 × 2places (front) ø45 (side) ø30 × 2places (back) | ø30 × 2places (front) ø45 (side) ø30 × 2places (back) |
| G | Connecting position of the local pipe. (gas side) | ø19.05 (3/4")(Brazing) | ø22.22 (7/8")(Brazing) | ø25.4 (1")(Brazing) |

Notes:

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, the blower outlet should face perpendicularly to the dominant wind direction.
- (4) Leave a 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front.
- (7) Connect the Service valve with local pipe by using the pipe of the attachment.(Gas side only)
- (8) Mark ※ shows the connecting position of the local pipe.(Gas side only)



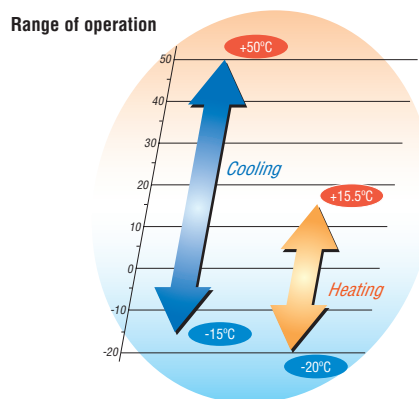
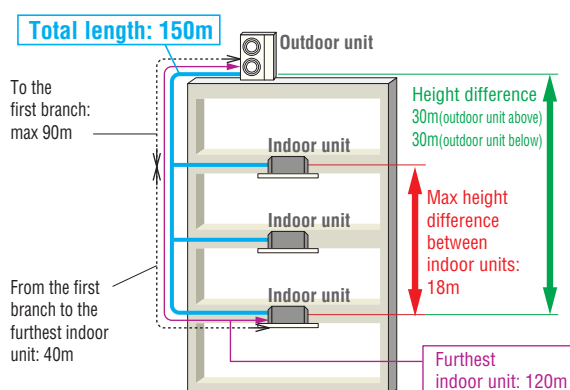
KXZ Lite Heat pump systems

8, 10HP (22.4kW - 28.0kW)

| Model No. | Nominal Cooling Capacity |
|--------------|--------------------------|
| FDC224KXZPE1 | 22.4kW |
| FDC280KXZPE1 | 28.0kW |



- Connect up to 8 indoor units/up to 120% capacity.
- High efficiency with COP (in cooling) up to 4.0.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- KXZ Lite extends a cooling range operation up to 50°C.
- External static pressure is available up to 35 Pa.
- Tropical usage mode.



Specifications

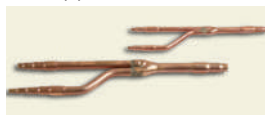
| Item | Model | FDC224KXZPE1 | FDC280KXZPE1 |
|------------------------------------|-------------------|------------------------|--------------|
| Nominal horse power | | 8HP | 10HP |
| Power source | | 3 Phase 380-415V, 50Hz | |
| Starting current | A | 5 | |
| Max current | A | 21 | 22 |
| Nominal capacity | Cooling | 22.4 | 28.0 |
| | Heating | 22.4 | 28.0 |
| Electrical characteristics | Power consumption | Cooling | 5.6 |
| | | Heating | 4.8 |
| Exterior dimensions | HxWxD | 1505x970x370 | |
| Net weight | kg | 165 | |
| Sound pressure level | Cooling/Heating | 59/60 | 60/63 |
| Refrigerant | Type / GWP | R410A / 2088 | |
| | Charge | 8.9 / 18.583 | |
| Refrigerant piping size | Liquid line | ø9.52(3/8") | |
| | Gas line | ø19.05(3/4") | ø22.22(7/8") |
| Capacity connection | % | 50~120 | |
| Number of connectable indoor units | | 8 | 8 |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.

Refrigerant piping

| | | | |
|-------------------|-------------------------------|--------|--------------|
| Outdoor unit (HP) | | 8 | 10 |
| Gas pipe | Furthest indoor unit =<90m | ø19.05 | ø22.22 |
| Liquid pipe | | ø9.52 | |
| Gas pipe | 90m | ø22.22 | ø25.4/ø28.58 |
| Liquid pipe | =<Furthest indoor unit | ø9.52 | |

Branch pipes



DIS-22-1G
DIS-180-1G

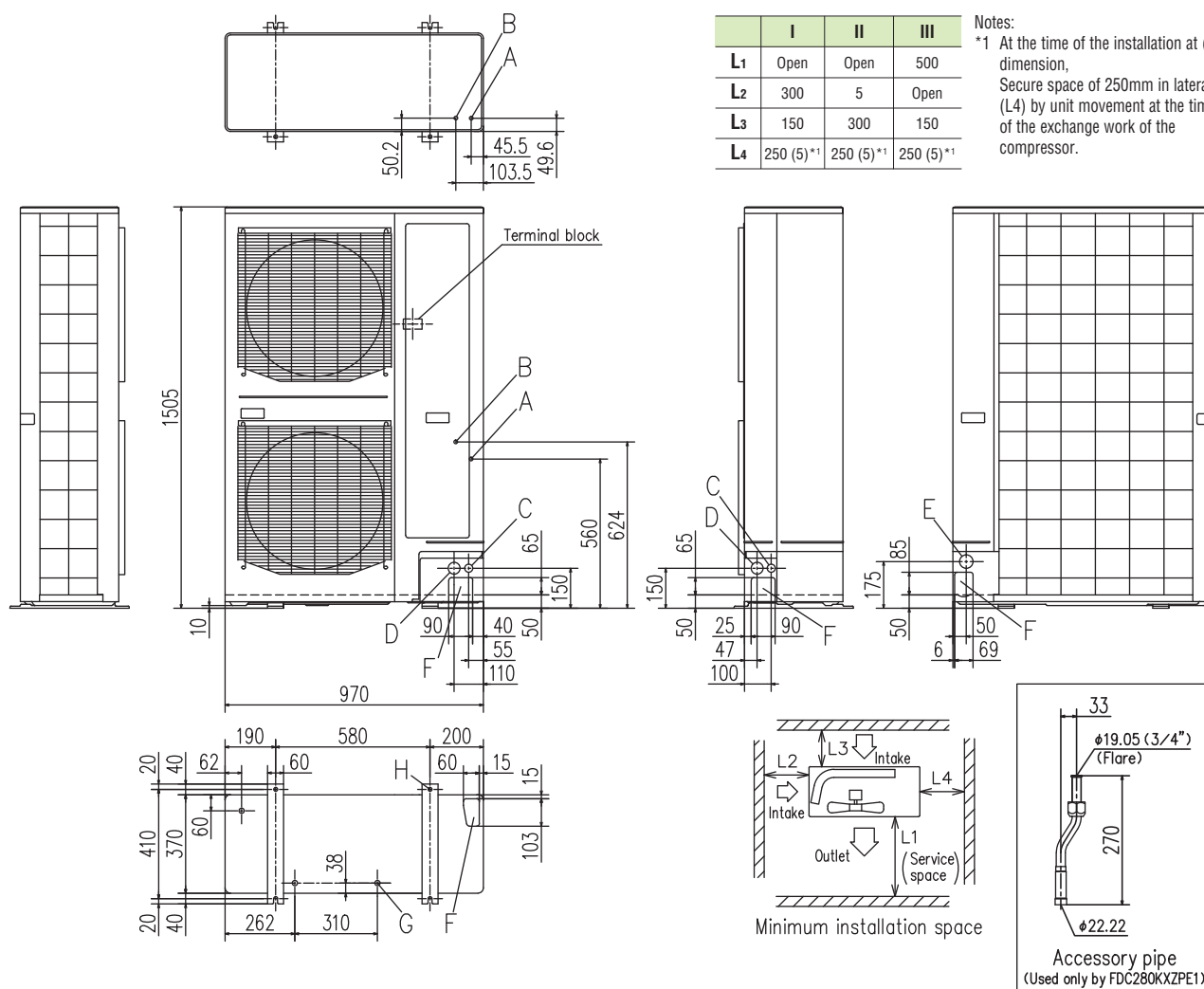
Header pipe



HEAD4-22-1G
HEAD6-180-1G

Dimensions

All measurements in mm.



| | I | II | III |
|----|-----------|-----------|-----------|
| L1 | Open | Open | 500 |
| L2 | 300 | 5 | Open |
| L3 | 150 | 300 | 150 |
| L4 | 250 (5)*1 | 250 (5)*1 | 250 (5)*1 |

Notes:

*1 At the time of the installation at () dimension, Secure space of 250mm in lateral (L4) by unit movement at the time of the exchange work of the compressor.

Notes:

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front panel.
- (7) Connect the Service valve with local pipe by using the pipe of the attachment. (Gas side only) (Accessory pipe is used only by FDC280KXZPE1)
- (8) Regarding attaching the pipe of accessories, refer to an attached installation manual.

| Mark | Content | |
|------|---|-----------------------|
| A | Service valve connection of the attached connecting pipe (gas side) | ø19.05 (3/4") (Flare) |
| B | Service valve connection (liquid side) | ø9.52 (3/8") (Flare) |
| C | Cable draw-out hole (front · side) | ø30 × 2places |
| D | Cable draw-out hole (front · side) | ø45 × 2places |
| E | Cable draw-out hole (back) | ø50 |
| F | Pipe/cable draw-out hole | 4places |
| G | Drain discharge hole | ø20 × 3places |
| H | Anchor bolt hole | M10 × 4places |



KXZ Heat pump systems

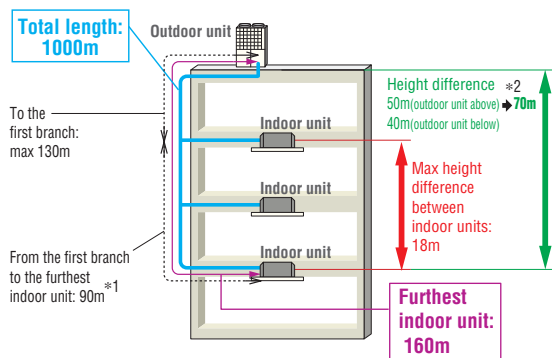
10, 12HP (28.0kW, 33.5kW)

| Model No. | Nominal Cooling Capacity |
|-------------|--------------------------|
| FDC280KXZE1 | 28.0kW |
| FDC335KXZE1 | 33.5kW |

- Connect up to 29 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) up to 3.9.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.

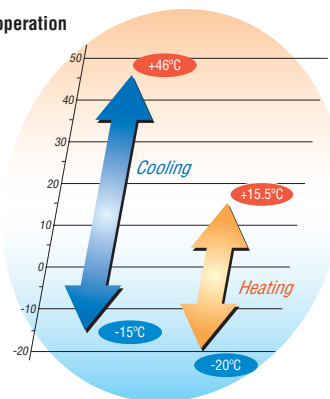


Uniform footprint of models (10,12HP) allows continuous side-by-side installation



- *1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page56.

Range of operation



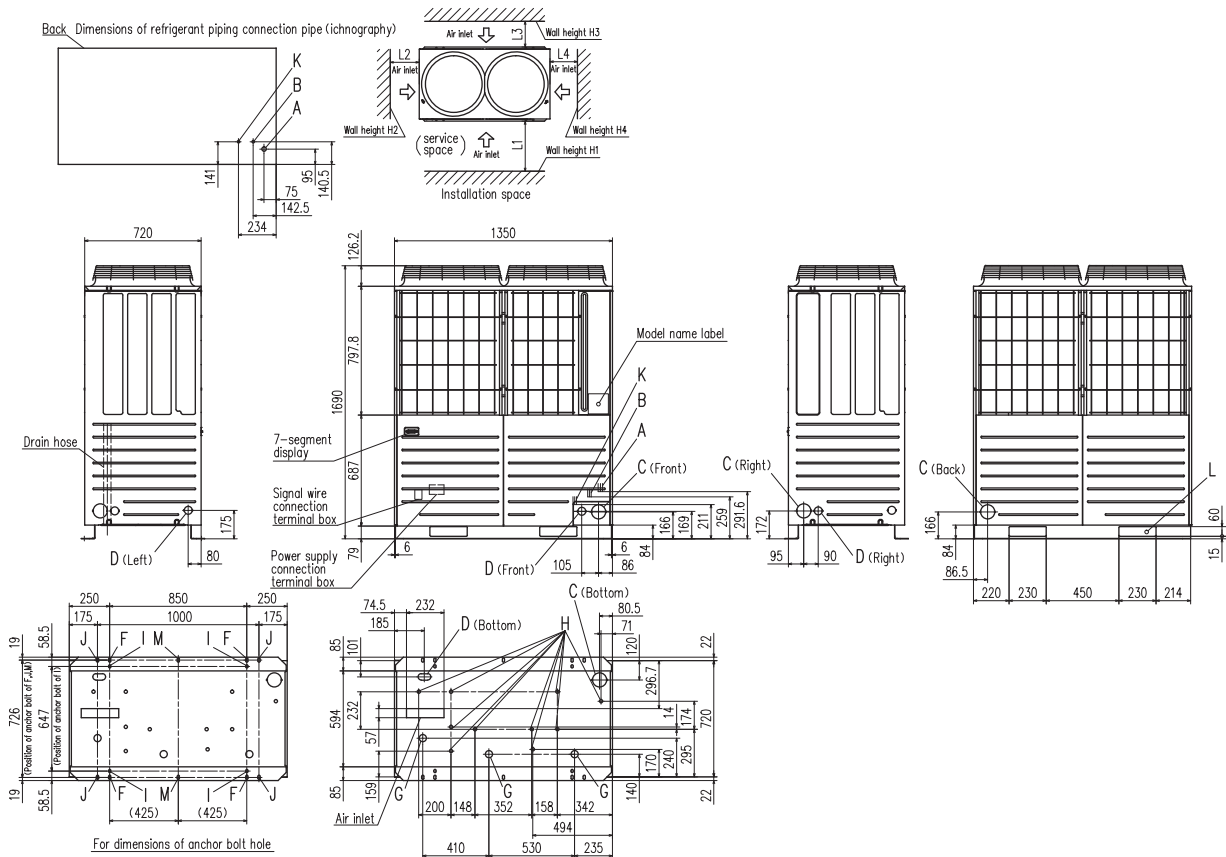
Specifications

| Item | | Model | FDC280KXZE1 | FDC335KXZE1 |
|------------------------------------|-------------------|------------------------|------------------------|--------------------------|
| Nominal horse power | | | 10HP | 12HP |
| Power source | | | 3 Phase 380-415V, 50Hz | |
| Starting current | | A | 5 | |
| Max current | | A | 21.2 | |
| Nominal capacity | Cooling | kW | 28.0 | 33.5 |
| | Heating | | 31.5 | 37.5 |
| Electrical characteristics | Power consumption | kW | Cooling | 7.24 |
| | | | Heating | 7.28 |
| Exterior dimensions | | HxWxD | 1690x1350x720 | |
| Net weight | | kg | 272 | |
| Sound pressure level | | Cooling/Heating | 55/57 | 61/58 |
| Refrigerant | Type / GWP | | R410A / 2088 | |
| | Charge | kg/TCO ₂ Eq | 11.0 / 22.968 | |
| Refrigerant piping size | Liquid line | mm(in) | ø9.52(3/8") | ø12.7(1/2") |
| | Gas line | mm(in) | ø22.22(7/8") | ø25.4(1") [ø22.22(7/8")] |
| Capacity connection | | % | 50~130 | |
| Number of connectable indoor units | | | 24 | 29 |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.
 4. [] : Pipe sizes applicable to European installations are shown in parentheses.

Dimensions

All measurements in mm.

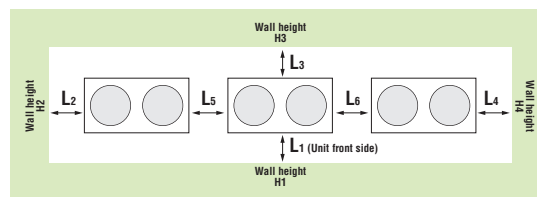


| Mark | Content | 280 | 335 |
|------|---|--|----------------|
| A | Refrigerant gas piping connection pipe | ø22.22(Brazing) | ø25.4(Brazing) |
| B | Refrigerant liquid piping connection pipe | ø9.52(Flare) | ø12.7(Flare) |
| C | Refrigerant piping exit hole | ø88(or ø100) | |
| D | Power supply entry hole | ø50 (right · left · front), long hole 40 x 80 (bottom) | |
| F | Anchor bolt hole | M10 x 4 places | |
| G | Drain waste water hose hole | ø45 x 3 places | |
| H | Drain hole | ø20 x 10 places | |
| K | Refrigerant oil equalization piping connection pipe | ø9.52(Flare) | |
| L | Carrying in or hole for hanging | 230 x 60 | |

| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10(30) | 10(30) |
| L ₃ | 100 | 100 |
| L ₄ | 10(30) | Open |
| H ₁ | 1500 | Open |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | Open |

() : In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.

When more than one unit is installed



| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10(30) | 200 |
| L ₃ | 100 | 300 |
| L ₄ | 10(30) | Open |
| L ₅ | 10(30) | 400 |
| L ₆ | 10(30) | 400 |
| H ₁ | 1500 | Open |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | Open |

() : In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.



KXZ Heat pump systems

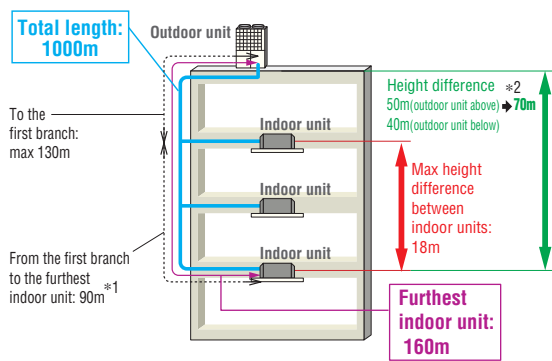
14, 16, 17, 18, 20HP (40.0kW~56.0kW)

| Model No. | Nominal Cooling Capacity |
|-------------|--------------------------|
| FDC400KXZE1 | 40.0kW |
| FDC450KXZE1 | 45.0kW |
| FDC475KXZE1 | 47.5kW |
| FDC500KXZE1 | 50.0kW |
| FDC560KXZE1 | 56.0kW |

- Connect up to 48 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) up to 3.6.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.

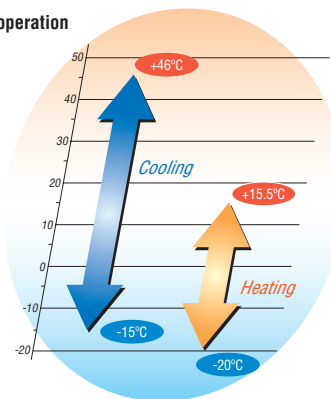


Uniform footprint of all models (from 14HP~20HP) allows continuous side-by-side installation



- *1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page56.

Range of operation



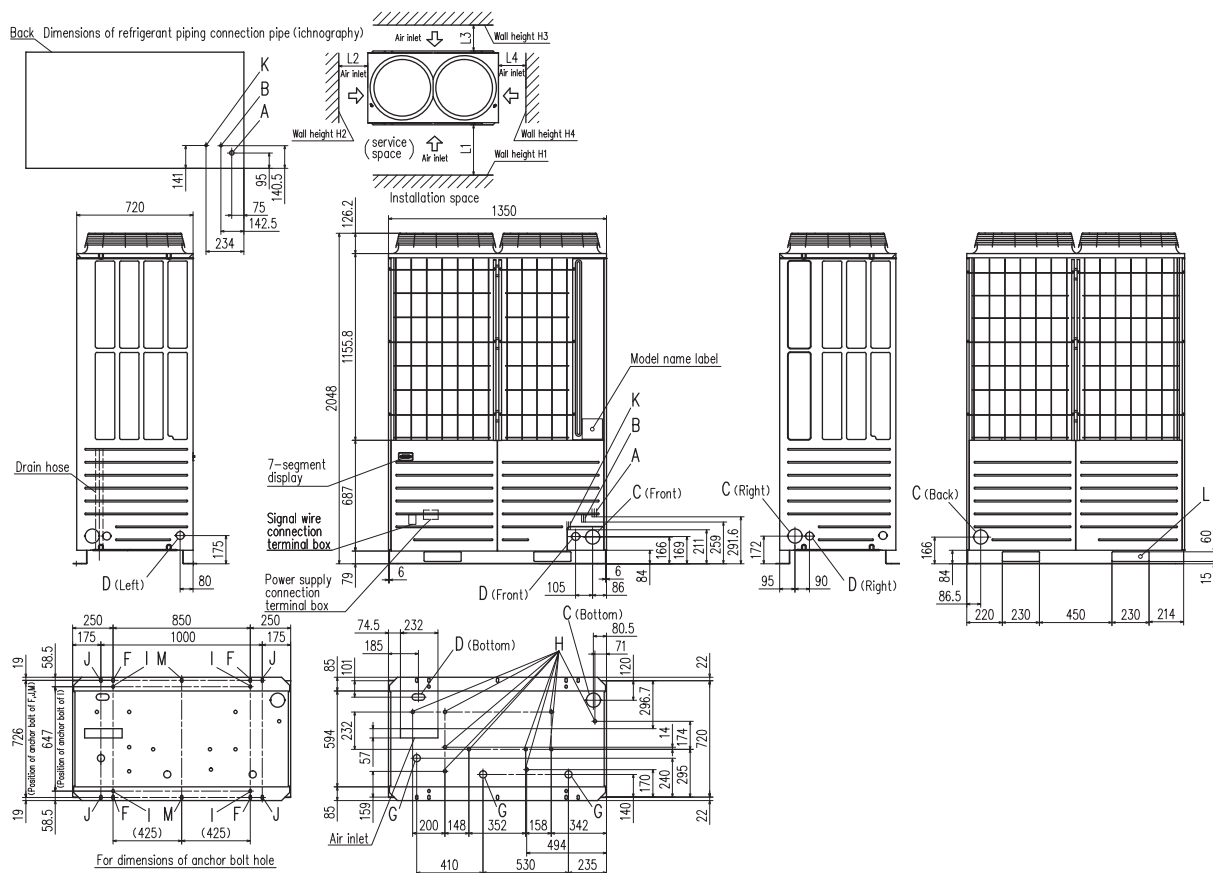
Specifications

| Item | | Model | FDC400KXZE1 | FDC450KXZE1 | FDC475KXZE1 | FDC500KXZE1 | FDC560KXZE1 | |
|------------------------------------|-------------------|-----------------|--------------------------------------|-------------|-------------|-------------|-------------|-------|
| Nominal horse power | | | 14HP | 16HP | 17HP | 18HP | 20HP | |
| Power source | | | 3 Phase 380-415V, 50Hz | | | | | |
| Starting current | | A | 5 | | 8 | | | |
| Max current | | A | 32 | | 42.4 | | | |
| Nominal capacity | Cooling | kW | 40.0 | 45.0 | 47.5 | 50.0 | 56.0 | |
| | Heating | kW | 45.0 | 50.0 | 53.0 | 56.0 | 63.0 | |
| Electrical characteristics | Power consumption | kW | Cooling | 10.96 | 13.98 | 13.98 | 13.97 | 16.62 |
| | Heating | | 10.69 | 12.50 | 13.00 | 13.49 | 15.95 | |
| Exterior dimensions | | HxWxD | mm 2048x1350x720 | | | | | |
| Net weight | | kg | 317 | | | | | |
| Sound pressure level | | Cooling/Heating | 60/62 | 61/62 | 61/61 | 61/62 | 64/66 | |
| Refrigerant | | Type / GWP | R410A / 2088 | | | | | |
| | | Charge | kg/TCO ₂ Eq 11.5 / 24.012 | | | | | |
| Refrigerant piping size | | Liquid line | mm(in) ø12.7(1/2") | | | | | |
| | | Gas line | ø25.4(1") [ø28.58(1 1/8")] | | | | | |
| Capacity connection | | % | 50~130 | | | | | |
| Number of connectable indoor units | | | 34 | 39 | 41 | 43 | 48 | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.
 4. [] : Pipe sizes applicable to European installations are shown in parentheses.

Dimensions

All measurements in mm.



| Mark | Content | 400 | 450, 475, 500, 560 |
|------|---|--|--------------------|
| A | Refrigerant gas piping connection pipe | ø25.4(Brazing) | ø28.58(Brazing) |
| B | Refrigerant liquid piping connection pipe | ø12.7(Flare) | |
| C | Refrigerant piping exit hole | ø88(or ø100) | |
| D | Power supply entry hole | ø50 (right · left · front), long hole 40 x 80 (bottom) | |
| F | Anchor bolt hole | M10 x 4 places | |
| G | Drain waste water hose hole | ø45 x 3 places | |
| H | Drain hole | ø20 x 10 places | |
| K | Refrigerant oil equalization piping connection pipe | ø9.52(Flare) | |
| L | Carrying in or hole for hanging | 230 x 60 | |

| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10(30) | 10(30) |
| L ₃ | 100 | 100 |
| L ₄ | 10(30) | Open |
| H ₁ | 1500 | Open |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | Open |

() :In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.



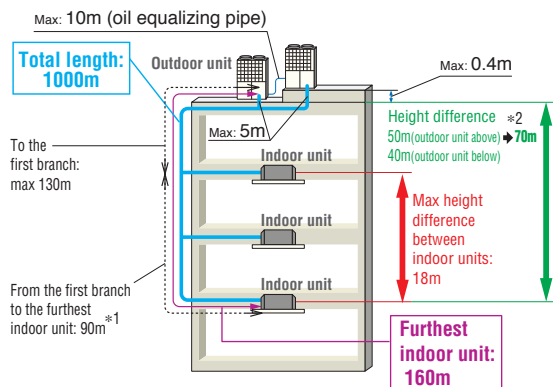
KXZ Heat pump combination systems

22, 24HP (61.5kW, 67.0kW)



| Model No. | Nominal Cooling Capacity |
|-----------------------------|--------------------------|
| FDC615KXZE1 (FDC280+FDC335) | 61.5kW |
| FDC670KXZE1 (FDC335+FDC335) | 67.0kW |

- Connect up to 58 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) up to 3.8.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.

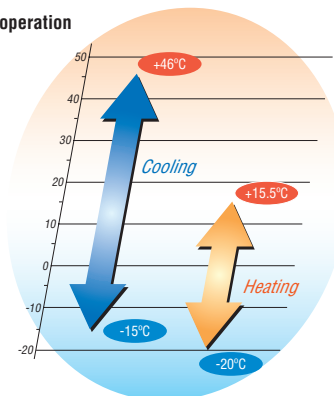


*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
 *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page56.



Uniform footprint of all models (from 22HP, 24HP) allows continuous side-by-side installation

Range of operation



Specifications

Exterior dimension : Please refer to page37.

| Item | | Model | FDC615KXZE1 | FDC670KXZE1 |
|------------------------------------|-------------------|---------|------------------------|----------------------|
| Combination (FDC) | | | 280KXZE1 335KXZE1 | 335KXZE1 335KXZE1 |
| Nominal horse power | | | 22HP | 24HP |
| Power source | | | 3 Phase 380-415V, 50Hz | |
| Starting current | | A | 10 | |
| Max current | | A | 42.4 | |
| Nominal capacity | Cooling | kW | 61.5 | 67.0 |
| | Heating | kW | 69.0 | 75.0 |
| Electrical characteristics | Power consumption | Cooling | 16.20 | 17.92 |
| | | Heating | 16.32 | 18.08 |
| Exterior dimensions | | HxWxD | mm 1690x2700x720 | |
| Net weight | | kg | 544 | |
| Refrigerant charge | | R410A | kg 11.0x2 | |
| Refrigerant piping size | Liquid line | mm(in) | ø12.7(1/2") | |
| | Gas line | mm(in) | ø28.58(1 1/8") | |
| Capacity connection | | % | 50~130 | |
| Number of connectable indoor units | | | 53 | 58 |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

KXZ Heat pump combination systems

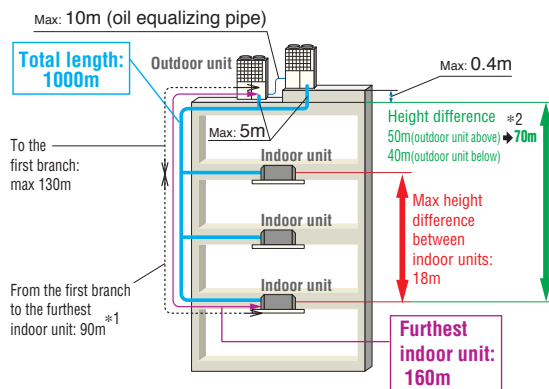
26, 28, 30, 32, 34, 36, 38, 40HP (73.5kW~112.0kW)

| Model No. | Nominal Cooling Capacity |
|------------------------------|--------------------------|
| FDC735KXZE1 (FDC335+FDC400) | 73.5kW |
| FDC800KXZE1 (FDC400+FDC400) | 80.0kW |
| FDC850KXZE1 (FDC400+FDC450) | 85.0kW |
| FDC900KXZE1 (FDC450+FDC450) | 90.0kW |
| FDC950KXZE1 (FDC475+FDC475) | 95.0kW |
| FDC1000KXZE1 (FDC500+FDC500) | 100.0kW |
| FDC1060KXZE1 (FDC500+FDC560) | 106.0kW |
| FDC1120KXZE1 (FDC560+FDC560) | 112.0kW |

- Connect up to 80 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) up to 3.7.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.

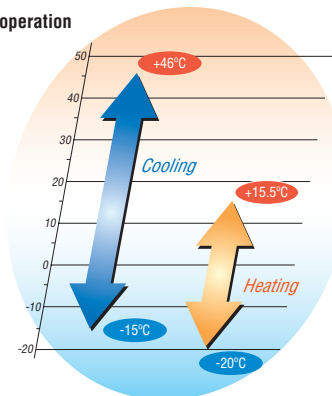


• In case of 26HP



- *1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page56.

Range of operation



Specifications

Exterior dimension : Please refer to page37,39.

| Item | Model | FDC735KXZE1 | FDC800KXZE1 | FDC850KXZE1 | FDC900KXZE1 | FDC950KXZE1 | FDC1000KXZE1 | FDC1060KXZE1 | FDC1120KXZE1 | |
|------------------------------------|-------------------|------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | | Combination (FDC) | 335KXZE1 400KXZE1 | 400KXZE1 400KXZE1 | 400KXZE1 450KXZE1 | 450KXZE1 450KXZE1 | 475KXZE1 475KXZE1 | 500KXZE1 500KXZE1 | 500KXZE1 560KXZE1 | 560KXZE1 560KXZE1 |
| Nominal horse power | | 26HP | 28HP | 30HP | 32HP | 34HP | 36HP | 38HP | 40HP | |
| Power source | | 3 Phase 380-415V, 50Hz | | | | | | | | |
| Starting current | A | 10 | | | | 16 | | | | |
| Max current | A | 53.2 | 64 | | | 84.8 | | | | |
| Nominal capacity | Cooling | kW | | | | | | | | |
| | Heating | kW | | | | | | | | |
| Electrical characteristics | Power consumption | Cooling | kW | | | | | | | |
| | | Heating | kW | | | | | | | |
| Exterior dimensions | HxWxD | mm | | | | | | | | |
| Net weight | kg | 589 | 634 | | | 740 | | | | |
| Refrigerant charge | R410A | kg | | kg | | | | | | |
| Refrigerant piping size | Liquid line | mm(in) | | | | | | | mm(in) | |
| | Gas line | mm(in) | | | | | | | mm(in) | |
| Capacity connection | % | % | | | | | | | | |
| Number of connectable indoor units | | 63 | 69 | 73 | 78 | 80 | | | | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. [] : Pipe sizes applicable to European installations are shown in parentheses.



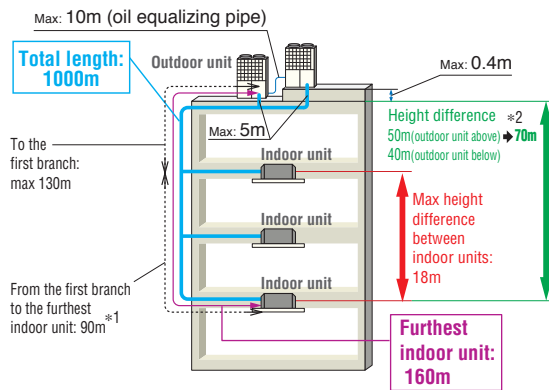
KXZ Heat pump combination systems

42, 44, 46, 48HP (120.0kW~135.0kW)

| Model No. | Nominal Cooling Capacity |
|-------------------------------------|--------------------------|
| FDC1200KXZE1 (FDC400+FDC400+FDC400) | 120.0kW |
| FDC1250KXZE1 (FDC400+FDC400+FDC450) | 125.0kW |
| FDC1300KXZE1 (FDC400+FDC450+FDC450) | 130.0kW |
| FDC1350KXZE1 (FDC450+FDC450+FDC450) | 135.0kW |

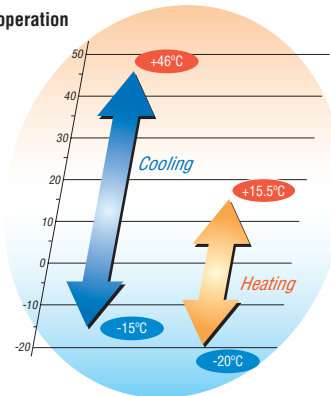


- Connect up to 80 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) up to 3.6.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.



*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
 *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page56.

Range of operation



Specifications

Exterior dimension : Please refer to page39.

| Item | | Model | FDC1200KXZE1 | FDC1250KXZE1 | FDC1300KXZE1 | FDC1350KXZE1 |
|------------------------------------|-------------------|-------------|---------------------------------------|--------------|--------------|--------------|
| Combination (FDC) | | | 400KXZE1 | 400KXZE1 | 400KXZE1 | 450KXZE1 |
| | | | 400KXZE1 | 400KXZE1 | 450KXZE1 | 450KXZE1 |
| | | | 400KXZE1 | 450KXZE1 | 450KXZE1 | 450KXZE1 |
| Nominal horse power | | | 42HP | 44HP | 46HP | 48HP |
| Power source | | | 3 Phase 380-415V, 50Hz | | | |
| Starting current | | A | 15 | | | |
| Max current | | A | 96 | | | |
| Nominal capacity | Cooling | kW | 120.0 | 125.0 | 130.0 | 135.0 |
| | Heating | | 135.0 | 140.0 | 145.0 | 150.0 |
| Electrical characteristics | Power consumption | Cooling | 32.88 | 35.90 | 38.92 | 41.94 |
| | | Heating | 32.07 | 33.88 | 35.69 | 37.50 |
| Exterior dimensions | | HxWxD | 2048x4050x720 | | | |
| Net weight | | kg | 951 | | | |
| Refrigerant charge | | R410A | kg 11.5x3 | | | |
| Refrigerant piping size | | Liquid line | mm(in) ø19.05(3/4") | | | |
| | | Gas line | mm(in) ø38.1(1 1/2") [ø34.92(1 3/8")] | | | |
| Capacity connection | | % | 50-130 | | | |
| Number of connectable indoor units | | | 80 | | | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. [] : Pipe sizes applicable to European installations are shown in parentheses.

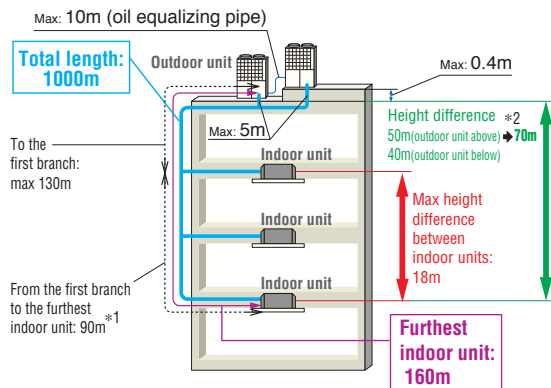
KXZ Heat pump combination systems

50, 52, 54, 56, 58, 60HP (142.5kW~168.0kW)

| Model No. | Nominal Cooling Capacity |
|-------------------------------------|--------------------------|
| FDC1425KXZE1 (FDC475+FDC475+FDC475) | 142.5kW |
| FDC1450KXZE1 (FDC475+FDC475+FDC500) | 145.0kW |
| FDC1500KXZE1 (FDC500+FDC500+FDC500) | 150.0kW |
| FDC1560KXZE1 (FDC500+FDC500+FDC560) | 156.0kW |
| FDC1620KXZE1 (FDC500+FDC560+FDC560) | 162.0kW |
| FDC1680KXZE1 (FDC560+FDC560+FDC560) | 168.0kW |

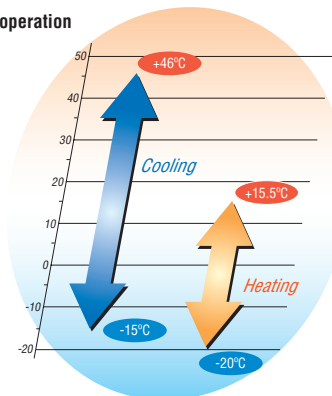


- Connect up to 80 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) up to 3.6.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.



*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
 *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page56.

Range of operation



Specifications

Exterior dimension : Please refer to page39.

| Item | Model | FDC1425KXZE1 | FDC1450KXZE1 | FDC1500KXZE1 | FDC1560KXZE1 | FDC1620KXZE1 | FDC1680KXZE1 | | |
|------------------------------------|-------------------|------------------------|--------------------------------|--------------|--------------|--------------|--------------|----------|-------|
| | | Combination (FDC) | 475KXZE1 | 475KXZE1 | 500KXZE1 | 500KXZE1 | 500KXZE1 | 560KXZE1 | |
| | | 475KXZE1 | 475KXZE1 | 500KXZE1 | 500KXZE1 | 560KXZE1 | 560KXZE1 | | |
| | | 475KXZE1 | 500KXZE1 | 500KXZE1 | 560KXZE1 | 560KXZE1 | 560KXZE1 | | |
| Nominal horse power | | 50HP | 52HP | 54HP | 56HP | 58HP | 60HP | | |
| Power source | | 3 Phase 380-415V, 50Hz | | | | | | | |
| Starting current | A | 24 | | | | | | | |
| Max current | A | 127.2 | | | | | | | |
| Nominal capacity | Cooling | kW | 142.5 | 145.0 | 150.0 | 156.0 | 162.0 | 168.0 | |
| | Heating | kW | 159.0 | 162.0 | 168.0 | 175.0 | 182.0 | 189.0 | |
| Electrical characteristics | Power consumption | Cooling | kW | 41.94 | 41.93 | 41.91 | 44.56 | 47.21 | 49.86 |
| | | Heating | kW | 39.00 | 39.49 | 40.47 | 42.93 | 45.39 | 47.85 |
| Exterior dimensions | HxWxD | mm | 2048x4050x720 | | | | | | |
| Net weight | | kg | 1110 | | | | | | |
| Refrigerant charge | R410A | kg | 11.5x3 | | | | | | |
| Refrigerant piping size | Liquid line | mm(in) | ø19.05(3/4") | | | | | | |
| | Gas line | mm(in) | ø38.1(1 1/2") [ø34.92(1 3/8")] | | | | | | |
| Capacity connection | | % | 50-130 | | | | | | |
| Number of connectable indoor units | | | 80 | | | | | | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. [] : Pipe sizes applicable to European installations are shown in parentheses.

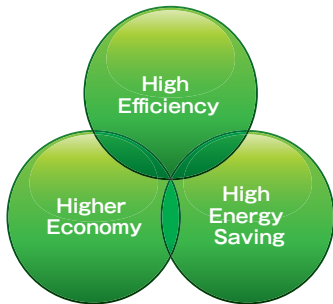


KXZ Hi-COP series

8~36HP(22.4kW~100.0kW)

| Model No. | Nominal Cooling Capacity |
|--------------|--------------------------|
| FDC224KXZXE1 | 22.4kW |
| FDC280KXZXE1 | 28.0kW |
| FDC335KXZXE1 | 33.5kW |

| Model No. | Nominal Cooling Capacity |
|--------------------------------------|--------------------------|
| FDC450KXZXE1 (FDC224+FDC224) | 45.0kW |
| FDC500KXZXE1 (FDC224+FDC280) | 50.0kW |
| FDC560KXZXE1 (FDC280+FDC280) | 56.0kW |
| FDC615KXZXE1 (FDC280+FDC335) | 61.5kW |
| FDC670KXZXE1 (FDC335+FDC335) | 67.0kW |
| FDC735KXZXE1 (FDC224+FDC224+FDC280) | 73.5kW |
| FDC800KXZXE1 (FDC224+FDC280+FDC280) | 80.0kW |
| FDC850KXZXE1 (FDC280+FDC280+FDC280) | 85.0kW |
| FDC900KXZXE1 (FDC280+FDC280+FDC335) | 90.0kW |
| FDC950KXZXE1 (FDC280+FDC335+FDC335) | 95.0kW |
| FDC1000KXZXE1 (FDC335+FDC335+FDC335) | 100.0kW |



- This series can connect indoor unit capacity up to 160~200%.

| kW | capacity connection |
|------------|---------------------|
| 22.4~45.0 | 200% |
| 50.0~100.0 | 160% |

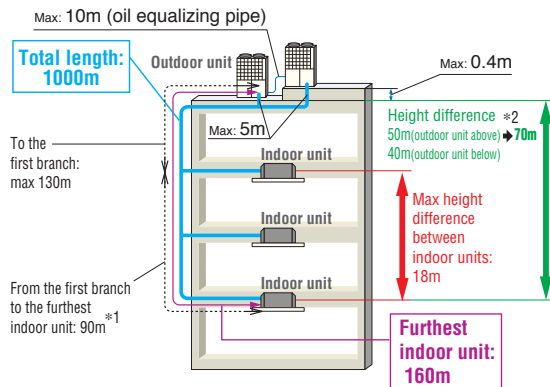
- High efficiency with COP (in cooling) up to 4.5.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.



FDC224KXZXE1



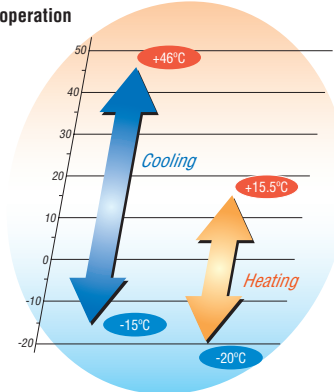
FDC280KXZXE1
FDC335KXZXE1



*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)

*2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page56.

Range of operation



Specifications

| Item | Model | FDC224KXZE1 | FDC280KXZE1 | FDC335KXZE1 |
|------------------------------------|-------------------|-----------------------|---------------|--------------------------|
| Nominal horse power | | 8HP | 10HP | 12HP |
| Power source | | 3Phase 380-415V, 50Hz | | |
| Starting current | A | 5 | | |
| Max current | A | 21.2 | 32 | |
| Nominal capacity | Cooling | 22.4 | 28.0 | 33.5 |
| | Heating | 25.0 | 31.5 | 37.5 |
| Electrical characteristics | Power consumption | 4.98 | 6.95 | 8.68 |
| | Cooling Heating | 5.56 | 6.83 | 8.39 |
| Exterior dimensions | H x W x D | 1690x1350x720 | 2048x1350x720 | |
| Net weight | kg | 280 | 325 | |
| Sound pressure level | Cooling / Heating | 56/57 | 56/56 | 62/57 |
| Refrigerant | Type / GWP | R410A / 2088 | | |
| | Charge | 11.0 / 22.968 | 11.5 / 24.012 | |
| Refrigerant piping size | Liquid line | ø9.52(3/8") | | |
| | Gas line | ø19.05(3/4") | ø22.22(7/8") | ø25.4(1") [ø22.22(7/8")] |
| Capacity connection | % | 200 | | |
| Number of connectable indoor units | | 29 | 37 | 44 |

| Item | Model | FDC450KXZE1 | FDC500KXZE1 | FDC560KXZE1 | FDC615KXZE1 | FDC670KXZE1 |
|------------------------------------|-------------------|-----------------------|---------------|-------------|-------------|-------------|
| Combination (FDC) | | 224KXZE1 | 224KXZE1 | 280KXZE1 | 280KXZE1 | 335KXZE1 |
| | | 224KXZE1 | 280KXZE1 | 280KXZE1 | 335KXZE1 | 335KXZE1 |
| Nominal horse power | | 16HP | 18HP | 20HP | 22HP | 24HP |
| Power source | | 3Phase 380-415V, 50Hz | | | | |
| Starting current | A | 10 | | | | |
| Max current | A | 42.4 | 53.2 | 64 | | |
| Nominal capacity | Cooling | 45.0 | 50.0 | 56.0 | 61.5 | 67.0 |
| | Heating | 50.0 | 56.0 | 63.0 | 69.0 | 75.0 |
| Electrical characteristics | Power consumption | 10.0 | 11.8 | 13.9 | 15.6 | 17.4 |
| | Cooling Heating | 11.1 | 12.3 | 13.7 | 15.2 | 16.8 |
| Exterior dimensions | H x W x D | 1690x2700x720 | 2048x2700x720 | | | |
| Net weight | kg | 560 | 605 | 650 | 650 | 650 |
| Refrigerant charge | R410A | 11.0x2 | 11.0+11.5 | 11.5x2 | | |
| Refrigerant piping size | Liquid line | ø12.7(1/2") | | | | |
| | Gas line | ø28.58(1 1/8") | | | | |
| | Oil equalization | ø9.52(3/8") | | | | |
| Capacity connection | % | 200 | 160 | | | |
| Number of connectable indoor units | | 60 | 53 | 59 | 65 | 71 |

| Item | Model | FDC735KXZE1 | FDC800KXZE1 | FDC850KXZE1 | FDC900KXZE1 | FDC950KXZE1 | FDC1000KXZE1 |
|------------------------------------|-------------------|---------------------------------|-------------|-------------|-------------|-------------|--------------|
| Combination (FDC) | | 224KXZE1 | 224KXZE1 | 280KXZE1 | 280KXZE1 | 280KXZE1 | 335KXZE1 |
| | | 224KXZE1 | 280KXZE1 | 280KXZE1 | 280KXZE1 | 335KXZE1 | 335KXZE1 |
| | | 280KXZE1 | 280KXZE1 | 280KXZE1 | 335KXZE1 | 335KXZE1 | 335KXZE1 |
| Nominal horse power | | 26HP | 28HP | 30HP | 32HP | 34HP | 36HP |
| Power source | | 3Phase 380-415V, 50Hz | | | | | |
| Starting current | A | 15 | | | | | |
| Max current | A | 74.4 | 85.2 | 96 | | | |
| Nominal capacity | Cooling | 73.5 | 80.0 | 85.0 | 90.0 | 95.0 | 100.0 |
| | Heating | 82.5 | 90.0 | 95.0 | 100.0 | 106.0 | 112.0 |
| Electrical characteristics | Power consumption | 17.1 | 19.3 | 21.1 | 22.7 | 24.3 | 25.9 |
| | Cooling Heating | 18.2 | 19.7 | 20.6 | 21.9 | 23.5 | 25.1 |
| Exterior dimensions | H x W x D | 2048x4050x720 | | | | | |
| Net weight | kg | 885 | 930 | 975 | 975 | | |
| Refrigerant charge | R410A | 11.0x2+11.5 | 11.0+11.5x2 | 11.5x3 | | | |
| Refrigerant piping size | Liquid line | ø15.88(5/8") | | | | | |
| | Gas line | ø31.75(1 1/4") [ø34.92(1 3/8")] | | | | | |
| | Oil equalization | ø9.52(3/8") | | | | | |
| Capacity connection | % | 160 | | | | | |
| Number of connectable indoor units | | 78 | 80 | 80 | 80 | 80 | 80 |

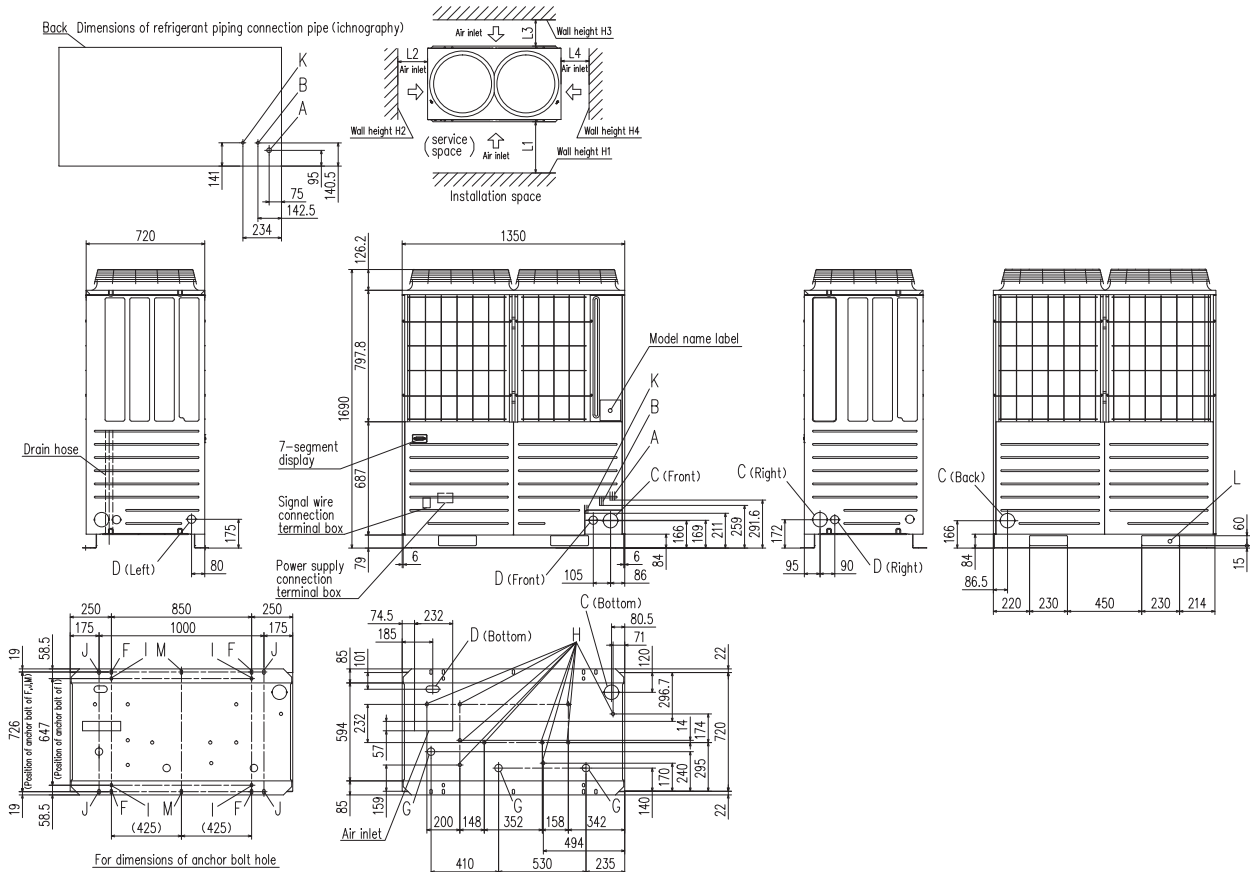
- The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
- Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.
- [] : Pipe sizes applicable to European installations are shown in parentheses.



Dimensions

All measurements in mm.

FDC224KXZXE1

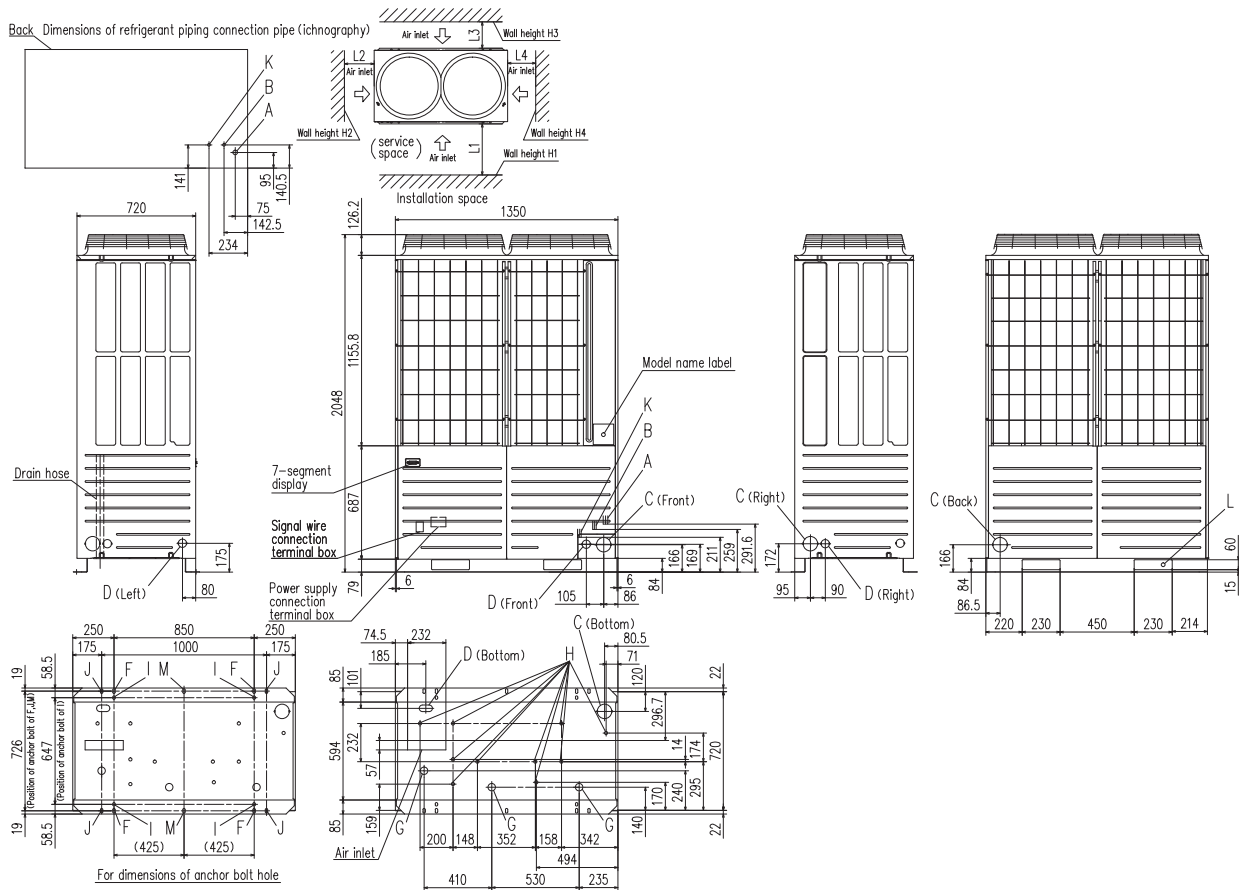


| Mark | Content | 224 |
|------|---|--|
| A | Refrigerant gas piping connection pipe | ø19.05 (Brazing) |
| B | Refrigerant liquid piping connection pipe | ø9.52 (Flare) |
| C | Refrigerant piping exit hole | ø88 (or ø100) |
| D | Power supply entry hole | ø50 (Right · Left · Front), Long hole 40 x 80 (Bottom) |
| F | Anchor bolt hole | M10 x 4 places |
| G | Drain waste water hose hole | ø45 x 3 places |
| H | Drain hole | ø20 x 10 places |
| K | Refrigerant oil equalization piping connection pipe | ø9.52 (Flare) |
| L | Carrying in or hole for hanging | 230 x 60 |

| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10(30) | 10(30) |
| L ₃ | 100 | 100 |
| L ₄ | 10(30) | Open |
| H ₁ | 1500 | Open |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | Open |

() : In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.

FDC280KXZE1, 335KXZE1



| Mark | Content | 280 | 335 |
|------|---|--|-----------------|
| A | Refrigerant gas piping connection pipe | ø22.22 (Brazing) | ø25.4 (Brazing) |
| B | Refrigerant liquid piping connection pipe | ø9.52 (Flare) | ø12.7 (Flare) |
| C | Refrigerant piping exit hole | ø88 (or ø100) | |
| D | Power supply entry hole | ø50 (Right · Left · Front), Long hole 40 x 80 (Bottom) | |
| F | Anchor bolt hole | M10 x 4 places | |
| G | Drain waste water hose hole | ø45 x 3 places | |
| H | Drain hole | ø20 x 10 places | |
| K | Refrigerant oil equalization piping connection pipe | ø9.52(Flare) | |
| L | Carrying in or hole for hanging | 230 x 60 | |

| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10(30) | 10(30) |
| L ₃ | 100 | 100 |
| L ₄ | 10(30) | Open |
| H ₁ | 1500 | Open |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | Open |

() :In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.



KXZ Standard large connection Series

10~34HP (28.0kW~95.0kW)

| Model No. | Nominal Cooling Capacity |
|--------------|--------------------------|
| FDCL280KXZE1 | 28.0kW |
| FDCL335KXZE1 | 33.5kW |
| FDCL400KXZE1 | 40.0kW |
| FDCL450KXZE1 | 45.0kW |
| FDCL475KXZE1 | 47.5kW |
| FDCL500KXZE1 | 50.0kW |
| FDCL560KXZE1 | 56.0kW |

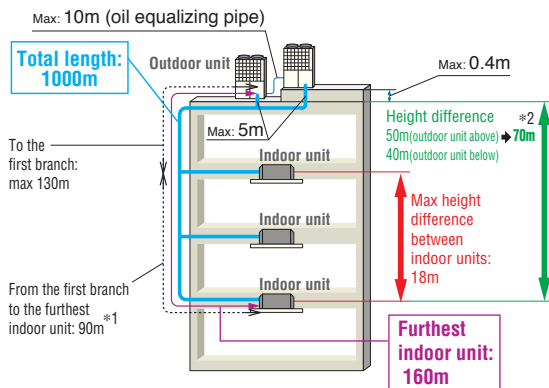
| Model No. | Nominal Cooling Capacity |
|--------------------------------|--------------------------|
| FDCL615KXZE1 (FDCL280+FDCL335) | 61.5kW |
| FDCL670KXZE1 (FDCL335+FDCL335) | 67.0kW |
| FDCL735KXZE1 (FDCL335+FDCL400) | 73.5kW |
| FDCL800KXZE1 (FDCL400+FDCL400) | 80.0kW |
| FDCL850KXZE1 (FDCL400+FDCL450) | 85.0kW |
| FDCL900KXZE1 (FDCL450+FDCL450) | 90.0kW |
| FDCL950KXZE1 (FDCL475+FDCL475) | 95.0kW |



Increased indoor unit connection capacity

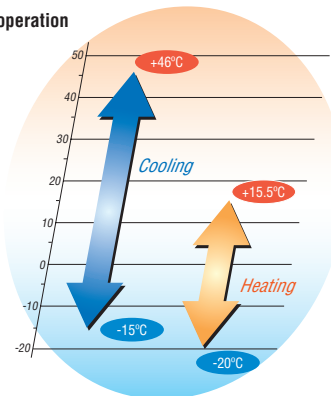
This series can connect indoor unit capacity up to 160~200% from 130% of Standard series.

| Standard series | | Standard large connection series | |
|-----------------|---------------------|----------------------------------|---------------------|
| kW | capacity connection | kW | capacity connection |
| 28.0~95.0 | 130% | 28.0~45.0 | 200% |
| | | 47.5~95.0 | 160% |



*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
*2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page 56.

Range of operation



Specifications

| Item | Model | FDCL280KXZE1 | FDCL335KXZE1 | FDCL400KXZE1 | FDCL450KXZE1 |
|------------------------------------|-------------------|-----------------------|--------------------------|----------------------------|--------------|
| Nominal horse power | | 10HP | 12HP | 14HP | 16HP |
| Power source | | 3Phase 380-415V, 50Hz | | | |
| Starting current | A | 5 | | | |
| Max current | A | 21.2 | | 32 | |
| Nominal capacity | Cooling | 28.0 | 33.5 | 40.0 | 45.0 |
| | Heating | 31.5 | 37.5 | 45.0 | 50.0 |
| Electrical characteristics | Power consumption | 7.24 | 8.96 | 10.96 | 13.98 |
| | Cooling Heating | 7.28 | 9.04 | 10.69 | 12.50 |
| Exterior dimensions | H x W x D | 1690x1350x720 | | 2048x1350x720 | |
| Net weight | kg | 280 | | 325 | |
| Sound pressure level | Cooling / Heating | 55/57 | 61/58 | 60/62 | 61/62 |
| Refrigerant | Type / GWP | R410A/2088 | | | |
| | Charge | 11.0/22.968 | | 11.5/24.012 | |
| Refrigerant piping size | Liquid line | ø9.52(3/8") | | ø12.7(1/2") | |
| | Gas line | ø22.22(7/8") | ø25.4(1") [ø22.22(7/8")] | ø25.4(1") [ø28.58(1 1/8")] | |
| Capacity connection | % | 200% | | | |
| Number of connectable indoor units | | 24 | 29 | 36 | 40 |

| Item | Model | FDCL475KXZE1 | FDCL500KXZE1 | FDCL560KXZE1 |
|------------------------------------|-------------------|-----------------------|--------------|--------------|
| Nominal horse power | | 17HP | 18HP | 20HP |
| Power source | | 3Phase 380-415V, 50Hz | | |
| Starting current | A | 8 | | |
| Max current | A | 42.4 | | |
| Nominal capacity | Cooling | 47.5 | 50.0 | 56.0 |
| | Heating | 53.0 | 56.0 | 63.0 |
| Electrical characteristics | Power consumption | 13.98 | 13.97 | 16.62 |
| | Cooling Heating | 13.00 | 13.49 | 15.95 |
| Exterior dimensions | H x W x D | 2048x1350x720 | | |
| Net weight | kg | 378 | | |
| Sound pressure level | Cooling / Heating | 61/61 | 61/62 | 64/66 |
| Refrigerant | Type / GWP | R410A/2088 | | |
| | Charge | 11.5/24.012 | | |
| Refrigerant piping size | Liquid line | ø12.7(1/2") | | |
| | Gas line | ø28.58(1 1/8") | | |
| Capacity connection | % | 160% | | |
| Number of connectable indoor units | | 41 | 43 | 48 |

| Item | Model | FDCL615KXZE1 | FDCL670KXZE1 | FDCL735KXZE1 | FDCL800KXZE1 | FDCL850KXZE1 | FDCL900KXZE1 | FDCL950KXZE1 |
|------------------------------------|-------------------|-----------------------|--------------|---------------------------------|---------------|--------------|--------------|--------------|
| Combination (FDC) | | 280KXZE1 | 335KXZE1 | 335KXZE1 | 400KXZE1 | 400KXZE1 | 450KXZE1 | 475KXZE1 |
| | | 335KXZE1 | 335KXZE1 | 400KXZE1 | 400KXZE1 | 450KXZE1 | 450KXZE1 | 475KXZE1 |
| Nominal horse power | | 22HP | 24HP | 26HP | 28HP | 30HP | 32HP | 34HP |
| Power source | | 3Phase 380-415V, 50Hz | | | | | | |
| Starting current | A | 10 | | | | | | |
| Max current | A | 42.4 | | 53.2 | 64 | | 84.8 | |
| Nominal capacity | Cooling | 61.5 | 67.0 | 73.5 | 80.0 | 85.0 | 90.0 | 95.0 |
| | Heating | 69.0 | 75.0 | 82.5 | 90.0 | 95.0 | 100.0 | 106.0 |
| Electrical characteristics | Power consumption | 16.20 | 17.92 | 19.92 | 21.92 | 24.94 | 27.96 | 27.96 |
| | Cooling Heating | 16.32 | 18.08 | 19.73 | 21.38 | 23.19 | 25.00 | 26.00 |
| Exterior dimensions | H x W x D | 1690x2700x720 | | | 2048x2700x720 | | | |
| Net weight | kg | 560 | | 605 | 650 | | 756 | |
| Refrigerant charge | R410A | 11.0x2 | | 11.0+11.5 | 11.5x2 | | | |
| Refrigerant piping size | Liquid line | ø12.7(1/2") | | | ø15.88(5/8") | | | |
| | Gas line | ø28.58(1 1/8") | | ø31.75(1 1/4") [ø34.92(1 3/8")] | | | | |
| | Oil equalization | ø9.52(3/8") | | | | | | |
| Capacity connection | % | 160% | | | | | | |
| Number of connectable indoor units | | 53 | 58 | 63 | 69 | 73 | 78 | 80 |

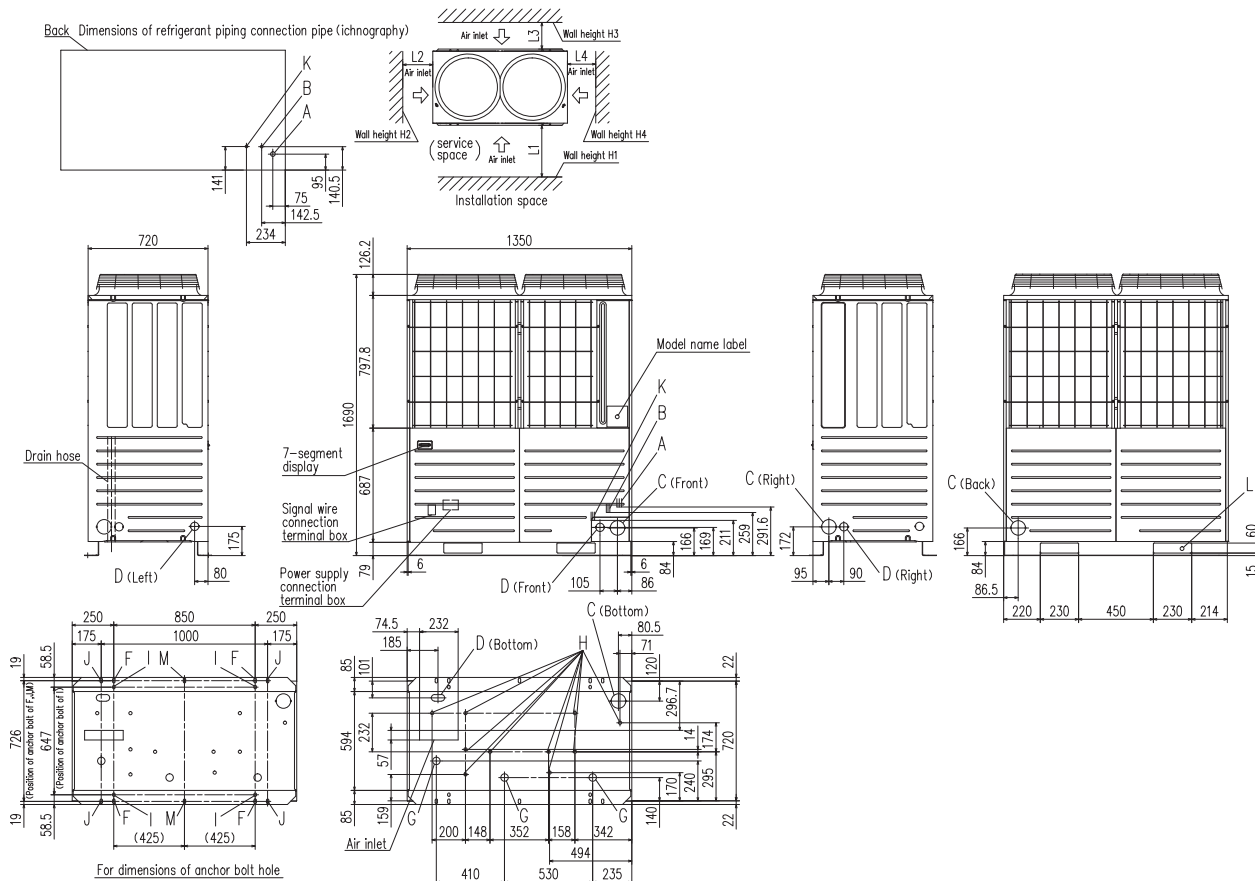
- The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
- Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.
- [] : Pipe sizes applicable to European installations are shown in parentheses.



Dimensions

All measurements in mm.

FDCL280KXZE1, 335KXZE1

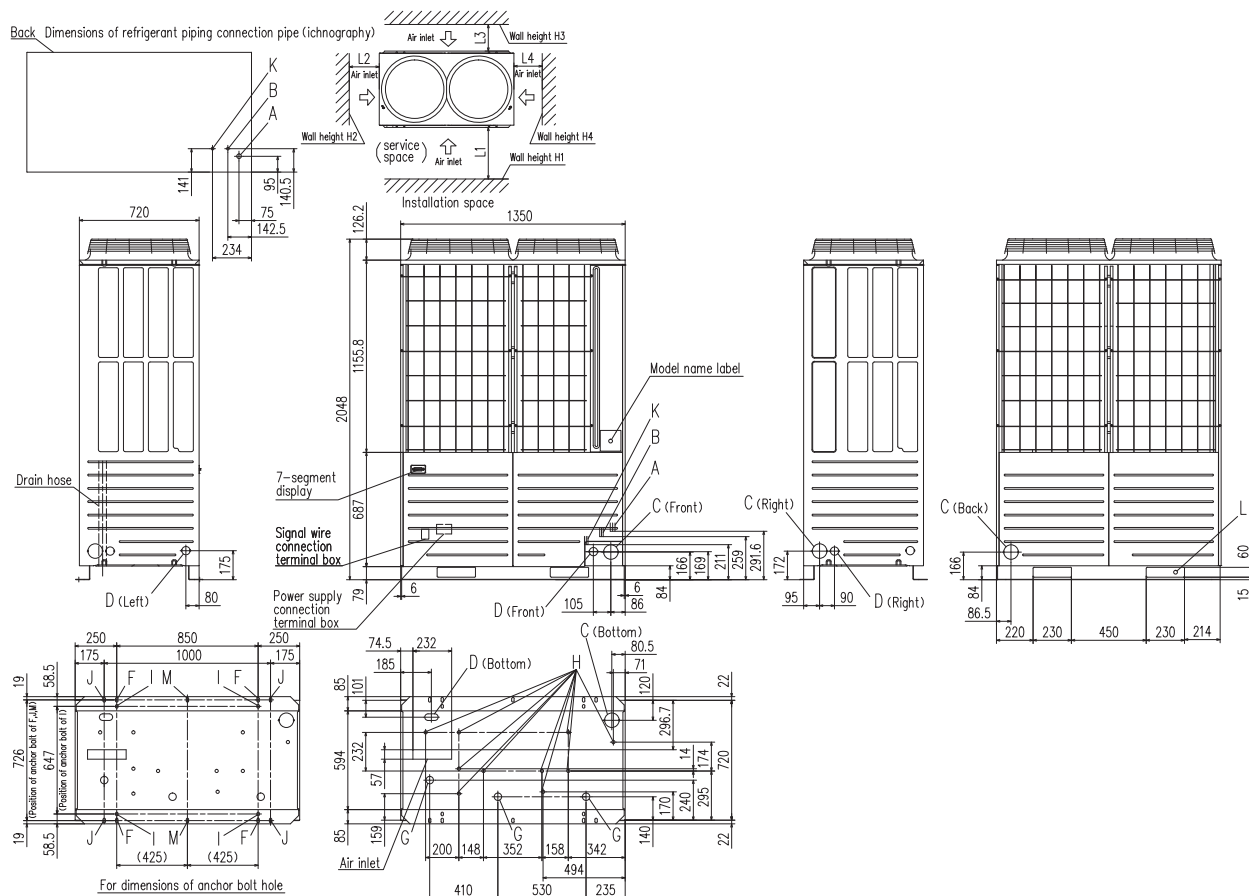


| Mark | Content | 280 | 335 |
|------|---|--|-----------------|
| A | Refrigerant gas piping connection pipe | ø22.22 (Brazing) | ø25.4 (Brazing) |
| B | Refrigerant liquid piping connection pipe | ø9.52 (Flare) | ø12.7 (Flare) |
| C | Refrigerant piping exit hole | ø88 (or ø100) | |
| D | Power supply entry hole | ø50 (Right · Left · Front), Long hole 40 x 80 (Bottom) | |
| F | Anchor bolt hole | M10 x 4 places | |
| G | Drain waste water hose hole | ø45 x 3 places | |
| H | Drain hole | ø20 x 10 places | |
| K | Refrigerant oil equalization piping connection pipe | ø9.52 (Flare) | |
| L | Carrying in or hole for hanging | 230 x 60 | |

| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10(30) | 10(30) |
| L ₃ | 100 | 100 |
| L ₄ | 10(30) | Open |
| H ₁ | 1500 | Open |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | Open |

() : In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.

FDCL400KXZE1, 450KXZE1, 475KXZE1, 500KXZE1, 560KXZE1



| Mark | Content | 400 | 450,475,500,560 |
|------|---|--|------------------|
| A | Refrigerant gas piping connection pipe | ø25.4 (Brazing) | ø28.58 (Brazing) |
| B | Refrigerant liquid piping connection pipe | ø12.7 (Flare) | |
| C | Refrigerant piping exit hole | ø88 (or ø100) | |
| D | Power supply entry hole | ø50 (Right · Left · Front), Long hole 40 x 80 (Bottom) | |
| F | Anchor bolt hole | M10 x 4 places | |
| G | Drain waste water hose hole | ø45 x 3 places | |
| H | Drain hole | ø20 x 10 places | |
| K | Refrigerant oil equalization piping connection pipe | ø9.52 (Flare) | |
| L | Carrying in or hole for hanging | 230 x 60 | |

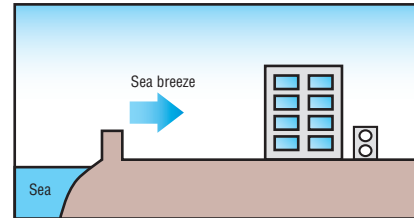
| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10(30) | 10(30) |
| L ₃ | 100 | 100 |
| L ₄ | 10(30) | Open |
| H ₁ | 1500 | Open |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | Open |

() : In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43°C or more.



Corrosion Protection Treatment series 4~60HP (11.2kW~168.0kW)

Corrosion Protection Treatment series are available with special coating applied for not only sheet metals but also small parts in order to prevent salt corrosion caused by sea breeze in area along coast line (Within approximately 500m from coast line).



| Model No. | Nominal Cooling Capacity |
|--------------|--------------------------|
| FDCS112KXEN6 | 11.2kW |
| FDCS112KXES6 | 11.2kW |
| FDCS140KXEN6 | 14.0kW |
| FDCS140KXES6 | 14.0kW |
| FDCS155KXEN6 | 15.5kW |
| FDCS155KXES6 | 15.5kW |
| FDCS224KXE6G | 22.4kW |
| FDCS280KXE6G | 28.0kW |
| FDCS335KXE6G | 33.5kW |

| Model No. | Nominal Cooling Capacity |
|--------------|--------------------------|
| FDCS280KXZE1 | 28.0kW |
| FDCS335KXZE1 | 33.5kW |
| FDCS400KXZE1 | 40.0kW |
| FDCS450KXZE1 | 45.0kW |
| FDCS475KXZE1 | 47.5kW |
| FDCS504KXZE1 | 50.4kW |
| FDCS560KXZE1 | 56.0kW |

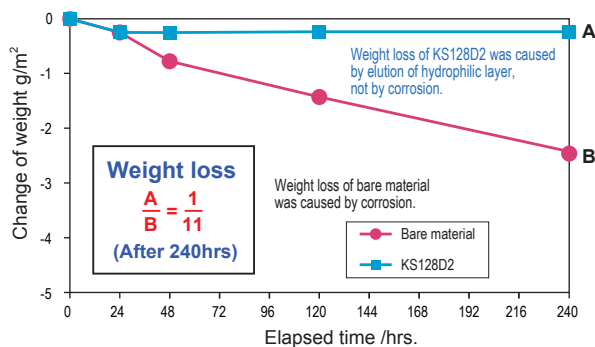
- Combination systems: 22~60HP (61.5kW~168.0kW) are the same as that of the standard KXZ series shown on previous pages.
- Specifications and Dimensions are the same as that of the standard KXZ series shown on previous pages.
- Non-CE Marking models.



Corrosion resistance performance of high anticorrosion fin

Comparison of weight loss by corrosion

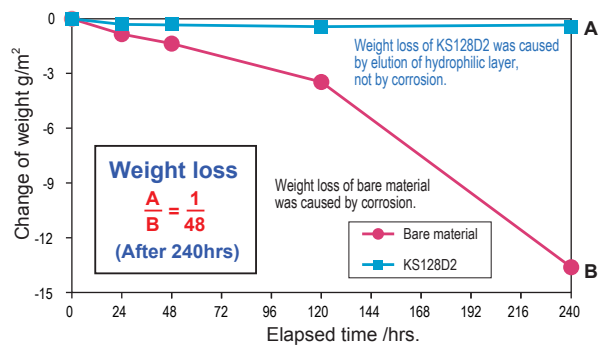
Neutral salt water spray test



<Test conditions>

JIS Z2371
NaCl concentration : 50g/L
pH : 6.5~7.2
temperature : 35°C

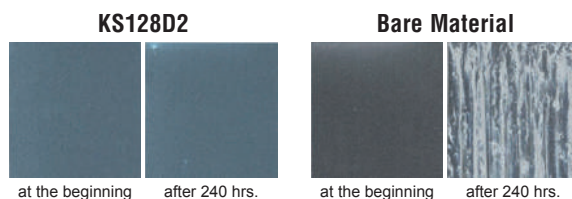
Acetic acid salt water spray test



<Test conditions>

JIS Z2371
NaCl concentration : 50g/L
pH : 3.1~3.3 (adjusted with acetic acid)
temperature : 35°C

Appearance comparison before and after acetic acid salt water spray test



For outside sheet metals, Cation electrodeposition coating is used for undercoat plus polyester powder coating or acrylic baked coating for top coat and corrosion protection is applied for heat exchanger, welded parts, fan guard, fin guard and other major parts.

Preventing corrosion by salt damage or sulfurous acid gas has made service life of this series longer while its exterior appearance has been greatly improved.

Durability of this series for anticorrosion is about two times that of standard outdoor units under the same conditions.

Additional treatment from the standard series

| | | Micro | KXZ |
|--|------------|---|--|
| Exterior panel | | undercoat: Cation electrodeposition coating topcoat: polyester powder coating or acrylic baked coating | undercoat: Cation electrodeposition coating topcoat: acrylic baked coating |
| Base plate | | undercoat: Cation electrodeposition coating topcoat: polyester powder coating or acrylic baked coating | undercoat: Cation electrodeposition coating topcoat: acrylic baked coating |
| Drain pan | | _____ | undercoat: Cation electrodeposition coating topcoat: acrylic baked coating |
| Fan motor | | application of anticorrosion compound | application of anticorrosion compound |
| Fan motor base | | 4~6HP _____ | application of anticorrosion compound |
| | | 8~12HP application of anticorrosion compound | |
| Heat exchanger | Fin | Precoated Aluminum Blue Fins in high anticorrosion specification | Precoated Aluminum Blue Fins in high anticorrosion specification |
| | pipe | application of anticorrosion compound | application of anticorrosion compound |
| | Side plate | application of anticorrosion compound | application of anticorrosion compound |
| Compressor | | application of anticorrosion compound | application of anticorrosion compound |
| Accumulator | | application of anticorrosion compound | application of anticorrosion compound |
| Receiver | | application of anticorrosion compound | application of anticorrosion compound |
| Control box | | 4~6HP _____ | galvanized steel sheet + undercoat: Cation electrodeposition coating + topcoat: acrylic baked finish |
| | | 8~12HP application of anticorrosion compound | |
| Baffle plate | | 4~6HP _____ | _____ |
| | | 8~12HP application of anticorrosion compound | |
| Service valve bracket | | 4~6HP _____ | galvanized steel sheet + undercoat: Cation electrodeposition coating + topcoat: acrylic baking finish |
| | | 8~12HP application of anticorrosion compound | |
| Screw for exterior panel | | zinc coating + chromate treatment + fluorine coating | zinc coating + chromate treatment + fluorine coating |
| Screw tap for inside of exterior panel | | zinc coating + chromate treatment + fluorine coating | zinc coating + chromate treatment + fluorine coating |

Corrosion protection treatment complies with regulation of The Japan Refrigeration and Air Conditioning Industry Association (JRA9002)

Caution

Even if the outdoor unit is protected with the anti-salt damage treatment, it cannot be perfectly free from rusting.

The following points should be kept in mind during installation and maintenance of the outdoor units.

Installation

- (1) When installing the outdoor unit close to the coastal area, provide a windbreak to protect it from direct sea breeze and salt water splash.
- (2) Select a well-drained place to install.
- (3) If any scratch or damages occurred on the outdoor unit during installation, repair it carefully.

Maintenance

- (1) Clean salt grains on the outdoor unit with fresh water periodically.
- (2) Apply rust preventive at regular intervals for maintenance depending on the conditions at the installation place (consulting with the withstanding capacity).
- (3) Confirm reset of screw tap after maintenance, if missing it may cause corrosion occurred from the hole of screw tap.
- (4) During prolonged non operation periods, protect the unit with covering.



Water cooled series

8~36HP (22.4~100.0kW)

| Model No. | Nominal Cooling Capacity | Model No. | Nominal Cooling Capacity |
|-----------------------------|--------------------------|-------------------------------|--------------------------|
| FDC224KXZWE1 | 22.4kW | FDC730KXZWE1(FDC224×2+FDC280) | 73.0kW |
| FDC280KXZWE1 | 28.0kW | FDC775KXZWE1(FDC224+FDC280×2) | 77.5kW |
| FDC335KXZWE1 | 33.5kW | FDC850KXZWE1(FDC280×3) | 85.0kW |
| FDC450KXZWE1(FDC224×2) | 45.0kW | FDC900KXZWE1(FDC280×2+FDC335) | 90.0kW |
| FDC500KXZWE1(FDC224+FDC280) | 50.0kW | FDC950KXZWE1(FDC280+FDC335×2) | 95.0kW |
| FDC560KXZWE1(FDC280×2) | 56.0kW | FDC1000KXZWE1(FDC335×3) | 100.0kW |
| FDC615KXZWE1(FDC280+FDC335) | 61.5kW | | |
| FDC670KXZWE1(FDC335×2) | 67.0kW | | |

Features

- 1. High efficiency (EER/COP)**
 - Energy saving → Reduction of operation cost!
- 2. Compact design**
 - Easy transportation and installation
 - Elevator carrying
- 3. BMS (Building Management System)**
 - Can use the same BMS as air-cooled KX
 - Available to large-scale and fine control
- 4. Serviceability & Maintenance**
 - Service and maintenance of main parts can be done from the front side only
 - Useful service tools (Mente-PC, SL-Checker etc.)

Applicable to

- 1. High-rise Building**
 - 50m <FDC> , -100m <FDCH>
 - 100m or higher in height <FDCW>
- 2. Glass-exterior facade Building**
 - Possible to hide KXZW units and to keep fine sight



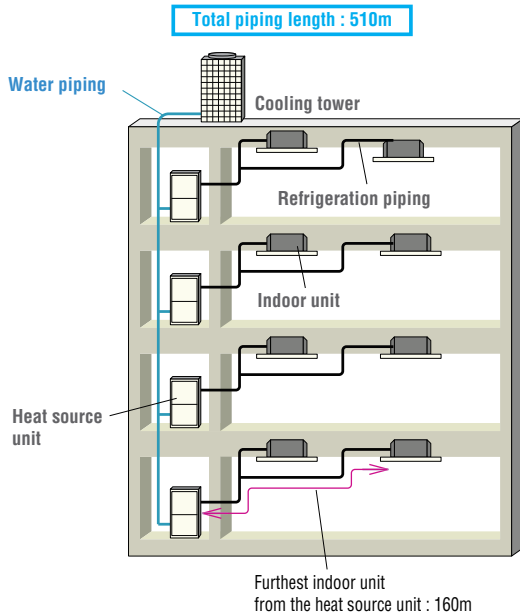
Specifications

| Item | Model | FDC224KXZWE1 | FDC280KXZWE1 | FDC335KXZWE1 | FDC450KXZWE1 | FDC500KXZWE1 | FDC560KXZWE1 | FDC615KXZWE1 | FDC670KXZWE1 |
|----------------------|---------|------------------------|--------------|--------------|--------------|---------------------|--------------|--------------|--------------|
| Combination (FDC) | | - | - | - | 224KXZWE1 | 224KXZWE1 | 280KXZWE1 | 280KXZWE1 | 335KXZWE1 |
| | | - | - | - | 224KXZWE1 | 280KXZWE1 | 280KXZWE1 | 335KXZWE1 | 335KXZWE1 |
| Nominal horse power | | 8HP | 10HP | 12HP | 16HP | 18HP | 20HP | 22HP | 24HP |
| Power source | | 3 Phase 380-415V, 50Hz | | | | | | | |
| Nominal capacity | Cooling | 22.4 | 28.0 | 33.5 | 45.0 | 50.0 | 56.0 | 61.5 | 67.0 |
| | Heating | 25.0 | 31.5 | 37.5 | 50.0 | 56.0 | 63.0 | 69.0 | 75.0 |
| Power consumption | Cooling | 4.23 | 5.75 | 8.13 | 8.49 | 9.83 | 11.5 | 13.7 | 16.3 |
| | Heating | 4.24 | 5.10 | 6.30 | 8.47 | 9.27 | 10.2 | 11.4 | 12.6 |
| EER | Cooling | 5.3 | 4.9 | 4.1 | 5.3 | 5.1 | 4.9 | 4.5 | 4.1 |
| COP | Heating | 5.9 | 6.2 | 6.0 | 5.9 | 6.0 | 6.2 | 6.1 | 6.0 |
| Exterior dimensions | HxWxD | mm 1100x780x550 | | | | mm (1100x780x550)x2 | | | |
| Sound pressure level | dB(A) | 48 | 50 | 52 | 50 | 52 | 53 | 54 | 55 |
| Net weight | kg | 185 | | | | 185x2 | | | |

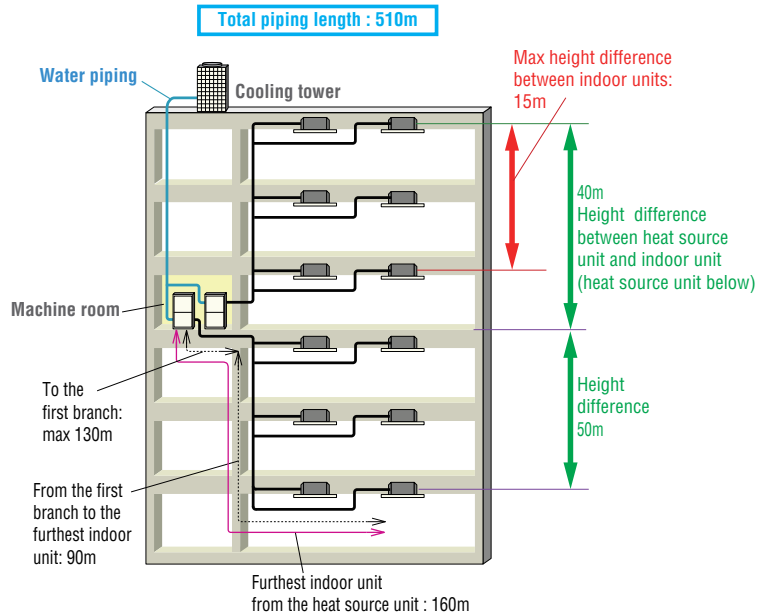
| Item | Model | FDC730KXZWE1 | FDC775KXZWE1 | FDC850KXZWE1 | FDC900KXZWE1 | FDC950KXZWE1 | FDC1000KXZWE1 |
|----------------------|---------|------------------------|--------------|--------------|--------------|--------------|---------------|
| Combination (FDC) | | 224KXZWE1 | 224KXZWE1 | 280KXZWE1 | 280KXZWE1 | 280KXZWE1 | 335KXZWE1 |
| | | 224KXZWE1 | 280KXZWE1 | 280KXZWE1 | 280KXZWE1 | 335KXZWE1 | 335KXZWE1 |
| | | 280KXZWE1 | 280KXZWE1 | 280KXZWE1 | 335KXZWE1 | 335KXZWE1 | 335KXZWE1 |
| Nominal horse power | | 26HP | 28HP | 30HP | 32HP | 34HP | 36HP |
| Power source | | 3 Phase 380-415V, 50Hz | | | | | |
| Nominal capacity | Cooling | 73.0 | 77.5 | 85.0 | 90.0 | 95.0 | 100 |
| | Heating | 82.5 | 90.0 | 95.0 | 100 | 106 | 112 |
| Power consumption | Cooling | 14.2 | 15.5 | 17.5 | 19.5 | 21.7 | 24.3 |
| | Heating | 13.8 | 14.8 | 15.4 | 16.4 | 17.6 | 18.8 |
| EER | Cooling | 5.1 | 5.0 | 4.9 | 4.6 | 4.4 | 4.1 |
| COP | Heating | 6.0 | 6.1 | 6.2 | 6.1 | 6.0 | 6.0 |
| Exterior dimensions | HxWxD | mm (1100x780x550)x3 | | | | | |
| Sound pressure level | dB(A) | 54 | 54 | 55 | 56 | 56 | 57 |
| Net weight | kg | 185x3 | | | | | |

The data is based on the rating condition:
 Cooling: Indoor temp. of 27 °C DB, 19 °C WB, and heat source unit inlet water temp. of 30 °C, water flow rate 96 L/min
 Heating: Indoor temp. of 20 °C DB, 15 °C WB, and heat source unit inlet water temp. of 20 °C, water flow rate 96 L/min

Heat source units on every floor
- New building projects -

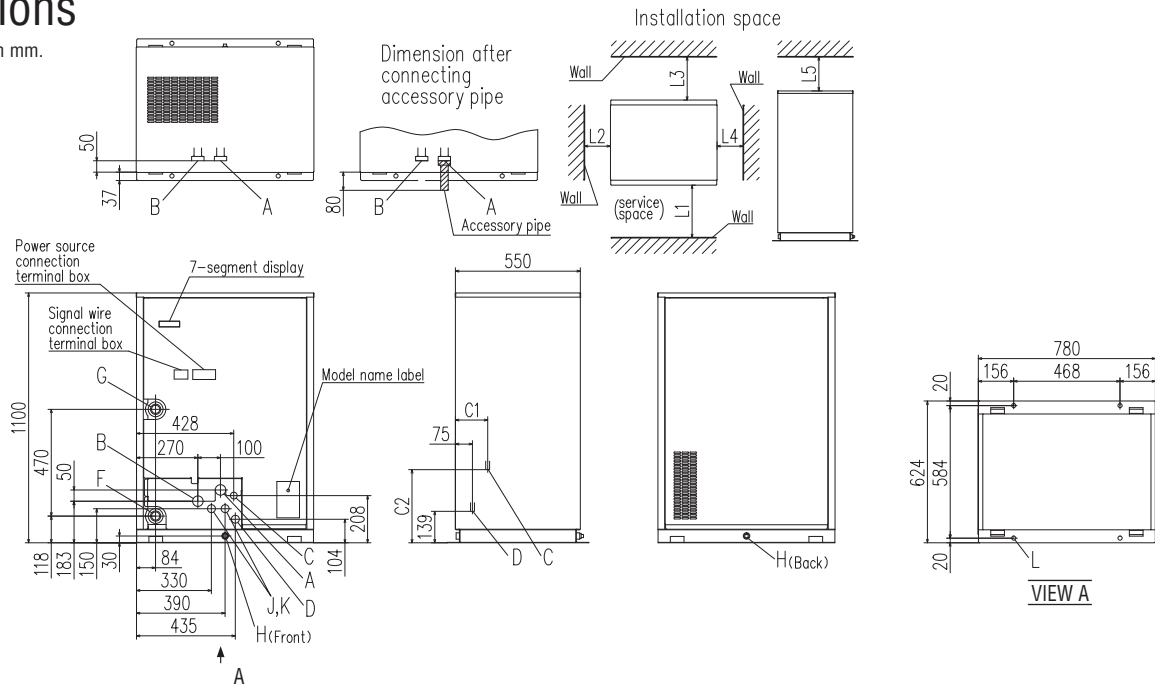


Heat source units in the machine room
- Renovation projects -



Dimensions

All measurements in mm.



| Mark | Content | |
|------|-----------------------|----------------------|
| A | High/low gas line | Refer to piping size |
| B | - | Not to use. |
| C | Liquid line | Refer to piping size |
| D | Oil equalization line | |
| F | Water inlet | R1 1/4 |
| G | Water outlet | R1 1/4 |
| H | Drain outlet | Rp 1/2, 2places |
| J | Power source intake | ø35 |
| K | Signal wiring intake | ø35 |
| L | Anchor bolt hole | ø18, 4places |

| Dimension | FDC-KXZWE1 | |
|-----------|------------------------|-----|
| | 224,280 | 335 |
| C1 | 142 | 139 |
| C2 | 322 | 316 |
| | Installation example 1 | |
| Dimension | | |
| L1 | 600 or more | |
| L2 | 20 or more | |
| L3 | 500 or more | |
| L4 | 20 or more | |
| L5 | 300 or more | |

Piping size

| | FDC224KXZWE1 | FDC280KXZWE1 | FDC335KXZWE1 | Connection method |
|-----------------------|--------------|--------------|--------------|-------------------|
| High/low gas line | ø19.05 | ø22.22 | ø25.4 | Flange |
| Liquid line | ø9.52 | ø9.52 | ø12.7 | Flare |
| Oil equalization line | ø9.52 | ø9.52 | ø9.52 | |



High Head series (100m) **cooling only**

14~48HP (40.0~136.0kW)

Model No. Nominal Cooling Capacity

| | |
|------------------|---------------|
| FDCH335CKXE6G-K* | 33.5 kW(380V) |
| FDCH400CKXE6G | 40.0 kW(380V) |
| FDCH450CKXE6G | 45.0 kW(380V) |
| FDCH504CKXE6G | 50.4 kW(380V) |
| FDCH560CKXE6G | 56.0 kW(380V) |
| FDCH560CKXE6G-K* | 56.0 kW(380V) |
| FDCH615CKXE6G | 61.5 kW(380V) |
| FDCH680CKXE6G | 68.0 kW(380V) |

*FDCH335CKXE6G-K & FDCH560CKXE6G-K are only used for combining with other models.

- Maximum allowable height difference between the outdoor and the indoor unit located at the lowest height position has been increased from 50m to 100m.

(When the outdoor unit is located at higher position than the indoor unit)

- Non-CE Marking models.

Model No. Nominal Cooling Capacity

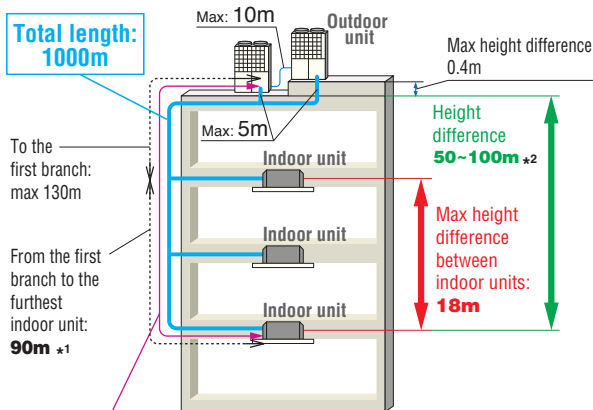
| | |
|------------------------------------|----------------|
| FDCH735CKXE6G (FDCH335-K+FDCH400) | 73.5 kW(380V) |
| FDCH800CKXE6G (FDCH400x2) | 80.0 kW(380V) |
| FDCH850CKXE6G (FDCH400+FDCH450) | 85.0 kW(380V) |
| FDCH900CKXE6G (FDCH450x2) | 90.0 kW(380V) |
| FDCH960CKXE6G (FDCH450+FDCH504) | 96.0 kW(380V) |
| FDCH1010CKXE6G (FDCH504x2) | 101.0 kW(380V) |
| FDCH1065CKXE6G (FDCH504+FDCH560) | 106.5 kW(380V) |
| FDCH1130CKXE6G (FDCH560x2) | 113.0 kW(380V) |
| FDCH1180CKXE6G (FDCH560-K+FDCH615) | 118.0 kW(380V) |
| FDCH1235CKXE6G (FDCH615x2) | 123.5 kW(380V) |
| FDCH1300CKXE6G (FDCH615+FDCH680) | 130.0 kW(380V) |
| FDCH1360CKXE6G (FDCH680x2) | 136.0 kW(380V) |



**FDCH335CKXE6G-K
FDCH400CKXE6G
FDCH450CKXE6G**



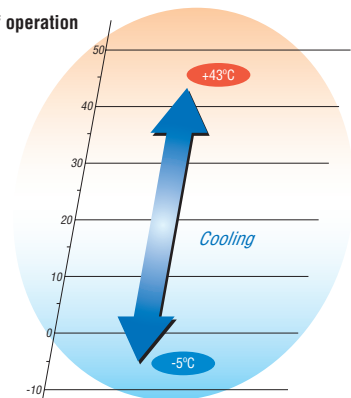
FDCH504~680CKXE6G



*1 The difference between the longest and shortest indoor unit piping from the first branch must be within 40m.

*2 In case of less than 50m, the High Head models can not be applied.
In case Indoor unit is higher than outdoor unit, the High Head models can not be applied.

Range of operation



Specifications

| Item | Model | FDCH400CKXE6G | FDCH450CKXE6G | FDCH504CKXE6G | FDCH560CKXE6G | FDCH615CKXE6G | FDCH680CKXE6G | | |
|------------------------------------|-------------------|------------------------|----------------------------|---------------|----------------|---------------|---------------|-------|-------|
| Nominal horse power | | 14HP | 16HP | 18HP | 20HP | 22HP | 24HP | | |
| Power source | | 3 Phase 380V, 60Hz | | | | | | | |
| Starting current | A | 8 | | | | | | | |
| Max current | A | 47 | | | | | | | |
| Nominal capacity | Cooling | kW | 40.0 | 45.0 | 50.4 | 56.0 | 61.5 | 68.0 | |
| Electrical characteristics | Power consumption | Cooling | kW | 11.27 | 12.97 | 14.73 | 16.79 | 20.37 | 24.98 |
| Exterior dimensions | HxWxD | mm | 1690x1350x720 | | | 2048x1350x720 | | | |
| Net weight | | kg | 326 | | 358 | | 377 | | |
| Sound pressure level | Cooling | dB(A) | 59.5 | 62.5 | 61.5 | 63.0 | 64.5 | 65.0 | |
| Refrigerant | Type/GWP | | R410A/2088 | | | | | | |
| | Charge | kg/TCO ₂ Eq | 11.5/24.012 | | | | | | |
| Refrigerant piping size | Liquid line | mm(in) | ø12.7(1/2") | | | ø15.88(5/8") | | | |
| | Gas line | mm(in) | ø25.4(1") [ø28.58(1 1/8")] | | ø28.58(1 1/8") | | | | |
| Capacity connection | | % | 50-200 | | | 50-160 | | | |
| Number of connectable indoor units | | | 36 | 40 | 36 | 40 | 44 | 49 | |

| Item | Model | FDCH735CKXE6G | FDCH800CKXE6G | FDCH850CKXE6G | FDCH900CKXE6G | | |
|------------------------------------|-------------------|--------------------|--------------------------------|---------------|---------------|-------|-------|
| Combination (FDCH) | | 335CKXE6G-K | 400CKXE6G | 400CKXE6G | 450CKXE6G | | |
| | | 400CKXE6G | 400CKXE6G | 450CKXE6G | 450CKXE6G | | |
| Nominal horse power | | 26HP | 28HP | 30HP | 32HP | | |
| Power source | | 3 Phase 380V, 60Hz | | | | | |
| Starting current | A | 16 | | | | | |
| Max current | A | 94 | | | | | |
| Nominal capacity | Cooling | kW | 73.5 | 80.0 | 85.0 | 90.0 | |
| Electrical characteristics | Power consumption | Cooling | kW | 20.21 | 22.54 | 24.24 | 25.94 |
| Exterior dimensions | HxWxD | mm | 1690x2700x720 | | | | |
| Net weight | | kg | 326x2 | | | | |
| Refrigerant charge | R410A | kg | 11.5x2 | | | | |
| Refrigerant piping size | Liquid line | mm(in) | ø19.05(3/4") | | | | |
| | Gas line | mm(in) | ø31.8(1 1/4") [ø34.92(1 3/8")] | | | | |
| Capacity connection | | % | 50-160 | | | | |
| Number of connectable indoor units | | | 53 | 58 | 61 | 65 | |

| Item | Model | FDCH960CKXE6G | FDCH1010CKXE6G | FDCH1065CKXE6G | FDCH1130CKXE6G | | |
|------------------------------------|-------------------|--------------------|--------------------------------|----------------|----------------|---------------|-------|
| Combination (FDCH) | | 450CKXE6G | 504CKXE6G | 504CKXE6G | 560CKXE6G | | |
| | | 504CKXE6G | 504CKXE6G | 560CKXE6G | 560CKXE6G | | |
| Nominal horse power | | 34HP | 36HP | 38HP | 40HP | | |
| Power source | | 3 Phase 380V, 60Hz | | | | | |
| Starting current | A | 16 | | | | | |
| Max current | A | 94 | | | | | |
| Nominal capacity | Cooling | kW | 96.0 | 101.0 | 106.5 | 113.0 | |
| Electrical characteristics | Power consumption | Cooling | kW | 27.70 | 29.46 | 31.52 | 33.58 |
| Exterior dimensions | HxWxD | mm | 2048x2700x720 | | | | |
| Net weight | | kg | 326+358 | | 358x2 | | |
| Refrigerant charge | R410A | kg | 11.5x2 | | | | |
| Refrigerant piping size | Liquid line | mm(in) | ø19.05(3/4") | | | ø22.22(7/8") | |
| | Gas line | mm(in) | ø31.8(1 1/4") [ø34.92(1 3/8")] | | | ø38.1(1 1/2") | |
| Capacity connection | | % | 50-160 | | 50-130 | | |
| Number of connectable indoor units | | | 69 | 59 | 62 | 66 | |

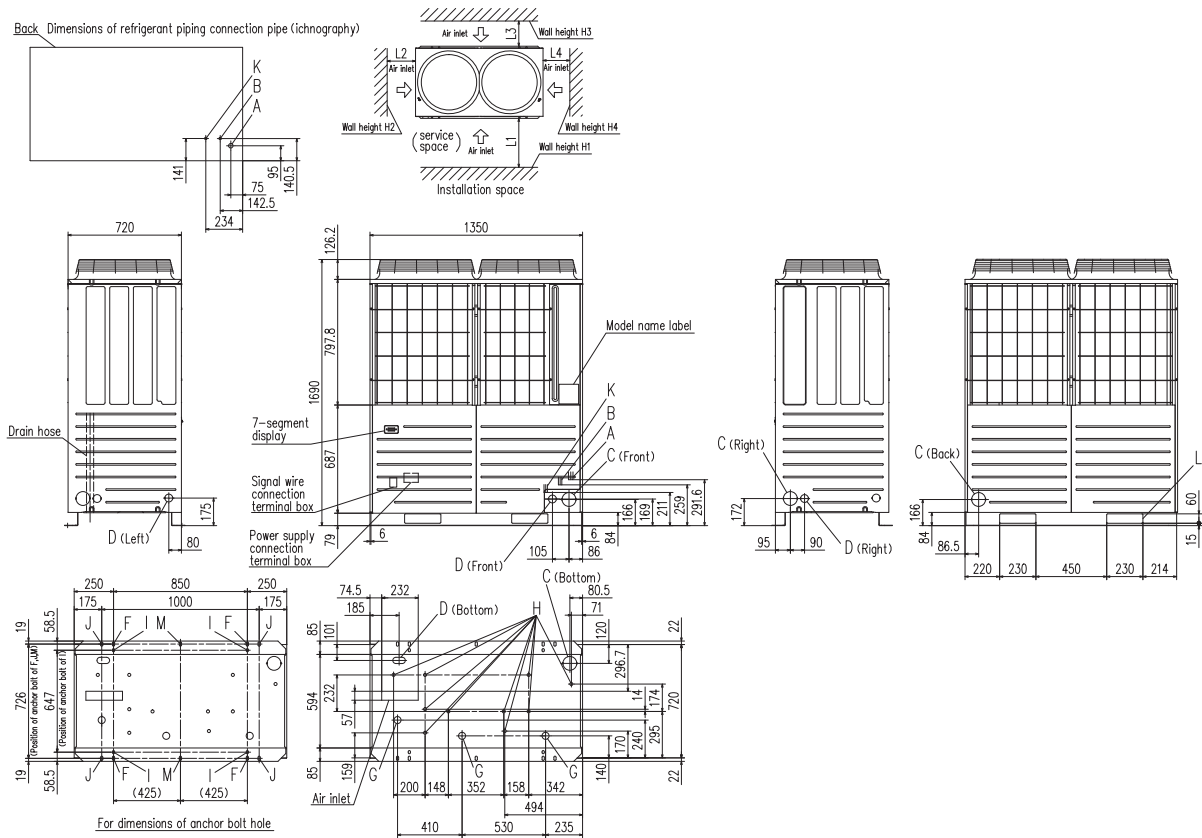
| Item | Model | FDCH1180CKXE6G | FDCH1235CKXE6G | FDCH1300CKXE6G | FDCH1360CKXE6G | | |
|------------------------------------|-------------------|--------------------|----------------|----------------|----------------|-------|-------|
| Combination (FDCH) | | 560CKXE6G-K | 615CKXE6G | 615CKXE6G | 680CKXE6G | | |
| | | 615CKXE6G | 615CKXE6G | 680CKXE6G | 680CKXE6G | | |
| Nominal horse power | | 42HP | 44HP | 46HP | 48HP | | |
| Power source | | 3 Phase 380V, 60Hz | | | | | |
| Starting current | A | 16 | | | | | |
| Max current | A | 94 | | | | | |
| Nominal capacity | Cooling | kW | 118.0 | 123.5 | 130.0 | 136.0 | |
| Electrical characteristics | Power consumption | Cooling | kW | 37.16 | 40.74 | 45.35 | 49.96 |
| Exterior dimensions | HxWxD | mm | 2048x2700x720 | | | | |
| Net weight | | kg | 377x2 | | | | |
| Refrigerant charge | R410A | kg | 11.5x2 | | | | |
| Refrigerant piping size | Liquid line | mm(in) | ø22.22(7/8") | | | | |
| | Gas line | mm(in) | ø38.1(1 1/2") | | | | |
| Capacity connection | | % | 50-130 | | | | |
| Number of connectable indoor units | | | 69 | 72 | 76 | 80 | |

- The data are measured under the following conditions (ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
- Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
- 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.
- [] : Pipe sizes applicable to European installations are shown in parentheses.

Dimensions

All measurements in mm.

FDCH335CKXE6G-K, 400CKXE6G, 450CKXE6G



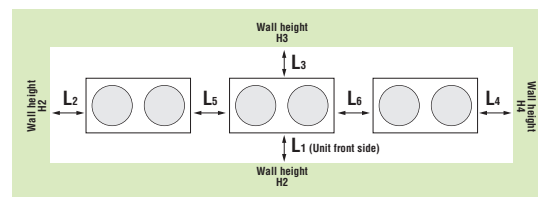
| Mark | Content | 335-K | 400 | 450 |
|------|---|--|-----|-----------------|
| A | Refrigerant gas piping connection pipe | ø25.4(Brazing) | | ø28.58(Brazing) |
| B | Refrigerant liquid piping connection pipe | ø12.7(Flare) | | |
| C | Refrigerant piping exit hole | ø88(or ø100) | | |
| D | Power supply entry hole | ø50 (Right · Left · Front), Long hole 40 x 80 (Bottom) | | |
| F | Anchor bolt hole | M10, 4 pcs | | |
| G | Drain waste water hose hole | ø45, 3 pcs | | |
| H | Drain hole | ø20, 10 pcs | | |
| K | Refrigerant oil equalization piping connection pipe | ø9.52(Flare) | | |
| L | Carrying in or hole for hanging | 230 x 60 | | |

| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10 | 10 |
| L ₃ | 100 | 100 |
| L ₄ | 10 | Open |
| H ₁ | 1500 | Open |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | Open |

Notes:

- (1) The unit must be fixed with anchor bolts.
- (2) Leave a 2m or larger space above the unit.
- (3) The unit name plate is attached on the lower right corner of the front panel.
- (4) The ports for refrigerant pipe and power cable penetrations are covered with half-blanks. Please cut off a half-blank with nippers in using these ports.
- (5) Use a ø88 port for refrigerant pipe connection.
- (6) Anchor holes marked "L J" (four holes for M10) are for a renewal installation.
- (7) The oil-equalising pipe K should be used when outdoor units are used in combination. (For 14,16Hp only)

When more than one unit is installed

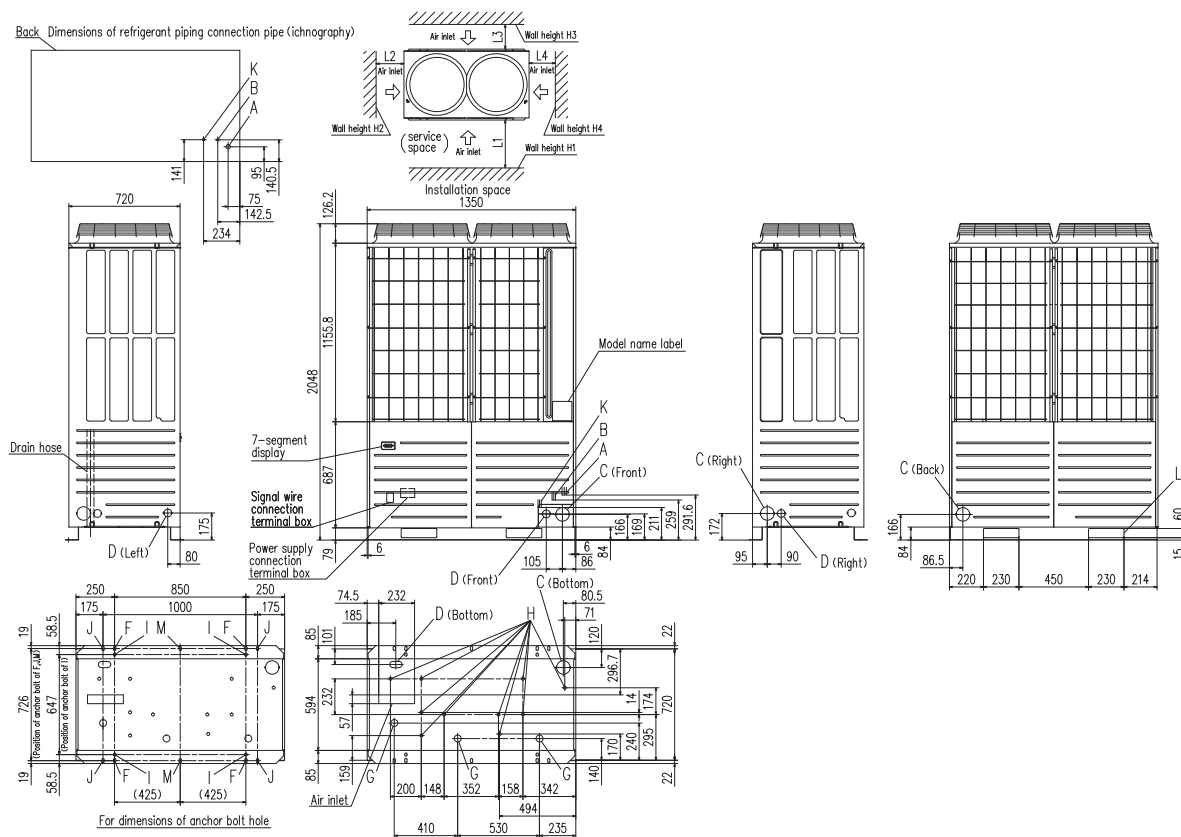


| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10 | 200 |
| L ₃ | 100 | 300 |
| L ₄ | 10 | Open |
| L ₅ | 0 | 400 |
| L ₆ | 0 | 400 |
| H ₁ | 1500 | No limit |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | No limit |

Dimensions

All measurements in mm.

FDCH504CKXE6G, 560CKXE6G, 560CKXE6G-K, 615CKXE6G, 680CKXE6G



| Mark | Content | |
|------|---|--|
| A | Refrigerant gas piping connection pipe | ø28.58(Brazing) |
| B | Refrigerant liquid piping connection pipe | ø12.7(Flare) |
| C | Refrigerant piping exit hole | ø88(or ø100) |
| D | Power supply entry hole | ø50 (Right · Left · Front), Long hole 40 x 80 (Bottom) |
| F | Anchor bolt hole | M10, 4 pcs |
| G | Drain waste water hose hole | ø45, 3 pcs |
| H | Drain hole | ø20, 10 pcs |
| K | Refrigerant oil equalization piping connection pipe | ø9.52(Flare) |
| L | Carrying in or hole for hanging | 230 x 60 |

| Installation example | | |
|----------------------|----------|----------|
| Dimensions | 1 | 2 |
| L ₁ | 500 | Open |
| L ₂ | 10 | 10 |
| L ₃ | 100 | 100 |
| L ₄ | 10 | Open |
| H ₁ | 1500 | Open |
| H ₂ | No limit | No limit |
| H ₃ | 1000 | No limit |
| H ₄ | No limit | Open |

Notes:

- (1) The unit must be fixed with anchor bolts.
- (2) Leave a 2m or larger space above the unit.
- (3) The unit name plate is attached on the lower right corner of the front panel.
- (4) The ports for refrigerant pipe and power cable penetrations are covered with half-blanks. Please cut off a half-blank with nippers in using these ports.
- (5) Use a ø88 port for refrigerant pipe connection.
- (6) Anchor holes marked "L J" (four holes for M10) are for a renewal installation.
- (7) The oil-equalising pipe K should be used when outdoor units are used in combination.



Refresh series

8, 10HP(22.4kW · 28.0kW)

If replacing a used unit with a new one, these units can reuse existing piping.

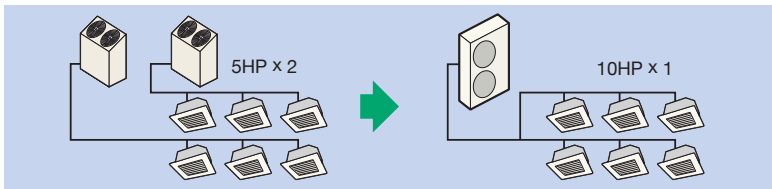


| Model No. | Nominal Cooling Capacity |
|-------------|--------------------------|
| FDCR224KXE6 | 22.4kW |
| FDCR280KXE6 | 28.0kW |

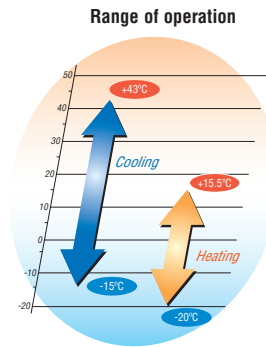
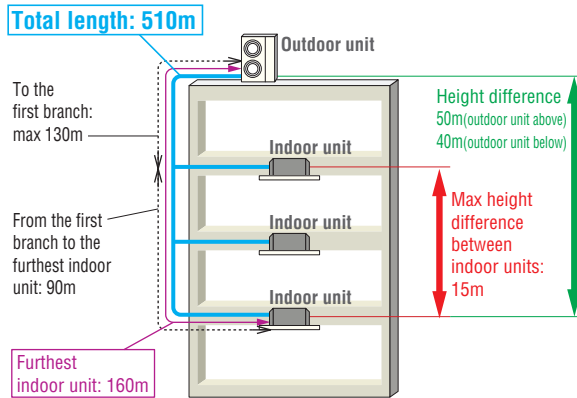
<Option>

FDCR-KIT-E : Service valve kit

- Applies to a wide range of pipe sizes (R22, R407C, R410A standard size).
- Meets to a short period of renewal installation.
- Savings on replacement expenses such as scrapping waste material or procuring new pipe.
- Possible to replace the existing unit with a new larger capacity unit.
- Possible to replace plural systems with one system.
For example: Existing 5HP × 2units can be replaced with a new 10HP × 1unit.



Note: FDUT15KXE6F-E, FDTC15KXE1 and FDK15KXE1 can not be connected to the above systems.



Specifications

| Item | | Model | FDCR224KXE6 | FDCR280KXE6 |
|------------------------------------|-------------------|------------------------|--------------------------|-----------------------------|
| Nominal horse power | | | 8HP | 10HP |
| Power source | | | 3 Phase 380-415V, 50Hz | |
| Starting current | | A | 5 | |
| Max current | | A | 20 | |
| Nominal capacity | Cooling | kW | 22.4 | 28.0 |
| | Heating | kW | 25.0 | 31.5 |
| Electrical characteristics | Power consumption | Cooling | 5.60 | 8.09 |
| | | Heating | 6.03 | 8.21 |
| Exterior dimensions | | HxWxD | 1675x1080x480 | |
| Net weight | | kg | 224 | |
| Sound pressure level | | Cooling/Heating | 58/58 | 59/60 |
| Refrigerant | Type / GWP | | R410A / 2088 | |
| | Charge | kg/TCO ₂ Eq | 11.5 / 24.012 | |
| Refrigerant piping size | Liquid line | mm(in) | ø9.52(3/8")~ø15.88(5/8") | |
| | Gas line | mm(in) | ø19.05(3/4")~ø25.4(1") | ø22.22(7/8")~ø28.58(1 1/8") |
| Capacity connection | | % | 50~130 | |
| Number of connectable indoor units | | | 13 | 16 |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.

Advanced refresh function

◆ When the existing unit is operable

The existing pipe can be reused by cooling operation only.

Pipe refresh kit and Service valve kit are not required.

1. Implement cooling operation of all indoor units for more than 30 minutes.
2. Implement pump-down after cooling operation.
3. Recover refrigerant and remove the existing outdoor unit and indoor unit.

◆ When the existing unit is not operable

The existing pipe can be reused by washing operation after connecting Refresh outdoor units, Pipe refresh kit and Service valve kit.

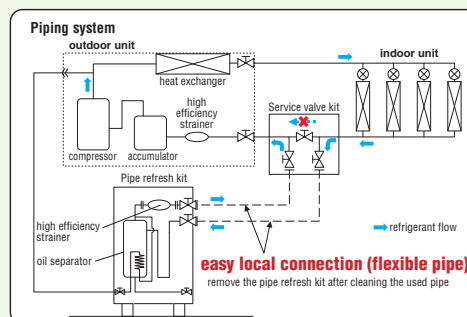
Connecting and removing of Refresh outdoor units and Pipe refresh kit is very easy by use of flexible pipe and flanges.

1. Pipe washing operation is implemented by changing dip switch on the outdoor unit PCB.
2. Completing washing is monitored via 7-segment display on the outdoor unit PCB.
3. As washing operation is about 60 minutes, it can meet to a required short period of renewal installation.

7-segment display

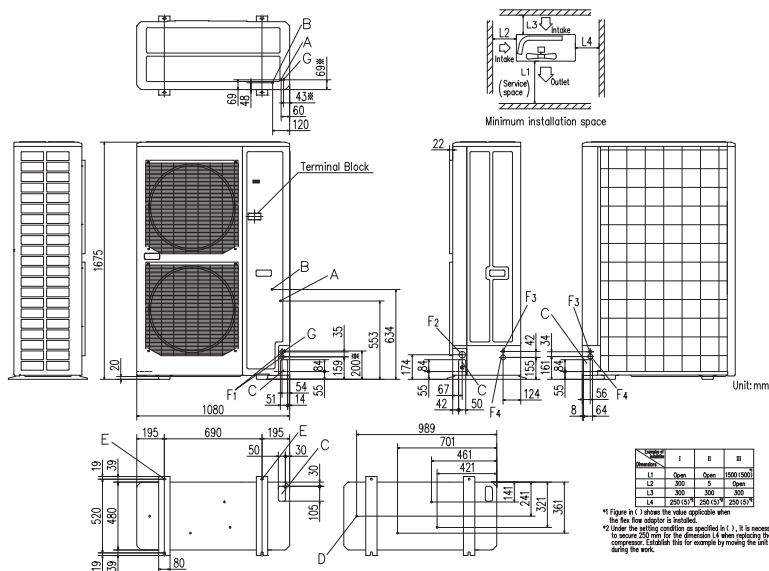


Pipe refresh kit (FDCR-KIT-E)

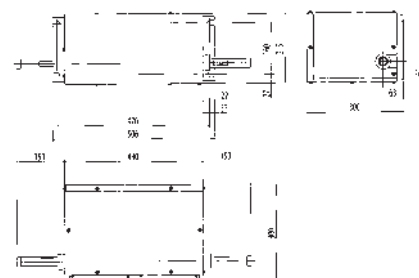


Dimensions

All measurements in mm.



Service valve kit



| Mark | Content | |
|------|---|-----------------------|
| A | Service valve connection of the attached connecting pipe (gas side) | ø19.05 (3/4") (Flare) |
| B | Service valve connection (liquid side) | ø12.7 (1/2) (Flare) |
| C | Pipe/cable draw-out hole | 4places |
| D | Drain discharge hole | ø20 × 4places |
| E | Anchor bolt hole | M10 × 4places |
| F1 | Cable draw-out hole | ø30 |
| F2 | Cable draw-out hole | ø45 |
| F3 | Cable draw-out hole | ø22 |
| F4 | Cable draw-out hole | ø34 |
| G | Connecting position of the local pipe. (gas side) | ø25.4 (1") (Brazing) |

Notes:

- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (4) Leave 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the units height.
- (6) The model name label is attached on the lower right corner of the front.
- (7) Connect the Service valve with local pipe by using the pipe of the attachment. (Gas side only)
- (8) Mark ※ shows the connecting position of the local pipe. (Gas side only)



Refrigerant piping

Installation of Interconnecting Pipework

KXZ/KX6 equipment is manufactured to the highest standards of quality and reliability. It is imperative the method of installation and the materials used are also to high standards, to ensure trouble free operation and long term reliability.

The interconnecting pipework must be installed by a competent and trained engineer. Refrigeration quality copper tube must be used, soft copper coils or half-hard straight lengths. The refrigeration quality tube must be soft drawn seamless high grade copper pipe. The copper tube must be selected taking into account the higher operating pressures of R410A refrigerant, and that high pressures will occur throughout the system because of the reverse cycle operation. All pipework material used should be EN12735 European standard.

The supplied branch pipe kits, must be used to make connections to indoor units, and the supplied manifold kits must be used to make connections between outdoor units (where applicable); it is not permitted to use standard fittings such as elbows, tees etc. The branch pipes shall be installed in accordance with the manufacturer's instructions, allowing unrestricted flow of refrigerant, and in accordance with European standard E378. All brazed joints shall be made with dry nitrogen purge to ensure the prevention of oxidation to the internal surface of the copper pipes. The ingress of moisture, dirt and any other contaminants to the interior of the copper pipes, and air conditioning units, must be prevented during the installation procedure. After the installation of pipework, prior to the

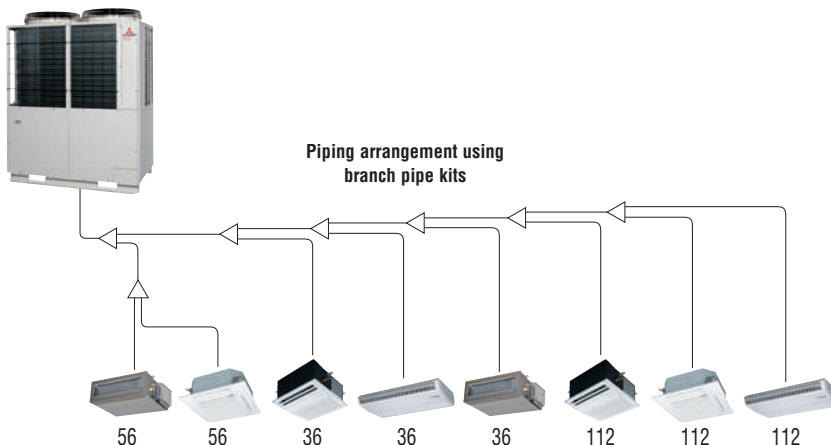
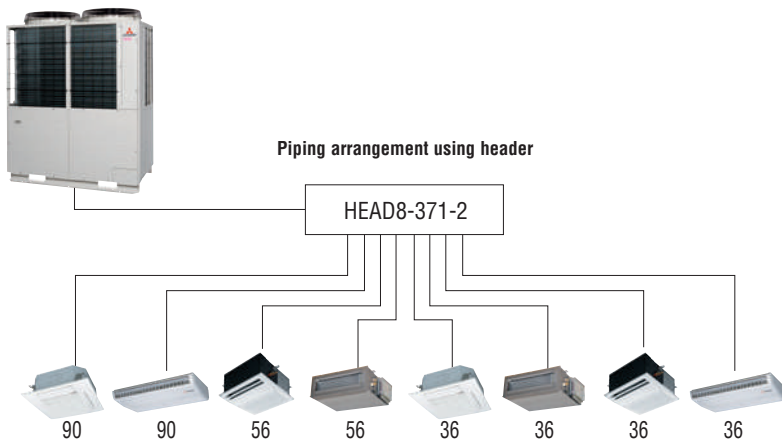
connection of the outdoor units, and sealing of insulation joints, the pipework must be pressure tested for leakage, using dry nitrogen.

Additional Refrigerant

Additional R410A refrigerant only shall be used, and must be charged by weight only, using electronic scales. The amount of additional refrigerant must be accurately calculated from the manufacturer's data, based on the length and diameter of each section of the liquid refrigerant pipework of the system.

The products contains fluorinated greenhouse gases covered by Kyoto protocol.

Single outdoor unit piping examples:



Main (Outdoor unit side branching pipe – Indoor unit side first branching pipe)

If the longest distance (measured between the outdoor unit and the farthest indoor unit) is 90m or longer (actual length), please change the main pipe size according to the table below.

| Outdoor unit | Main pipe size (normal) | | Pipe size for an actual length of 90m or longer | | mm | inch | | | |
|--------------|-----------------------------------|----------------|---|----------------|----------------|------------------------------------|------------------------------------|----------------|----------------|
| | Gas pipe | Liquid pipe | Gas pipe | Liquid pipe | | | | | |
| 280 | ø22.22 × t 1.0 | ø9.52 × t 0.8 | ø25.4 (ø22.22) × t 1.0 | ø12.7 × t 0.8 | ø9.52 | 3/8" | | | |
| 335 | ø25.4 (ø22.22) × t 1.0 | ø12.7 × t 0.8 | | | ø28.58 × t 1.0 | ø12.7 | 1/2" | | |
| 400 | ø25.4 (ø28.58) × t 1.0 | | ø31.8 × t 1.1 (ø28.58 × t 1.0) | ø15.88 × t 1.0 | ø15.88 | 5/8" | | | |
| 450 | ø28.58 × t 1.0 | | | | ø19.05 × t 1.0 | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 | 3/4" | |
| 475 | | | ø31.8 × t 1.1 (ø34.92 × t 1.2) | ø15.88 × t 1.0 | | | ø22.22 | 7/8" | |
| 500 | | | | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | ø25.4 | 1" |
| 560 | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | | | | ø22.22 × t 1.0 | ø28.58 |
| 615 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | | | | | ø15.88 × t 1.0 | ø31.8 | | 1 1/4" |
| 670 | | | | | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | | ø19.05 × t 1.0 |
| 735 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | | | | | ø15.88 × t 1.0 | | | |
| 800 | | | | | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | | ø19.05 × t 1.0 |
| 850 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | ø15.88 × t 1.0 | | | | ø50.8 | | | |
| 900 | | | | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | | ø22.22 × t 1.0 |
| 950 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | ø15.88 × t 1.0 | | | ø19.05 × t 1.0 | | | | |
| 1000 | | | | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | | ø19.05 × t 1.0 |
| 1060 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | ø15.88 × t 1.0 | | | ø19.05 × t 1.0 | | | | |
| 1120 | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | | ø19.05 × t 1.0 | ø22.22 × t 1.0 | | |
| 1200 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | ø15.88 × t 1.0 | | | ø19.05 × t 1.0 | | | | |
| 1250 | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | | ø19.05 × t 1.0 | ø22.22 × t 1.0 | | |
| 1300 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | ø15.88 × t 1.0 | | | ø19.05 × t 1.0 | | | | |
| 1350 | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | | ø19.05 × t 1.0 | ø22.22 × t 1.0 | | |
| 1425 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | ø15.88 × t 1.0 | | | ø19.05 × t 1.0 | | | | |
| 1450 | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | | ø19.05 × t 1.0 | ø22.22 × t 1.0 | | |
| 1500 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | ø15.88 × t 1.0 | | | ø19.05 × t 1.0 | | | | |
| 1560 | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | | ø19.05 × t 1.0 | ø22.22 × t 1.0 | | |
| 1620 | ø31.8 × t 1.1 (ø34.92 × t 1.2) | ø15.88 × t 1.0 | | | ø19.05 × t 1.0 | | | | |
| 1680 | | | ø38.1 × t 1.35 (ø34.92 × t 1.2) | ø19.05 × t 1.0 | | ø19.05 × t 1.0 | ø22.22 × t 1.0 | | |

Please use C1220T-1/2H for ø19.05 or larger pipes.
Pipe sizes applicable to European installations are shown in parentheses.

Branch pipes



DIS-22-1G/DIS-180-1G

Header pipe



HEAD6-180-1G

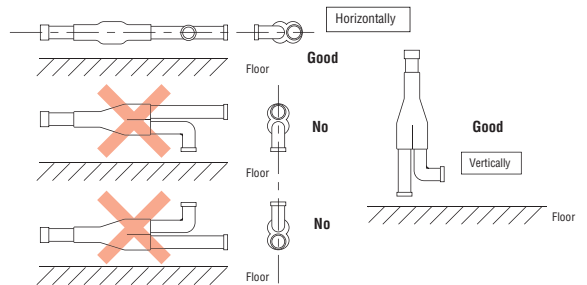
Combination outdoor unit manifold



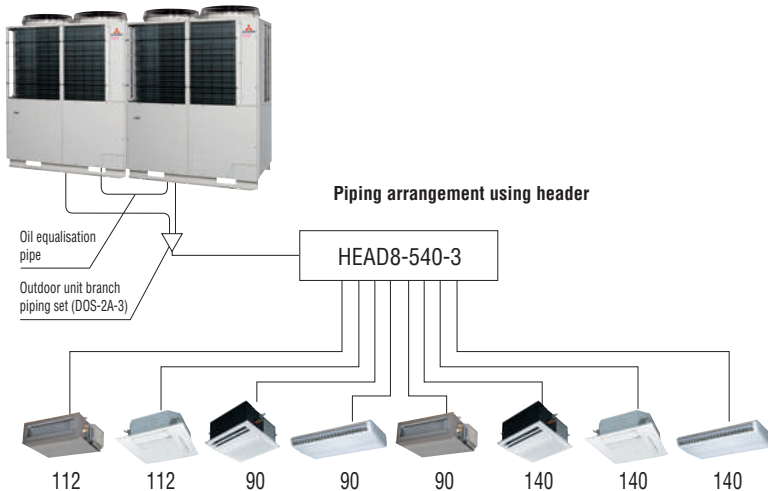
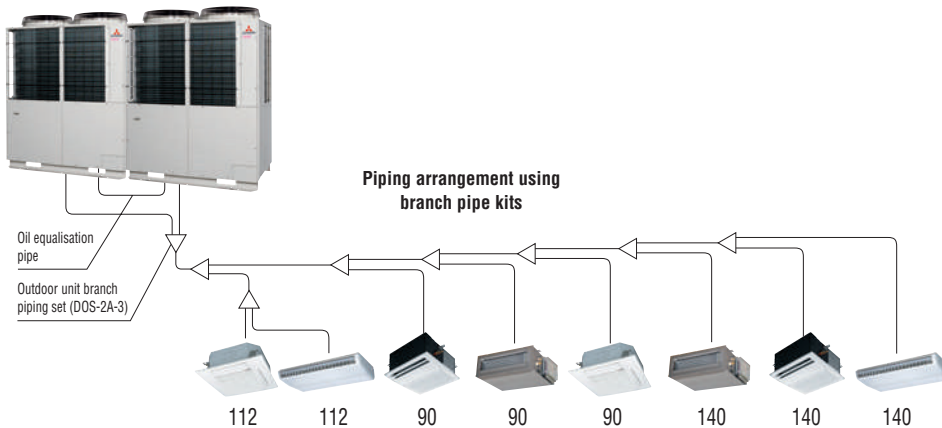
DIS-371-1G/DIS-540-3



DOS-2A-3
DOS-3A-3



Combination outdoor unit piping examples:



Outdoor unit's branch piping set

| Outdoor unit | Branch piping set |
|---------------------------------|-------------------|
| For two units (for 615~1120) | DOS-2A-3 |
| For three units (for 1200~1680) | DOS-3A-3 |

Indoor unit's first branch piping set

| Total capacity of indoor units | Branch piping set | Header set | |
|--------------------------------|-------------------|--------------|----------------|
| | | Model | Branches |
| ~179 | DIS-22-1G | HEAD4-22-1G | Max 4 branches |
| 180~370 | DIS-180-1G | HEAD6-180-1G | Max 6 branches |
| 371~539 | DIS-371-1G | HEAD8-371-2 | Max 8 branches |
| 540~ | DIS-540-3 | HEAD8-540-3 | Max 8 branches |

Electrical wiring – power supply

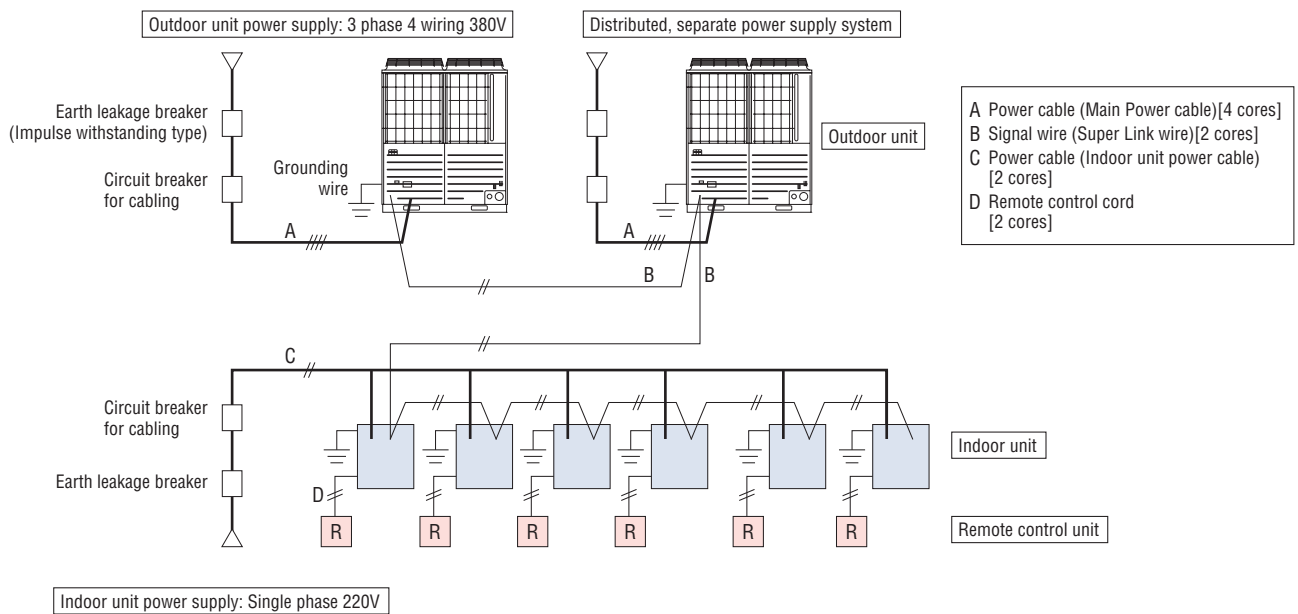
KXZ/KX6 includes greatly simplified wiring requirements utilising a 'polarity-free' two wire control loop connecting the indoor units.

Power wiring

Cables can be laid through the front, right, left or bottom of the outdoor unit casing.

Separate power supplies should be used for the outdoor unit (3Phase) and the indoor units (1Phase).

Only control wiring is connected from outdoor to indoor unit.



CAUTION

If the earth leakage breaker is exclusively for ground fault protection, then you will need to install a circuit breaker for wiring work.

Electrical wiring – control wiring

1. The control wiring is 5 Volt DC, non-polarised, two wire connection notated as 'A1' and 'B1'. This 'AB' wiring connects outdoor unit to indoor unit and indoor unit to indoor unit.

2. This wiring must be a 2-core shielded cable size 0.75mm² or 1.25mm².

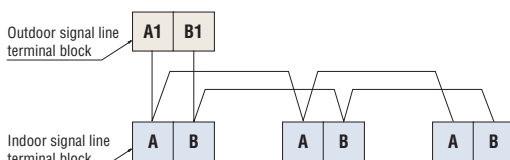
| | 0.75mm ² | 1.25mm ² |
|------------|---------------------|---------------------|
| ~1000m | YES | YES |
| 1000~1500m | YES | NO |

3. We recommend the both ends of the shield of the cable are connected to ground (earth) at all the indoor units and outdoor units.

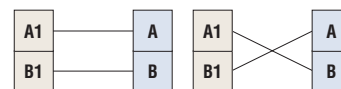
4. When plural outdoor units are used,
 -Connect the signal cable between indoor and outdoor units and the signal cable between outdoor units belonging to the same refrigerant line to A1 and B1.
 -Connect the signal line between outdoor units on different refrigerant lines to A2 and B2.

5. For current specification of 2-core (AB) wiring, please consult your dealer.

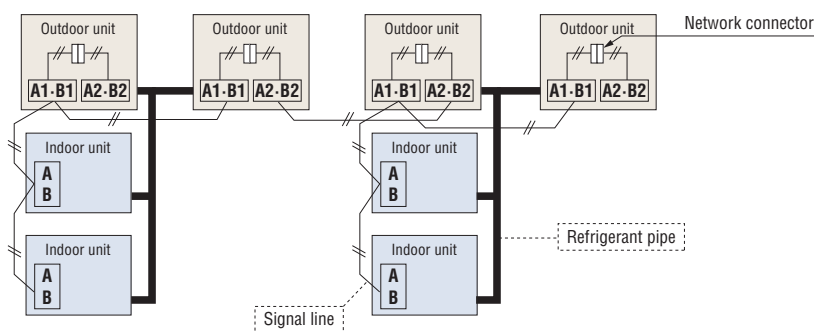
(1) When one outdoor unit is used



o Indoor and outdoor signal lines do not have a polarity. Any of the connections in the following illustration can be made.

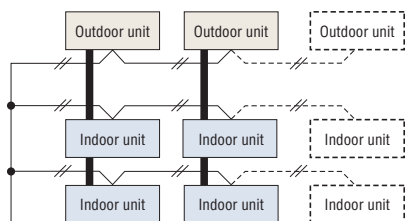


(2) When plural outdoor units are used



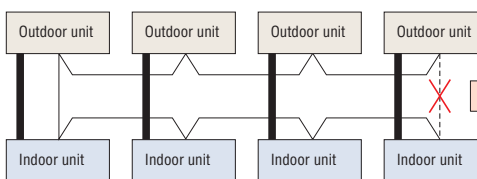
The maximum number of indoor units that can be connected in a system is 128 and it is possible to configure outdoor units and/or indoor units as an outdoor or indoor unit group connected with each other with two wires.

(3) The signal lines can also be connected using the method shown below.



Important

o Loop wiring prohibited

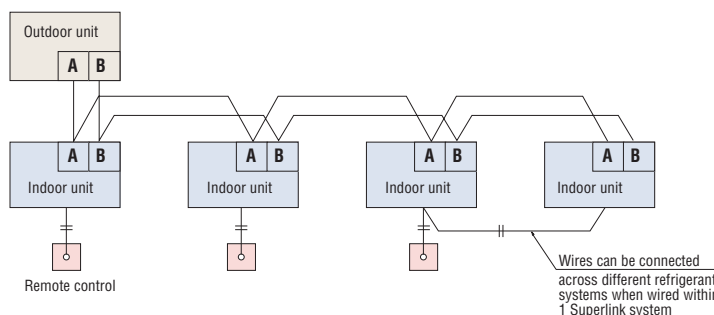


The signal lines cannot form a loop, so the wirings shown as in the diagram are prohibited.

Remote control wiring specifications

For interconnecting wiring between the remote control and indoor units (XY wiring) use 2-core cable size 0.3mm². The maximum length of 2-core cable is 600 metres. Where the 2-core wiring exceeds 100m, use the wire size detailed on the table below.

| Length (m) | Wire size |
|------------|------------------------------|
| 100 to 200 | 0.5mm ² x 2 core |
| To 300 | 0.75mm ² x 2 core |
| To 400 | 1.25mm ² x 2 core |
| To 600 | 2.0mm ² x 2 core |



Wires can be connected across different refrigerant systems when wired within 1 Superlink system



Indoor units

Benefits Summary

When using RC-EX3A (Remote control), functions with symbol ● are available.
However, for RC-E5 (Remote control), functions with ※ are not available.

| | | |
|------------|--------------------------------------|---|
| Economy | Inverter technology | Inverter control technology functions at high efficiency with smooth operation from high speed to low speed. A smooth sine voltage wave is attained. |
| | Energy-saving ※ | Since the capacity is controlled automatically based on the outdoor temperature, energy can be saved without losing comfort. |
| | Home leave operation ※ | This function ensures that when the room is unoccupied for long periods of time, the unit will maintain a moderate indoor temperature, avoiding extremely hot or cool temperatures. |
| | Set temperature auto return ※ | This function allows you to program a preferred set temperature that the unit will return to each time it is operated. |
| Comfort | Automatic operation | This function automatically selects the required heating or cooling function based on the current room conditions. |
| | Silent operation | This function allows you to program periods where the unit will operate with reduced noise levels, perfect for night time and an uninterrupted sleep. |
| | Motion sensor ※ | This sensor detects human activity and shifts the temperature setting according to the amount of activity in the room. |
| | Hi power operation ※ | Use the high power function to quickly reach your optimum temperature level when you first turn on the unit. This function will operate for a maximum of 15 minutes before returning to normal operation. |
| Air flow | Flap control system | This function allows you to set the upper and lower limit positions of the flap at each air outlet individually, providing you with complete control over interior air flow. |
| | Vertical auto swing | The vertical louvers on your unit will move up and down continuously during operation. This function allows you to set the up/down swing position of the louver to your preferred operation angle. |
| | Draught prevention setting ※ | Draft Prevention setting provides a comfortable air flow without any draft feeling. Whether cooling or heating a room, the remote control can be used to instantly suppress any warm or cool drafts. This accurately assists how air flow is directed out of the indoor unit. |
| | Automatic fan speed | The unit's on-board microcomputer continuously monitors the room's air temperature and adjusts the air flow automatically. |
| Timer | Sleep timer | This function allows you to set a pre-determined amount of time between 30 and 240 minutes that your unit will operate for before switching off. |
| | Peak-cut timer ※ | This function lets you to preset the capacity limit during certain periods of the day, minimising energy consumption during peak billing times, thus reducing operation costs. |
| | Weekly timer | Set your unit to turn on and off automatically on a weekly basis to suit your usual room usage on each day. |
| Convenient | Function Switch ※ | From the seven available functions on the unit, this function allows you to set two functions to operate automatically. |
| | Favorite setting ※ | Operation mode, set temperature, fan speed and air flow direction automatically adjust to the programmed favorite setting. |
| | Static pressure adjustment | This is operable when connecting duct type indoor units equipped with the external static pressure adjustment function. It will adjust the airflow accordingly based on the connected duct static pressure. |
| | Select the language ※ | Set the language to be displayed on the remote control. |
| | Air filter | The air filter in the unit traps and removes airborne dust particles and other allergens to provide you with a clean air function. |
| | Filter sign | This warning alerts you to when the filter needs to be cleaned. |
| | Outside air intake | This function provides clean fresh air into the room through the external air intake, avoiding the constant recycling of internal air. |
| Others | Self diagnostics | The internal microcomputer automatically runs a diagnostic of the system in the event of a malfunction. This enables your authorised dealer to isolate and repair any issues. |
| | Built in drain pump | The built-in drain pump, allows greater flexibility with installation, offering a great solution for applications with limited space. |
| | Improved serviceability | The fan unit (comprised of impeller and motor) is easily accessible from either the side or bottom of the unit and can be slid out for easy maintenance. |

Ceiling Cassette -4way- FDT

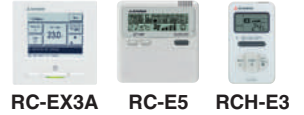
- Model No.**
 FDT28KXZE1
 FDT36KXZE1
 FDT45KXZE1
 FDT56KXZE1
 FDT71KXZE1
 FDT90KXZE1
 FDT112KXZE1
 FDT140KXZE1
 FDT160KXZE1



Draft Prevention Panel (Option)

Remote control (option)

Wired



Wireless

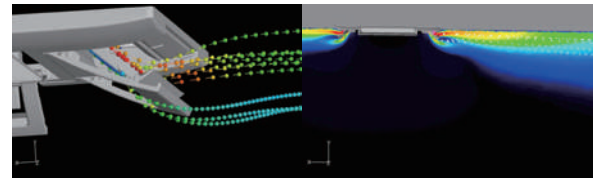
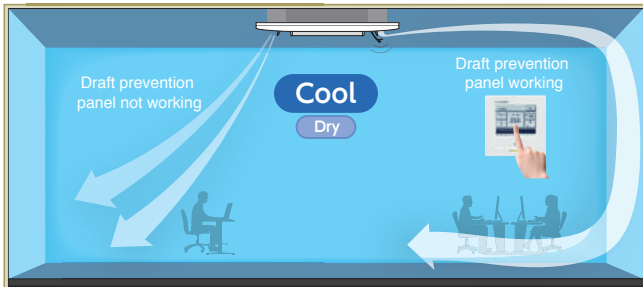


Draft Prevention Panel

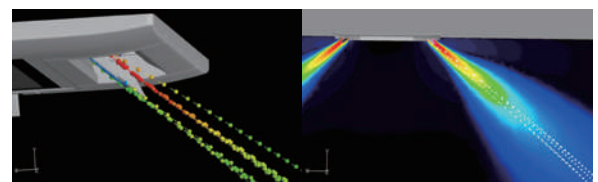
(Option)

Draft Prevention Panel prevents cold / hot draft being blown directly on the user.
 It is possible to set Draft Prevention Panel for each air outlet.

Advanced airflow control technology cultivated through aircraft development.



Draft Prevention Panel working



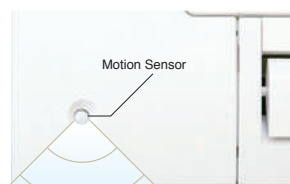
Draft Prevention Panel placed at off position

User can position Draft Prevention Panel panels by using the remote controller only (RC-EX3A, RCN-T-5AW-E2).

Motion Sensor

(Option)

Motion sensor is equipped in the panel corner and detects the presence/absence and activity of humans in a room to improve the comfort and energy saving performance of the unit.



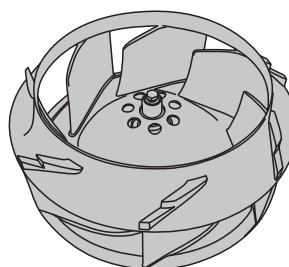
LB-T-5W-E



Improve the aerodynamic performance of the unit

New designed component can have better aerodynamic performance and achieve lower noise.

New design turbo fan



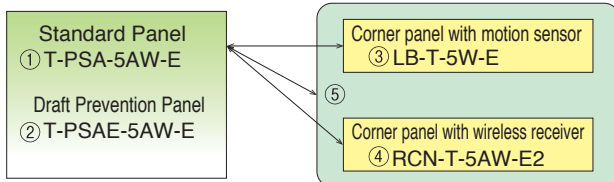
Fan guard (standard equipment)



Panel select pattern

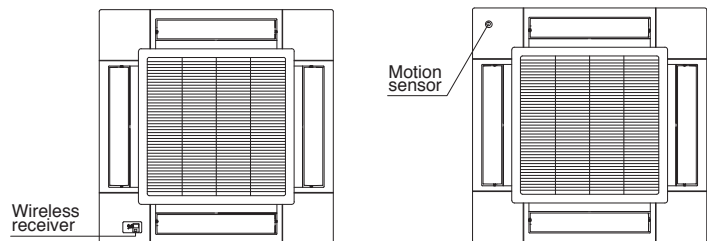
(Option)

8 patterns of panel are available.



- ① Standard Panel only
- ①+③ Standard Panel with corner panel with motion sensor
- ①+④ Standard Panel with corner panel with wireless receiver
- ①+⑤ Standard Panel with corner panel with motion sensor & corner panel with wireless receiver
- ② Draft Prevention Panel only
- ②+③ Draft Prevention Panel with corner panel with motion sensor
- ②+④ Draft Prevention Panel with corner panel with wireless receiver
- ②+⑤ Draft Prevention Panel with corner panel with motion sensor & corner panel with wireless receiver

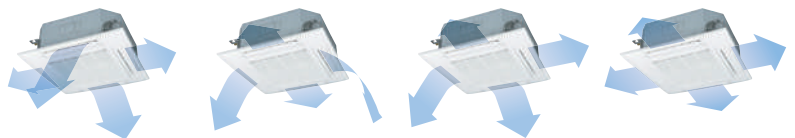
Installation position of Wireless kit and Motion sensor kit



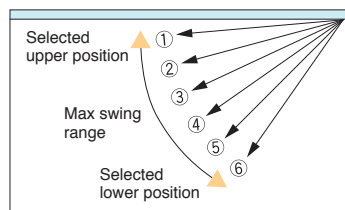
*Wireless receiver and Motion sensor can be installed to the position as shown

Individual flap control system

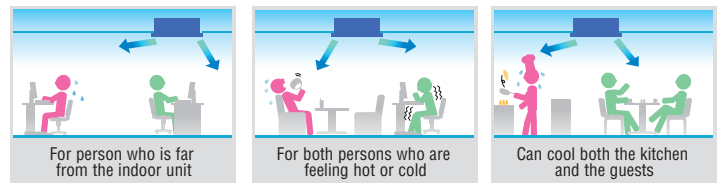
According to room conditions, four directions of air flow can be controlled individually by utilizing the flap control system. Individual flap control is available even after installation.



Flap can swing within an upper and lower flap range position within can be selected with a wired remote control.

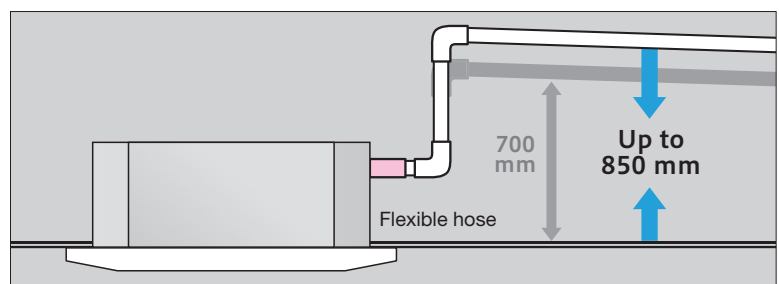


※The wireless remote control is not applicable to the Individual flap control system.



850mm Drain Pump

Drain can be discharged upwards by 850mm from the ceiling surface. It allows a piping layout with a high degree of freedom. Depending on the installation location and 185mm flexible hose as a standard equipment supports easy workability.

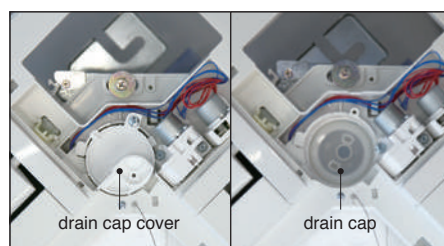


Easy check of drain pan

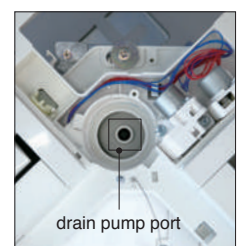
Easy check of drain pan condition is available by removing corner lid only.



Remove corner lid.



Remove drain cap cover and check the condition. It is necessary to clean-up, firstly remove the rubber stopper to drain water out and secondly remove the drain cap.



Clean up the area around the drain pump port.



Specifications

| Item | Model | FDT28KXZE1 | FDT36KXZE1 | FDT45KXZE1 | FDT56KXZE1 | FDT71KXZE1 |
|--|---------------------|--|---------------------------|---|----------------------------|--|
| Nominal cooling capacity | kW | 2.8 | 3.6 | 4.5 | 5.6 | 7.1 |
| Nominal heating capacity | kW | 3.2 | 4.0 | 5.0 | 6.3 | 8.0 |
| Power source | | 1 Phase 220-240V, 50Hz | | | | |
| Power consumption | Cooling | 0.02-0.02 | | 0.03-0.03 | | 0.04-0.04 |
| | Heating | 0.02-0.02 | | 0.03-0.03 | | 0.04-0.04 |
| Sound power level | dB(A) | 49 | | | 50 | 55 |
| Sound pressure level | dB(A) | P-Hi:37 Hi:33 Me:30 Lo:28 | | | P-Hi:38 Hi:33 Me:31 Lo:29 | |
| Exterior dimensions H x W x D | mm | Unit:236x840x840 Panel:35x950x950 | | | | |
| Net weight | kg | Unit:20 Standard Panel:5 | | | Unit:21.5 Standard Panel:5 | |
| Air flow | m ³ /min | P-Hi:15 Hi:14 Me:12 Lo:10 | P-Hi:16 Hi:14 Me:12 Lo:10 | P-Hi:17 Hi:15 Me:13 Lo:10 | P-Hi:20 Hi:16 Me:13 Lo:11 | P-Hi:28 Hi:17 Me:14 Lo:12 |
| Outside air intake | | Possible | | | | |
| Panel | | T-PSA-5AW-E, T-PSAE-5AW-E | | | | |
| Air filter, Q'ty | | Pocket Plastic net x1 (Washable) | | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-T-5AW-E2 | | | | |
| Installation data Refrigerant piping size | mm(in) | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") |

| Item | Model | FDT90KXZE1 | FDT112KXZE1 | FDT140KXZE1 | FDT160KXZE1 |
|--|---------------------|--|---------------------------|---------------------------|---------------------------|
| Nominal cooling capacity | kW | 9.0 | 11.2 | 14.0 | 16.0 |
| Nominal heating capacity | kW | 10.0 | 12.5 | 16.0 | 18.0 |
| Power source | | 1 Phase 220-240V, 50Hz | | | |
| Power consumption | Cooling | 0.13-0.13 | | 0.14-0.14 | |
| | Heating | 0.13-0.13 | | 0.14-0.14 | |
| Sound power level | dB(A) | 65 | | 66 | |
| Sound pressure level | dB(A) | P-Hi:49 Hi:38 Me:36 Lo:31 | P-Hi:49 Hi:39 Me:37 Lo:31 | P-Hi:49 Hi:42 Me:39 Lo:32 | P-Hi:49 Hi:42 Me:39 Lo:33 |
| Exterior dimensions H x W x D | mm | Unit:298x840x840 Panel:35x950x950 | | | |
| Net weight | kg | Unit:25 Standard Panel:5 | | | |
| Air flow | m ³ /min | P-Hi:37 Hi:25 Me:22 Lo:15 | P-Hi:38 Hi:26 Me:23 Lo:17 | P-Hi:38 Hi:28 Me:25 Lo:18 | P-Hi:38 Hi:29 Me:26 Lo:19 |
| Outside air intake | | Possible | | | |
| Panel | | T-PSA-5AW-E, T-PSAE-5AW-E | | | |
| Air filter, Q'ty | | Pocket Plastic net x1 (Washable) | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-T-5AW-E2 | | | |
| Installation data Refrigerant piping size | mm(in) | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") | | | |

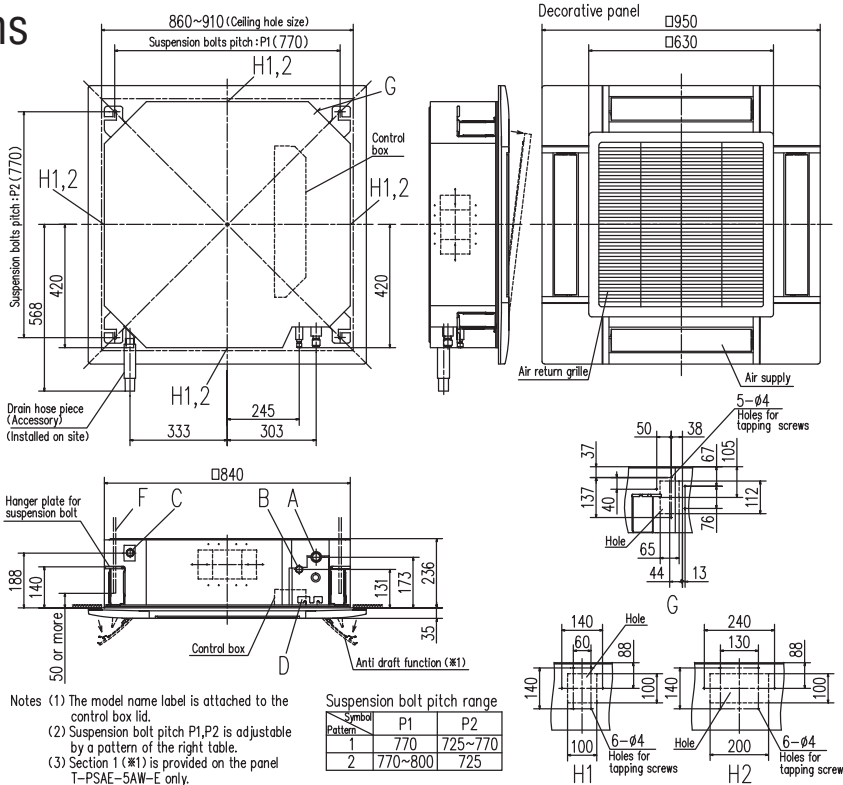
- The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
- Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.



Dimensions

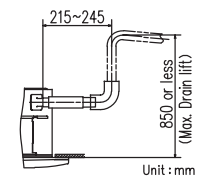
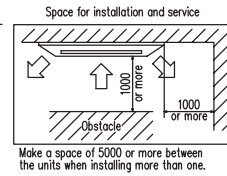
All measurements in mm.

FDT28KXZE1
36KXZE1
45KXZE1
56KXZE1
71KXZE1

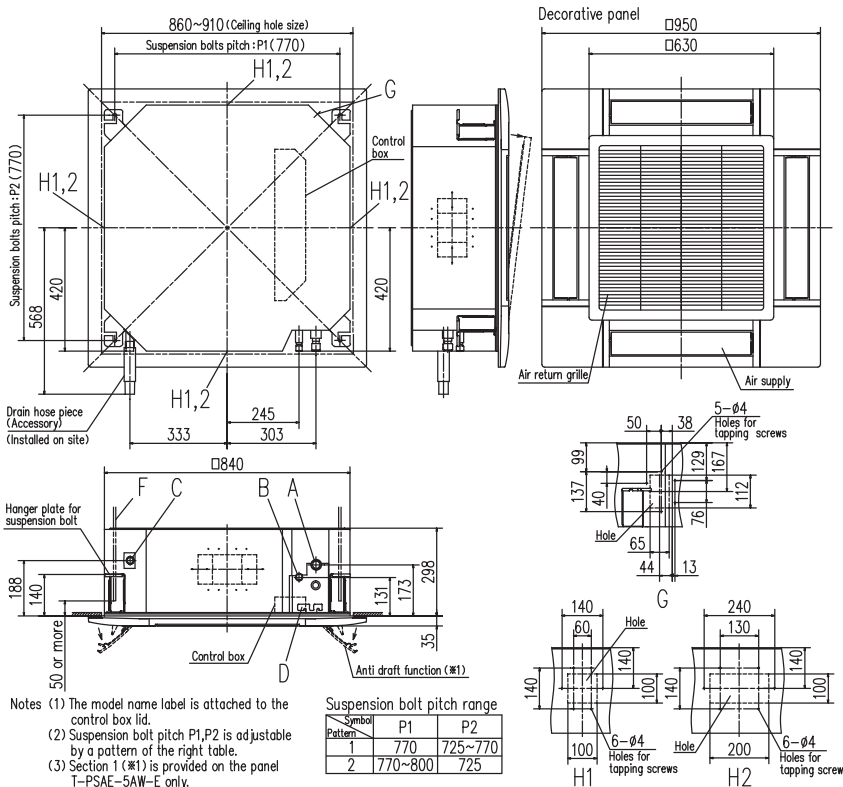


Notes (1) The model name label is attached to the control box lid.
(2) Suspension bolt pitch P1,P2 is adjustable by a pattern of the right table.
(3) Section 1 (※1) is provided on the panel T-PSAE-5AW-E only.

| Symbol | Model | 28 | 36,45,56 | 71 |
|--------|---------------------------------|-----------------------|-----------------------|-----------------------|
| A | Gas piping | φ15.88 (5/8") (Flare) | φ15.88 (5/8") (Flare) | φ15.88 (5/8") (Flare) |
| B | Liquid piping | φ9.52 (3/8") (Flare) | φ9.52 (3/8") (Flare) | φ9.52 (3/8") (Flare) |
| C | Drain piping | VP25 (O.D.32) | VP25 (O.D.32) | VP25 (O.D.32) |
| D | Hole for wiring | | | |
| F | Suspension bolts | (M10 or M8) | | |
| G | Outside air opening for ducting | (Knock out) | | |
| H1 | Air outlet opening for ducting | φ125 (Knock out) | | |
| H2 | Air outlet opening for ducting | φ200 (Knock out) | | |

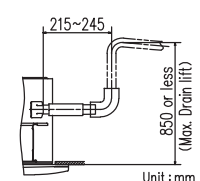
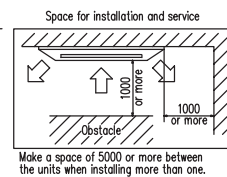


FDT90KXZE1
112KXZE1
140KXZE1
160KXZE1



Notes (1) The model name label is attached to the control box lid.
(2) Suspension bolt pitch P1,P2 is adjustable by a pattern of the right table.
(3) Section 1 (※1) is provided on the panel T-PSAE-5AW-E only.

| Symbol | Content |
|--------|---|
| A | Gas piping φ15.88 (5/8") (Flare) |
| B | Liquid piping φ9.52 (3/8") (Flare) |
| C | Drain piping VP25 (O.D.32) |
| D | Hole for wiring |
| F | Suspension bolts (M10 or M8) |
| G | Outside air opening for ducting (Knock out) |
| H1 | Air outlet opening for ducting φ125 (Knock out) |
| H2 | Air outlet opening for ducting φ200 (Knock out) |





Ceiling Cassette -4way Compact FDTC

NEW

Model No.

- FDTC15KXZE1
- FDTC22KXZE1
- FDTC28KXZE1
- FDTC36KXZE1
- FDTC45KXZE1
- FDTC56KXZE1



Draft Prevention Panel (option)

Remote control (option)

Wired



RC-EX3A RC-E5 RCH-E3

Wireless



RCN-TC-5AW-E2

European design & Flat panel

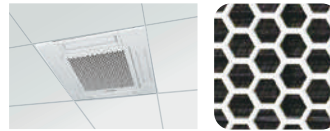


Thin Panel

Big Louver

Unique Grille Design

Integrated ceiling system design



A grille designed with a unique structure and a clean white panel harmonize with interior. This design was invented by zweigrad GmbH & Co. KG in Germany.

Compact Design

□700mm → □620mm

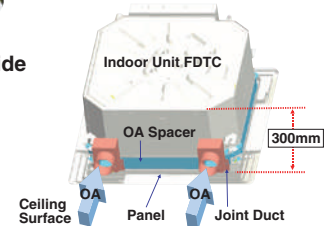
A weight of only 14kg.

Height of thin panel and main body is only 248 mm allowing it to be a very easy installation.

Taking OA (Outside Air) into inside

Fresh air can be taken in without option parts. When it is insufficient, existing option parts also can be used.

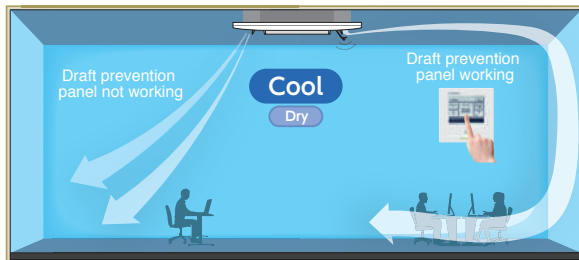
- OA Spacer TC-OAS-E2(option)
- Joint Duct TC-OAD-E(option)



Draft Prevention Panel

(Option)

Draft Prevention Panel prevents cold/hot draft being blown directly on the user. It is possible to set Draft Prevention Panel for each air outlet.



User can position Draft Prevention Panel panels by using the remote controller only (RC-EX3A, RCN-TC-5AW-E2).

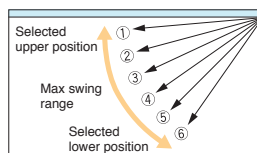
Individual flap control system

According to room temperature conditions, four directions of air flow can be controlled individually by following Flap control system. Individual flap control is available even after installation.



The flap can swing within the range of upper and lower flap position selected with wired remote control.

*The wireless remote control is not applicable to the Individual flap control system.



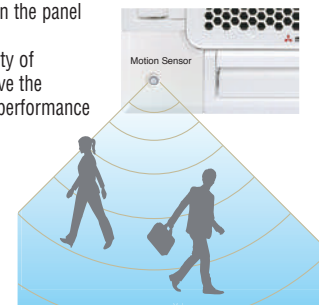
Motion Sensor

(Option)

Motion sensor is equipped in the panel corner and detects the presence/absence and activity of humans in a room to improve the comfort and energy saving performance of the unit.



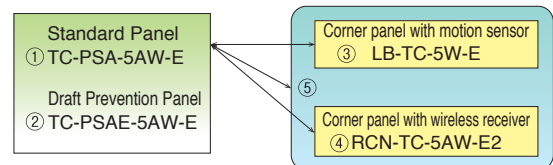
LB-TC-5W-E



Panel select pattern

(Option)

8 patterns of panel are available. Please refer to P69.



850mm Drain Pump

Drain can be discharged upward by 850 mm from the ceiling surface close to the indoor unit. It allows a piping layout with a high degree of freedom depending on the installation location.

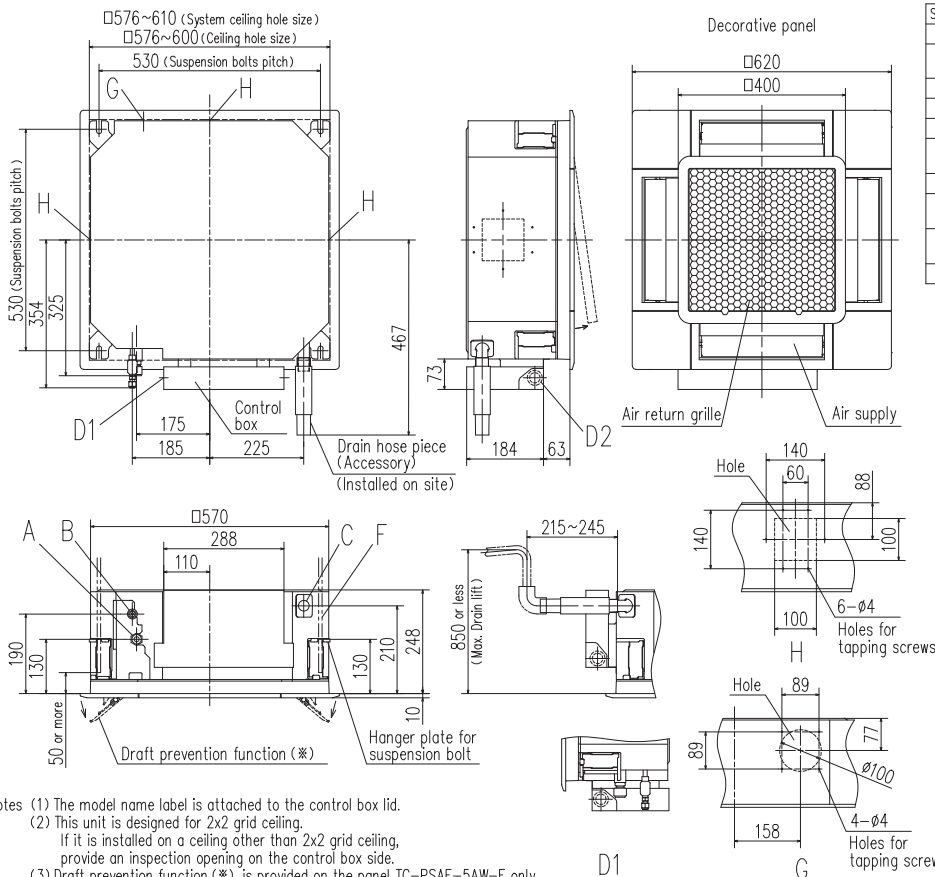
Specifications

| Item | Model | FDTC15KXZE1 | FDTC22KXZE1 | FDTC28KXZE1 | FDTC36KXZE1 | FDTC45KXZE1 | FDTC56KXZE1 | |
|----------------------------------|---------|---|-------------|----------------------------|---|----------------------------|---------------------------|---------------------------|
| Nominal cooling capacity | kW | 1.5 | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 | |
| Nominal heating capacity | kW | 1.7 | 2.5 | 3.2 | 4.0 | 5.0 | 6.3 | |
| Power source | | 1 Phase 220-240V, 50Hz | | | | | | |
| Power consumption | Cooling | 0.03-0.03 | | | 0.04-0.04 | | 0.05-0.05 | 0.06-0.06 |
| | Heating | 0.03-0.03 | | | 0.04-0.04 | | 0.05-0.05 | 0.06-0.06 |
| Sound power level | dB(A) | Cooling:47 Heating:46 | | 49 | | Cooling:54 Heating:53 | Cooling:58 Heating:57 | 60 |
| Sound pressure level | Cooling | P-Hi:33 Hi:30 Me:28 Lo:25 | | P-Hi:35 Hi:32 Me:29 Lo:25 | | P-Hi:39 Hi:36 Me:31 Lo:26 | P-Hi:43 Hi:39 Me:36 Lo:28 | P-Hi:47 Hi:43 Me:39 Lo:31 |
| | Heating | P-Hi:33 Hi:30 Me:26 Lo:22 | | P-Hi:35 Hi:32 Me:29 Lo:25 | | P-Hi:39 Hi:36 Me:31 Lo:26 | P-Hi:43 Hi:39 Me:36 Lo:28 | P-Hi:47 Hi:43 Me:39 Lo:31 |
| Exterior dimensions H x W x D | mm | Unit:248x570x570 Panel:10x620x620 | | | | | | |
| Net weight | kg | Unit:12.5 Standard Panel:2.5 | | Unit:13 Standard Panel:2.5 | | Unit:14 Standard Panel:2.5 | | |
| Air flow | Cooling | P-Hi:8 Hi:7 Me:6 Lo:5 | | P-Hi:9 Hi:8 Me:7 Lo:6 | | P-Hi:10 Hi:9 Me:8 Lo:6 | P-Hi:12 Hi:10 Me:9 Lo:7 | P-Hi:14 Hi:12 Me:10 Lo:8 |
| | Heating | P-Hi:8 Hi:7 Me:6 Lo:5 | | P-Hi:9 Hi:8 Me:7 Lo:6 | | P-Hi:10 Hi:9 Me:8 Lo:6 | P-Hi:12 Hi:10 Me:9 Lo:7 | P-Hi:14 Hi:12 Me:10 Lo:8 |
| Outside air intake | | Possible | | | | | | |
| Panel | | TC-PSA-5AW-E, TC-PSAE-5AW-E | | | | | | |
| Air filter, Q'ty | | Pocket Plastic net x1 (Washable) | | | | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-TC-5AW-E2 | | | | | | |
| Installation data | | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | | | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | | |
| Refrigerant piping size | mm(in) | | | | | | | |

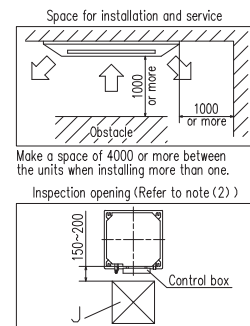
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

Dimensions

All measurements in mm.



| Symbol | Content | | |
|--------|--|----------------------|----------------------|
| | Model | 15,22,28 | 36,45,56 |
| A | Gas piping | ø9.52 (3/8") (Flare) | ø12.7 (1/2") (Flare) |
| B | Liquid piping | ø6.35 (1/4") (Flare) | |
| C | Drain piping | VP25 (O.D.32) | |
| D1 | Power supply connection | | |
| D2 | Remote control code and signal wiring connection | | |
| F | Suspension bolts | (M10 or M8) | |
| G | Outside air opening for ducting | (Knock out) | |
| H | Air outlet opening for ducting | ø125 (Knock out) | |
| J | Inspection opening | 450X450 | |



- Notes (1) The model name label is attached to the control box lid.
 (2) This unit is designed for 2x2 grid ceiling.
 If it is installed on a ceiling other than 2x2 grid ceiling, provide an inspection opening on the control box side.
 (3) Draft prevention function (※) is provided on the panel TC-PSAE-5AW-E only.

Ceiling Cassette -2way- FDTW

Model No.

| | |
|-------------|--------------|
| FDTW28KXE6F | FDTW90KXE6F |
| FDTW45KXE6F | FDTW112KXE6F |
| FDTW56KXE6F | FDTW140KXE6F |
| FDTW71KXE6F | |



FDTW28-71

FDTW90-140

Remote control (option)

Wired



RC-EX3A RC-E5 RCH-E3

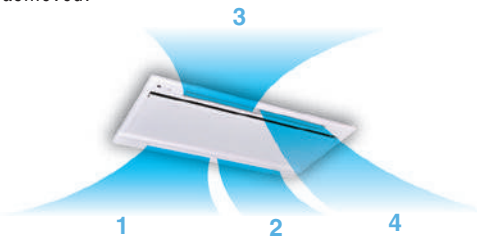
Wireless



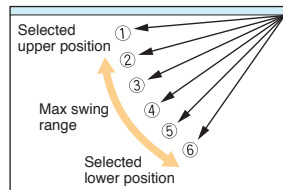
RCN-TW-E2

Individual flap control system

According to room temperature conditions, four directions air flow can be controlled individually by flap control system. Due to optimization of outlet design of air flow our new advanced technology, sufficient air flow is secured and long reach of air flow is achieved.



The flap can swing within the range of upper and lower flap position selected with wired remote control.



*The wireless remote control is not applicable to the individual flap control system.

Installation workability

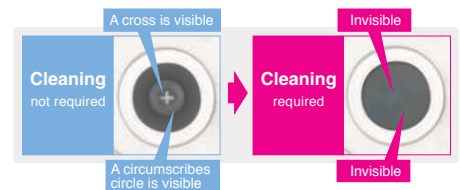
Drainage spout

Drainage flow test can be done easily by use of this drainage spout.



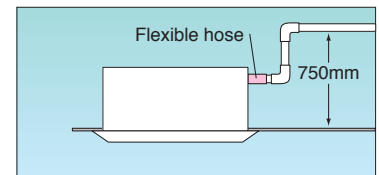
Transparent access hole to drain pan

Dirt condition of the bottom of a drain pan can be checked through this transparent access hole without removing drain pan.



750mm Drain Pump

Drain can be discharged upward by 750mm from the ceiling surface close to the indoor unit. It allows a piping layout with a high degree of freedom depending on the installation location.



Specifications

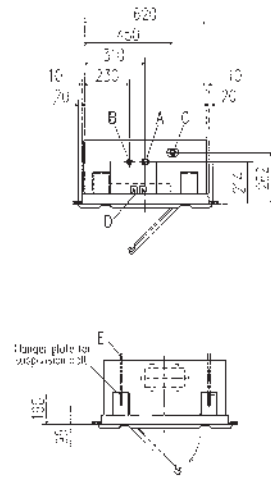
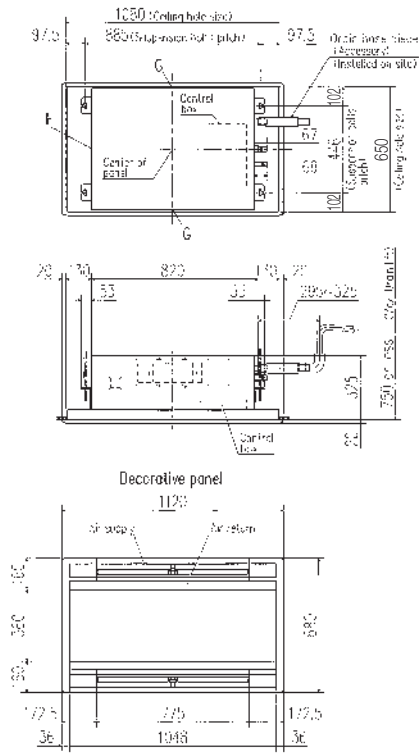
| Item | Model | FDTW28KXE6F | FDTW45KXE6F | FDTW56KXE6F | FDTW71KXE6F | FDTW90KXE6F | FDTW112KXE6F | FDTW140KXE6F | |
|----------------------------------|---------------------|---|-------------------|---|-------------------|--|-------------------------------------|--------------|--|
| Nominal cooling capacity | kW | 2.8 | 4.5 | 5.6 | 7.1 | 9.0 | 11.2 | 14.0 | |
| Nominal heating capacity | kW | 3.2 | 5.0 | 6.3 | 8.0 | 10.0 | 12.5 | 16.0 | |
| Power source | | 1 Phase 220-240V, 50Hz | | | | | | | |
| Power consumption | Cooling | 0.09-0.09 | 0.10-0.10 | 0.14-0.14 | 0.14-0.14 | 0.19-0.19 | | | |
| | Heating | 0.09-0.09 | 0.10-0.10 | 0.14-0.14 | | 0.19-0.19 | | | |
| Sound power level | dB(A) | 58 | | | | | 65 | — | |
| Sound pressure level | dB(A) | P-Hi:42 Hi:38 Me:34 Lo:31 | | | | | P-Hi:48 Hi:45 Me:41 Lo:37 | | |
| Exterior dimensions H x W x D | mm | Unit:325x820x620 Panel:20x1120x680 | | | | | Unit:325x1535x620 Panel:20x1835x680 | | |
| Net weight | kg | Unit:20 Panel:8.5 | Unit:21 Panel:8.5 | | Unit:23 Panel:8.5 | Unit:35 Panel:13 | | | |
| Air flow | m ³ /min | P-Hi:14.5 Hi:12 Me:10 Lo:9 | | | | | P-Hi:31 Hi:27 Me:23 Lo:20 | | |
| Outside air intake | | Possible | | | | | | | |
| Panel | | TW-PSA-26W-E | | | | TW-PSA-46W-E | | | |
| Air filter, Q'ty | | Pocket Plastic net x2 (Washable) | | | | | Pocket Plastic net x3 (Washable) | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-TW-E2 | | | | | | | |
| Installation data | | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") | | | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

Dimensions

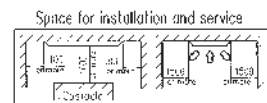
All measurements in mm.

FDTW28KXE6F, 45KXE6F, 56KXE6F, 71KXE6F



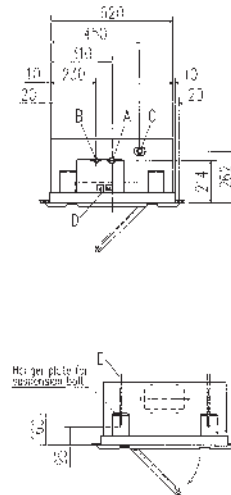
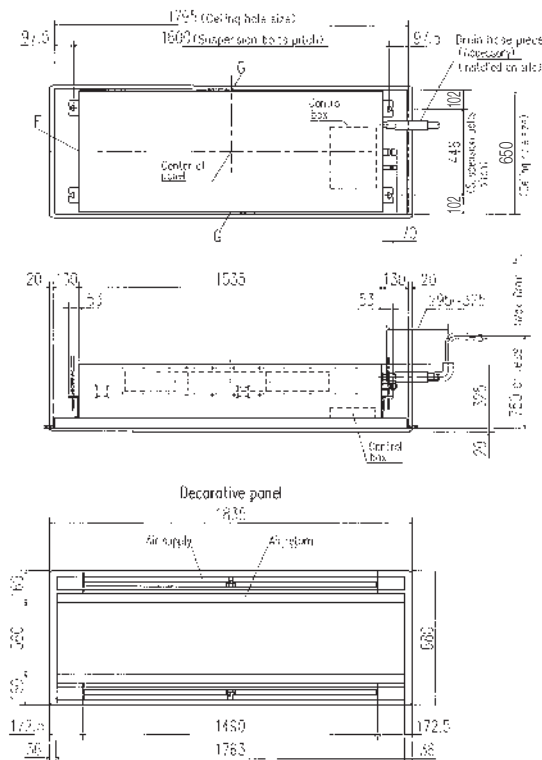
| Symbol | Model | General |
|--------|--------------------------------|---|
| A | Control box | 45, 56, 71 |
| B | Liquid piping | ø19.05 (3/4") (11mm) (ø19.05 (3/4") (11mm)) |
| C | Drain piping | ø6.35 (1/4") (3mm) (ø6.35 (1/4") (3mm)) |
| D | Side opening for ducting | VP25 (O.D. 32) |
| E | Air outlet opening for ducting | ø125 (ø125) |

Note (1) The main panel level is indicated as the level of the control box.



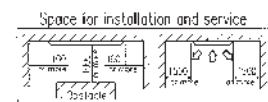
Make a space of 100 mm or more between the main panel and the control box.

FDTW90KXE6F, 112KXE6F, 140KXE6F



| Symbol | Model | General |
|--------|--------------------------------|----------------------|
| A | Control box | 90, 112, 140 |
| B | Liquid piping | ø19.05 (3/4") (11mm) |
| C | Drain piping | ø6.35 (1/4") (3mm) |
| D | Side opening for ducting | VP25 (O.D. 32) |
| E | Air outlet opening for ducting | ø125 (ø125) |

Note (1) The main panel level is indicated as the level of the control box.



Make a space of 100 mm or more between the main panel and the control box.

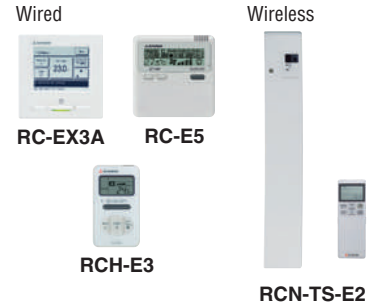


Ceiling Cassette -1way- FDTS

Model No.
FDTS45KXE6F
FDTS71KXE6F

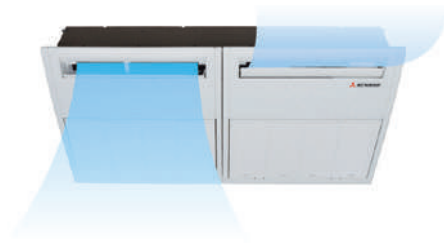


Remote control (option)

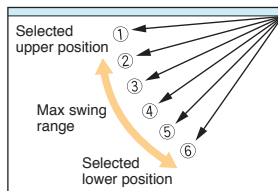


Individual flap control system

Two directions of air flow can be controlled individually by flap control system.



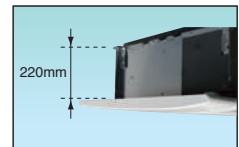
The flap can swing within the range of upper and lower flap position selected with wired remote control.



*The wireless remote control is not applicable to the individual flap control system.

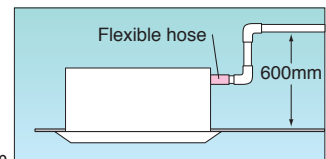
Compact design

Indoor unit size (W:1,150 x D:565) brings easy installation for 1,200 x 600 ceiling and Panel size (1,250 x 650) is suitable for 1,200 x 600 ceiling. Height is the industry's lowest height level 220mm and weight is 27/28kg only.



600mm Drain Pump

Drain can be discharged upward by 600mm from the ceiling surface close to the indoor unit. It allows a piping layout with a high degree of freedom depending on the installation location.



Wireless remote control

For wireless remote control simply attach an additional panel with infrared receiver on the right side of the main decorative panel.



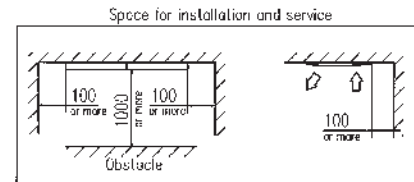
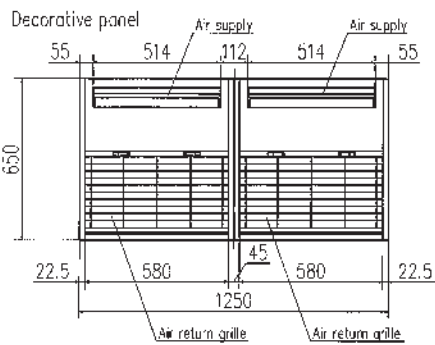
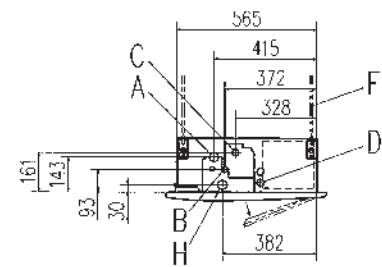
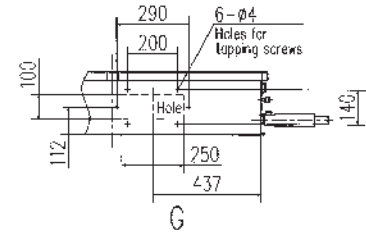
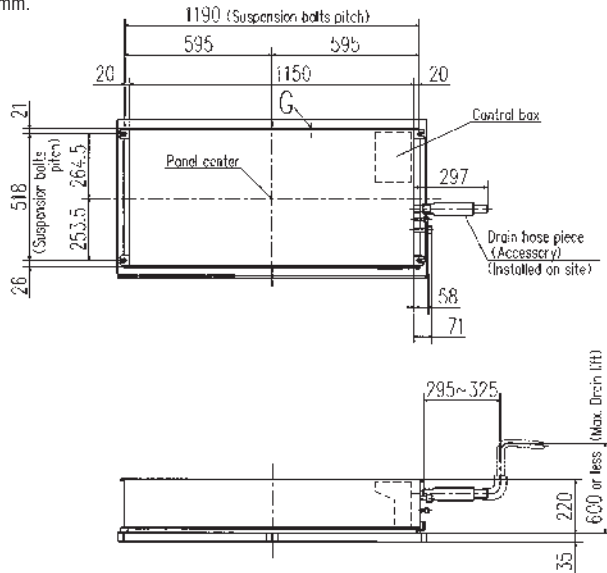
Specifications

| Item | Model | FDTS45KXE6F | FDTS71KXE6F |
|----------------------------------|-------------------------|---|----------------------------|
| Nominal cooling capacity | kW | 4.5 | 7.1 |
| Nominal heating capacity | kW | 5.0 | 8.0 |
| Power source | | 1 Phase 220-240V, 50Hz | |
| Power consumption | Cooling | 0.04-0.04 | 0.09-0.09 |
| | Heating | 0.04-0.04 | 0.09-0.09 |
| Sound power level | dB(A) | 60 | 61 |
| Sound pressure level | dB(A) | P-Hi:42 Hi:40 Me:38 Lo:35 | P-Hi:49 Hi:46 Me:41 Lo:36 |
| Exterior dimensions H x W x D | mm | Unit:220x1150x565 Panel:35x1250x650 | |
| Net weight | kg | Unit:27 Panel:5 | Unit:28 Panel:5 |
| Air flow | m ³ /min | P-Hi:13 Hi:12 Me:11 Lo:9.5 | P-Hi:17 Hi:15 Me:12 Lo:9.5 |
| Outside air intake | | Possible | |
| Panel | | TS-PSA-3AW-E | |
| Air filter, Q'ty | | Pocket Plastic net x2 (Washable) | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-TS-E2 | |
| Installation data | mm(in) | Liquid line:ø6.35(1/4") | Liquid line:ø9.52(3/8") |
| | Refrigerant piping size | Gas line:ø12.7(1/2") | Gas line:ø15.88(5/8") |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

Dimensions

All measurements in mm.



Make a space of 4000 or more between the units when installing more than one.

| Symbol | Content | | |
|--------|---------------------------------|--------------------------|-----------------------|
| | Model | 45 | 71 |
| A | Gas piping | ø12.7 (1/2") (Flare) | ø15.88 (5/8") (Flare) |
| B | Liquid piping | ø6.35 (1/4") (Flare) | ø9.52 (3/8") (Flare) |
| C | Drain piping | VP25 (O.D. 32) | |
| D | Hole for wiring | | |
| F | Suspension bolts | (M10) | |
| G | Outside air opening for ducting | (Knock out) | |
| H | Drain piping (Gravity drainage) | VP25 (I.D. 25 , O.D. 32) | |



Ceiling Cassette -1way Compact-FDTQ

Model No.
 FDTQ22KXE6F
 FDTQ28KXE6F
 FDTQ36KXE6F



Fits into standard
 600 x 600 ceiling

Remote control (option)

Wired



RC-EX3A RC-E5 RCH-E3

Wireless



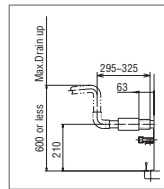
RCN-KIT4-E2

Compact design

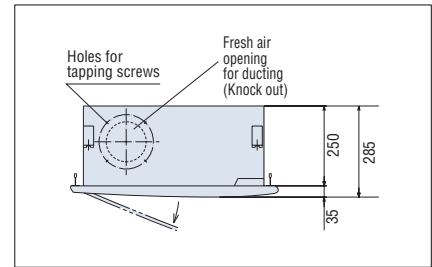
- Comfortable effective cooling for small rooms, with low fan speed air flow at just 5.4m³/min.



Optional wide panel shown for solid ceiling



Condensate drain pump included as standard



Ultra slim design at just 250mm above the ceiling

Specifications

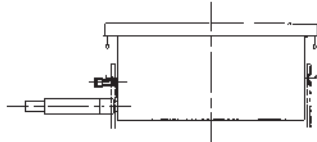
| Item | Model | FDTQ22KXE6F | | | | FDTQ28KXE6F | | | | FDTQ36KXE6F | | | |
|--------------------------|---------------------|---|-----------------|-------------------|-----------------|---------------------------|-----------------|-------------------|-----------------|---------------------------|-----------------|-------------------|-----------------|
| Panel Name | | Direct blow panel | | Duct panel | | Direct blow panel | | Duct panel | | Direct blow panel | | Duct panel | |
| Panel mode (Option) | | TQ-PSA-15W-E | TQ-PSB-15W-E | QR-PNA-14W-ER | QR-PNB-14W-ER | TQ-PSA-15W-E | TQ-PSB-15W-E | QR-PNA-14W-ER | QR-PNB-14W-ER | TQ-PSA-15W-E | TQ-PSB-15W-E | QR-PNA-14W-ER | QR-PNB-14W-ER |
| Nominal cooling capacity | kW | 2.2 | | | | 2.8 | | | | 3.6 | | | |
| Nominal heating capacity | kW | 2.5 | | | | 3.2 | | | | 4.0 | | | |
| Power source | | 1 Phase 220-240V, 50Hz | | | | | | | | | | | |
| Power consumption | Cooling | 0.05-0.07 | | | | 0.05-0.07 | | | | 0.05-0.07 | | | |
| | Heating | 0.05-0.07 | | | | 0.05-0.07 | | | | 0.05-0.07 | | | |
| Sound power level | dB(A) | 60 | | | | | | | | | | | |
| Sound pressure level | dB(A) | P-Hi:45 Hi:41 Me:38 Lo:33 | | | | P-Hi:45 Hi:41 Me:38 Lo:33 | | | | P-Hi:45 Hi:41 Me:38 Lo:33 | | | |
| Exterior dimensions | Unit | 250x570x570 | | | | | | | | | | | |
| | H x W x D | 35x625x650 | 35x780x650 | 35x625x650 | 35x780x650 | 35x625x650 | 35x780x650 | 35x625x650 | 35x780x650 | 35x625x650 | 35x780x650 | 35x625x650 | 35x780x650 |
| Net weight | kg | Unit:23 Panel:2.5 | Unit:23 Panel:3 | Unit:23 Panel:2.5 | Unit:23 Panel:3 | Unit:23 Panel:2.5 | Unit:23 Panel:3 | Unit:23 Panel:2.5 | Unit:23 Panel:3 | Unit:23 Panel:2.5 | Unit:23 Panel:3 | Unit:23 Panel:2.5 | Unit:23 Panel:3 |
| Air flow | m ³ /min | P-Hi:8 Hi:7 Me:6 Lo:5 | | | | P-Hi:8 Hi:7 Me:6 Lo:5 | | | | P-Hi:8 Hi:7 Me:6 Lo:5 | | | |
| Outside air intake | | Possible | | | | | | | | | | | |
| Air filter, Q'ty | | Pocket Plastic net x1 (Washable) | | | | | | | | | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2 | | | | | | | | | | | |
| Installation data | | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | | | | | | | | | | | |
| Refrigerant piping size | mm(in) | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | | | | | | | | | | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

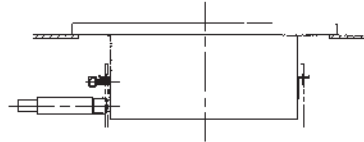
Dimensions

All measurements in mm.

Direct blow panel (TQ-PSA-15W-E)

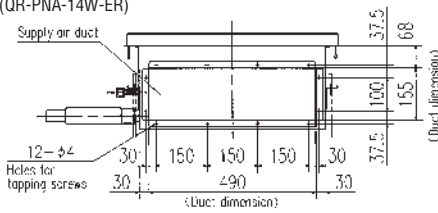


Direct blow panel (TQ-PSB-15W-E)

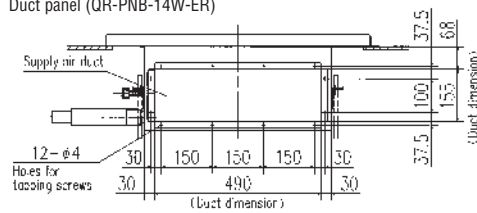


| Symbol | Content |
|----------------------------------|----------------------------|
| Model | TQ-PSA-15W-E, TQ-PSB-15W-E |
| Gas piping | φ6.35 (1/4") (Note 1) |
| Liquid piping | φ6.35 (1/4") (Note 1) |
| Drain piping | φ6.35 (1/4") (Note 1) |
| Wiring hole | φ30 |
| Suspension bolts | M10 |
| Outside air opening for electric | Knock out |

Duct panel (QR-PNA-14W-ER)

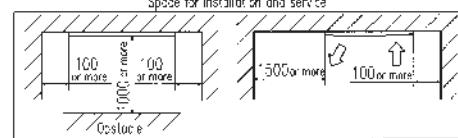
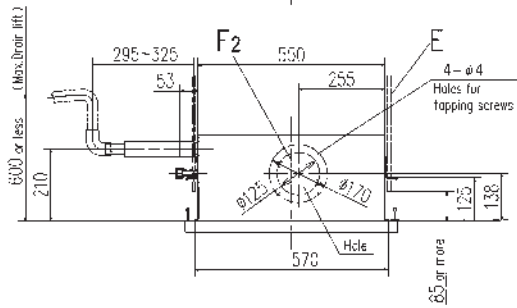
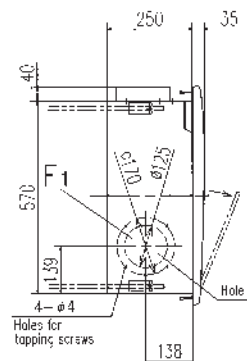
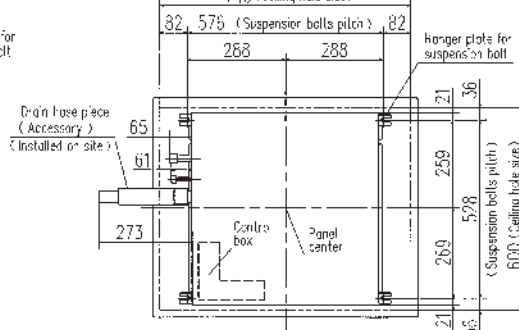
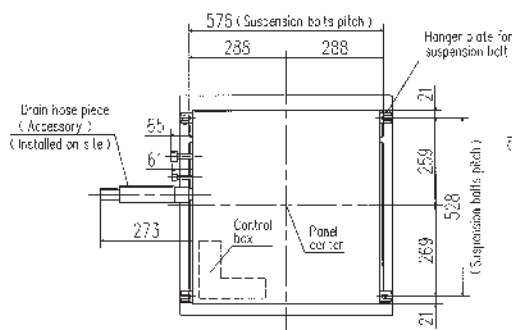


Duct panel (QR-PNB-14W-ER)

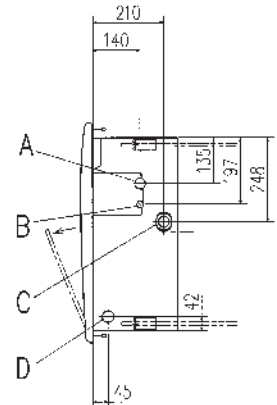
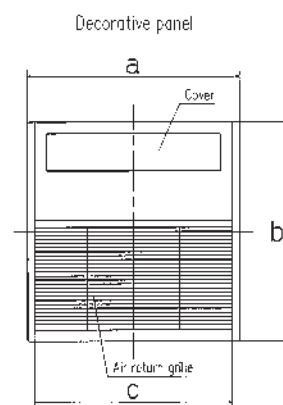
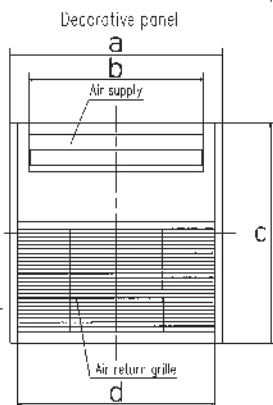


Notes

- (1) The model name label is attached on the front case inside the air return grille.
- (2) This unit is designed for 2x2 grid ceiling.
- * In case of Direct blow panel



Make a space of 3000 or more between the units when installing more than one.



Dimension Table

Unit:mm

| model | a | b | c | d |
|--------------|-----|-----|-----|-----|
| TQ-PSA-15W-E | 625 | 514 | 650 | 580 |
| TQ-PSB-15W-E | 780 | 514 | 650 | 580 |

Dimension Table

Unit:mm

| model | a | b | c |
|---------------|-----|-----|-----|
| QR-PNA-14W-ER | 625 | 650 | 580 |
| QR-PNB-14W-ER | 780 | 650 | 580 |



Duct Connected -High Static Pressure- FDU

- Model No.**
 FDU45KXE6F
 FDU56KXE6F
 FDU71KXE6F
 FDU90KXE6F
 FDU112KXE6F
 FDU140KXE6F
 FDU160KXE6F



- Model No.**
 FDU224KXZE1
 FDU280KXZE1



Remote control (option)

Wired



Wireless

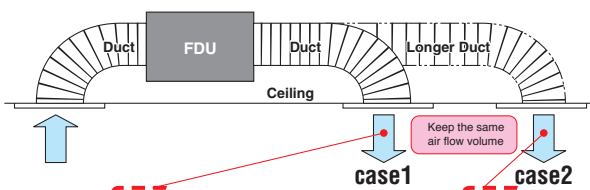


External Static Pressure(E.S.P) control

You can set External Static Pressure (E.S.P.) by method of manual setting on remote control. Indoor unit will control fan-speed to keep rated air flow volume at each fan speed setting. You can set required E.S.P. by wired remote control that calculated with the set air flow rate and pressure loss of the duct connected.



E.S.P. button RC-E5
 External Static Pressure (E.S.P.) can be set by E.S.P. button.



| Setting No. | No.8 | No.9 | No.10 | No.11 | No.12 | No.13 | No.14 | No.15 |
|-------------|------|------|-------|-------|-------|-------|-------|-------|
| E.S.P. | 80Pa | 90Pa | 100Pa | 110Pa | 120Pa | 130Pa | 140Pa | 150Pa |

*Range of 80~150 Pa is set at ex-factory default.
 Range of 10~200 Pa is available by setting SW8-4 switch on at site.

<Expansion of external static pressure range>

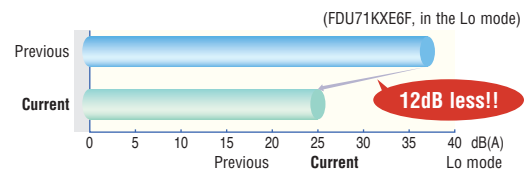
Previous **10~130Pa** → Current **10~200Pa**

Thin design



| | Previous | Current | |
|-----------------|----------|---------|-------------|
| FDU71KXE6F | 297 | 280 | 17mm less!! |
| FDU112/140KXE6F | 350 | 280 | 70mm less!! |

Reduction of sound pressure level

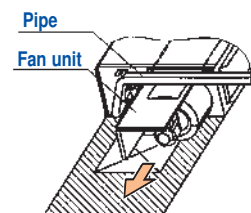


Transparent inspection window

Dirt condition of the bottom of a drain pan can be checked through this transparent inspection window without removing drain pan. (Please refer to P84)

Improvement of the serviceability

Fan unit (impeller and motor) can be pulled out from the right side of the unit. Maintenance can be available from the right side or the bottom side. (Common for FDU22~160KXE6F & FDU45~160KXE6F)



Specifications

| Item | Model | FDU45KXE6F | FDU56KXE6F | FDU71KXE6F | FDU90KXE6F | FDU112KXE6F | FDU140KXE6F | FDU160KXE6F |
|--|---------------------|---|------------|---------------------------|--|---------------------------|---------------------------|---------------------------|
| Nominal cooling capacity | kW | 4.5 | 5.6 | 7.1 | 9.0 | 11.2 | 14.0 | 16.0 |
| Nominal heating capacity | kW | 5.0 | 6.3 | 8.0 | 10.0 | 12.5 | 16.0 | 18.0 |
| Power source | | 1 Phase 220-240V, 50Hz | | | | | | |
| Power consumption | Cooling | 0.10-0.10 | | 0.24-0.25 | | 0.31-0.32 | 0.35-0.36 | 0.42-0.43 |
| | Heating | 0.10-0.10 | | 0.24-0.25 | | 0.31-0.32 | 0.35-0.36 | 0.42-0.43 |
| Sound power level | dB(A) | 60 | | 65 | | — | | |
| Sound pressure level | dB(A) | P-Hi:37 Hi:32 Me:29 Lo:26 | | P-Hi:38 Hi:33 Me:29 Lo:25 | | P-Hi:44 Hi:38 Me:36 Lo:30 | P-Hi:45 Hi:40 Me:34 Lo:29 | P-Hi:47 Hi:40 Me:35 Lo:30 |
| Exterior dimensions H x W x D | mm | 280x750x635 | | 280x950x635 | | 280x1370x740 | | |
| Net weight | kg | 29 | | 34 | | 54 | | |
| Air flow | m ³ /min | P-Hi:13 Hi:10 Me:9 Lo:8 | | P-Hi:24 Hi:19 Me:15 Lo:10 | | P-Hi:36 Hi:28 Me:25 Lo:19 | P-Hi:39 Hi:32 Me:26 Lo:20 | P-Hi:48 Hi:35 Me:28 Lo:22 |
| Maximum external static pressure | Pa | 200 | | | | | | |
| Outside air intake | | Possible | | | | | | |
| Air filter | | Procure locally | | | | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2 | | | | | | |
| Installation data Refrigerant piping size | mm(in) | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") | | | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. External static pressure of indoor unit is 60Pa.

2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

| Item | Model | FDU224KXZE1 | FDU280KXZE1 |
|--|---------------------|---|--|
| Nominal cooling capacity | kW | 22.4 | 28.0 |
| Nominal heating capacity | kW | 25.0 | 31.5 |
| Power source | | 1 Phase 220-240V, 50Hz | |
| Power consumption | Cooling | 1.16-1.20 | |
| | Heating | 1.16-1.20 | |
| Sound pressure level | dB(A) | P-Hi:52 Hi:50 Me:47 Lo:45 | |
| Exterior dimensions H x W x D | mm | 379x1600x893 | |
| Net weight | kg | 89 | |
| Air flow | m ³ /min | P-Hi:80 Hi:72 Me:64 Lo:56 | |
| Maximum external static pressure | Pa | 200 | |
| Outside air intake | | Possible(on return duct) | |
| Air filter | | Procure locally | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2 | |
| Installation data Refrigerant piping size | mm(in) | Liquid line:ø9.52(3/8") Gas line:ø19.05(3/4") | Liquid line:ø9.52(3/8") Gas line:ø22.22(7/8") |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. External static pressure of indoor unit is 72Pa.

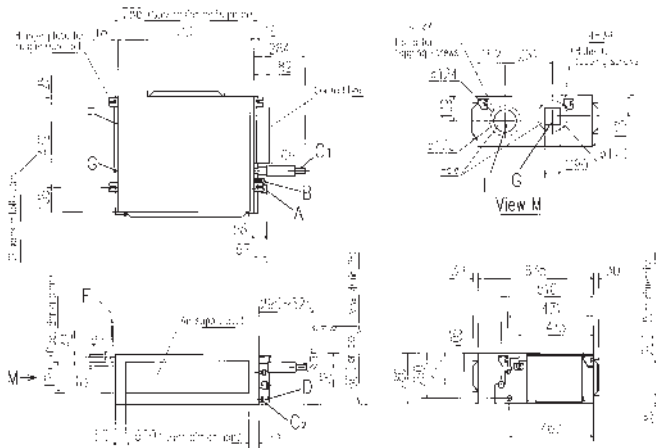
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.



Dimensions

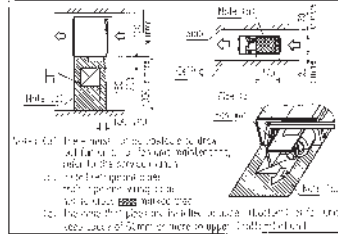
All measurements in mm.

FDU45KXE6F, 56KXE6F



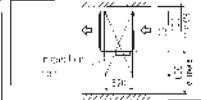
Opening a door from inside

Use the edge of the cover to push down on the flap and release the door. This is shown in:



Notes: Call the attention of the customer to the following points: After the door is closed, the door must be locked with the key. The door must be locked with the key. The door must be locked with the key. The door must be locked with the key.

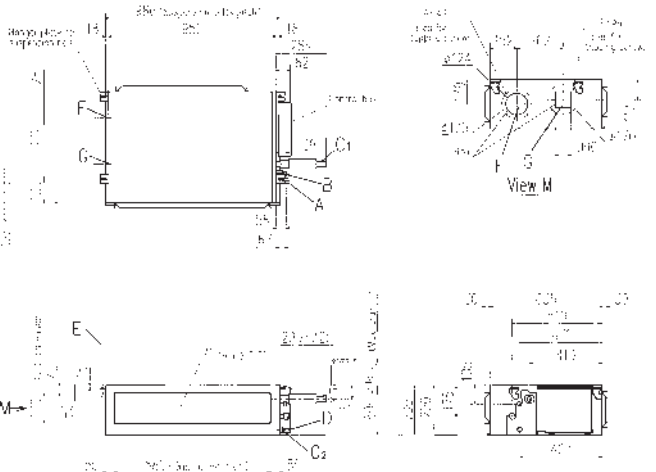
View 21 - From bottom cover



Notes: The door must be locked with the key. The door must be locked with the key.

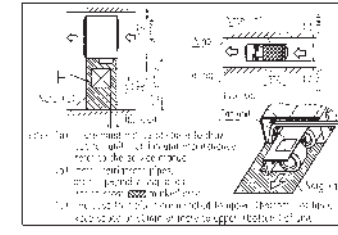
| Symbol | Description | Accessories |
|--------|--------------|---------------------|
| A | Opening plug | 472210701 (1 piece) |
| B | Locking plug | 472210702 (1 piece) |
| C | Locking plug | 472210703 (1 piece) |
| D | Locking plug | 472210704 (1 piece) |
| E | Locking plug | 472210705 (1 piece) |
| F | Locking plug | 472210706 (1 piece) |
| G | Locking plug | 472210707 (1 piece) |
| H | Locking plug | 472210708 (1 piece) |
| I | Locking plug | 472210709 (1 piece) |
| J | Locking plug | 472210710 (1 piece) |
| K | Locking plug | 472210711 (1 piece) |
| L | Locking plug | 472210712 (1 piece) |
| M | Locking plug | 472210713 (1 piece) |
| N | Locking plug | 472210714 (1 piece) |
| O | Locking plug | 472210715 (1 piece) |
| P | Locking plug | 472210716 (1 piece) |
| Q | Locking plug | 472210717 (1 piece) |
| R | Locking plug | 472210718 (1 piece) |
| S | Locking plug | 472210719 (1 piece) |
| T | Locking plug | 472210720 (1 piece) |

FDU71KXE6F, 90KXE6F



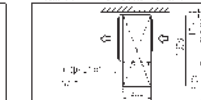
Opening a door from inside

Use the edge of the cover to push down on the flap and release the door. This is shown in:



Notes: Call the attention of the customer to the following points: After the door is closed, the door must be locked with the key. The door must be locked with the key. The door must be locked with the key.

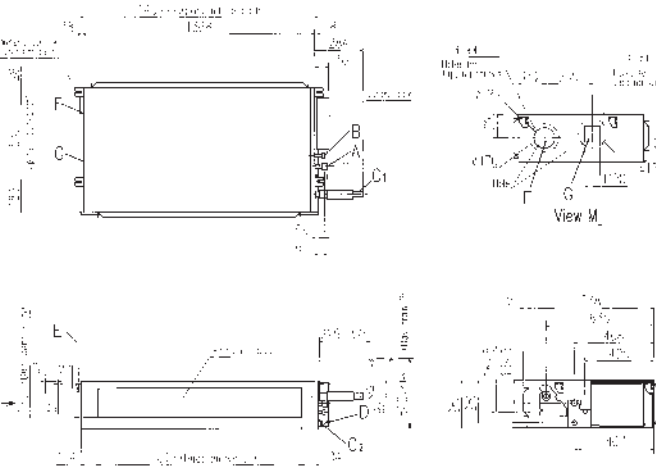
View 21 - From bottom cover



Notes: The door must be locked with the key. The door must be locked with the key.

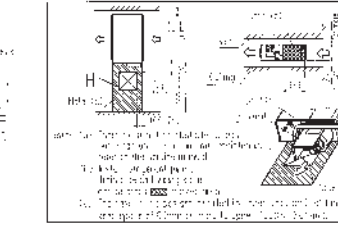
| Symbol | Description | Accessories |
|--------|--------------|---------------------|
| A | Opening plug | 472210701 (1 piece) |
| B | Locking plug | 472210702 (1 piece) |
| C | Locking plug | 472210703 (1 piece) |
| D | Locking plug | 472210704 (1 piece) |
| E | Locking plug | 472210705 (1 piece) |
| F | Locking plug | 472210706 (1 piece) |
| G | Locking plug | 472210707 (1 piece) |
| H | Locking plug | 472210708 (1 piece) |
| I | Locking plug | 472210709 (1 piece) |
| J | Locking plug | 472210710 (1 piece) |
| K | Locking plug | 472210711 (1 piece) |
| L | Locking plug | 472210712 (1 piece) |
| M | Locking plug | 472210713 (1 piece) |
| N | Locking plug | 472210714 (1 piece) |
| O | Locking plug | 472210715 (1 piece) |
| P | Locking plug | 472210716 (1 piece) |
| Q | Locking plug | 472210717 (1 piece) |
| R | Locking plug | 472210718 (1 piece) |
| S | Locking plug | 472210719 (1 piece) |
| T | Locking plug | 472210720 (1 piece) |

FDU112KXE6F, 140KXE6F, 160KXE6F



Opening a door from inside

Use the edge of the cover to push down on the flap and release the door. This is shown in:



Notes: Call the attention of the customer to the following points: After the door is closed, the door must be locked with the key. The door must be locked with the key. The door must be locked with the key.

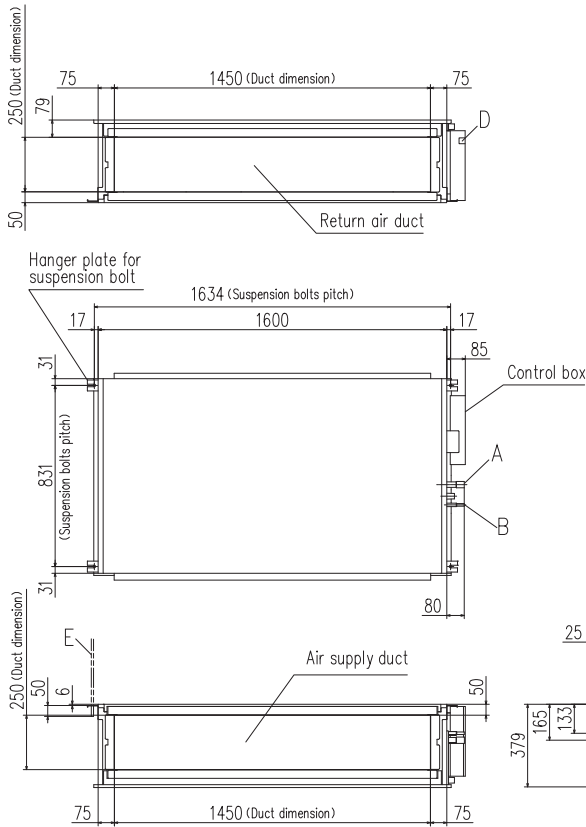
View 21 - From bottom cover



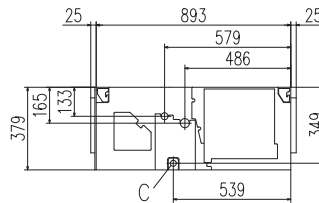
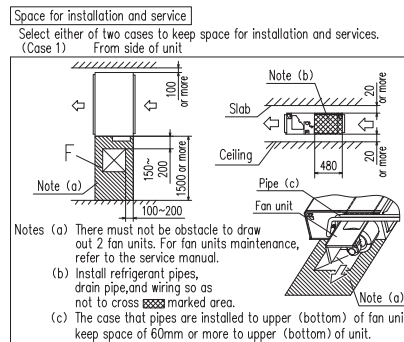
Notes: The door must be locked with the key. The door must be locked with the key.

| Symbol | Description | Accessories |
|--------|--------------|---------------------|
| A | Opening plug | 472210701 (1 piece) |
| B | Locking plug | 472210702 (1 piece) |
| C | Locking plug | 472210703 (1 piece) |
| D | Locking plug | 472210704 (1 piece) |
| E | Locking plug | 472210705 (1 piece) |
| F | Locking plug | 472210706 (1 piece) |
| G | Locking plug | 472210707 (1 piece) |
| H | Locking plug | 472210708 (1 piece) |
| I | Locking plug | 472210709 (1 piece) |
| J | Locking plug | 472210710 (1 piece) |
| K | Locking plug | 472210711 (1 piece) |
| L | Locking plug | 472210712 (1 piece) |
| M | Locking plug | 472210713 (1 piece) |
| N | Locking plug | 472210714 (1 piece) |
| O | Locking plug | 472210715 (1 piece) |
| P | Locking plug | 472210716 (1 piece) |
| Q | Locking plug | 472210717 (1 piece) |
| R | Locking plug | 472210718 (1 piece) |
| S | Locking plug | 472210719 (1 piece) |
| T | Locking plug | 472210720 (1 piece) |

FDU224KXZE1, 280KXZE1



| Symbol | Content | | |
|--------|---------------------------------|-----------------------|-----------------------|
| | MODEL | 224 | 280 |
| A | Gas piping | φ19.05 (3/4") (Braze) | φ22.22 (7/8") (Braze) |
| B | Liquid piping | φ9.52 (3/8") (Braze) | |
| C | Drain piping (Gravity drainage) | VP25 (O.D.32) | |
| D | Hole for wiring | | |
| E | Suspension bolts | M10 | |
| F | Inspection hole | (450X450) | |



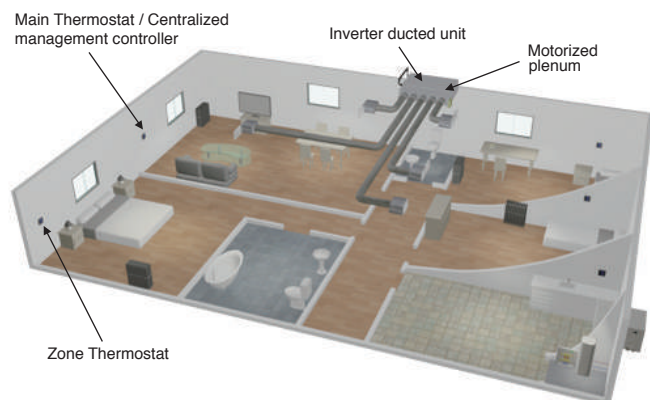
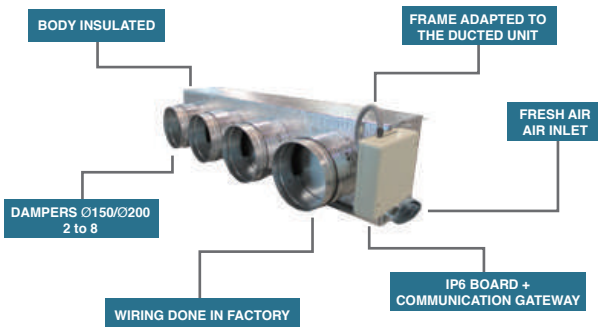
Round duct adapter (Available for FDU 45~160KXE6F, FDUM 22~160KXE6F)

Company : AIRZONE
URL : <http://www.airzone.es>



All-in-one solution: the whole zoning system in a plug&play device perfectly adapted to the indoor DX unit

Main components





Duct Connected -Low/Middle Static Pressure- FDUM

Model No.

| | |
|-------------|--------------|
| FDUM22KXE6F | FDUM71KXE6F |
| FDUM28KXE6F | FDUM90KXE6F |
| FDUM36KXE6F | FDUM112KXE6F |
| FDUM45KXE6F | FDUM140KXE6F |
| FDUM56KXE6F | FDUM160KXE6F |



Filter kit (option)

- UM-FL1EF : for 22~56
- UM-FL2EF : for 71, 90
- UM-FL3EF : for 112, 140, 160



*Filter pressure loss:5pa

Remote control (option)

Wired



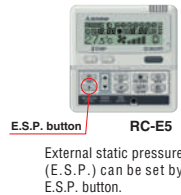
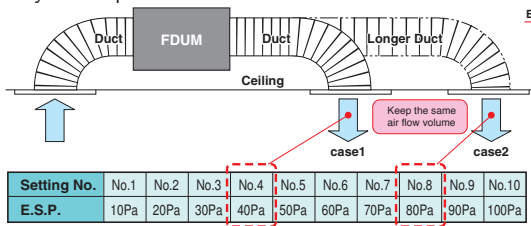
Wireless



RCN-KIT4-E2

Automatic external static pressure (E.S.P.) control

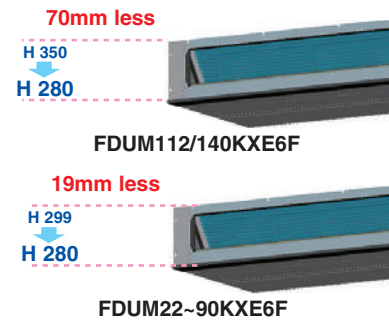
Duct design was simplified.
Using DC motor, the most optimum air flow volume can be achieved by this automatic control.
Indoor unit will recognize external static pressure by itself automatically and keep rated air flow volume.



External static pressure (E.S.P.) can be set by E.S.P. button.

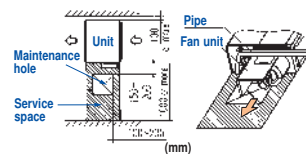
Thin design

The height of all FDUM models is only 280mm.



Improvement of the serviceability

Fan unit (impeller and motor) can be pulled out from the right side or the bottom side of the unit.
Maintenance can be available from the right side or the bottom side.



Transparent inspection window

Dirt condition of the bottom of a drain pan can be checked through this transparent inspection window without removing drain pan. (Please refer to P74)

Specifications

| Item | Model | FDUM22KXE6F | FDUM28KXE6F | FDUM36KXE6F | FDUM45KXE6F | FDUM56KXE6F | FDUM71KXE6F | FDUM90KXE6F | FDUM112KXE6F | FDUM140KXE6F | FDUM160KXE6F | |
|--|---------------------|---|-------------|-------------|---|-------------|---------------------------|--|--------------|---------------------------|---------------------------|---------------------------|
| Nominal cooling capacity | kW | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 | 7.1 | 9.0 | 11.2 | 14.0 | 16.0 | |
| Nominal heating capacity | kW | 2.5 | 3.2 | 4.0 | 5.0 | 6.3 | 8.0 | 10.0 | 12.5 | 16.0 | 18.0 | |
| Power source | | 1 Phase 220-240V, 50Hz | | | | | | | | | | |
| Power consumption | Cooling | 0.10-0.10 | | | | | 0.20-0.20 | | | 0.29-0.29 | 0.33-0.33 | 0.45-0.45 |
| | Heating | 0.10-0.10 | | | | | 0.20-0.20 | | | 0.29-0.29 | 0.33-0.33 | 0.45-0.45 |
| Sound power level | dB(A) | 60 | | | | | 65 | | | — | | |
| Sound pressure level | dB(A) | P-Hi:37 Hi:32 Me:29 Lo:26 | | | | | P-Hi:38 Hi:33 Me:29 Lo:25 | | | P-Hi:44 Hi:38 Me:36 Lo:30 | P-Hi:45 Hi:40 Me:34 Lo:29 | P-Hi:47 Hi:40 Me:35 Lo:30 |
| Exterior dimensions H x W x D | mm | 280 x 750 x 635 | | | | | 280 x 950 x 635 | | | 280 x 1370 x 740 | | |
| Net weight | kg | 29 | | | | | 34 | | | 54 | | |
| Air flow | m ³ /min | P-Hi:13 Hi:10 Me:9 Lo:8 | | | | | P-Hi:24 Hi:19 Me:15 Lo:10 | | | P-Hi:36 Hi:28 Me:25 Lo:19 | P-Hi:39 Hi:32 Me:26 Lo:20 | P-Hi:48 Hi:35 Me:28 Lo:22 |
| Maximum external static pressure | Pa | 100 | | | | | | | | | | |
| Outside air intake | | Possible | | | | | | | | | | |
| Air filter | | Filter kit:UM-FL1EF/UM-FL2EF/UM-FL3EF(option) | | | | | | | | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2 | | | | | | | | | | |
| Installation data Refrigerant piping size | mm(in) | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | | | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") | | | | |

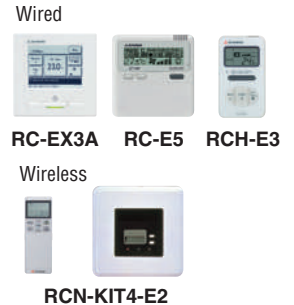
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. External static pressure of indoor unit is 35Pa(22/28/36/45/56/71/90), 60Pa(112/140/160).
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

Duct Connected (thin) -Low Static Pressure- FDUT

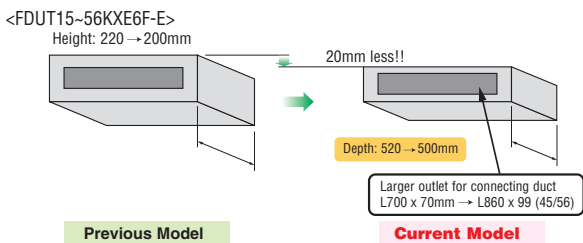
Model No.
 FDUT15KXE6F-E
 FDUT22KXE6F-E
 FDUT28KXE6F-E
 FDUT36KXE6F-E
 FDUT45KXE6F-E
 FDUT56KXE6F-E
 FDUT71KXE6F-E



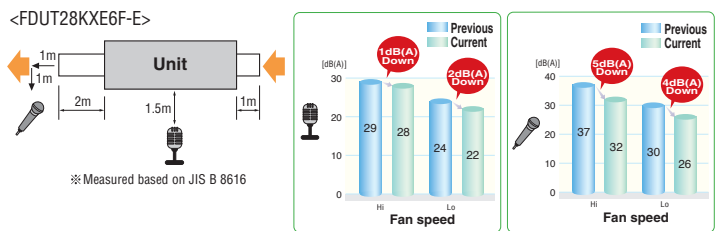
Remote control (option)



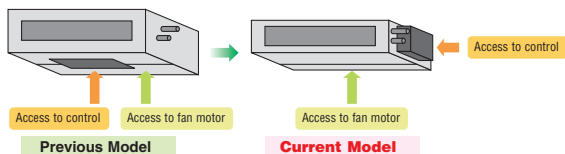
Compact design



Lower noise



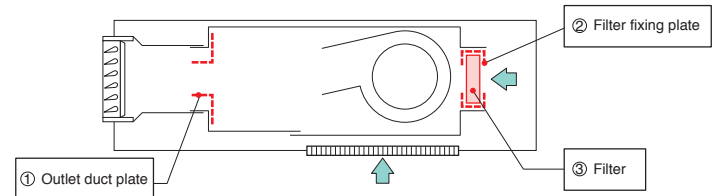
Serviceability



Duct kit and filter options

| Item | Contents | for FDUT15/22/28/36KXE6F-E | for FDUT45/56KXE6F-E | for FDUT71KXE6F-E |
|-------------------|----------|----------------------------|----------------------|-------------------|
| Outlet duct plate | ① | UT-SAT1EF | UT-SAT2EF | UT-SAT3EF |
| Filter set | ②+③ | UT-FL1EF | UT-FL2EF | UT-FL3EF |

Filter pressure loss : 5 Pa



Specifications

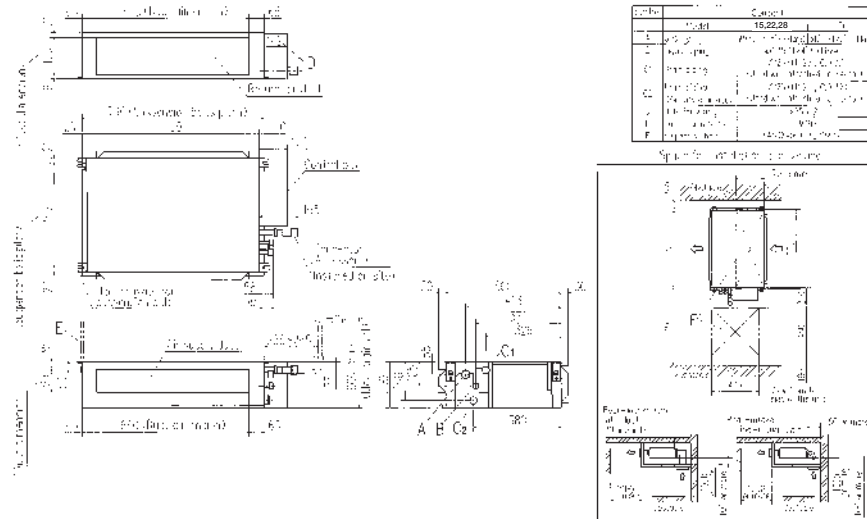
| Item | Model | FDUT15KXE6F-E | FDUT22KXE6F-E | FDUT28KXE6F-E | FDUT36KXE6F-E | FDUT45KXE6F-E | FDUT56KXE6F-E | FDUT71KXE6F-E | |
|--|---------------------|---|-------------------|---------------|---|-------------------|--|--------------------|--|
| Nominal cooling capacity | kW | 1.5 | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 | 7.1 | |
| Nominal heating capacity | kW | 1.7 | 2.5 | 3.2 | 4.0 | 5.0 | 6.0 | 8.0 | |
| Power source | | 1 Phase 220-240V, 50Hz | | | | | | | |
| Power consumption | Cooling | 0.06-0.06 | | 0.07-0.07 | | 0.08-0.08 | | 0.08-0.08 | |
| | Heating | 0.06-0.06 | | 0.07-0.07 | | 0.08-0.08 | | 0.07-0.07 | |
| Sound power level | dB(A) | 52 | | | 57 | 58 | 59 | | |
| Sound pressure level ① | dB(A) | Hi:28 Me:26 Lo:22 | Hi:28 Me:26 Lo:22 | | Hi:33 Me:30 Lo:26 | Hi:34 Me:32 Lo:28 | Hi:35 Me:33 Lo:30 | Hi:35 Me:31 Lo:28 | |
| Sound pressure level ② | dB(A) | Hi:32 Me:29 Lo:25 | Hi:32 Me:29 Lo:26 | | Hi:37 Me:34 Lo:28 | Hi:36 Me:33 Lo:27 | Hi:38 Me:33 Lo:29 | Hi:41 Me:37 Lo:32 | |
| Exterior dimensions H x W x D | mm | 200x750x500 | | | | 200x950x500 | | 220x1150x565 | |
| Net weight | kg | 21 | | | 22 | 25 | | 31 | |
| Air flow (Standard) | m ³ /min | Hi:6 Me:5 Lo:4 | Hi:7.5 Me:6 Lo:5 | | Hi:8.5 Me:7 Lo:5.5 | Hi:11.5 Me:9 Lo:7 | Hi:12.5 Me:9 Lo:7.2 | Hi:16 Me:13 Lo:9.5 | |
| External Static pressure | Pa | Standard:10, Max:35 | | | | | Standard:10, Max:50 | | |
| Outside air intake | | Possible from return duct | | | | | | | |
| Air filter | | Filter set:UT-FL1EF/UT-FL2EF/UT-FL3EF(option) | | | | | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2 | | | | | | | |
| Installation data Refrigerant piping size | mm(in) | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | | | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") | | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. External static pressure of indoor unit is 10Pa.
 2. The data of nominal cooling and heating capacity and sound pressure level are measured with 10Pa of external static pressure.
 3. The sound level indicates the value of rear-intake type with duct in anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 4. Sound pressure levels are values when 2m supply duct and 1m return duct are connected.
 ①: Mike position is 1.5m below unit, ②: Mike position is 1m in front and 1m below the air supply duct.

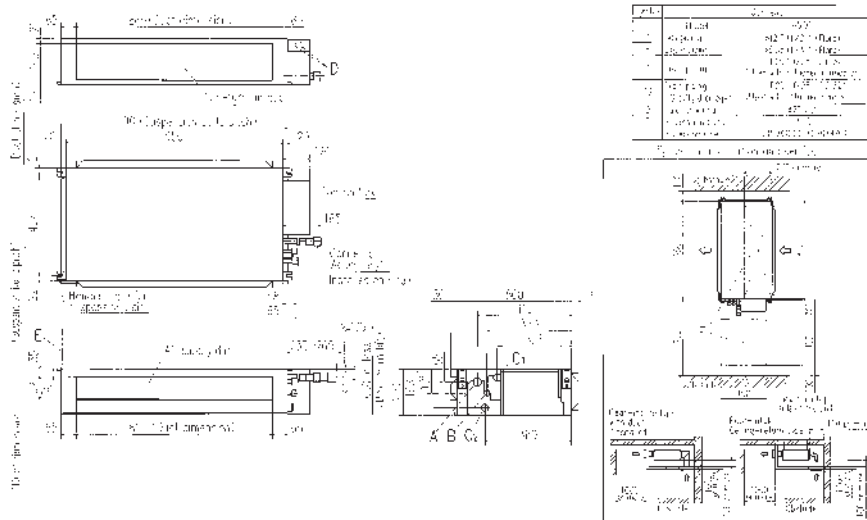
Dimensions

All measurements in mm.

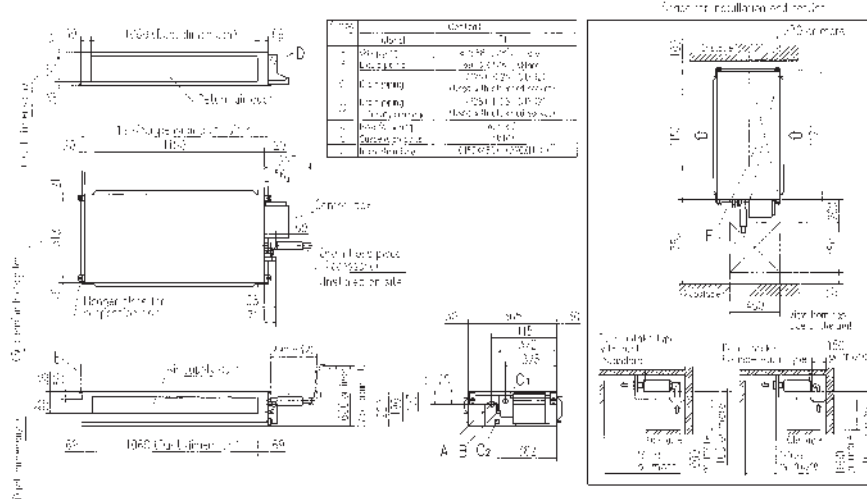
FDUT15KXE6F-E, 22KXE6F-E, 28KXE6F-E, 36KXE6F-E



FDUT45KXE6F-E, 56KXE6F-E



FDUT71KXE6F-E



Duct Connected (Compact & Flexible) FDUH

Model No.
FDUH22KXE6F
FDUH28KXE6F
FDUH36KXE6F



Drain up kit (option)
(600mm)
UH-DU-E

Remote control (option)

Wired



RC-EX3A RC-E5 RCH-E3

Wireless



RCN-KIT4-E2

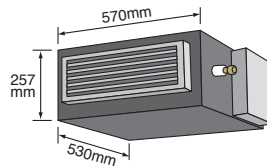
Filter kit (option)
UH-FL1E



*Filter pressure loss:5pa

Compact and thin size, light weight

Our leading high technology has realized the best solution for air conditioning in hotels with compact and thin size units and high energy efficiency. In addition, weight is only 20kg.

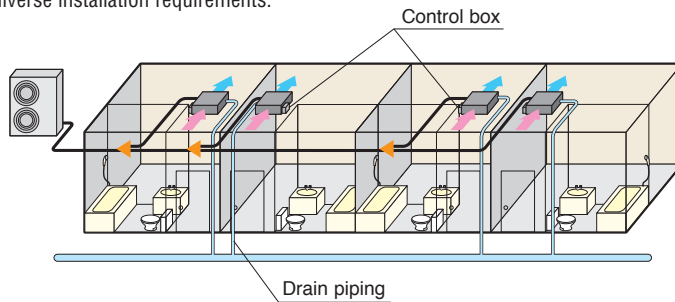


Quiet operation

The lowest sound level in the industry can ensure comfortable stay and rest in hotels.

Installation Flexibility

Control box and drain piping can be installed on both side of the unit and air intake to the unit is available from bottom or back side. Our highest technology can satisfy diverse installation requirements.



Wired remote control



RCH-E3 (option)

Simple remote control

Considering specialized usage in hotel rooms, control buttons are limited only to minimum required functions such as ON/OFF, mode, temperature setting and fan speed. It is really simple and easy to use.

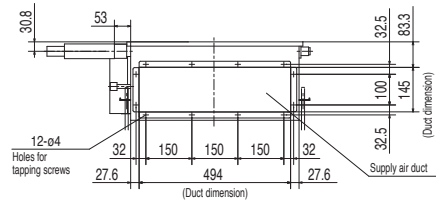
Specifications

| Item | Model | FDUH22KXE6F | FDUH28KXE6F | FDUH36KXE6F |
|---------------------------|-------------------------|---|-------------|-------------------------|
| Nominal cooling capacity | kW | 2.2 | 2.8 | 3.6 |
| Nominal heating capacity | kW | 2.5 | 3.2 | 4.0 |
| Power source | | 1 Phase 220-240V, 50Hz | | |
| Power consumption | Cooling | 0.05-0.07 | | |
| | Heating | 0.05-0.07 | | |
| Sound power level | dB(A) | 60 | | |
| Sound pressure level | dB(A) | P-Hi: 39 Hi: 33 Me: 30 Lo: 27 | | |
| Exterior dimensions HxWxD | mm | 257x570x530 | | |
| Net weight | kg | 22 | | |
| Air flow | m ³ /min | P-Hi: 8.5 Hi: 7 Me: 6.5 Lo: 6 | | |
| External static pressure | Pa | 30 | | |
| Outside air intake | | Possible from return duct | | |
| Air filter | | Filter kit:UH-FL1E(option) | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2 | | |
| Installation data | mm(m) | Liquid line:ø6.35(1/4") | | Liquid line:ø6.35(1/4") |
| | Refrigerant piping size | Gas line:ø9.52(3/8") | | Gas line:ø12.7(1/2") |

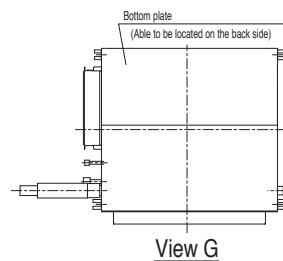
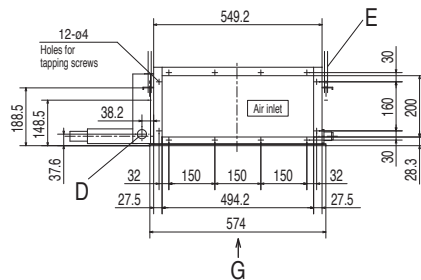
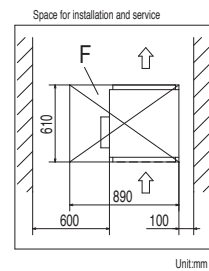
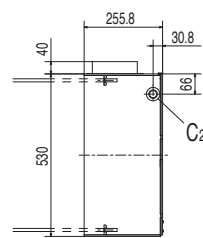
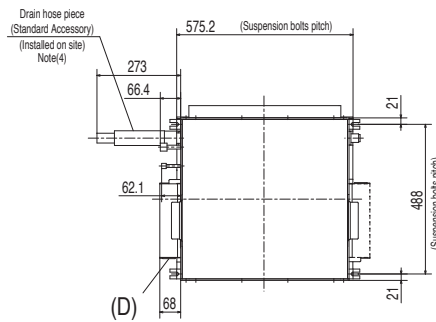
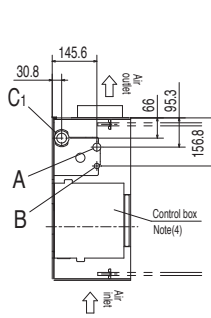
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

Dimensions

All measurements in mm.



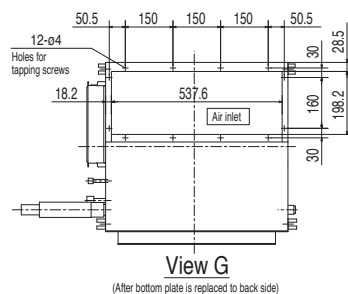
| Symbol | Content | | |
|---------------------------------|------------------|--------------------------------|----------------------|
| | Model | FDUH22XE6F/28XE6F | FDUH38XE6F |
| A | Gas piping | ø9.52 (3/8") (Flare) | ø12.7 (1/2") (Flare) |
| B | Liquid piping | ø6.35 (1/4") (Flare) | |
| C ₁ , C ₂ | Drain piping | VP20(I, D.20, O.D.26) Note (2) | |
| D | Hole for wiring | ø30 | |
| E | Suspension bolts | (M10) | |
| F | Inspection hole | (635X890) Note (3) | |



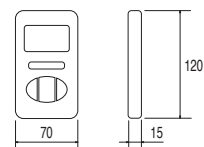
Notes

- (1) The model name label is attached on the fan case inside the air return grille.
- (2) Prepare the connecting socket (VP20) on site. (As for drain piping, it is possible to choose C₁ or C₂)
- (3) When control box is located on the reverse side, installation space should be modified to new location.
- (4) Control box and Drain hose piece are able to be relocated on the reverse side.

In case of Bottom air intake



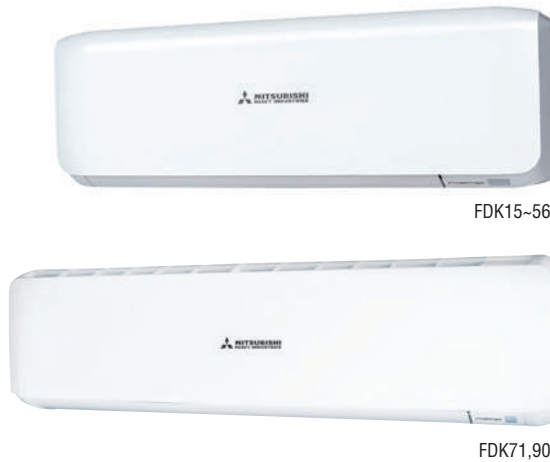
Simple remote control





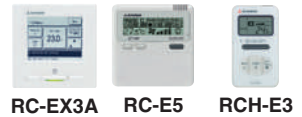
Wall Mounted FDK

- Model No.**
 FDK15KXZE1
 FDK22KXZE1
 FDK28KXZE1
 FDK36KXZE1
 FDK45KXZE1
 FDK56KXZE1
 FDK71KXZE1
 FDK90KXZE1



Remote control (option)

Wired



Wireless

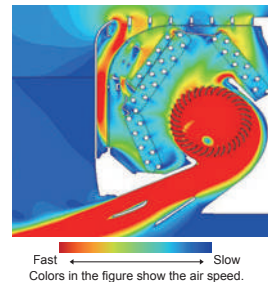


Elegant Timeless Design

The new FDK series air-conditioners have been stylishly designed with rounded contours that fit beautifully into any of Europe's diverse interior settings. The design was created by the Italian industrial design studio Tensa srl, based in Milan, to respond to a broad spectrum of local user needs. (15-56KXZE1)



Jet Technology

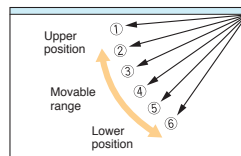


FDK models adopt the air flow design that's proven to minimise resistance in a CFD analysis to achieve uniform air conditioning to the furthest corners of the room.

Flap control system

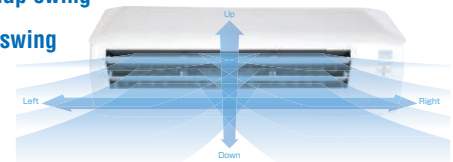
Selection of flap position is possible. A flap can be set at different angles.

* The wireless remote control is not applicable to the flap control system.



Lateral Swing ▶ flap swings from right to left automatically

Up/Down Flap swing + Lateral swing



Specifications

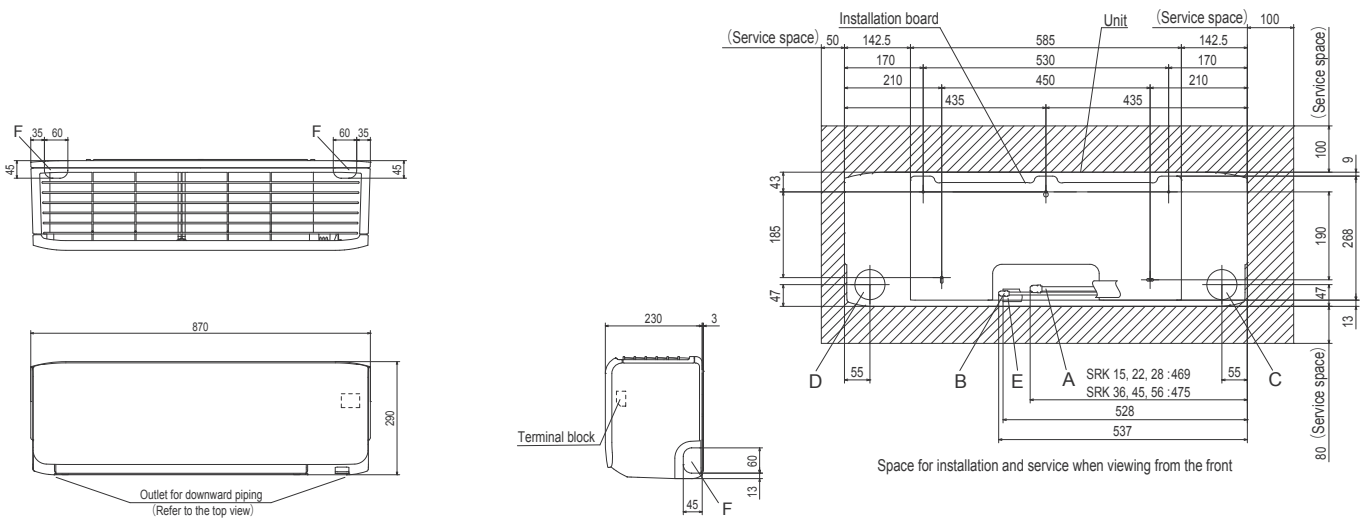
| Item | Model | FDK15KXZE1 | FDK22KXZE1 | FDK28KXZE1 | FDK36KXZE1 | FDK45KXZE1 | FDK56KXZE1 | FDK71KXZE1 | FDK90KXZE1 | |
|---|---------|--|---------------------------|---------------------------|---|---------------------------|---------------------------|--|---------------------------|--|
| Nominal cooling capacity | kW | 1.5 | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 | 7.1 | 9.0 | |
| Nominal heating capacity | kW | 1.7 | 2.5 | 3.2 | 4.0 | 5.0 | 6.3 | 8.0 | 10.0 | |
| Power source | | 1 Phase 220-240V, 50Hz | | | | | | | | |
| Power consumption | Cooling | 0.02-0.02 | | | 0.03-0.03 | | | 0.04-0.04 | 0.05-0.05 | |
| | Heating | 0.02-0.02 | | | 0.03-0.03 | | | 0.04-0.04 | 0.05-0.05 | |
| Sound power level | dB(A) | 54 | 55 | | 58 | | Cooling:58 Heating:61 | 59 | 61 | |
| Sound pressure level | Cooling | P-Hi:38 Hi:34 Me:31 Lo:28 | P-Hi:38 Hi:36 Me:32 Lo:28 | P-Hi:40 Hi:38 Me:33 Lo:28 | P-Hi:43 Hi:41 Me:36 Lo:33 | P-Hi:43 Hi:41 Me:36 Lo:33 | P-Hi:42 Hi:40 Me:37 Lo:35 | P-Hi:44 Hi:42 Me:39 Lo:35 | P-Hi:44 Hi:42 Me:39 Lo:35 | |
| | Heating | P-Hi:38 Hi:34 Me:31 Lo:28 | P-Hi:38 Hi:36 Me:32 Lo:28 | P-Hi:40 Hi:38 Me:33 Lo:28 | P-Hi:43 Hi:41 Me:36 Lo:33 | P-Hi:44 Hi:42 Me:37 Lo:33 | P-Hi:42 Hi:40 Me:37 Lo:35 | P-Hi:44 Hi:42 Me:39 Lo:35 | P-Hi:44 Hi:42 Me:39 Lo:35 | |
| Exterior dimensions H x W x D | mm | 290 x 870 x 230 | | | | | | 339 x 1197 x 262 | | |
| Net weight | kg | 11.5 | 11 | | 11.5 | | 17 | | | |
| Air flow | Cooling | P-Hi:5.7 Hi:5 Me:4.5 Lo:3.6 | P-Hi:8.5 Hi:8 Me:6 Lo:5 | | P-Hi:11 Hi:10 Me:8 Lo:7 | P-Hi:12 Hi:11 Me:9 Lo:8 | P-Hi:12 Hi:11 Me:9 Lo:8 | P-Hi:22 Hi:19 Me:16 Lo:14 | P-Hi:23 Hi:21 Me:19 Lo:16 | |
| | Heating | | | | | | P-Hi:13 Hi:12 Me:10 Lo:8 | | | |
| Outside air intake | | Not possible | | | | | | | | |
| Air filter, Q'ty | | Polypropylene net x2 (Washable) | | | | | | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-K-E2, RCN-K71-E2 | | | | | | | | |
| Installation data Refrigerant piping size | mm(in) | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | | | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") | | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

Dimensions

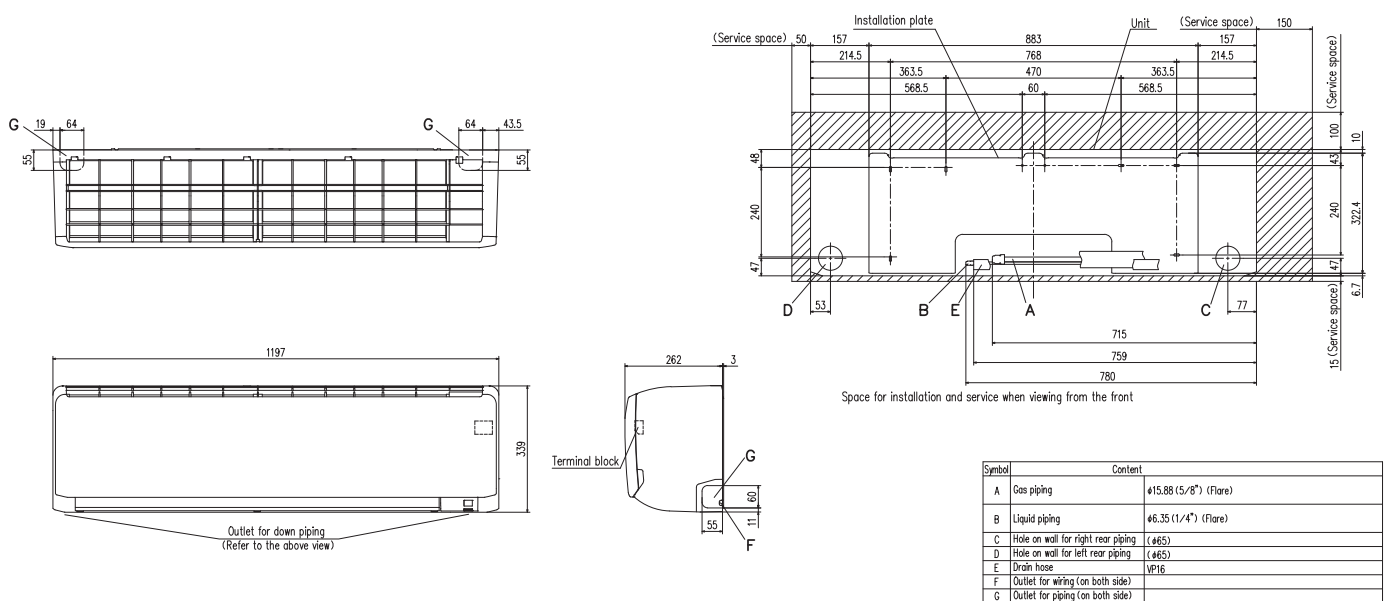
All measurements in mm.

FDK15KXZE1, 22KXZE1, 28KXZE1, 36KXZE1, 45KXZE1, 56KXZE1



| Symbol | Content |
|--------|--|
| A | Gas piping SRK15, 22, 28 ϕ 9.52 (3/8") (Flare) |
| B | Liquid piping SRK36, 45, 56 ϕ 12.7 (1/2") (Flare) |
| C | Hole on wall for right rear piping (ϕ 65) |
| D | Hole on wall for left rear piping (ϕ 65) |
| E | Drain hose VP16 |
| F | Outlet for piping (on both side) |

FDK71KXZE1, 90KXZE1



| Symbol | Content |
|--------|---|
| A | Gas piping ϕ 15.88 (5/8") (Flare) |
| B | Liquid piping ϕ 6.35 (1/4") (Flare) |
| C | Hole on wall for right rear piping (ϕ 65) |
| D | Hole on wall for left rear piping (ϕ 65) |
| E | Drain hose VP16 |
| F | Outlet for wiring (on both side) |
| G | Outlet for piping (on both side) |

Ceiling Suspended FDE

Model No.

- FDE36KXZE1
- FDE45KXZE1
- FDE56KXZE1
- FDE71KXZE1
- FDE112KXZE1
- FDE140KXZE1



Remote control (option)

Wired



RC-EX3A RC-E5 RCH-E3

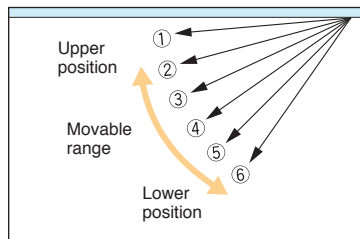
Wireless



RCN-E-E3

Flap control system

Selection of flap position is possible. A flap can be set at different angles.



* The wireless remote control is not applicable to the flap control system.

Reduction of weight

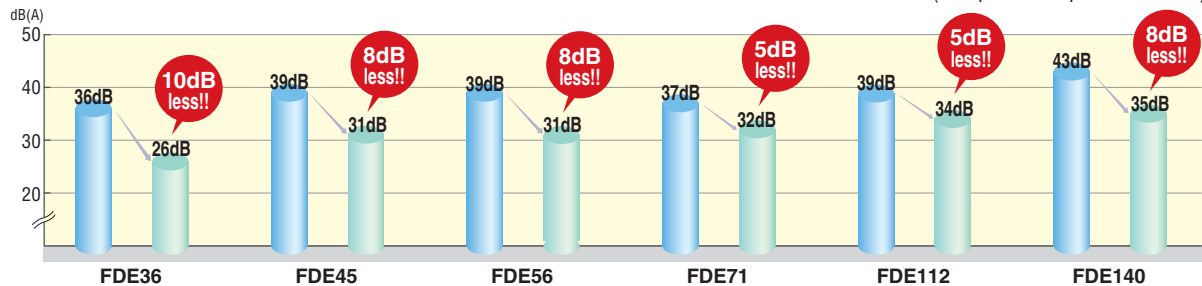
Thanks to decreasing the numbers of fan motor from two to one, reduction of weight was achieved.

| | Previous | | Current | |
|--------|----------|---|---------|------------|
| FDE71 | 37 | ➔ | 33 | 4kg less!! |
| FDE112 | 49 | ➔ | 43 | 6kg less!! |
| FDE140 | 49 | ➔ | 43 | 6kg less!! |

Reduction of sound pressure level (Lo mode)

The industry's lowest sound pressure levels were achieved by decreasing air flow volume, decreasing pressure loss with employment of one fan motor and optimizing casing and distributor shape.

(Comparison of previous model)



Specifications

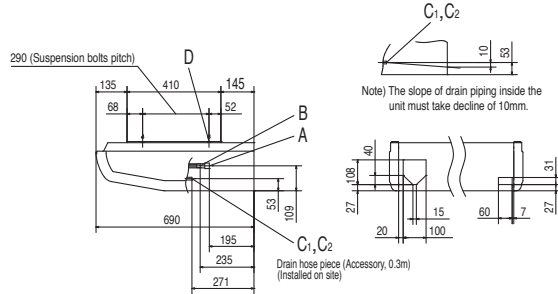
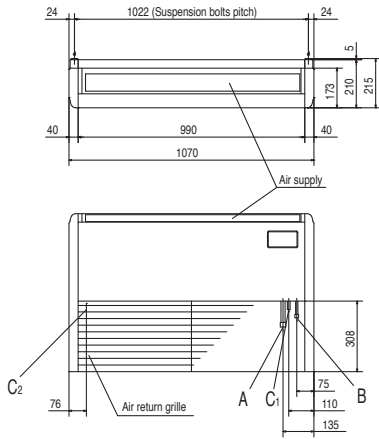
| Item | Model | FDE36KXZE1 | FDE45KXZE1 | FDE56KXZE1 | FDE71KXZE1 | FDE112KXZE1 | FDE140KXZE1 |
|-------------------------------|-------------------------|---|---------------------------|---------------------------|--|-----------------------------|---------------------------|
| Nominal cooling capacity | kW | 3.6 | 4.5 | 5.6 | 7.1 | 11.2 | 14.0 |
| Nominal heating capacity | kW | 4.0 | 5.0 | 6.3 | 8.0 | 12.5 | 16.0 |
| Power source | | 1 Phase 220-240V, 50Hz | | | | | |
| Power consumption | Cooling kW | 0.05-0.05 | | | 0.07-0.07 | 0.10-0.10 | 0.13-0.13 |
| | Heating kW | 0.05-0.05 | | | 0.07-0.07 | 0.10-0.10 | 0.13-0.13 |
| Sound power level | dB(A) | 60 | | | 62 | — | |
| Sound pressure level | dB(A) | P-Hi:46 Hi:38 Me:31 Lo:26 | P-Hi:46 Hi:38 Me:36 Lo:31 | P-Hi:46 Hi:38 Me:36 Lo:31 | P-Hi:47 Hi:39 Me:37 Lo:32 | P-Hi:45 Hi:42 Me:38 Lo:34 | P-Hi:48 Hi:43 Me:40 Lo:35 |
| Exterior dimensions H x W x D | mm | 210 x 1070 x 690 | | | 210 x 1320 x 690 | 250 x 1620 x 690 | |
| Net weight | kg | 28 | | | 33 | 43 | |
| Air flow | m ³ /min | P-Hi:13 Hi:10 Me:7 Lo:5.5 | P-Hi:13 Hi:10 Me:9 Lo:7 | | P-Hi:20 Hi:15 Me:13 Lo:10 | P-Hi:28 Hi:25 Me:21 Lo:16.5 | P-Hi:32 Hi:26 Me:23 Lo:17 |
| Outside air intake | | Not possible | | | | | |
| Air filter, Q'ty | | Pocket Plastic net x2 (Washable) | | | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-E-E3 | | | | | |
| Installation data | Refrigerant piping size | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") | | |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

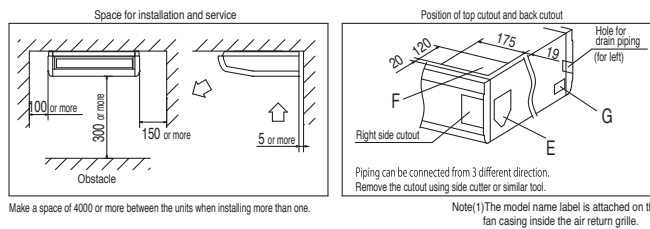
Dimensions

All measurements in mm.

FDE36KXZE1, 45KXZE1, 56KXZE1



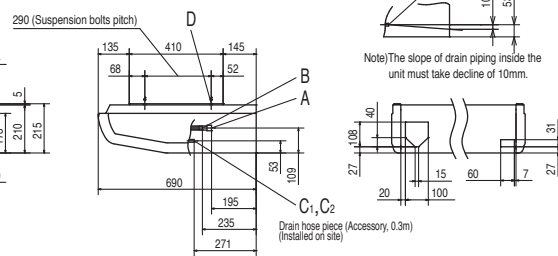
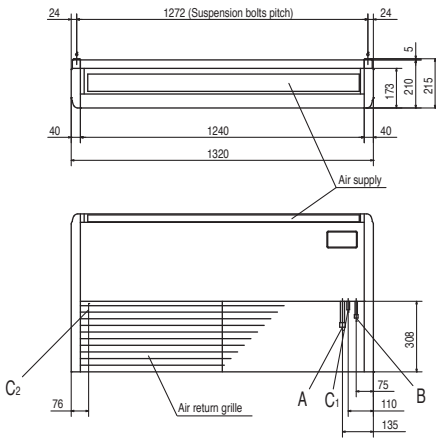
| Symbol | Content |
|------------------|---|
| A | Gas piping $\phi 12.7$ (1/2") (Flare) |
| B | Liquid piping $\phi 6.35$ (1/4") (Flare) |
| C _{1,2} | Drain piping VP20 (I.D.20) |
| D | Hole for suspension bolt (M10 or M8) |
| E | Back cutout PE cover |
| F | Top cutout Plate cover |
| G | Hole for drain piping (for left back) (Knock out) |



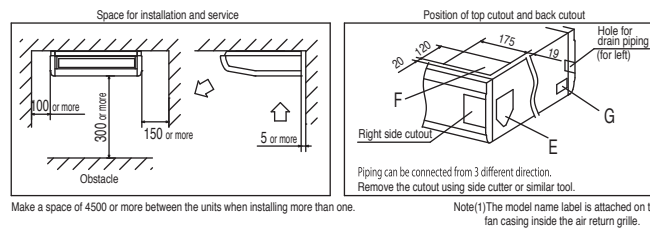
Make a space of 4000 or more between the units when installing more than one.

Note(1) The model name label is attached on the fan casing inside the air return grille.

FDE71KXZE1



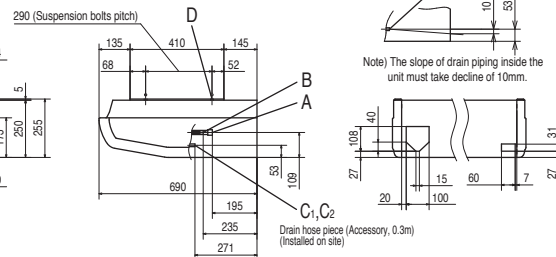
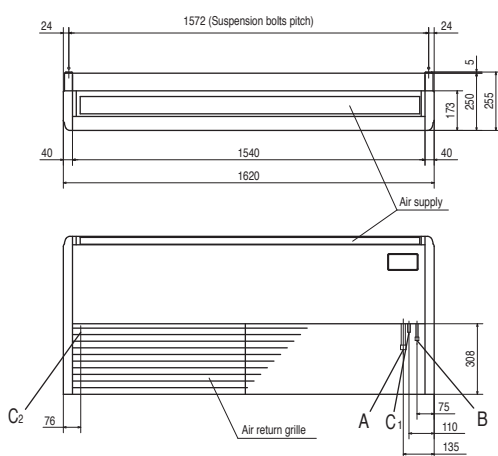
| Symbol | Content |
|------------------|---|
| A | Gas piping $\phi 15.88$ (5/8") (Flare) |
| B | Liquid piping $\phi 9.52$ (3/8") (Flare) |
| C _{1,2} | Drain piping VP20 (I.D.20) |
| D | Hole for suspension bolt (M10 or M8) |
| E | Back cutout PE cover |
| F | Top cutout Plate cover |
| G | Hole for drain piping (for left back) (Knock out) |



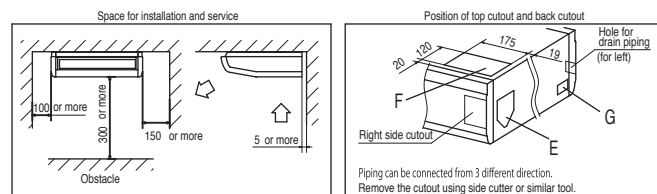
Make a space of 4500 or more between the units when installing more than one.

Note(1) The model name label is attached on the fan casing inside the air return grille.

FDE112KXZE1, 140KXZE1



| Symbol | Content |
|------------------|---|
| A | Gas piping $\phi 15.88$ (5/8") (Flare) |
| B | Liquid piping $\phi 9.52$ (3/8") (Flare) |
| C _{1,2} | Drain piping VP20 (I.D.20) |
| D | Hole for suspension bolt (M10 or M8) |
| E | Back cutout PE cover |
| F | Top cutout Plate cover |
| G | Hole for drain piping (for left back) (Knock out) |



Make a space of 5000 or more between the units when installing more than one.

Note(1) The model name label is attached on the fan casing inside the air return grille.



Floor Standing -2way- FDFW

Model No.

FDFW28KXE6F
FDFW45KXE6F
FDFW56KXE6F



Auto air outlet selection

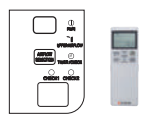


Remote control (option)

Wired



Wireless



Sophisticated Design

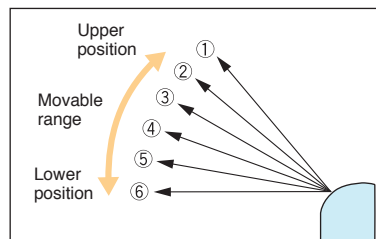
With classy semi flat front panel in chic white, the new series fit in various kinds of rooms and create relaxing atmosphere. Choice of wall hanging, floor standing or behind gallery installation is available.

Quiet Operation

Thanks to optimum balance of air outlet direction and sufficient air flow volume, the sound level has been minimized. The level of FDFW28KXE6F in the cooling lo mode is 30dB(A) only.

Flap control system

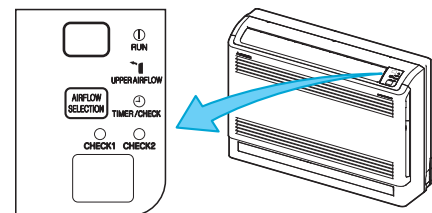
Selection of flap position is possible. A flap can be set at different angles.



*The wireless remote control is not applicable to the flap control system.

Convenient to use operation

Simultaneous lower and upper air outlets or upper outlet can be selected by air flow direction button. Further control can be arranged by a remote control.



(In case of use of wireless remote control)

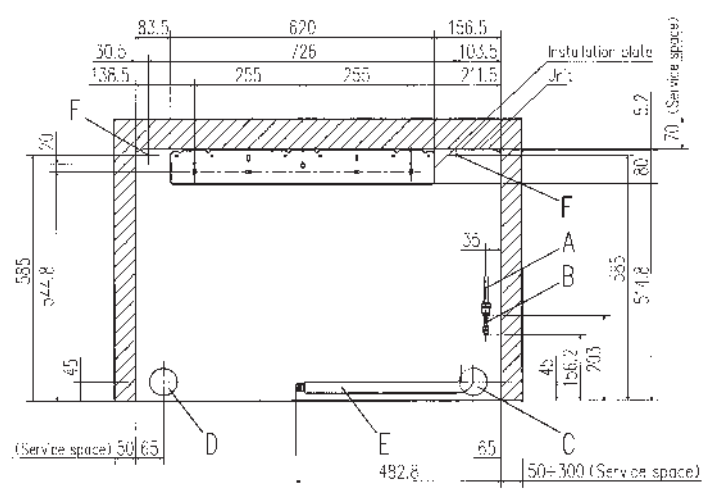
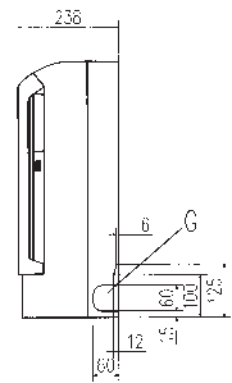
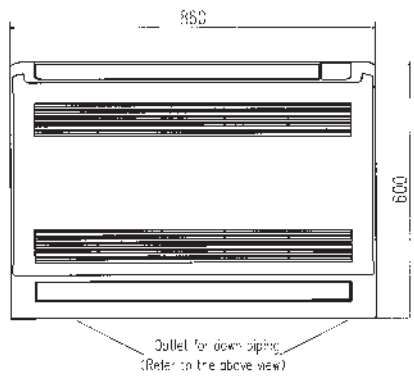
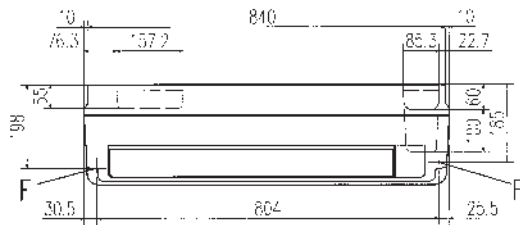
Specifications

| Item | Model | FDFW28KXE6F | FDFW45KXE6F | FDFW56KXE6F |
|--|---------------------|---|-------------------|---|
| Nominal cooling capacity | kW | 2.8 | 4.5 | 5.6 |
| Nominal heating capacity | kW | 3.2 | 5.0 | 6.3 |
| Power source | | 1 Phase 220-240V, 50Hz | | |
| Power consumption | Cooling | 0.02-0.02 | 0.02-0.02 | 0.03-0.03 |
| | Heating | 0.02-0.02 | 0.02-0.02 | 0.03-0.03 |
| Sound power level | dB(A) | 55 | 57 | 60 |
| Sound pressure level | dB(A) | Hi:36 Me:34 Lo:30 | Hi:38 Me:36 Lo:33 | Hi:44 Me:37 Lo:33 |
| Exterior dimensions H x W x D | mm | 600x860x238 | | |
| Net weight | kg | 19 | 20 | 20 |
| Air flow (Standard) | m ³ /min | Hi:9 Me:8 Lo:7 | | Hi:11 Me:9 Lo:8 |
| Air filter, Q'ty | | Polypropylene net x1 (Washable) | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-FW-E2 | | |
| Installation data Refrigerant piping size | mm(in) | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

Dimensions

All measurements in mm.



Space for installation and service when viewing from the front.

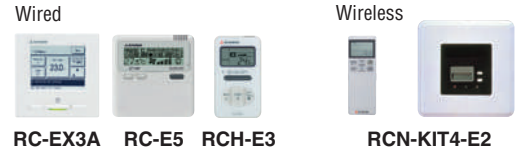
| Symbol | Model | Content |
|--------|------------------------------------|--|
| A | Gas piping | 1D1W282056-1 (1D1W45KXLS1, 56KXLS1) ø9.52 (3/8") (1 core) ø12.7 (1/2") (1 core) |
| B | Liquid piping | ø6.35 (1/4") (1 core) |
| C | Hole on wall for right rear piping | ø65 |
| D | Hole on wall for left rear piping | ø65 |
| L | Drain hose | φP15 (D:16) |
| I | Screws to fasten the indoor unit | ø5 |
| G | Outlet for piping for both sides | |

- Notes:
- (1) The main name label is attached on the right side of the unit.
 - (2) In case of wall installation, leave the unit 150mm or less from the floor.

Floor Standing (with casing) FDFL

Floor Standing (without casing) FDFU

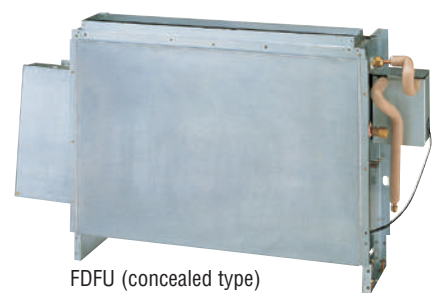
Remote control (option)



- Model No.**
 FDFL71KXE6F
 FDFU28KXE6F
 FDFU45KXE6F
 FDFU56KXE6F
 FDFU71KXE6F



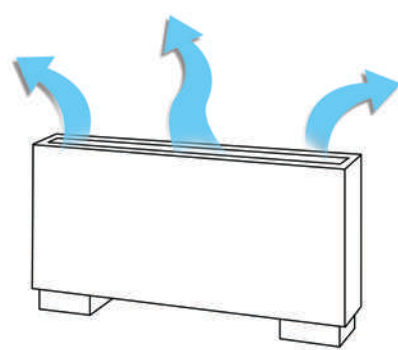
FDFL



FDFU (concealed type)



Compact design at 630mm height



Wider airflow for optimum comfort

Specifications

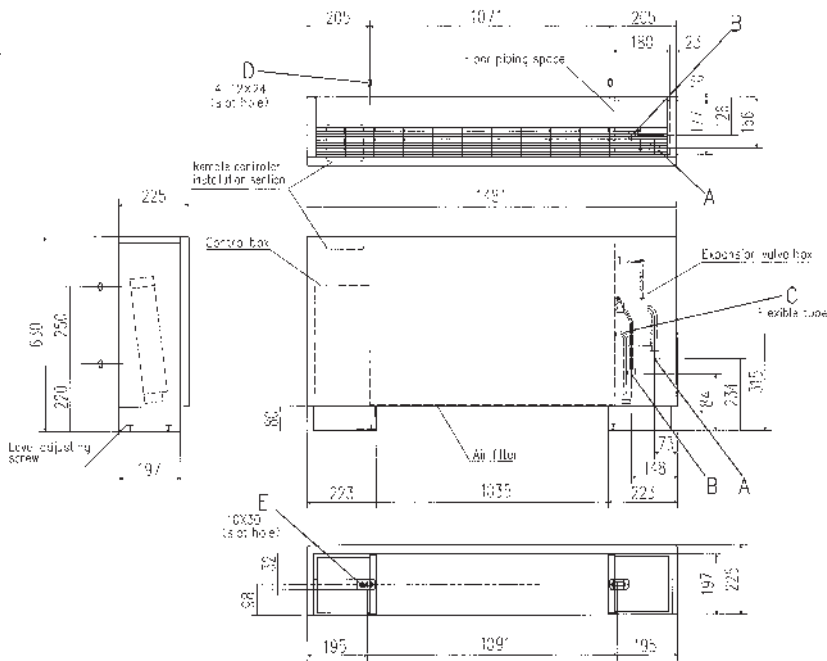
| Item | Model | FDFL71KXE6F | FDFU28KXE6F | FDFU45KXE6F | FDFU56KXE6F | FDFU71KXE6F |
|--|---------------------|---|---|---|-------------|--|
| Nominal cooling capacity | kW | 7.1 | 2.8 | 4.5 | 5.6 | 7.1 |
| Nominal heating capacity | kW | 8.0 | 3.2 | 5.0 | 6.3 | 8.0 |
| Power source | | 1 Phase 220-240V, 50Hz | | | | |
| Power consumption | Cooling | 0.09-0.10 | | 0.09-0.10 | | |
| | Heating | 0.09-0.10 | | 0.09-0.10 | | |
| Sound power level | dB(A) | 62 | 58 | 60 | | |
| Sound pressure level | dB(A) | Hi:43 Me:41 Lo:40 | Hi:41 Me:38 Lo:36 | Hi:43 Me:41 Lo:40 | | |
| Exterior dimensions H x W x D | mm | 630x1481x225 | 630x1077x225 | | | 630x1362x225 |
| Net weight | kg | 40 | 25 | | | 32 |
| Air flow (Standard) | m ³ /min | Hi:18 Me:15 Lo:12 | Hi:12 Me:11 Lo:10 | Hi:14 Me:12 Lo:10 | | Hi:18 Me:15 Lo:12 |
| Air filter, Q'ty | | Polypropylene net x1 (Washable) | | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2 | | | | |
| Installation data Refrigerant piping size | mm(in) | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") |

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

Dimensions

All measurements in mm.

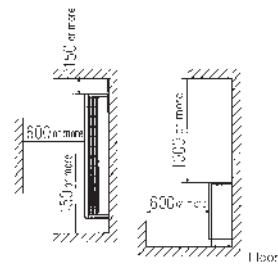
FDFL



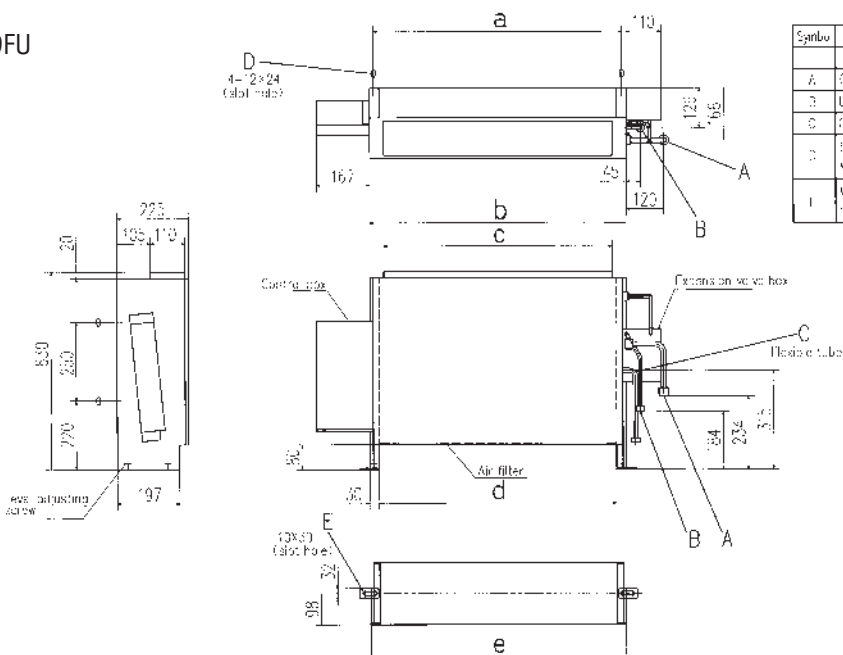
| Symbol | Content | |
|--------|--|---------------------------|
| | Model | FDL714X56F |
| A | Gas piping (Accessory) | ø15.88 (5/8") (flare) |
| B | Liquid piping | ø6.35 (1/4") (flare) |
| C | Drain piping (Accessory) | P720A female screw, 360mm |
| D | Slot hole for wall mounting | (M10) |
| F | Metal plate for floor mounting (Accessory) | (M8) |

Note (1) The model name label is attached on the lid of the control box.

Space for installation and service



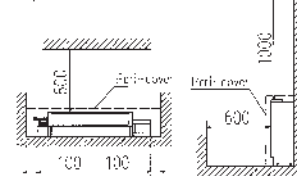
FDFU



| Symbol | Content | | | |
|--------|--|---------------------------|----------------------|---------------------------|
| | Model | FDL55KX56F | FDL56KX56F | FDL71KX56F |
| A | Gas piping (Accessory) | ø15.88 (5/8") (flare) | ø15.7 (1/2") (flare) | ø19.56 (5/8") (flare) |
| B | Liquid piping | ø6.35 (1/4") (flare) | ø6.35 (1/4") (flare) | ø9.52 (3/8") (flare) |
| C | Drain piping (Accessory) | P720A female screw, 360mm | | P720A female screw, 362mm |
| D | Slot hole for wall mounting | (M10) | | (M10) |
| F | Metal plate for floor mounting (Accessory) | (M8) | | (M8) |

Note (1) The model name label is attached on the lid of the control box.

Space for installation and service



Dimension Table

Unit:mm

| model | a | b | c | d | e |
|-------------------------------|------|------|------|------|------|
| FDFU28KXE6F, 45KXE6F, 56KXE6F | 786 | 810 | 722 | 750 | 806 |
| FDFU71KXE6F | 1071 | 1095 | 1007 | 1035 | 1091 |



Outdoor Air Processing unit FDU-F

Model No.

FDU650FKXZE1
FDU1100FKXZE1
FDU1800FKXZE1
FDU2400FKXZE1



Remote control (option)

Wired



RC-EX3A RC-E5 RCH-E3

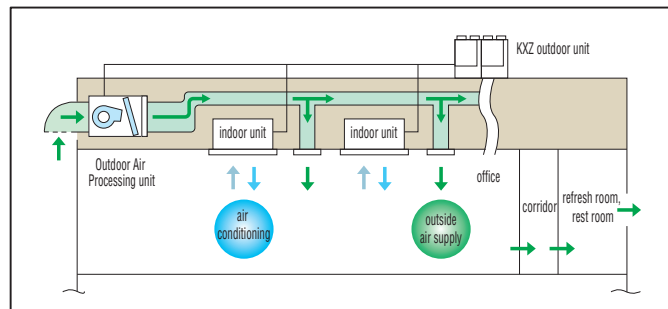
Wireless



RCN-KIT4-E2

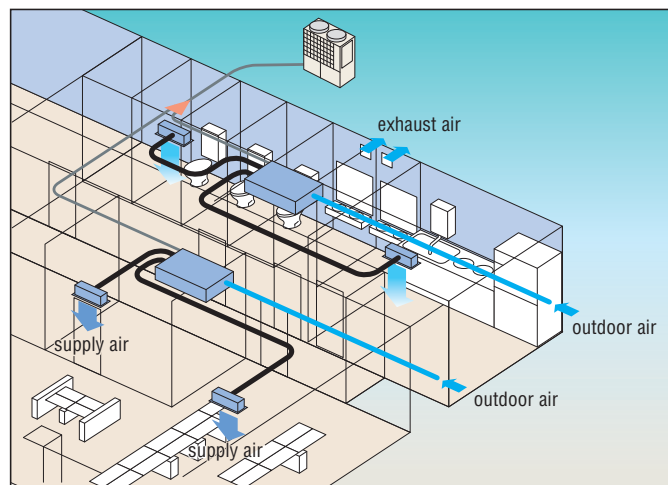
Air conditioning and intake of outdoor air are in the same system

Outdoor Air processing unit can be connected in a KXZ system as one of indoor unit series and can create fresh and comfortable air supply together from our high advanced technology.



Compact design

Compact design at just 280(650, 1100), 379(1800, 2400)mm in height, high static pressure of 200Pa and the industry's lowest noise level can meet various kind of installation location for office, refresh room, restroom and kitchen of restaurant etc.



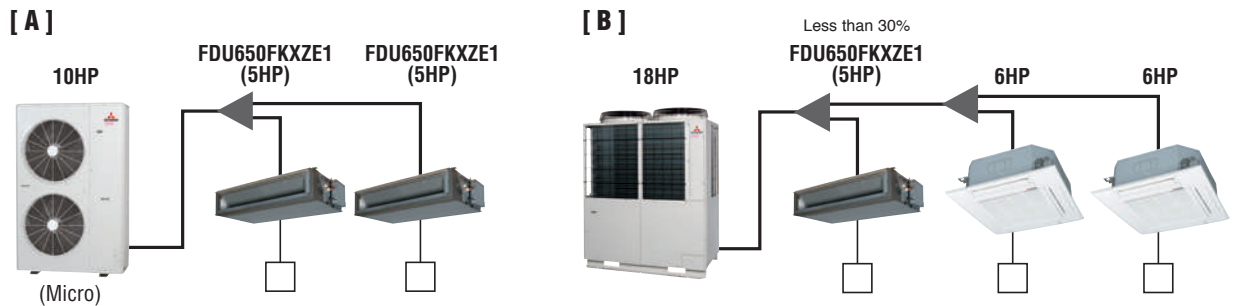
- (1) This unit is the specific unit for processing the outdoor air temperature closer to the room temperature. For conditioning the room temperature a dedicated air-conditioner is required additionally.
- (2) This unit monitors the outdoor air temperature and controls thermostat ON/OFF at the setting temperature by the remote controller, which indicates the outdoor air temperature for controlling thermostat ON/OFF. When thermostat is turned OFF, the operation is changed to the fan mode so that unprocessed outdoor air will be blown into the room directly. Therefore place the air outlet port or orient the air outlet direction not to blow air directly to persons in the room, especially in the small room such as a restroom and/or sanitary hot water supplying room.
- (3) It is strictly prohibited to monitor the room temperature by switching to the thermistor at remote controller side and/or the optional remote thermistor. Otherwise dew formation at air outlet port and/or dew dripping may occur during cooling operation due to the lower outdoor air temperature. Therefore keep the remote controller of this unit in place closer to the administrator so as not to be touched it freely by the end user.
- (4) Dehumidifying operation with this unit is prohibited.
- (5) When handing over this unit to the end user, make sure to explain sufficiently about the foregoing cautions, the installation place and usage of remote control for this unit and the location of the air outlet.

Connectivity with Outdoor units

FDU-F series are connectable to 8-60HP outdoor units, not connectable to 4-6HP, KXZ Lite.

Combination with Outdoor units

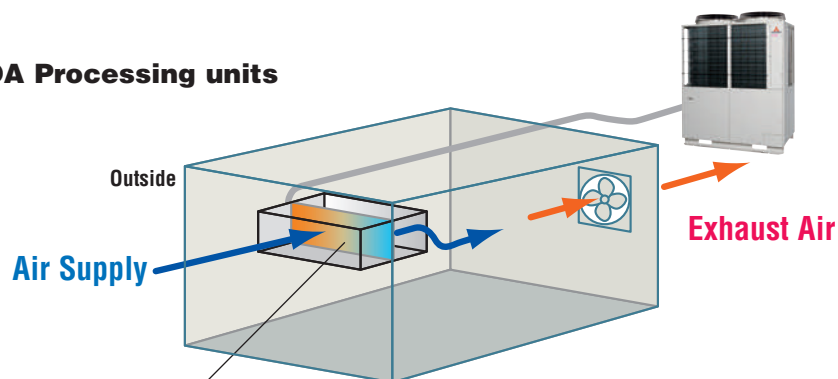
| | case | Combination |
|---|---|---|
| A | In case OA processing units only are connected with outdoor units. | The total capacity of FDU-F is 50~100% of outdoor capacity and max quantity of FDU-F is 2 units. |
| B | In case both of OA processing units and dedicated air-conditioner are connected with outdoor units. | The total capacity of FDU-F and dedicated air-conditioners is 50~100% of outdoor capacity and max quantity of FDU-F should be below 30% of outdoor unit capacity. |



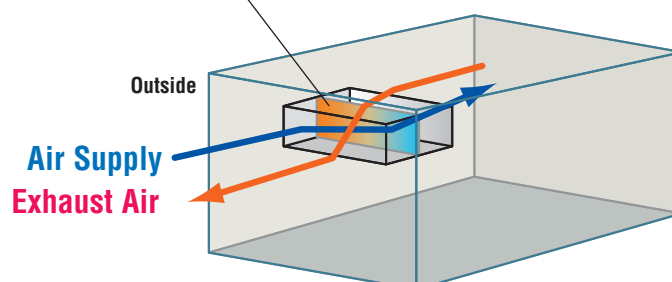
Concept (Difference between FDU-F and SAF)

SAF is the energy recovery ventilation unit which can recover heat energy from exhaust air to supply air and "has no air processing function, but FDU-F is air processing unit which can treat the supply air closer to room temperature by cooling or heating in connection with KXZ refrigerant system and exhaust air is discharged to outside of the room.

FDU-F OA Processing units



SAF





Specifications

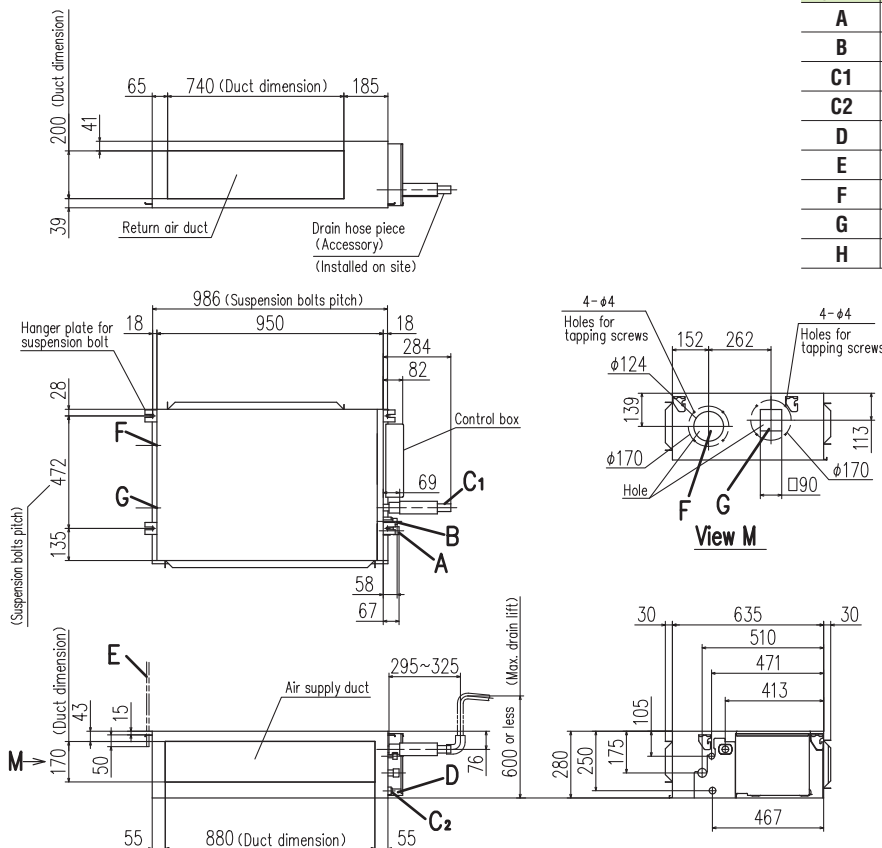
| Item | Model | FDU650FKXZE1 | FDU1100FKXZE1 | FDU1800FKXZE1 | FDU2400FKXZE1 |
|---------------------------|---------------------|---|---------------|--|---------------|
| Nominal cooling capacity | kW | 9.0 | 14.0 | 22.4 | 28.0 |
| Nominal heating capacity | kW | 6.5 | 10.5 | 16.0 | 21.5 |
| Power source | | 1 Phase 220-240V, 50Hz | | | |
| Power consumption | Cooling | 0.24-0.25 | 0.35-0.36 | 1.16-1.20 | 1.16-1.20 |
| | Heating | 0.24-0.25 | 0.35-0.36 | 1.16-1.20 | 1.16-1.20 |
| Sound pressure level | dB(A) | Hi:31 | Hi:37 | Hi:42 | Hi:45 |
| Exterior dimension HxWxD | mm | 280x950x635 | 280x1370x740 | 379x1600x893 | |
| Net weight | kg | 34 | 54 | 89 | 89 |
| Air flow (Standard) | m ³ /min | Hi:11 | Hi:18 | Hi:30 | Hi:40 |
| External static pressure | Pa | 200 (at Hi Air flow) | | | |
| Air filter, Q'ty | | Procure locally | | | |
| Remote control(option) | | wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2 | | | |
| Installation data | mm | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") | | Liquid line:ø9.52(3/8") Gas line:ø19.05(3/4") | |
| Refrigerating piping size | (in) | | | Liquid line:ø9.52(3/8") Gas line:ø22.22(7/8") | |

- The data are measured at 33°CDB 28°CWB (68%RH) during cooling and 0°CDB-2.9°CWB (50%RH) during heating (no frost).
- Temperature range of outdoor air must be 20-40°CDB (32°CWB) during cooling and 0-24°CDB during heating.
- Sound level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient conditions.
- The factory E.S.P. setting is set within the range of 10 - 120Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa. (with RC-EX3A and RC-E5 only)

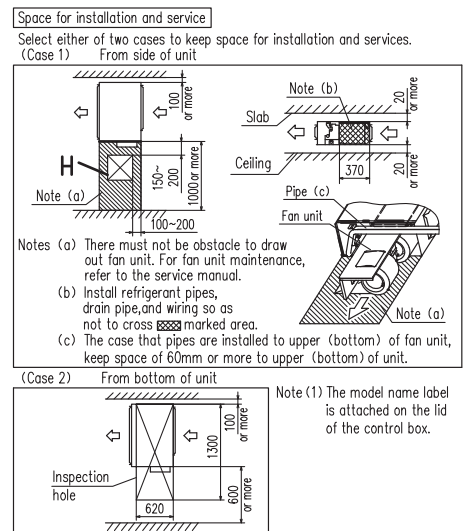
Dimensions

All measurements in mm.

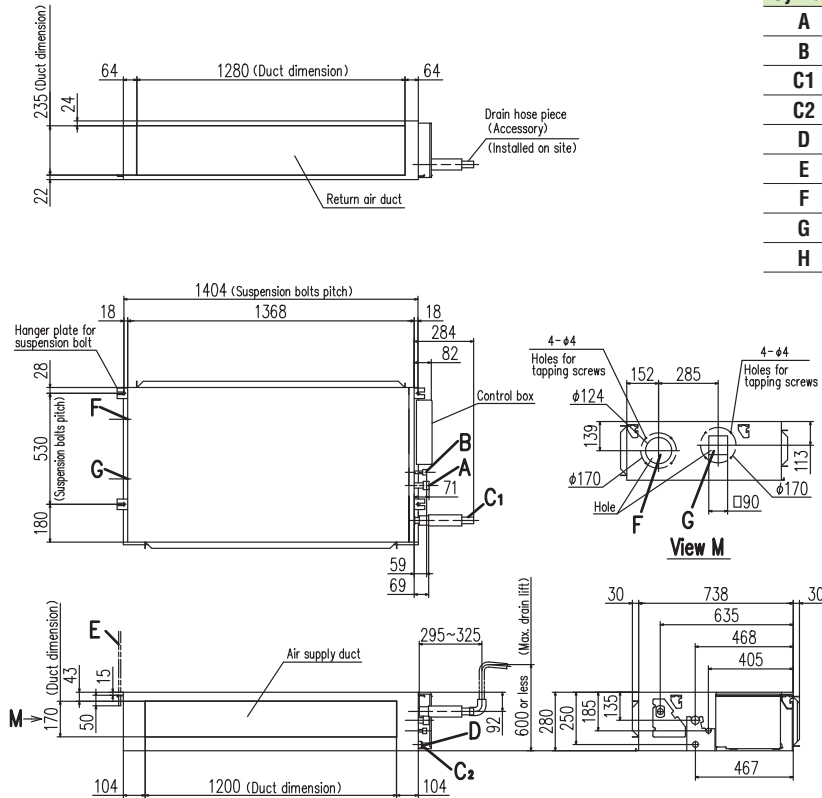
FDU650FKXZE1



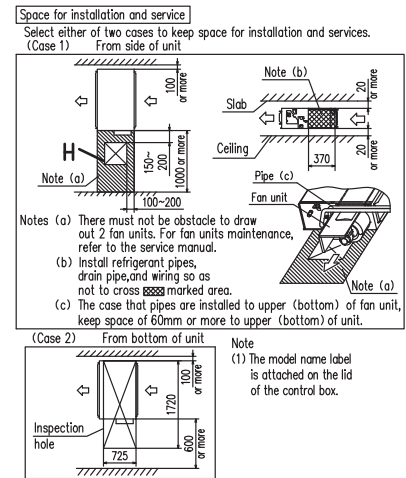
| Symbol | Content | |
|-----------|---------------------------------|-----------------------|
| A | Gas piping | ø15.88 (5/8") (Flare) |
| B | Liquid piping | ø9.52 (3/8") (Flare) |
| C1 | Drain piping | VP25(O.D.32) |
| C2 | Drain piping(Gravity drainage) | V20(O.D.26) |
| D | Hole for wiring | |
| E | Suspension bolts | M10 |
| F | Outside air opening for ducting | (Knock out) |
| G | Air outlet opening for ducting | (Knock out) |
| H | Inspection hole | (450X450) |



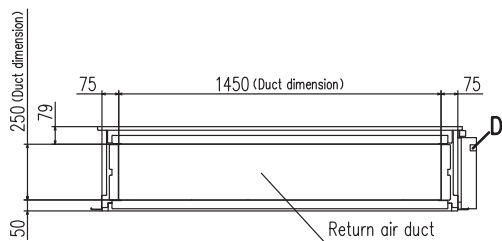
FDU1100FKXZE1



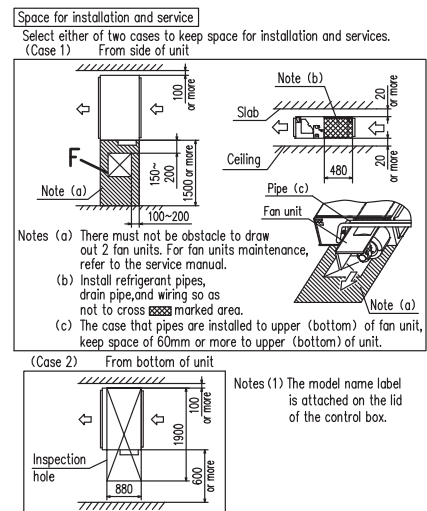
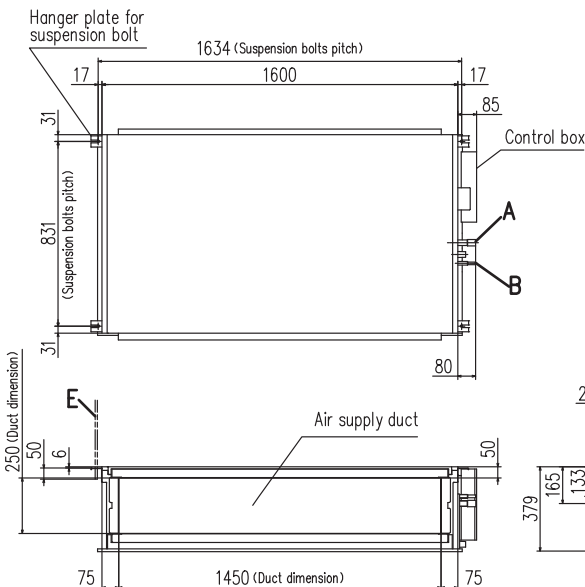
| Symbol | Content | |
|--------|---------------------------------|-----------------------|
| A | Gas piping | ø15.88 (5/8") (Flare) |
| B | Liquid piping | ø9.52 (3/8") (Flare) |
| C1 | Drain piping | VP25(O.D.32) |
| C2 | Drain piping(Gravity drainage) | V20(O.D.26) |
| D | Hole for wiring | |
| E | Suspension bolts | M10 |
| F | Outside air opening for ducting | (Knock out) |
| G | Air outlet opening for ducting | (Knock out) |
| H | Inspection hole | (450X450) |



FDU1800FKXZE1, FDU2400FKXZE1



| Symbol | Content | 1800 | 2400 |
|--------|--------------------------------|------------------------|---------------|
| A | Gas piping | ø19.05 (3/4") | ø22.22 (7/8") |
| B | Liquid piping | ø9.52 (3/8") (Brazing) | |
| C | Drain piping(Gravity drainage) | VP25(O.D.32) | |
| D | Hole for wiring | | |
| E | Suspension bolts | M10 | |
| F | Inspection hole | (450X450) | |





Fresh Air Ventilation and Heat Exchange unit SAF-E7

Model No.

- SAF150E7
- SAF250E7
- SAF350E7
- SAF500E7
- SAF800E7
- SAF1000E7



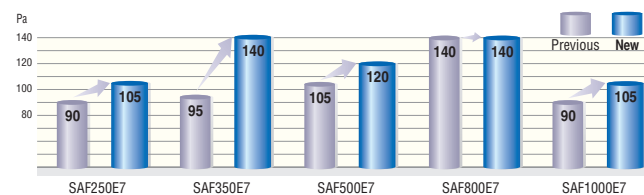
Energy Performance of Building Directive - EPBD

EPBD limit the amount of electrical/gas power to be used to provide heating or cooling in commercial buildings. Therefore the building designer needs to select energy efficient heating/cooling equipment, and to minimise energy losses through ventilation systems.

The SAF recovers heat energy which would otherwise be exhausted to atmosphere, and uses this energy to warm the air entering the building. The reverse happens in warmer climates, where the exhausted cool air is used to partially cool the incoming air.

Capturing this waste energy, means the heating/ cooling requirements of the building are reduced, so smaller size plant can be selected, savings can be made in long term energy consumption, and carbon emissions are reduced.

Increased external static pressure at UHi air flow



Switch box (option)



Remote control

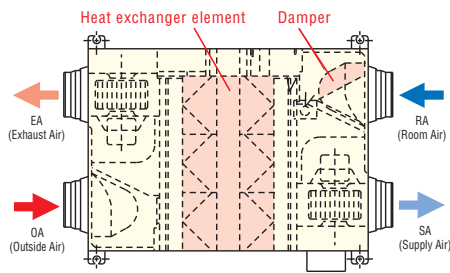
The following functions are newly available.

- ON/OFF Timer – The hour and minute of timer on/off can be set.
- Filter Sign – Announces the due time for cleaning the air filter.

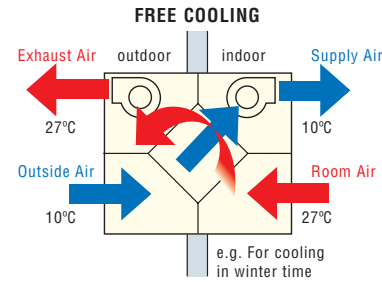
Specifications

| Item | Model | SAF150E7 | SAF250E7 | SAF350E7 | SAF500E7 | SAF800E7 | SAF1000E7 | | |
|---|---------------------------|---|-------------|--------------|--------------|--------------|---------------|----|----|
| Power source | | 1 Phase 220-240V, 50Hz | | | | | | | |
| Exterior dimensions Height x Width x Depth | mm | 270x970x467 | 270x882x599 | 317x1050x804 | 317x1090x904 | 388x1322x884 | 388x1322x1134 | | |
| Exterior appearance | | Galvanized steel sheet | | | | | | | |
| Power input | W | 92-107 | 108-123 | 178-185 | 204-225 | 360-378 | 416-432 | | |
| Running current | A | 0.42-0.45 | 0.49-0.51 | 0.81-0.77 | 0.93-0.94 | 1.64-1.58 | 1.89-1.80 | | |
| Capacity | UHi | Enthalpy exchange efficiency | Cooling | 63 | 63 | 66 | 62 | 65 | 65 |
| | | | Heating | 70 | 70 | 69 | 67 | 71 | 71 |
| | | Temperature exchange efficiency | 75 | | | | | | |
| | Hi | Enthalpy exchange efficiency | Cooling | 63 | 63 | 66 | 62 | 65 | 65 |
| | | | Heating | 70 | 70 | 69 | 67 | 71 | 71 |
| | | Temperature exchange efficiency | 75 | | | | | | |
| | Lo | Enthalpy exchange efficiency | Cooling | 66 | 65 | 71 | 64 | 68 | 70 |
| | | | Heating | 73 | 72 | 73 | 69 | 74 | 76 |
| | | Temperature exchange efficiency | 77 | 77 | 78 | 76 | 76 | 79 | |
| Motor & Q'ty | W | 10 x 2 | 20 x 2 | 40 x 2 | 70 x 2 | 180 x 2 | 180 x 2 | | |
| Air handling equipment Fan type & Q'ty | | Sirocco fan x 2 | | | | | | | |
| Air flow | UHi | 150 | 250 | 350 | 500 | 800 | 1000 | | |
| | Hi | 150 | 250 | 350 | 500 | 800 | 1000 | | |
| | Lo | 120 | 190 | 240 | 440 | 630 | 700 | | |
| External static pressure | UHi | 80 | 105 | 140 | 120 | 140 | 105 | | |
| | Hi | 70 | 95 | 60 | 60 | 110 | 80 | | |
| | Lo | 25 | 45 | 45 | 35 | 55 | 75 | | |
| Net weight | kg | 25 | 29 | 49 | 57 | 71 | 83 | | |
| Remote control | | Included | | | | | | | |
| Air filter | Supply air Exhaust air | Protection for element (Washable) PS400 | | | | | | | |

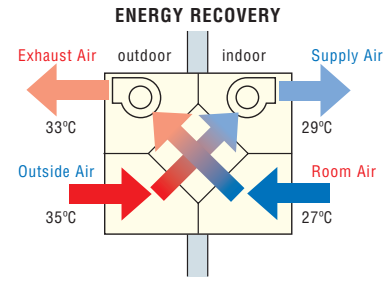
Structure (SAF800E7)



Principle of operation (simple ventilation)



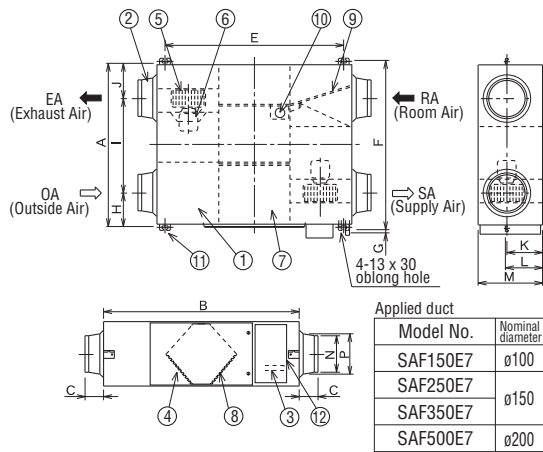
Principle of operation (heat exchanging)



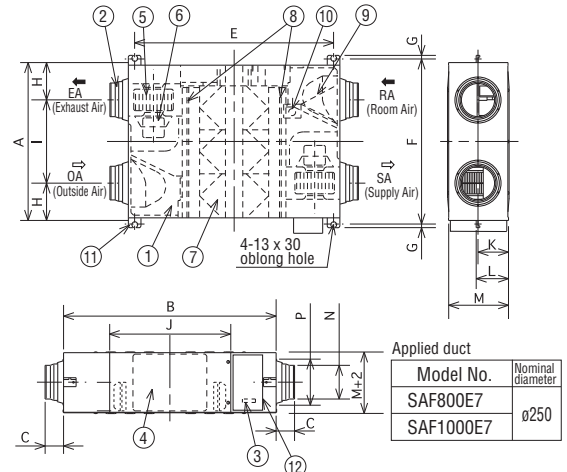
Dimensions

All measurements in mm.

SAF150E7, SAF250E7, SAF350E7, SAF500E7



SAF800E7, SAF1000E7



Dimension table

| Model | A | B | C | E | F | G | H | I | J | K | L | M | N | P |
|----------|-----|------|------|-----|-----|----|-----|-----|------|------|------|------|------|------|
| SAF150E7 | 467 | 970 | 49 | 810 | 525 | 19 | 82 | 303 | 82 | 135 | 159 | 270 | ø98 | ø110 |
| SAF250E7 | 599 | 882 | 95 | 655 | 142 | | 315 | 142 | 159 | 270 | ø144 | ø164 | | |
| SAF350E7 | 804 | 1050 | 70 | 978 | 860 | | 112 | 580 | 112 | 159 | 182 | 317 | ø164 | |
| SAF500E7 | 904 | 1090 | 1018 | 960 | 132 | | 640 | 132 | ø194 | ø210 | | | | |

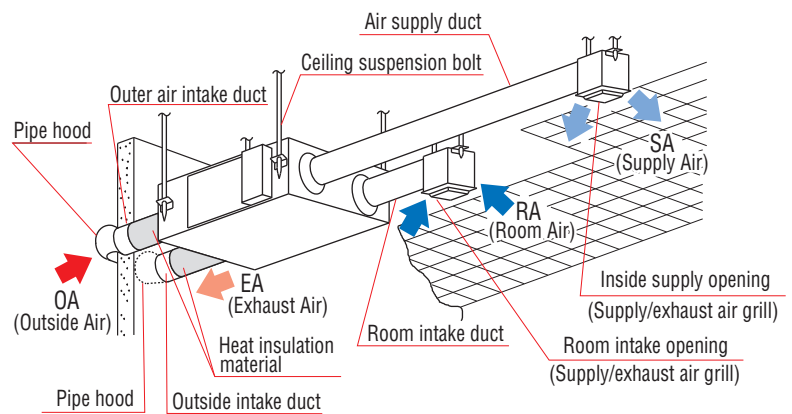
Dimension table

| Model | A | B | C | E | F | G | H | I | J | K | L | M | N | P |
|-----------|------|------|-----|------|-----|----|-----|-----|-----|-----|------|------|------|---|
| SAF800E7 | 884 | 1322 | 85 | 1250 | 940 | 19 | 428 | 612 | 194 | 218 | 388 | ø242 | ø258 | |
| SAF1000E7 | 1134 | 678 | 228 | 1190 | 678 | | 612 | 194 | 218 | 388 | ø242 | ø258 | | |

| NO. | Name | Qt'y |
|-----|---------------------------|------|
| ① | Frame | 1 |
| ② | Adaptor | 4 |
| ③ | Terminal board | 1 |
| ④ | Inspection Cover | 1 |
| ⑤ | Fan | 2 ※ |
| ⑥ | Motor | 2 ※ |
| ⑦ | Heat Exchange Element | |
| | SAF150E7 | 1 |
| | SAF250E7 | 1 |
| | SAF350E7 | 2 |
| | SAF500E7 | 2 |
| ⑧ | SAF800E7 | 3 |
| | SAF1000E7 | 4 |
| | | |
| ⑧ | Filter | 2 |
| ⑨ | Damper | 1 |
| ⑩ | Damper Motor | 1 |
| ⑪ | Suspension fitting | 4 |
| ⑫ | Electrical components box | 1 |

※Model SAF350E7, SAF500E7 have different fan and motor locations.

Installation reference



Note: An inspection port is needed for cleaning the heat exchanger and filter 1 or 2 times a year.

Fresh Air DX Assembly

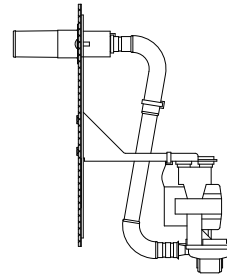
Model No.

- SAF-DX250E6
- SAF-DX350E6
- SAF-DX500E6
- SAF-DX800E6
- SAF-DX1000E6



Drain up kit (option, built-in type)
(600mm)

DXA-DU-E



Remote control (option)

Wired

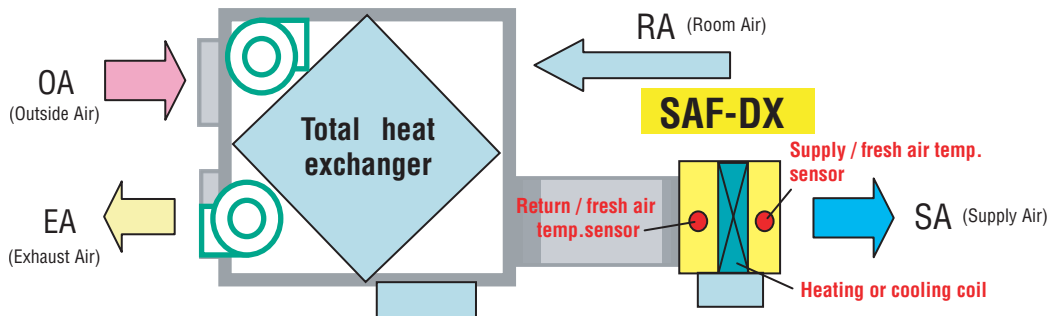


Wireless



RCN-KIT4-E2

- SAF-DX is a heating or cooling coil incorporating KXZ series controls. It can be used in combination with our SAF series of total heat exchanger.
- Combination of SAF-DX together with other indoor units is possible. The capacity code index of each model is shown below and must be used when making the system selection. Total capacity code index must be within 100% of outdoor unit capacity code index.
- Remote control option is the same as with other indoor units (see above). Connection to all Superlink controls is also possible.
- Optional condensate lift mechanism is also available (600mm height).
- Return air temp. control or supply air temp. control can be selectable.



SAF-DX can provide heating or cooling to the fresh air supplied through a 3rd party air handling unit or total heat exchanger such as our SAF series.

Specifications

| Item | Model | SAF-DX250E6 | SAF-DX350E6 | SAF-DX500E6 | SAF-DX800E6 | SAF-DX1000E6 |
|-------------------------------|-------------------|---|-------------|---|-----------------|--|
| Nominal cooling capacity *1 | kW | 2.0 | 2.8 | 3.6 | 5.6 | 6.3 |
| Nominal heating capacity *2 | kW | 1.8 | 2.2 | 2.8 | 4.5 | 5.6 |
| Capacity code | | 22 | 28 | 36 | 56 | 71 |
| Power source | | 1 Phase 220-240V, 50Hz | | | | |
| Power consumption | Cooling | 7.2-7.2 | | | | |
| | Heating | 7.2-7.2 | | | | |
| Running current | Cooling | 0.05-0.05 | | | | |
| | Heating | 0.05-0.05 | | | | |
| Exterior dimensions H x W x D | mm | 315 x 452 x 422 | | 315 x 537 x 422 | 315 x 682 x 422 | 315 x 822 x 422 |
| Net weight | kg | 12.3 | | 13.6 | 16.1 | 18.4 |
| Air flow (Standard) | m ³ /h | 250 | 350 | 500 | 800 | 1000 |
| Internal resistance | Pa | 38 | | 66 | | |
| Remote control(option) | | wired: RC-E5, RCH-E3 wireless: RCN-KIT4-E2 | | | | |
| Installation data | mm(in) | Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8") | | Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2") | | Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8") |

(1) The data are measured at the following conditions.

| Item | Return/fresh air temperature | | Outdoor air temperature | | Standards |
|------------|------------------------------|------|-------------------------|------|-----------|
| | DB | WB | DB | WB | |
| Cooling *1 | 27°C | 19°C | 35°C | 24°C | ISO-T1 |
| Heating *2 | 20°C | | 7°C | 6°C | |

(2) This air-conditioner is manufactured and tested in conformity with ISO-T1 "UNITARY AIR-CONDITIONERS".

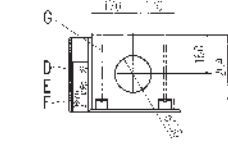
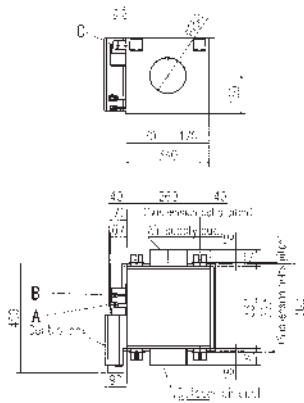
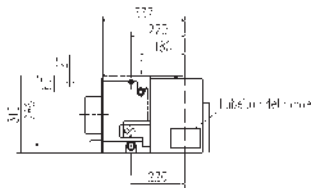
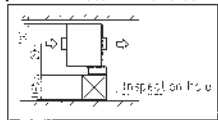
Dimensions

All measurements in mm.

SAF-DX250E6,350E6

| | | |
|--------|---------------|-------------------|
| Symbol | Workshop | SAF-DX250E6,350E6 |
| A | Control panel | SAF-DX250E6,350E6 |
| B | Control panel | SAF-DX250E6,350E6 |
| C | Control panel | SAF-DX250E6,350E6 |
| D | Control panel | SAF-DX250E6,350E6 |
| E | Control panel | SAF-DX250E6,350E6 |
| F | Control panel | SAF-DX250E6,350E6 |
| G | Control panel | SAF-DX250E6,350E6 |
| H | Control panel | SAF-DX250E6,350E6 |
| I | Control panel | SAF-DX250E6,350E6 |
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| T | Control panel | SAF-DX250E6,350E6 |
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| W | Control panel | SAF-DX250E6,350E6 |
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| Z | Control panel | SAF-DX250E6,350E6 |

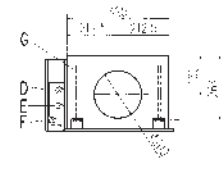
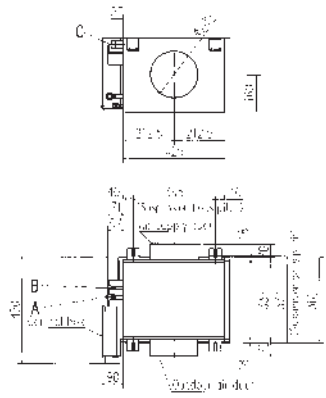
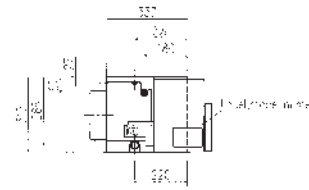
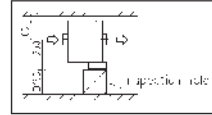
Space for installatin and service



SAF-DX500E6

| | | |
|--------|---------------|-------------|
| Symbol | Workshop | SAF-DX500E6 |
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| B | Control panel | SAF-DX500E6 |
| C | Control panel | SAF-DX500E6 |
| D | Control panel | SAF-DX500E6 |
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| Y | Control panel | SAF-DX500E6 |
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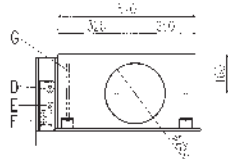
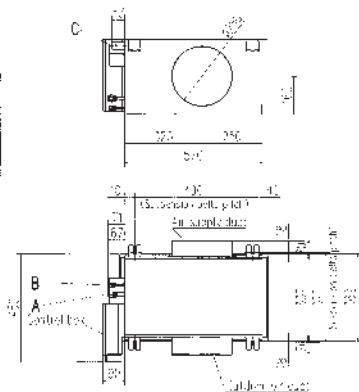
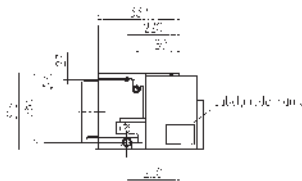
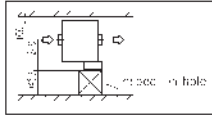
Space for installatin and service



SAF-DX800E6

| | | |
|--------|---------------|-------------|
| Symbol | Workshop | SAF-DX800E6 |
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| B | Control panel | SAF-DX800E6 |
| C | Control panel | SAF-DX800E6 |
| D | Control panel | SAF-DX800E6 |
| E | Control panel | SAF-DX800E6 |
| F | Control panel | SAF-DX800E6 |
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| P | Control panel | SAF-DX800E6 |
| Q | Control panel | SAF-DX800E6 |
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| V | Control panel | SAF-DX800E6 |
| W | Control panel | SAF-DX800E6 |
| X | Control panel | SAF-DX800E6 |
| Y | Control panel | SAF-DX800E6 |
| Z | Control panel | SAF-DX800E6 |

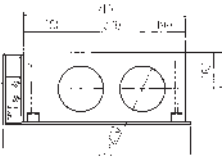
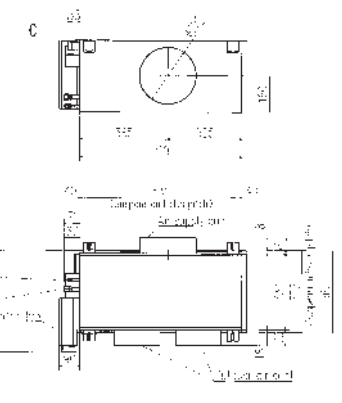
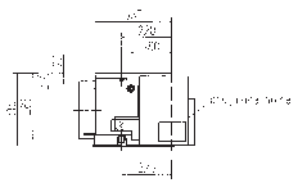
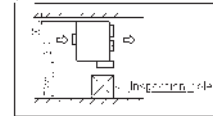
Space for installatin and service



SAF-DX1000E6

| | | |
|--------|---------------|--------------|
| Symbol | Workshop | SAF-DX1000E6 |
| A | Control panel | SAF-DX1000E6 |
| B | Control panel | SAF-DX1000E6 |
| C | Control panel | SAF-DX1000E6 |
| D | Control panel | SAF-DX1000E6 |
| E | Control panel | SAF-DX1000E6 |
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| W | Control panel | SAF-DX1000E6 |
| X | Control panel | SAF-DX1000E6 |
| Y | Control panel | SAF-DX1000E6 |
| Z | Control panel | SAF-DX1000E6 |

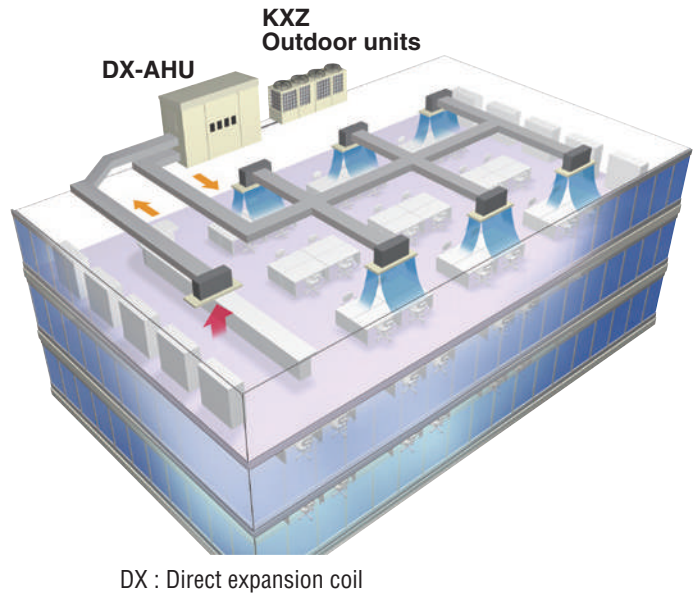
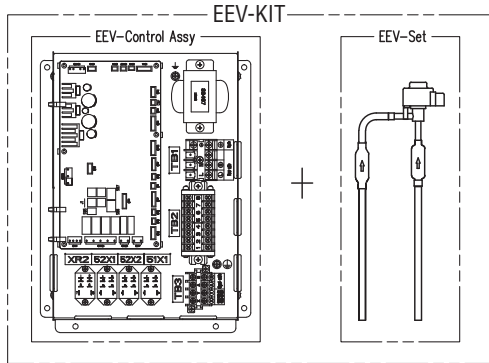
Space for installatin and service





EEV-KIT

- EEV-KIT is the control kit for operating the locally provided AHU or FCU with direct expansion heat exchanger coils in connection with the KXZ / KXE6 system.
(AHU : Air Handling Unit, FCU : Fan Coil Unit)
- EEV-KIT is composed of one EEV-Control ASSY and one EEV-Set.



Features

EEV-Control Assy has 2 types.

| Refrigeration system | EEV-Control Assy | |
|----------------------|--------------------|-----------------------|
| | EEVKIT6-E-M | EEVKIT6-E-C |
| Single | Not Use | 1 box-Many boxes |
| Multiple | 1 box (for master) | Many boxes(for slave) |

EEV-Set Select from following 3 types according to the coil capacity.

| Type | EEV6-71-E | EEV6-160-E | EEV6-280-E |
|----------|-----------|------------|------------|
| Capacity | 22-71 | 90-160 | 224-280 |

System configuration

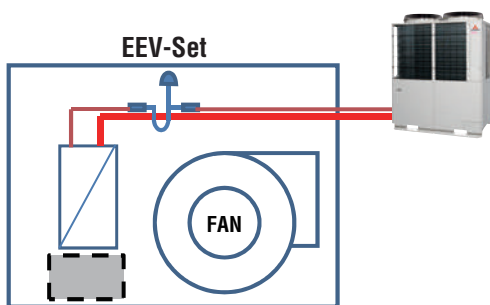
- Single refrigeration system EEVKIT6-E-C ... Possible with multiple
- Multiple refrigeration system EEVKIT6-E-M (1) + EEVKIT6-E-C ... Possible with multiple (Max32)
- EEVKIT6-E-C is common for both single and multiple refrigeration systems

Single refrigerant system

- Single refrigeration system is one that can have multiple outdoor units on one refrigerant pipe work circuit.
- There are 2 types of EEV-KIT systems that can be built into the single refrigeration system.
- System A : one EEV-KIT.
- System B : multiple EEV-KIT's.

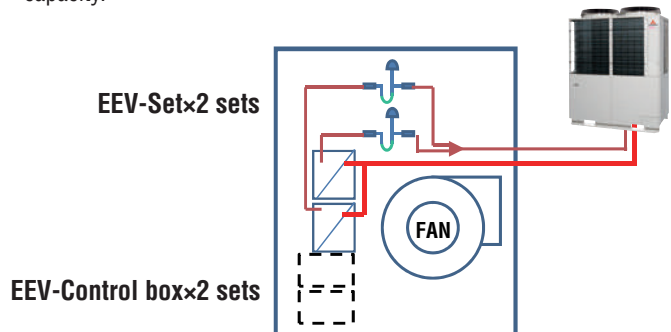
System A

- This system has only one set of EEV-KIT built into one indoor unit with only one heat exchanger. This system can be applied to an indoor unit whose capacity is up to 10HP.



System B

- System B is a system that has multiple EEV-KIT's built into one indoor unit with multiple heat exchangers on one refrigerant circuit.
- This system can be applied up to 60HP(for KXZ), 48HP(for KXE6) AHU capacity.



Multiple refrigerant system

Multiple refrigeration system is an AHU system with

- 1) Multiple independent refrigerant circuits
- 2) One master control to control the whole system.

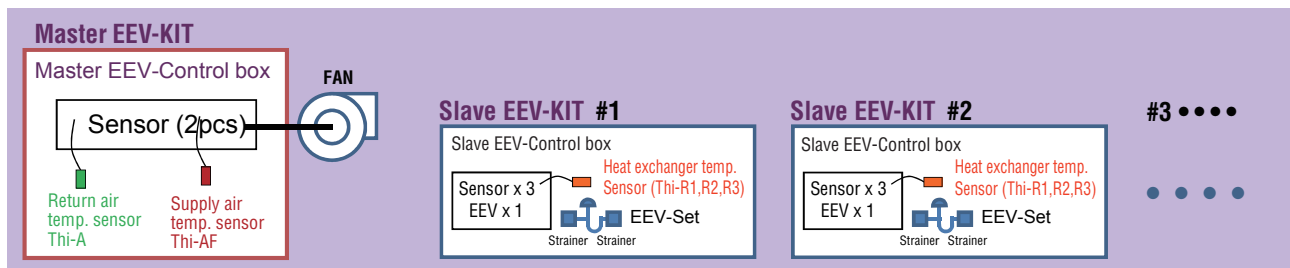
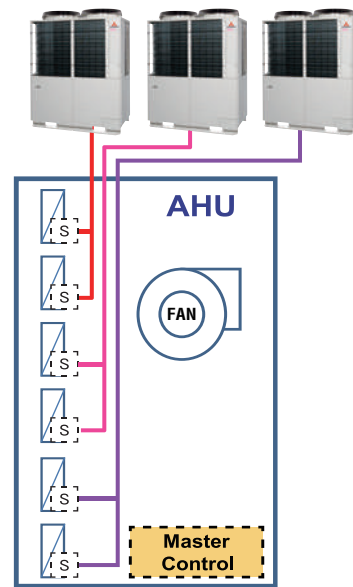
Advantage

- Large systems are possible [max capacity 896kW (Indoor unit : 28kW x 32)]
- External control
- Capacity step control

Additional parts over a single refrigeration system

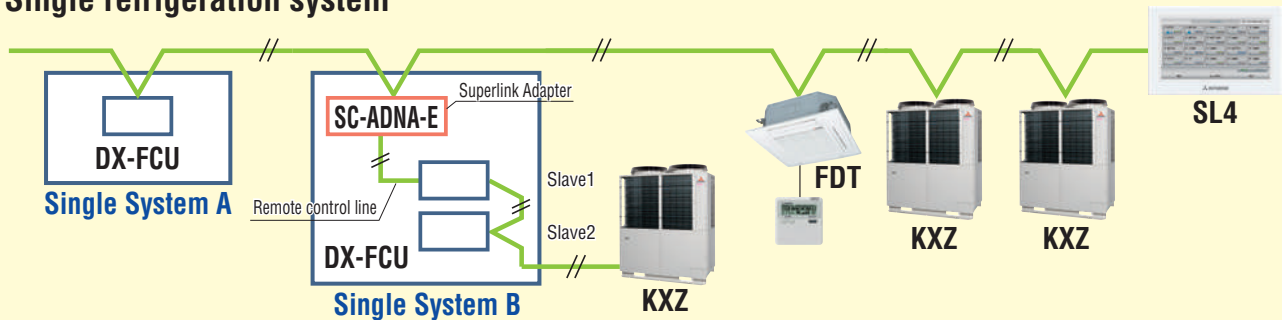
- One master control

The slave EEV control and EEV set are the same as a single refrigeration system.

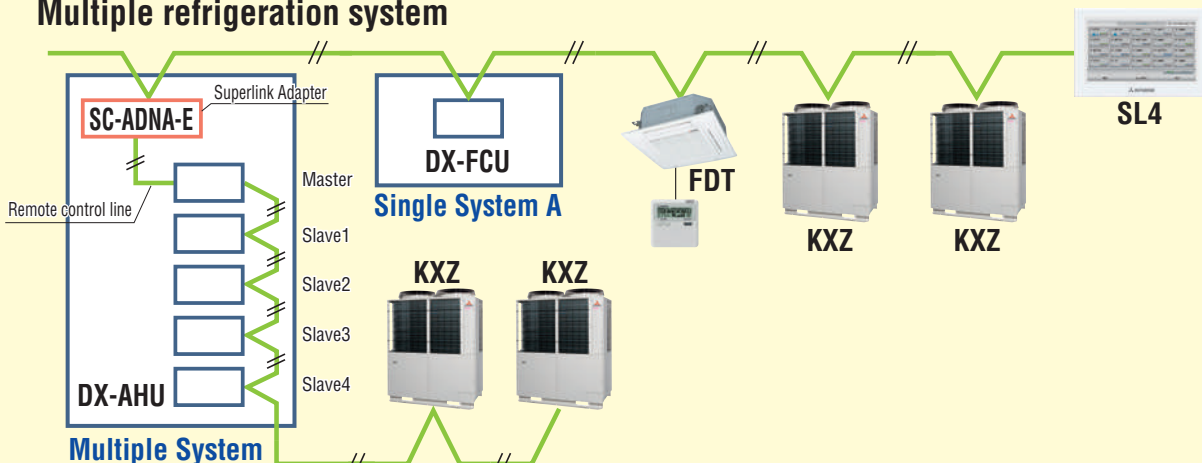


Connection to SUPERLINK II

Single refrigeration system



Multiple refrigeration system





Control Systems

<Individual control>

Remote Control line up

| | indoor unit | remote control | | indoor unit | remote control | | indoor unit | remote control | |
|-------|-------------|----------------|----------|-------------|----------------|----------|-------------|----------------|-------------|
| wired | all models | RC-EX3A | wireless | FDT | RCN-T-5AW-E2 | FDT5 | RCN-TS-E2 | FDE | RCN-E-E3 |
| | | RC-E5 | | FDTTC | RCN-TC-5AW-E2 | FDK22~56 | RCN-K-E2 | FDFW | RCN-FW-E2 |
| | | RCH-E3 | | FDTW | RCN-TW-E2 | FDK71 | RCN-K71-E2 | others* | RCN-KIT4-E2 |
| | | | | | | | | | |

*FDTQ, FDU, FDUH, FDUU, FDUV, FDUW, FDUX, FDUY, FDUZ

Wired remote control (option)

RC-EX3A

Easy touch and Easy view with full dot Liquid Crystal display

User friendly

- LCD panel with light tap operation introduced as the industry's first
- Simple interface with only three buttons

Easy view

- Big LCD with 3.8 inch full dot display
- Back light function
- Multi language display (12 languages)

Operation mode setting screen

The desired operation mode can be selected by simply tapping this button.

Setting temperature screen

You can select the temperature as desired by tapping ▲▼ button.

Operation mode

- Cooling
- Fan
- Dry
- Heating
- Auto

Run / Stop

The highest capacity operation (Max 15 minutes)

- Increasing compressor speed
- Increasing air flow volume

Energy-saving operation

- Changes set temperature. At 28°C in cooling mode and 22°C in heating mode, 25°C in auto mode.
- Operation correction by outdoor temperature

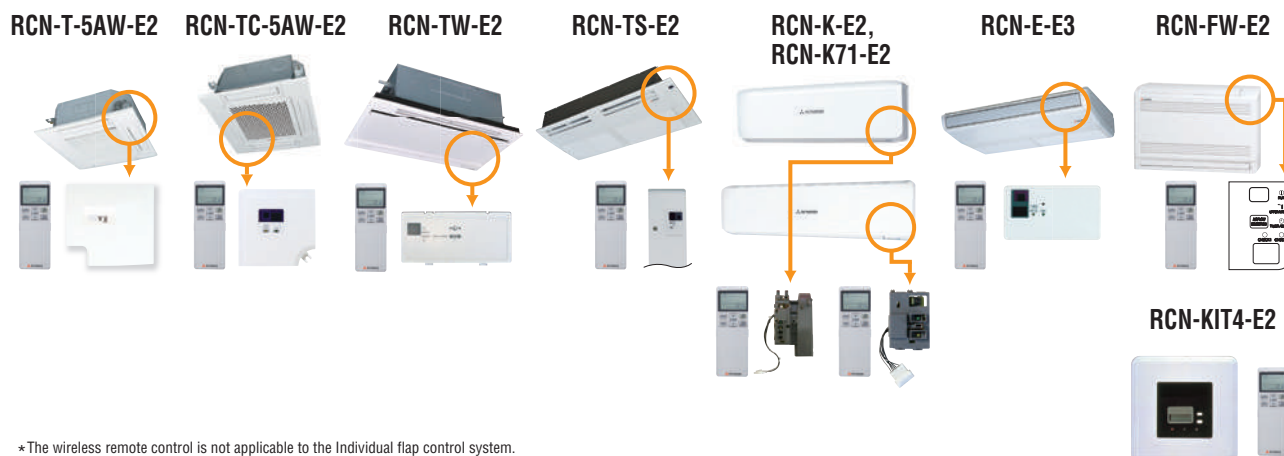
2. Main functions

| | Function name | Description |
|-----------------|--|---|
| Economy & Timer | Energy-saving operation | Since the capacity is controlled automatically based on the outdoor temperature, energy can be saved without losing comfort. |
| | Sleep timer | Set the time period from start to stop of operation. The selectable range of setting time is from 30 to 240 minutes (at 10-minute intervals). |
| | Set temperature auto return | The temperature automatically returns to the previously set temperature. |
| | Set ON timer by hour | When the set time elapses, the air conditioner starts. |
| | Set OFF timer by hour | When the set time elapses, the air conditioner stops. |
| | Set ON timer by clock | The air conditioner starts at the set time. |
| | Set OFF timer by clock | The air conditioner stops at the set time. |
| | Weekly timer | On or Off timer can be set on a weekly basis. |
| | Peak-cut timer | Capacity control can be set by using peak cut function on RC-EX3 for better energy saving. Five-step capacity control is available. |
| | Home leave operation | When the unit is not used for a long period of time, the room temperature is maintained at a moderate level, avoiding extremely hot or cool temperatures. |
| Comfort | Big LCD & Touch screen panel | Large 3.8 inch screen has resulted in improved visibility and operability. |
| | Easy modification of Individual flap control | User can visually confirm and set the direction of flaps using the visual display on the remote controller. |
| | Automatic fan speed *1 | The micro-computer automatically adjusts the airflow effectively to follow the changes of return air temperature. |
| | Temp increment setting | Temperature increment for the change of the set temp can be changed. |
| Convenience | Silent mode | Set the period of time to operate the Outdoor unit with prioritizing the quietness. |
| | Function switch | The function switch allows user to select and set two functions among seven available functions. |
| | Favorite setting | Operation mode, set temperature, fan speed and air flow direction automatically adjust to the programmed favorite setting. |
| | Adjusting Brightness of the background light | The brightness of the background light can be adjusted by 10 stages. |
| | LCD contrast setting | This function allows user to adjust LCD display contrast. |
| | High power operation | High Power Mode increases the unit operating ability for 15 minutes to quickly adjust the room temperature to a comfortable level. |
| | Back light setting | This convenient function allows user to set controls under low light conditions. |
| | Administrator settings | This function only allows specific individuals to operate the unit. |
| | Setting temp range | Limited range of setting temperature in the heating or the cooling operation can be selected. |
| | External Input/Output Function | The external input/output of indoor unit by remote controller can set input/output based on user needs. |
| Service | Select the language | Set the language to be displayed on the remote control. |
| | USB connection (mini-B) | This function allows batch input of schedule timer settings and other settings involving a large amount of data. |
| | Error code display | This function allows user to check information displayed when abnormal function of the unit occurs. |
| | Operation data display | Displays various types of air conditioner operation data in real time. |
| | Contact company display | Address of the service contact is displayed. |
| | Filter sign | Announces the due time for cleaning of the air filter. |
| | Static pressure adjustment | Allows user to adjust duct static pressure using the remote control. |
| | Backup Control | Allows for rotation control, fault backup control, and capacity backup control. |

*1 Cannot be used when a centralized control remote is connected.

Wireless remote control (option)

For wireless control simply insert the infra-red receiver kit on a corner of the panel



*The wireless remote control is not applicable to the Individual flap control system.

Wired remote control (option)

RC-E5

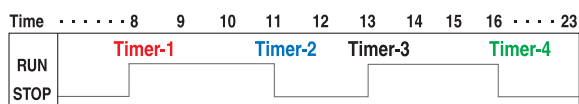


The RC-E5 controller enables extensive access to service and maintenance technical data combined with easy to use functions and a clear LCD display.

Weekly timer function as standard

RC-E5 provides (as a standard feature) a weekly timer, which allows one-week operation schedules to be registered. A user can specify up to four times a day to start/stop the air conditioner. (Temperature setting is also possible with the timer).

Timer operation



Run hour meters to facilitate maintenance checking

RC-E5 stores operation data when an anomaly occurs and indicates the error on the LCD. It also displays cumulative operation hours of the air conditioner and compressor since commissioning.

Room temperature controlled by the remote control sensor

The temperature sensor is housed in the top section of the remote control unit. This arrangement has improved the sensitivity of the remote control unit's sensor, which permits more finely controlled air conditioning.



Changeable set temperature ranges

RC-E5 allows the upper and lower limits of a set temperature range to be specified separately. By adjusting a set temperature range, you can ensure energy saving air conditioning by avoiding excessive cooling or heating.

| Changeable range | |
|------------------|--|
| Upper limit | 20~30°C(effective for heating operation) |
| Lower limit | 18~26°C(effective for non-heating operation) |

Simple remote control (option)

RCH-E3 (wired)



Considering specialized usage in hotel rooms, control buttons are limited only to minimum required functions such as ON/OFF, mode, temperature setting and fan speed. It is really simple and easy to use.

Up to 16 units

It can control up to 16 units individually, with pressing the AIR CON No. button.

AUTO restart

This function allows starting the air conditioner automatically when power supply is restored after power failure or by turning on the power switch.

*RCH-E3 is not applicable to the Individual flap control system.
*When RCH-E3 is used, the fan speed setting can only be set to 3 speed settings (Hi-Me-Lo).

Thermistor (option)

SC-THB-E3

In case sensor in the indoor units or the remote control sensor can not sense the room temperature correctly, or individual remote control in each room is not required but only sensor is required (as when center control system is in place), install SC-THB-E3 at proper place in the rooms.

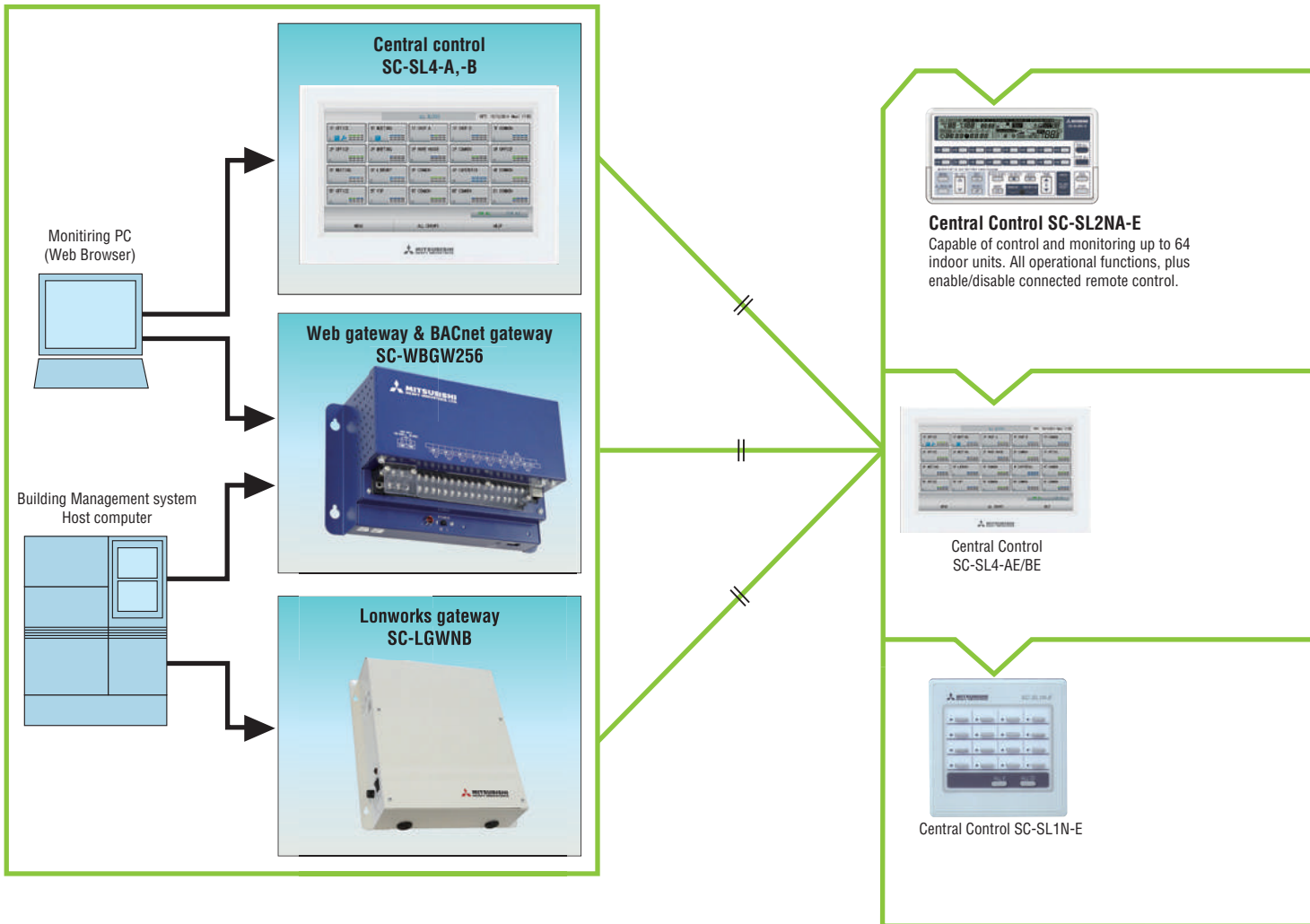


8m



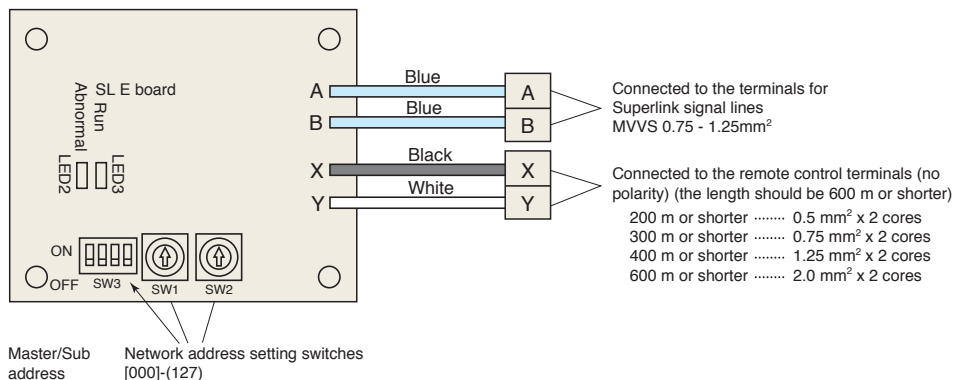
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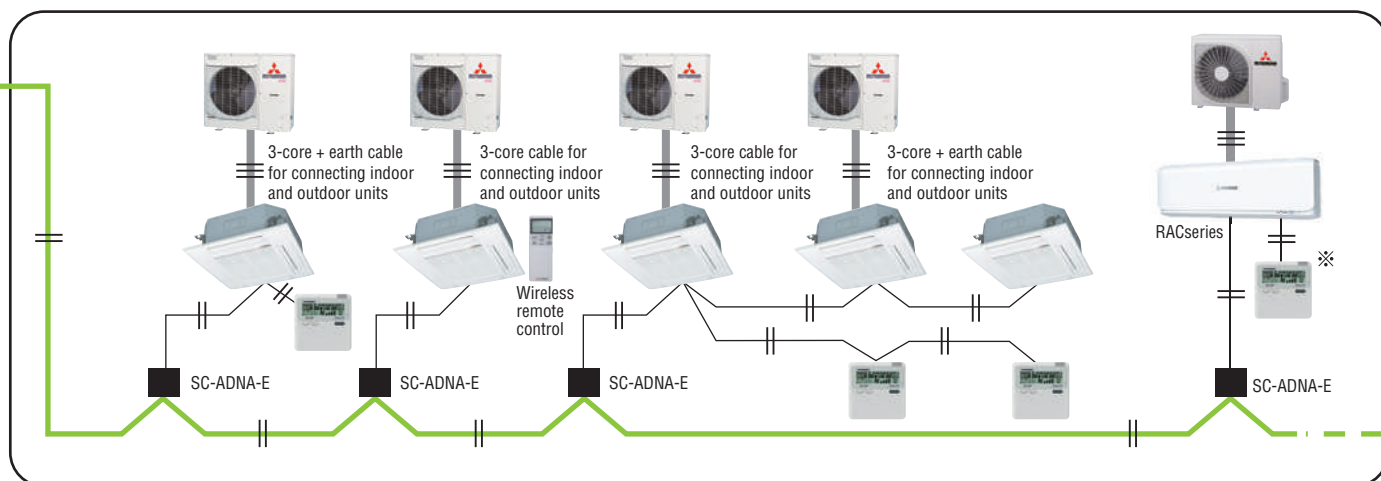
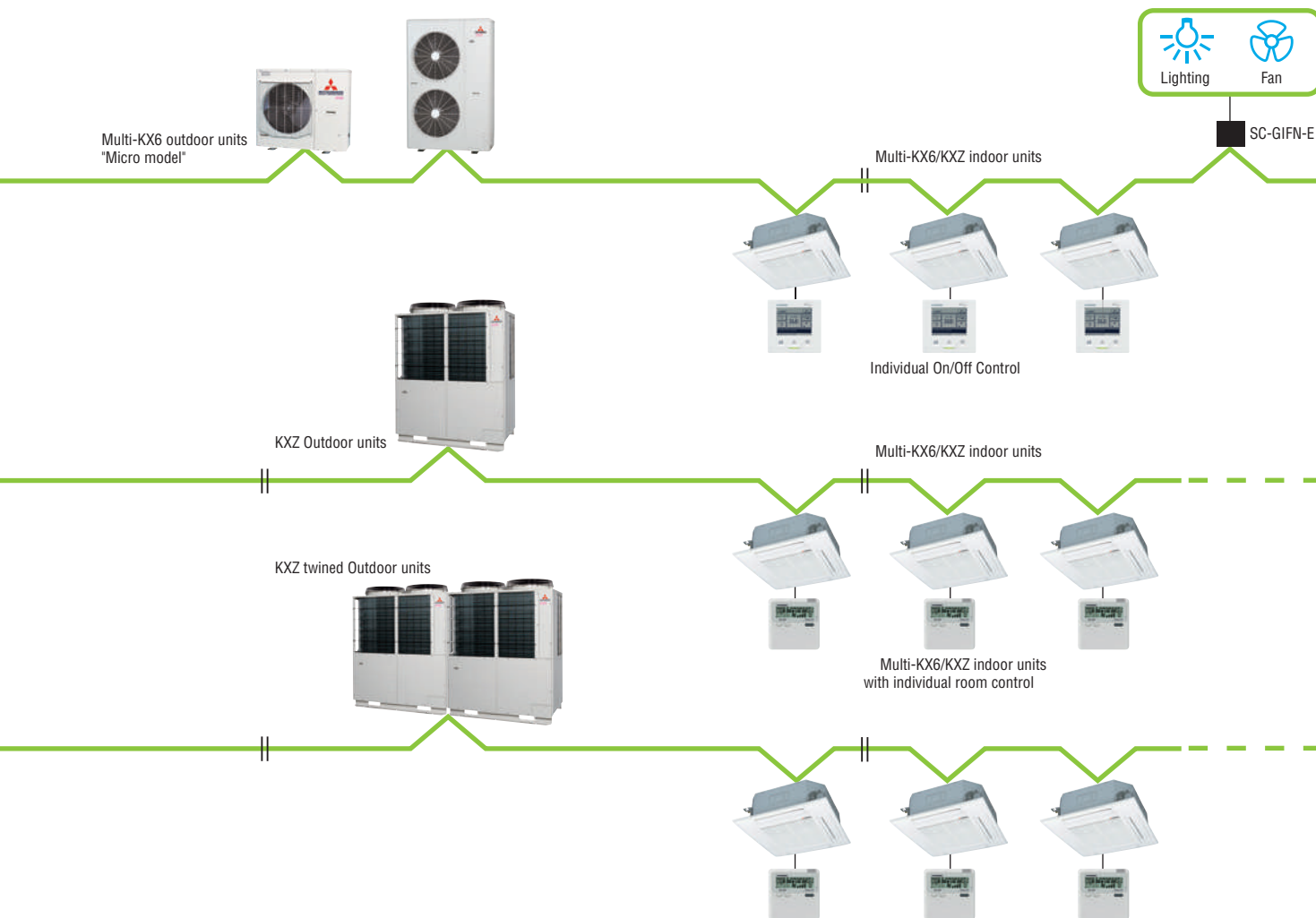
Mitsubishi Heavy Industries Thermal Systems has now combined simplicity of installation with our highly sophisticated Superlink-II control system, to offer building owners and occupiers a comprehensive control and management system, while providing complete commissioning and service maintenance assistance for installers and service engineers. The Superlink-II network utilises two wire, non-polar cable - for further details of wiring. Superlink-II is an advanced high speed data transmission system that can connect up to 128 indoor units and 32 outdoor units as a network. Mitsubishi Heavy Industries Thermal Systems offers a wide range of control options for the Superlink-II network to suit any application large or small, as well as connection to new or existing building management systems. Individual Mitsubishi Heavy Industries Thermal Systems split systems can also be integrated on to the Superlink-II network using SC-ADNA-E.



SUPERLINK E BOARD(SC-ADNA-E)

This board is used when conducting control of the single package (wired remote control unit) 1-type series using a network option.





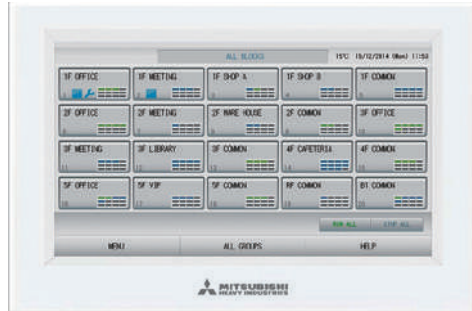
※ SC-BIKN is necessary to connect to wired remote controller.



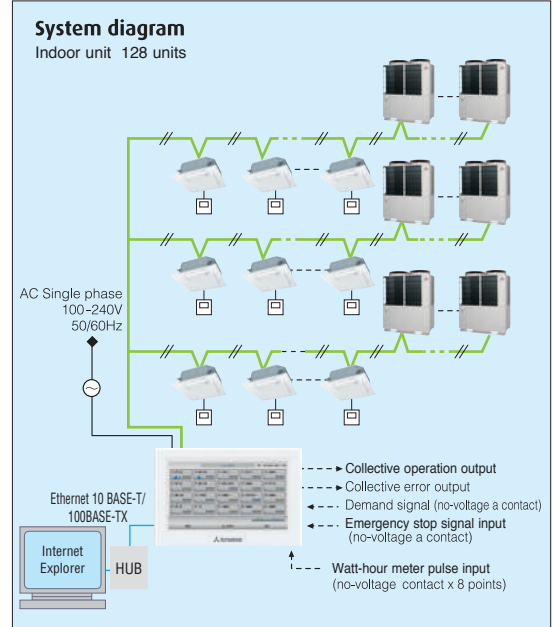
<Central Control> SC-SL4-AE/BE

Mitsubishi Heavy Industries Thermal Systems introduces the full colour touch screen central control SC-SL4-AE/BE, with 9 inch interactive LCD display. Offers control, monitoring, scheduling and service/maintenance functions for up to 128 indoor units.

Control with PC is available by use of internet explorer.



| Control | Monitoring | Scheduling | Administration/Service |
|--------------------------------|--|-------------------------|--|
| Run/Stop / Home leave | Operating state | Yearly schedule | Block definition, Floor layout |
| Mode (cool/heat/fan/dry/Auto) | Mode | Today's schedule | Group definition |
| Set temperature | Set temperature | Detailed daily schedule | Unit definition |
| Operation permitted/prohibited | Room temperature | Season setting | Time and date setting |
| Fan speeds | Operation permitted/prohibited | | Alarm history |
| Air direction | Fan speed | | Energy consumption calculation period |
| Filter sign reset | Air direction | | Energy consumption, cumulative operation time |
| Demand control (3 steps) | Filter sign | | Flap control setting |
| Emergency stop | Maintenance (1, 2 or back-up) Outdoor air temperature | | Operation data monitoring Data logging (Run / Stop set temperature , room temperature , outdoor air temperature) |



PC requirements: Windows Vista or Windows 7, 8.1, 10
Monitor resolution 1280 x 1024 or more.
Web browser requirements: Internet Explorer 11

Schedule setting

For each group

Schedule settings for each group are possible. The RUN/STOP/HOME LEAVE time, operation mode, remote control Lock/Unlock setting, temperature setting, energy setting, and silent mode can be set up to 16 times per day.



Yearly Schedule

Schedule settings for a year are also possible. The weekday, holiday, special day 1 or special day 2 can be selected and set.



Operation time history

Possible to check operation time history for cooling and heating separately.

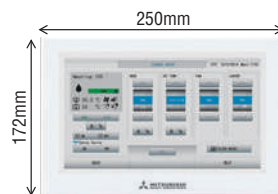


Alarm history

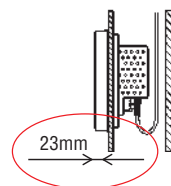
A maximum of 300 records is displayed for the history of error occurrence and restoration in the unit of air-conditioner. It is possible to output the history data to a CSV data file.

High visibility

Increasing in size from 7 to 9 inches



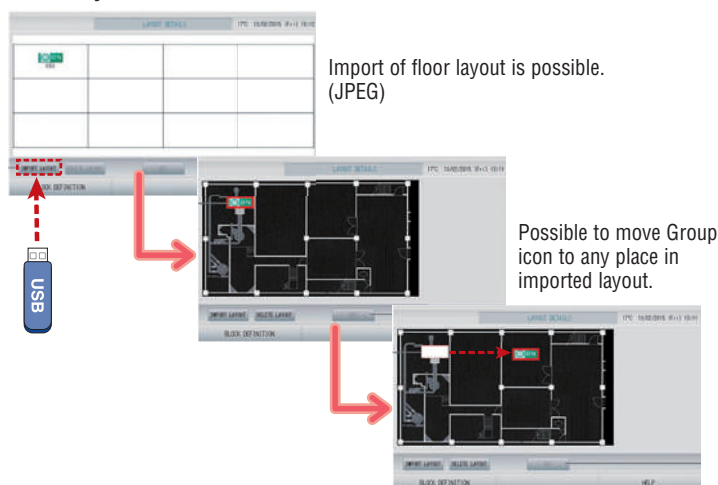
9 inch wide LCD



Contrast between five colors for icon display and black light base screen has achieved high visibility.

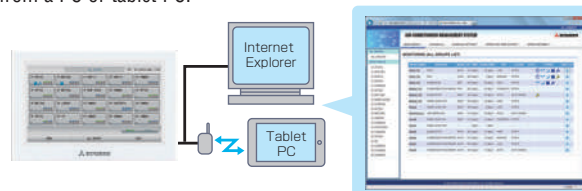
- Green : in operation
- Blue : stop
- Red : error
- Yellow : communication error
- Gray : no groups

Block layout function

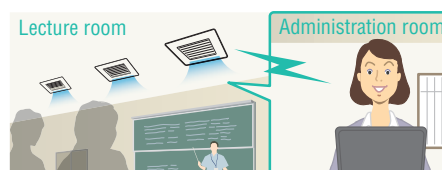


Web function

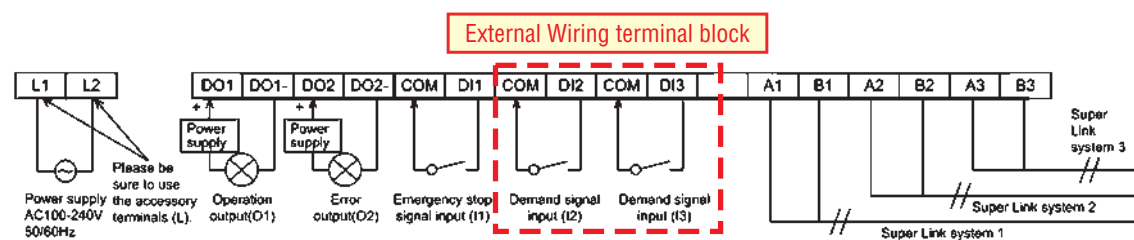
You can monitor and control up to 128 indoor units (Max.128 groups) from a PC or tablet PC.



<Example>
Monitoring and operating air-conditioners in a lecture room of a university



3 levels of demand control from 2 external inputs



| Demand level | Control | Not objective | | Center/Remote | Set temp. | Set to D1 | Center/Remote | Set temp. | Set to D2 | Center/Remote | Set temp. | Set to D3 | Center/Remote |
|--------------|--------------|---------------|----------------|---------------|-----------|-----------|---------------|-----------|-----------|---------------|-----------|-----------|---------------|
| | | Set temp. | Operation mode | | | | | | | | | | |
| 0 | Normal | - | - | - | - | - | - | - | - | - | - | - | - |
| 1 | Temp. shift | - | - | - | Shift | - | Center | - | - | - | - | - | - |
| 2 | Fan (1stage) | - | - | - | - | Fan | Center | - | Fan | Center | - | - | - |
| 3 | Fan (2stage) | - | - | - | - | Fan | Center | - | Fan | Center | - | Fan | Center |

Demand level 1 – Any indoor unit set to D1 (Demand level 1) has its temperature set point shifted by +2°C in cooling mode or -2°C in heating mode and cannot be operated from the local remote controller

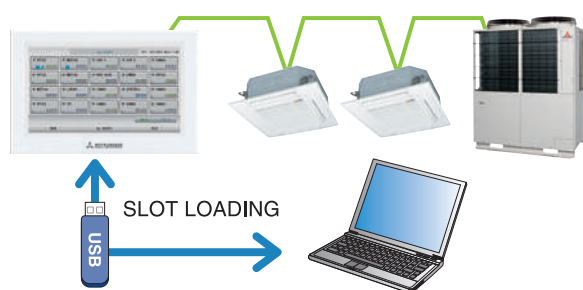
Demand level 2 – Any indoor unit set to D1 or D2 switch to fan only mode and cannot be operated from the local remote controller

Demand level 3 – Any indoor unit set to D1 or D2 or D3 switch to fan only mode and cannot be operated from the local remote controller

Electric power calculation function:

(for SC-SL4-BE only)

SC-SL4-BE gives electric power consumption data (kWh) for each indoor unit, each group, each SUPERLINK-II system, and each watt-hour meter input.



| | SC-SL4-BE |
|---------------------------------------|-----------|
| Export data by | USB / LAN |
| Calculation software | Included |
| Watt-hour meter pulse input (Maximum) | 8 |
| Max connectable indoor units | 128 |

| Item | Model | SC-SL4-AE/SC-SL4-BE |
|--|------------------------------|--|
| Ambient temperature during use | | 0 ~ 40°C |
| Power supply | | 1 Phase 100-240V 50/60Hz |
| Power consumption | | 9W |
| External dimensions (Height x Width x Depth) | | 172mm x 250mm x 23 (+70) mm |
| Net weight | | 2.0kg |
| Number of connectable units (indoor units) | | up to 128 units |
| LCD touch panel | | Colour LCD, 9 inches wide |
| Inputs | SL (Superlink) signal inputs | 1 system (Super link-II) |
| | Watt-hour meter pulse input* | 8-point, pulse width 80ms or more |
| | Emergency stop signal input* | 1 point, non-voltage a contact input continuous input (closed, forced stop) |
| | Demand signal input* | 2 point, non-voltage a contact input continuous input (closed, demand control) |
| Outputs | Operation output | 1 point, maximum rated current 40mA, DC24 V All units stop; Open, any unit operating; Close |
| | Error output | 1 point maximum rated current 40mA, DC24 V Normal; closed. If even one unit is abnormal; Open (Open/closed can be changed) |

* The receiving side power supply is DC 12V (10mA).
The air conditioning charges calculations of this unit are not based on OIML, the international standard.



SC-SL1N-E

Start/stop control of up to 16 indoor units either individually or collectively.
Simple centralised control.

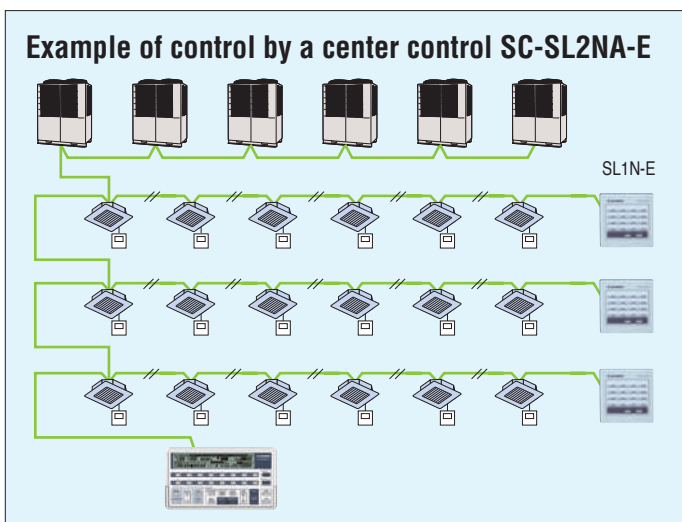
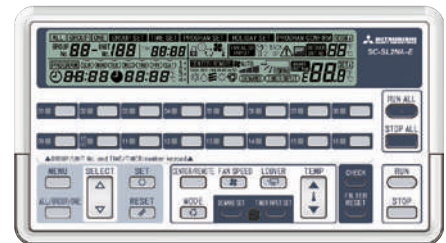
1. The SC-SL1N-E is connected to the Superlink-II network via 2-core, non-polar wires ('AB' connection).
2. It will monitor and control the start/stop function of up to 16 units, with the sixteen operation button.
3. The unit or group numbers in operation or in need of service are displayed with an LED.
4. Collective start/stop is also available through the simultaneous on/off button.
5. Up to 12 SC-SL1N-E units can be connected to a Superlink-II network (consisting of up to 128 indoor units).
6. If a power failure occurs, the SC-SL1N-E will resume the operation of the system according to a stored operation condition, once power is restored.



SC-SL2NA-E

Central control of up to 64 indoor units including weekly timer function as standard.

1. The SC-SL2NA-E is connected to the Superlink-II network via 2-core, non-polar wires ('AB' connection).
2. It will monitor and control the start/stop function of up to 16 units, or 16 groups of units, with the sixteen operation buttons.
3. It also monitors and controls the following functions for individual units, groups of units or the complete network: operation mode, set point temperature, return air temperature, louvre position, error code. Air flow and center lock function.
4. The unit or group numbers in operation or in need of service are displayed with an LCD.
5. Collective start/stop is also available through the simultaneous on/off button.
6. If a power failure occurs, the SC-SL2NA-E will resume the operation of the system according to a stored operation condition, once power is restored.
7. The SC-SL2NA-E can be connected to an external timer to facilitate timed on/off cycles.



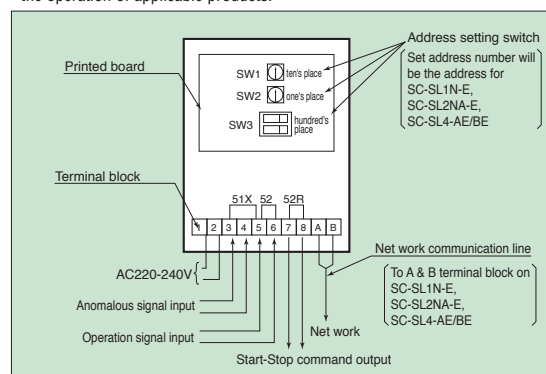
An SC-SL2NA-E performs the start/stop control, monitoring and mode setting of up to 64 units. It is a high quality air conditioner control system that allows up to 64 indoor units to be freely grouped into 1 to 16 groups.

It allows not only the start/stop control but also the monitoring, display of operation statuses such as in operation or in need of service and mode setting such as switching of operation modes of connected units collectively, by group or individually.

- Outer dimensions: H120 x W215 x D25+35* mm.
- 35* is the measurement including the part contained in a recess.

SC-GIFN-E Interface kit

- Applicable products
Ventilation fan, Air purifier
- By using SC-GIFN-E together with central control such as SC-SL1N-E, SC-SL2NA-E and SC-SL4-AE/BE, you can start-stop, operate & monitor the operation of applicable products.



Note: Please consult dealer for combination of center controls and Building Management Systems interface units.

<Building Management Systems> SC-WBGW256 (Web gateway+BACnet gateway)

Production by order

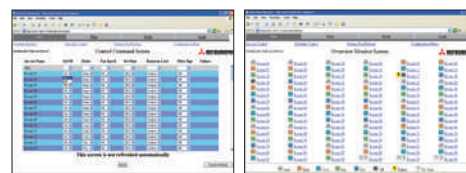
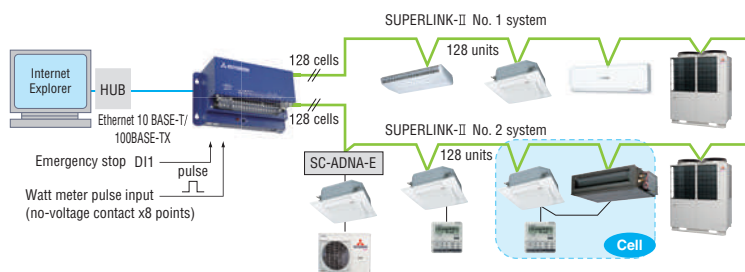
SC-WBGW256 control and monitoring of up to 256 cells (some cells can have two or more indoor units and total number of indoor units can be up to 256 units) centralised to a network PC using the Superlink-II web gateway. Simple installation is assured with no special software requirements, operation is via Internet Explorer. A low power embedded CPU and compact flash ROM ensure a large storage capacity with high reliability (no moving parts such as a PC fan, etc). An IP address filter function combined with three-level user authentication check also ensures security.

Also, SC-WBGW256 can be used as interface devices that convert Mitsubishi Heavy Industries Superlink-II communication data to BACnet code and are controlled centrally from a building management system.



Additional engineering service cost etc. is required.
Please consult your dealer when using this central control.

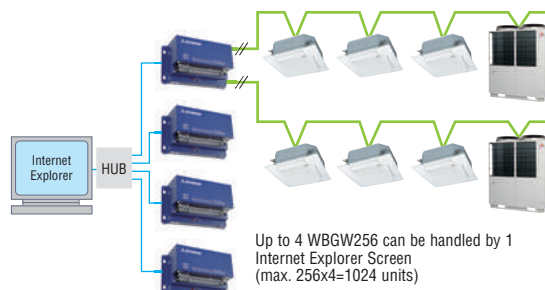
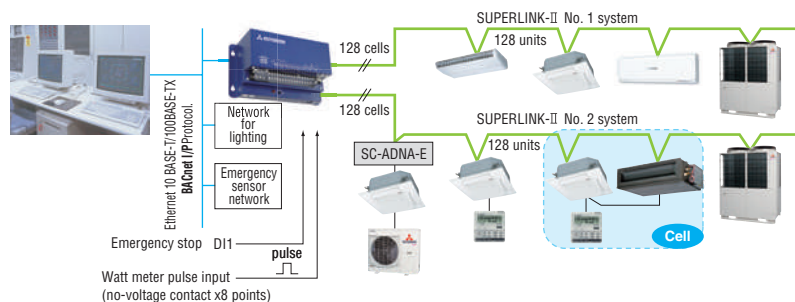
[In case of web gateway]



PC requirements: Windows 7 or Windows 8.1.
Monitor resolution 1364 x 768.

Users can manage up to 1024 units by connecting the four devices!!

[In case of BACnet gateway]

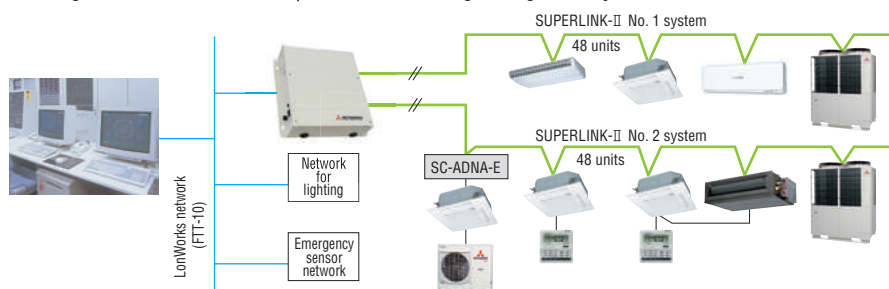


Up to 4 WBGW256 can be handled by 1 Internet Explorer Screen (max. 256x4=1024 units)

SC-LGWNB (LonWorks gateway)

Production by order

SC-LGWNB is an interface device that converts Mitsubishi Heavy Industries Superlink-II communication data to LonWorks code. Control and monitoring functions of the a/c system for up to 96 indoor units can be integrated to a central control point via the building management system network.



Additional engineering service cost etc. is required.
Please consult your dealer when using this gateway.

INTESIS BMS Interface for Mitsubishi Heavy Industries Thermal Systems air conditioners

All technical support, including specifying work, compatibility issues, product quality (repair and replacement issues), product liability issues and the required after sales service (including spare parts supply) will be provided by Intesis as it is an Intesis product. Product sales and delivery will be conducted by Intesis as well. For details concerning such matters please directly contact Intesis.

Integration of Mitsubishi Heavy Industries Thermal Systems VRF in your KNX installation by Superlink

MH-AC-KNX-48

(Max 48 indoor units / Superlink I & II)

MH-AC-KNX-128

(Max 128 indoor units / Superlink II)

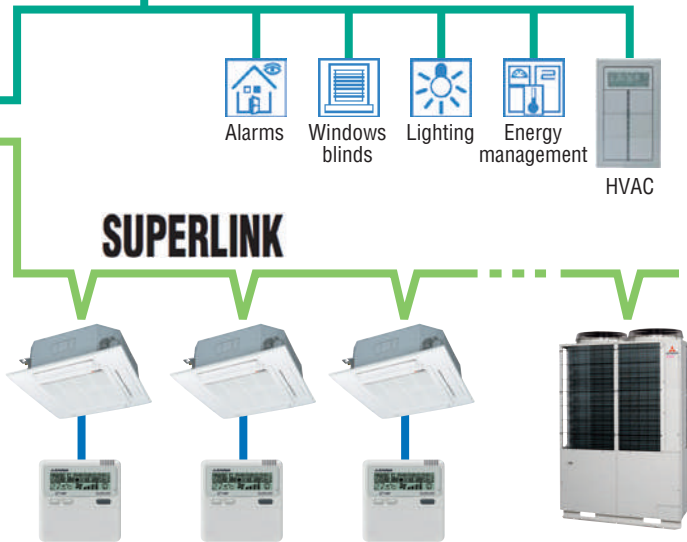


INTEGRATED GATEWAY

- Bidirectional: Supervision and Control
- Robust and reliable hardware
- Direct connection to KNX TP-1 BUS
- Independent management of communications
- Power supply: 230 VAC 50/60Hz
- Wall mounting case



TOUCH SCREEN



Integration of Mitsubishi Heavy Industries Thermal Systems VRF in your Modbus installation by Superlink

MH-AC-MBS-48

(Max 48 indoor units / Superlink I & II)

MH-AC-MBS-128

(Max 128 indoor units / Superlink II)

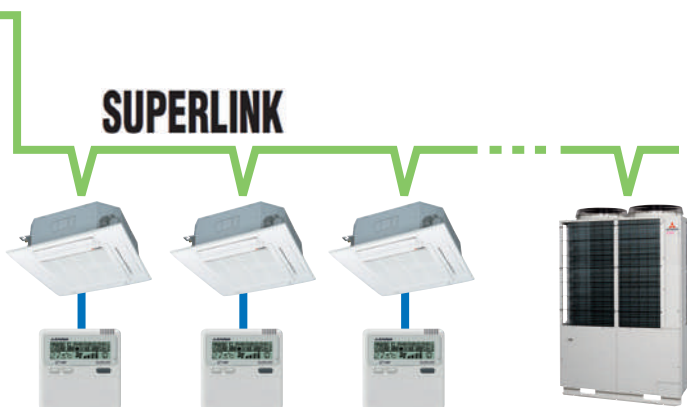
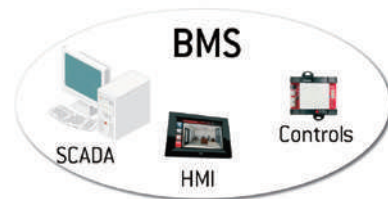


INTEGRATED GATEWAY

- Bidirectional: Supervision and Control
- Robust and reliable hardware
- Modbus TCP or Modbus RTU RS-485/RS-232
- Independent management of communications
- Power supply: 230 VAC 50/60Hz
- Wall mounting case



MODBUS



Integration of Mitsubishi Heavy Industries Thermal Systems PAC in your KNX installation by Remote control line

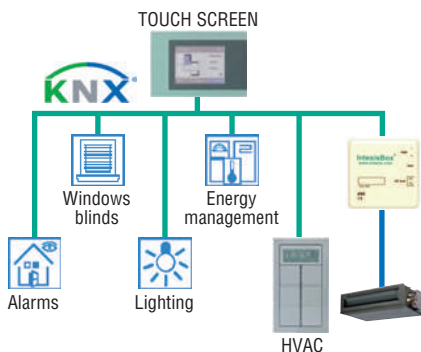
MH-RC-KNX-1i



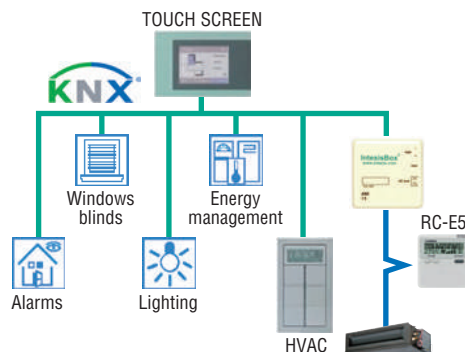
IntesisBox

- Protocol : KNX TP-1 bus
- Dimension : 71 x 71 x 27 mm
- External Power supply : no need

Example :
Device as Master



Example :
Device as Slave



Integration of Mitsubishi Heavy Industries Thermal Systems PAC in your Modbus installation by Remote control line

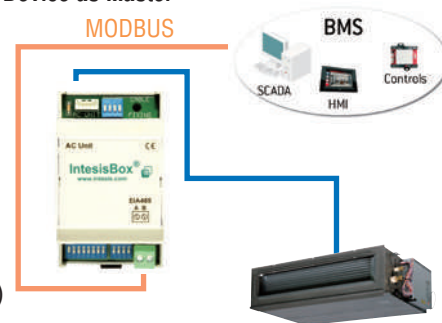
MH-RC-MBS-1



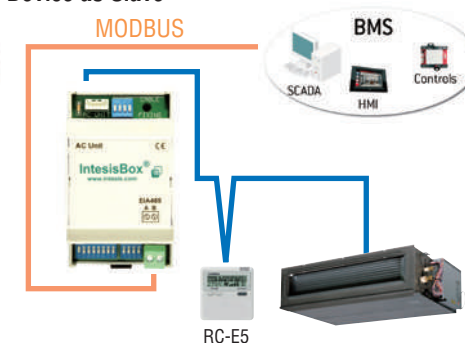
IntesisBox

- Protocol : Modbus RTU (RS-485)
- Dimension : 93 x 53 x 58 mm
- External Power supply : no need

Example :
Device as Master



Example :
Device as Slave



Integration of Mitsubishi Heavy Industries Thermal systems PAC in your EnOcean installation by Remote control line

MH-RC-ENO-1i/1iC



IntesisBox

- Protocol : EnOcean
1i : 868MHz@EU
1iC : 315MHz@USA, ASIA
- Dimension : 100 x 70 x 28 mm
- External Power supply : no need

Example :
Device as Master



Example :
Device as Slave



IntesisHome
Your home in the cloud

Intesis Wifi Adaptors



PAC Model: MH-RC-WIFI-1A

Please access the followings for details.

Intesis software URL | <http://www.intesis.com>
email | info@intesis.com

Before starting use

Heating performance

The heating performance values (kW) described in the catalogue are the values obtained by operating at an outdoor temperature of 7°C and indoor temperature of 20°C as set forth in the ISO Standards. As the heating performance decreases the outdoor temperature drops, if the outdoor temperature is too low and the heating performance is insufficient, use other heating appliances as well.

Indication of sound values

The sound values are the values (A scale) measured in a chamber such as an anechoic chamber following the ISO Standards. In the actual installation state, the value is normally larger than the values given in the catalogue due to the effect of surrounding noise and echo. Take this into consideration when installing.

Use in oil atmosphere

Avoid installing this unit in an atmosphere where oil scatters or builds up, such as in a kitchen or machine factory.

If the oil adheres to the heat exchanger, the heat exchanging performance will drop, mist may be generated, and the synthetic resin parts may deform and break.

Use in acidic or alkaline atmosphere

If this unit is used in acidic atmosphere such as hot spring areas having high level of sulfuric gases or in alkaline atmosphere including ammonia or calcium chloride, places where the exhaust of the heat exchanger is sucked in, or at coastal areas where the unit is subject to salt breezes, the outer plate or heat exchanger, etc., will corrode. Please ask a dealer or specialist when you use an air conditioner in places differing from a general atmosphere.

Use in places with high ceilings

If the ceiling is high, install a circulator to improve the heat and air flow distribution when heating.

Refrigerant leakage

The refrigerant (R410A) used for Air conditioner is non-toxic and inflammable in its original state.

However, in consideration of a state where the refrigerant leaks into the room, measures against refrigerant leaks must be taken in small rooms where the tolerable level could be exceeded. Take measures by installing ventilation devices, etc.

Use in snowy areas

Take the following measures when installing the outdoor unit in snowy areas.

·Snow prevention

Install a snow-prevention hood so that the snow does not obstruct the air intake port or enter and freeze in the outdoor unit.

·Snow piling

In areas with heavy snow fall, the piled snow could block the air intake port. In this case, a frame that is 50cm or higher than the estimated snow fall must be installed underneath the outdoor unit.

Automatic defrosting device

If the temperature is low, and the humidity is high, frost will stick to the heat exchanger of the outdoor unit. If use is continued, the heating performance will drop.

The "Automatic defrosting device" will function to remove this frost.

After heating for approx. three to ten minutes, it will stop, and the frost will be removed. After defrosting, hot air will be blown again.

Servicing the air-conditioner

After the air-conditioner is used for several seasons, dirt will build up in the air-conditioner causing the performance to drop. In addition to regular servicing, we recommend the maintenance contract (charged for) by a specialist.

⚠ Safety Precautions

Air-conditioner usage target

The air-conditioner described in this catalogue is a dedicated cooling/heating device for human use.

Do not use it for special applications such as the storage of food items, animals or plants, precision devices or valuable art, etc.

This could cause the quality of the items to drop, etc.

Do not use this for cooling vehicles or ships. Water leakage or current leaks could occur.

Before use

Always read the "User's Manual" thoroughly before starting use.

Installation

Always commission the installation to a dealer or specialist. Improper installation will lead to water leakage, electric shocks and fires.

Make sure that the outdoor unit is stable in installation. Fix the unit to stable base.

Usage place

Do not install in places where combustible gas could leak or where there are sparks.

Installation in a place where combustible gas could be generated, flow or accumulate, or places containing carbon fibers could lead to fires.



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<http://www.mhi-mth.co.jp/en/>

Our factories are ISO9001 and ISO14001 certified.

Certified ISO 9001



Certificate Number : JQA-0709



Certificate:44 100 980813



Certificate Number : 4333-2007-AQ-RGC-PvA

Certified ISO 14001



Certificate Number : YKA4005636



Certificate:04 104 980813



Certificate number : 02117E10160PDM

