MITSUBISHI HEAVY INDUSTRIES

MOVE THE WORLD FORWARD MITSUBISHI HEAVY INDUSTRIES GROUP

VRF inverter multi-system Air-Conditioners

KXZ

High Performance Air-Conditioning

2023

Tropical Usage Model

50/60Hz

23KX04E

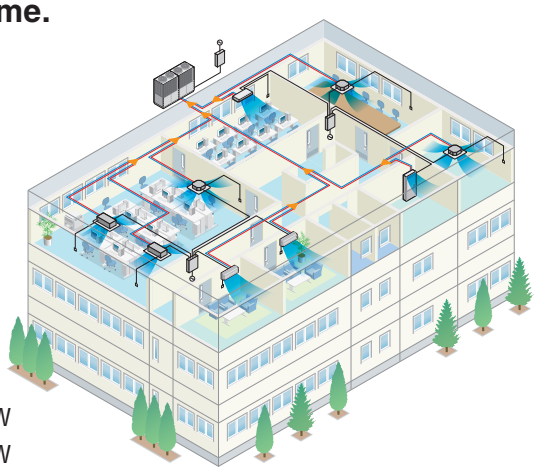
Japanese highly advanced technologies bring the most comfortable atmosphere. Tropical usage models has employed the same sophisticated control system which has been used in Japan and Europe markets for a long time.

Product Line Up

CE

<Outdoor units>

KXZ



Model No.

FDCB224KXZE1	22.4kW
FDCB280KXZE1	28.0kW
FDCB335KXZE1	33.5kW

Model No.

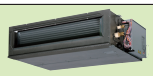
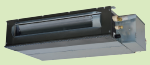
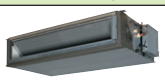
FDCB450KXZE1	(FDCB224+FDCB224)	45.0kW
FDCB500KXZE1	(FDCB224+FDCB280)	50.0kW
FDCB560KXZE1	(FDCB280+FDCB280)	56.0kW
FDCB615KXZE1	(FDCB280+FDCB335)	61.5kW
FDCB670KXZE1	(FDCB335+FDCB335)	67.0kW
FDCB735KXZE1	(FDCB224+FDCB224+FDCB280)	73.5kW
FDCB800KXZE1	(FDCB224+FDCB280+FDCB280)	80.0kW
FDCB850KXZE1	(FDCB280+FDCB280+FDCB280)	85.0kW
FDCB900KXZE1	(FDCB280+FDCB280+FDCB335)	90.0kW
FDCB950KXZE1	(FDCB280+FDCB335+FDCB335)	95.0kW
FDCB1000KXZE1	(FDCB335+FDCB335+FDCB335)	100.0kW

	Single use (1 outdoor unit)			Combination use (2 outdoor units)					Combination use (3 outdoor units)					
Capacity	8HP	10HP	12HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP	34HP	36HP
Model Code : kW	22.4	28	33.5	45.0	50.0	56.0	61.5	67.0	73.5	80.0	85.0	90.0	95.0	100.0
BTU / h	76,400	95,500	114,300	153,500	170,600	191,100	209,800	228,600	250,800	273,000	290,000	307,100	324,100	341,200
kcal / h	19,300	24,100	28,800	38,700	43,000	48,200	52,890	57,600	63,200	68,800	73,100	77,400	81,700	86,000

Contents

<Indoor units>

17 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.

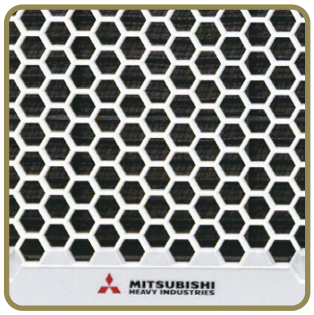
Type			Capacity	0.5HP	0.8HP	1HP	1.25HP	1.6HP	2HP	2.5HP	3.2HP	4HP	5HP	6HP	8HP	10HP
			Model Code : kW	15	22	28	36	45	56	71	90	112	140	160	224	280
Ceiling Cassette	4way	FDT				●	●	●	●	●	●	●	●	●		
	4way Compact	FDTC		●	●	●	●	●	●							
	2way	FDTW				●		●	●	●	●	●	●			
	1way	FDTS						●		●						
	1way Compact	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※				●		●	●	●						
OA Processing unit		FDU-F									●		●		●	●

Type		Air flow M³/h	150	250	350	500	800	850	1000	1300	1800
Fresh Air Ventilation and Heat Exchange unit	SAF※		●	●	●	●	●		●		
Fresh Air DX Assembly	SAF-DX※			●	●	●	●		●		

※ Not available for 60Hz area.

New Generation FDTC

European design & Flat panel



Ceiling cassette
Compact

FDTC

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

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

Thin Panel
FDTC thin panel fit within 10mm from the ceiling.

Unique Grille Design
Honeycomb grille

Draft Prevension Panel (Option)
Please refer to page 8

Motion Sensor (Option)
Please refer to page 6,7

Big Louver
Improved distribution

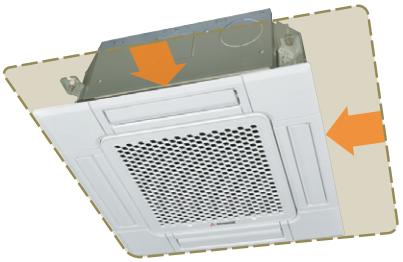
It is available to set draft prevention panel and motion sensor as well as FDT.

Compact Design

□700mm → □620mm

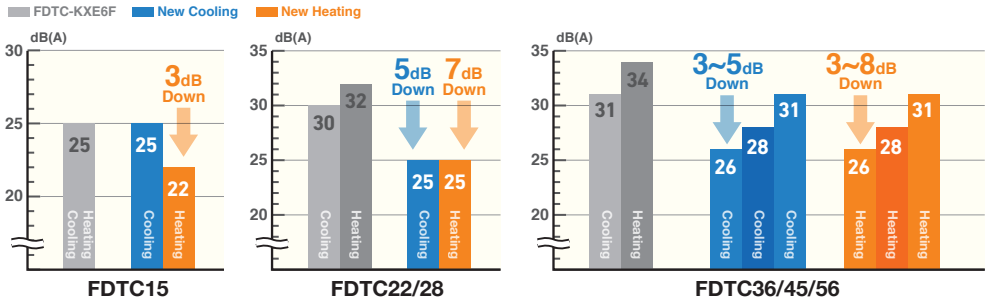
The weight is 14kg

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



Quieter operation

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



FDT colour variation

Now available in shadow black

Blend in, *or stand out*.

Shadow black

Fine snow white

Motion sensor

(Option)

Energy saving operation by detecting human movement

Optional for the following models


FDT


FDTC


FDTW


FDTS


FDU


FDUM


FDUT(71only)


FDE


FDK


FDU-F

NEW


FDTQ


FDUT(15~56)


FDFL


FDFU

3 Step Control

1 Power Control

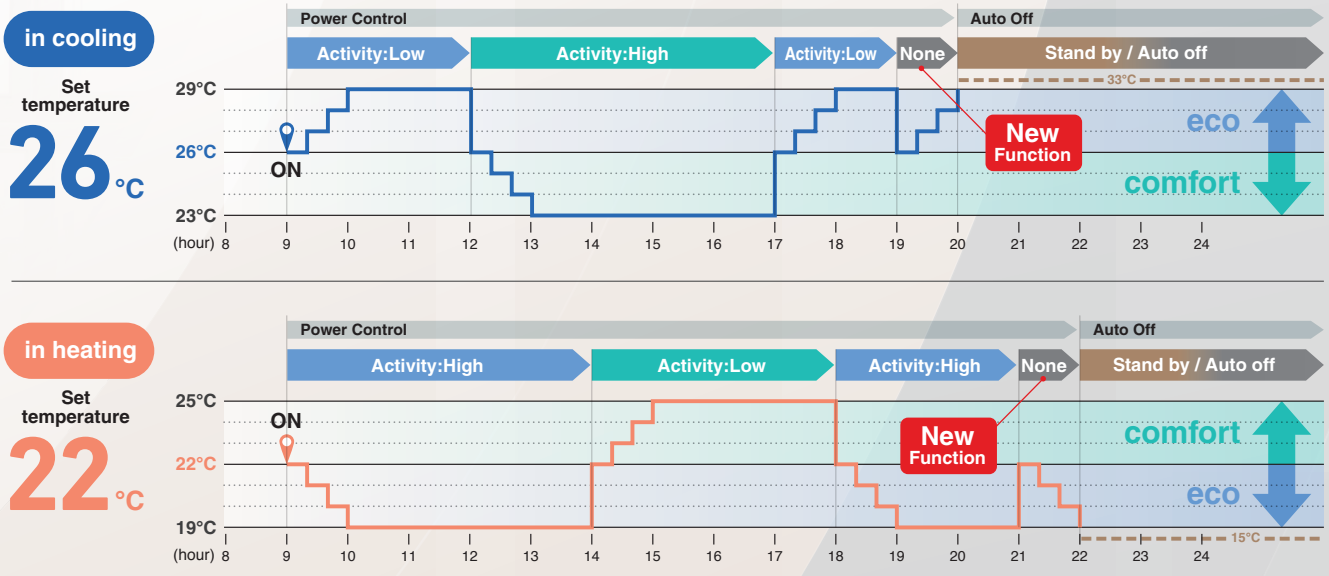
New motion sensor (option) detects human activity. Energy saving control is achieved by shifting set temperature according to detected amount of activity.

2 Stand by

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

3 Auto Off

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



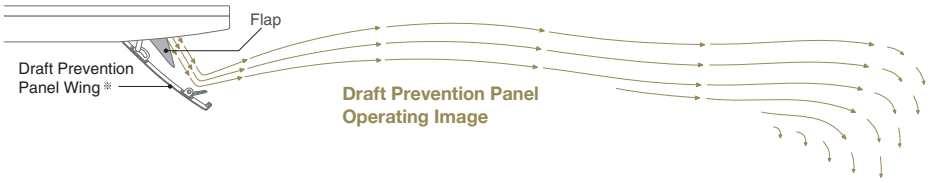
Operation mode and Control of Motion sensor

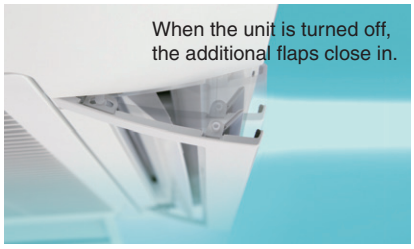
			Operation mode				
eco operation / comfort operation			Auto	Cool	Heat	Dry	Fan
Power Control ※1	Human activity	Low	Cooling +3°C Heating +3°C	+3°C	+3°C	–	–
		High	Cooling -3°C Heating -3°C	-3°C	-3°C	–	–
		None	Cooling +3°C Heating -3°C	+3°C	-3°C	–	–
Auto Off ※2			●	●	●	●	●

※1 Set temperature is revised maximum ±3℃ at Cooling/Heating mode by detecting heat volume movement.
※2 Absence for 1 hour ⇒ Operation stops (“Stand-by”) More 12 hours absence ⇒ Operation stops completely

Draft Prevention Panel (Option)

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



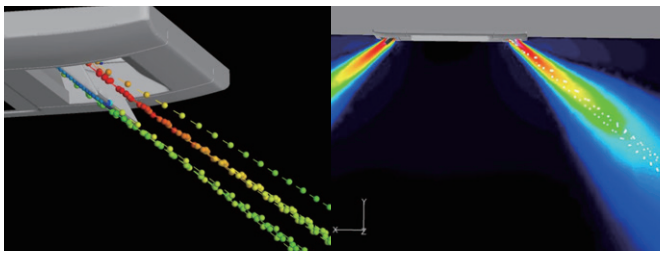


- New flexible function in the market
- Flexible flap control for draft prevention

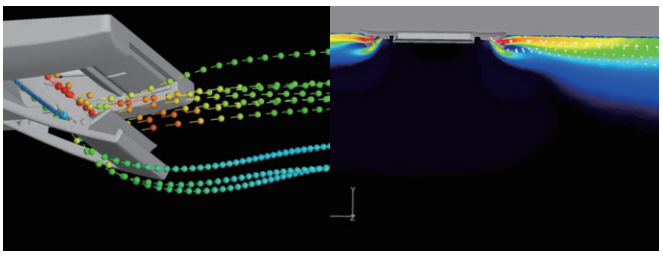
Each of the 4 flaps can be controlled individually at each operation mode. They change air flow direction and prevent drafts occurring. This function also provides flexible control for air flow direction.
User can position Draft Prevention Panel panels by using the remote controller only (RC-EX3A,Wireless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

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

Draft Prevention Panel off



Draft Prevention Panel working ※



Draft Prevention Panel provides a comfortable airflow without any draft feeling. Whether cooling or heating a room, the remote control can be used to instantly suppress any warm or cool drafts. This accurately assists how air flow is directed out of the indoor unit.

※ Image is for illustration purposes

Ceiling cassette
FDT

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

Remote Control

RC-EX3A

Intuitive touch controller with Liquid Crystal Display

Function Switch

The function switch allows you to select and set two functions of your choice among the seven available functions shown.
These functions can be used by simply pressing the button after they are set, allowing you to use your preferable functions immediately.

1. Draft prevention ON/OFF

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

2. High Power Mode

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

3. Energy Saving Mode

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

4. Quiet Mode

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

5. Home Leave Mode

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

6. Favourite Mode

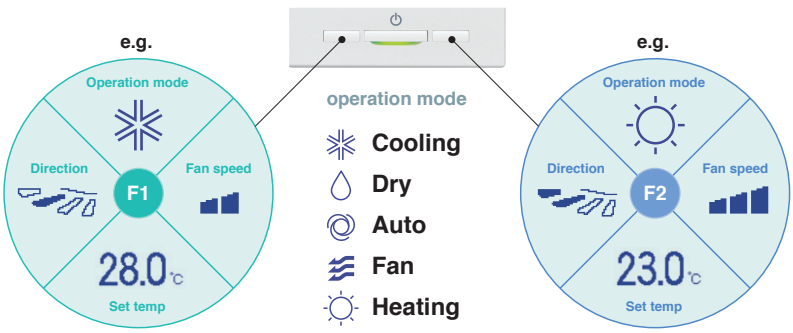
Operation mode, set temperature, fan speed and air flow direction will automatically be adjusted to the programmed favorite setting.

7. Filter Sign

Announces the due time for cleaning the air filter.

Favourite Mode

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



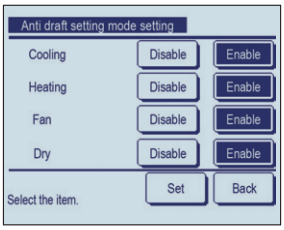
Adjustable Brightness of the Operation Lamp

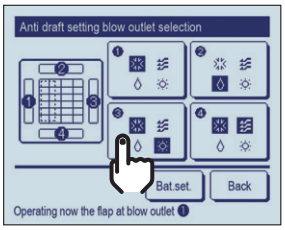
The brightness of the operation lamp behind Run/Stop switch can be adjusted by 10 stages.

Draft Prevention Setting

(only for FDT·FDTC series)

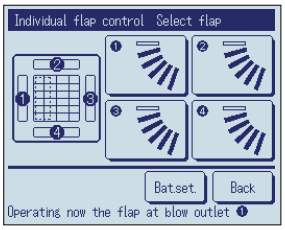
User can enable/disable the motion of Draft prevention panel for each blow outlet for each operation mode. This function can be set while operating.

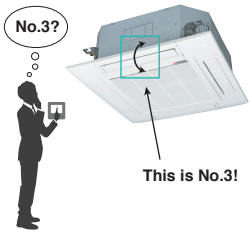




Easy Adjustment of the Air Flow

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





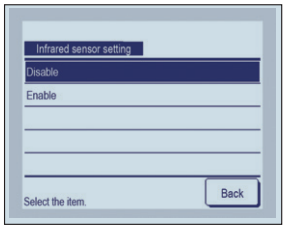
Motion Sensor Control

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

❶ Select Enable / Disable

Motion sensor control

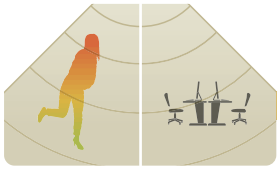
Enable/Disable



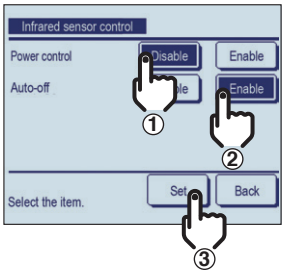
Select Enable / Disable for the motion sensor of the indoor unit connected to the R/C.

❷ Select Enable / Disable per control

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



Enable/Disable



Backup Control

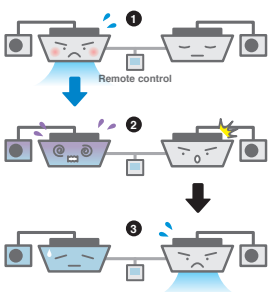
Control restricted to two indoor units (two groups)

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.

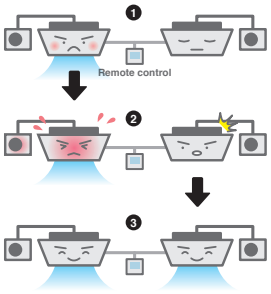


Capacity backup control

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.

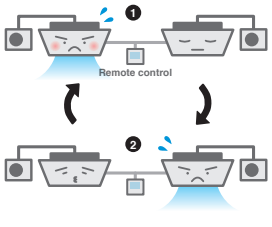


Rotational operation control

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.)



Additional functions of External Input / Output

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

Remote surveillance system

Card key on-off

External Input

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

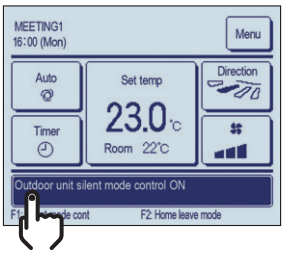
External Output

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

Newly added

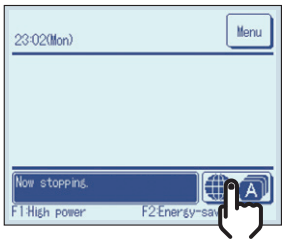
Silent mode control

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



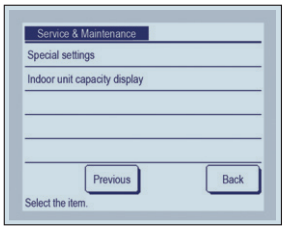
Language Switching

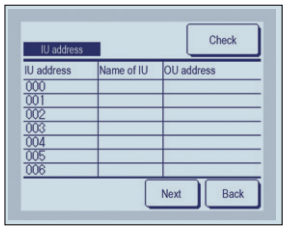
User can select from the following languages and also switch them on the top display.

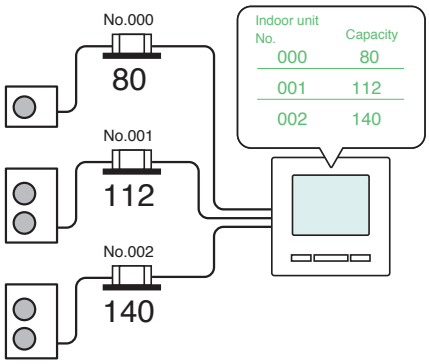


Indoor unit capacity display

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



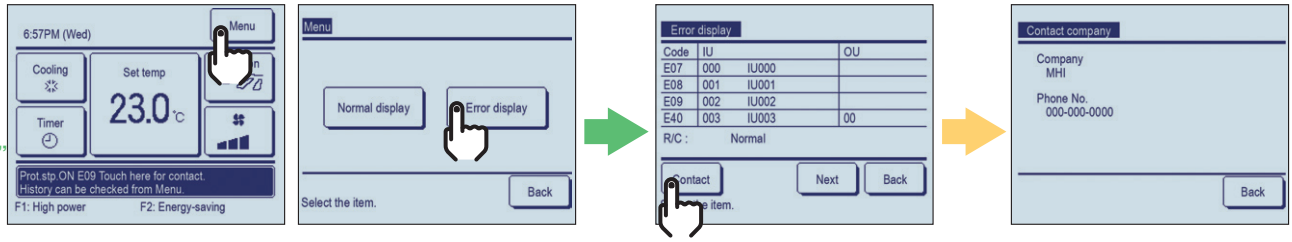




Error display

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

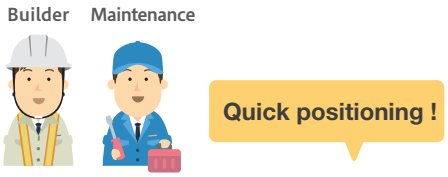
"Error"



Serviceability & workability

Easy and quick installation and maintenance

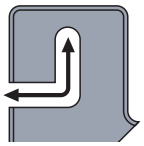
Indoor unit is easily positioned and installed

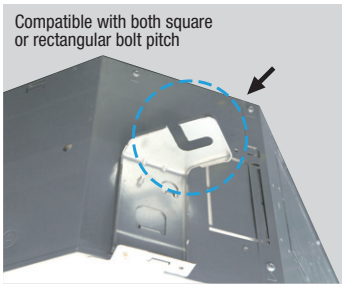


1 Adjustable easier positioning of unit by new slits

FDT

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

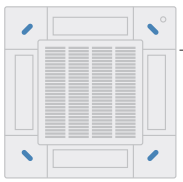


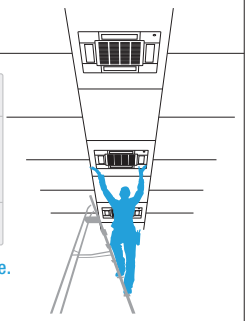


2 New slit in panel allows easier installation on site

FDT
FDTC

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





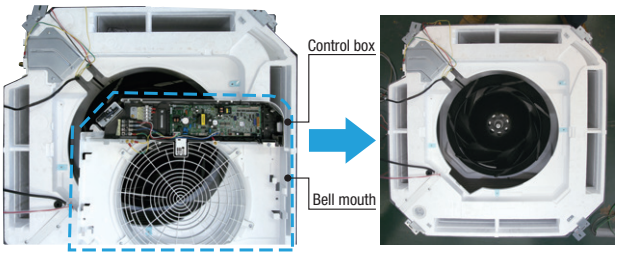
Quick installation and maintenance

1 Easy access to component part for easy maintenance

FDT

1 **The control box and bell mouth can be removed together.**

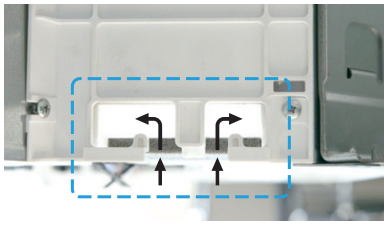
2 **Easy access to impeller and fan motor.**

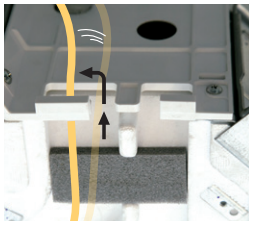


2 New shape of path of wiring

FDT

New shape of path gives easy wiring work for installation.

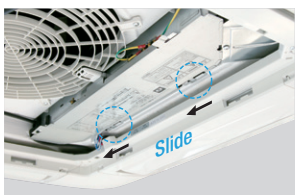


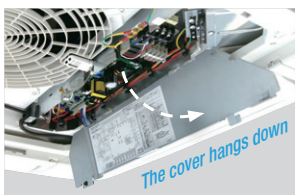


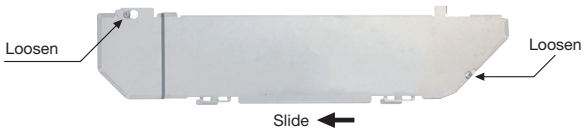
3 No need to remove screws to open the controller cover

FDT

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



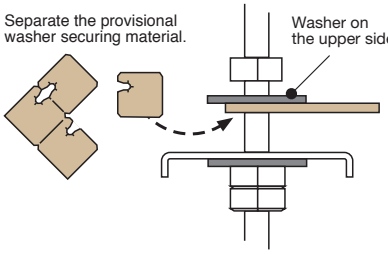


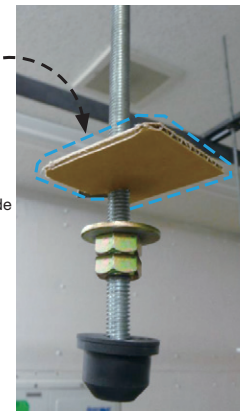


4 More safe installation by stopper of washer

FDT
FDTC

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





Builder Maintenance

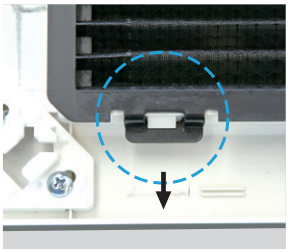
For smooth and easy working

Easy installation and maintenance

1 Easy and flexible hook to remove the filter

FDT FDTC

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

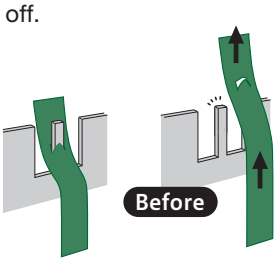


Press the filter tab to the outside and remove the filter.

2 Securely fix the corner lid by strap

FDT

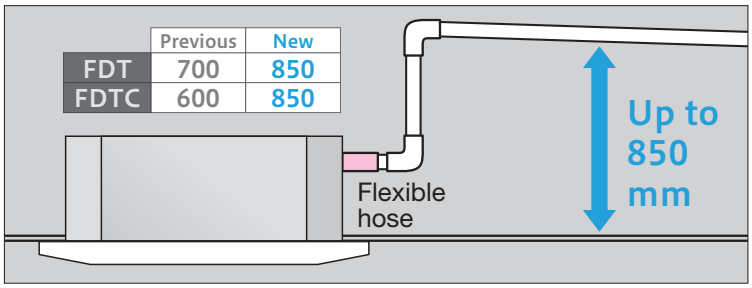
The direction of the strap hook part has been changed from longitudinal to lateral. Furthermore, a barb has been added to the hook pin to prevent the strap from coming off.



3 Drain-up-lift increases up to 850 mm

FDT FDTC

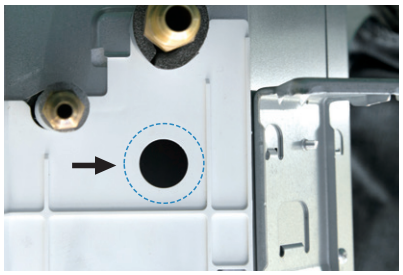
The drain can be lifted up to 850 mm from the ceiling surface.



4 New port to check drain water flow

FDT

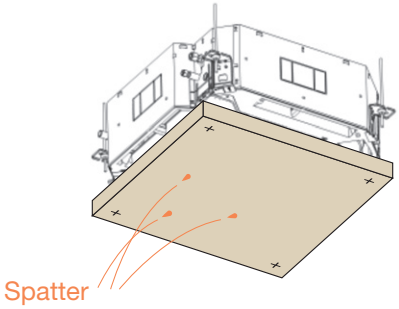
A water supply port has been provided in the piping lid for easier testing of the drain water flow.
(The port is usually sealed with a rubber cap.)



5 Re-use of packages during construction work

FDT FDTC

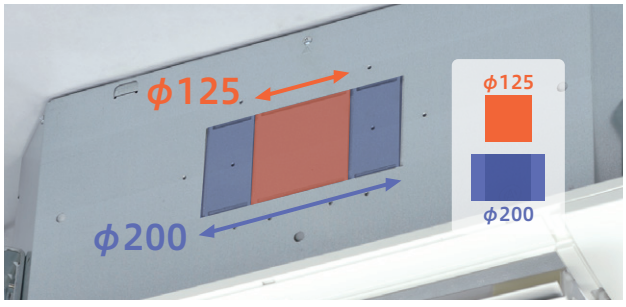
Package material (carton) helps to protect the unit from unexpected welding spatter or dust on the new unit.



6 More flexible outlet for ducting

FDT FDTC

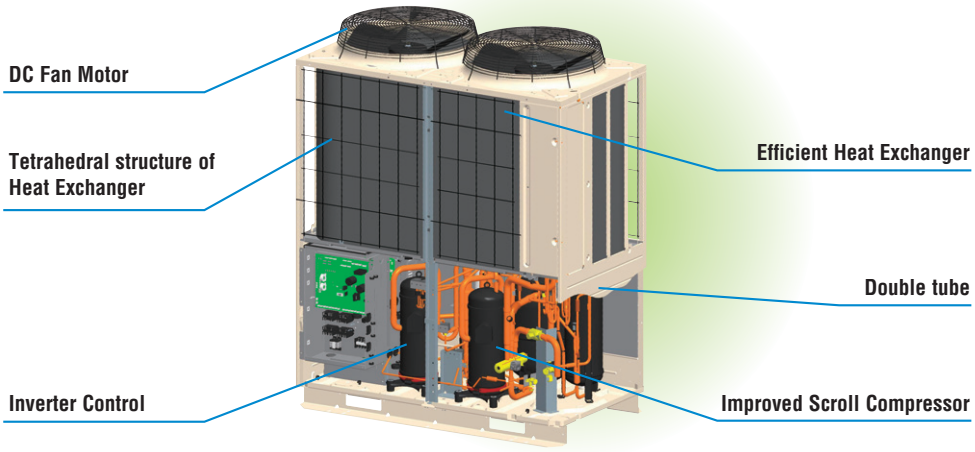
Both ϕ125 and ϕ200 (oval shaped) are available.



Outdoor unit

1. High Efficiency & Comfort

High efficiency and compact design are achieved by applying advanced components



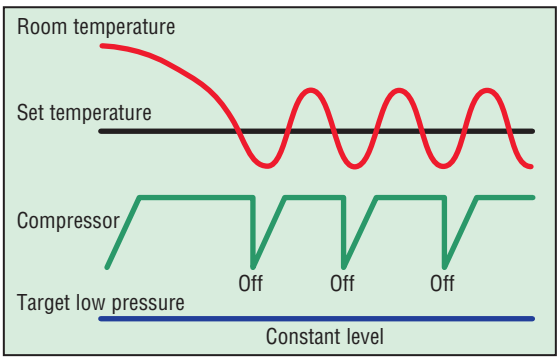
Variable Temperature and Capacity Control

VTCC

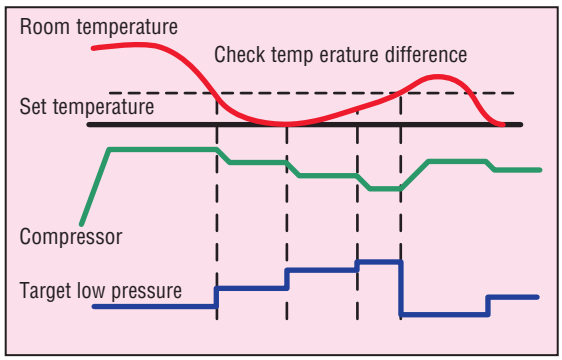
- The VTCC is a energy saving function designed by Mitsubishi Heavy Industries Thermal Systems.
- A new feature to all our KXZ ranges which provides up to 34%* energy savings in both cooling and heating mode.
- VTCC is a function specifically designed to maximise energy savings in partial load conditions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

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

Normal operation (in the cooling mode)



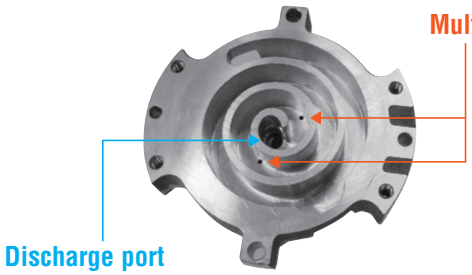
Energy saving operation (in the cooling mode)



VTCC adjusts the target pressure of the refrigerant cycle in the outdoor unit automatically according to the demand of the indoor units in partial load conditions. These smooth adjustments ensure an optimal capacity usage of the indoor units as well as maximised energy savings. Ultimately this also increases comfort for the user. For example, in partial load conditions where you have low cooling and heating requirements, VTCC reduces the compressor frequency and controls the actuators in the outdoor unit.
Overall with the VTCC functionality you will always have an additional energy saving of up to 34% (depending on configuration and usage of system) in low cooling and heating load requirements.

Multiport compressor that achieves high efficiency

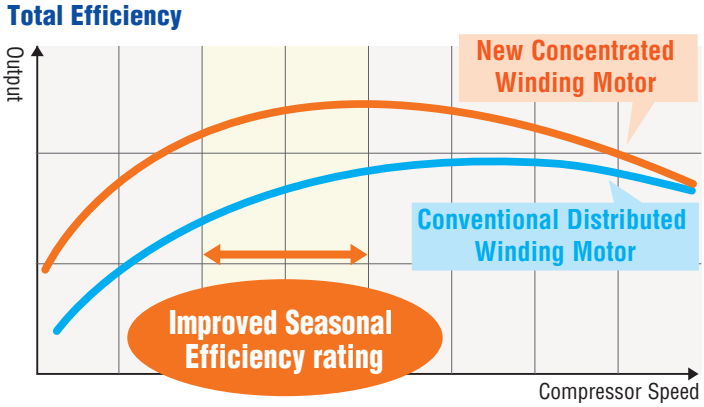
The multiport discharge area in the compressor has optimized pressure control with better balancing.
The performance improvement at medium Hz has resulted in higher annual efficiencies.



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

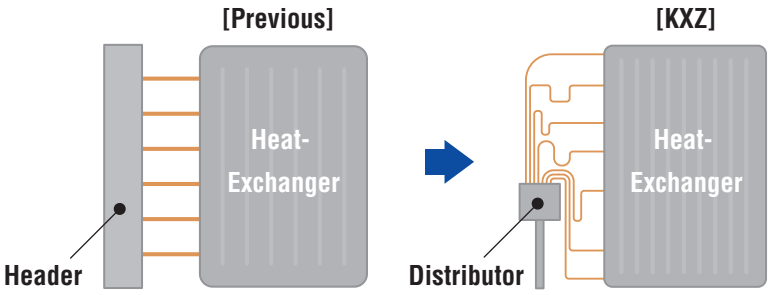
Concentrated winding motor achieves "High Output" and "Total Efficiency Improvement"

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



Energy efficient Heat-exchanger

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



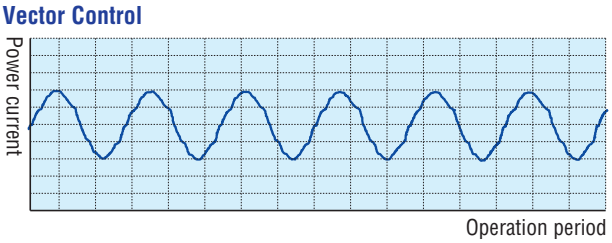
Strengthened resistance against frost

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

Vector control

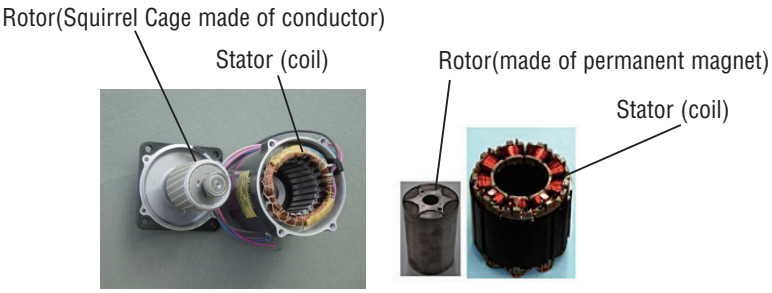
Applied Vector control has a high efficiency and many new advanced features.

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



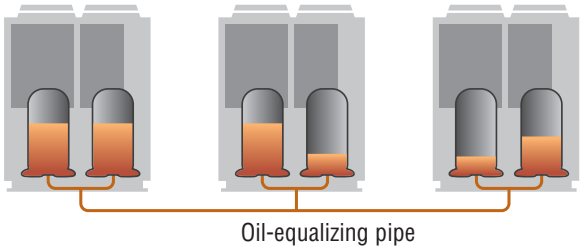
DC Fan Motor

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



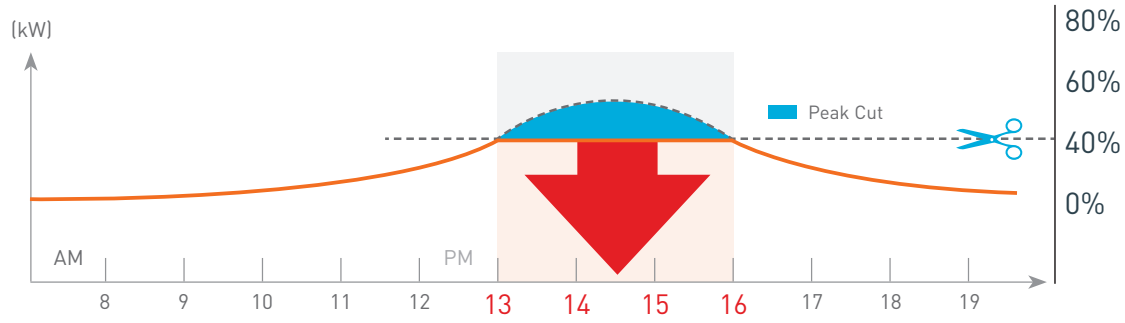
Oil level control capability

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



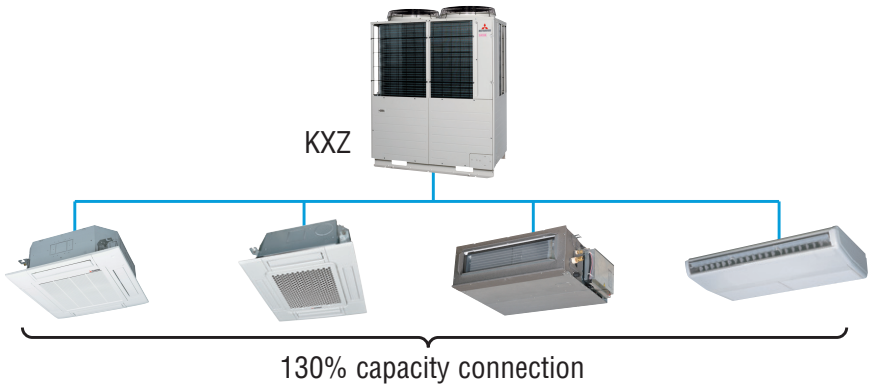
Capacity control

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



2. Design Flexibility

Indoor unit capacity connection

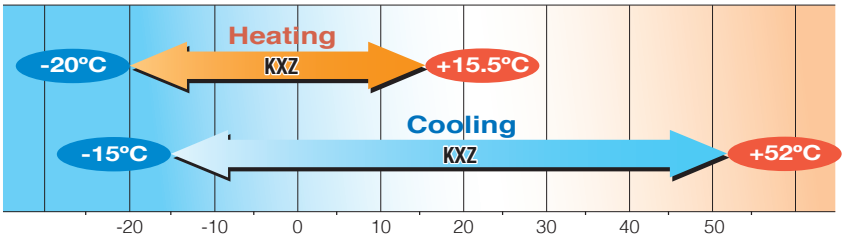


Connectable indoor units

HP	8	10	12	16	18	20	22	24	26	28	30	32	34	36
Numbers	22	24	29	39	43	48	53	58	63	69	73	78	80	80

Wide Range of Operation

KXZ series permits an extensible system design with a heating range operation down to -20˚C and a cooling range operation up to 52˚C (previous model : 43˚C)



Control Systems

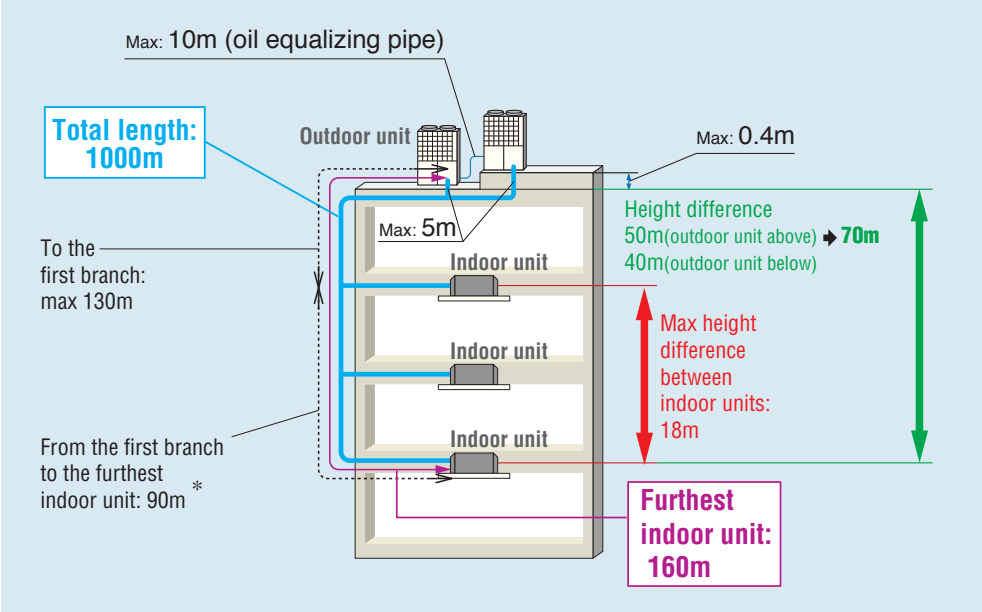
All series offer wide choice of control system and provide the best solution.

[Control system units with SUPERLINK-Ⅱ]

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

Long Pipe Length

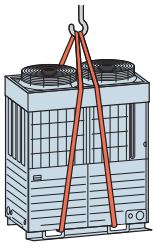
Piping length has extended max height difference between indoor units up to 18m and enables us to put indoor units on extra three floors. The furthest indoor unit: 160m or total length: 1000m contributes to system design flexibility.



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

Easy Transportation & Installation

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



Blue Fin

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

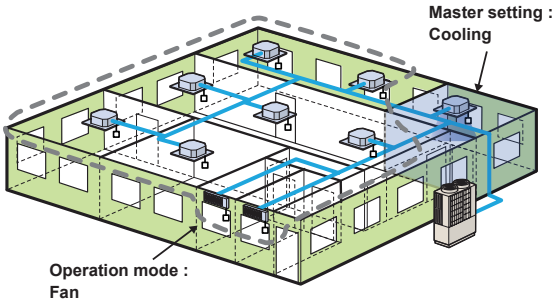
Priority operation mode rule

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

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

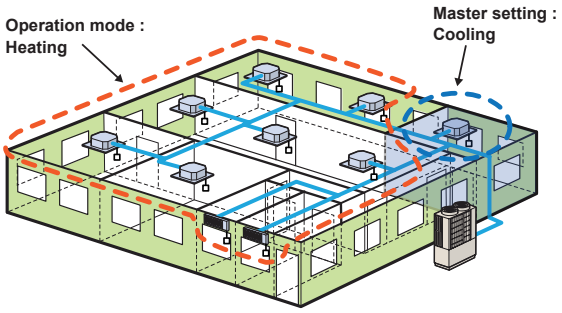
<Majority operation mode>

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



<Master operation mode>

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



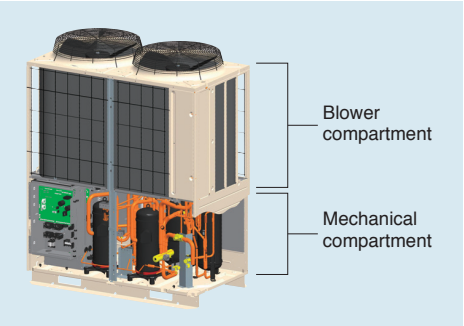
Fixed Cooling mode/fixed heating mode (summer/winter switch)

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

3. Serviceability

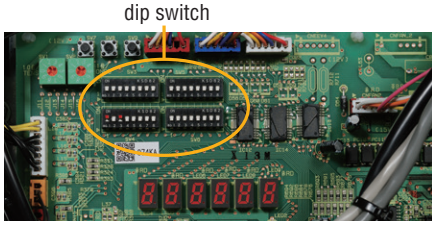
Easy Service

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



Check Operation

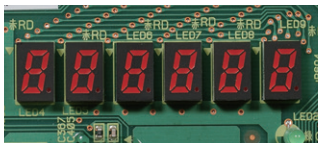
Closing of Service valve, crossing connection of refrigerant piping and electrical wiring, proper operation of EEV (Electrical Expansion Valve) can be checked automatically in cooling operation. This check operation can be done at 0~43ºC outdoor temperature and 10~32ºC indoor temperature by use of outdoor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



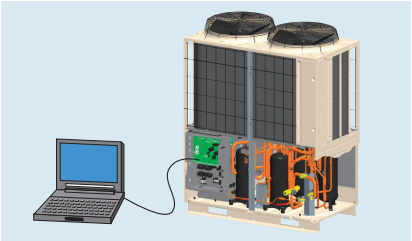
Monitoring Function

All series include features to assist with servicing and troubleshooting.
Various data can be monitored through 3-digit or 6-digit display on the outdoor unit PCB.

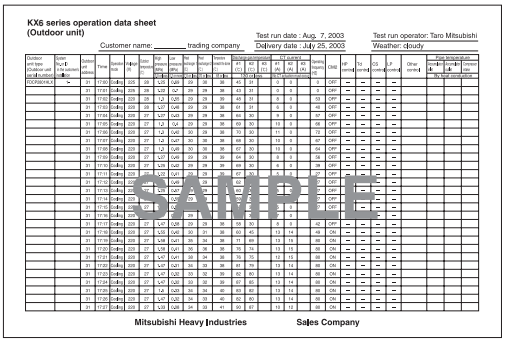
Detailed fault diagnosis and operation history memory via 7-segment display.



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



Automatically produced test-run report


KX6 series operation data sheet
(Outdoor unit)

Customer name: _____ trading company

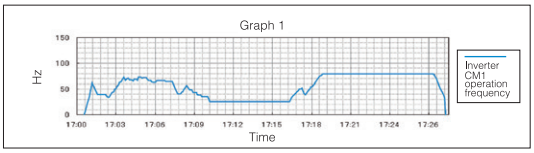
Test run date : Aug. 7, 2003
Delivery date : July 25, 2003

Test run operator: Taro Mitsubishi
Weather: cloudy

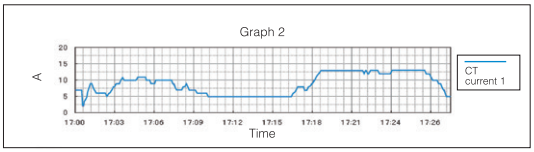
SAMPLE

Mitsubishi Heavy Industries Sales Company

Operation data storage during servicing

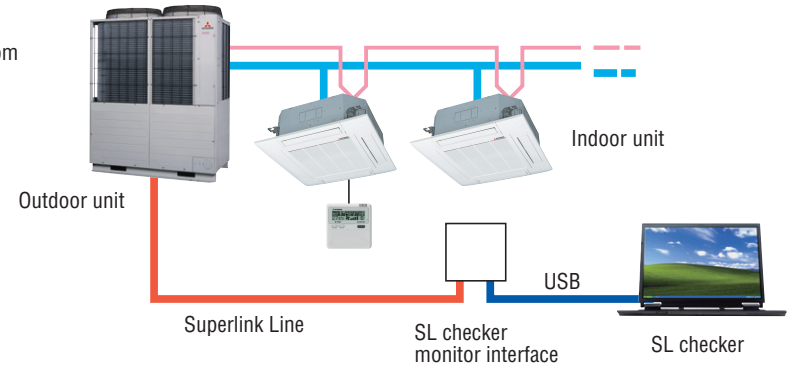


Operation data storage when a fault occurs



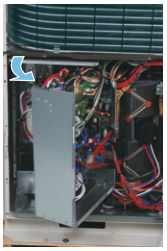
SL Checker Ⅱ

Remote Control can be operated function from setting Superlink checker.



3 Layer Construction

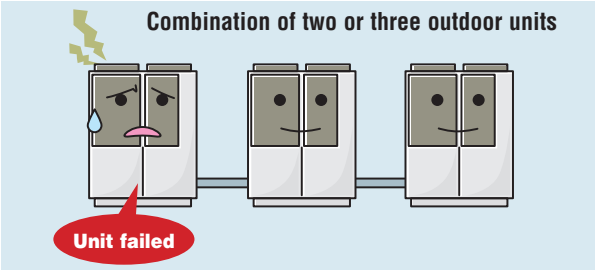
Thanks to control box structure with 3 layer construction using hinge connection, service and maintenance has been made much easier for inverter components.



KXZ (3 layer)

Back-up Operation

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



4. 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)

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

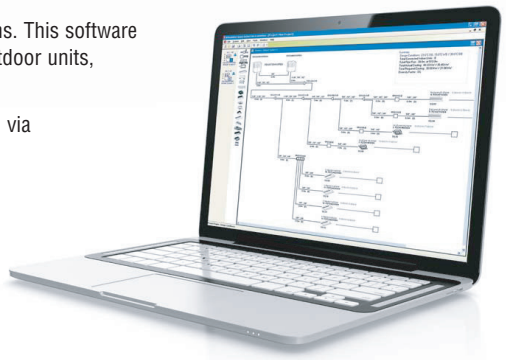
- Better design visualization
- BIM reduces conflicts and changes during construction
- Increases overall accuracy of project documentation
- Improves cost estimating
- Improves energy analysis
- Simplifies reporting and scheduling

e-solution

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

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

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



MACO Service App

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

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

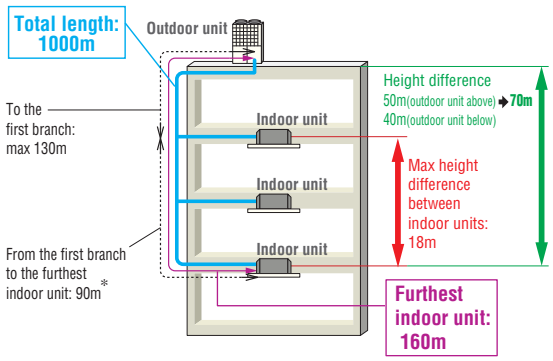
To download the App go to:
iPhone: https://apps.apple.com/th/app/maco-service/id1276956648
Android: https://play.google.com/store/apps/details?id=com.ssd.macoservice&hl=en_US&gl=US

KXZ Heat pump systems CE
8,10,12HP (22.4kW~33.5kW)

Model No.	Nominal Cooling Capacity
FDCB224KXZE1	22.4kW
FDCB280KXZE1	28.0kW
FDCB335KXZE1	33.5kW

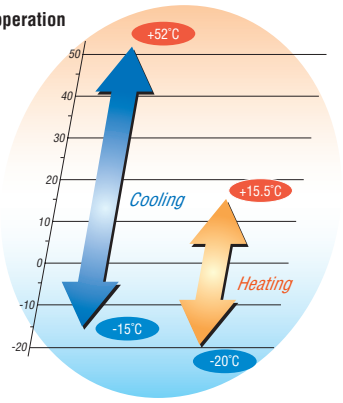
Blue Fin

- The KXZ heat pump 2-pipe systems offer high performance VRF for applications that require either cooling only or heating only, ideal for open plan areas.
- Connect up to 29 indoor units/up to 130% capacity.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.



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

Range of operation



Specifications

Item				Model	FDCB224KXZE1	FDCB280KXZE1	FDCB335KXZE1
Nominal horse power					8HP	10HP	12HP
Power source					3 phase 380-415V, 50Hz / 380V, 60Hz		
Starting current				A	5		
Max current				A	18.2	21.2	
ISO-T1	Nominal capacity	Cooling		kW	22.4	28.0	33.5
		Heating			25.0	31.5	37.5
	Electric characteristics	Power consumption	Cooling	kW	4.98	7.24	8.96
			Heating		5.56	7.28	9.04
ISO-T3	Nominal capacity	Cooling		kW	20.7	24.5	29.3
	Electric characteristics	Power consumption	Cooling	kW	6.04	8.00	9.83
Exterior dimensions		HxWxD		mm	1690x1350x720		
Net weight				kg	272		
Refrigeration charge		R410A		kg	11		
Sound pressure level		Cooling/Heating		dB(A)	56/57	55/57	61/58
Refrigerant piping size		Liquid line		mm(in)	ø9.52(3/8")		ø12.7(1/2")
		Gas line			ø19.05(3/4")	ø22.22(7/8")	ø25.4(1")
Capacity connection				%	80~130		
Number of connectable indoor units					22	24	29

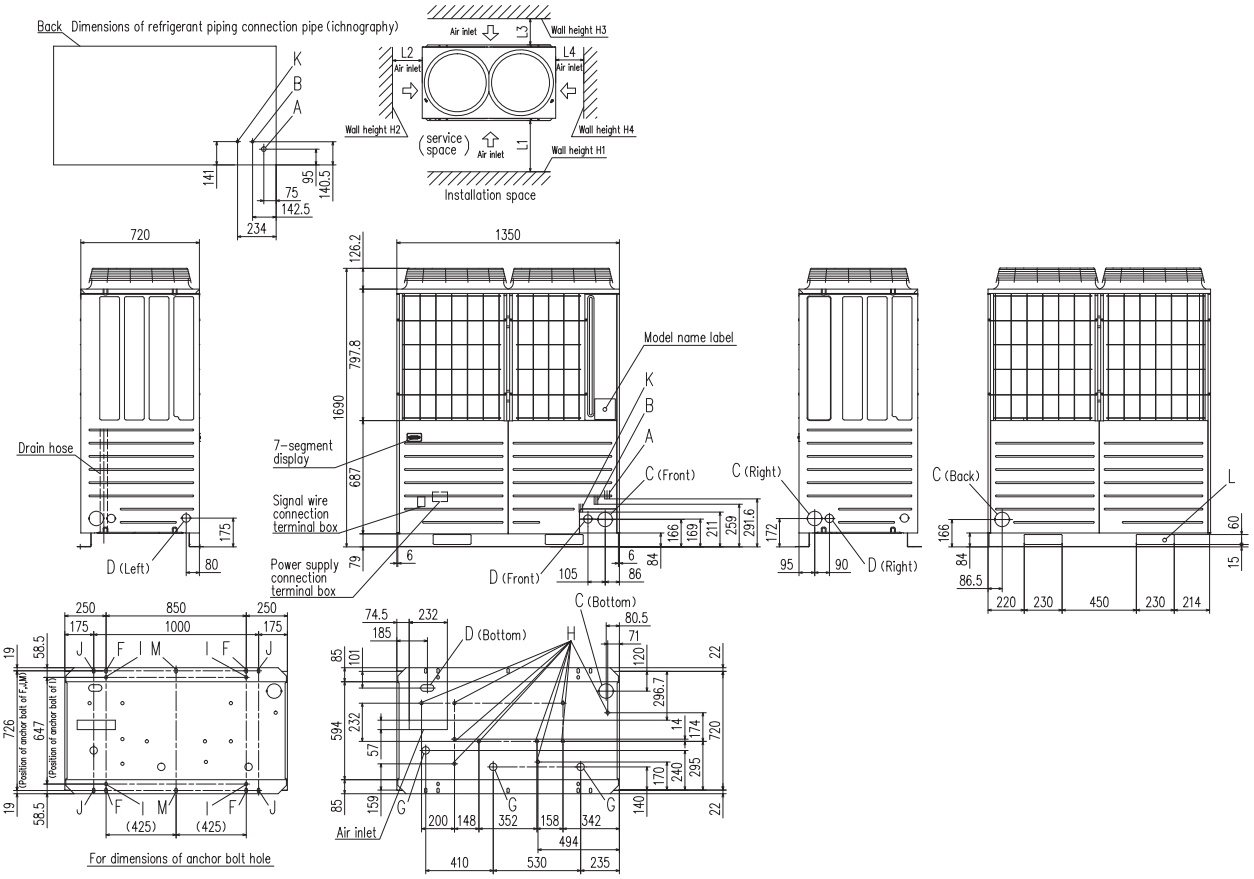
(1) The operation datas are measured under the following conditions.

Item / Standard		Indoor air temperature		Outdoor air temperature	
		DB	WB	DB	WB
Cooling	ISO-T1	27°C	19°C	35°C	24°C
	ISO-T3	29°C	19°C	46°C	24°C
Heating	ISO-T1/T3	20°C	-	7°C	6°C

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

Dimensions

All measurements in mm.



Mark	Content	224	280	335
A	Refrigerant gas piping connection pipe	ø19.05 (Brazing)	ø22.22 (Brazing)	ø25.4 (Brazing)
B	Refrigerant liquid piping connection pipe	ø9.52 (Flare)		ø12.7 (Flare)
C	Refrigerant piping exit hole	ø88 (or ø100)		
D	Power supply entry hole	ø50 (Right · Left · Front), Long hole 40 x 80 (Bottom)		
F	Anchor bolt hole	M10 x 4 places		
G	Drain waste water hose hole	ø45 x 3 places		
H	Drain hole	ø20 x 10 places		
K	Refrigerant oil equalization piping connection pipe	ø9.52 (Flare)		
L	Carrying in or hole for hanging	230 x 60		

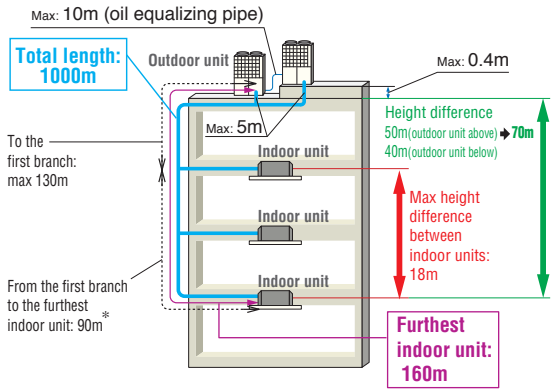
Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10(30)	10(30)
L_3	100	100
L_4	10(30)	Open
H_1	1500	Open
H_2	No limit	No limit
H_3	1000	No limit
H_4	No limit	Open

In case the ambient temperature becomes 43˚C or higher during cooling operation

KXZ Heat pump systems CE
16,18,20,22,24HP (45.0kW~67.0kW)

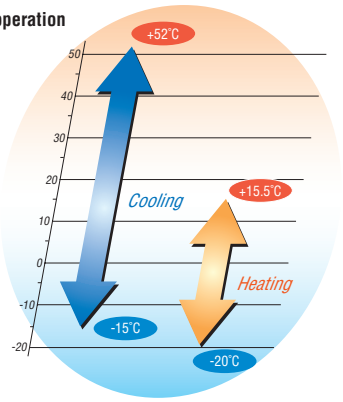
Model No.		Nominal Cooling Capacity
FDCB450KXZE1	(FDCB224+FDCB224)	45.0kW
FDCB500KXZE1	(FDCB224+FDCB280)	50.0kW
FDCB560KXZE1	(FDCB280+FDCB280)	56.0kW
FDCB615KXZE1	(FDCB280+FDCB335)	61.5kW
FDCB670KXZE1	(FDCB335+FDCB335)	67.0kW

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



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

Range of operation



Specifications

Exterior dimension : Please refer to page23.

Item				Model	FDCB450KXZE1	FDCB500KXZE1	FDCB560KXZE1	FDCB615KXZE1	FDCB670KXZE1
Combination(FDCB)					224KXZE1	224KXZE1	280KXZE1	280KXZE1	335KXZE1
					224KXZE1	280KXZE1	280KXZE1	335KXZE1	335KXZE1
Nominal horse power					16HP	18HP	20HP	22HP	24HP
Power source					3 phase 380-415V, 50Hz / 380V, 60Hz				
Starting current				A	10				
Max current				A	36.4	39.4	42.4		
ISO-T1	Nominal capacity	Cooling		kW	45.0	50.0	56.0	61.5	67.0
		Heating			50.0	56.0	63.0	69.0	75.0
	Electric characteristics	Power consumption	Cooling	kW	10.00	12.05	14.47	16.20	17.92
			Heating		11.12	12.72	14.56	16.32	18.08
ISO-T3	Nominal capacity	Cooling		kW	41.5	45.2	49.0	53.8	58.6
	Electric characteristics	Power consumption	Cooling	kW	12.11	14.04	16.00	17.83	19.66
Exterior dimensions		HxWxD		mm	1690x2700x720				
Net weight				kg	544				
Refrigeration charge		R410A		kg	11.0x2				
Refrigerant piping size		Liquid line		mm(in)	ø12.7(1/2")				
		Gas line			ø28.58(1 1/8")				
Capacity connection				%	80~130				
Number of connectable indoor units					39	43	48	53	58

(1) The operation datas are measured under the following conditions.

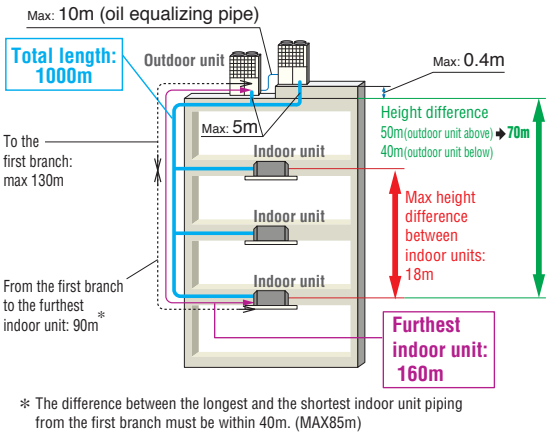
Item / Standard		Indoor air temperature		Outdoor air temperature	
		DB	WB	DB	WB
Cooling	ISO-T1	27°C	19°C	35°C	24°C
	ISO-T3	29°C	19°C	46°C	24°C
Heating	ISO-T1/T3	20°C	-	7°C	6°C

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

KXZ Heat pump systems CE
26,28,30,32,34,36HP (73.5kW~100.0kW)

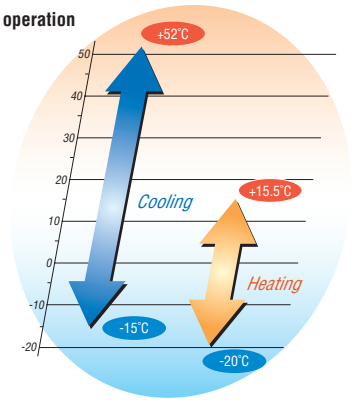
Model No.		Nominal Cooling Capacity
FDCB735KXZE1	(FDCB224+FDCB224+FDCB280)	73.5kW
FDCB800KXZE1	(FDCB224+FDCB280+FDCB280)	80.0kW
FDCB850KXZE1	(FDCB280+FDCB280+FDCB280)	85.0kW
FDCB900KXZE1	(FDCB280+FDCB280+FDCB335)	90.0kW
FDCB950KXZE1	(FDCB280+FDCB335+FDCB335)	95.0kW
FDCB1000KXZE1	(FDCB335+FDCB335+FDCB335)	100.0kW

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



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

Range of operation



Specifications

Exterior dimension : Please refer to page23.

Item				Model	FDCB735KXZE1	FDCB800KXZE1	FDCB850KXZE1	FDCB900KXZE1	FDCB950KXZE1	FDCB1000KXZE1
Combination(FDCB)					224KXZE1	224KXZE1	280KXZE1	280KXZE1	280KXZE1	335KXZE1
					224KXZE1	280KXZE1	280KXZE1	280KXZE1	335KXZE1	335KXZE1
					280KXZE1	280KXZE1	280KXZE1	335KXZE1	335KXZE1	335KXZE1
Nominal horse power					26HP	28HP	30HP	32HP	34HP	36HP
Power source					3 phase 380-415V, 50Hz / 380V, 60Hz					
Starting current				A	15					
Max current				A	57.6	60.6	63.6			
ISO-T1	Nominal capacity	Cooling		kW	73.5	80.0	85.0	90.0	95.0	100.0
		Heating			82.5	90.0	95.0	100.0	106.0	112.0
	Electric characteristics	Power consumption	Cooling	kW	17.26	19.76	21.98	23.55	25.15	26.75
			Heating		18.62	20.57	21.96	23.47	25.23	27.00
ISO-T3	Nominal capacity	Cooling		kW	65.9	69.7	73.5	78.3	83.1	87.9
	Electric characteristics	Power consumption	Cooling	kW	20.08	22.04	24.00	25.83	27.66	29.49
Exterior dimensions		HxWxD		mm	1690x4050x720					
Net weight				kg	816					
Refrigeration charge		R410A		kg	11.0x3					
Refrigerant piping size		Liquid line		mm(in)	ø15.88(5/8")					
		Gas line			ø31.8(1 1/4") [ø34.92(1 3/8")]					ø38.1(1 1/2") [ø34.92(1 3/8")]
Capacity connection				%	80~130					
Number of connectable indoor units					63	69	73	78	80	80

(1) The operation datas are measured under the following conditions.

Item / Standard		Indoor air temperature		Outdoor air temperature	
		DB	WB	DB	WB
Cooling	ISO-T1	27°C	19°C	35°C	24°C
	ISO-T3	29°C	19°C	46°C	24°C
Heating	ISO-T1/T3	20°C	-	7°C	6°C

(2) Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
(3) [ ]:Pipe size applicable to European installations are shown in parentheses.

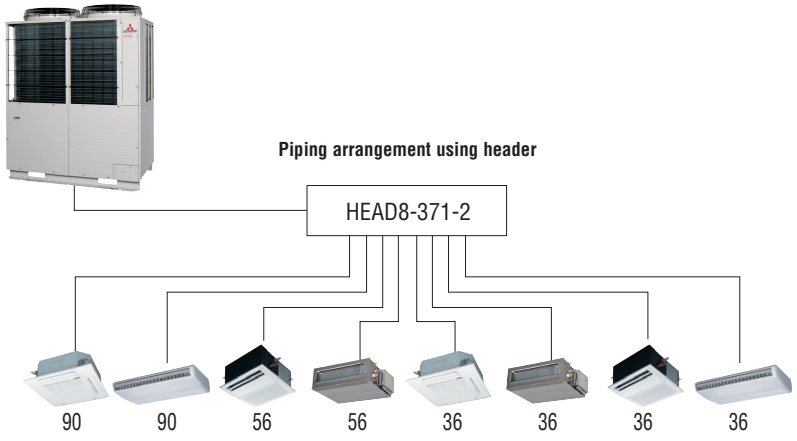
Refrigerant piping

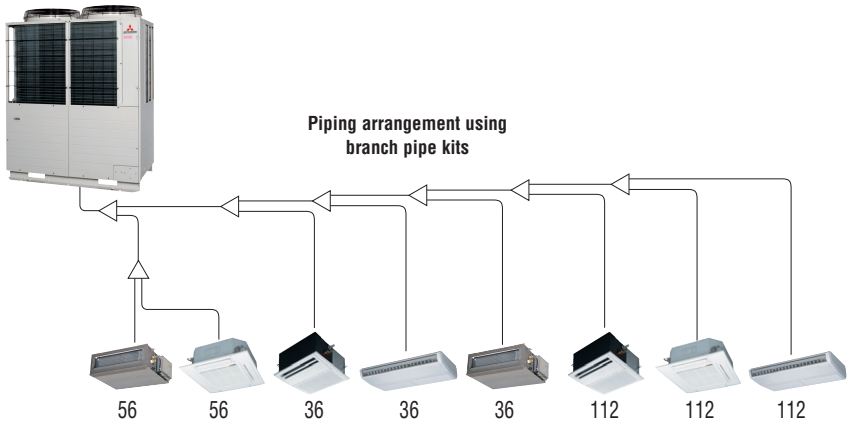
Installation of Interconnecting Pipework
KXZ equipment is manufactured to meet the highest standards of quality and reliability. It is imperative that the method of installation and the materials used are also to the high standards, to ensure trouble free operation and long term reliability.
The interconnecting 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 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 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.

Single outdoor unit piping examples:





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.

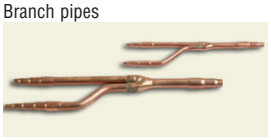
Outdoor unit	Main pipe size (normal)		Pipe size for an actual length of 90m or longer	
	Gas pipe	Liquid pipe	Gas pipe	Liquid pipe
224	ø19.05 × t 1.0	ø9.52 × t 0.8	ø22.22 × t 1.0	ø12.7 × t 0.8
280	ø22.22 × t 1.0		ø25.4 (ø22.22) × t 1.0	
335	ø25.4 (ø22.22) × t 1.0	ø12.7 × t 0.8		
400	ø25.4 (ø28.58) × t 1.0		ø28.58 × t 1.0	
450	ø28.58 × t 1.0		ø31.8 × t 1.1 (ø28.58 × t 1.0)	
475				ø15.88 × t 1.0
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)			

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"

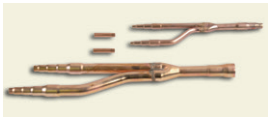
mm	inch
ø28.58	1 1/8"
ø31.8	1 1/4"
ø34.92	1 3/8"
ø38.1	1 1/2"
ø44.5	1 3/4"
ø50.8	2"

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

Branch pipes

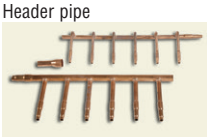


DIS-22-1G/DIS-180-1G



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

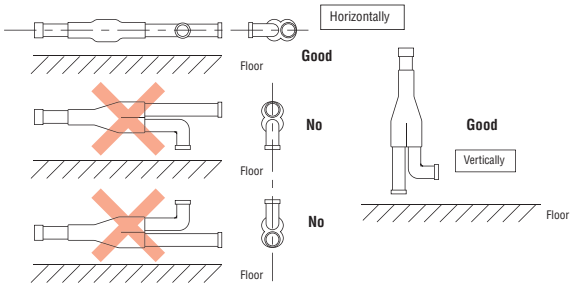
Header pipe



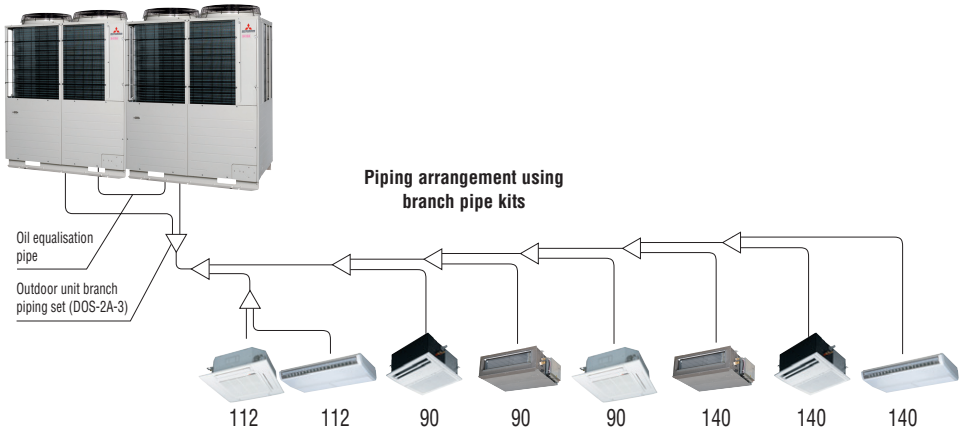
HEAD6-180-1G

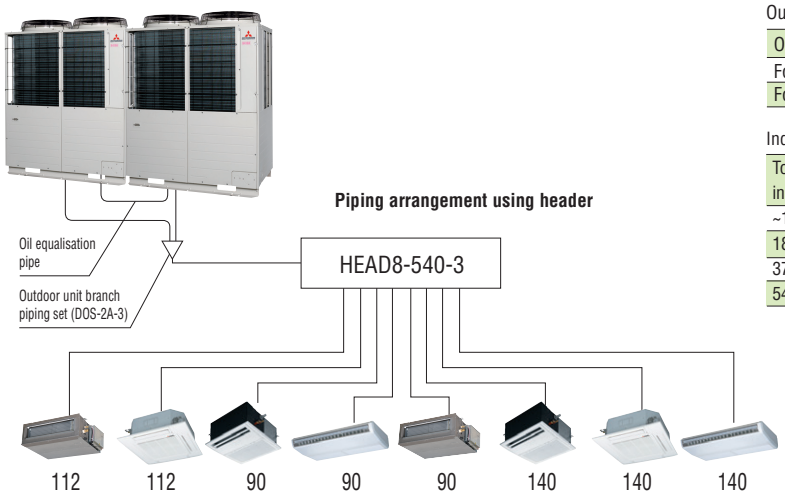
Combination outdoor unit manifold

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



Combination outdoor unit piping examples:





Outdoor unit's branch piping set

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

Indoor unit's first branch piping set

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

Electrical wiring – power supply

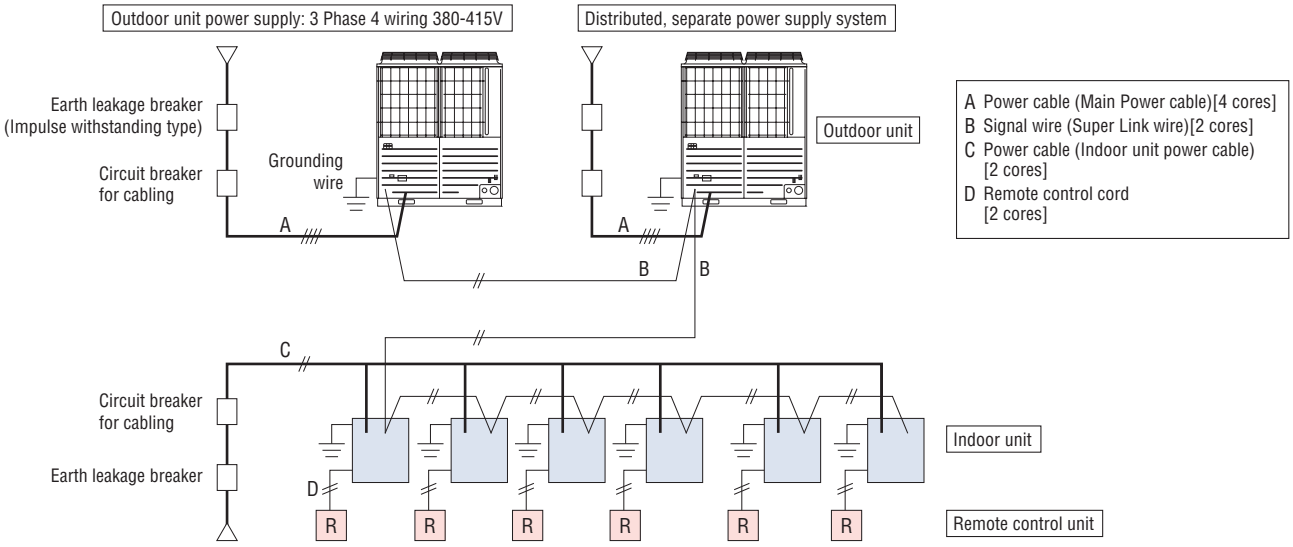
KXZ has greatly simplified wiring requirements utilising a 'polarity-free' two wire control loop connecting the indoor units.

Power wiring

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

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

Only control wiring is connected from outdoor to indoor unit.



Indoor unit power supply: Single Phase 220-240V

CAUTION

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

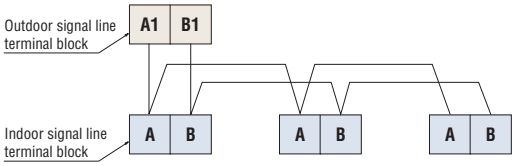
Electrical wiring – control wiring

1. The control wiring is 5 Volt DC, non-polarised, two wire connection notated as 'A1' and 'B1'. This 'AB' wiring connects outdoor unit to indoor unit and indoor unit to indoor unit.
2. This wiring must be a 2-core shielded cable size 0.75mm² or 1.25mm².

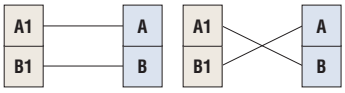
	0.75mm²	1.25mm²
~1000m	YES	YES
1000~1500m	YES	NO

3. We recommend both ends of the shield of the cable are connected to ground (earth) at all the indoor units and outdoor units.
4. When multiple outdoor units are used,
   - Connect the signal cable between indoor and outdoor units and the signal cable between outdoor units belonging to the same refrigerant line to A1 and B1.
   - Connect the signal line between outdoor units on different refrigerant lines to A2 and B2.
5. For current specification of 2-core (AB) wiring, please consult your dealer.

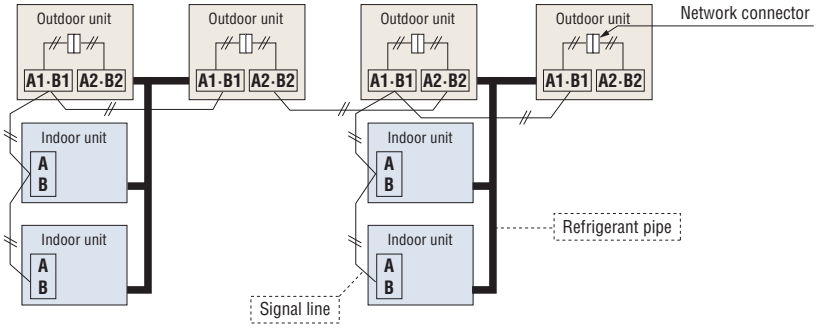
(1) When one outdoor unit is used



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

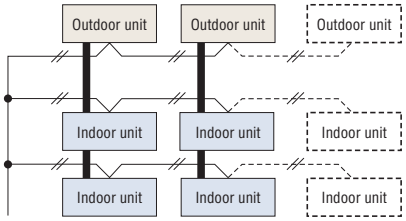


(2) When plural outdoor units are used

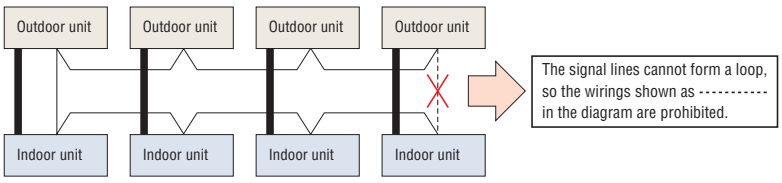


The maximum number of indoor units that can be connected in a system is 128 and it is possible to configure outdoor units and/or indoor units as an outdoor or indoor unit group connected with each other with two wires.

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



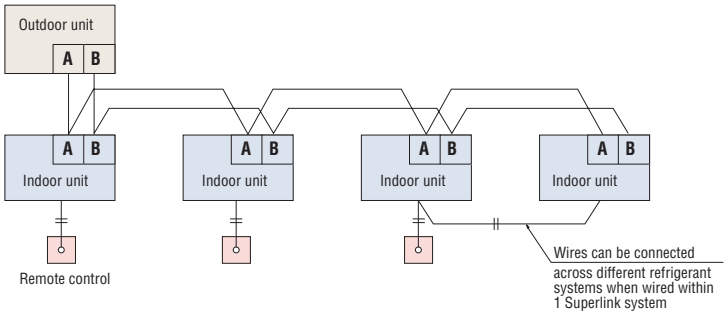
Important ○ Loop wiring prohibited



Remote control wiring specifications

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

Length (m)	Wire size
100 to 200	0.5mm² x 2 core
To 300	0.75mm² x 2 core
To 400	1.25mm² x 2 core
To 600	2.0mm² x 2 core



Indoor units

Benefits Summary

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

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

	FDT	FDTC	FDTW	FDTS	FDTQ	FDU	FDUM	FDUT	FDUH	FDK	FDE	FDFW	FDFL	FDFU	FDU-F
															
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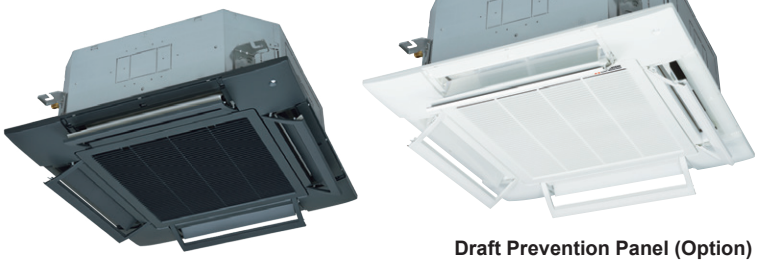
						●	●								

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

Ceiling Cassette -4way- FDT

Model No.

FDT28KXZE1
FDT36KXZE1
FDT45KXZE1
FDT56KXZE1
FDT71KXZE1
FDT90KXZE1
FDT112KXZE1
FDT140KXZE1
FDT160KXZE1



Draft Prevention Panel (Option)

Remote control (option)

Wired



RC-EX3A RC-E5 RCH-E3

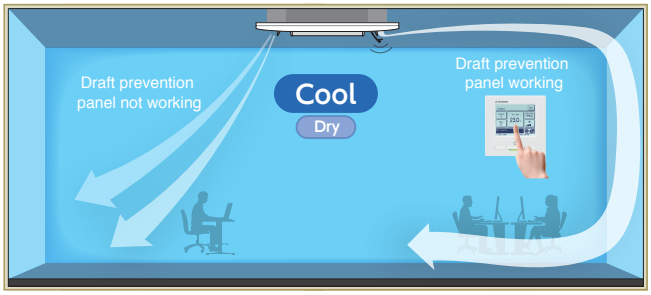
Wireless



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

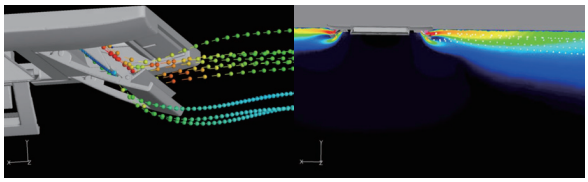
Draft Prevention Panel (Option)

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

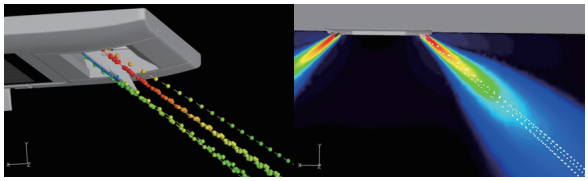


User can position panels by using the remote controller only (RC-EX3A, Wireless kit)) when Draft Prevention Panel is available.

Advanced airflow control technology cultivated through aircraft development.



Draft Prevention Panel working

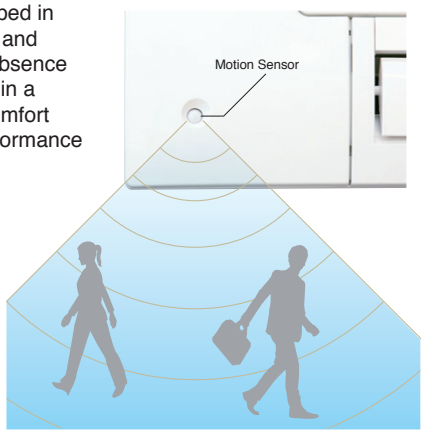


Draft Prevention Panel placed at off position

Motion Sensor (Option)

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

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



Improve the aerodynamic performance of the unit

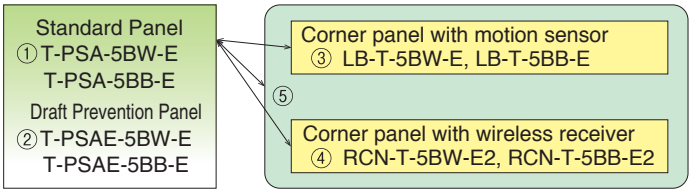
New designed component has better aerodynamic perfromance and achieve lower noise.

New design turbo fan

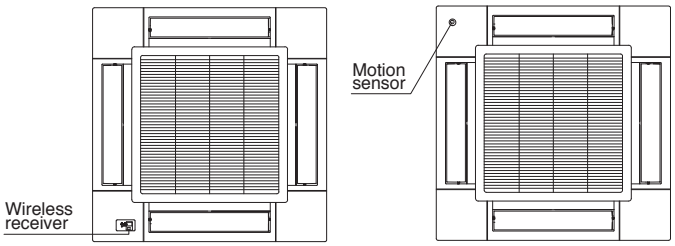
Fan guard (standard equipment)

Panel select pattern (Option)

8 patterns of panel are avilable.



Installation position of Wireless kit and Motion sensor kit

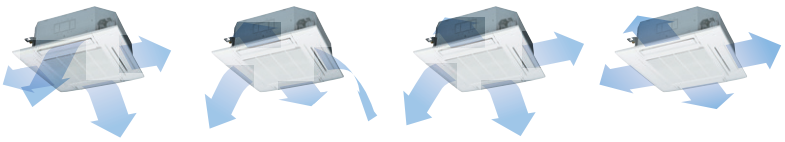


*Wireless receiver and Motion sensor can be installed to the position as shown

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

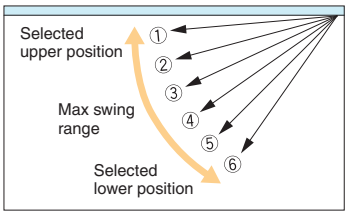
Individual flap control system

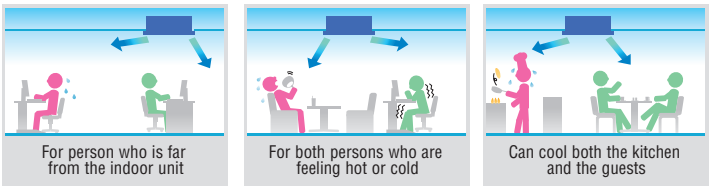
According to room conditions, four directions of air flow can be controlled individually by utilizing the flap control system.
Individual flap control is available even after installation.



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

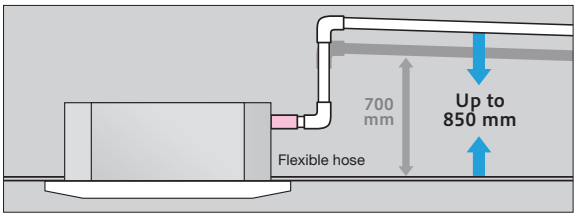
※The wireless remote control is not applicable to the Individual flap control system.





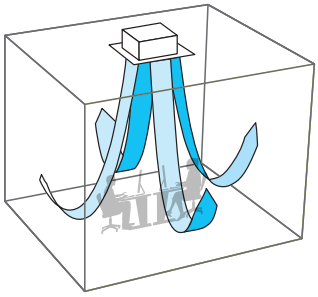
850mm Drain Pump

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



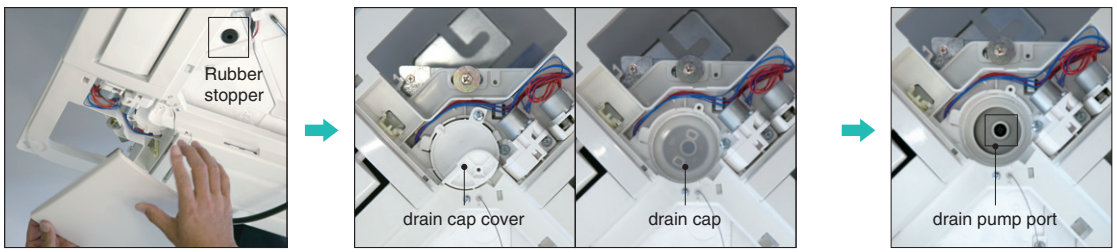
Suitable for High ceilings

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



Easy check of drain pan

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



Remove corner lid.

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

Clean up the area around the drain pump port.

Specifications

Item		Model	FDT28KXZE1	FDT36KXZE1	FDT45KXZE1	FDT56KXZE1	FDT71KXZE1
Nominal cooling capacity		kW	2.8	3.6	4.5	5.6	7.1
Nominal heating capacity		kW	3.2	4.0	5.0	6.3	8.0
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz				
Power consumption	Cooling	kW	0.04-0.04 / 0.04			0.07-0.07/0.07	0.08-0.08/0.08
	Heating		0.04-0.04 / 0.04			0.07-0.07/0.07	0.08-0.08/0.08
Sound power level		dB(A)	55			60	62
Sound pressure level		dB(A)	P-Hi:38 Hi:33 Me:30 Lo:28		P-Hi:38 Hi:33 Me:31 Lo:29	P-Hi:44 Hi:33 Me:31 Lo:29	P-Hi:47 Hi:35 Me:32 Lo:28
Exterior dimensions H x W x D		mm	Unit:236x840x840 Panel:35x950x950				
Net weight		kg	Unit:20 Standard Panel:5			Unit:21.5 Standard Panel:5	
Air flow		m^3/min	P-Hi:20 Hi:14 Me:12 Lo:10	P-Hi:20 Hi:14 Me:12 Lo:10	P-Hi:20 Hi:15 Me:13 Lo:10	P-Hi:26 Hi:16 Me:13 Lo:11	P-Hi:28 Hi:17 Me:14 Lo:12
Outside air intake			Possible				
Panel			T-PSA-5BW-E, T-PSAE-5BW-E (White) / T-PSA-5BB-E, T-PSAE-5BB-E (Black)				
Air filter, Q'ty			Pocket Plastic net x1 (Washable)				
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-T-5BW-E2, RCN-T-5BB-E2				
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")

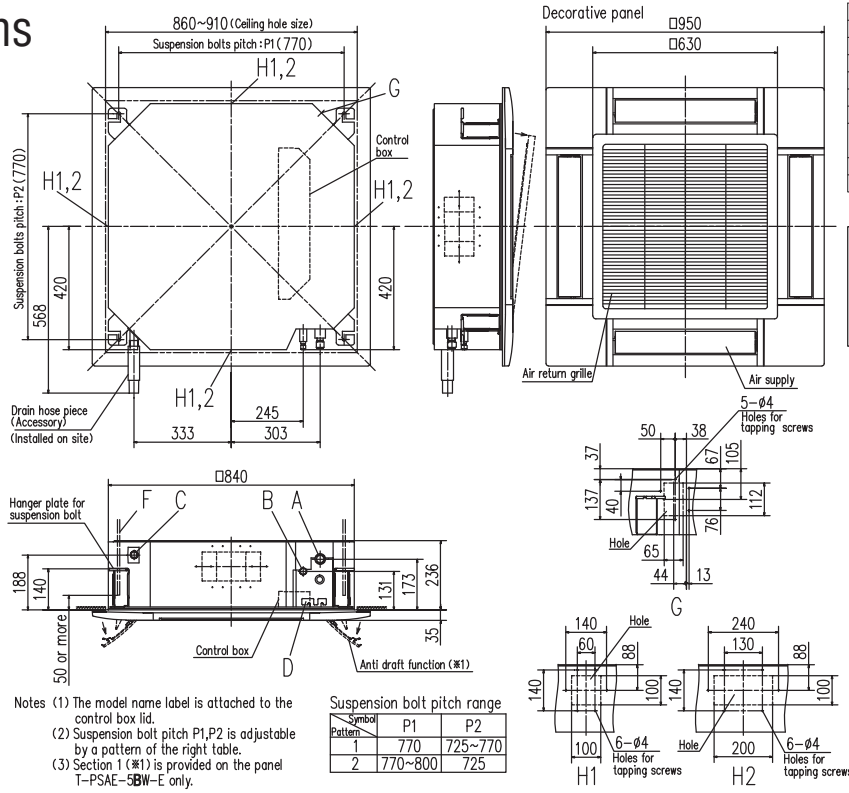
Item		Model	FDT90KXZE1	FDT112KXZE1	FDT140KXZE1	FDT160KXZE1
Nominal cooling capacity		kW	9.0	11.2	14.0	16.0
Nominal heating capacity		kW	10.0	12.5	16.0	18.0
Power source			1 Phase 220-240V, 50Hz			
Power consumption	Cooling	kW	0.13-0.13/0.13	0.14-0.14/0.14		
	Heating		0.13-0.13/0.13	0.14-0.14/0.14		
Sound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

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.

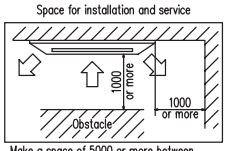
Dimensions

All measurements in mm.

FDT28KXZE1
36KXZE1
45KXZE1
56KXZE1
71KXZE1



Symbol	Content			
	Model	28	36,45,56	71
A	Gas piping	ϕ12.7 (1/2") (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)		



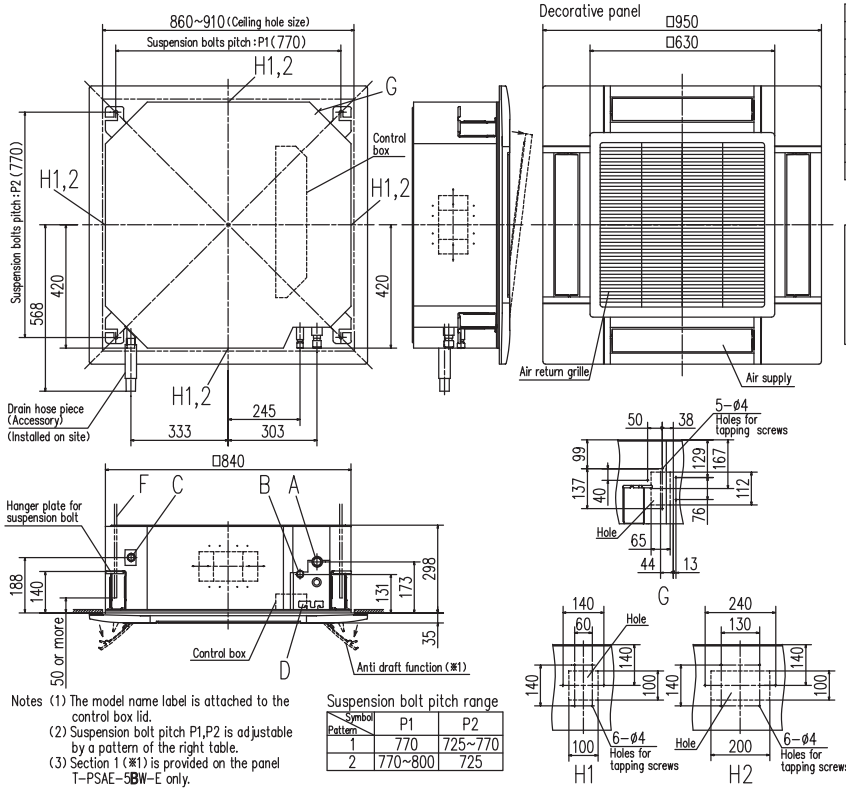
Make a space of 5000 or more between the units when installing more than one.

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) Section 1 (※1) is provided on the panel T-PSAE-5**B**W-E only.

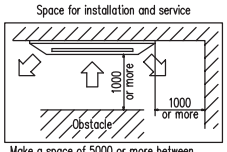
Suspension bolt pitch range

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

FDT90KXZE1
112KXZE1
140KXZE1
160KXZE1



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)



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) Section 1 (※1) is provided on the panel T-PSAE-5**B**W-E only.

Suspension bolt pitch range

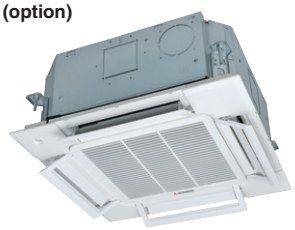
Symbol / Pattern	P1	P2
1	770	725~770
2	770~800	725

Ceiling Cassette -4way Compact FDTC

Model No.

FDTC15KXZE1
FDTC22KXZE1
FDTC28KXZE1
FDTC36KXZE1
FDTC45KXZE1
FDTC56KXZE1

Draft Prevention Panel (option)



Grid type

Remote control (option)

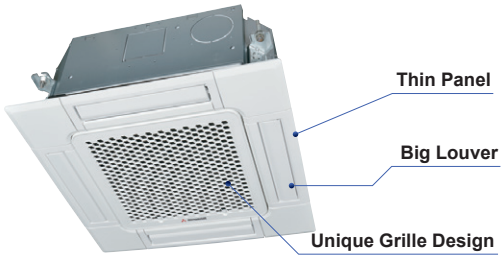
Wired

RC-EX3A RC-E5 RCH-E3

Wireless

RCN-TC-5AW-E3

European design & Flat panel



Unique Grille Design

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

Honeycomb type

Grid type

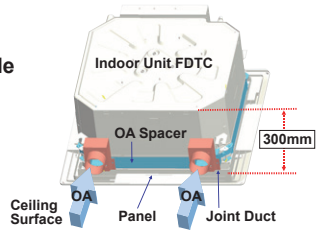
Integrated ceiling system design 600x600

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

Taking OA (Outside Air) into inside

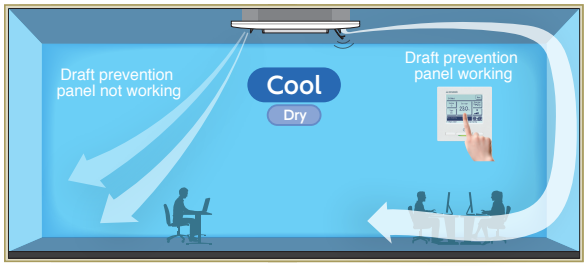
Fresh air can be taken in without optional parts. When the fresh air is insufficient, optional parts can be used.

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



Draft Prevention Panel (Option)

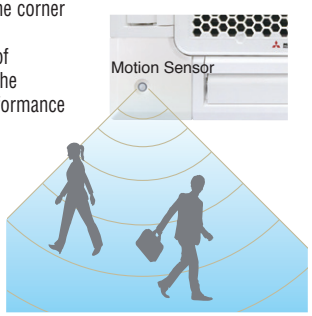
This prevents cold/hot draft being blown directly on the user. It is possible to set Draft Prevention Panel for each air outlet.



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

Motion Sensor (Option)

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



LB-TC-5W-E

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.

Panel select pattern (Option)

8 patterns of panel are available. Please refer to P33.

Standard Panel
① TC-PSA-5AW-E
TC-PSAG-5AW-E

Draft Prevention Panel
② TC-PSAE-5AW-E
TC-PSAGE-5AW-E

Corner panel with motion sensor
③ LB-TC-5W-E

Corner panel with wireless receiver
④ RCN-TC-5AW-E3

⑤ (③+④ motion sensor + wireless receiver)

850mm Drain Pump

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

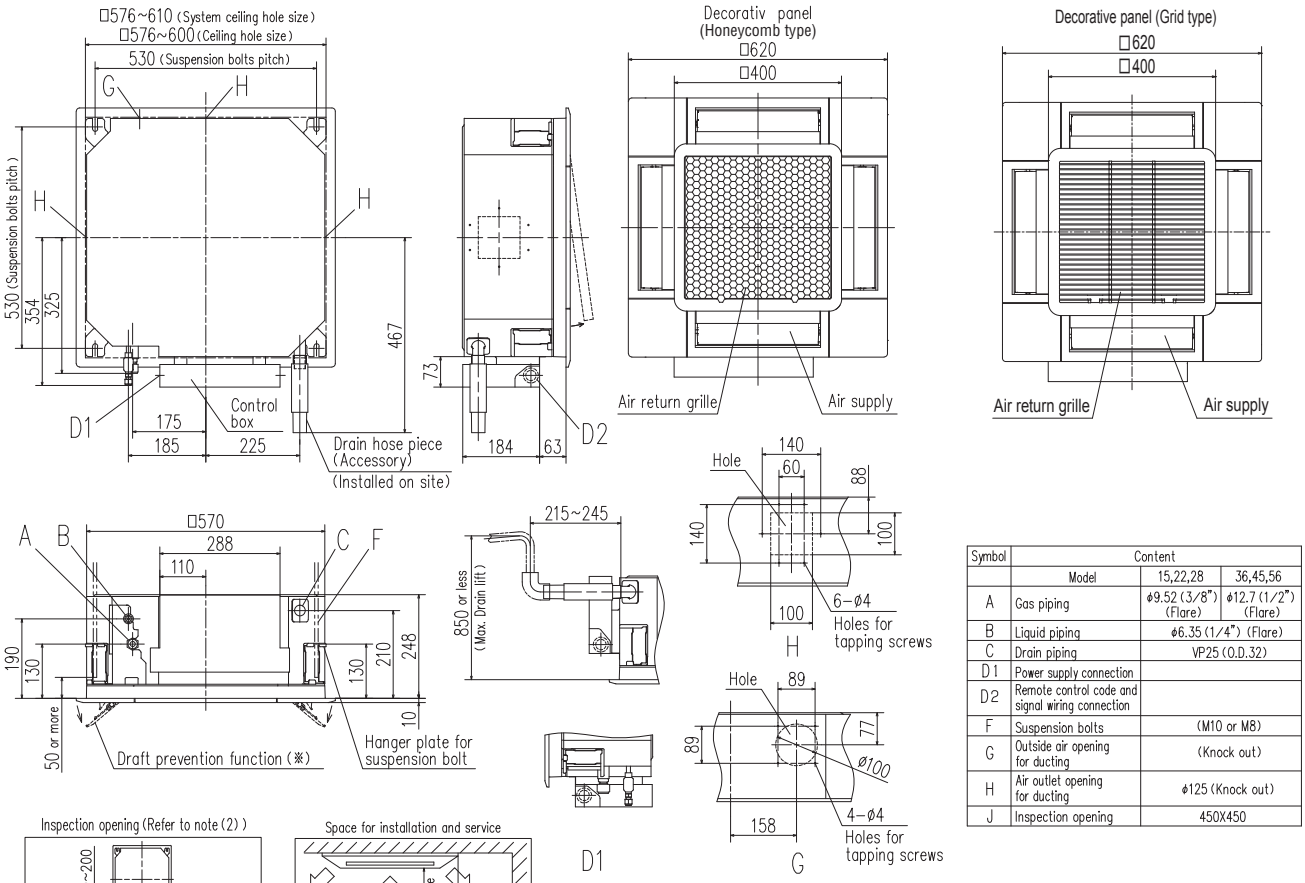
Specifications

Item		Model	FDTC15KXZE1	FDTC22KXZE1	FDTC28KXZE1	FDTC36KXZE1	FDTC45KXZE1	FDTC56KXZE1
Nominal cooling capacity		kW	1.5	2.2	2.8	3.6	4.5	5.6
Nominal heating capacity		kW	1.7	2.5	3.2	4.0	5.0	6.3
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz					
Power consumption	Cooling	kW	0.03-0.03/0.03			0.04-0.04/0.04	0.05-0.05/0.05	0.06-0.06/0.06
	Heating		0.03-0.03/0.03			0.04-0.04/0.04	0.05-0.05/0.05	0.06-0.06/0.06
Sound power level		dB(A)	Cooling:47 Heating:46	49		Cooling:54 Heating:53	Cooling:58 Heating:57	60
Sound pressure level	Cooling	dB(A)	P-Hi:33 Hi:30 Me:28 Lo:25	P-Hi:35 Hi:32 Me:29 Lo:25		P-Hi:39 Hi:36 Me:31 Lo:26	P-Hi:43 Hi:39 Me:36 Lo:28	P-Hi:47 Hi:43 Me:39 Lo:31
	Heating		P-Hi:33 Hi:30 Me:26 Lo:22	P-Hi:35 Hi:32 Me:29 Lo:25		P-Hi:39 Hi:36 Me:31 Lo:26	P-Hi:43 Hi:39 Me:36 Lo:28	P-Hi:47 Hi:43 Me:39 Lo:31
Exterior dimensions H x W x D		mm	Unit:248x570x570 Panel:10x620x620					
Net weight		kg	Unit:12.5 Standard Panel:2.5	Unit:13 Standard Panel:2.5		Unit:14 Standard Panel:2.5		
Air flow	Cooling	m³/min	P-Hi:8 Hi:7 Me:6 Lo:5	P-Hi:9 Hi:8 Me:7 Lo:6		P-Hi:10 Hi:9 Me:8 Lo:6	P-Hi:12 Hi:10 Me:9 Lo:7	P-Hi:14 Hi:12 Me:10 Lo:8
	Heating		P-Hi:8 Hi:7 Me:6 Lo:5	P-Hi:9 Hi:8 Me:7 Lo:6		P-Hi:10 Hi:9 Me:8 Lo:6	P-Hi:12 Hi:10 Me:9 Lo:7	P-Hi:14 Hi:12 Me:10 Lo:8
Outside air intake			Possible					
Panel			TC-PSA-5AW-E, TC-PSAE-5AW-E (Honeycomb) / TC-PSAG-5AW-E, TC-PSAGE-5AW-E (Grid)					
Air filter, Q'ty			Pocket Plastic net x1 (Washable)					
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-TC-5AW-E3					
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")			Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")		

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.

Dimensions

All measurements in mm.



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

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

Ceiling Cassette -2way- FDTW

FDTW28~71

FDTW90~140

Model No.

FDTW28KXE6F	FDTW90KXE6F
FDTW45KXE6F	FDTW112KXE6F
FDTW56KXE6F	FDTW140KXE6F
FDTW71KXE6F	

Remote control (option)

Wired

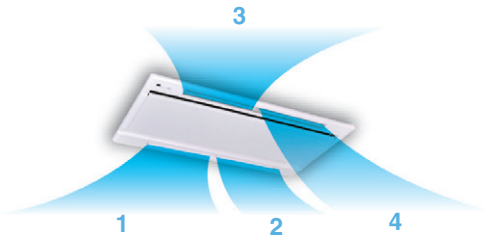
RC-EX3A RC-E5 RCH-E3

Wireless

RCN-TW-E2

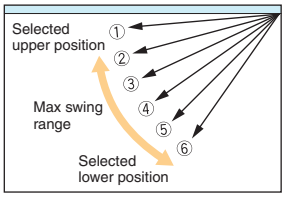
Individual flap control system

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



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

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



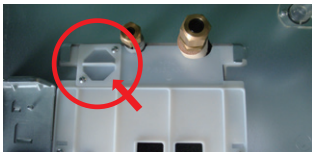
750mm Drain Pump

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.

Installation workability

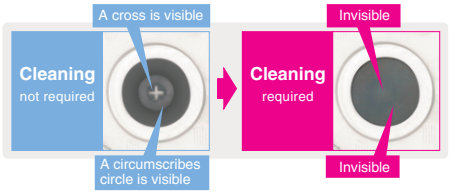
Drainage spout

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



Transparent access hole to drain pan

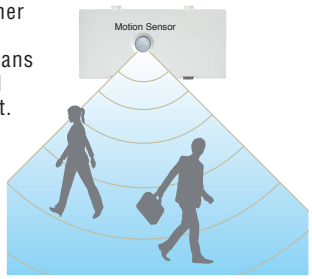
Condition of the bottom of a drain pan can be checked through this transparent access hole without removing drain pan.



Motion Sensor (Option)

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

LB-TW-6W



Specifications

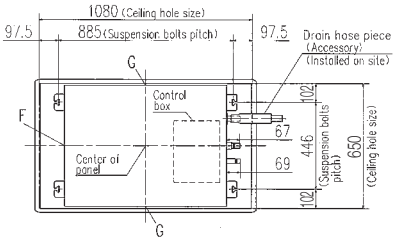
Item		Model	FDTW28KXE6F	FDTW45KXE6F	FDTW56KXE6F	FDTW71KXE6F	FDTW90KXE6F	FDTW112KXE6F	FDTW140KXE6F
Nominal cooling capacity		kW	2.8	4.5	5.6	7.1	9.0	11.2	14.0
Nominal heating capacity		kW	3.2	5.0	6.3	8.0	10.0	12.5	16.0
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz						
Power consumption	Cooling	kW	0.09-0.09/0.09	0.10-0.10/0.10		0.14-0.14/0.14	0.19-0.19/0.19		
	Heating		0.09-0.09/0.09	0.10-0.10/0.10		0.14-0.14/0.14	0.19-0.19/0.19		
Sound power level		dB(A)	58				65		
Sound pressure level		dB(A)	P-Hi:42 Hi:38 Me:34 Lo:31				P-Hi:48 Hi:45 Me:41 Lo:37		
Exterior dimensions H x W x D		mm	Unit:325x820x620 Panel:20x1120x680				Unit:325x1535x620 Panel:20x1835x680		
Net weight		kg	Unit:20 Panel:8.5	Unit:21 Panel:8.5		Unit:23 Panel:8.5	Unit:35 Panel:13		
Air flow		m3/min	P-Hi:14.5 Hi:12 Me:10 Lo:9				P-Hi:31 Hi:27 Me:23 Lo:20		
Outside air intake			Possible						
Panel			TW-PSA-26W-E				TW-PSA-46W-E		
Air filter, Q'ty			Pocket Plastic net x2 (Washable)				Pocket Plastic net x3 (Washable)		
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-TW-E2						
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")		Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")			

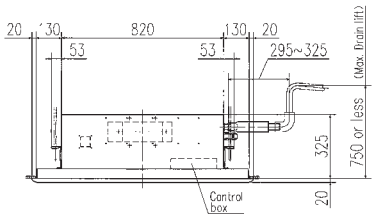
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

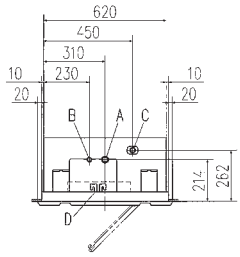
Dimensions

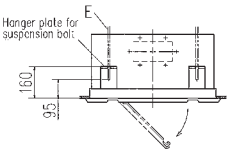
All measurements in mm.

FDTW28KXE6F, 45KXE6F, 56KXE6F, 71KXE6F





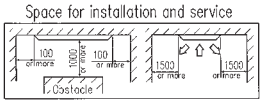




Symbol	Content			
	Model	28	45,56	71
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)	ø15.88 (5/8") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)		ø9.52 (3/8") (Flare)
C	Drain piping	VP25 (O.D. 32)		
D	Hole for wiring			
E	Suspension bolts	(M10)		
F	Outside air opening for ducting	(Knock out)		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

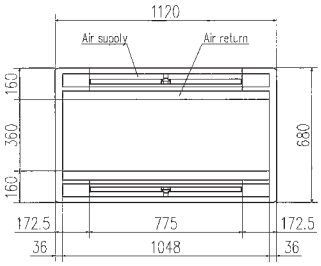
Notes (1) The model name label is attached on the lid of the control box.

Space for installation and service

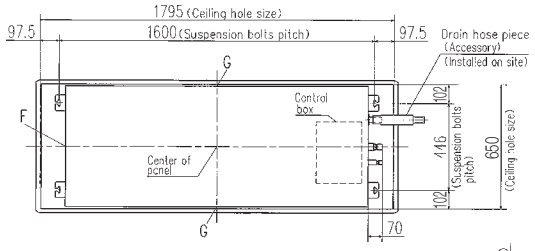


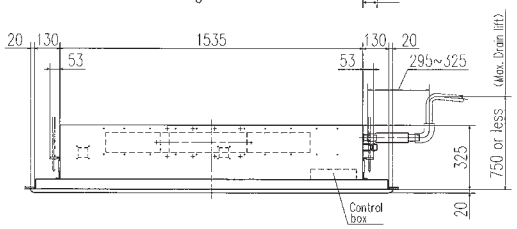
Make a space of 4000 or more between the units when installing more than one.

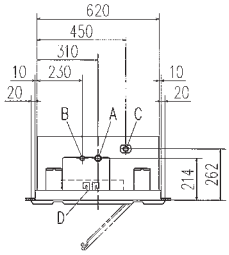
Decorative panel

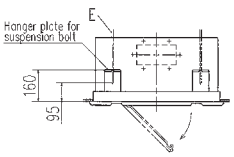


FDTW90KXE6F, 112KXE6F, 140KXE6F





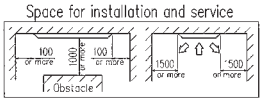




Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C	Drain piping	VP25 (O.D. 32)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)

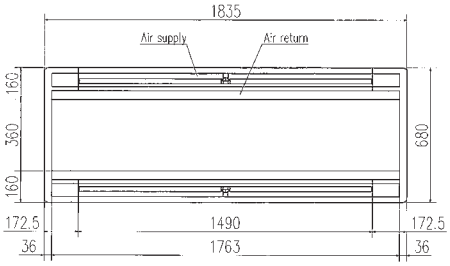
Notes (1) The model name label is attached on the lid of the control box.

Space for installation and service



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

Decorative panel



Ceiling Cassette -1way- FDTS

Model No.
FDTS45KXE6F
FDTS71KXE6F

Remote control (option)

Wired

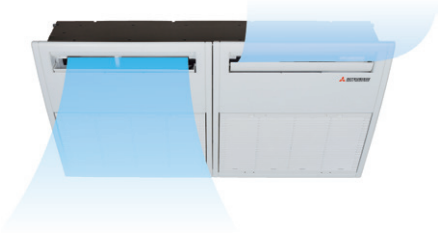
RC-EX3A RC-E5 RCH-E3

Wireless

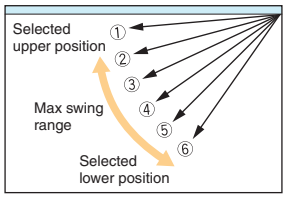
RCN-TS-E2

Individual flap control system

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



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



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

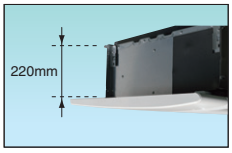
Wireless remote control

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

RCN-TS-E2

Compact design

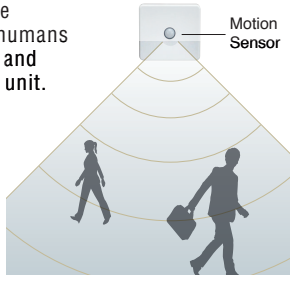
Indoor unit size (W:1,150 x D:565) brings easy installation for 1,200 x 600 ceiling and Panel size (1,250 x 650) is suitable for 1,200 x 600 ceiling. Height is the industry's lowest height level 220mm and weight is only 27, 28kg.



Motion Sensor (Option)

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

LB-KIT2



600mm Drain Pump

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

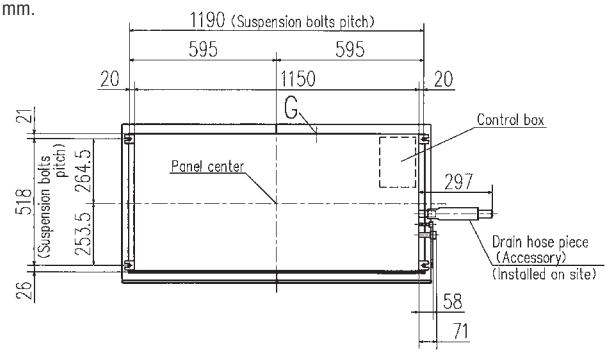
Specifications

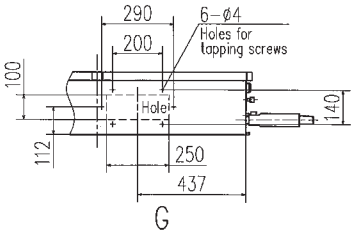
Item		Model	FDTS45KXE6F	FDTS71KXE6F
Nominal cooling capacity		kW	4.5	7.1
Nominal heating capacity		kW	5.0	8.0
Power source			1 Phase 220-240V, 560Hz / 220V, 60Hz	
Power consumption	Cooling	kW	0.04-0.04/0.04	0.09-0.09/0.09
	Heating		0.04-0.04/0.04	0.09-0.09/0.09
Sound power level		dB(A)	60	61
Sound pressure level		dB(A)	P-Hi:42 Hi:40 Me:38 Lo:35	P-Hi:49 Hi:46 Me:41 Lo:36
Exterior dimensions H x W x D		mm	Unit:220x1150x565 Panel:35x1250x650	
Net weight		kg	Unit:27 Panel:5	Unit:28 Panel:5
Air flow		m³/min	P-Hi:13 Hi:12 Me:11 Lo:9.5	P-Hi:17 Hi:15 Me:12 Lo:10
Outside air intake			Possible	
Panel			TS-PSA-3AW-E	
Air filter, Q'ty			Pocket Plastic net x2 (Washable)	
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-TS-E2	
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")	Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")

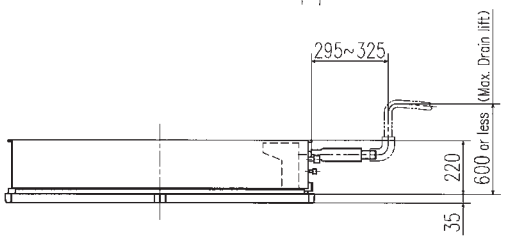
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

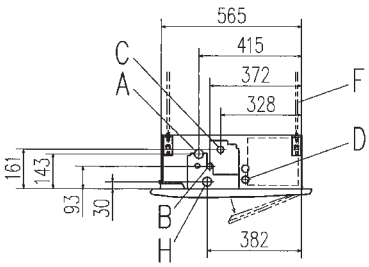
Dimensions

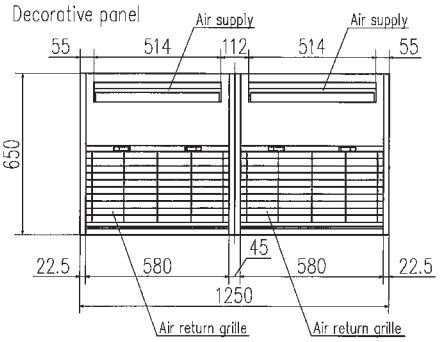
All measurements in mm.

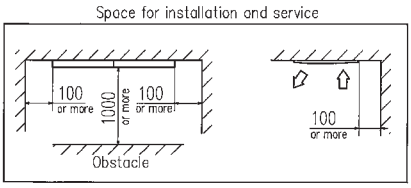












Make a space of 4000 or more between the units when installing more than one.

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

Ceiling Cassette -1way Compact- FDTQ

Model No.
FDTQ22KXE6F
FDTQ28KXE6F
FDTQ36KXE6F

Fits into standard 600 x 600 ceiling

Remote control (option)

Wired

RC-EX3A RC-E5 RCH-E3

Wireless

RCN-KIT4-E2

Compact design

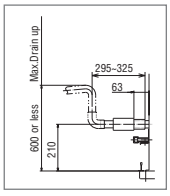
Comfortable effective cooling for small rooms, with low fan speed air flow at just 5.4m³/min.

Optional wide panel shown for solid ceiling

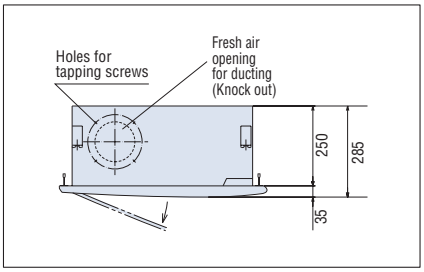
Motion Sensor NEW (Option)

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

LB-KIT2



Condensate drain pump included as standard



Ultra slim design at just 250mm above the ceiling

Specifications

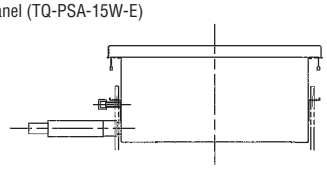
Item		Model	FDTQ22KXE6F				FDTQ28KXE6F				FDTQ36KXE6F			
Panel Name			Direct blow panel		Duct panel		Direct blow panel		Duct panel		Direct blow panel		Duct panel	
Panel mode (Option)			TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER	TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER	TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER
Nominal cooling capacity		kW	2.2				2.8				3.6			
Nominal heating capacity		kW	2.5				3.2				4.0			
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz											
Power consumption	Cooling	kW	0.05-0.07/0.07				0.05-0.07/0.07				0.05-0.07/0.07			
	Heating		0.05-0.07/0.07				0.05-0.07/0.07				0.05-0.07/0.07			
Sound power level		dB(A)	60											
Sound pressure level		dB(A)	P-Hi:45Hi:41 Me:38 Lo:33				P-Hi:45 Hi:41 Me:38 Lo:33				P-Hi:45 Hi:41 Me:38 Lo:33			
Exterior dimensions H x W x D	Unit	mm	250x570x570				250x570x570				250x570x570			
	Panel		35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650
Net weight		kg	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3
Air flow		m³/min	P-Hi:8 Hi:7 Me:6 Lo:5				P-Hi:8 Hi:7 Me:6 Lo:5				P-Hi:8 Hi:7 Me:6 Lo:5			
Outside air intake			Possible											
Air filter, Q'ty			Pocket Plastic net x1 (Washable)											
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2											
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")								Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			

1. The data are based on 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.

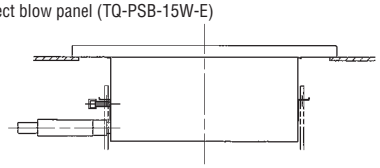
Dimensions

All measurements in mm.

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

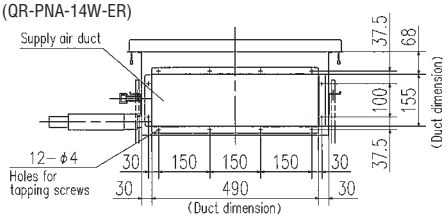


Direct blow panel (TQ-PSB-15W-E)

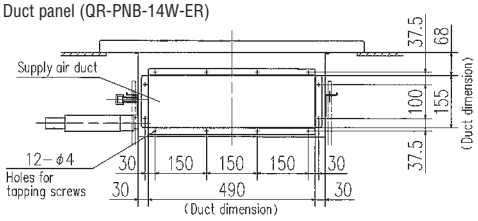


Symbol	Content		
	Model	FDTQ22KXE6F, 28KXE6F	FDTQ36KXE6F
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Drain piping	VP 25 (O.D. 32)	
D	Hole for wiring	ϕ30	
E	Suspension bolts	M10	
F1,2	Outside air opening for ducting	(Knock out)	

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



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

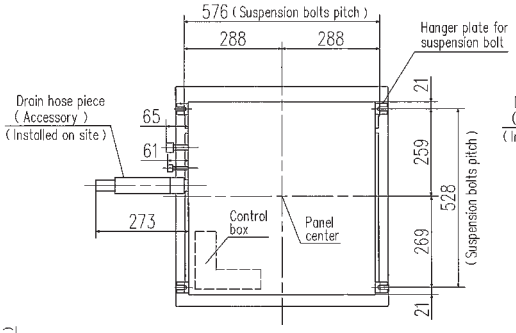


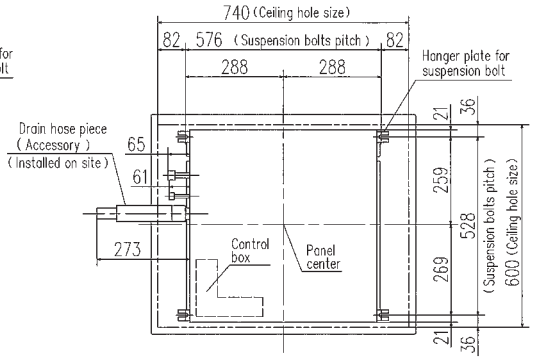
Notes

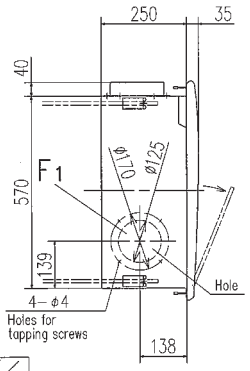
(1) The model name label is attached on the fan case inside the air return grille.

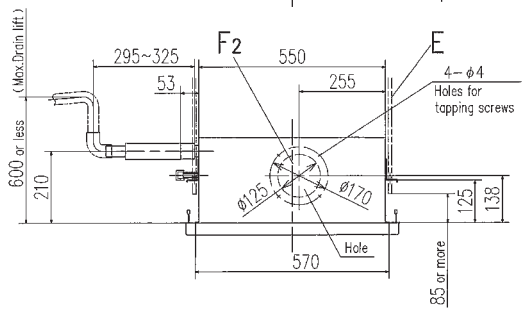
(2) This unit is designed for 2X2 grid ceiling.

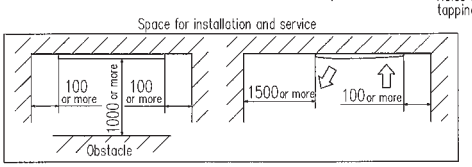
★ In case of Direct blow panel





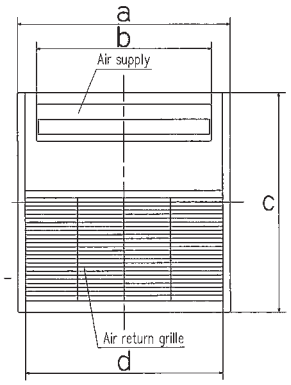




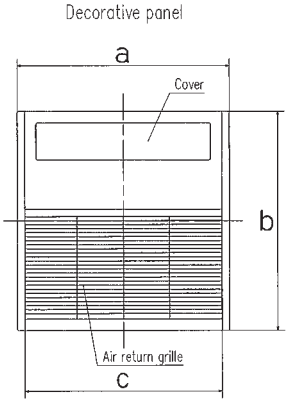


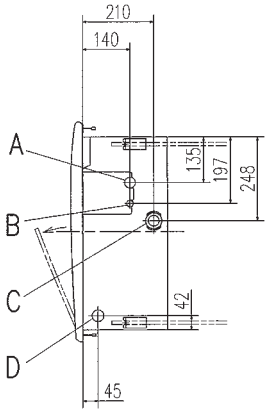
Make a space of 3000 or more between the units when installing more than one.

Decorative panel



Decorative panel





Dimension Table

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

Dimension Table

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

Duct Connected -High Static Pressure- FDU

Model No.
FDU45KXE6F
FDU56KXE6F
FDU71KXE6F
FDU90KXE6F
FDU112KXE6F
FDU140KXE6F
FDU160KXE6F

Model No.
FDU224KXZE1
FDU280KXZE1

Remote control (option)

Wired

RC-EX3A RC-E5 RCH-E3

Wireless

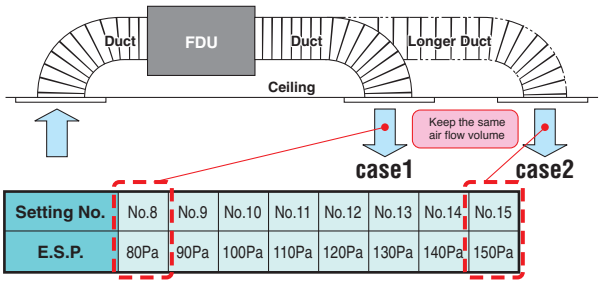
RCN-KIT4-E2

External Static Pressure(E.S.P) control

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

E.S.P. button RC-E5

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



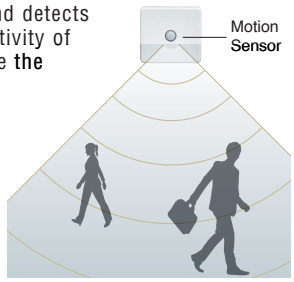
Setting No.	No.8	No.9	No.10	No.11	No.12	No.13	No.14	No.15
E.S.P.	80Pa	90Pa	100Pa	110Pa	120Pa	130Pa	140Pa	150Pa

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

Motion Sensor (Option)

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

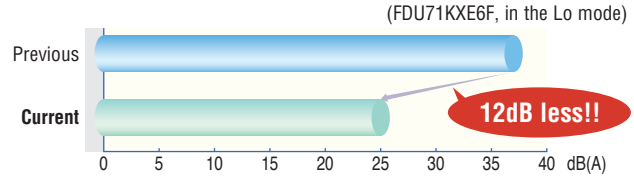
LB-KIT2



Thin design

The height of all FDU models only 280mm

Reduction of sound pressure level



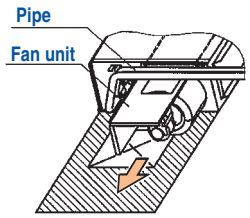
	Previous		Current	Lo mode
FDU90KXE6F	37	→	25	12dB(A) less!!
FDU112KXE6F	38	→	30	8dB(A) less!!
FDU140KXE6F	39	→	29	10dB(A) less!!

Transparent inspection window

Dirt condition of the bottom of a drain pan can be checked through this transparent inspection window without removing drain pan. (Please refer to P38)

Improvement of the serviceability

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



Specifications

Item		Model	FDU45KXE6F	FDU56KXE6F	FDU71KXE6F	FDU90KXE6F	FDU112KXE6F	FDU140KXE6F	FDU160KXE6F
Nominal cooling capacity		kW	4.5	5.6	7.1	9.0	11.2	14.0	16.0
Nominal heating capacity		kW	5.0	6.3	8.0	10.0	12.5	16.0	18.0
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz						
Power consumption	Cooling	kW	0.10-0.10/0.10		0.24-0.25/0.24		0.31-0.32/0.31	0.35-0.36/0.35	0.42-0.43/0.42
	Heating		0.10-0.10/0.10		0.24-0.25/0.24		0.31-0.32/0.31	0.35-0.36/0.35	0.42-0.43/0.42
Sound power level		dB(A)	60		65		71	72	74
Sound pressure level		dB(A)	P-Hi:37 Hi:32 Me:29 Lo:26		P-Hi:38 Hi:33 Me:29 Lo:25		P-Hi:44 Hi:38 Me:36 Lo:30	P-Hi:45 Hi:40 Me:34 Lo:29	P-Hi:47 Hi:40 Me:35 Lo:30
Exterior dimensions H x W x D		mm	280x750x635		280x950x635		280x1370x740		
Net weight		kg	29		34		54		
Air flow		m³/min	P-Hi:13 Hi:10 Me:9 Lo:8		P-Hi:24 Hi:19 Me:15 Lo:10		P-Hi:36 Hi:28 Me:25 Lo:19	P-Hi:39 Hi:32 Me:26 Lo:20	P-Hi:48 Hi:35 Me:28 Lo:22
Maximum external static pressure		Pa	200						
Outside air intake			Possible						
Air filter			Procure locally						
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2						
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")		Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")				

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 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.

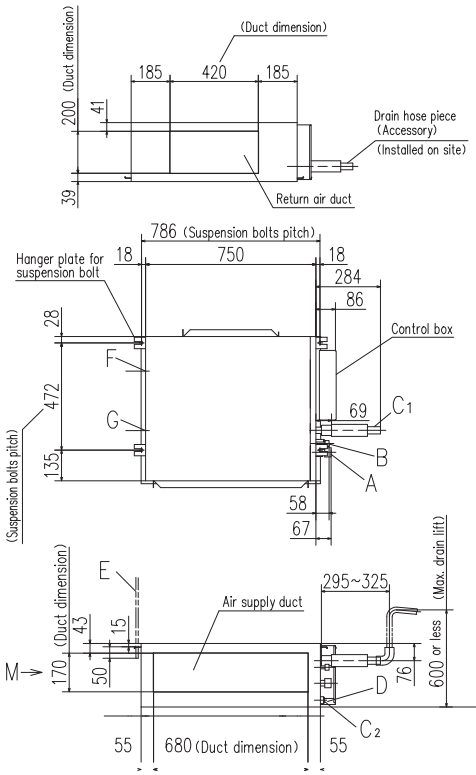
Item		Model	FDU224KXZE1	FDU280KXZE1
Nominal cooling capacity		kW	22.4	28.0
Nominal heating capacity		kW	25.0	31.5
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz	
Power consumption	Cooling	kW	1.16-1.20/1.16	1.16-1.20/1.16
	Heating		1.16-1.20/1.16	1.16-1.20/1.16
Sound pressure level		dB(A)	P-Hi:52 Hi:50 Me:47 Lo:45	
Exterior dimensions H x W x D		mm	379x1600x893	
Net weight		kg	89	
Air flow		m³/min	P-Hi:80 Hi:72 Me:64 Lo:56	
Maximum external static pressure		Pa	200	
Outside air intake			Possible(on return duct)	
Air filter			Procure locally	
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2	
Installation data Refrigerant piping size		mm(in)	Liquid line:ø9.52(3/8") Gas line:ø19.05(3/4")	Liquid line:ø9.52(3/8") Gas line:ø22.22(7/8")

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 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.

Dimensions

All measurements in mm.

FDU45KXE6F, 56KXE6F

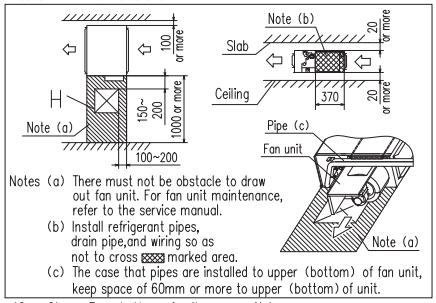


Symbol	Content	
A	Gas piping	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection opening	(450X450)

Space for installation and service

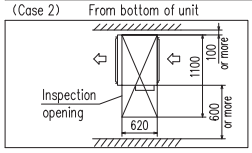
Select either of two cases to keep space for installation and services.

(Case 1) From side of unit



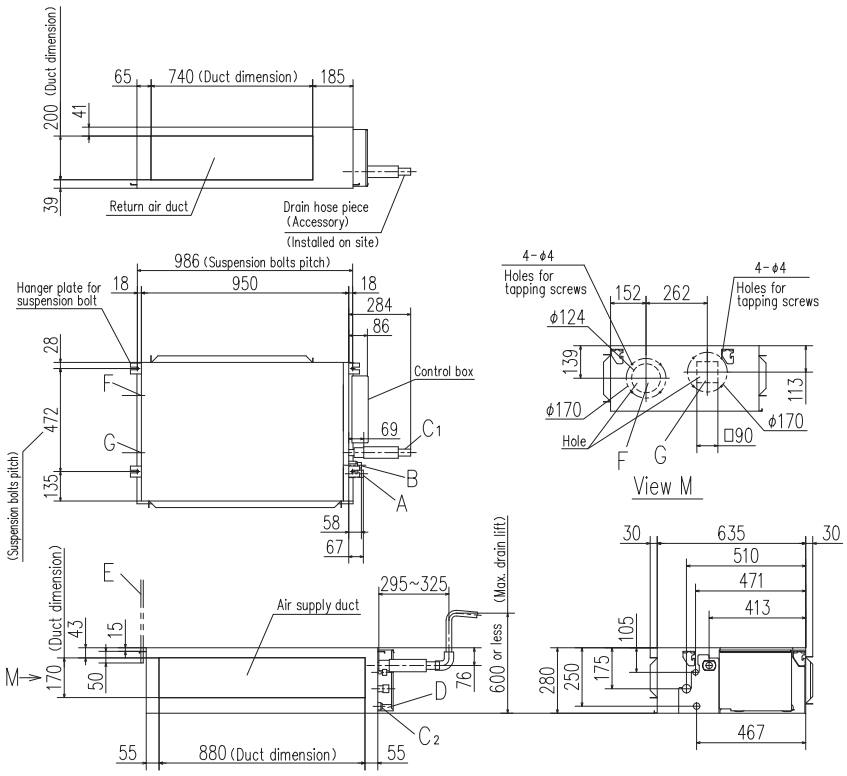
Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to the service manual.
(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.
(c) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper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

(Case 2) From bottom of unit



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

FDU71KXE6F, 90KXE6F

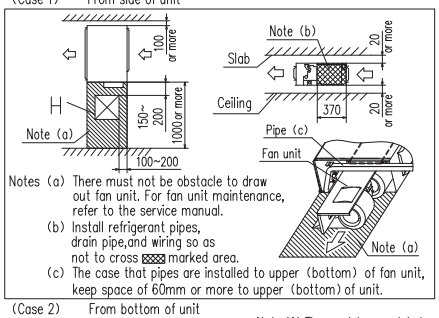


Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection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

Space for installation and service

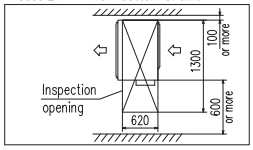
Select either of two cases to keep space for installation and services.

(Case 1) From side of unit



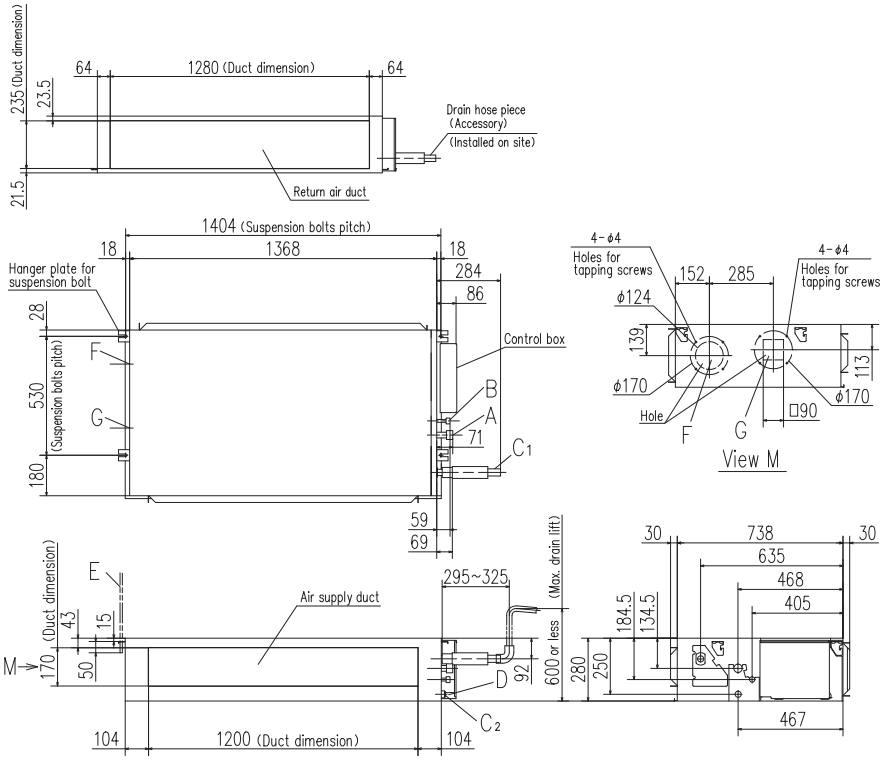
Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to the service manual.
(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.
(c) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper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

(Case 2) From bottom of unit



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

FDU112KXE6F, 140KXE6F, 160KXE6F

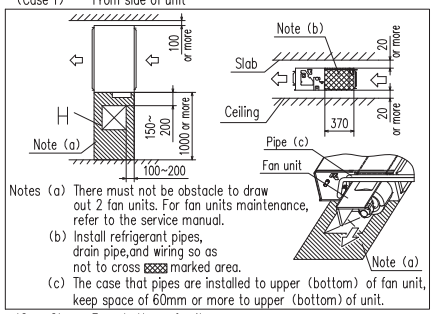


Symbol	Content	
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C1	Drain piping	VP25 (O.D.32)
C2	Drain piping (Gravity drainage)	VP20
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection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

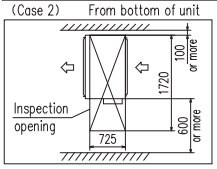


Notes (a) There must not be obstacle to draw out 2 fan units. For fan units maintenance, refer to the service manual.

(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.

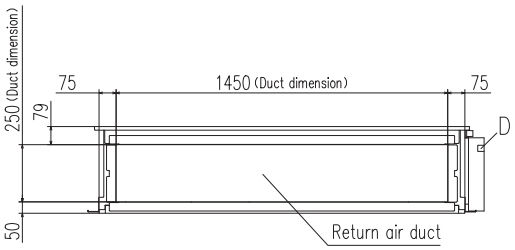
(Case 2) From bottom of unit



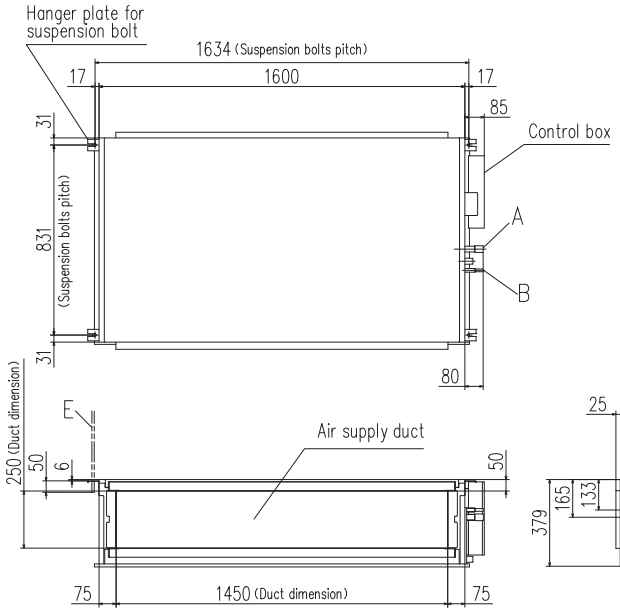
Note

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

FDU224KXZE1, 280KXZE1



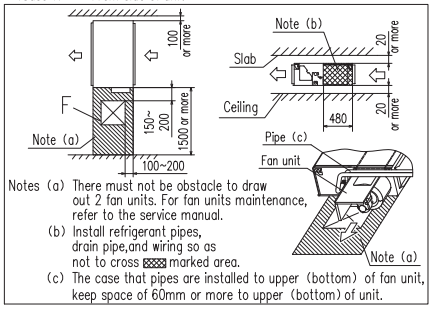
Symbol	Content		
	MODEL	224	280
A	Gas piping	φ19.05 (3/4") (Brazing)	φ22.22 (7/8") (Brazing)
B	Liquid piping	φ9.52 (3/8") (Brazing)	
C	Drain piping (Gravity drainage)	VP25 (O.D.32)	
D	Hole for wiring		
E	Suspension bolts	M10	
F	Inspection hole	(450X450)	



Space for installation and service

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

(Case 1) From side of unit

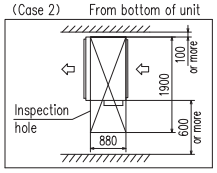


Notes (a) There must not be obstacle to draw out 2 fan units. For fan units maintenance, refer to the service manual.

(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

Model No.

FDUM22KXE6F	FDUM71KXE6F
FDUM28KXE6F	FDUM90KXE6F
FDUM36KXE6F	FDUM112KXE6F
FDUM45KXE6F	FDUM140KXE6F
FDUM56KXE6F	FDUM160KXE6F

Filter kit (option)

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

*Filter pressure loss:5pa

Remote control (option)

Wired

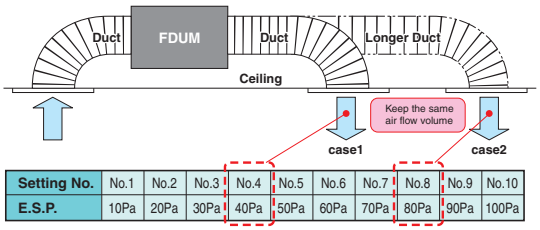
RC-EX3A **RC-E5** **RCH-E3**

Wireless

RCN-KIT4-E2

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

Using DC motor, the most optimum air flow volume is achieved. The indoor unit will recognize external static pressure automatically and keep rated air flow volume.



Setting No.	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
E.S.P.	10Pa	20Pa	30Pa	40Pa	50Pa	60Pa	70Pa	80Pa	90Pa	100Pa

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

Thin design

The height of all FDUM models is only 280mm.

Transparent inspection window

Dirt condition of the bottom of a drain pan can be checked through this transparent inspection window without removing drain pan. (Please refer to P38)

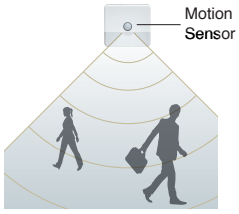
Improvement of the serviceability

Fan unit (impeller and motor) can be pulled out from the right side or the bottom side of the unit. Maintenance can be carried out from the right side or the bottom side of the unit. (Please refer to P44)

Motion Sensor (Option)

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

LB-KIT2



Specifications

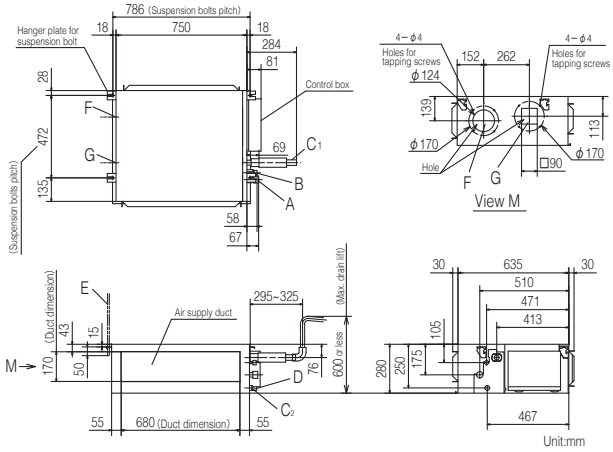
Item		Model	FDUM22KXE6F	FDUM28KXE6F	FDUM36KXE6F	FDUM45KXE6F	FDUM56KXE6F	FDUM71KXE6F	FDUM90KXE6F	FDUM112KXE6F	FDUM140KXE6F	FDUM160KXE6F
Nominal cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0
Nominal heating capacity		kW	2.5	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	18.0
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz									
Power consumption	Cooling	kW	0.10-0.10/0.10					0.20-0.20/0.20		0.29-0.29/0.29	0.33-0.33/0.33	0.45-0.45/0.45
	Heating		0.10-0.10/0.10					0.20-0.20/0.20		0.29-0.29/0.29	0.33-0.33/0.33	0.45-0.45/0.45
Sound power level		dB(A)	60					65		—		
Sound pressure level		dB(A)	P-Hi:37 Hi:32 Me:29 Lo:26					P-Hi:38 Hi:33 Me:29 Lo:25		P-Hi:44 Hi:38 Me:36 Lo:30	P-Hi:45 Hi:40 Me:34 Lo:29	P-Hi:47 Hi:40 Me:35 Lo:30
Exterior dimensions H x W x D		mm	280 x 750 x 635					280 x 950 x 635		280 x 1370 x 740		
Net weight		kg	29					34		54		
Air flow		m3/min	P-Hi:13 Hi:10 Me:9 Lo:8					P-Hi:24 Hi:19 Me:15 Lo:10		P-Hi:36 Hi:28 Me:25 Lo:19	P-Hi:39 Hi:32 Me:26 Lo:20	P-Hi:48 Hi:35 Me:28 Lo:22
Maximum external static pressure		Pa	100									
Outside air intake			Possible									
Air filter			Filter kit:UM-FL1EF					Filter kit:UM-FL2EF		Filter kit:UM-FL3EF		
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2									
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")		Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")				

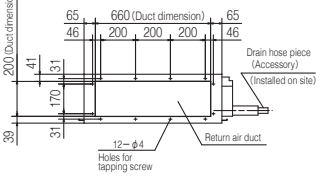
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

Dimensions

All measurements in mm.

FDUM22KXE6F, 28KXE6F, 36KXE6F, 45KXE6F, 56KXE6F

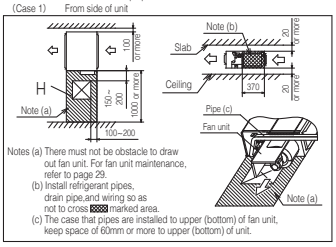




Space for installation and service

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

(Case 1) From side of unit

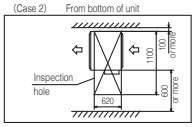


Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to page 29.
(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.
(c) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper (bottom) of unit.

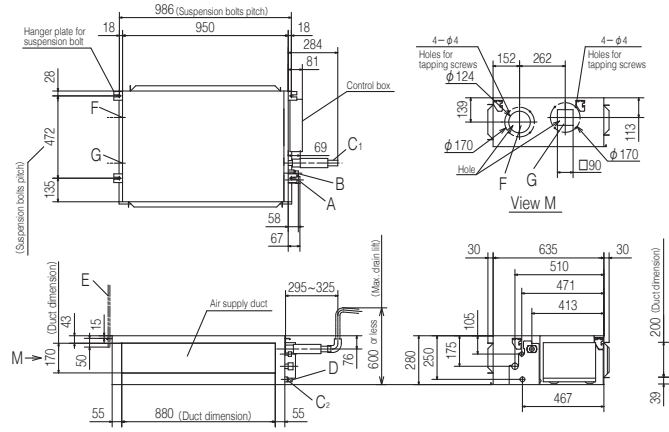
Symbol	Content		
	Model	22,28	36,45,56
A	Gas piping	φ9.52(3/8") (Flare)	φ12.7(1/2") (Flare)
B	Liquid piping	φ6.35(1/4") (Flare)	
C1	Drain piping	VP20 (I.D.20,O.D.26) (Standard) or VP25 (I.D.25,O.D.32) (Used with attached socket) Note (2)	
C2	Drain piping (Gravity drainage)	VP20 (I.D.20,O.D.26) (Standard) or VP25 (I.D.25,O.D.32) (Used with attached socket)	
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)	

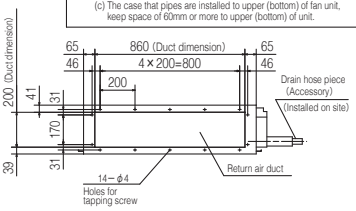
Notes (1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20 or VP25) on site.

(Case 2) From bottom of unit



FDUM71KXE6F, 90KXE6F

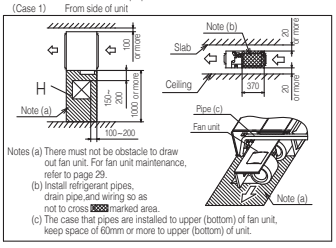




Space for installation and service

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

(Case 1) From side of unit

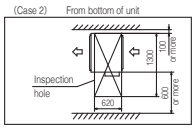


Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to page 29.
(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.
(c) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper (bottom) of unit.

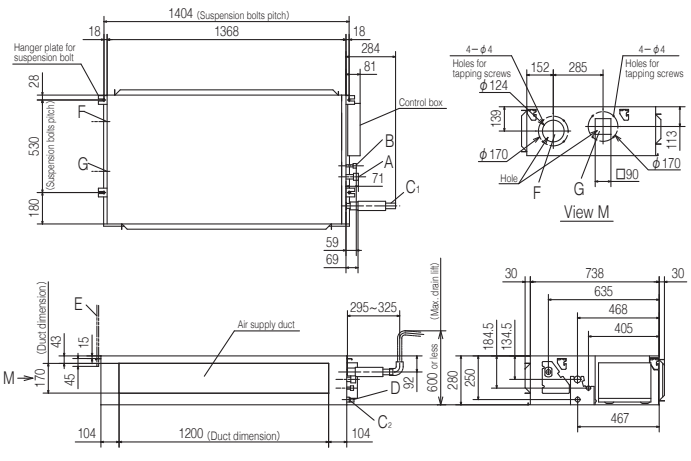
Symbol	Content	
A	Gas piping	φ15.88(5/8")(Flare)
B	Liquid piping	φ9.52(3/8")(Flare)
C1	Drain piping	VP20 (I.D.20,O.D.26) (Standard) or VP25 (I.D.25,O.D.32) (Used with attached socket) Note (2)
C2	Drain piping (Gravity drainage)	VP20 (I.D.20,O.D.26) (Standard) or VP25 (I.D.25,O.D.32) (Used with attached socket)
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)

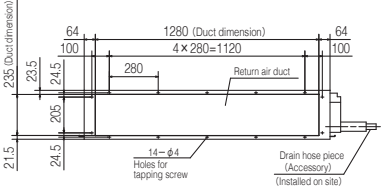
Notes(1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20 or VP25) on site.

(Case 2) From bottom of unit



FDUM112KXE6F, 140KXE6F, 160KXE6F

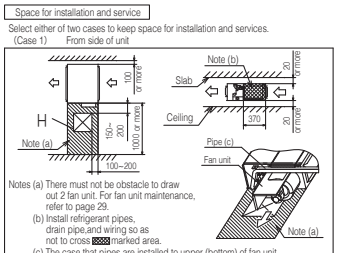




Space for installation and service

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

(Case 1) From side of unit

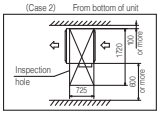


Notes (a) There must not be obstacle to draw out 2 fan unit. For fan unit maintenance, refer to page 29.
(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.
(c) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper (bottom) of unit.

Symbol	Content	
A	Gas piping	φ15.88(5/8") (Flare)
B	Liquid piping	φ9.52(3/8") (Flare)
C1	Drain piping	VP20 (I.D.20,O.D.26) (Standard) or VP25 (I.D.25,O.D.32) (Used with attached socket) Note (2)
C2	Drain piping (Gravity drainage)	VP20 (I.D.20,O.D.26) (Standard) or VP25 (I.D.25,O.D.32) (Used with attached socket)
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)

Notes (1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20 or VP25) on site.

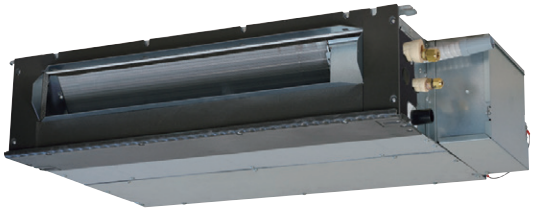
(Case 2) From bottom of unit



Duct Connected (thin) -Low Static Pressure- FDUT

Model No.

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



Remote control (option)

Wired

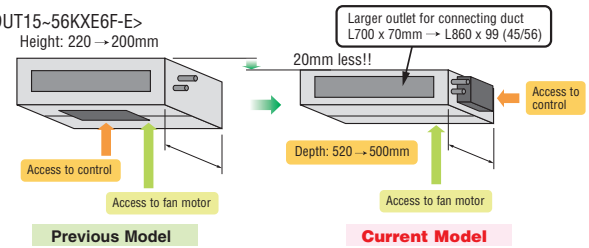
RC-EX3A RC-E5 RCH-E3

Wireless

RCN-KIT4-E2

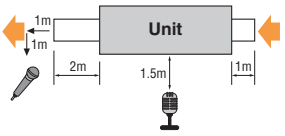
Compact design

<FDUT15~56KXE6F-E>
Height: 220 → 200mm

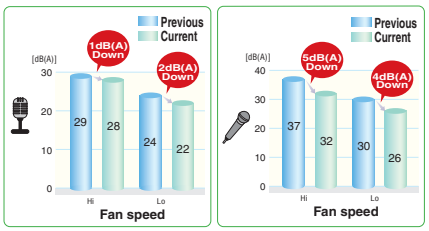


Lower noise

<FDUT28KXE6F-E>



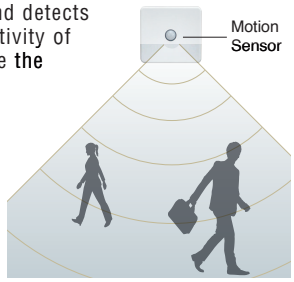
※Measured based on JIS B 8616



Motion Sensor NEW (Option)

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

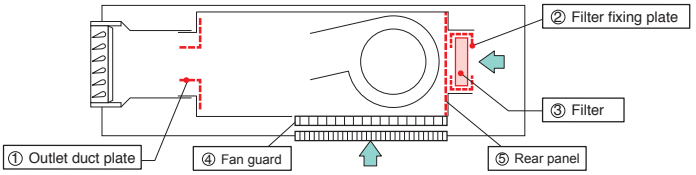
LB-KIT2



Duct kit and filter options

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

Filter pressure loss : 5 Pa



Specifications

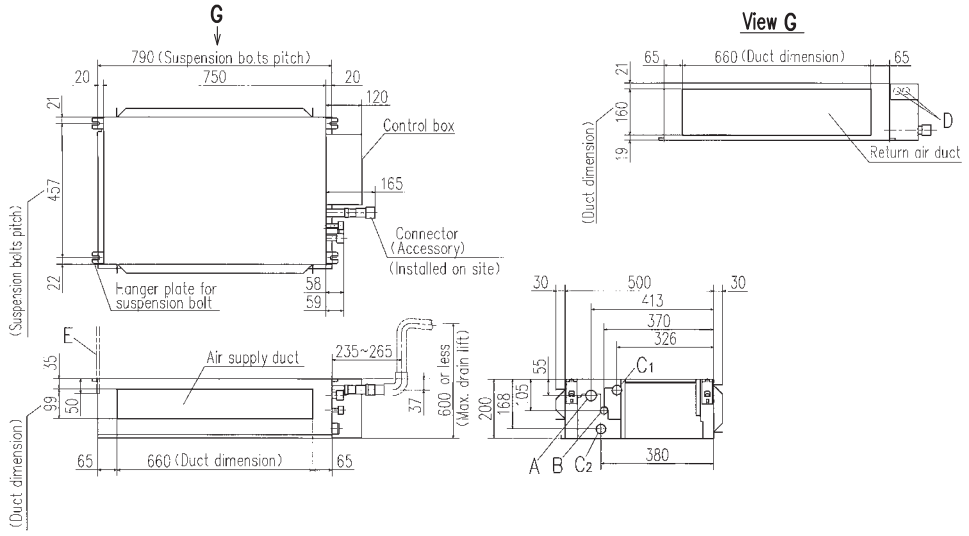
Item		Model	FDUT15KXE6F-E	FDUT22KXE6F-E	FDUT28KXE6F-E	FDUT36KXE6F-E	FDUT45KXE6F-E	FDUT56KXE6F-E	FDUT71KXE6F-E
Nominal cooling capacity		kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1
Nominal heating capacity		kW	1.7	2.5	3.2	4.0	5.0	6.0	8.0
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz						
Power consumption	Cooling	kW	0.06-0.06/0.06	0.07-0.07/0.07			0.08-0.08/0.09		0.08-0.08//0.08
	Heating	kW	0.06-0.06/0.06	0.07-0.07/0.08			0.08-0.08/0.09		0.07-0.07//0.07
Sound power level		dB(A)	52			57	58	59	
Sound pressure level ①		dB(A)	Hi:28 Me:26 Lo:22			Hi:33 Me:30 Lo:26	Hi:34 Me:32 Lo:28	Hi:35 Me:33 Lo:30	Hi:35 Me:31 Lo:28
Sound pressure level ②		dB(A)	Hi:32 Me:29 Lo:26			Hi:37 Me:34 Lo:28	Hi:36 Me:33 Lo:27	Hi:38 Me:33 Lo:29	Hi:41 Me:37 Lo:32
Exterior dimensions H x W x D		mm	200x750x500				200x950x500		220x1150x565
Net weight		kg	22	21		22	25		31
Air flow (Standard)		m³/min	Hi:6 Me:5 Lo:4	Hi:7.5 Me:6 Lo:5		Hi:8.5 Me:7 Lo:5.5	Hi:11.5 Me:9 Lo:7	Hi:12.5 Me:9 Lo:7.2	Hi:16 Me:13 Lo:9.5
External Static pressure		Pa	Standard:10, Max:35				Standard:10, Max:50		
Outside air intake			Possible from return duct						
Air filter			Filter set:UT-FL1EF				Filter set:UT-FL2EF		Filter set:UT-FL3EF
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2						
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")			Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 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 levels shows the value when the supply of 2m and the return duct of 1m (except the Bottom air return) are connected the unit.
① : Mike position is 1.5m below unit, ② : Mike position is 1m in front and 1m below the air supply duct.

Dimensions

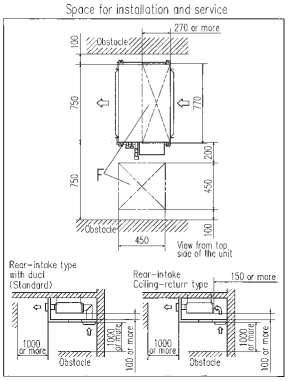
All measurements in mm.

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

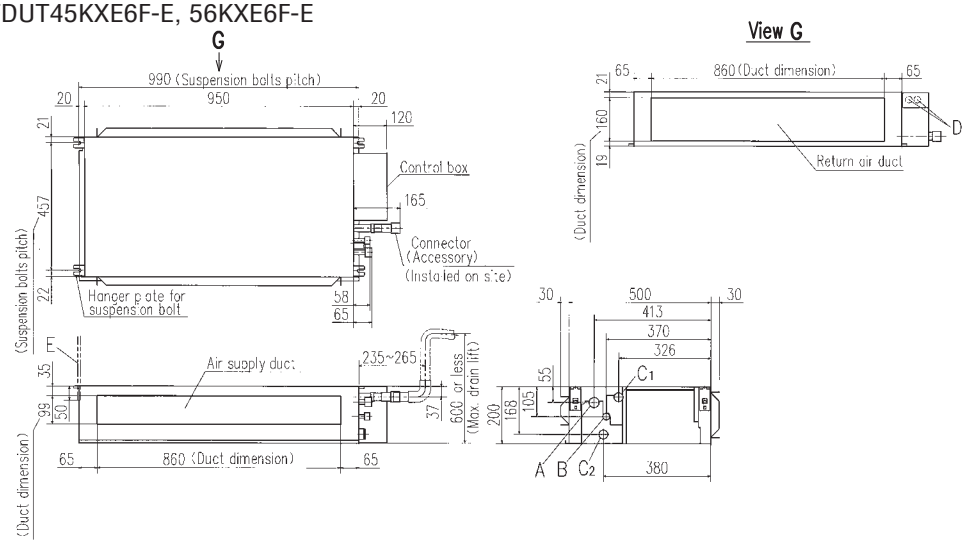


Symbol	Model	Content	
		15	22 28 36
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)	
C1	Drain piping	VP25 (I.D.25 , O.D.32) (Used with attached connector)	
C2	Drain piping (Gravity drainage)	VP25 (I.D.25 , O.D.32) (Used with attached connector)	
D	Hole for wiring	ø25 x 2	
E	Suspension bolts	(M10)	
F	Inspection hole	(450X450) , (270X770)	

Space for installation and service

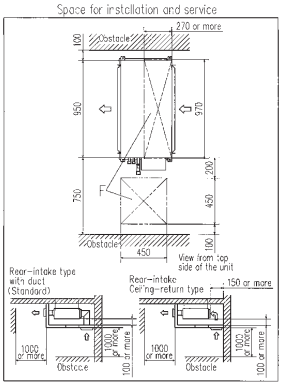


FDUT45KXE6F-E, 56KXE6F-E

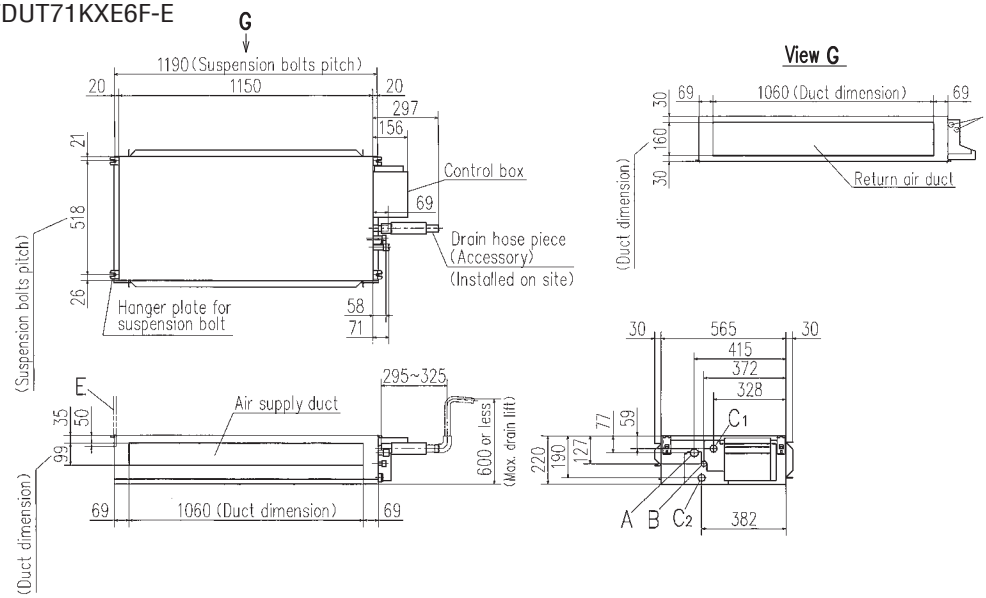


Symbol	Model	Content
		45,56
A	Gas piping	ø12.7 (1/2") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)
C1	Drain piping	VP25 (I.D.25 , O.D.32) (Used with attached connector)
C2	Drain piping (Gravity drainage)	VP25 (I.D.25 , O.D.32) (Used with attached connector)
D	Hole for wiring	ø25 x 2
E	Suspension bolts	(M10)
F	Inspection hole	(450X450) , (270X870)

Space for installation and service

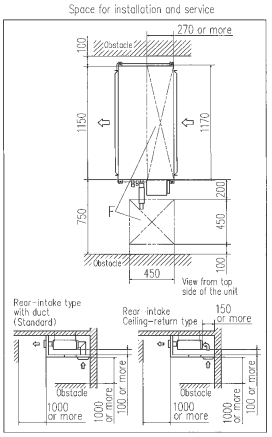


FDUT71KXE6F-E



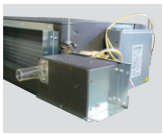
Symbol	Model	Content
		71
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C1	Drain piping	VP25 (I.D.25 , O.D.32) (Used with attached socket)
C2	Drain piping (Gravity drainage)	VP25 (I.D.25 , O.D.32) (Used with attached socket)
D	Hole for wiring	ø25 x 2
E	Suspension bolts	(M10)
F	Inspection hole	(450X450) , (270X1170)

Space for installation and service



Duct Connected (Compact & Flexible) FDUH

Model No.
FDUH22KXE6F
FDUH28KXE6F
FDUH36KXE6F



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

Filter kit (option)
UH-FL1E

*Filter pressure loss:5pa

Remote control (option)

Wired

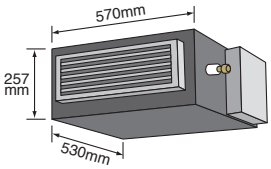
RC-EX3A **RC-E5** **RCH-E3**

Wireless

RCN-KIT4-E2

Compact and thin size, light weight

Our leading high technology has created the best solution for air conditioning in hotels.
The compact and thin sized units don't compromise on high energy efficiency all while weighing in at only 20kg.
The lowest sound level in the industry can ensure comfortable stay and rest in hotels.



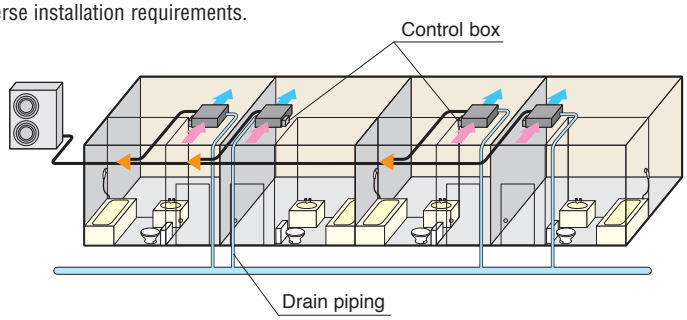
Motion Sensor NEW (Option)

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

LB-KIT2

Installation Flexibility

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



Wired remote control

RCH-E3
(option)

Simple remote control

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

Specifications

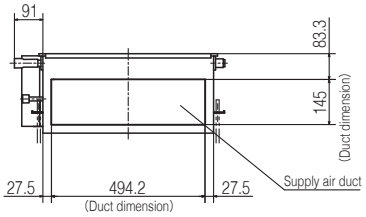
Item	Model	FDUH22KXE6F	FDUH28KXE6F	FDUH36KXE6F
Nominal cooling capacity	kW	2.2	2.8	3.6
Nominal heating capacity	kW	2.5	3.2	4.0
Power source		1 Phase 220-240V, 50Hz / 220V, 60Hz		
Power consumption Cooling	kW	0.05-0.07/0.07		
Power consumption Heating	kW	0.05-0.07/0.07		
Sound power level	dB(A)	60		
Sound pressure level	dB(A)	P-Hi:39 Hi: 33 Me: 30 Lo: 27		
Exterior dimensions HxWxD	mm	257x570x530		
Net weight	kg	20		
Air flow	m³/min	P-Hi:8.5 Hi: 7 Me: 6.5 Lo: 6		
External static pressure	Pa	30		
Outside air intake		Not possible		
Air filter		Filter kit:UH-FL1E		
Remote control(option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2		
Installation data Refrigerant piping size	mm(in)	Liquid line:ø6.35(1/4")		Liquid line:ø6.35(1/4")
		Gas line:ø9.52(3/8")		Gas line:ø12.7(1/2")

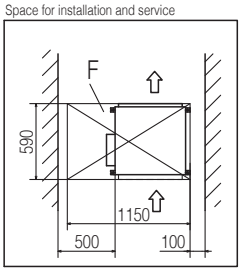
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

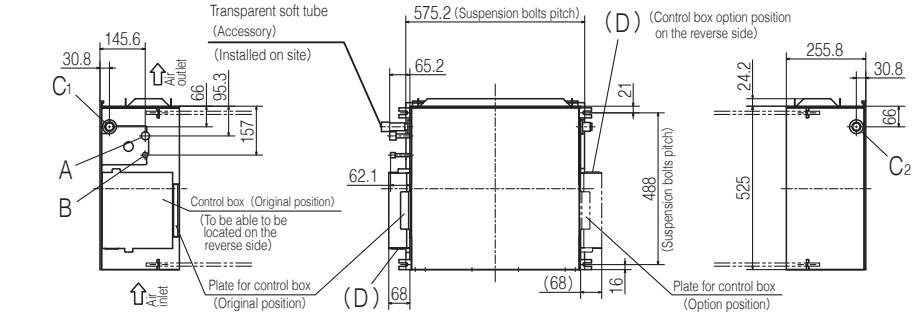
Dimensions

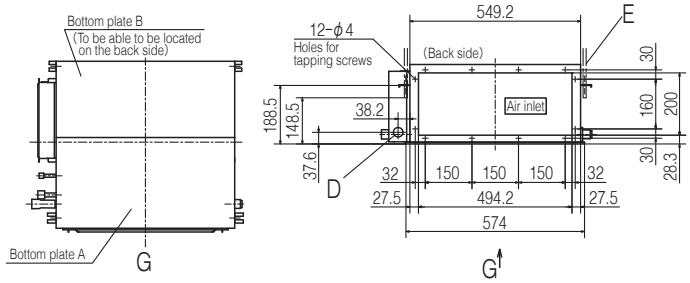
All measurements in mm.

Rear air return type







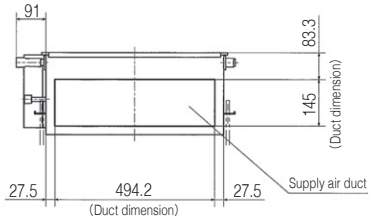


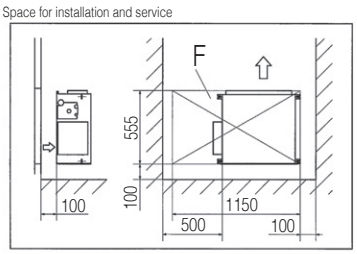
Symbol	Content		
	Model	22,28	36
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C_1	Drain piping	VP20 (I.D.20,O.D.26) Note (2)	
C_2	Drain piping	To be used instead of "C_1"	
D	Hole for wiring	ϕ30	
E	Suspension bolts	(M10)	
F	Inspection hole	(590 × 1150) Note (3)	

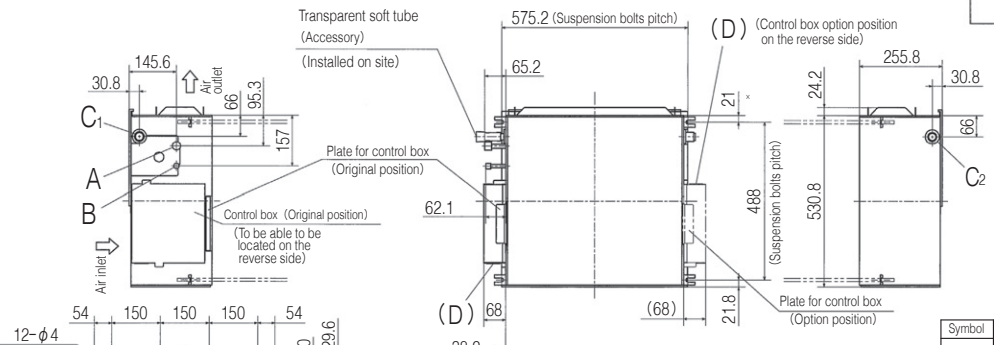
Notes

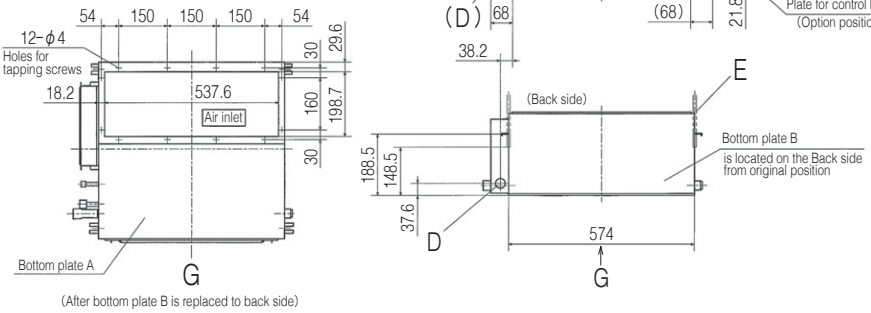
(1) The model name label is attached on the fan cose inside the air return grille.
(2) Prepare the connecting socket (VP20) on site. (As for drain piping, it is possible to choose C_1 or C_2)
(3) When control box is located on the reverse side, Installation space should be modified new location.

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 (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	(555 × 1150) Note (3)	

Notes

(1) The model name label is attached on the fan cose 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.

Wall Mounted FDK

Model No.

FDK15KXZE1
FDK22KXZE1
FDK28KXZE1
FDK36KXZE1
FDK45KXZE1
FDK56KXZE1
FDK71KXZE1
FDK90KXZE1

FDK15~56

FDK71,90

Remote control (option)

Wired

RC-EX3A

RC-E5

RCH-E3

Wireless

RCN-K-E2:
FDK15~56

RCN-K71-E2:
FDK71,90

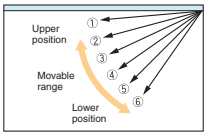
Elegant Timeless Design

The FDK series air conditioners are 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. (15-56KXZE1)

Flap control system

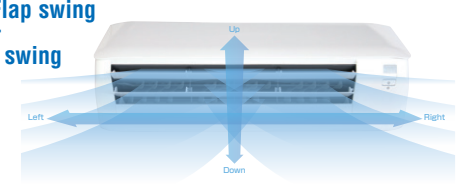
Selection of flap position is possible. A flap can be set at different angles.

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

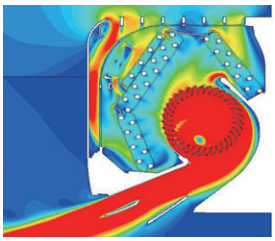


Lateral Swing ▶ flap swings from right to left automatically

Up/Down Flap swing + Lateral swing



Jet Technology



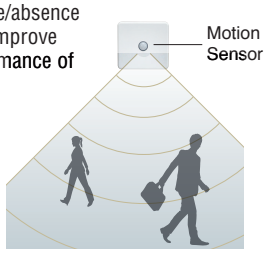
Fast ⟷ Slow
Colours in the figure show the air speed.

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.

Motion Sensor (Option)

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

LB-KIT2



Specifications

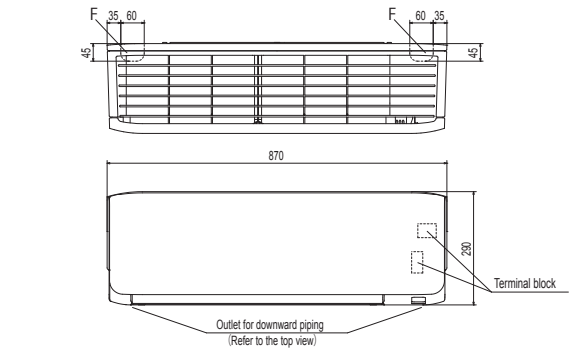
Item		Model	FDK15KXZE1	FDK22KXZE1	FDK28KXZE1	FDK36KXZE1	FDK45KXZE1	FDK56KXZE1	FDK71KXZE1	FDK90KXZE1
Nominal cooling capacity		kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1	9.0
Nominal heating capacity		kW	1.7	2.5	3.2	4.0	5.0	6.3	8.0	10.0
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz							
Power consumption	Cooling	kW	0.02-0.02/0.02			0.03-0.03/0.03			0.04-0.04/0.04	0.05-0.05/0.05
	Heating		0.02-0.02/0.02			0.03-0.03/0.03			0.04-0.04/0.04	0.05-0.05/0.05
Sound power level		dB(A)	54	55		58		Cooling:58 Heating:61	59	61
Sound pressure level	Cooling	dB(A)	P-Hi:38 Hi:34 Me:31 Lo:28	P-Hi:38 Hi:36 Me:32 Lo:28		P-Hi:40 Hi:38 Me:33 Lo:28	P-Hi:43 Hi:41 Me:36 Lo:33	P-Hi:43 Hi:41 Me:36 Lo:33	P-Hi:42 Hi:40 Me:37 Lo:35	P-Hi:44 Hi:42 Me:39 Lo:35
	Heating		P-Hi:38 Hi:34 Me:31 Lo:28	P-Hi:38 Hi:36 Me:32 Lo:28		P-Hi:40 Hi:38 Me:33 Lo:28	P-Hi:43 Hi:41 Me:36 Lo:33	P-Hi:44 Hi:42 Me:37 Lo:33	P-Hi:42 Hi:40 Me:37 Lo:35	P-Hi:44 Hi:42 Me:39 Lo:35
Exterior dimensions H x W x D		mm	290 x 870 x 230						339 x 1197 x 262	
Net weight		kg	11.5	11		11.5			17	
Air flow	Cooling	m³/min	P-Hi:5.7 Hi:5 Me:4.5 Lo:3.6	P-Hi:8.5 Hi:8 Me:6 Lo:5		P-Hi:11 Hi:10 Me:8 Lo:7	P-Hi:12 Hi:11 Me:9 Lo:8	P-Hi:12 Hi:11 Me:9 Lo:8 P-Hi:13 Hi:12 Me:10 Lo:8	P-Hi:21 Hi:19 Me:16 Lo:14	P-Hi:23 Hi:21 Me:19 Lo:16
	Heating									
Outside air intake			Not possible							
Air filter, Q'ty			Polypropylene net x2 (Washable)							
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-K-E2						wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-K71-E2	
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")			Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")	

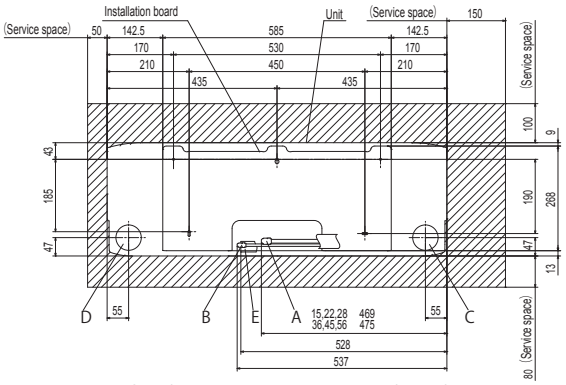
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

Dimensions

All measurements in mm.

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



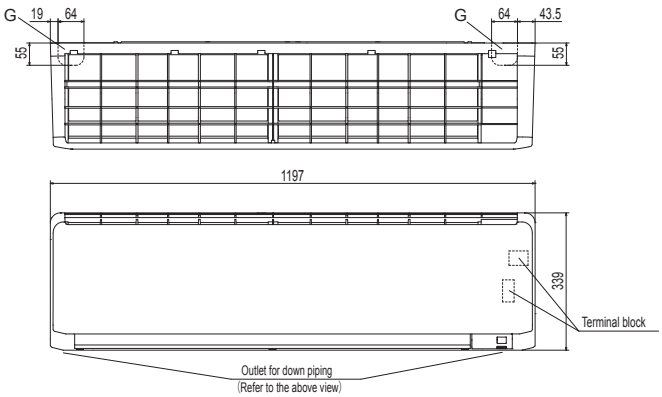


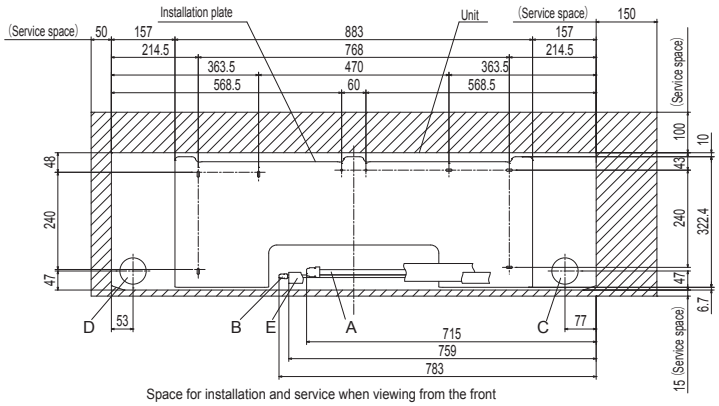
Space for installation and service when viewing from the front

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.

FDK71KXZE1, 90KXZE1





Space for installation and service when viewing from the front

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.

Ceiling Suspended FDE

Model No.

FDE36KXZE1
FDE45KXZE1
FDE56KXZE1
FDE71KXZE1
FDE112KXZE1
FDE140KXZE1

Remote control (option)

Wired

RC-EX3A RC-E5 RCH-E3

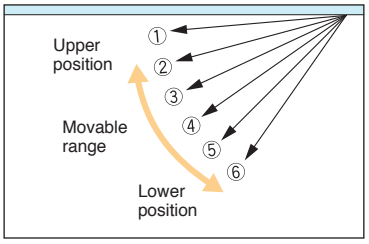
Wireless

RCN-E-E3

Flap control system

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

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



Reduction of weight

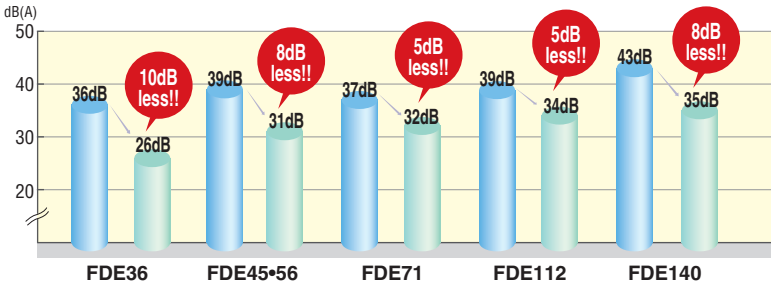
By decreasing the number of fan motors from two to one, we reduced the overall weight of our FDE units.

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

Reduction of sound pressure level (Lo mode)

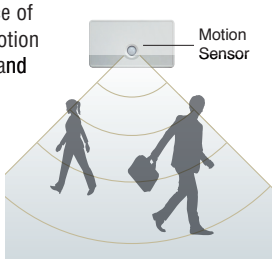
We achieved the industry's lowest sound pressure levels by decreasing air flow volume, decreasing pressure loss with employment of one fan motor and optimizing casing and distributor shape.

(comparison of previous model)



Motion Sensor (Option)

Reduce your environmental impact with our optional motion sensor feature.
By detecting presence or absence of human activity in a room, the motion sensor improves room comfort and unit energy saving performance.



LB-E

Specifications

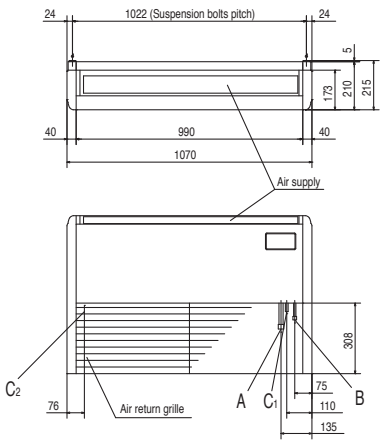
Item	Model	FDE36KXZE1	FDE45KXZE1	FDE56KXZE1	FDE71KXZE1	FDE112KXZE1	FDE140KXZE1
Nominal cooling capacity	kW	3.6	4.5	5.6	7.1	11.2	14.0
Nominal heating capacity	kW	4.0	5.0	6.3	8.0	12.5	16.0
Power source		1 Phase 220-240V, 50Hz / 220V, 60Hz					
Power consumption	Cooling kW	0.05-0.05/0.05			0.07-0.07/0.07	0.10-0.10/0.10	0.13-0.13/0.13
	Heating kW	0.05-0.05/0.05			0.07-0.07/0.07	0.10-0.10/0.10	0.13-0.13/0.13
Sound power level	dB(A)	60			62	61	64
Sound pressure level	dB(A)	P-Hi:46 Hi:38 Me:31 Lo:26	P-Hi:46 Hi:38 Me:36 Lo:31	P-Hi:46 Hi:38 Me:36 Lo:31	P-Hi:47 Hi:39 Me:37 Lo:32	P-Hi:45 Hi:42 Me:38 Lo:34	P-Hi:48 Hi:43 Me:40 Lo:35
Exterior dimensions H x W x D	mm	210 x 1070 x 690			210 x 1320 x 690	250 x 1620 x 690	
Net weight	kg	28			33	43	
Air flow	m³/min	P-Hi:13 Hi:10 Me:7 Lo:5.5	P-Hi:13 Hi:10 Me:9 Lo:7		P-Hi:20 Hi:15 Me:13 Lo:10	P-Hi:28 Hi:25 Me:21 Lo:16.5	P-Hi:32 Hi:26 Me:23 Lo:17
Outside air intake		Not possible					
Air filter, Q'ty		Pocket Plastic net x2 (Washable)					
Remote control(option)		wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-E-E3					
Installation data Refrigerant piping size	mm(in)	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")		

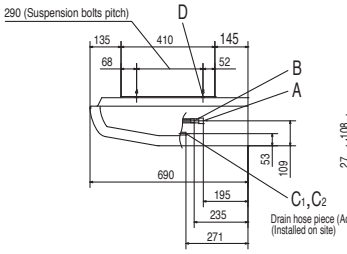
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

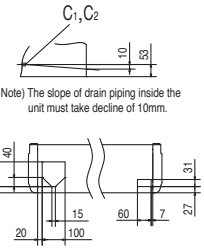
Dimensions

All measurements in mm.

FDE36KXZE1, 45KXZE1, 56KXZE1

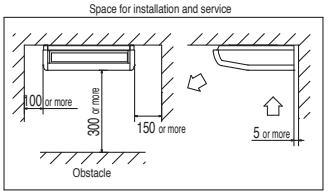




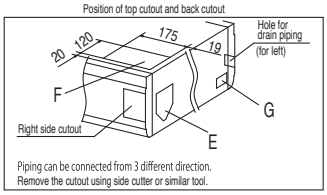


Note) The slope of drain piping inside the unit must take decline of 10mm.

Symbol	Content	
A	Gas piping	ø12.7 (1/2") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)
C 1,2	Drain piping	VP20 (I.D.20)
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping (for left back)	(Knock out)

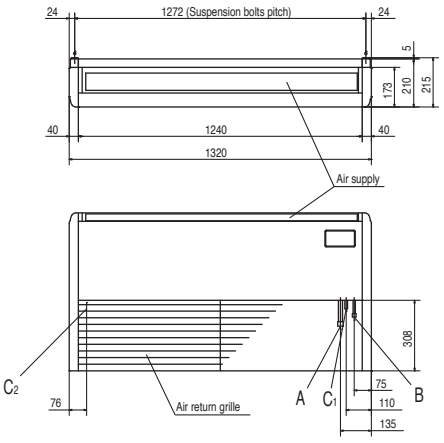


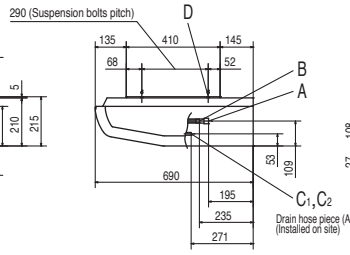
Make a space of 4000 or more between the units when installing more than one.

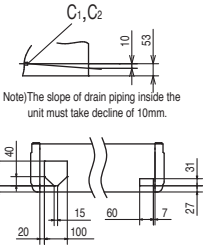


Note(1)The model name label is attached on the fan casing inside the air return grille.

FDE71KXZE1

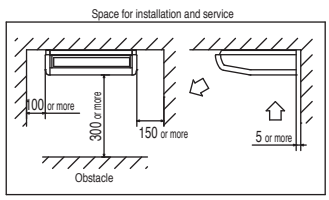




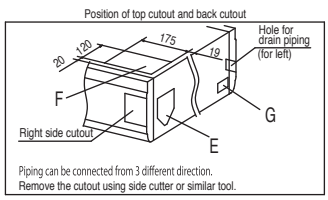


Note)The slope of drain piping inside the unit must take decline of 10mm.

Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C 1,2	Drain piping	VP20 (I.D.20)
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping(for left back)	(Knock out)

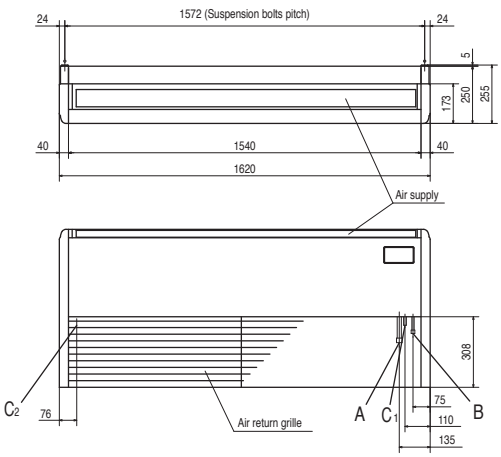


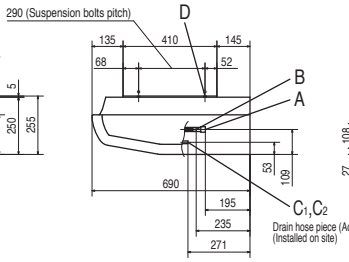
Make a space of 4500 or more between the units when installing more than one.

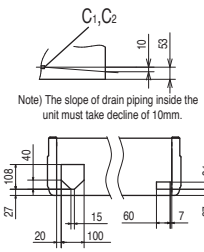


Note(1)The model name label is attached on the fan casing inside the air return grille.

FDE112KXZE1, 140KXZE1

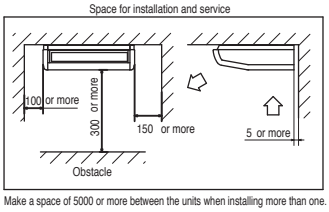




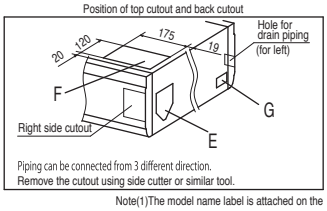


Note) The slope of drain piping inside the unit must take decline of 10mm.

Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C 1,2	Drain piping	VP20 (I.D.20)
D	Hole for suspension bolt	(M10 or M8)
E	Back cutout	PE cover
F	Top cutout	Plate cover
G	Hole for drain piping (for left back)	(Knock out)



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



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

Floor Standing -2way-
FDFW

Model No.
FDFW28KXE6F
FDFW45KXE6F
FDFW56KXE6F

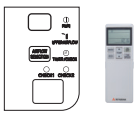
Auto air outlet selection

Remote control (option)

Wired

RC-EX3A RC-E5 RCH-E3

Wireless



RCN-FW-E2

Sophisticated Design

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

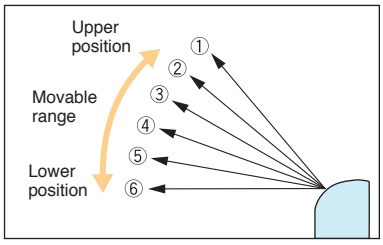
Quiet Operation

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

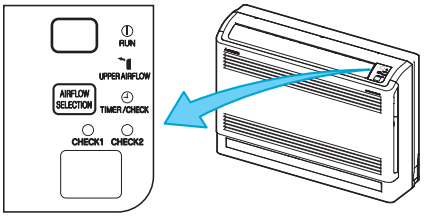
Selection of flap position is possible. A flap can be set at different angles.

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



Convenient to use operation

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



(In case of use of wireless remote control)

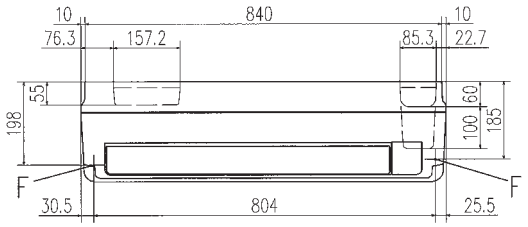
Specifications

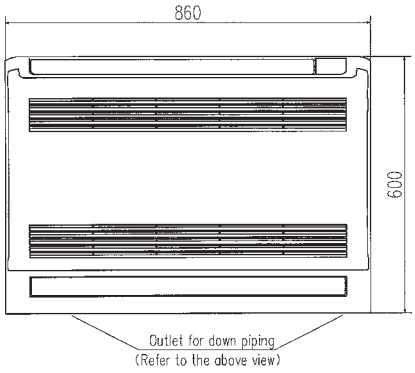
Item		Model	FDFW28KXE6F	FDFW45KXE6F	FDFW56KXE6F
Nominal cooling capacity		kW	2.8	4.5	5.6
Nominal heating capacity		kW	3.2	5.0	6.3
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz		
Power consumption	Cooling	kW	0.02-0.02/0.02	0.02-0.02/0.02	0.03-0.03/0.03
	Heating		0.02-0.02/0.02	0.02-0.02/0.02	0.03-0.03/0.03
Sound power level		dB(A)	55	57	60
Sound pressure level		dB(A)	Hi:36 Me:34 Lo:30	Hi:38 Me:36 Lo:33	Hi:44 Me:37 Lo:33
Exterior dimensions H x W x D		mm	600x860x238		
Net weight		kg	19	20	
Air flow (Standard)		m³/min	Hi:9 Me:8 Lo:7		Hi:11 Me:9 Lo:8
Air filter, Q'ty			Polypropylene net x1 (Washable)		
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-FW-E2		
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")	

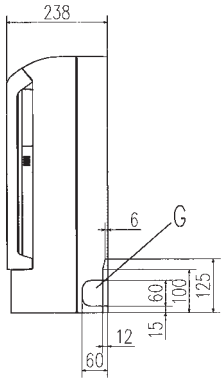
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27ºCDB, 19ºCWB, and outdoor temp. of 35ºCDB. Heating: Indoor temp. of 20ºCDB, and outdoor temp. of 7ºCDB, 6ºCWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

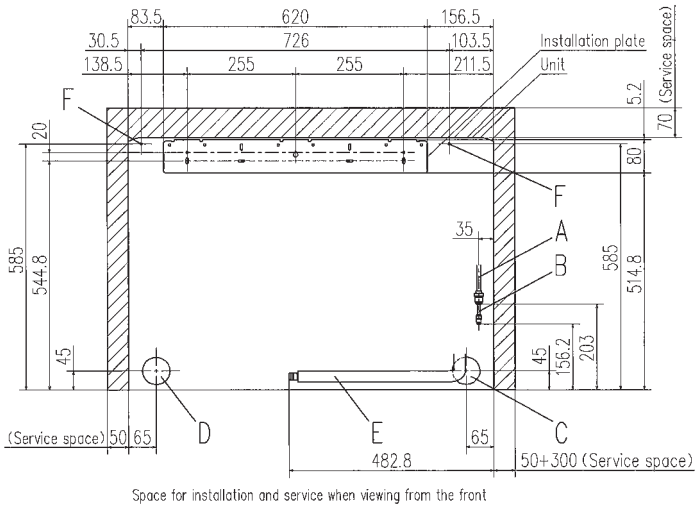
Dimensions

All measurements in mm.









Space for installation and service when viewing from the front

Symbol	Content		
	Model	FDFW28KXE6F	FDFW45KXE6F,56KXE6F
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Hole on wall for right rear piping	(ϕ65)	
D	Hole on wall for left rear piping	(ϕ65)	
E	Drain hose	VP16 (I.D.16)	
F	Screw point fasten the indoor unit	ϕ5	
G	Outlet for piping (on both side)		

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

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

Remote control (option)

Wired

RC-EX3A

RC-E5

RCH-E3

Wireless

RCN-KIT4-E2

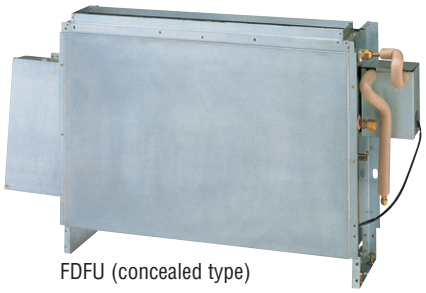
Model No.

FDFL71KXE6F

FDFU28KXE6F
FDFU45KXE6F
FDFU56KXE6F
FDFU71KXE6F

*Not available for 60Hz area.

FDFL



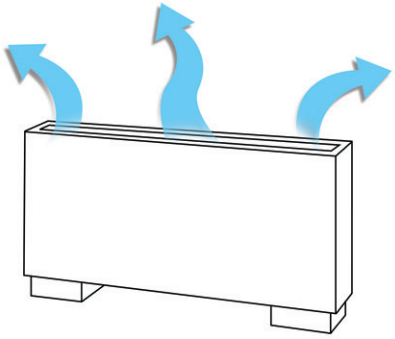
FDFU (concealed type)

Motion Sensor NEW **(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

Compact design at 630mm height



Wider airflow for optimum comfort

Specifications

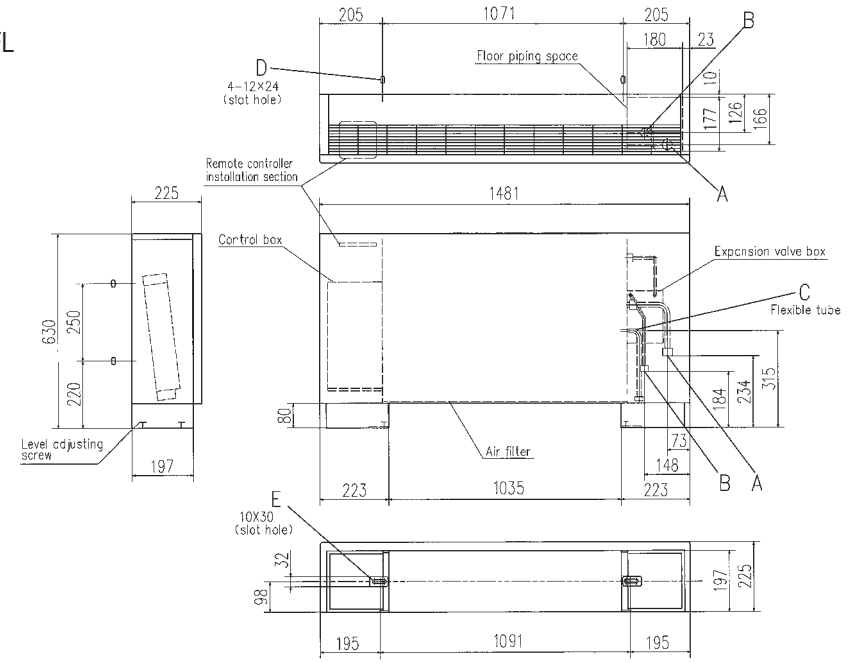
Item		Model	FDFL71KXE6F	FDFU28KXE6F	FDFU45KXE6F	FDFU56KXE6F	FDFU71KXE6F
Nominal cooling capacity		kW	7.1	2.8	4.5	5.6	7.1
Nominal heating capacity		kW	8.0	3.2	5.0	6.3	8.0
Power source			1 Phase 220-240V, 50Hz				
Power consumption	Cooling	kW	0.09-0.10	0.09-0.10			
	Heating		0.09-0.10	0.09-0.10			
Sound power level		dB(A)	62	58	60		
Sound pressure level		dB(A)	Hi:43 Me:41 Lo:40	Hi:41 Me:38 Lo:36	Hi:43 Me:41 Lo:40		
Exterior dimensions H x W x D		mm	630x1481x225	630x1077x225			630x1362x225
Net weight		kg	40	25			32
Air flow (Standard)		m³/min	Hi:18 Me:15 Lo:12	Hi:12 Me:11 Lo:10	Hi:14 Me:12 Lo:10		Hi:18 Me:15 Lo:12
Air filter, Q'ty			Polypropylene net x1 (Washable)				
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2				
Installation data Refrigerant piping size		mm(in)	Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")		Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 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.

Dimensions

All measurements in mm.

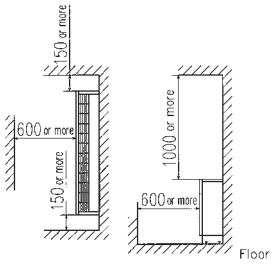
FDFL



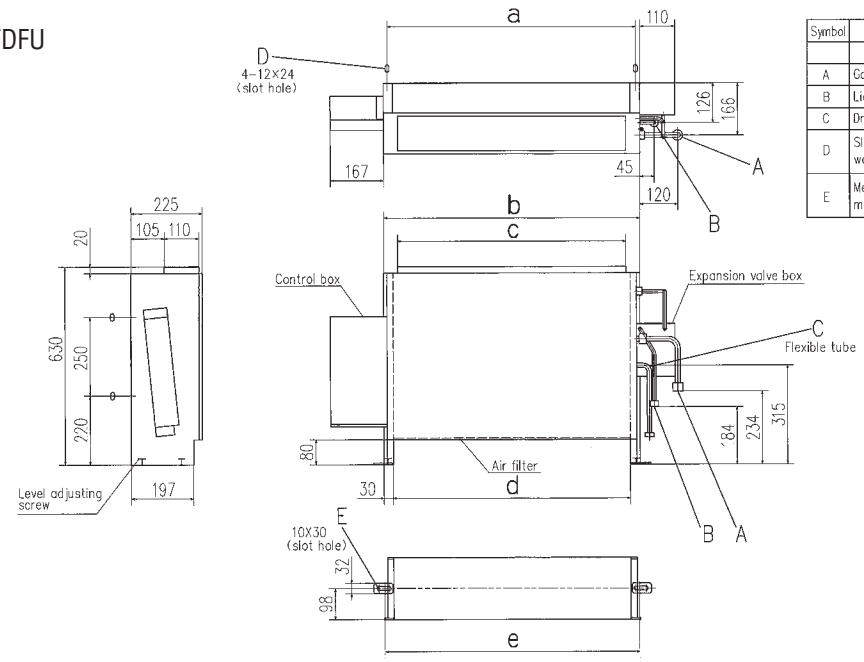
Symbol	Content	
	Model	FDFL71KXE6F
A	Gas piping (Accessory)	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C	Drain piping (Accessory)	PT20A female screw, 360mm
D	Slot hole for wall mounting	(M10)
E	Metal plate for floor mounting (Accessory)	(M8)

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

Space for installation and service



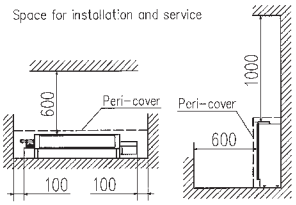
FDFU



Symbol	Content		
	Model	FDFU28KXE6F	FDFU45KXE6F,56KXE6F	FDFU71KXE6F
A	Gas piping (Accessory)	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 (Accessory)	PT20A female screw, 360mm		PT20A female screw, 360mm
D	Slot hole for wall mounting	(M10)		(M10)
E	Metal plate for floor mounting (Accessory)	(M8)		(M8)

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

Space for installation and service



Dimension Table

Unit:mm

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

Outdoor Air Processing unit
FDU-F

Model No.

FDU650FKXZE1
FDU1100FKXZE1
FDU1800FKXZE1
FDU2400FKXZE1

Remote control (option)

Wired

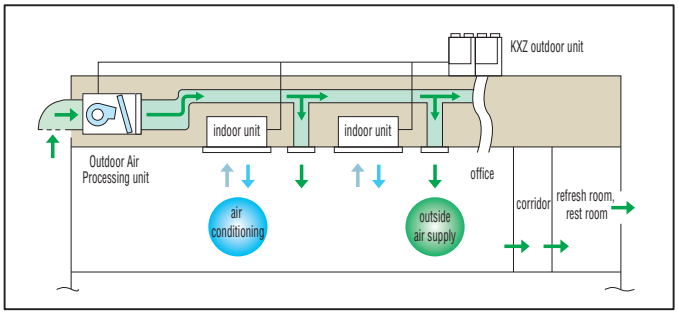
RC-EX3A **RC-E5** **RCH-E3**

Wireless

RCN-KIT4-E2

Create a fresher environment with the Outdoor Air Processing feature

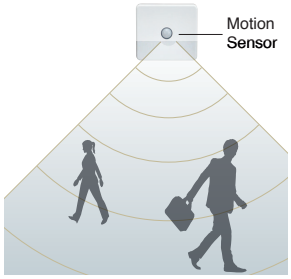
Connect your KXZ system to an Outdoor Air Processing unit with one streamlined system. This advanced technology allows you to enjoy a fresh and comfortable air supply.



Motion Sensor (Option)

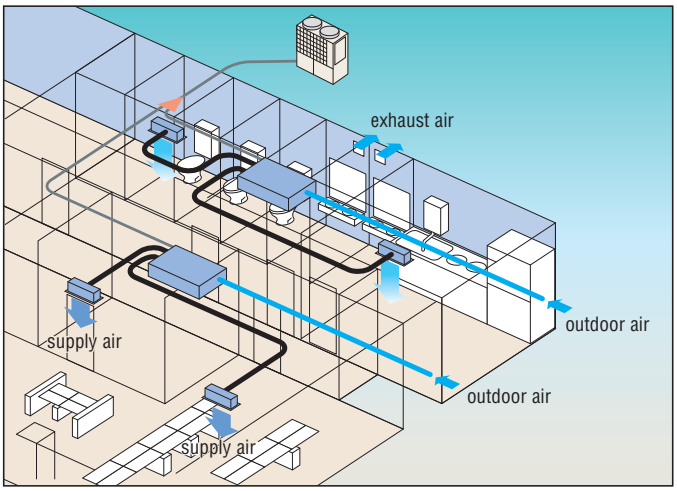
Built into the ceiling or wall plane, our motion sensor smart technology improves energy saving performance and overall room comfort.

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.

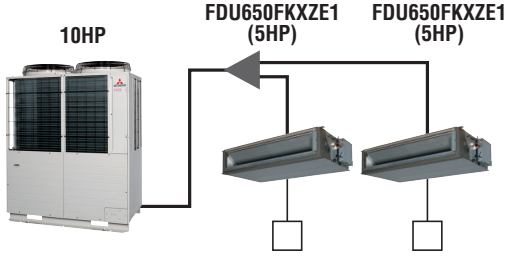
Connectivity with Outdoor units

FDU-F series are connectable to 8~36HP outdoor units.

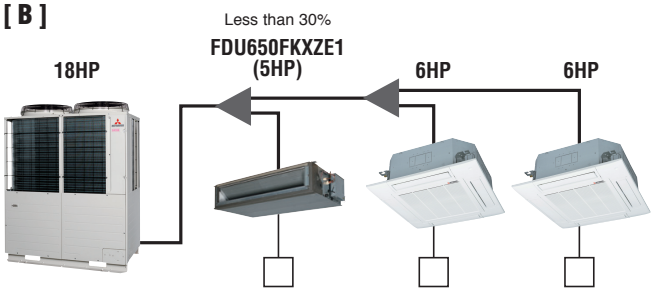
Combination with Outdoor units

	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.

[A]

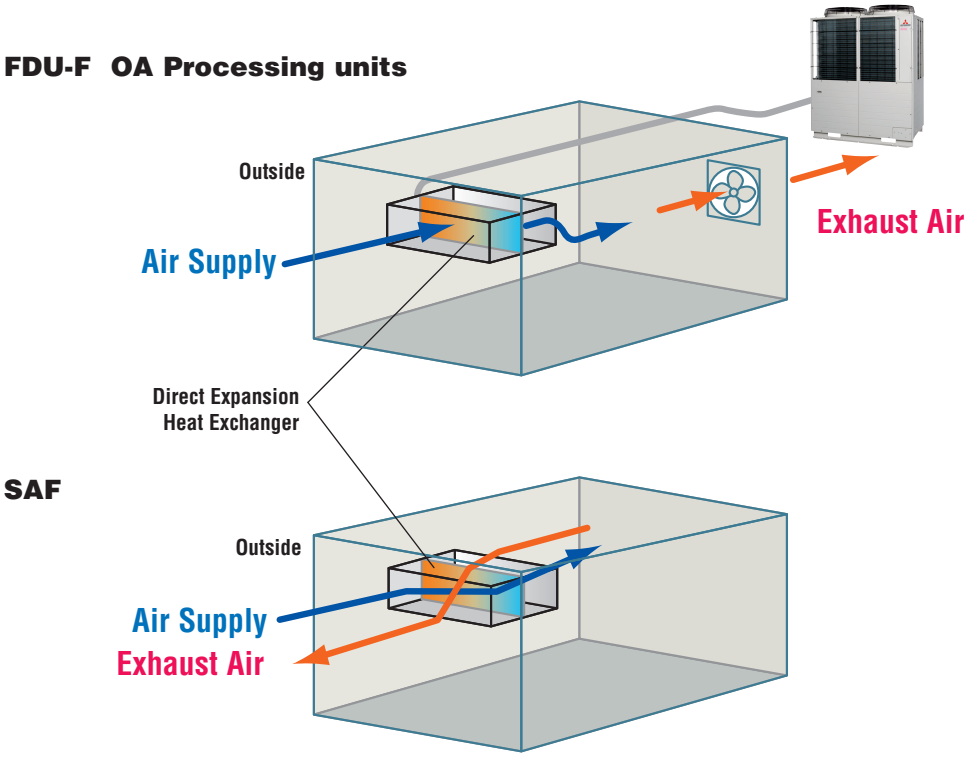


[B]



Concept (Difference between FDU-F and SAF)

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



Specifications

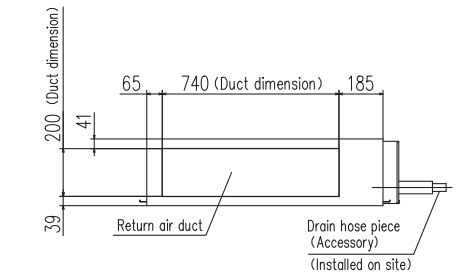
Item		Model	FDU650FKXZE1	FDU1100FKXZE1	FDU1800FKXZE1	FDU2400FKXZE1
Nominal cooling capacity		kW	9.0	14.0	22.4	28.0
Nominal heating capacity		kW	6.5	10.5	16.0	21.5
Power source			1 Phase 220-240V, 50Hz / 220V, 60Hz			
Power consumption	Cooling	kW	0.24-0.25/0.24	0.35-0.36/0.35	1.16-1.20/1.16	1.16-1.20/1.16
	Heating		0.24-0.25/0.24	0.35-0.36/0.35	1.16-1.20/1.16	1.16-1.20/1.16
Sound pressure level		dB(A)	Hi:31	Hi:37	Hi:42	Hi:45
Exterior dimension HxWxD		mm	280x950x635	280x1370x740	379x1600x893	
Net weight		kg	34	54	89	89
Air flow (Standard)		m3/min	Hi:11	Hi:18	Hi:30	Hi:40
External static pressure		Pa	200 (at Hi Air flow)			
Air filter, Q'ty			Procure locally			
Remote control(option)			wired:RC-EX3A, RC-E5, RCH-E3 wireless:RCN-KIT4-E2			
Installation data Refrigerating piping size		mm (in)	Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")		Liquid line:ø9.52(3/8") Gas line:ø19.05(3/4")	Liquid line:ø9.52(3/8") Gas line:ø22.22(7/8")

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-EX3A and RC-E5 only)

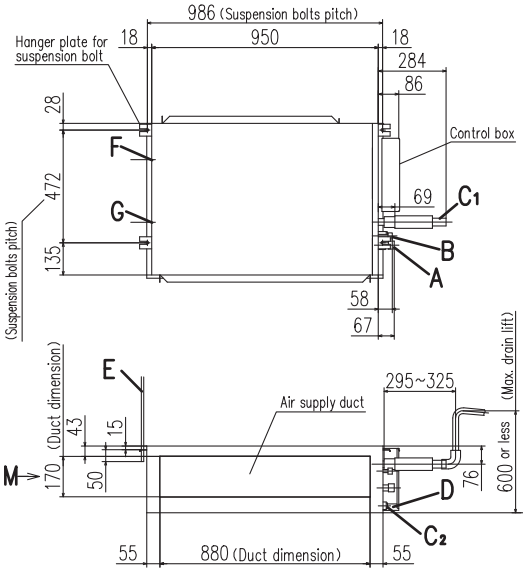
Dimensions

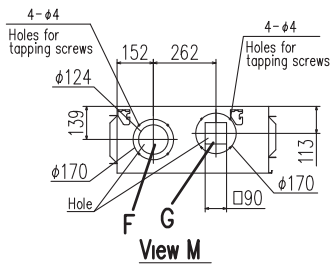
All measurements in mm.

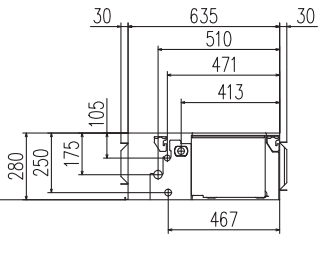
FDU650FKXZE1



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

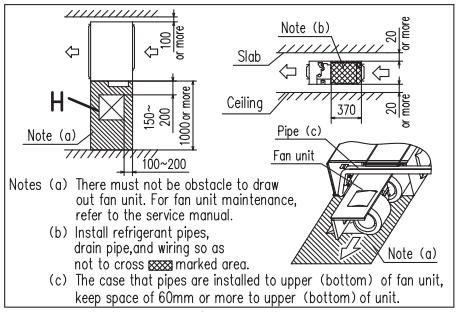




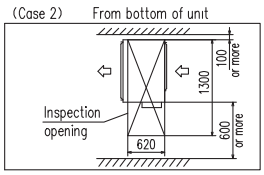


Space for installation and service

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



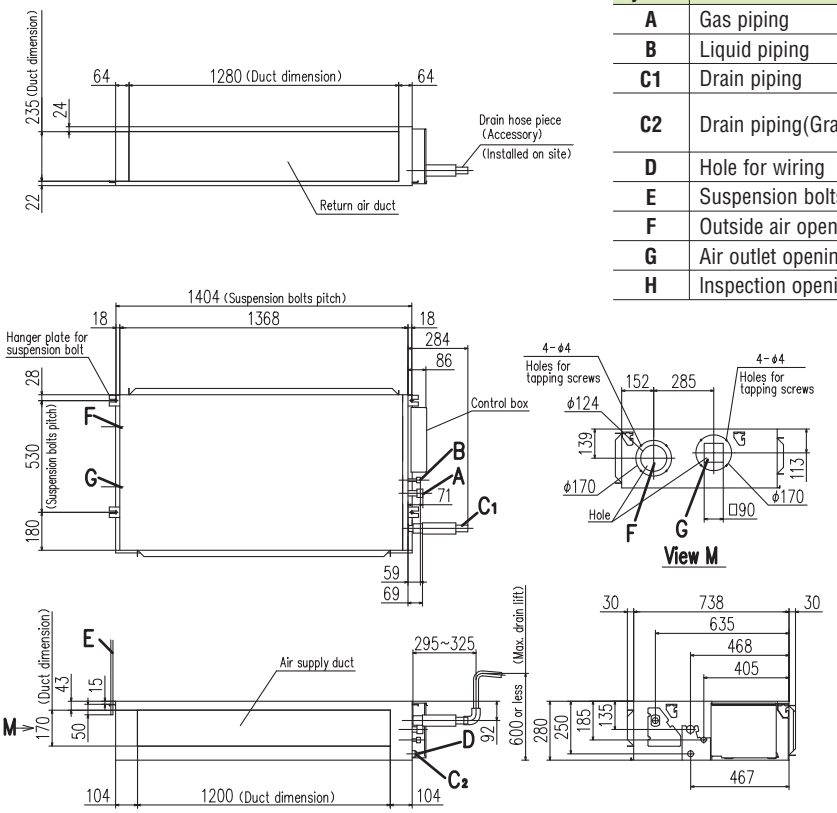
Notes (a) There must not be obstacle to draw out fan unit. For fan unit maintenance, refer to the service manual.
(b) Install refrigerant pipes, drain pipe,and wiring so as not to cross ▨ marked area.
(c) The case that pipes are installed to upper (bottom) of fan unit, keep space of 60mm or more to upper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

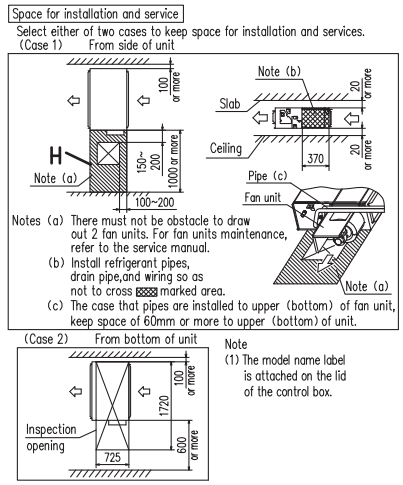


Note (1) The model name label is attached on the lid of the control box.

FDU1100FKXZE1

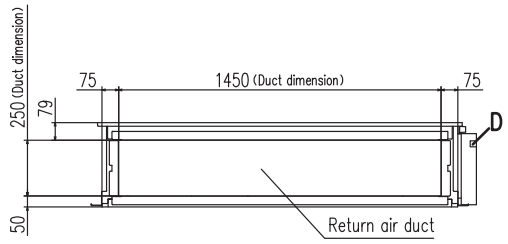
Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C1	Drain piping	VP25(O.D.32)
C2	Drain piping(Gravity drainage)	V20(O.D.26)(standard) or VP25(O.D.32)(Used with attached socket)
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)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

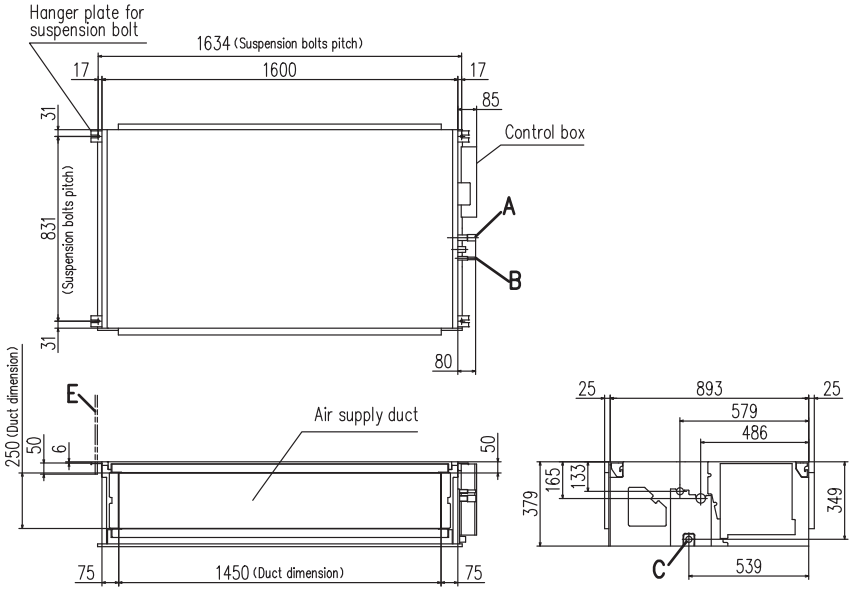


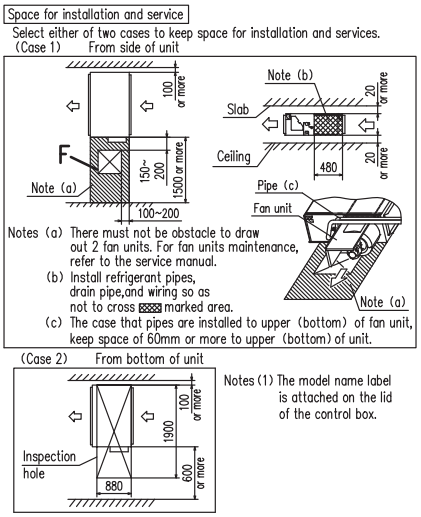


FDU1800FKXZE1, FDU2400FKXZE1

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







Fresh Air Ventilation and Heat Exchange unit
SAF-E7

Model No.

SAF150E7
SAF250E7
SAF350E7
SAF500E7
SAF800E7
SAF1000E7

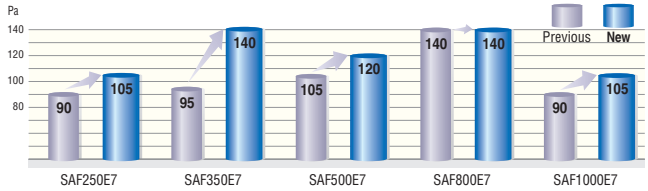
*Not available for 60Hz area.

Energy Performance of Building Directive - EPBD

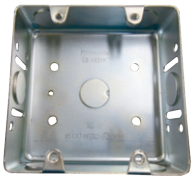
The EPBD function limits electrical/gas power to provide heating or cooling to commercial buildings. To use this function, the building designer needs to select energy efficient heating/cooling equipment and to minimise energy losses through ventilation systems.
SAF smart technology recovers heat energy 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. EPBD also allows for smaller sized units as less heating/cooling requirements are needed!

Increased external static pressure at UHi air flow



Switch box
(option)



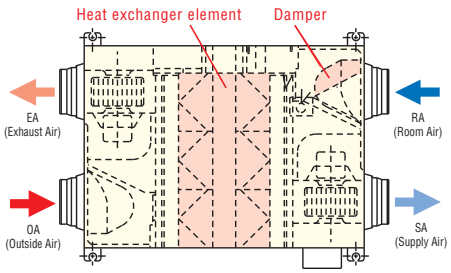
Remote control
The following functions are newly available.

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

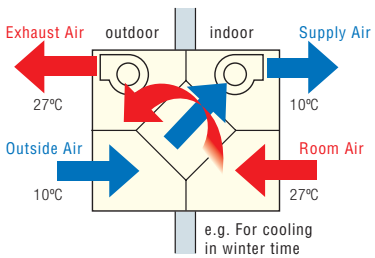
Specifications

Item				Model	SAF150E7	SAF250E7	SAF350E7	SAF500E7	SAF800E7	SAF1000E7
Power source					1 Phase 220-240V, 50Hz					
Exterior dimensions Height x Width x Depth				mm	270x970x467	270x882x599	317x1050x804	317x1090x904	388x1322x884	388x1322x1134
Exterior appearance					Galvanized steel sheet					
Power input				W	92-107	108-123	178-185	204-225	360-378	416-432
Running current				A	0.42-0.45	0.49-0.51	0.81-0.77	0.93-0.94	1.64-1.58	1.89-1.80
Capacity	UHi	Enthalpy exchange efficiency	Cooling	%	63	63	66	62	65	65
			Heating		70	70	69	67	71	71
		Temperature exchange efficiency			75					
	Hi	Enthalpy exchange efficiency	Cooling		63	63	66	62	65	65
			Heating		70	70	69	67	71	71
		Temperature exchange efficiency			75					
	Lo	Enthalpy exchange efficiency	Cooling		66	65	71	64	68	70
			Heating		73	72	73	69	74	76
		Temperature exchange efficiency			77	77	78	76	76	79
Motor & Q'ty				W	10 x 2	20 x 2	40 x 2	70 x 2	180 x 2	180 x 2
Air handling equipment Fan type & Q'ty					Sirocco fan x 2					
Air flow			UHi	m^3/h	150	250	350	500	800	1000
			Hi		150	250	350	500	800	1000
			Lo		120	190	240	440	630	700
External static pressure			UHi	Pa	80	105	140	120	140	105
			Hi		70	95	60	60	110	80
			Lo		25	45	45	35	55	75
Net weight				kg	25	29	49	57	71	83
Remote control					Included					
Air filter	Supply air				Protection for element (Washable) PS400					
	Exhaust air									

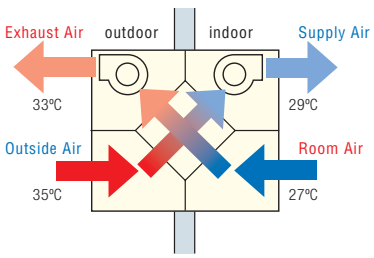
Structure (SAF800E7)



Principle of operation (simple ventilation)



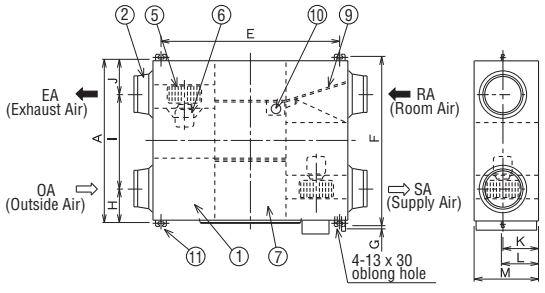
Principle of operation (heat exchanging)



Dimensions

All measurements in mm.

SAF150E7, SAF250E7, SAF350E7, SAF500E7



Applied duct

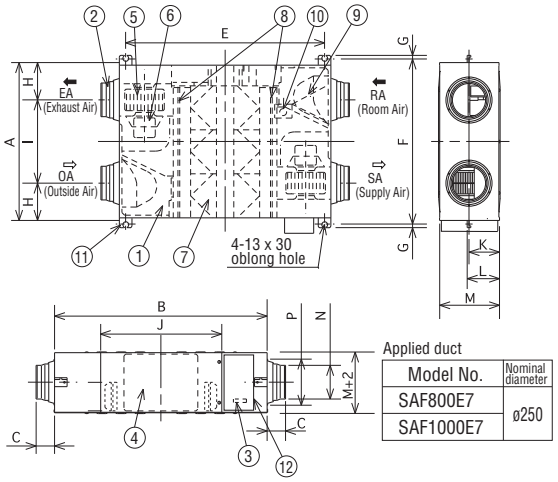
Model No.	Nominal diameter
SAF150E7	ø100
SAF250E7	ø150
SAF350E7	
SAF500E7	ø200

Dimension table

Unit:mm

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

SAF800E7, SAF1000E7



Applied duct

Model No.	Nominal diameter
SAF800E7	ø250
SAF1000E7	

Dimension table

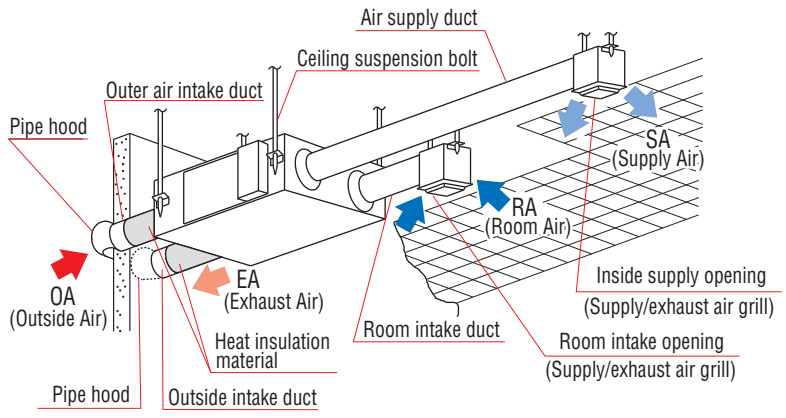
Unit:mm

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

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 SAF500E7 SAF800E7 SAF1000E7	 1 1 2 2 3 4
⑧	Filter	2
⑨	Damper	1
⑩	Damper Motor	1
⑪	Suspension fitting	4
⑫	Electrical components box	1

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

Installation reference



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

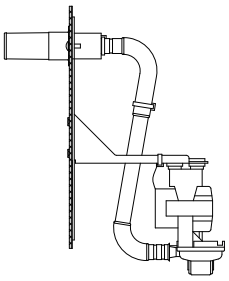
Fresh Air DX Assembly

Model No.
SAF-DX250E6
SAF-DX350E6
SAF-DX500E6
SAF-DX800E6
SAF-DX1000E6

*Not available for 60Hz area.

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

DXA-DU-E



Remote control (option)

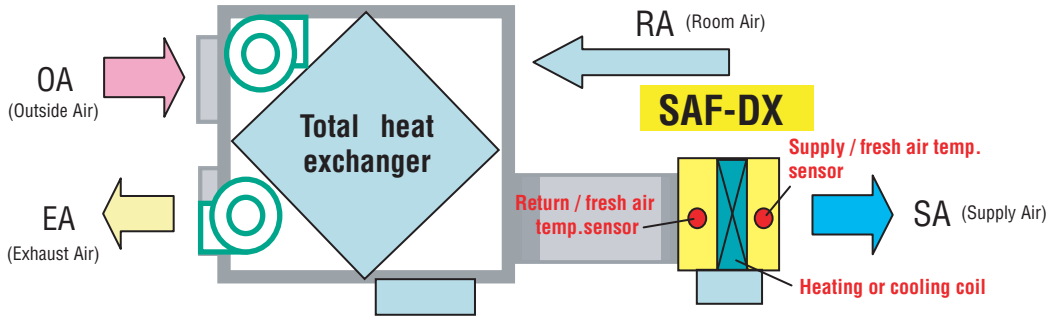
Wired

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

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

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

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

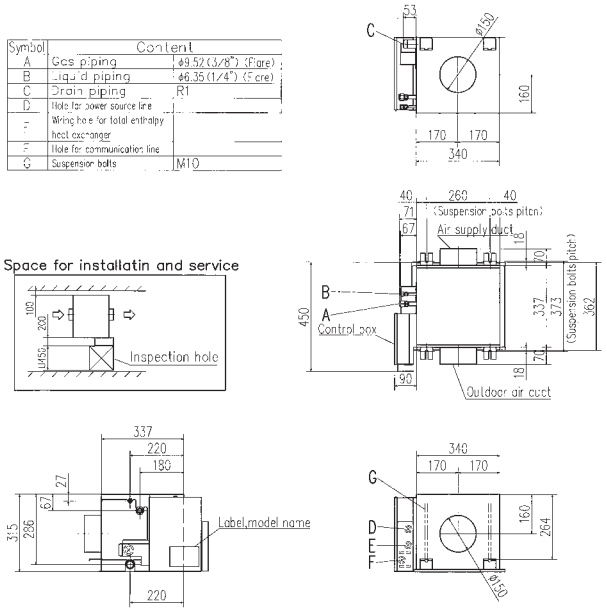
(2) This air-conditioner is manufactured and tested in conformity with ISO-T1 "UNITARY AIR-CONDITIONERS".

Dimensions

All measurements in mm.

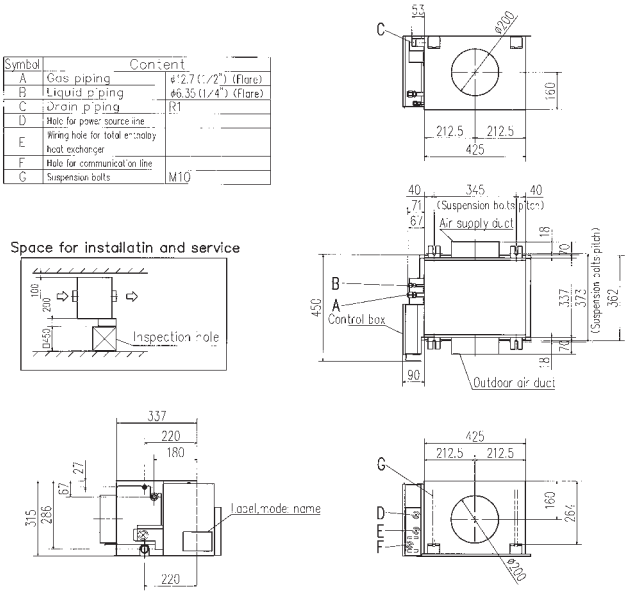
SAF-DX250E6,350E6

Symbol	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



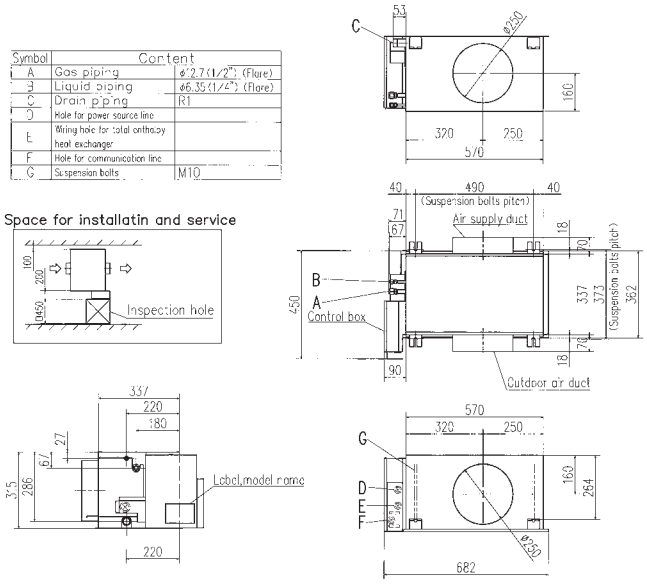
SAF-DX500E6

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



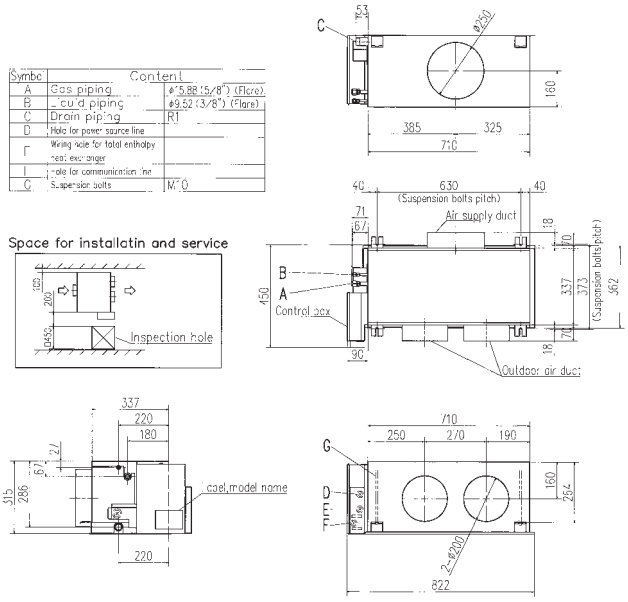
SAF-DX800E6

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



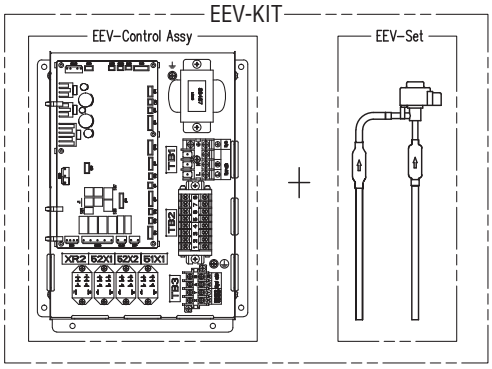
SAF-DX1000E6

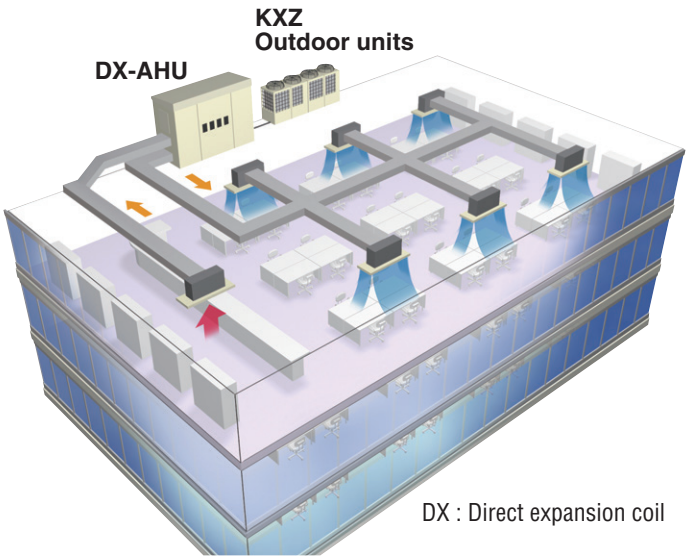
Symbol	Content	
A	Gas piping	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ9.52 (3/8") (Flare)
C	Drain piping	R1
D	Hole for power source line	
E	Wiring hole for total enthalpy heat exchanger	
F	Hole for communication line	
G	Suspension bolts	M10



EEV-KIT

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





*Conditions

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

Features

EEV-Control Assy has 2 types.

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

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

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

System configuration

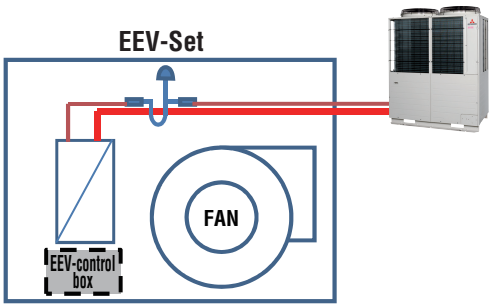
- Single refrigeration system EEVKIT6-E-C ··· Possible with multiple refrigeration systems
- Multiple refrigeration system EEVKIT6-E-M (1) + EEVKIT6-E-C ··· Possible with multiple refrigeration systems (Max32)
- EEVKIT6-E-C is common for both single and multiple refrigeration systems

Single refrigerant system

- Single refrigeration system is 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.

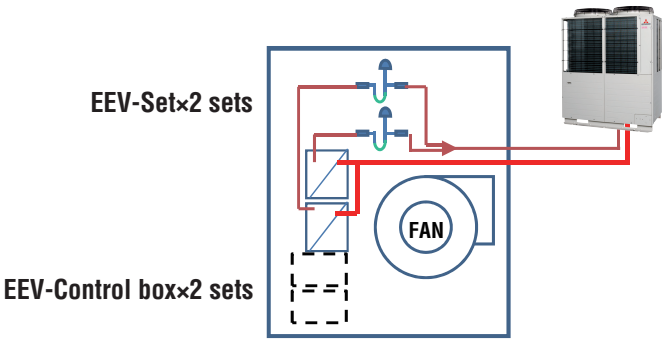
System A

- 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.



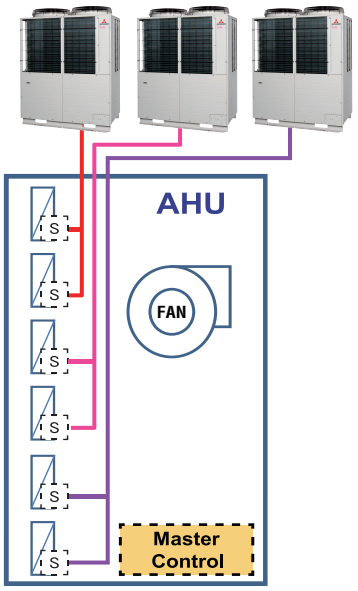
System B

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

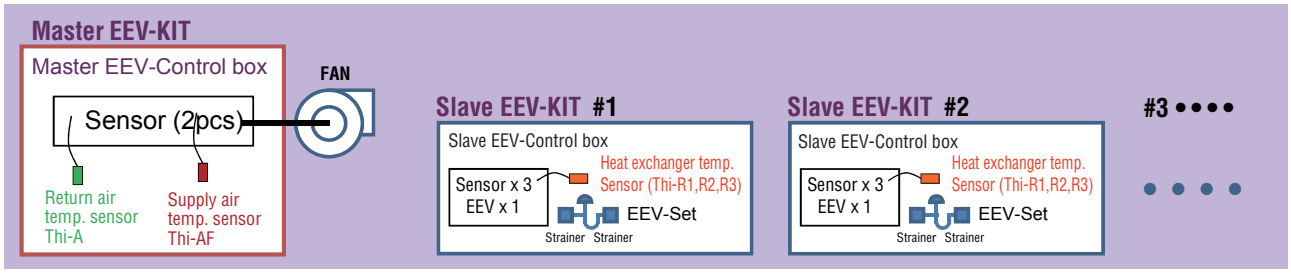


Advantages

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

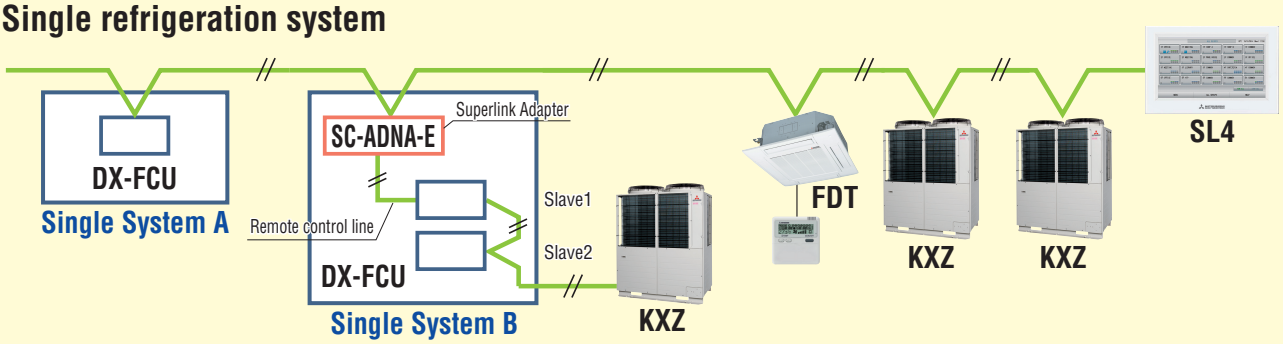
Additional parts over a single refrigeration system

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

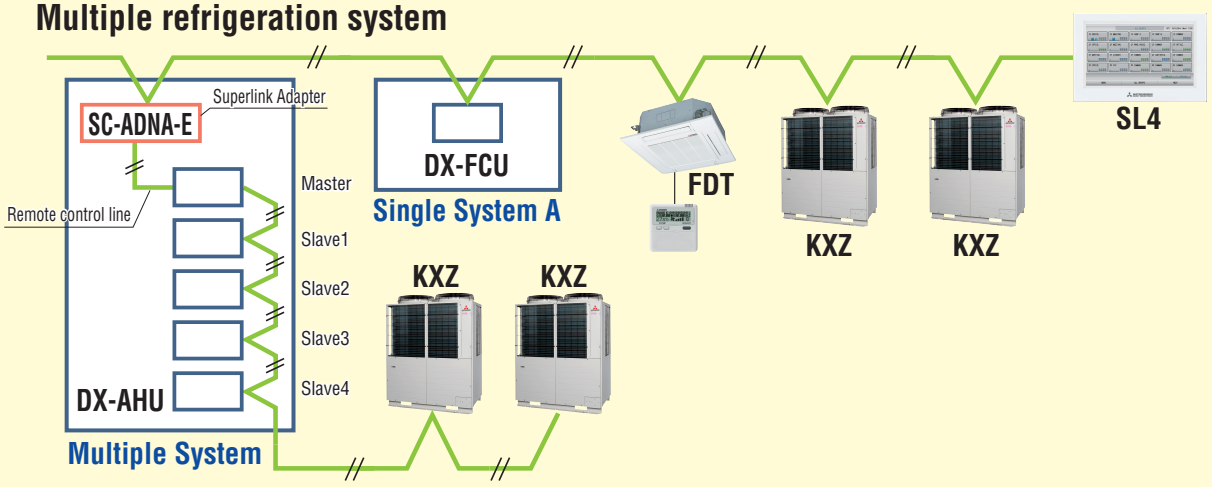


Connection to SUPERLINK II

Single refrigeration system



Multiple refrigeration system



Control Systems
<Individual control>

Remote Control line up

	indoor unit	remote control
wired	all models	RC-EX3A
		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-EX3A

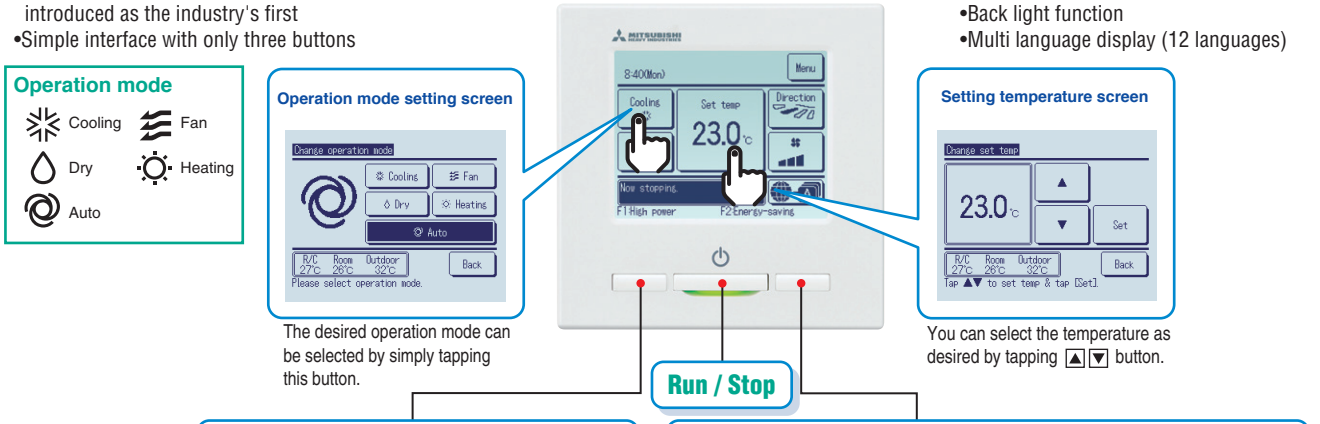
Intuitive touch controller with Liquid Crystal Display

User friendly

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

Easy view

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



High power operation

The highest capacity operation (Max 15 minutes)
- Increasing compressor speed
- Increasing air flow volume

Energy-saving operation
- Changes set temperature.
  At 28℃ in cooling mode and 22℃ in heating mode, 25℃ in auto mode.
- Operation correction by outdoor temperature

2. Main functions

	Function name	Description
Economy & Timer	Energy-saving operation	Since the capacity is controlled automatically based on the outdoor temperature, energy can be saved without losing comfort.
	Sleep timer	Set the time period from start to stop of operation. The selectable range of setting time is from 30 to 240 minutes (at 10-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-EX3A for better energy saving. Five-step capacity control is available.
	Home leave operation	When the unit is not used for a long period of time, the room temperature is maintained at a moderate level, avoiding extremely hot or cool temperatures.
Comfort	Big LCD & Touch screen panel	Large 3.8 inch screen has resulted in improved visibility and operability.
	Easy modification of Individual flap control	User can visually confirm and set the direction of flaps using the visual display on the remote controller.
	Automatic fan speed *1	The micro-computer automatically adjusts the airflow effectively to follow the changes of return air temperature.
	Temp increment setting	Temperature increment for the change of the set temp can be changed.
	Silent mode	Set the period of time to operate the Outdoor unit with prioritizing the quietness.
Convenience	Function switch	The function switch allows user to select and set two functions among available functions.
	Favorite setting	Operation mode, set temperature, fan speed and air flow direction automatically adjust to the programmed favorite setting.
	Adjusting Brightness of the background light	The brightness of the background light can be adjusted by 10 stages.
	LCD contrast setting	This function allows user to adjust LCD display contrast.
	High power operation	High Power Mode increases the unit operating ability for 15 minutes to quickly adjust the room temperature to a comfortable level.
	Back light setting	This convenient function allows user to see controls under low light conditions.
	Administrator settings	This function only allows specific individuals to operate the unit.
	Setting temp range	Limited range of setting temperature in the heating or the cooling operation can be selected.
	External Input/Output Function	The external input/output of indoor unit by remote controller can set input/output based on user needs.
	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

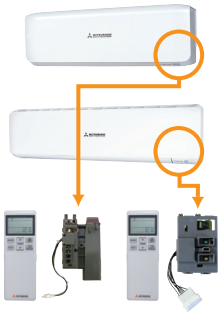
RCN-T-5BW-E2
RCN-T-5BB-E2

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)

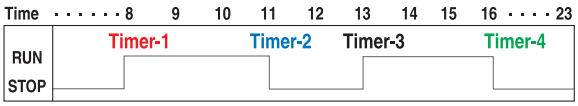
RC-E5

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

Simple remote control (option)

RCH-E3 (wired)

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

Up to 16 units

It can control up to 16 indoor units, by pressing the AIR CON No. button.

AUTO restart

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

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

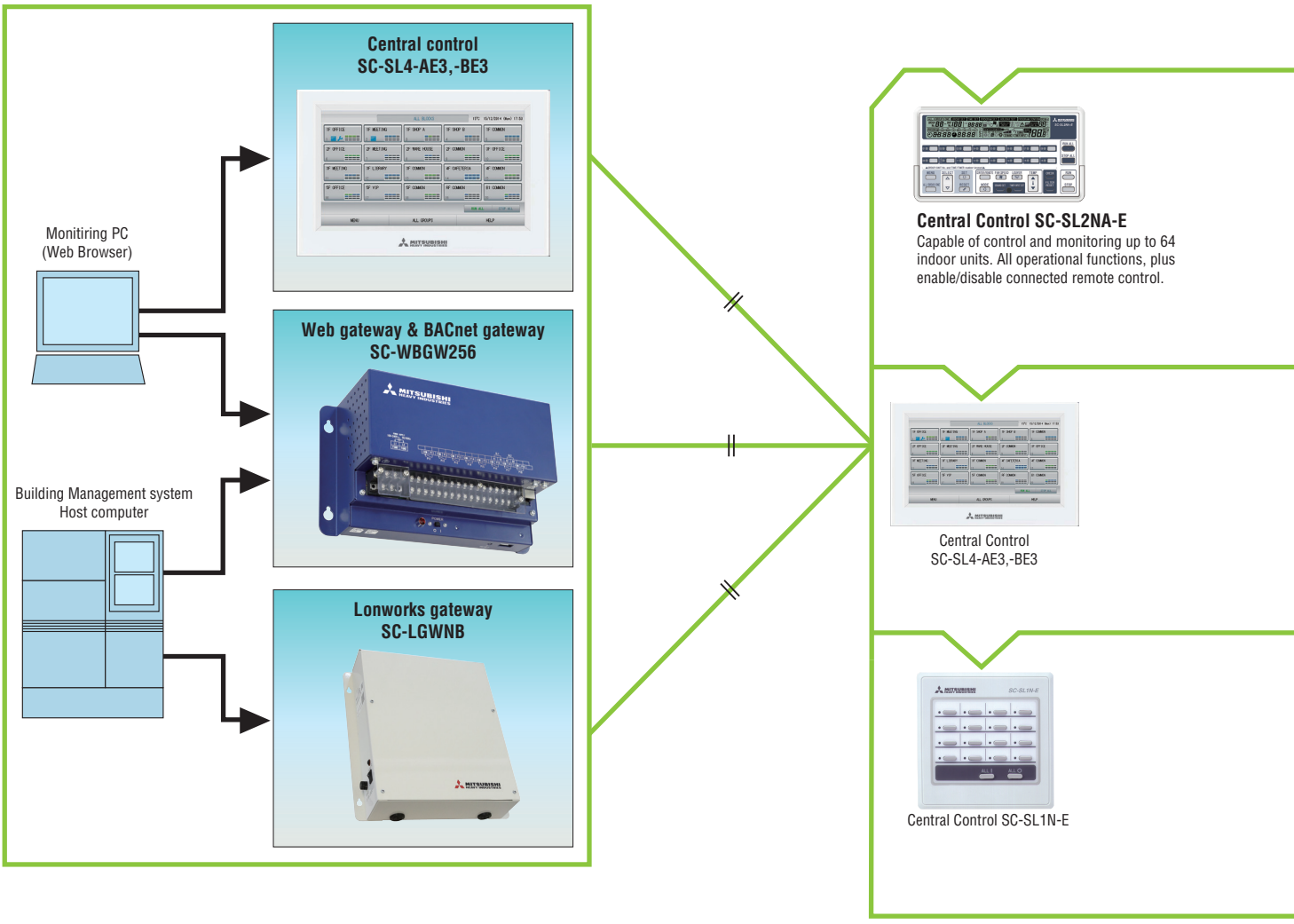
Thermistor (option)

SC-THB-E3

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

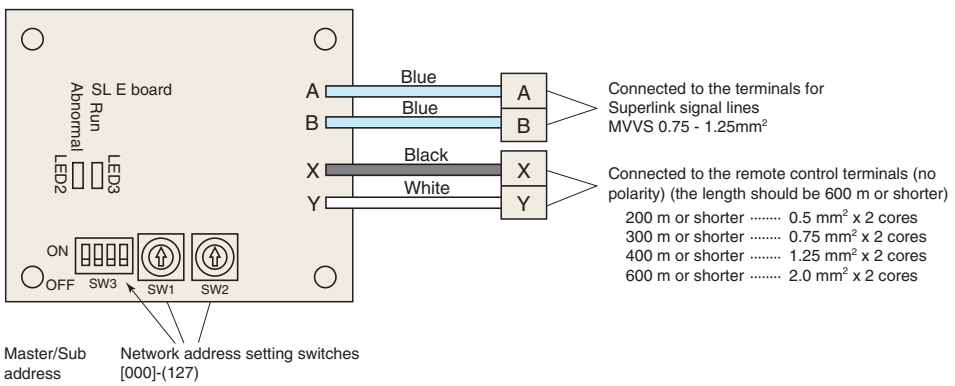
<SUPERLINK®- Ⅱ Control System>

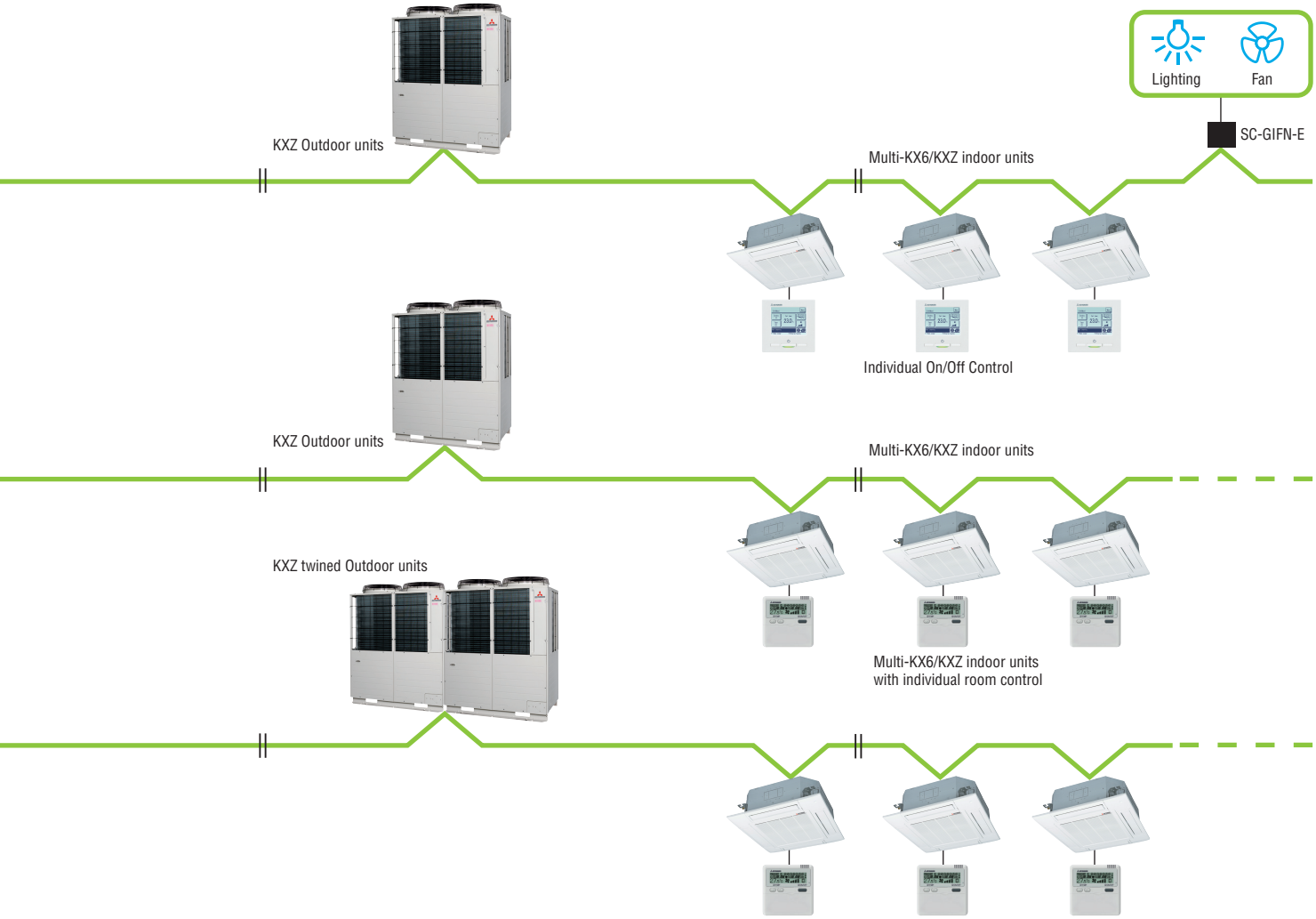
Mitsubishi Heavy Industries Thermal Systems has now combined simplicity of installation with our highly sophisticated Superlink-Ⅱ control system, to offer building owners and occupiers a comprehensive control and management system, while providing complete commissioning and service maintenance assistance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

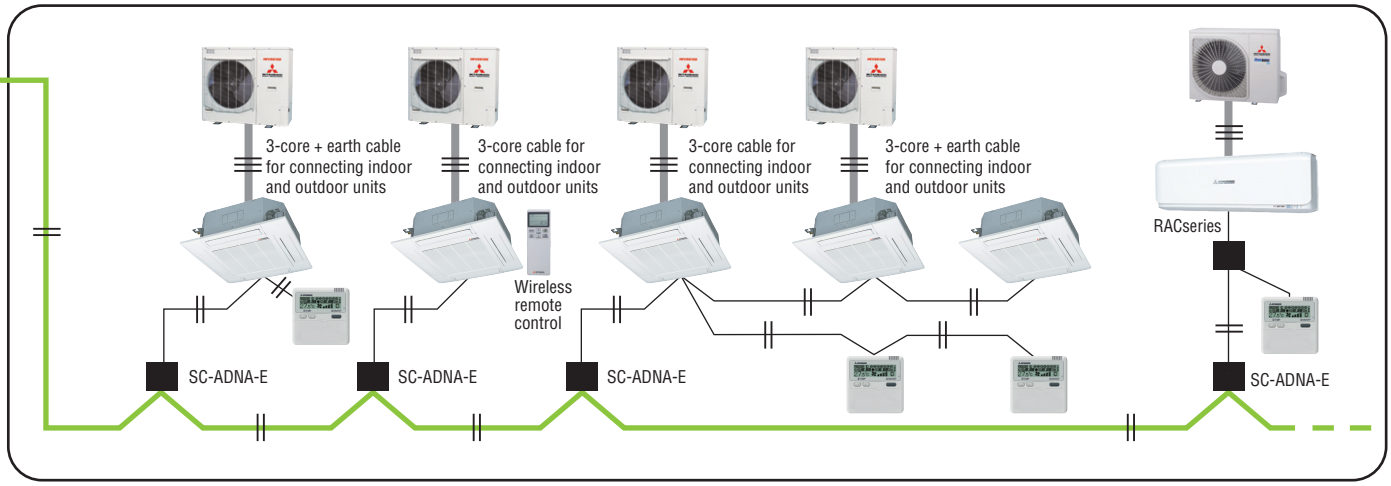


SUPERLINK E BOARD(SC-ADNA-E)

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



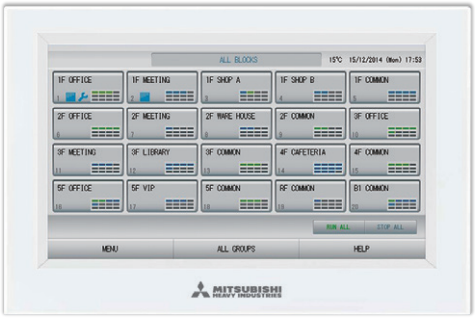

KXZ Outdoor units
Lighting
Fan
SC-GIFN-E
Multi-KX6/KXZ indoor units
Individual On/Off Control
KXZ Outdoor units
Multi-KX6/KXZ indoor units
KXZ twined Outdoor units
Multi-KX6/KXZ indoor units
with individual room control


3-core + earth cable
for connecting indoor
and outdoor units
3-core cable for
connecting indoor
and outdoor units
3-core cable for
connecting indoor
and outdoor units
3-core + earth cable
for connecting indoor
and outdoor units
Wireless
remote
control
RACseries
SC-ADNA-E
SC-ADNA-E
SC-ADNA-E
SC-ADNA-E

<Central Control>

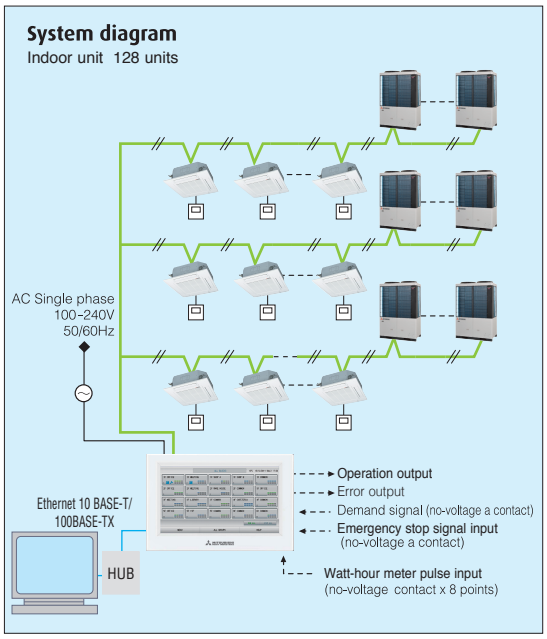
SC-SL4-AE3,BE3 Added new function

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)

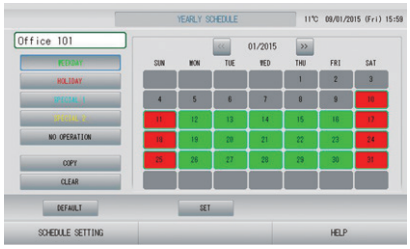


PC requirements: Windows 10, Windows 11
Monitor resolution 1280 x 1024 or more.
Web browser requirements: Microsoft Edge , Google Chrome

Schedule setting

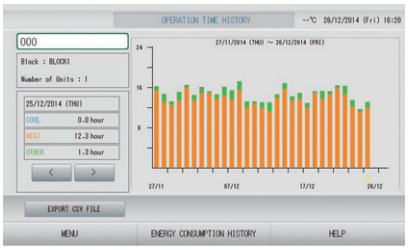
For each group
Schedule settings for each group are possible. The RUN/STOP/HOME LEAVE time, operation mode, remote control Lock/Unlock setting, temperature setting, energy setting, and silent mode can be set up to 16 times per day.

Yearly Schedule NEW
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 NEW

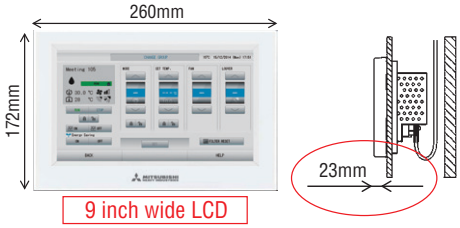
Able to show the maintenance code

Improved visibility NEW

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



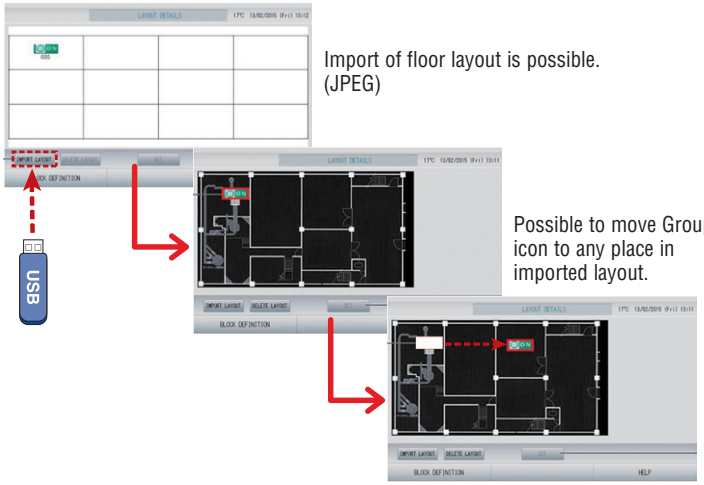
Contrast between five colours for icon display and black light base screen has achieved high visibility.

Models that can be connected has increased NEW

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

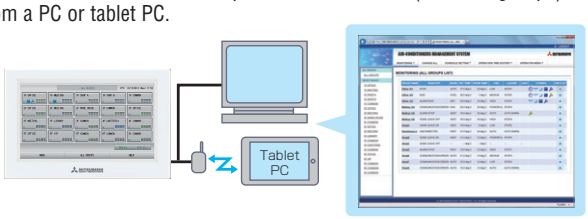


Import of floor layout is possible. (JPEG)

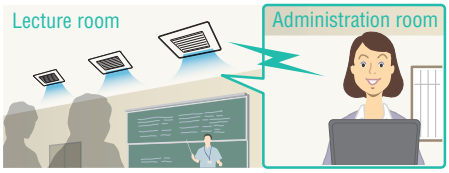
Possible to move Group icon to any place in imported layout.

Web function

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



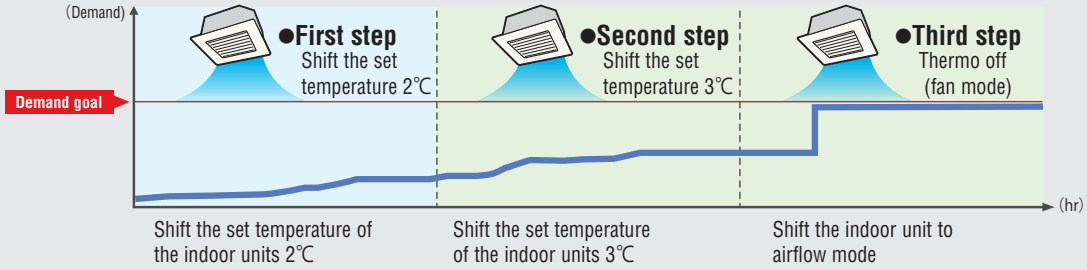
<Example>
Monitoring and operating air conditioners in a lecture room of a university



New demand control function NEW

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

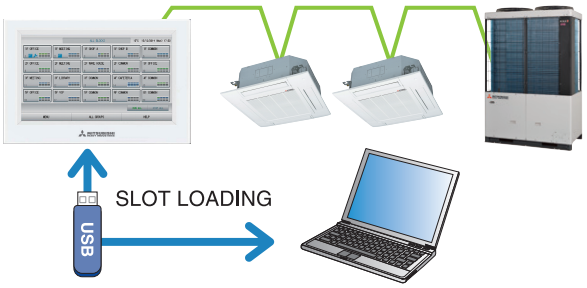
Image of demand control for temperature shifts and air flow



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.

SC-SL1N-E

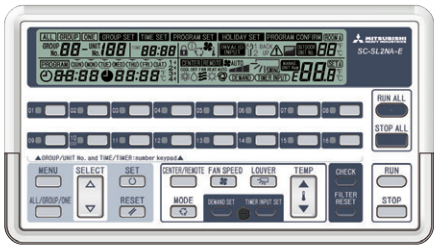
Start/stop control of up to 16 indoor units either individually or collectively.

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.

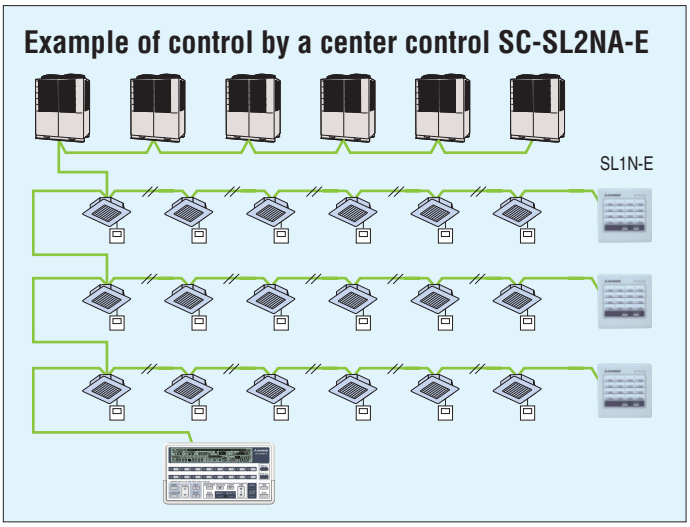
SC-SL2NA-E

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.

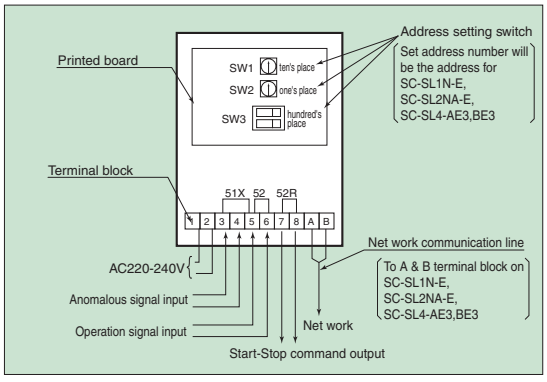
Example of control by a center control SC-SL2NA-E



An SC-SL2NA-E performs the start/stop control, monitoring and mode setting of up to 64 units. It is a high quality air conditioner control system that allows up to 64 indoor units to be freely grouped into 1 to 16 groups.
It allows not only the start/stop control but also the monitoring, display of operation statuses such as in operation or in need of service and mode setting such as switching of operation modes of connected units collectively, by group or individually.
• Outer dimensions: H120 x W215 x D25+35*mm.
35* is the measurement including the part contained in a recess.

SC-GIFN-E Interface kit

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



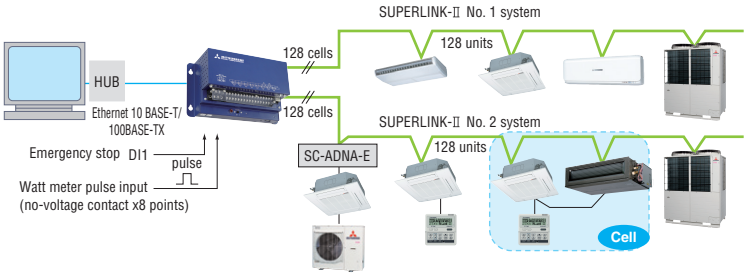
Note:Please consult dealer for combination of center controls and Building Management Systems interface units.

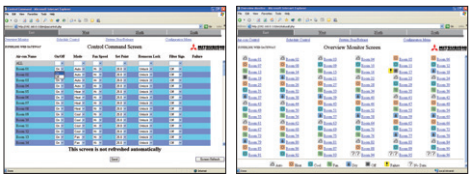
<Building Management Systems>
SC-WBGW256 (Web gateway+BACnet gateway)

Production by order

SC-WBGW256 controls and monitors of up to 256 cells (some cells can have two or more indoor units and total number of indoor units can be up to 256 units) centralised to a network PC using the Superlink-Ⅱ web gateway. Simple installation is assured with no special software requirements, operation is via web browser. A low power embedded CPU and compact flash ROM ensure a large storage capacity with high reliability (no moving parts such as a PC fan, etc). An IP address filter function combined with three-level user authentication check also ensures security.
Also, SC-WBGW256 can be used as interface devices that convert Mitsubishi Heavy Industries Superlink-Ⅱ communication data to BACnet code and are controlled centrally from a building management system.

[In case of web gateway]

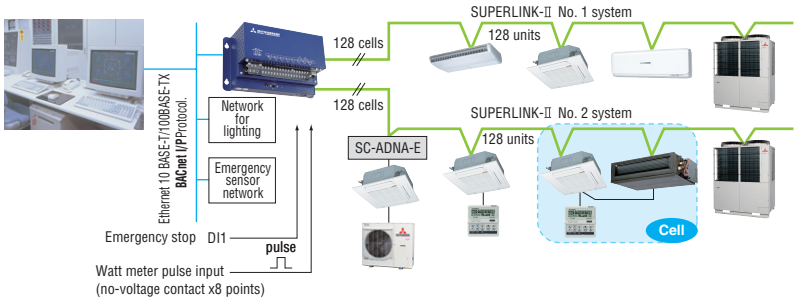


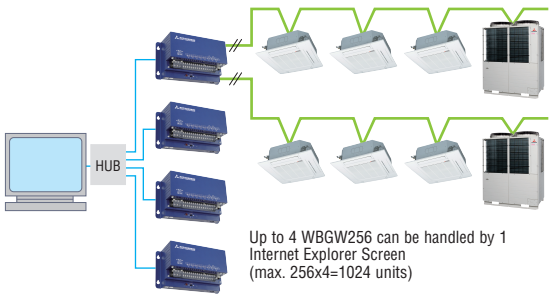


PC requirements: Windows 7 or Windows 8.1.
Monitor resolution 1364 x 768.

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

[In case of BACnet gateway]



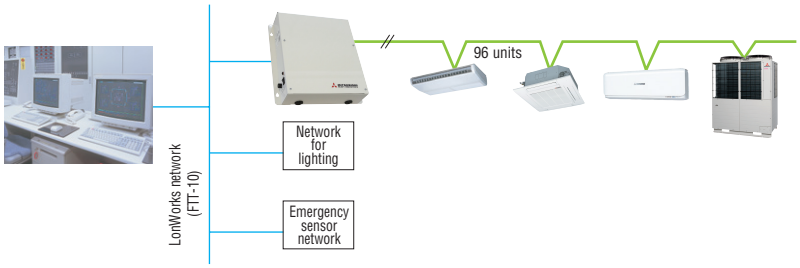


Up to 4 WBGW256 can be handled by 1
Internet Explorer Screen
(max. 256x4=1024 units)

SC-LGWNB (LonWorks gateway)

Production by order

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



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

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.

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