

# VRF inverter multi-system Air Conditioners

**KXZ**

High Performance  
Air Conditioning

2023

Eco.lution

60Hz

23KX03E  
Latin



# High Performance Air Conditioning 2023 *Eco.lution*



## KXZ2

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 KXZ**



**Micro model**



**KXZ Lite**



**KXZ 2**

**RC-EX3A**

Simple use with advanced setting Remote control



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# KXZ system is the best air conditioning solution for "Sophisticated" buildings

KXZ 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, centralised and customised comfort control

## Design flexibility

- Various types of indoor units suiting all applications
- Long piping length and wide limitation of piping
- Easy selection and design software

## Easy & customised control

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

## Good serviceability

- Easy access for maintenance
- Engineering and monitoring tool available

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

Energy efficient and highly reliable industry leading compact units are designed and built by our technology experts.



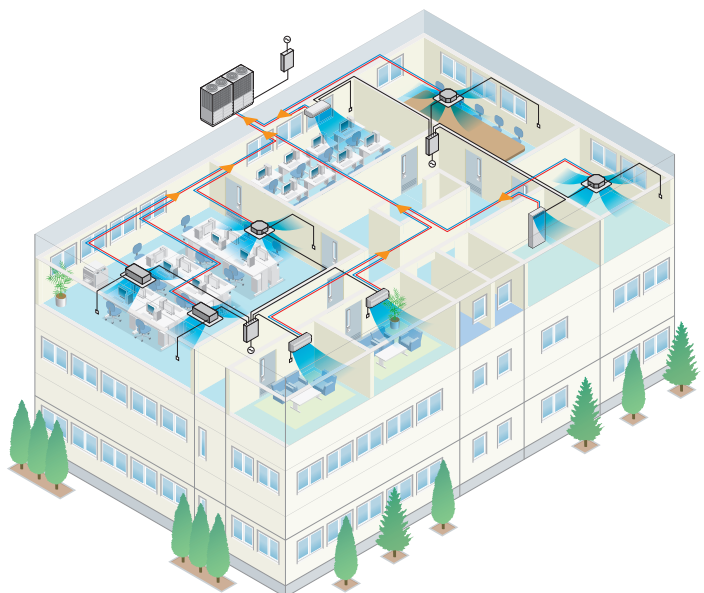
## Heat pump systems

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

These systems provide either a heating or cooling operation to all indoor units at the same time and are suitable for a wide range of applications from an apartment or villa to an entire multi-story building, especially when 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.



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

## Case study: Hotel and Leisure



The VRF heat recovery systems from Mitsubishi Heavy Industries (MHI) Thermal Systems KX range match the demanding needs and specifications for luxury hotels and 'airport style' bus stations. MHI Thermal VRF systems feature advanced inverter technology that adjusts compressor output to match the cooling or heating demands of the indoor units. Allowing to save energy and easily control room temperature by choosing to heat or cool in different areas. Our adaptable system allows to increase the heat in sunnier, south facing rooms; all while providing energy for rooms in cooler, shadier sides of your building.

## Case study: Education










We're proud to have provided Crossways Academy in Lewisham with a VRF system with inverter control - helping to make school a cooler place to learn.

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.

# Product Line Up

## Outdoor units

Capacity Range	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
Micro KXZ (4~6HP)											
Micro KXZ (4~6HP)											
Micro model (4~6HP)											
Micro model (8~12HP)											
KXZ Lite											
Standard model KXZE2M / KXZE2											
Hi-COP combination KXZXE2M / KXZXE2											

### Micro KXZ



11.2kW	14.0kW	15.5kW
4HP	5HP	6HP
FDC112KXZEN1-W	FDC140KXZEN1-W	FDC155KXZEN1-W
FDC112KXZES1-W	FDC140KXZES1-W	FDC155KXZES1-W






11.2kW	14.0kW	15.5kW
4HP	5HP	6HP
FDC112KXZEN1	FDC140KXZEN1	FDC155KXZEN1
FDC112KXZES1	FDC140KXZES1	FDC155KXZES1

### KXZ Lite



22.4kW	28.0kW
8HP	10HP
FDC224KXZPE1	FDC280KXZPE1

	1Phase 220V
	3Phase 220V
	3Phase 380V

### Micro model



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



22.4kW	28.0kW	33.5kW
8HP	10HP	12HP
FDC224KXE6M	FDC280KXE6M	FDC335KXE6M
FDC224KXE6G	FDC280KXE6G	FDC335KXE6G

### Standard model KXZE2M / KXZE2



28.0kW	33.5kW	40.0kW	45.0kW	47.5kW	50.0kW	56.0kW
10HP	12HP	14HP	16HP	17HP	18HP	20HP
FDC280KXZE2M	FDC335KXZE2M	FDC400KXZE2M	FDC450KXZE2M	FDC475KXZE2M	FDC500KXZE2M	FDC560KXZE2M
FDC280KXZE2	FDC335KXZE2	FDC400KXZE2	FDC450KXZE2	FDC475KXZE2	FDC500KXZE2	FDC560KXZE2

FDC280, 335 FDC400-560

FDC615, 670



FDC735



FDC800-1120



61.5kW	67.0kW	73.5kW	80.0kW	85.0kW	90.0kW	95.0kW	100.0kW	106.0kW	112.0kW
22HP	24HP	26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP
FDC615KXZE2M	FDC670KXZE2M	FDC735KXZE2M	FDC800KXZE2M	FDC850KXZE2M	FDC900KXZE2M	FDC950KXZE2M	FDC1000KXZE2M	FDC1060KXZE2M	FDC1120KXZE2M
FDC615KXZE2	FDC670KXZE2	FDC735KXZE2	FDC800KXZE2	FDC850KXZE2	FDC900KXZE2	FDC950KXZE2	FDC1000KXZE2	FDC1060KXZE2	FDC1120KXZE2

22HP	24HP	26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP	42HP	44HP	46HP	48HP	50HP	52HP	54HP	56HP	58HP	60HP
61.5	67.0	73.5	80.0	85.0	90.0	95.0	100.0	106.0	112.0	120.0	125.0	130.0	135.0	142.5	145.0	150.0	156.0	162.0	168.0
209,800	228,600	250,800	273,000	290,000	307,100	324,100	341,200	361,700	382,100	409,400	426,500	443,600	460,600	486,200	494,700	511,800	532,200	552,700	573,200

## Standard model KXZE2M / KXZE2 NEW

FDC1200-1680



120.0kW	125.0kW	130.0kW	135.0kW	142.5kW	145.0kW	150.0kW	156.0kW	162.0kW	168.0kW
42HP	44HP	46HP	48HP	50HP	52HP	54HP	56HP	58HP	60HP
FDC1200KXZE2M	FDC1250KXZE2M	FDC1300KXZE2M	FDC1350KXZE2M	FDC1425KXZE2M	FDC1450KXZE2M	FDC1500KXZE2M	FDC1560KXZE2M	FDC1620KXZE2M	FDC1680KXZE2M
FDC1200KXZE2	FDC1250KXZE2	FDC1300KXZE2	FDC1350KXZE2	FDC1425KXZE2	FDC1450KXZE2	FDC1500KXZE2	FDC1560KXZE2	FDC1620KXZE2	FDC1680KXZE2

## Hi-COP combination KXZXE2M / KXZXE2 NEW

FDC560



56.0kW

20HP

FDC560KXZXE2M

FDC560KXZXE2

FDC850-1000



FDC1060







FDC1120



85.0kW	90.0kW	95.0kW	100.0kW	106.0kW	112.0kW
30HP	32HP	34HP	36HP	38HP	40HP
FDC850KXZXE2M	FDC900KXZXE2M	FDC950KXZXE2M	FDC1000KXZXE2M	FDC1060KXZXE2M	FDC1120KXZXE2M
FDC850KXZXE2	FDC900KXZXE2	FDC950KXZXE2	FDC1000KXZXE2	FDC1060KXZXE2	FDC1120KXZXE2

# Indoor units

13 types of exposed or concealed indoor units available in a wide range of capacities. The best solution of indoor units for all applications is available from our full lineup.

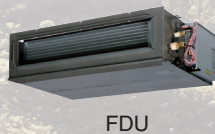
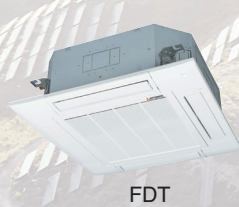
		1.5kW <0.5HP>	2.2kW <0.8HP>	2.8kW <1HP>	3.6kW <1.25HP>	
Ceiling Cassette	4way FDT			FDT28KXZE1-W	FDT36KXZE1-W	
				FDT28KXZE1	FDT36KXZE1	
	4way Compact FDTC			FDTC15KXZE1-W	FDTC22KXZE1-W	FDTC28KXZE1-W
				FDTC15KXZE1	FDTC22KXZE1	FDTC28KXZE1
	2way FDTW				FDTW28KXE6F	
Duct Connected	1way FDTS					
	1way Compact FDTQ				FDTQ22KXE6F	FDTQ28KXE6F
					FDTQ36KXE6F	
	High Static Pressure FDU					
Wall Mounted	Low/Middle Static Pressure FDUM			FDUM22KXE6F-W	FDUM28KXE6F-W	FDUM36KXE6F-W
				FDUM22KXE6F	FDUM28KXE6F	FDUM36KXE6F
	Low Static Pressure(thin) FDUT			FDUT15KXE6F-W	FDUT22KXE6F-W	FDUT28KXE6F-W
				FDUT15KXE6F-E	FDUT22KXE6F-E	FDUT28KXE6F-E
	Compact & Flexible FDUH				FDUH22KXE6F	FDUH28KXE6F
Floor Standing					FDUH36KXE6F	
OA Processing unit FDU-F				FDU-F series is not connectable to the Micro (4~6HP), KXZ Lite.		

\*R32 indoor unit are not compatible with R410A outdoor unit and vice versa.

	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>
	FDT45KXE1-W	FDT56KXE1-W	FDT71KXE1-W	FDT90KXE1-W	FDT112KXE1-W	FDT140KXE1-W	FDT160KXE1-W		
	FDT45KXE1	FDT56KXE1	FDT71KXE1	FDT90KXE1	FDT112KXE1	FDT140KXE1	FDT160KXE1		
	FDTC45KXE1-W	FDTC56KXE1-W							
	FDTC45KXE1	FDTC56KXE1							
	FDTW45KXE6F	FDTW56KXE6F	FDTW71KXE6F	FDTW90KXE6F	FDTW112KXE6F	FDTW140KXE6F			
	FDTS45KXE6F		FDTS71KXE6F						
	FDU45KXE6F-W	FDU56KXE6F-W	FDU71KXE6F-W	FDU90KXE6F-W	FDU112KXE6F-W	FDU140KXE6F-W	FDU160KXE6F-W		
	FDU45KXE6F	FDU56KXE6F	FDU71KXE6F	FDU90KXE6F	FDU112KXE6F	FDU140KXE6F	FDU160KXE6F	FDU224KXE1	FDU280KXE1
	FDUM45KXE6F-W	FDUM56KXE6F-W	FDUM71KXE6F-W	FDUM90KXE6F-W	FDUM112KXE6F-W	FDUM140KXE6F-W	FDUM160KXE6F-W		
	FDUM45KXE6F	FDUM56KXE6F	FDUM71KXE6F	FDUM90KXE6F	FDUM112KXE6F	FDUM140KXE6F	FDUM160KXE6F		
	FDUT45KXE6F-W	FDUT56KXE6F-W	FDUT71KXE6F-W						
	FDUT45KXE6F-E	FDUT56KXE6F-E	FDUT71KXE6F-E						
	FDK45KXE1-W	FDK56KXE1-W	FDK71KXE1-W	FDK90KXE1-W					
	FDK45KXE1	FDK56KXE1	FDK71KXE1	FDK90KXE1					
	FDE45KXE1	FDE56KXE1	FDE71KXE1		FDE112KXE1	FDE140KXE1			
	FDFW45KXE6F	FDFW56KXE6F							
				FDU650FKXE1		FDU1100FKXE1		FDU1800FKXE1	FDU2400FKXE1

# Next Generation Refrigerant R32

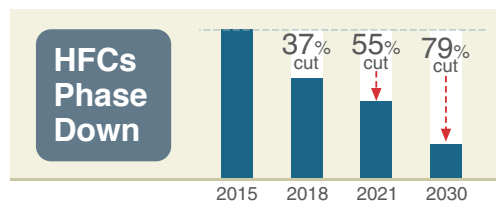
New indoor units and outdoor units line up are available for R32 refrigerant



## F-GAS REGULATION (EU) No 517/2014

Introduced in January 2015 to regulate the use of Fluorinated Greenhouse Gases (F-Gases)

The Hydrofluorocarbons (HFCs) are F-Gases used in the HVACR sector (Heating, Ventilation, Air Conditioning and Refrigeration)



### OBJECTIVE

To protect the environment by reducing the F-Gases emissions

### IMPACT ON HFCs(in EU)

HFCs Phase Down

HFCs Ban

### SOLUTIONS

- Use lower GWP\* refrigerants in new equipment
- Use high-efficiency equipment with less refrigerant charge
- Check refrigerant leaks regularly

\* GWP is the Global Warming Potential of a refrigerant, representing how much heat an F-Gas traps in the atmosphere

### HFCs Ban

2020

**GWP ≥ 150**

Portable room air conditioner

**GWP ≥ 2500**

Stationary refrigeration<sup>\*1</sup> (except < -50°C)

**GWP ≥ 2500**

Commercial hermetically sealed refrigerators, freezers

2022

**GWP ≥ 150**

Commercial multipack centralised refrigeration

**GWP ≥ 150**

Commercial hermetically sealed refrigerators, freezers

2025

**GWP ≥ 750**

Single Split Fixed Air Conditioning < 3kg HFC

<sup>\*1</sup> Stationary refrigeration equipment, that contains or relies its functions upon, HFCs with GWP of 2500 or more except equipment intended for application designed to cool products to temperatures below -50°C application

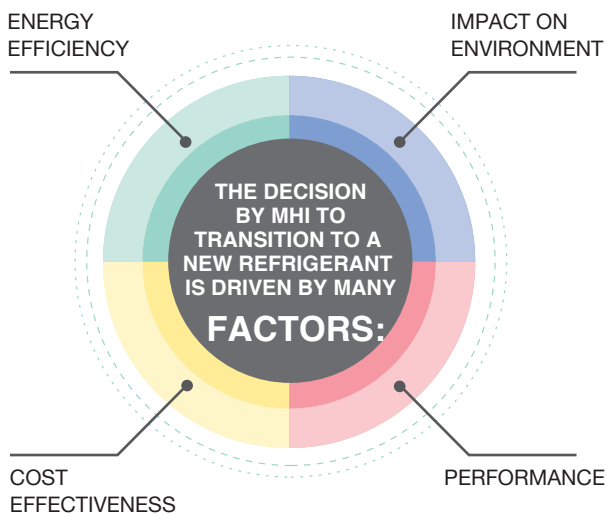
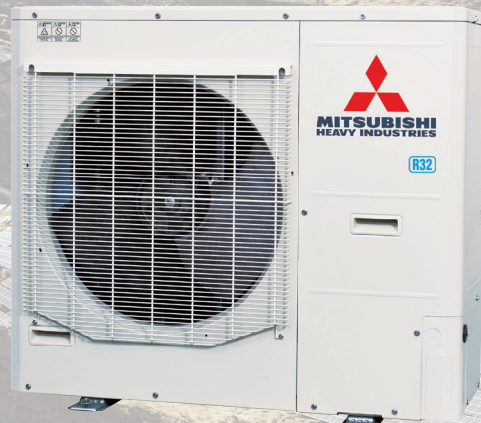


$$\text{LOWER GWP} + \text{LESS REFRIGERANT CHARGE} = \text{LOWER HFCs EMISSIONS}$$

## R32 - A Low GWP Refrigerant

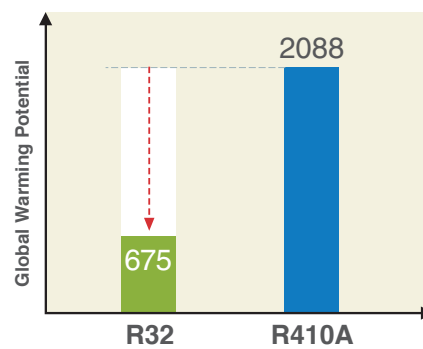
- A single component, easy to handle refrigerant
- Known as a component of the blend R410A(50% R32, 50% R125)
- Already used in Air Conditioning systems worldwide
- Zero Ozone Depletion
- Superior Energy Efficiency vs. R410A
- Reduced refrigerant charge vs. R410A
- Easy to recycle

**Micro KXZ** Heat pump systems  
4, 5, 6HP (11.2kW ~ 15.5kW)

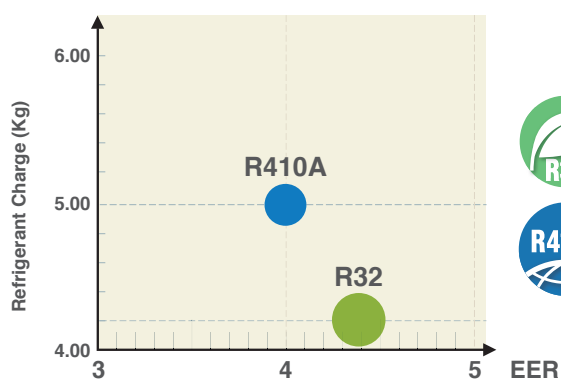


### Low Global Warming Potential

1/3 GWP VS. R410A



### Improved Energy Efficiency

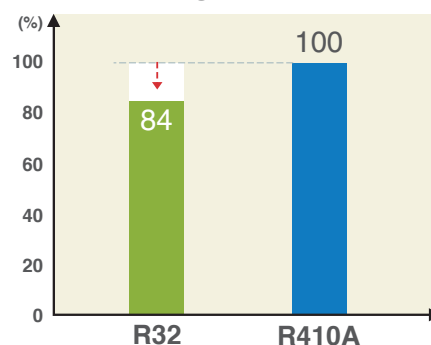


Energy Efficiency Ratio Based on 11.2kW Micro Outdoor unit.



### Reduced Refrigerant Charge

Saving up to 16%

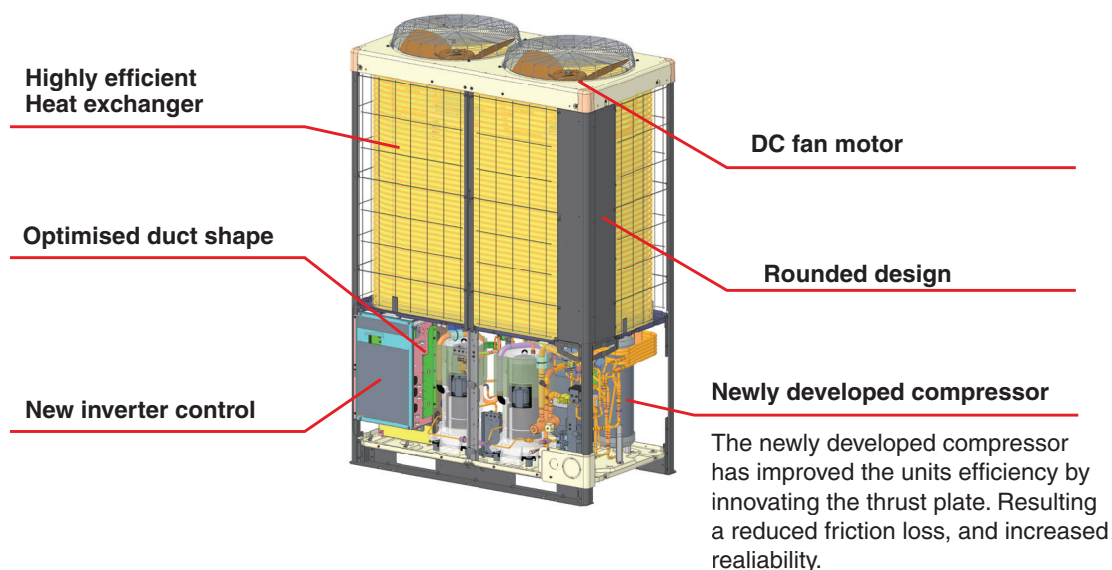


# New Generation

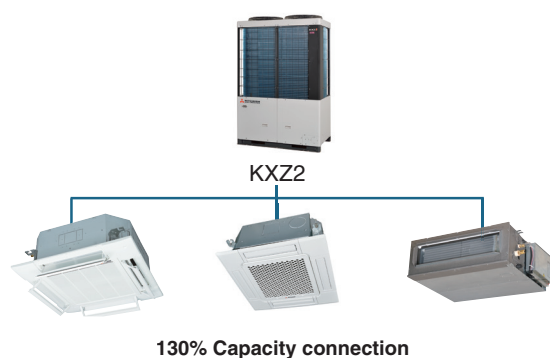


## New Design

The new KXZ2 series has a layered design and a refined new form. The flexibility in design and ease of installation are further enhanced to provide optimum response to medium and large building airconditioning systems.



## Indoor Unit Capacity Connection



Connectable indoor units														
HP	10	12	14	16	17	18	20	22	24	26	28	30	32	34
Numbers	24	27	34	39	41	43	45	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	

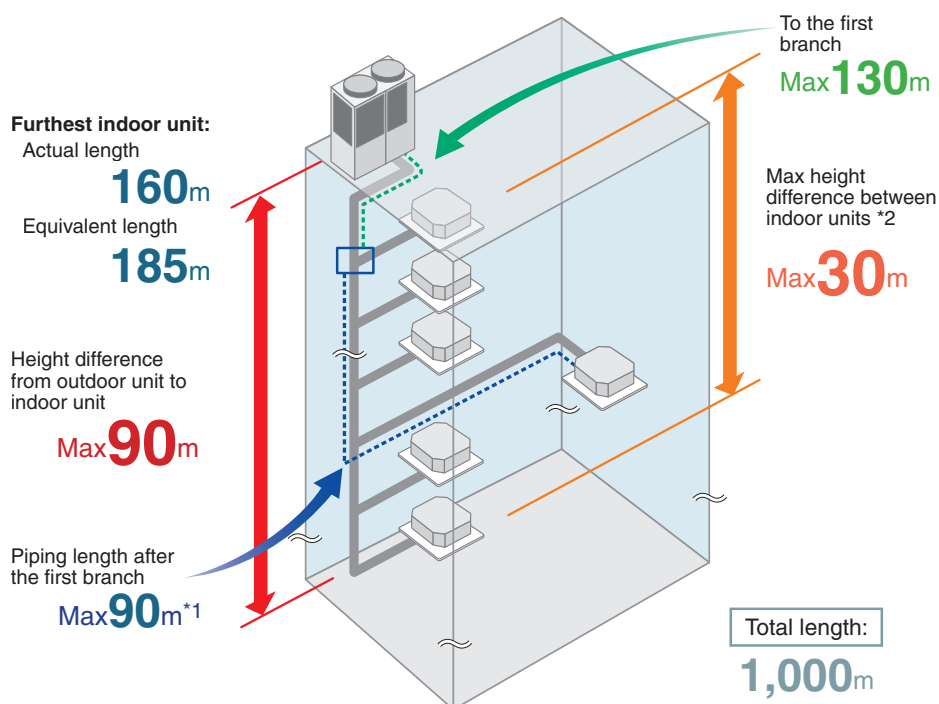
► This page is mainly described KXZ2M series.

## Long Pipe Length

The maximum height difference between indoor units has been increased to a maximum of 30m, and the maximum height difference between the outdoor unit and indoor unit has been expanded to 90m. For with few limitations, 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 It is necessary to change the setting corresponding to each height difference in installation. The range of use is also different.



## Technology

### Continuous Heating Capacity Control (CHCC)

Our CHCC defrosting control has been added to our KXZ2 system and allows to achieve greater capacities than that of our previous model in low ambient temperature conditions. CHCC controls the target pressure automatically before the capacity drops, which increases the period of heating operation and reduces the systems defrosting time.

### Variable Temperature and Capacity Control

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 optimal usage of the indoor units as well as maximised energy savings. Ultimately this also increases comfort for the user.

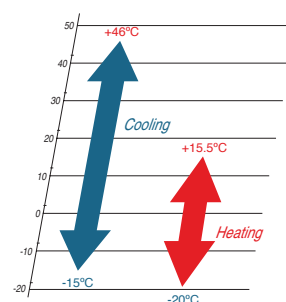
# VTCC

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



### Wide Range of Operation

Our KXZ2 series enable a heating range operation down to -20°C and a cooling range up to 46°C.



KXZ2 (10HP to 60HP)

# New Generation FDTC

## European design & Flat panel



### Ceiling Cassette Compact FDTC

- More comfort and Higher energy savings
- New European Design
- Lower noise



A' Design Award and Competition is the World's largest, most prestigious and influential design accolade, the highest achievement in design. A' Design Award Winner Logo, symbolizes exceptional design excellence in products, projects and services.



### Thin Panel

FDTC thin panel fit within 10mm from the ceiling.

### Unique Grille Design

Honeycomb grille

### Draft Prevention Panel (Option)

Please refer to page 18



### Motion Sensor (Option)

Please refer to page 16-17

### Big Louver

Improved distribution

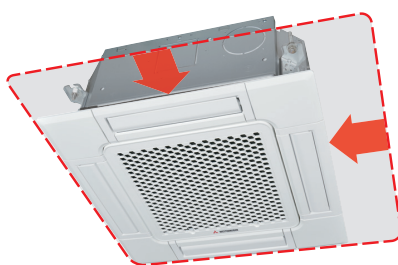
- It is available to set draft prevention panel and motion sensor as well as FDT.

## Compact Design

700mm → 620mm

The weight is 14kg

Height of thin panel and main body is 248mm allowing adequate spacing for installation.

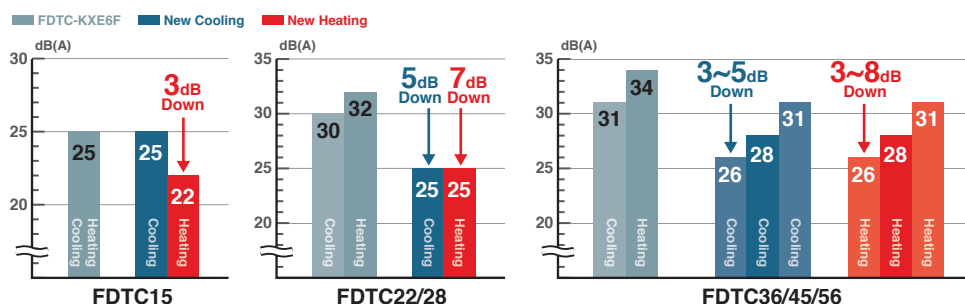


Integrated ceiling system design 600x600



## Quieter operation

Adopting new turbo fan and improving new heat exchanger enables noise reduction. (Sound pressure level in the Lo mode.)



## *FDT colour variation*

Now available in shadow black

*Blend in,  
or **stand out.***



**Shadow black**



**Fine snow white**



## **Motion sensor** (Option)

Energy saving operation by detecting human movement

Optional for the following models



FDT



FDTC



FDTW



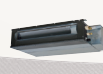
FDTS



FDU



FDUM



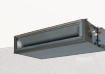
FDUT(71 only)



FDE



FDK

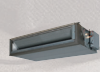


FDU-F

NEW



FDTQ



FDUT(15~56)

## 3 Step Control

### 1 Power Control

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



### 2 Stand by

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

### 3 Auto Off

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

Low human activity (in cooling)



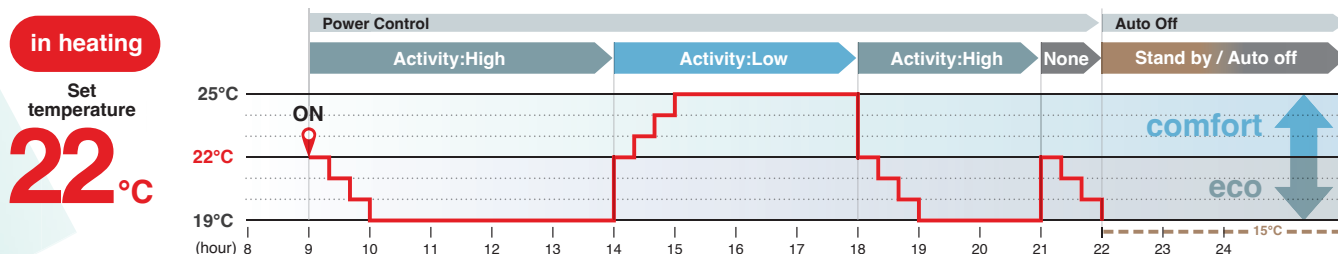
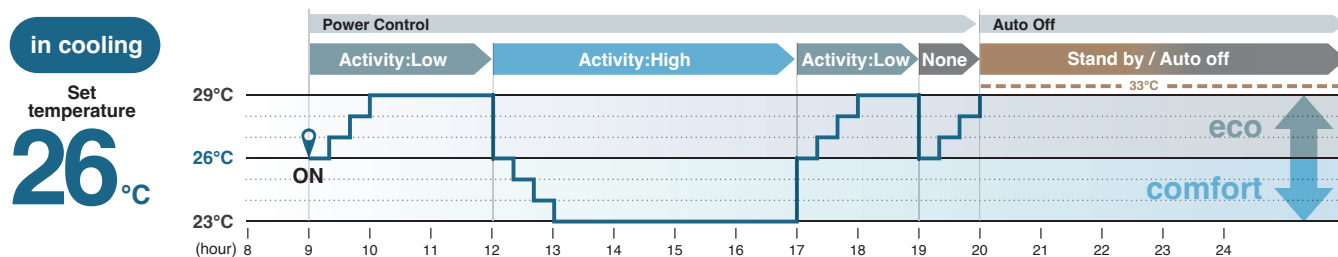
High human activity (in cooling)




Absence for 1 hour



12 hours absence



## Operation mode and Control of Motion sensor

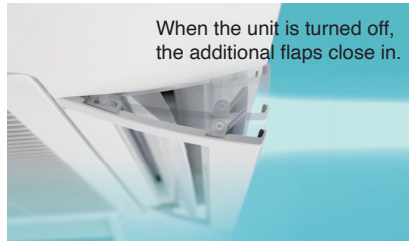
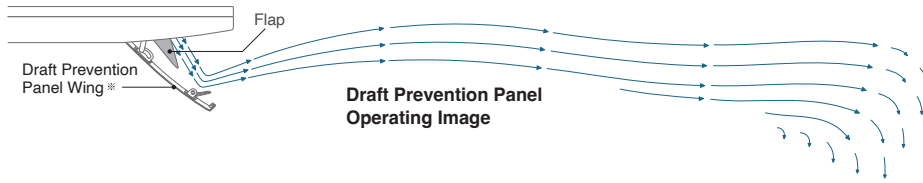
eco operation			Operation mode				
comfort operation			Auto	Cool	Heat	Dry	Fan
Power Control *1	<div>Human activity</div> <div></div>	Low	<div>Cooling +3°C</div> <div>Heating +3°C</div>	+3°C	+3°C	-	-
		High	<div>Cooling -3°C</div> <div>Heating -3°C</div>	-3°C	-3°C	-	-
		None	<div>Cooling +3°C</div> <div>Heating -3°C</div>	+3°C	-3°C	-	-
Auto Off *2			●	●	●	●	●

\*1 Set temperature is revised maximum  $\pm 3^{\circ}\text{C}$  at Cooling/Heating mode by detecting heat volume movement.

\*2 Absence for 1 hour  $\Rightarrow$  Operation stops ("Stand-by") 12 hours absence  $\Rightarrow$  Operation stops completely

## Draft Prevention Panel (Option)

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



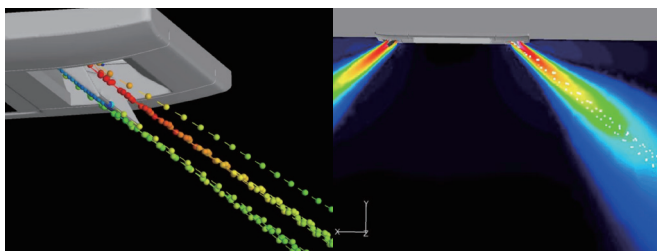
### - New frexible function in the market - Flexible flap control for draft prevention

Each of the 4 flaps can be controlled individually at each operation mode. They change air flow direction and prevent drafts occurring. This function also provides more flexible control for air flow direction. User can position Draft Prevention Panel panels by using only the remote controller (RC-EX3A, Wireless kit).

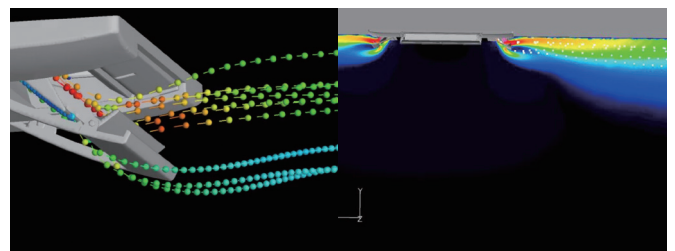
- It can also prevent user from being directly blown by hot drafts in heating mode.



Draft Prevention Panel off



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.

\* Image is for illustration purposes

Ceiling cassette  
**FDT**



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. (FDT)

# Remote Control

Simple use with advanced settings REMOTE CONTROL

## RC-EX3A

Intuitive touch controller with Liquid Crystal Display

### Function Switch

The function switch allows you to select and set two functions of your choice among the seven 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. Draft prevention ON/OFF



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

#### 2. High Power Mode



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

#### 3. Energy Saving Mode



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

#### 4. 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.

#### 5. Home Leave Mode



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

#### 6. Favourite Mode



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

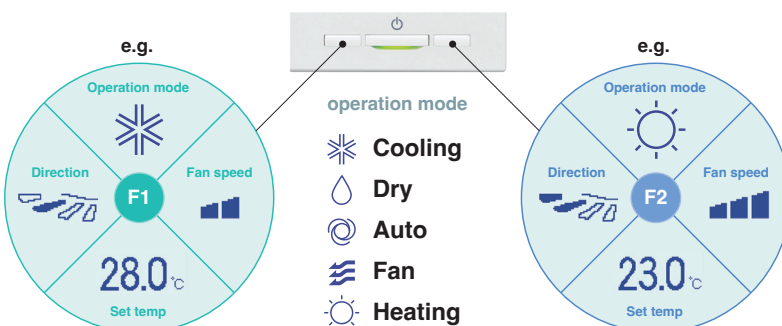
#### 7. Filter Sign



Announces the due time for cleaning the air filter.

### Favourite 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.



### Adjustable Brightness of the Operation Lamp

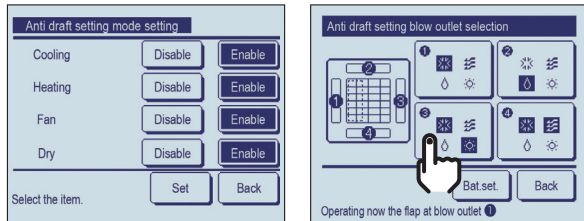
The brightness of the operation lamp behind Run/Stop switch can be adjusted by 10 stages.



## Draft Prevention Setting

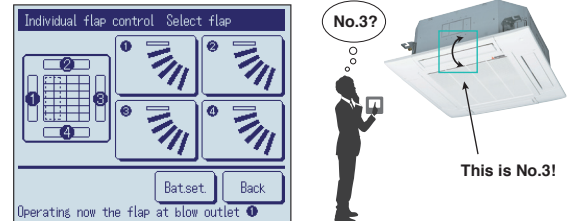
(only for FDT•FDTC series)

User can enable/disable the motion of Draft prevention panel for each blow outlet for each operation mode. This function can be set while operating.



## Easy Adjustment of the Air Flow

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



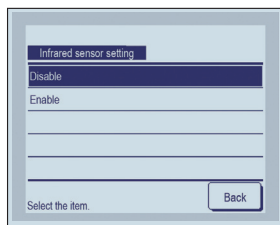
## Motion Sensor Control

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

### 1 Select Enable / Disable Motion sensor control



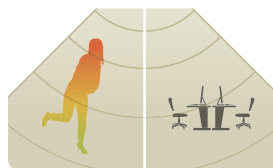
Enable/Disable



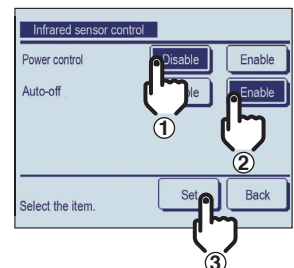
Select [Enable]/[Disable] for the motion sensor of the indoor unit connected to the R/C.

### 2 Select Enable / Disable per control

- Power control
- Auto-off



Enable/Disable

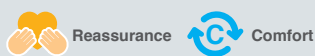


## Backup Control

Control restricted to two indoor units (two groups)

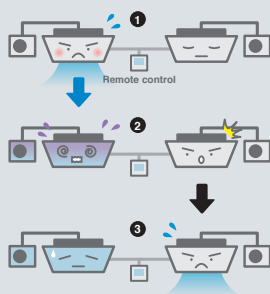


### Fault backup control



#### 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.

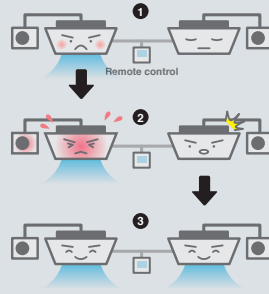


### Capacity backup control



#### Maintains users' comfort!

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

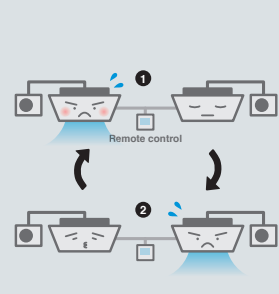


### Rotational operation control



#### 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 1 to 999 hours in increments of 1 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

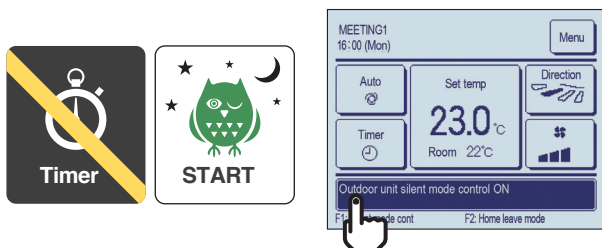
CNT (1-6) CNTA (1-2)	
Input	On/Off Permission/Prohibition Cooling/Heating Emergency Stop
Newly added	Set temp. shift Forced thermo-off IU operation stop Silent mode

### 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) - Ventilation - Heater ON
5	Output - Free cooling - IU overload alarm

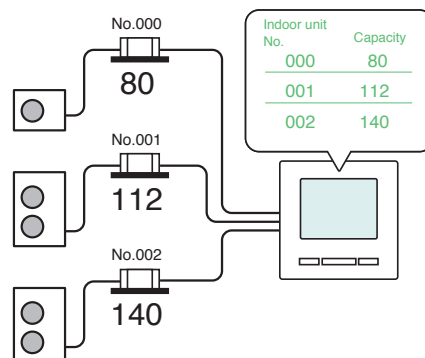
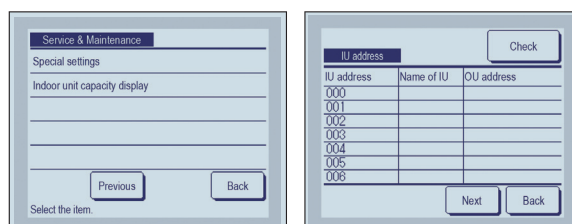
### Silent mode control

The Outdoor unit is controlled prioritising quiet operation. 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.



### Indoor unit capacity display

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



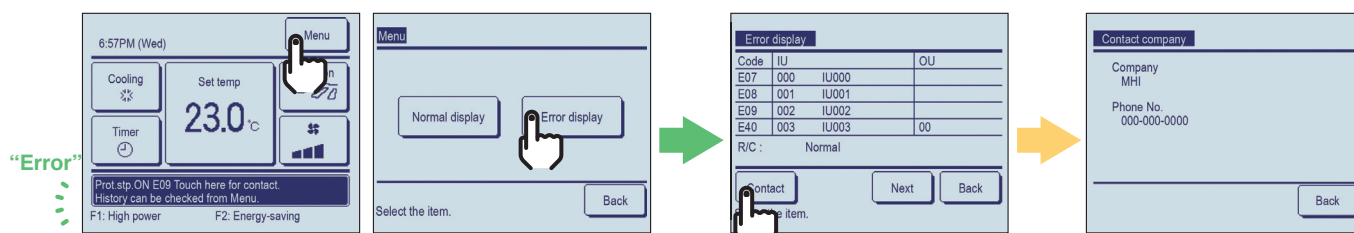
### Language Switching

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



### Error display

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



# Serviceability & workability (Indoor unit)

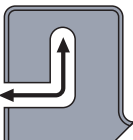
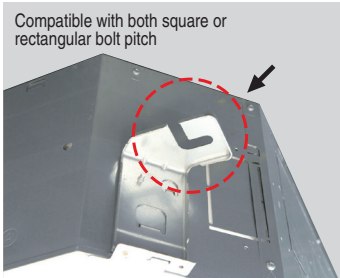

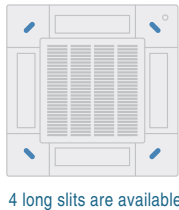
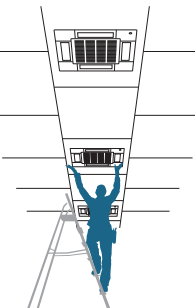
Builder Maintenance



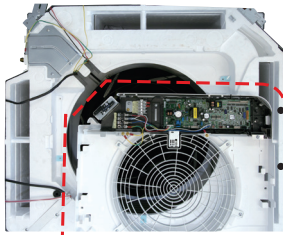
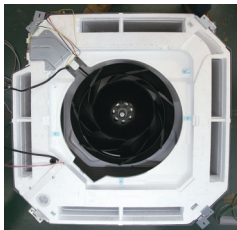
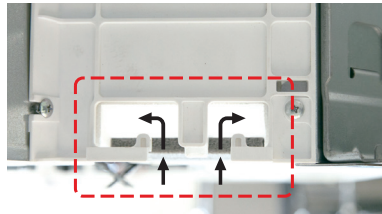
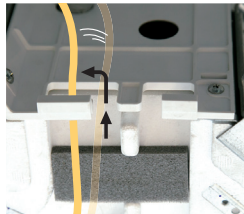
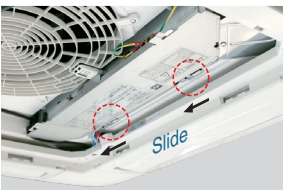
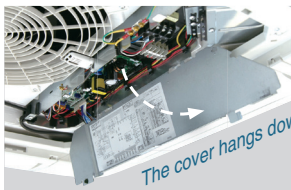
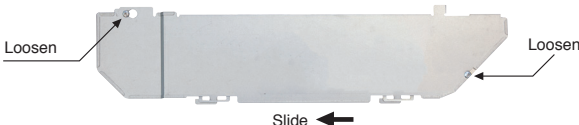
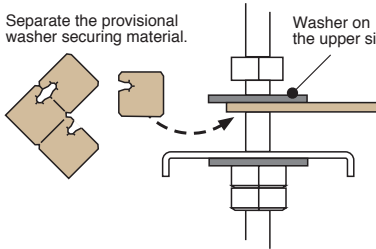
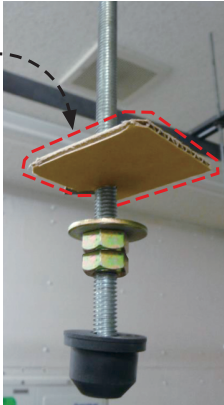
Quick positioning!

## Easy and quick installation and maintenance

Indoor unit is easily positioned and installed

<b>1</b> Adjustable easier positioning of unit by new slits <span style="float: right;">FDT</span>	<b>2</b> New slit in panel allows easier installation on site <span style="float: right;">FDT FDC</span>
<p>New shape of slit is suitable to install the unit with more flexibility, compatible with many kinds of suspending bolt pitch on site.</p> <p>Any rectangular or squared pitch of suspending bolts are available with this slit.</p>   <p>Compatible with both square or rectangular bolt pitch</p>	<p>Flexible positioning is available, which helps adjusting the direction of panel accordingly to lines or pattern on the ceiling.</p>   

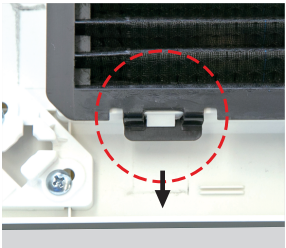
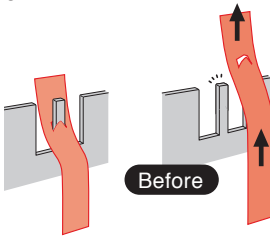
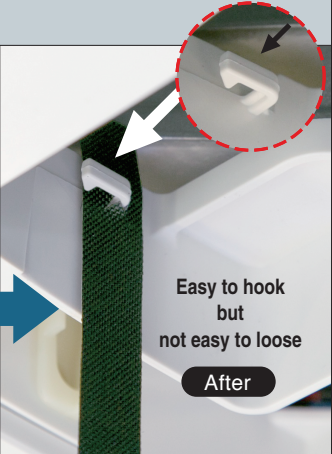
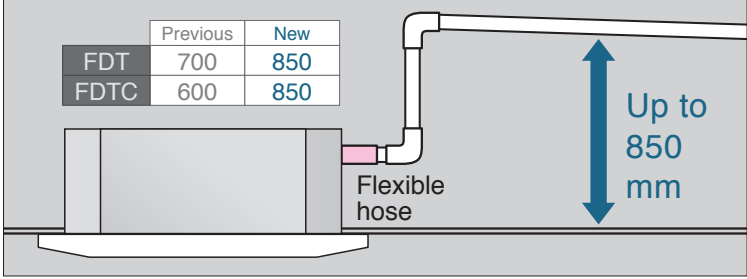
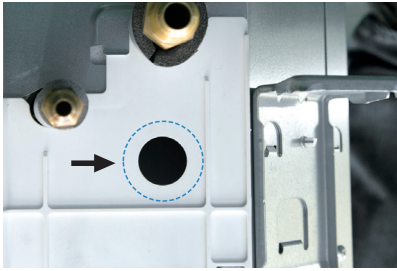
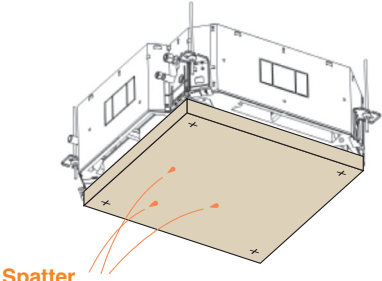
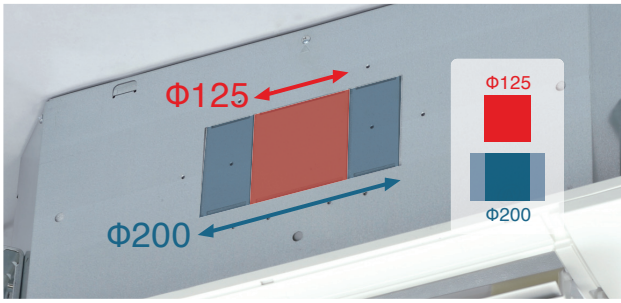
## Quick installation and maintenance

<div><div>1</div><div>Easy access to component part for easy maintenance</div><div>FDT</div></div> <div><div><div>1 The control box and bell mouth can be removed together.</div><div>2 Easy access to impeller and fan motor.</div></div><div><div><div>Control box</div><div>Bell mouth</div></div><div></div></div></div>	<div><div>2</div><div>New shape of path of wiring</div><div>FDT</div></div> <div><div>New shape of path gives easy wiring work for installation.</div><div><div></div><div></div></div></div>
<div><div>3</div><div>No need to remove screws to open the controller cover</div><div>FDT</div></div> <div><div>It is possible to loose and slide open the cover without removing the screws. This prevents the cover from falling and causing damage on site.</div><div><div><div>Slide</div></div><div><div>The cover hangs down</div></div><div><div><div>Loosen</div><div>Slide</div><div>Loosen</div></div></div></div></div>	<div><div>4</div><div>More safe installation by stopper of washer</div><div><div>FDT</div><div>FDC</div></div></div> <div><div>When unit is installed with hook between washers, this stopper helps to install the unit safely, without adjusting washer.</div><div><div><div>Separate the provisional washer securing material.</div><div>Washer on the upper side</div></div><div></div></div></div>



For smooth and easy working

## Easy installation and maintenance

<p><b>1</b> Easy and flexible hook to remove the filter</p> <p>FDT FDTC</p> <p>Hook of soft material helps to remove the filter without dust spreading.</p>  <p>Press the filter tab to the outside and remove the filter.</p>	<p><b>2</b> Securely fix the corner lid by strap</p> <p>FDT</p> <p>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.</p>  <p>Before</p>  <p>Easy to hook but not easy to loose</p> <p>After</p>									
<p><b>3</b> Drain-up-lift increases up to 850 mm</p> <p>FDT FDTC</p> <p>The drain can be lifted up to 850 mm from the ceiling surface.</p> <table border="1"> <thead> <tr> <th></th> <th>Previous</th> <th>New</th> </tr> </thead> <tbody> <tr> <td>FDT</td> <td>700</td> <td>850</td> </tr> <tr> <td>FDTC</td> <td>600</td> <td>850</td> </tr> </tbody> </table>  <p>Up to 850 mm</p> <p>Flexible hose</p>		Previous	New	FDT	700	850	FDTC	600	850	<p><b>4</b> New port to check drain water flow</p> <p>FDT</p> <p>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.)</p> 
	Previous	New								
FDT	700	850								
FDTC	600	850								
<p><b>5</b> Re-use of packages during construction work</p> <p>FDT FDTC</p> <p>Package material (carton) helps to protect the unit from unexpected welding spatter or dust on the new unit.</p>  <p>Spatter</p>	<p><b>6</b> More flexible outlet for ducting</p> <p>FDT FDTC</p> <p>Both <math>\Phi 125</math> and <math>\Phi 200</math> (oval shaped) are available.</p>  <p><math>\Phi 125</math></p> <p><math>\Phi 200</math></p>									

# Support tool

## TIME SAVING SOFTWARE

### BIM (Building Information Modelling)

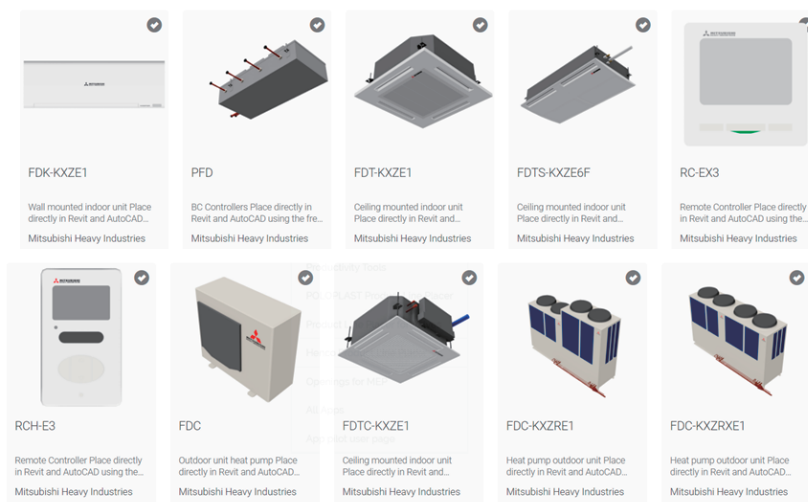
We can provide high quality Building Information Modelling (BIM) models in three formats:

1. Revit
2. 3D Cad
3. IFC (IFC provides an interoperability solution between different software applications. The format establishes international standards to import and export building objects and their properties)

How and why BIM is used

BIM enables all disciplines of a project (Architects, engineers, quantity surveyors, contractors, clients etc..) to share a common model and data representing the project they are building.

- Better design visualization
- BIM reduces conflicts and changes during construction
- Increases overall accuracy of project documentation
- Improves cost estimating
- Improves energy analysis
- Simplifies reporting and scheduling

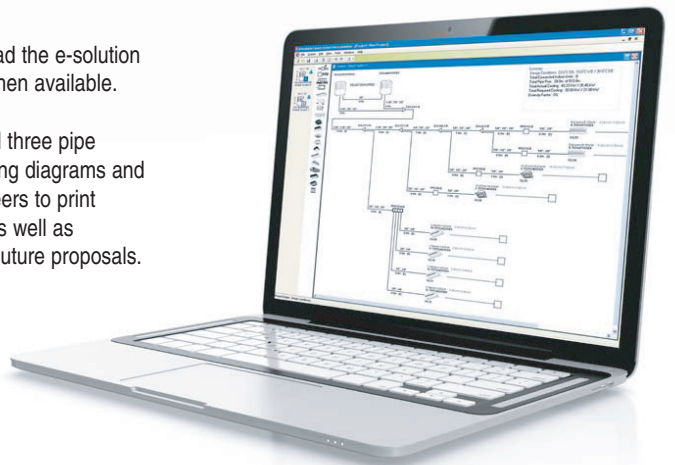


### e-solution

Use our e-solution design software tool to find the latest specifications for our KXZ VRF systems. This software helps to simplify the processes to enable engineers to select the most suitable indoor units, outdoor units, pipework, controls & calculate any additional required refrigerants.

If you're an engineer interested in using e-solution, please register and download the e-solution via <https://mhiae.com/e-solution/> and be sure to download the latest updates when available.

Please be aware that this tool was developed to cater for the design of two and three pipe systems, and specifies the appropriate models and sizes. It also generates wiring diagrams and engineering drawing to export to AutoCAD or PDF. This flexibility allows engineers to print selected design information and technical data to present to potential clients. As well as personalising the design information into their own formats and documents for future proposals.



## MACO Service App

MACO Service application is available & free to download to both IOS and Android devices.  
The application covers "Mitsubishi Heavy Industries Thermal System, Ltd" Air conditioning systems:  
RAC, PAC & VRF.



This "MACO Service" Application enables field engineers to make:

- A quick search of the meaning of error codes that may appear when there is a malfunction in a "Mitsubishi Heavy Industries Thermal Systems, Ltd" Air conditioning system, the probable cause for the malfunction and troubleshooting guideline.
- Scan the unit's QR code and search the meaning of error codes depending on the model type.
- Additional refrigerant charge calculation for VRF.
- Technical manual, Service manual for RAC, PAC & VRF.
- Technical support Video (Part checking, Troubleshooting, Service Tools, Maintenance data analysis) for RAC, PAC & VRF.
- Spare part information for RAC, PAC & VRF.
- Currently available in English, Japanese, Chinese, Thai, Turkish, Indonesian, Vietnamese, Arabic, Cambodian & Burmese.

To download the App go to:

iPhone: <https://apps.apple.com/th/app/maco-service/id1276956648>

Android: [https://play.google.com/store/apps/details?id=com.ssd.macoservice&hl=en\\_US&gl=US](https://play.google.com/store/apps/details?id=com.ssd.macoservice&hl=en_US&gl=US)



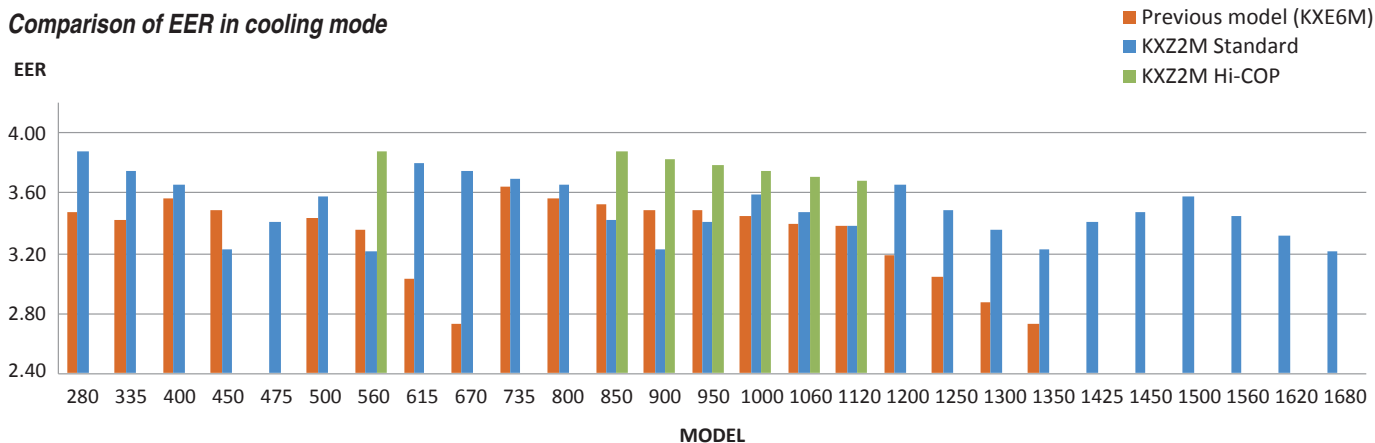
# Outdoor unit

## High Efficiency & Comfort

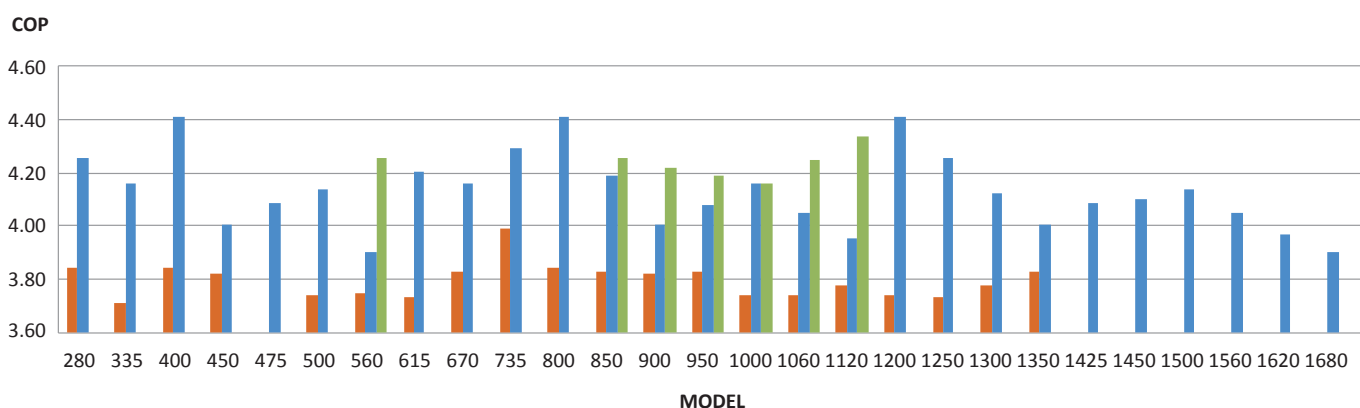
### Improved Efficiency

The graphs below highlight the improved efficiencies of the KXZ2 standard and Hi-COP models compared to the previous models.

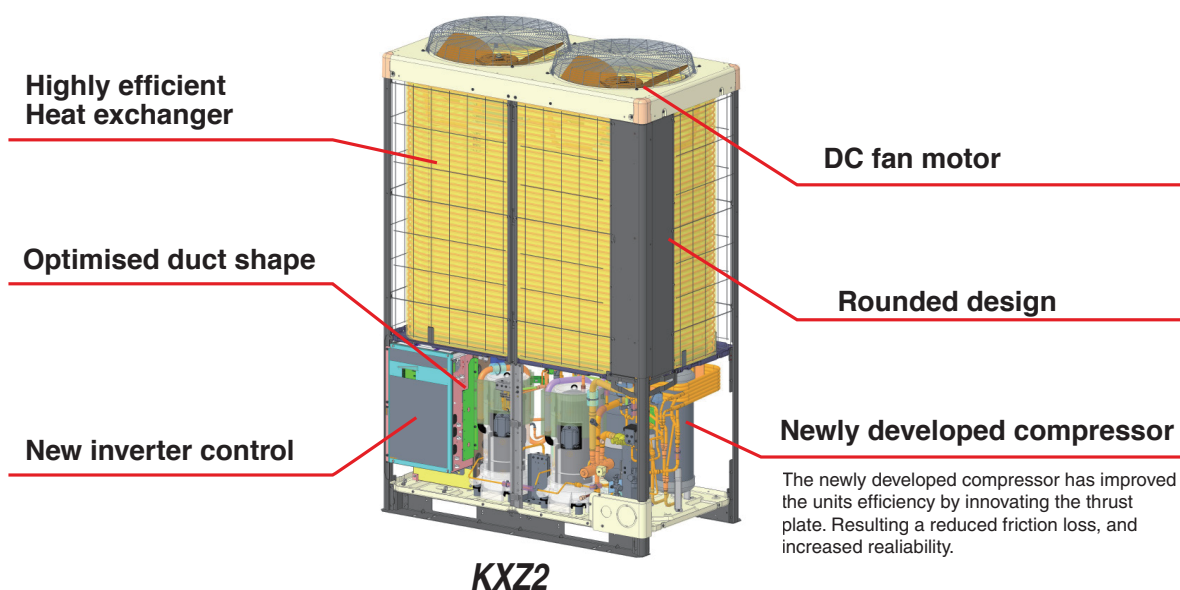
Comparison of EER in cooling mode



Comparison of COP in heating mode



High efficiency and compact design are achieved by applying advanced components  
10~60HP



## Variable Temperature and Capacity Control

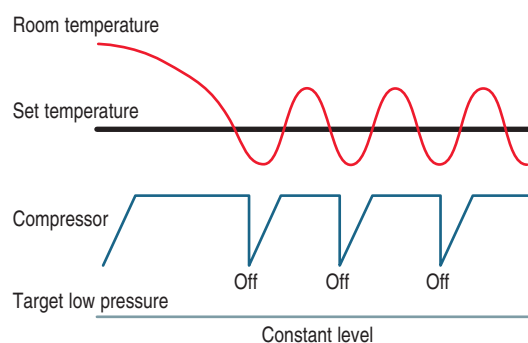
### VTCC

- The VTCC is a 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.

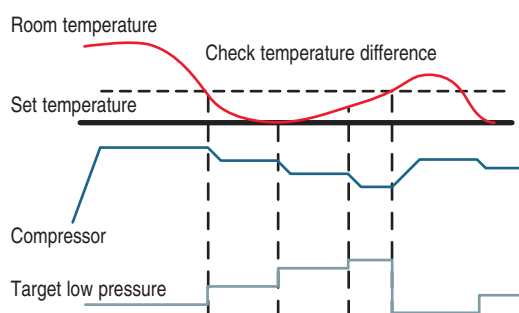


\*34% energy savings are based on comparison with a KXZ standard model with VTCC vs. a KXZ standard model both under partial load condition.

#### Normal operation (in the cooling mode)



#### Energy saving operation (in the cooling mode)



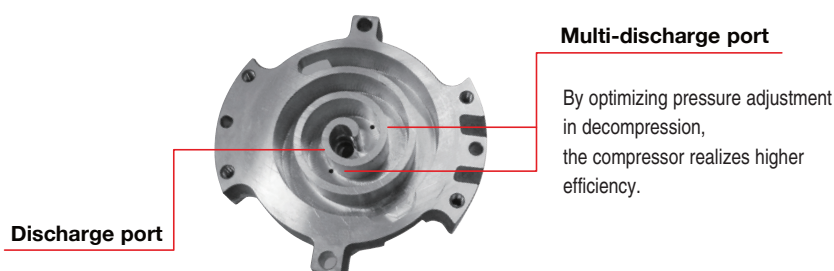
VTCC adjusts the target pressure of the refrigerant cycle in the outdoor unit automatically according to the demand of the indoor units in partial load conditions. These smooth adjustments ensure an optimal capacity usage of the indoor units as well as maximised energy savings. Ultimately this also increases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

## Continuous Heating Capacity Control (CHCC)

Our defrosting control achieves more capacity than that of previous model in low ambient temperature condition. Target pressure is controlled automatically before capacity drops, which makes longer period of heating operation and shorter defrosting time.

## Multiport compressor that achieves high efficiency

The 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.

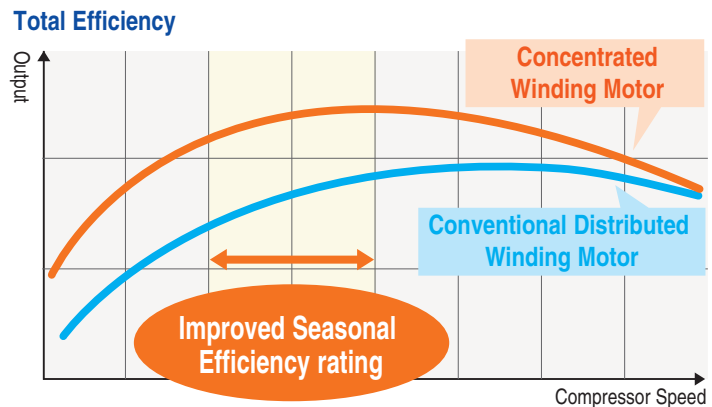


#### Multi-discharge port

By optimizing pressure adjustment in decompression, the compressor realizes higher efficiency.

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

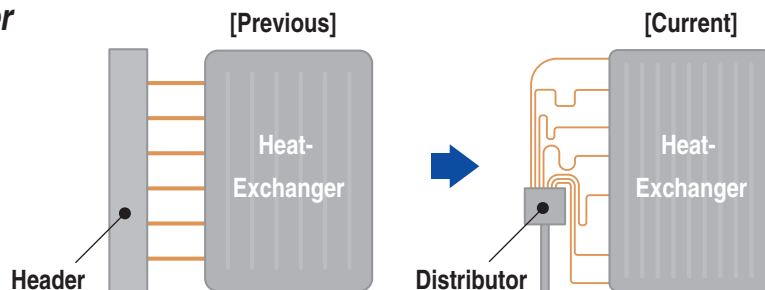
The high performance CPU enables high precision optimization for compressor speed, which leads to concentrated winding motor use. Our product achieves high output and better energy saving effects and in particular improves seasonal efficiency rating.



## Energy efficient Heat-exchanger

With piping layout rearranged from header to heat exchanger, refrigerant distribution flow has improved and maximum energy efficiency has been achieved.

Furthermore due to expansion of effective the heat transfer area in heat exchanger, energy efficiency has increased.



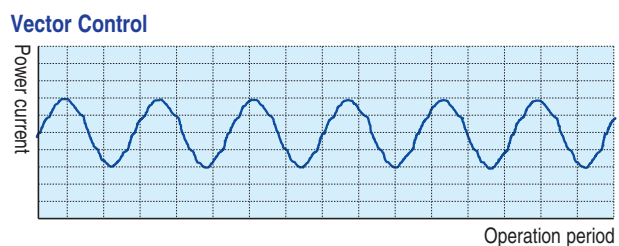
## Strengthened resistance against frost

Resistance against frost has been strengthened by adopting the Energy efficient heat-exchanger.

## Vector control

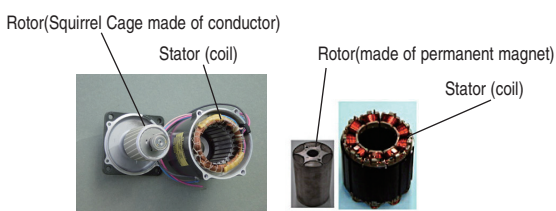
Applied Vector control has a high efficiency and many new advanced features.

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



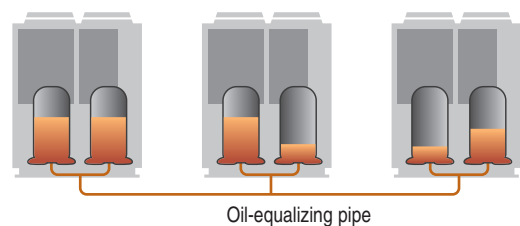
## DC Fan Motor

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



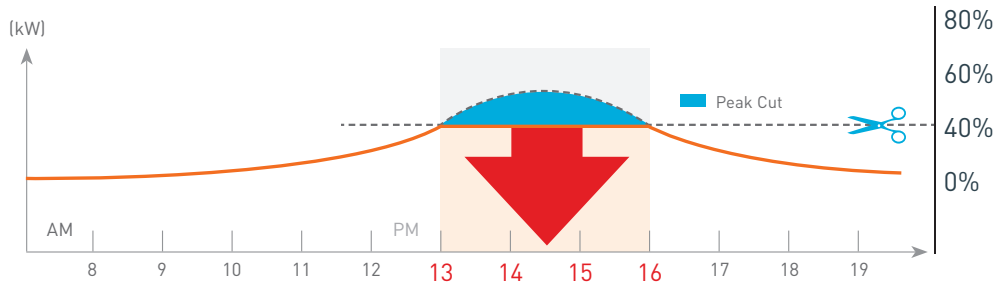
## Oil level control capability

Our proprietary technology adjusts the oil level when combining two or three outdoor units, achieving level operation rate, keeping performance of the units and ensuring long life of the system.

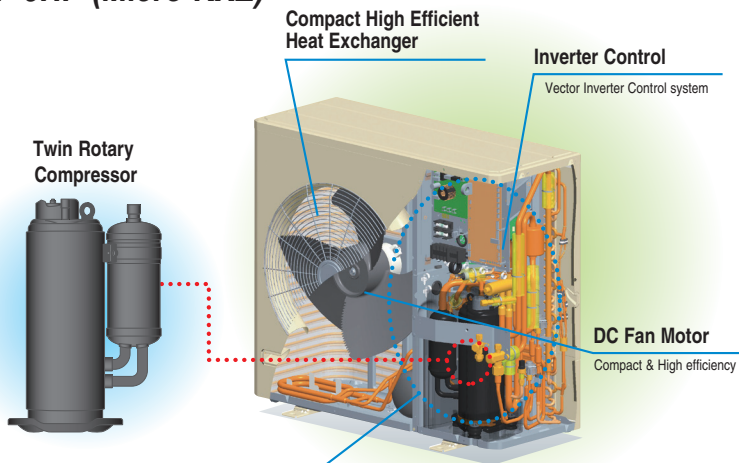


## Capacity control

The peak cut function can easily be set on the controller. This function makes the control of the capacity easier and allow a better energy management over the long term. Four steps of capacity control are available with 80%, 60%, 40%, 0% (off). Schedule can be set up to 4 operations/day.



## 4~6HP (Micro KXZ)

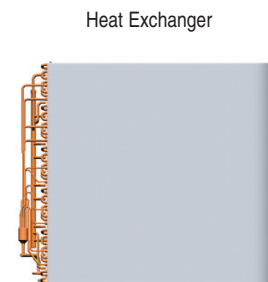


### Optimum Refrigerant System Control

- Optimum heat exchanger refrigerant distribution
- Advanced refrigerant liquid return protection control system
- High speed system control by new Superlink system

## Compact high efficiency Heat Exchanger

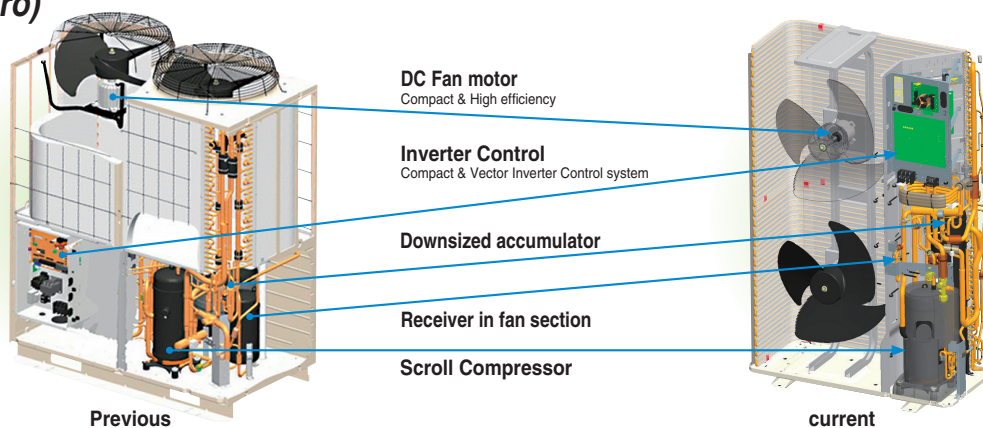
- Optimizing relationship of the air flow velocity & fin pattern
- Improvement of air distribution Maximizing efficiency of heat exchanger



## Compact Integrated PCB

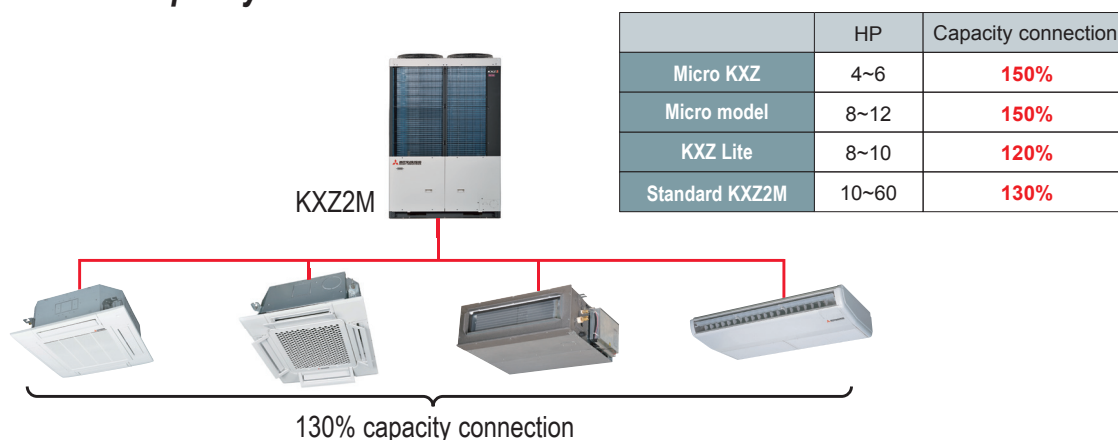
- Control Box size reduction
- PCB size reduced by 50%
  - Control PCB: Single-sided board → Double-sided board
  - Inverter PCB: Power transistor size reduction
- New Superlink system control
- New Design method applied

## 8~12HP (Micro)



# Design Flexibility

## Indoor unit capacity connection



## Connectable indoor units

Micro KXZ	HP	4	5	6
	Numbers	8	10*	10*

Micro model	HP	8	10	12
	Numbers	22	24	24

KXZ Lite	HP	8	10
	Numbers	8	8

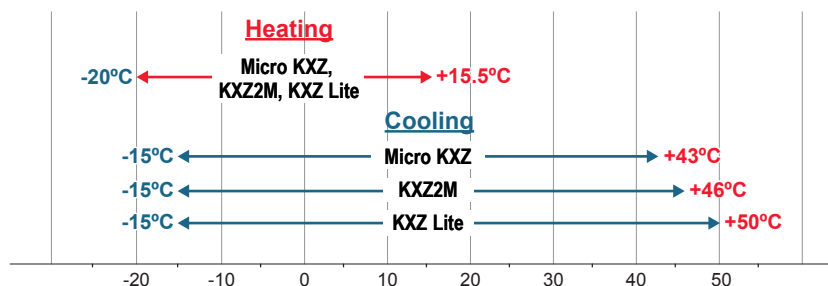
  

Standard KXZ2M	HP	10	12	14	16	17	18	20	22	24	26	28	30	32	34
	Numbers	24	27	34	39	41	43	45	53	58	63	69	73	78	80
	HP	36	38	40	42	44	46	48	50	52	54	56	58	60	
	Numbers	80	80	80	80	80	80	80	80	80	80	80	80	80	

\*When connecting 9 units or more, set the total capacity as follows : 5HP : 110% or less, 6HP : 100% or less. In the case of KXZ(R410A).

## Wide Range of Operation

KXZ series permits an extensible system design with a heating range operation down to -20°C and a cooling range operation up to 46°C. Furthermore KXZ Lite extends a cooling range operation up to 50°C.



## Control Systems

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

[Control system units with SUPERLINK-II]

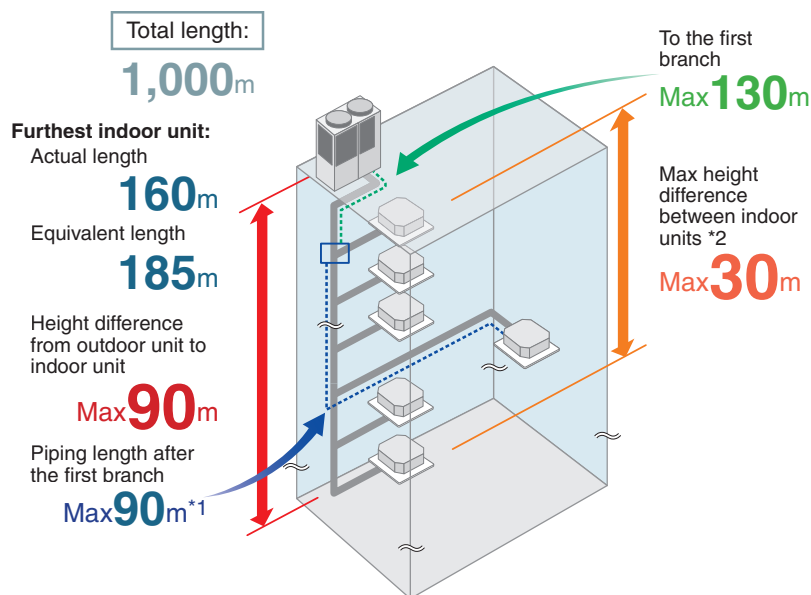
Classification	Type		Model	Connectable Indoor units (Maximum)	Electric power calculation
Individual controller	Wired		RC-E5	16	—
			RC-EX3A	16	—
	Wireless		RCN-T-5BW-E2 etc.	16	—
Center Console	Push buttons		SC-SL1N-E	16	—
			SC-SL2NA-E	64	—
	Touch screen		SC-SL4-AE3	128	—
			SC-SL4-BE3	128	●
	BMS interface units	Web gateway & BACnet	SC-WBGW256	256(128x2)	●
		Lonworks	SC-LGWNB	96	—

## Long Pipe Length 10~60HP

The maximum height difference between indoor units has been increased to a maximum of 30m, and the maximum height difference between the outdoor unit and indoor unit has been expanded to 90m. For with few limitations, contributes to system design flexibility.

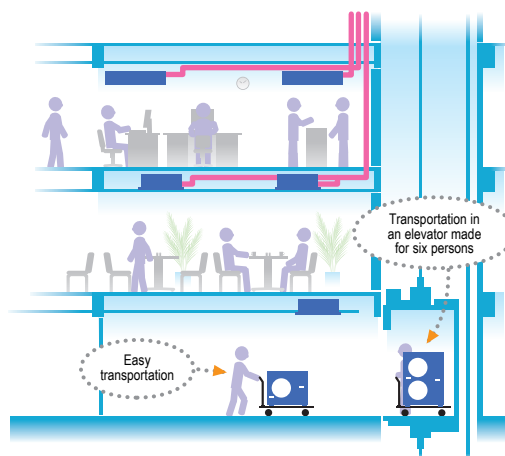
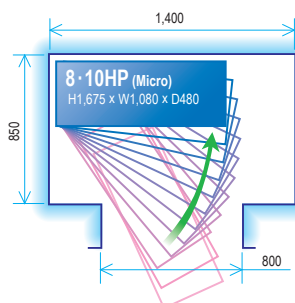
\*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)

\*2 It is necessary to change the setting corresponding to each height difference in installation. The range of use is also different.

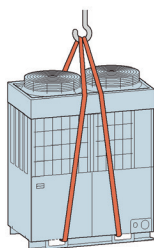


## Easy Transportation & Installation

Due to realization of significant reduction in size and footprint 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.

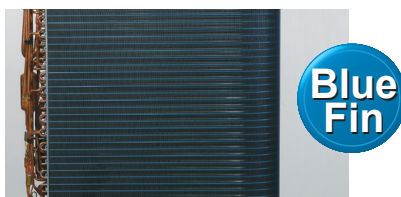


KXZ is portable and the uniform reduced footprint allows neat, continuous installation.



## Blue Fin

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



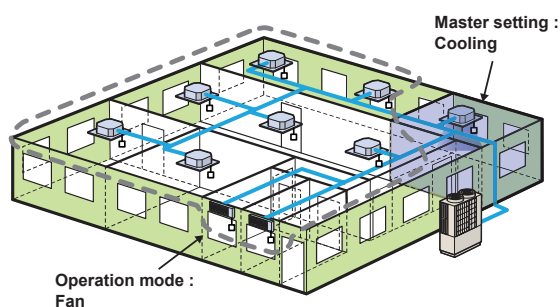
## Priority operation mode rule

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)

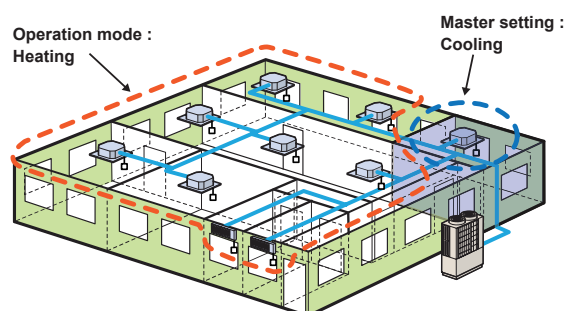
### <Majority operation mode>

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.



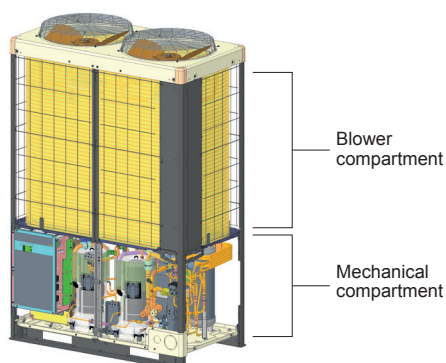
## Fixed Cooling mode/fixed heating mode (summer/winter switch)

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.

## Serviceability

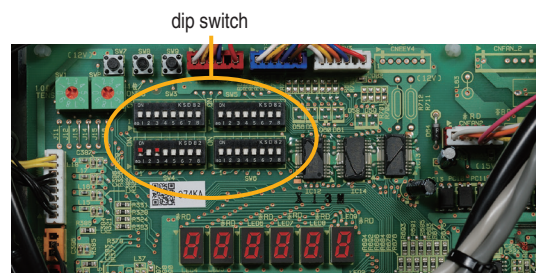
### Easy Service

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



### Check Operation (10~60HP)

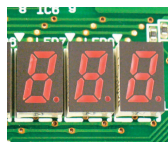
Closing of Service valve, crossing connection of refrigerant piping and electrical wiring, proper operation of EEV (Electrical Expansion Valve) can be checked automatically in cooling operation. This check operation can be done at 0~43°C outdoor temperature and 10~32°C indoor temperature by use of outdoor 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.



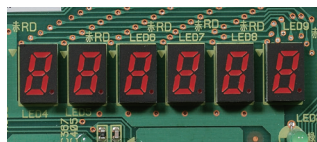
## Monitoring Function

All series include features to assist with servicing and troubleshooting.  
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.

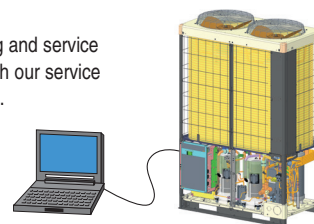


4~6HP  
8.10HP(KXZ Lite)



8~60HP

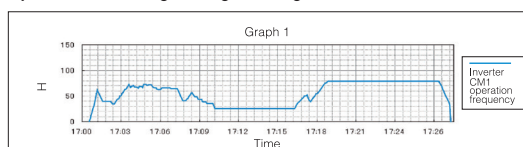
To your PC monitoring and service tasks made simple with our service software ("Mente PC").



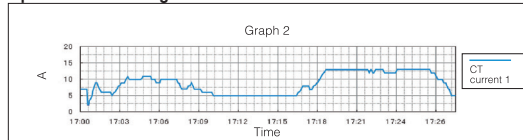
Automatically produced test-run report

[illegible]

### Operation data storage during servicing

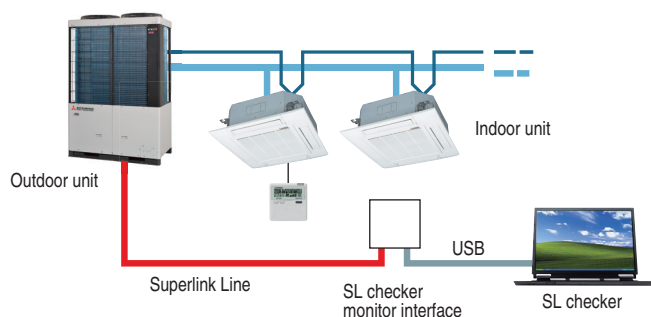


### Operation data storage when a fault occurs



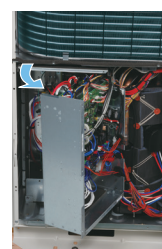
## SL Checker II

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.



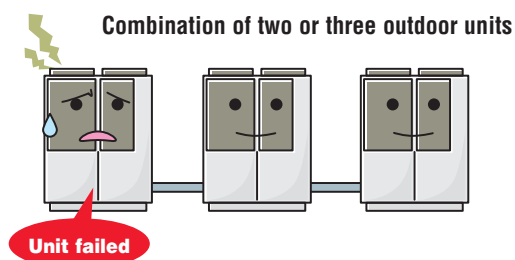
KXZ (3 layer)



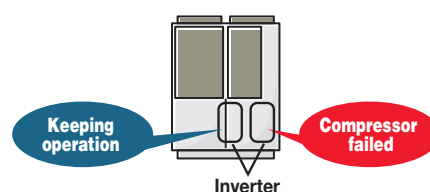
KXZ Lite (2 layer)

### ***Back-up Operation***

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



For the event that one compressor has a failure, the unit will keep operating with the other second compressor.



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



# Micro KXZ Heat pump systems

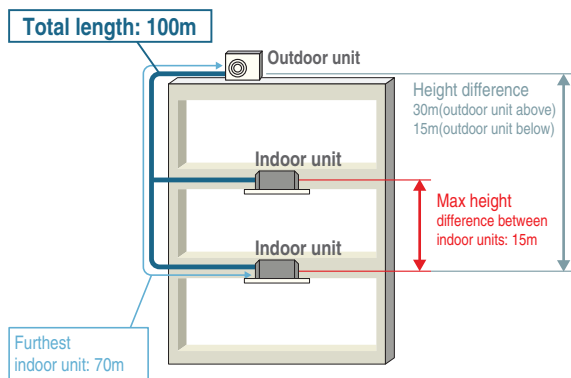
## 4 ~ 6HP (11.2kW~15.5kW)

Model No.	Nominal Cooling Capacity
FDC112KXZEN1-W	11.2kW (220V)
FDC140KXZEN1-W	14.0kW (220V)
FDC155KXZEN1-W	15.5kW (220V)
FDC112KXZES1-W	11.2kW (380V)
FDC140KXZES1-W	14.0kW (380V)
FDC155KXZES1-W	15.5kW (380V)

NEW

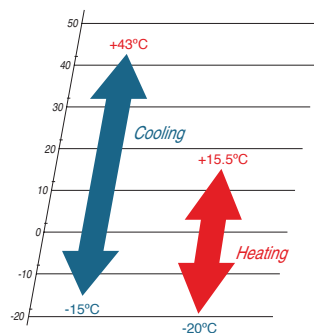


- Low Global Warming Potential (GWP) and High energy efficiency by new refrigerant R32.
- Connect up to 10 indoor units/up to 150% capacity.
- High efficiency with EER up to 4.39.
- These units employ DC inverter compressors ONLY.
- Industry leading total piping length up to 100m and a maximum pipe run of 70m.



\* The total length of  $\phi 9.52\text{mm}$  (3/8") liquid piping must be 50m or less

Range of operation



## Specifications

Item			Model	FDC112KXZEN1-W	FDC140KXZEN1-W	FDC155KXZEN1-W	FDC112KXZES1-W	FDC140KXZES1-W	FDC155KXZES1-W
Nominal horse power				4HP	5HP	6HP	4HP	5HP	6HP
Power source				1 Phase 220V, 60Hz			3 Phase 380V, 60Hz		
Starting current			A	5					
Max current			A	23			13.5		
Nominal capacity	Cooling	kW	11.2	14.0	15.5	11.2	14.0	15.5	
	Heating		11.2	14.0	15.5	11.2	14.0	15.5	
Electrical characteristics	Power consumption	Cooling	kW	2.55	4.00	5.20	2.55	4.00	5.20
		Heating		2.53	3.52	4.06	2.53	3.52	4.06
Exterior dimensions	HxWxD		mm	845x970x370					
Net weight			kg	85			87		
Sound pressure level	Cooling/Heating		dB(A)	53/55	54/58	54/58	53/55	54/58	54/58
Refrigerant	Type / GWP			R32 / 675					
	Charge		kg/TCO2Eq	4.2 / 2.835					
Refrigerant piping size	Liquid line		mm(in)	ø9.52 (3/8")					
	Gas line			ø15.88 (5/8")					
Capacity connection			%	80~150					
Number of connectable indoor units				8	10	10	8	10	10

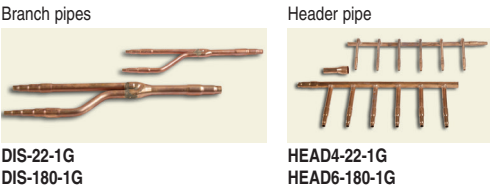
1.The data are measured under the following conditions (ISO-T1, H1). Cooling: indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: indoor temp. was 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.

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

3.'tonne(s) of CO<sub>2</sub> equivalent' means a quantity of greenhouse gases-expressed as the product of the weight of greenhouse gases in metric tonnes and of their global warming potential

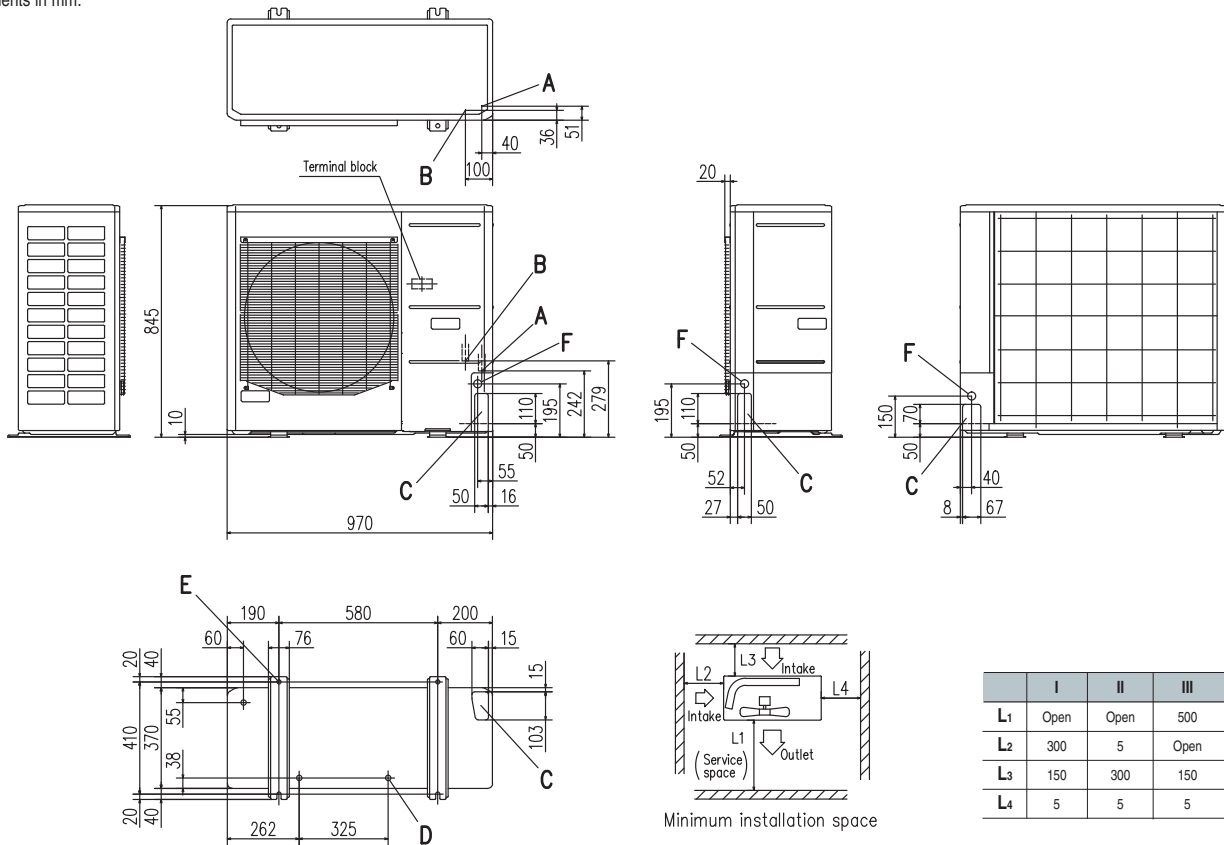
# Refrigerant piping

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



# Dimensions

All measurements in mm.



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.

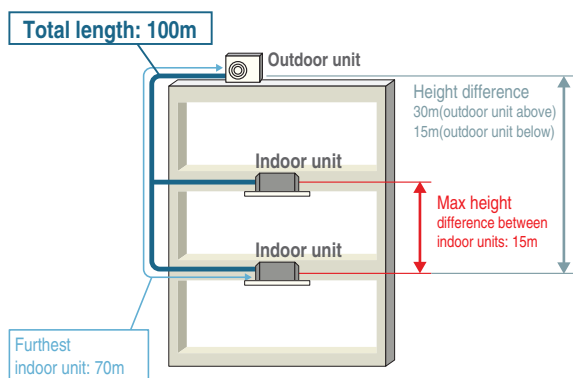
# Micro KXZ Heat pump systems

## 4 ~ 6HP (11.2kW~15.5kW)

Model No.	Nominal Cooling Capacity
FDC112KXZEN1	11.2kW (220V)
FDC140KXZEN1	14.0kW (220V)
FDC155KXZEN1	15.5kW (220V)
FDC112KXZES1	11.2kW (380V)
FDC140KXZES1	14.0kW (380V)
FDC155KXZES1	15.5kW (380V)

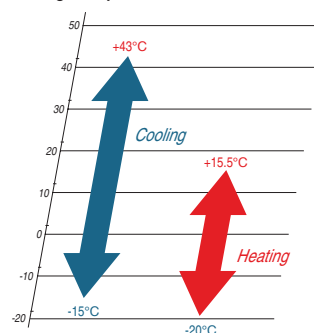
- Connect up to 10\* indoor units/up to 150% capacity.
- High efficiency with EER up to 4.44.
- These units employs DC inverter compressors ONLY.
- Industry leading total piping length up to 100m and a maximum pipe run of 70m.

\*When connecting 9 units or more, set the total capacity as follows : 5HP : 110% or less, 6HP : 100% or less.



\* The total length of  $\phi 9.52\text{mm}$  (3/8") liquid piping must be 50m or less

Range of operation



## Specifications

Item			Model	FDC112KXZEN1	FDC140KXZEN1	FDC155KXZEN1	FDC112KXZES1	FDC140KXZES1	FDC155KXZES1
Nominal horse power				4HP	5HP	6HP	4HP	5HP	6HP
Power source				1 Phase 220V, 60Hz			3 Phase 380V, 60Hz		
Starting current			A	5					
Max current			A	28			13.5		
Nominal capacity	Cooling		kW	11.2	14.0	15.5	11.2	14.0	15.5
	Heating			11.2	14.0	15.5	11.2	14.0	15.5
Electrical characteristics	Power consumption	Cooling	kW	2.52	3.96	5.20	2.52	3.96	5.20
		Heating		2.57	3.66	4.28	2.57	3.66	4.28
Exterior dimensions	HxWxD		mm	845x970x370					
Net weight			kg	85			87		
Sound pressure level	Cooling/Heating		dB(A)	52/55	53/57	54/57	52/55	53/57	54/57
Refrigerant	Type / GWP			R410A / 2088					
	Charge		kg/TCO2Eq	5.0 / 10.44					
Refrigerant piping size	Liquid line		mm(in)	ø9.52(3/8")					
	Gas line			ø15.88(5/8")					
Capacity connection			%	80~150					
Number of connectable indoor units				8	10*	10*	8	10*	10*

1.The data are measured under the following conditions (ISO-T1, H1). Cooling: indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: indoor temp. was 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.

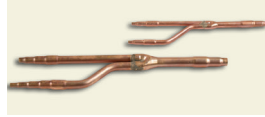
2.Sound pressure level indicates the value in an anechoic chamber. During operation these values were somewhat higher due to ambient conditions.

3.'tonne(s) of CO<sub>2</sub> equivalent' means a quantity of greenhouse gases-expressed as the product of the weight of 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

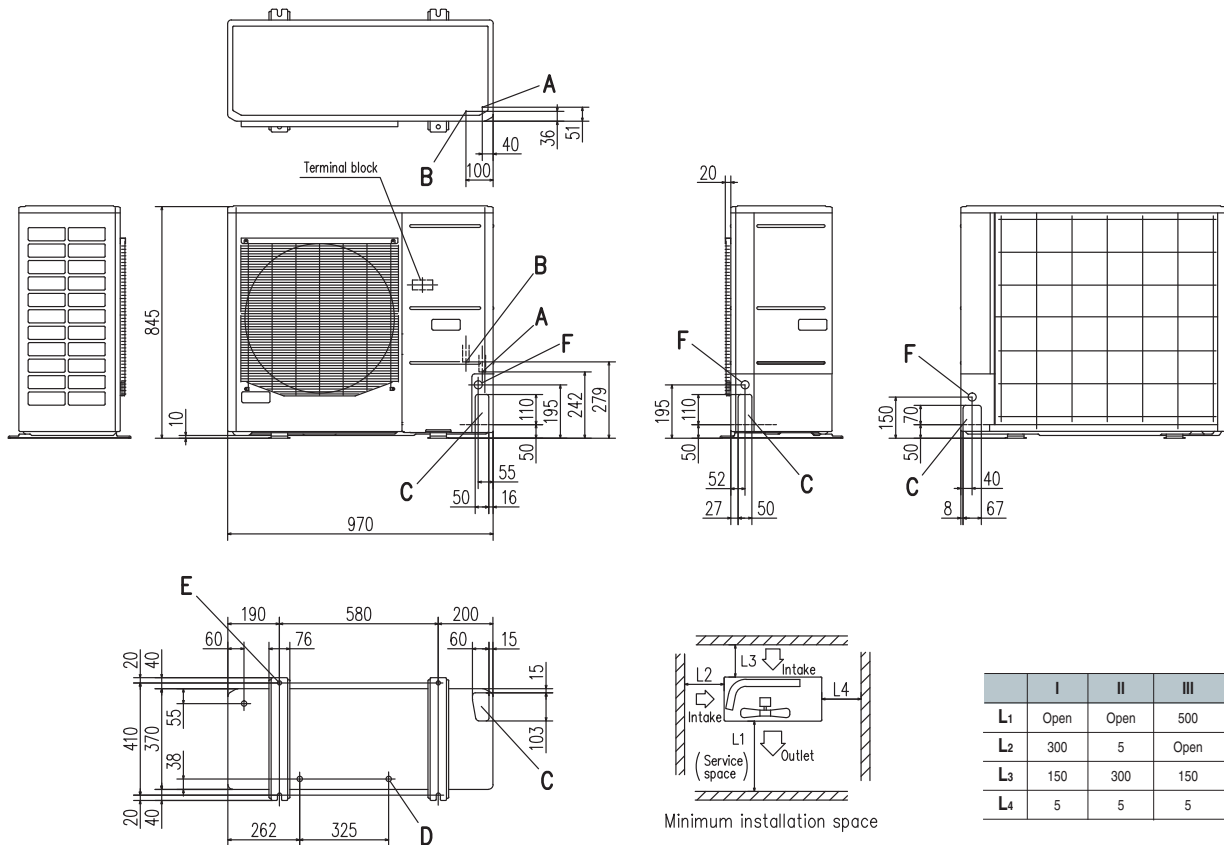
Header pipe



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

## Dimensions

All measurements in mm.



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

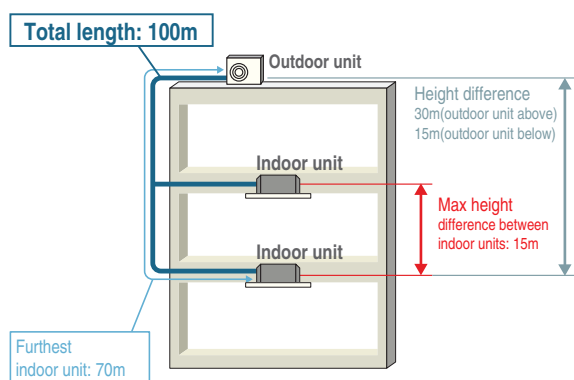
## 4 ~ 6HP (11.2kW~15.5kW)

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 EER up to 4.00.
- These units employ DC inverter compressors ONLY.
- Industry leading total piping length up to 100m and a maximum pipe run of 70m.

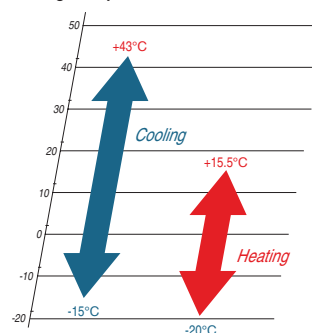


Note: FDUT15KXE6F-E, FDT15KXZE1 and FDK15KXZE1 can not be connected to the above systems.



\* The total length of  $\phi 9.52\text{mm}$  (3/8") liquid piping must be 50m or less

Range of operation



## Specifications

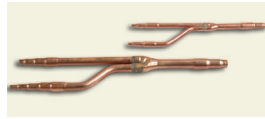
Item			Model	FDC112KXEN6	FDC140KXEN6	FDC155KXEN6	FDC112KXES6	FDC140KXES6	FDC155KXES6
Nominal horse power				4HP	5HP	6HP	4HP	5HP	6HP
Power source				1 Phase 220V, 60Hz			3 Phase 380V, 60Hz		
Starting current			A	5					
Max current			A	23		23.3	13.5		
Nominal capacity	Cooling		kW	11.2	14.0	15.5	11.2	14.0	15.5
	Heating			12.5	16.0	16.3	12.5	16.0	16.3
Electrical characteristics	Power consumption	Cooling	kW	2.80	4.17	4.71	2.80	4.17	4.71
		Heating		2.89	4.31	4.38	2.89	4.31	4.38
Exterior dimensions	HxWxD		mm	845x970x370					
Net weight			kg	85			87		
Sound pressure level	Cooling/Heating		dB(A)	52/54	53/57	53/57	52/54	53/57	53/57
Refrigerant	Type / GWP			R410A / 2088					
	Charge		kg/TCO2Eq	5.0 / 10.44					
Refrigerant piping size	Liquid line		mm(in)	ø9.52(3/8")					
	Gas line			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.  
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 CO<sub>2</sub> 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

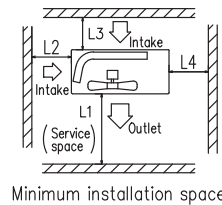
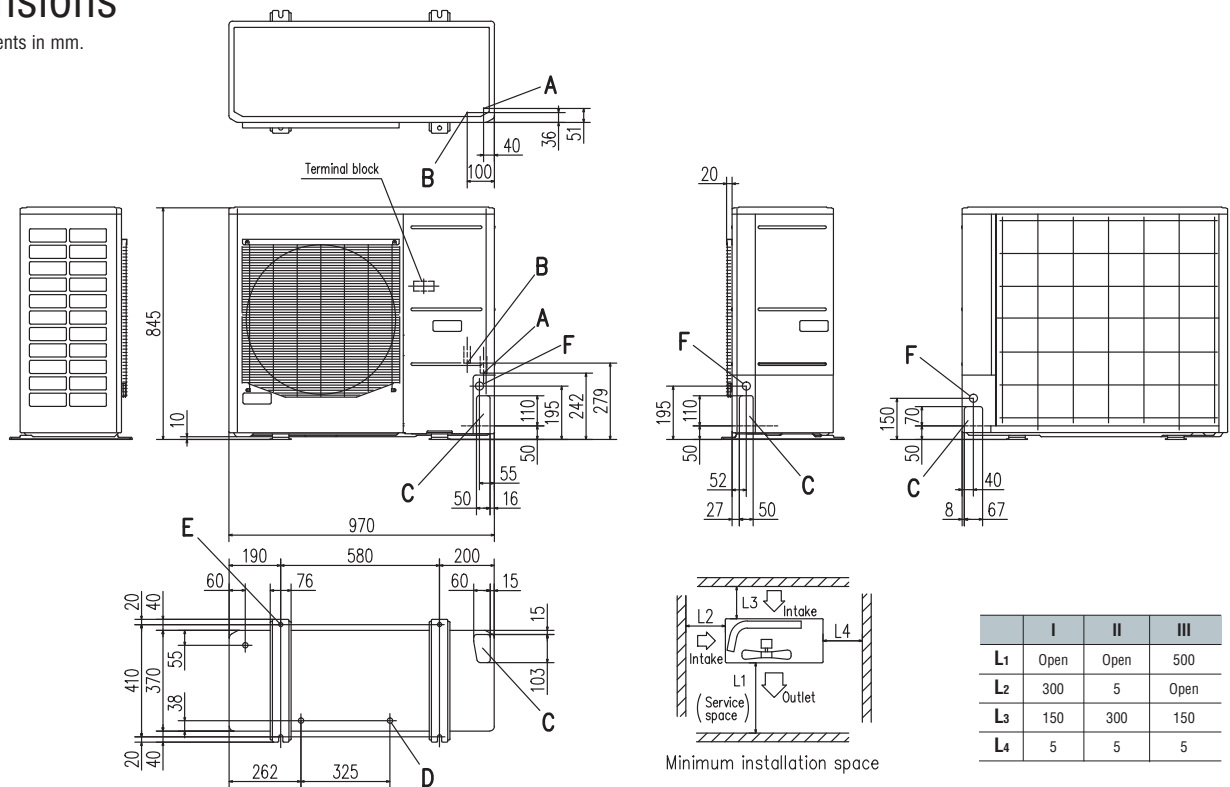
Header pipe



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:

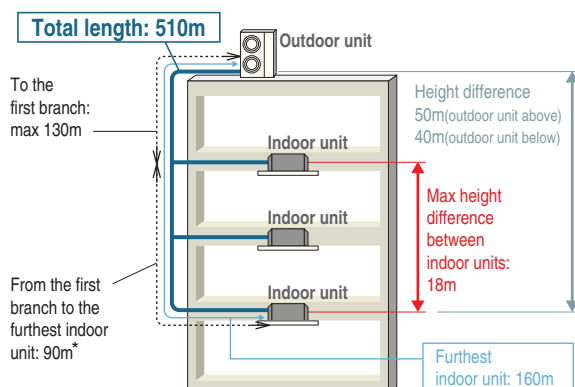
- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
- (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 ~ 12HP (22.4kW~33.5kW)

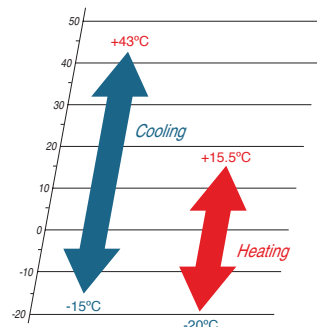
Model No.	Nominal Cooling Capacity
FDC224KXE6M	22.4kW (220V)
FDC280KXE6M	28.0kW (220V)
FDC335KXE6M	33.5kW (220V)
FDC224KXE6G	22.4kW (380V)
FDC280KXE6G	28.0kW (380V)
FDC335KXE6G	33.5kW (380V)

- Connect up to 24 indoor units/up to 150% capacity.
- High efficiency with EER up to 4.00.
- 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	FDC224KXE6M	FDC280KXE6M	FDC335KXE6M	FDC224KXE6G	FDC280KXE6G	FDC335KXE6G
Nominal horse power				8HP	10HP	12HP	8HP	10HP	12HP
Power source				3 Phase 3wiring 220V, 60Hz / 3 Phase 4wiring 220V, 60Hz			3 Phase 380V, 60Hz		
Starting current			A	5		6	5		
Max current			A	33	35	36	20	20	23
Nominal capacity	Cooling		kW	22.4	28.0	33.5	22.4	28.0	33.5
	Heating			25.0	31.5	37.5	25.0	31.5	37.5
Electrical characteristics	Power consumption	Cooling	kW	5.85	8.57	9.82	5.60	8.09	9.82
		Heating		6.38	8.70	10.12	6.03	8.21	10.12
Exterior dimensions	HxWxD		mm	1675x1080x480					
Net weight			kg	212			215		218
Sound pressure level	Cooling/Heating		dB(A)	58/58	59/60	61/61	58/58	59/60	61/61
Refrigerant	Type / GWP			R410A/2088					
	Charge		kg/TCO2Eq	11.5/24.012					
Refrigerant piping size	Liquid line		mm(in)	ø9.52(3/8")		ø12.7(1/2")	ø9.52(3/8")		ø12.7(1/2")
	Gas line			ø19.05(3/4")	ø22.22(7/8")	ø25.4(1") [ø22.22(7/8")]	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	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.

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 CO<sub>2</sub> 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.

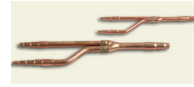
4. [ ] : Pipe sizes applicable to European installations are shown in parentheses.

5. Do not connect N-phase wire to the unit when the power supply is 3-phase and 4-wire.

# Refrigerant piping

Outdoor unit (HP)		Micro model			KXZ Lite	
		8	10	12	8	10
Gas pipe	Furthest indoor unit =<90m	ø19.05	ø22.22	ø25.4(ø22.22)	ø19.05	ø22.22
Liquid pipe		ø9.52		ø12.7	ø9.52	
Gas pipe	90m	ø22.22	ø25.4(ø22.22)		ø22.22	ø25.4 / ø28.58
Liquid pipe	=<Furthest indoor unit	ø12.7			ø9.52	

Branch pipes



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



DIS-371-1G

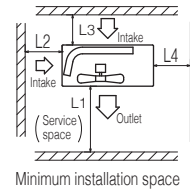
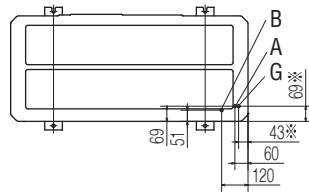
Header pipe



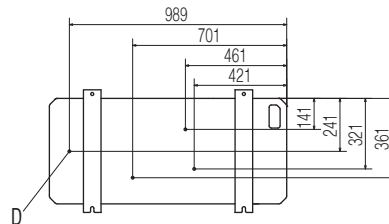
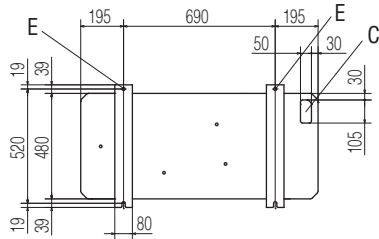
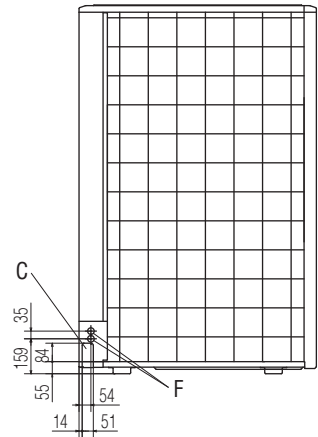
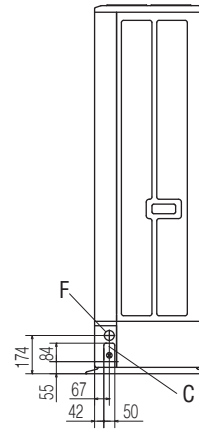
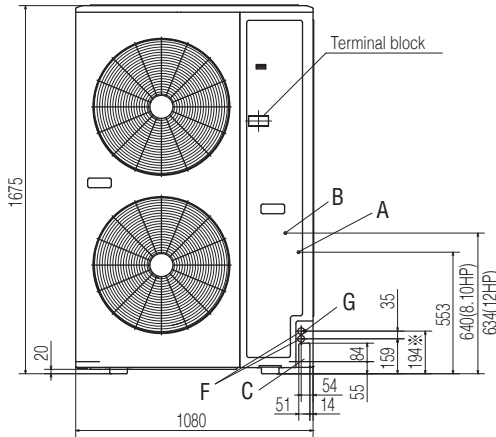
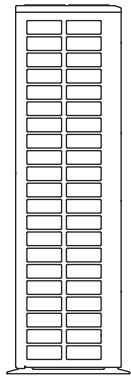
HEAD4-22-1G  
HEAD6-180-1G  
HEAD8-371-2

## 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 x 4places	ø20 x 4places	ø20 x 4places
E	Anchor bolt hole	M10 x 4places	M10 x 4places	M10 x 4places
F	Cable draw-out hole	ø30 x 2places (front) ø45 (side) ø30 x 2places (back)	ø30 x 2places (front) ø45 (side) ø30 x 2places (back)	ø30 x 2places (front) ø45 (side) ø30 x 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:

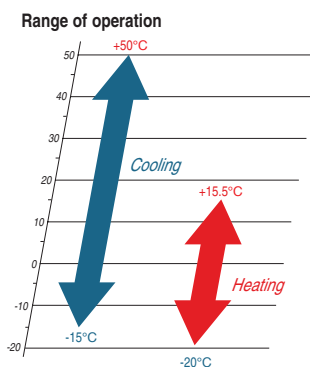
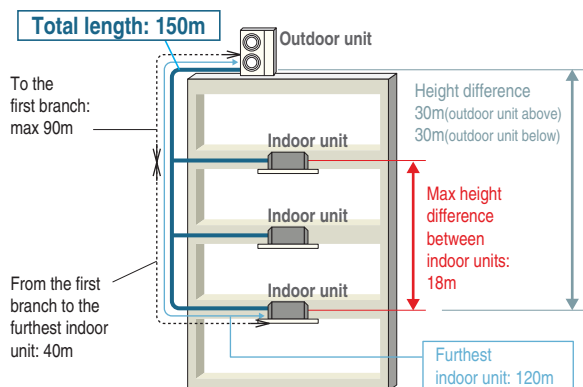
- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, the blower outlet should face perpendicularly to the dominant wind direction.
- (4) Leave a 1m or more space above the unit.
- (5) A wall in front of the blower outlet must not exceed the unit's 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 (380V)
FDC280KXZPE1	28.0kW (380V)

- Connect up to 8 indoor units/up to 120% capacity.
- High efficiency with EER up to 4.00.
- 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.



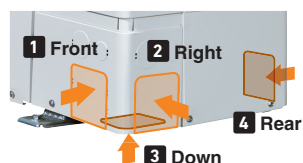
## Specifications

Item			Model	FDC224KXZPE1	FDC280KXZPE1
Nominal horse power				8HP	10HP
Power source				3 Phase 380V, 60Hz	
Starting current			A	5	
Max current			A	21	22
Nominal capacity	Cooling	kW		22.4	28.0
	Heating			22.4	28.0
Electrical characteristics	Power consumption	Cooling	kW	5.6	7.87
		Heating		4.8	6.47
Exterior dimensions	HxWxD		mm	1505x970x370	
Net weight			kg	165	
Sound pressure level	Cooling/Heating		dB(A)	59/60	60/63
Refrigerant	Type / GWP			R410A / 2088	
	Charge		kg/TCO2Eq	8.9 / 18.583	
Refrigerant piping size	Liquid line		mm(in)	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, H1). 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 CO<sub>2</sub> 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.

## Serviceability

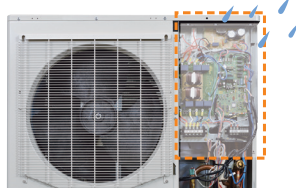
### Improved freedom of piping layout



Hole size became 120% bigger.

### A transparent rain cover

Attached as a standard for easy maintenance.



### Wire insertion holes for fall prevention



### Four handles



Located at the same level for easy transport and transfer.

### Fixing screws to service panel

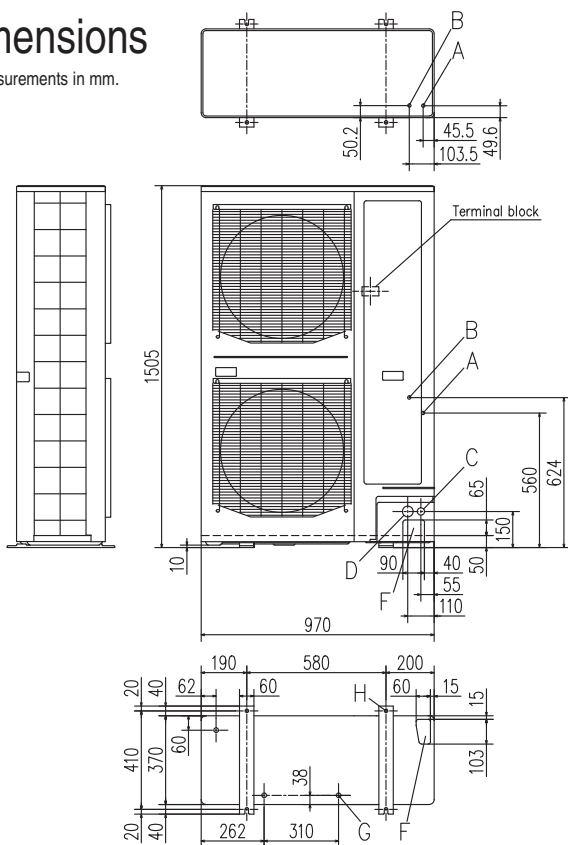
Decreased number of screws from 5 to 2, installation & service speed is improved.

## Refrigerant piping

Please refer to page 41.

## Dimensions

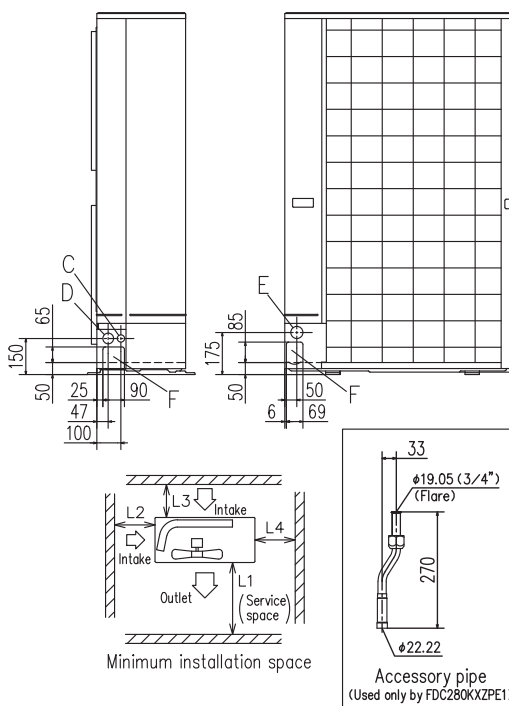
All measurements in mm.



	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.



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 x 2places
D	Cable draw-out hole (front - side)	ø45 x 2places
E	Cable draw-out hole (back)	ø50
F	Pipe/cable draw-out hole	4places
G	Drain discharge hole	ø20 x 3places
H	Anchor bolt hole	M10 x 4places

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.

# KXZ2 Heat pump systems

## 10, 12HP (28.0kW, 33.5kW)

### Model No. Nominal Cooling Capacity

FDC280KXZE2M 28.0kW (220V)

FDC335KXZE2M 33.5kW (220V)

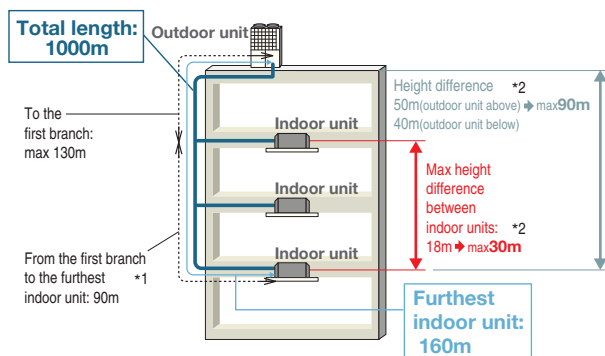
FDC280KXZE2 28.0kW (380V)

FDC335KXZE2 33.5kW (380V)

- The new KXZ2 series has a layered design and a refined new form.
- Connect up to 29 indoor units/up to 130% capacity. (KXZE2M)

Increased number of connectable units			Increased max connection capacity		
Size	KXZE2M	KXZE2	Size	KXZE2M	KXZE2
280	1-24	1-37	280	50-130%	50-200%
335	1-29	1-44	335	50-130%	50-200%

- High efficiency with EER up to 3.86.
- New Heating Solution-Continuous Heating Capacity Control (CHCC).



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

\*2 It is necessary to change the setting corresponding to each height difference in installation. The range of use is also different.

NEW

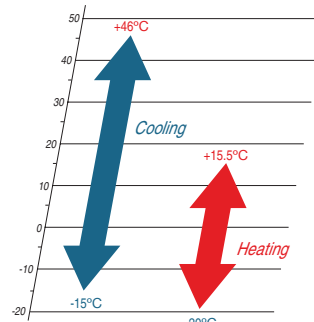


Blue Fin



Uniform footprint of models allows continuous side-by-side installation

### Range of operation



## Specifications

Item		Model	FDC280KXZE2M	FDC335KXZE2M
			FDC280KXZE2	FDC335KXZE2
Nominal horse power			10HP	12HP
Power source	KXZE2M / KXZE2		3 Phase 3wiring 220V, 60Hz / 3 Phase 380V, 60Hz	
Starting current		A	5	
Max current	KXZE2M / KXZE2		33.0 / 20.1	
Nominal capacity	Cooling		28.0	33.5
	Heating		31.5	37.5
Electrical characteristics	Power consumption	Cooling	7.25	8.98
		Heating	7.41	9.03
Exterior dimensions	HxWxD		mm1697x1350x720	
Net weight	KXZE2M / KXZE2		kg293 / 288	
Sound pressure level	Cooling/Heating		dB(A)56/57	63/62
Refrigerant	Type / GWP		R410A / 2088	
	Charge	kg/TCO2Eq	11.0 / 22.968	
Refrigerant piping size	Liquid line	mm(in)	ø9.52(3/8")	ø12.7(1/2")
	Gas line		ø22.22(7/8")	ø25.4(1") [ø22.22(7/8")]
Capacity connection	KXZE2M / KXZE2		%50~130 / 50~200	
Number of connectable indoor units	KXZE2M / KXZE2		24 / 37	29 / 44

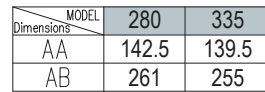
1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.

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 CO<sub>2</sub> 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.

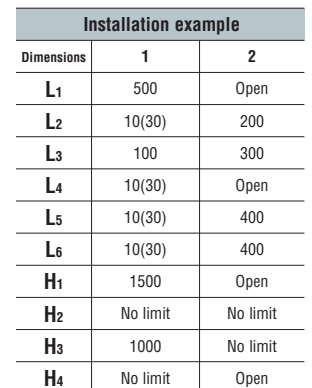
4. [] : Pipe sizes applicable to European installations are shown in parentheses.

All measurements in mm.



Installation example		
Dimensions	1	2
<b>L<sub>1</sub></b>	500	Open
<b>L<sub>2</sub></b>	10(30)	10(30)
<b>L<sub>3</sub></b>	100	100
<b>L<sub>4</sub></b>	10(30)	Open
<b>H<sub>1</sub></b>	1500	Open
<b>H<sub>2</sub></b>	No limit	No limit
<b>H<sub>3</sub></b>	1000	No limit
<b>H<sub>4</sub></b>	No limit	Open

### When more than one unit is installed



# KXZ2 Heat pump systems

## 14 ~ 20HP (40.0kW~56.0kW)

NEW

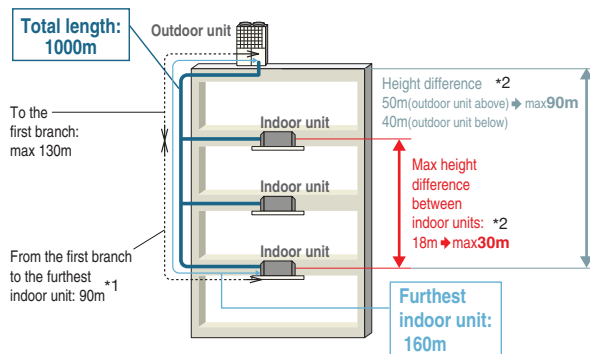
Blue Fin

Model No.	Nominal Cooling Capacity
FDC400KXZE2M / FDC400KXZE2	40.0kW (220V / 380V)
FDC450KXZE2M / FDC450KXZE2	45.0kW (220V / 380V)
FDC475KXZE2M / FDC475KXZE2	47.5kW (220V / 380V)
FDC500KXZE2M / FDC500KXZE2	50.0kW (220V / 380V)
FDC560KXZE2M / FDC560KXZE2	56.0kW (220V / 380V)

- The new KXZ2 series has a layered design and a refined new form.
- Connect up to 48 indoor units/up to 130% capacity.(KXZE2M)

Increased number of connectable units			Increased max connection capacity		
Size	KXZE2M	KXZE2	Size	KXZE2M	KXZE2
400	1-34	1-53	400	50-130%	50-200%
450	1-39	1-60	450	50-130%	50-200%
475	1-41	1-50	475	50-130%	50-160%
500	1-43	1-53	500	50-130%	50-160%
560	1-48	1-59	560	50-130%	50-160%

- High efficiency with EER up to 3.64.
- New Heating Solution-Continuous Heating Capacity Control (CHCC).

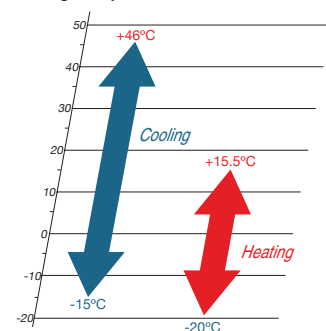


\*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)

\*2 It is necessary to change the setting corresponding to each height difference in installation. The range of use is also different.

Uniform footprint of all models allows continuous side-by-side installation

Range of operation



## Specifications

Item			Model	FDC400KXZE2M	FDC450KXZE2M	FDC475KXZE2M	FDC500KXZE2M	FDC560KXZE2M
				FDC400KXZE2	FDC450KXZE2	FDC475KXZE2	FDC500KXZE2	FDC560KXZE2
Nominal horse power				14HP	16HP	17HP	18HP	20HP
Power source	KXZE2M / KXZE2			3 Phase 3wiring 220V, 60Hz / 3 Phase 380V, 60Hz				
Starting current			A	5		8		
Max current	KXZE2M / KXZE2		A	52.0 / 32.0	59.0 / 32.0	62.0 / 40.2		66.0 / 40.2
Nominal capacity	Cooling	kW		40.0	45.0	47.5	50.0	56.0
	Heating			45.0	50.0	53.0	56.0	63.0
Electrical characteristics	Power consumption	Cooling	kW	10.98	13.98	13.97	14.01	17.50
		Heating		10.23	12.50	12.99	13.56	16.15
Exterior dimensions	HxWxD		mm	2052x1350x720				
Net weight	KXZE2M / KXZE2		kg	336 / 332		383 / 378		
Sound pressure level	Cooling/Heating		dB(A)	60/62	61/62	61/61	61/62	63/64
Refrigerant	Type / GWP			R410A / 2088				
	Charge		kg/TCO2Eq	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")]	ø28.58(1 1/8")			
Capacity connection	KXZE2M / KXZE2		%	50~130 / 50~200		50~130 / 50~160		
Number of connectable indoor units	KXZE2M / KXZE2			34 / 53	39 / 60	41 / 50	43 / 53	48 / 59

1. The data are measured under the following conditions(ISO-T1, H1). 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 CO<sub>2</sub> 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.

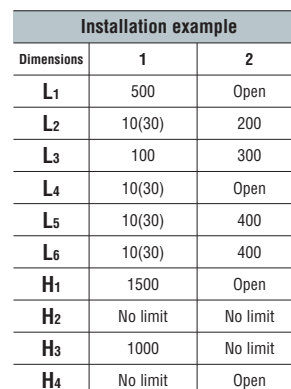
All measurements in mm.

All measurements in mm.



Installation example		
Dimensions	1	2
<b>L<sub>1</sub></b>	500	Open
<b>L<sub>2</sub></b>	10(30)	10(30)
<b>L<sub>3</sub></b>	100	100
<b>L<sub>4</sub></b>	10(30)	Open
<b>H<sub>1</sub></b>	1500	Open
<b>H<sub>2</sub></b>	No limit	No limit
<b>H<sub>3</sub></b>	1000	No limit
<b>H<sub>4</sub></b>	No limit	Open

### When more than one unit is installed



# KXZ2 Heat pump systems

## 22, 24HP (61.5kW, 67.0kW)

Blue  
Fin

Model No.	Nominal Cooling Capacity
FDC615KXZE2M / FDC615KXZE2	61.5kW (220V / 380V)
FDC670KXZE2M / FDC670KXZE2	67.0kW (220V / 380V)

NEW

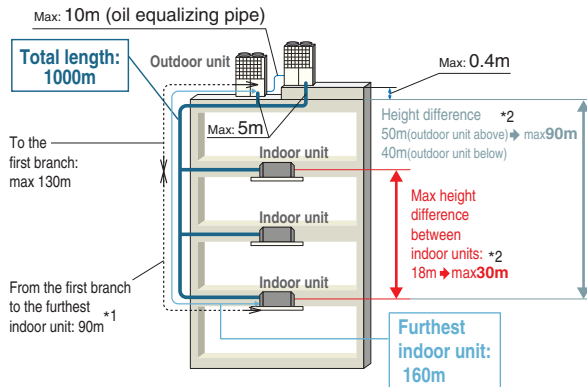
- The new KXZ2 series has a layered design and a refined new form.
- Connect up to 58 indoor units/up to 130% capacity. (KXZE2M)

Increased number of connectable units		
Size	KXZE2M	KXZE2
615	2-53	2-65
670	2-58	2-71

Increased max connection capacity		
Size	KXZE2M	KXZE2
615 • 670	50-130%	50-160%

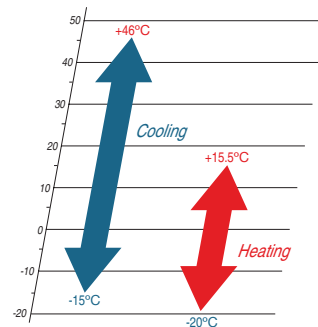
- High efficiency with EER up to 3.78.
- New Heating Solution-Continuous Heating Capacity Control (CHCC).



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

\*2 It is necessary to change the setting corresponding to each height difference in installation. The range of use is also different.

Range of operation



## Specifications

Exterior dimension : Please refer to page 45.

Item		Model	FDC615KXZE2M FDC615KXZE2	FDC670KXZE2M FDC670KXZE2
Combination			FDC280 + FDC335	FDC335 + FDC335
Nominal horse power			22HP	24HP
Power source	KXZE2M / KXZE2		3 Phase 3wiring 220V, 60Hz / 3 Phase 380V, 60Hz	
Starting current		A	10	
Max current	KXZE2M / KXZE2		66.0 / 40.2	
Nominal capacity	Cooling	kW	61.5	67.0
	Heating		69.0	75.0
Electrical characteristics	Power consumption	Cooling	16.23 (KXZE2M) / 16.24 (KXZE2)	
		Heating	16.44	
Exterior dimensions	HxWxD	mm	1697x2700x720	
Net weight	KXZE2M / KXZE2	kg	585 / 576	
Refrigerant charge	R410A	kg	11.0x2	
Refrigerant piping size	Liquid line	mm(in)	ø12.7(1/2")	
	Gas line		ø28.58(1 1/8")	
Capacity connection	KXZE2M / KXZE2	%	50~130 / 50~160	
Number of connectable indoor units	KXZE2M / KXZE2		53 / 65	58 / 71

1. The data are measured under the following conditions(ISO-T1,H1). 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 anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

# KXZ<sup>2</sup> Heat pump systems

## 26 ~ 40HP (73.5kW~112.0kW)

NEW



Model No.	Nominal Cooling Capacity
FDC735KXZE2M / FDC735KXZE2	73.5kW (220V / 380V)
FDC800KXZE2M / FDC800KXZE2	80.0kW (220V / 380V)
FDC850KXZE2M / FDC850KXZE2	85.0kW (220V / 380V)
FDC900KXZE2M / FDC900KXZE2	90.0kW (220V / 380V)
FDC950KXZE2M / FDC950KXZE2	95.0kW (220V / 380V)
FDC1000KXZE2M / FDC1000KXZE2	100.0kW (220V / 380V)
FDC1060KXZE2M / FDC1060KXZE2	106.0kW (220V / 380V)
FDC1120KXZE2M / FDC1120KXZE2	112.0kW (220V / 380V)

- The new KXZ<sup>2</sup> series has a layered design and a refined new form.
- Connect up to 80 indoor units/up to 130% capacity. (KXZE2M)

Increased number of connectable units		
Size	KXZE2M	KXZE2
735	2-63	2-78
800	2-69	2-80
850	2-73	2-80
900	2-78	2-80
950-1120	2-80	2-80

Increased max connection capacity		
Size	KXZE2M	KXZE2
735-1120	50-130%	50-160%

- High efficiency with EER up to 3.68.
- New Heating Solution-Continuous Heating Capacity Control (CHCC).
- Industry leading total piping length up to 1000m and a maximum height difference between indoor units has been increased to maximum of 30m.
- Wide range of operation.

FDC735



FDC800~1120

## Specifications

Exterior dimension : Please refer to page 45, 47

Item			Model	FDC735KXE2M	FDC800KXE2M	FDC850KXE2M	FDC900KXE2M	FDC950KXE2M	FDC1000KXE2M	FDC1060KXE2M	FDC1120KXE2M
				FDC735KXE2	FDC800KXE2	FDC850KXE2	FDC900KXE2	FDC950KXE2	FDC1000KXE2	FDC1060KXE2	FDC1120KXE2
Combination				FDC335 + FDC400	FDC400 + FDC400	FDC400 + FDC450	FDC450 + FDC450	FDC475 + FDC475	FDC500 + FDC500	FDC500 + FDC560	FDC560 + FDC560
Nominal horse power				26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP
Power source	KXE2M / KXE2			3 Phase 3wiring 220V, 60Hz / 3 Phase 380V, 60Hz							
Starting current			A	10				16			
Max current	KXE2M / KXE2			85.0 / 52.1	104.0 / 64.0	111.0 / 64.0	118.0 / 64.0	124.0 / 80.4		128.0 / 80.4	132.0 / 80.4
Nominal capacity	Cooling		kW	73.5	80.0	85.0	90.0	95.0	100.0	106.0	112.0
	Heating			82.5	90.0	95.0	100.0	106.0	112.0	119.0	126.0
Electrical characteristics	Power consumption	Cooling	kW	19.96	21.96	24.96	27.96 (KXE2M) / 27.95 (KXE2)	27.94	28.02	31.51	35.00
		Heating		19.26	20.46 (KXE2M) / 20.45 (KXE2)	22.73	25.00	25.98	27.12	29.71	32.30 (KXE2M) / 32.31 (KXE2)
Exterior dimensions	HxWxD		mm	2052x2700x720							
Net weight	KXE2M / KXE2			629 / 620	673 / 664			767 / 756			
Refrigerant charge	R410A		kg	11.0+11.5	11.5x2						
Refrigerant piping size	Liquid line		mm(in)	ø15.88(5/8")						ø19.05(3/4")	
	Gas line			ø31.75(1 1/4") [ø34.92(1 3/8")]					ø38.1(1 1/2") [ø34.92(1 3/8")]		
Capacity connection	KXE2M / KXE2		%	50~130 / 50~160							
Number of connectable indoor units	KXE2M / KXE2			63 / 78	69 / 80	73 / 80	78 / 80	80 / 80			

1. The data are measured under the following conditions(ISO-T1,H1). 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. [ ] : Pipe sizes applicable to European installations are shown in parentheses.

# KXZ2 Heat pump systems

## 42 ~ 48HP (120.kW~135.0kW)



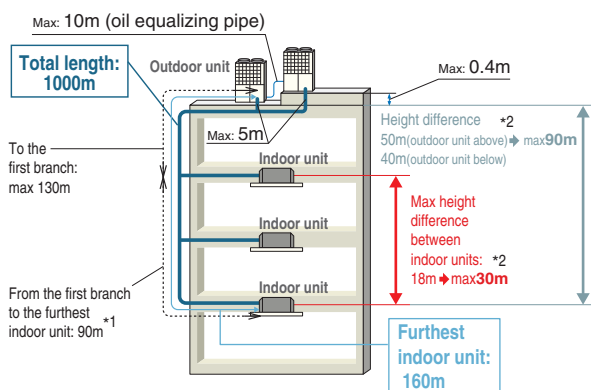
Model No.	Nominal Cooling Capacity
FDC1200KXZE2M / FDC1200KXZE2	120.0kW (220V / 380V)
FDC1250KXZE2M / FDC1250KXZE2	125.0kW (220V / 380V)
FDC1300KXZE2M / FDC1300KXZE2	130.0kW (220V / 380V)
FDC1350KXZE2M / FDC1350KXZE2	135.0kW (220V / 380V)

NEW

- The new KXZ2 series has a layered design and a refined new form.
- Connect up to 80 indoor units/up to 130% capacity.
- High efficiency with EER up to 3.64.
- New Heating Solution-Continuous Heating Capacity Control (CHCC).

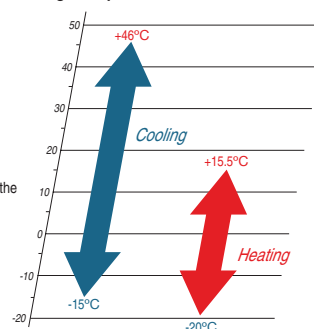


FDC1200~1350



- \*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- \*2 It is necessary to change the setting corresponding to each height difference in installation. The range of use is also different.

Range of operation



## Specifications

Exterior dimension : Please refer to page 47.

Item	Model		FDC1200KXZE2M	FDC1250KXZE2M	FDC1300KXZE2M	FDC1350KXZE2M
			FDC1200KXZE2	FDC1250KXZE2	FDC1300KXZE2	FDC1350KXZE2
Combination			FDC400 + FDC400 + FDC400	FDC400 + FDC400 + FDC450	FDC400 + FDC450 + FDC450	FDC450 + FDC450 + FDC450
Nominal horse power			42HP	44HP	46HP	48HP
Power source	KXZE2M / KXZE2		3 Phase 3wiring 220V, 60Hz / 3 Phase 380V, 60Hz			
Starting current		A	15			
Max current	KXZE2M / KXZE2	A	156.0 / 96.0	163.0 / 96.0	170.0 / 96.0	177.0 / 96.0
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	32.94	35.94	38.94(KXZE2M) / 38.93 (KXZE2)	41.94(KXZE2M) / 41.93 (KXZE2)
		Heating	30.69(KXZE2M) / 30.68 (KXZE2)	32.96(KXZE2M) / 32.95 (KXZE2)	35.23	37.50
Exterior dimensions	HxWxD	mm	2052x4050x720			
Net weight	KXZE2M / KXZE2	kg	1009 / 996			
Refrigerant charge	R410A	kg	11.5x3			
Refrigerant piping size	Liquid line	mm(in)	ø19.05(3/4")			
	Gas line		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,H1). 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. [ ] : Pipe sizes applicable to European installations are shown in parentheses.

# KXZ<sup>2</sup> Heat pump systems

## 50 ~ 60HP (142.5kW~168.0kW)



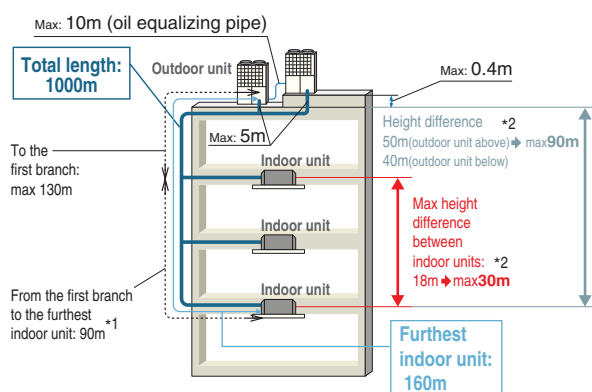
Model No.	Nominal Cooling Capacity
FDC1425KXZE2M / FDC1425KXZE2	142.5kW (220V / 380V)
FDC1450KXZE2M / FDC1450KXZE2	145.0kW (220V / 380V)
FDC1500KXZE2M / FDC1500KXZE2	150.0kW (220V / 380V)
FDC1560KXZE2M / FDC1560KXZE2	156.0kW (220V / 380V)
FDC1620KXZE2M / FDC1620KXZE2	162.0kW (220V / 380V)
FDC1680KXZE2M / FDC1680KXZE2	168.0kW (220V / 380V)

NEW

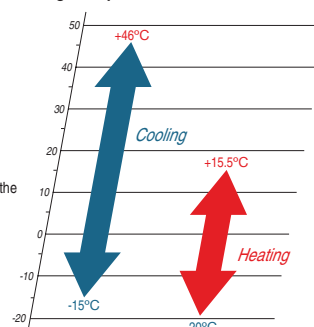


FDC1425~1680

- The new KXZ<sup>2</sup> series has a layered design and a refined new form.
- Connect up to 80 indoor units/up to 130% capacity.
- High efficiency with EER up to 3.40.
- New Heating Solution-Continuous Heating Capacity Control (CHCC).



Range of operation



- \*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- \*2 It is necessary to change the setting corresponding to each height difference in installation. The range of use is also different.

## Specifications

Exterior dimension : Please refer to page 47.

Item	Model		FDC1425KXZE2M	FDC1450KXZE2M	FDC1500KXZE2M	FDC1560KXZE2M	FDC1620KXZE2M	FDC1680KXZE2M
			FDC1425KXZE2	FDC1450KXZE2	FDC1500KXZE2	FDC1560KXZE2	FDC1620KXZE2	FDC1680KXZE2
Combination			FDC475 + FDC475 + FDC475	FDC475 + FDC475 + FDC500	FDC500 + FDC500 + FDC500	FDC500 + FDC500 + FDC560	FDC500 + FDC560 + FDC560	FDC560 + FDC560 + FDC560
Nominal horse power			50HP	52HP	54HP	56HP	58HP	60HP
Power source	KXZE2M / KXZE2		3 Phase 3wiring 220V, 60Hz / 3 Phase 380V, 60Hz					
Starting current		A	24					
Max current	KXZE2M / KXZE2	A	186.0 / 120.6			190.0 / 120.6	194.0 / 120.6	198.0 / 120.6
Nominal capacity	Cooling	kW	142.5	145.0	150.0	156.0	162.0	168.0
	Heating		159.0	162.0	168.0	175.0	182.0	189.0
Electrical characteristics	Power consumption	Cooling	41.91	41.95	42.03	45.52	49.01	52.50
		Heating	38.97	39.54	40.68	43.27	45.86(KXZE2M) / 45.87 (KXZE2)	48.45(KXZE2M) / 48.46 (KXZE2)
Exterior dimensions	HxWxD	mm	2052x4050x720					
Net weight	KXZE2M / KXZE2	kg	1151 / 1134					
Refrigerant charge	R410A	kg	11.5x3					
Refrigerant piping size	Liquid line	mm(in)	ø19.05(3/4")					
	Gas line		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,H1). 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. [] : Pipe sizes applicable to European installations are shown in parentheses.

# KXZ2 Hi-COP combination systems

## 20 ~ 40HP(56.0kW~113.5kW)



### Model No.

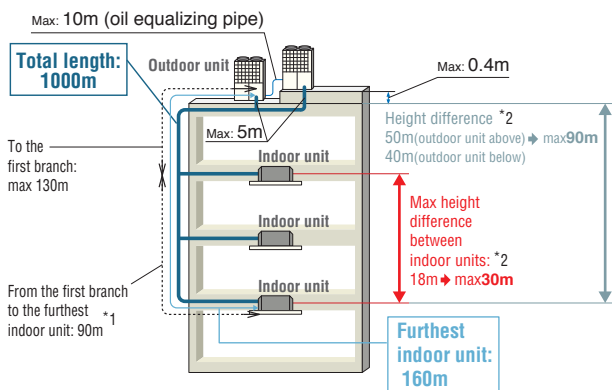
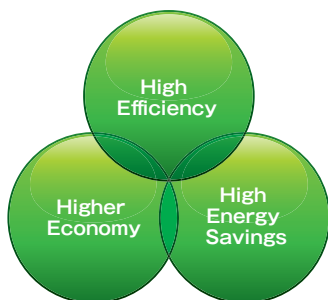
FDC560KXZE2M	(FDC280+FDC280)
FDC850KXZE2M	(FDC280+FDC280+FDC280)
FDC900KXZE2M	(FDC280+FDC280+FDC335)
FDC950KXZE2M	(FDC280+FDC335+FDC335)
FDC1000KXZE2M	(FDC335+FDC335+FDC335)
FDC1060KXZE2M	(FDC280+FDC335+FDC400)
FDC1120KXZE2M	(FDC335+FDC400+FDC400)

### Nominal Cooling Capacity

56.0kW (220V)
84.0kW (220V)
89.5kW (220V)
95.0kW (220V)
100.5kW (220V)
107.0kW (220V)
113.5kW (220V)

FDC560KXZE2	(FDC280+FDC280)	56.0kW (380V)
FDC850KXZE2	(FDC280+FDC280+FDC280)	84.0kW (380V)
FDC900KXZE2	(FDC280+FDC280+FDC335)	89.5kW (380V)
FDC950KXZE2	(FDC280+FDC335+FDC335)	95.0kW (380V)
FDC1000KXZE2	(FDC335+FDC335+FDC335)	100.5kW (380V)
FDC1060KXZE2	(FDC280+FDC335+FDC400)	107.0kW (380V)
FDC1120KXZE2	(FDC335+FDC400+FDC400)	113.5kW (380V)

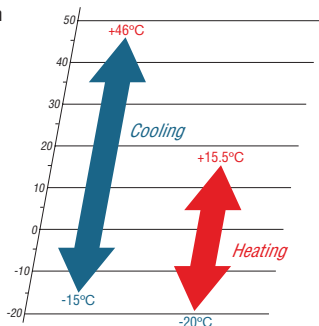
- The new KXZ2 series has a layered design and a refined new form.
- This series can connect indoor unit capacity up to 130%. (KXZE2M)
- High efficiency with EER up to 3.86.
- New Heating Solution-Continuous Heating Capacity Control (CHCC).



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

\*2 It is necessary to change the setting corresponding to each height difference in installation. The range of use is also different.

### Range of operation



NEW



FDC560



FDC850 - 1000



FDC1060



FDC1120

# Specifications

Item			Model	FDC560KXZE2M	FDC850KXZE2M	FDC900KXZE2M	FDC950KXZE2M	FDC1000KXZE2M	FDC1060KXZE2M	FDC1120KXZE2M
Combination (FDC)				280KXZE2M	280KXZE2M	280KXZE2M	280KXZE2M	335KXZE2M	335KXZE2M	335KXZE2M
				280KXZE2M	280KXZE2M	280KXZE2M	335KXZE2M	335KXZE2M	335KXZE2M	400KXZE2M
				-	280KXZE2M	335KXZE2M	335KXZE2M	335KXZE2M	400KXZE2M	400KXZE2M
Nominal horse power				20HP	30HP	32HP	34HP	36HP	38HP	40HP
Power source				3 Phase 3wiring 220V, 60Hz						
Starting current			A	10	15					
Max current			A	66.0	99.0				118.0	137.0
Nominal capacity	Cooling		kW	56.0	84.0	89.5	95.0	100.5	107.0	113.5
	Heating			63.0	94.5	100.5	106.5	112.5	120.0	127.5
Electrical characteristics	Power consumption	Cooling	kW	14.50	21.75	23.48	25.21	26.94	28.94	30.94
		Heating		14.82	22.23	23.85	25.47	27.09	28.29	29.49
Exterior dimensions	HxWxD		mm	1697x2700x720	1697x4050x720				2052x4050x720	
Net weight			kg	585	878				922	966
Refrigerant charge	R410A		kg	11.0x2	11.0x3				11.0x2+11.5	11.0+11.5x2
Refrigerant piping size	Liquid line		mm(in)	ø12.7(1/2")	ø15.88(5/8")				ø19.05(3/4")	
	Gas line			ø28.58(1 1/8")	ø31.75(1 1/4") [ø34.92(1 3/8")]			ø38.1(1 1/2") [ø34.92(1 3/8")]		
Capacity connection			%	80~130						
Number of connectable indoor units				48	73	78	80			

Item			Model	FDC560KXZE2	FDC850KXZE2	FDC900KXZE2	FDC950KXZE2	FDC1000KXZE2	FDC1060KXZE2	FDC1120KXZE2	
Combination (FDC)				280KXZE2	280KXZE2	280KXZE2	280KXZE2	335KXZE2	335KXZE2	335KXZE2	
				280KXZE2	280KXZE2	280KXZE2	335KXZE2	335KXZE2	335KXZE2	400KXZE2	400KXZE2
				-	280KXZE2	335KXZE2	335KXZE2	335KXZE2	400KXZE2	400KXZE2	
Nominal horse power				20HP	30HP	32HP	34HP	36HP	38HP	40HP	
Power source				3 Phase 380V, 60Hz							
Starting current			A	10	15						
Max current			A	40.2	60.3				72.2	84.1	
Nominal capacity	Cooling		kW	56.0	84.0	89.5	95.0	100.5	107.0	113.5	
	Heating			63.0	94.5	100.5	106.5	112.5	120.0	127.5	
Electrical characteristics	Power consumption	Cooling	kW	14.51	21.76	23.49	25.22	26.94	28.94	30.94	
		Heating		14.82	22.23	23.85	25.47	27.09	28.29	29.48	
Exterior dimensions	HxWxD		mm	1697x2700x720	1697x4050x720				2052x4050x720		
Net weight			kg	576	864				908	952	
Refrigerant charge	R410A		kg	11.0x2	11.0x3				11.0x2+11.5	11.0+11.5x2	
Refrigerant piping size	Liquid line		mm(in)	ø12.7(1/2")	ø15.88(5/8")				ø19.05(3/4")		
	Gas line			ø28.58(1 1/8")	ø31.75(1 1/4") [ø34.92(1 3/8")]				ø38.1(1 1/2") [ø34.92(1 3/8")]		
Capacity connection			%	80~160				80~130			
Number of connectable indoor units				59	80						

1. The data are measured under the following conditions(ISO-T1,H1). 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. [ ] : Pipe sizes applicable to European installations are shown in parentheses.

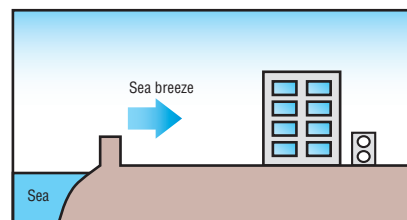
## Dimensions

Please refer to page 45, 47.

# Corrosion Protection Treatment series 4 ~ 12HP (11.2kW~33.5kW)

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).

Production by order



Model No.	Nominal Cooling Capacity	Model No.	Nominal Cooling Capacity
FDSC112KXEN6	11.2kW (220V)	FDSC224KXE6M	22.4kW (220V)
FDSC140KXEN6	14.0kW (220V)	FDSC280KXE6M	28.0kW (220V)
FDSC155KXEN6	15.5kW (220V)	FDSC335KXE6M	33.5kW (220V)
FDSC112KXES6	11.2kW (380V)	FDSC224KXE6G	22.4kW (380V)
FDSC140KXES6	14.0kW (380V)	FDSC280KXE6G	28.0kW (380V)
FDSC155KXES6	15.5kW (380V)	FDSC335KXE6G	33.5kW (380V)

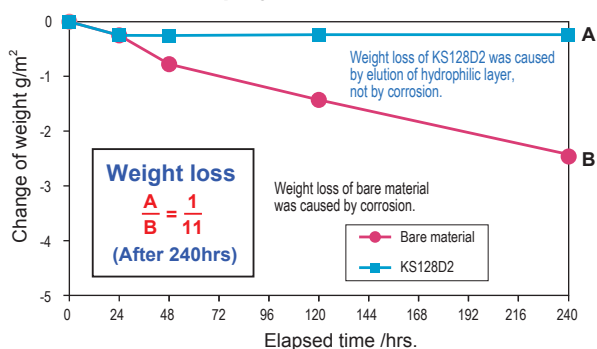
- Specifications and Dimensions are the same as that of the standard series shown on previous pages.
- Non-CE Marking models.



## Corrosion resistance performance of high anticorrosion fin

### Comparison of weight loss by corrosion

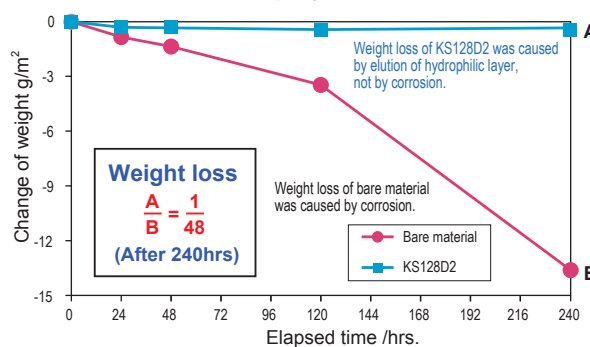
#### Neutral salt water spray test



#### <Test conditions>

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

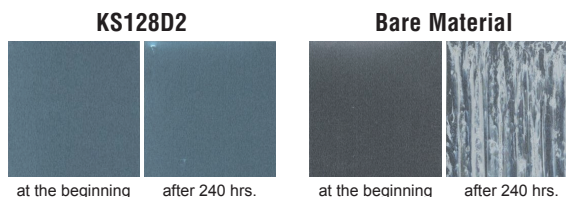
#### Acetic acid salt water spray test



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

# High Head series (100m) 14 ~ 48HP (40.0~136.0kW)

cooling only

Production by order

## 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.

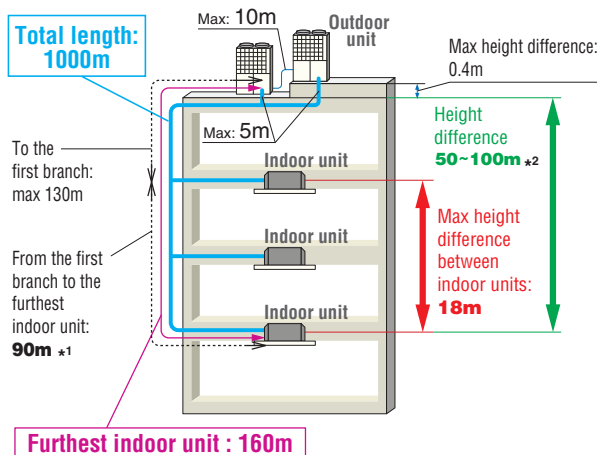
## Model No. Nominal Cooling Capacity

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



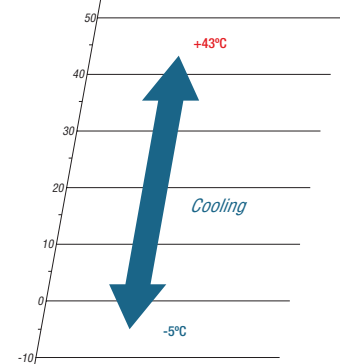
FDCH504~680CKXE6G



\*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 <sub>2</sub> 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

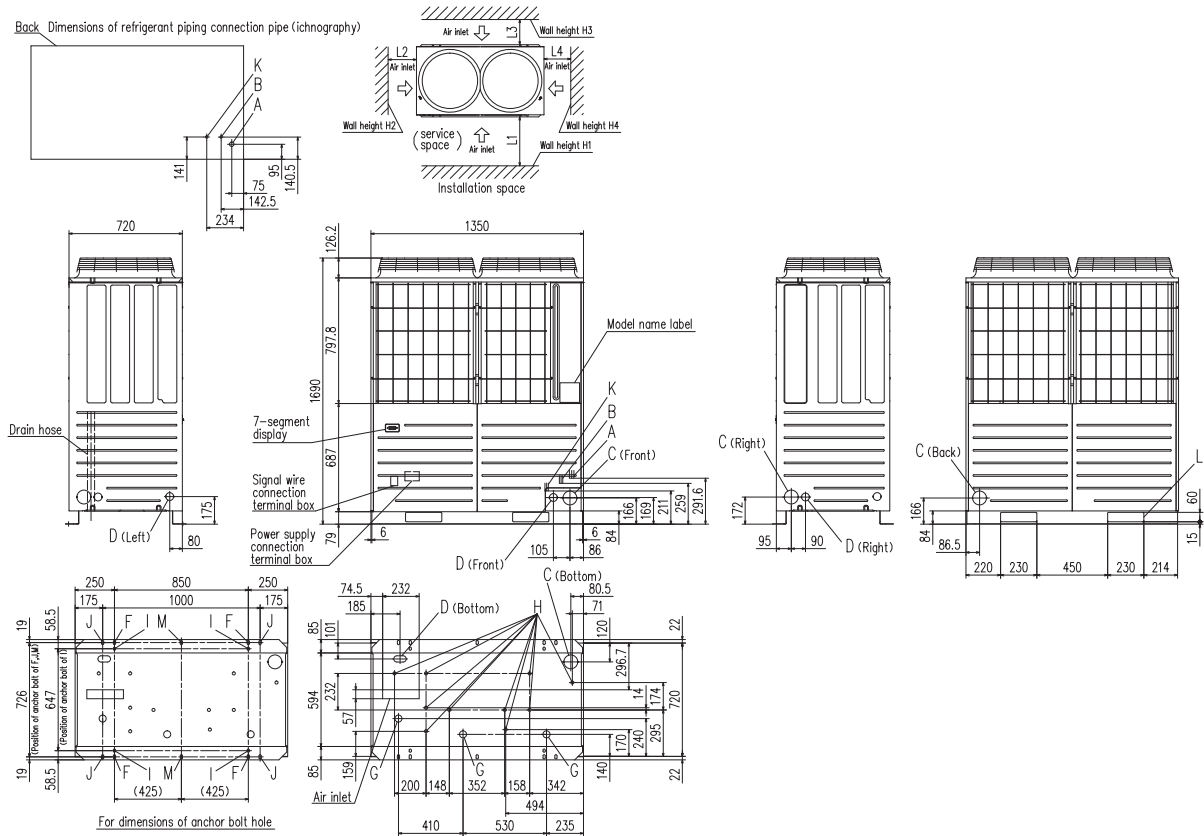
Item			Model	FDCH1180CKXE6G	FDCH1235CKXE6G	FDCH1300CKXE6G	FDCH1360CKXE6G
Combination (FDCH)				560CKXE6G-K	615CKXE6G	615CKXE6G	680CKXE6G
				615CKXE6G	615CKXE6G	680CKXE6G	680CKXE6G
Nominal horse power				42HP	44HP	46HP	48HP
Power source				3 Phase 380V, 60Hz			
Starting current			A	16			
Max current			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

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 anechoic chamber. During operation these values are somewhat higher due to ambient conditions.  
3. 'tonne(s) of CO<sub>2</sub> 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.

FDCH335CKXE6G-K, 400CKXE6G, 450CKXE6G

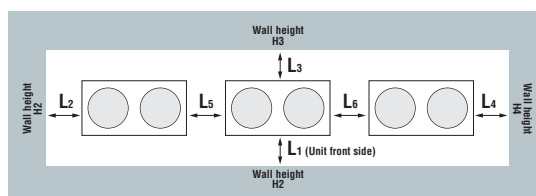


Mark	Content	335-K	400	450
A	Refrigerant gas piping connection pipe	ø25.4(Brazing)		ø28.58(Brazing)
B	Refrigerant liquid piping connection pipe	ø12.7(Flare)		
C	Refrigerant piping exit hole	ø88(or ø100)		
D	Power supply entry hole	ø50 (Right · Left · Front), Long hole 40 x 80 (Bottom)		
F	Anchor bolt 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		

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 top 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)

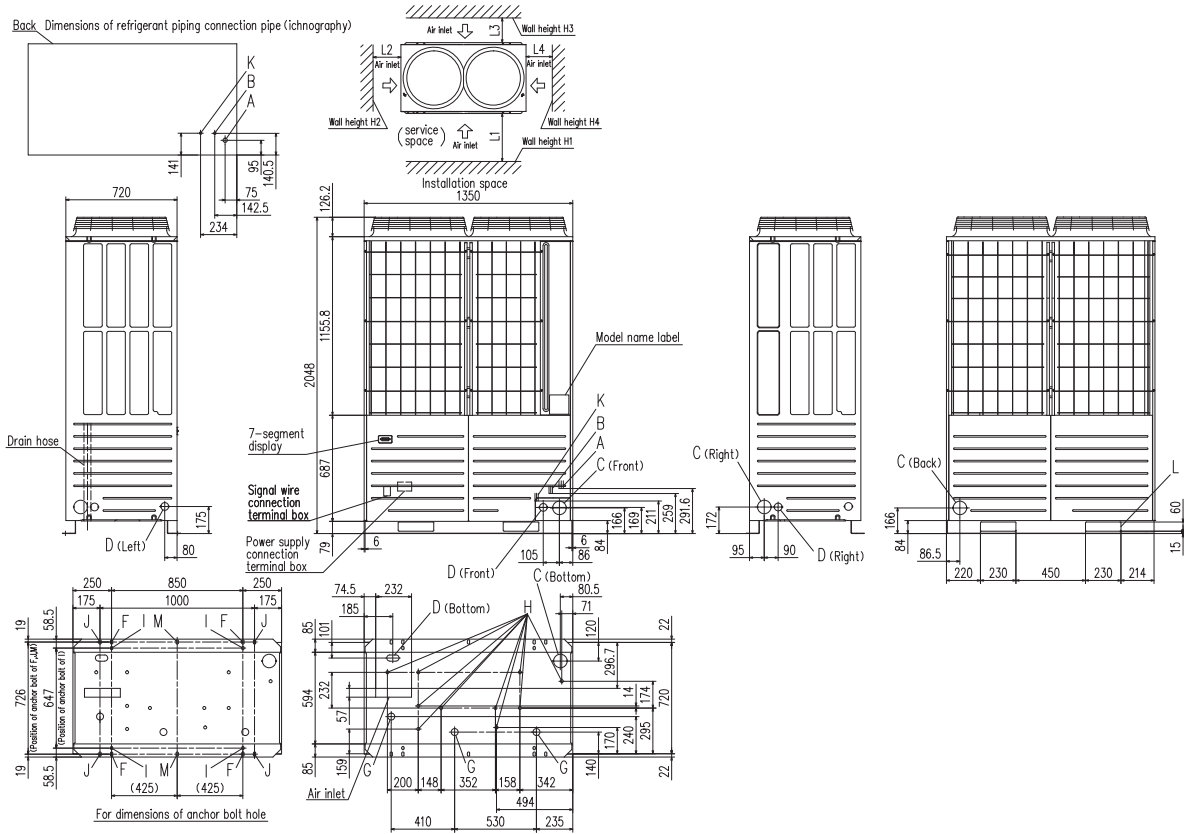
When more than one unit is installed



Installation example		
Dimensions	1	2
L1	500	Open
L2	10	10
L3	100	100
L4	10	Open
H1	1500	Open
H2	No limit	No limit
H3	1000	No limit
H4	No limit	Open

Installation example		
Dimensions	1	2
L1	500	Open
L2	10	200
L3	100	300
L4	10	Open
L5	0	400
L6	0	400
H1	1500	No limit
H2	No limit	No limit
H3	1000	No limit
H4	No limit	No limit

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
<b>L<sub>1</sub></b>	500	Open
<b>L<sub>2</sub></b>	10	10
<b>L<sub>3</sub></b>	100	100
<b>L<sub>4</sub></b>	10	Open
<b>H<sub>1</sub></b>	1500	Open
<b>H<sub>2</sub></b>	No limit	No limit
<b>H<sub>3</sub></b>	1000	No limit
<b>H<sub>4</sub></b>	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.

# Refrigerant piping

## Installation of Interconnecting Pipework

KXZ equipment is manufactured to meet the highest standards of quality and reliability. It is imperative that the method of installation and the materials used are also to the 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 R32 · R410A refrigerant, and that high pressures will occur throughout the system because of the reverse cycle operation. All pipework material used should comply with 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 EN378.

All brazed joints shall be made with dry nitrogen purge to ensure the prevention of oxidation of 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

Only R32 · R410A refrigerant shall be used, it 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.

## Standard (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.

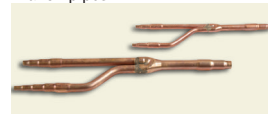
Outdoor unit	Main pipe size (normal)		Pipe size for an actual length of 90m or longer	
	Gas pipe	Liquid pipe	Gas pipe	Liquid pipe
280	ø22.22 × t 1.0	ø9.52 × t 0.8	ø25.4 (ø22.22) × t 1.0	ø12.7 × t 0.8
335	ø25.4 (ø22.22) × t 1.0	ø12.7 × t 0.8		
400	ø25.4 (ø28.58) × t 1.0			
450	ø28.58 × t 1.0			
475		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

Please use C1220T-1/2H for ø19.05 or larger pipes.

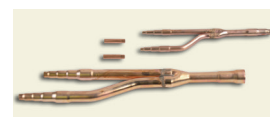
Pipe sizes applicable to European installations are shown in parentheses.

mm	inch	mm	inch
ø9.52	3/8"	ø28.58	1 1/8"
ø12.7	1/2"	ø31.8	1 1/4"
ø15.88	5/8"	ø34.92	1 3/8"
ø19.05	3/4"	ø38.1	1 1/2"
ø22.22	7/8"	ø44.5	1 3/4"
ø25.4	1"	ø50.8	2"

Branch pipes



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



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

Header pipe

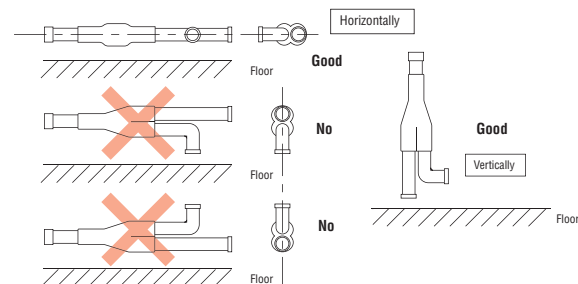


HEAD6-180-1G

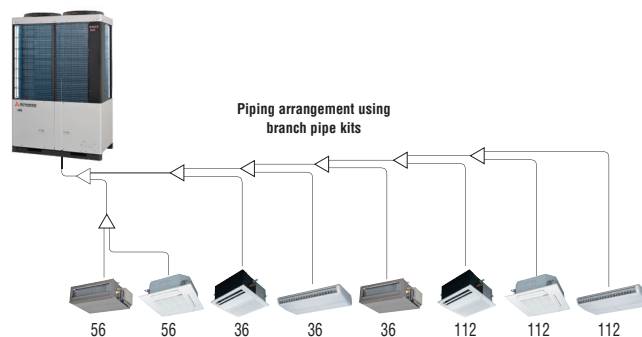
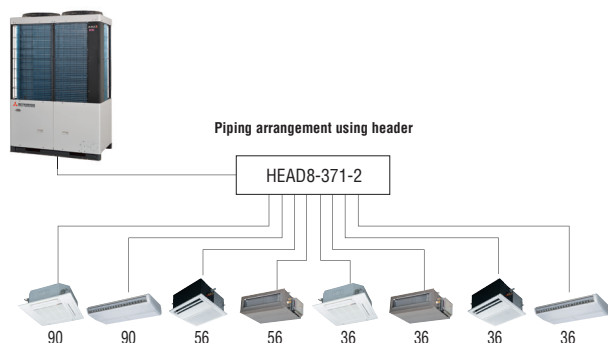
Combination outdoor unit manifold



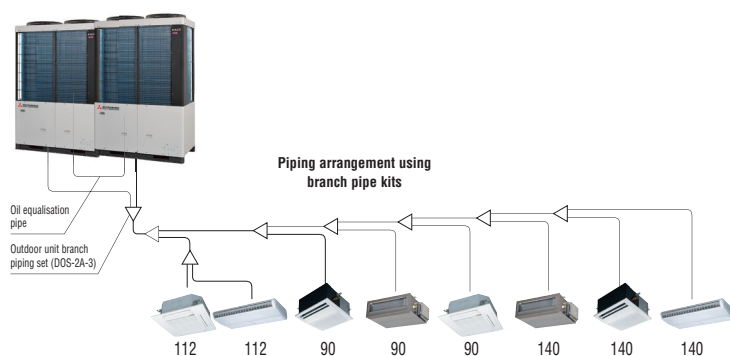
DOS-2A-3  
DOS-3A-3



## Single outdoor unit piping examples:

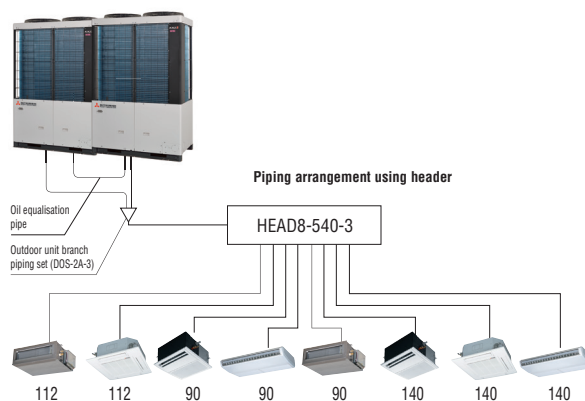


## Combination outdoor unit piping examples:



Outdoor unit's branch piping set

Outdoor unit	Branch piping set
For two units	DOS-2A-3
For three units	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

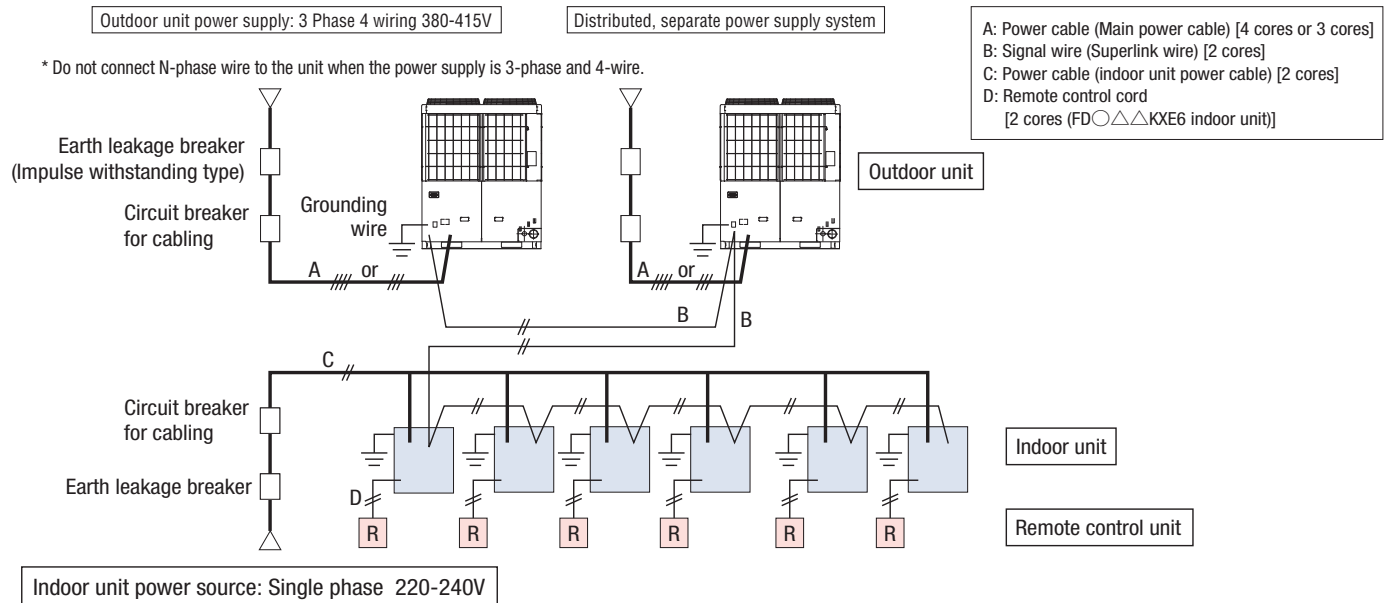
KXZ has greatly simplified wiring requirements utilising a ‘polarity-free’ two wire control loop connecting the indoor units.

## 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 0.75mm<sup>2</sup> or 1.25mm<sup>2</sup>.

	0.75mm <sup>2</sup>	1.25mm <sup>2</sup>
~1000m	YES	YES
1000-1500m	YES	NO

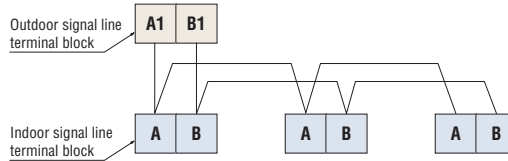
3. We recommend both ends of the shield of the cable are connected to ground (earth) at all the indoor units and outdoor units.

4. When multiple outdoor units are used,

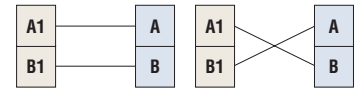
- Connect the signal cable between indoor and outdoor units and the signal cable between outdoor units belonging to the same refrigerant line to A1 and B1.
- Connect the signal line between outdoor units on different refrigerant lines to A2 and B2.

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

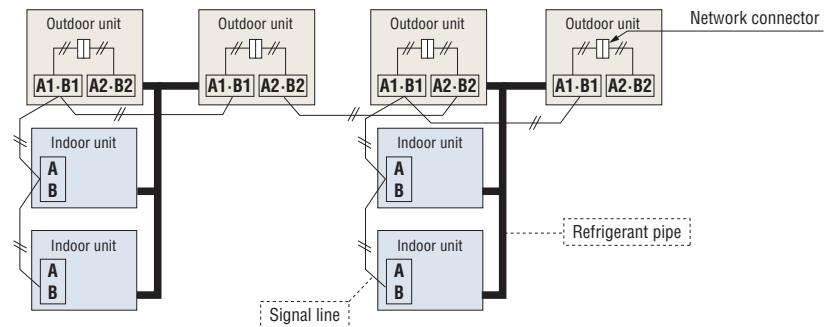
(1) When one outdoor unit is used



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

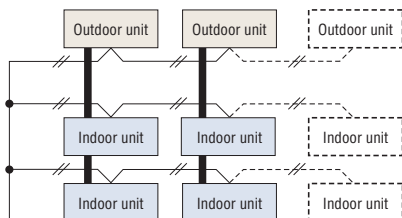


(2) When plural outdoor units are used



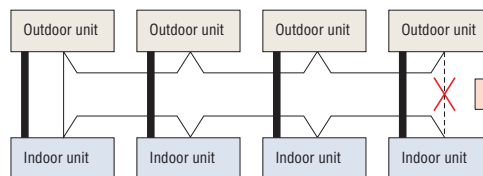
The maximum number of indoor units that can be connected in a system is 128 and it is possible to configure outdoor units and/or indoor units as an outdoor or indoor unit group connected with each other with two wires.

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



## Important

Loop wiring prohibited

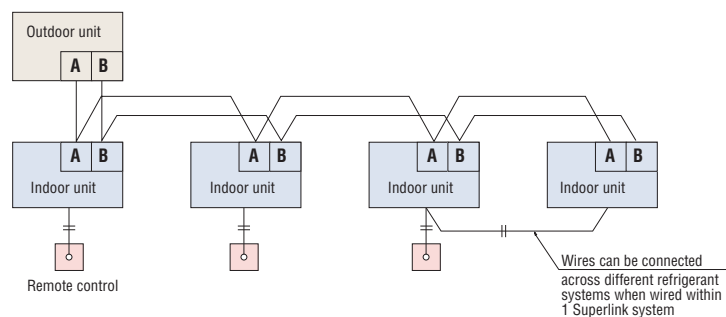


The signal lines cannot form a loop, so the wirings shown as - - - - - in the diagram are prohibited.

# Remote control wiring specifications



For interconnecting wiring between the remote control and indoor units (XY wiring) use 2-core cable size 0.3mm<sup>2</sup>. 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 <sup>2</sup> x 2 core
To 300	0.75mm <sup>2</sup> x 2 core
To 400	1.25mm <sup>2</sup> x 2 core
To 600	2.0mm <sup>2</sup> x 2 core
















# 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.

Energy Saving	Inverter technology	Inverter control technology delivers high efficiency and a 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.
	Motion sensor★	This sensor detects human activity and shifts the temperature setting according to the amount of activity in the room.
	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 the user 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 the user to program periods where the unit will operate with reduced noise levels, perfect for night time and an uninterrupted sleep.
	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 the user 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 the preferred operation angle.
	Draft 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 the user 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 the user 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 the 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 eight available functions on the unit, this function allows the user to set two functions to operate automatically.
	Favourite setting★	Operation mode, set temperature, fan speed and air flow direction automatically adjust to the programmed favourite 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 clean air.
	Filter sign	This warning alerts 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 authorised dealers 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.

	FDT	FDTC	FDTW	FDTS	FDTQ	FDU	FDUM	FDUT	FDUH	FDK	FDE	FDFW	FDU-F
													
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●
	● Option	● Option	● Option	● Option	● Option	● Option	● Option	● Option	● Option	● Option	● Option		● Option
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●						●	●	●	
	●	●	●	●	●					●	●	●	
	● Option	● Option											
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●
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						●	●	● (71only)					●
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	procure locally	● Option	● Option	● Option	●	●	●	procure locally
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	● Option	●	●	●	●	●	●	●				●
	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	● ★ 1	●	●	● Option				● ★ 2
						●	●						

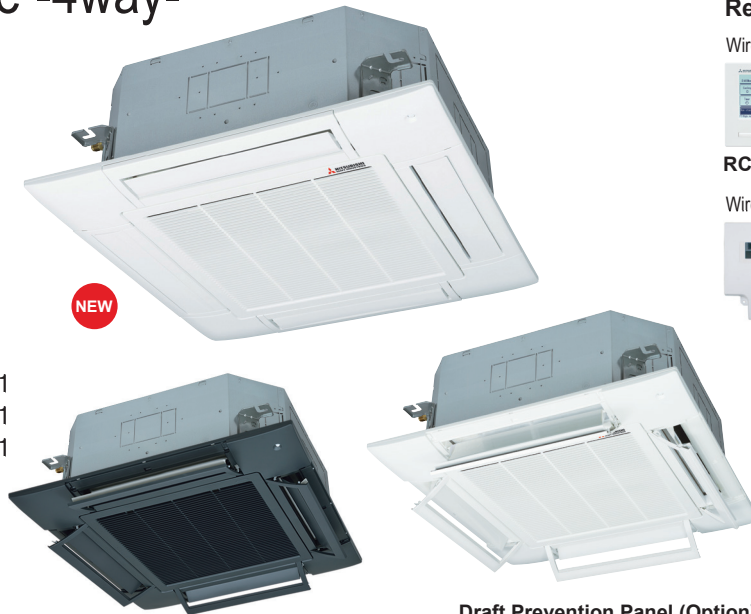
★ 1 : Except 224 • 280    ★ 2 : Except 1800 • 2400



# Ceiling Cassette -4way- FDT

## Model No.

FDT28KXZE1-W	FDT28KXZE1
FDT36KXZE1-W	FDT36KXZE1
FDT45KXZE1-W	FDT45KXZE1
FDT56KXZE1-W	FDT56KXZE1
FDT71KXZE1-W	FDT71KXZE1
FDT90KXZE1-W	FDT90KXZE1
FDT112KXZE1-W	FDT112KXZE1
FDT140KXZE1-W	FDT140KXZE1
FDT160KXZE1-W	FDT160KXZE1



## Remote control (option)

### Wired



RC-EX3A RC-E5 RCH-E3

### Wireless



RCN-T-5BW-E2(White)  
RCN-T-5BB-E2(Black)

\*R32 indoor unit are not compatible with R410A outdoor unit and vice versa.

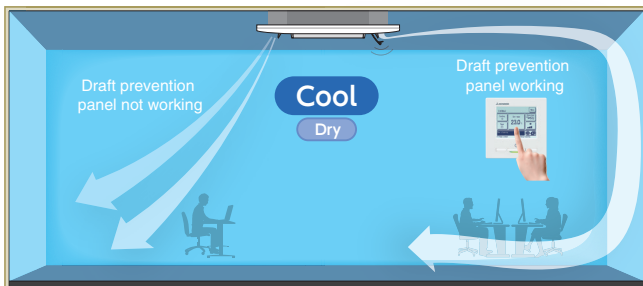
## Draft Prevention Panel (Option)

(Option)

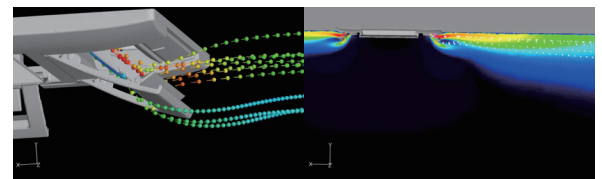
### Draft Prevention Panel

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

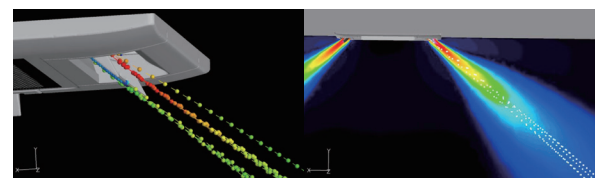
Advanced airflow control technology cultivated through aircraft development.



User can position panels by using the remote controller (RC-EX3A, Wireless kit) only when Draft Prevention Panel is available.



Draft Prevention Panel working

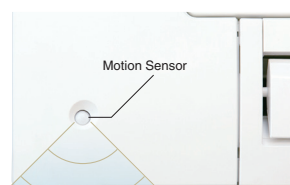


Draft Prevention Panel placed at off position

### Motion Sensor

(Option)

Motion sensor is equipped in the corner of the panel 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-5BW-E(White)  
LB-T-5BB-E(Black)

### Improve the aerodynamic performance of the unit

New designed component has better aerodynamic performance and achieve lower noise.

### New design turbo fan



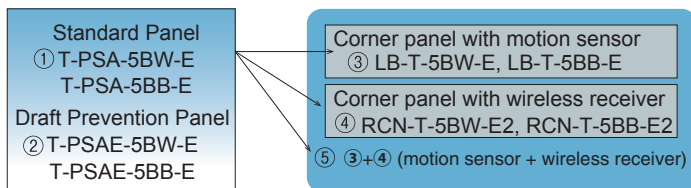
### Fan guard (standard equipment)



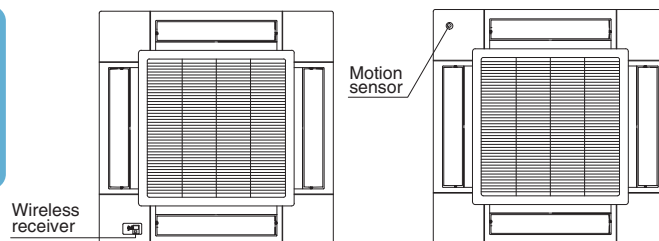
## Panel select pattern

(Option)

8 patterns of panel are available.



Installation position of Wireless kit and Motion sensor kit

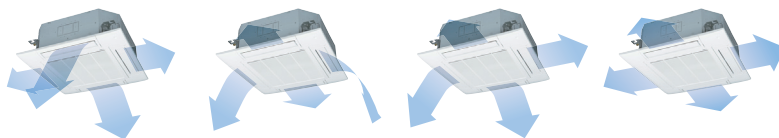


\*Wireless receiver and Motion sensor can be installed to the position as shown

- 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

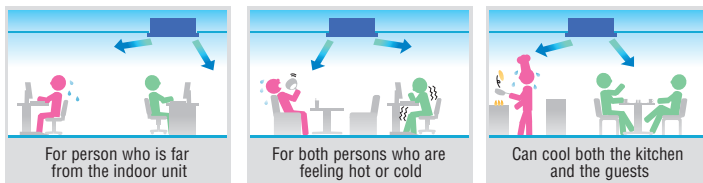
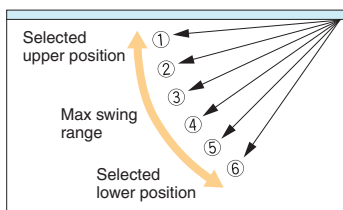
## Individual flap control system

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.



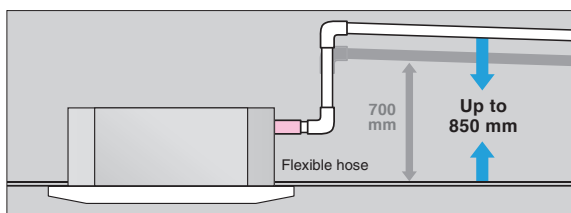
Flap can swing within an upper and lower flap range position that can be selected with a wired remote control.

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



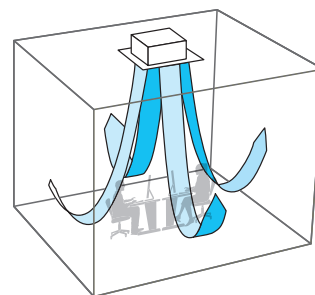
## 850mm Drain Pump

Drain can be discharged upwards up to 850mm from the ceiling surface, allowing a piping layout with a high degree of freedom. Thanks to the 185mm flexible hose, equipment supports easy workability.



## Suitable for High ceilings

The Powerful blowout carries comfortable air flow to the floor even in high ceiling applications. It is ideal for high ceiling offices, stores, etc., with a wide, uniform air flow throughout the room.

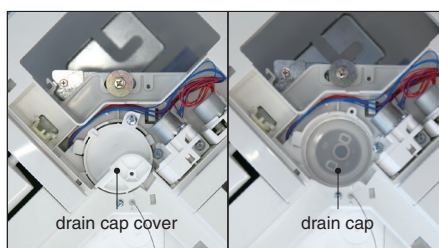


## Easy check of drain pan

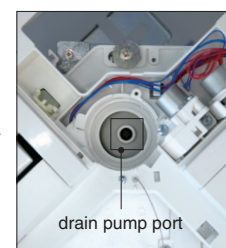
Easy inspection of the condition of the drain pan is possible by removing only the corner lid.



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-W	FDT36KXZE1-W	FDT45KXZE1-W	FDT56KXZE1-W	FDT71KXZE1-W
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 220V, 60Hz				
Power consumption	Cooling	kW	0.04			0.07	0.08
	Heating		0.04			0.07	0.08
Sound power level		dB(A)	55			60	62
Sound pressure level	Cooling	dB(A)	P-Hi:40 Hi:32 Me:30 Lo:28	P-Hi:40 Hi:34 Me:30 Lo:28	P-Hi:40 Hi:34 Me:31 Lo:28	P-Hi:44 Hi:34 Me:31 Lo:28	P-Hi:47 Hi:35 Me:32 Lo:28
	Heating		P-Hi:40 Hi:31 Me:29 Lo:26	P-Hi:40 Hi:33 Me:29 Lo:26	P-Hi:40 Hi:33 Me:30 Lo:26	P-Hi:44 Hi:34 Me:30 Lo:27	P-Hi:47 Hi:35 Me:32 Lo:28
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	Cooling	m³/min	P-Hi:20 Hi:14 Me:12 Lo:10	P-Hi:20 Hi:15 Me:12 Lo:10	P-Hi:20 Hi:15 Me:13 Lo:10		P-Hi:26 Hi:16 Me:13 Lo:11
	Heating		P-Hi:20 Hi:14 Me:12 Lo:11	P-Hi:20 Hi:15 Me:12 Lo:11	P-Hi:20 Hi:15 Me:13 Lo:11		
Outside air intake			Possible				
Panel			T-PSA-5BW-E, T-PSAE-5BW-E (White) / T-PSA-5BB-E, T-PSAE-5BB-E (Black)				
Air filter, Q'ty			Pocket Plastic net x1 (Washable)				
Remote control (option)			wired:RC-EX3A, RC-E5, RCH-E3    wireless:RCN-T-5BW-E2, RCN-T-5BB-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-W	FDT112KXZE1-W	FDT140KXZE1-W	FDT160KXZE1-W
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 220V, 60Hz			
Power consumption	Cooling	0.13	0.14		
	Heating	0.13	0.14		
Sound power level		65		66	
Sound pressure level	Cooling	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:32
	Heating	P-Hi:49 Hi:38 Me:36 Lo:30	P-Hi:49 Hi:39 Me:37 Lo:30	P-Hi:49 Hi:42 Me:39 Lo:31	P-Hi:49 Hi:42 Me:39 Lo:31
Exterior dimensions (H x W x D)	mm	Unit:298x840x840 Panel:35x950x950			
Net weight	kg	Unit:25 Standard Panel:5			
Air flow	Cooling	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
	Heating				
Outside air intake		Possible			
Panel		T-PSA-5BW-E, T-PSAE-5BW-E (White) / T-PSA-5BB-E, T-PSAE-5BB-E (Black)			
Air filter, Q'ty		Pocket Plastic net x1 (Washable)			
Remote control (option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-T-5BW-E2, RCN-T-5BB-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.

# 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 220V, 60Hz				
Power consumption	Cooling	0.04			0.07	0.08
	Heating	0.04			0.07	0.08
Sound power level		55			60	62
Sound pressure level		P-Hi:38 Hi:33 Me:30 Lo:28			P-Hi:44 Hi:33 Me:31 Lo:29	P-Hi:47 Hi:35 Me:32 Lo:28
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	Cooling	P-Hi:20 Hi:14 Me:12 Lo:10	P-Hi:20 Hi:14 Me:12 Lo:10	P-Hi:20 Hi:15 Me:13 Lo:10	P-Hi:26 Hi:16 Me:13 Lo:11	P-Hi:28 Hi:17 Me:14 Lo:12
	Heating					
Outside air intake		Possible				
Panel		T-PSA-5BW-E, T-PSAE-5BW-E (White) / T-PSA-5BB-E, T-PSAE-5BB-E (Black)				
Air filter, Q'ty		Pocket Plastic net x1 (Washable)				
Remote control (option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-T-5BW-E2, RCN-T-5BB-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 220V, 60Hz			
Power consumption	Cooling	0.13	0.14		
	Heating	0.13	0.14		
Sound power level		65	66		
Sound pressure level		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	Cooling	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
	Heating				
Outside air intake		Possible			
Panel		T-PSA-5BW-E, T-PSAE-5BW-E (White) / T-PSA-5BB-E, T-PSAE-5BB-E (Black)			
Air filter, Q'ty		Pocket Plastic net x1 (Washable)			
Remote control (option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-T-5BW-E2, RCN-T-5BB-E2			
Installation data Refrigerant piping size	mm(in)	Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")			

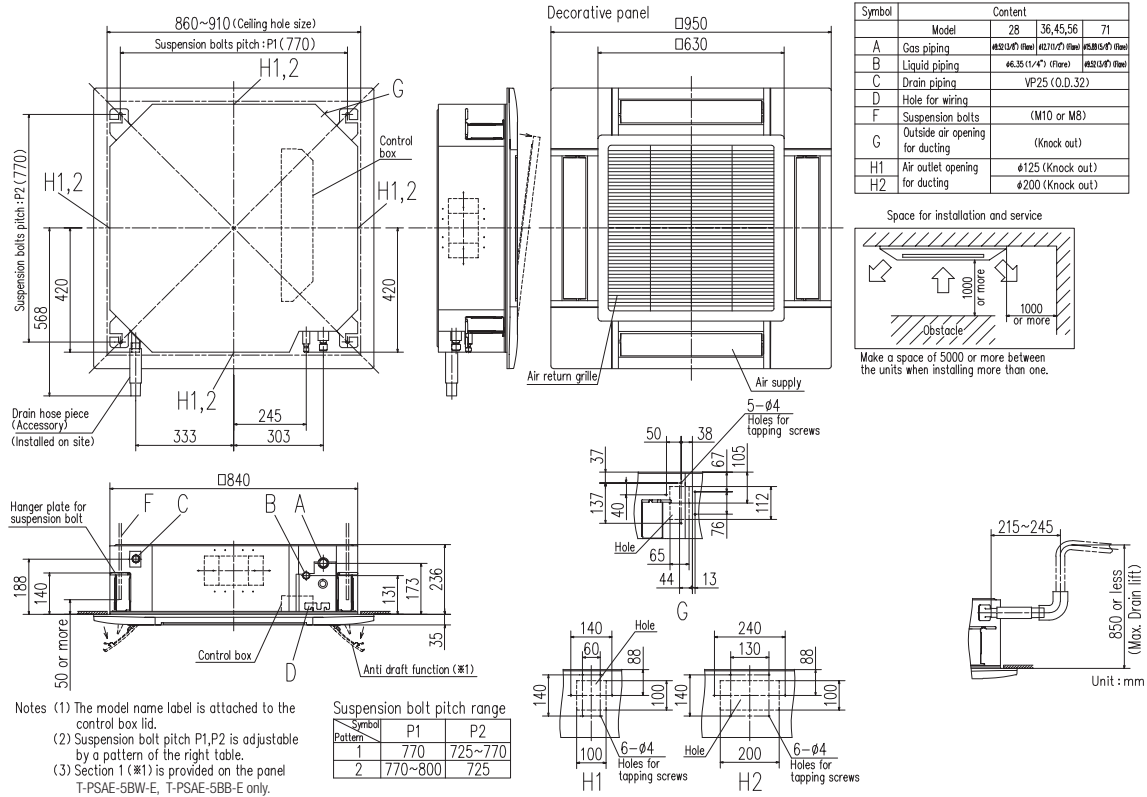
- The data are measured under the following conditions (ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
- Sound pressure level indicates the value in an anechoic chamber. During operation these values are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

# Dimensions

All measurements in mm.

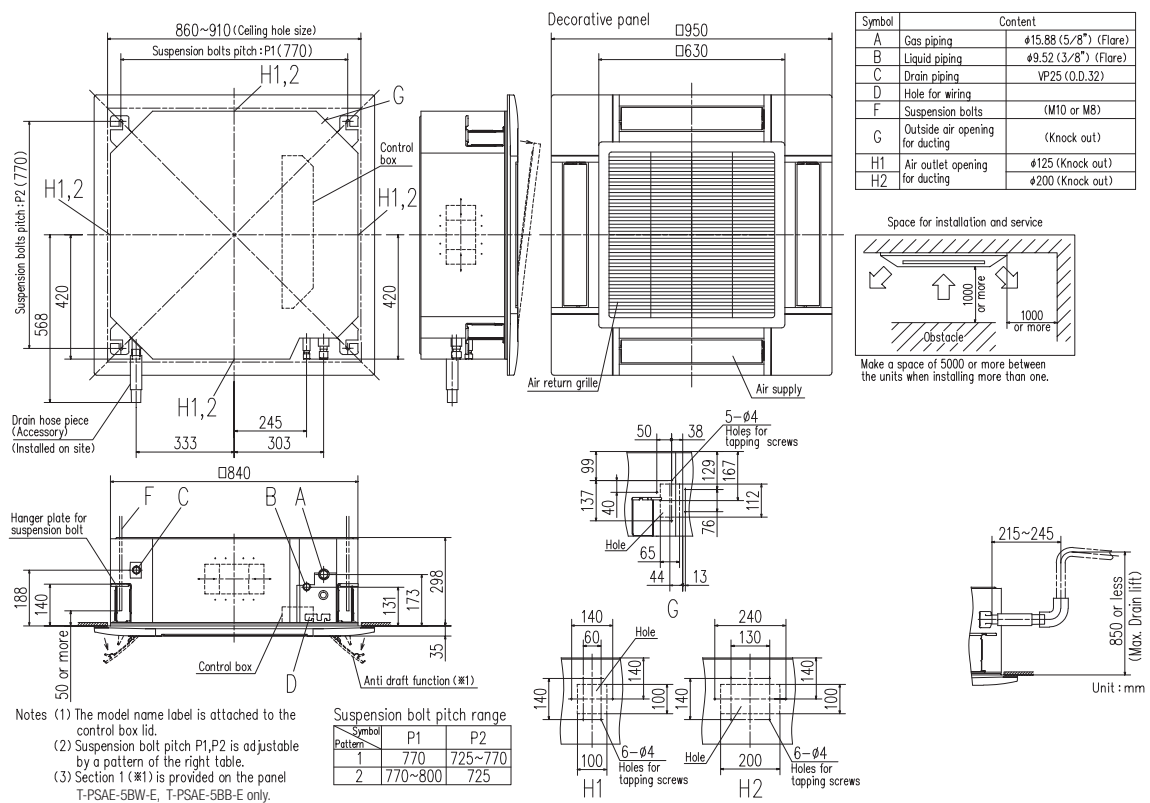
FDT28KXZE1-W, 36KXZE1-W, 45KXZE1-W, 56KXZE1-W, 71KXZE1-W

FDT28KXZE1, 36KXZE1, 45KXZE1, 56KXZE1, 71KXZE1



FDT90KXZE1-W, 112KXZE1-W, 140KXZE1-W, 160KXZE1-W

FDT90KXZE1, 112KXZE1, 140KXZE1, 160KXZE1





# Ceiling Cassette - 4way Compact FDTC

## Model No.

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

FDTC15KXZE1  
FDTC22KXZE1  
FDTC28KXZE1  
FDTC36KXZE1  
FDTC45KXZE1  
FDTC56KXZE1

NEW



**Draft Prevention  
Panel (option)**



**Grid type**

## Remote control (option)

Wired



**RC-EX3A RC-E5 RCH-E3**

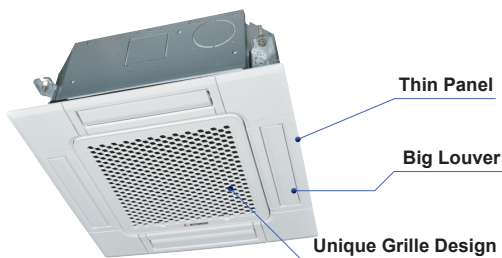
Wireless



**RCN-TC-5AW-E3**

\*R32 indoor unit are not compatible with  
R410A outdoor unit and vice versa.

## European design & Flat panel



## Unique Grille Design

A grille designed with a unique structure and a clean white panel that blends with the room.



**Honeycomb type**



**Grid type**

## Integrated ceiling system design 600x600

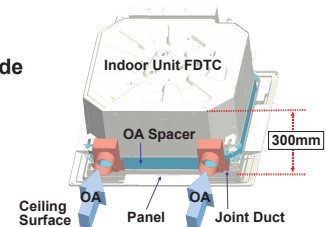


Easy installation - with a weight of only 14kg, a thin panel, and a main body size of only 248mm.

## Taking OA (Outside Air) into inside

Fresh air can be taken in without optional parts. When the fresh air is insufficient, optional parts can be used.

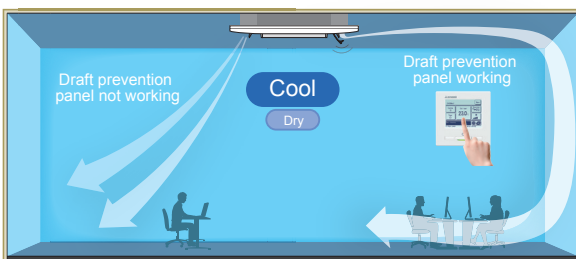
OA Spacer TC-OAS-E2(option)  
Joint Duct TC-OAD-E(option)



## Draft Prevention Panel

(Option)

This 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 panels by using the remote controller (RC-EX3A, Wireless kit) only when Draft Prevention Panel is available.

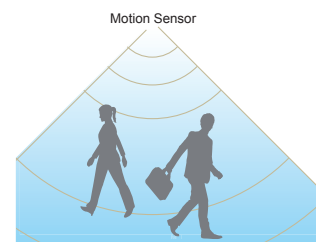
## Motion Sensor

(Option)

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



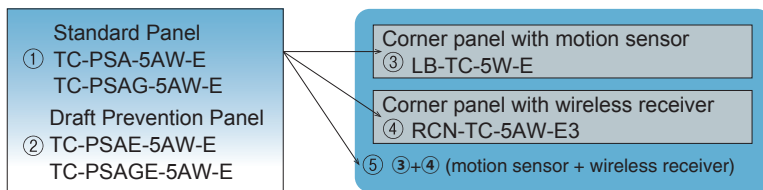
**LB-TC-5W-E**



## Panel select pattern

(Option)

8 patterns of panel are available.



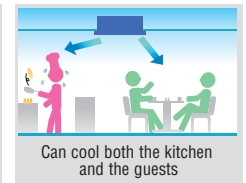
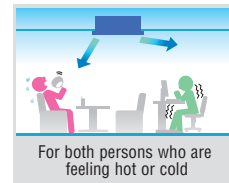
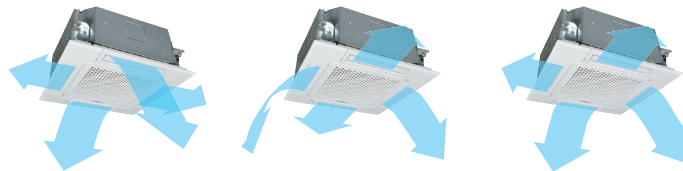
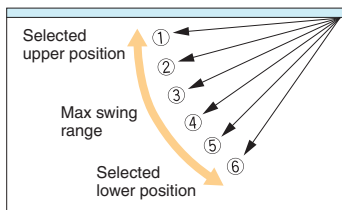
- ① Standard Panel only
- ①+③ Standard Panel with corner panel with motion sensor
- ①+④ Standard Panel with corner panel with wireless receiver
- ①+⑤ Standard Panel with corner panel with motion sensor & corner panel with wireless receiver
- ② Draft Prevention Panel only
- ②+③ Draft Prevention Panel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

## 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.

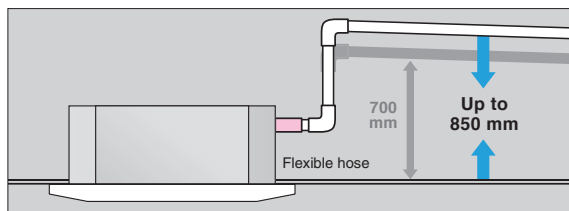
The flap can swing within the range of upper and lower flap position selected with wired remote control.

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



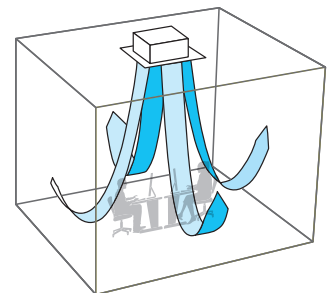
## 850mm Drain Pump

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.



## Suitable for High ceilings

The Powerful blowout carries comfortable air flow to the floor even in high ceiling applications. It is ideal for high ceiling offices, stores, etc., with a wide, uniform air flow throughout the room.



# Specifications



Item		Model	FDTCT15KXE1-W		FDTCT22KXE1-W		FDTCT28KXE1-W		FDTCT36KXE1-W		FDTCT45KXE1-W		FDTCT56KXE1-W			
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 220V, 60Hz													
Power consumption		Cooling	kW	0.03					0.04		0.05		0.06			
		Heating		0.03					0.04		0.05		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 Heating	dB(A)	P-Hi:33 Hi:30 Me:28 Lo:25 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 Heating	m³/min	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 (Honeycomb) / TC-PSAG-5AW-E, TC-PSAGE-5AW-E (Grid)													
Air filter, Q'ty			Pocket Plastic net x1 (Washable)													
Remote control (option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-TC-5AW-E3													
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")								

- 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.

# Specifications



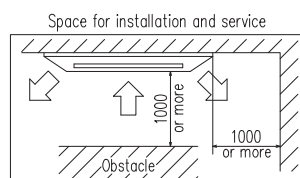
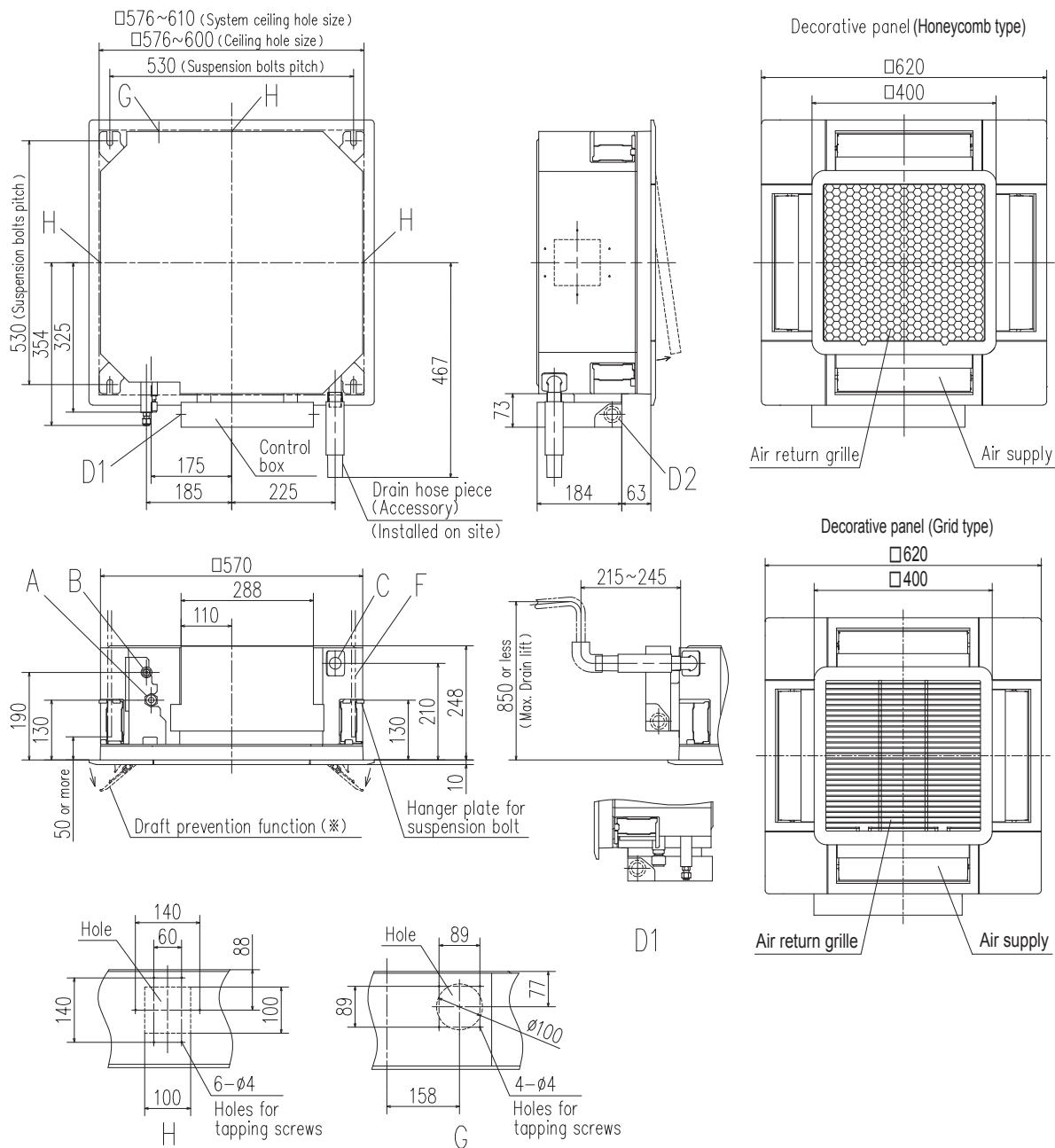
Item	Model		FDTCT15KXE1	FDTCT22KXE1	FDTCT28KXE1	FDTCT36KXE1	FDTCT45KXE1	FDTCT56KXE1
Nominal cooling capacity	kW		1.5	2.2	2.8	3.6	4.5	5.6
Nominal heating capacity	kW		1.7	2.5	3.2	4.0	5.0	6.3
Power source		1 Phase 220V, 60Hz						
Power consumption	Cooling	kW	0.03			0.04	0.05	0.06
	Heating		0.03			0.04	0.05	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	dB(A)	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					
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	m³/min	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							
Outside air intake		Possible						
Panel		TC-PSA-5AW-E, TC-PSAE-5AW-E (Honeycomb) / TC-PSAG-5AW-E, TC-PSAGE-5AW-E (Grid)						
Air filter, Q'ty		Pocket Plastic net x1 (Washable)						
Remote control (option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-TC-5AW-E3						
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")		

- 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.

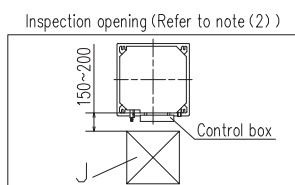


# Dimensions

All measurements in mm.



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



- 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, TC-PSAGE-5AW-E only.

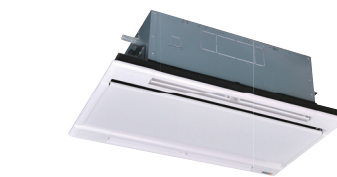
Symbol	Content		
	Model	15,22,28	36,45,56
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Drain piping	VP25 (O.D.32)	
D1	Power source connection		
D2	Remote control code and signal wiring connection		
F	Suspension bolts	(M10 or M8)	
G	Outside air opening for ducting	(Knock out)	
H	Air outlet opening for ducting	φ125 (Knock out)	
J	Inspection opening	450X450	

# Ceiling Cassette -2way- FDTW

## Model No.

FDTW28KXE6F  
FDTW45KXE6F  
FDTW56KXE6F  
FDTW71KXE6F

FDTW90KXE6F  
FDTW112KXE6F  
FDTW140KXE6F



FDTW28-71



FDTW90-140

## Remote control (option)

### Wired



RC-EX3A RC-E5 RCH-E3

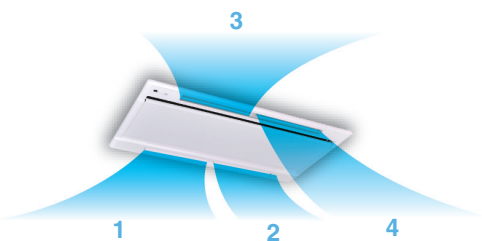
### Wireless



RCN-TW-E2

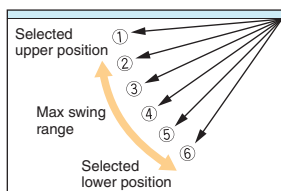
## Individual flap control system

We've optimised our outlet design with advanced technology to allow you to control up to four directions of air flow. Allowing you to control air direction via the flap systems and room temperature.



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

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



## Installation workability

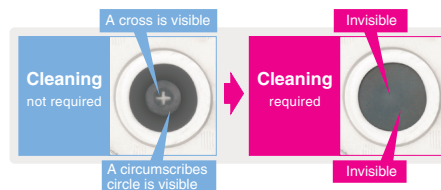
### Drainage spout

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



### Transparent access hole to drain pan

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



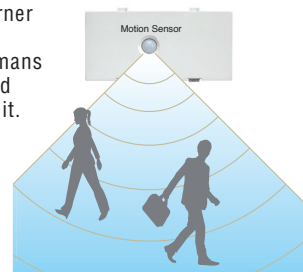
## Motion Sensor

(Option)

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



LB-TW-6W



## 750mm Drain Pump

The drain discharge system allows for a piping layout with a high degree of freedom (dependent on installation location). Discharge from above 750mm from a ceiling surface to the indoor unit.

# Specifications

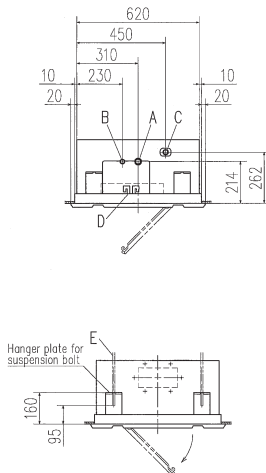
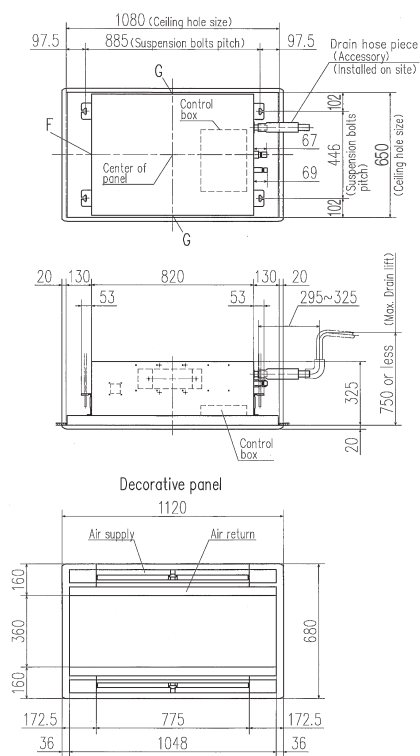
Item	Model	FDTW28KXE6F	FDTW45KXE6F	FDTW56KXE6F	FDTW71KXE6F	FDTW90KXE6F	FDTW112KXE6F	FDTW140KXE6F	
Nominal cooling capacity	kW	2.8	4.5	5.6	7.1	9.0	11.2	14.0	
Nominal heating capacity	kW	3.2	5.0	6.3	8.0	10.0	12.5	16.0	
Power source		1 Phase 220V, 60Hz							
Power consumption	Cooling	0.09	0.10		0.14		0.19		
	Heating	0.09	0.10		0.14		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	m³/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 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(SO-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

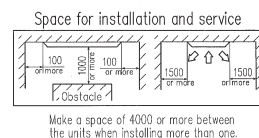
All measurements in mm.

FDTW28KXE6F, 45KXE6F, 56KXE6F, 71KXE6F

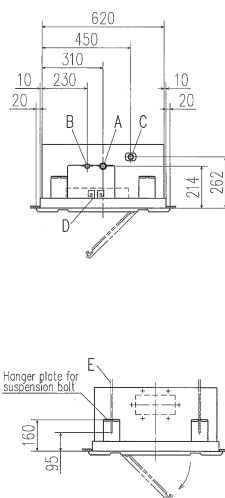
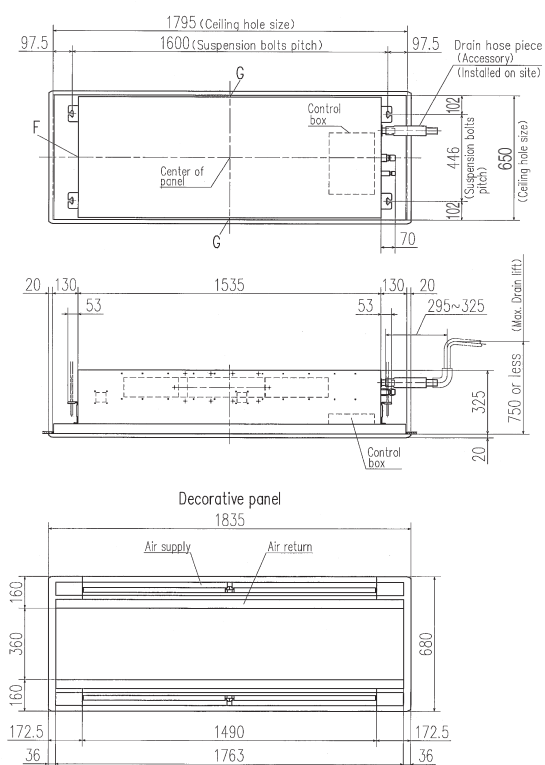


Symbol	Model	28	45,56	71
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)	ø15.88 (5/8") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)
C	Drain piping	VP25 (O.D. 32)		
D	Hole for wiring			
E	Suspension bolts	(M10)		
F	Outside air opening for ducting	(Knock out)		
G	Air outlet opening for ducting	(Knock out)		

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

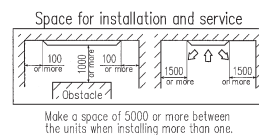


FDTW90KXE6F, 112KXE6F, 140KXE6F



Symbol	Content
A	Gas piping ø15.88 (5/8") (Flare)
B	Liquid piping ø9.52 (3/8") (Flare)
C	Drain piping VP25 (O.D. 32)
D	Hole for wiring
E	Suspension bolts (M10)
F	Outside air opening for ducting (Knock out)
G	Air outlet opening for ducting (Knock out)

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



# Ceiling Cassette -1way-FDTS

## Model No.

FDTS45KXE6F

FDTS71KXE6F



## Remote control (option)

### Wired



RC-EX3A RC-E5 RCH-E3

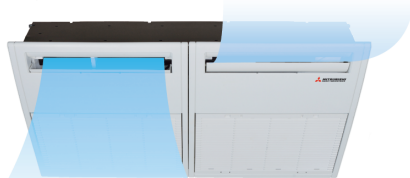
### Wireless



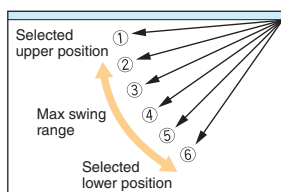
RCN-TS-E2

## 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.

## Wireless remote control

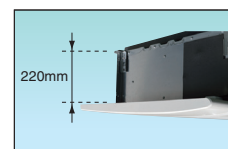
For wireless remote control simply attach an additional panel with infrared receiver on the right side of the main decorative panel.



RCN-TS-E2

## 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 only 27, 28kg.



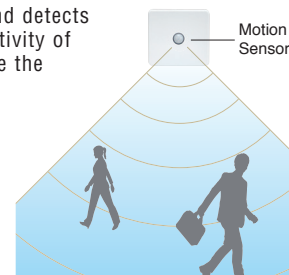
## Motion Sensor

(Option)

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



LB-KIT2



## 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.

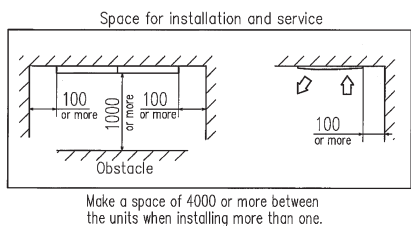
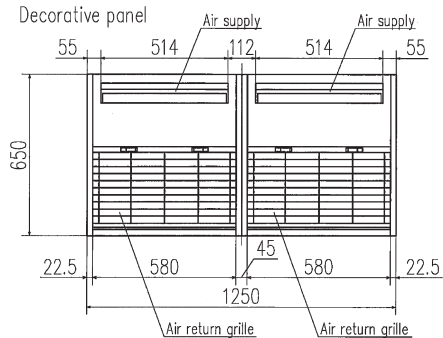
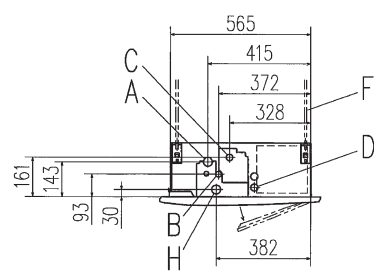
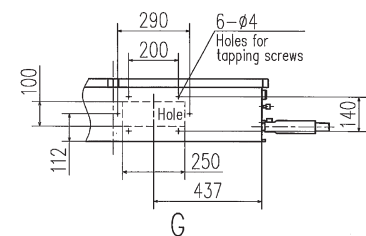
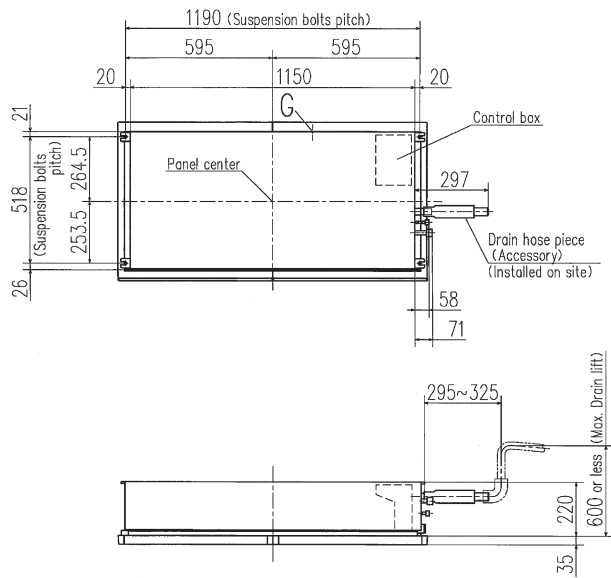
# Specifications

Item	Model	FDTS45KXE6F	FDTS71KXE6F
Nominal cooling capacity	kW	4.5	7.1
Nominal heating capacity	kW	5.0	8.0
Power source		1 Phase 220V, 60Hz	
Power consumption	Cooling	0.04	0.09
	Heating	0.04	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	m³/min	P-Hi:13 Hi:12 Me:11 Lo:9.5	P-Hi:17 Hi:15 Me:12 Lo:10
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 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.  
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	φ12.7 (1/2") (Flare)	φ15.88 (5/8") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	φ9.52 (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 5.4m<sup>3</sup>/min.



Optional wide panel shown for solid ceiling

## Motion Sensor

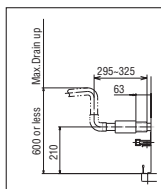
NEW

(Option)

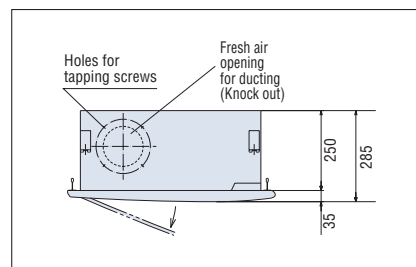
Motion sensor is equipped in the ceiling plane or wall plane and detects the presence/absence and activity of humans in a room to improve the comfort and energy saving performance of the unit.



LB-KIT2



Condensate drain pump included as standard



Ultra slim design at just 250mm above the ceiling

## Specifications

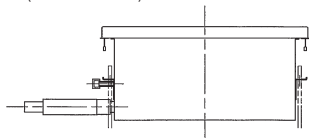
Item		Model	FDTQ22KXE6F				FDTQ28KXE6F				FDTQ36KXE6F			
Panel Name			Direct blow panel		Duct panel		Direct blow panel		Duct panel		Direct blow panel		Duct panel	
Panel mode (Option)			TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER	TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER	TQ-PSA-15W-E	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 220V, 60Hz											
Power consumption	Cooling	kW	0.07				0.07				0.07			
	Heating		0.07				0.07				0.07			
Sound power level		dB(A)	60											
Sound pressure level		dB(A)	P-Hi:45Hi: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 H x W x D	Unit	mm	250x570x570				250x570x570				250x570x570			
	Panel		35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650
Net weight		kg	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3
Air flow		m³/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		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")		
Refrigerant piping size														

1. The data are based on 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.

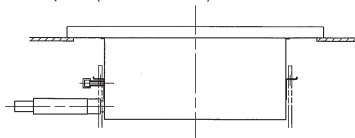
# Dimensions

All measurements in mm.

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

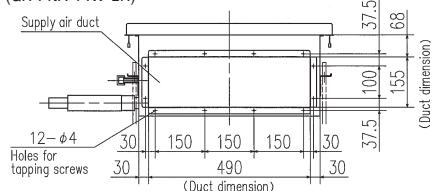


Direct blow panel (TQ-PSB-15W-E)

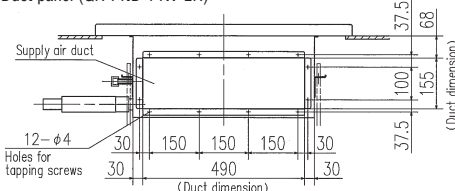


Symbol	Content
	Model
A	Gas piping
B	Liquid piping
C	Drain piping
D	Hole for wiring
E	Suspension bolts
F1,2	Outside air opening for ducting (Knock out)

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

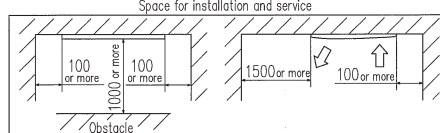
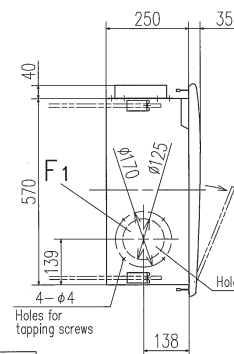
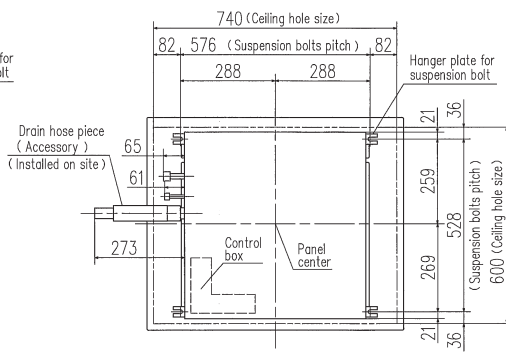
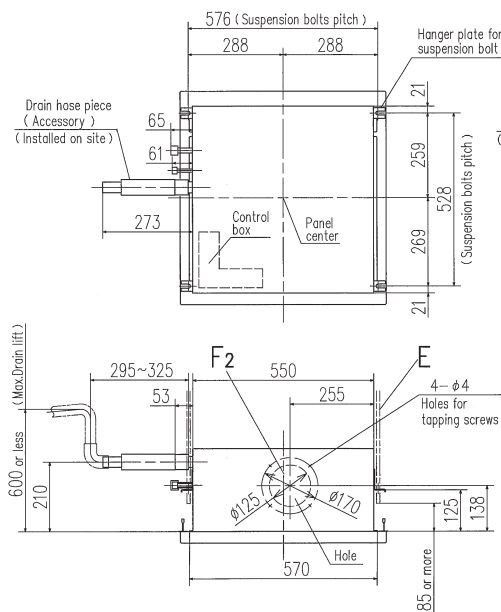


Duct panel (QR-PNB-14W-ER)



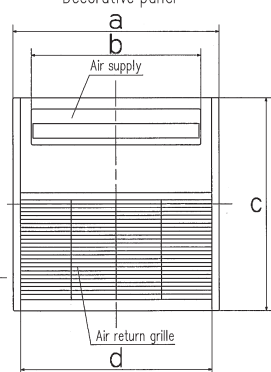
## Notes

- (1) The model name label is attached on the fan case inside the air return grille.
- (2) This unit is designed for 2X2 grid ceiling.  
\* In case of Direct blow panel

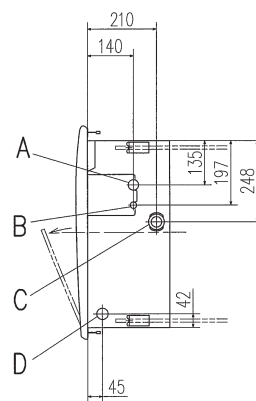
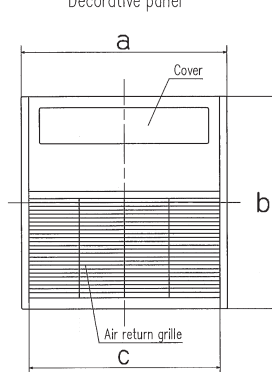


Make a space of 3000 or more between the units when installing more than one.

Decorative panel



Decorative panel



Dimension Table

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

Dimension Table

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



# Duct Connected -High Static Pressure- FDU

NEW

## Model No.

FDU45KXE6F-W	FDU45KXE6F
FDU56KXE6F-W	FDU56KXE6F
FDU71KXE6F-W	FDU71KXE6F
FDU90KXE6F-W	FDU90KXE6F
FDU112KXE6F-W	FDU112KXE6F
FDU140KXE6F-W	FDU140KXE6F
FDU160KXE6F-W	FDU160KXE6F

## Model No.

FDU224KXZE1  
FDU280KXZE1



224・280

## Remote control (option)

Wired



RC-EX3A



RC-E5



RCH-E3

Wireless



RCN-KIT4-E2

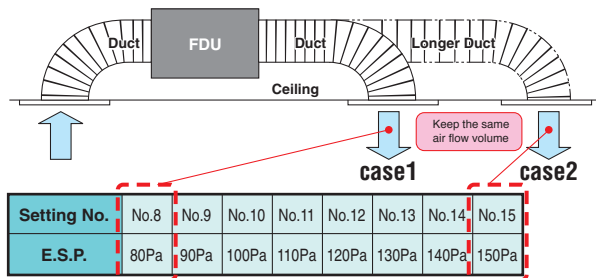
\*R32 indoor unit are not compatible with R410A outdoor unit and vice versa.

## External Static Pressure(E.S.P.) control

Manually set the E.S.P. on the wired controller, and the indoor unit will control the fan speed to keep rated air flow volume at each fan speed setting. You can set a required E.S.P. by your wired remote controller – calculated with the set air flow rate and the pressure loss of the duct.



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



\*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.

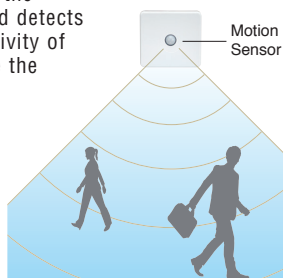
## Motion Sensor

(Option)

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



LB-KIT2

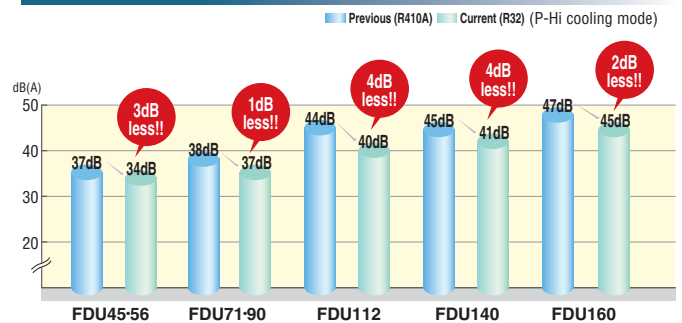


## Thin design

The height of all FDU models only 280mm (45~160).



## Reduction of sound pressure level

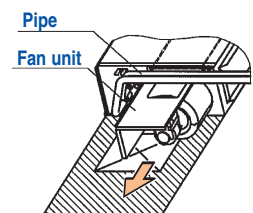


## Transparent inspection window

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

## Improvement of the serviceability

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



# Specifications

Item		Model	FDU45KXE6F-W	FDU56KXE6F-W	FDU71KXE6F-W	FDU90KXE6F-W	FDU112KXE6F-W	FDU140KXE6F-W	FDU160KXE6F-W
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 220V, 60Hz						
Power consumption	Cooling	kW	0.10		0.24		0.31	0.35	0.42
	Heating		0.10		0.24		0.31	0.35	0.42
Sound power level		dB(A)	Cooling:58 Heating:60		Cooling:63 Heating:65		Cooling:68 Heating:69		72
Sound pressure level	Cooling	dB(A)	P-Hi:34 Hi:29 Me:27 Lo:25		P-Hi:37 Hi:31 Me:27 Lo:22		P-Hi:40 Hi:36 Me:34 Lo:28	P-Hi:41 Hi:37 Me:34 Lo:28	P-Hi:45 Hi:38 Me:34 Lo:29
	Heating		P-Hi:35 Hi:30 Me:29 Lo:25		P-Hi:39 Hi:33 Me:28 Lo:23		P-Hi:41 Hi:36 Me:34 Lo:28	P-Hi:41 Hi:37 Me:34 Lo:28	P-Hi:45 Hi:38 Me:34 Lo:29
Exterior dimensions (H x W x D)		mm	280x750x635		280x950x635		280x1368x740		
Net weight		kg	29		34		54		
Air flow		m³/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, Q'ty			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")				

- 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.

# 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 220V, 60Hz						
Power consumption	Cooling	kW	0.10		0.24		0.31	0.35	0.42
	Heating		0.10		0.24		0.31	0.35	0.42
Sound power level		dB(A)	60		65		71	72	74
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		280x1368x740		
Net weight		kg	29		34		54		
Air flow		m³/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, Q'ty			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")				

Item	Model	FDU224KXZE1	FDU280KXZE1
Nominal cooling capacity	kW	22.4	28.0
Nominal heating capacity	kW	25.0	31.5
Power source		1 Phase 220V, 60Hz	
Power consumption	Cooling	1.16	
	Heating	1.16	
Sound power level		dB(A) 75	
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 <sup>3</sup> /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, Q'ty		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")

- 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.

## Round duct adapter

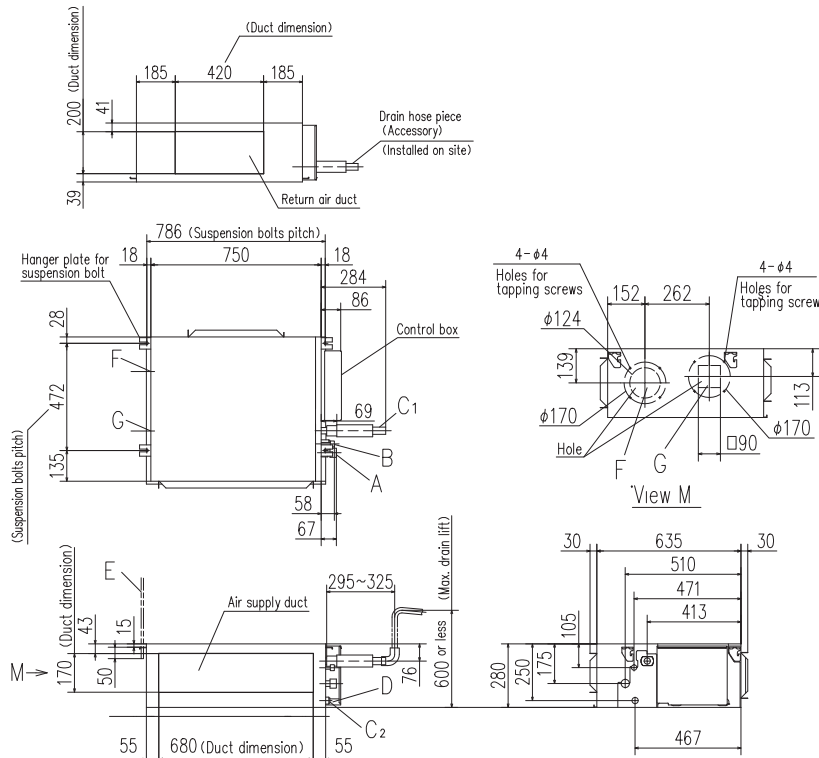
In case of requirements of round duct adapter, please refer to P87.

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

# Dimensions

All measurements in mm.

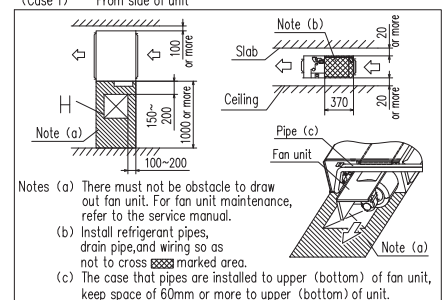
FDU45KXE6F-W, 56KXE6F-W  
FDU45KXE6F, 56KXE6F



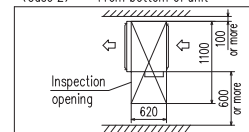
Symbol	Content
A	Gas piping $\phi 12.7$ (1/2") (Flare)
B	Liquid piping $\phi 6.35$ (1/4") (Flare)
C1	Drain piping VP25 (O.D.32)
C2	Drain piping (Gravity drainage) VP20
D	Hole for wiring
E	Suspension bolts M10
F	Outside air opening for ducting (Knock out)
G	Air outlet opening for ducting (Knock out)
H	Inspection opening (450X450)

## Space for installation and service

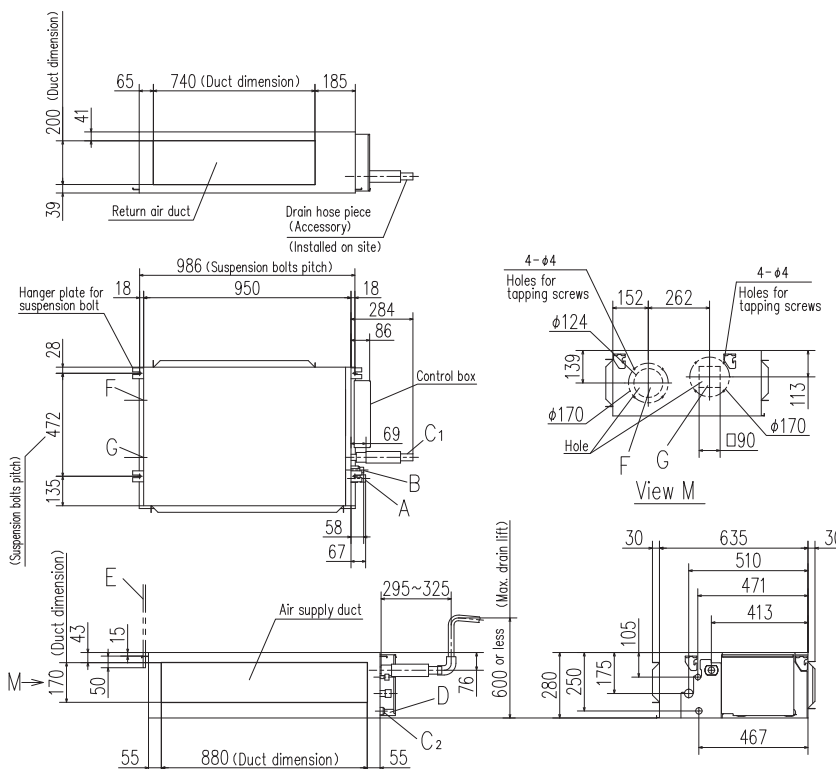
Select either of two cases to keep space for installation and services.  
(Case 1) From side of unit



(Case 2) From bottom of unit



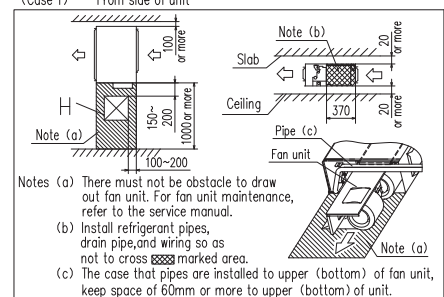
FDU71KXE6F-W, 90KXE6F-W  
FDU71KXE6F, 90KXE6F



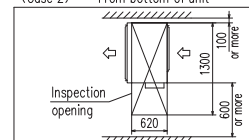
Symbol	Content
A	Gas piping $\phi 15.88$ (5/8") (Flare)
B	Liquid piping $\phi 9.52$ (3/8") (Flare)
C1	Drain piping VP25 (O.D.32)
C2	Drain piping (Gravity drainage) VP20
D	Hole for wiring
E	Suspension bolts M10
F	Outside air opening for ducting (Knock out)
G	Air outlet opening for ducting (Knock out)
H	Inspection opening (450X450)

## Space for installation and service

Select either of two cases to keep space for installation and services.  
(Case 1) From side of unit



(Case 2) From bottom of unit



Technical drawing of the Hanger plate for suspension bolt (Accessories) showing front and side views with dimensions and labels.

**Front View Dimensions:**

- Top: 235 (Duct dimension), 64, 1280 (Duct dimension), 64
- Left: 21.5
- Right: 18, 1404 (Suspension bolts pitch), 1368, 18, 284, 86
- Bottom: 530 (Suspension bolts pitch), 180

**Side View Dimensions:**

- Left: 170 (Duct dimension), 43, 50, 104
- Right: 59, 69, 295~325, 92, 104
- Bottom: 1200 (Duct dimension)

**Labels and Callouts:**

- Return air duct
- Drain hose piece (Accessory) (Installed on site)
- Hanger plate for suspension bolt
- Control panel (implied by 'Control' label)
- Labels A, B, C1, C2, D
- Air supply duct

**Space for installation and service**

Select either of two cases to keep space for installation and services.  
(Case 1) From side of unit

Note (a)

Note (b)

Note (c)

Notes

- (1) There must not be obstacle to draw out 2 fan units. For fan units maintenance, refer to the service manual.
- (2) Install refrigerant pipes, drain pipe, and wiring so as not to cross ~~xxxx~~ marked area.
- (3) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper (bottom) of unit.

(Case 2) From bottom of unit

Note (a)

Note

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

[illegible]

**Space for installation and service**

Select either of two cases to keep space for installation and services.

(Case 1) From side of unit

Note (a)

Note (b)

Note (c)


(Case 2) From bottom of unit

Note (a)

Note (b)

Note (c)

Notes

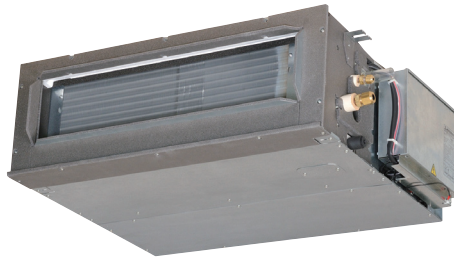
- There must not be obstacle to draw out 2 fan units. For fan units maintenance, refer to the service manual.
- Install refrigerant pipes, drain pipe, and wiring so as not to cross  marked area.
- The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper (bottom) of unit.

# Duct Connected -Low/Middle Static Pressure-FDUM

## Model No.

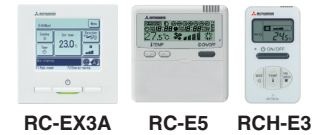
FDUM22KXE6F-W	FDUM22KXE6F
FDUM28KXE6F-W	FDUM28KXE6F
FDUM36KXE6F-W	FDUM36KXE6F
FDUM45KXE6F-W	FDUM45KXE6F
FDUM56KXE6F-W	FDUM56KXE6F
FDUM71KXE6F-W	FDUM71KXE6F
FDUM90KXE6F-W	FDUM90KXE6F
FDUM112KXE6F-W	FDUM112KXE6F
FDUM140KXE6F-W	FDUM140KXE6F
FDUM160KXE6F-W	FDUM160KXE6F

NEW



## Remote control (option)

Wired



Wireless



\*R32 indoor unit are not compatible with R410A outdoor unit and vice versa.

## Filter kit (option)

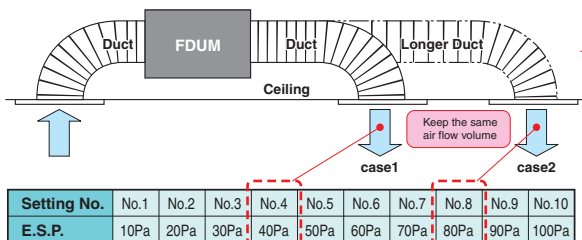
UM-FL1EF : for 22~56  
UM-FL2EF : for 71, 90  
UM-FL3EF : for 112, 140, 160



\*Filter pressure loss:5pa

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

Using the automatic control, DC motor, the most optimum air flow volume is achieved. The Indoor unit will recognise external static pressure automatically and keep rated air flow volume.



E.S.P. button RC-E5  
External static pressure (E.S.P.) can be set by E.S.P. button.

## Thin design

The height of all FDUM models only 280mm



## Transparent inspection window

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

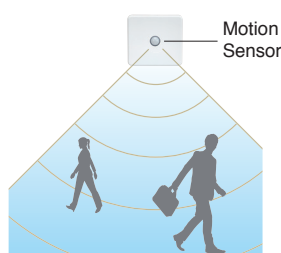
## Motion Sensor

(Option)

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

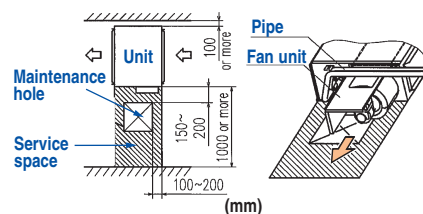


LB-KIT2



## 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 carried out from the right side or the bottom side of the unit.



# Specifications



Item		Model	FDUM22KXE6F-W	FDUM28KXE6F-W	FDUM36KXE6F-W	FDUM45KXE6F-W	FDUM56KXE6F-W
Nominal cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
Nominal heating capacity		kW	2.5	3.2	4.0	5.0	6.3
Power source			1 Phase 220V, 60Hz				
Power consumption	Cooling	kW	0.08				
	Heating		0.08				
Sound power level		dB(A)	Cooling:57 Heating:60		Cooling:58 Heating:60		
Sound pressure level	Cooling	dB(A)	P-Hi:33 Hi:27 Me:25 Lo:23		P-Hi:34 Hi:29 Me:27 Lo:25		
	Heating		P-Hi:36 Hi:30 Me:29 Lo:25		P-Hi:35 Hi:30 Me:29 Lo:25		
Exterior dimensions (H x W x D)		mm	280 x 750 x 635				
Net weight		kg	29				
Air flow		m³/min	P-Hi:13 Hi:10 Me:9 Lo:8				
Maximum external static pressure		Pa	100				
Outside air intake			Possible				
Air filter, Q'ty			Filter kit:UM-FL1EF				
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")		

Item		Model	FDUM71KXE6F-W	FDUM90KXE6F-W	FDUM112KXE6F-W	FDUM140KXE6F-W	FDUM160KXE6F-W
Nominal cooling capacity		kW	7.1	9.0	11.2	14.0	16.0
Nominal heating capacity		kW	8.0	10.0	12.5	16.0	18.0
Power source			1 Phase 220V, 60Hz				
Power consumption	Cooling	kW	0.16	0.25	0.26	0.38	
	Heating		0.16	0.25	0.26	0.38	
Sound power level		dB(A)	Cooling:63 Heating:65		Cooling:68 Heating:69		72
Sound pressure level	Cooling	dB(A)	P-Hi:37 Hi:31 Me:27 Lo:22		P-Hi:40 Hi:36 Me:34 Lo:28	P-Hi:41 Hi:37 Me:34 Lo:28	P-Hi:45 Hi:38 Me:34 Lo:29
	Heating		P-Hi:39 Hi:33 Me:28 Lo:23		P-Hi:41 Hi:36 Me:34 Lo:28		
Exterior dimensions (H x W x D)		mm	280 x 950 x 635		280 x 1368 x 740		
Net weight		kg	34		54		
Air flow		m³/min	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, Q'ty			Filter kit:UM-FL2EF		Filter kit:UM-FL3EF		
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")				

# Specifications



Item	Model	FDUM22KXE6F	FDUM28KXE6F	FDUM36KXE6F	FDUM45KXE6F	FDUM56KXE6F
Nominal cooling capacity	kW	2.2	2.8	3.6	4.5	5.6
Nominal heating capacity	kW	2.5	3.2	4.0	5.0	6.3
Power source		1 Phase 220V, 60Hz				
Power consumption	Cooling	0.10				
	Heating	0.10				
Sound power level	dB(A)	60				
Sound pressure level	dB(A)	P-Hi:37 Hi:32 Me:29 Lo:26				
Exterior dimensions (H x W x D)	mm	280 x 750 x 635				
Net weight	kg	29				
Air flow	m <sup>3</sup> /min	P-Hi:13 Hi:10 Me:9 Lo:8				
Maximum external static pressure	Pa	100				
Outside air intake		Possible				
Air filter, Q'ty		Filter kit:UM-FL1EF				
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")		

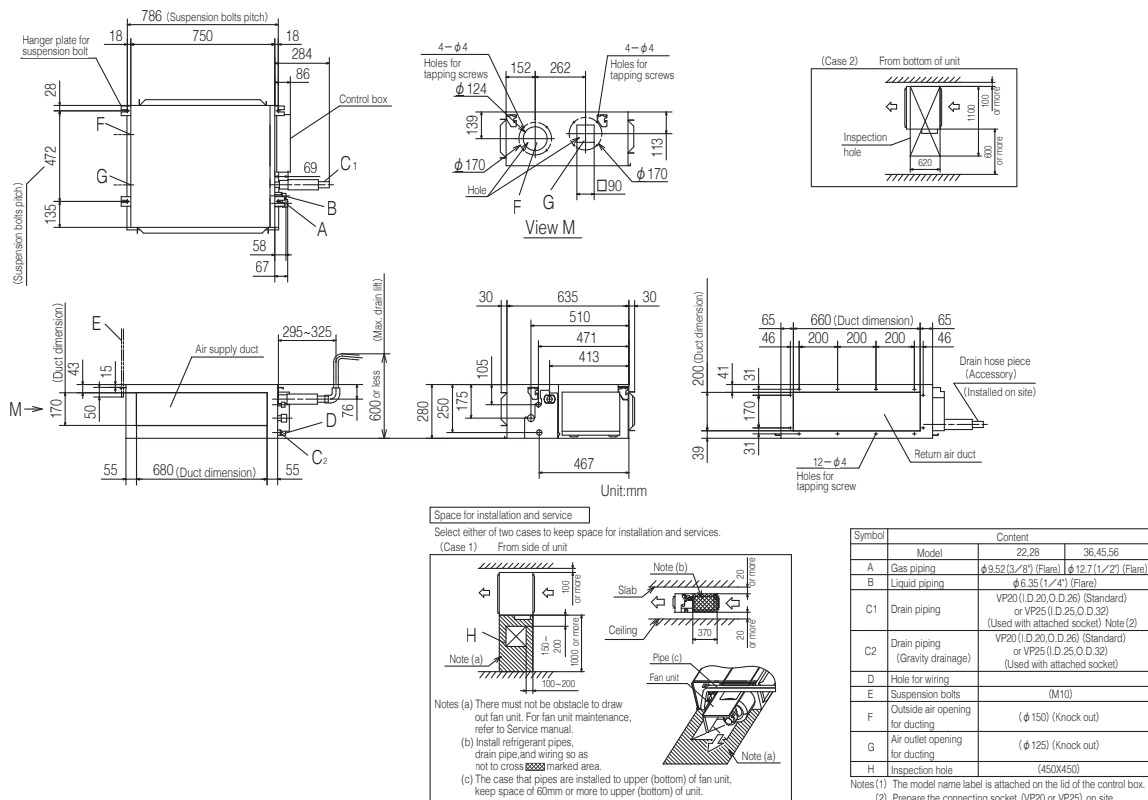
Item		Model	FDUM71KXE6F	FDUM90KXE6F	FDUM112KXE6F	FDUM140KXE6F	FDUM160KXE6F
Nominal cooling capacity		kW	7.1	9.0	11.2	14.0	16.0
Nominal heating capacity		kW	8.0	10.0	12.5	16.0	18.0
Power source			1 Phase 220V, 60Hz				
Power consumption	Cooling	kW	0.20	0.29		0.33	0.45
	Heating		0.20	0.29		0.33	0.45
Sound power level		dB(A)	65		71	72	74
Sound pressure level		dB(A)	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 950 x 635		280 x 1368 x 740		
Net weight		kg	34		54		
Air flow		m³/min	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, Q'ty			Filter kit:UM-FL2EF		Filter kit:UM-FL3EF		
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")				

- 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.

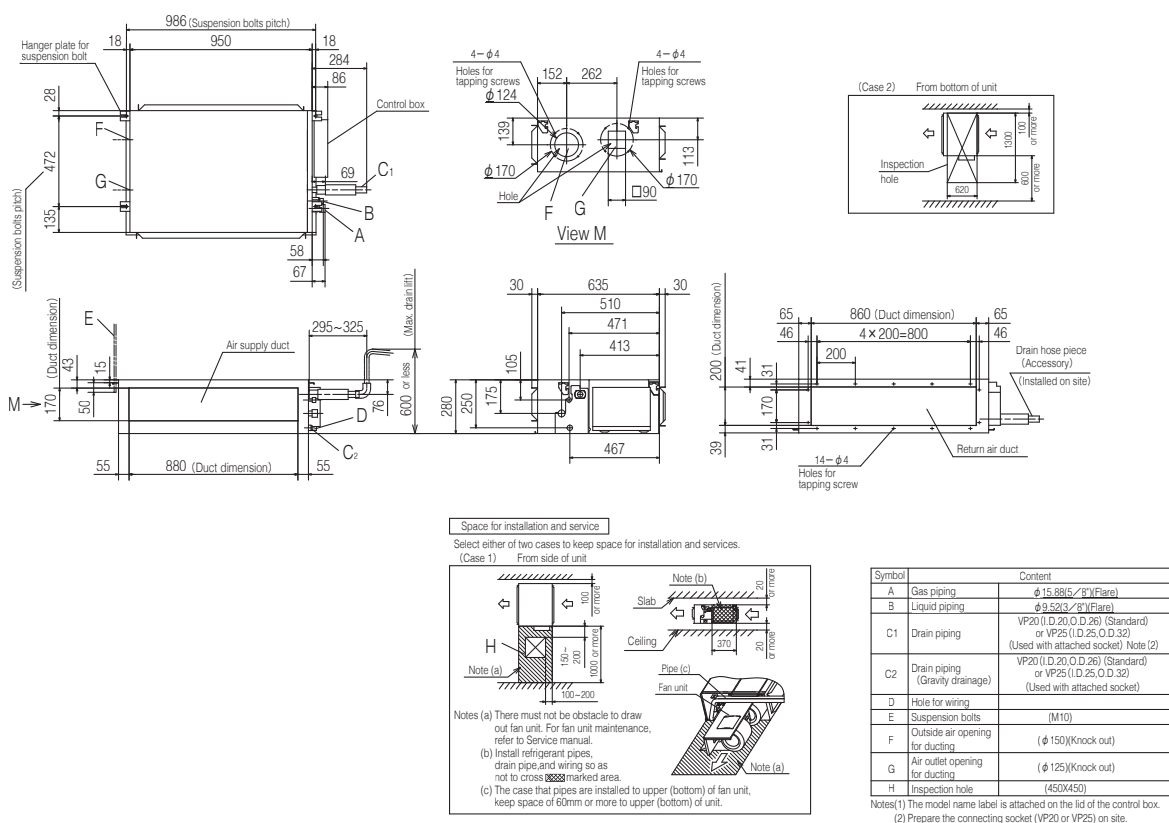
# Dimensions

All measurements in mm.

FDUM22KXE6F-W, 28KXE6F-W, 36KXE6F-W, 45KXE6F-W, 56KXE6F-W  
FDUM22KXE6F, 28KXE6F, 36KXE6F, 45KXE6F, 56KXE6F



FDUM71KXE6F-W, 90KXE6F-W  
FDUM71KXE6F, 90KXE6F



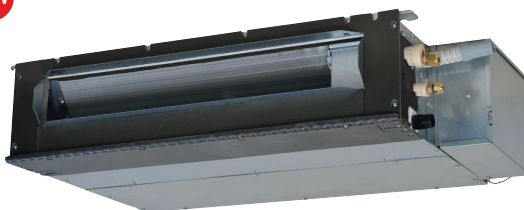


# Duct Connected (thin) -Low Static Pressure-FDUT

## Model No.

FDUT15KXE6F-W	FDUT15KXE6F-E
FDUT22KXE6F-W	FDUT22KXE6F-E
FDUT28KXE6F-W	FDUT28KXE6F-E
FDUT36KXE6F-W	FDUT36KXE6F-E
FDUT45KXE6F-W	FDUT45KXE6F-E
FDUT56KXE6F-W	FDUT56KXE6F-E
FDUT71KXE6F-W	FDUT71KXE6F-E

NEW



\*R32 indoor unit are not compatible with R410A outdoor unit and vice versa.

## Remote control (option)

Wired



RC-EX3A RC-E5 RCH-E3

Wireless



RCN-KIT4-E2

## Motion Sensor

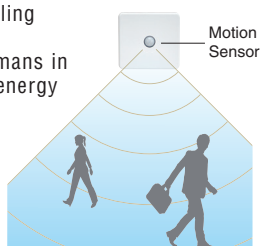
NEW

(Option)

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



LB-KIT2

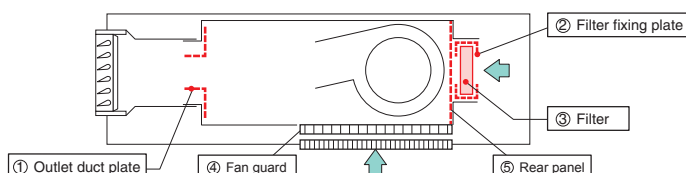


## Duct kit and filter / Bottom air inlet kit

(Option)

Item	Contents	for FDUT15/22/28/36	for FDUT45/56	for FDUT71
Outlet duct plate	①	UT-SAT1EF	UT-SAT2EF	UT-SAT3EF
Filter set	②+③	UT-FL1EF	UT-FL2EF	UT-FL3EF
Bottom air inlet kit	④+⑤	UT-BAT1EF	UT-BAT2EF	UT-BAT3EF

Filter pressure loss : 5 Pa



## Specifications



Item		Model	FDUT15KXE6F-W	FDUT22KXE6F-W	FDUT28KXE6F-W	FDUT36KXE6F-W	FDUT45KXE6F-W	FDUT56KXE6F-W	FDUT71KXE6F-W
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 220V, 60Hz						
Power consumption	Cooling	kW	0.060	0.090	0.072	0.088	0.090	0.08	
	Heating		0.060	0.090	0.074	0.085	0.088	0.07	
Sound power level		dB(A)	Cooling:52 Heating:51	52	Cooling:54 Heating:55	54	55	Cooling:56 Heating:57	
Sound pressure level *1	Cooling	dB(A)	Hi:28 Me:26 Lo:21	Hi:28 Me:26 Lo:22	Hi:30 Me:28 Lo:24	Hi:30 Me:26 Lo:24	Hi:31 Me:27 Lo:24	Hi:32 Me:28 Lo:27	
	Heating		Hi:28 Me:25 Lo:20		Hi:31 Me:29 Lo:25	Hi:30 Me:27 Lo:25	Hi:31 Me:28 Lo:26	Hi:32 Me:28 Lo:26	
Sound pressure level *2		dB(A)	Hi:32 Me:29 Lo:25	Hi:32 Me:29 Lo:25	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	22	21	22	25		31	
Air flow (Standard)		m³/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 (option)			Filter set:UT-FL1EF				Filter set:UT-FL2EF		Filter set:UT-FL3EF
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")	

## 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 220V, 60Hz						
Power consumption	Cooling	kW	0.06	0.07			0.09		0.08
	Heating		0.06	0.08			0.09		0.07
Sound power level		dB(A)	52			57	58	59	
Sound pressure level <sup>*1</sup>		dB(A)	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 <sup>*2</sup>		dB(A)	Hi:32 Me:29 Lo:25			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	22	21			22	25	31
Air flow (Standard)		m³/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
External Static pressure		Pa	Standard: 10 Max: 35				Standard: 10 Max: 50		
Outside air intake			Possible from return duct						
Air filter (option)			Filter set:UT-FL1EF				Filter set:UT-FL2EF		Filter set:UT-FL3EF
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.

2. The data of nominal cooling and heating capacity and sound pressure level are measured with 10Pa of external static pressure.

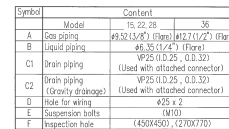
3. The sound level indicates the value of rear-intake type with duct in anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

4. Sound Pressure Level shows the value when the supply duct of 2m and the return duct of 1m (except the Bottom air return) are connected to the unit.

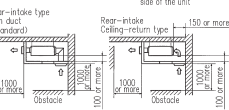
Sound pressure level \*1 : Mike position is 1.5m below the unit, \*2 : Mike position is 1m in front and 1m below of the air supply duct.

All measurements in mm.

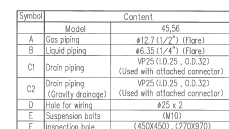
FDUT15KXE6F-W, 22KXE6F-W, 28KXE6F-W, 36KXE6F-W  
FDUT15KXE6F-E, 22KXE6F-E, 28KXE6F-E, 36KXE6F-E



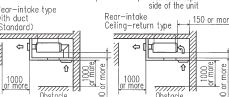
Space for installation and service



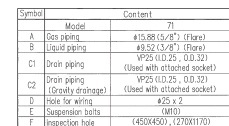
FDUT45KXE6F-W, 56KXE6F-W  
FDUT45KXE6F-E, 56KXE6F-E



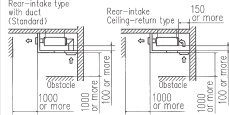
Space for installation and service



FDUT71KXE6F-W  
FDUT71KXE6F-E



Space for installation and service



# Duct Connected (Compact & Flexible) FDUH

## Model No.

FDUH22KXE6F  
FDUH28KXE6F  
FDUH36KXE6F

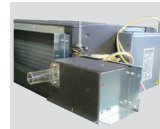


## Filter kit (option) UH-FL1E



\*Filter pressure loss:5pa

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



## Remote control (option)

### Wired



RC-EX3A RC-E5 RCH-E3

### Wireless

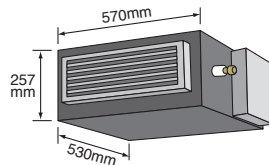


RCN-KIT4-E2

## Compact and thin size, light weight

Our leading high technology has created the best solution for air conditioning in hotels. The compact and thin sized units don't compromise on high energy efficiency all while weighing in at only 20kg.

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



## Motion Sensor

NEW

(Option)

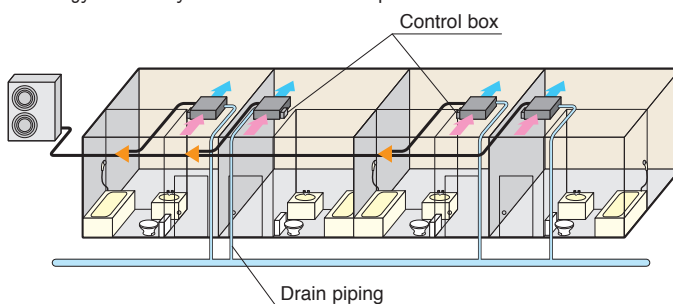
Motion sensor is equipped in the ceiling plane or wall plane and detects the presence/absence and activity of humans in a room to improve the comfort and energy saving performance of the unit.



LB-KIT2

## 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

Designed specially for hotel rooms, control buttons are limited only to the minimum required functions such as ON/OFF, mode, temperature setting and fan speed. It is really simple and easy to use.

# Specifications

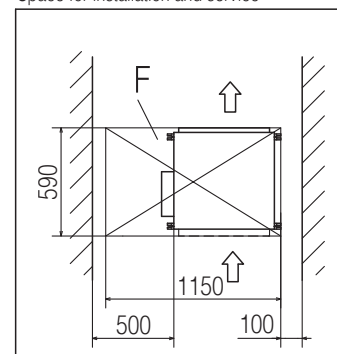
Item	Model	FDUH22KXE6F	FDUH28KXE6F	FDUH36KXE6F
Nominal cooling capacity	kW	2.2	2.8	3.6
Nominal heating capacity	kW	2.5	3.2	4.0
Power source		1 Phase 220V, 60Hz		
Power consumption	Cooling	0.07		
	Heating	0.07		
Sound power level	dB(A)	60		
Sound pressure level	dB(A)	P-Hi:39 Hi: 33 Me: 30 Lo: 27		
Exterior dimensions	HxWxD	257x570x530		
Net weight	kg	20		
Air flow	m³/min	P-Hi:8.5 Hi: 7 Me: 6.5 Lo: 6		
External static pressure	Pa	30		
Outside air intake		Not possible		
Air filter		Filter kit:UH-FL1E(option)		
Remote control(option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2		
Installation data		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.

All measurements in mm.



	Notes
	<p>(1) The model name label is attached on the fan case inside the air return grille.</p> <p>(2) Prepare the connecting socket (VP20) on site. (As for drain piping, it is possible to choose C<sub>1</sub> or C<sub>2</sub>.)</p> <p>(3) When control box is located on the reverse side, Installation space should be modified new location.</p>



# Dimensions

All measurements in mm.

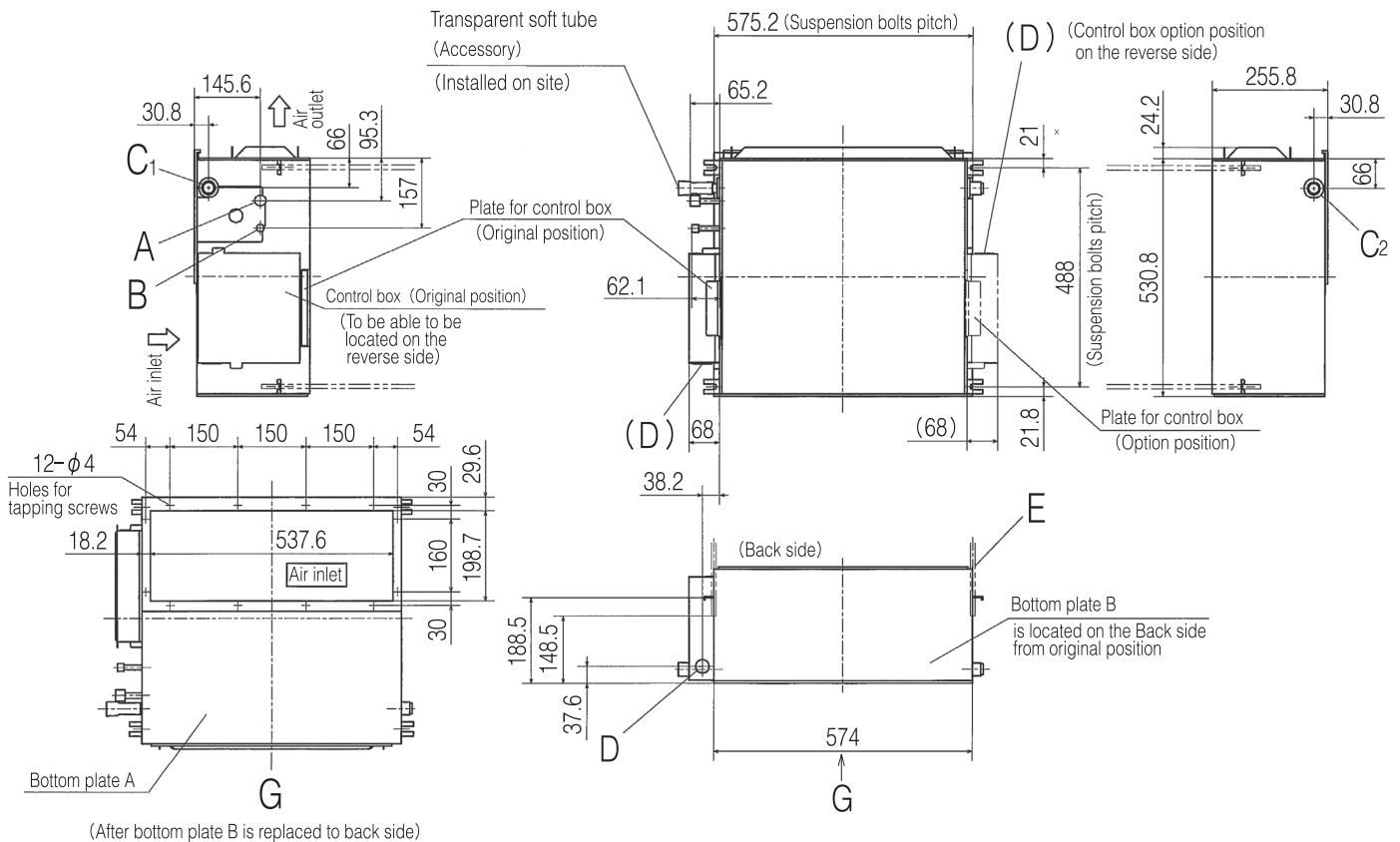
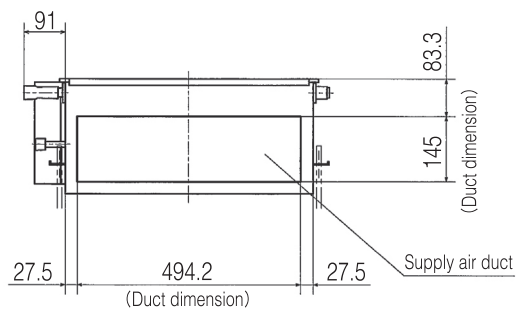
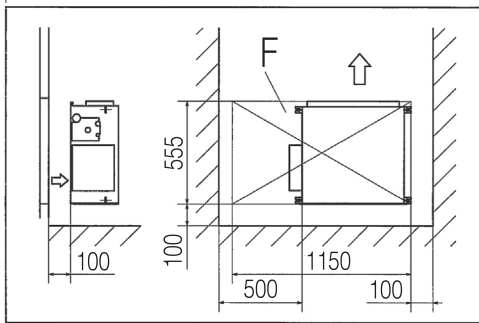
## Bottom suction type

Symbol	Content		
	Model	22,28	36
A	Gas piping	$\phi 9.52 (3/8")$ (Flare)	$\phi 12.7 (1/2")$ (Flare)
B	Liquid piping	$\phi 6.35 (1/4")$ (Flare)	
C <sub>1</sub>	Drain piping	VP20 (I.D.20,O.D.26) Note (2)	
C <sub>2</sub>	Drain piping	To be used instead of "C."	
D	Hole for wiring	$\phi 30$	
E	Suspension bolts	(M10)	
F	Inspection hole	(555 x 1150) 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 C<sub>1</sub> or C<sub>2</sub>)
- (3) When control box is located on the reverse side, Installation space should be modified new location.

Space for installation and service



# Wall Mounted FDK

## Model No.

FDK15KXZE1-W	FDK15KXZE1
FDK22KXZE1-W	FDK22KXZE1
FDK28KXZE1-W	FDK28KXZE1
FDK36KXZE1-W	FDK36KXZE1
FDK45KXZE1-W	FDK45KXZE1
FDK56KXZE1-W	FDK56KXZE1
FDK71KXZE1-W	FDK71KXZE1
FDK90KXZE1-W	FDK90KXZE1

NEW



FDK15-56



FDK71,90

\*R32 indoor unit are not compatible with R410A outdoor unit and vice versa.

## Remote control (option)

### Wired



RC-EX3A RC-E5 RCH-E3

### Wireless



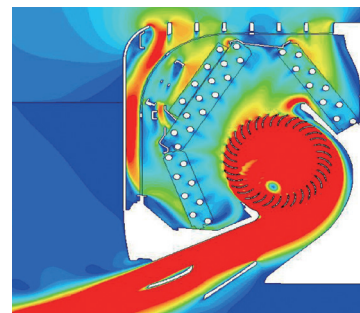
RCN-K-E2: FDK15~56 RCN-K71-E2: FDK71,90

## Elegant Timeless Design

The FDK series air conditioners are inovatively designed with rounded contours that beautifully fit into any of Europe's diverse interior settings. Created by an Italian industrial design studio based in Milan, Tensa srl, the design meets a broad range of requirements. (FDK15-56)

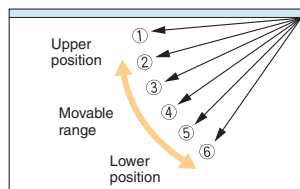
## Jet Technology

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

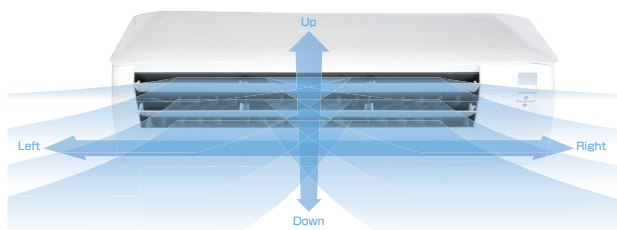
Selection of flap position is possible. A flap can be set at different angles.



\*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**



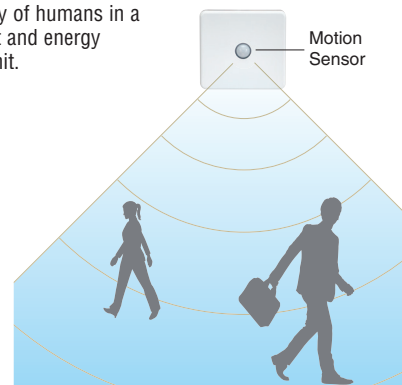
## Motion Sensor

(Option)

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



LB-KIT2



# Specifications



Item	Model	FDK15KXZE1-W	FDK22KXZE1-W	FDK28KXZE1-W	FDK36KXZE1-W	FDK45KXZE1-W	FDK56KXZE1-W	FDK71KXZE1-W	FDK90KXZE1-W	
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 220V, 60Hz								
Power consumption	Cooling	0.02			0.03			0.04	0.05	
	Heating	0.02			0.03			0.04	0.05	
Sound power level	dB(A)	54	55		58		Cooling:58 Heating:61	59	61	
Sound pressure level	dB(A)	P-Hi:38 Hi:34 Me:31 Lo:28	P-Hi:38 Hi:36 Me:30 Lo:27		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	
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:21 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							wired:RC-EX3A, RC-E5, RCH-E3 wireless: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.

# Specifications

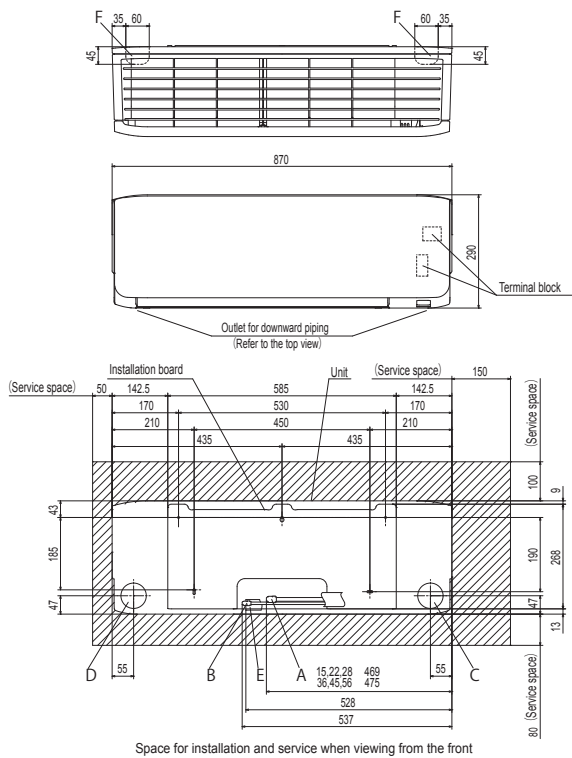


Item		Model	FDK15KXZE1	FDK22KXZE1	FDK28KXZE1	FDK36KXZE1	FDK45KXZE1	FDK56KXZE1	FDK71KXZE1	FDK90KXZE1	
Nominal cooling capacity			kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1	9.0
Nominal heating capacity			kW	1.7	2.5	3.2	4.0	5.0	6.3	8.0	10.0
Power source				1 Phase 220V, 60Hz							
Power consumption	Cooling	kW	0.02				0.03			0.04	0.05
	Heating		0.02				0.03			0.04	0.05
Sound power level			dB(A)	54	55		58		Cooling:58 Heating:61	59	61
Sound pressure level	Cooling	dB(A)	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	
	Heating							P-Hi:44 Hi:42 Me:37 Lo:33			
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	m³/min	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:21 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						wired:RC-EX3A, RC-E5, RCH-E3 wireless: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")	

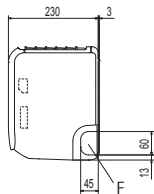
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.  
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

# Dimensions

All measurements in mm.  
FDK15KXZE1-W, 22KXZE1-W, 28KXZE1-W, 36KXZE1-W, 45KXZE1-W, 56KXZE1-W  
FDK15KXZE1, 22KXZE1, 28KXZE1, 36KXZE1, 45KXZE1, 56KXZE1

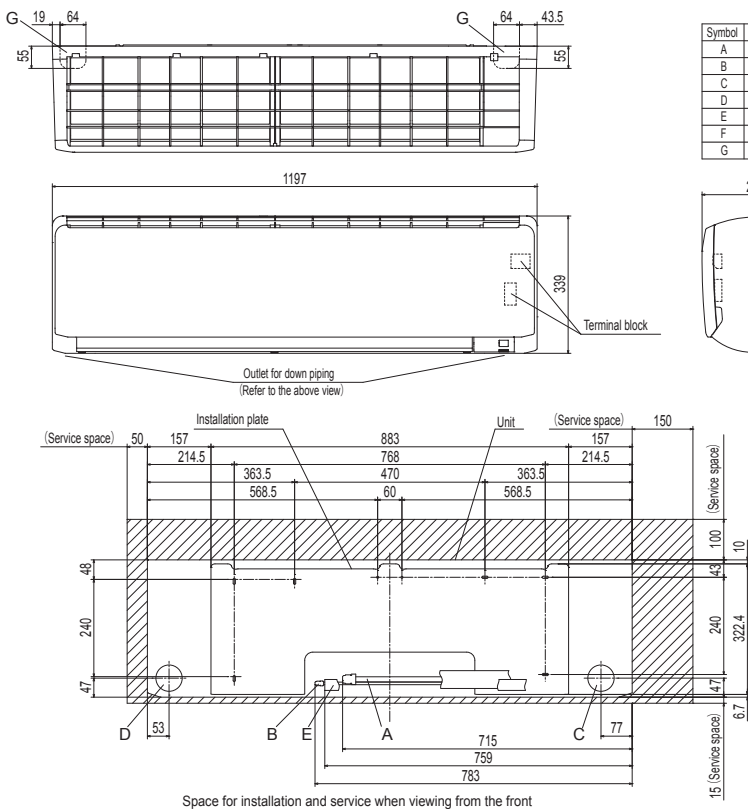


Symbol	Model	15.22.28	36.45.56
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Hole on wall for right rear piping	(φ65)	
D	Hole on wall for left rear piping	(φ65)	
E	Drain hose	VP16 (O.D.22)	
F	Outlet for wiring (on both side)		

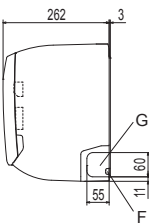


Note (1) The model name label is attached on the right side of the unit.

FDK71KXZE1-W, 90KXZE1-W  
FDK71KXZE1, 90KXZE1



Symbol	Content
A	Gas piping
B	Liquid piping
C	Hole on wall for right rear piping
D	Hole on wall for left rear piping
E	Drain hose
F	Outlet for wiring (on both side)
G	Outlet for piping (on both side)



Note (1) The model name label is attached on the underside of the indoor unit.

# Ceiling Suspended FDE

## Model No.

FDE36KXZE1  
FDE45KXZE1  
FDE56KXZE1  
FDE71KXZE1  
FDE112KXZE1  
FDE140KXZE1



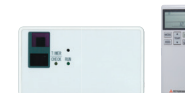
## Remote control (option)

### Wired



RC-EX3A RC-E5 RCH-E3

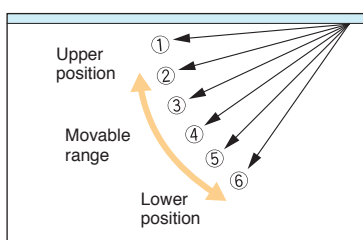
### Wireless



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.

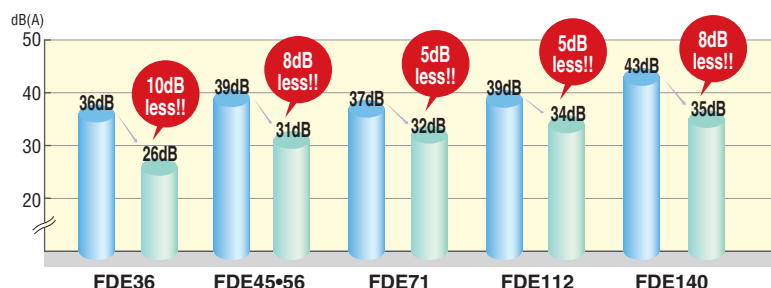
## Lighter than ever

By decreasing the number of fan motors from two to one, we reduced the overall weight of our FDE units.

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

## Reduction of sound pressure level (Lo mode)

We achieved the industry's lowest sound pressure levels by decreasing air flow volume, decreasing pressure loss with employment of one fan motor and optimising casing and distributor shape.  
(comparison of previous model)



## Motion Sensor

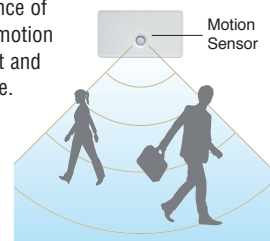
(Option)

Reduce your environmental impact with our optional motion sensor feature.

By detecting presence or absence of human activity in a room, the motion sensor improves room comfort and unit energy saving performance.



LB-E



# Specifications

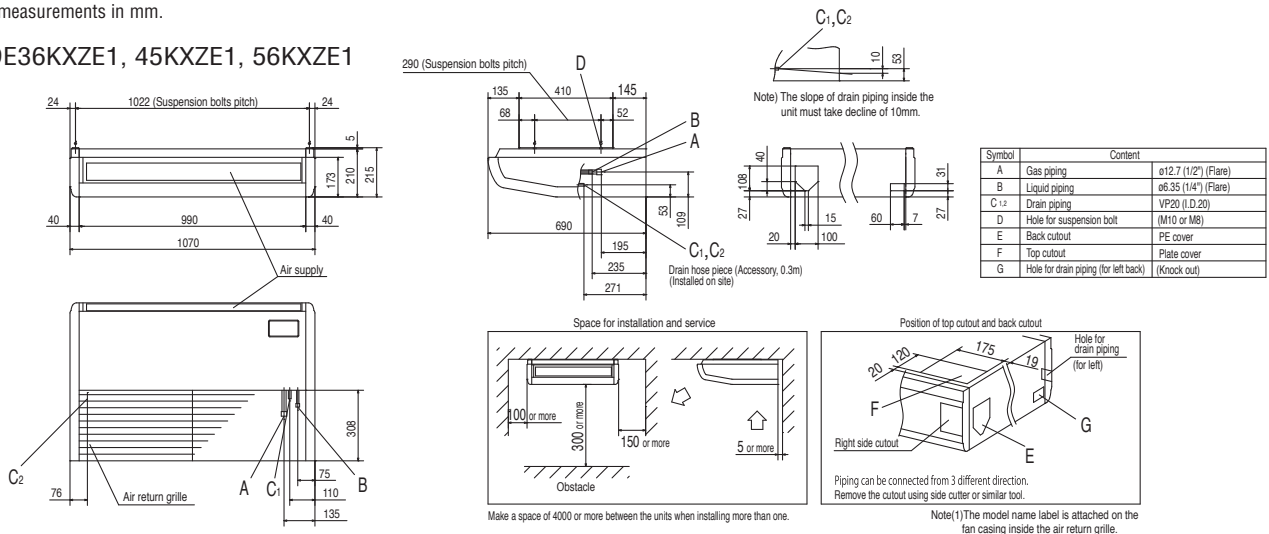
Item	Model	FDE36KXZE1		FDE45KXZE1		FDE56KXZE1		FDE71KXZE1		FDE112KXZE1		FDE140KXZE1	
Nominal cooling capacity	kW	3.6		4.5		5.6		7.1		11.2		14.0	
Nominal heating capacity	kW	4.0		5.0		6.3		8.0		12.5		16.0	
Power source		1 Phase 220V, 60Hz											
Power consumption	Cooling	kW		0.05				0.07		0.10		0.13	
	Heating	kW		0.05				0.07		0.10		0.13	
Sound power level	dB(A)	60						62		61		64	
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	m³/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	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.  
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

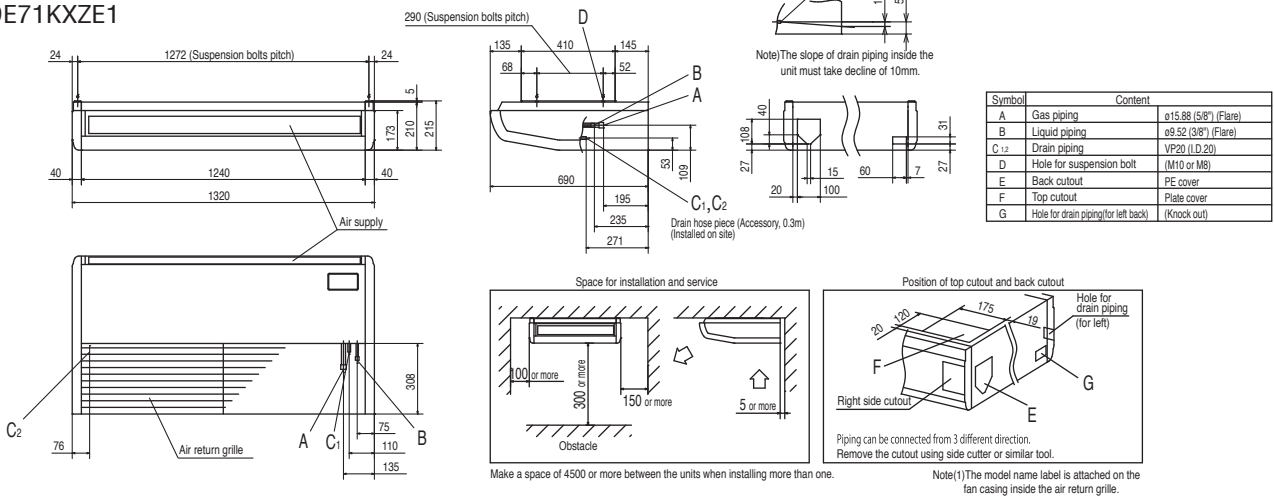
# Dimensions

All measurements in mm.

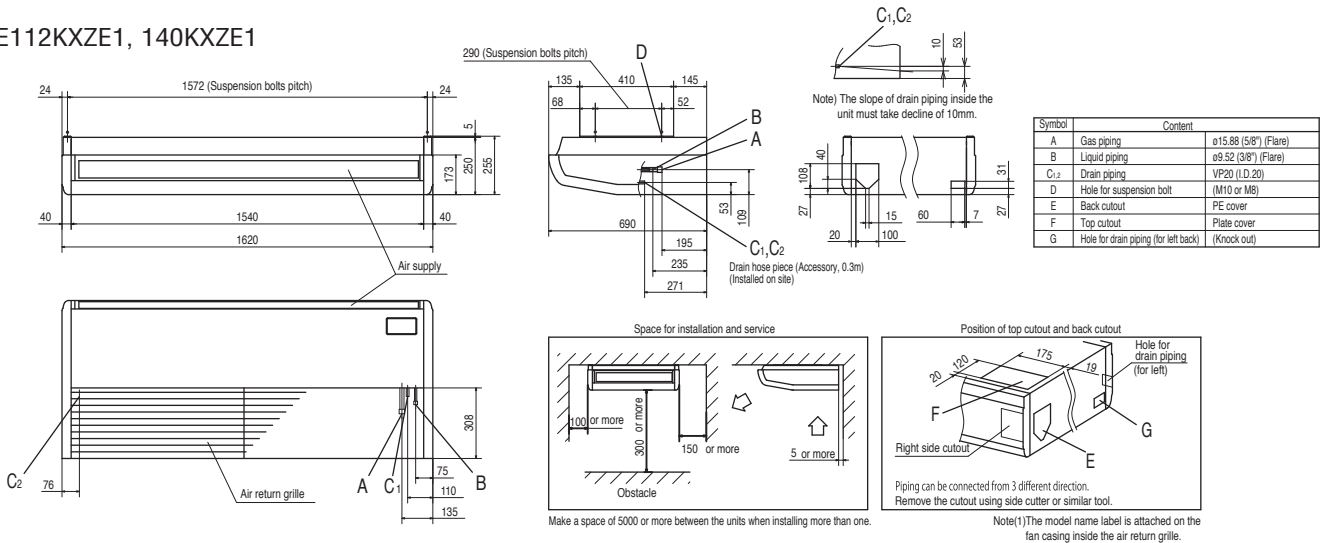
## FDE36KXZE1, 45KXZE1, 56KXZE1



## FDE71KXZE1



## FDE112KXZE1, 140KXZE1



# Floor Standing -2way- FDFW

## Model No.

FDFW28KXE6F

FDFW45KXE6F

FDFW56KXE6F



## Auto air outlet selection



## Remote control (option)

Wired



RC-EX3A

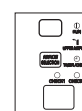


RC-E5



RCH-E3

Wireless



RCN-FW-E2

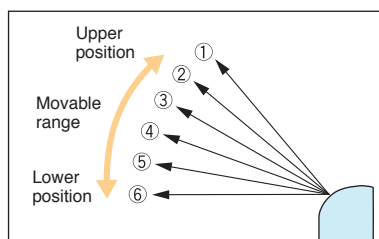
## Sophisticated Design

With an elegant semi flat front panel in stylish 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.

## 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.

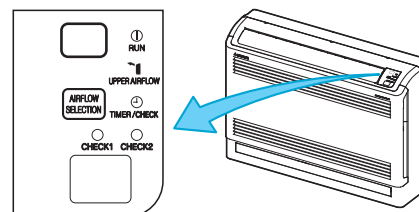


## Quiet Operation

Thanks to the 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 only 30dB(A).

## 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)

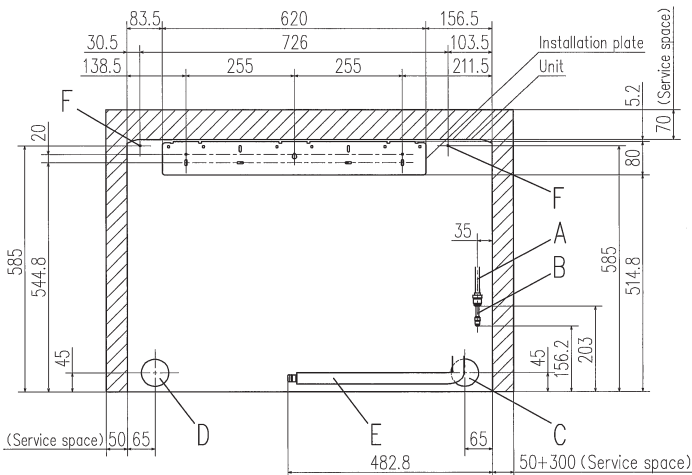
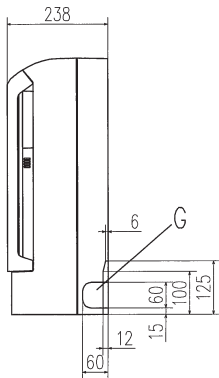
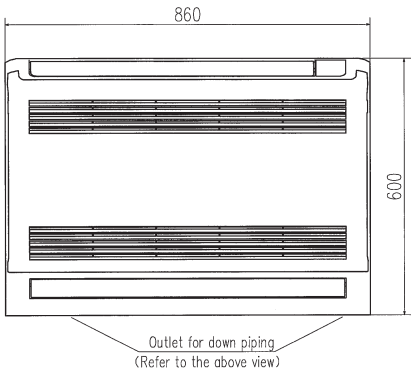
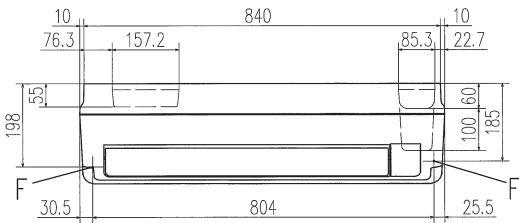
# Specifications

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 220V, 60Hz		
Power consumption	Cooling kW	0.02	0.02	0.03
	Heating kW	0.02	0.02	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	
Air flow (Standard)	m <sup>3</sup> /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	
		FDFW28KXE6F	FDFW45KXE6F,56KXE6F
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Hole on wall for right rear piping	(φ65)	
D	Hole on wall for left rear piping	(φ65)	
E	Drain hose	VP16 (I.D.16)	
F	Screw point fasten the indoor unit	φ5	
G	Outlet for piping (on both side)		

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

# Outdoor Air Processing unit FDU-F

## Model No.

FDU650FKXZE1  
FDU1100FKXZE1  
FDU1800FKXZE1  
FDU2400FKXZE1



## Remote control (option)

### Wired



RC-EX3A RC-E5 RCH-E3

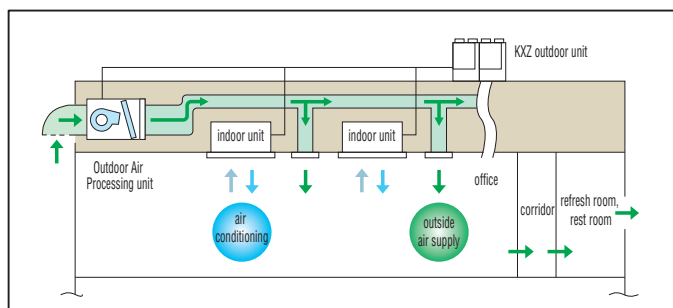
### Wireless



RCN-KIT4-E2

## Create a fresher environment with the Outdoor Air Processing feature

Connect your KXZ system to an Outdoor Air Processing unit with one streamlined system. This advanced technology allows you to enjoy a fresh and comfortable air supply.



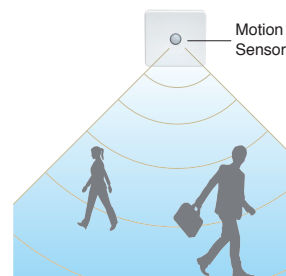
## Motion Sensor

(Option)

Built into the ceiling or wall plane, our motion sensor smart technology improves energy saving performance and overall room comfort.

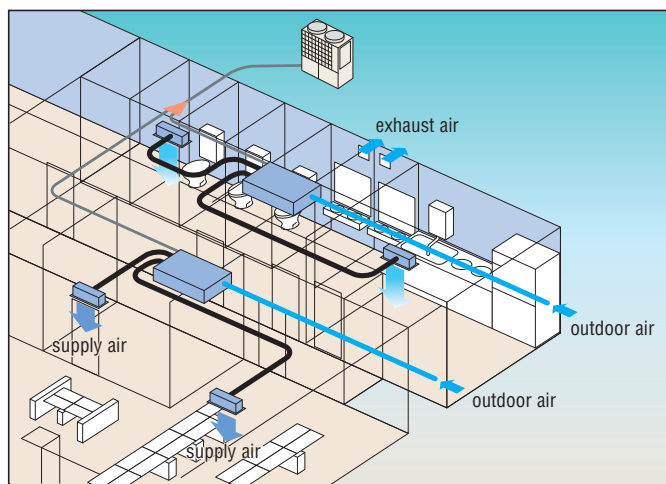


LB-KIT2



## 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 locations for offices, refresh rooms, restrooms and kitchens of restaurants etc.



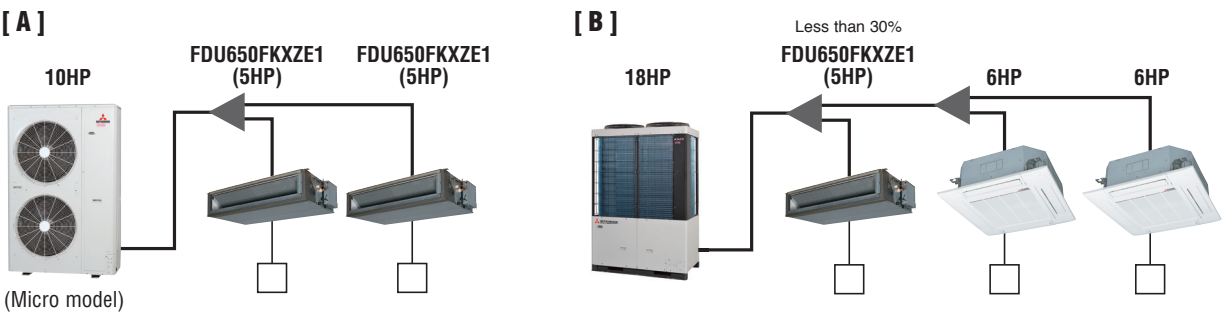
- (1) This unit is the specific unit for processing the outdoor air temperature closer to the room temperature. For conditioning the room temperature a dedicated air conditioner is required additionally.
- (2) This unit monitors the outdoor air temperature and controls the thermostat's ON/OFF at the setting temperature by the remote controller, which indicates the outdoor air temperature for controlling the thermostat's ON/OFF. When the 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 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 the 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 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 KXZ outdoor units, not connectable to 4~6HP, KXZ Lite.

## Combination with Outdoor units

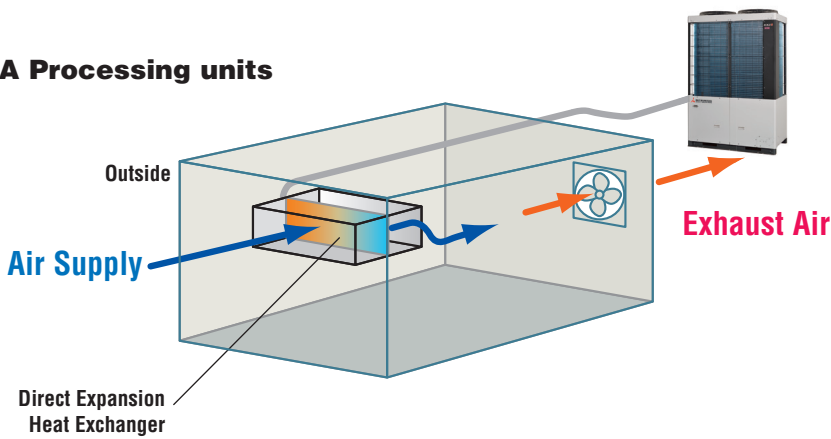
	case	Combination
A	Only OA processing units are connected with outdoor units.	The total capacity of FDU-F is 50~100% of outdoor capacity and max quantity of FDU-F is 2 units.
B	Both of OA processing units and dedicated air conditioner are connected with outdoor units.	The total capacity of FDU-F and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



## Concept

FDU-F is an 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



## Specifications

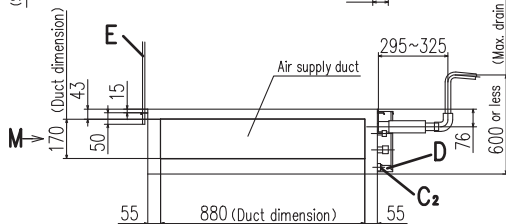
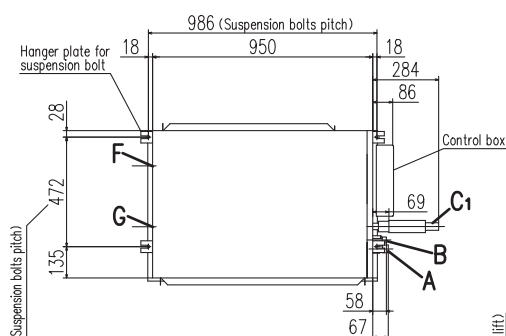
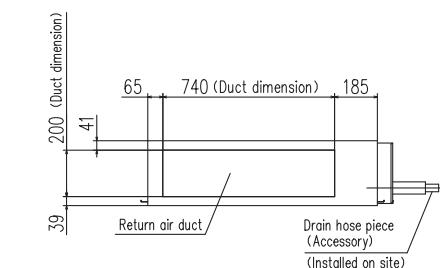
Item		Model	FDU650FKXZE1	FDU1100FKXZE1	FDU1800FKXZE1	FDU2400FKXZE1
Nominal cooling capacity		kW	9.0	14.0	22.4	28.0
Nominal heating capacity		kW	6.5	10.5	16.0	21.5
Power source			1 Phase 220V, 60Hz			
Power consumption	Cooling	kW	0.24	0.35	1.16	1.16
	Heating		0.24	0.35	1.16	1.16
Sound pressure level		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)		m³/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 Refrigerating piping size		mm (in)	Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")			Liquid line:ø9.52(3/8") Gas line:ø22.22(7/8")

1. 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).
2. Temperature range of outdoor air must be 20~40°CDB (32°CWB) during cooling and 0~24°CDB during heating.
3. Sound level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient conditions.
4. The factory F.S.P. setting is set within the range of 10 - 120Pa.If SW8-4 is turned to "ON". F.S.P. setting range can be changed to 10 - 200 Pa. (with RC-FX3A and RC-F5 onlv)

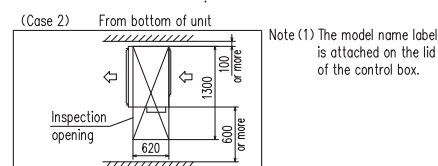
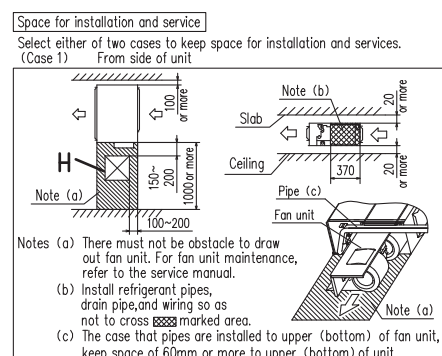
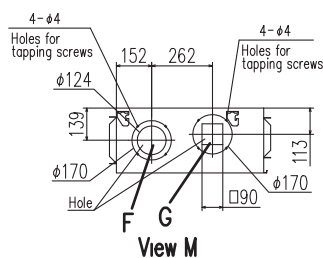
## Dimensions

All measurements in mm.

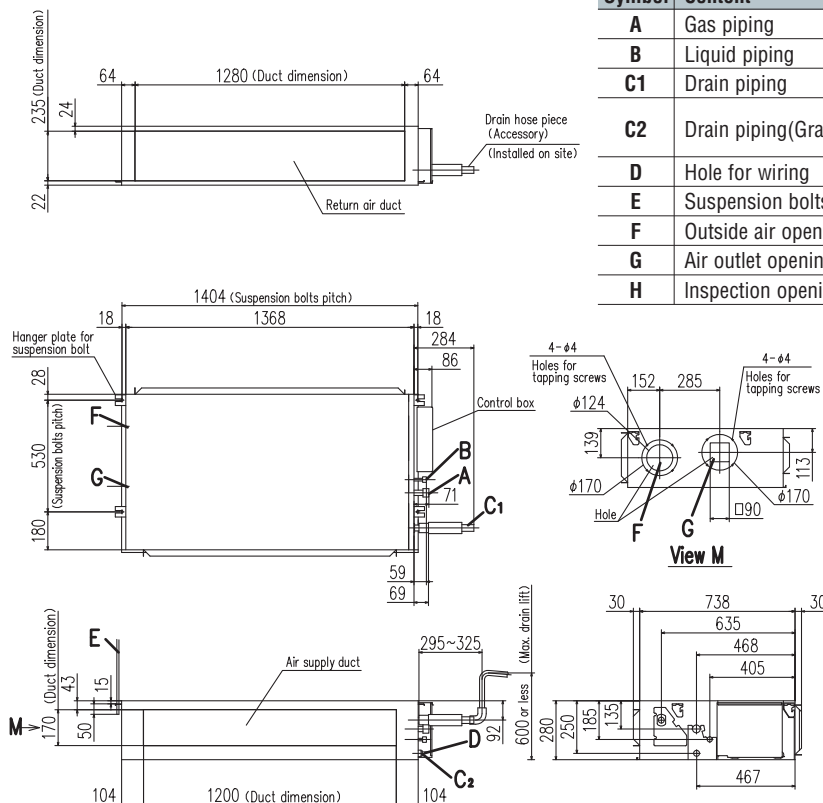
## FDU650FKXZE1



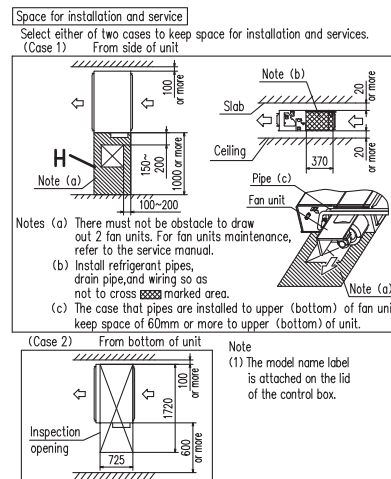
Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C1	Drain piping	VP25(O.D.32)
C2	Drain piping(Gravity drainage)	V20(O.D.26)(standard) or VP25(O.D.32)(Used with attached socket)
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)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



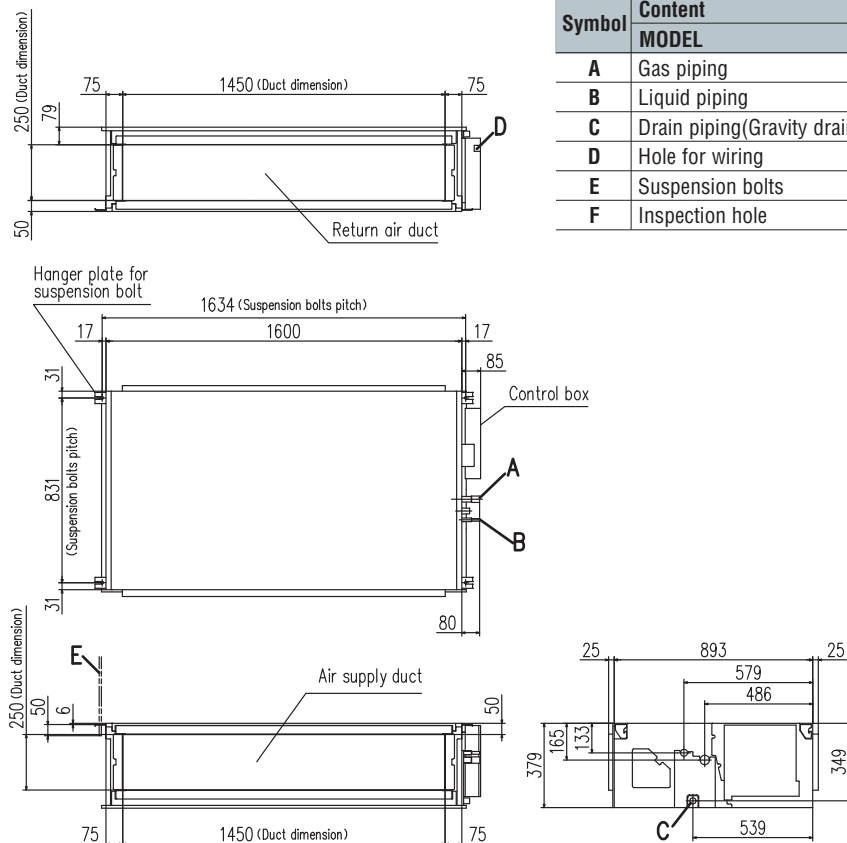
# FDU1100FKXZE1



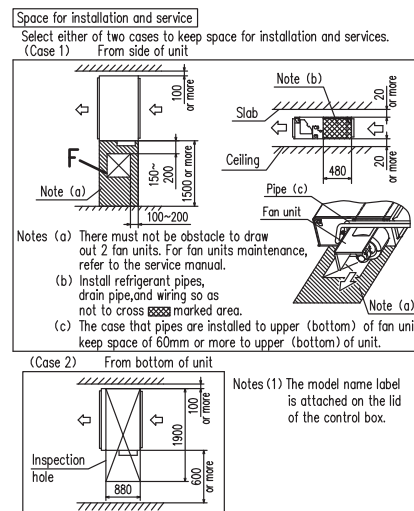
Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C1	Drain piping	VP25(O.D.32)
C2	Drain piping(Gravity drainage)	V20(O.D.26)(standard) or VP25(O.D.32)(Used with attached socket)
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)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



# FDU1800FKXZE1, FDU2400FKXZE1

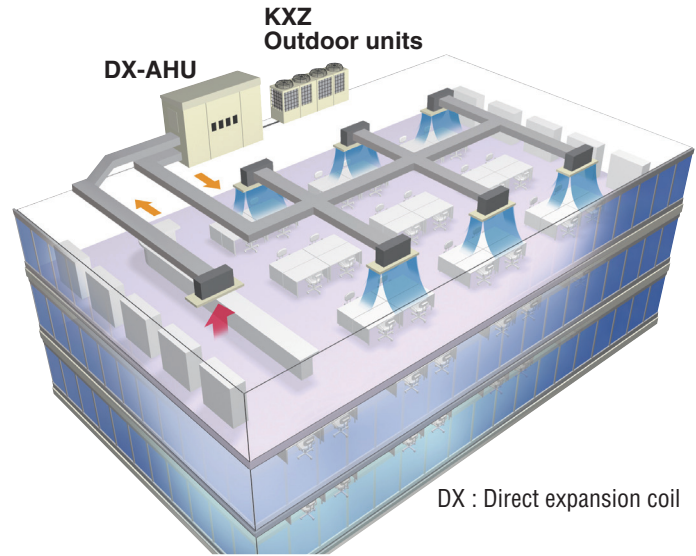
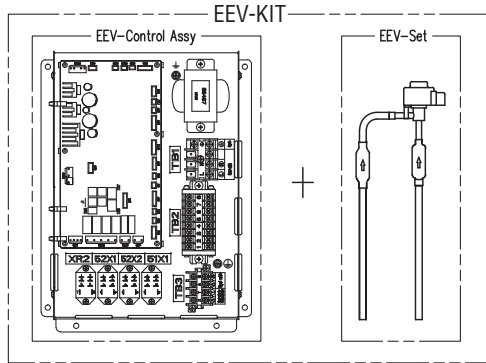


Symbol	Content	1800	2400
A	Gas piping	ø19.05 (3/4")	ø22.22 (7/8")
B	Liquid piping	ø9.52 (3/8") (Brazing)	
C	Drain piping(Gravity drainage)	VP25(O.D.32)	
D	Hole for wiring		
E	Suspension bolts	M10	
F	Inspection hole	(450X450)	



# 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 system.  
(AHU : Air Handling Unit, FCU : Fan Coil Unit)
- EEV-KIT is composed of one EEV-Control ASSY and one EEV-Set.



\*Conditions

Inlet air temperature of AHU is limited to that of FDC-KXZE1.

## Features

EEV-Control Assy has 2 types.

Refrigeration system	EEV-Control Assy	
	EEVKIT6-E-M	EEVKIT6-E-C
Single		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

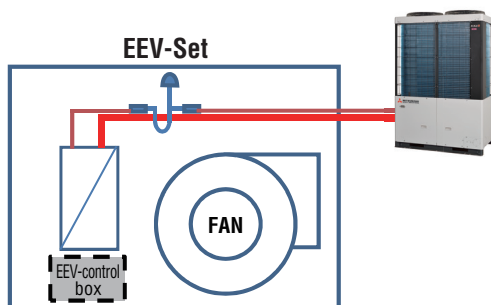
- Single refrigeration system EEVKIT6-E-C ... Possible with multiple refrigeration systems
- Multiple refrigeration system EEVKIT6-E-M (1) + EEVKIT6-E-C ... Possible with multiple refrigeration systems(Max32)
- EEVKIT6-E-C is common for both single and multiple refrigeration systems

## Single refrigerant system

- Single refrigeration system is the 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.

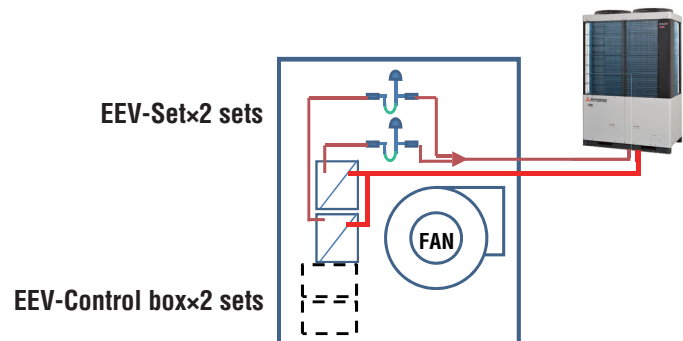
### System A

- 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) AHU capacity.



## Multiple refrigerant system

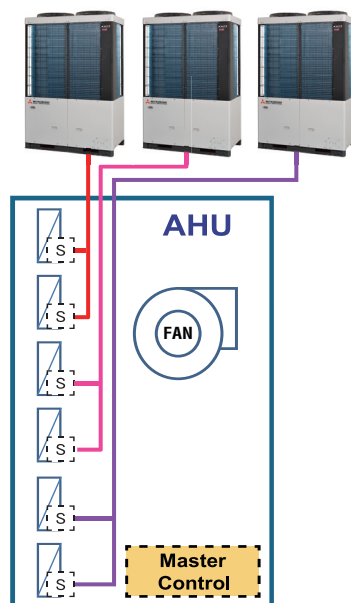
Multiple refrigeration system is an AHU system with multiple independent refrigerant circuits and one master control to control the whole system.

### Advantages

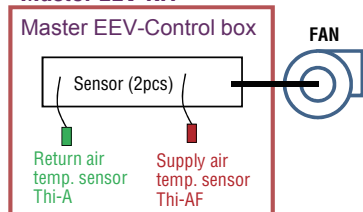
- Large systems are possible [max capacity 896kW]
- External control
- Capacity step control
- Can connect to 32 units

### Additional parts over a single refrigeration system

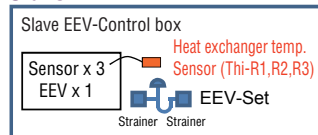
- One master control
- The slave EEV control and EEV set are the same as a single refrigeration system.



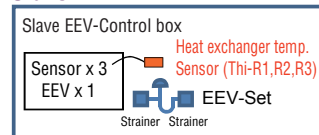
#### Master EEV-KIT



#### Slave EEV-KIT #1

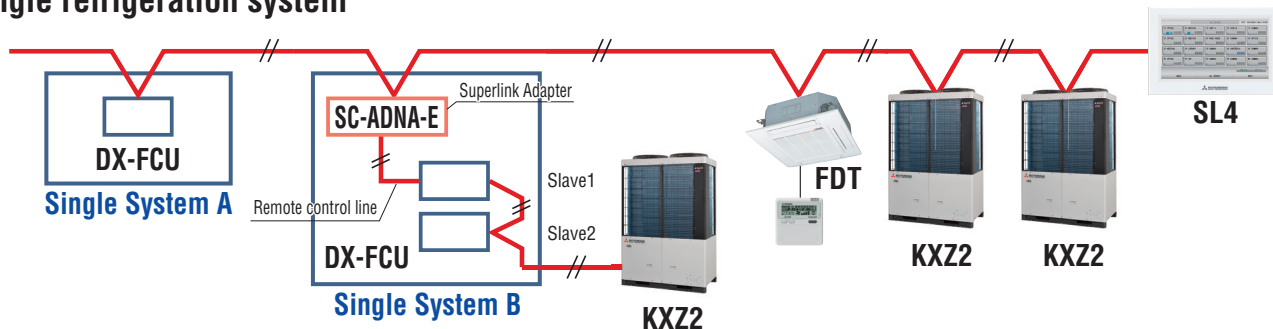


#### Slave EEV-KIT #2

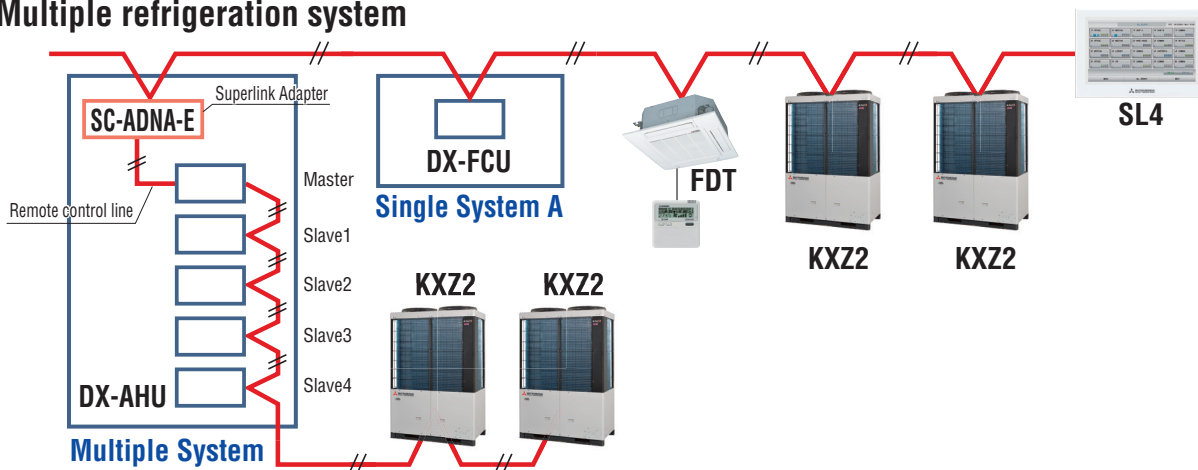


## Connection to SUPERLINK II

### 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	indoor unit	remote control
wired	all models	RC-EX3A	wireless	FDT	RCN-T-5BW(-5BB)-E2	FDTs	RCN-TS-E2	FDE	RCN-E-E3
		FDTC		RCN-TC-5AW-E3	FDK22~56	RCN-K-E2	FDFW	RCN-FW-E2	
		FDTW		RCN-TW-E2	FDK71	RCN-K71-E2	others*	RCN-KIT4-E2	

\*FDTQ, FDU, FDUM, FDUU, FDUH, FDU-F

### Wired remote control (option)

#### RC-EX3A

Intuitive touch controller with Liquid Crystal Display

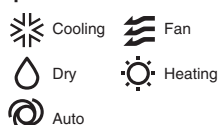
#### User friendly

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

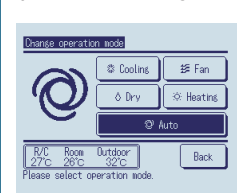
#### Easy view

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

#### Operation mode



#### Operation mode setting screen

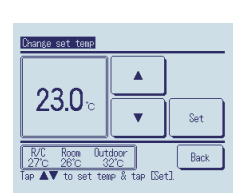


The desired operation mode can be selected by simply tapping this button.



#### Run / Stop

#### Setting temperature screen



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

#### High power operation

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

## 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-EX3A 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.
	Silent mode	Set the period of time to operate the Outdoor unit with prioritizing the quietness.
Convenience	Function switch	The function switch allows user to select and set two functions among 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 see 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

**RCN-T-5BW-E2**  
**RCN-T-5BB-E2**



**RCN-TC-5AW-E3**



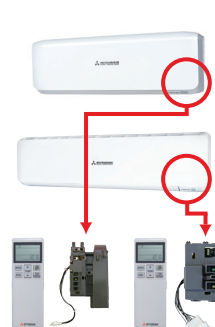
**RCN-TW-E2**



**RCN-TS-E2**



**RCN-K-E2,**  
**RCN-K71-E2**



**RCN-E-E3**



**RCN-FW-E2**



**RCN-KIT4-E2**



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

## Wired remote control (option)

**RC-E5**

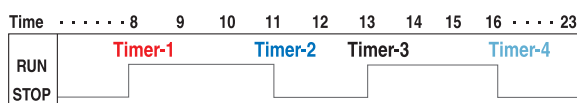


The RC-E5 controller enables extensive access to service and maintenance technical data combined with easy to use functions and a clear LCD display.

### 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

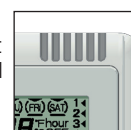


### Run hour meters to facilitate maintenance checking

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)**



Designed specially for hotel rooms, the controller's buttons are limited only to the 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 indoor units, by 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**

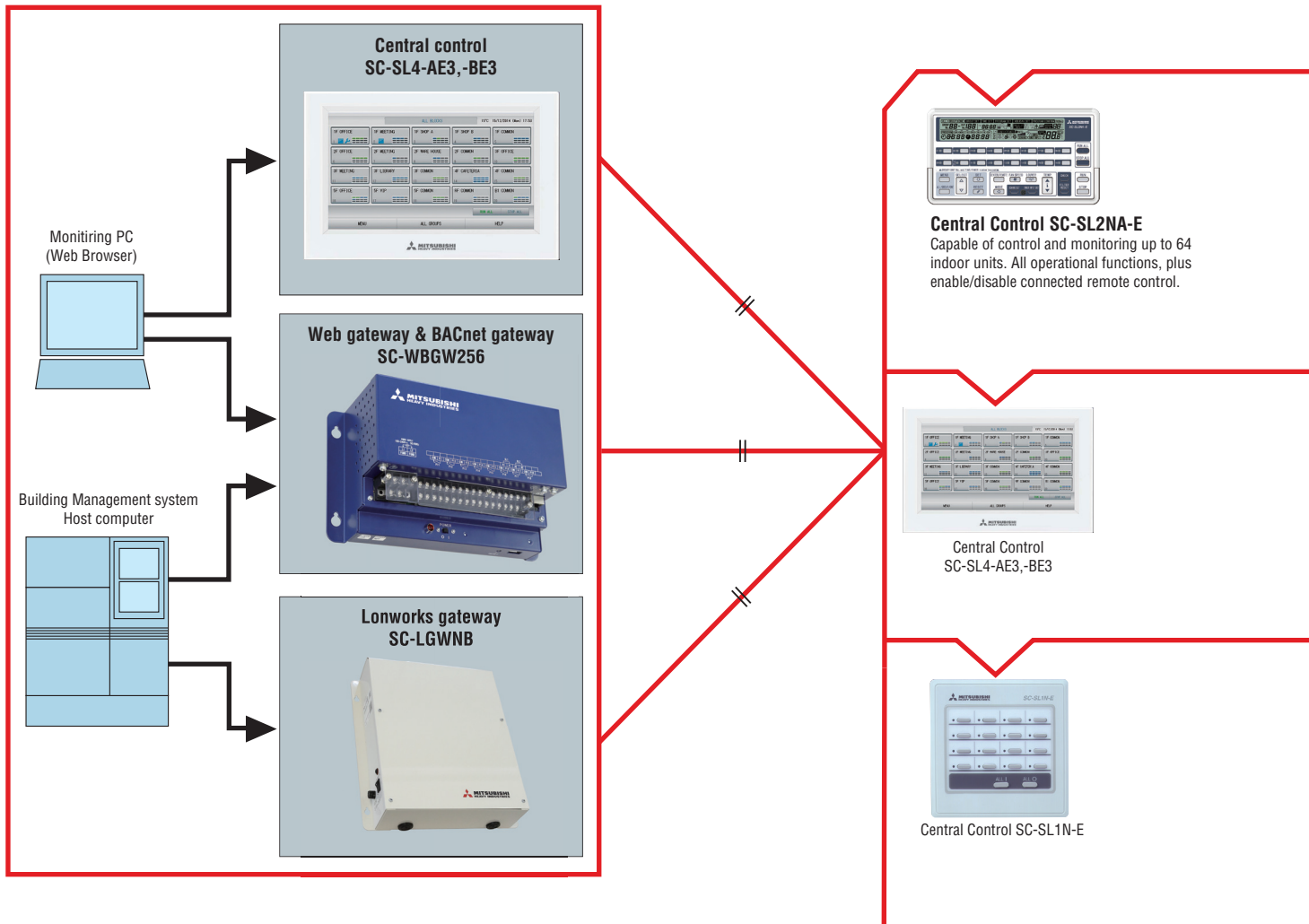
In case the sensor integrated in the indoor unit or in the remote controller is unable to sense the room temperature correctly, or an individual controller in each room is not required but a temperature sensor is (as when a central control system is in place), install SC-THB-E3 in an adequate location in the room.



8m

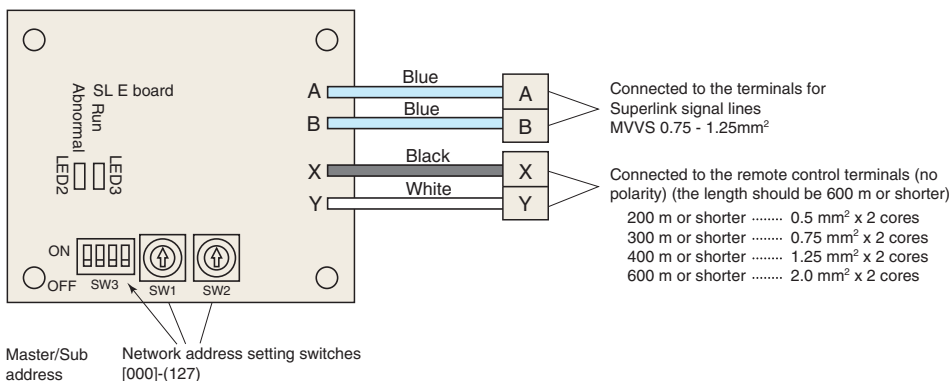
# SUPERLINK® - II Control System

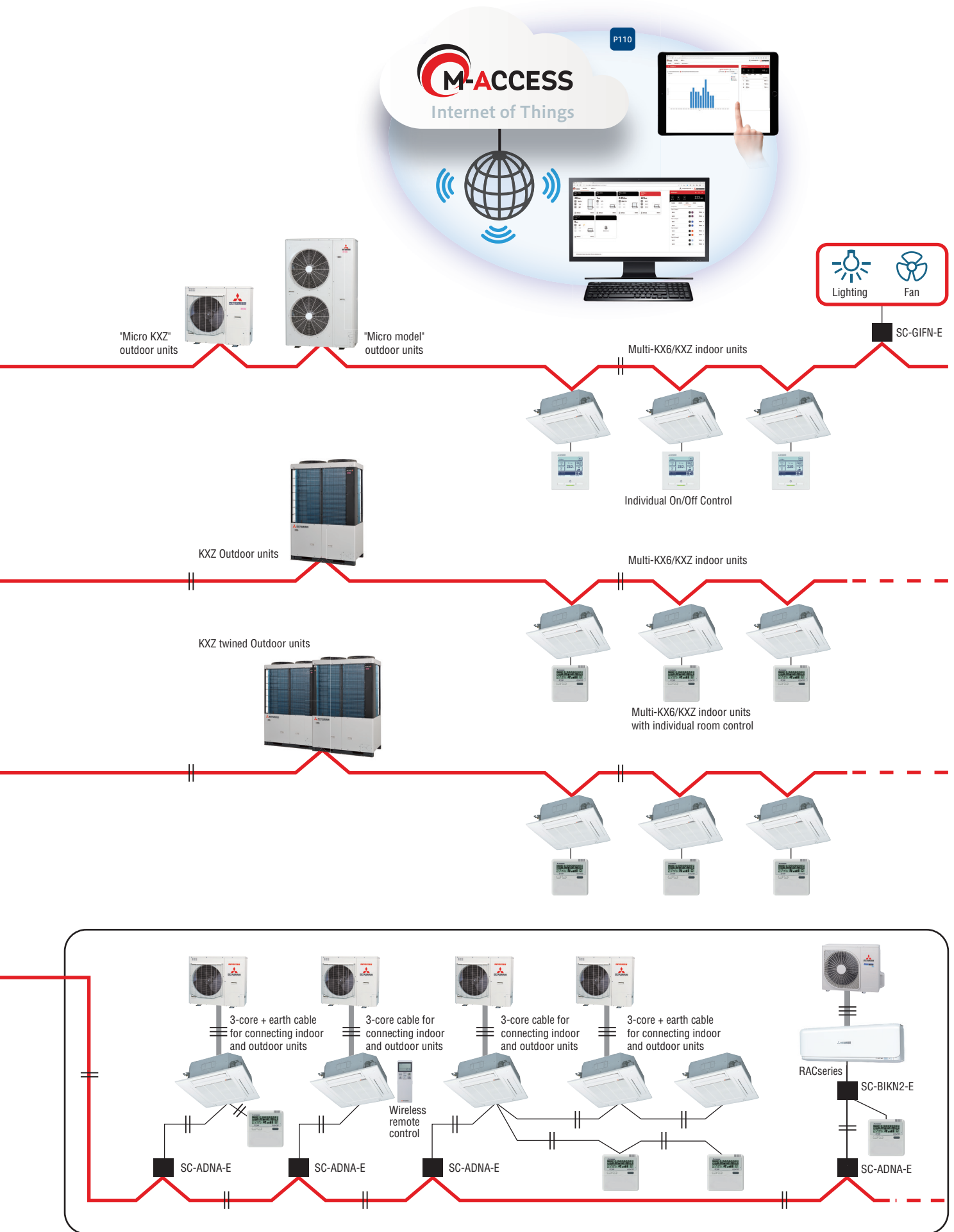
Mitsubishi Heavy Industries Thermal Systems has now combined simplicity of installation with our highly sophisticated SUPERLINK - II control system, to offer building owners and occupiers a comprehensive control and management system, while providing complete commissioning and service maintenance assistance for installers and service engineers. 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.



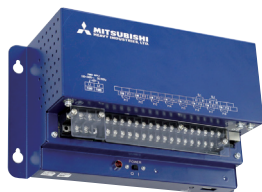


# IoT Remote monitoring system



The Cloud system M-access can remotely control the air conditioning units by using IoT technology.

With 3 different functions the system supports the operation and management from both the software and hardware.



**RM-CGW-E1**

H140 × W260 × D93mm

## 1 Diverse connectivity

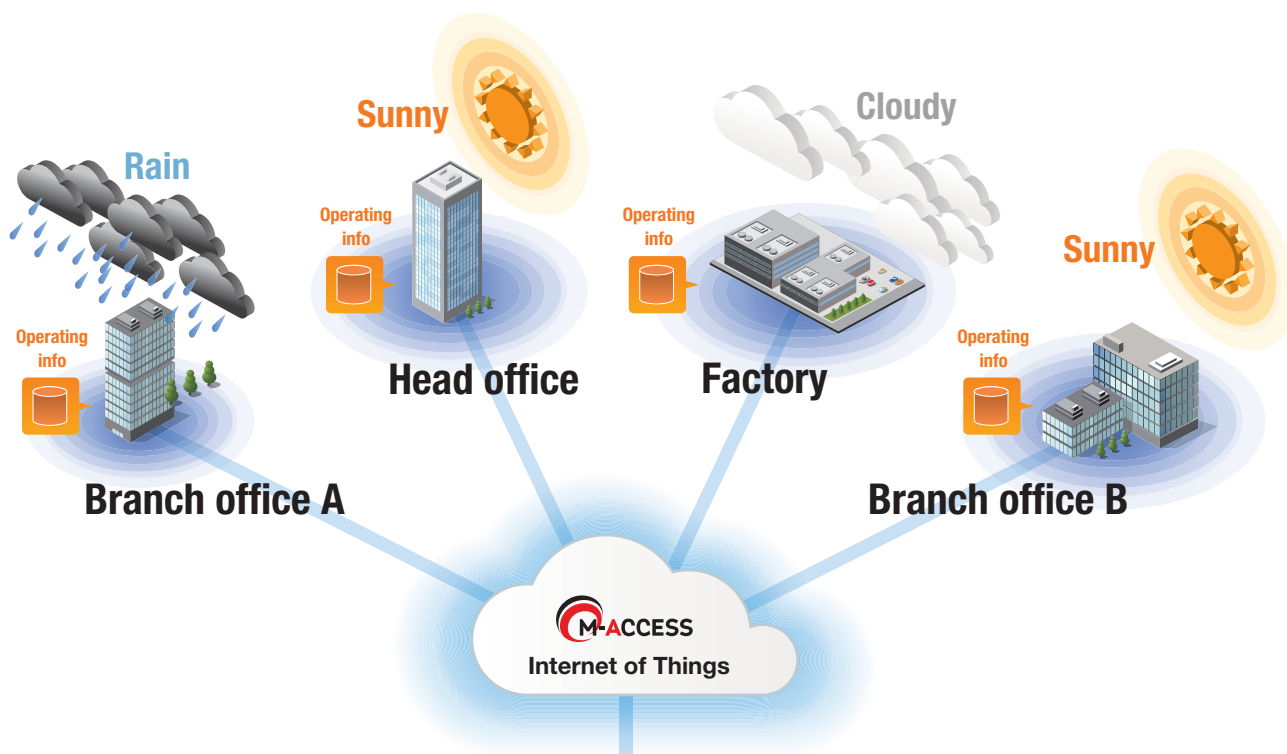
The system could be connected to a wide range of units.

## 2 Could monitor and control the units in various locations

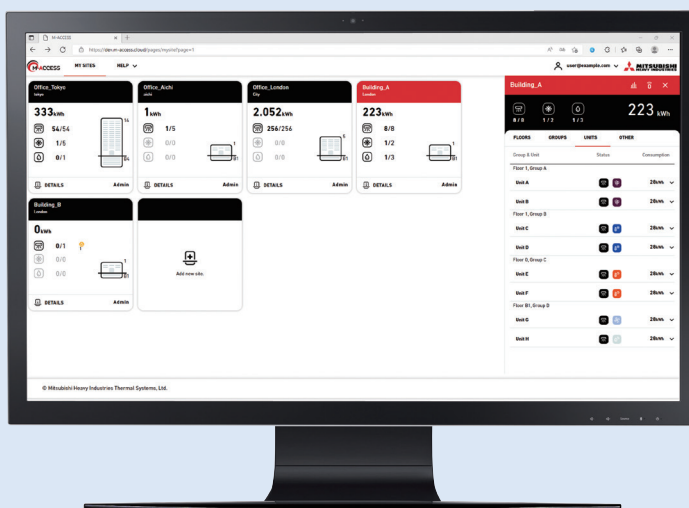
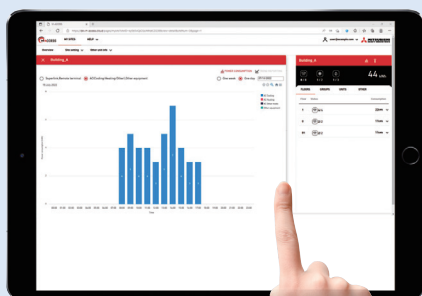
Could monitor the conditions of the air conditioning units in remote locations in real time.

## 3 Error notifications

When detecting malfunction an alert is sent to the user by E-mail. Could register multiple users for the sending address.



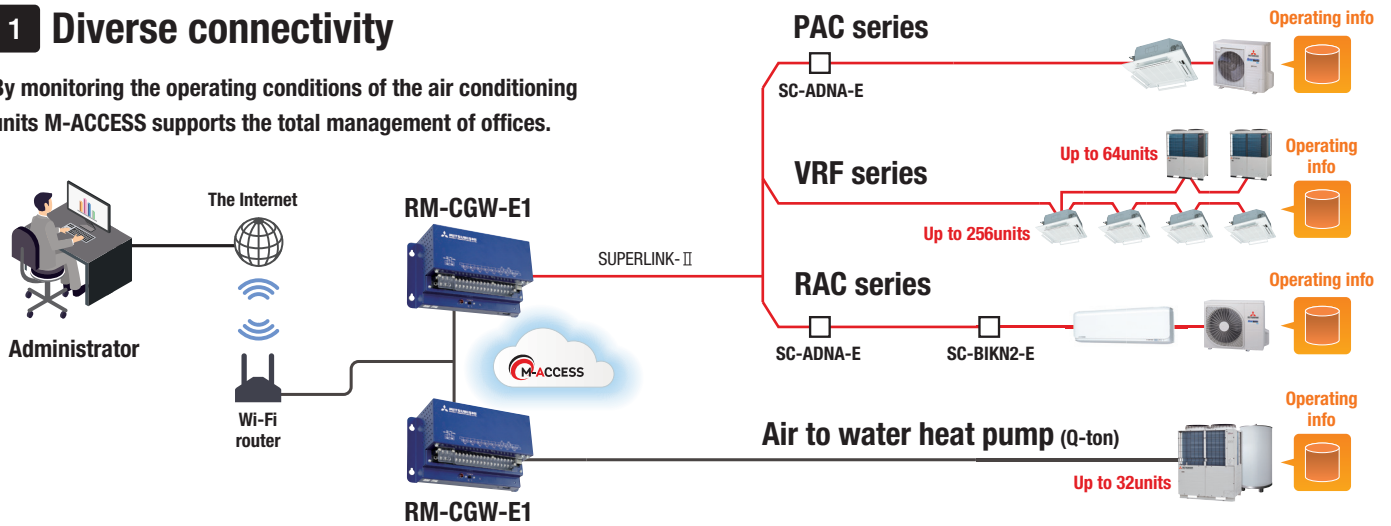
## From PC and tablets



The photos of the devices are an image

## 1 Diverse connectivity

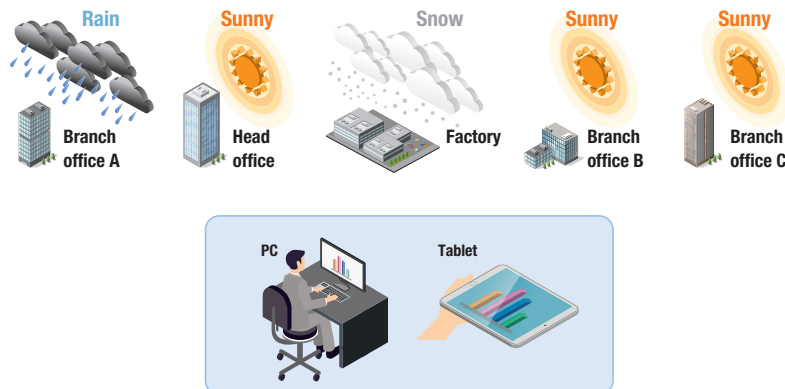
By monitoring the operating conditions of the air conditioning units M-ACCESS supports the total management of offices.



## 2 Could monitor and control the units in various locations

Could know the real time operating conditions of the units in different locations.  
Could simultaneously manage up to 128 different locations.

Example controlling 5 different locations with one device



### 1 Improving the operation and making the life cycle of units better



Could remotely activate/deactivate or change the setting temperature by looking at the weather conditions of various locations.

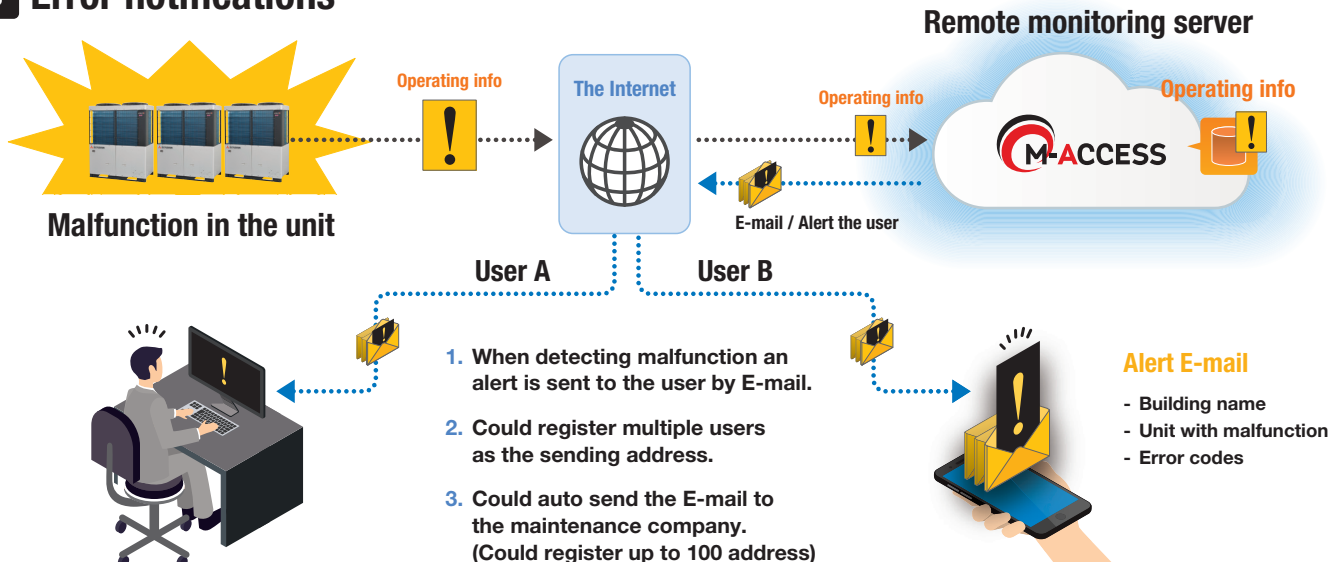
### 2 Making Efficient operation possible with connection to the various units



Operating the units with optimized combination

Could connect to VRFs, Packaged inverter units and Residential AC.

## 3 Error notifications

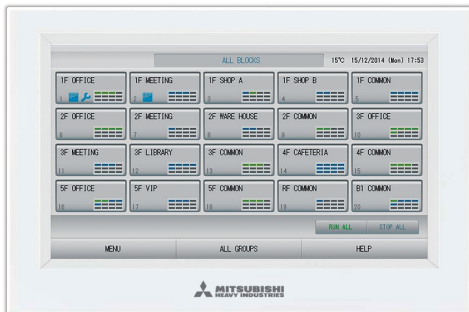


# Central Control

## SC-SL4-AE3,BE3

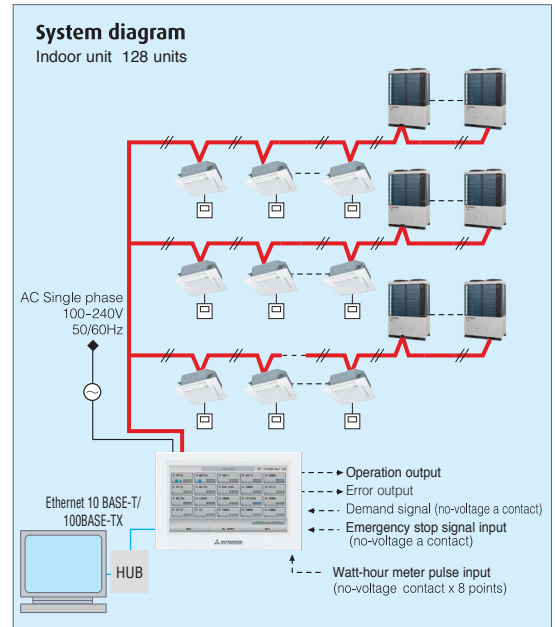
Mitsubishi Heavy Industries Thermal Systems introduces the full colour touch screen central control SC-SL4-AE3,BE3, with 9 inch interactive LCD display. Offers control, monitoring, scheduling and service/maintenance functions for up to 128 indoor units.

Control with PC is available by use of Microsoft Edge/Google chrome.



Indoor units can be controlled, scheduled, monitored and either individually, as groups or as blocks of groups with the following functions:

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 )

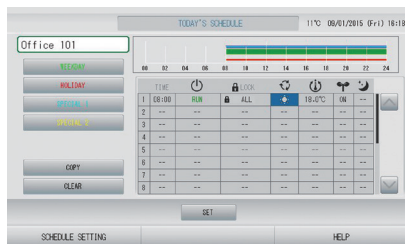


PC requirements: Windows 10, Windows 11  
Monitor resolution 1280 x 1024 or more.  
Web browser requirements: Microsoft Edge , Google Chrome

### Schedule setting

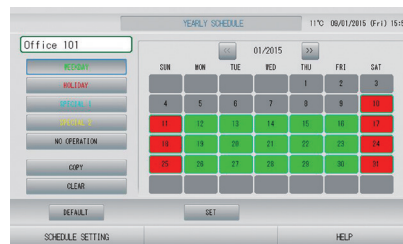
#### For each group

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.



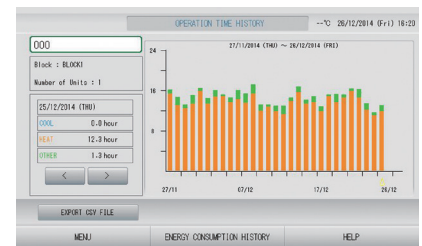
#### Yearly Schedule

Schedule settings for a year are also possible. The weekday, holiday, special day 1 or special day 2 can be selected and set. Able to automatically update the yearly schedule.



### 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.

### Maintenance code

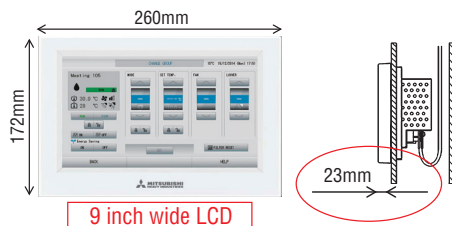
Able to show the maintenance code

### Improved visibility

Compared to the old model the visible angle of the LCD has expanded and the visibility has improved.

### High visibility

Increase in size from 7 to 9 inches



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

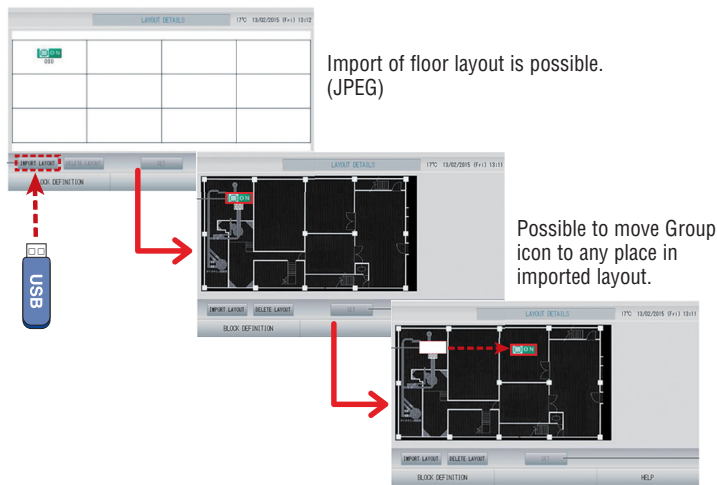
### Models that can be connected has increased

Can now connect to Q-ton/ HMU. Can have easy centralized control over various modes



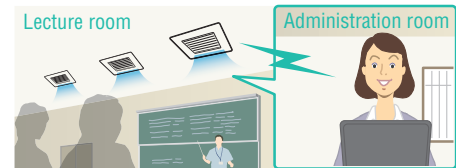
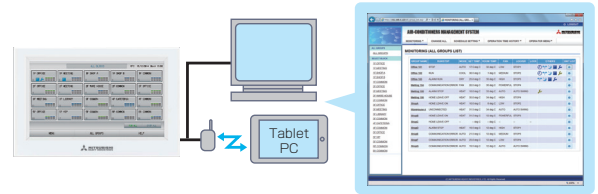
\*When connecting to Q-ton, an interface(RCI-MDQ2E) is necessary.

## Block layout function



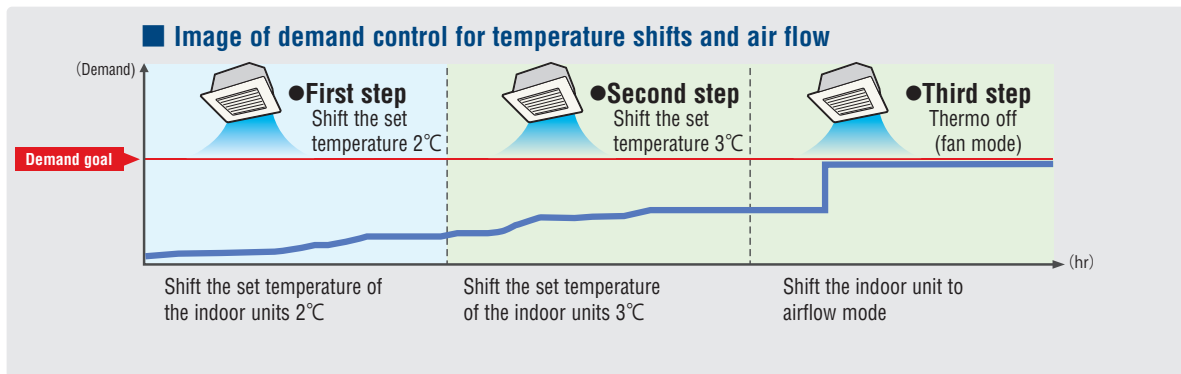
## Web function

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



## New demand control function

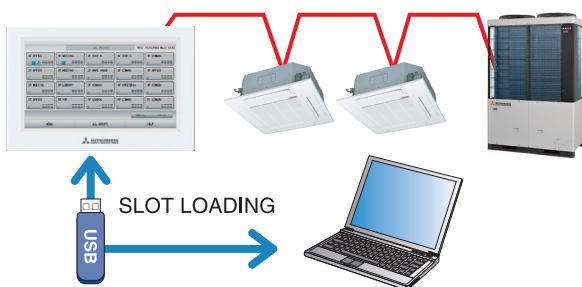
With the new demand control, temperature shifts between 1~9°C(Cooling or Drying ;1~9°C, Heating: -1~9°C),fan mode can be selected.



## Electric power calculation function:

(for SC-SL4-BE3 only)

SC-SL4-BE3 gives electric power consumption data (kWh) for each indoor unit , each group , each SUPERLINK-II system , and each watt-hour meter input.



	SC-SL4-BE3
Export data by	USB / LAN
Calculation software	Included
Watt-hour meter pulse input (Maximum)	8
Max connectable indoor units	128

Item	Model	SC-SL4-AE3/SC-SL4-BE3
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 260mm 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.**

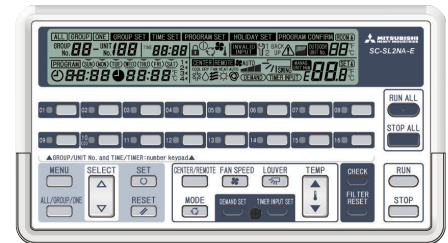
1. The SC-SL1N-E is connected to the Superlink-II network via 2-core, non-polar wires ('AB' connection).
2. It will monitor and control the start/stop function of up to 16 units, with the sixteen operation button.
3. The unit or group numbers in operation or in need of service are displayed with an LED.
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.



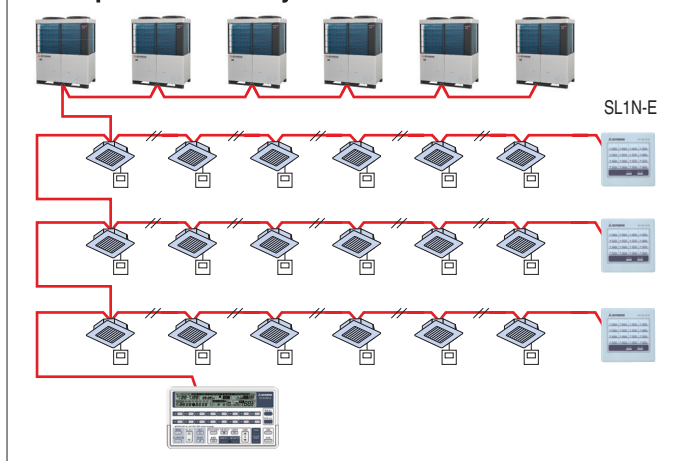
# SC-SL2NA-E

**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.



## Example of control by a center control SC-SL2NA-E

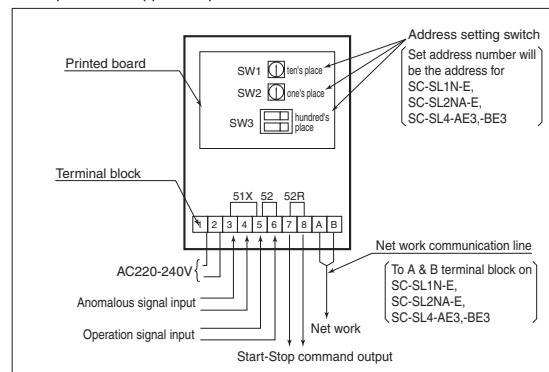


An SC-SL2NA-E performs the start/stop control, monitoring and mode setting of up to 64 units. It is a high quality air conditioner control system that allows up to 64 indoor units to be freely grouped into 1 to 16 groups. It allows not only the start/stop control but also the monitoring, display of operation 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-AE3,-BE3, 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)

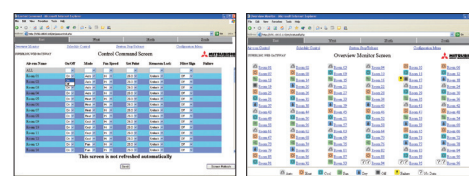
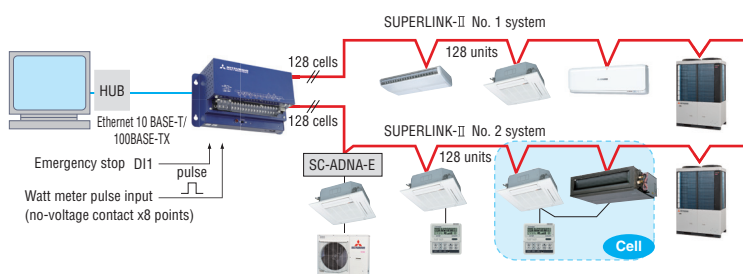
Production by order

SC-WBGW256 controls and monitors 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 web browser. 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.

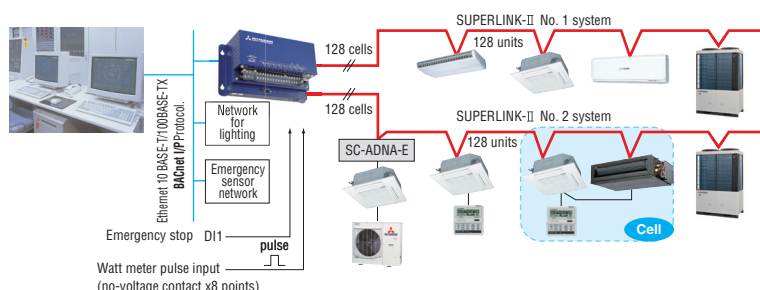


### [ In case of web gateway ]

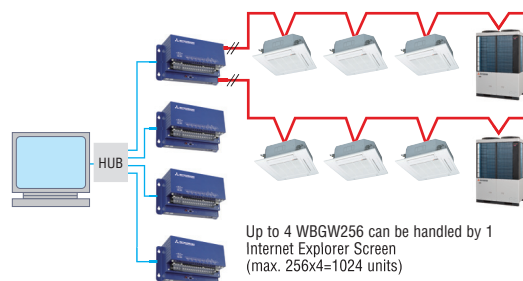


PC requirements: Windows 7 or Windows 8.1.  
Monitor resolution 1364 x 768.

### [ In case of BACnet gateway ]



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

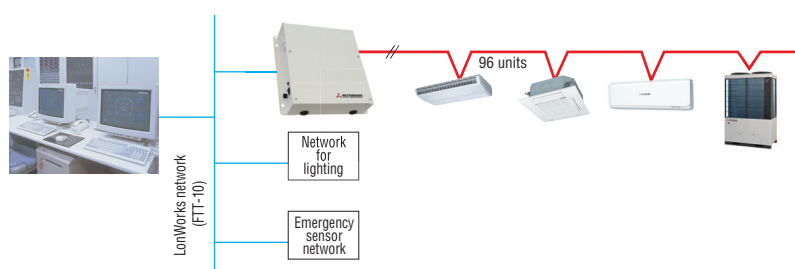


Up to 4 WBGW256 can be handled by 1 Internet Explorer Screen (max. 256x4=1024 units)

## 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.



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

**INKNXMH10480000**

(Max 48 indoor units / Superlink I & II)

**INKNXMH1280000**

(Max 128 indoor units / Superlink II)

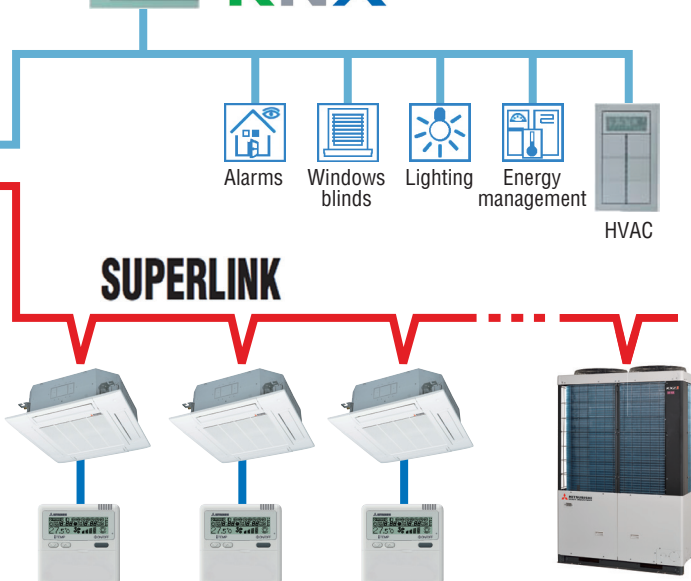
**Intesis**  
BY HMS NETWORKS

TOUCH SCREEN



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



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

**INMBSMH10480000**

(Max 48 indoor units / Superlink I & II)

**INMBSMH1280000**

(Max 128 indoor units / Superlink II)

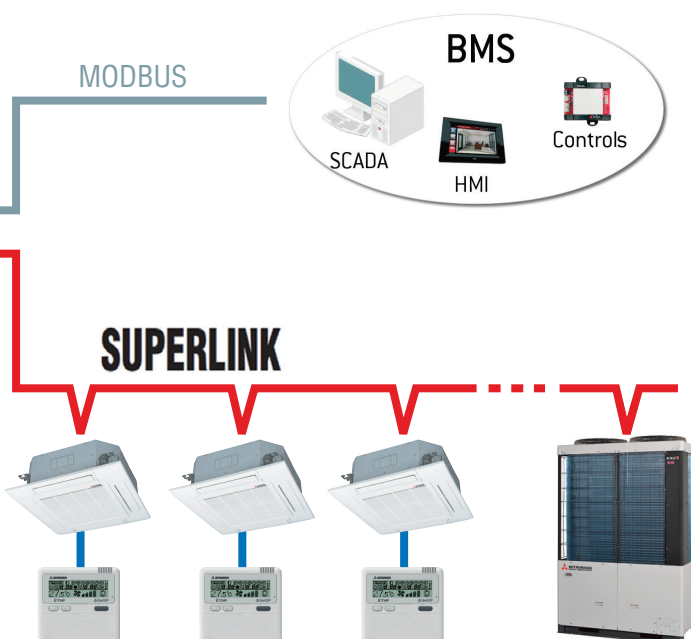
**Intesis**  
BY HMS NETWORKS

MODBUS



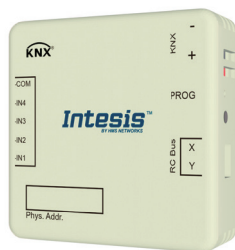
INTEGRATED GATEWAY

- 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



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

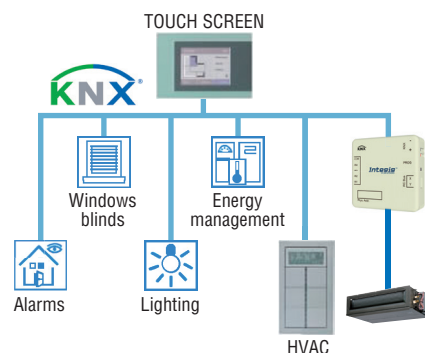
### INKNXMH001R000



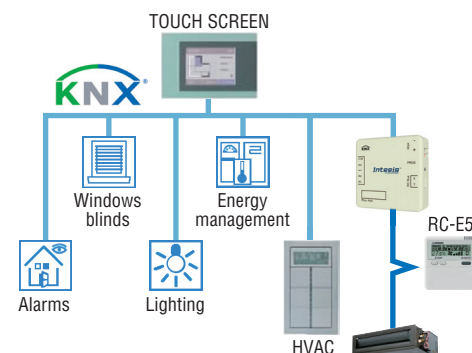
**Intesis™**  
BY HMS NETWORKS

- 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

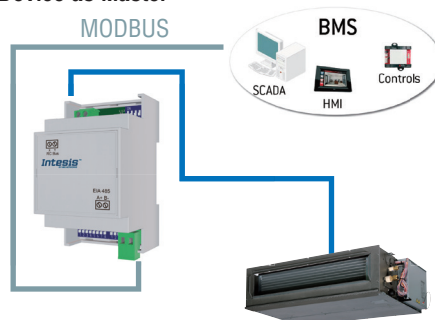
### INMBSMH001R000



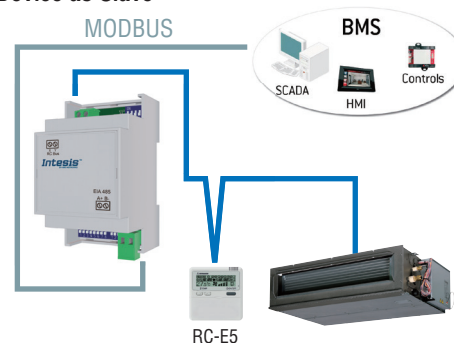
**Intesis™**  
BY HMS NETWORKS

- 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



## AC Cloud Control



PAC Model: INWMPMH001R000

Please access the followings for details.

**Intesis™**  
BY HMS NETWORKS

URL | <http://www.intesis.com>  
email | [info@intesis.com](mailto: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. Heating performance is reduced as the 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 (R32, R410A) used for air conditioner is non-toxic and 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 continued to use, 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

After the air conditioner has been used for several seasons, dirt will build up in the air conditioner causing the performance to drop. In addition to regular servicing, a maintenance contract by a specialist is recommended.

## 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.

## Mitsubishi Heavy Industries Thermal Systems, Ltd.

( Wholly-owned subsidiary of MITSUBISHI HEAVY INDUSTRIES, LTD.)

2-3 Marunouchi 3-chome, Chiyoda-ku, Tokyo 100-8332, Japan

<https://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-RvA

Certified ISO 14001



Certificate:04 104 980813



Certificate number : 02117E10160ROM



Not on  
FDGS, FDCH series