MITSUBISHI HEAVY INDUSTRIES

VRF multi-system Air Conditioners

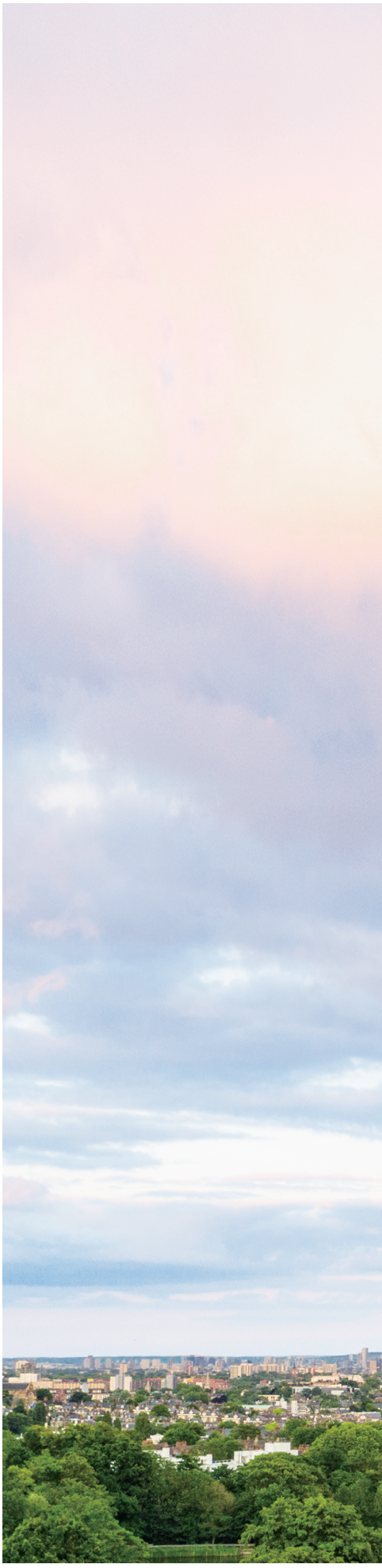
KXZ

MOVE THE WORLD FORWARD MITSUBISHI HEAVY INDUSTRIES GROUP

New Climate & Energy Solution

The new Mitsubishi Heavy Industries KXZ VRF series delivers high performance in cooling and heating for all commercial applications.
The KXZ series provides the highest level of design flexibility, efficiency as well as operational functions.
This brochure highlights the key benefits and new and improved functions of our latest VRF technology.



Line-Up

Harmonize with the world

Harmonize with the earth

- **Global Environment**
- **Improved Energy Efficiency**
- **Toughness**

Harmonize with people

- **Wellness & Comfort**
- **Serviceability**

Harmonize with buildings

- **Design Flexibility**

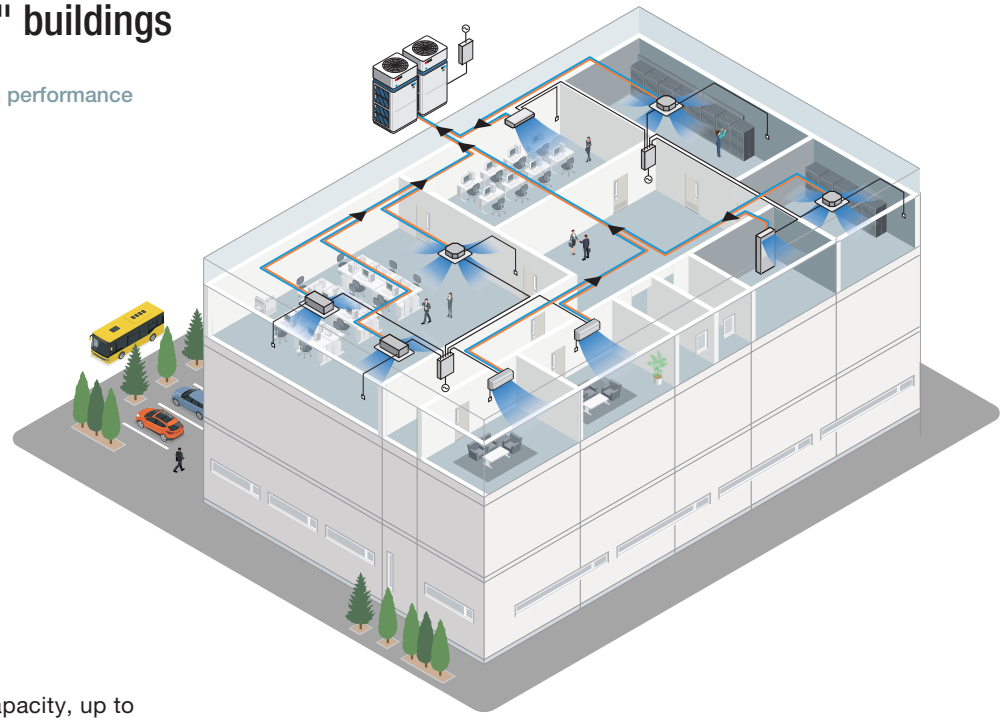
KXZ3

CONTENTS

VRF MULTI SYSTEM

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

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



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 12.1kW 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.(KXZ2)
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.

KXZ2

KXZ3

Environmental

Mitsubishi Heavy Industries, Ltd. (MHI), are unswervingly dedicated to facing the challenges of the future.

MHI are dedicated to supporting global sustainability by offering the most energy efficient air-conditioning systems. Through our in-depth research and development, we are able to incorporate new technologies within our units to maximise their energy efficiency and significantly reduce carbon emissions.

Environmental Impact

MHI recognises the increasing importance of reducing carbon emissions as this is becoming a priority when selecting air and water distribution systems. Furthermore new technologies are constantly being developed to help meet heating and cooling requirements as well as environmental objectives.

The future of our planet rests in the sustained evolution of humankind while caring, with love and responsibility, for all life forms that inhabit it. Therefore MHI will continue to develop new technologies and products and will remain competitive in the market to achieve a sustainable future.

“Micro KXZ series” for small offices, shops applications

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

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

Case study : **Education**

Case study : **Hotel and Leisure**

We're excited to have provided Crossways Academy in Lewisham with our VRF system, making the school a cooler and more comfortable place for learning.

Maintaining comfortable temperatures in rooms frequented by large groups of students is crucial, and it must be done economically. Factors like simultaneous entries and exits of students, fluctuations in heat load due to IT equipment usage, and the operation of electric blinds to control glare all play significant roles in this endeavor.
The VRF KX system from Mitsubishi Heavy Industries Thermal Systems offers an ideal solution for your needs. Designed with a focus on natural ventilation, the building utilizes electronically operated windows. The air conditioning system is seamlessly integrated with this control system, ensuring it shuts down when windows are opened. Mitsubishi Heavy Industries Thermal Systems KX is specifically suitable for various retrofit applications, making it a perfect fit for your requirements.

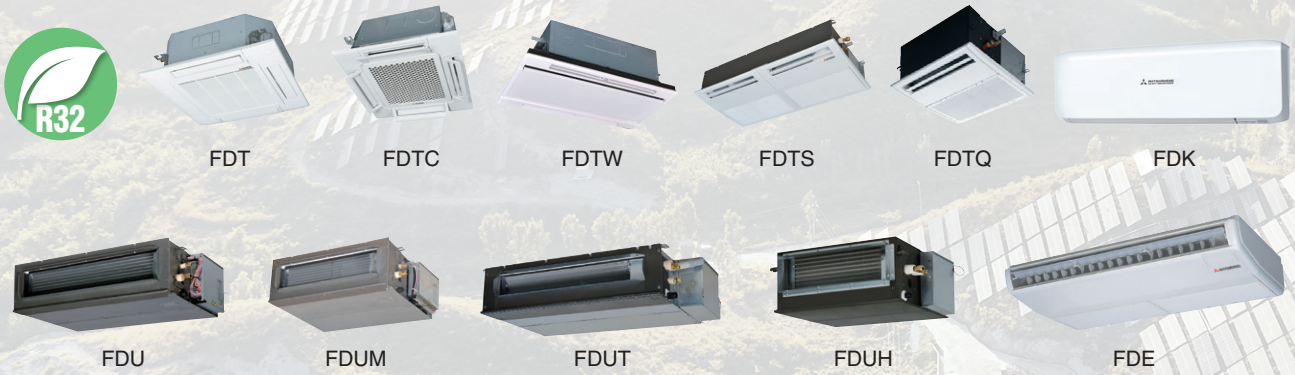
Mitsubishi Heavy Industries (MHI) Thermal Systems' VRF heat recovery systems, part of the KX range, are perfectly suited to meet the rigorous requirements of luxury hotels and "airport-style" bus stations. These systems feature advanced inverter technology, which intelligently adjusts compressor output to precisely match the cooling or heating demands of indoor units. This ensures optimal comfort and energy efficiency in demanding environments.
By opting for our adaptable heating and cooling system, you're not just saving energy, but also gaining precise control over room temperatures. Our system empowers you to adjust heating and cooling levels in different areas according to specific needs.

For instance, in sunnier, south-facing rooms where temperatures tend to rise, you can effortlessly increase the heat to maintain comfort. Meanwhile, in cooler, shadier areas of your building, our system efficiently provides energy for heating, ensuring consistent comfort throughout.

With this flexibility, you can optimize energy usage based on varying conditions, enhancing both comfort and energy efficiency in your space.

Next Generation Refrigerant R32

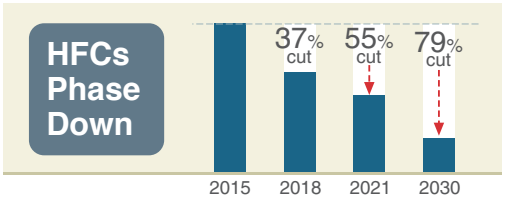
New indoor units and outdoor units line up are available for R32 refrigerant



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	IMPACT ON HFCs(in EU)	SOLUTIONS
To protect the environment by reducing the F-Gases emissions	HFCs Phase Down HFCs Ban	•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*1 (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

*1 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℃ application

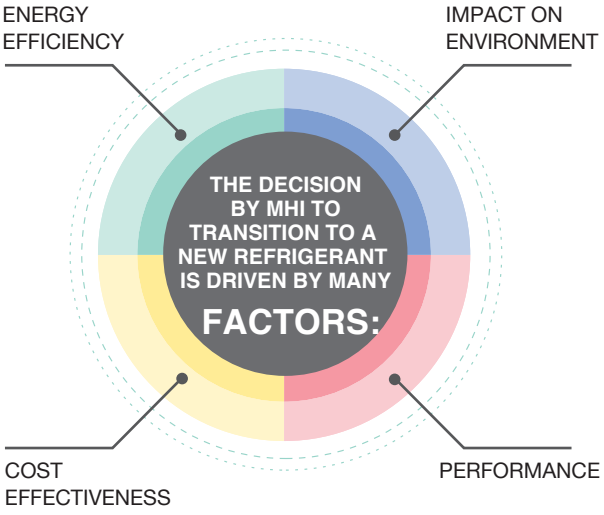
LOWER GWP + LESS REFRIGERANT CHARGE = LOWER HFCs EMISSIONS

R32 - A Low GWP Refrigerant

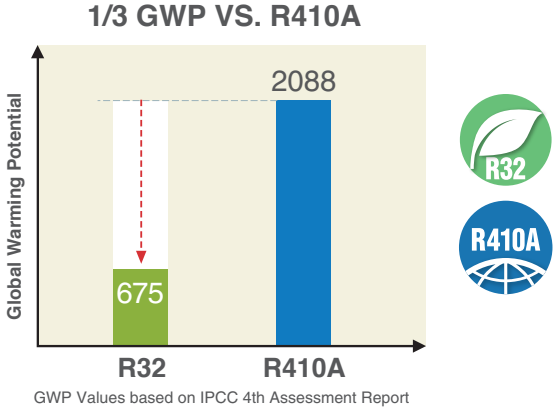
- A single component, easy to handle refrigerant
- Known as a component of the blend R410A(50% R32, 50% R125)
- Already used in Air Conditioning systems worldwide
- Zero Ozone Depletion
- Superior Energy Efficiency vs. R410A
- Reduced refrigerant charge vs. R410A
- Easy to recycle

Micro KXZ Heat pump systems
4, 5, 6HP (12.1kW ~ 15.5kW)

KXZ3 Heat pump systems
8~36HP (22.4kW ~ 100.0kW)

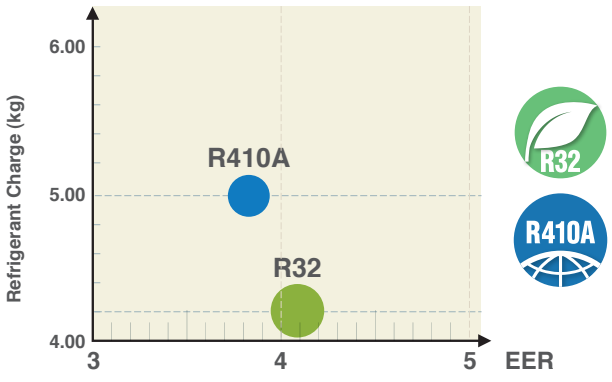


Low Global Warming Potential



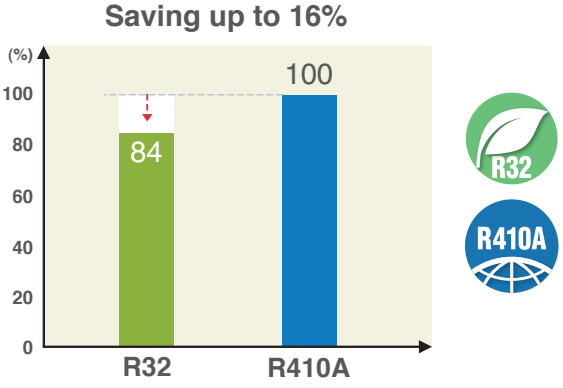
GWP Values based on IPCC 4th Assessment Report

Superior Energy Efficiency



Energy Efficiency Ratio Based on 12.1kW MicroKXZ Outdoor unit.

Reduced Refrigerant Charge



Example case 12.1kW MicroKXZ Outdoor unit.

KXZ series product Line up

Outdoor units

Capacity Range	4HP	5HP	6HP	8HP	10HP	12HP	14HP	16HP	17HP	18HP	20HP	22HP	24HP
Model Code : kW	12.1	14.0	15.5	22.4	28.0	33.5	40.0	45.0	47.5	50.0	56.0	61.5	67.0
BTU / h	41,300	47,800	52,900	76,400	95,500	114,300	136,500	153,500	162,100	170,600	191,100	209,800	228,600
KXZ3 New! **Standard** • New design • High efficiency • Design Flexibility • VTCC+, Continuous heating R32				FDC224 ~ 335 ●	●	●		FDC450 ~ 670 ●		●	●	●	●
KXZ2 **Standard** • Flexible design • Wide range of operation • Large capacity outdoor unit (Up to 60HP) • VTCC, Continuous heating R410A					FDC280-335 ●	●		FDC400 ~ 560 ●	●	●	●	FDC615-670 ●	●
KXZ2 **Hi-COP combination** • Higher energy savings • Flexible design • VTCC, Continuous heating R410A											FDC560 ●		
KXZ2 **Heat Recovery** • High efficiency in simultaneous cooling and heating mode • Flexible design • Wide range of operation • VTCC, Continuous heating R410A				FDC224 ~ 335 ●	●	●		FDC400 ~ 670 ●	●	●	●	●	●
KXZ2 **Heat Recovery Hi-COP combination** • High efficiency in simultaneous cooling and heating mode • Higher energy savings • VTCC, Continuous heating R410A								FDC450 ~ 670 ●		●	●	●	●
Micro KXZ • Space saving • Flexible design • Slim, light, broad range (4-6 HP) • Small, Medium building • Available in 1-phase and 3-Phase R32		FDC121 ~ 155 ●	●	●									
Micro KXZ • Space saving • Large number of connectable indoor units (Up to 24 Units) • Small, Medium building • Available in 1-phase and 3-Phase (4-6HP) R410A		FDC121 ~ 155 ●	●	FDC224 ~ 335 ●	●	●							
KXZ Lite • Space saving • High efficiency • Tropical usage mode • Easy tranceportation & Installation R410A				FDC224-280 ●	●								
KXZ **Water cooled series** • High efficiency • Low noise operation • Individual control building, Large building R410A				FDC224 ~ 335 ●	●	●		●		FDC450 ~ 670 ●	●	●	●

Refrigerant	● : R32	● : R410A

	26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP	42HP	44HP	46HP	48HP	50HP	52HP	54HP	56HP	58HP	60HP
	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
	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
			 FDC735 ~ 1000															
	 FDC735				 FDC800 ~ 1120								 FDC1200 ~ 1680					
				 FDC850 ~ 1000			 FDC1060	 FDC1120										
	 FDC735				 FDC800 ~ 1120								 FDC1200 ~ FDC1680					
			 FDC735 ~ 1000															
			 FDC730 ~ 1000															

KXZ3 series

KXZ3

New Design - 6 concepts -

The redesigned model with R32 refrigerant has been engineered by the following 6 concepts.

New line-up

1 FAN structure

Compact design with a 1 FAN structure on the upper part of the unit.

New design 6 Concepts

1 Global Environment

- Reduce CO_2 emission by about 70%

2 Wide Design Flexibility

- New exterior design to fit the scenery
- Various type of indoor units available
- Wider limitation of piping installation
- Flexible selection of safety systems

3 Improved Energy Efficiency

- Higher SCOP & SEER
- New R32 scroll compressor
- Heat exchanger with small heat transfer pipe
- Optimized fan and flow path design
- VTCC+ : advanced variable temperature and capacity control

4 Wellness & Comfort

- Advanced continuous heating
- Four steps of capacity control

5 Toughness

- Cooling use in high ambient temperature
- Strengthened resistance against corrosion & frost
- Long life and efficiency for the system

6 Serviceability

- Easy access to replacement parts

Harmonize with the earth

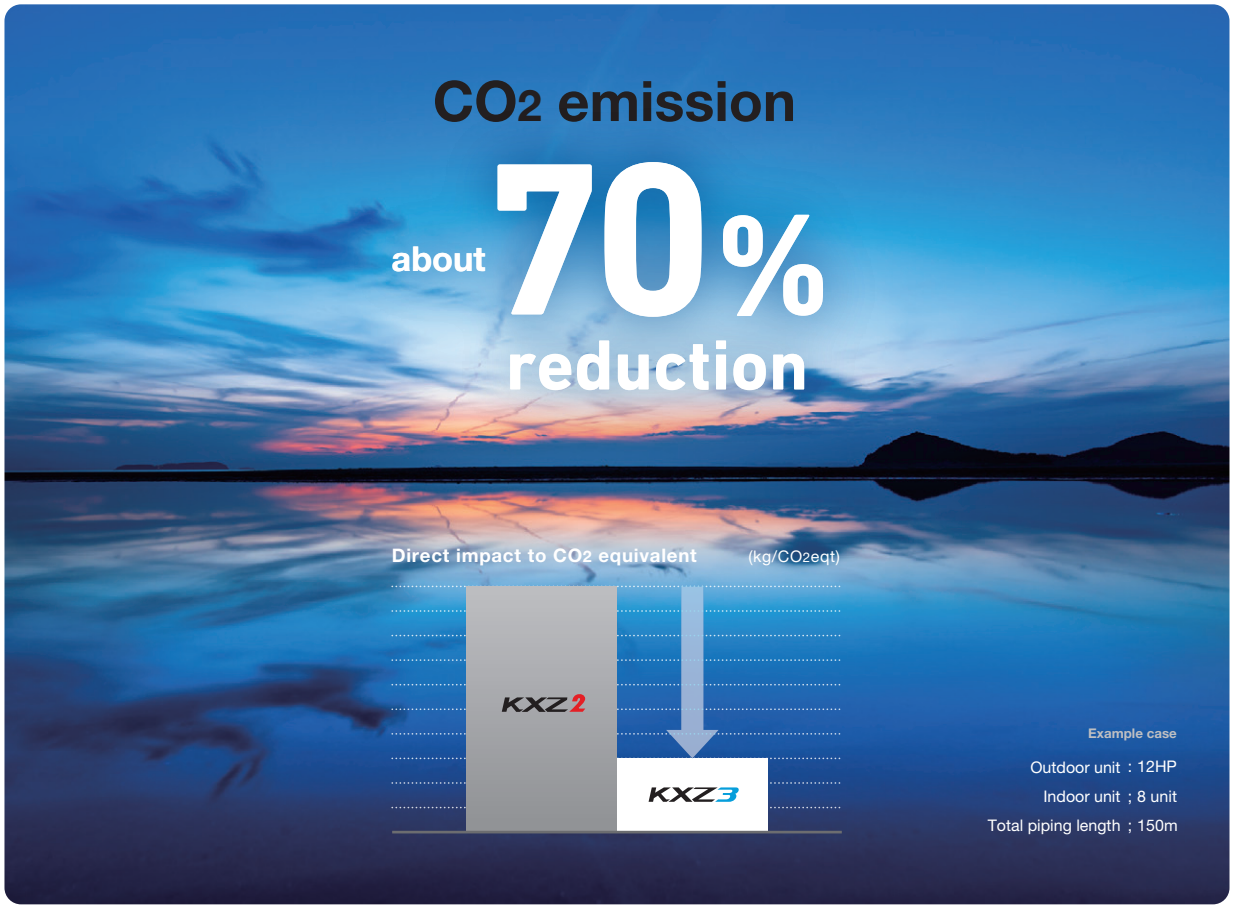
Concept 1

Global Environment

Meet our new R32 KXZ3 series of heat pumps, the perfect climate solution for heating and cooling commercial and industrial applications.

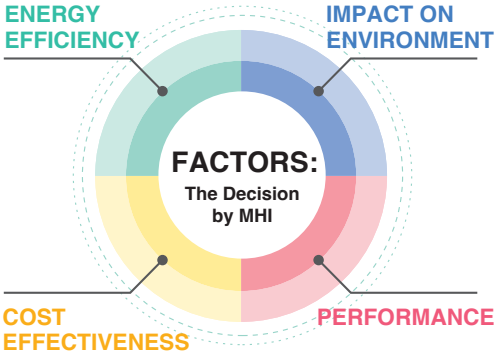
By optimizing the KXZ3 series with R32 refrigerant has increased

- **Energy efficiency**
- **Cost effectiveness**
- **Overall performance**
- **Reduction in environmental impact**



R32 - A Low GWP Refrigerant

The Decision by MHI to transition to a new refrigerant is driven by many factors.
KXZ3 with the use of R32 refrigerant, lower GWP (675) than R410A (2088)



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

Concept 2

Wide Design Flexibility

New exterior design to fit the scenery

1. Outdoor units - Product line-up -

Our line-up and limitation of use make it possible to adopt wider range of installation on commercial buildings.

Compact design

One of the smallest in the industry

The KXZ3 series has reduced the installation space with the integral structure of the heat exchanger and the mechanical components.
The total footprint has become more compact compared to our previous model.

Combination use is also possible

The new product line-up of the KXZ3 series can also be installed to offer solutions with a combination of 3 outdoor units.

Single module	Combination
8 - 12HP	up to 36HP

Connectability

KXZ3 - Standard Connectable Indoor Units

Increased number of connectable units and max capacity connection.

	HP	8	10	12	16	18	20	22	24	26	28	30	32	34	36
Standard KXZ3	Numbers	22	28	33	45	50	56	61	67	73	80	80	80	80	80
	IU Capacity connection	50 - 150% (*1)													

(*1) When connecting the indoor unit type FDK, FDFL, FDFU or FDFW series, limit the connectable capacity not higher than 130%.

Various type of indoor units available

Indoor units only for R32

2. Indoor units - Product line-up -

Wide variety of 14 types 78 models

Type			Capacity : HP	0.5	0.8	1	1.25	1.6	2	2.5	3.2	4	5	6	8	10
			Model Code : kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0	22.4	28.0
Ceiling Cassette	4way	FDT				●	●	●	●	●	●	●	●	●		
	4way Compact	FDTC		●	●	●	●	●	●							
	2way	FDTW				●		●	●	●	●	●	●			
	1way	FDTS						●		●						
	1way Compact	FDTQ			●	●	●									
Duct Connected	High Static Pressure	FDU						●	●	●	●	●	●	●	●	●
	Low/Middle Static Pressure	FDUM			●	●	●	●	●	●	●	●	●	●		
	Low Static Pressure (thin)	FDUT		●	●	●	●	●	●	●						
	Compact & Flexible	FDUH			●	●	●									
Wall mounted		FDK		●	●	●	●	●	●	●	●					
Ceiling Suspended		FDE					●	●	●	●		●	●			
Floor Standing	2way	FDFW				●		●	●							
	With Casing	FDFL								●						
	Without Casing	FDFU				●		●	●	●						

Coming soon

Wider limitation of piping installation

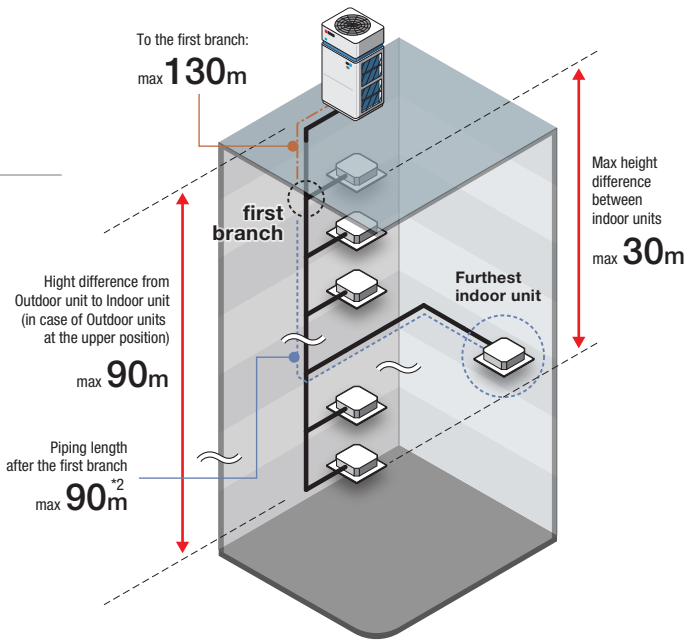
3. Flexible pipe installation

Total length : 1,000m

Furthest indoor unit:
Actual length: 160m

The piping length of our KXZ series have been extended with a maximum height difference between indoor units of up to 30m enabling installation of indoor units on an extra three floors. Also, the furthest unit can be installed up to 160m from outdoor unit.

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



4. Safety system R32 refrigerant

R32 refrigerant is categorized as mildly flammable (A2L) by International Standard ISO817. Safety measures specified in safety standard IEC60335-2-40 Ed.6.0. must be observed when installing or using R32 refrigerant equipment. The necessity of safety measures and the type and number of required safety equipment depend on the conditions of each room in the building.

1. Refrigerant leak detector	2. Safety alarm	3. Shut-off valve	4. Ventilator
			MHI option has not been prepared.

The necessity of safety measures and the type and number of required safety equipment depend on the conditions of each room in the building. Safety equipment units are grouped into the following categories.

Refrigerant leak detector
(Safety alerm)

RLD-KIT-E

Remote Controller
(Safety alerm)

RC-EX3D

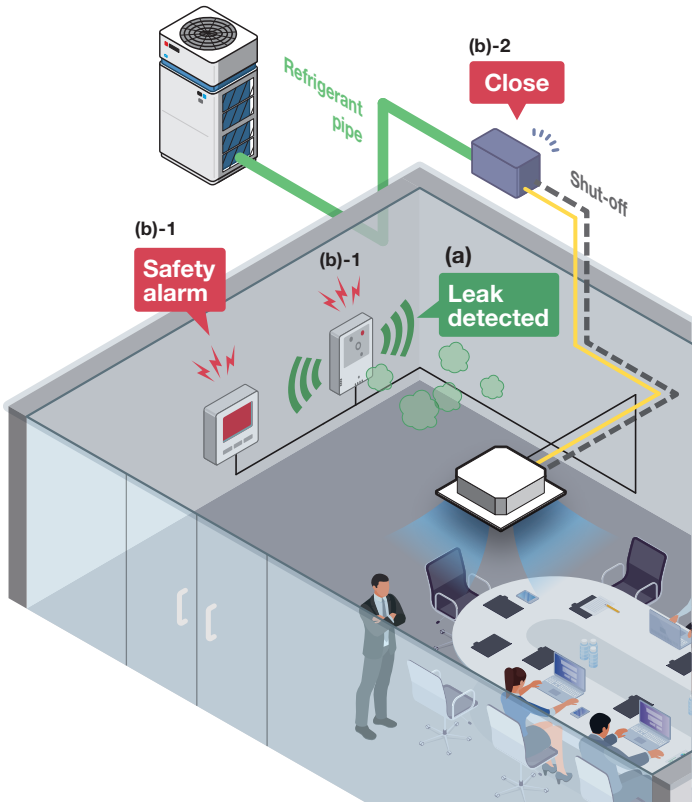
Shut-off valve

SV-KIT-S1N-E
SV-KIT-L1N-E

Example of the safety system

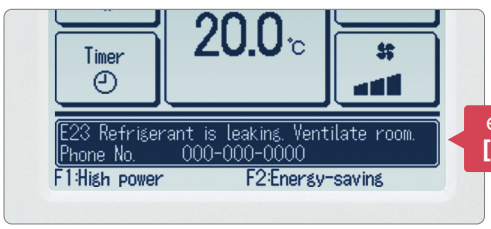
1. **Refrigerant leak detected**
2. **Safety alarm is sounded, and flow of refrigerant is blocked.**

(a) : Refrigerant leak detector detects refrigerant leakage in the room.
(b)-1 : Safety alarm sounds and light alerts to signal refrigerant leakage.
(b)-2 : Shut-off valve in the refrigerant pipe closes and blocks the flow of refrigerant.



Refrigerant leakage will be signaled by the flashing LED and the alarm sound.

(Warning will only be issued when the alarm function is ON.)



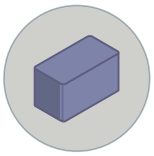
Leakage detection error [E23] is displayed on the remote control and the heating/cooling operation of the air-conditioner will stop.

Our safety system offers wide flexibility of installation for safety measures.
Safety system can be installed only to the rooms that are necessary.

Refrigerant pipe

Power supply wiring

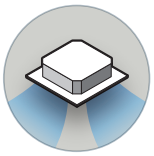
Signal wiring



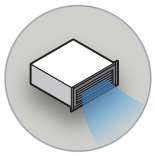
Shut-off valve

Refrigerant leak detector

Remote controller



Indoor unit FDT

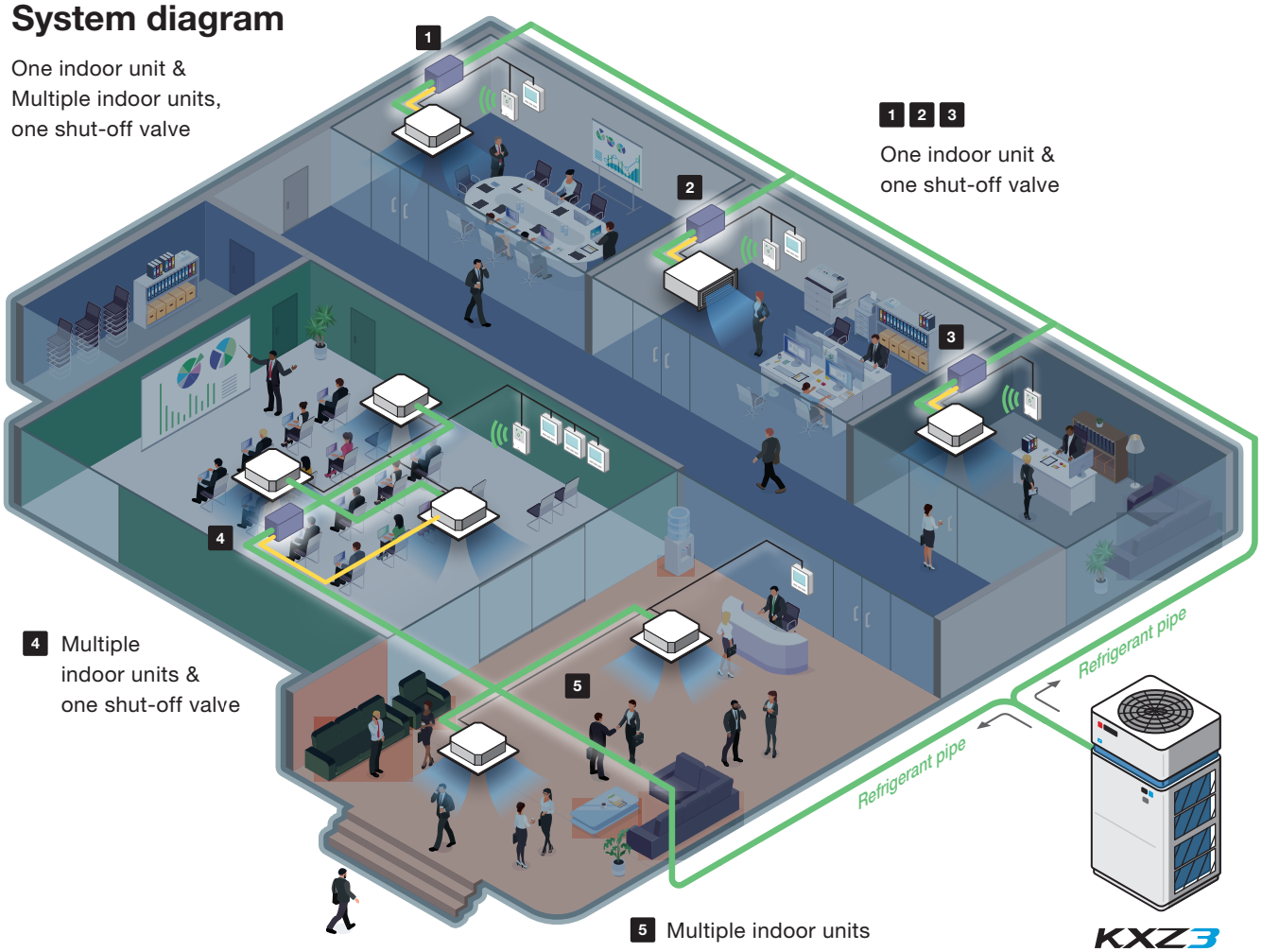


Indoor unit FDU

System diagram

One indoor unit &
Multiple indoor units,
one shut-off valve

1 **2** **3**
One indoor unit &
one shut-off valve



4 Multiple
indoor units &
one shut-off valve

5 Multiple indoor units
without shut-off valve

SV-RLY-E

For the following models a relay kit (SV-RLY-E) is required to connect to the shut off valve.

FDUT--KXZE3-W **FDUH--KXZE3-W**
FDTQ--KXZE3-W **FDFW--KXZE3-W**

Refrigerant leak detector and shut-off valve may not be required depending on the room size.

Harmonize with the earth

Concept 3

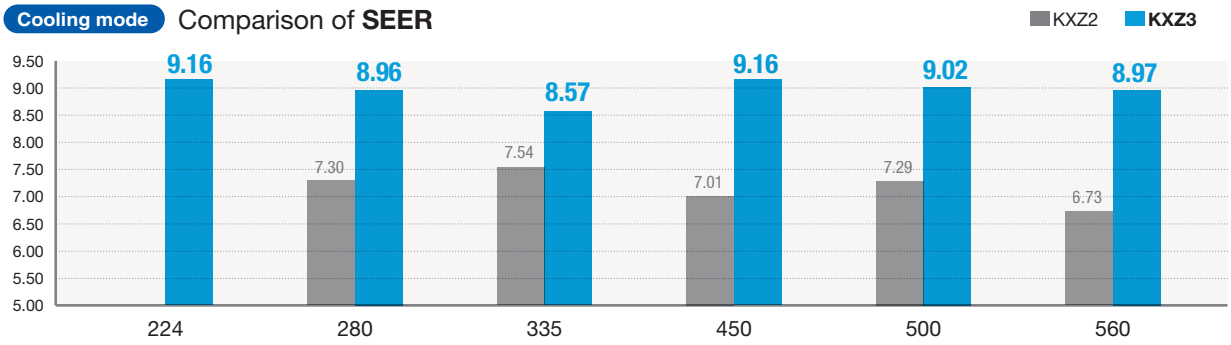
Improved Energy Efficiency

Higher SCOP & SEER

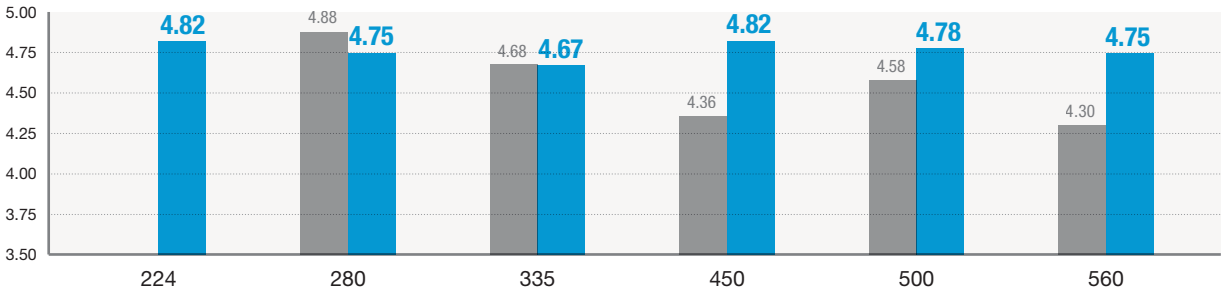
Increased seasonal efficiencies

Our KXZ3 series provide high performance and excellent energy savings across all ranges. This is achieved by the optimized heat exchangers with the increased capacities and the advanced energy efficient compressor.

Cooling mode Comparison of **SEER**



Heating mode Comparison of **SCOP**



From the models beyond 450 the KXZ3 series are measured with combinations

Features

Improved seasonal efficiency is achieved by

1. New R32 scroll compressor with the improved scroll mechanism and motor.
2. Heat exchanger with small heat transfer pipe (Φ7)
3. Optimized fan and flow path design
4. Advanced VTCC+ control

New R32 scroll compressor **with the improved scroll mechanism and motor**

1 New scroll compressor

With the adaptation of new components and its optimization, the KXZ3 series is now available in R32 refrigerant with a higher efficiency and a wide operation range. The new compressor uses the latest compressor technology and has proven to be extremely reliable.

New Technology

1. **New liquid injection structure to cool down the refrigerant**

   Leading to
   the wide operation range

2. **Redesign of the spiral structure of the scroll**

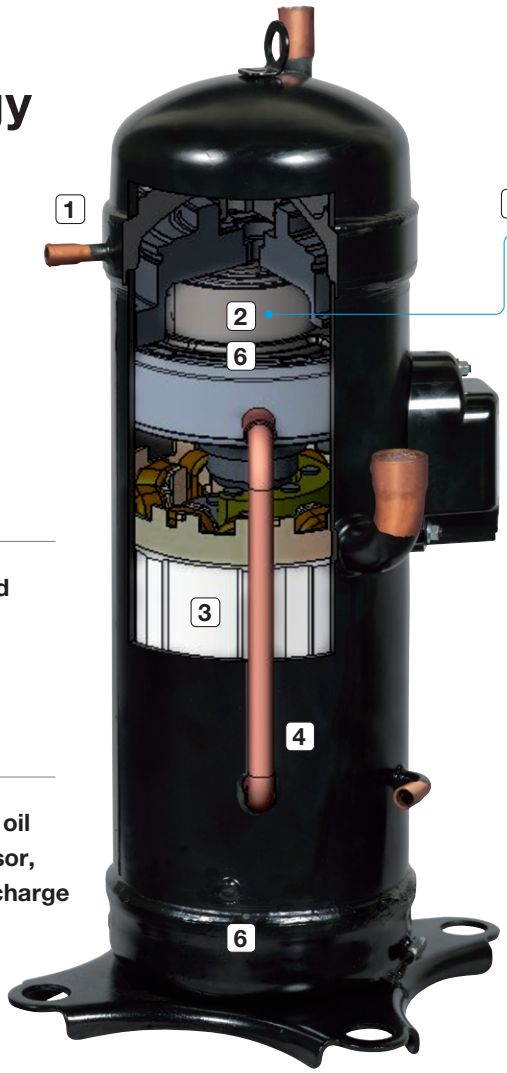
   Leading to
   higher efficiency

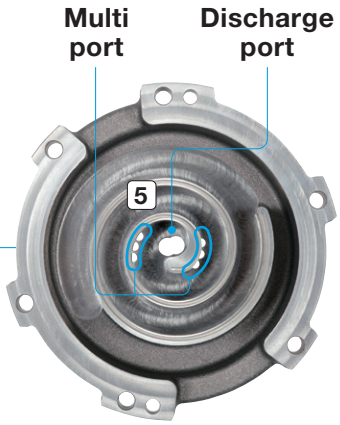
3. **Larger motor with an optimized winding structure of the coil**

   Leading to
   the wide operation range
   and improved efficiency

4. **New oil circuit that returns the oil to the bottom of the compressor, decreasing the amount of discharge oil at high rotation range.**

   Leading to
   higher efficiency





5. **Optimized layout of multi ports / discharge ports in the scroll**

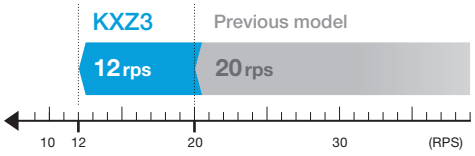
   Leading to
   higher efficiency

6. **Wear resistant coating to some of the parts**

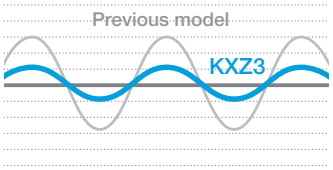
   Leading to
   the wide operation range

Expansion of minimum | Rotation speed of the compressor

Achieving precise performance control

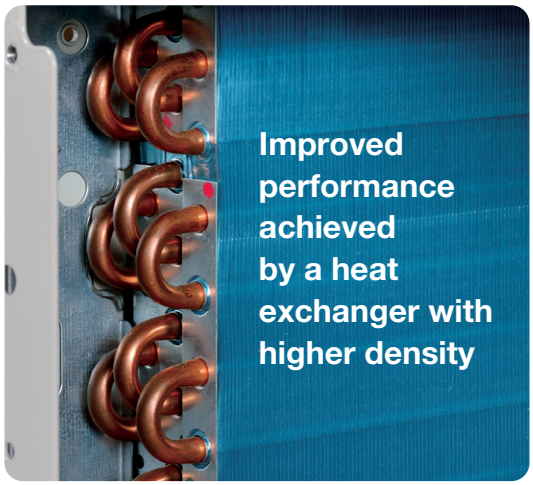


Improved energy savings and comfort at set temperature



Heat exchanger with small heat transfer pipe (Φ7.0)

2 Improved heat exchanger

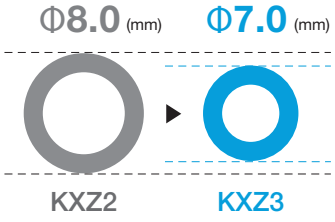


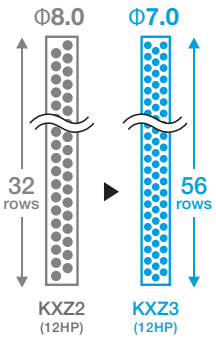
Adopting a slimmer 7.0mm copper pipe.
By increasing the number of the copper pipe and fin, the performance level has improved while keeping the heat exchanger size small.

With the adaptation of the new slim heat exchanger lesser refrigerant load and more compact sizing, achieved while keeping the overall permeance and the efficiency higher than the previous model.

Heat exchanger: (10HP)	-30% in volume	-12% in surface area

Slimmer heat exchanger and a dense copper piping

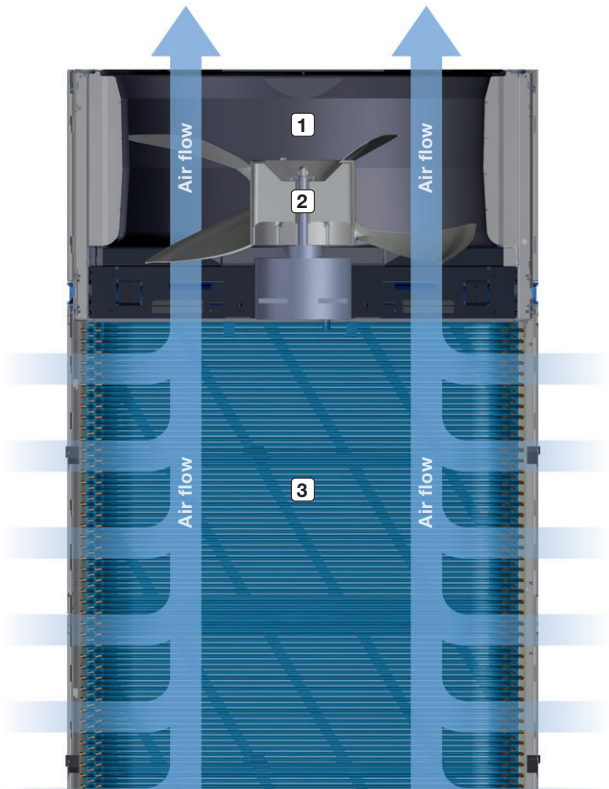


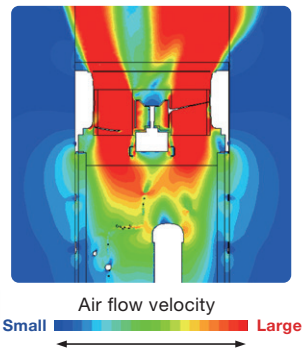


Optimized fan and flow path design

3 Optimized air flow structure

Pressure loss in flow path is minimized with the newly designed impeller and optimized path, dedicating better energy efficiency. Regulated air flow by optimized flow path leads to more efficient heat exchange.



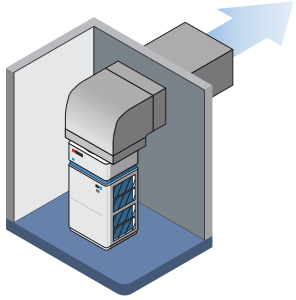


1. **Optimized diffuser**
2. **Newly designed impeller**
3. **Heat exchanger**

Extended external static pressure

Max: **90 Pa**

Flexibility to meet installation location needs.



VTCC+ : advanced variable temperature and capacity control

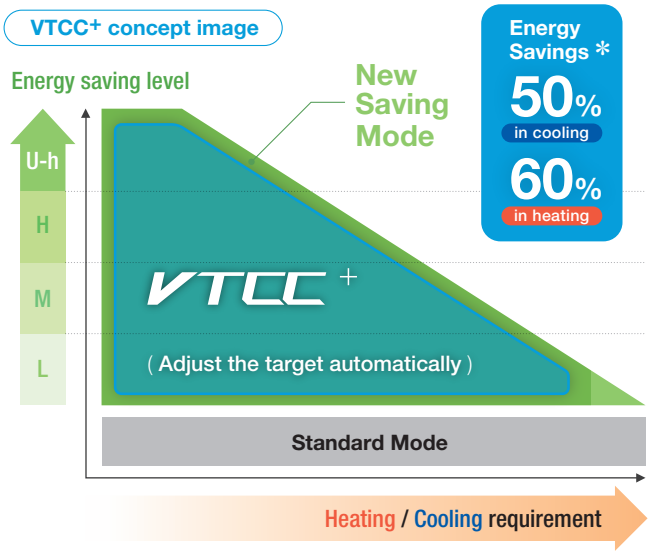
4 KX VRF redesigned with VTCC+

New Variable Temperature and Capacity Control

VTCC+

New VRF control VTCC+ adjusts the target pressure of the refrigerant automatically according to the requirement load of the indoor rooms 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.

- Most balanced mode between capacity control and energy saving
- Target pressure is automatically adjusted according to heating/cooling requirement,which achieves energy saving
- Advanced capacity control achieves smooth temperature control close to set temperature
- Suitable for heating/cooling demand varies among the room in the building



* Saving mode(U-High) compared to standard mode in the following conditions
Cooling : Outside temperature 20℃DB, Partial load factor 21%, Set temperature 27℃
Heating : Outside temperature 12℃DB/11℃WB, Partial load factor 15%, Set temperature 20℃

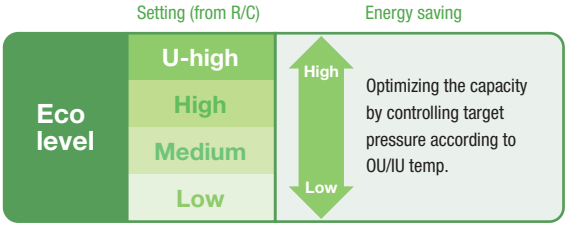
New Saving mode

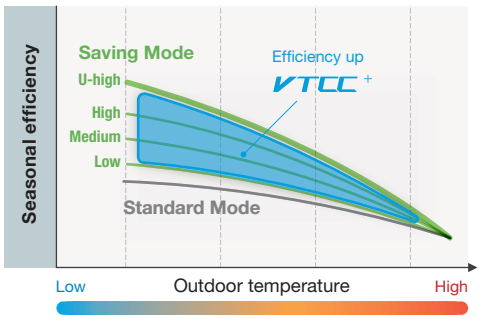
- Suitable for the building with strict energy target
- Target pressure would be fixed based on the selected eco level (Low / Medium / High / U-high)

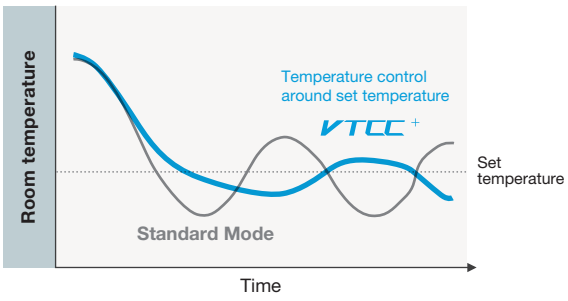
Standard mode

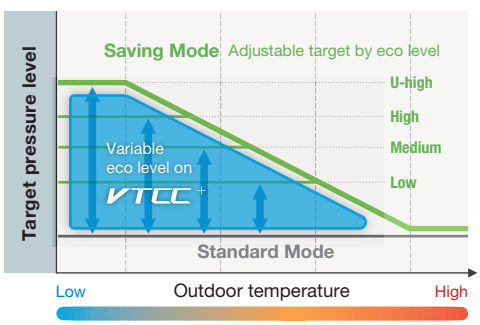
- Capacity is maximised
- Suitable for high heating/cooling demand in the building
- Target pressure is adjusted steady to maximize the capacity

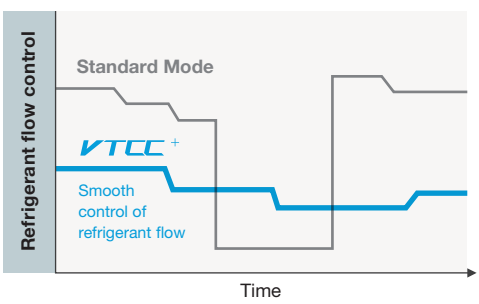
Better partial load performance









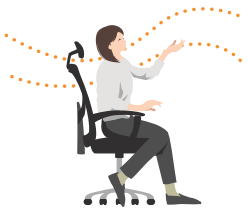


* All the graph above shows the conditions in cooling

Harmonize with people

Concept 4

Wellness & Comfort

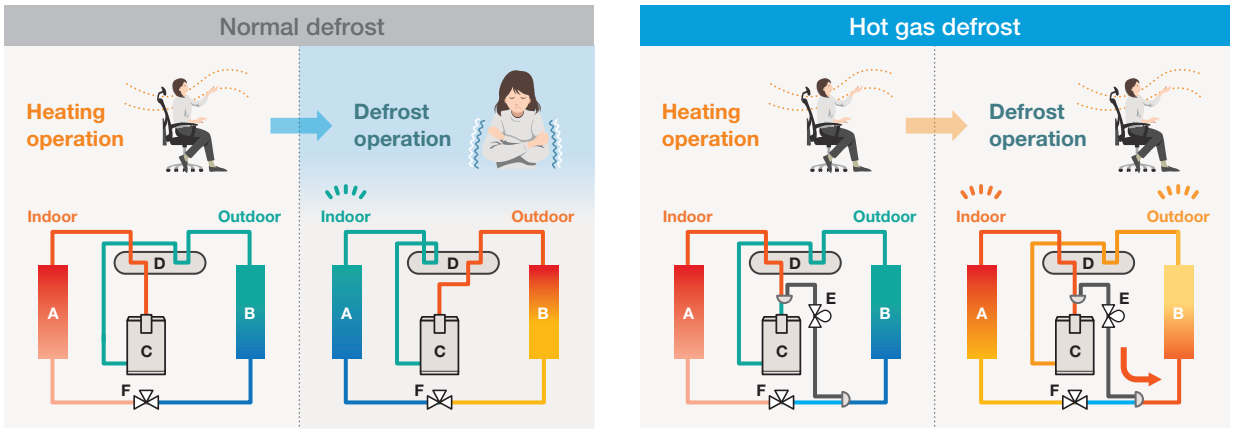


Advanced continuous heating

Continuous heating with two defrost modes

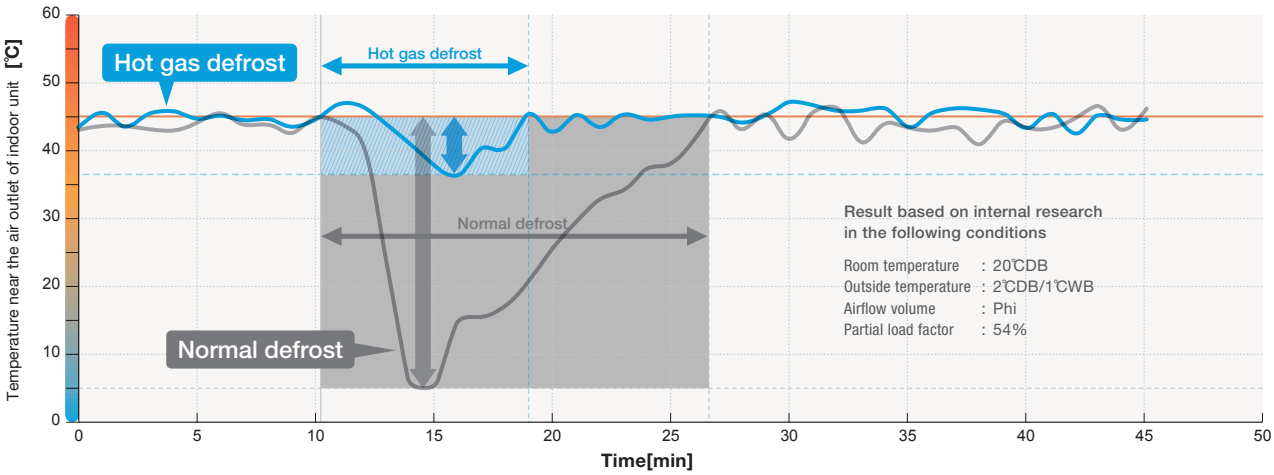
Two defrost modes are prepared, and the defrost is automatically switched according to the amount of frost formation. Hot gas defrost mode enables non-stop heating during defrost operation with of hot gas bypass.

Enhanced heating operation functions



The comparison between the air outlet temperature of normal defrost and hot gas defrost

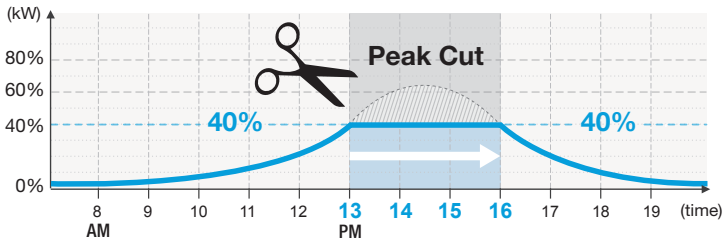
- Reduction in the time period of temperature drop caused by defrost
- Mitigation in temperature drop caused by defrost



Four steps of capacity control

Capacity control with 80%, 60%, 40%, 0% (off)

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.



Concept 5

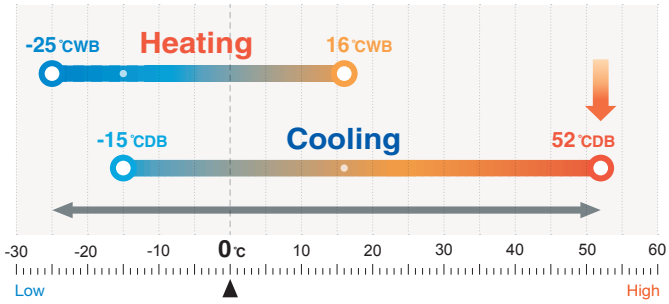
Toughness

Cooling use in high ambient temperature

Wide range of operation

Our new advanced technology has expanded the heating and cooling operation range.
KXZ3 series permits an extensible system design with a heating range operation down to -25˚C and a cooling range operation up to 52˚C.

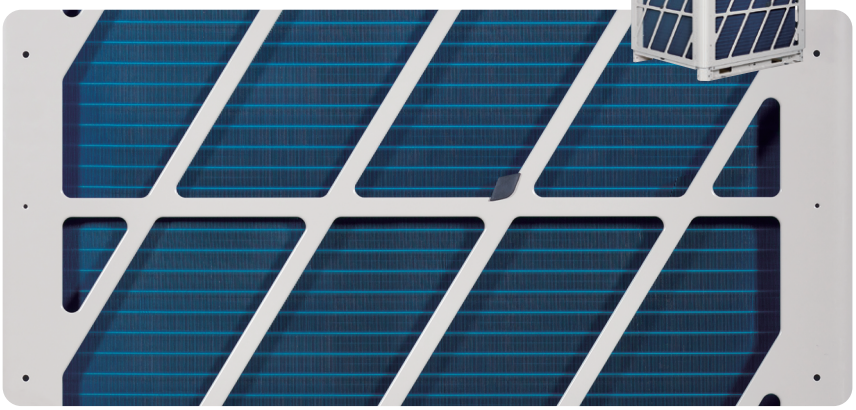
* With limitation to piping length and height difference between indoor and outdoor units.



Strengthened resistance against corrosion & frost

Blue fin

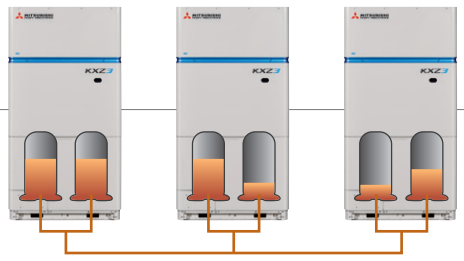
Due to application of blue coated fins on the heat exchanger of the new outdoor unit, corrosion resistance has been improved compared to previous models.
Resistance against frost has been strengthened by adopting the energy efficient heat-exchanger.



Long life and efficiency for the system

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.



Oil-equalizing pipe

Concept 6

Serviceability

Easy access to replacement parts

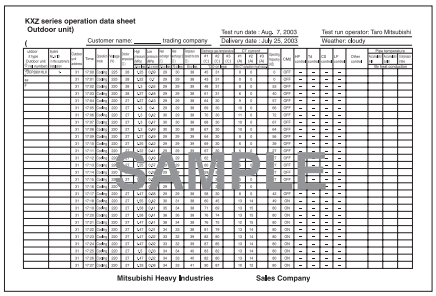
Easy access to the control box

The control box is in the upper part of the unit and can now be easily accessed by taking off the upper front panel.

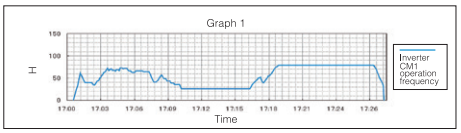
Features

- The total amount of data that can be checked from the remote controller has increased
- Can save the data of the operating conditions 30~180 minutes before malfunction after the power is off (To save data for more than 30 minutes settings must be changed)
- Can now output air flow volume of the outside fan
- Can now record the running hours of the fan motor

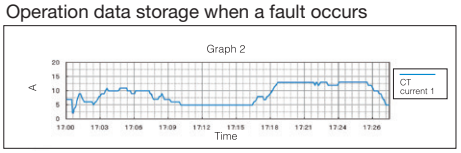
Automatically produced test-run report



Operation data storage during servicing



Operation data storage when a fault occurs

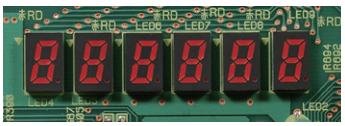


Check Operation

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. It takes 15~30 minutes and avoids frequent failure by preventing careless mistakes during installation.

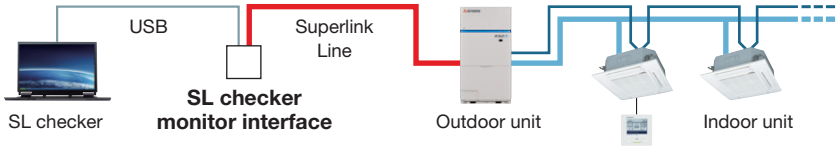
Monitoring Function

All series include features to assist with servicing and troubleshooting. Various data can be monitored through 3 or 6-digit display on the outdoor unit PCB. Detailed fault diagnosis and operation history memory via 7-segment display.



SL Checker II

Remote Control can be operated function from setting Superlink checker.

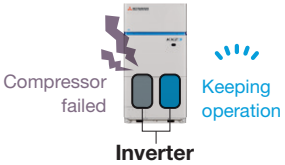


Back-up Operation

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

Combination of two or three outdoor units

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



Inverter

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

Energy efficient and environmentally conscious

Several radical design changes and engineering developments have brought about a vast improvement in energy efficiency and environmental protection.

SEER and SCOP is defined in European regulations listed below.

No.2016/2281: requirement for air-heating products, cooling products, high temperature process chillers and fan coil units.
Seasonal efficiency is the new way of rating the true efficiency of heating and cooling products over an entire year.
Set by the EU's new regulation implementing Eco-Design Directive for Energy related Product (ErP) which specifies the minimum efficiency of air conditioners manufacturers must integrate into their products.
The new Seasonal Efficiency rating system that must be used for heating and cooling by all manufacturers are;

SEER - Seasonal Efficiency Ratio (value in cooling)

This ratio represents the annual cooling performance divided by the annual consumption of electricity for cooling.

SCOP - Seasonal Coefficient of Performance (value in heating)

This ratio is calculated as the divided reference annual heating performance by the annual consumption of electricity for heating.

RoHS - Restriction of Hazardous substances

In order to avoid the release of hazardous substances into the environment, all models have utilized lead-free solder application. It has been considered to be difficult to use lead-free solder for practical applications because it requires higher solder temperatures at assembly, which can jeopardize reliability.
However our PbF soldering method can produce a higher quality lead-free printed circuit board.

8~12HP (22.4kW ~ 33.5kW)

R32 Blue Fin VTCC+

Technical focus

- Available in the R32 refrigerant
- New exterior design containing cutting edge technology
- High SEER with advanced technology
- VTCC+ : advanced variable temperature and capacity control
- Compact design with a small total footprint
- Advanced continuous heating

New!

FDC224~335

■ SPECIFICATIONS

Item		Model	FDC224KXZE3	FDC280KXZE3	FDC335KXZE3
Nominal horse power			8HP	10HP	12HP
Power source			3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling	kW	22.4	28.0	33.5
	Heating		22.4	28.0	33.5
Max heating capacity		kW	25.0	31.5	37.5
Power consumption	Cooling	kW	5.52	8.05	9.69
	Heating		4.58	6.35	7.98
EER			4.06	3.48	3.46
COP			4.90	4.41	4.20
SEER			9.16	8.96	8.57
SCOP			4.82	4.75	4.67
Exterior dimensions (HxWxD)		mm	1750×920×760		
Net weight		kg	262		274
Sound power level	Cooling	dB(A)	76	77	82
	Heating		78	83	86
Sound pressure level	Cooling	dB(A)	55	56	60
	Heating		55	60	63
Starting current		A	5		
Max current		A	20.7	23.2	25.7
Refrigerant	Type / GWP		R32 / 675		
	Charge	kg	7.1		7.7
	TCO_2Eq		4.793		5.198
Refrigerant piping size	Liquid	mm (in)	ø9.52(3/8")		ø12.7(1/2")
	Gas		ø19.05(3/4")	ø22.22(7/8")	
Total piping length		m	1000		
Outdoor operating temperature range	Cooling	°CDB	-15~52		
	Heating	°CWB	-25~16		
Capacity connection		%	50~150		
Number of connectable indoor units			22	28	33

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. SEER/SCOP are based on EN14825:2018 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. When connecting the indoor unit type FDK, FDFL, FDFU or FDFW series, limit the connectable capacity not higher than 130%.

16~24HP (44.8kW ~ 67.0kW)

R32 Blue Fin VTCC+

Technical focus

- Available in the R32 refrigerant
- New exterior design containing cutting edge technology
- High SCOP & SEER with advanced technology
- VTCC+ : advanced variable temperature and capacity control
- Compact design with a small total footprint
- Advanced continuous heating

New!

FDC450~670

■ SPECIFICATIONS

Item		Model	FDC450KXZVE3	FDC500KXZVE3	FDC560KXZVE3	FDC615KXZVE3	FDC670KXZVE3
Combination (FDC)			224KXZE3	224KXZE3	280KXZE3	280KXZE3	335KXZE3
			224KXZE3	280KXZE3	280KXZE3	335KXZE3	335KXZE3
Nominal horse power			16HP	18HP	20HP	22HP	24HP
Power source			3 Phase 380-415V, 50Hz				
Nominal capacity	Cooling	kW	44.8	50.4	56.0	61.5	67.0
	Heating		44.8	50.4	56.0	61.5	67.0
Max heating capacity		kW	50.0	56.5	63.0	69.0	75.0
Power consumption	Cooling	kW	11.0	13.6	16.1	17.7	19.4
	Heating		9.1	10.9	12.7	14.3	16.0
EER			4.06	3.71	3.48	3.46	3.46
COP			4.90	4.61	4.41	4.29	4.20
SEER			9.16	9.02	8.97	8.74	8.57
SCOP			4.82	4.78	4.75	4.70	4.67
Net weight		kg	524			536	548
Starting current		A	10				
Max current		A	41.4	43.9	46.4	48.9	51.4
Refrigerant	Type / GWP		R32 / 675				
	Charge	kg	7.1+7.1			7.1+7.7	7.7+7.7
Refrigerant piping size	Liquid	mm (in)	ø12.7 (1/2")				
	Gas		ø28.58 (11/8")				
	Oil equalization		ø12.7 (1/2")				
Total piping length		m	1000				
Outdoor operating temperature range	Cooling	°CDB	-15~52				
	Heating	°CWB	-25~16				
Capacity connection		%	50~150				
Number of connectable indoor units			45	50	56	61	67

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. SEER/SCOP are based on EN14825:2018 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. When connecting the indoor unit type FDK, FDFL, FDFU or FDFW series, limit the connectable capacity not higher than 130%.

26~30HP (72.8kW ~ 84.0kW)

R32 Blue Fin VTCC+

Technical focus

- Available in the R32 refrigerant
- New exterior design containing cutting edge technology
- High SCOP & SEER with advanced technology
- VTCC+ : advanced variable temperature and capacity control
- Compact design with a small total footprint
- Advanced continuous heating

New!

FDC735~850

■ SPECIFICATIONS

Item		Model	FDC735KXZVE3	FDC800KXZVE3	FDC850KXZVE3
Combination (FDC)			224KXZE3	224KXZE3	280KXZE3
			224KXZE3	280KXZE3	280KXZE3
			280KXZE3	280KXZE3	280KXZE3
Nominal horse power			26HP	28HP	30HP
Power source			3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling	kW	72.8	78.4	84.0
	Heating		72.8	78.4	84.0
Max heating capacity		kW	81.5	88.0	94.5
Power consumption	Cooling	kW	19.1	21.6	24.1
	Heating		15.5	17.3	19.0
EER			3.81	3.62	3.48
COP			4.69	4.53	4.41
SEER			9.07	9.02	8.97
SCOP			4.79	4.78	4.75
Net weight		kg	786		
Starting current		A	15		
Max current		A	64.6	67.1	69.6
Refrigerant	Type / GWP		R32 / 675		
	Charge	kg	7.1×3		
Refrigerant piping size	Liquid	mm (in)	ø15.88(5/8")		
	Gas		ø34.92(1·3/8")		
	Oil equalization		ø12.7 (1/2")		
Total piping length		m	1000		
Outdoor operating temperature range	Cooling	°CDB	-15~52		
	Heating	°CWB	-25~16		
Capacity connection		%	50~150		
Number of connectable indoor units			73	80	

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. SEER/SCOP are based on EN14825:2018 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. When connecting the indoor unit type FDK, FDFL, FDFU or FDFW series, limit the connectable capacity not higher than 130%.

32~36HP (89.5kW ~ 100.5kW)

R32 Blue Fin VTCC+

Technical focus

- Available in the R32 refrigerant
- New exterior design containing cutting edge technology
- High SCOP & SEER with advanced technology
- VTCC+ : advanced variable temperature and capacity control
- Compact design with a small total footprint
- Advanced continuous heating

New!

FDC900~1000

■ SPECIFICATIONS

Item			Model	FDC900KXZVE3	FDC950KXZVE3	FDC1000KXZVE3
Combination (FDC)				280KXZE3	280KXZE3	335KXZE3
				280KXZE3	335KXZE3	335KXZE3
				335KXZE3	335KXZE3	335KXZE3
Nominal horse power				32HP	34HP	36HP
Power source				3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling	kW		89.5	95.0	100.5
	Heating			89.5	95.0	100.5
Max heating capacity		kW		100.5	106.5	112.5
Power consumption	Cooling	kW		25.8	27.4	29.0
	Heating			20.7	22.3	23.9
EER				3.47	3.46	3.46
COP				4.32	4.25	4.20
SEER				8.81	8.68	8.57
SCOP				4.72	4.69	4.67
Net weight		kg		798	810	822
Starting current		A		15		
Max current		A		72.1	74.6	77.1
Refrigerant	Type / GWP			R32 / 675		
	Charge	kg		7.1+7.1+7.7	7.1+7.7+7.7	7.7×3
Refrigerant piping size	Liquid	mm (in)		ø15.88(5/8")		
	Gas			ø34.92(1·3/8")		
	Oil equalization			ø12.7 (1/2")		
Total piping length		m		1000		
Outdoor operating temperature range	Cooling	°CDB		-15~52		
	Heating	°CWB		-25~16		
Capacity connection		%		50~150		
Number of connectable indoor units				80		

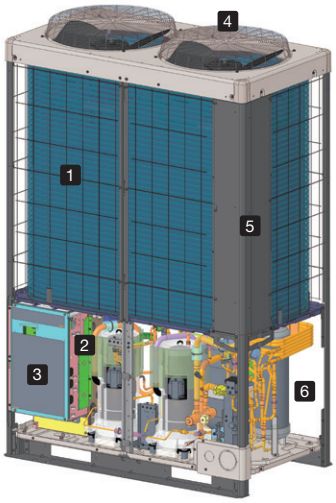
1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. SEER/SCOP are based on EN14825:2018 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. When connecting the indoor unit type FDK, FDFL, FDFU or FDFW series, limit the connectable capacity not higher than 130%.

KXZ2 series

KXZ2

Flexible Design

The 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 air conditioning systems.

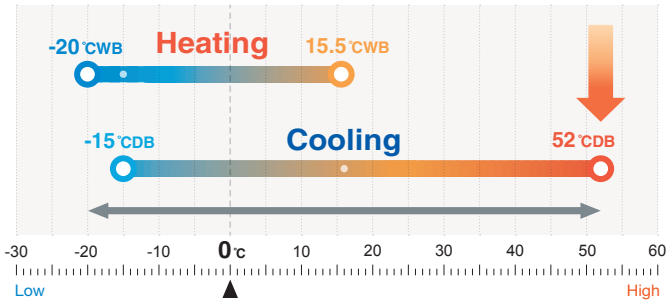


1. Highly efficient Heat exchanger
2. Optimised duct shape
3. New inverter control
4. DC Fan Motor
5. Rounded design
6. Compressor

The compressor has improved the units efficiency by innovating the thrust plate. Resulting a reduced friction loss, and increased realiability.

Wide range operation

Cooling range operation up to 52°C*

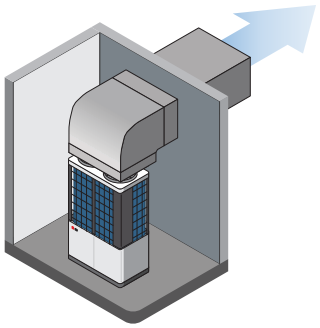


* With limitation to piping length and height difference between indoor and outdoor units.

Extended external static pressure

Max:
50Pa to 85Pa

Flexibility to meet installation location needs.



Indoor unit capacity connection

Increased number of connectable units and max capacity connection

(compared to KXZE1)

HP	10	12	14	16	17	18	20	22	24	26	28	30	32	34
Numbers	37	44	53	60	50	53	59	65	71	78	80			
IU Capacity connection	50 - 200% (*1)				50 - 160% (*1)									

HP	36	38	40	42	44	46	48	50	52	54	56	58	60
Numbers	80												
IU Capacity connection	50 - 130% (*1)												

(*1) When connecting the indoor unit type FDK, FDFL, FDFU or FDFW series, limit the connectable capacity not higher than 130%.

CHCC

Continuous Heating Capacity Control

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.

VTCC

Variable Temperature and Capacity Control

Energy Savings * 34%

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.

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

Long Pipe length

Total length : 1,000m

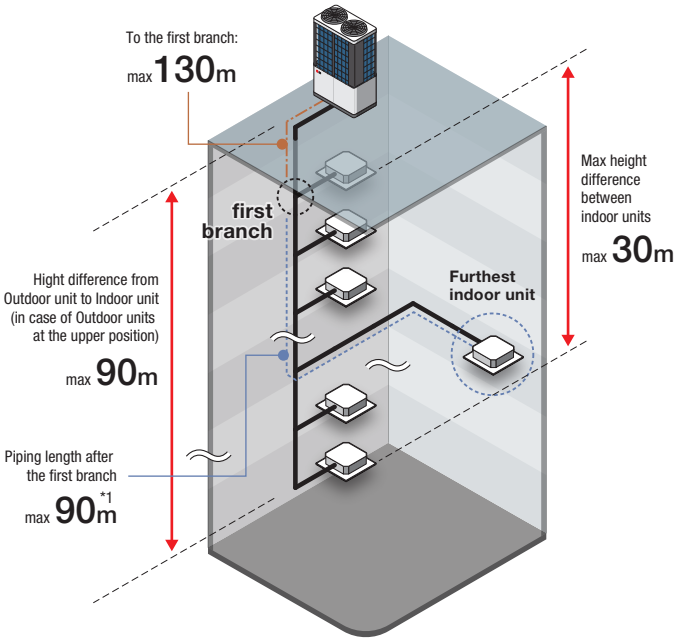
Furthest indoor unit:

Actual length: 160m

Equivalent length: 185m

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

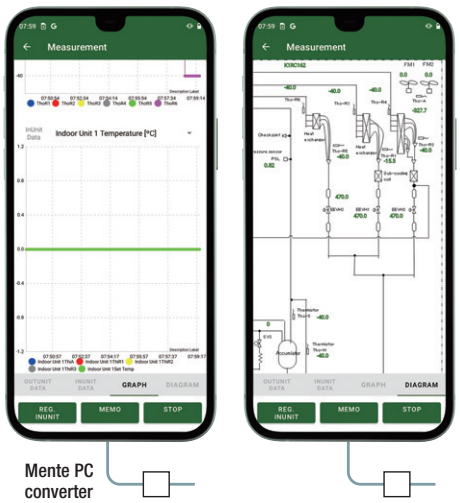
*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)



Field service with smart device

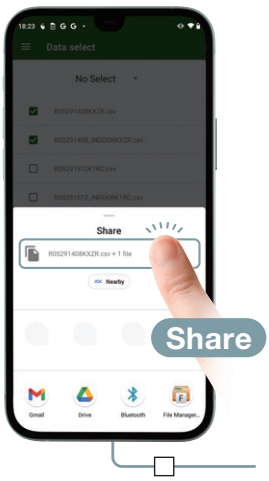
android only

GRAPH DIAGRAM

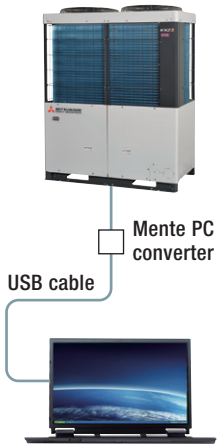


Monitoring and service task could now be done with a smartphone or a tablet by connecting to the Mente PC converter.

DATA SHARE



The data collected via the smart device could also be sent and viewed with our service software Mente PC.



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

10, 12HP (28.0kW • 33.5kW)

R410A Blue Fin VTCC

Technical focus

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.86
- VTCC : advanced variable temperature and capacity control
- Total piping length up to 1000m and a maximum height difference between indoor unit is maximum of 30m.
- Wide range of operation.

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

FDC280 · 335

SPECIFICATIONS

Item		Model	FDC280KXZE2	FDC335KXZE2
Nominal horse power			10HP	12HP
Power source			3 Phase 380-415V, 50Hz	
Nominal capacity	Cooling	kW	28.0	33.5
	Heating		31.5	37.5
Max heating capacity		kW	31.5	37.5
Power consumption	Cooling	kW	7.25	8.98
	Heating		7.41	9.03
EER			3.86	3.73
COP			4.25	4.15
SEER			7.30	7.54
SCOP			4.88	4.68
Exterior dimensions (HxWxD)		mm	1697x1350x720	
Net weight		kg	288	
Sound power level	Cooling	dB(A)	75	82
	Heating		76	81
Sound pressure level	Cooling	dB(A)	56	63
	Heating		57	62
Starting current		A	5	
Max current		A	20.1	
Refrigerant	Type / GWP		R410A / 2088	
	Charge	kg	11.0	
	TCO_2Eq		22.968	
Refrigerant piping size	Liquid	mm (in)	ø9.52(3/8")	ø12.7(1/2")
	Gas		ø22.22(7/8")	ø25.4(1")[ø22.22(7/8")]
Total piping length		m	1000	
Outdoor operating temperature range	Cooling	°CDB	-15~52	
	Heating	°CWB	-20~15.5	
Capacity connection		%	50~200	
Number of connectable indoor units			37	44

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. SEER/SCOP are based on EN14825:2016 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. Refrigerant piping size applicable to European installations are shown in parentheses.

14~20HP (40.0kW ~ 56.0kW)

R410A Blue Fin VTCC

Technical focus

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.64
- VTCC : advanced variable temperature and capacity control
- Total piping length up to 1000m and a maximum height difference between indoor unit is maximum of 30m.
- Wide range of operation.

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

FDC400~560

■ SPECIFICATIONS

Item			Model	FDC400KXZE2	FDC450KXZE2	FDC475KXZE2	FDC500KXZE2	FDC560KXZE2
Nominal horse power				14HP	16HP	17HP	18HP	20HP
Power source				3 Phase 380-415V, 50Hz				
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
Max heating capacity		kW		45.0	50.0	53.0	56.0	63.0
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
EER				3.64	3.22	3.40	3.57	3.20
COP				4.40	4.00	4.08	4.13	3.90
SEER				7.12	7.01	6.84	7.29	6.73
SCOP				4.87	4.36	4.45	4.58	4.30
Exterior dimensions (HxWxD)		mm		2052x1350x720				
Net weight		kg		332		378		
Sound power level	Cooling	dB(A)		80	81	81	81	82
	Heating			82	82	81	82	83
Sound pressure level	Cooling	dB(A)		60	61	61	61	63
	Heating			62	62	61	62	64
Starting current		A		5		8		
Max current		A		32.0		40.2		
Refrigerant	Type / GWP			R410A / 2088				
	Charge	kg		11.5				
	TCO_2Eq			24.012				
Refrigerant piping size	Liquid	mm (in)		ø12.7(1/2")				
	Gas			ø25.4(1")[ø28.58(1·1/8")]	ø28.58(1·1/8")			
Total piping length		m		1000				
Outdoor operating temperature range	Cooling	°CDB		-15~52				
	Heating	°CWB		-20~15.5				
Capacity connection		%		50~200		50~160		
Number of connectable indoor units				53	60	50	53	59

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. SEER/SCOP are based on EN14825:2016 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. Refrigerant piping size applicable to European installations are shown in parentheses.

22~26HP (61.5kW ~ 73.5kW)

R410A Blue Fin VTCC

Technical focus

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.79
- VTCC : advanced variable temperature and capacity control
- Total piping length up to 1000m and a maximum height difference between indoor unit is maximum of 30m.
- Wide range of operation.

FDC615 · 670

FDC735

■ SPECIFICATIONS

Item			Model	FDC615KXZE2	FDC670KXZE2	FDC735KXZE2
Combination (FDC)				280KXZE2	335KXZE2	335KXZE2
				335KXZE2	335KXZE2	400KXZE2
Nominal horse power				22HP	24HP	26HP
Power source				3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling	kW		61.5	67.0	73.5
	Heating			69.0	75.0	82.5
Power consumption	Cooling	kW		16.24	17.96	19.96
	Heating			16.44	18.06	19.26
EER				3.79	3.73	3.68
COP				4.20	4.15	4.28
Net weight		kg		576		620
Starting current		A		10		
Max current		A		40.2		52.1
Refrigerant	Type / GWP			R410A / 2088		
	Charge	kg		11.0+11.0		11.0+11.5
Refrigerant piping size	Liquid	mm (in)		ø12.7(1/2")		ø15.88(5/8")
	Gas			ø28.58(1·1/8")		ø31.75(1·1/4") [ø34.92(1·3/8")]
	Oil equalization			ø9.52 (3/8")		
Total piping length		m		1000		
Outdoor operating temperature range	Cooling	°CDB		-15~52		
	Heating	°CWB		-20~15.5		
Capacity connection		%		50~160		
Number of connectable indoor units				65	71	78

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

28~40HP (80.0kW ~ 112.0kW)

R410A Blue Fin VTCC

Technical focus

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.64
- VTCC : advanced variable temperature and capacity control
- Total piping length up to 1000m and a maximum height difference between indoor unit is maximum of 30m.
- Wide range of operation.

FDC800~1120

■ SPECIFICATIONS

Item			Model	FDC800KXZE2	FDC850KXZE2	FDC900KXZE2	FDC950KXZE2	FDC1000KXZE2	FDC1060KXZE2	FDC1120KXZE2
Combination (FDC)				400KXZE2	400KXZE2	450KXZE2	475KXZE2	500KXZE2	500KXZE2	560KXZE2
				400KXZE2	450KXZE2	450KXZE2	475KXZE2	500KXZE2	560KXZE2	560KXZE2
Nominal horse power				28HP	30HP	32HP	34HP	36HP	38HP	40HP
Power source				3 Phase 380-415V, 50Hz						
Nominal capacity	Cooling	kW		80.0	85.0	90.0	95.0	100.0	106.0	112.0
	Heating			90.0	95.0	100.0	106.0	112.0	119.0	126.0
Power consumption	Cooling	kW		21.96	24.96	27.95	27.94	28.02	31.51	35.00
	Heating			20.45	22.73	25.00	25.98	27.12	29.71	32.31
EER				3.64	3.41	3.22	3.40	3.57	3.36	3.20
COP				4.40	4.18	4.00	4.08	4.13	4.01	3.90
Net weight			kg	664			756			
Starting current			A	10			16			
Max current			A	64.0			80.4			
Refrigerant	Type / GWP			R410A / 2088						
	Charge		kg	11.5+11.5						
Refrigerant piping size	Liquid		mm (in)	ø15.88(5/8")					ø19.05(3/4")	
	Gas			ø31.75(1·1/4") [ø34.92(1·3/8")]				ø38.1(1·1/2") [ø34.92(1·3/8")]		
	Oil equalization			ø9.52 (3/8")						
Total piping length			m	1000						
Outdoor operating temperature range	Cooling		°CDB	-15~52						
	Heating		°CWB	-20~15.5						
Capacity connection			%	50~160				50~130		
Number of connectable indoor units				80						

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

42~50HP (120.0kW ~ 142.5kW)

R410A Blue Fin VTCC

Technical focus

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.64
- VTCC : advanced variable temperature and capacity control
- Total piping length up to 1000m and a maximum height difference between indoor unit is maximum of 30m.
- Wide range of operation.

FDC1200~1425

■ SPECIFICATIONS

Item		Model	FDC1200KXZE2	FDC1250KXZE2	FDC1300KXZE2	FDC1350KXZE2	FDC1425KXZE2
Combination (FDC)			400KXZE2	400KXZE2	400KXZE2	450KXZE2	475KXZE2
			400KXZE2	400KXZE2	450KXZE2	450KXZE2	475KXZE2
			400KXZE2	450KXZE2	450KXZE2	450KXZE2	475KXZE2
Nominal horse power			42HP	44HP	46HP	48HP	50HP
Power source			3 Phase 380-415V, 50Hz				
Nominal capacity	Cooling	kW	120.0	125.0	130.0	135.0	142.5
	Heating		135.0	140.0	145.0	150.0	159.0
Power consumption	Cooling	kW	32.94	35.94	38.93	41.93	41.91
	Heating		30.68	32.95	35.23	37.50	38.97
EER			3.64	3.48	3.34	3.22	3.40
COP			4.40	4.25	4.12	4.00	4.08
Net weight		kg	996				1134
Starting current		A	15				24
Max current		A	96.0				120.6
Refrigerant	Type / GWP		R410A / 2088				
	Charge	kg	11.5x3				
Refrigerant piping size	Liquid	mm (in)	ø19.05(3/4")				
	Gas		ø38.1(1·1/2") [ø34.92(1·3/8")]				
	Oil equalization		ø9.52 (3/8")				
Total piping length		m	1000				
Outdoor operating temperature range	Cooling	°CDB	-15~52				
	Heating	°CWB	-20~15.5				
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 level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

52~60HP (145.0kW ~ 168.0kW)

R410A Blue Fin VTCC

Technical focus

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.57
- VTCC : advanced variable temperature and capacity control
- Total piping length up to 1000m and a maximum height difference between indoor unit is maximum of 30m.
- Wide range of operation.

FDC1450~1680

■ SPECIFICATIONS

Item			Model	FDC1450KXZE2	FDC1500KXZE2	FDC1560KXZE2	FDC1620KXZE2	FDC1680KXZE2
Combination (FDC)				475KXZE2	500KXZE2	500KXZE2	500KXZE2	560KXZE2
				475KXZE2	500KXZE2	500KXZE2	560KXZE2	560KXZE2
				500KXZE2	500KXZE2	560KXZE2	560KXZE2	560KXZE2
Nominal horse power				52HP	54HP	56HP	58HP	60HP
Power source				3 Phase 380-415V, 50Hz				
Nominal capacity	Cooling	kW		145.0	150.0	156.0	162.0	168.0
	Heating			162.0	168.0	175.0	182.0	189.0
Power consumption	Cooling	kW		41.95	42.03	45.52	49.01	52.50
	Heating			39.54	40.68	43.27	45.87	48.46
EER				3.46	3.57	3.43	3.31	3.20
COP				4.10	4.13	4.04	3.97	3.90
Net weight		kg		1134				
Starting current		A		24				
Max current		A		120.6				
Refrigerant	Type / GWP			R410A / 2088				
	Charge	kg		11.5x3				
Refrigerant piping size	Liquid	mm (in)		ø19.05(3/4")				
	Gas			ø38.1(1-1/2") [ø34.92(1-3/8")]				
	Oil equalization			ø9.52 (3/8")				
Total piping length		m		1000				
Outdoor operating temperature range	Cooling	°CDB		-15~52				
	Heating	°CWB		-20~15.5				
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 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

20~32HP (56.0kW ~ 89.5kW)

R410A Blue Fin VTCC

Technical focus

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.86
- VTCC : advanced variable temperature and capacity control
- Total piping length up to 1000m and a maximum height difference between indoor unit is maximum of 30m.
- Wide range of operation.

FDC560

FDC850 · 900

■ SPECIFICATIONS

Item			Model	FDC560KXZXE2	FDC850KXZXE2	FDC900KXZXE2
Combination (FDC)				280KXZE2	280KXZE2	280KXZE2
				280KXZE2	280KXZE2	280KXZE2
				–	280KXZE2	335KXZE2
Nominal horse power				20HP	30HP	32HP
Power source				3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling	kW		56.0	84.0	89.5
	Heating			63.0	94.5	100.5
Power consumption	Cooling	kW		14.51	21.76	23.49
	Heating			14.82	22.23	23.85
EER				3.86	3.86	3.81
COP				4.25	4.25	4.21
Net weight		kg		576	864	
Starting current		A		10	15	
Max current		A		40.2	60.3	
Refrigerant	Type / GWP			R410A / 2088		
	Charge	kg		11.0+11.0	11.0x3	
Refrigerant piping size	Liquid	mm (in)		ø12.7(1/2")	ø15.88(5/8")	
	Gas			ø28.58(1·1/8")	ø31.75(1·1/4") [ø34.92(1·3/8")]	
	Oil equalization			ø9.52 (3/8")		
Total piping length		m		1000		
Outdoor operating temperature range	Cooling	°CDB		-15~52		
	Heating	°CWB		-20~15.5		
Capacity connection		%		80~160		
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 level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

34~40HP (95.0kW ~ 113.5kW)

R410A Blue Fin VTCC

Technical focus

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.77
- VTCC : advanced variable temperature and capacity control
- Total piping length up to 1000m and a maximum height difference between indoor unit is maximum of 30m.
- Wide range of operation.


FDC950 · 1000


FDC1060


FDC1120

■ SPECIFICATIONS

Item			Model	FDC950KXZXE2	FDC1000KXZXE2	FDC1060KXZXE2	FDC1120KXZXE2
Combination (FDC)				280KXZE2	335KXZE2	335KXZE2	335KXZE2
				335KXZE2	335KXZE2	335KXZE2	400KXZE2
				335KXZE2	335KXZE2	400KXZE2	400KXZE2
Nominal horse power				34HP	36HP	38HP	40HP
Power source				3 Phase 380-415V, 50Hz			
Nominal capacity	Cooling	kW		95.0	100.5	107.0	113.5
	Heating			106.5	112.5	120.0	127.5
Power consumption	Cooling	kW		25.22	26.94	28.94	30.94
	Heating			25.47	27.09	28.29	29.48
EER				3.77	3.73	3.70	3.67
COP				4.18	4.15	4.24	4.32
Net weight		kg		864		908	952
Starting current		A		15			
Max current		A		60.3		72.2	84.1
Refrigerant	Type / GWP			R410A / 2088			
	Charge	kg		11.0x3		11.0+11.0+11.5	11.0+11.5+11.5
Refrigerant piping size	Liquid	mm (in)		ø15.88(5/8")		ø19.05(3/4")	
	Gas			ø31.75(1·1/4") [ø34.92(1·3/8")]		ø38.1(1·1/2") [ø34.92(1·3/8")]	
	Oil equalization			ø9.52 (3/8")			
Total piping length		m		1000			
Outdoor operating temperature range	Cooling	°CDB		-15~52			
	Heating	°CWB		-20~15.5			
Capacity connection		%		80~160	80~130		
Number of connectable indoor units				80			

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

KXZ2 series

Heat Recovery Systems

for simultaneous heating and cooling

Flexibility and Performance

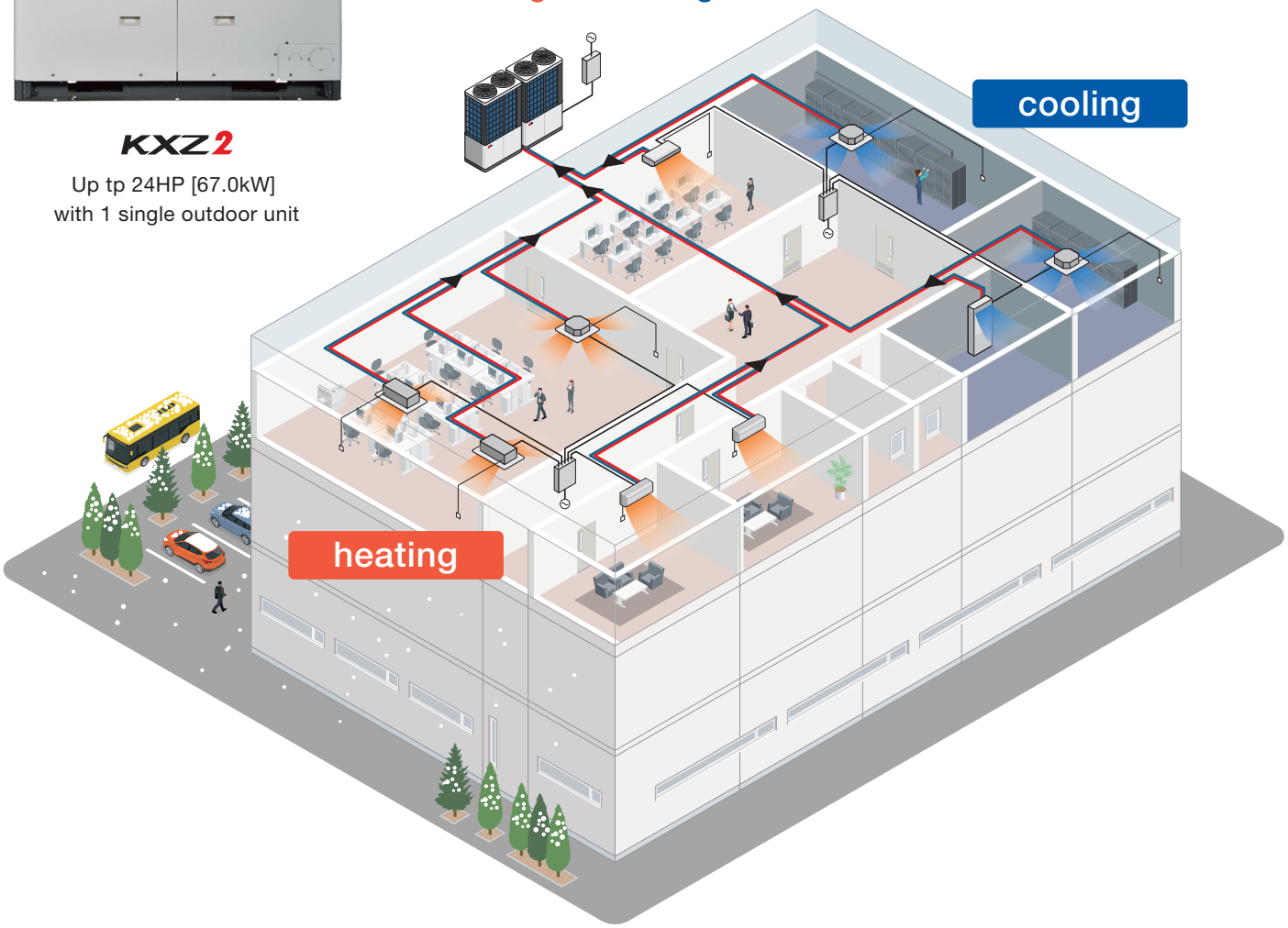
The heat recovery systems operate with 3 inter-connecting pipes, commonly referred to as a '3-pipe system'.
The systems provide both heating and cooling operations simultaneously to individual indoor units according to room conditions or user requirements.
The systems incorporate highly sophisticated controls transferring heat load energy from the entire building to provide an efficient, comfortable heating and cooling environment.

The range starts from a cooling capacity of 8 HP (22.4 kW) and expands up to 24 HP (67.0kW) using a single outdoor unit. Outdoor units can also be used as a modular system (twin or triple) providing up to 60 HP (168.0 kW) of cooling capacity.

KXZ2

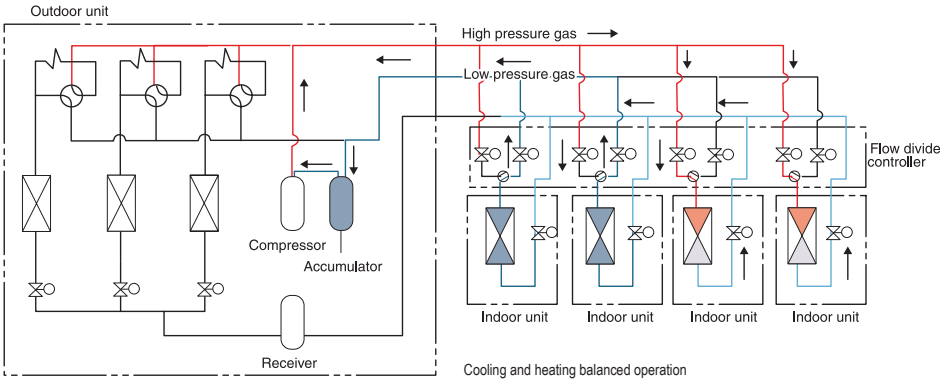
Up tp 24HP [67.0kW]
with 1 single outdoor unit

Example of simultaneous heating and cooling



Heat recovery systems

The system interconnecting pipework has a unique arrangement, with two of the interconnecting pipes routed through a PFD Distribution Controller, and the third pipe connected directly to each indoor unit from the main pipe run. This reduces installation time, and the number of brazed connections on site. The PFD Distribution Controllers are available for single connection, or as a combined PFD 4-way connection, with each connected unit having independent cooling or heating operation.



Cooling and heating balanced operation

During defrosting or during automatic protection of a compressor, which is activated every several hours in heating operation, heating operation temporarily stops and restarts after some period. The series has the same automatic protection of compressor in cooling operation also. During this protection period air flow only comes on and cooling operation restarts after some period.
These models are not suitable for year round cooling applications -such as server rooms- especially in areas where the outdoor air temperature goes below 5°C.

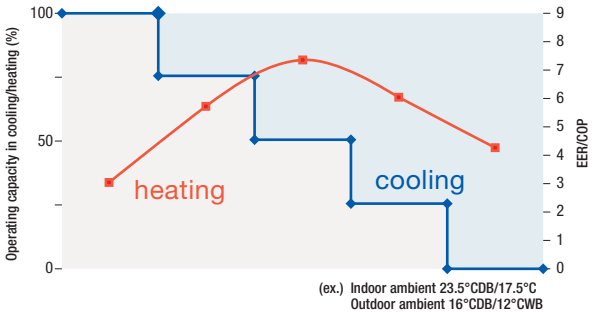
Heat recovery features

High efficiency in simultaneous heating and cooling mode

Highly efficient operation mode is automatically determined inside the refrigerant system during simultaneous cooling and heating operation. Heat recovery efficiency is maximized by this control and Max COP 9.0 (*) is achieved during operation with simultaneous cooling and heating.

* Conditions for simultaneous cooling and heating (Our estimation in 8HP operation and the following conditions: Temperature outside the room DB16°C/WB12°C, temperature in the cooled room DB27°C/19°C, and temperature in the heated room DB20°C/WB14.5°C)

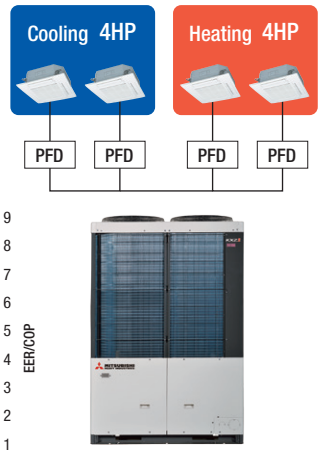
Energy efficiency in heat recovery mode



(ex.) Indoor ambient 23.5°CDB/17.5°C
Outdoor ambient 16°CDB/12°CWB

Max COP > 9.0

(Condition) FDC224KXZRE2
50% Indoor unit in cooling (27°CDB/19°C)
50% Indoor unit in heating (20°CDB/14.5°C)
Outdoor ambient 16°CDB/12°CWB

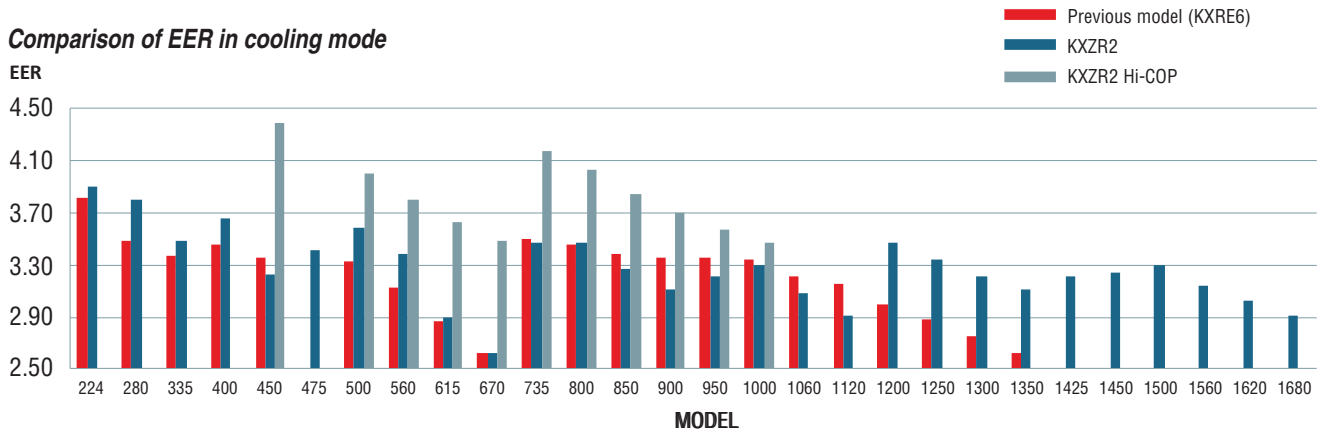


Technology

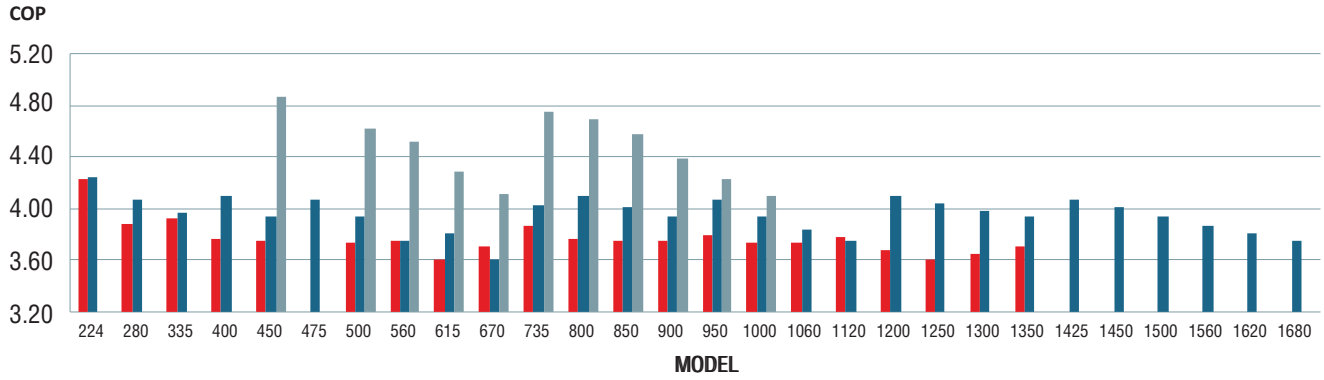
High Efficiency

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

Comparison of EER in cooling mode



Comparison of COP in heating mode



Continuous Heating Capacity Control (CHCC) -

Our CHCC 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.

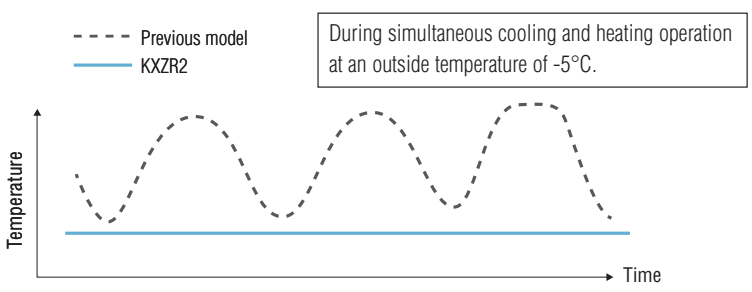
Improved cooling capacity in low ambient temperature

Small split heat exchanger and pressure control make it possible for the outdoor unit to work in cooling operation even at low ambient temperature condition, which achieves more capacity in such low ambient condition as -5˚C, compared to previous model.

In previous model, when high demand for heating and low cooling demand are required at the same time in low ambient temperature condition, pressure control is adjusted to keep more heating capacity than the cooling capacity.
Adopted heat exchanger and pressure control in KXZR series, has improved its capacity for both heating and cooling capacity at the same time. (*)

(*) Refrigerant system will prioritize required heating mode more than low cooling demand, in case most of the indoor units are operated in heating mode.

Blown air temperature in the cooled room



Design Flexibility

Indoor unit capacity connection

	HP	8	10	12	14	16	17	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
KXZR	Numbers	29	37	44	53	60	50	53	59	65	71	78	80																
	IU Capacity connection	50-200%					50-160%										50-130%												

	HP	16	18	20	22	24	26	28	30	32	34	36
KXZRX	Numbers	60	53	59	65	71	78	80				
	IU Capacity connection	50-200%	50-160%									50-130%

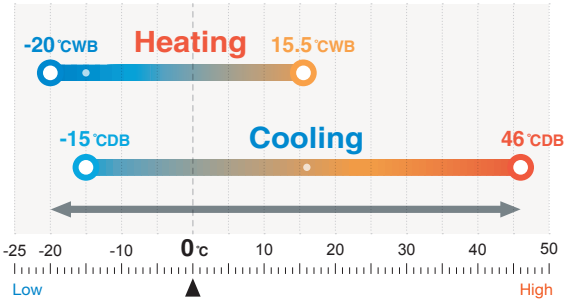
Connectable indoor units

Up to 80 indoor units can be connected to the largest capacity outdoor unit, with a range of 15 types of exposed or concealed indoor unit, in several capacities, a choice of 82 indoor units is available.

- In case that capacity connection is more than 130%, additional charge of refrigerant is required on site.
- In case of 8-34HP of the systems, if one or more indoor units of FDK, FDFL,FDFU and/or FDFW series are connected to the system, the total connecting capacity of indoor units should not exceed 130%.

Wide Range of Operation

KXZR series permits an extensible system design with a heating range operation under a low temperature condition down to -20˚C and a cooling range operation up to 46˚C



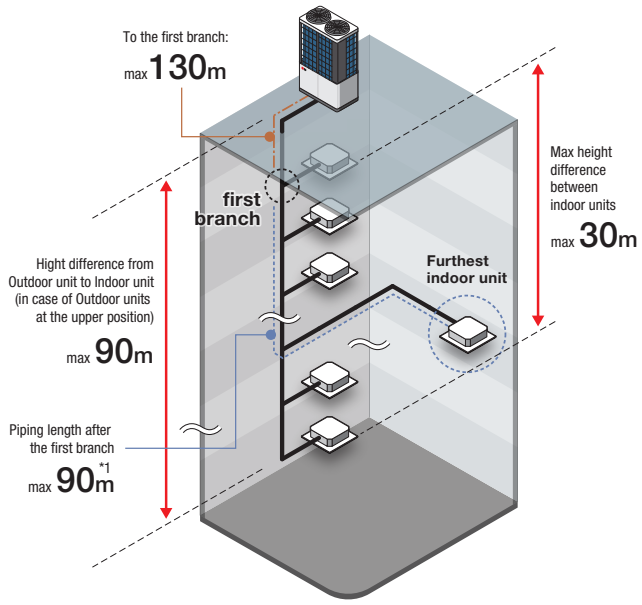
Long Pipe Length

Total length :
1,000m

Furthest indoor unit:
Actual length: 160m
Equivalent length: 185m

The maximum height difference between indoor units is a maximum of 30m, and the maximum height difference between the outdoor unit and indoor unit is 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)



Improvement of the PFD controller noise level

Sound insulation box design specification, reducing the level of noises from the PFD controller generated due to the flow of refrigerant or other causes.

Sound insulation design

8~12HP (22.4kW ~ 33.5kW)

R410A Blue Fin VTCC

Technical focus

- for simultaneous heating and cooling

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.89
- VTCC : advanced variable temperature and capacity control
- Continuous heating capacity control
- Total piping length up to 1000m and a maximum pipe run of 160m

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

FDC224~335

■ SPECIFICATIONS

Item		Model	FDC224KXZRE2	FDC280KXZRE2	FDC335KXZRE2
Nominal horse power			8HP	10HP	12HP
Power source			3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling	kW	22.4	28.0	33.5
	Heating		22.4	28.0	33.5
Max heating capacity		kW	25.0	31.5	37.5
Power consumption	Cooling	kW	5.76	7.39	9.65
	Heating		5.27	6.86	8.44
EER			3.89	3.79	3.47
COP			4.25	4.08	3.97
SEER			6.21	6.36	7.15
SCOP			4.06	4.02	4.43
Exterior dimensions (HxWxD)		mm	1697x1350x720		
Net weight		kg	305		
Sound power level	Cooling	dB(A)	75	75	82
	Heating		77	76	82
Sound pressure level	Cooling	dB(A)	56	55	63
	Heating		58	57	63
Starting current		A	5		
Max current		A	16.0	20.0	21.2
Refrigerant	Type / GWP		R410A / 2088		
	Charge	kg	11.5		
	TCO_2Eq		24.012		
Refrigerant piping size	Liquid	mm (in)	ø9.52(3/8")		ø12.7(1/2")
	Suction gas		ø19.05(3/4")	ø22.22(7/8")	ø25.4(1") [ø22.22(7/8")]
	Discharge gas		ø15.88(5/8")	ø19.05(3/4")	
Total piping length		m	1000		
Outdoor operating temperature range	Cooling	°CDB	-15~46		
	Heating	°CWB	-20~15.5		
Capacity connection		%	50~200		
Number of connectable indoor units			29	37	44

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. SEER/SCOP are based on EN14825:2016 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. Refrigerant piping size applicable to European installations are shown in parentheses.

14~24HP (40.0kW ~ 67.0kW)

R410A Blue Fin VTCC

Technical focus

- for simultaneous heating and cooling

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.46
- VTCC : advanced variable temperature and capacity control
- Continuous heating capacity control
- Total piping length up to 1000m and a maximum pipe run of 160m

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

FDC400~670

■ SPECIFICATIONS

Item		Model	FDC400KXZRE2	FDC450KXZRE2	FDC475KXZRE2	FDC500KXZRE2	FDC560KXZRE2	FDC615KXZRE2	FDC670KXZRE2
Nominal horse power			14HP	16HP	17HP	18HP	20HP	22HP	24HP
Power source			3 Phase 380-415V, 50Hz						
Nominal capacity	Cooling	kW	40.0	45.0	47.5	50.0	56.0	61.5	67.0
	Heating	kW	40.0	45.0	47.5	50.0	56.0	61.5	63.0
Max heating capacity		kW	45.0	50.0	53.0	56.0	63.0	63.0	63.0
Power consumption	Cooling	kW	11.56	14.47	14.84	15.20	19.31	21.35	25.57
	Heating	kW	9.76	11.39	11.67	12.69	14.93	16.14	17.45
EER			3.46	3.11	3.20	3.29	2.90	2.88	2.62
COP			4.10	3.95	4.07	3.94	3.75	3.81	3.61
SEER			6.78	6.29	6.60	7.01	6.26	6.05	5.88
SCOP			4.39	4.33	4.27	4.39	4.29	4.34	4.50
Exterior dimensions (HxWxD)		mm	2052x1350x720						
Net weight		kg	372		420				
Sound power level	Cooling	dB(A)	81				84		
	Heating	dB(A)	82				82	83	
Sound pressure level	Cooling	dB(A)	61				64	65	
	Heating	dB(A)	62				63	64	
Starting current		A	5				8		
Max current		A	30.0	32.0	40.4	41.0	41.6	42.0	42.4
Refrigerant	Type / GWP		R410A / 2088						
	Charge	kg	11.5						
	TCO_2Eq		24.012						
Refrigerant piping size	Liquid	mm (in)	ø12.7(1/2")						
	Suction gas	mm (in)	ø25.4(1") [ø28.58(1·1/8")]	ø28.58(1·1/8")					
	Discharge gas	mm (in)	ø22.22(7/8")					ø25.4(1") [ø22.22(7/8")]	
Total piping length		m	1000						
Outdoor operating temperature range	Cooling	°CDB	-15~46						
	Heating	°CWB	-20~15.5						
Capacity connection		%	50~200		50~160				
Number of connectable indoor units			53	60	50	53	59	65	71

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. SEER/SCOP are based on EN14825:2016 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. Refrigerant piping size applicable to European installations are shown in parentheses.

26~40HP (73.5kW ~ 112.0kW)

R410A Blue Fin VTCC

Technical focus

- for simultaneous heating and cooling

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.47
- VTCC : advanced variable temperature and capacity control
- Continuous heating capacity control
- Total piping length up to 1000m and a maximum pipe run of 160m

FDC735

FDC800~1120

■ SPECIFICATIONS

Item		Model	FDC735KXZRE2	FDC800KXZRE2	FDC850KXZRE2	FDC900KXZRE2	FDC950KXZRE2	FDC1000KXZRE2	FDC1060KXZRE2	FDC1120KXZRE2
Combination (FDC)			335KXZRE2	400KXZRE2	400KXZRE2	450KXZRE2	475KXZRE2	500KXZRE2	500KXZRE2	560KXZRE2
			400KXZRE2	400KXZRE2	450KXZRE2	450KXZRE2	475KXZRE2	500KXZRE2	560KXZRE2	560KXZRE2
Nominal horse power			26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP
Power source			3 Phase 380-415V, 50Hz							
Nominal capacity	Cooling	kW	73.5	80.0	85.0	90.0	95.0	100.0	106.0	112.0
	Heating		73.5	80.0	85.0	90.0	95.0	100.0	106.0	112.0
Power consumption	Cooling	kW	21.21	23.12	26.03	28.94	29.68	30.40	34.51	38.62
	Heating		18.20	19.52	21.15	22.78	23.34	25.38	27.62	29.86
EER			3.47	3.46	3.27	3.11	3.20	3.29	3.07	2.90
COP			4.04	4.10	4.02	3.95	4.07	3.94	3.84	3.75
Net weight		kg	677	744			840			
Starting current		A	10				16			
Max current		A	51.2	60.0	62.0	64.0	80.8	82.0	82.6	83.2
Refrigerant	Type / GWP		R410A / 2088							
	Charge	kg	11.5+11.5							
Refrigerant piping size	Liquid	mm (in)	ø15.88(5/8")						ø19.05(3/4")	
	Suction gas		ø31.75(1·1/4") [ø34.92(1·3/8")]					ø38.1(1·1/2") [ø34.92(1·3/8")]		
	Discharge gas		ø25.4(1") [ø28.58(1·1/8")]	ø28.58(1·1/8")					ø31.75(1·1/4") [ø28.58(1·1/8")]	
	Oil equalization		ø9.52 (3/8")							
Total piping length		m	1000							
Outdoor operating temperature range	Cooling	°CDB	-15~46							
	Heating	°CWB	-20~15.5							
Capacity connection		%	50~160					50~130		
Number of connectable indoor units			78	80						

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

42~50HP (120.0kW ~ 142.5kW)

R410A Blue Fin VTCC

Technical focus

- for simultaneous heating and cooling

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.46
- VTCC : advanced variable temperature and capacity control
- Continuous heating capacity control
- Total piping length up to 1000m and a maximum pipe run of 160m

FDC1200~1425

■ SPECIFICATIONS

Item		Model	FDC1200KXZRE2	FDC1250KXZRE2	FDC1300KXZRE2	FDC1350KXZRE2	FDC1425KXZRE2
Combination (FDC)			400KXZRE2	400KXZRE2	400KXZRE2	450KXZRE2	475KXZRE2
			400KXZRE2	400KXZRE2	450KXZRE2	450KXZRE2	475KXZRE2
			400KXZRE2	450KXZRE2	450KXZRE2	450KXZRE2	475KXZRE2
Nominal horse power			42HP	44HP	46HP	48HP	50HP
Power source			3 Phase 380-415V, 50Hz				
Nominal capacity	Cooling	kW	120.0	125.0	130.0	135.0	142.5
	Heating	kW	120.0	125.0	130.0	135.0	142.5
Power consumption	Cooling	kW	34.68	37.59	40.50	43.41	44.52
	Heating	kW	29.28	30.91	32.54	34.17	35.01
EER			3.46	3.33	3.21	3.11	3.20
COP			4.10	4.04	4.00	3.95	4.07
Net weight		kg	1116				1260
Starting current		A	15				24
Max current		A	90.0	92.0	94.0	96.0	121.2
Refrigerant	Type / GWP		R410A / 2088				
	Charge	kg	11.5x3				
Refrigerant piping size	Liquid	mm (in)	ø19.05(3/4")				
	Suction gas	mm (in)	ø38.1(1-1/2") [ø34.92(1-3/8")]				
	Discharge gas	mm (in)	ø31.75(1-1/4") [ø28.58(1-1/8")]				
	Oil equalization	mm (in)	ø9.52 (3/8")				
Total piping length		m	1000				
Outdoor operating temperature range	Cooling	°CDB	-15~46				
	Heating	°CWB	-20~15.5				
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 level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

52~60HP (145.0kW ~ 168.0kW)

R410A Blue Fin VTCC

Technical focus

- for simultaneous heating and cooling

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.29
- VTCC : advanced variable temperature and capacity control
- Continuous heating capacity control
- Total piping length up to 1000m and a maximum pipe run of 160m

FDC1450~1680

■ SPECIFICATIONS

Item		Model	FDC1450KXZRE2	FDC1500KXZRE2	FDC1560KXZRE2	FDC1620KXZRE2	FDC1680KXZRE2
Combination (FDC)			475KXZRE2	500KXZRE2	500KXZRE2	500KXZRE2	560KXZRE2
			475KXZRE2	500KXZRE2	500KXZRE2	560KXZRE2	560KXZRE2
			500KXZRE2	500KXZRE2	560KXZRE2	560KXZRE2	560KXZRE2
Nominal horse power			52HP	54HP	56HP	58HP	60HP
Power source			3 Phase 380-415V, 50Hz				
Nominal capacity	Cooling	kW	145.0	150.0	156.0	162.0	168.0
	Heating		145.0	150.0	156.0	162.0	168.0
Power consumption	Cooling	kW	44.88	45.60	49.71	53.82	57.93
	Heating		36.03	38.07	40.31	42.55	44.79
EER			3.23	3.29	3.14	3.01	2.90
COP			4.02	3.94	3.87	3.81	3.75
Net weight		kg	1260				
Starting current		A	24				
Max current		A	121.8	123.0	123.6	124.2	124.8
Refrigerant	Type / GWP		R410A / 2088				
	Charge	kg	11.5x3				
Refrigerant piping size	Liquid	mm (in)	ø19.05(3/4")				
	Suction gas		ø38.1(1·1/2") [ø34.92(1·3/8")]				
	Discharge gas		ø31.75(1·1/4") [ø28.58(1·1/8")]				
	Oil equalization		ø9.52 (3/8")				
Total piping length		m	1000				
Outdoor operating temperature range	Cooling	°CDB	-15~46				
	Heating	°CWB	-20~15.5				
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 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

KXZ2 Heat recovery Hi-COP combination 3-pipe systems

16~24HP (45.0kW ~ 67.0kW)

R410A Blue Fin VTCC

Technical focus

- for simultaneous heating and cooling

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.91
- VTCC : advanced variable temperature and capacity control
- Continuous heating capacity control
- Total piping length up to 1000m and a maximum pipe run of 160m

FDC450~670

■ SPECIFICATIONS

Item			Model	FDC450KXZRXE2	FDC500KXZRXE2	FDC560KXZRXE2	FDC615KXZRXE2	FDC670KXZRXE2
Combination (FDC)				224KXZRE2 224KXZRE2	224KXZRE2 280KXZRE2	280KXZRE2 280KXZRE2	280KXZRE2 335KXZRE2	335KXZRE2 335KXZRE2
Nominal horse power				16HP	18HP	20HP	22HP	24HP
Power source				3 Phase 380-415V, 50Hz				
Nominal capacity	Cooling	kW		45.0	50.0	56.0	61.5	67.0
	Heating			45.0	50.0	56.0	61.5	67.0
Power consumption	Cooling	kW		11.52	13.15	14.78	17.04	19.30
	Heating			10.54	12.13	13.72	15.30	16.88
EER				3.91	3.80	3.79	3.61	3.47
COP				4.27	4.12	4.08	4.02	3.97
Net weight		kg		610				
Starting current		A		10				
Max current		A		32.0	36.0	40.0	41.2	42.4
Refrigerant	Type / GWP			R410A / 2088				
	Charge	kg		11.5+11.5				
Refrigerant piping size	Liquid	mm (in)		ø12.7(1/2")				
	Suction gas			ø28.58(1·1/8")				
	Discharge gas			ø22.22(7/8")			ø25.4(1") [ø22.22(7/8")]	
	Oil equalization			ø9.52 (3/8")				
Total piping length		m		1000				
Outdoor operating temperature range	Cooling	°CDB		-15~46				
	Heating	°CWB		-20~15.5				
Capacity connection		%		80~200	80~160			
Number of connectable indoor units				60	53	59	65	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 level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

KXZ2 Heat recovery Hi-COP combination 3-pipe systems

26~36HP (73.5kW ~ 100.0kW)

R410A Blue Fin VTCC

Technical focus

- for simultaneous heating and cooling

- The KXZ2 series has a layered design and a refined new form
- High efficiency with EER up to 3.89
- VTCC : advanced variable temperature and capacity control
- Continuous heating capacity control
- Total piping length up to 1000m and a maximum pipe run of 160m

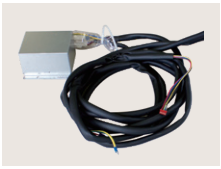
FDC735~1000

■ SPECIFICATIONS

Item		Model	FDC735KXZRXE2	FDC800KXZRXE2	FDC850KXZRXE2	FDC900KXZRXE2	FDC950KXZRXE2	FDC1000KXZRXE2
Combination (FDC)			224KXZRE2	224KXZRE2	280KXZRE2	280KXZRE2	280KXZRE2	335KXZRE2
			224KXZRE2	280KXZRE2	280KXZRE2	280KXZRE2	335KXZRE2	335KXZRE2
			280KXZRE2	280KXZRE2	280KXZRE2	335KXZRE2	335KXZRE2	335KXZRE2
Nominal horse power			26HP	28HP	30HP	32HP	34HP	36HP
Power source			3 Phase 380-415V, 50Hz					
Nominal capacity	Cooling	kW	73.5	80.0	85.0	90.0	95.0	100.0
	Heating		73.5	80.0	85.0	90.0	95.0	100.0
Power consumption	Cooling	kW	18.91	20.54	22.17	24.43	26.69	28.95
	Heating		17.40	18.99	20.58	22.16	23.74	25.32
EER			3.89	3.89	3.83	3.68	3.56	3.45
COP			4.22	4.21	4.13	4.06	4.00	3.95
Net weight		kg	915					
Starting current		A	15					
Max current		A	52.0	56.0	60.0	61.2	62.4	63.6
Refrigerant	Type / GWP		R410A / 2088					
	Charge	kg	11.5x3					
Refrigerant piping size	Liquid	mm (in)	ø15.88(5/8")					
	Suction gas		ø31.75(1·1/4") [ø34.92(1·3/8")]					ø38.1(1·1/2") [ø34.92(1·3/8")]
	Discharge gas		ø25.4(1") [ø28.58(1·1/8")]	ø28.58(1·1/8")				
	Oil equalization		ø9.52 (3/8")					
Total piping length		m	1000					
Outdoor operating temperature range	Cooling	°CDB	-15~46					
	Heating	°CWB	-20~15.5					
Capacity connection		%	80~160					80~130
Number of connectable indoor units			78	80				

1. The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
3. Refrigerant piping size applicable to European installations are shown in parentheses.

PFD refrigerant flow branch control



Relay kit
(Relay kit comes attached to the branch control)

Branch control	Total downstream indoor unit capacity
PFD1124-E	less than 11.2kW
PFD1804-E	less than 18.0kW
PFD2804-E	28.0kW or less
PFD1124X4-E	less than 37.1kW(less than 11.2kWx4 branches)

4-Way PFD box

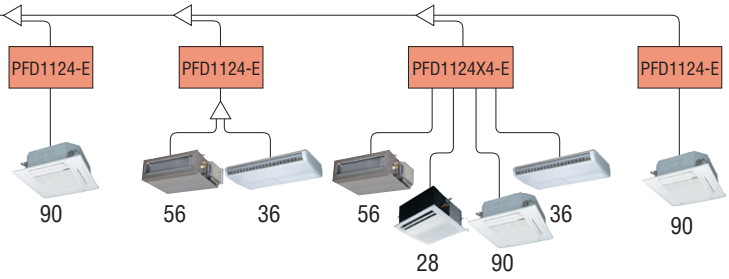
Design flexibility

A total of 37.1 kW group of indoor units can be connected to a PFD box single branch.
All connected units will operate in the same mode only (cooling or heating).

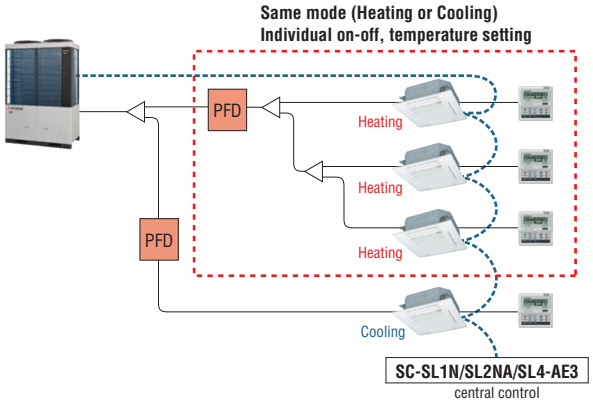
The recent 4-way PFD control PFD1124X4-E can connect to up to four indoor units with individual control – allowing for simultaneous cooling or heating.

Branch control	Total downstream capacity	Connectable indoor units
PFD1124-E	less than 112	1-5
PFD1804-E	112 or more but less than 180	1-8
PFD2804-E	180 or more but less than 280	1-10
PFD1124X4-E	less than 371(less than 112 per branch)	Up to 16

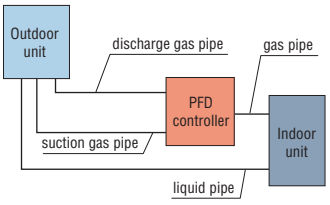
*Refer to Data Book for details



- The remote control setting (as individual indoor unit on-off, temperature setting other than cooling/heating mode control) is possible with one remote control connected to each indoor unit, while at the same time, Center Control (SC-SL1N/SL2NA/SL4-AE3) can be used together with the individual remote control.
- It is necessary to set the central control to use this function. Please refer to the Installation Manual for details.
- In case of mode changeover from cooling to heating and from heating to cooling, by the use of only the indoor units and PFD box combination, the mode changeover noise is reduced. All this made possible without turning off the compressor and at the same time without the reduction of capacity.
  The risk of refrigerant leakage is reduced by changing piping connection at the PFD box to brazing method.
- The use of optional PFD box extension cable that has a connector at ends, makes it possible to further separate the indoor unit and PFD box. This will enable the PFD box to be located away from the indoor unit and help reduce the influence of sound caused by PFD box and refrigerant flow.



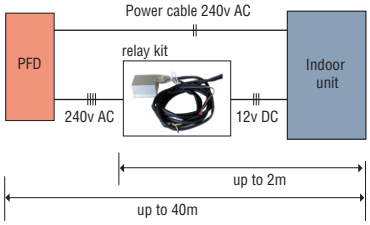
Easy installation
PFD control box design allows to directly connect the liquid pipe from indoor unit to outdoor unit by bypassing the PFD box. As a result, the piping connections per indoor unit are reduced by a third, thus reducing installation time and cost.



extension cable 15m

PFD4-15WR-E (option)

The PFD is connected to the indoor unit by 3 core signal wire via a relay kit (supplied) to be located within 2m of each other. The indoor unit however can be up to 40m away. Power to the PFD can be connected from the indoor unit or other supply.



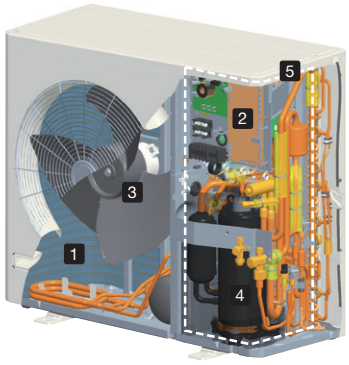
Micro KXZ series

Micro KXZ

Space saving

for small offices, shops applications

Micro 4~6HP



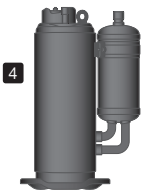
1 **Heat Exchanger**

2 **Inverter Control**
Vector Inverter Control system

3 **DC Fan Motor**
Compact & High efficiency

4 **Twin Rotary Compressor**

5 **System Control**



1 Compact high efficient Heat Exchanger

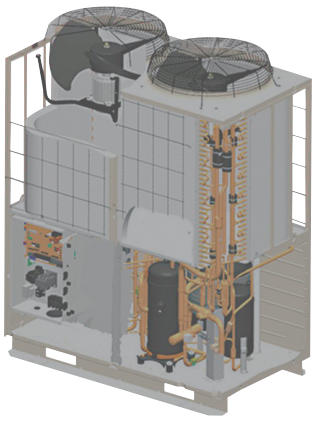
- Optimizing relationship of the air flow velocity & fin pattern
- Improvement of air distribution
  Maximizing efficiency of heat exchanger

5 Optimum Refrigerant System Control

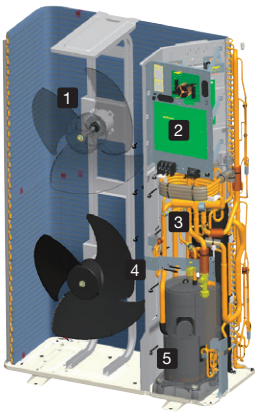
- Optimum heat exchanger refrigerant distribution
- Advanced refrigerant liquid return protection control system
- High speed system control by Superlink system

Micro 8~12HP

Previous



Micro KXZ



1 **DC Fan motor**
Compact & High efficiency

2 **Inverter Control**
Compact & Vector Inverter Control system

3 **Downsized accumulator**

4 **Receiver in fan section**

5 **Scroll Compressor**

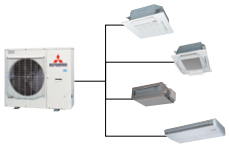
Design Flexibility

Connectable indoor units & Indoor unit capacity connection

	HP	4	5	6	8	10	12
Micro KXZ	Numbers	8	10*	10*	22	24	24
	IU Capacity connection	80 ~ 150%			50 ~ 150%		

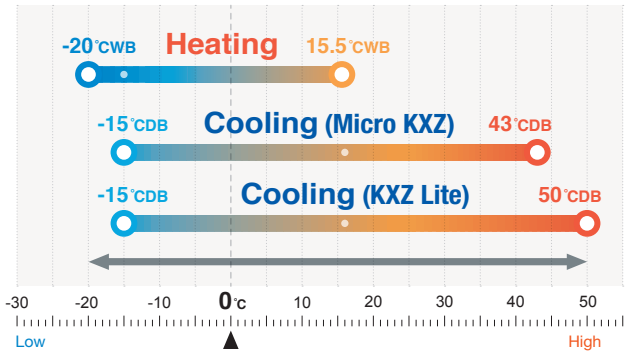
*When connecting 9 units or more, set the total capacity as follows : 5HP : 110% or less, 6HP : 100% or less. In the case of R410A.

	HP	8	10
KXZ Lite	Numbers	8	8
	IU Capacity connection	50 ~ 120%	



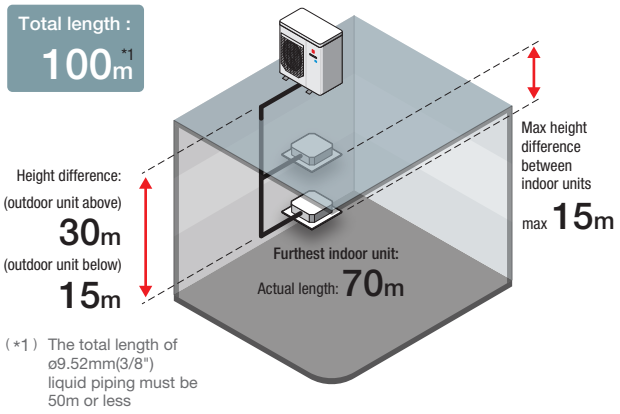
150% capacity connection

Wide range operation



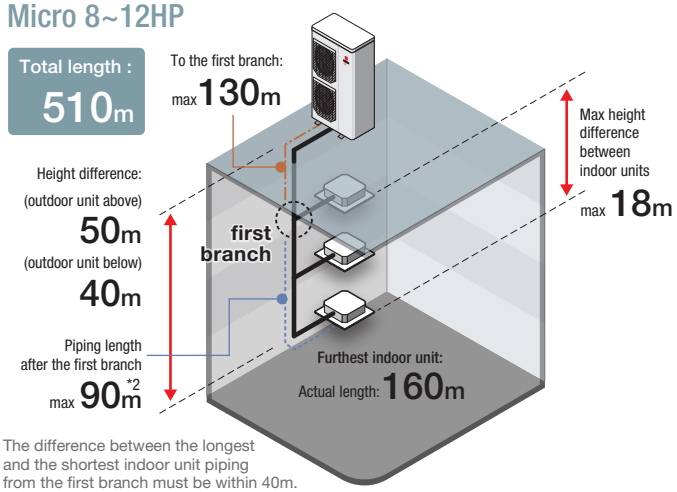
Long Pipe length

Micro 4~6HP



(*1) The total length of ø9.52mm(3/8") liquid piping must be 50m or less

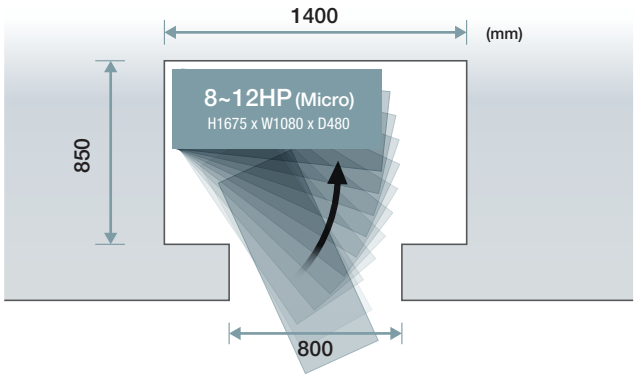
Micro 8~12HP



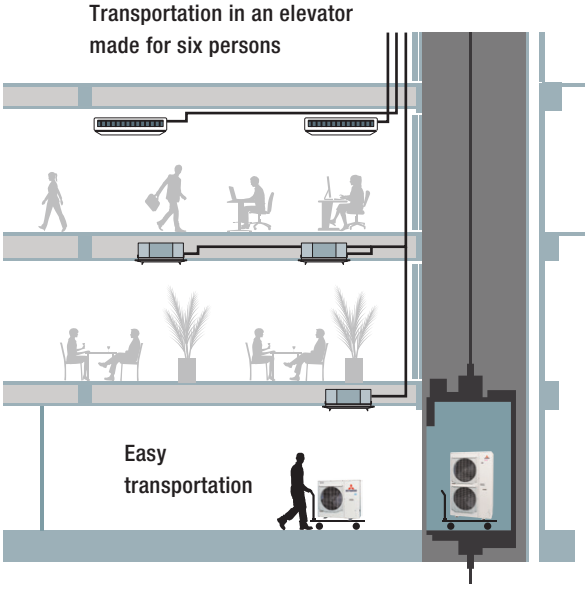
(*2) The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m.

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.



Transportation in an elevator made for six persons



Micro KXZ Heat pump systems

4~6HP (12.1kW ~ 15.5kW)

Technical focus

- Compact & flexible design
- High efficiency with EER up to 4.08
- Easy maintenance & Quick installation
- Available in 1-phase (KXZEN1-W) and 3-Phase (KXZES1-W)
- Total piping length up to 100m and a maximum pipe run of 70m

FDC121~155

■ SPECIFICATIONS

Item		Model	FDC121KXZEN1-W	FDC140KXZEN1-W	FDC155KXZEN1-W	FDC121KXZES1-W	FDC140KXZES1-W	FDC155KXZES1-W
Nominal horse power			4HP	5HP	6HP	4HP	5HP	6HP
Power source			1 Phase 220-240V, 50Hz			3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling	kW	12.1	14.0	15.5	12.1	14.0	15.5
	Heating		12.1	14.0	15.5	12.1	14.0	15.5
Max heating capacity		kW	12.5	16.0	16.3	12.5	16.0	16.3
Power consumption	Cooling	kW	2.97	4.00	5.20	2.97	4.00	5.20
	Heating		2.88	3.52	4.06	2.88	3.52	4.06
EER			4.08	3.50	2.98	4.08	3.50	2.98
COP			4.20	3.98	3.82	4.20	3.98	3.82
SEER *1(Eurovent Certification condition)			8.63	8.36	7.87	8.63	8.36	7.87
SCOP *1(Eurovent Certification condition)			4.40	4.43	4.41	4.40	4.43	4.41
SEER *2 (Lot6/21)			9.67	8.82	8.17	9.67	8.82	8.17
SCOP *2 (Lot6/21)			4.67	4.62	4.58	4.67	4.62	4.58
Exterior dimensions (HxWxD)		mm	845x970x370					
Net weight		kg	85			87		
Sound power level	Cooling	dB(A)	68	69	70	68	69	70
	Heating		71	73	73	71	73	73
Sound pressure level	Cooling	dB(A)	54	54	54	54	54	54
	Heating		56	58	58	56	58	58
Starting current		A	5					
Max current		A	23.0			13.5		
Refrigerant	Type / GWP		R32 / 675					
	Charge	kg	4.2					
	TCO_2Eq		2.835					
Refrigerant piping size	Liquid	mm (in)	ø9.52(3/8")					
	Gas		ø15.88(5/8")					
Total piping length		m	100					
Outdoor operating temperature range	Cooling	°CDB	-15~43					
	Heating	°CWB	-20~15.5					
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 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. SEER/SCOP are based on EN14825:2016 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. Refrigerant piping size applicable to European installations are shown in parentheses.

*1 Seasonal efficiency of Eurovent certification condition SEER/SCOP certified value according to the max air flow limit of 275m^3/h/kW stated in the Eurovent certification rules.
*2 Seasonal efficiency of Lot6/21 condition.

4~6HP (12.1kW ~ 15.5kW)

R410A Blue Fin

Technical focus

- Compact & flexible design
- High efficiency with EER up to 3.82
- Easy maintenance & Quick installation
- Available in 1-phase (KXZEN1) and 3-Phase (KXZES1)
- Total piping length up to 100m and a maximum pipe run of 70m

FDC121~155

■ SPECIFICATIONS

Item		Model	FDC121KXZEN1	FDC140KXZEN1	FDC155KXZEN1	FDC121KXZES1	FDC140KXZES1	FDC155KXZES1
Nominal horse power			4HP	5HP	6HP	4HP	5HP	6HP
Power source			1 Phase 220-240V, 50Hz			3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling	kW	12.1	14.0	15.5	12.1	14.0	15.5
	Heating		12.1	14.0	15.5	12.1	14.0	15.5
Max heating capacity		kW	12.5	16.0	16.3	12.5	16.0	16.3
Power consumption	Cooling	kW	3.16	3.96	5.20	3.16	3.96	5.20
	Heating		3.09	3.66	4.28	3.09	3.66	4.28
EER			3.82	3.54	2.98	3.82	3.54	2.98
COP			3.91	3.83	3.62	3.91	3.83	3.62
SEER *1(Eurovent Certification condition)			7.37	7.06	6.68	7.37	7.06	6.68
SCOP *1(Eurovent Certification condition)			4.52	4.52	4.41	4.52	4.52	4.41
SEER *2 (Lot6/21)			8.15	7.73	7.21	8.15	7.73	7.21
SCOP *2 (Lot6/21)			4.63	4.59	4.55	4.63	4.59	4.55
Exterior dimensions (HxWxD)		mm	845x970x370					
Net weight		kg	85			87		
Sound power level	Cooling	dB(A)	70	71	71	70	71	71
	Heating		72	72	74	72	72	74
Sound pressure level	Cooling	dB(A)	53	53	54	53	53	54
	Heating		56	57	57	56	57	57
Starting current		A	5					
Max current		A	28.0			13.5		
Refrigerant	Type / GWP		R410A / 2088					
	Charge	kg	5.0					
	TCO_2Eq		10.44					
Refrigerant piping size	Liquid	mm	ø9.52(3/8")					
	Gas	(in)	ø15.88(5/8")					
Total piping length		m	100					
Outdoor operating temperature range	Cooling	°CDB	-15~43					
	Heating	°CWB	-20~15.5					
Capacity connection		%	80~150					
Number of connectable indoor units			8	10*3	10*3	8	10*3	10*3

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. SEER/SCOP are based on EN14825:2016 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. Refrigerant piping size applicable to European installations are shown in parentheses.

*1 Seasonal efficiency of Eurovent certification condition SEER/SCOP certified value according to the max air flow limit of 275m^3/h/kW stated in the Eurovent certification rules.
*2 Seasonal efficiency of Lot6/21 condition.
*3 When connecting 9 units or more, set the total capacity as follows : 5HP : 110% or less, 6HP : 100% or less. In the case of R410A.

8~12HP (22.4kW ~ 33.5kW)

R410A Blue Fin

Technical focus

- Compact & flexible design
- High efficiency with EER up to 4.00
- Easy transportation & Quick installation
- Connect up to 24 indoor units / up to 150% capacity
- Total piping length up to 510m and a maximum pipe run of 160m

FDC224~335

■ SPECIFICATIONS

Item		Model	FDC224KXZME1	FDC280KXZME1	FDC335KXZME1A
Nominal horse power			8HP	10HP	12HP
Power source			3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling	kW	22.4	28.0	33.5
	Heating		22.4	28.0	33.5
Max heating capacity		kW	25.0	31.5	37.5
Power consumption	Cooling	kW	5.59	7.90	10.68
	Heating		4.97	6.53	8.44
EER			4.00	3.54	3.13
COP			4.50	4.28	3.96
SEER			6.55	6.03	5.84
SCOP			4.55	4.54	4.04
Exterior dimensions (HxWxD)		mm	1675x1080x480		
Net weight		kg	221		224
Sound power level	Cooling	dB(A)	73	75	75
	Heating		75	76	77
Sound pressure level	Cooling	dB(A)	58	60	60
	Heating		59	60	62
Starting current		A	5		
Max current		A	20.0		23.0
Refrigerant	Type / GWP		R410A / 2088		
	Charge	kg	11.5		
	TCO_2Eq		24.012		
Refrigerant piping size	Liquid	mm (in)	ø9.52(3/8")		ø12.7(1/2")
	Gas		ø19.05(3/4")	ø22.22(7/8")	ø25.4(1") [ø22.22(7/8")]
Total piping length		m	510		
Outdoor operating temperature range	Cooling	°CDB	-15~43		
	Heating	°CWB	-20~15.5		
Capacity connection		%	50~150		
Number of connectable indoor units			22	24	24

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. SEER/SCOP are based on EN14825:2016 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. Refrigerant piping size applicable to European installations are shown in parentheses.

KXZ Lite Heat pump systems

8, 10 HP (22.4kW · 28.0kW)

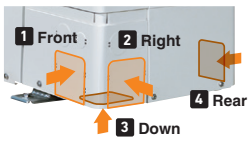
R410A Blue Fin

Technical focus

- Compact & flexible design
- High efficiency with EER up to 4.00
- KXZ Lite extends a cooling range operation up to 50°C.
- Connect up to 8 indoor units / up to 120% capacity
- Total piping length up to 150m and a maximum pipe run of 120m
- External static pressure is available up to 35 Pa
- Improved installation items

FDC224 · 280

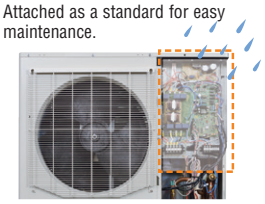
Improved freedom of piping layout



Hole size became 120% bigger.

A transparent rain cover

Attached as a standard for easy maintenance.



Wire insertion holes for fall prevention

Fixing screws to service panel

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

■ SPECIFICATIONS

Item		Model	FDC224KXZPE1	FDC280KXZPE1
Nominal horse power			8HP	10HP
Power source			3 Phase 380-415V, 50Hz	
Nominal capacity	Cooling	kW	22.4	28.0
	Heating		22.4	28.0
Power consumption	Cooling	kW	5.6	7.87
	Heating		4.8	6.47
EER			4.00	3.56
COP			4.67	4.33
SEER			6.65	6.68
SCOP			4.34	4.50
Exterior dimensions (HxWxD)		mm	1505x970x370	
Net weight		kg	165	
Sound power level	Cooling	dB(A)	72	74
	Heating		73	76
Sound pressure level	Cooling	dB(A)	59	60
	Heating		60	63
Starting current		A	5	
Max current		A	21.0	22.0
Refrigerant	Type / GWP		R410A / 2088	
	Charge	kg	8.9	
	TCO_2Eq		18.583	
Refrigerant piping size	Liquid	mm (in)	ø9.52(3/8")	
	Gas		ø19.05(3/4")	ø22.22(7/8")
Total piping length		m	150	
Outdoor operating temperature range	Cooling	°CDB	-15~50	
	Heating	°CWB	-20~15.5	
Capacity connection		%	50~120	
Number of connectable indoor units			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. SEER/SCOP are based on EN14825:2016 and Commission regulation (EU) No.2016/2281. Temperature conditions for calculating SCOP are based on "Average climate".
3. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
4. 'tonne(s) of CO_2 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.
5. Refrigerant contained in the products is a fluorinated greenhouse gas listed in Regulation (EU) No 517/2014.
6. Refrigerant piping size applicable to European installations are shown in parentheses.

KXZ series

KXZ Water cooled series

8~36HP (22.4kW ~ 100.0kW)

R410A

Technical focus

- Ideal for high rise buildings, using water as heat source

1. High efficiency (EER/COP)
- Energy saving ➡ Reduction of operation cost

2. Compact design
- Easy transportation and installation
- Carriable by elevator

3. BMS (Building Management System)
- Can use the same BMS as air cooled KX
- Available to large-scale and fine control

4. Serviceability & Maintenance
- Service and maintenance of main parts can be done from the front side only
- Useful service tools (Mente-PC, SL-Checker etc.)

FDC224~335

FDC450~670

FDC730~1000

■ SPECIFICATIONS

Item		Model	FDC224KXZWE1	FDC280KXZWE1	FDC335KXZWE1	FDC450KXZWE1	FDC500KXZWE1	FDC560KXZWE1
Combination (FDC)			–	–	–	224KXZWE1	224KXZWE1	280KXZWE1
			–	–	–	224KXZWE1	280KXZWE1	280KXZWE1
			–	–	–	–	–	–
Nominal horse power			8HP	10HP	12HP	16HP	18HP	20HP
Power source			3 Phase 380-415V, 50Hz					
Nominal capacity	Cooling	kW	22.4	28.0	33.5	45.0	50.0	56.0
	Heating		25.0	31.5	37.5	50.0	56.0	63.0
Power consumption	Cooling	kW	4.23	5.75	8.13	8.49	9.83	11.5
	Heating		4.24	5.10	6.30	8.47	9.27	10.2
EER			5.30	4.87	4.12	5.30	5.09	4.87
COP			5.90	6.18	5.95	5.90	6.04	6.18
Exterior dimensions (HxWxD)		mm	1100x780x550			–		
Net weight		kg	185			185x2		
Sound pressure level	Cooling	dB(A)	48	50	52	51	52	53
	Heating							
Refrigerant	Type / GWP		R410A / 2088					
	Charge	kg	9.9			9.9+9.9		
	TCO_2Eq		20.671			–		
Refrigerant piping size	Liquid	mm (in)	ø9.52(3/8")		ø12.7(1/2")			
	Gas		ø19.05(3/4")	ø22.22(7/8")	ø25.4(1") [ø22.22(7/8")]	ø28.58(1·1/8")		
	Oil equalization		–	–	–	ø9.52(3/8")		
Water piping size	Water inlet		R1 1/4					
	Water outlet		R1 1/4					
	Drain outlet		Rp 1/2(internal thread)					
Total piping length		m	510					
Capacity connection		%	50~150					
Number of connectable indoor units			22	28	33	44	50	56

1.The data are measured at the following condition:
Cooling: Indoor temp. of 27 °CDB,19 °CWB, and heat source unit inlet water temp. of 30 °C, water flow rate 96 L/min
Heating: Indoor temp. of 20 °CDB,15 °CWB, and heat source unit inlet water temp. of 20 °C, water flow rate 96 L/min
2.Refrigerant piping size applicable to European installations are shown in parentheses.

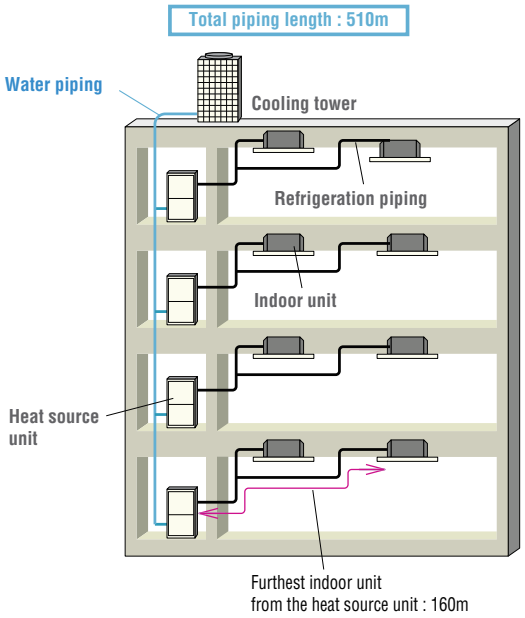
1. High-rise Building

- 100m or higher in height

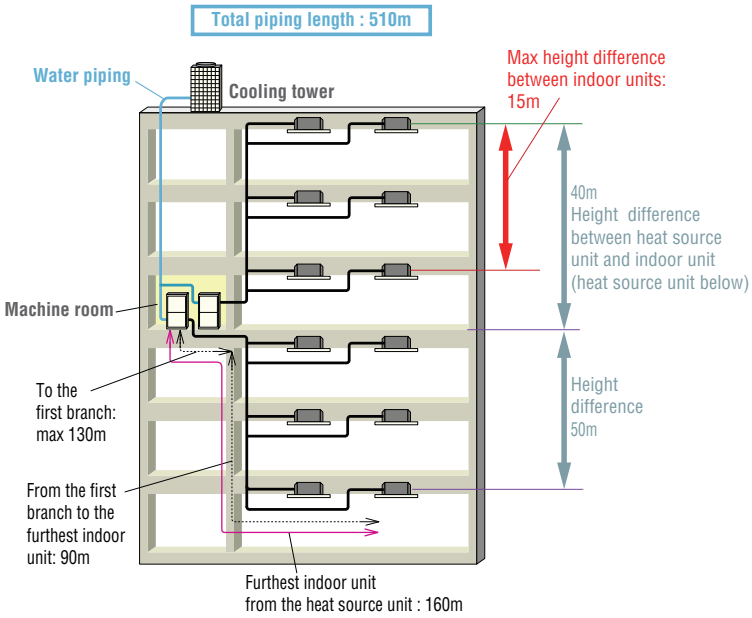
2. Glass-exterior facade Building

- Possible to hide KXZW units and to keep fine sight

Heat source units on every floor
- New building projects -



Heat source units in the machine room
- Renovation projects -



FDC615KXZWE1	FDC670KXZWE1	FDC730KXZWE1	FDC775KXZWE1	FDC850KXZWE1	FDC900KXZWE1	FDC950KXZWE1	FDC1000KXZWE1
280KXZWE1	335KXZWE1	224KXZWE1	224KXZWE1	280KXZWE1	280KXZWE1	280KXZWE1	335KXZWE1
335KXZWE1	335KXZWE1	224KXZWE1	280KXZWE1	280KXZWE1	280KXZWE1	335KXZWE1	335KXZWE1
–	–	280KXZWE1	280KXZWE1	280KXZWE1	335KXZWE1	335KXZWE1	335KXZWE1
22HP	24HP	26HP	28HP	30HP	32HP	34HP	36HP
3 Phase 380-415V, 50Hz							
61.5	67.0	73.0	77.5	85.0	90.0	95.0	100.0
69.0	75.0	82.5	90.0	95.0	100.0	106.0	112.0
13.7	16.3	14.2	15.5	17.5	19.5	21.7	24.3
11.4	12.6	13.8	14.8	15.4	16.4	17.6	18.8
4.49	4.11	5.14	5.00	4.86	4.62	4.38	4.12
6.05	5.95	5.98	6.08	6.17	6.10	6.02	5.96
–		–			–		
370		555					
54	55	54		55	56		57
R410A / 2088							
9.9+9.9		9.9x3					
–		–			–		
ø12.7(1/2")		ø15.88(5/8")					
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")]
ø9.52(3/8")							
R1 1/4							
R1 1/4							
Rp 1/2(internal thread)							
510							
50~150							
61	67	72	78	80			

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 oxidisation 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.

Refrigerant piping size selection

Outdoor unit		Micro KXZ		
		121	140	155
Gas pipe	Furthest indoor unit =<70m	ø15.88		
Liquid pipe		ø9.52		

Outdoor unit		Micro KXZ			KXZ Lite	
		224	280	335	224	280
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 =<Furthest indoor unit	ø22.22	ø25.4(ø22.22)		ø22.22	ø25.4/ ø28.58
Liquid pipe		ø12.7			ø9.52	

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
224	ø19.05 × t 1.0	ø9.52 × t 0.8	ø22.22× t 1.0	ø12.7 × t 0.8
280	ø22.22 × t 1.0		ø25.4 (ø22.22) × t 1.0	
335	ø25.4 (ø22.22) × t 1.0	ø12.7 × t 0.8		
400	ø25.4 (ø28.58) × t 1.0		ø28.58 × t 1.0	
450	ø28.58 × t 1.0		ø31.8 × t 1.1 (ø28.58 × t 1.0)	ø15.88 × t 1.0
475				
500				
560				
615				
670				
735	ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0	ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø19.05 × t 1.0
800				
850				
900				
950				
1000	ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø19.05 × t 1.0		ø22.22 × t 1.0
1060				
1120				
1200				
1250				
1300				
1350				
1425				
1450				
1500				
1560				
1620				
1680				

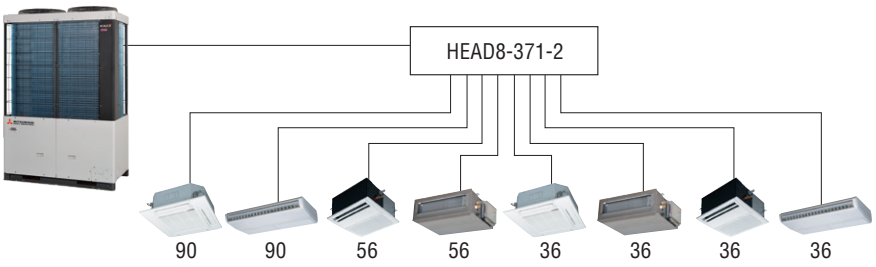
mm	inch
ø9.52	3/8"
ø12.7	1/2"
ø15.88	5/8"
ø19.05	3/4"
ø22.22	7/8"
ø25.4	1"

mm	inch
ø28.58	1-1/8"
ø31.8	1-1/4"
ø34.92	1-3/8"
ø38.1	1-1/2"
ø44.5	1-3/4"
ø50.8	2"

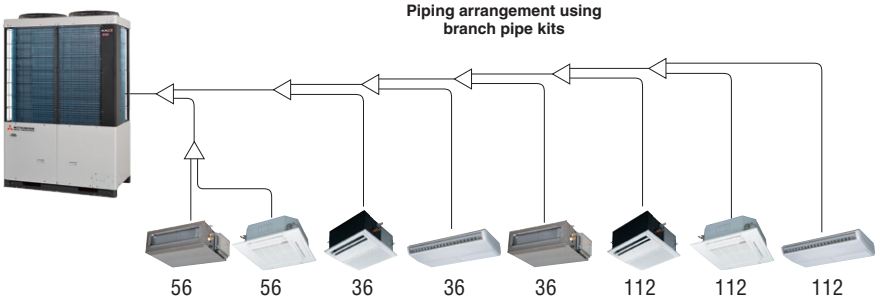
Please use C1220T-1/2H for ø19.05 or larger pipes.
Pipe sizes applicable to European installations are shown in parentheses.

Single outdoor unit piping examples:

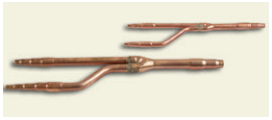
Piping arrangement using header



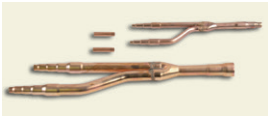
Piping arrangement using branch pipe kits



Branch pipes



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



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

Header pipe

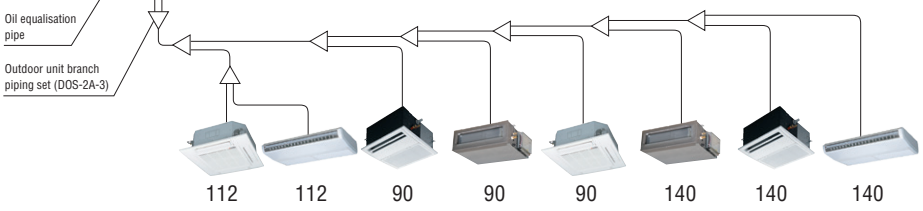
HEAD4-22-1G
HEAD6-180-1G
HEAD8-371-2

Combination outdoor unit manifold

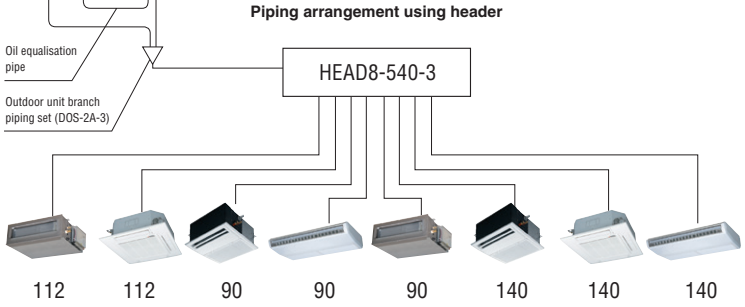
DOS-2A-3
DOS-3A-3

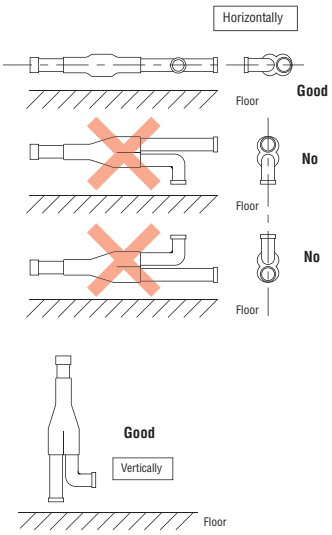
Combination outdoor unit piping examples:

Piping arrangement using branch pipe kits



Piping arrangement using header





Outdoor unit side branching pipe set

Outdoor unit	KXZ3	KXZ2
For two units	DOS-2A-4	DOS-2A-3, DOS-2A-4
For three units	DOS-3A-4	DOS-3A-3, DOS-3A-4

Indoor unit side branching pipe set

Total capacity downstream	For KXZ3 OU	For KXZ2 OU
Less than 180	DIS-22-1G	
180 or more but less than 371	DIS-180-1G	
371 or more but less than 540	DIS-371-1G	
540 or more	DIS-540-4	DIS-540-3, DIS-540-4

Indoor unit side Header set

Total capacity downstream	For KXZ3 OU	For KXZ2 OU	Number of branches
Less than 180	HEAD4-22-1G		4 branches at the most
180 or more but less than 371	HEAD6-180-1G		6 branches at the most
371 or more but less than 540	HEAD8-371-2		8 branches at the most
540 or more	HEAD8-540-4	HEAD8-540-3, HEAD8-540-4	8 branches at the most

Heat recovery systems (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.

※ Even if the longest distance exceeds 90m (actual length), you do not need to change the size of discharge gas pipes.

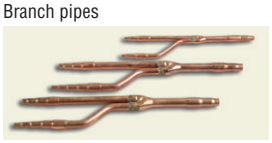
Outdoor unit	Main pipe size (normal)			Pipe size for an actual length of 90m or longer		
	Suction gas pipe	Discharge gas pipe	Liquid pipe	Suction gas pipe	Discharge gas pipe	Liquid pipe
224	ø19.05×t1.0	ø15.88×t1.0	ø9.52×t0.8	ø22.22×t1.0	ø15.88×t1.0	ø12.7 × t 0.8
280	ø22.22×t1.0	ø19.05×t1.0		ø25.4 (ø22.22)×t1.0	ø19.05×t1.0	
335	ø25.4 (ø22.22)×t1.0		ø12.7×t0.8			
400	ø25.4 (ø28.58)×t1.0	ø22.22×t1.0		ø28.58×t1.0	ø22.22×t1.0	
450	ø28.58×t1.0			ø31.8×t1.1 (ø28.58×t1.0)		ø15.88 × t 1.0
475						
500						
560						
615		ø25.4 (ø22.22)×t1.0			ø25.4 (ø22.22)×t1.0	
670						
735	ø31.8×t1.1 (ø34.92×t1.2)	ø28.58 (ø25.4)×t1.0	ø15.88×t1.0	ø38.1×t1.35 (ø34.92×t1.2)	ø28.58×t1.0	ø19.05 × t 1.0
800						
850						
900						
950						
1000	ø38.1×t1.35 (ø34.92×t1.2)	ø31.8×t1.1 (ø28.58×t1.0)	ø19.05×t1.0		ø31.8×t1.1 (ø28.58×t1.0)	ø22.22 × t 1.0
1060						
1120						
1200						
1350						
1425						
1450						
1500						
1560						
1620						
1680						

mm	inch
ø9.52	3/8"
ø12.7	1/2"
ø15.88	5/8"
ø19.05	3/4"
ø22.22	7/8"
ø25.4	1"

mm	inch
ø28.58	1-1/8"
ø31.8	1-1/4"
ø34.92	1-3/8"
ø38.1	1-1/2"
ø44.5	1-3/4"
ø50.8	2"

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

Branch pipes

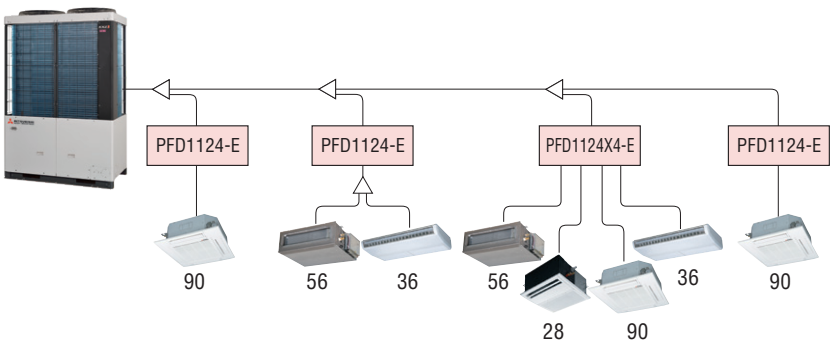


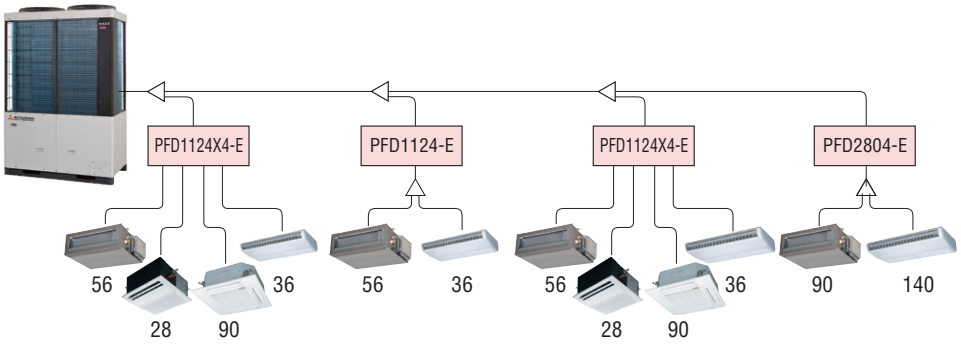
DIS-22-1-RG/DIS-180-1-RG

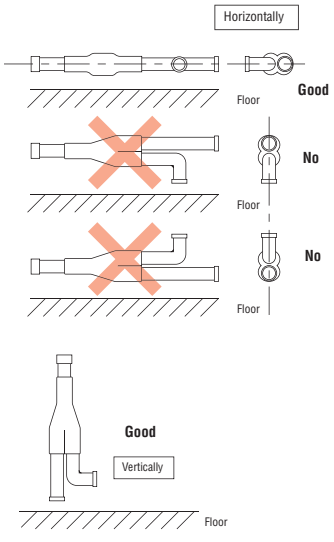
Combination outdoor unit manifold

DOS-2A-3-R

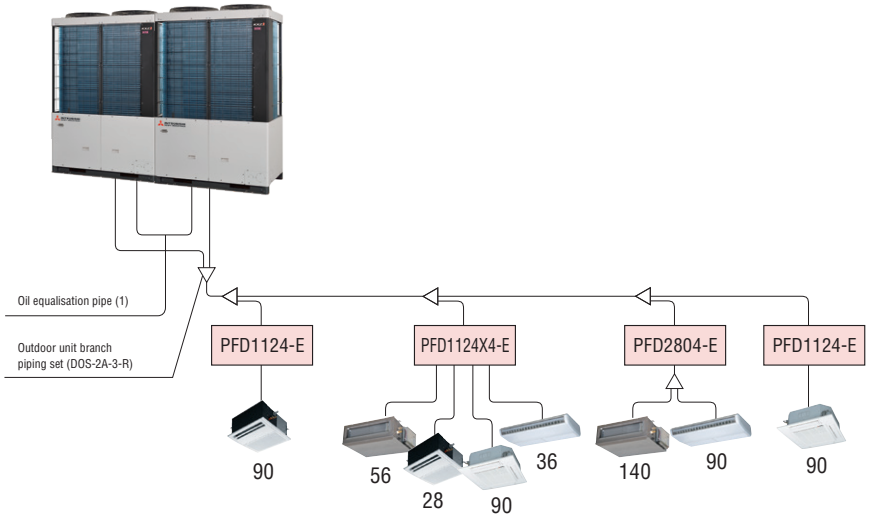
Single outdoor unit piping examples:







Combination outdoor unit piping examples:



Outdoor unit's branch piping set

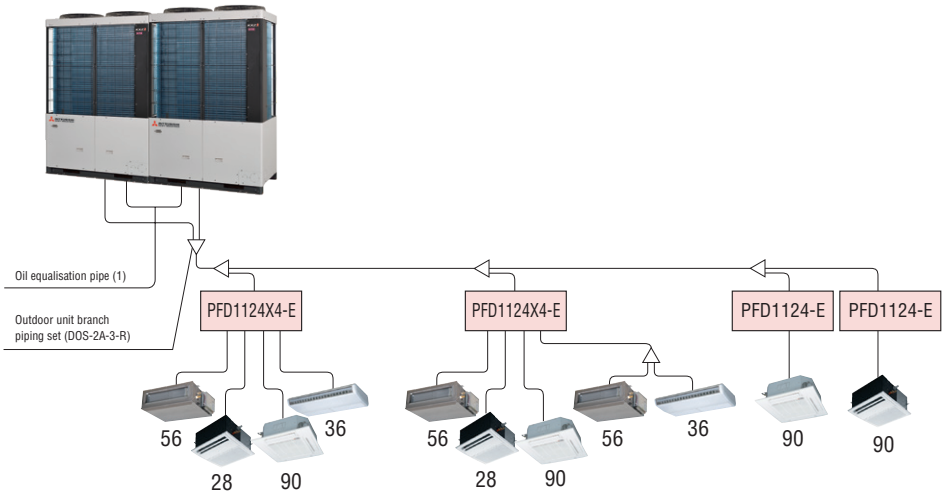
Outdoor unit	Branch piping set
2 units	DOS-2A-3-R
3 units	DOS-3A-3-R

Indoor unit's first branch piping set

Total capacity of indoor units	Branch piping set
~179	DIS-22-1-RG
180~370	DIS-180-1-RG
371~539	DIS-371-2-RG
540~	DIS-540-2-RG

In the Down Stream of branching control

Total capacity of indoor units	Branch piping set
~179	DIS-22-1G
180~370	DIS-180-1G
371~539	DIS-371-1G
540~	DIS-540-3



KXZ series product Line up

Indoor units

18 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	2.2kW	2.8kW	3.6kW	4.5kW	
			0.5HP	0.8HP	1HP	1.25HP	1.6HP	
Ceiling Cassette	4way	FDT			● ●	● ●	● ●	
	4way Compact	FDTC	● ●	● ●	● ●	● ●	● ●	
	2way	FDTW			● ●		● ●	
	1way	FDTS					● ●	
	1way Compact	FDTQ		● ●	● ●	● ●		
Duct Connected	High Static Pressure	FDU					● ●	
	Low/Middle Static Pressure	FDUM		● ●	● ●	● ●	● ●	
	Low Static Pressure(thin)	FDUT	● ●	● ●	● ●	● ●	● ●	
	Compact & Flexible	FDUH		● ●	● ●	● ●		
Wall Mounted		FDK	● ●	● ●	● ●	● ●	● ●	
Celling Suspended		FDE				● ●	● ●	
Floor Standing	2way	FDFW			● ● Coming soon		● ● Coming soon	
	With Casing	FDFL						
	Without Casing	FDFU			● ● Coming soon		● ● Coming soon	
OA Processing unit		FDU-F *						
Hydro module unit		HMU						

Air flow m³/h		150	250	350	500		
Fresh Air Ventillation & Heat Exchange unit	SAF	●	●	●	●		
Fresh Air Assembly	SAF-DX		●	●	●		

Combination for KXZ outdoor units

Refrigerant	● : R32 KXZ3 Micro KXZ	● : R410A KXZ2 Micro KXZ

For the R32 Micro KXZ series the safety system of MHI has not been prepared.

5.6kW	7.1kW	9.0kW	11.2kW	14.0kW	16.0kW	22.4kW	28.0kW
2HP	2.5HP	3.2HP	4HP	5HP	6HP	8HP	10HP
● ●	● ●	● ●	● ●	● ●	● ●		
● ●							
● ●	● ●	● ●	● ●	● ●			
	● ●						
● ●	● ●	● ●	● ●	● ●	● ●	● ● *	● ● *
● ●	● ●	● ●	● ●	● ●	● ●		
● ●	● ●						
● ●	● ●	● ●					
● ●	● ●		● ●	● ●			
● Coming soon							
	● Coming soon						
● Coming soon	● Coming soon						
		●		●		●	●
				●			●

800	1000						
●	●						
●	●						

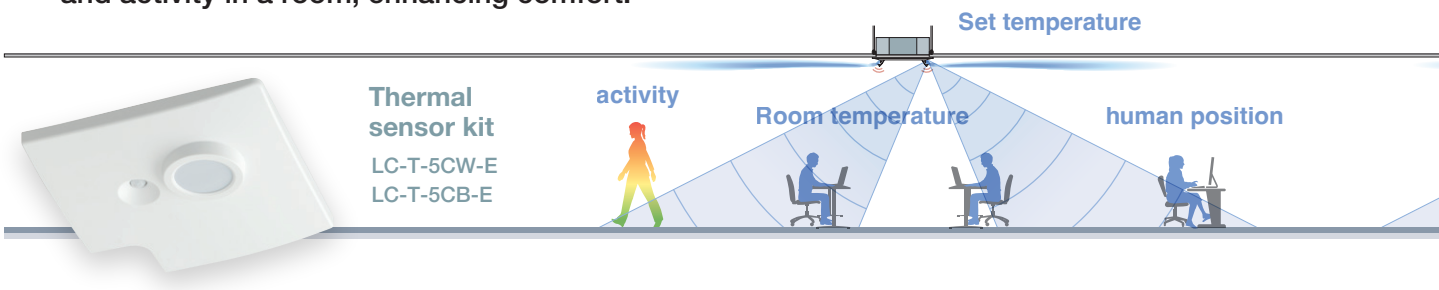
✻ Can not be connected to the Micro model(4-6HP), KXZ Lite.

Coming soon

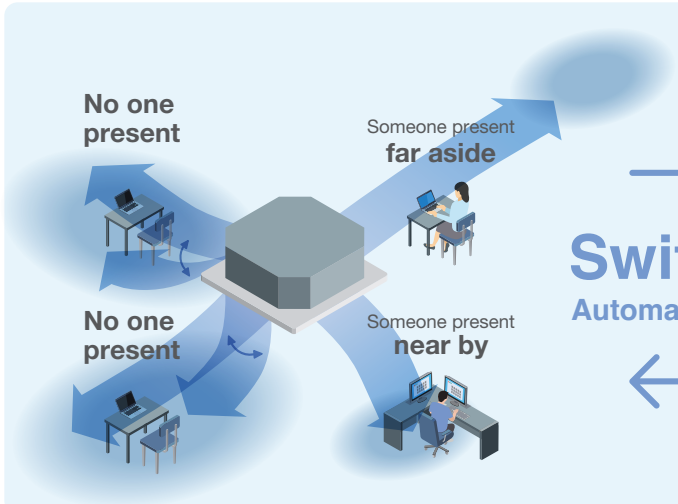
New Generation FDT

New *Automatic anti-draft control*

A corner-mounted motion sensors detects human presence and activity in a room, enhancing comfort.



1. Air flow based on human position



2. Anti-draft control for all directions

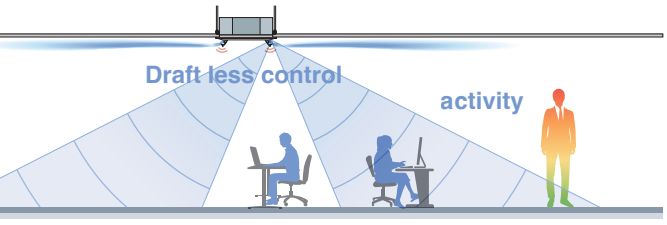
Automatically open Draft Prevention Panel Wing

* If there are not draft prevention panel wing, flaps will be horizontal direction.

New

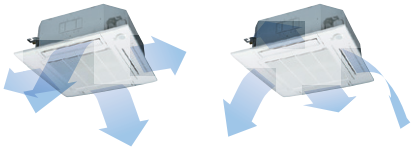
Thermal sensing soothing comfort

A Sensor to optimize the air flow



Direct flow control

The louvers are controlled to blow towards human position.



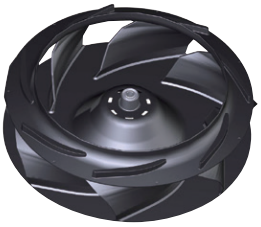
Draft less control

Draft prevention panel is activated based on human position.

New

Improved performance

Power consumption decreased by:

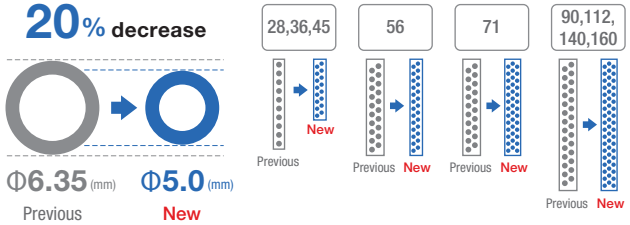


1. Adopting new designed impeller and flow path

improves the aerodynamic performance of the unit.

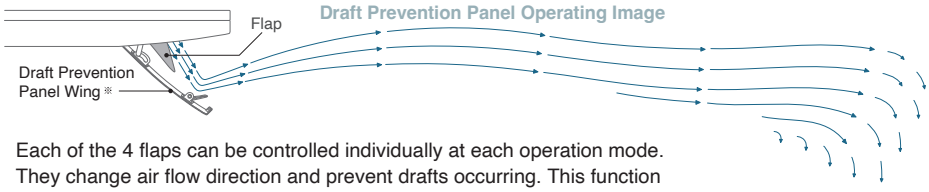
2. Φ5.0 heat exchanger tube is adopted to improve the performance

Slimmer heat exchanger and a dense copper piping.



Draft Prevention Panel (Option)

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



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 flexible control for air flow direction.
User can position Draft Prevention Panel panels by using only the remote controller (RC-EX3D, Wireless kit).

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

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.

Motion sensor (Option)

Three Steps Control

1 Power Control

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.

Operation mode and Control of Motion sensor

eco operation comfort operation

	Human activity	Operation mode: Auto	Cool	Heat	Dry	Fan
Power Control *1	Low	Cooling +3°C / Heating +3°C	+3°C	+3°C	—	—
	High	Cooling -3°C / Heating -3°C	-3°C	-3°C	—	—
	None	Cooling -3°C / Heating -3°C	-3°C	-3°C	—	—
Auto Off *2		●	●	●	●	●

*1 Set temperature is revised maximum ±3°C at Cooling/Heating mode by detecting heat volume movement.
*2 Absence for 1 hour ⇒Operation stops ("Stand-by") 12 hours absence ⇒Operation stops completely

Wireless Control System Now available in our FDT series

Control your air conditioner from anywhere, anytime.

If you turn on the air conditioner when you're on the go, you'll be comfortable when you get to the office. Even if you forget to turn it off, you can turn it off when you are out and about.

WF-PAC-E

You can control the air-conditioner at home or on the go by installing App (Smart M-Air) on your smartphone or tablet.

M-Air

Search for "Smart M-Air" from the GooglePlay™ store for Android™ and AppStore for iPhone.

GET IT ON Google Play Download on the App Store

Application compatible model:
Android™ OS 8.0 or later smartphones and tablets, iPhone for iOS 13.0 or later.

Functions

1. Turn ON/OFF
2. Change operation mode
   (Auto, Cool, Heat, Fan, Dry)
3. Control temperature
4. Set Timers
5. Favourite setting

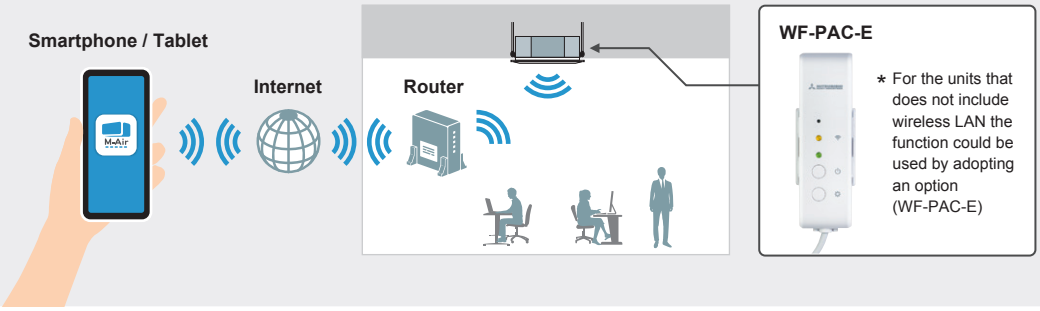
Notification Function

1. Shut-off reminder alert
2. Accidentally left running
   It will be sent to your smart device if the air conditioner is accidentally left running
3. Hi temp / low temp alert
4. Watching function

Weekly Timer

Timers can be set for different days of the week. They can also be set from the calendar.

System configuration



*SC-BIKN2-E cannot be used simultaneously for system configuration.

Indoor unit
Serviceability & workability

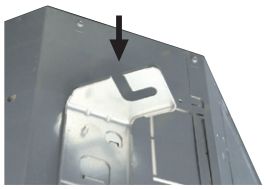
Easy and quick installation and maintenance

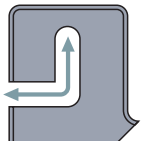
Indoor unit is easily positioned and installed

Quick positioning!

1 Adjustable easier positioning of unit by new slits — FDT

New shape of slit is suitable to install the unit with more flexibility, compatible with many kinds of suspending bolt pitch on site.Any rectangular or squared pitch of suspending bolts are available with this slit.

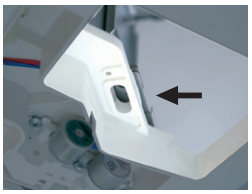




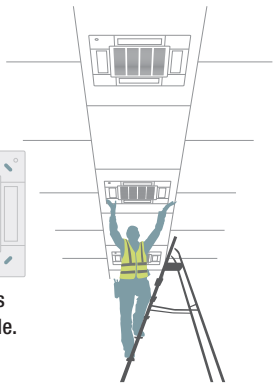
Compatible with both square or rectangular bolt pitch

2 New slit in panel allows easier installation on site — FDT FDTC

Flexible positioning is available, which helps adjusting the direction of panel accordingly to lines or pattern on the ceiling.



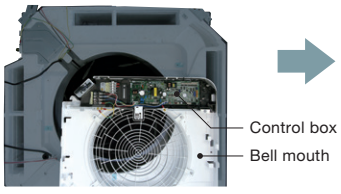
4 long slits are available.

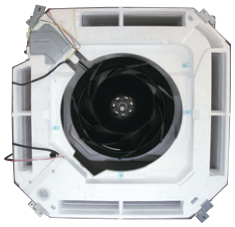


Quick installation and maintenance

1 Easy access to component part for easy maintenance — FDT

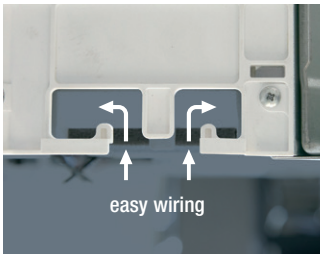
1. The control box and bell mouth can be removed together.
2. Easy access to impeller and fan motor.

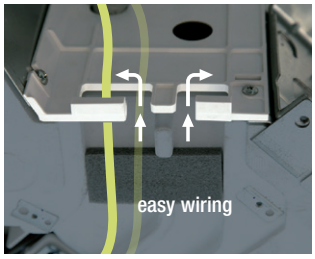




2 New shape of path of wiring — FDT

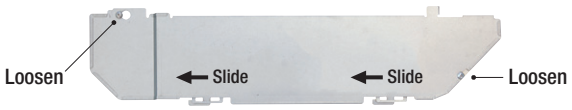
New shape of path gives easy wiring work for installation.

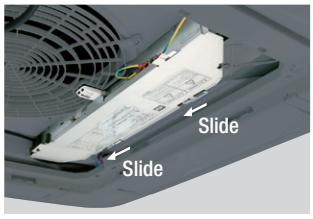




3 No need to remove screws to open the controller cover — FDT

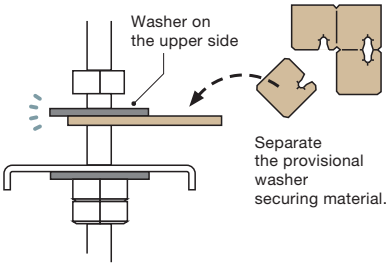
It is possible to loose and slide open the cover without removing the screws. This prevents the cover from falling and causing damage on site.

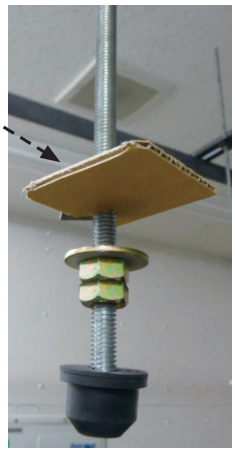




4 More safe installation by stopper of washer — FDT FDTC

When unit is installed with hook between washers, this stopper helps to install the unit safely, without adjusting washer.





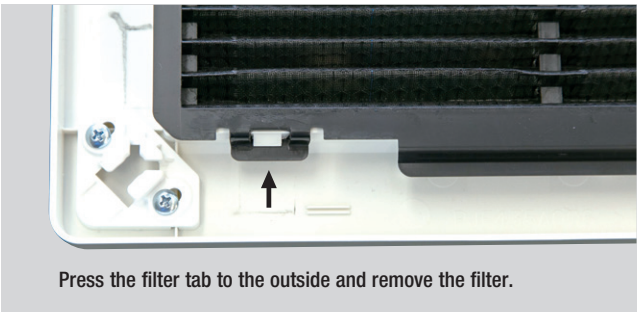
Easy installation and maintenance

For smooth and easy working

1 Easy and flexible hook to remove the filter

FDT FDTC

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

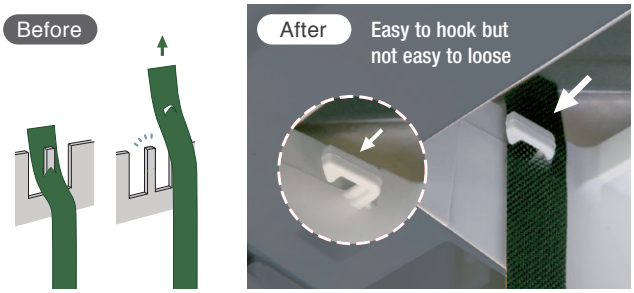


Press the filter tab to the outside and remove the filter.

2 Securely fix the corner lid by strap

FDT

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

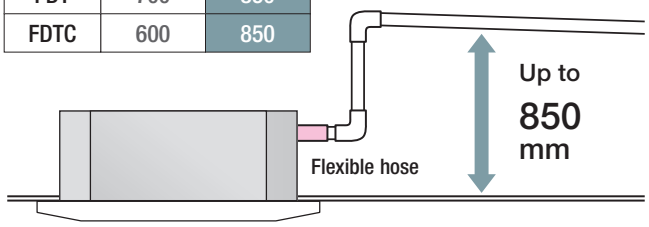


3 Drain-up-lift increases up to 850 mm

FDT FDTC

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

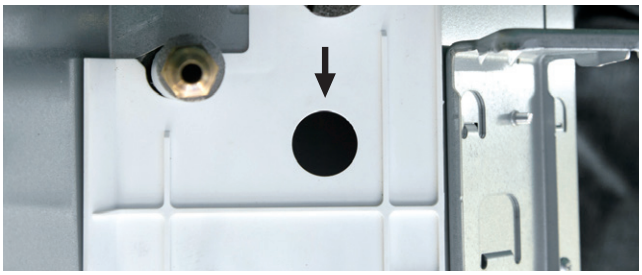
	Previous	New
FDT	700	850
FDTC	600	850



4 New port to check drain water flow

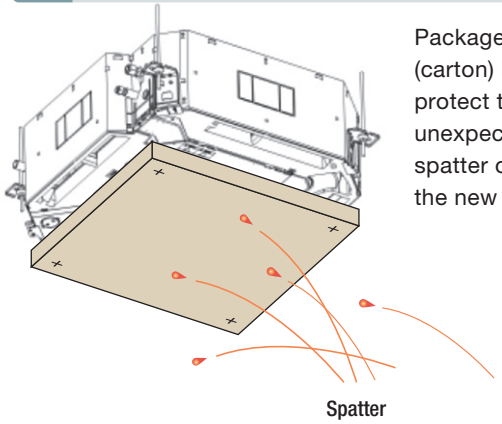
FDT

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



5 Re-use of packages during construction work

FDT FDTC

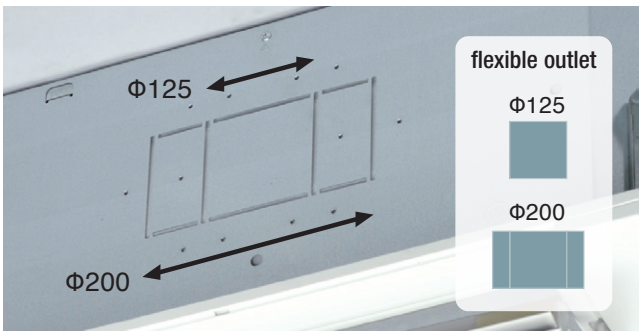


Package material (carton) helps to protect the unit from unexpected welding spatter or dust on the new unit.

6 More flexible outlet for ducting

FDT FDTC

Both Φ125 and Φ200 (oval shaped) are available.



Remote Control

Simple use with advanced settings REMOTE CONTROL

RC-EX3D

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

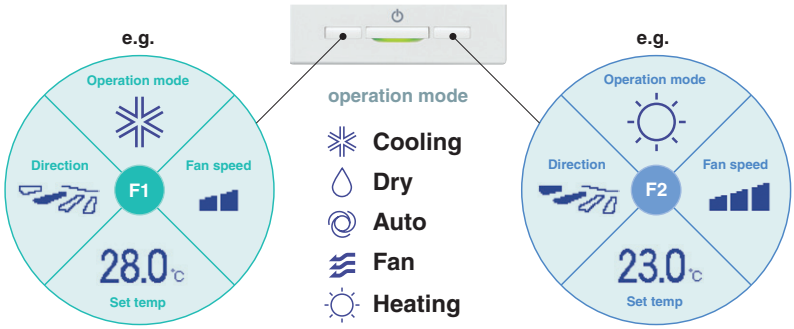
Operation mode, set temperature, fan speed and air flow direction will automatically be adjusted to the programmed favourite setting.

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.



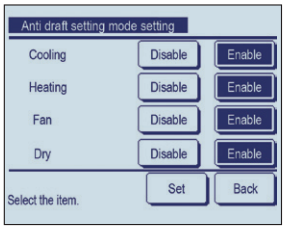
Adjustable Brightness of the Operation Lamp

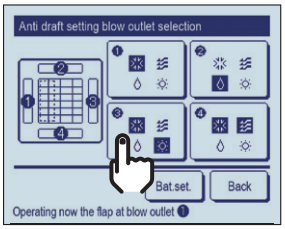
The brightness of the operation lamp behind Run/Stop switch can be adjusted by 10 stages.

Draft Prevention Setting

(only for FDT•FDTC series)

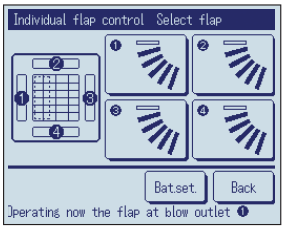
User can enable/disable the motion of Draft prevention panel for each blow outlet for each operation mode. This function can be set while operating.

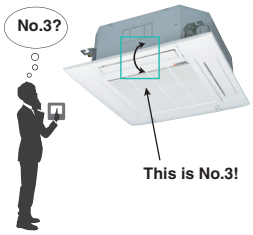




Easy Adjustment of the Air Flow

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



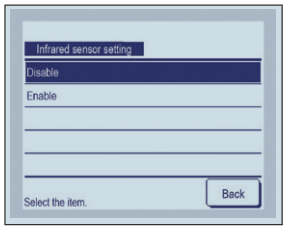


Motion Sensor Control

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

1 Select Enable / Disable
Motion sensor control

Enable/Disable

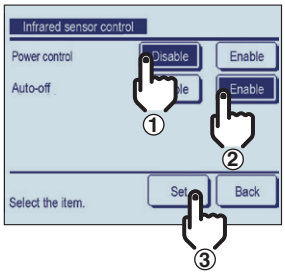


Select Enable / Disable for the motion sensor of the indoor unit connected to the R/C.

2 Select Enable / Disable per control

- **Power control**
- **Auto-off**

Enable/Disable



Backup Control

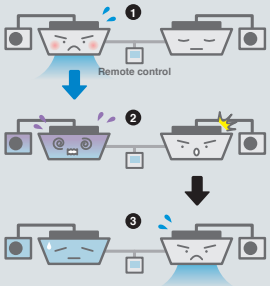
Control restricted to two indoor units (two groups)

Fault backup control

Reassurance Comfort

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.

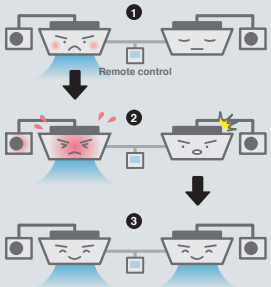


Capacity backup control

Comfort Energy saving Longer unit life

Maintains users' comfort!

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

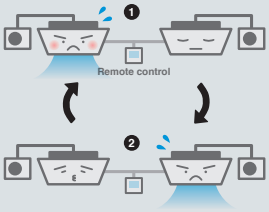


Rotational operation control

Longer unit life Energy saving

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.)



Indoor unit benefits Summary

Benefits Series

When using RC-EX3D (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	FDFL	FDFU	FDU-F
															
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	○ Option	○ Option	○ Option	○ Option	○ Option	○ Option	○ Option	○ Option	○ Option	○ Option	○ Option		○ Option	○ Option	○ Option
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
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	○ Option	○ Option													
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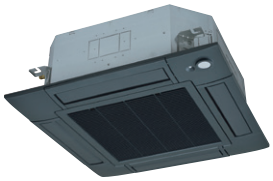
						●	●	● (71only)							●
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	procure locally	○ Option	○ Option	○ Option	●	●	●	●	●	procure locally
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	○ Option	●	●	●	●	●	●	●						●
	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	●	●	●	●	●	● *1	●	●	○ Option						● *2
						●	●								

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

Ceiling Cassette -4way-

FDT New!

FDT28-160



Black Panel

Draft Prevention Panel
(Option)

Remote control (option)

Wired

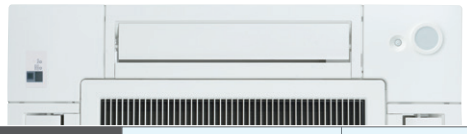
RC-EX3D RC-E5 RCH-E3

Wireless

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

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

Panel select pattern (option)

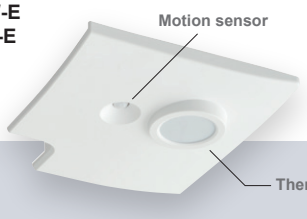


			Sensor		Receiver	Interface
			Thermal sensor kit LC-5TCW(B)-E	Motion sensor kit LB-T-5BW(B)-E	Wireless receiver kit RCN-T-5BW(B)-E2	Wireless LAN interface WF-PAC-E
KXZE3-W	Standard Panel	T-PSA-5CW(B)-E	●	●	●	●
	Draft Prevention Panel	T-PSAE-5CW(B)-E				
KXZE1	Standard Panel	T-PSA-5BW(B)-E	–	●	●	–
	Draft Prevention Panel	T-PSAE-5BW(B)-E				

Automatic anti-draft control (option)

Thermal sensor kit

LC-T-5CW-E
LC-T-5CB-E



1. Automatic anti-draft control

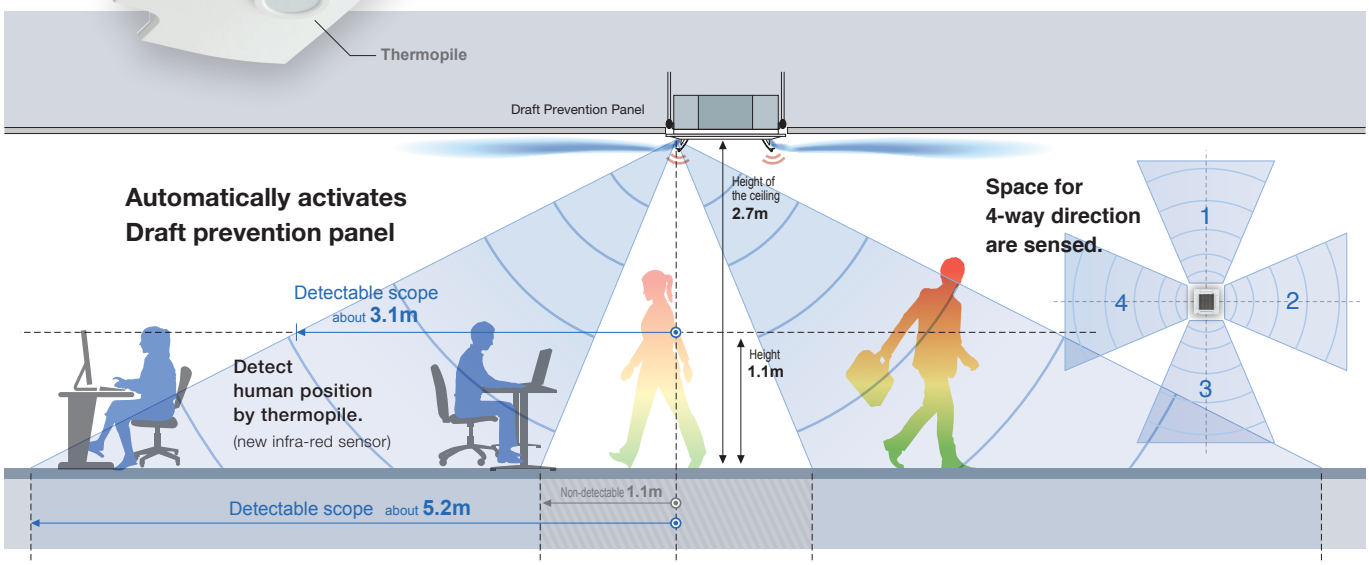
Automatically activates the louvers when the room temperature is hotter or colder than the set temperature. After detecting the room temperature at the set temperature, the draft prevention panel is activated.

2. Direct flow control

The louvers are controlled to blow towards human position.

3. Draft less control

Draft prevention panel is activated based on human position



Draft Prevention Panel (option)

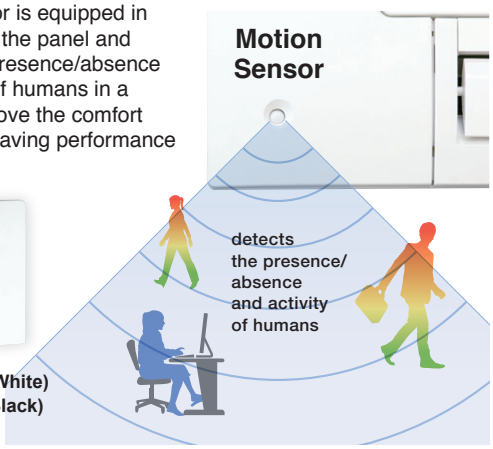
This prevents cold/hot draft being blown directly on the user. It is possible to set Draft Prevention Panel for each air outlet.

User can position panels by using the remote controller (RC-EX3D, Wireless kit) only when Draft Prevention Panel is available.

Motion Sensor (option)

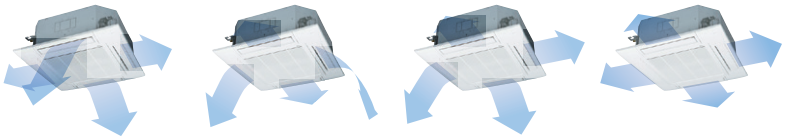
Motion sensor is equipped in the corner of the panel and detects the presence/absence and activity of humans in a room to improve the comfort and energy saving performance of the unit.

LB-T-5BW-E(White)
LB-T-5BB-E(Black)



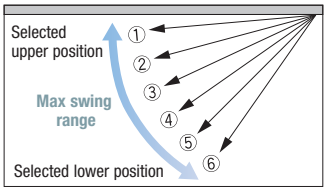
Individual flap control system

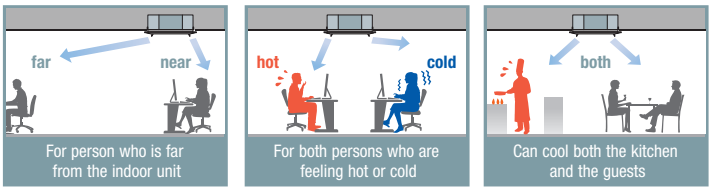
According to room conditions, four directions of air flow can be controlled individually by utilizing the flap control system. Individual flap control is available even after installation.



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.





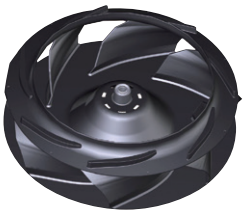
Power consumption decreased by new technologies

1. Adopting new impeller and flow path.

New designed impeller

improves the aerodynamic performance of the unit.

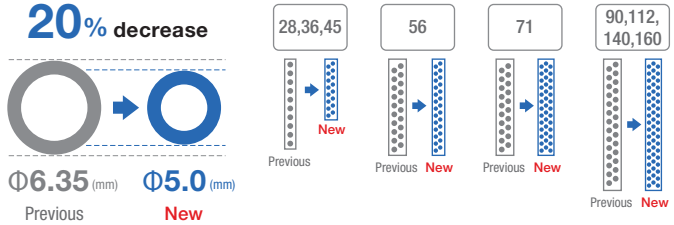
New designed component has better aerodynamic performance and achieve lower noise.



2. Φ5.0 heat exchanger tubes is adopted to improve the performance.

Slimmer heat exchanger

and a dense copper piping.

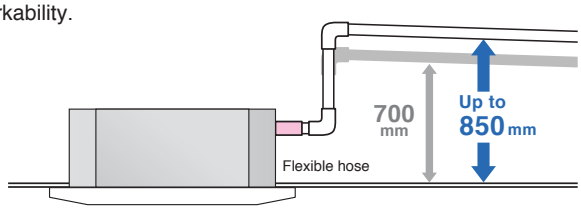


Wireless Control System Now available in our FDT series

Control your air conditioner from anywhere, anytime. If you turn on the air conditioner when you're on the go, you'll be comfortable when you get to the office. Even if you forget to turn it off, you can turn it off when you are out and about.

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.



■ SPECIFICATIONS

Indoor unit	FDT		28KXZE3-W	36KXZE3-W	45KXZE3-W	56KXZE3-W	71KXZE3-W	90KXZE3-W	112KXZE3-W	140KXZE3-W	160KXZE3-W
Power source			1 Phase 220-240V, 50Hz								
Nominal capacity	Cooling	kW	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0
	Heating		3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	18.0
Power consumption	Cooling	W	40-40			70-70	80-80	130-130			
	Heating										
Sound power level*1	Cooling	dB(A)	55			60	62	65			
	Heating										
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	40/31/30/28	40/34/30/28	40/34/31/28	45/34/31/29	47/35/32/28	49/38/36/31	49/39/37/31	49/42/39/32	49/42/40/33
	Heating		40/31/26/23	40/33/26/23	40/33/30/23						
Exterior dimensions (HeightxWidthxDepth)	Unit	mm	236x840x840					298x840x840			
	Panel		35x950x950					35x950x950			
Net weight	Unit	kg	21			22	24	28			
	Panel		Standard panel : 5, Draft prevention panel : 6								
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	19/12/10/9	19/14/10/9	19/14/12/9	25/15/13/11	28/16/14/12	37/24/21/16	37/24/22/16	37/27/24/17	37/28/25/18
	Heating										
Outside air intake			Possible								
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")				ø9.52(3/8")				
	Gas		ø9.52(3/8")	ø12.7(1/2")			ø15.88(5/8")				
Panel (option)			White : T-PSA-5CW-E, T-PSAE-5CW-E Black : T-PSA-5CB-E, T-PSAE-5CB-E								
Air filter, Q'ty			Pocket plastic net x 1(Washable)								

Indoor unit	FDT		28KXZE1	36KXZE1	45KXZE1	56KXZE1	71KXZE1	90KXZE1	112KXZE1	140KXZE1	160KXZE1
Power source			1 Phase 220-240V, 50Hz								
Nominal capacity	Cooling	kW	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0
	Heating		3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	18.0
Power consumption	Cooling	W	40-40			70-70	80-80	130-130	140-140		
	Heating										
Sound power level*1	Cooling	dB(A)	55			60	62	65		66	
	Heating										
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	38/33/30/28		38/33/31/29	44/33/31/29	47/35/32/28	49/38/36/31	49/39/37/31	49/42/39/32	49/42/39/33
	Heating										
Exterior dimensions (HeightxWidthxDepth)	Unit	mm	236x840x840					298x840x840			
	Panel		35x950x950					35x950x950			
Net weight	Unit	kg	20			21.5		25			
	Panel		Standard panel : 5, Draft prevention panel : 6								
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	20/14/12/10	20/14/12/10	20/15/13/10	26/16/13/11	28/17/14/12	37/25/22/15	38/26/23/17	38/28/25/18	38/29/26/19
	Heating										
Outside air intake			Possible								
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")				ø9.52(3/8")				
	Gas		ø9.52(3/8")	ø12.7(1/2")			ø15.88(5/8")				
Panel (option)			White : T-PSA-5BW-E, T-PSAE-5BW-E Black : T-PSA-5BB-E, T-PSAE-5BB-E								
Air filter, Q'ty			Pocket plastic net x 1(Washable)								

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

Ceiling Cassette - 4way Compact
FDTC

R32 R410A

New!

FDTC15~56 **Honeycomb type**

Draft Prevention Panel (option)

Grid type

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

Remote control (option)

Wired

RC-EX3D **RC-E5** **RCH-E3**

Wireless

RCN-TC-5AW-E3

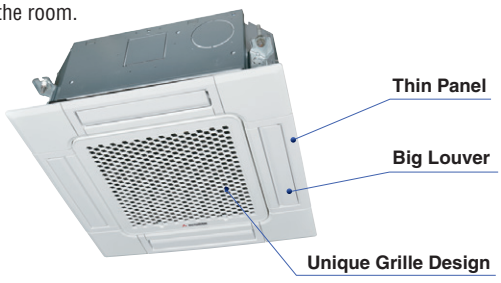
Panel select pattern (option)

Wireless receiver / Motion Sensor			Motion sensor	Wireless receiver	Motion sensor & Wireless receiver	
			LB-TC-5W-E	RCN-TC-5AW-E3	LB-TC-5W-E	RCN-TC-5AW-E3
Honeycomb type	**Standard Panel**	TC-PSA-5AW-E	●	●	●	
	Draft Prevention Panel	TC-PSAE-5AW-E	●	●	●	
Grid type	**Standard Panel**	TC-PSAG-5AW-E	●	●	●	
	Draft Prevention Panel	TC-PSAGE-5AW-E	●	●	●	

European design & Flat panel

Unique Grille Design

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

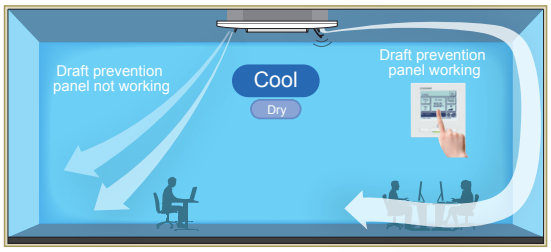


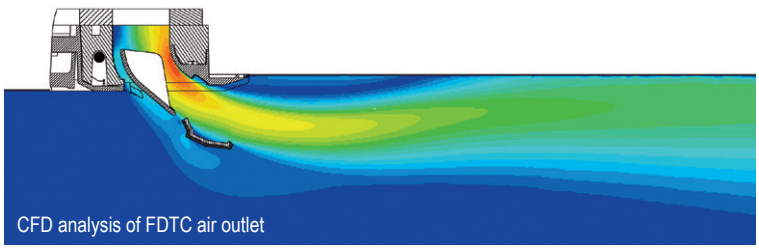
Integrated ceiling system design 600x600

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

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.

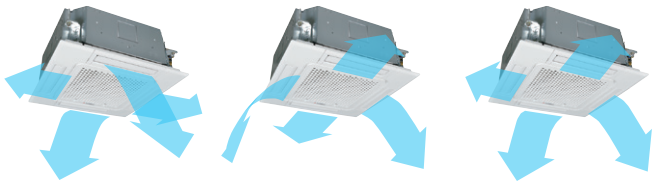




User can position panels by using the remote controller (RC-EX3D, Wireless kit) only when Draft Prevention Panel is available.

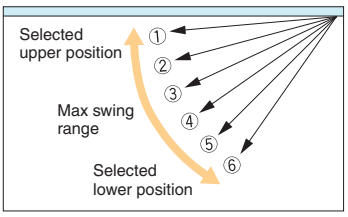
Individual flap control system

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



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

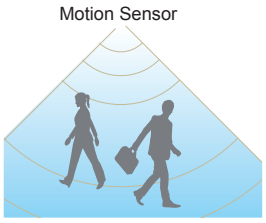
*The wireless remote control is not applicable to the Individual flap control system.



Motion Sensor (option)

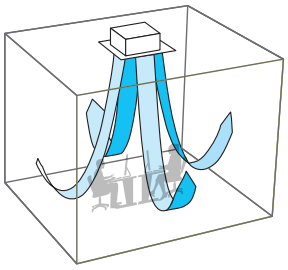
Motion sensor is equipped in the corner of the panel and detects the presence/absence and activity of humans in a room to improve the comfort and energy saving performance of the unit.

LB-TC-5W-E



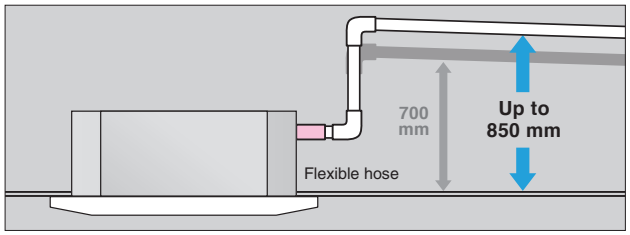
Suitable for High ceilings

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.



850mm Drain Pump

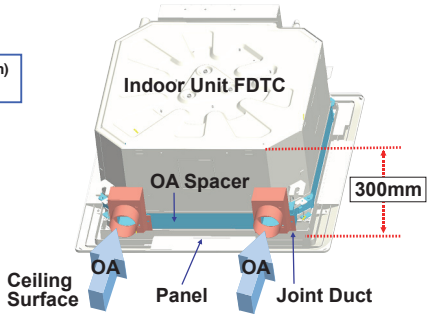
Drain can be discharged upward by 850 mm from the ceiling surface close to the indoor unit. It allows a piping layout with a high degree of freedom depending on the installation location.



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)



■ SPECIFICATIONS

Indoor unit	FDTC		15KXZE3-W	22KXZE3-W	28KXZE3-W	36KXZE3-W	45KXZE3-W	56KXZE3-W
Power source			1 Phase 220-240V, 50Hz					
Nominal capacity	Cooling	kW	1.5	2.2	2.8	3.6	4.5	5.6
	Heating		1.7	2.5	3.2	4.0	5.0	6.3
Power consumption	Cooling	W	30-30			40-40	50-50	60-60
	Heating							
Sound power level*1	Cooling	dB(A)	47	49		54	58	60
	Heating		46			53	57	
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	33/30/28/25	35/32/29/25		39/36/31/26	43/39/36/28	47/43/39/31
	Heating		33/30/26/22					
Exterior dimensions (HeightxWidthxDepth)	Unit	mm	248x570x570					
	Panel		10x620x620					
Net weight	Unit	kg	12.5	13		14		
	Panel		Standard panel : 2.5, Draft prevention panel : 3					
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	8/7/6/5	9/8/7/6		10/9/8/6	12/10/9/7	14/12/10/8
	Heating							
Outside air intake			Possible					
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")					
	Gas		ø9.52(3/8")			ø12.7(1/2")		
Panel (option)			Honeycomb : TC-PSA-5AW-E, TC-PSAE-5AW-E Grid : TC-PSAG-5AW-E, TC-PSAGE-5AW-E					
Air filter, Q'ty			Pocket plastic net x 1(Washable)					

Indoor unit	FDTC		15KXZE1	22KXZE1	28KXZE1	36KXZE1	45KXZE1	56KXZE1
Power source			1 Phase 220-240V, 50Hz					
Nominal capacity	Cooling	kW	1.5	2.2	2.8	3.6	4.5	5.6
	Heating		1.7	2.5	3.2	4.0	5.0	6.3
Power consumption	Cooling	W	30-30			40-40	50-50	60-60
	Heating							
Sound power level*1	Cooling	dB(A)	47	49		54	58	60
	Heating		46			53	57	
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	33/30/28/25	35/32/29/25		39/36/31/26	43/39/36/28	47/43/39/31
	Heating		33/30/26/22					
Exterior dimensions (HeightxWidthxDepth)	Unit	mm	248x570x570					
	Panel		10x620x620					
Net weight	Unit	kg	12.5	13		14		
	Panel		Standard panel : 2.5, Draft prevention panel : 3					
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	8/7/6/5	9/8/7/6		10/9/8/6	12/10/9/7	14/12/10/8
	Heating							
Outside air intake			Possible					
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")					
	Gas		ø9.52(3/8")			ø12.7(1/2")		
Panel (option)			Honeycomb : TC-PSA-5AW-E, TC-PSAE-5AW-E Grid : TC-PSAG-5AW-E, TC-PSAGE-5AW-E					
Air filter, Q'ty			Pocket plastic net x 1(Washable)					

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

Ceiling Cassette -2way- FDTW

R32 R410A

New!

FDTW28~71

FDTW90~140

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

Remote control (option)

Wired

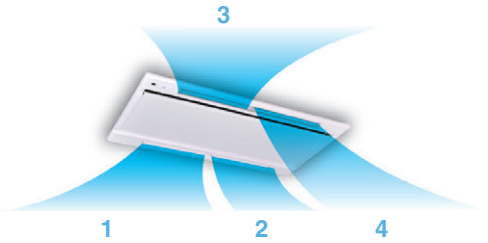
RC-EX3D RC-E5 RCH-E3

Wireless

RCN-TW-E2

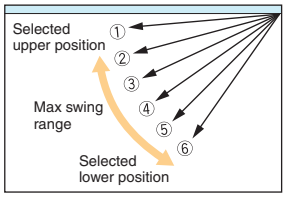
Individual flap control system

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.

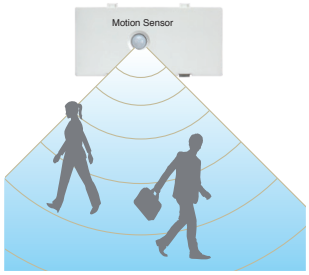
*The wireless remote control is not applicable with the individual flap control system.



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.

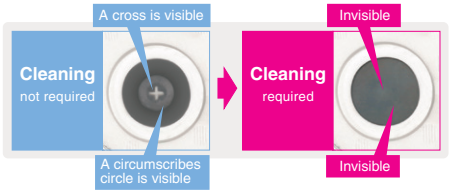
LB-TW-6W



Installation workability

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

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



Transparent access hole to drain pan

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

Indoor unit	FDTW		28KXZE3-W	45KXZE3-W	56KXZE3-W	71KXZE3-W	90KXZE3-W	112KXZE3-W	140KXZE3-W
Power source			1 Phase 220-240V, 50Hz						
Nominal capacity	Cooling	kW	2.8	4.5	5.6	7.1	9.0	11.2	14.0
	Heating		3.2	5.0	6.3	8.0	10.0	12.5	16.0
Power consumption	Cooling	W	90-90	100-100		140-140	190-190		
	Heating								
Sound power level[*1]	Cooling	dB(A)	57	58			63		
	Heating						62		
Sound pressure level[*1] (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	42/38/34/31				48/45/41/37		
	Heating								
Exterior dimensions (HeightxWidthxDepth)	Unit	mm	325x820x620				325x1535x620		
	Panel		20x1120x680				20x1835x680		
Net weight	Unit	kg	20	21		23	35		
	Panel		8.5	8.5		8.5	13		
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	14.5/12/10/9				31/27/23/20		
	Heating								
Outside air intake			Possible						
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")			ø9.52(3/8")			
	Gas		ø9.52(3/8")	ø12.7(1/2")		ø15.88(5/8")			
Panel (option)			TW-PSA-26W-E				TW-PSA-46W-E		
Air filter, Q'ty			Pocket plastic net x 2(Washable)				Pocket plastic net x 3(Washable)		

Indoor unit	FDTW		28KXE6F	45KXE6F	56KXE6F	71KXE6F	90KXE6F	112KXE6F	140KXE6F
Power source			1 Phase 220-240V, 50Hz						
Nominal capacity	Cooling	kW	2.8	4.5	5.6	7.1	9.0	11.2	14.0
	Heating		3.2	5.0	6.3	8.0	10.0	12.5	16.0
Power consumption	Cooling	W	90-90	100-100		140-140	190-190		
	Heating								
Sound power level[*1]	Cooling	dB(A)	58				65		
	Heating								
Sound pressure level[*1] (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	42/38/34/31				48/45/41/37		
	Heating								
Exterior dimensions (HeightxWidthxDepth)	Unit	mm	325x820x620				325x1535x620		
	Panel		20x1120x680				20x1835x680		
Net weight	Unit	kg	20	21		23	35		
	Panel		8.5	8.5		8.5	13		
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	14.5/12/10/9				31/27/23/20		
	Heating								
Outside air intake			Possible						
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")			ø9.52(3/8")			
	Gas		ø9.52(3/8")	ø12.7(1/2")		ø15.88(5/8")			
Panel (option)			TW-PSA-26W-E				TW-PSA-46W-E		
Air filter, Q'ty			Pocket plastic net x 2(Washable)				Pocket plastic net x 3(Washable)		

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

Ceiling Cassette -1way- FDTS

R32 R410A

New!

FDTS45・71

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

Remote control (option)

Wired

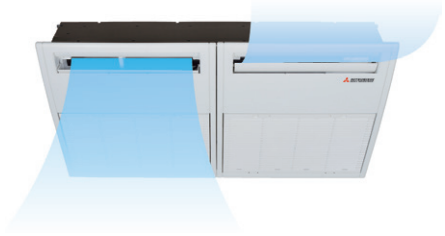
RC-EX3D RC-E5 RCH-E3

Wireless

RCN-TS-E2

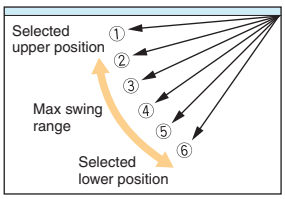
Individual flap control system

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



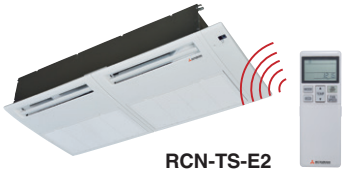
The flap can swing within the range of upper and lower flap position selected with wired control.

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



Wireless remote control

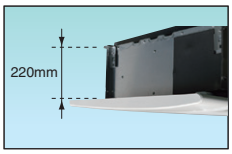
For wireless remote control simply attach an additional panel with infrared receiver on the right side of the main decorative panel.



RCN-TS-E2

Compact design

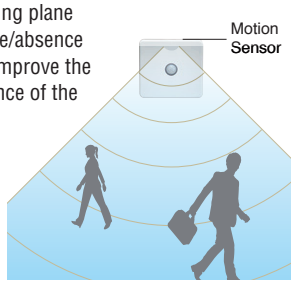
Indoor unit size (W:1150 x D:565) brings easy installation for 1200 x 600 ceiling and Panel size (1250 x 650) is suitable for 1200 x 600 ceiling. Height is the industry's lowest height level 220mm and weight is only 27, 28kg.



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

Indoor unit	FDTS		45KXZE3-W	71KXZE3-W	45KXE6F	71KXE6F
Power source			1 Phase 220-240V, 50Hz			
Nominal capacity	Cooling	kW	4.5	7.1	4.5	7.1
	Heating		5.0	8.0	5.0	8.0
Power consumption	Cooling	W	40-40	90-90	40-40	90-90
	Heating					
Sound power level*1	Cooling	dB(A)	52	60	60	61
	Heating					
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	40/39/37/35	49/46/41/36	42/40/38/35	49/46/41/36
	Heating					
Exterior dimensions (HeightxWidthxDepth)	Unit	mm	220x1150x565			
	Panel		35x1250x650			
Net weight	Unit	kg	27	28	27	28
	Panel		5	5	5	5
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	13/12/11/9.5	17/15/12/10	13/12/11/9.5	17/15/12/10
	Heating					
Outside air intake			Possible			
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")	ø9.52(3/8")	ø6.35(1/4")	ø9.52(3/8")
	Gas		ø12.7(1/2")	ø15.88(5/8")	ø12.7(1/2")	ø15.88(5/8")
Panel (option)			TS-PSA-3AW-E			
Air filter, Q'ty			Pocket plastic net x 2(Washable)			

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

Ceiling Cassette -1way Compact- FDTQ

New!

FDTQ22~36

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

Remote control (option)

Wired

RC-EX3D RC-E5 RCH-E3

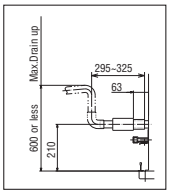
Wireless

RCN-KIT4-E2

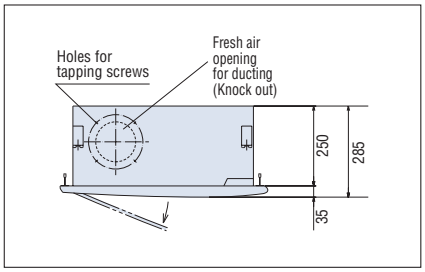
Compact design

- Comfortable effective cooling for small rooms, with low fan speed air flow at just 5.4m^3/min.

Optional wide panel shown for solid ceiling



- Condensate drain pump included as standard



- Ultra slim design at just 250mm above the ceiling

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

Indoor unit	FDTQ		22KXZE3-W	28KXZE3-W	36KXZE3-W	22KXE6F	28KXE6F	36KXE6F
Panel Name			Direct blow panel					
Panel (option)			TQ-PSA-15W-E (Short Panel)					
			TQ-PSB-15W-E (Wide Panel)					
Power source			1 Phase 220-240V, 50Hz					
Nominal capacity	Cooling	kW	2.2	2.8	3.6	2.2	2.8	3.6
	Heating		2.5	3.2	4.0	2.5	3.2	4.0
Power consumption	Cooling	W	50-70					
	Heating							
Sound power level[*1]	Cooling	dB(A)	56			60		
	Heating							
Sound pressure level[*1] (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	45/41/38/34			45/41/38/33		
	Heating							
Exterior dimensions (HeightxWidthxDepth)	Unit	mm	250x570x570					
	Panel		35x625x650(TQ-PSA-15W-E), 35x780x650(TQ-PSB-15W-E)					
Net weight	Unit	kg	19					
	Panel		2.5(TQ-PSA-15W-E), 3(TQ-PSB-15W-E)					
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	8/7/6/5					
	Heating							
Outside air intake			Possible					
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")					
	Gas		ø9.52(3/8")		ø12.7(1/2")	ø9.52(3/8")		ø12.7(1/2")
Air filter, Q'ty			Pocket plastic net x 1(Washable)					

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

Duct Connected -High Static Pressure-
FDU

New!

FDU45~160

FDU224・280

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

Remote control (option)

Wired

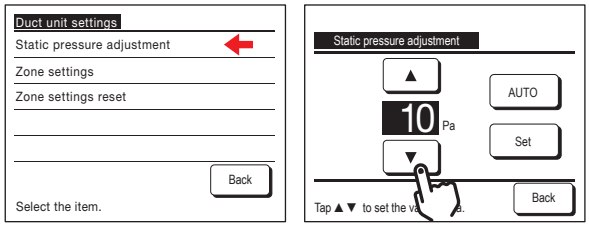
RC-EX3D RC-E5 RCH-E3

Wireless

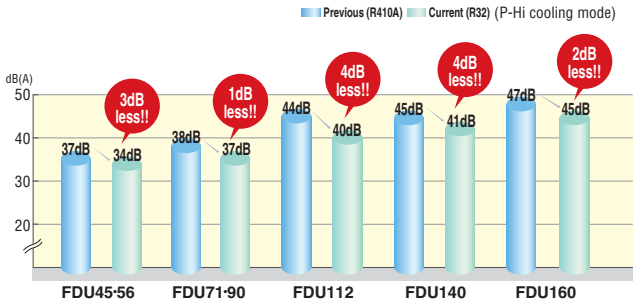
RCN-KIT4-E2

Static pressure could be adjusted via the remote control

The static pressure of the air duct could simply be adjusted via the remote control thereby work above the celling to adjust is no longer required.



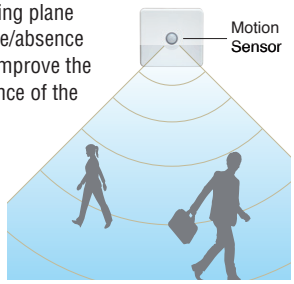
Reduction of sound pressure level



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 FDU (45~160) models are only 280mm

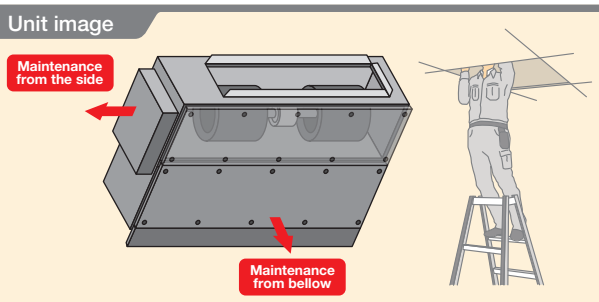
Transparent inspection window

Dirt condition of the bottom of the drain pan can be checked through this transparent inspection window without removing drain pan. (Please refer to P80)

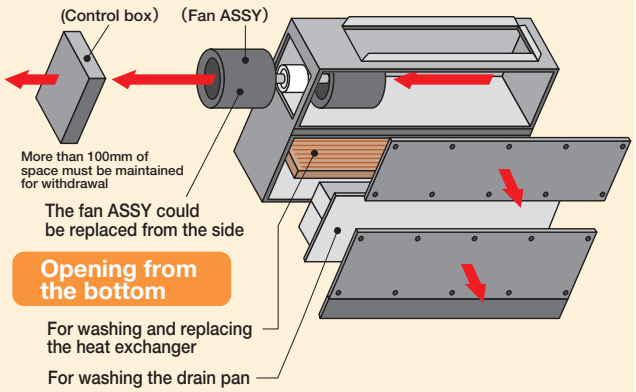
Improvement of the serviceability

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.

Unit image



Opening from the side



■ SPECIFICATIONS

Indoor unit	FDU		45KXZE3-W	56KXZE3-W	71KXZE3-W	90KXZE3-W	112KXZE3-W	140KXZE3-W	160KXZE3-W	224KXZE3-W	280KXZE3-W
Power source			1 Phase 220-240V, 50Hz								
Nominal capacity	Cooling	kW	4.5	5.6	7.1	9.0	11.2	14.0	16.0	22.4	28.0
	Heating		5.0	6.3	8.0	10.0	12.5	16.0	18.0	25.0	31.5
Power consumption	Cooling	W	100-100		240-250		310-320	350-360	420-430	1.160-1.200	
	Heating										
Sound power level*1	Cooling	dB(A)	58		63		68		72	78	
	Heating		60		65		69				
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	34/29/27/25		37/31/27/22		40/36/34/28	41/37/34/28	45/38/34/29	52/50/47/44	
	Heating		35/30/29/25		39/33/28/23		41/36/34/28				
Exterior dimensions (HxWxD)		mm	280x750x635		280x950x635		280x1368x738			379x1600x893	
Net weight		kg	29		34		54			89	
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	13/10/9/8		24/19/15/10		36/28/25/19	39/32/26/20	48/35/28/22	80/72/64/56	
	Heating										
Available static pressure		Pa	200								
Outside air intake			Possible								
Refrigerant piping size	Liquid	mm (in)	ø6.35(1/4") (Flare)		ø9.52(3/8")(Flare)					ø9.52(3/8")(Brazing)	
	Gas		ø12.7(1/2")(Flare)		ø15.88(5/8")(Flare)					ø19.05(3/4") (Brazing)	ø22.22(7/8") (Brazing)
Air filter, Q'ty			Procure locally								

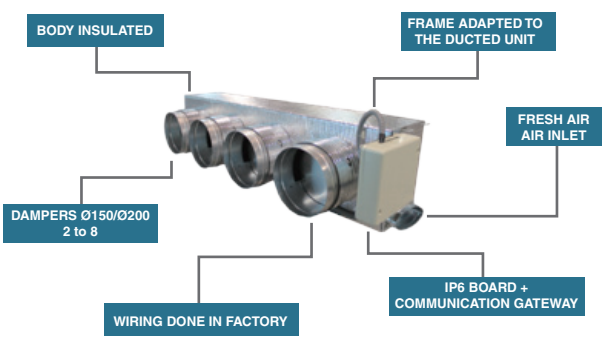
Indoor unit	FDU		45KXE6F	56KXE6F	71KXE6F	90KXE6F	112KXE6F	140KXE6F	160KXE6F	224KXZE1	280KXZE1
Power source			1 Phase 220-240V, 50Hz								
Nominal capacity	Cooling	kW	4.5	5.6	7.1	9.0	11.2	14.0	16.0	22.4	28.0
	Heating		5.0	6.3	8.0	10.0	12.5	16.0	18.0	25.0	31.5
Power consumption	Cooling	W	100-100		240-250		310-320	350-360	420-430	1.160-1.200	
	Heating										
Sound power level*1	Cooling	dB(A)	60		65		71	72	74	75	
	Heating										
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	37/32/29/26		38/33/29/25		44/38/36/30	45/40/34/29	47/40/35/30	52/50/47/45	
	Heating										
Exterior dimensions (HxWxD)		mm	280x750x635		280x950x635		280x1368x740			379x1600x893	
Net weight		kg	29		34		54			89	
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	13/10/9/8		24/19/15/10		36/28/25/19	39/32/26/20	48/35/28/22	80/72/64/56	
	Heating										
Available static pressure		Pa	200								
Outside air intake			Possible								
Refrigerant piping size	Liquid	mm (in)	ø6.35(1/4")(Flare)		ø9.52(3/8")(Flare)					ø9.52(3/8")(Brazing)	
	Gas		ø12.7(1/2")(Flare)		ø15.88(5/8")(Flare)					ø19.05(3/4") (Brazing)	ø22.22(7/8") (Brazing)
Air filter, Q'ty			Procure locally								

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

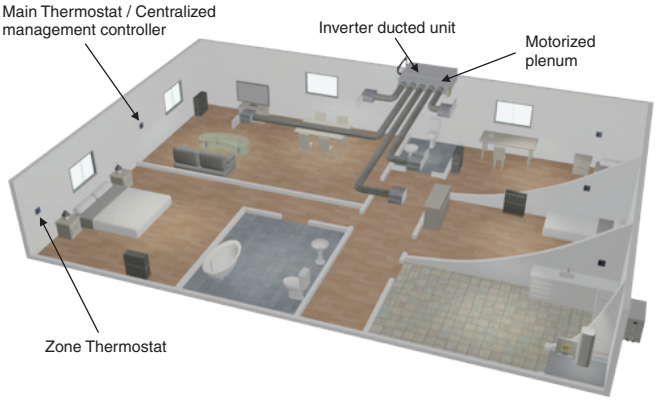
Round duct adapter (Available for FDU 45~160, FDUM 22~160)

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

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



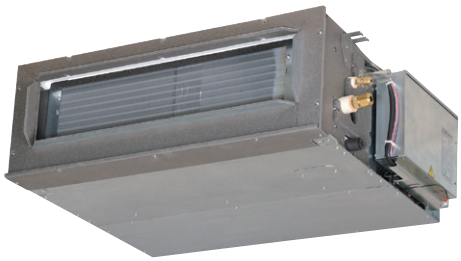
Main components



Duct Connected -Low/Middle Static Pressure- FDUM

R32 R410A

New!



FDUM22~160

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

*Filter pressure loss:5pa

Filter kit (option)
UM-FL1EF : for 22~56
UM-FL2EF : for 71, 90
UM-FL3EF : for 112, 140, 160

Remote control (option)

Wired

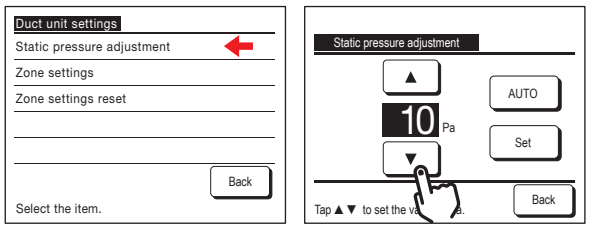
RC-EX3D RC-E5 RCH-E3

Wireless

RCN-KIT4-E2

Static pressure could be adjusted via the remote control

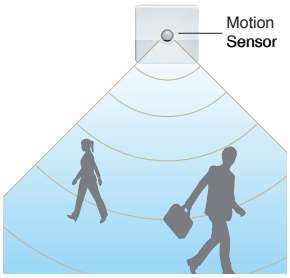
The static pressure of the air duct could simply be adjusted via the remote control thereby work above the celling to adjust is no longer required.



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 FDUM models only 280mm

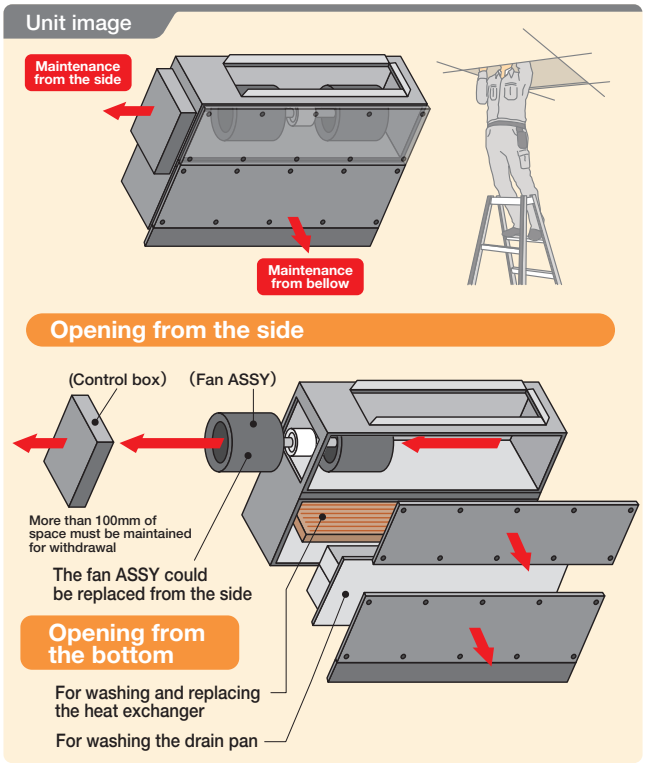
Transparent inspection window

Dirt condition of the bottom of the drain pan can be checked through this transparent inspection window without removing drain pan. (Please refer to P80)

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.

Unit image



Round duct adapter
In case of requirements of round duct adapter, please refer to P85.

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

■ SPECIFICATIONS

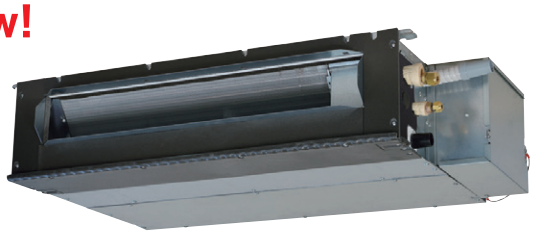
Indoor unit	FDUM		22KXZE3-W	28KXZE3-W	36KXZE3-W	45KXZE3-W	56KXZE3-W	71KXZE3-W	90KXZE3-W	112KXZE3-W	140KXZE3-W	160KXZE3-W
Power source			1 Phase 220-240V, 50Hz									
Nominal capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0
	Heating		2.5	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	18.0
Power consumption	Cooling	W	80-80					160-160		250-250	260-260	380-380
	Heating											
Sound power level*1	Cooling	dB(A)	57		58			63		68		72
	Heating		60		60			65		69		
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	33/27/25/23		34/29/27/25			37/31/27/22		40/36/34/28	41/37/34/28	45/38/34/29
	Heating		36/30/29/25		35/30/29/25			39/33/28/23		41/36/34/28		
Exterior dimensions (HxWxD)		mm	280x750x635					280x950x635		280x1368x738		
Net weight		kg	29					34		54		
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	13/10/9/8					24/19/15/10		36/28/25/19	39/32/26/20	48/35/28/22
	Heating											
Available static pressure		Pa	100									
Outside air intake			Possible									
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")					ø9.52(3/8")				
	Gas		ø9.52(3/8")		ø12.7(1/2")			ø15.88(5/8")				
Air filter (option)			UM-FL1EF					UM-FL2EF		UM-FL3EF		

Indoor unit	FDUM		22KXE6F	28KXE6F	36KXE6F	45KXE6F	56KXE6F	71KXE6F	90KXE6F	112KXE6F	140KXE6F	160KXE6F
Power source			1 Phase 220-240V, 50Hz									
Nominal capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0
	Heating		2.5	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	18.0
Power consumption	Cooling	W	100-100					200-200		290-290	330-330	450-450
	Heating											
Sound power level*1	Cooling	dB(A)	60					65		71	72	74
	Heating											
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	37/32/29/26					38/33/29/25		44/38/36/30	45/40/34/29	47/40/35/30
	Heating											
Exterior dimensions (HxWxD)		mm	280x750x635					280x950x635		280x1368x740		
Net weight		kg	29					34		54		
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	13/10/9/8					24/19/15/10		36/28/25/19	39/32/26/20	48/35/28/22
	Heating											
Available static pressure		Pa	100									
Outside air intake			Possible									
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")					ø9.52(3/8")				
	Gas		ø9.52(3/8")		ø12.7(1/2")			ø15.88(5/8")				
Air filter (option)			UM-FL1EF					UM-FL2EF		UM-FL3EF		

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

Duct Connected (thin) -Low Static Pressure- FDUT

New!



FDUT15~71

Remote control (option)

Wired

RC-EX3D RC-E5 RCH-E3

Wireless

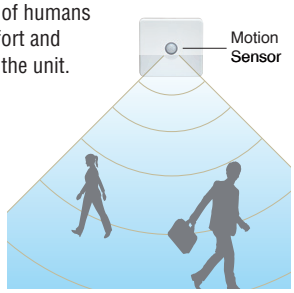
RCN-KIT4-E2

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

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.

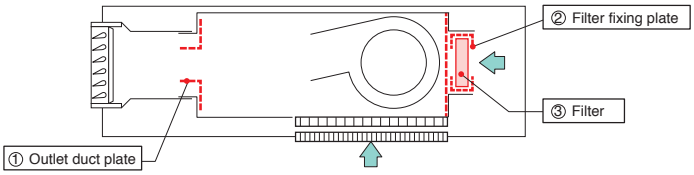
LB-KIT2



Filter 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

Filter pressure loss : 5 Pa



■ SPECIFICATIONS

Indoor unit	FDUT		15KXZE3-W	22KXZE3-W	28KXZE3-W	36KXZE3-W	45KXZE3-W	56KXZE3-W	71KXZE3-W
Power source			1 Phase 220-240V, 50Hz						
Nominal capacity	Cooling	kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1
	Heating		1.7	2.5	3.2	4.0	5.0	6.0	8.0
Power consumption	Cooling	W	57-58	63-66		67-70	75-78	76-80	80-80
	Heating			65-67		70-72	72-76	73-78	70-70
Sound power level*1	Cooling	dB(A)	52	52		54	54	55	56
	Heating		51			55			57
Sound pressure level*1 (Hi/Me/Lo)	Cooling	dB(A)	28/26/21	28/26/22		30/28/24	30/26/24	31/27/24	32/28/27
	Heating		28/25/20			31/29/25	30/27/25	31/28/26	32/28/26
Sound pressure level*2 (Hi/Me/Lo)	Cooling	dB(A)	32/29/25	32/29/25		37/34/28	36/33/27	38/33/29	41/37/32
	Heating								
Exterior dimensions (HxWxD)		mm	200x750x500				200x950x500		220x1150x565
Net weight		kg	22	21		22	25		31
Air flow (Hi/Me/Lo)	Cooling	m^3/min	6/5/4	7.5/6/5		8.5/7/5.5	11.5/9/7	12.5/9/7.2	16/13/9.5
	Heating								
External static pressure		Pa	Standard : 10 Max : 35				Standard : 10 Max : 50		
Outside air intake			Possible						
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")						ø9.52(3/8")
	Gas		ø9.52(3/8")			ø12.7(1/2")			ø15.88(5/8")
Air filter (option)			UT-FL1EF				UT-FL2EF		UT-FL3EF

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

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

Indoor unit	FDUT		15KXE6F-E	22KXE6F-E	28KXE6F-E	36KXE6F-E	45KXE6F-E	56KXE6F-E	71KXE6F-E
Power source			1 Phase 220-240V, 50Hz						
Nominal capacity	Cooling	kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1
	Heating		1.7	2.5	3.2	4.0	5.0	6.0	8.0
Power consumption	Cooling	W	60-60	70-70			80-80		80-80
	Heating								70-70
Sound power level*1	Cooling	dB(A)	52			57	58	59	
	Heating								
Sound pressure level*1 (Hi/Me/Lo)	Cooling	dB(A)	28/26/22			33/30/26	34/32/28	35/33/30	35/31/28
	Heating								
Sound pressure level*2 (Hi/Me/Lo)	Cooling	dB(A)	32/29/25			37/34/28	36/33/27	38/33/29	41/37/32
	Heating								
Exterior dimensions (HxWxD)		mm	200x750x500				200x950x500		220x1150x565
Net weight		kg	22	21		22	25		31
Air flow (Hi/Me/Lo)	Cooling	m^3/min	6/5/4	7.5/6/5		8.5/7/5.5	11.5/9/7	12.5/9/7.2	16/13/9.5
	Heating								
External static pressure		Pa	Standard : 10 Max : 35				Standard : 10 Max : 50		
Outside air intake			Possible						
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")						ø9.52(3/8")
	Gas		ø9.52(3/8")				ø12.7(1/2")		ø15.88(5/8")
Air filter (option)			UT-FL1EF				UT-FL2EF		UT-FL3EF

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

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

Duct Connected (Compact & Flexible)
FDUH

R32 R410A

New!

FDUH22~36

Remote control (option)

Wired

RC-EX3D **RC-E5** **RCH-E3**

Wireless

RCN-KIT4-E2

Filter kit (option)
UH-FL1E

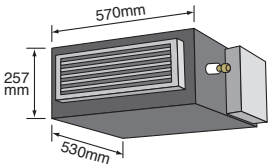
*Filter pressure loss:5pa

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

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

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.



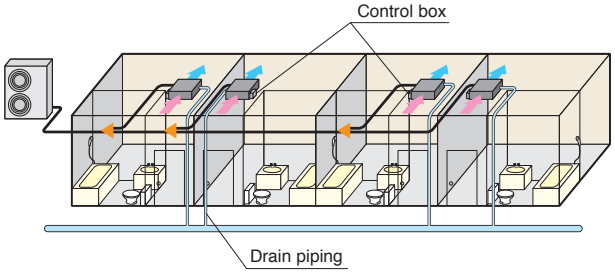
Motion Sensor (option)

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

Indoor unit	FDUH		22KXZE3-W	28KXZE3-W	36KXZE3-W	22KXE6F	28KXE6F	36KXE6F
Power source			1 Phase 220-240V, 50Hz					
Nominal capacity	Cooling	kW	2.2	2.8	3.6	2.2	2.8	3.6
	Heating		2.5	3.2	4.0	2.5	3.2	4.0
Power consumption	Cooling	W	50-70					
	Heating							
Sound power level*1	Cooling	dB(A)	58			60		
	Heating							
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	36/33/30/27			39/33/30/27		
	Heating							
Exterior dimensions (HxWxD)		mm	256x550x525			257x570x530		
Net weight		kg	19			20		
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	8.5/7/6.5/6					
	Heating							
Static pressure		Pa	30					
Outside air intake			Not possible					
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")					
	Gas		ø9.52(3/8")		ø12.7(1/2")	ø9.52(3/8")		ø12.7(1/2")
Air filter (option)			UH-FL1E					

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

Wall Mounted
FDK

New!

FDK15~56

FDK71·90

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

Remote control (option)

Wired

RC-EX3D RC-E5 RCH-E3

Wireless

RCN-K-E2: FDK15~56

RCN-K71-E2: FDK71·90

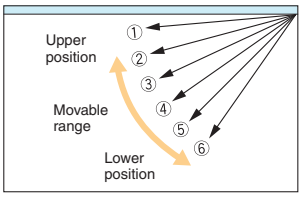
Elegant Timeless Design

The FDK series air conditioners are innovatively 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)

Flap control system

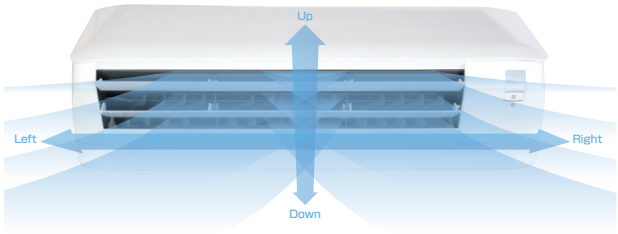
Selection of flap position is possible. A flap can be set at different angles.

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



Lateral Swing ▶ flap swings from right to left automatically

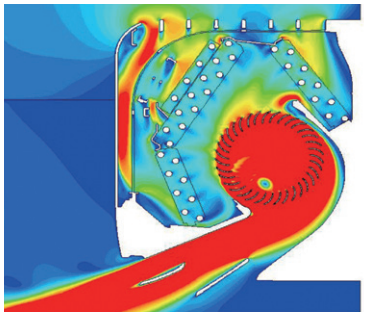
Up/Down Flap swing + Lateral swing



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.

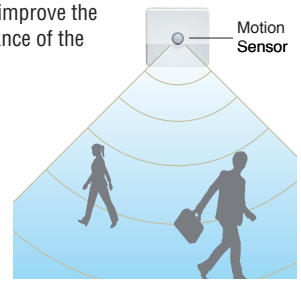
Colours in the figure show the air speed.



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

Indoor unit	FDK		15KXZE3-W	22KXZE3-W	28KXZE3-W	36KXZE3-W	45KXZE3-W	56KXZE3-W	71KXZE3-W	90KXZE3-W
Power source			1 Phase 220-240V, 50Hz							
Nominal capacity	Cooling	kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1	9.0
	Heating		1.7	2.5	3.2	4.0	5.0	6.3	8.0	10.0
Power consumption	Cooling	W	20-20			30-30			40-40	50-50
	Heating									
Sound power level*1	Cooling	dB(A)	54	55		58		58	59	61
	Heating							61		
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	38/34/31/28	38/36/30/27		40/38/33/28	43/41/36/33	43/41/36/33	42/40/37/35	44/42/39/35
	Heating							44/42/37/33		
Exterior dimensions (HxWxD)		mm	290x870x230						339x1197x262	
Net weight		kg	11.5	11		11.5			17	
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	5.7/5/4.5/3.6	8.5/8/6/5		11/10/8/7	12/11/9/8	12/11/9/8	21/19/16/14	23/21/19/16
	Heating							13/12/10/8		
Outside air intake			Not possible							
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")						ø9.52(3/8")	
	Gas		ø9.52(3/8")			ø12.7(1/2")			ø15.88(5/8")	
Air filter, Q'ty			Polypropylene net x2 (Washable)							

Indoor unit	FDK		15KXZE1	22KXZE1	28KXZE1	36KXZE1	45KXZE1	56KXZE1	71KXZE1	90KXZE1
Power source			1 Phase 220-240V, 50Hz							
Nominal capacity	Cooling	kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1	9.0
	Heating		1.7	2.5	3.2	4.0	5.0	6.3	8.0	10.0
Power consumption	Cooling	W	20-20			30-30			40-40	50-50
	Heating									
Sound power level*1	Cooling	dB(A)	54	55		58		58	59	61
	Heating							61		
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	38/34/31/28	38/36/32/28		40/38/33/28	43/41/36/33	43/41/36/33	42/40/37/35	44/42/39/35
	Heating							44/42/37/33		
Exterior dimensions (HxWxD)		mm	290x870x230						339x1197x262	
Net weight		kg	11.5	11		11.5			17	
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	5.7/5/4.5/3.6	8.5/8/6/5		11/10/8/7	12/11/9/8	12/11/9/8	21/19/16/14	23/21/19/16
	Heating							13/12/10/8		
Outside air intake			Not possible							
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")						ø9.52(3/8")	
	Gas		ø9.52(3/8")			ø12.7(1/2")			ø15.88(5/8")	
Air filter, Q'ty			Polypropylene net x2 (Washable)							

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

Ceiling Suspended
FDE

New!

FDE36~140

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

Remote control (option)

Wired

RC-EX3D RC-E5 RCH-E3

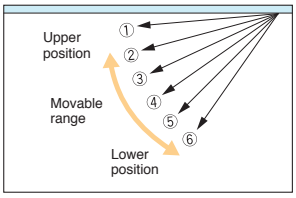
Wireless

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.



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

Indoor unit	FDE		36KXZE3-W	45KXZE3-W	56KXZE3-W	71KXZE3-W	112KXZE3-W	140KXZE3-W
Power source			1 Phase 220-240V, 50Hz					
Nominal capacity	Cooling	kW	3.6	4.5	5.6	7.1	11.2	14.0
	Heating		4.0	5.0	6.3	8.0	12.5	16.0
Power consumption	Cooling	W	50-50			70-70	100-100	130-130
	Heating							
Sound power level*1	Cooling	dB(A)	59	59	59	61	61	64
	Heating		60	60	60			
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	45/38/31/26	45/38/36/31		46/39/37/32	45/42/38/34	48/43/40/35
	Heating							
Exterior dimensions (HxWxD)		mm	210x1070x690			210x1320x690	250x1620x690	
Net weight		kg	28			35	43	
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	13/10/7/5.5	13/10/9/7		20/15/13/10	28/25/21/16.5	32/26/23/17
	Heating							
Outside air intake			Not possible					
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")			ø9.52(3/8")		
	Gas		ø12.7(1/2")			ø15.88(5/8")		
Air filter, Q'ty			Pocket Plastic net x2 (Washable)					

Indoor unit	FDE		36KXZE1	45KXZE1	56KXZE1	71KXZE1	112KXZE1	140KXZE1
Power source			1 Phase 220-240V, 50Hz					
Nominal capacity	Cooling	kW	3.6	4.5	5.6	7.1	11.2	14.0
	Heating		4.0	5.0	6.3	8.0	12.5	16.0
Power consumption	Cooling	W	50-50			70-70	100-100	130-130
	Heating							
Sound power level*1	Cooling	dB(A)	60			62	61	64
	Heating							
Sound pressure level*1 (P-Hi/Hi/Me/Lo)	Cooling	dB(A)	46/38/31/26	46/38/36/31		47/39/37/32	45/42/38/34	48/43/40/35
	Heating							
Exterior dimensions (HxWxD)		mm	210x1070x690			210x1320x690	250x1620x690	
Net weight		kg	28			33	43	
Air flow (P-Hi/Hi/Me/Lo)	Cooling	m^3/min	13/10/7/5.5	13/10/9/7		20/15/13/10	28/25/21/16.5	32/26/23/17
	Heating							
Outside air intake			Not possible					
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")			ø9.52(3/8")		
	Gas		ø12.7(1/2")			ø15.88(5/8")		
Air filter, Q'ty			Pocket Plastic net x2 (Washable)					

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

Floor Standing -2way-
FDFW

R410A

FDFW28~56

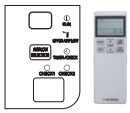
Auto air outlet selection

Remote control (option)

Wired

RC-EX3D 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.

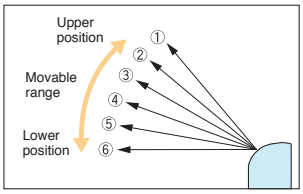
Quiet Operation

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).

Flap control system

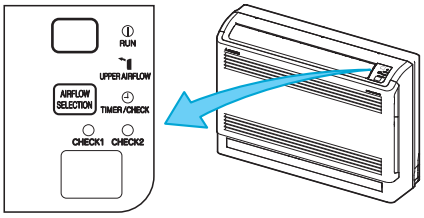
Selection of flap position is possible.
A flap can be set at different angles.

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



Motion Sensor

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

Indoor unit	FDFW		28KXE6F	45KXE6F	56KXE6F
Power source			1 Phase 220-240V, 50Hz		
Nominal capacity	Cooling	kW	2.8	4.5	5.6
	Heating		3.2	5.0	6.3
Power consumption	Cooling	W	20-20		30-30
	Heating				
Sound power level*1	Cooling	dB(A)	55	57	60
	Heating				
Sound pressure level*1 (Hi/Me/Lo)	Cooling	dB(A)	36/34/30	38/36/33	44/37/33
	Heating				
Exterior dimensions (HxWxD)		mm	600x860x238		
Net weight		kg	19	20	
Air flow (Hi/Me/Lo)	Cooling	m^3/min	9/8/7		11/9/8
	Heating				
Outside air intake			Not possible		
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")		
	Gas		ø9.52(3/8")	ø12.7(1/2")	
Air filter, Q'ty			Polypropylene net x1 (Washable)		

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

Floor Standing (with casing) FDFL
Floor Standing (without casing) FDFU

Remote control (option)

Wired

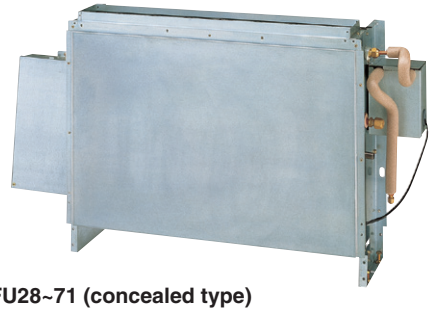
RC-EX3D RC-E5 RCH-E3

Wireless

RCN-KIT4-E2

R410A

FDFL71

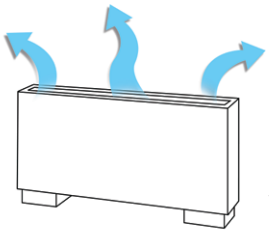


FDFU28~71 (concealed type)

Improved comfort with the airflow from a wide outlet

With the 60 degrees angle of the airflow from the front to the upper side the comfort has increased.

Piping could be taken from the side and the bottom leading to an improved serviceability and ease of instillation



Wider air flow for optimum comfort

Available in two types

The unit could be chosen from non concealed type and concealed type depending on the installation conditions

Compact design at 630mm height

Motion Sensor (option)

The optional motional sensor on our floor standing units saves energy by operations by detecting human movement. Our smart technology provides energy saving control by shifting set temperature by detecting human activity.

LB-KIT2

■ SPECIFICATIONS

Indoor unit	FDFL		71KXE6F	–	–	–	–
	FDFU		–	28KXE6F	45KXE6F	56KXE6F	71KXE6F
Power source			1 Phase 220-240V, 50Hz				
Nominal capacity	Cooling	kW	7.1	2.8	4.5	5.6	7.1
	Heating		8.0	3.2	5.0	6.3	8.0
Power consumption	Cooling	W	90-100				
	Heating						
Sound power level*1	Cooling	dB(A)	62	58	60		
	Heating						
Sound pressure level*1 (Hi/Me/Lo)	Cooling	dB(A)	43/41/40	41/38/36	43/41/40		
	Heating						
Exterior dimensions (HxWxD)		mm	630x1481x225	630x1087x225			630x1372x225
Net weight		kg	40	25			32
Air flow (Hi/Me/Lo)	Cooling	m^3/min	18/15/12	12/11/10	14/12/10		18/15/12
	Heating						
Outside air intake			Not possible				
Refrigerant piping size (Flare)	Liquid	mm (in)	ø9.52(3/8")	ø6.35(1/4")			ø9.52(3/8")
	Gas		ø15.88(5/8")	ø9.52(3/8")	ø12.7(1/2")		ø15.88(5/8")
Air filter, Q'ty			Polypropylene net x1 (Washable)				

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

Outdoor Air Processing unit
FDU-F

R410A

FDU650~2400F

Remote control (option)

Wired

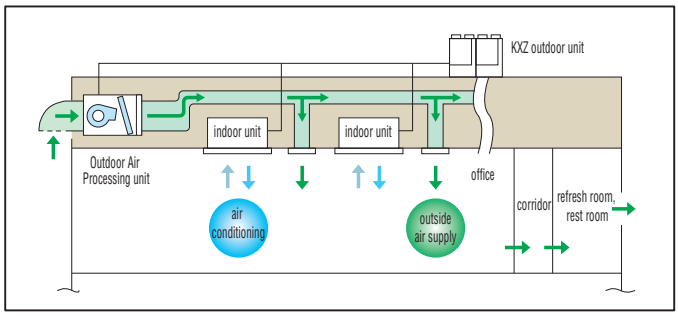
RC-EX3D RC-E5 RCH-E3

Wireless

RCN-KIT4-E2

Create a fresher environment with the Outdoor Air Processing feature

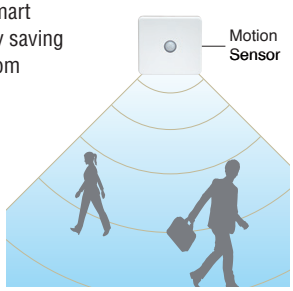
Connect your KXZ system to an Outdoor Air Processing unit with one streamlined system. This advanced technology allows you to enjoy a fresh and comfortable air supply.



Motion Sensor (option)

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

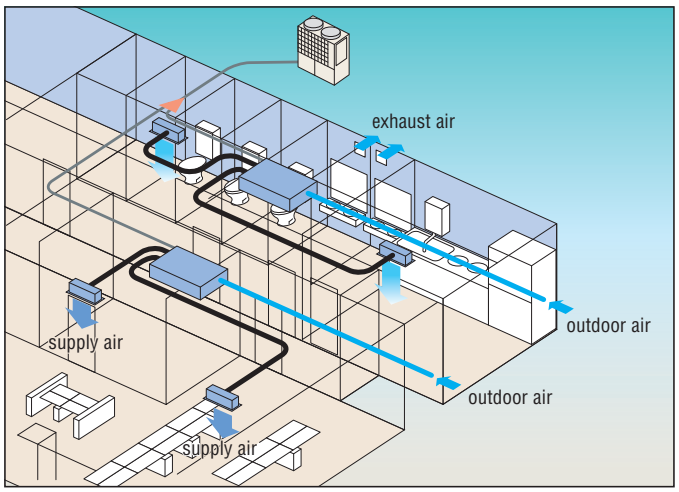
LB-KIT2



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.

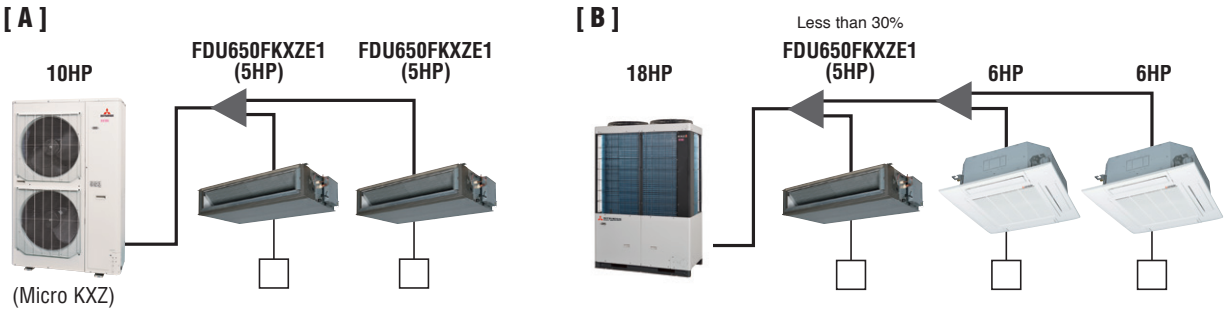


Connectivity with Outdoor units

FDU-F series are connectable to 8~60HP KXZ2 outdoor units, can not be connected to Micro model (4~6HP), KXZ Lite.

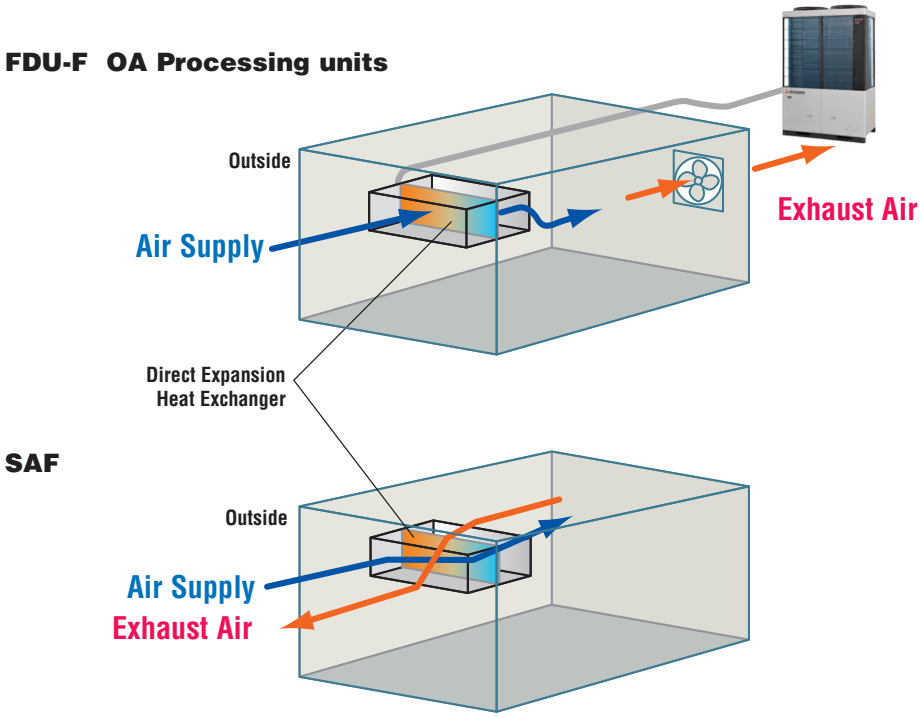
Combination with Outdoor units

	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 (Difference between FDU-F and SAF)

SAF is the energy recovery ventilation unit which can recover heat energy from exhaust air to supply air and "has no air processing function, but FDU-F is 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.



■ SPECIFICATIONS

Indoor unit	FDU		650FKXZE1	1100FKXZE1	1800FKXZE1	2400FKXZE1
Power source			1 Phase 220-240V, 50Hz			
Nominal capacity	Cooling	kW	9.0	14.0	22.4	28.0
	Heating		6.5	10.5	16.0	21.5
Power consumption	Cooling	W	240-250	350-360	1160-1200	
	Heating					
Sound power level*1	Cooling	dB(A)	55	62	68	70
	Heating					
Sound pressure level*1 (Hi)	Cooling	dB(A)	31	37	42	45
	Heating					
Exterior dimensions (HxWxD)		mm	280x950x635	280x1368x740	379x1600x893	
Net weight		kg	34	54	89	
Air flow (Hi)	Cooling	m^3/min	11	18	30	40
	Heating					
Static pressure		Pa	200(at Hi Air flow)			
Outside air intake			Possible			
Refrigerant piping size	Liquid	mm (in)	ø9.52(3/8")(Flare)		ø9.52(3/8")(Brazing)	
	Gas		ø15.88(5/8")(Flare)		ø19.05(3/4")(Brazing)	ø22.22(7/8")(Brazing)
Air filter			Procure locally			

1. The data are measured at 33ºCDB 28ºCWB (68%RH) during cooling and 0ºCDB-2.9ºCWB (50%RH) during heating (no frost).
2. Temperature range of outdoor air must be 20~40ºCDB (32ºCWB) during cooling and 0~24ºCDB 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 E.S.P. setting is set within the range of 10 - 120Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa. (with RC-EX3D and RC-E5 only)

Hydro Module unit
HMU

R410A

Remote control (option)

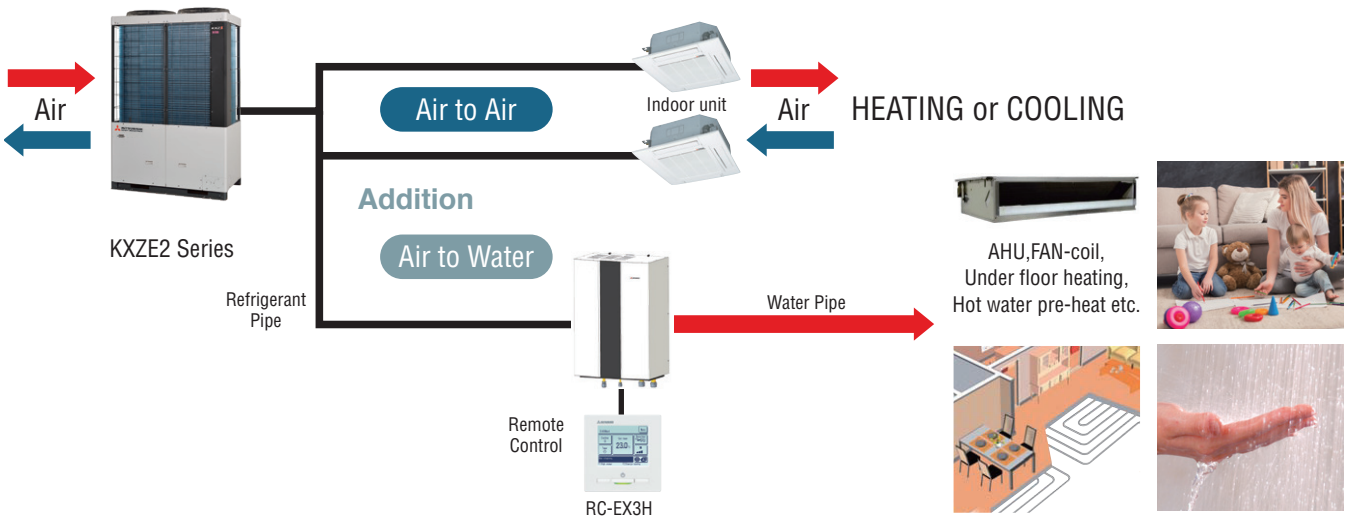
Wired

RC-EX3H

HMU140 · 280

What is the hydro module unit? (Hydro module unit : HMU)

This unit is an auxiliary device for use with the VRF type multi systems to control water temperatures.
It employs the plate heat exchanger in place of fin heat exchanger, and produces cold or hot water by exchanging heat between refrigerant and water.
Since it can produce hot or cold water using the VRF type multi systems as the heat source, it allows to configure a chiller system in a simple way on the one hand. On the other, it can expand the range of applications of air-conditioner because it can be used mixed with the multiple indoor unit for building.



Target outlet water temperature constant control

- This is achieved by controlling compressor frequency and control of EEVs.
- Controlling the capacity of HMUs in accordance with the load.
- The HMU is designed to achieve a hot water temperature of 55°C.

Antifreeze control

- Anti-freeze protection of plate heat exchanger is enabled during defrost operation.

Mixed operation

- Mixed operation is possible in the air to air indoor unit and HMU.
- During the operation only of HMU , it can accommodate a wide range of outlet water temperature controlled by a dedicated control.
- When the system is in mixed operation, the HMU or air conditioner can be set as priority.

External equipment linked

- External output of interlocking signal to an external heat source for the secondary heating.
- Possible target setting temperature change from the external input. (3 points)
- Water pump control (ON / OFF) possible.

*HMU is designed for closed loop heat exchange applications. Connections to any other open loop systems (such as domestic water) should be handled via a secondary heat exchanger.

Application example

Heating system using HMU and air conditioner propose various solutions.

■ SPECIFICATIONS

Indoor unit		HMU	140KXZE1	280KXZE1
Power source			1 Phase 220-240V, 50Hz	
Deviation, incoming supply		%	± 10%(Min.85% at starting)	
Operation range	Maximum capacity	Cooling / Heating kW	14	28
	Power consumption (Rated/Max.)	Cooling / Heating W	220/360	316/360
	Current (Rated/Max.)	Cooling / Heating A	1.00-0.92/1.54	1.44-1.32/1.54
	Outdoor temperature	Cooling °C	15-46	
		Heating °C	-20-32(Mixed Use*1 : -20-20)	
	Indoor temperature	°C	0-32(Without freezing)	
	Indoor relative humidity	%	≦ 90	
	Inlet water temperature	Cooling °C	12-30(Mixed Use*1 : 19-24)	
		Heating*2 °C	20-50(Mixed Use*1 : 20-35)	
		Heating*3 °C	25-50(Mixed Use*1 : 25-35)	
	Outlet water temperature	Cooling °C	7-25(Mixed Use*1 : 14-19)	
		Heating*2 °C	25-55(Mixed Use*1 : 25-40)	
		Heating*3 °C	30-55(Mixed Use*1 : 30-40)	
	Water flow (Rated/Min.-Max.)	L/min	40/20-40	80/24-80
	External water pressure @Rated flow	kPa	98	80
	Allowable operating pressure (water)	kPa	30-600	
	Minimum suction head at 50°C	kPa	30	
	Inlet water pressure	kPa	30-600	
Sound power level		Cooling*4, 6 dB(A)	48	
		Heating*5, 6 dB(A)	46	49
Sound pressure level		Cooling*4 dB(A)	32	
		Heating*5 dB(A)	27	31
Exterior dimensions (HxWxD)		mm	860(110*7) x 550 x 400	
Weight (without water)		kg	46	48
Weight (Including water)		kg	47.8	50.6
Minimum amount of water in the water circuit		L	150	230
Set pressure of safety valve		kPa	600	
Water pipe connection			R1-1/2	
Refrigerant piping size	Liquid	mm	ø9.52(3/8")(Flare)	
	Gas	(in)	ø15.88(5/8")(Flare)	ø22.22(7/8")*8 (Brazing)

*1 Mixed use means HMU and air to air indoor unit mixed operation. *2 In case outdoor temperature more than 0ºC.(0ºC<Outdoor air temperature) *3 In case outdoor air temperature is 0ºC or less. (Outdoor temperature ≦ 0ºC) *4 Sound test condition for cooling: Cooling condition 1. *5 Sound test condition for heating: Heating condition 3. *6 MIC position: 1m from the center of the HMU. *7 Outside piping length. *8 Accessory pipe needs to be connected for gas pipe on site.

■ Performance data

Indoor unit			HMU280KXZE1
Outdoor unit			FDC280KXZE2
Heating nominal capacity	condition 1	kW	23.00
	condition 2	kW	23.15
	condition 3	kW	25.20
Heating power consumption	condition 1	kW	8.40
	condition 2	kW	6.90
	condition 3	kW	6.00
COP	condition 1	-	2.74
	condition 2	-	3.36
	condition 3	-	4.20
ηsh	condition 3 base		151
Cooling nominal capacity	condition 1	kW	25.80
	condition 2	kW	18.80
Cooling power consumption	condition 1	kW	6.35
	condition 3	kW	6.25
EER	condition 1	-	4.06
	condition 2	-	3.01

Note:Heating condition 1: Inlet/outlet water temp. 47ºC/55ºC, Outdoor temp. 7ºCWB/6ºCDB. Heating condition 2: Inlet/outlet water temp. 40ºC/45ºC, Outdoor temp. 7ºCWB/6ºCDB.
Heating condition 3: Inlet/outlet water temp. 30ºC/35ºC, Outdoor temp. 7ºCWB/6ºCDB.
Cooling condition 1: Inlet/outlet water temp. 23ºC/18ºC, Outdoor temp. 35ºCWB/-. Cooling condition 2: Inlet/outlet water temp. 12ºC/7ºC, Outdoor temp. 35ºCWB/-.

Ventilation

Fresh Air Ventilation and Heat Exchange unit

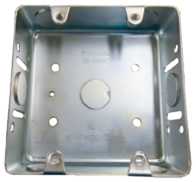
SAF-E7

Energy Performance of Building Directive - EPBD

The EPBD function limits electrical/gas power to provide heating or cooling to commercial buildings. To use this function, the building designer needs to select energy efficient heating/cooling equipment and to minimise energy losses through ventilation systems.
SAF smart technology recovers heat energy in the atmosphere which would have otherwise been lost. It then uses this energy to warm air entering the building. The reverse happens in warmer climates where the exhausted cool air is used to partially cool the incoming air.

Helping you to reduce energy consumption and carbon emissions by capturing waste energy. EFBD also allows for smaller sized units as less heating/cooling requirements are needed!

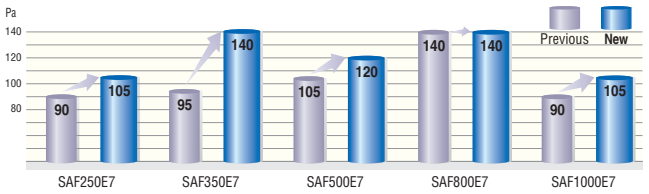
Switch box (option)



Remote control
The following functions are newly available.

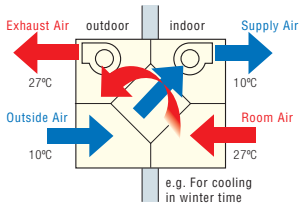
- ON/OFF Timer – The hour and minute of timer on/off can be set.
- Filter Sign – Announces the due time for cleaning the air filter.

Increased external static pressure at UHi air flow

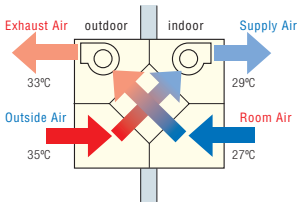


Principle of Operation

Principle of operation (simple ventilation)



Principle of operation (heat exchanging)



■ SPECIFICATIONS

Indoor unit	SAF	150E7	250E7	350E7	500E7	800E7	1000E7
Power source		1 Phase 220-240V, 50Hz					
Exterior dimensions (HxWxD)	mm	270x970x467	270x882x599	317x1050x804	317x1090x904	388x1322x884	388x1322x1134
Exterior appearance		Galvanized steel sheet					
Power input	W	92-107	108-123	178-185	204-225	360-378	416-432
Running current	A	0.42-0.45	0.49-0.51	0.81-0.77	0.93-0.94	1.64-1.58	1.89-1.80
Capacity UHi Enthalpy exchange efficiency	Cooling	63		66	62	65	
Capacity UHi Enthalpy exchange efficiency	Heating	70		69	67	71	
Capacity UHi Temperature exchange efficiency	%	75					
Capacity Hi Enthalpy exchange efficiency	Cooling	63		66	62	65	
Capacity Hi Enthalpy exchange efficiency	Heating	70		69	67	71	
Capacity Hi Temperature exchange efficiency	%	75					
Capacity Lo Enthalpy exchange efficiency	Cooling	66	65	71	64	68	70
Capacity Lo Enthalpy exchange efficiency	Heating	73	72	73	69	74	76
Capacity Lo Temperature exchange efficiency	%	77		78	76		79
Motor & Q'ty	W	10 x 2	20 x 2	40 x 2	70 x 2	180 x 2	180 x 2
Air handling equipment Fan type & Q'ty		Sirocco fan x 2					
Air flow (UHi/Hi/Lo)	m^3/h	150/150/120	250/250/190	350/350/240	500/500/440	800/800/630	1000/1000/700
External static pressure (UHi/Hi/Lo)	Pa	80/70/25	105/95/45	140/60/45	120/60/35	140/110/55	105/80/75
Net weight	kg	25	29	49	57	71	83
Air filter Supply air / Exhaust air		Protection for element (Washable) PS400					

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

		Summer	Winter
Indoor side (Supply air)	DB	27°C	20°C
	WB	20°C	14°C
Outdoor side (Outside air)	DB	35°C	5°C
	WB	29°C	2°C
Unit around	DB	27°C	20°C

Fresh Air DX Assembly
SAF-DX

Drain up kit (option)
DXA-DU-E
(built-in type)

Remote control (option)

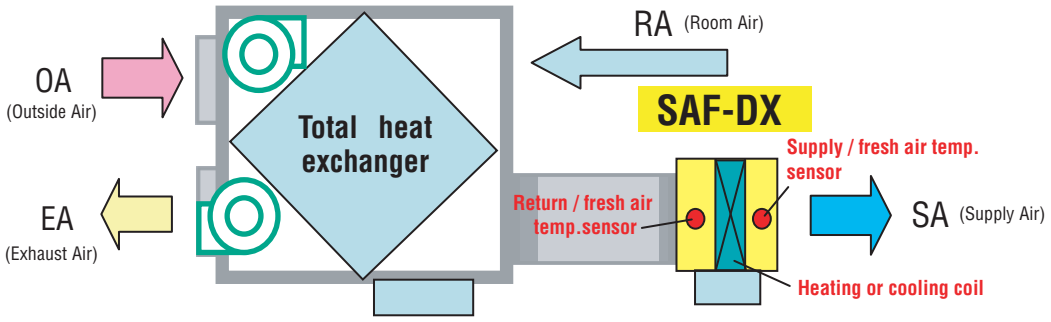
Wired

RC-E5 RCH-E3

Wireless

RCN-KIT4-E2

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



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

■ SPECIFICATIONS

Indoor unit	SAF-DX		250E6	350E6	500E6	800E6	1000E6
Power source			1 Phase 220-240V, 50Hz				
Nominal capacity	Cooling	kW	2.0	2.8	3.6	5.6	6.3
	Heating		1.8	2.2	2.8	4.5	5.6
Capacity code			22	28	36	56	71
Power consumption	Cooling	W	7.2-7.2				
	Heating						
Running current	Cooling	A	0.05-0.05				
	Heating						
Exterior dimensions (HxWxD)		mm	315x452x422		315x537x422	315x682x422	315x822x422
Net weight		kg	12.3		13.6	16.1	18.4
Air flow (Standard)		m^3/min	250	350	500	800	1000
Internal resistance		Pa	38	66			
Refrigerant piping size (Flare)	Liquid	mm (in)	ø6.35(1/4")				ø9.52(3/8")
	Gas		ø9.52(3/8")		ø12.7(1/2")		ø15.88(5/8")

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

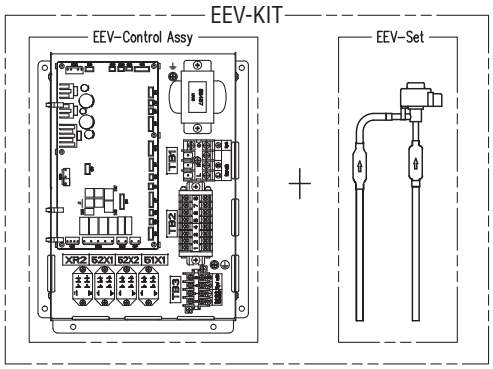
Item	Return/fresh air temperature		Outdoor air temperature		Standard
Operation	DB	WB	DB	WB	
Cooling*1	27°C	19°C	35°C	24°C	ISO-T1
Heating*2	20°C		7°C	6°C	

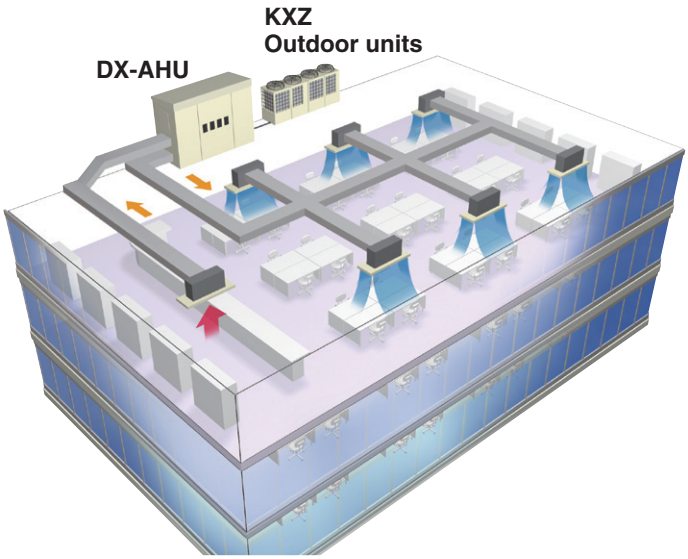
(2)The air conditioner is manufactured and tested in conformity with ISO-T1 "UNITARY AIR CONDITIONERS".

Electronic Expansion Valve Kit

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.





DX : Direct expansion coil

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

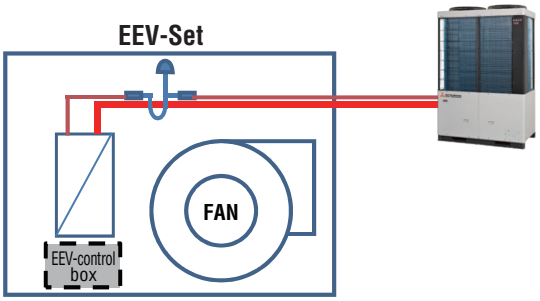
- Single refrigeration system EEVKIT6-E-C … Possible with multiple refrigeration systems
- Multiple refrigeration system EEVKIT6-E-M (1) + EEVKIT6-E-C … Possible with multiple refrigeration systems(Max32)
- EEVKIT6-E-C is common for both single and multiple refrigeration systems

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.

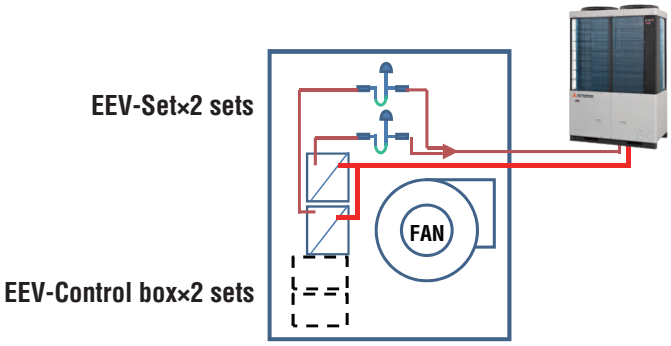
System A

- 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.



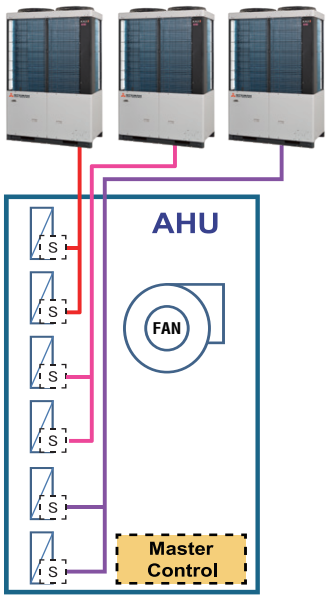
System B

- 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.

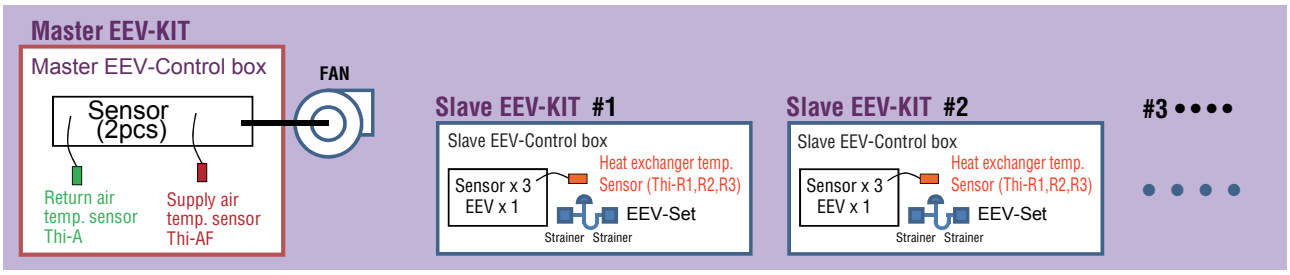


Advantages

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

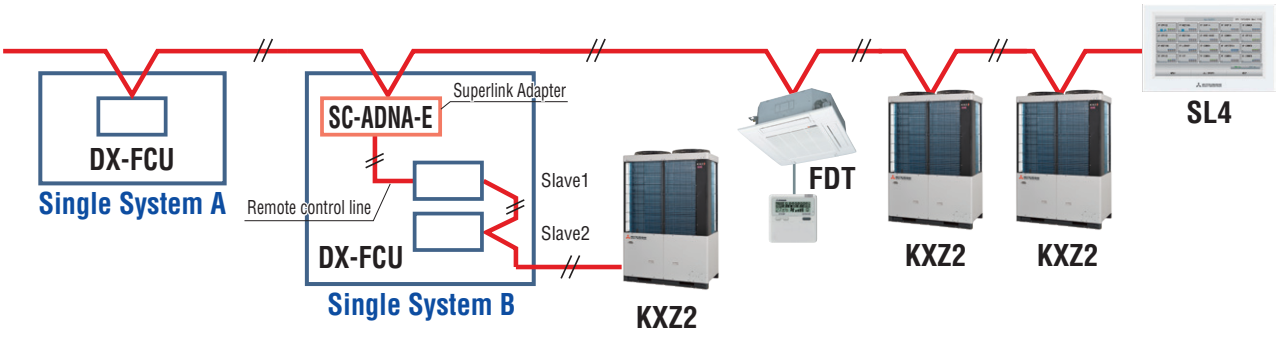
Additional parts over a single refrigeration system

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

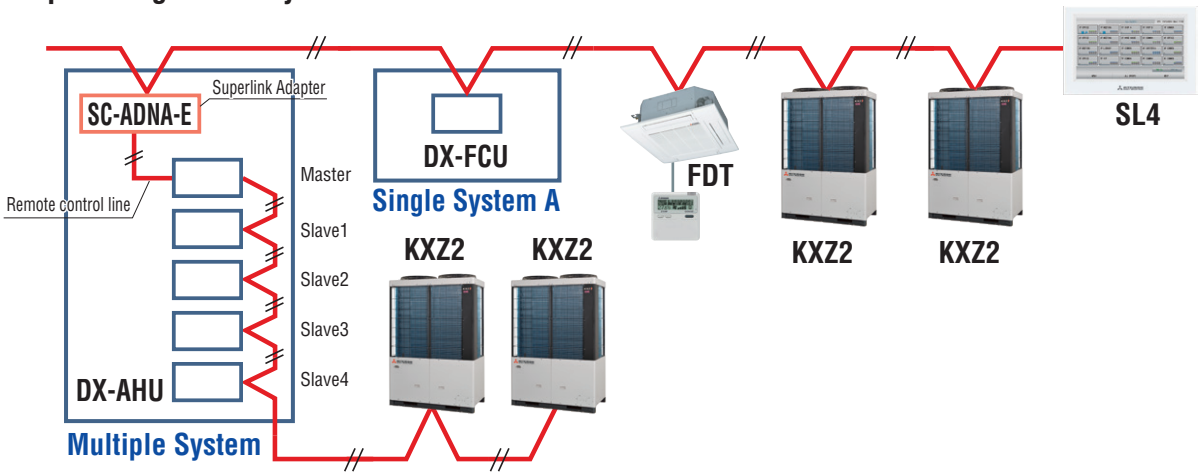


Connection to SUPERLINK-II

Single refrigeration system



Multiple refrigeration system



Control Systems

Individual control

Remote Control line up

	indoor unit	remote control
wired	all models	RC-EX3D
		RC-E5
		RCH-E3

	indoor unit	remote control	indoor unit	remote control	indoor unit	remote control
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, FDUT, FDUH, FDU-F

Wired remote control **(option)**

RC-EX3D

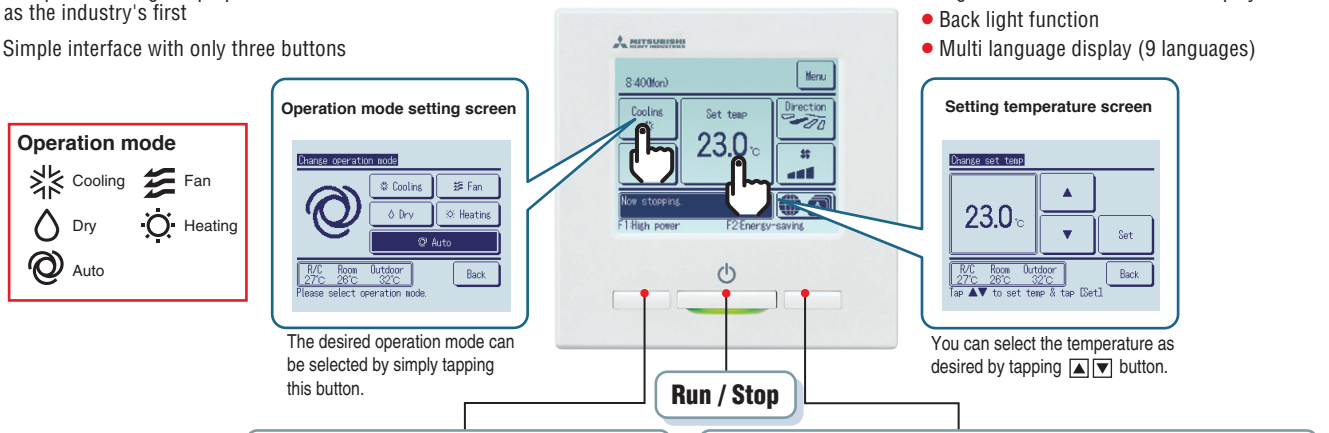
Intuitive touch controller with Liquid Crystal Display

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 (9 languages)



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-minuteintervals).
	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-EX3D 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.
	Favourite setting	Operation mode, set temperature, fan speed and air flow direction automatically adjust to the programmed favourite 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.
	Select the language	Set the language to be displayed on the remote control.
Service	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

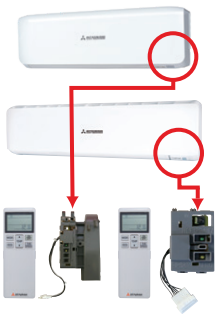
RCN-T-5BW-E2
RCN-T-5BB-E2

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)

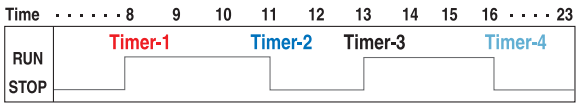
RC-E5

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	20~30ºC(effective for heating operation)
Lower limit	18~26ºC(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. 8m
*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

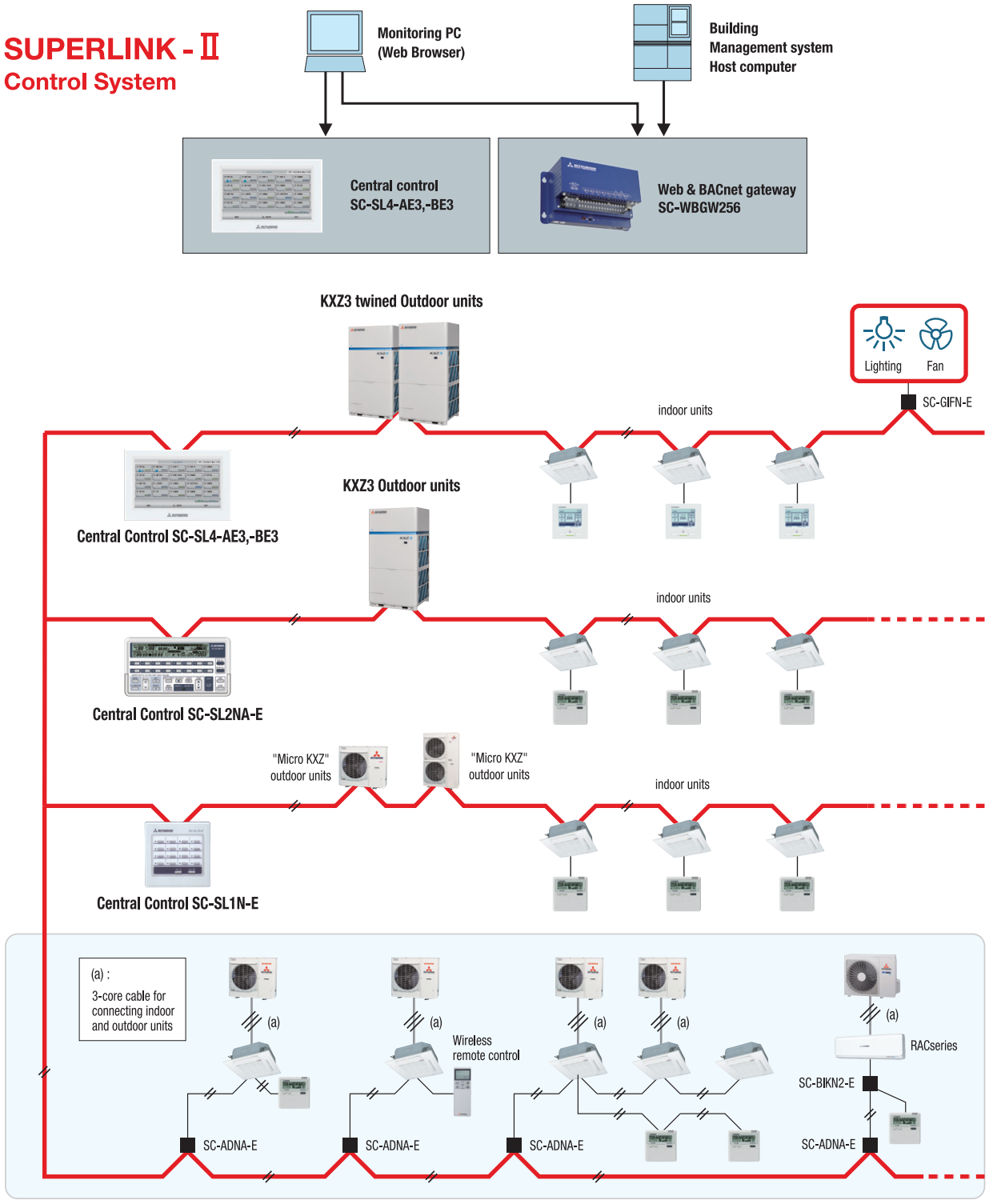
In case the sensor integrated in the indoor unit or in the remote controller is unable to sense the room temperature correctly, or an individual controller in each room is not required but a temperature sensor is (as when a central control system is in place), install SC-THB-E3 in an adequate location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

8m

Controls network overview

Our company offers simplicity in installation with the highly sophisticated SUPERLINK-Ⅱ Control System

This offers building owners and occupiers a comprehensive control and management system while providing complete commissioning and service maintenance assistance for installers and service engineers.
The SUPERLINK-Ⅱ is an advanced high speed data transmission system which can connect up to 128 indoor units and 32 outdoor units onto one network.
A wide range of control options are available for the SUPERLINK-Ⅱ network to suit any application large or small, as well as connection to a new or existing Building Management System (BMS).



Central Control

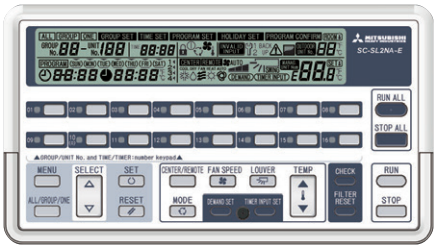
SC-SL1N-E

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.

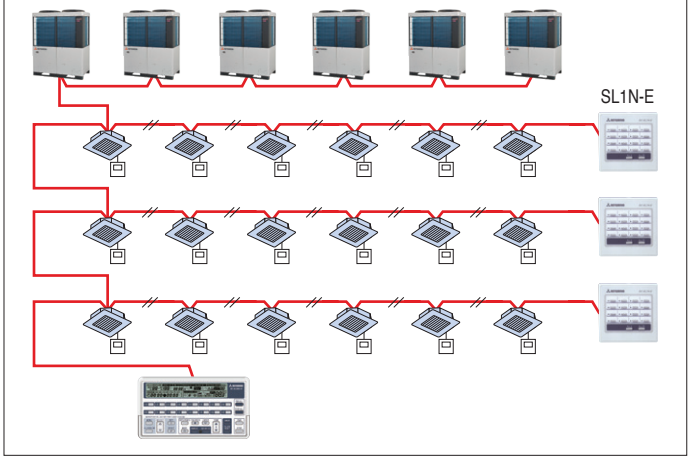
SC-SL2NA-E

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 to16 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.

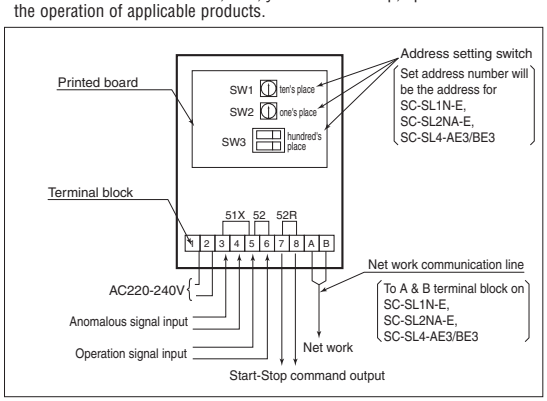
Example of control by a central control SC-SL2NA-E



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

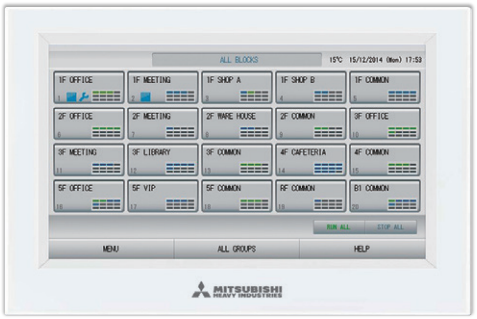
• Applicable products
Ventilation fan, Air purifier
• By using SC-GIFN-E together with central control such as SC-SL1N-E, SC-SL2NA-E and SC-SL4-AE3,-BE3, you can start-stop, operate & monitor the operation of applicable products.



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

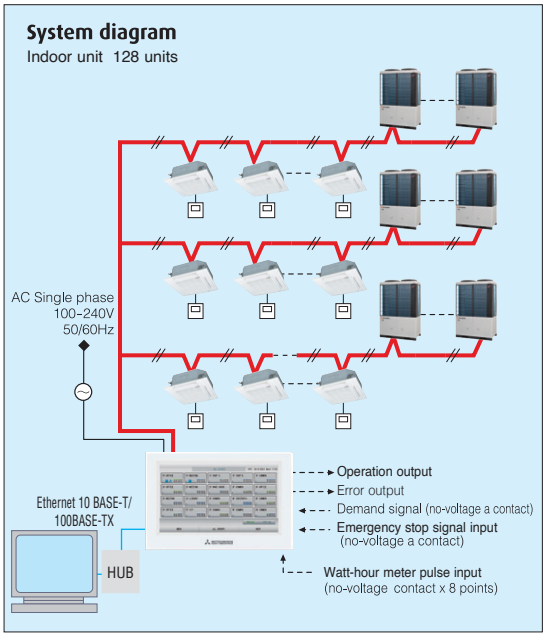
SC-SL4-AE3,BE3

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:

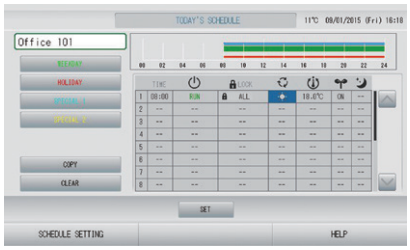
Control	Monitoring	Scheduling	Administration/Service
Run/Stop / Home leave	Operating state	Yearly schedule	Block definition, Floor layout
Mode (cool/heat/fan/dry/Auto)	Mode	Today's schedule	Group definition
Set temperature	Set temperature	Detailed daily schedule	Unit definition
Operation permitted/prohibited	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)



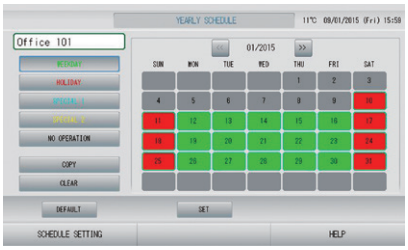
PC requirements: Windows 10, Windows 11
Monitor resolution 1280 x 1024 or more.
Web browser requirements: Microsoft Edge , Google Chrome

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.

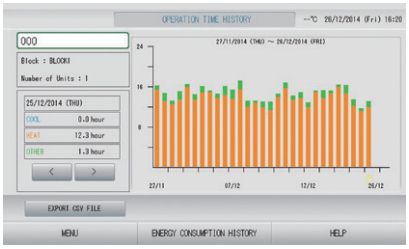


Yearly Schedule
Schedule settings for a year are also possible. The weekday, holiday, special day 1 or special day 2 can be selected and set.
Able to automatically update the yearly schedule.



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

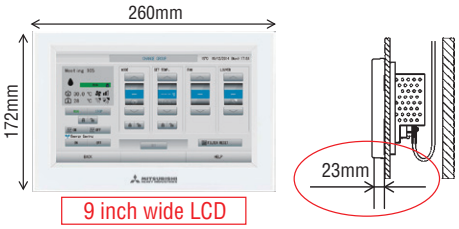
Able to show the maintenance code

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



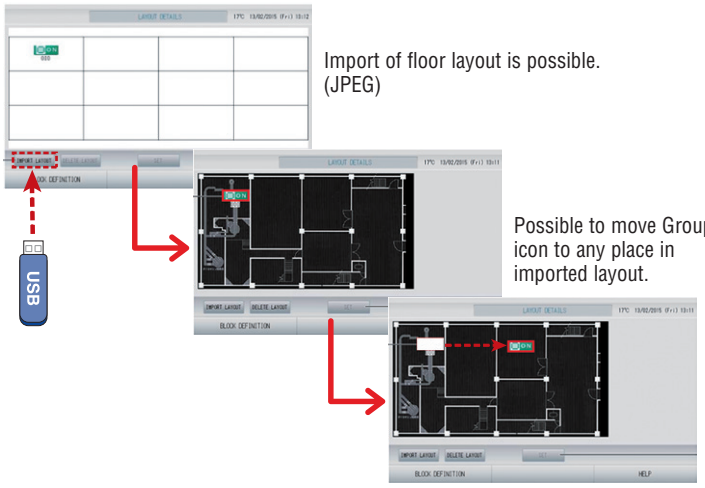
Contrast between five colours for icon display and black light base screen has achieved high visibility.

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-MDQE2) is necessary.

Block layout function

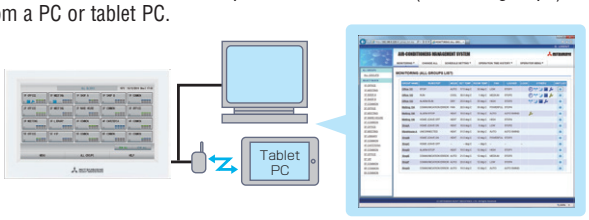


Import of floor layout is possible. (JPEG)

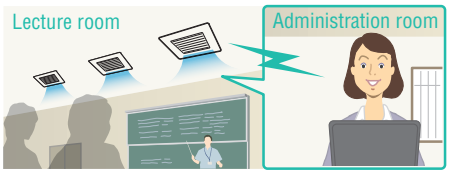
Possible to move Group icon to any place in imported layout.

Web function

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



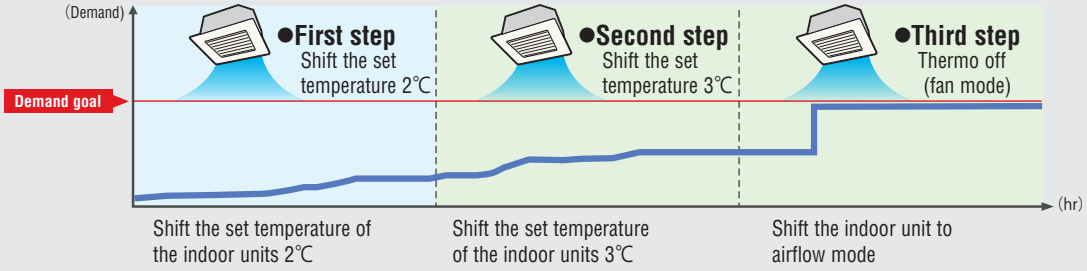
<Example>
Monitoring and operating air conditioners in a lecture room of a university



New demand control function

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

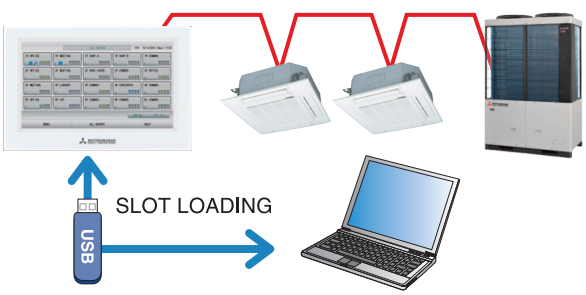
■ Image of demand control for temperature shifts and air flow



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℃
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.

IoT Remote monitoring system

M-ACCESS

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

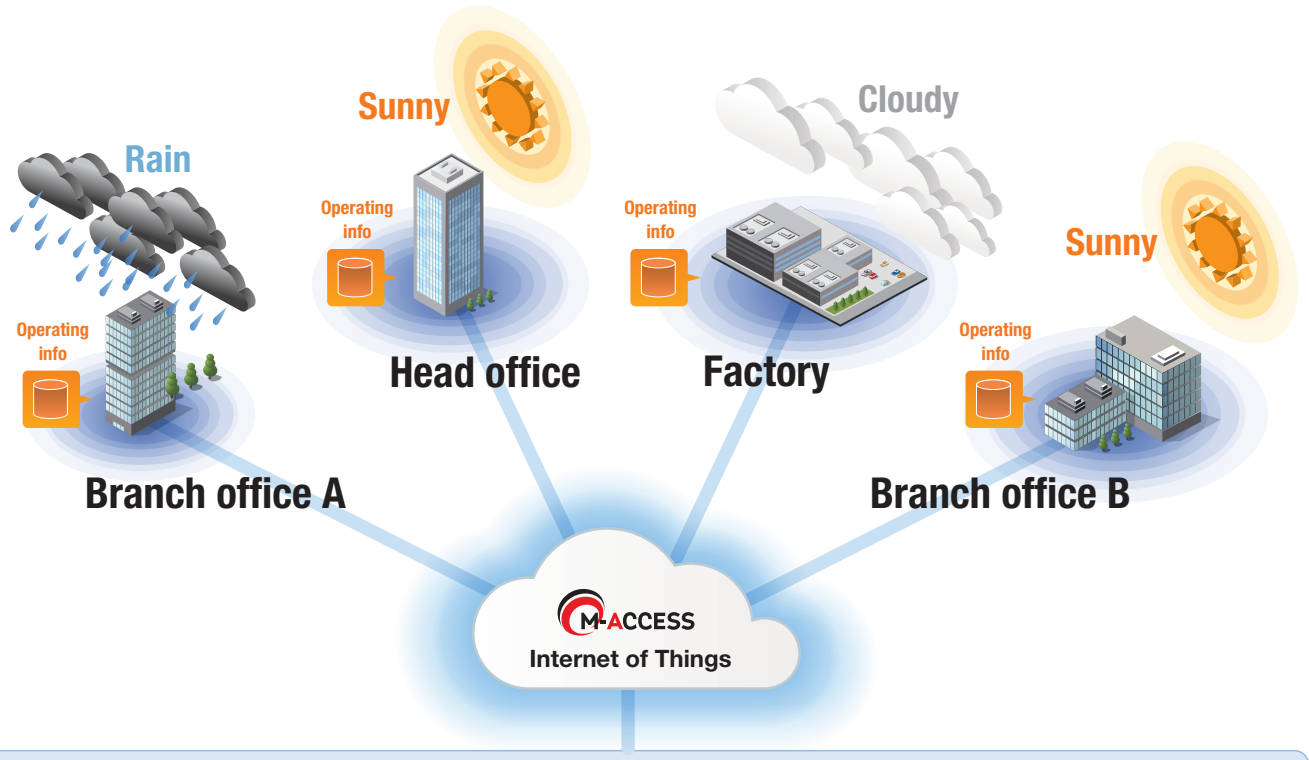
The system could be connected to a wide range of units.

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.

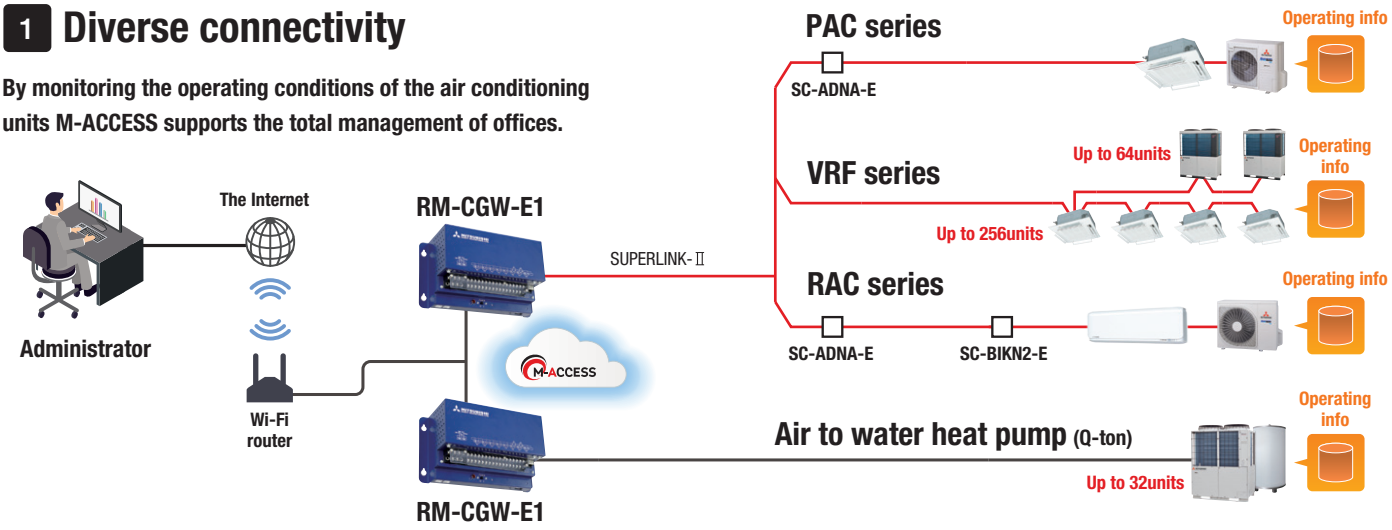


From PC and tablets

The photos of the devices are an image

1 Diverse connectivity

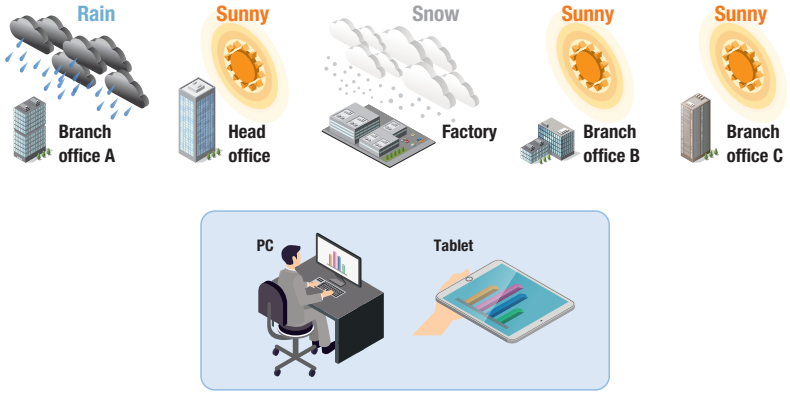
By monitoring the operating conditions of the air conditioning units M-ACCESS supports the total management of offices.



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

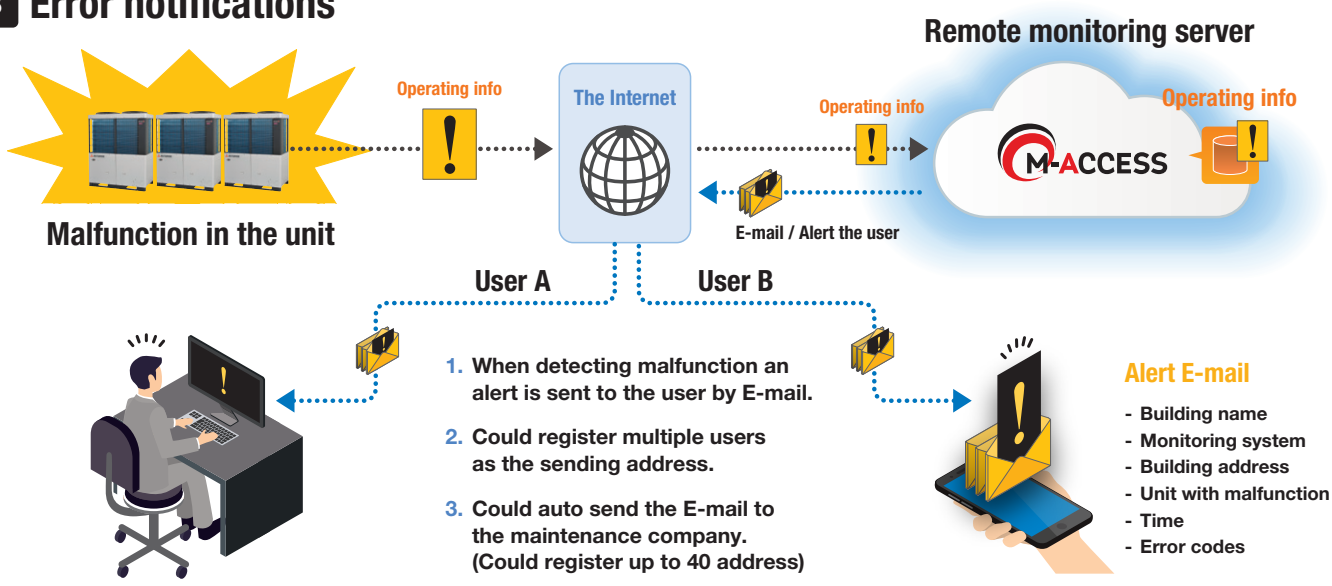
Could remotely activate/deactivate or change the setting temperature by looking at the weather conditions of various locations.

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



Building Management Systems

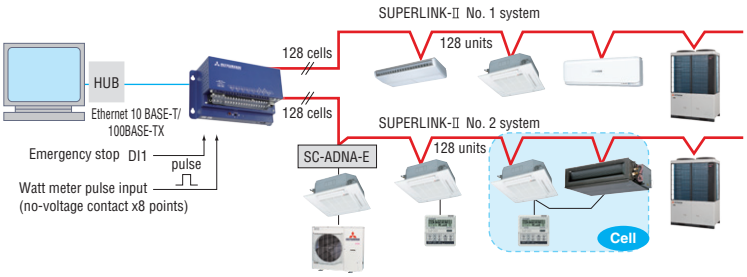
Our company offers a wide range of control options for the KXZ system to suit any application, large or small, as well as connection to a new or existing BMS.

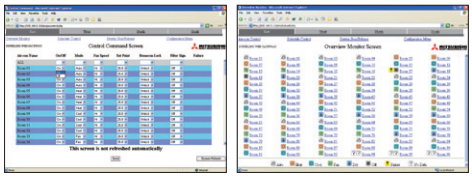
SC-WBGW256 (Web & BACnet gateway)

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 Internet Explorer. A low power embedded CPU and compact flash ROM ensure a large storage capacity with high reliability (no moving parts such as a PC fan, etc). An IP address filter function combined with three-level user authentication check also ensures security.
Also, SC-WBGW256 can be used as interface devices that convert Mitsubishi Heavy Industries Superlink-Ⅱ communication data to BACnet code and are controlled centrally from a building management system.

Production by order

[In case of web gateway]

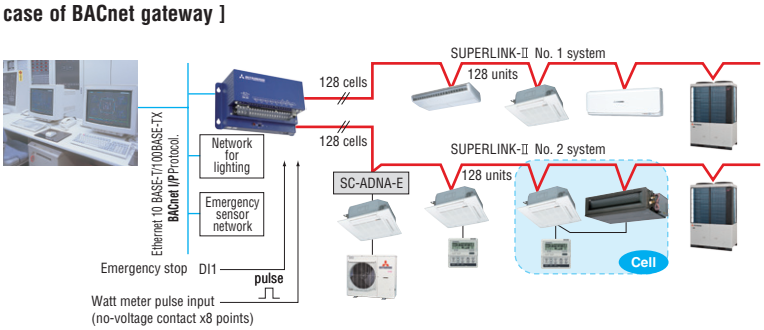


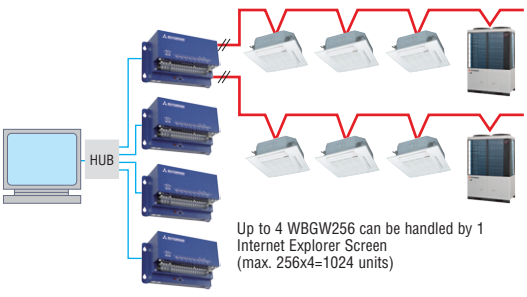


PC requirements: Windows 7 or Windows 8.1.
Monitor resolution 1364 x 768.

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

[In case of BACnet gateway]





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

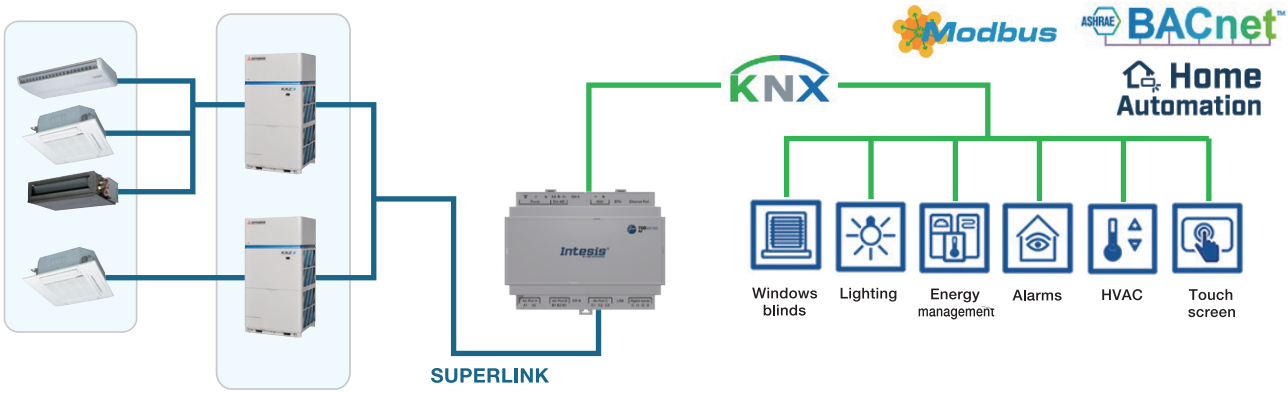
INTESIS BMS Interface for Mitsubishi Heavy Industries Thermal Systems Air Conditioners

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

Direct Connection to VRF outdoor units

The gateway is directly connected to the outdoor unit's communication bus and enables the control of all the indoor units connected to the system. This allows not only the control and monitoring of the main AC functions but the access to some internal variables of the outdoor units.



- Scan: Automatic identification of the units presents on the VRF system.
- Energy consumption signals from each indoor unit are available.
- Outdoor unit's signals available for the integration.
- Supports both BACnet/IP and BACnet MS/TP physical layers.
- Configuration through IP or USB (Console) port.
- Easy integration with Intesis MAPS.
- Automatic updates for both Intesis MAPS and interface's firmware.

AC Cloud Control

PAC Model: INWMPMHI001R000

Please access the followings for details.

Intesis™ BY HMS NETWORKS
URL http://www.intesis.com
email info@intesis.com

Support tool

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)

mhiae.com/BIM

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-seasonal

Coming soon

e-seasonal is an application for our Air cooled VRF Outdoor unit selection.
By selecting a combination of systems, location and occupancy profiles you can simulate:

1. **Annual seasonal efficiency calculation**
2. **Annual energy consumption, cost and CO_2 emission estimation**
3. **Comparison with multiple solutions including conventional heaters**

It is possible to download to your PC for an offline version or using a web browser for an online version. e-seasonal provides solution suggestions according to your requested design conditions.

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.

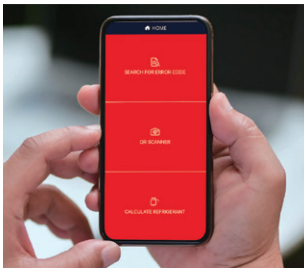
If you're an engineer interested in using e-solution, please register and download the e-solution via https://mhiae.com/e-solution/ and be sure to download the latest updates when available.

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.

MHI e-service App

MHI e-service application is available & free to download to both IOS and Android devices.
The application covers "Mitsubishi Heavy Industries Thermal Systems, Ltd" Air conditioning systems: Split (RAC & PAC), VRF, Q-ton & AtoW.

This "MHI e-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, and the probable cause for the malfunction.
Scan the unit's QR code and search the meaning of error codes depending on the model type
Additional refrigerant charge calculation for Split (PAC, RAC) & VRF
Currently available in English & Spanish languages and Italian



To download the App go to:

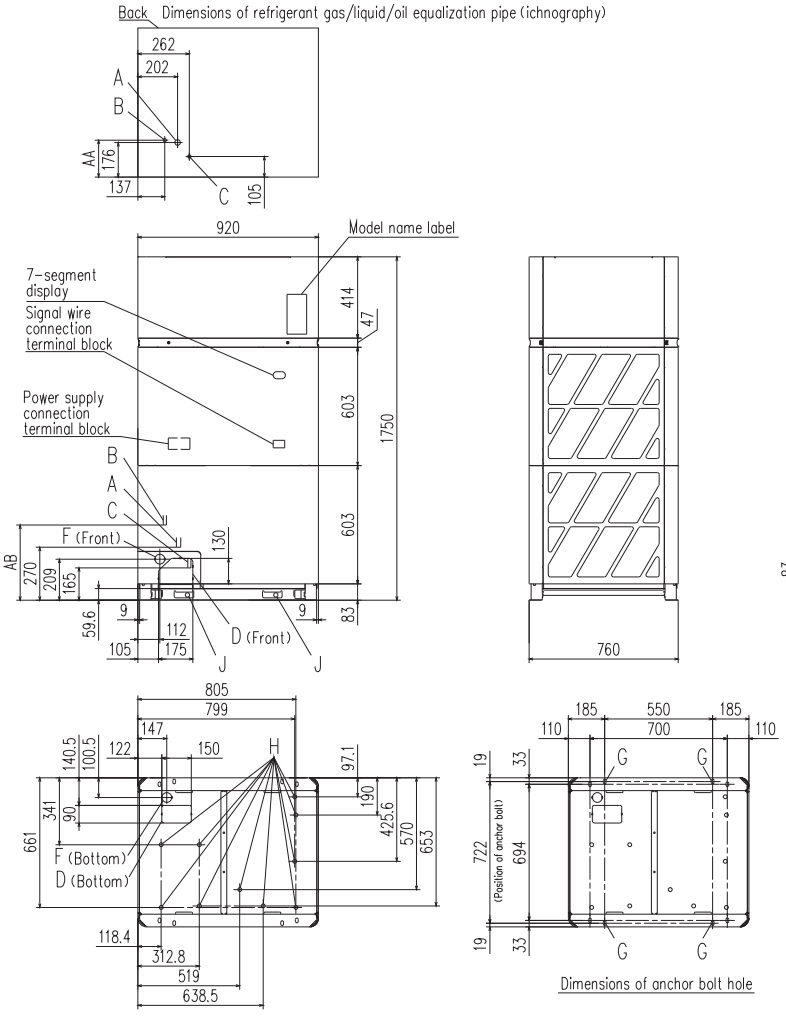
Android™ iPhone

"Android" and "Google Play" are trademarks or registered trademarks of Google LLC.
"iPhone" is a trademark of Apple Inc. registered in the U.S. and other countries.

Exterior dimensions

KXZ3 Heat pump systems

FDC224KXZE3, FDC280KXZE3, FDC335KXZE3

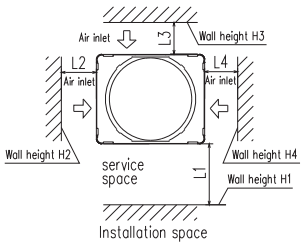


All measurements in mm.

Dimensions \ MODEL	224、280	335
AA	188.5	185.5
AB	383	377

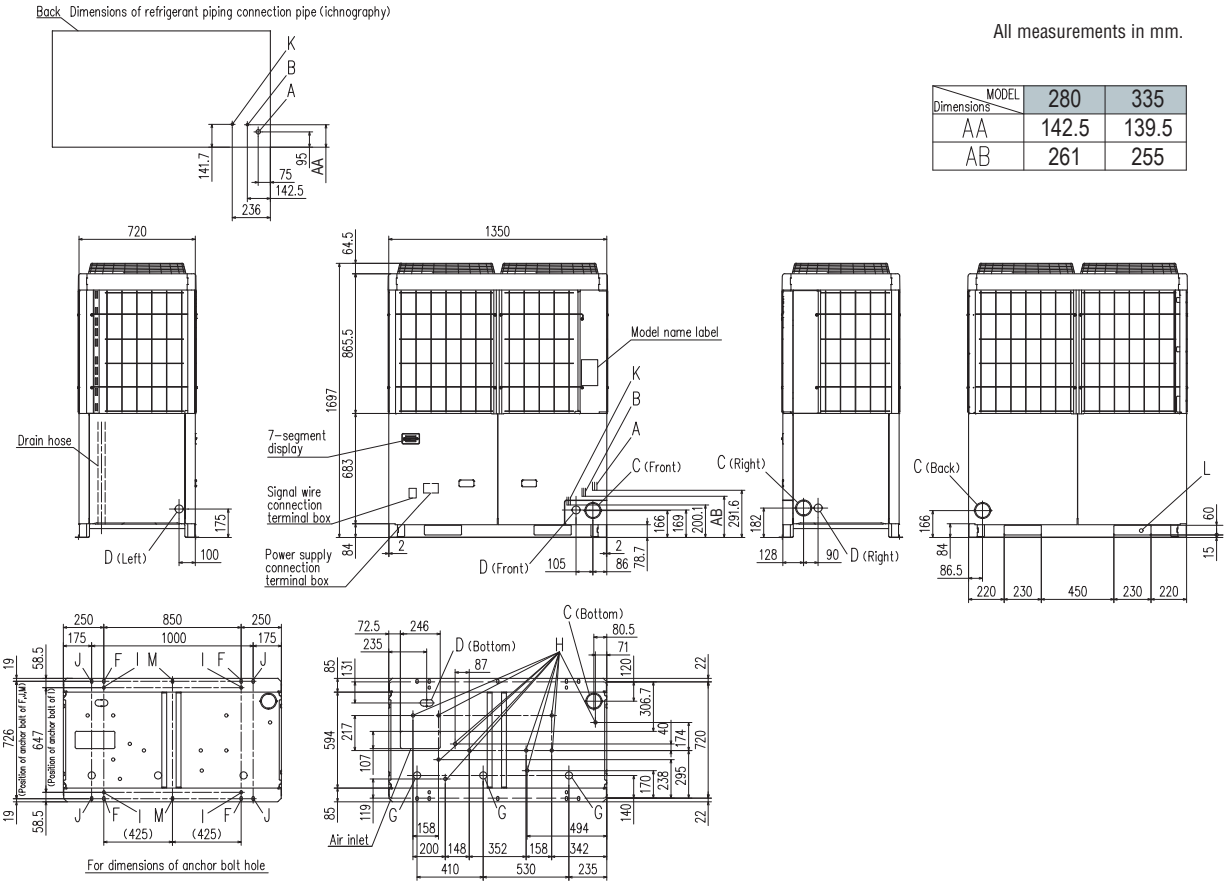
Mark	Content	224	280	335
A	Refrigerant gas pipe	ø19.05(Brazing)	ø22.22(Brazing)	
B	Refrigerant liquid pipe	ø9.52(Flare)		ø12.7(Flare)
C	Refrigerant oil equalization pipe	ø12.7(Flare)		
D	Knockout hole for pipes	175 x 130 (Front), 150 x 90 (Bottom)		
F	Knockout hole for power wiring	ø50		
G	Anchor bolt hole	M10 x 4 places		
H	Drain hole	ø20 x 10 places		
J	Hole for hanging	100 x 29.5		

Installation limitations			
Dimensions	1	2	3
L_1	500	500	Open
L_2	10(50)	50	10
L_3	300	100(300)	300
L_4	10(50)	50	Open
H_1	1500	1500	Open
H_2	No limit	No limit	No limit
H_3	500	500	No limit
H_4	No limit	No limit	Open



1. Install in a space larger than that shown in the left table.
   According to the installation conditions, secure sufficient additional space.
2. This installation example assumes operation at an ambient temperature under 43℃.
3. For use at higher ambient temperatures, install according to the dimension in parentheses.
4. If H1 or H3 exceeds the wall height limit in the table, H1/2 and H3/2 should be added to the L1 and L3 respectively.

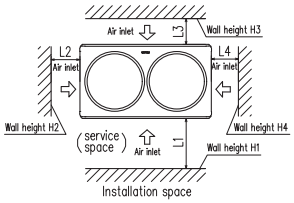
FDC280KXZE2, FDC335KXZE2



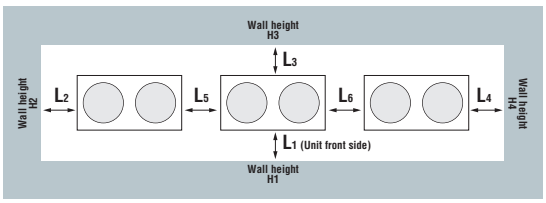
All measurements in mm.

Dimensions \ MODEL	280	335
AA	142.5	139.5
AB	261	255

Mark	Content	280	335
A	Refrigerant gas piping connection pipe	ø22.22(Brazing)	ø25.4(Brazing)
B	Refrigerant liquid piping connection pipe	ø9.52(Flare)	ø12.7(Flare)
C	Refrigerant piping exit hole	ø88(or ø100)	
D	Power supply entry hole	ø50 (right · left · front), long hole 40 x 80 (bottom)	
F	Anchor bolt hole	M10 x 4 places	
G	Drain waste water hose hole	ø45 x 3 places	
H	Drain hole	ø20 x 11 places	
K	Refrigerant oil equalization piping connection pipe	ø9.52(Flare)	
L	Carrying in or hole for hanging	230 x 60	



When more than one unit is installed



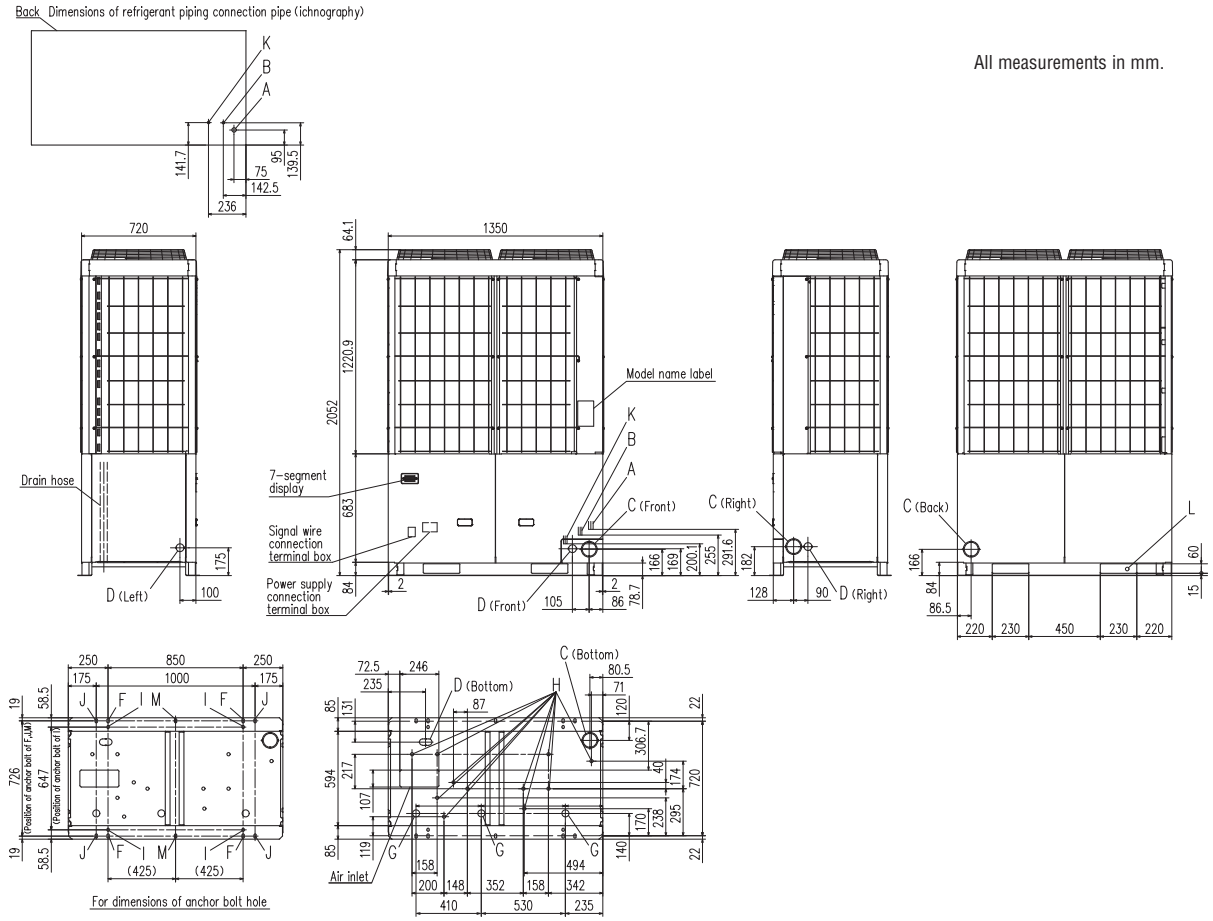
Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10(30)	10(30)
L_3	100	100
L_4	10(30)	Open
H_1	1500	Open
H_2	No limit	No limit
H_3	1000	No limit
H_4	No limit	Open

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

Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10(30)	200
L_3	100	300
L_4	10(30)	Open
L_5	10(30)	400
L_6	10(30)	400
H_1	1500	Open
H_2	No limit	No limit
H_3	1000	No limit
H_4	No limit	Open

FDC400KXZE2, FDC450KXZE2, FDC475KXZE2, FDC500KXZE2, FDC560KXZE2

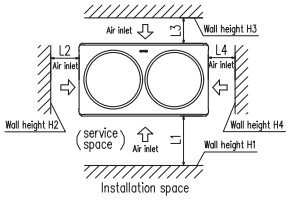
All measurements in mm.



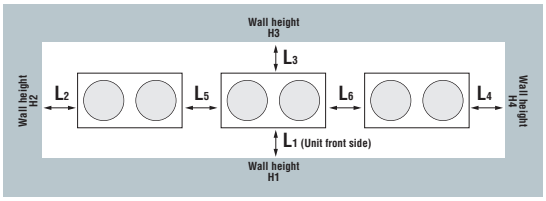
Mark	Content	400	450, 475, 500, 560
A	Refrigerant gas piping connection pipe	ø25.4(Brazing)	ø28.58(Brazing)
B	Refrigerant liquid piping connection pipe	ø12.7(Flare)	
C	Refrigerant piping exit hole	ø88(or ø100)	
D	Power supply entry hole	ø50 (right · left · front), long hole 40 x 80 (bottom)	
F	Anchor bolt hole	M10 x 4 places	
G	Drain waste water hose hole	ø45 x 3 places	
H	Drain hole	ø20 x 11 places	
K	Refrigerant oil equalization piping connection pipe	ø9.52(Flare)	
L	Carrying in or hole for hanging	230 x 60	

Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10(30)	10(30)
L_3	100	100
L_4	10(30)	Open
H_1	1500	Open
H_2	No limit	No limit
H_3	1000	No limit
H_4	No limit	Open

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



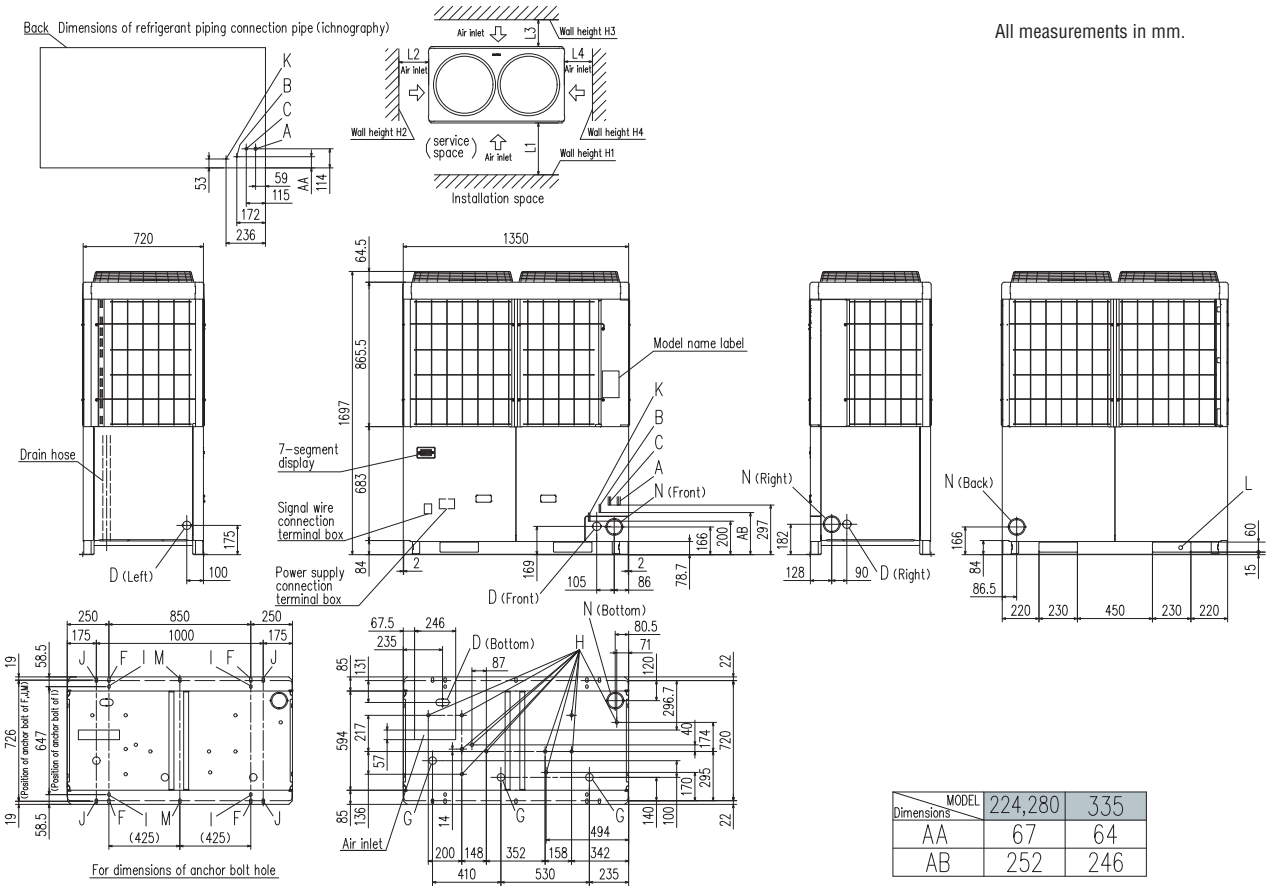
When more than one unit is installed



Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10(30)	200
L_3	100	300
L_4	10(30)	Open
L_5	10(30)	400
L_6	10(30)	400
H_1	1500	Open
H_2	No limit	No limit
H_3	1000	No limit
H_4	No limit	Open

FDC224KXZRE2, FDC280KXZRE2, FDC335KXZRE2

All measurements in mm.



MODEL / Dimensions	224,280	335
AA	67	64
AB	252	246

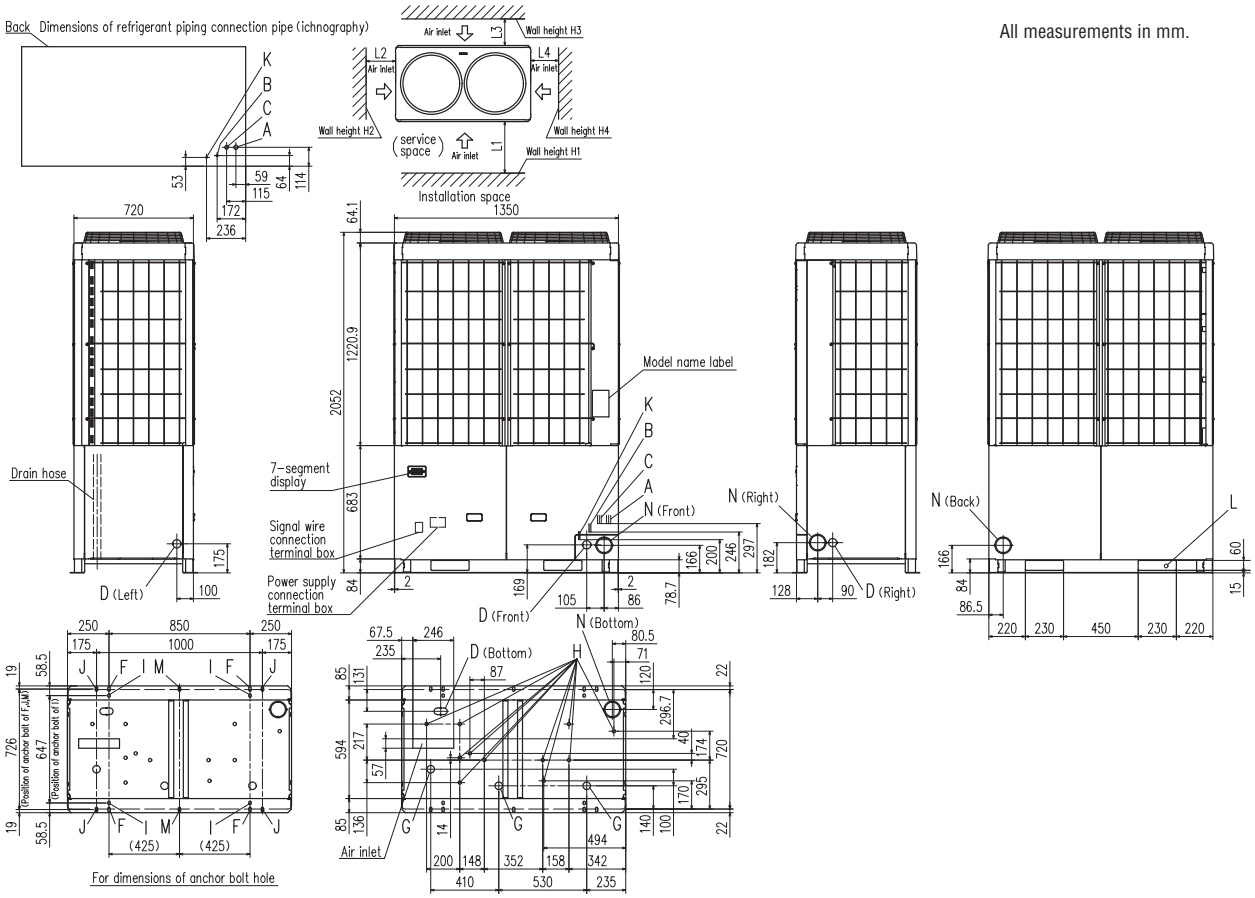
Mark	Content	224	280	335
A	Refrigerant suction gas piping connection entrance	ø19.05(Brazing)	ø22.22(Brazing)	ø25.4(Brazing)
B	Refrigerant liquid piping connection entrance	ø9.52(Flare)		ø12.7(Flare)
C	Refrigerant discharge gas piping connection entrance	ø15.88(Brazing)	ø19.05(Brazing)	
D	Power supply entry hole	ø50(right · left · front),long hole 40x80(Bottom)		
F	Anchor bolt hole	M10 x 4 places		
G	Drain waste water hose hole	ø45 x 3 places		
H	Drain hole	ø20 x 11 places		
K	Refrigerant oil equalization piping connection entrance	ø9.52(Flare)		
L	Carrying in or hole for hanging	230x60		
N	Refrigerant piping exit hole	ø88(or ø100)		

Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10(30)	10(30)
L_3	100	100
L_4	10(30)	Open
H_1	1500	Open
H_2	No limit	No limit
H_3	1000	No limit
H_4	No limit	Open

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

FDC400KXZRE2, FDC450KXZRE2, FDC475KXZRE2, FDC500KXZRE2, FDC560KXZRE2, FDC615KXZRE2, FDC670KXZRE2

All measurements in mm.



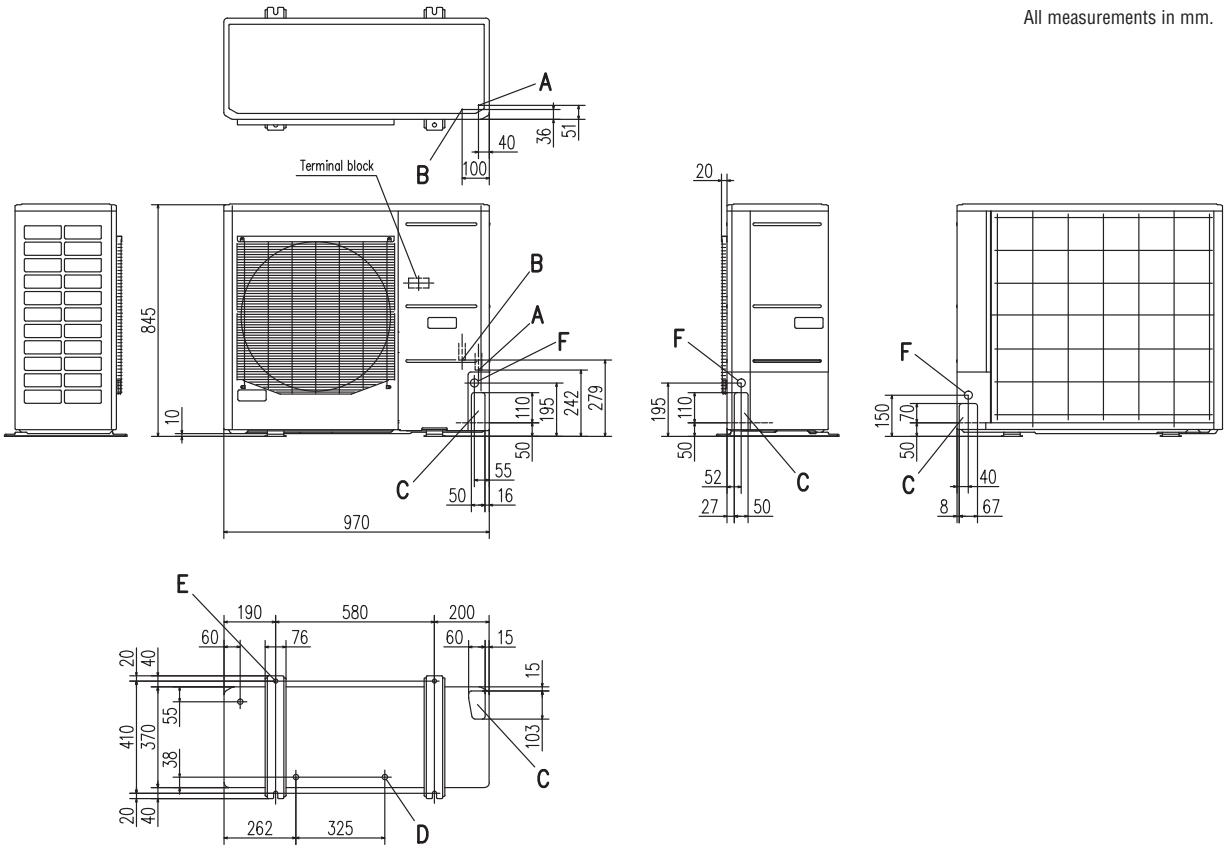
Mark	Content	400	450	475	500	560	615	670
A	Refrigerant suction gas piping connection entrance	ø25.4 (Brazing)	ø28.58(Brazing)					
B	Refrigerant liquid piping connection entrance	ø12.7(Flare)						
C	Refrigerant discharge gas piping connection entrance	ø22.22(Brazing)					ø25.4(Brazing)	
D	Power supply entry hole	ø50(right · left · front),long hole 40x80(Bottom)						
F	Anchor bolt hole	M10 x 4 places						
G	Drain waste water hose hole	ø45 x 3 places						
H	Drain hole	ø20 x 11 places						
K	Refrigerant oil equalization piping connection pipe	ø9.52(Flare)						
L	Carrying in or hole for hanging	230x60						
N	Refrigerant piping exit hole	ø88(or ø100)						

Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10(30)	10(30)
L_3	100	100
L_4	10(30)	Open
H_1	1500	Open
H_2	No limit	No limit
H_3	1000	No limit
H_4	No limit	Open

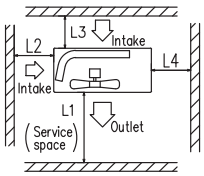
() :In case it is the promised installation location that the outdoor unit is used on conditions with the ambient temperature of 43ºC or more.

FDC121KXZEN1-W, FDC140KXZEN1-W, FDC155KXZEN1-W
FDC121KXZES1-W, FDC140KXZES1-W, FDC155KXZES1-W

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



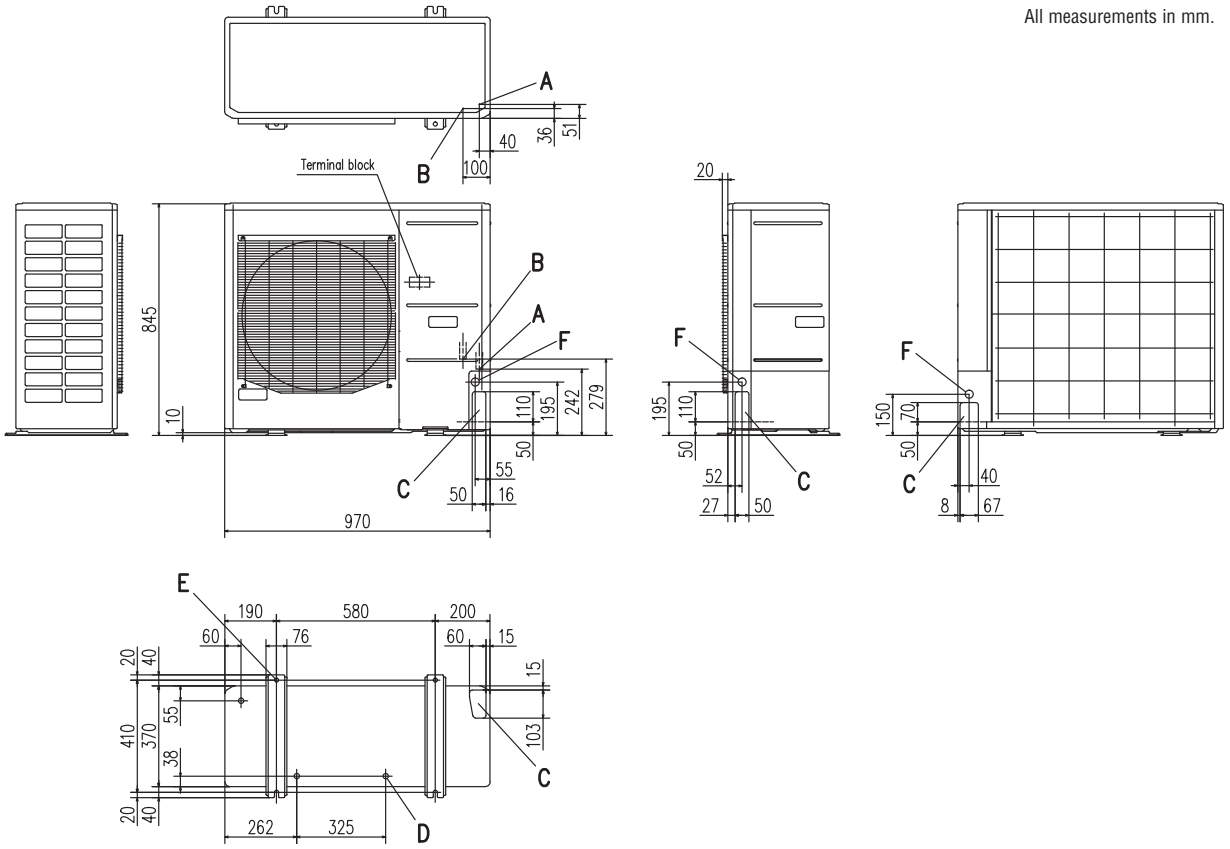
Minimum installation space

	I	II	III
L_1	Open	Open	500
L_2	300	5	Open
L_3	150	300	150
L_4	5	5	5

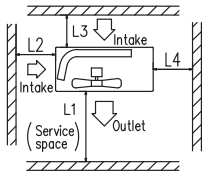
Notes:
(1) It must not be surrounded by walls on the four sides.
(2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
(3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.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

FDC121KXZEN1, FDC140KXZEN1, FDC155KXZEN1
FDC121KXZES1, FDC140KXZES1, FDC155KXZES1

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



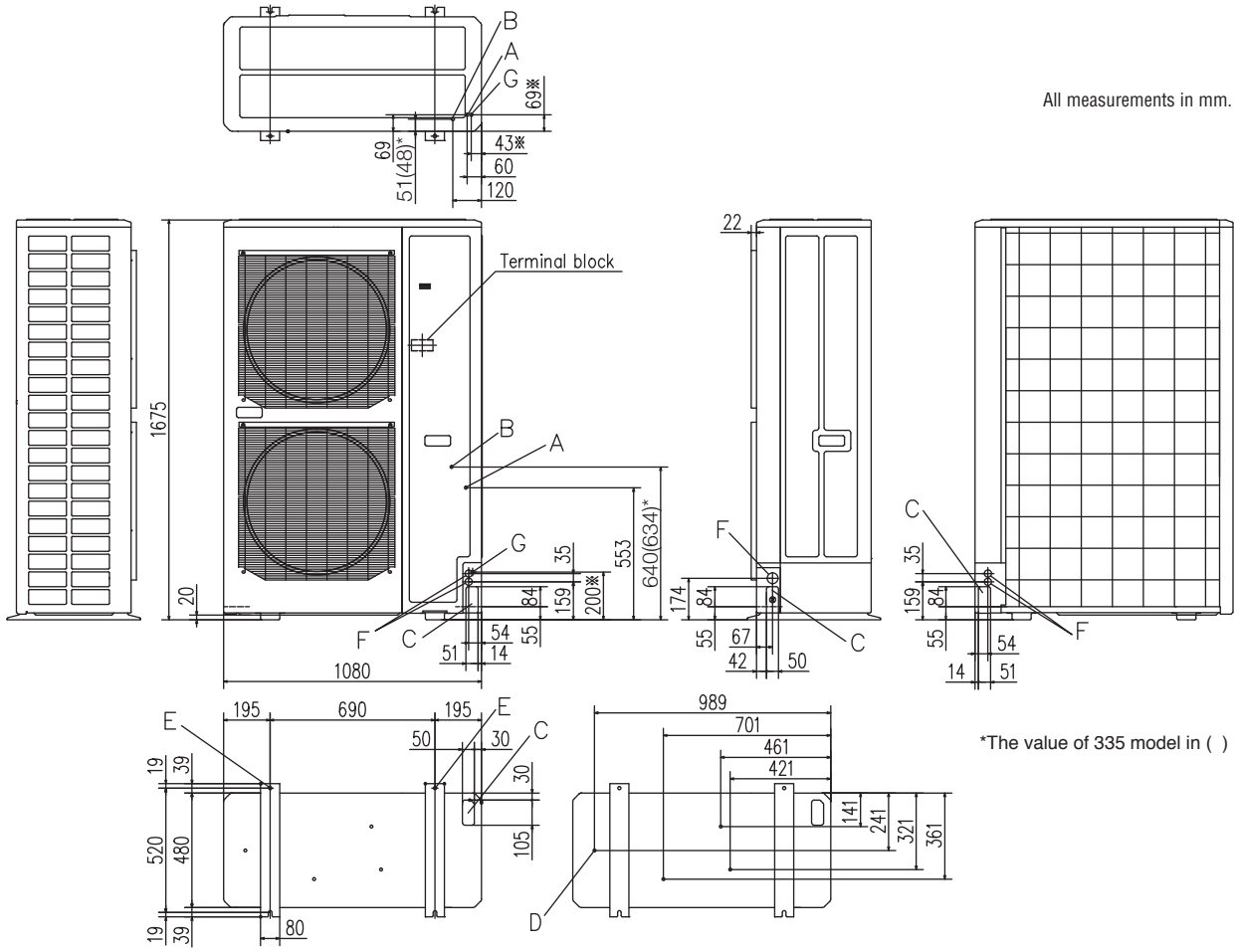
Minimum installation space

	I	II	III
L_1	Open	Open	500
L_2	300	5	Open
L_3	150	300	150
L_4	5	5	5

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.

FDC224KXZME1, FDC280KXZME1, FDC335KXZME1A

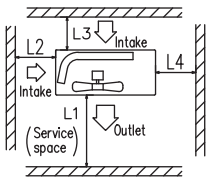
All measurements in mm.



*The value of 335 model in ( )

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 units height.
(6) The model name label is attached on the lower right corner of the front.
(7) Connect the Service valve with local pipe by using the pipe of the attachment.(Gas side only)
(8) Mark ※ shows the connecting position of the local pipe.(Gas side only)



Minimum installation space

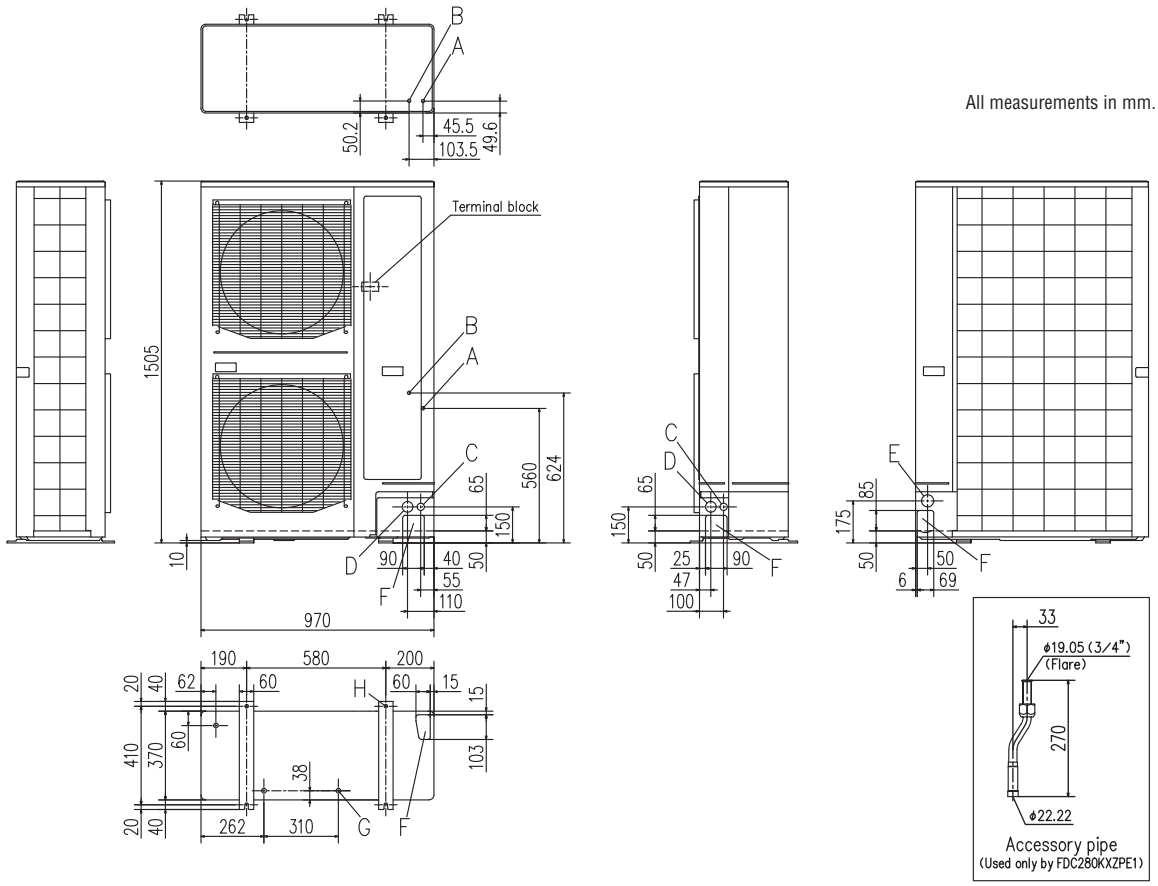
	I	II	III
L1	Open	Open	1500(500)*1
L2	300	5	Open
L3	300	300	300
L4	250(5)*2	250(5)*2	250(5)*2

Notes:
*1 Figure in ( ) shows the value applicable when the flex flow adaptor is installed.
*2 Under the setting condition as specified in ( ), it is necessary to secure 250 mm for the dimension L4 when replacing the compressor. Establish this for example by moving the unit during the work.

KXZ Lite Heat pump systems

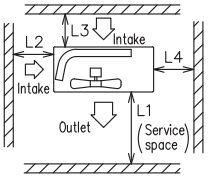
FDC224KXZPE1, FDC280KXZPE1

All measurements in mm.



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.



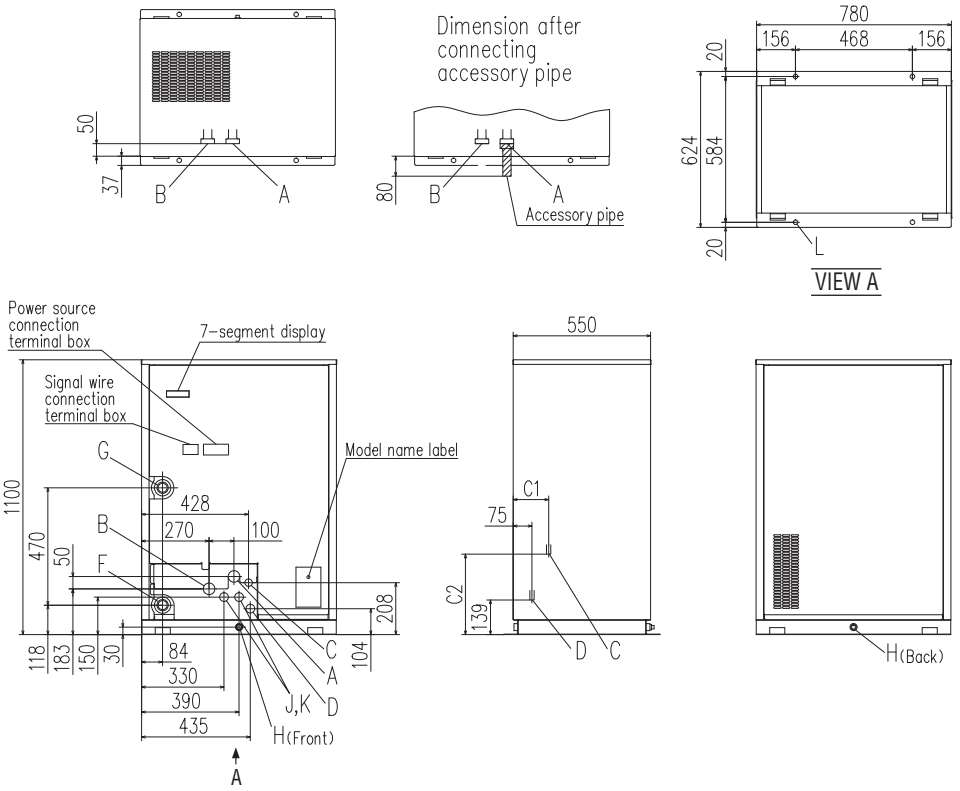
Minimum installation space

	I	II	III
L_1	Open	Open	500
L_2	300	5	Open
L_3	150	300	150
L_4	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.

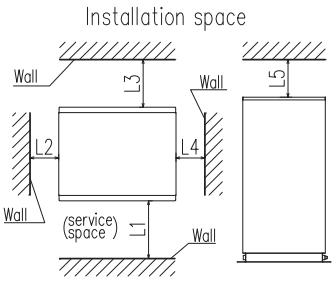
FDC224KXZWE1, FDC280KXZWE1, FDC335KXZWE1

All measurements in mm.



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

Dimension	FDC-KXZWE1	
	224,280	335
C1	142	139
C2	322	316



Dimension \ Installation example	1
L1	600 or more
L2	20 or more
L3	500 or more
L4	20 or more
L5	300 or more

Piping size

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

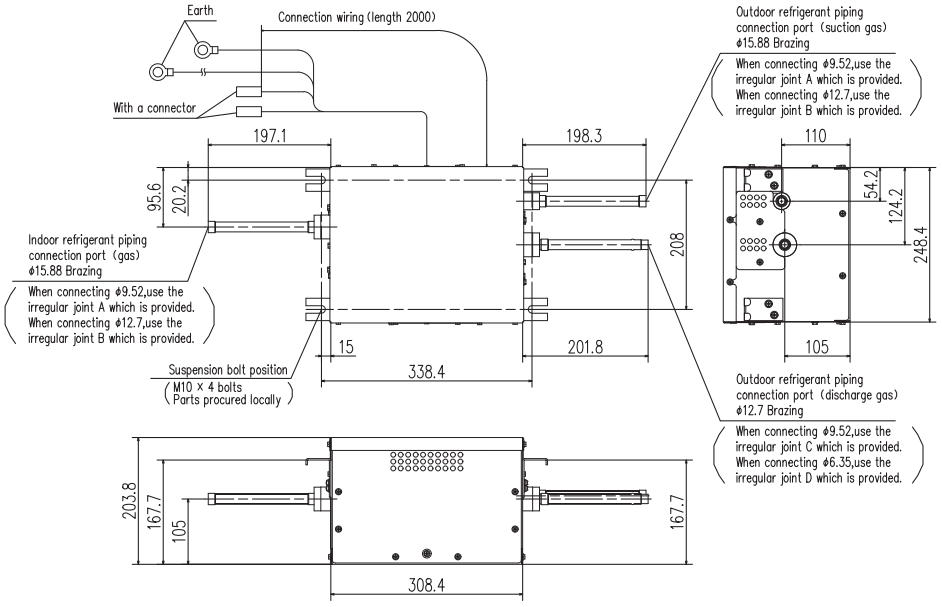
PFD refrigerant flow branch control

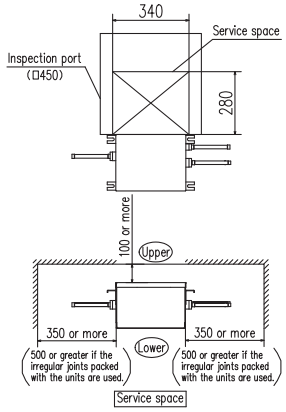
less than 11.2kW / less than 18.0kW

PFD1124-E, PFD1804-E

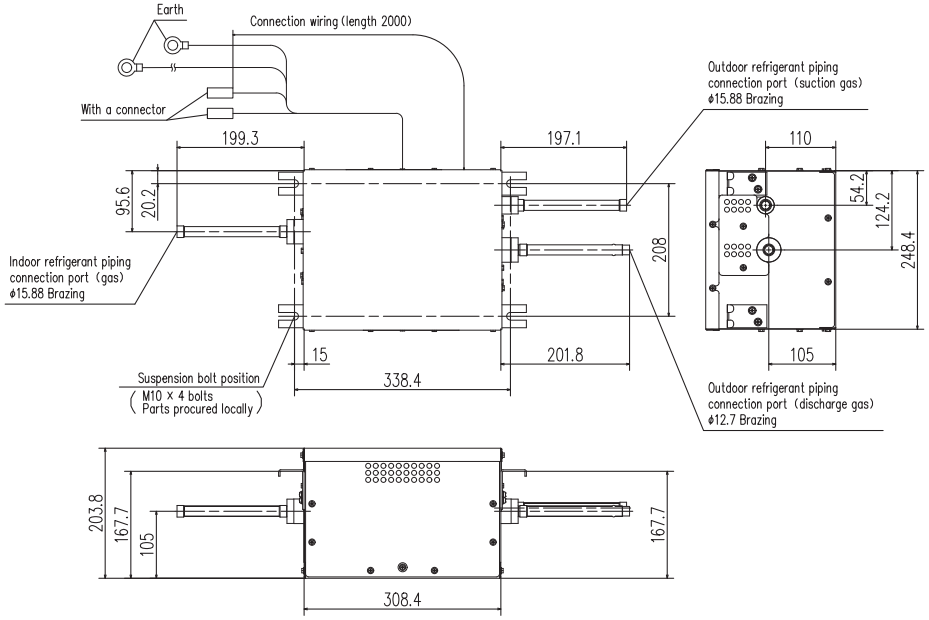
All measurements in mm.

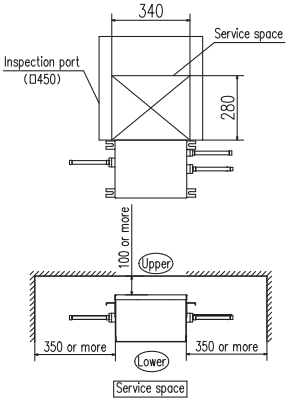
PFD1124-E





PFD1804-E





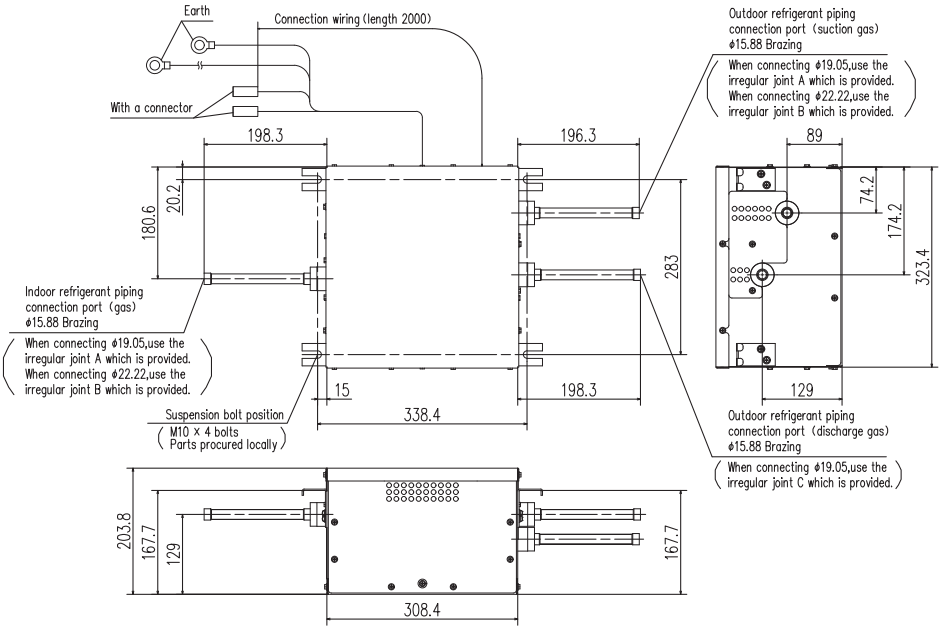
PFD refrigerant flow branch control

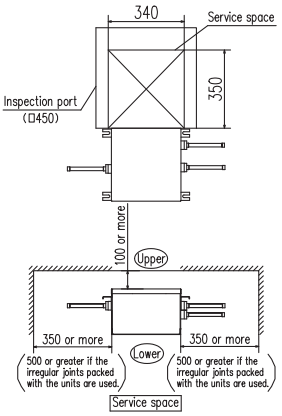
28.0kW or less / less than 37.1kW (less than 11.2kW x 4 branches)

PFD2804-E, PFD1124x4-E

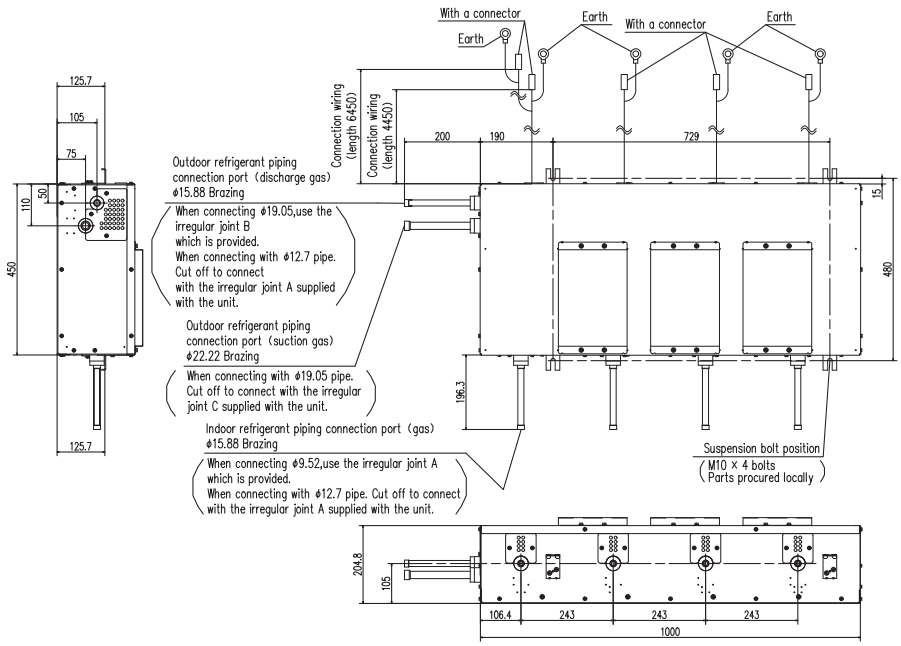
All measurements in mm.

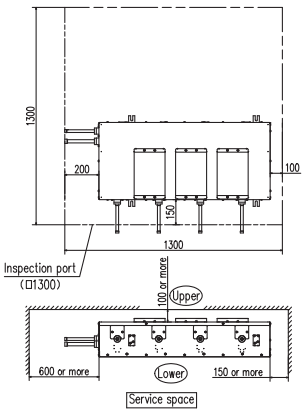
PFD2804-E





PFD1124X4-E

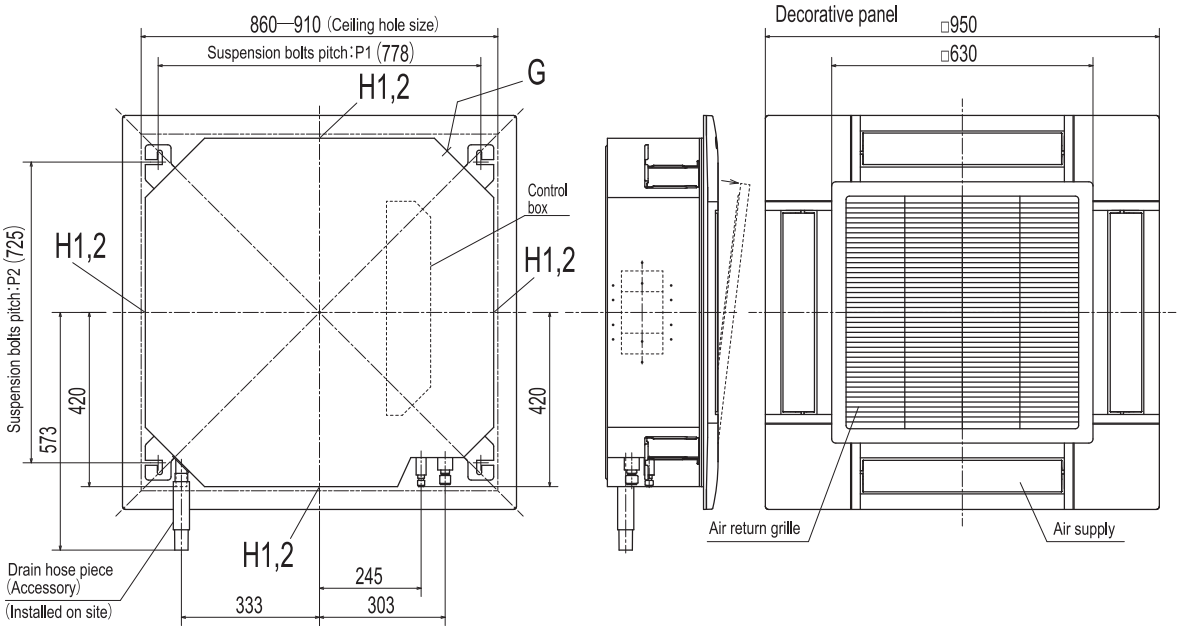


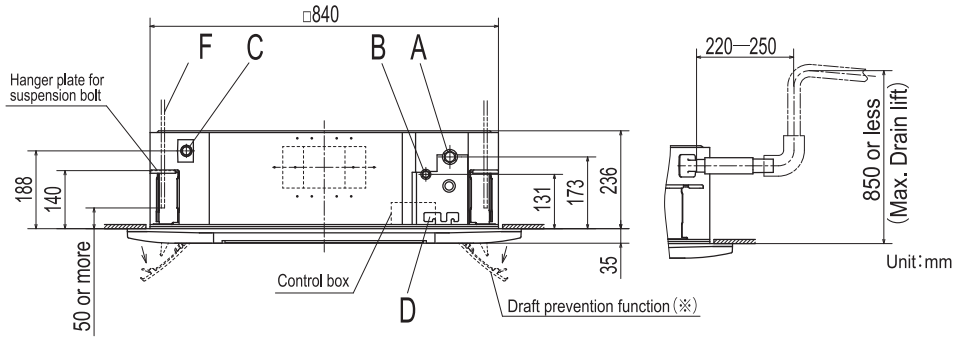


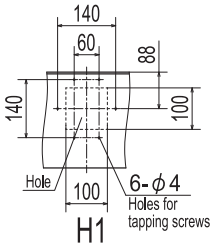
Ceiling Cassette - 4way -
FDT

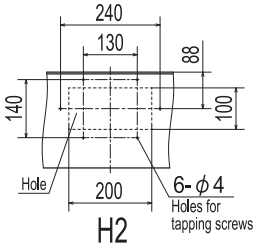
FDT28KXZE3-W, FDT36KXZE3-W, FDT45KXZE3-W, FDT56KXZE3-W, FDT71KXZE3-W

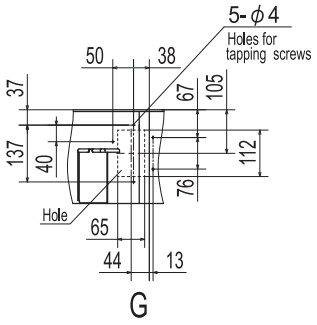
All measurements in mm.

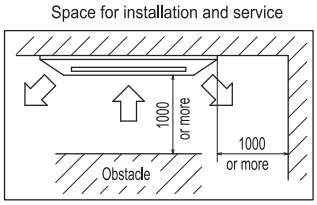












Space for installation and service

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) Suspension bolt pitch P1,P2 is adjustable by a pattern of the right table.
(3) Draft prevention function (※) is provided on the panel T-PSAE-5CW-E , T-PSAE-5CB-E only.

Suspension bolt pitch range

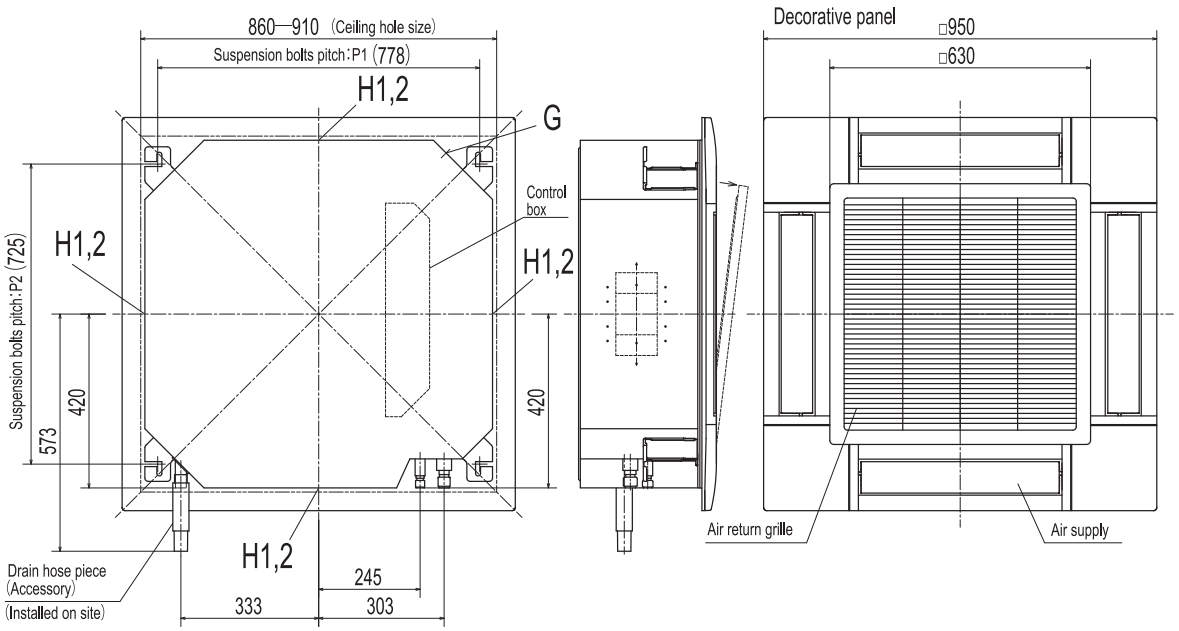
Symbol / Pattern	P1	P2
1	770	725—770
2	770—800	725

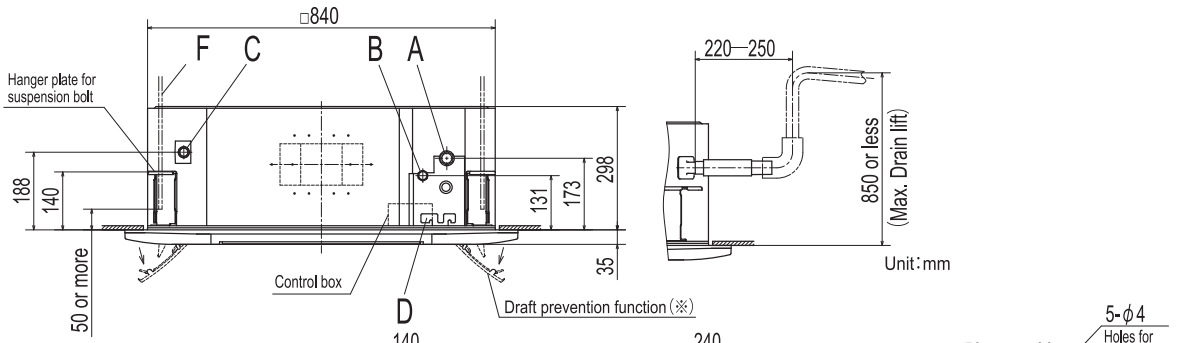
Symbol	Content			
	Model	28	36,45,56	71
A	Gas piping	φ9.52(3/8") (Flare)	φ12.7(1/2") (Flare)	φ15.88(5/8") (Flare)
B	Liquid piping	φ6.35(1/4") (Flare)		φ9.52(3/8") (Flare)
C	Drain piping	VP25 (O.D.32)		
D	Hole for wiring			
F	Suspension bolts	M10 or M8		
G	Outside air opening for ducting	(Knock out)		
H1	Air outlet opening for ducting	φ125 (Knock out)		
H2		φ200 (Knock out)		

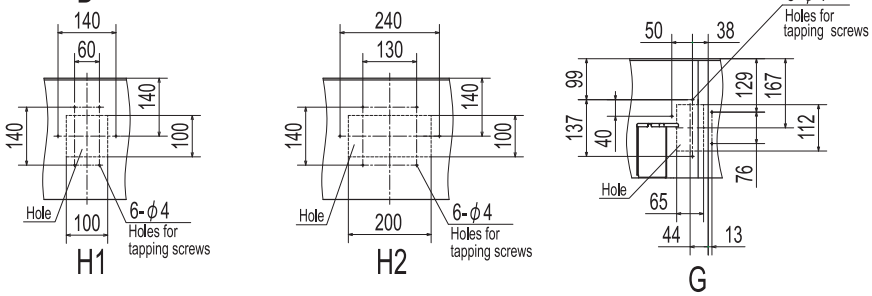
Ceiling Cassette - 4way -
FDT

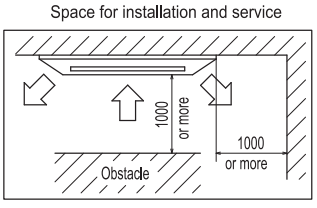
FDT90KXZE3-W, FDT112KXZE3-W, FDT140KXZE3-W, FDT160KXZE3-W

All measurements in mm.









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

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

Suspension bolt pitch range

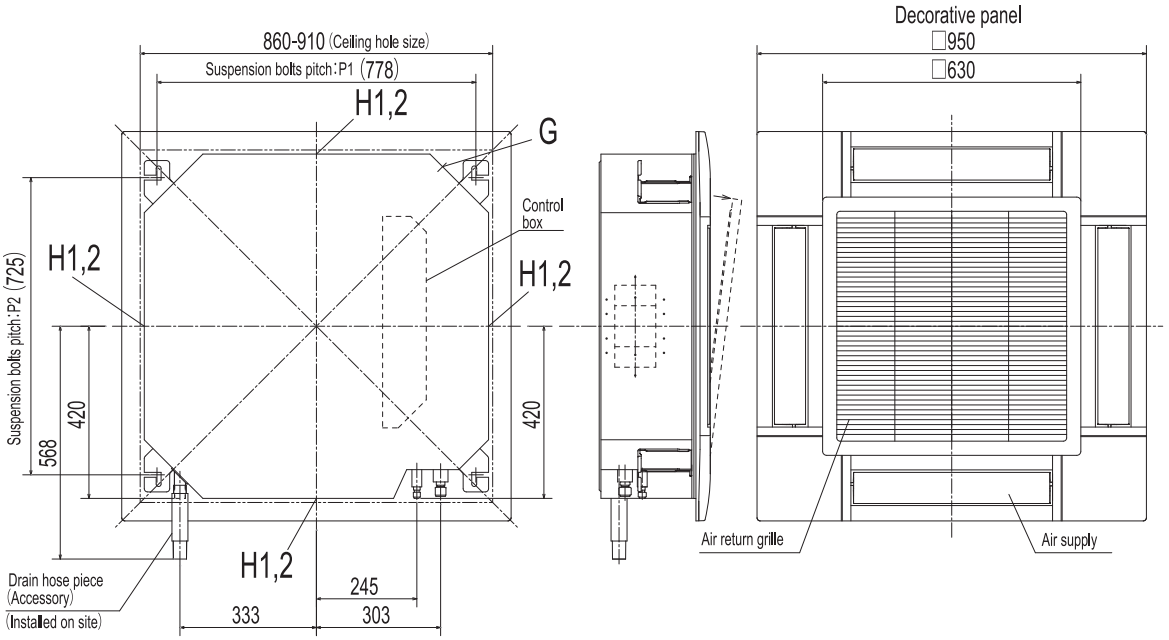
Symbol / Pattern	P1	P2
1	770	725—770
2	770—800	725

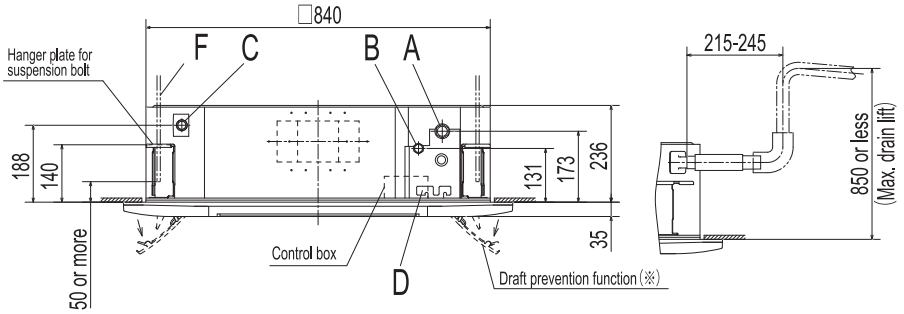
Notes (1) The model name label is attached to the control box lid.
(2) Suspension bolt pitch P1,P2 is adjustable by a pattern of the right table.
(3) Draft prevention function (※) is provided on the panel T-PSAE-5CW-E , T-PSAE-5CB-E only.

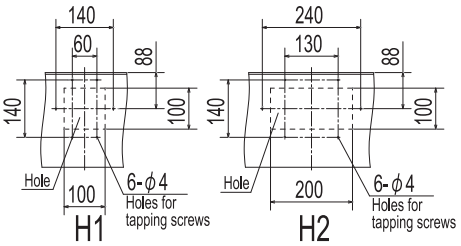
Ceiling Cassette - 4way -
FDT

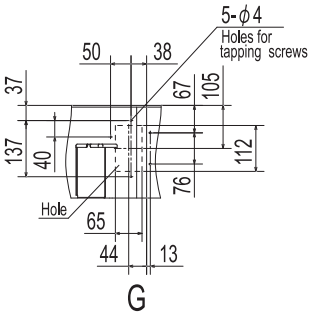
FDT28KXZE1, FDT36KXZE1, FDT45KXZE1, FDT56KXZE1, FDT71KXZE1

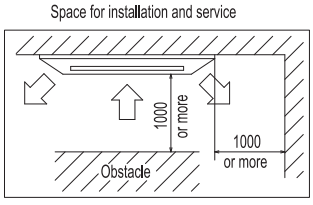
All measurements in mm.











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) Suspension bolt pitch P1, P2 is adjustable by a pattern of the right table.
(3) Draft prevention function (※) is provided on the panel T-PSAE-5BW-E, T-PSAE-5BB-E only.

Suspension bolt pitch range

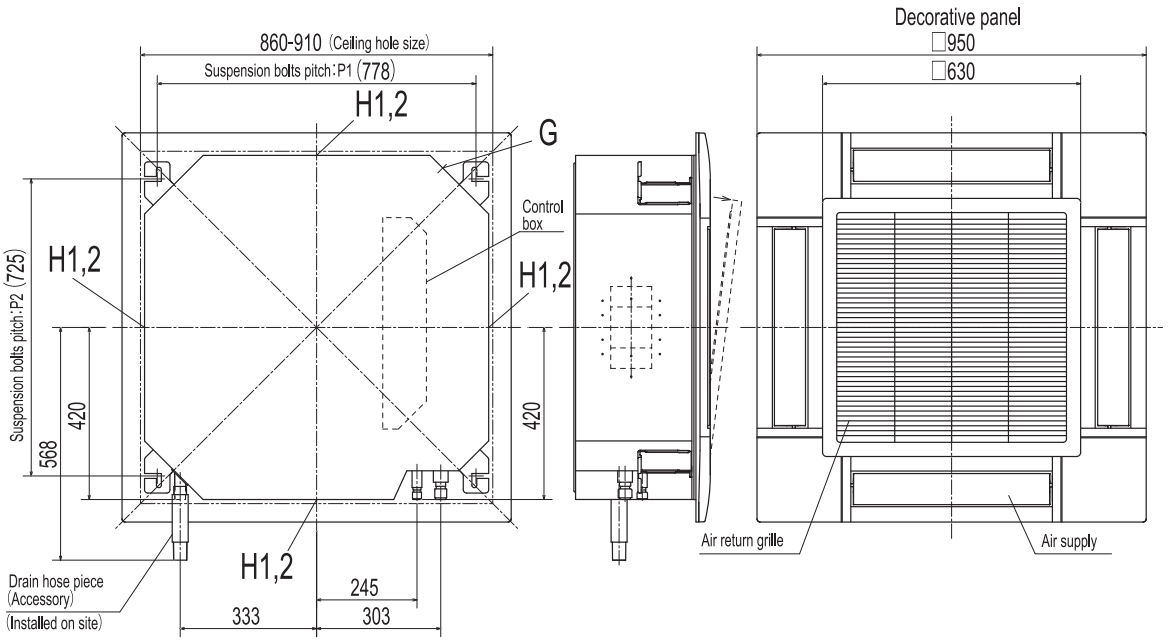
Symbol / Pattern	P1	P2
1	770	725-770
2	770-800	725

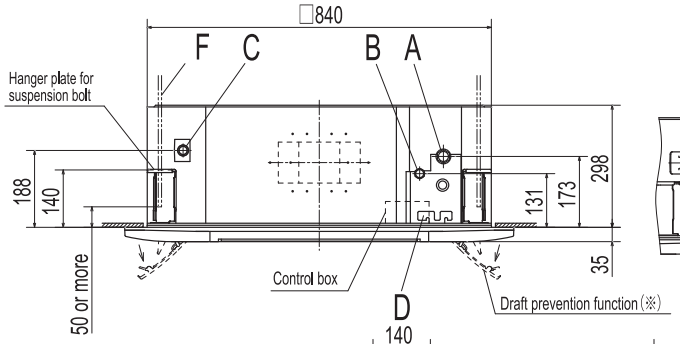
Symbol	Content		
Model	28	36,45,56	71
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)	φ15.88 (5/8") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	φ9.52 (3/8") (Flare)
C	Drain piping	VP25 (O.D.32)	
D	Hole for wiring		
F	Suspension bolts	(M10 or M8)	
G	Outside air opening for ducting	(Knock out)	
H1	Air outlet opening for ducting	φ125 (Knock out)	
H2		φ200 (Knock out)	

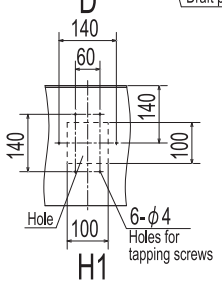
Ceiling Cassette - 4way - FDT

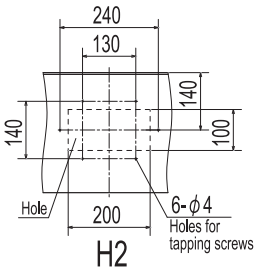
FDT90KXZE1, FDT112KXZE1, FDT140KXZE1, FDT160KXZE1

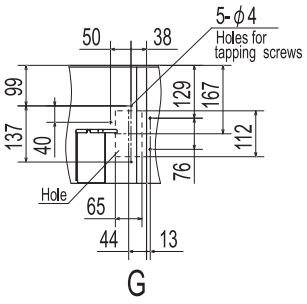
All measurements in mm.

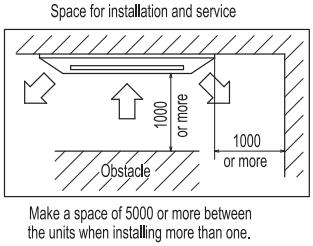












Make a space of 5000 or more between the units when installing more than one.

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

Suspension bolt pitch range

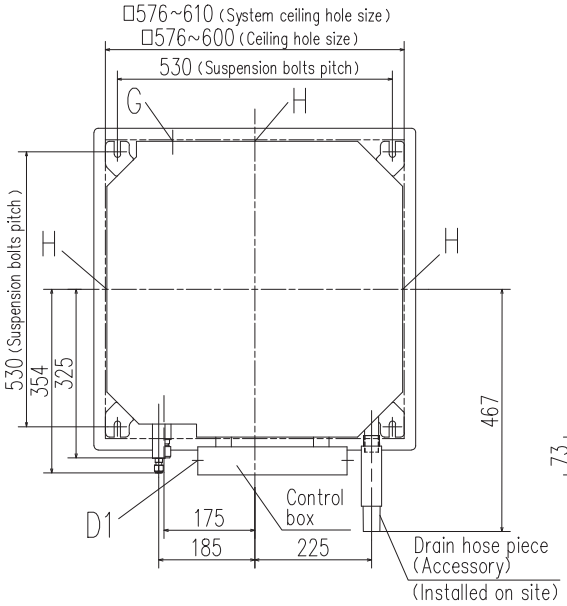
Symbol / Pattern	P1	P2
1	770	725-770
2	770-800	725

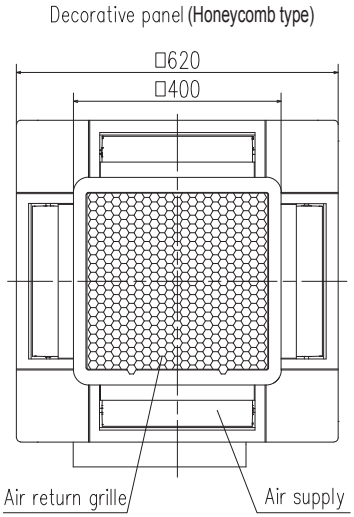
Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C	Drain piping	VP25 (O.D.32)
D	Hole for wiring	
F	Suspension bolts	(M10 or M8)
G	Outside air opening for ducting	(Knock out)
H1	Air outlet opening for ducting	φ125 (Knock out)
H2		φ200 (Knock out)

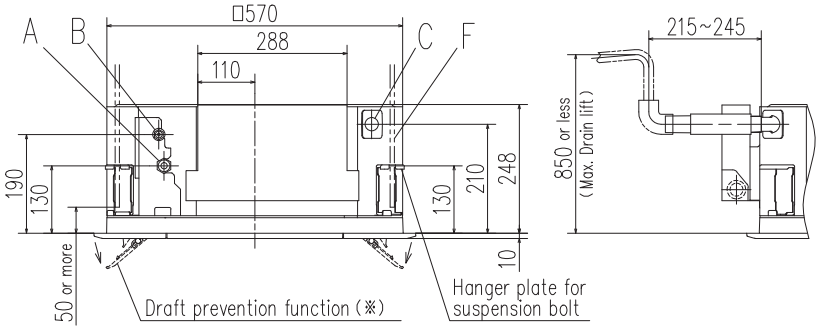
Ceiling Cassette - 4way Compact
FDTC

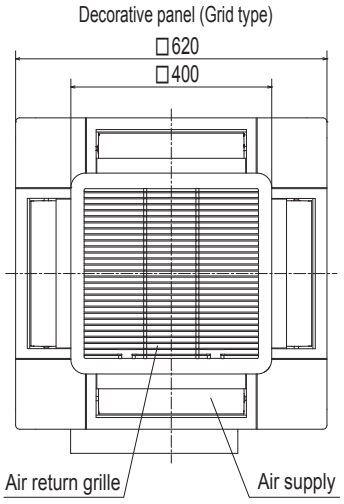
FDTC15KXZE3-W, FDTC22KXZE3-W, FDTC28KXZE3-W, FDTC36KXZE3-W, FDTC45KXZE3-W, FDTC56KXZE3-W
FDTC15KXZE1, FDTC22KXZE1, FDTC28KXZE1, FDTC36KXZE1, FDTC45KXZE1, FDTC56KXZE1

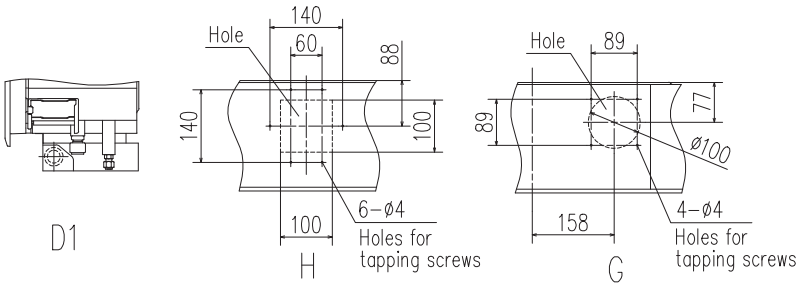
All measurements in mm.



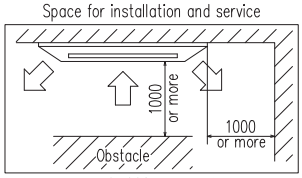






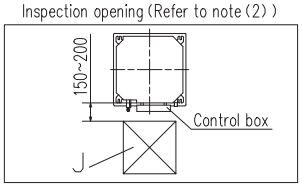


Space for installation and service



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

Inspection opening (Refer to note (2))



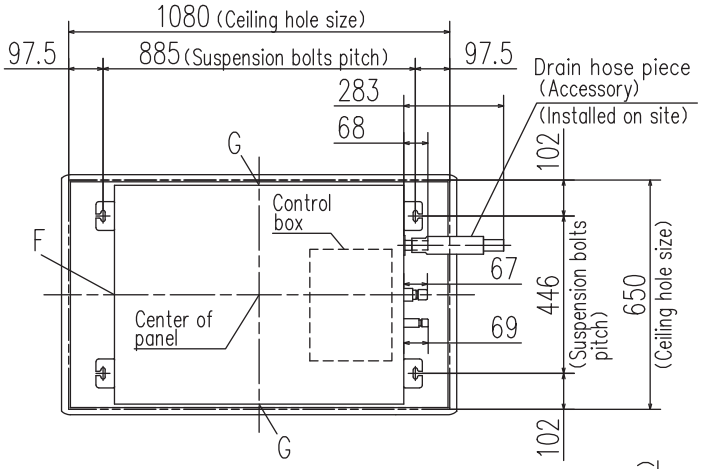
Symbol	Content		
	Model	15,22,28	36,45,56
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)	
C	Drain piping	VP25 (O.D.32)	
D1	Power source connection		
D2	Remote control code and signal wiring connection		
F	Suspension bolts	(M10 or M8)	
G	Outside air opening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

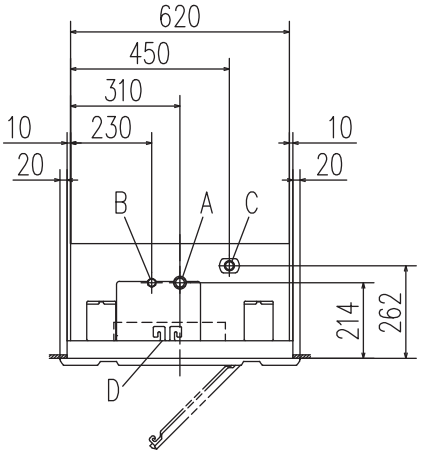
Notes (1) The model name label is attached to the control box lid.
(2) This unit is designed for 2x2 grid ceiling.
If it is installed on a ceiling other than 2x2 grid ceiling, provide an inspection opening on the control box side.
(3) Draft prevention function (※) is provided on the panel TC-PSAE-5AW-E,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

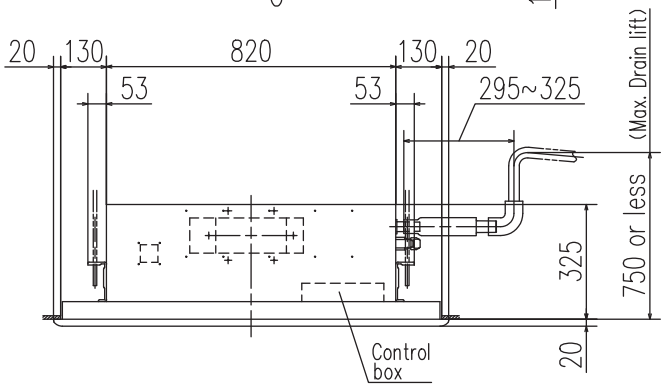
Ceiling Cassette -2way-
FDTW

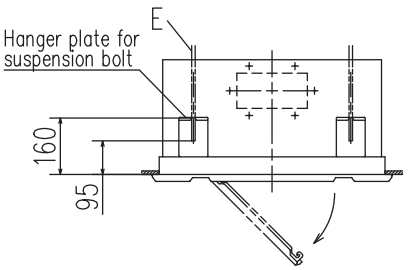
FDTW28KXZE3-W, FDTW45KXZE3-W, FDTW56KXZE3-W, FDTW71KXZE3-W
FDTW28KXE6F, FDTW45KXE6F, FDTW56KXE6F, FDTW71KXE6F

All measurements in mm.

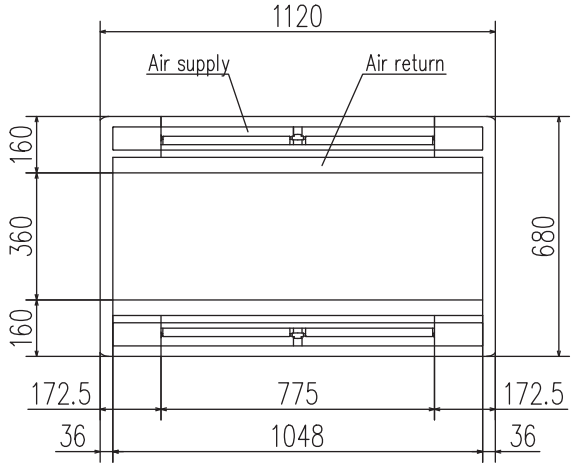




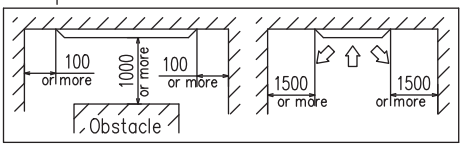




Decorative panel



Space for installation and service



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

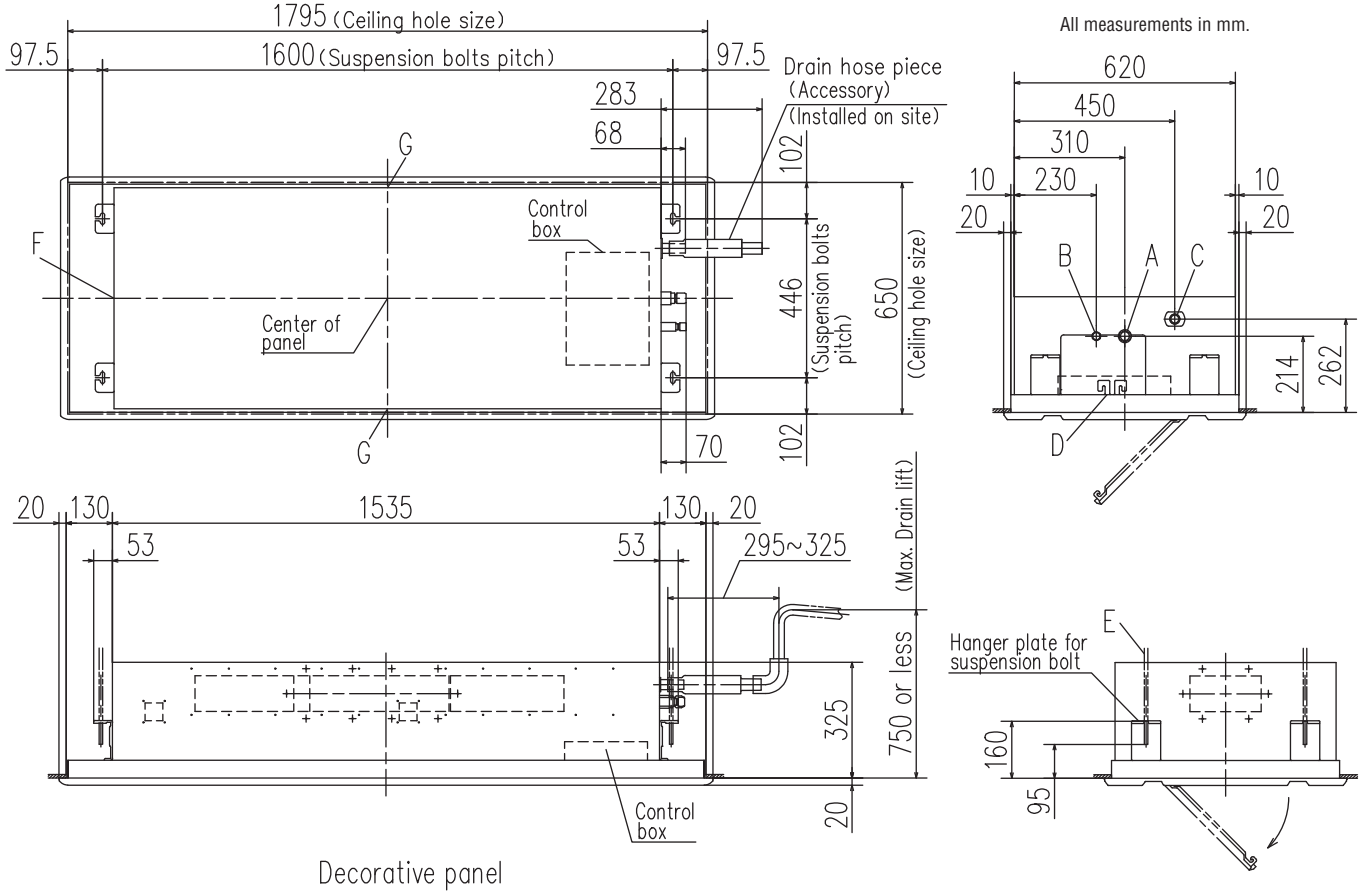
Symbol	Content			
	Model	28	45,56	71
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)		ϕ9.52 (3/8") (Flare)
C	Drain piping	VP25 (O.D.32)		
D	Hole for wiring			
E	Suspension bolts	M10		
F	Outside air opening for ducting	(Knock out)		
G	Air outlet opening for ducting	(Knock out)		

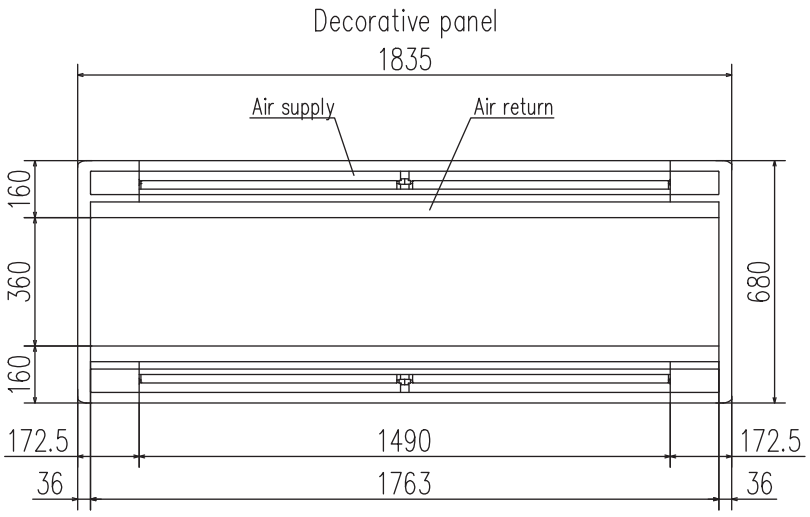
Notes (1) The model name label is attached on the lid of the control box.

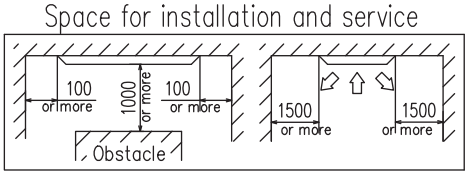
Ceiling Cassette -2way-
FDTW

FDTW90KXZE3-W, FDTW112KXZE3-W, FDTW140KXZE3-W
FDTW90KXE6F, FDTW112KXE6F, FDTW140KXE6F

All measurements in mm.







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

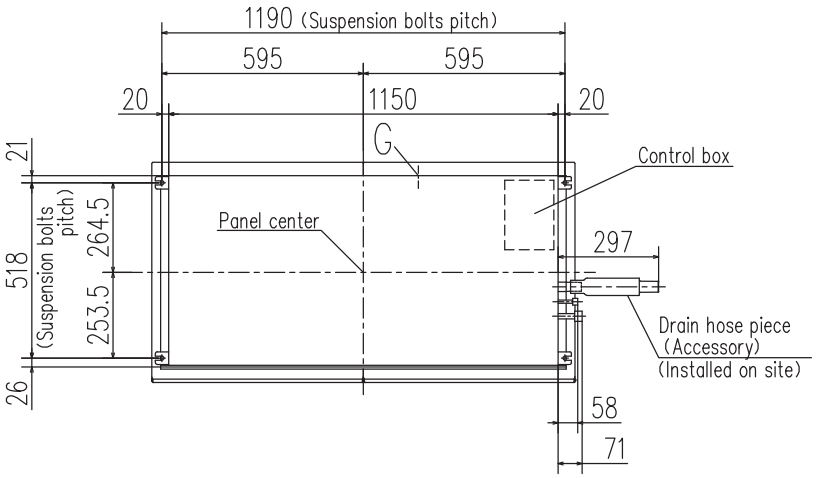
Symbol	Content	
A	Gas piping	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C	Drain piping	VP25 (O.D.32)
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)

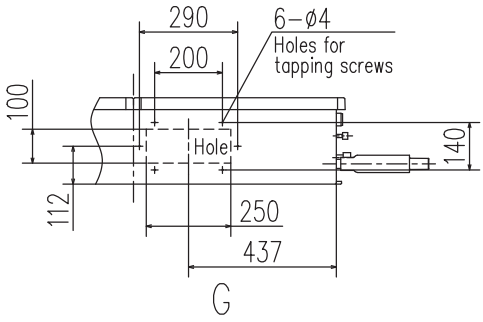
Notes (1) The model name label is attached on the lid of the control box.

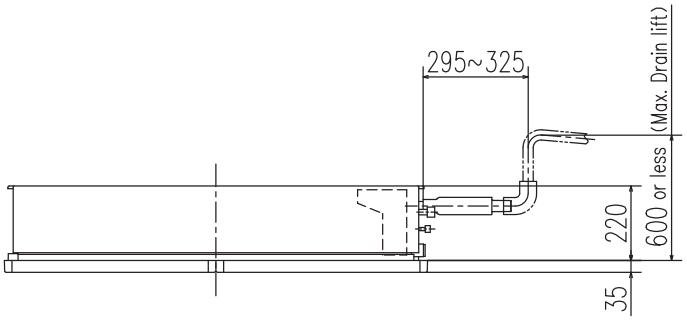
Ceiling Cassette -1way-
FDTS

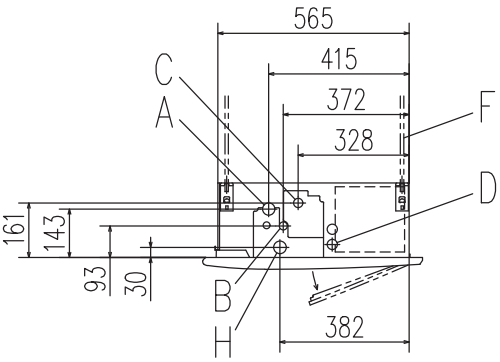
FDTS45KXZE3-W, FDTS71KXZE3-W
FDTS45KXE6F, FDTS71KXE6F

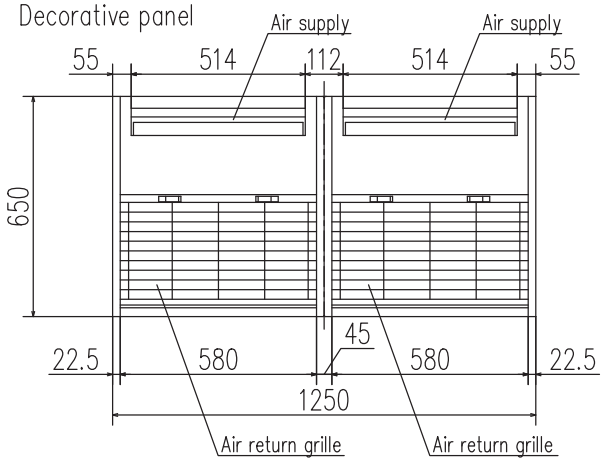
All measurements in mm.

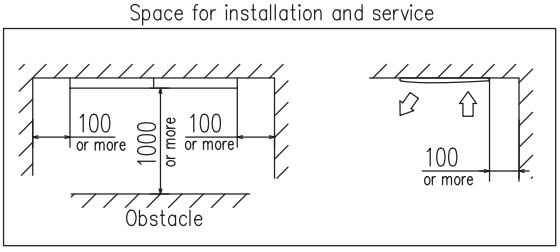












Make a space of 4000 or more between the units when installing more than one.

Symbol	Content		
	Model	45,50	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 (I.D.25 , O.D.32) Note (2)	
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)	

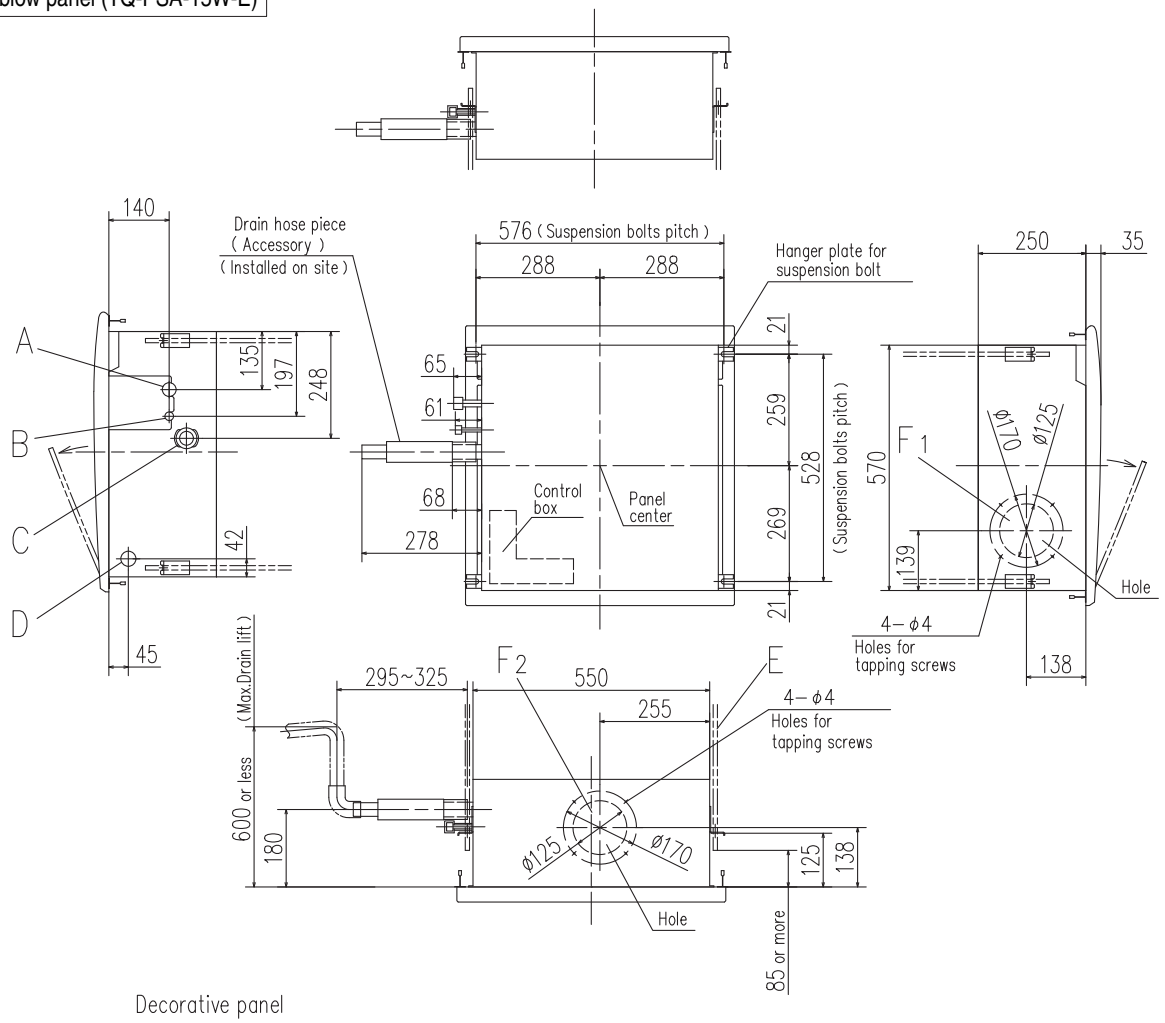
Notes (1) The model name label is attached inside the air return grille.
(2) This unit is designed for 2×4 grid ceiling.

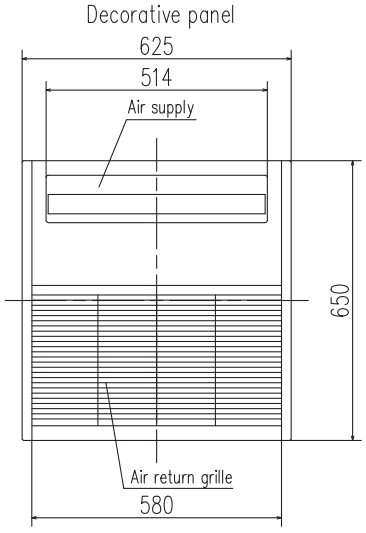
Ceiling Cassette -1way Compact-
FDTQ

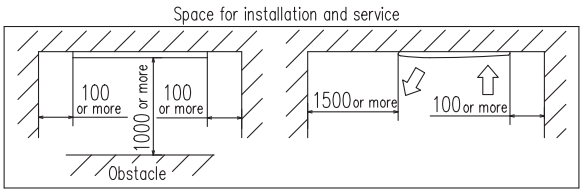
FDTQ22KXZE3-W, FDTQ28KXZE3-W, FDTQ36KXZE3-W
FDTQ22KXE6F, FDTQ28KXE6F, FDTQ36KXE6F

All measurements in mm.

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







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

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.

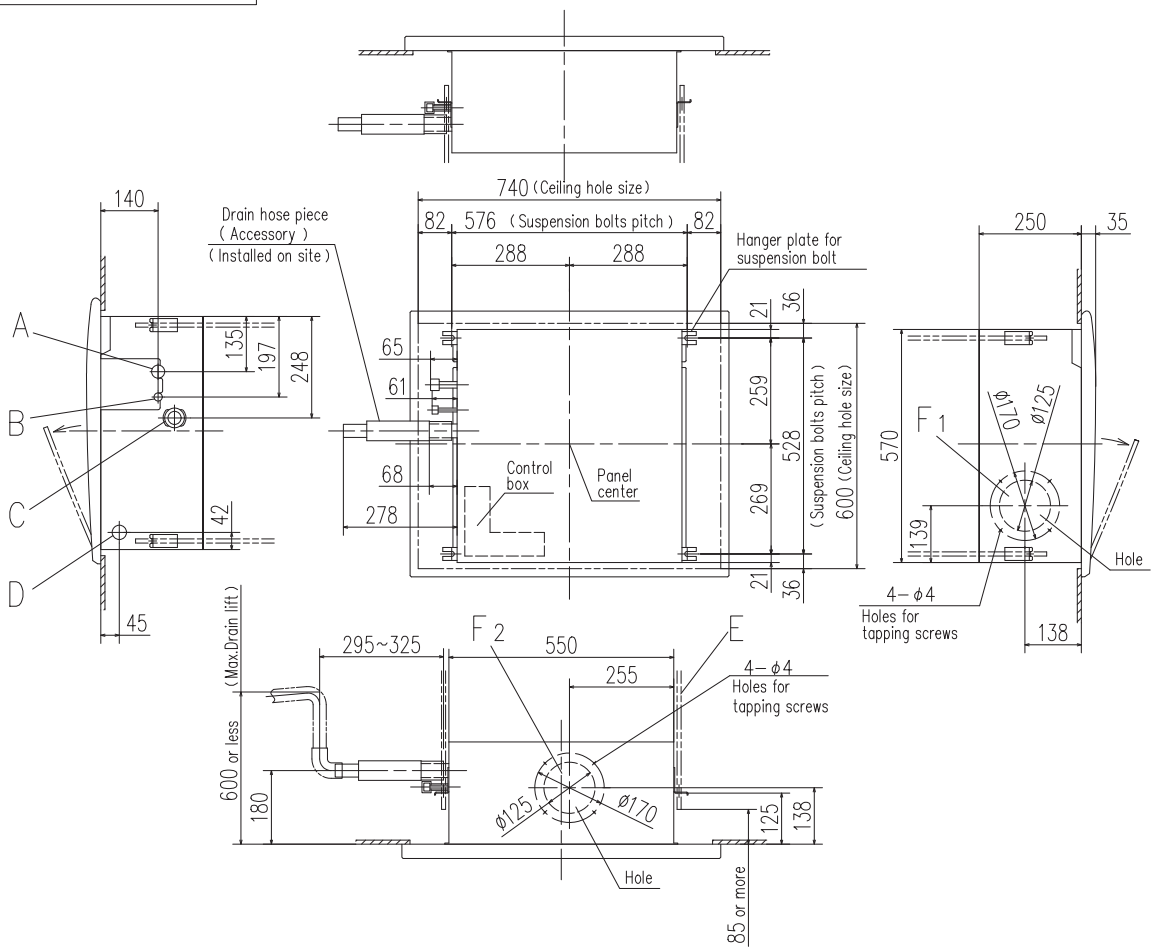
Symbol	Content		
	Model	22,28	36
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Drain piping	VP25 (O.D.32)	
D	Hole for wiring	ϕ30	
E	Suspension bolts	M10	
F 1,2	Outside air opening for ducting	(Knock out)	

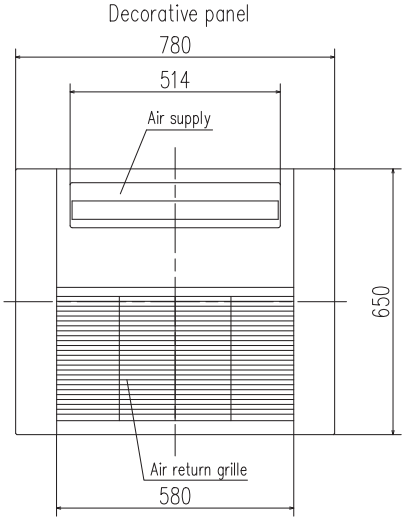
Ceiling Cassette -1way Compact-
FDTQ

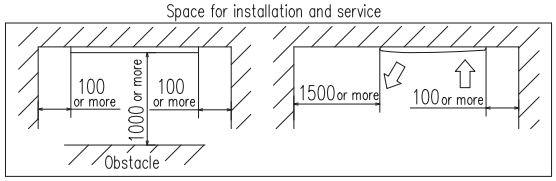
FDTQ22KXZE3-W, FDTQ28KXZE3-W, FDTQ36KXZE3-W
FDTQ22KXE6F, FDTQ28KXE6F, FDTQ36KXE6F

All measurements in mm.

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







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

Notes

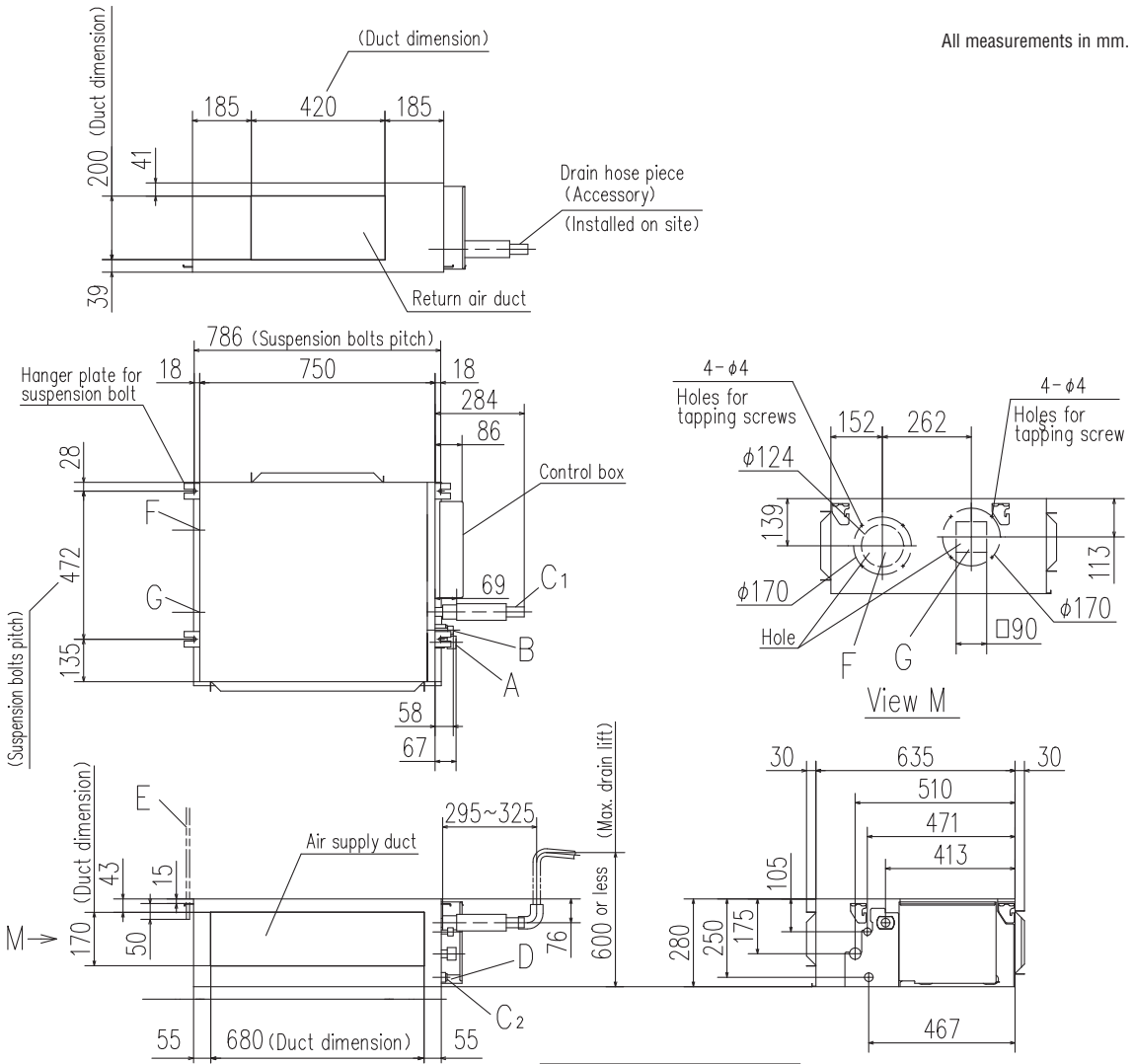
(1) The model name label is attached on the fan case inside the air return grille.

Symbol	Content		
	Model	22,28	36
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)	
D	Hole for wiring	ϕ30	
E	Suspension bolts	M10	
F 1,2	Outside air opening for ducting	(Knock out)	

Duct Connected -High Static Pressure-
FDU

FDU45KXZE3-W, FDU56KXZE3-W
FDU45KXE6F, FDU56KXE6F

All measurements in mm.

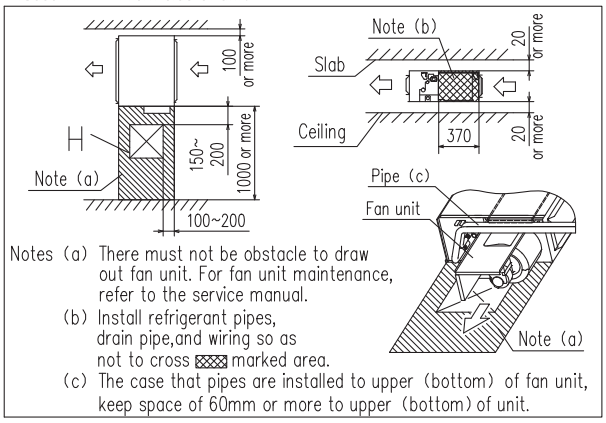


Symbol	Content	
A	Gas piping	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection 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

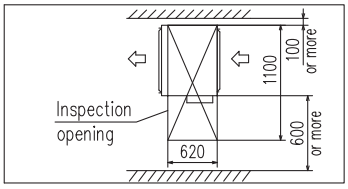


Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to the service manual.

(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.

(c) 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



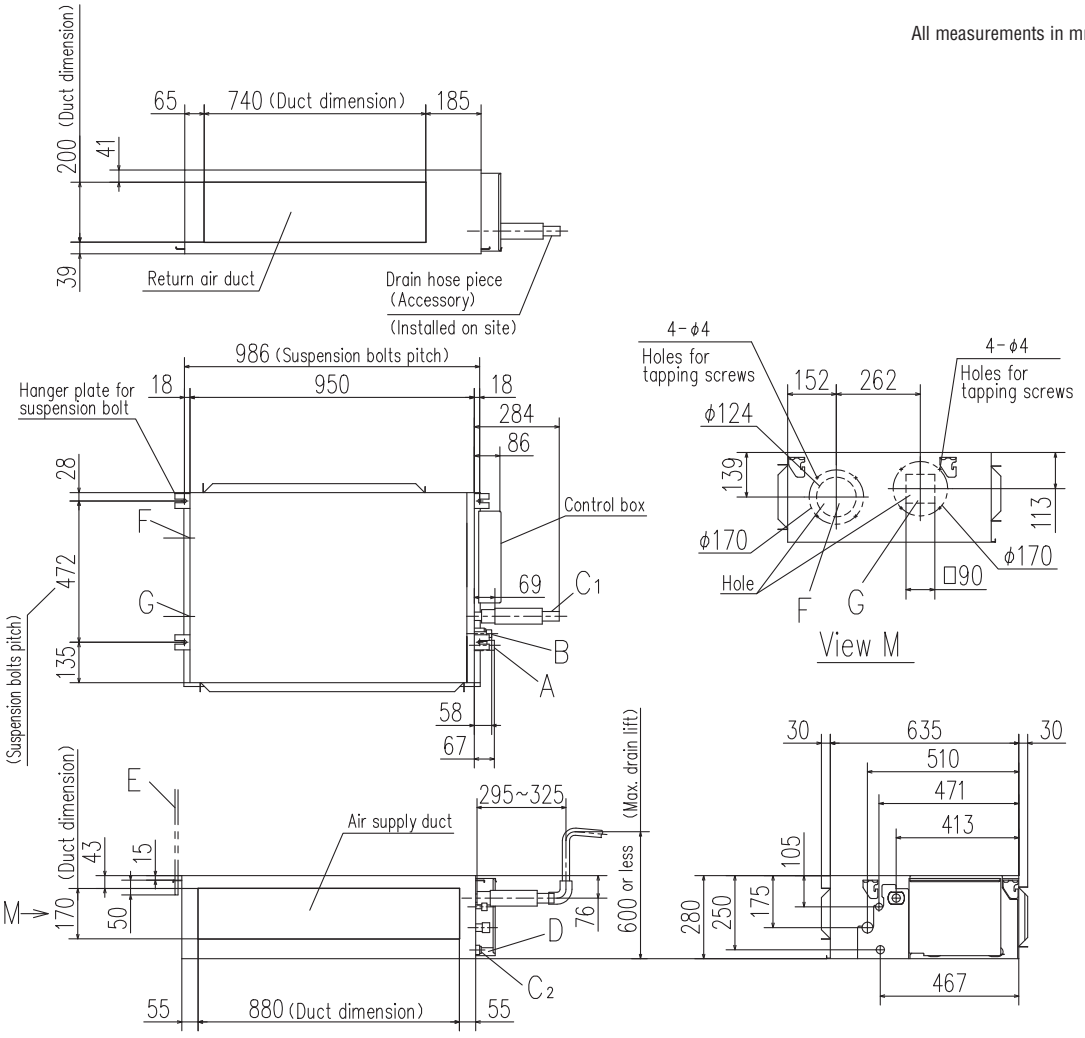
Note

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

Duct Connected -High Static Pressure-
FDU

FDU71KXZE3-W, FDU90KXZE3-W
FDU71KXE6F, FDU90KXE6F

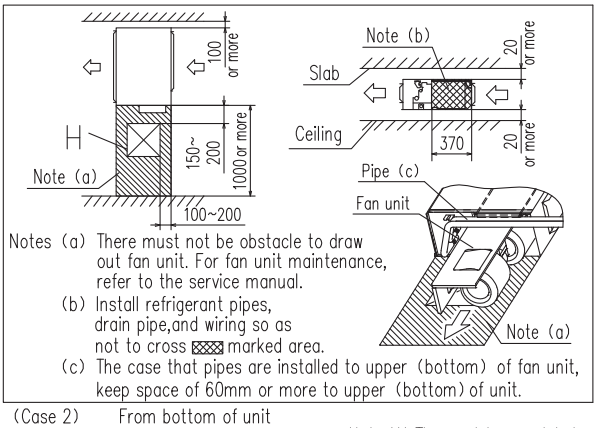
All measurements in mm.



Space for installation and service

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

(Case 1) From side of unit

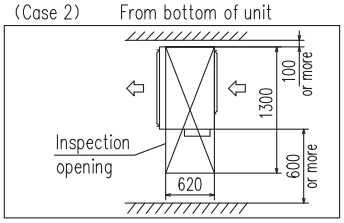


Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to the service manual.

(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.

(c) 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



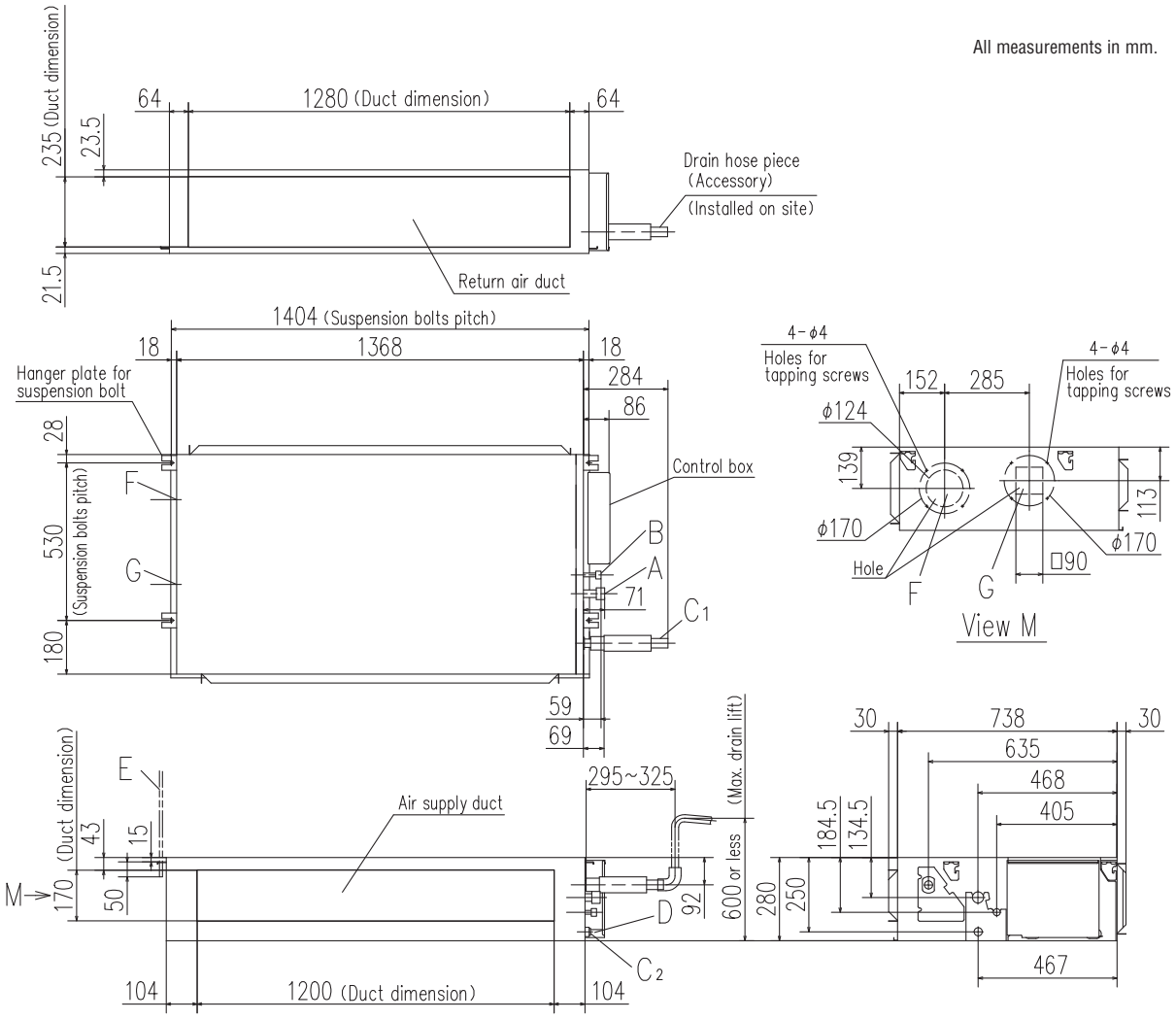
Note (1) The model name label is attached on the lid of the control box.

Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (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)

Duct Connected -High Static Pressure-
FDU

FDU112KXZE3-W, FDU140KXZE3-W, FDU160KXZE3-W
FDU112KXE6F, FDU140KXE6F, FDU160KXE6F

All measurements in mm.

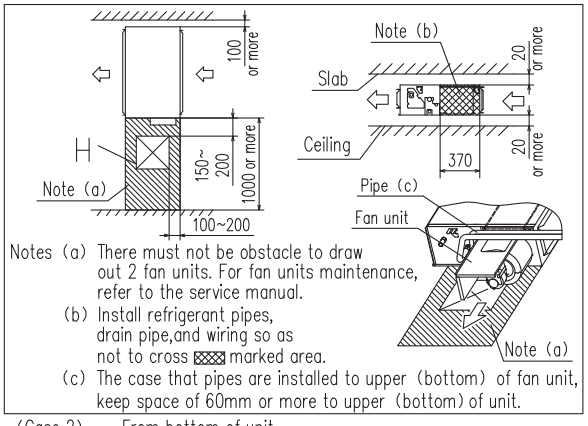


Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection 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

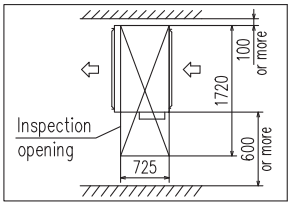


Notes (a) There must not be obstacle to draw out 2 fan units. For fan units maintenance, refer to the service manual.

(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.

(c) 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



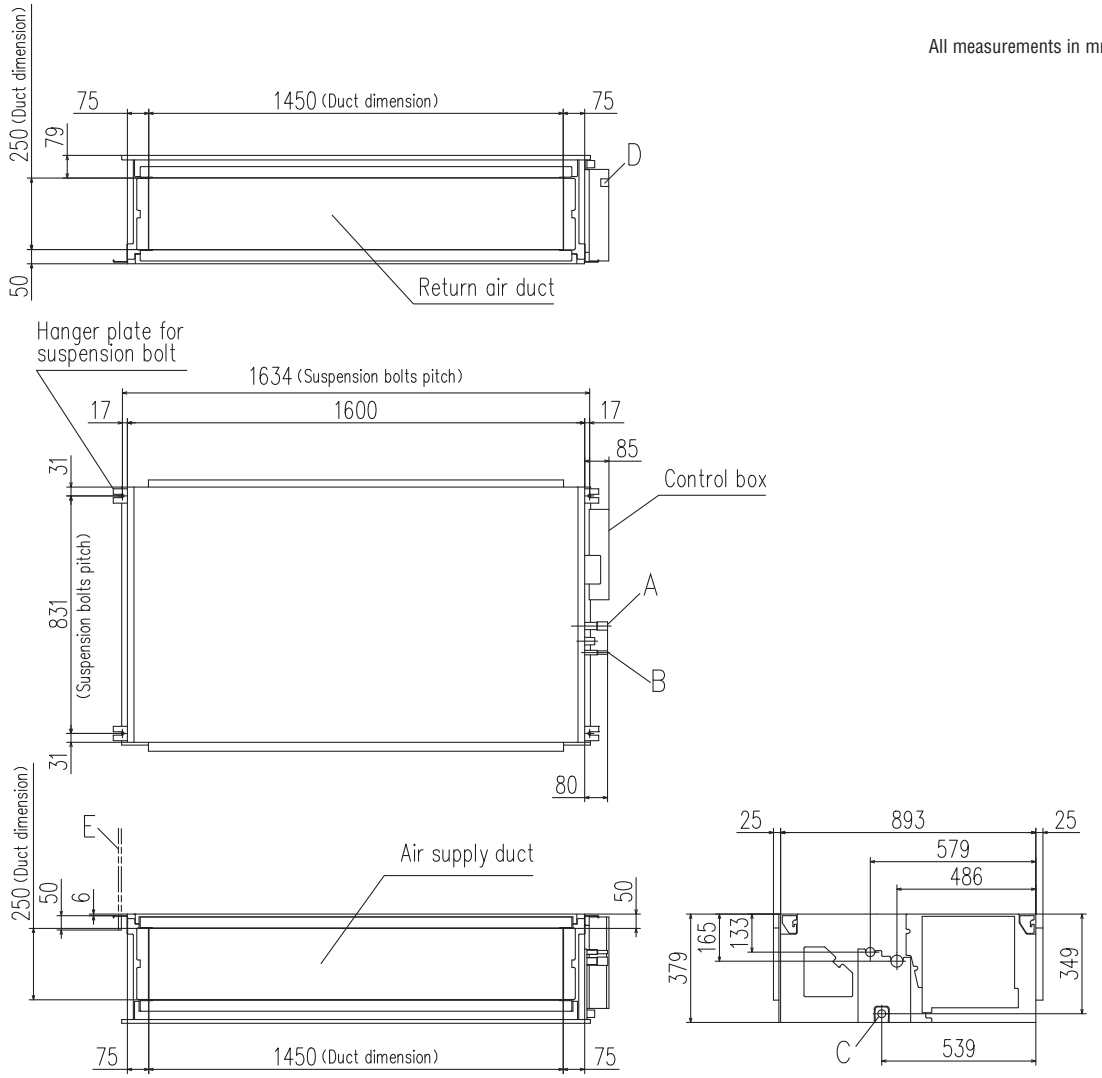
Note

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

Duct Connected -High Static Pressure-
FDU

FDU224KXZE3-W, FDU280KXZE3-W
FDU224KXZE1, FDU280KXZE1

All measurements in mm.

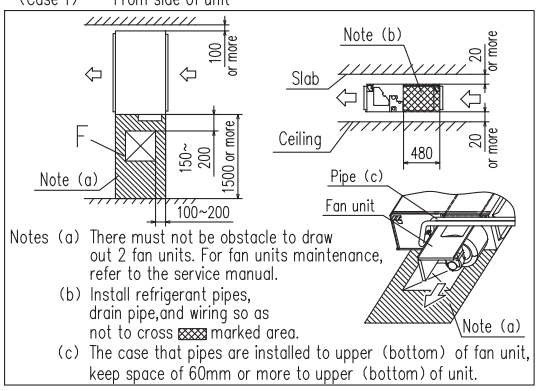


Symbol	Content		
	MODEL	224	280
A	Gas piping	ϕ19.05 (3/4") (Brazing)	ϕ22.22 (7/8") (Brazing)
B	Liquid piping	ϕ9.52 (3/8") (Brazing)	
C	Drain piping (Gravity drainage)	VP25 (O.D.32)	
D	Hole for wiring		
E	Suspension bolts	M10	
F	Inspection hole	(450X450)	

Space for installation and service

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

(Case 1) From side of unit

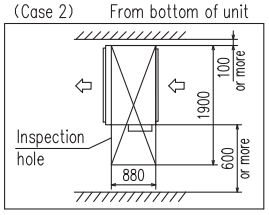


Notes (a) There must not be obstacle to draw out 2 fan units. For fan units maintenance, refer to the service manual.

(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.

(c) 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

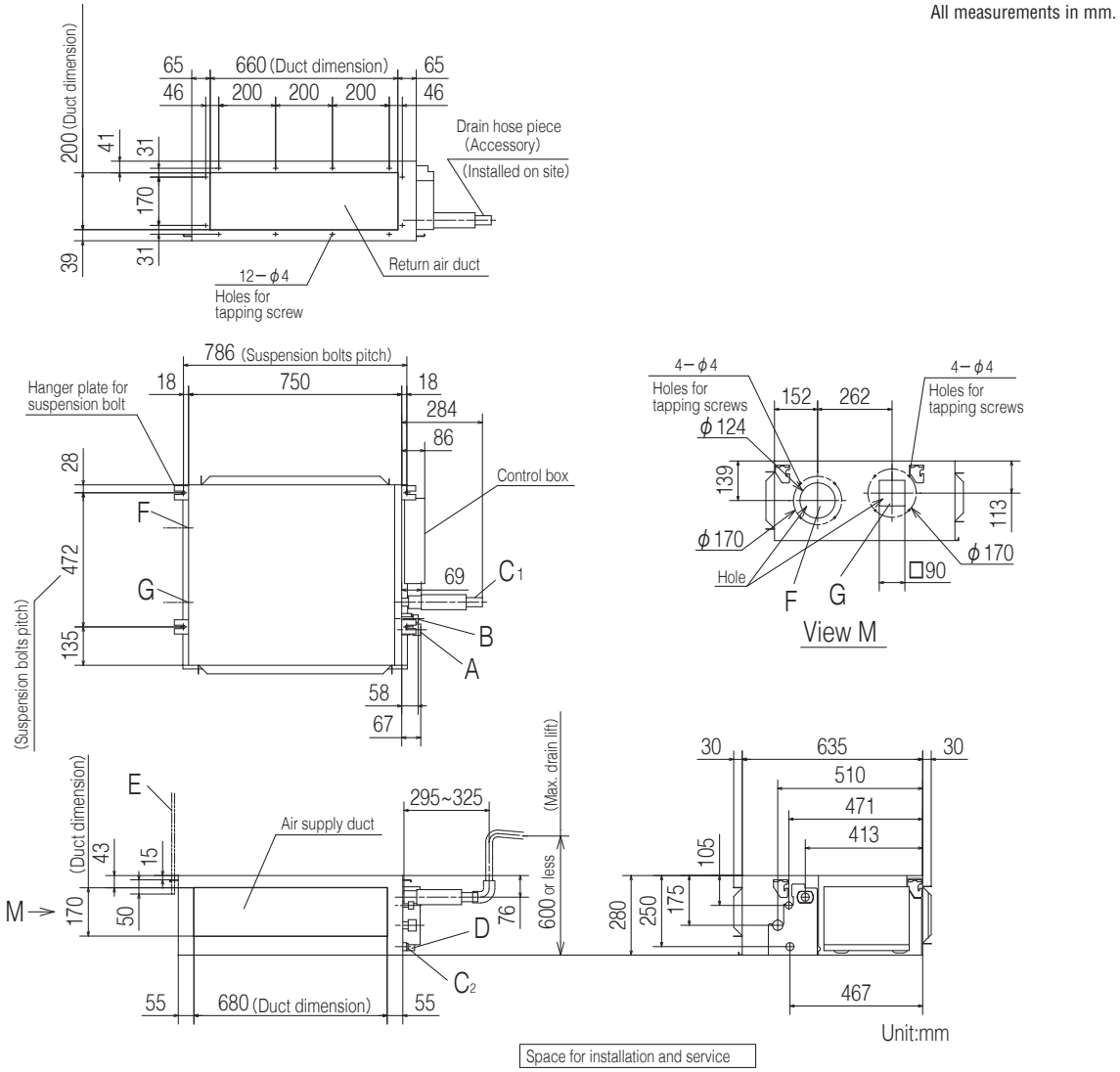


Notes (1) The model name label is attached on the lid of the control box.

Duct Connected -Low/Middle Static Pressure- FDUM

FDUM22KXZE3-W, FDUM28KXZE3-W, FDUM36KXZE3-W, FDUM45KXZE3-W, FDUM56KXZE3-W
FDUM22KXE6F, FDUM28KXE6F, FDUM36KXE6F, FDUM45KXE6F, FDUM56KXE6F

All measurements in mm.



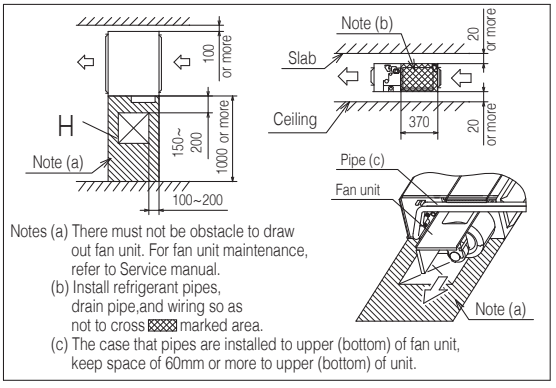
Symbol	Content		
	Model	22,28	36,45,56
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C1	Drain piping	VP25 (O.D.32)	
C2	Drain piping (Gravity drainage)	VP20 (O.D.26)	
D	Hole for wiring		
E	Suspension bolts	(M10)	
F	Outside air opening for ducting	(φ150) (Knock out)	
G	Air outlet opening for ducting	(φ125) (Knock out)	
H	Inspection hole	(450X450)	

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

Space for installation and service

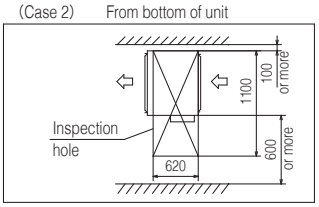
Select either of two cases to keep space for installation and services.

(Case 1) From side of unit



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

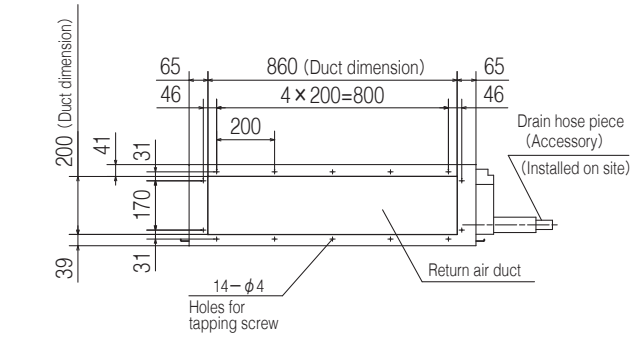
(Case 2) From bottom of unit

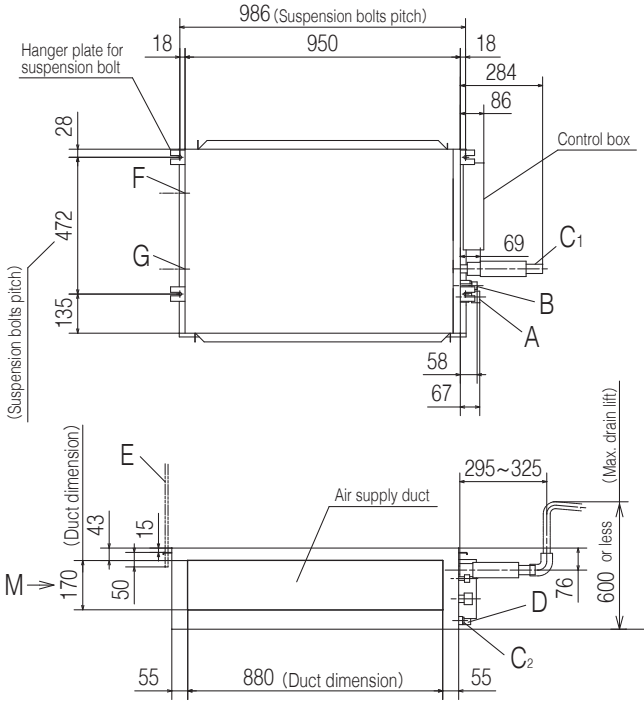


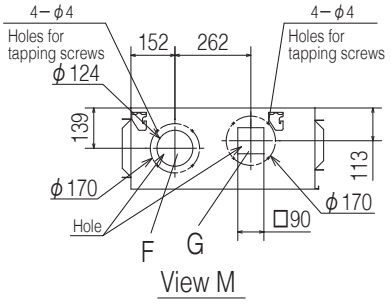
Duct Connected -Low/Middle Static Pressure-
FDUM

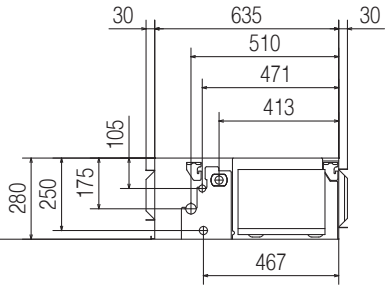
FDUM71KXZE3-W, FDUM90KXZE3-W
FDUM71KXE6F, FDUM90KXE6F

All measurements in mm.









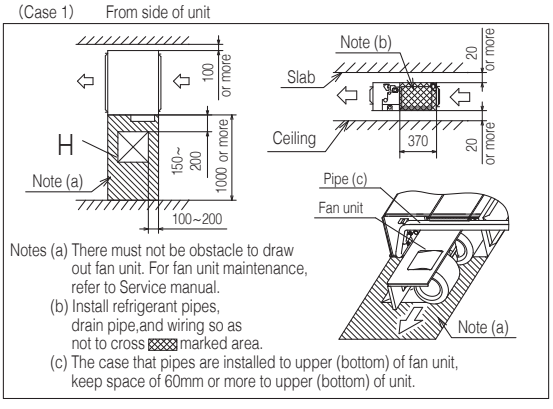
Symbol	Content	
A	Gas piping	ϕ15.88(5/8")(Flare)
B	Liquid piping	ϕ9.52(3/8")(Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20 (O.D.26)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(ϕ150)(Knock out)
G	Air outlet opening for ducting	(ϕ125)(Knock out)
H	Inspection hole	(450X450)

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

Space for installation and service

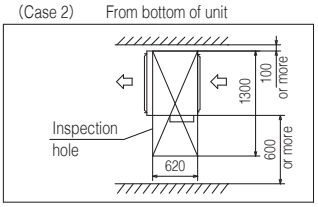
Select either of two cases to keep space for installation and services.

(Case 1) From side of unit



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

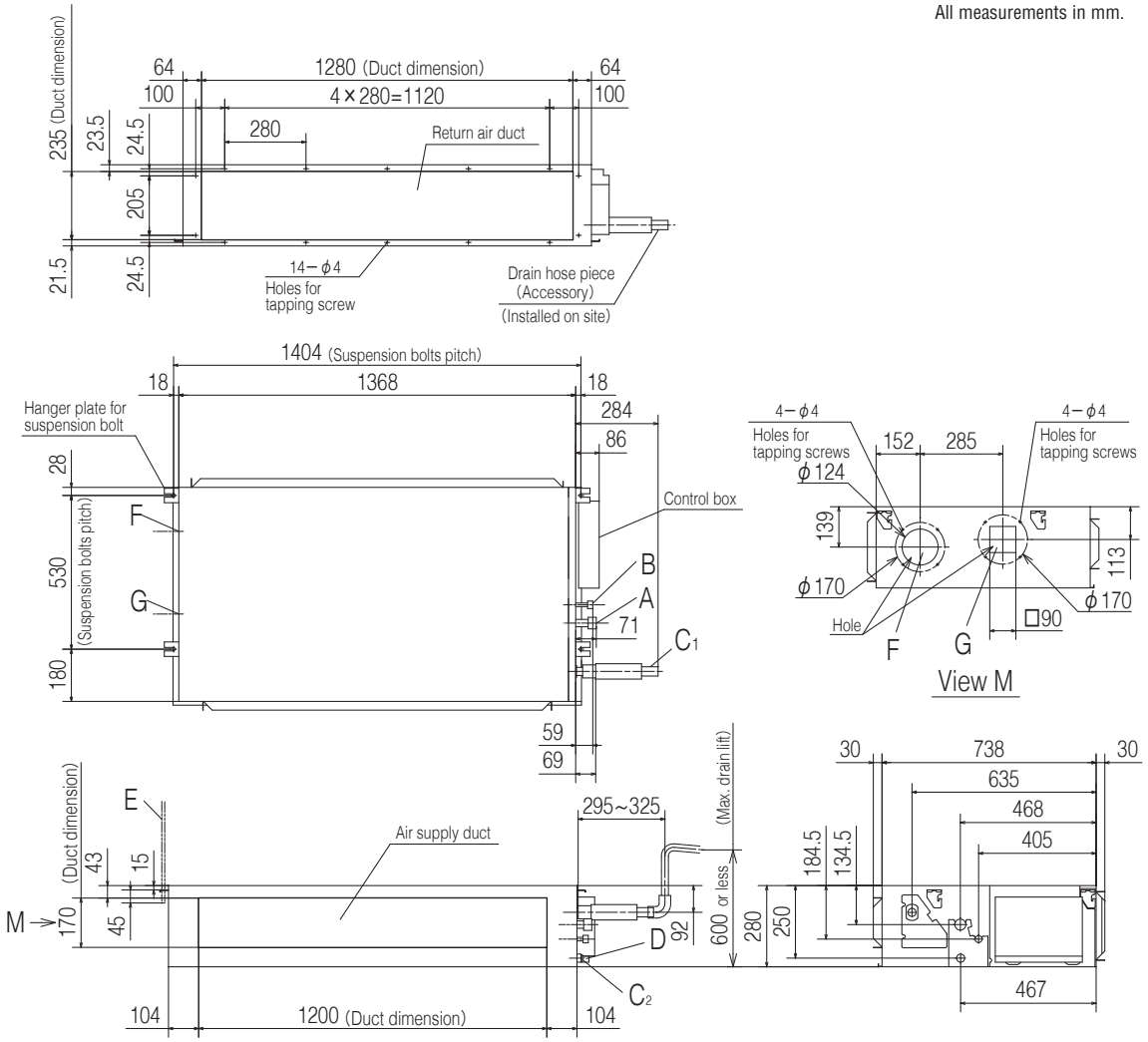
(Case 2) From bottom of unit



Duct Connected -Low/Middle Static Pressure-
FDUM

FDUM112KXZE3-W, FDUM140KXZE3-W, FDUM160KXZE3-W
FDUM112KXE6F, FDUM140KXE6F, FDUM160KXE6F

All measurements in mm.



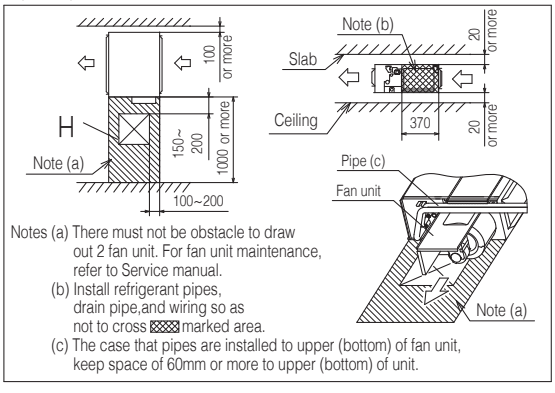
Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20 (O.D.26)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(φ150) (Knock out)
G	Air outlet opening for ducting	(φ125) (Knock out)
H	Inspection hole	(450X450)

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

Space for installation and service

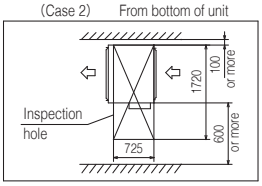
Select either of two cases to keep space for installation and services.

(Case 1) From side of unit



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

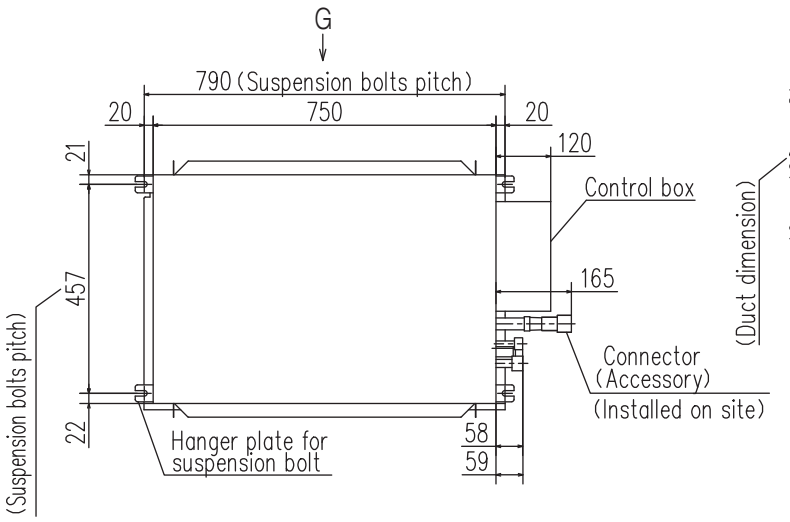
(Case 2) From bottom of unit

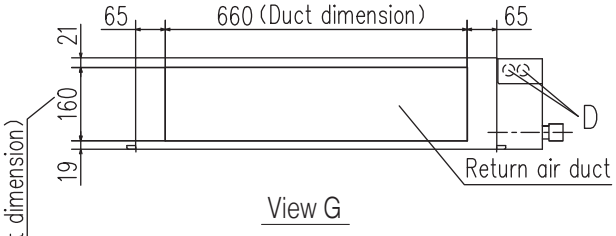


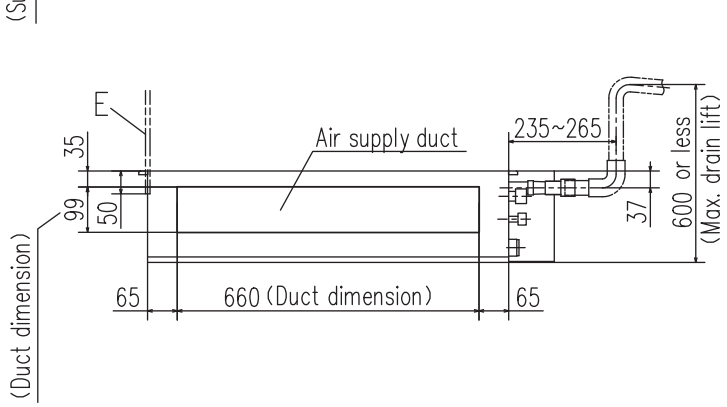
Duct Connected (thin) -Low Static Pressure-
FDUT

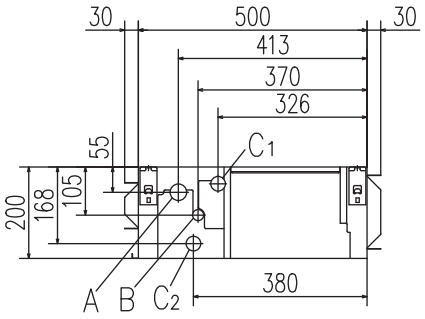
FDUT15KXZE3-W, FDUT22KXZE3-W, FDUT28KXZE3-W, FDUT36KXZE3-W
FDUT15KXE6F-E, FDUT22KXE6F-E, FDUT28KXE6F-E, FDUT36KXE6F-E

All measurements in mm.

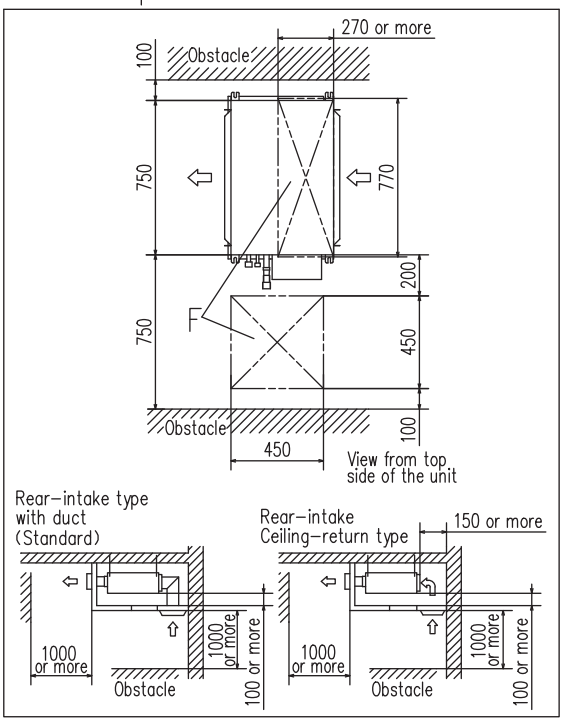








Space for installation and service



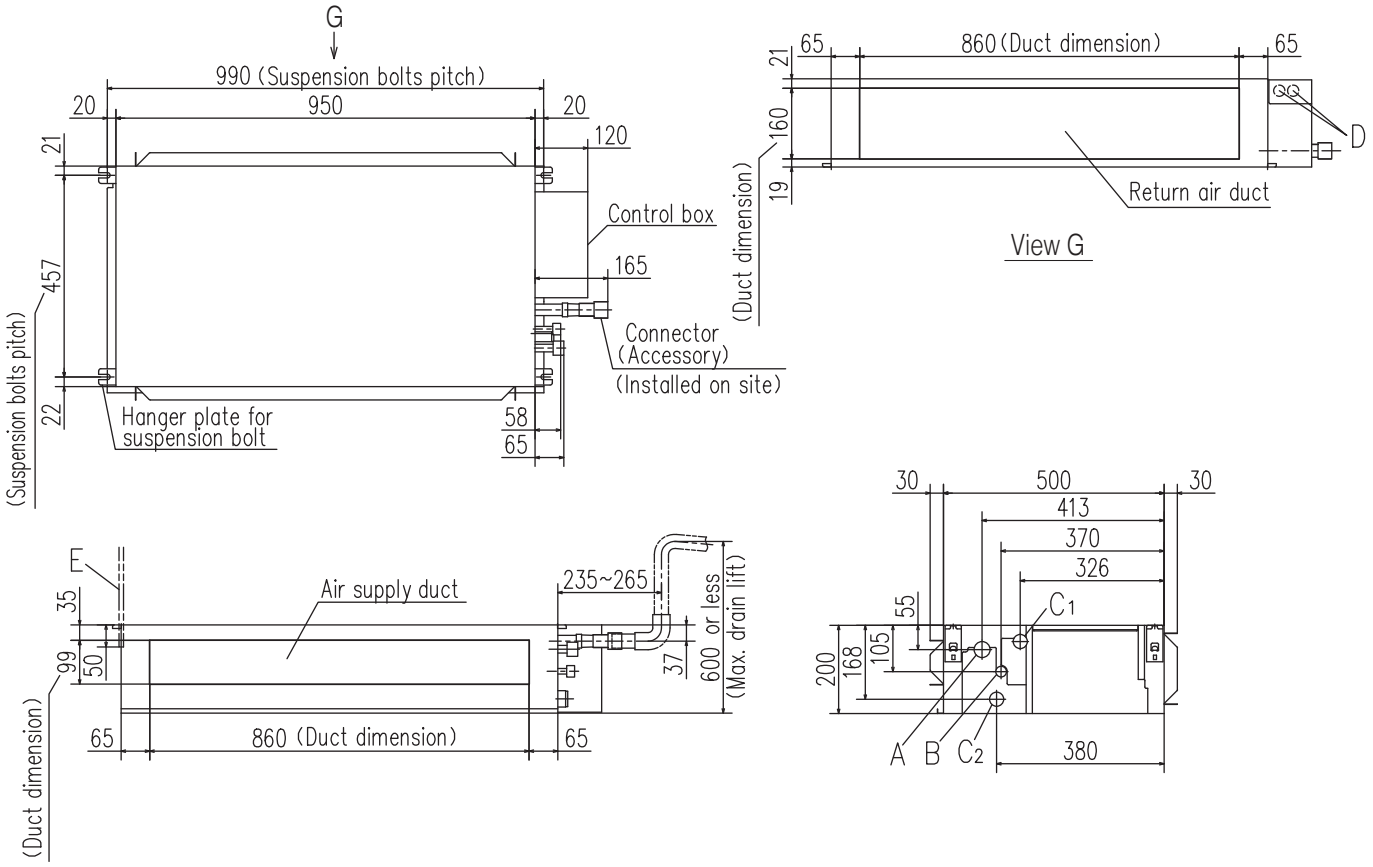
Symbol	Content		
	Model	15,22,28	36
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C1	Drain piping	VP25 (O.D.32) (Used with attached connector)	
C2	Drain piping (Gravity drainage)	VP25 (O.D.32) (Used with attached connector)	
D	Hole for wiring	ϕ25 x 2	
E	Suspension bolts	M10	
F	Inspection opening	(450X450), (270X770)	

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

Duct Connected (thin) -Low Static Pressure-
FDUT

FDUT45KXZE3-W, FDUT56KXZE3-W
FDUT45KXE6F-E, FDUT56KXE6F-E

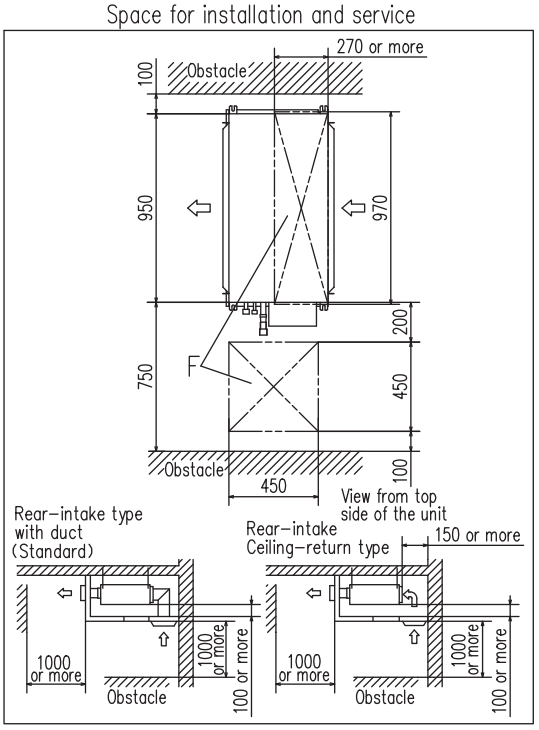
All measurements in mm.



Symbol	Content	
	Model	45,56
A	Gas piping	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)
C1	Drain piping	VP25 (O.D.32) (Used with attached connector)
C2	Drain piping (Gravity drainage)	VP25 (O.D.32) (Used with attached connector)
D	Hole for wiring	ϕ25 x 2
E	Suspension bolts	M10
F	Inspection opening	(450X450), (270X970)

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

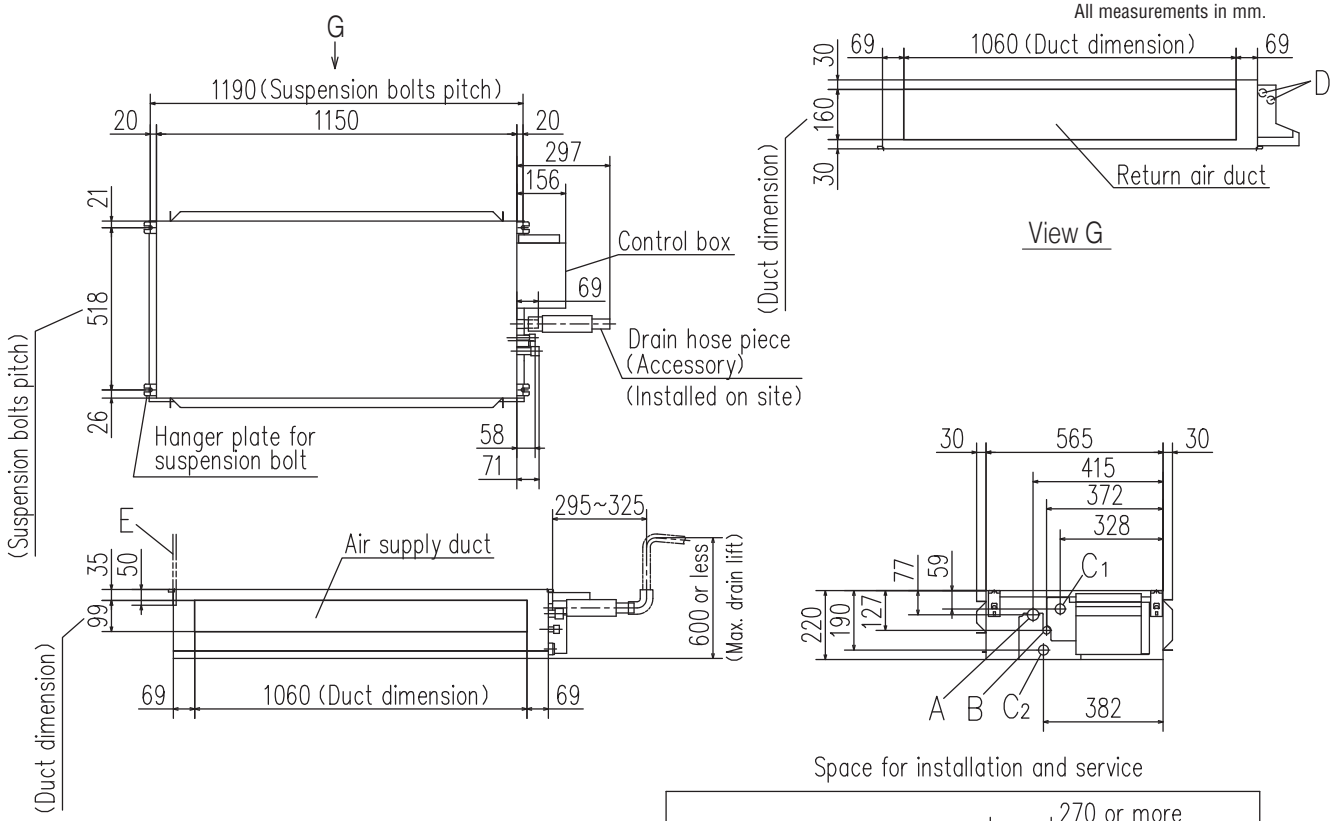
Space for installation and service



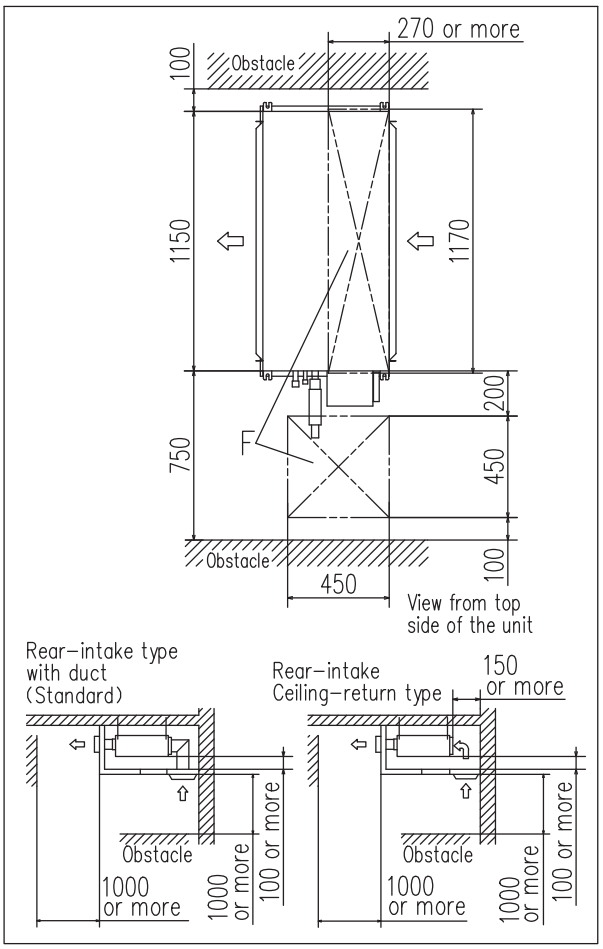
Duct Connected (thin) -Low Static Pressure-
FDUT

FDUT71KXZE3-W
FDUT71KXE6F-E

All measurements in mm.



Space for installation and service



Symbol	Content	
	Model	71
A	Gas piping	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP25 (O.D.32)
D	Hole for wiring	ϕ25 x 2
E	Suspension bolts	M10
F	Inspection opening	(450X450), (270X1170)

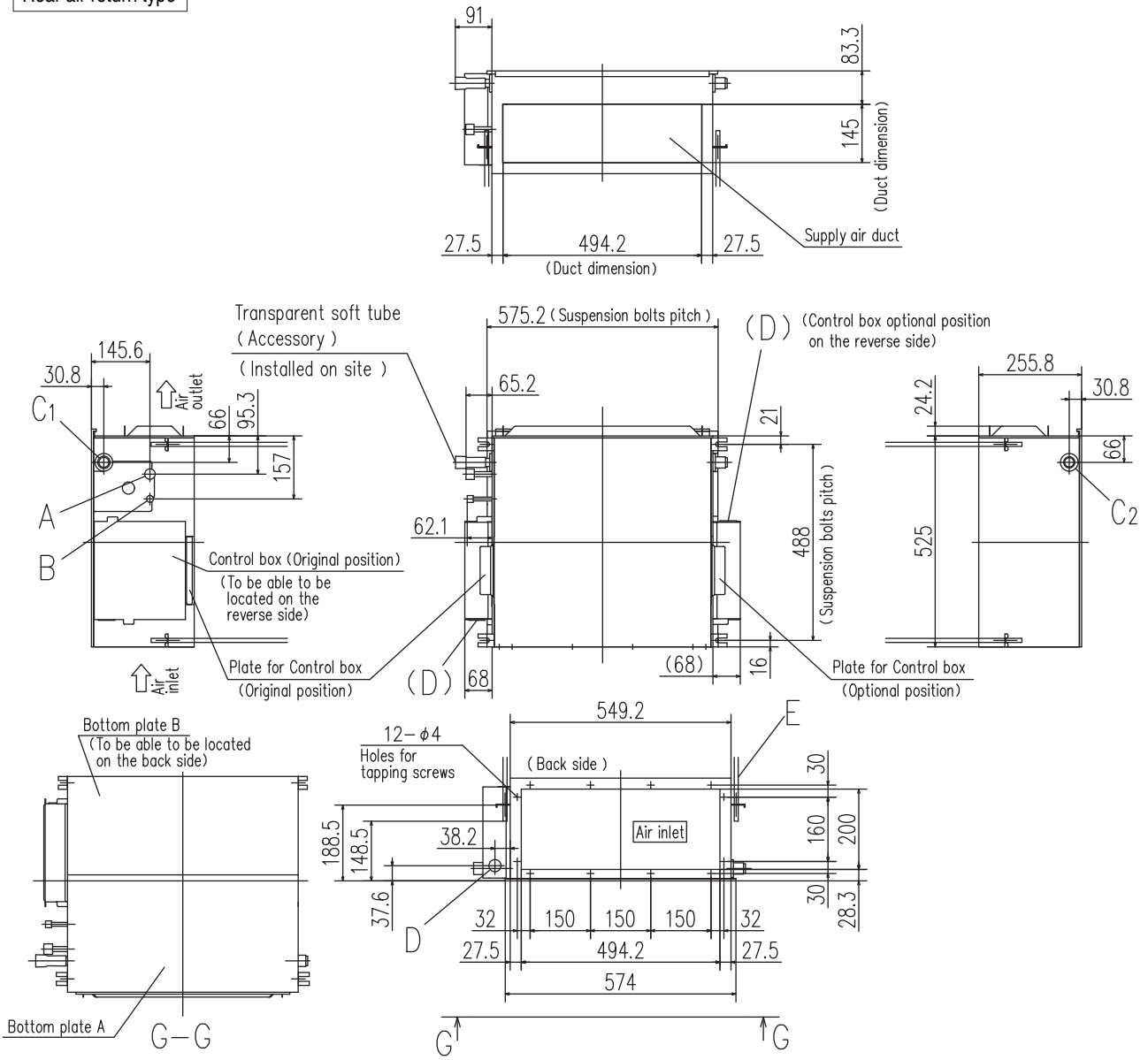
Note The model name label is attached on the lid of the control box.

Duct Connected (Compact & Flexible)
FDUH

FDUH22KXZE3-W, FDUH28KXZE3-W, FDUH36KXZE3-W
FDUH22KXE6F, FDUH28KXE6F, FDUH36KXE6F

All measurements in mm.

Rear air return type

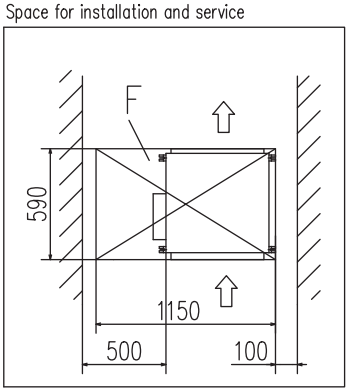


Symbol	Content		
	Model	22,28	36
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C_1	Drain piping	VP20 (I.D.20, O.D.26) Note (2)	
C_2	Drain piping	To be used instead of "C_1"	
D	Hole for wiring	φ30	
E	Suspension bolts	(M10)	
F	Inspection hole	(590X1150) Note (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_1 or C_2)
(3) When control box is located on the reverse side, Installation space should be modified new location.

Space for installation and service

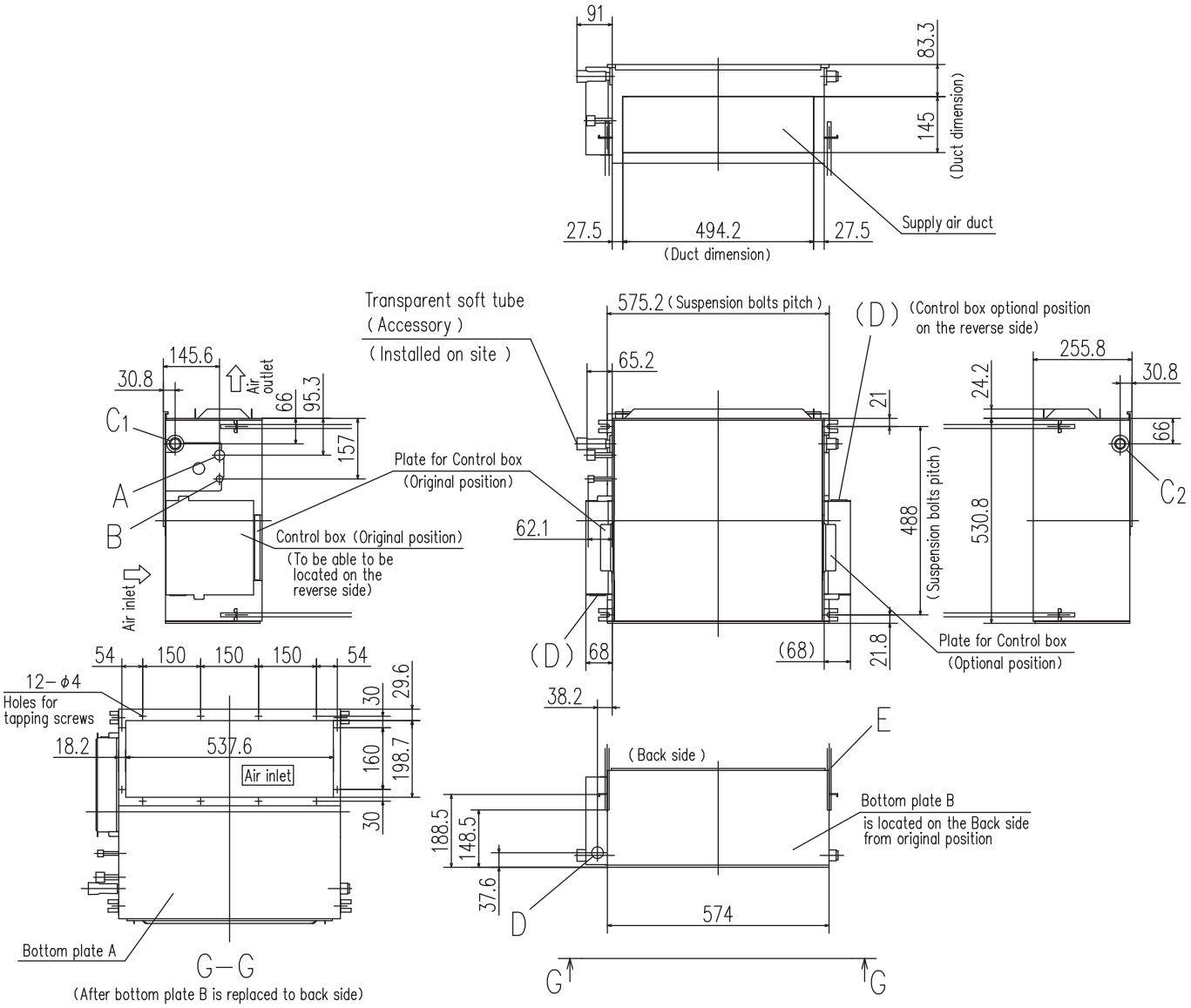


Duct Connected (Compact & Flexible)
FDUH

FDUH22KXZE3-W, FDUH28KXZE3-W, FDUH36KXZE3-W
FDUH22KXE6F, FDUH28KXE6F, FDUH36KXE6F

All measurements in mm.

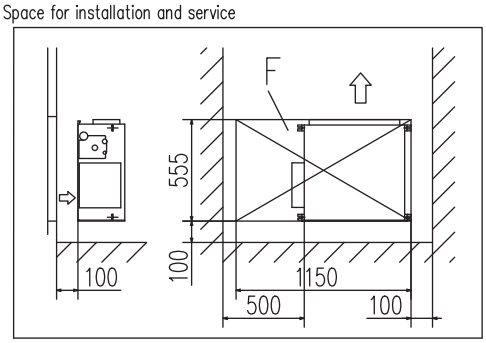
Bottom suction type



Symbol	Content		
	Model	22,28	36
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C_1	Drain piping	VP20 Note (2)	
C_2	Drain piping	To be used instead of "C_1"	
D	Hole for wiring	φ30	
E	Suspension bolts	(M10)	
F	Inspection hole	(555X1150) 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_1 or C_2)
(3) When control box is located on the reverse side, Installation space should be modified new location.

Space for installation and service



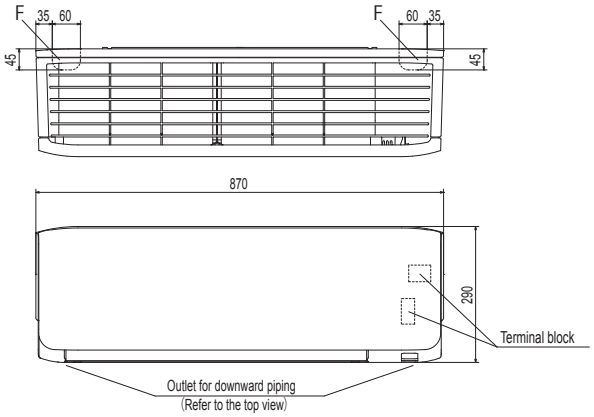
Wall Mounted
FDK

FDK15KXZE3-W, FDK22KXZE3-W, FDK28KXZE3-W, FDK36KXZE3-W, FDK45KXZE3-W, FDK56KXZE3-W
FDK15KXZE1, FDK22KXZE1, FDK28KXZE1, FDK36KXZE1, FDK45KXZE1, FDK56KXZE1

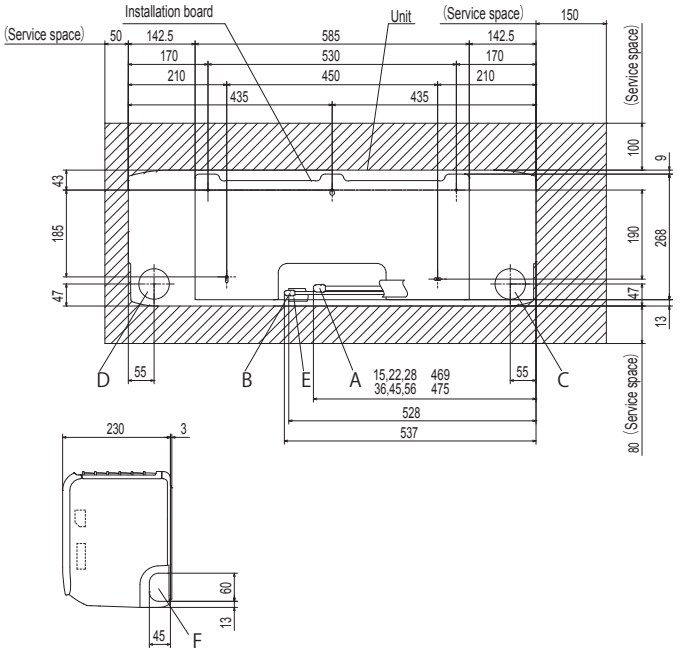
All measurements in mm.

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	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.



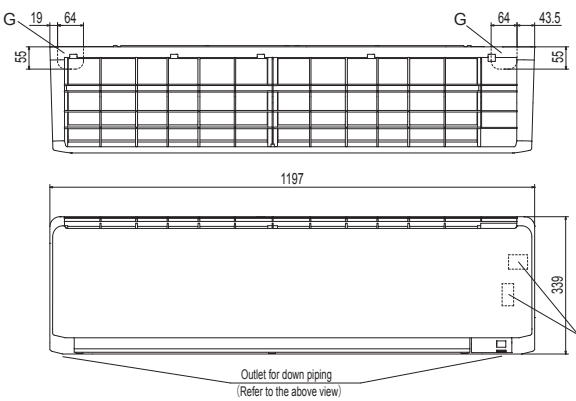
Space for installation and service when viewing from the front



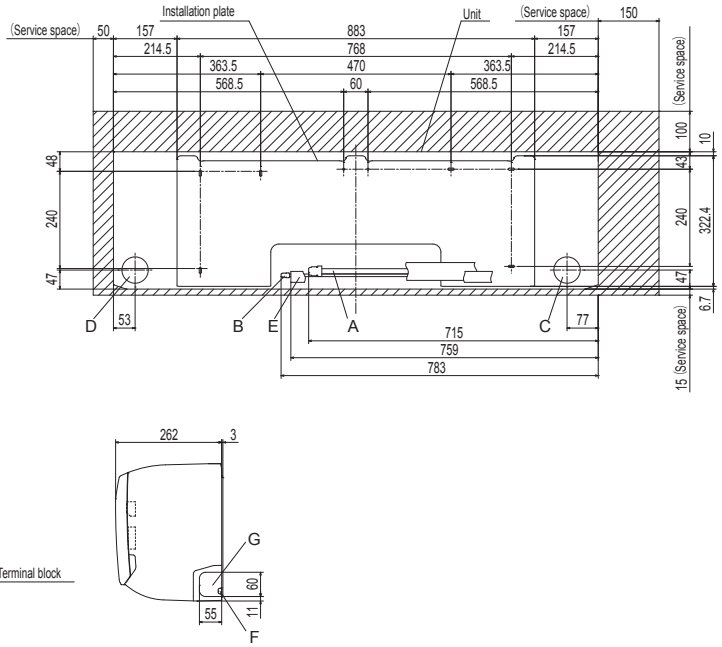
FDK71KXZE3-W, FDK90KXZE3-W
FDK71KXZE1, FDK90KXZE1

Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (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)	
G	Outlet for piping (on both side)	

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



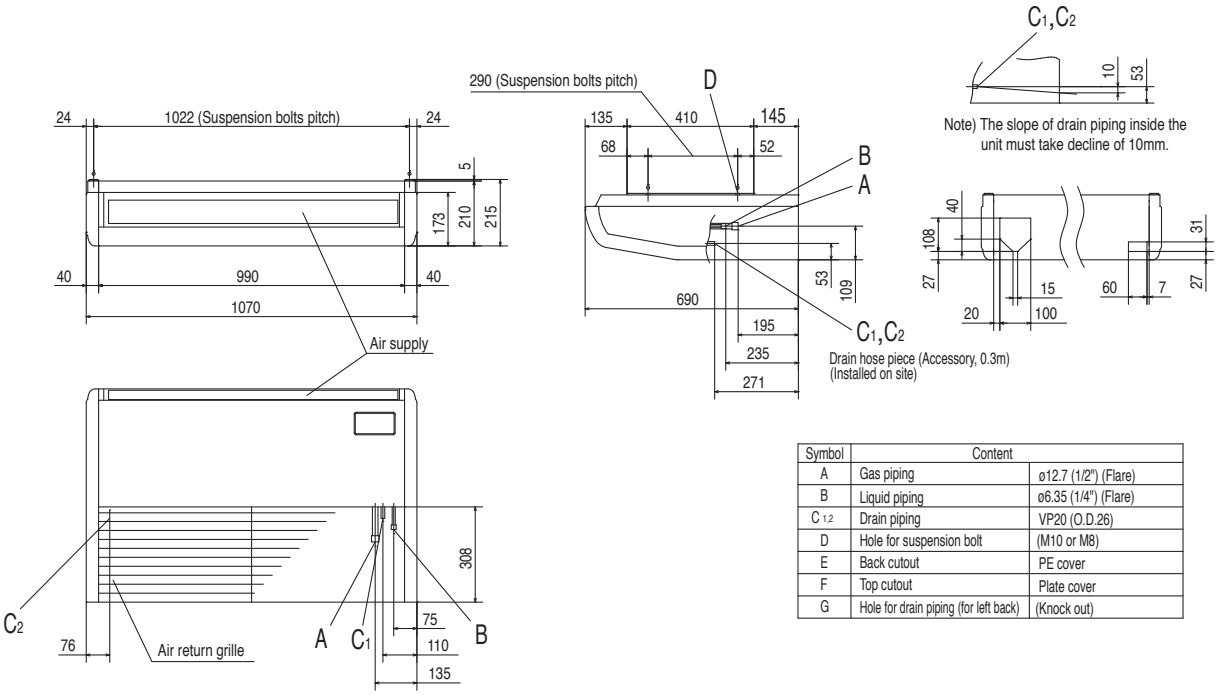
Space for installation and service when viewing from the front



Ceiling Suspended
FDE

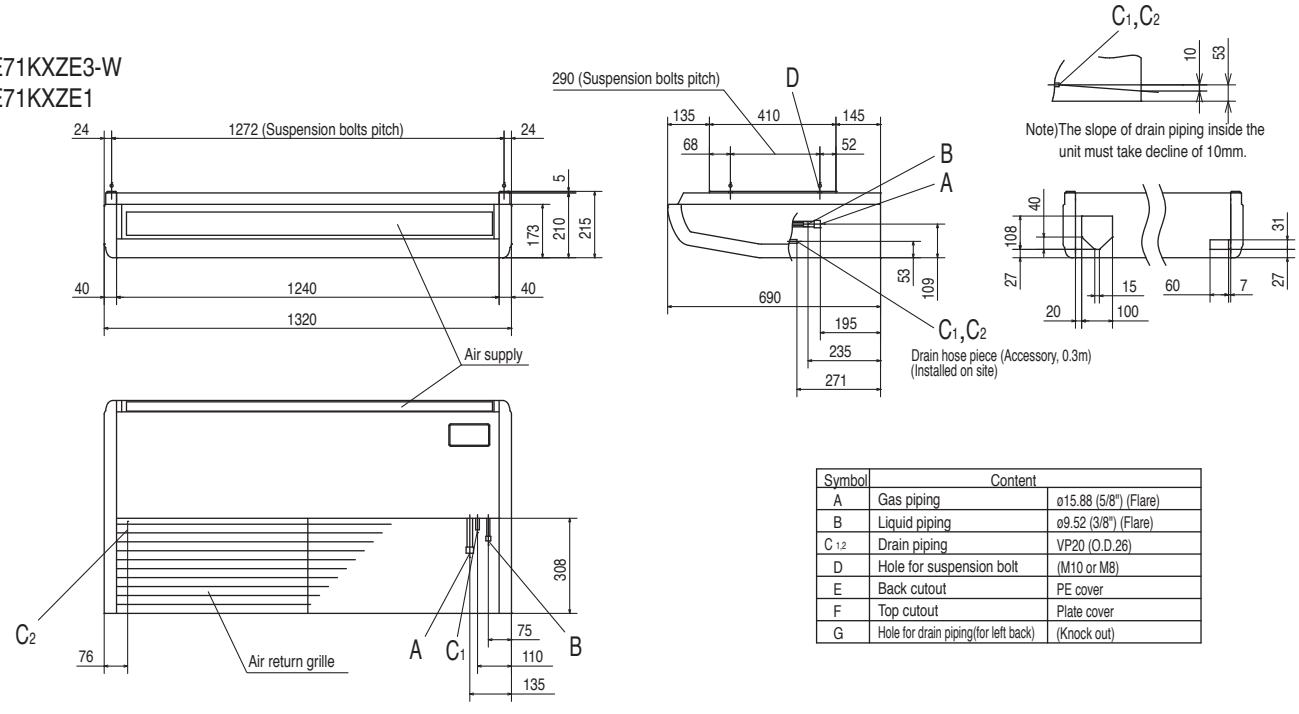
FDE36KXZE3-W, FDE45KXZE3-W, FDE56KXZE3-W
FDE36KXZE1, FDE45KXZE1, FDE56KXZE1

All measurements in mm.



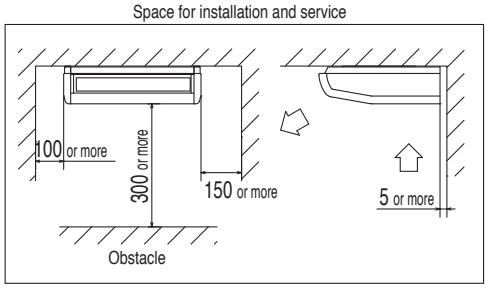
Symbol	Content	
A	Gas piping	ø12.7 (1/2") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)
C 1,2	Drain piping	VP20 (O.D.26)
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping (for left back)	(Knock out)

FDE71KXZE3-W
FDE71KXZE1



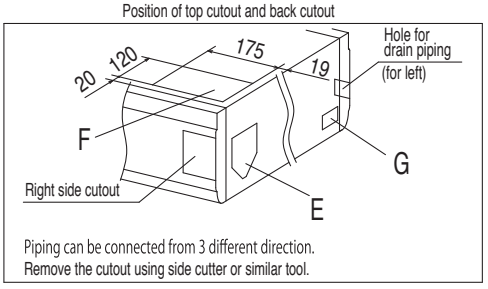
Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C 1,2	Drain piping	VP20 (O.D.26)
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping(for left back)	(Knock out)

Space for installation and service



Make a space of 4000(36~56), 4500(71) or more between the units when installing more than one.

Position of top cutout and back cutout

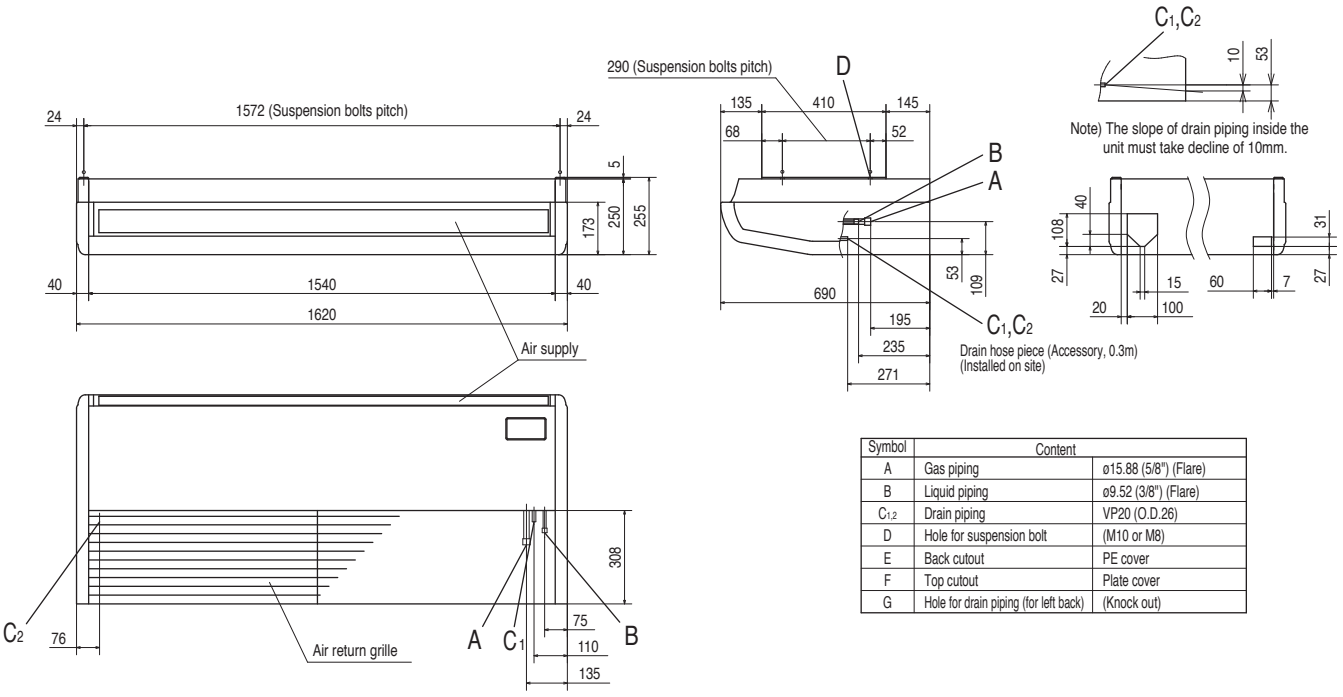


Note(1)The model name label is attached on the fan casing inside the air return grille.

Ceiling Suspended
FDE

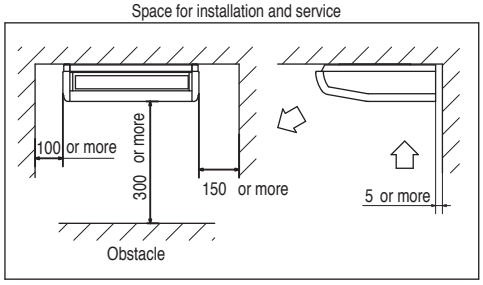
FDE112KXZE3-W, FDE140KXZE3-W
FDE112KXZE1, FDE140KXZE1

All measurements in mm.



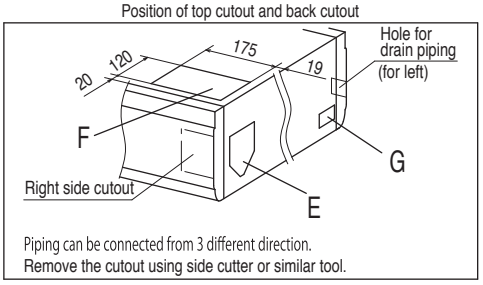
Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
$C_{1,2}$	Drain piping	VP20 (O.D.26)
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping (for left back)	(Knock out)

Space for installation and service



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

Position of top cutout and back cutout

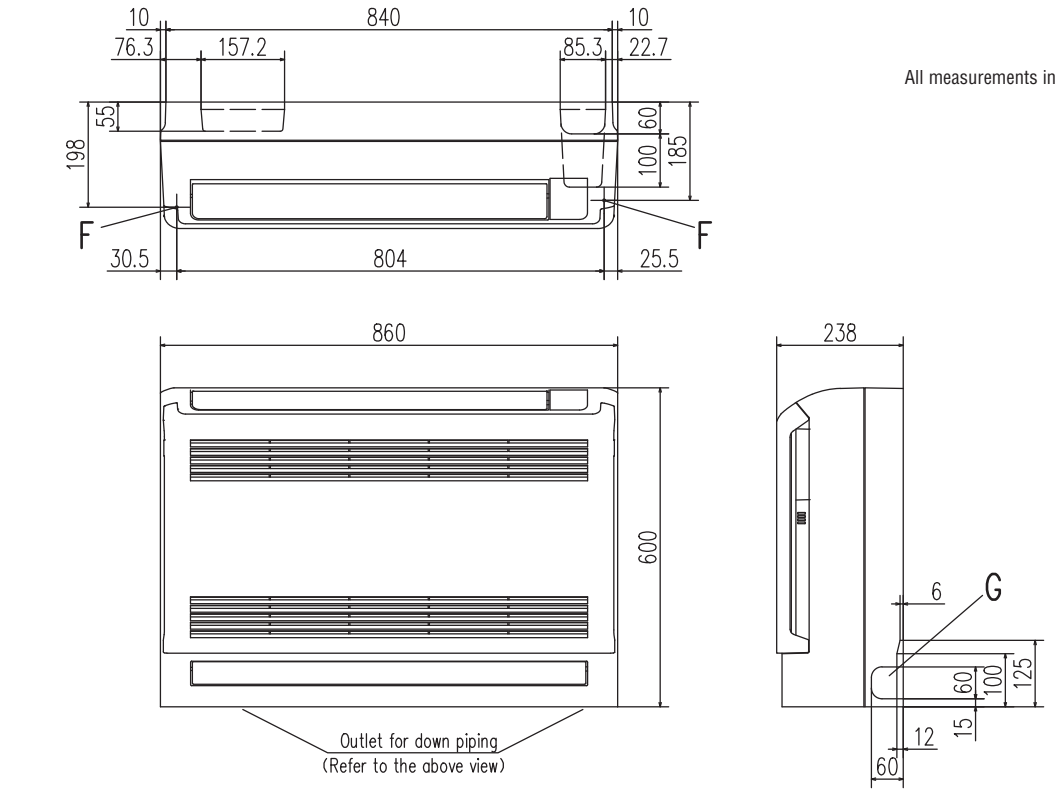


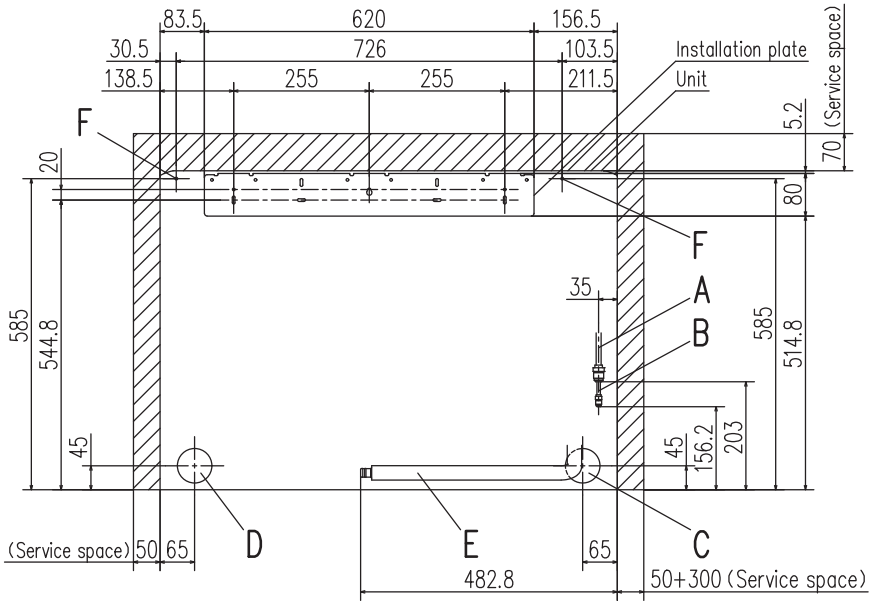
Note(1)The model name label is attached on the fan casing inside the air return grille.

Floor Standing -2way-
FDFW

FDFW28KXE6F, FDFW45KXE6F, FDFW56KXE6F

All measurements in mm.





Space for installation and service when viewing from the front

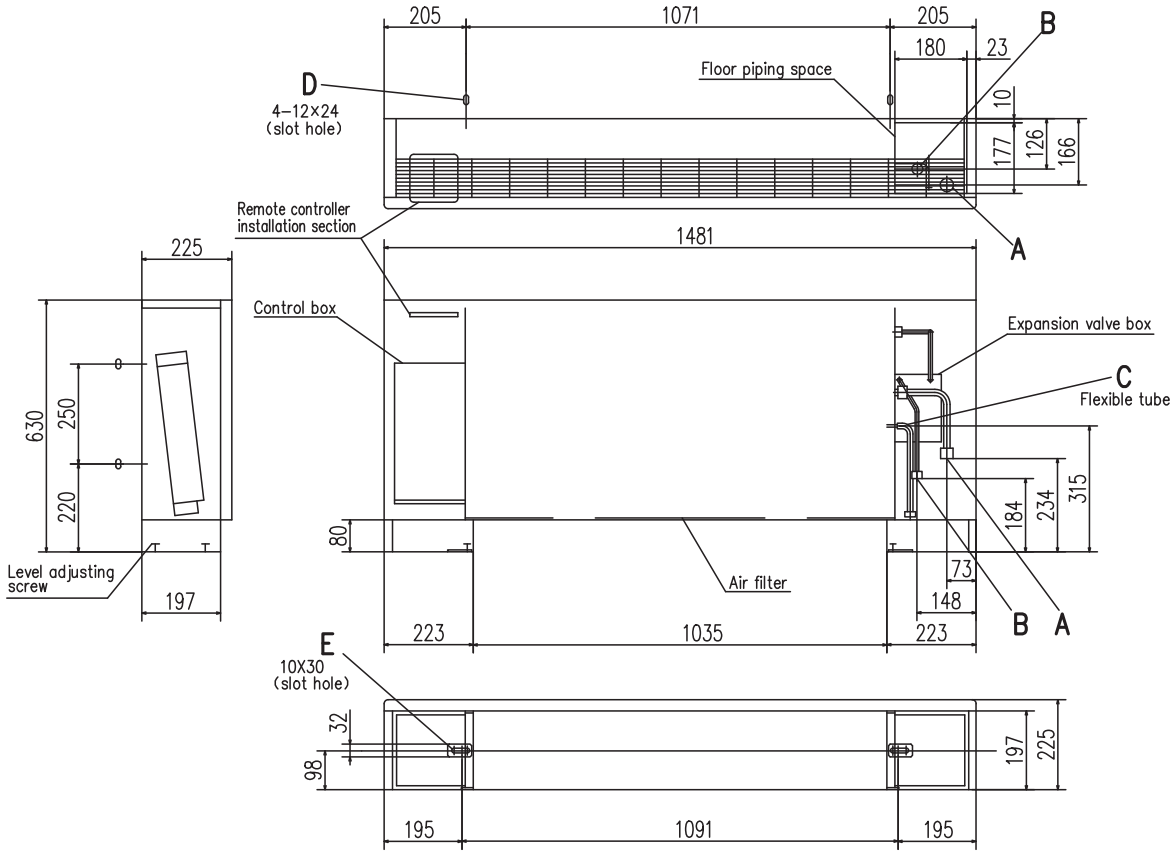
Symbol	Content		
	Model	28	45,56
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Hole on wall for right rear piping	(ϕ65)	
D	Hole on wall for left rear piping	(ϕ65)	
E	Drain hose	VP16 (O.D.22)	
F	Screw point fasten the indoor unit	ϕ5	
G	Outlet for piping (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.

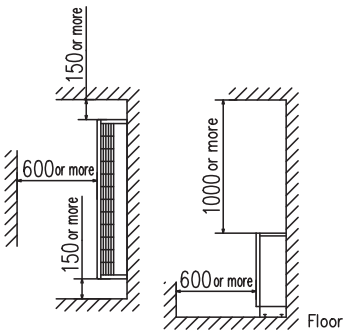
Floor Standing (with casing)
FDFL

FDFL71KXE6F

All measurements in mm.



Space for installation and service



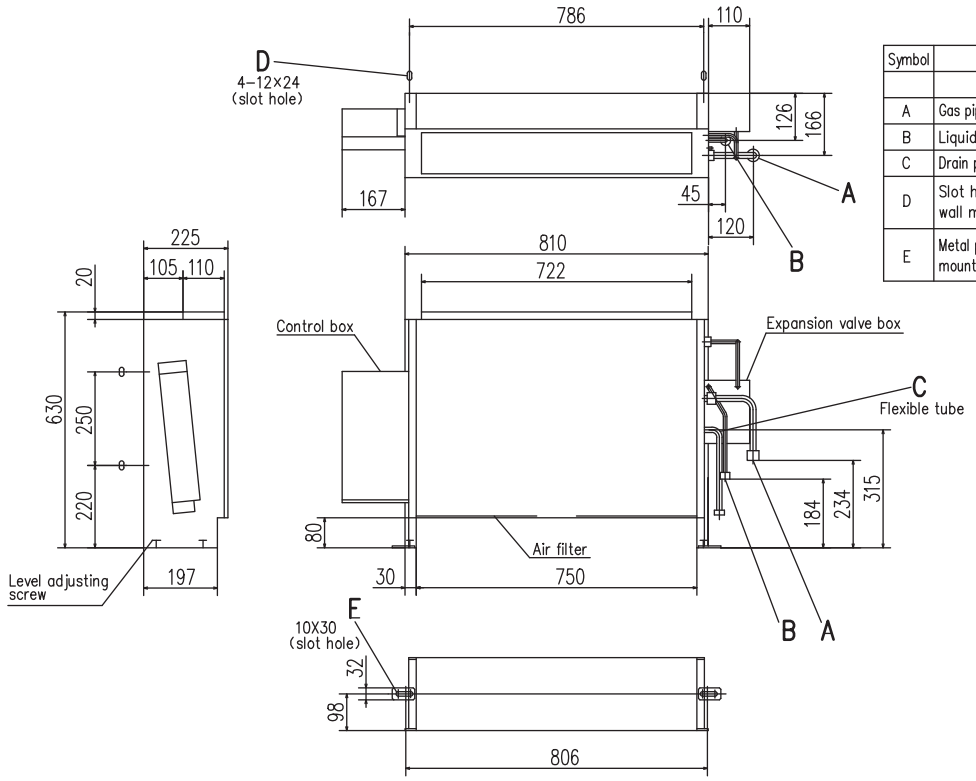
Symbol	Content	
A	Gas piping (Accessory)	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C	Drain piping (Accessory)	PT20A female screw, 360mm
D	Slot hole for wall mounting	(M10)
E	Metal plate for floor mounting (Accessory)	(M8)

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

Floor Standing (without casing)
FDFU

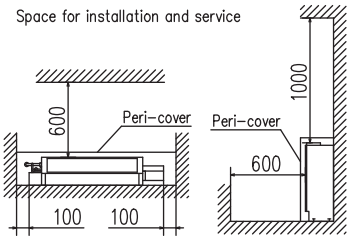
FDFU28KXE6F, FDFU45KXE6F, FDFU56KXE6F

All measurements in mm.

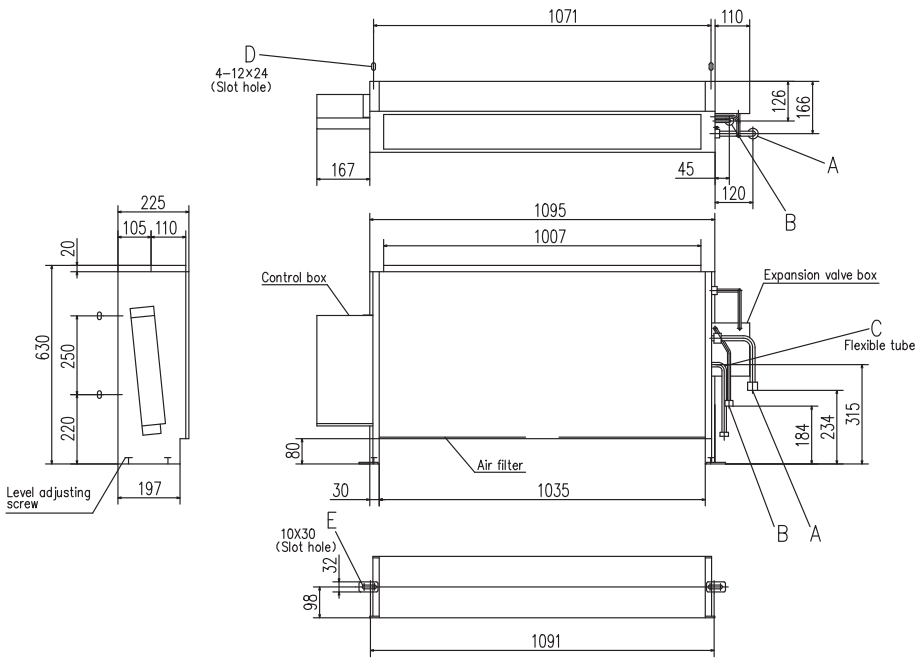


Symbol	Content		
	Model	28	45,56
A	Gas piping (Accessory)	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Drain piping (Accessory)	PT20A female screw, 360mm	
D	Slot hole for wall mounting	(M10)	
E	Metal plate for floor mounting (Accessory)	(M8)	

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

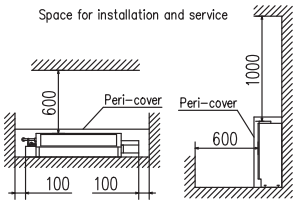


FDFU71KXE6F



Symbol	Content	
A	Gas piping (Accessory)	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C	Drain piping (Accessory)	PT20A female screw, 360mm
D	Slot hole for wall mounting	(M10)
E	Metal plate for floor mounting (Accessory)	(M8)

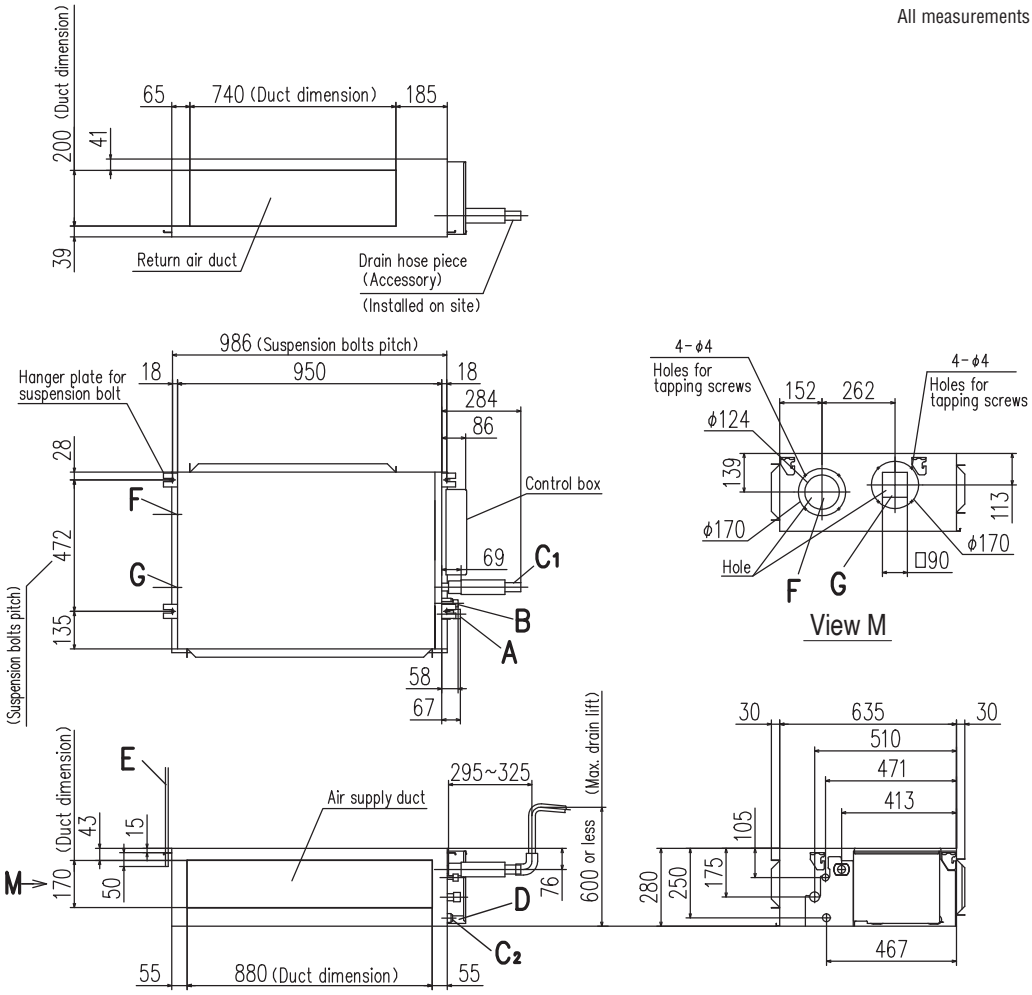
Note (1) The model name label is attached on the lid of the control box.



Outdoor Air Processing unit
FDU-F

FDU650FKXZE1

All measurements in mm.

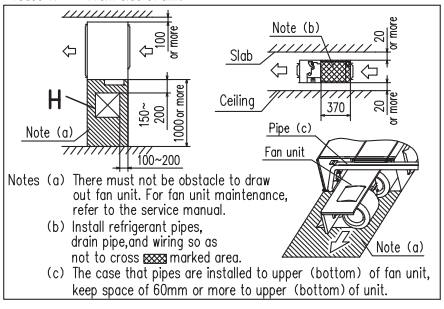


Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C1	Drain piping	VP25(O.D.32)
C2	Drain piping(Gravity drainage)	V20(O.D.26)
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection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

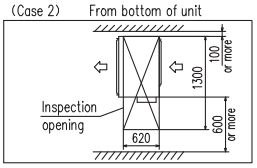


Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to the service manual.

(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.

(c) 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

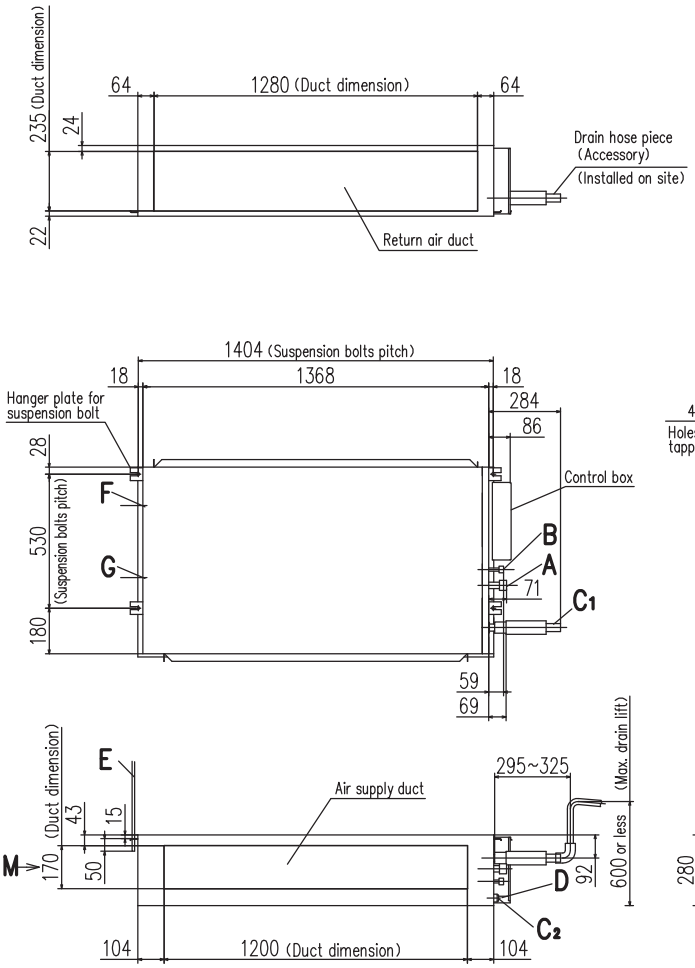


Note (1) The model name label is attached on the lid of the control box.

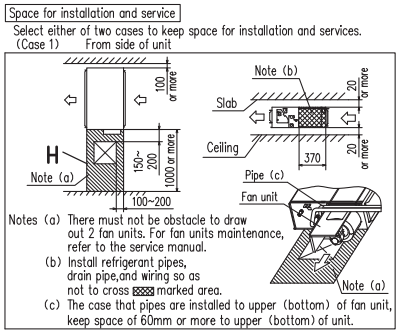
Outdoor Air Processing unit
FDU-F

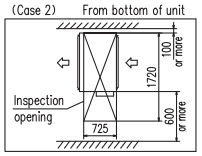
FDU1100FKXZE1

All measurements in mm.



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



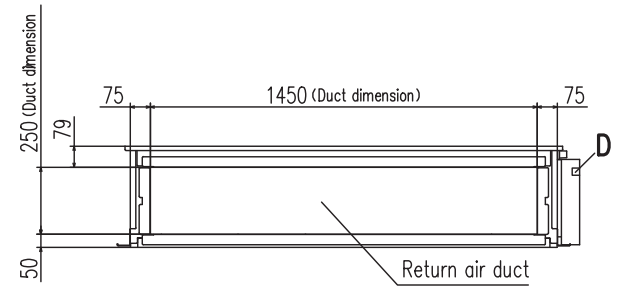


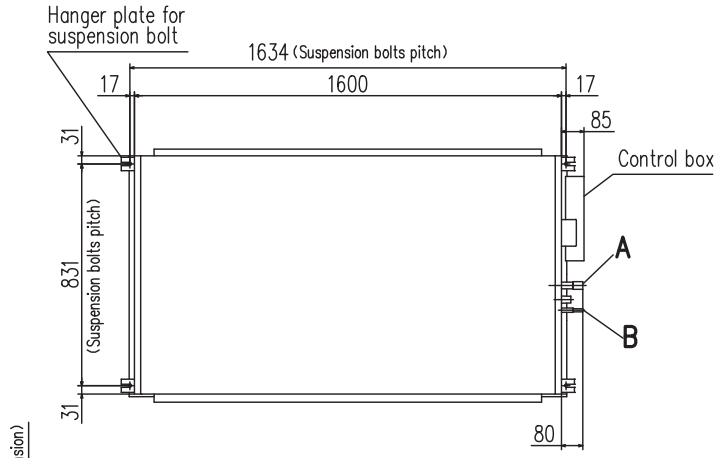
Note
(1) The model name label is attached on the lid of the control box.

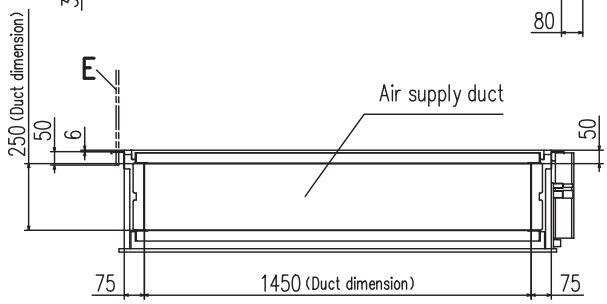
Outdoor Air Processing unit
FDU-F

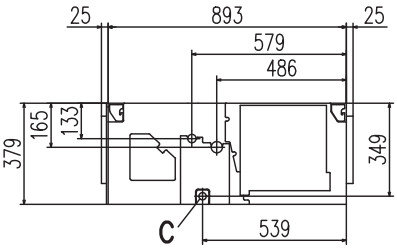
FDU1800FKXZE1, FDU2400FKXZE1

All measurements in mm.





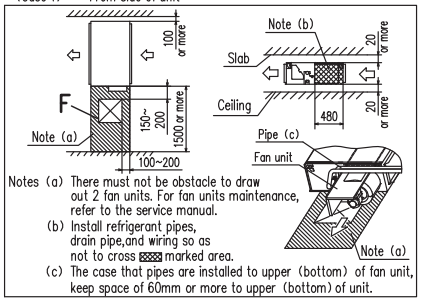




Space for installation and service

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

(Case 1) From side of unit

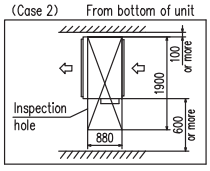


Notes (a) There must not be obstacle to draw out 2 fan units. For fan units maintenance, refer to the service manual.

(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▩ marked area.

(c) 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



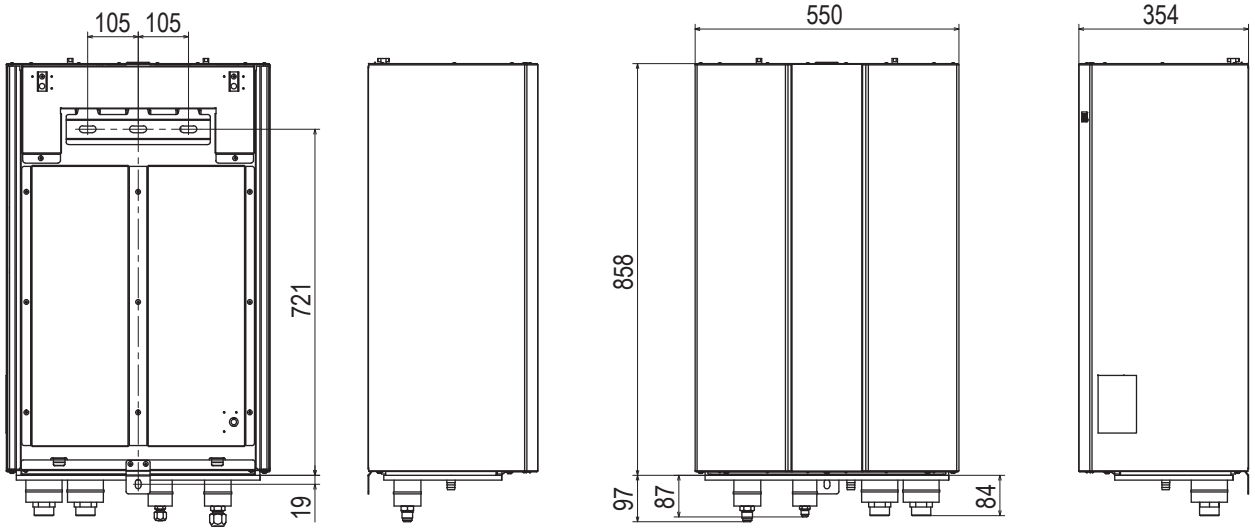
Notes (1) The model name label is attached on the lid of the control box.

Symbol	Content		
	MODEL	1800	2400
A	Gas piping	ø19.05 (3/4")(Brazing)	ø22.22 (7/8")(Brazing)
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)	

Hydro Module unit
HMU

HMU140KXZE1, HMU280KXZE1

All measurements in mm.



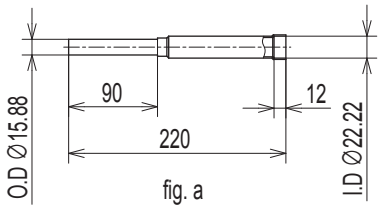


fig. a

Scale : 1:5

(Only for HMU280KXZE1)

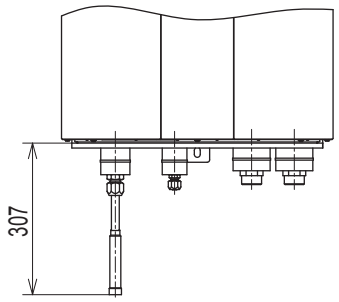
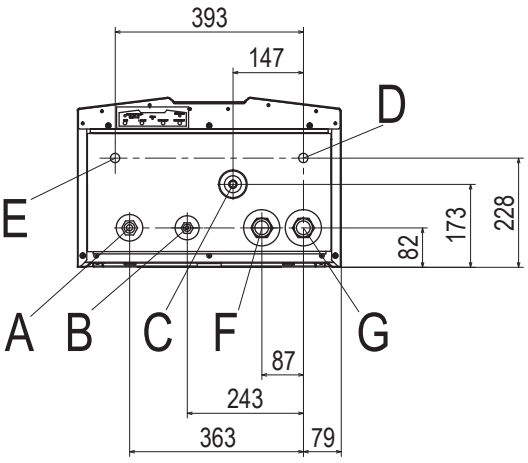
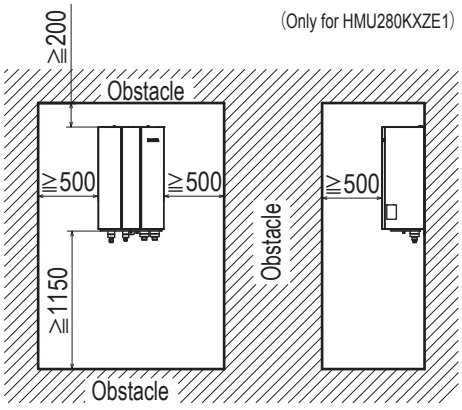


fig. b

(Only for HMU280KXZE1)





Space for installation and service

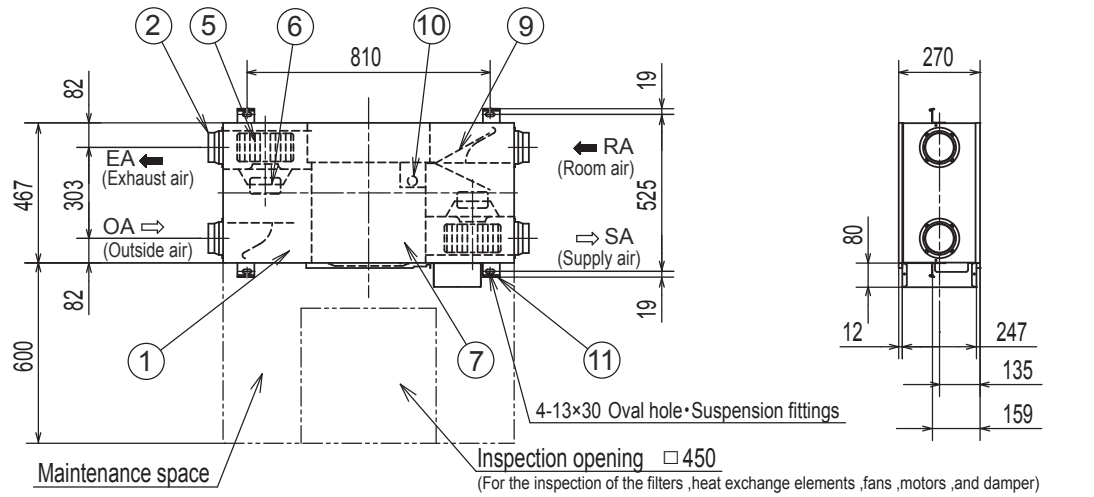
Symbol	Content	MODEL	
		HMU140KXZE1	HMU280KXZE1
A	Gas piping	φ15.88 (5/8") (Flare)	φ15.88 (5/8") (Flare) ※1
B	Liquid piping	φ9.52 (3/8") (Flare)	φ9.52 (3/8") (Flare)
C	Drain socket (Gravity drainage)	PVC, φ17 (O.D), t1.2	PVC, φ17 (O.D), t1.2
D	Hole for power cable	φ20	φ20
E	Hole for signal line	φ20	φ20
F	Water inlet	PT1-1/4	PT1-1/4
G	Water outlet	PT1-1/4	PT1-1/4

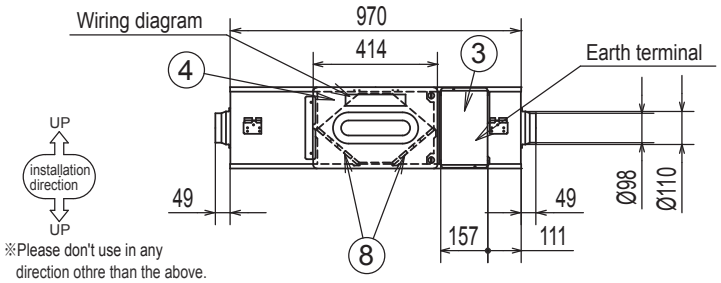
※1 Accessory pipe (fig.a) needs to be connected for gas pipe on site.
Therefore, the diameter of the gas pipe connected with the local piping is φ22.22 (Brazing) (fig.b).

Fresh Air Ventilation and Heat Exchange unit
SAF-E7

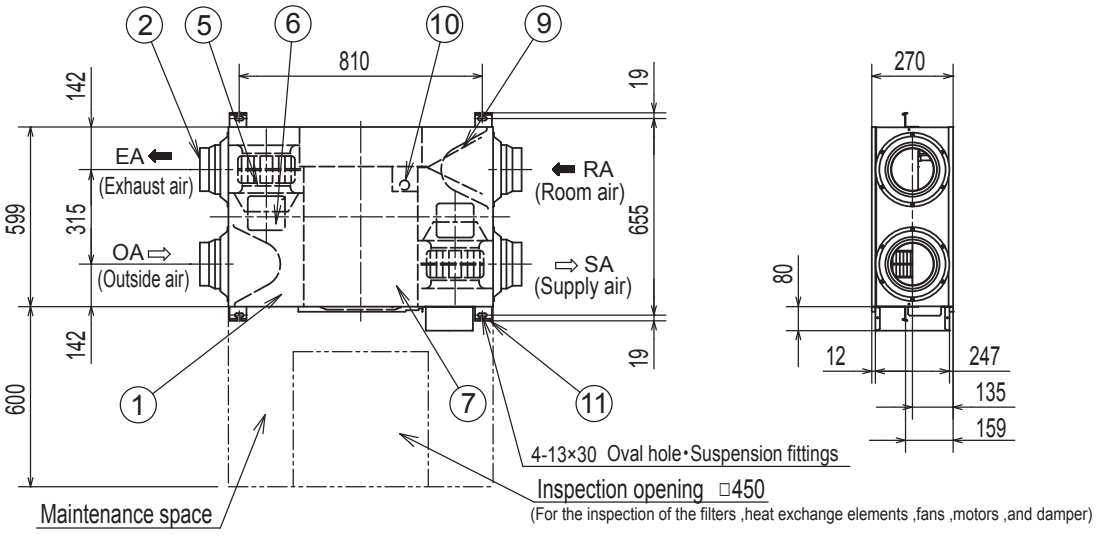
SAF150E7

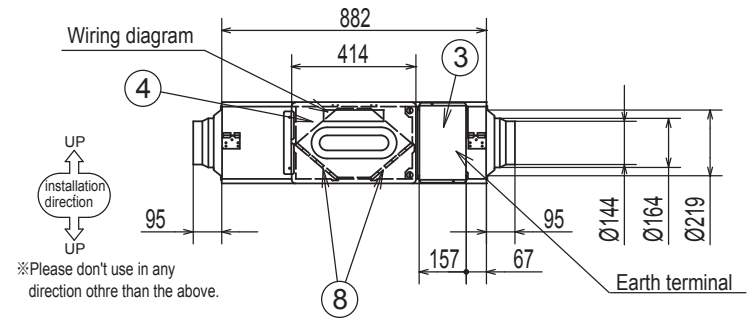
All measurements in mm.





SAF250E7

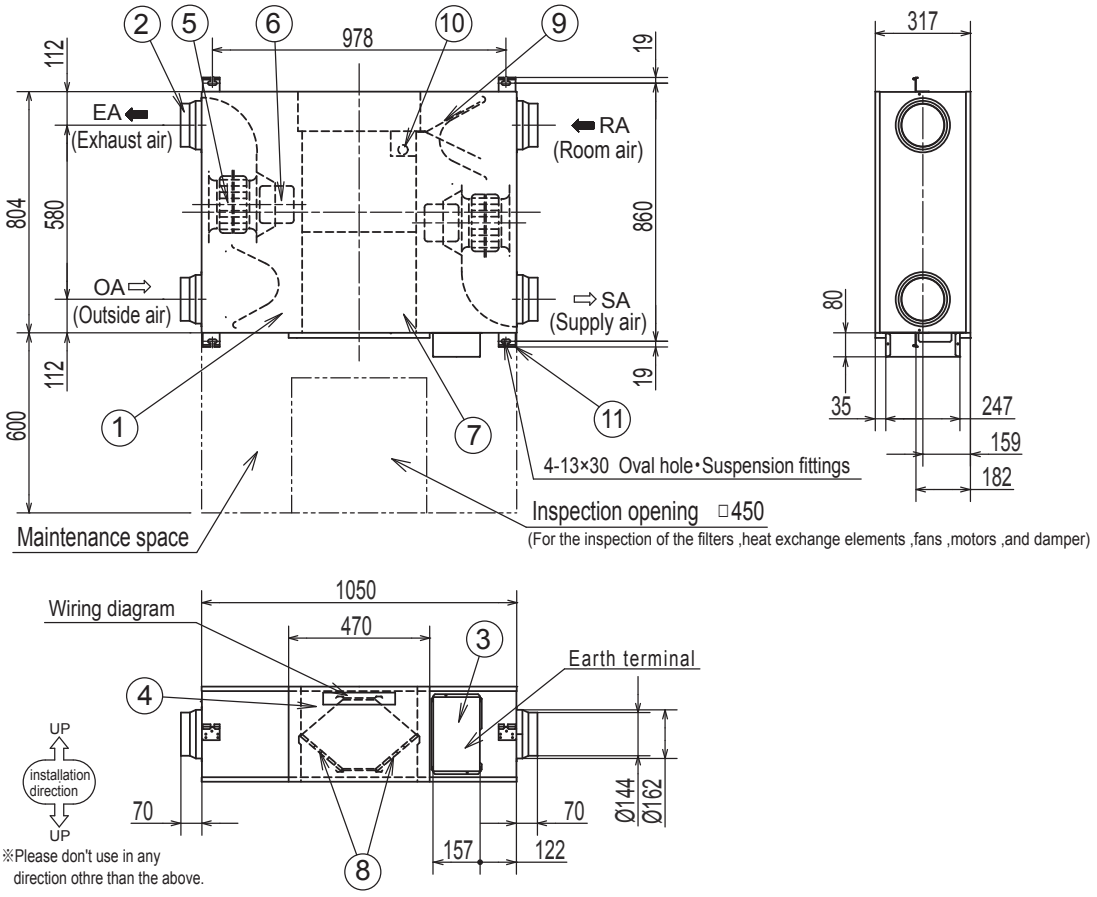




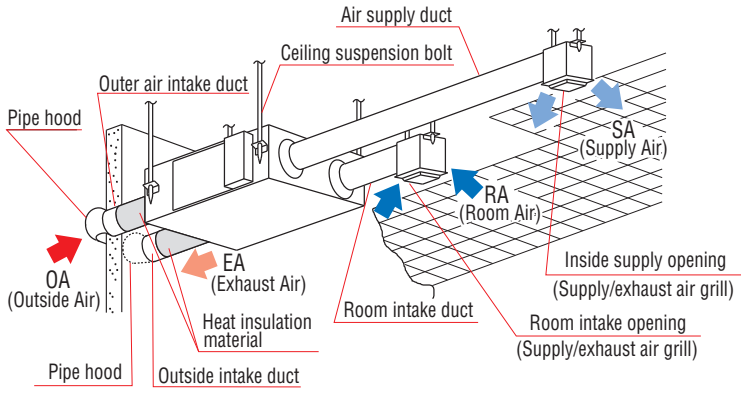
Fresh Air Ventilation and Heat Exchange unit
SAF-E7

SAF350E7

All measurements in mm.



Installation reference



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

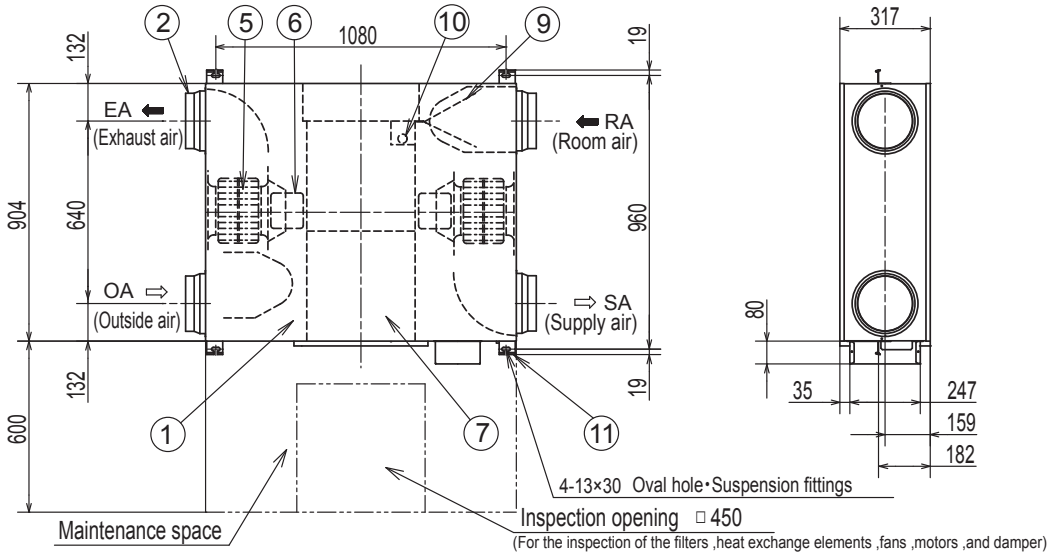
NO.	Name	Qt'y
①	Frame	1
②	Adaptor	4
③	Terminal board	1
④	Inspection Cover	1
⑤	Fan	2 ※
⑥	Motor	2 ※
⑦	Heat Exchange Element SAF150E7 SAF250E7 SAF350E7	 1 1 2
⑧	Filter	2
⑨	Damper	1
⑩	Damper Motor	1
⑪	Suspension fitting	4
⑫	Electrical components box	1

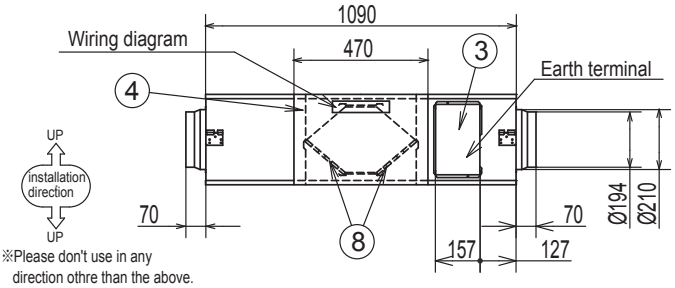
※Model SAF350E7 have different fan and motor locations.

Fresh Air Ventilation and Heat Exchange unit
SAF-E7

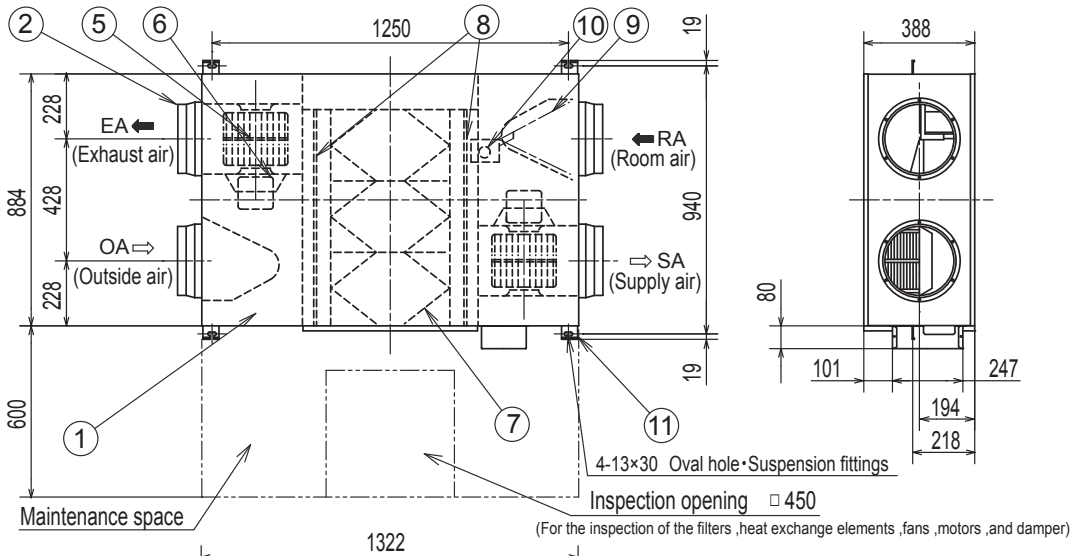
SAF500E7

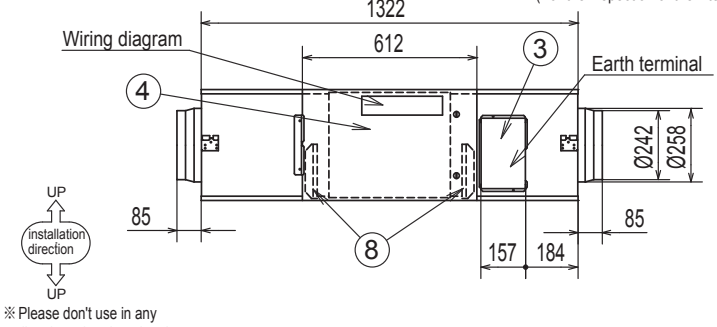
All measurements in mm.





SAF800E7

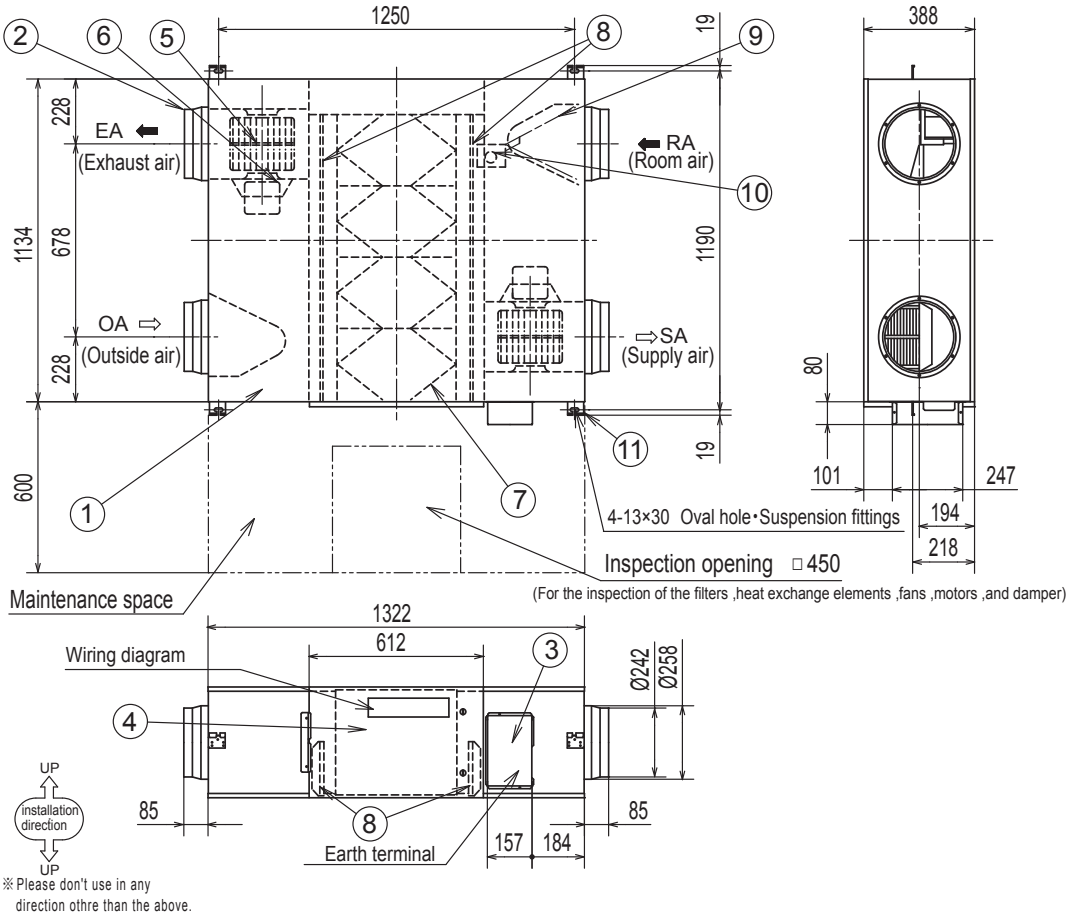




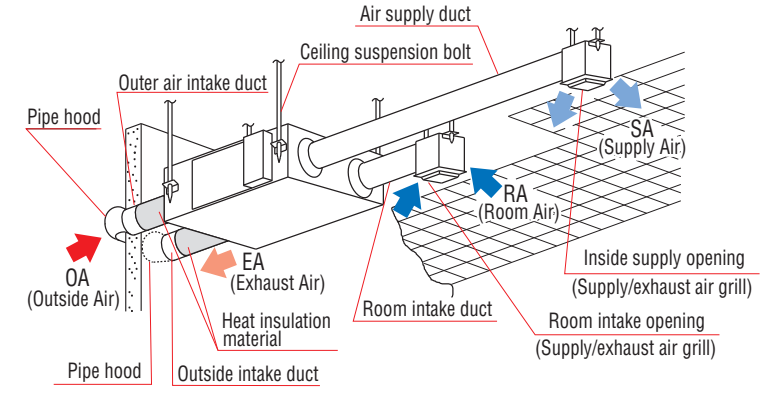
Fresh Air Ventilation and Heat Exchange unit
SAF-E7

SAF1000E7

All measurements in mm.



Installation reference



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

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

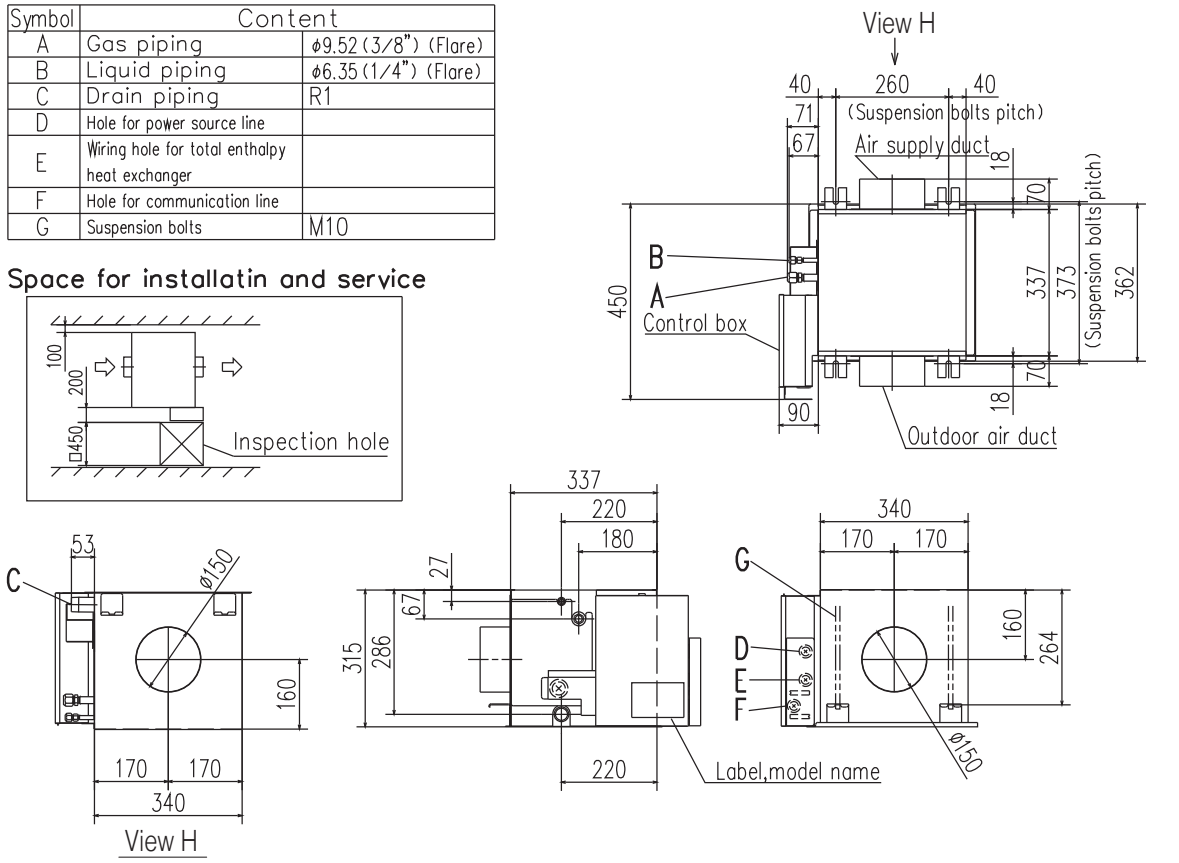
※Model SAF500E7 have different fan and motor locations.

Fresh Air DX Assembly
SAF-DX

SAF-DX250E6, SAF-DX350E6

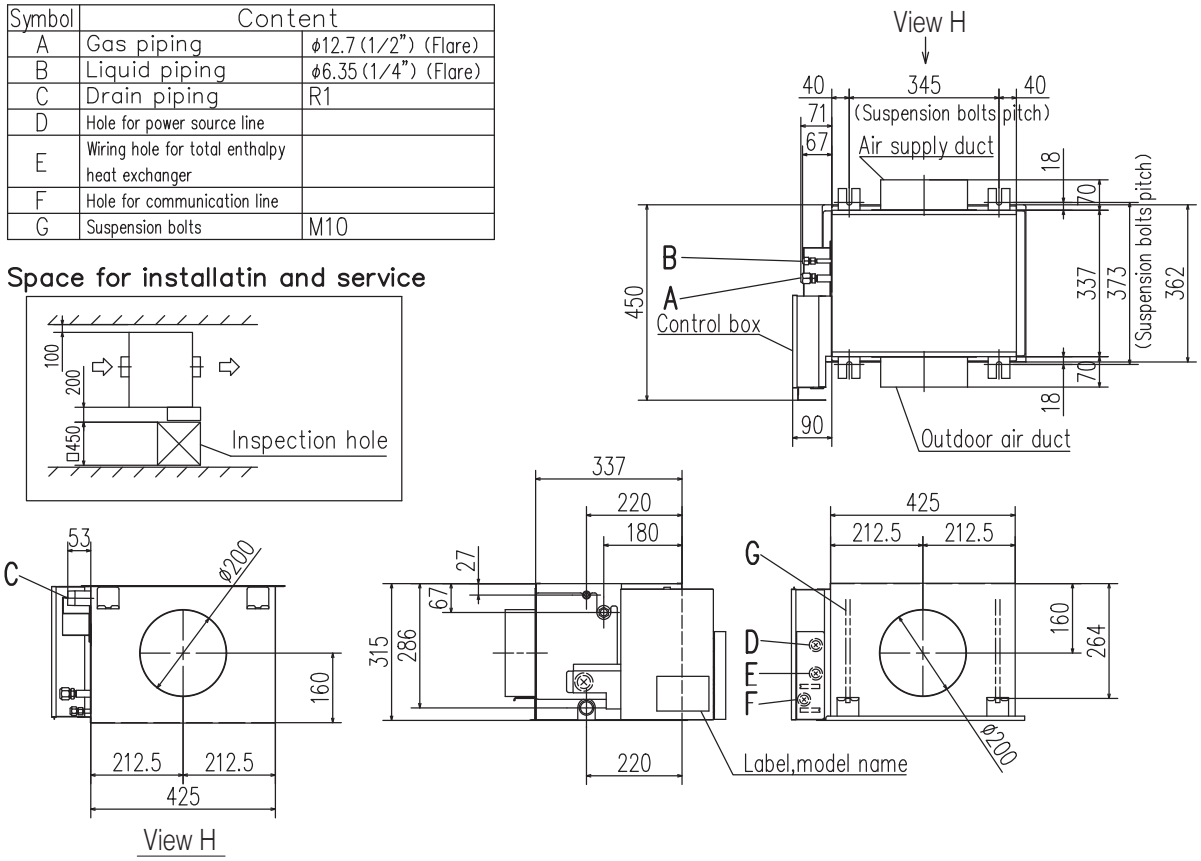
All measurements in mm.

Symbol	Content	
A	Gas piping	ϕ9.52 (3/8") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)
C	Drain piping	R1
D	Hole for power source line	
E	Wiring hole for total enthalpy heat exchanger	
F	Hole for communication line	
G	Suspension bolts	M10



SAF-DX500E6

Symbol	Content	
A	Gas piping	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)
C	Drain piping	R1
D	Hole for power source line	
E	Wiring hole for total enthalpy heat exchanger	
F	Hole for communication line	
G	Suspension bolts	M10



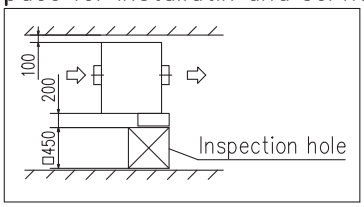
Fresh Air DX Assembly
SAF-DX

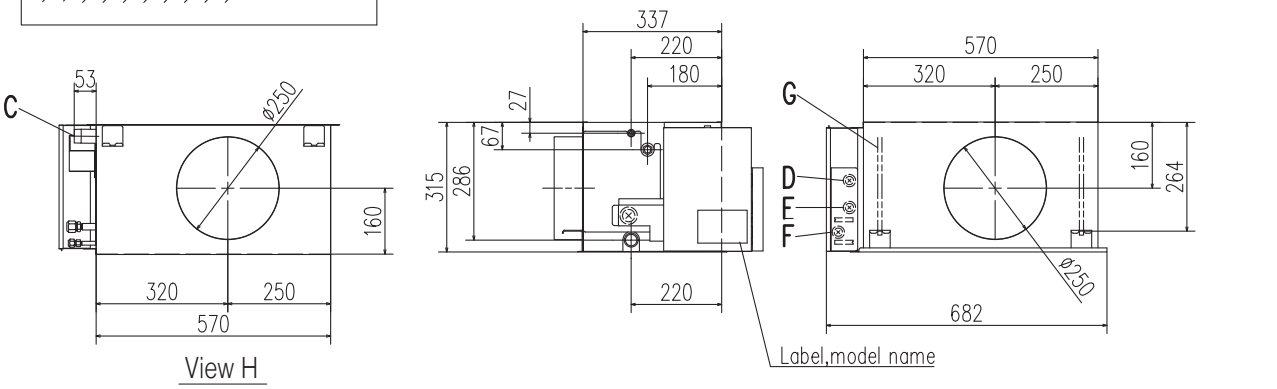
SAF-DX800E6

All measurements in mm.

Symbol	Content	
A	Gas piping	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)
C	Drain piping	R1
D	Hole for power source line	
E	Wiring hole for total enthalpy heat exchanger	
F	Hole for communication line	
G	Suspension bolts	M10

Space for installatin and service

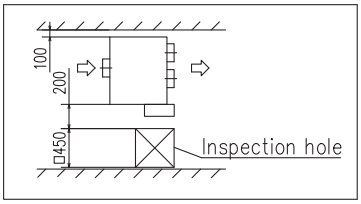


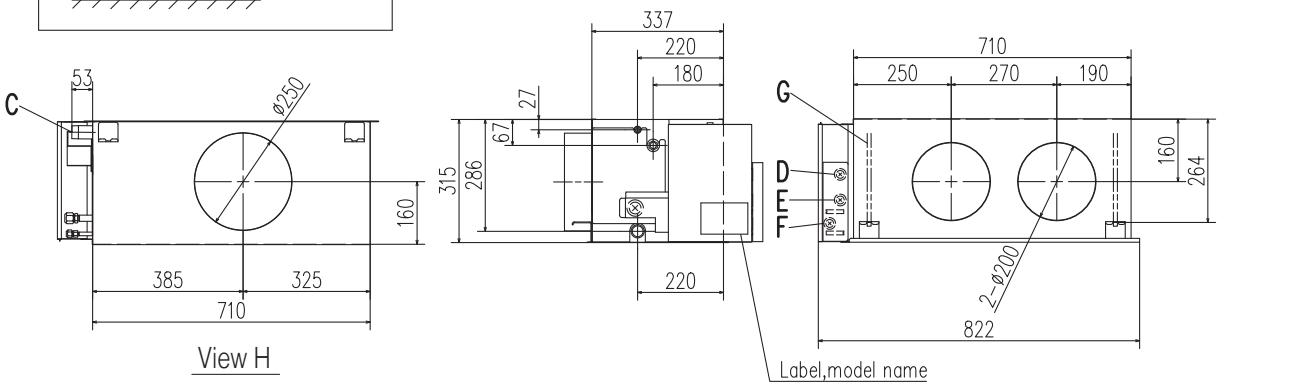


SAF-DX1000E6

Symbol	Content	
A	Gas piping	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C	Drain piping	R1
D	Hole for power source line	
E	Wiring hole for total enthalpy heat exchanger	
F	Hole for communication line	
G	Suspension bolts	M10

Space for installatin and service





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℃ and indoor temperature of 20℃ 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.

Our factories are ISO9001 and ISO14001 certified.

Certified ISO 9001

Certificate Number : JQA-0709

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

Certified ISO 14001

Certificate number : 02122E10366R2M

Mitsubishi Heavy Industries Thermal Systems, Ltd. Participate in the Eurovent certification program for variable refrigerant flow (VRF).Check ongoing validity of certificate: www.eurovent-certification.com

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https://www.mhi-mth.co.jp/en/

Because of our policy of continuous improvement, we reserve the right to make changes in all specifications without notice.

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