



Eco·lution

High Performance
Air-Conditioning



KXZ

VRF inverter multi-system Air-Conditioners

60Hz
17KX04E

High Performance Air-Conditioning *Eco-lution*



KXZ

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



Line Up



NEW *Micro* model

NEW *KXZ*

NEW *RC-EX3*

Simple use with advanced setting Remote control

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KXZ

The KXZ product lineup has been extended to offer solutions delivering up to 60 horsepower (60HP) when using a combination of 3 outdoor units.



By combining 3 outdoor units 60HP can be achieved

Product Line Up <Outdoor units>

Micro model



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

(1 Phase 220V)
(3 Phase 380V)

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



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

(3 Phase 220V)
(3 Phase 380V)

Standard model **KXZE1M** (3 Phase 220V)



FDC280,335 FDC400~560

28.0kW 10HP	33.5kW 12HP	40.0kW 14HP	45.0kW 16HP	47.5kW 17HP	50.0kW 18HP	56.0kW 20HP
FDC280KXZE1M	FDC335KXZE1M	FDC400KXZE1M	FDC450KXZE1M	FDC475KXZE1M	FDC500KXZE1M	FDC560KXZE1M



FDC615,670

61.5kW 22HP	67.0kW 24HP	73.5kW 26HP	80.0kW 28HP	85.0kW 30HP	90.0kW 32HP	95.0kW 34HP	100.0kW 36HP	106.0kW 38HP	112.0kW 40HP
FDC615KXZE1M	FDC670KXZE1M	FDC735KXZE1M	FDC800KXZE1M	FDC850KXZE1M	FDC900KXZE1M	FDC950KXZE1M	FDC1000KXZE1M	FDC1060KXZE1M	FDC1120KXZE1M
FDC400KXZE1M	FDC335KXZE1M	FDC335KXZE1M	FDC400KXZE1M	FDC400KXZE1M	FDC450KXZE1M	FDC475KXZE1M	FDC500KXZE1M	FDC500KXZE1M	FDC560KXZE1M
FDC335KXZE1M	FDC335KXZE1M	FDC400KXZE1M	FDC400KXZE1M	FDC450KXZE1M	FDC450KXZE1M	FDC475KXZE1M	FDC500KXZE1M	FDC560KXZE1M	FDC560KXZE1M



FDC735 FDC800~1120

120.0kW 42HP	125.0kW 44HP	130.5kW 46HP	135.0kW 48HP	142.5kW 50HP	145.0kW 52HP	150.0kW 54HP	156.0kW 56HP	162.0kW 58HP	168.0kW 60HP
FDC1200KXZE1M	FDC1250KXZE1M	FDC1300KXZE1M	FDC1350KXZE1M	FDC1425KXZE1M	FDC1450KXZE1M	FDC1500KXZE1M	FDC1560KXZE1M	FDC1620KXZE1M	FDC1680KXZE1M
FDC400KXZE1M	FDC400KXZE1M	FDC450KXZE1M	FDC450KXZE1M	FDC475KXZE1M	FDC475KXZE1M	FDC500KXZE1M	FDC500KXZE1M	FDC560KXZE1M	FDC560KXZE1M
FDC400KXZE1M	FDC400KXZE1M	FDC450KXZE1M	FDC450KXZE1M	FDC475KXZE1M	FDC475KXZE1M	FDC500KXZE1M	FDC500KXZE1M	FDC560KXZE1M	FDC560KXZE1M
FDC400KXZE1M	FDC450KXZE1M	FDC450KXZE1M	FDC450KXZE1M	FDC475KXZE1M	FDC500KXZE1M	FDC500KXZE1M	FDC560KXZE1M	FDC560KXZE1M	FDC560KXZE1M



FDC1200~1680

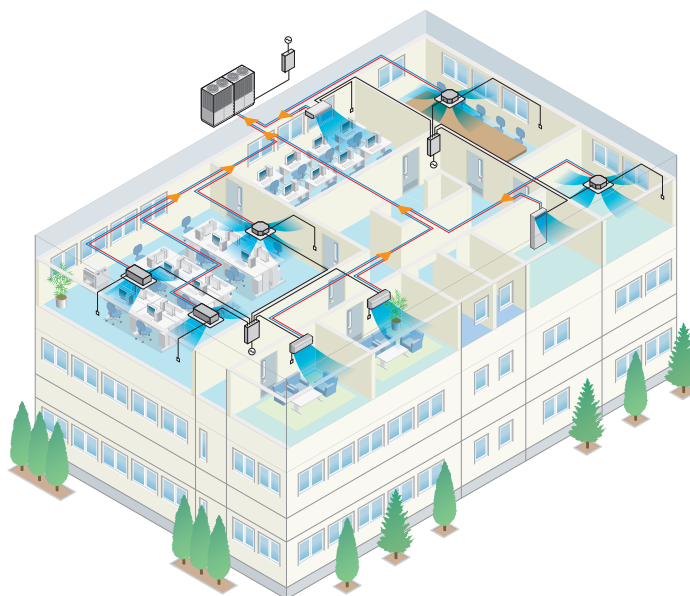
Heat pump systems

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

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

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

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



Capacity Range

Capacity	4HP	5HP	6HP	8HP	10HP	12HP	14HP	16HP	17HP	18HP	20HP
Model Code : kW	11.2	14	15.5	22.4	28	33.5	40.0	45.0	47.5	50.0	56.0
BTU/h	38,200	47,800	52,900	76,400	95,500	114,300	136,500	153,500	162,100	170,600	191,100

Capacity	22HP	24HP	26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP
Model Code : kW	61.5	67.0	73.5	80.0	85.0	90.0	95.0	100.0	106.0	112.0
BTU/h	209,800	228,600	250,800	273,000	290,000	307,100	324,100	341,200	361,700	382,100

Capacity	42HP	44HP	46HP	48HP	50HP	52HP	54HP	56HP	58HP	60HP
Model Code : kW	120.0	125.0	130.0	135.0	142.5	145.0	150.0	156.0	162.0	168.0
BTU/h	409,400	426,500	443,600	460,600	486,200	494,700	511,800	532,200	552,700	573,200

Standard model **KXZE1** (3 Phase 380V)



FDC280,335 FDC400~560

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



FDC615,670

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



FDC735 FDC800~1120

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











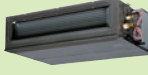






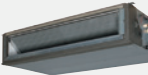


FDC1200~1680

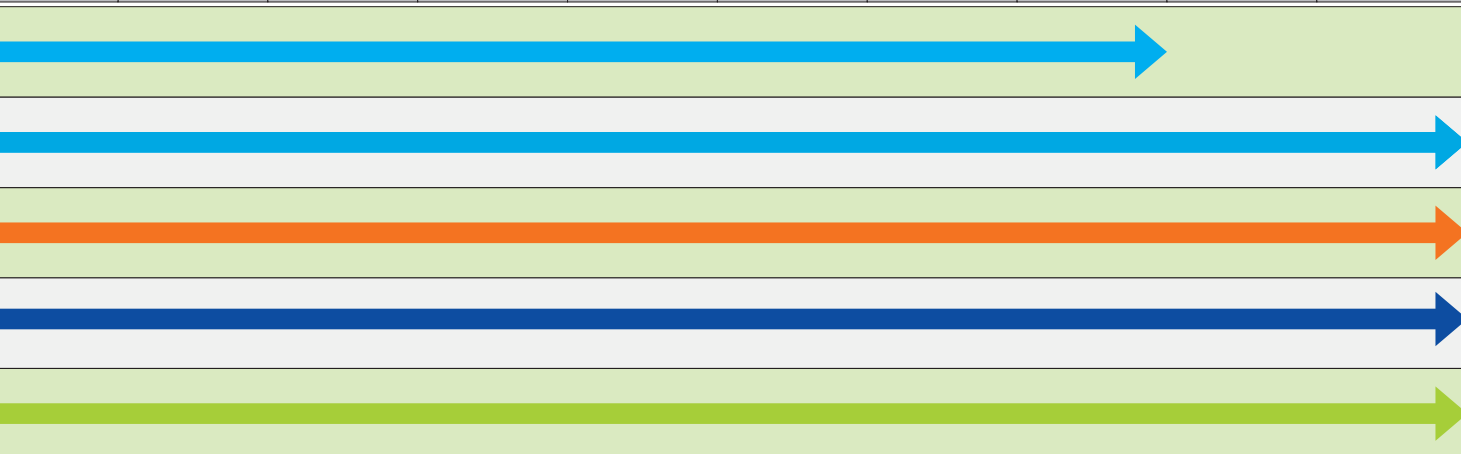


<Indoor units>

A range of 13 types of exposed or concealed indoor units available in a wide range of capacities (total 75 indoor models).
The best solution of indoor units for all applications is available from our full lineup.

				1.5kW <0.5HP>	2.2kW <0.8HP>	2.8kW <1HP>	3.6kW <1.25HP>		
Micro model (4~6HP) 				←					
Micro model (8~12HP) 				←					
Standard model KXZE1M KXZE1 NEW 				←					
KXZ Lite 				←					
Hi-COP model KXZXE1 				←					
Ceiling Cassette	4way NEW FDT 					FDT28KXZE1	FDT36KXZE1		
	4way Compact FDTC 		FDTC15KXE6F	FDTC22KXE6F	FDTC28KXE6F	FDTC36KXE6F			
	2way FDTW 					FDTW28KXE6F			
	1way FDTS 								
	1way Compact FDTQ 			FDTQ22KXE6F	FDTQ28KXE6F	FDTQ36KXE6F			
Duct Connected	High Static Pressure FDU 								
	Low/Middle Static Pressure FDUM 			FDUM22KXE6F	FDUM28KXE6F	FDUM36KXE6F			
	Low Static Pressure(thin) FDUT 		FDUT15KXE6F-E	FDUT22KXE6F-E	FDUT28KXE6F-E	FDUT36KXE6F-E			
	Compact & Flexible FDUH 			FDUH22KXE6F	FDUH28KXE6F	FDUH36KXE6F			
Wall Mounted NEW FDK 				FDK22KXZE1	FDK28KXZE1	FDK36KXZE1			
Ceiling Suspended FDE 						FDE36KXZE1			
Floor Standing FDW 						FDW28KXE6F			
OA Processing unit FDU-F 					• FDU-F series are not connectable to Micro model 4~6HP, KXZ L				

	4.5kW <1.6HP>	5.6kW <2HP>	7.1kW <2.5HP>	9.0kW <3.2HP>	11.2kW <4HP>	14.0kW <5HP>	16.0kW <6HP>	22.4kW <8HP>	28.0kW <10HP>
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	FDT45KXZE1	FDT56KXZE1	FDT71KXZE1	FDT90KXZE1	FDT112KXZE1	FDT140KXZE1	FDT160KXZE1		
	FDTC45KXE6F	FDTC56KXE6F							
	FDTW45KXE6F	FDTW56KXE6F	FDTW71KXE6F	FDTW90KXE6F	FDTW112KXE6F	FDTW140KXE6F			
	FDTS45KXE6F		FDTS71KXE6F						
	FDU45KXE6F	FDU56KXE6F	FDU71KXE6F	FDU90KXE6F	FDU112KXE6F	FDU140KXE6F	FDU160KXE6F	FDU224KXZE1	FDU280KXZE1
	FDUM45KXE6F	FDUM56KXE6F	FDUM71KXE6F	FDUM90KXE6F	FDUM112KXE6F	FDUM140KXE6F	FDUM160KXE6F		
	FDUT45KXE6F-E	FDUT56KXE6F-E	FDUT71KXE6F-E						
	FDK45KXZE1	FDK56KXZE1	FDK71KXZE1						
	FDE45KXZE1	FDE56KXZE1	FDE71KXZE1		FDE112KXZE1	FDE140KXZE1			
	FDW45KXE6F	FDW56KXE6F							
ite.				FDU650FKXZE1		FDU1100FKXZE1		FDU1800FKXZE1	FDU2400FKXZE1

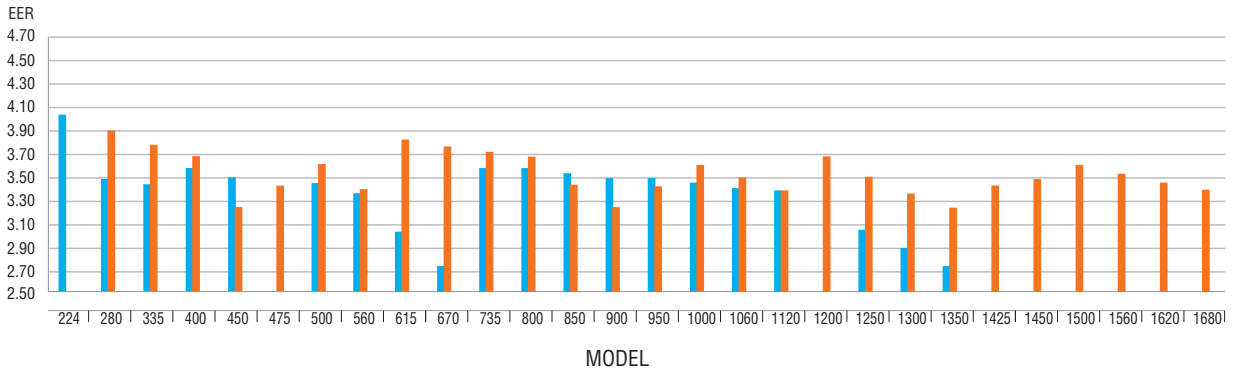


1. High Efficiency & Comfort

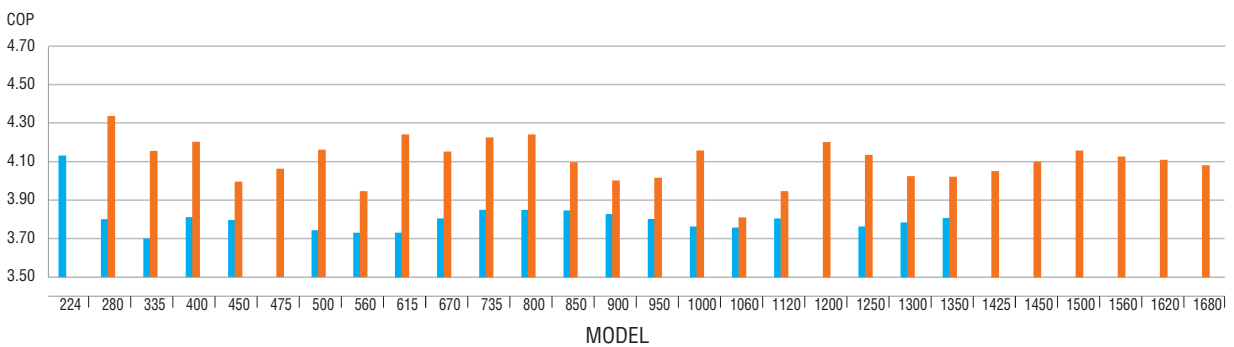
New and Improved Efficiency

The below graphs highlight the improved efficiencies between the previous models compared to the KXZ standard models.

Comparison of EER in Cooling Mode

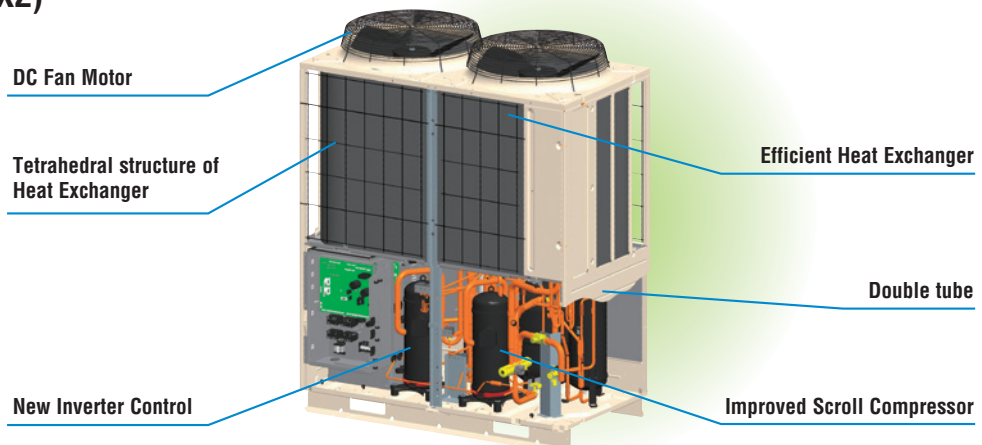


Comparison of COP in Heating Mode



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

10~60HP (KXZ)



Variable Temperature and Capacity Control (KXZ)

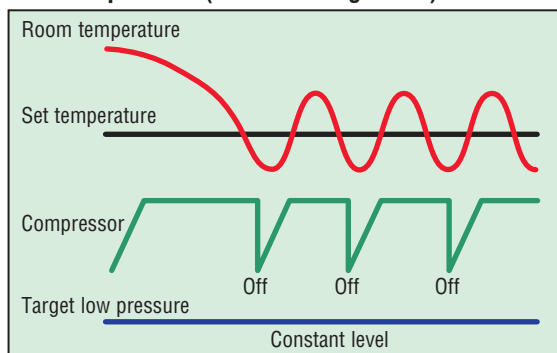
VTCC

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



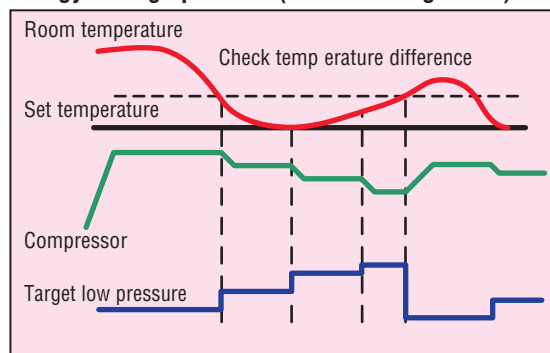
*34% energy savings are based on comparison with a KXZ standard model with VTCC vs. a KXZ standard model both under partial load condition.

Normal operation (in the cooling mode)



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

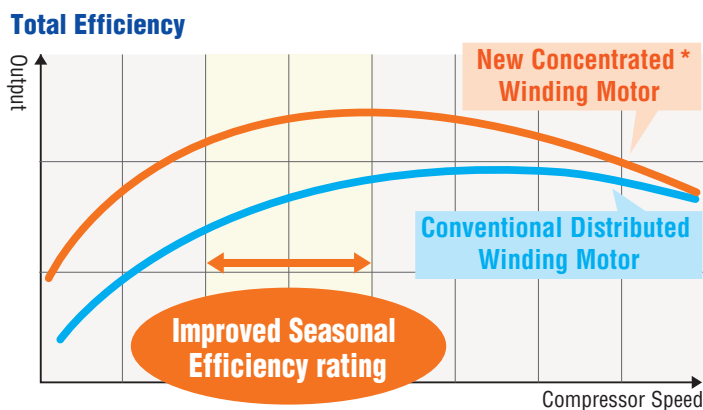
Energy saving operation (in the cooling mode)



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

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

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

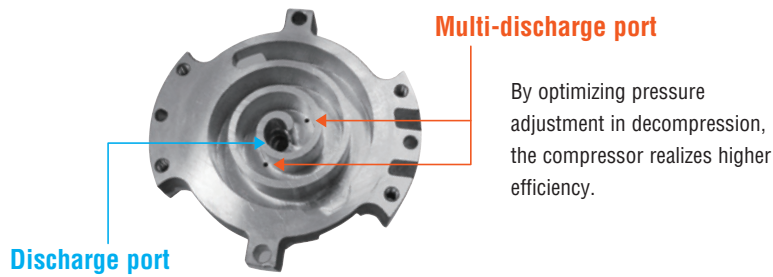


*Applied for KXZE1M:10/12/17/18/20HP, KXZXE1:8HP & KXZ Lite:8/10HP



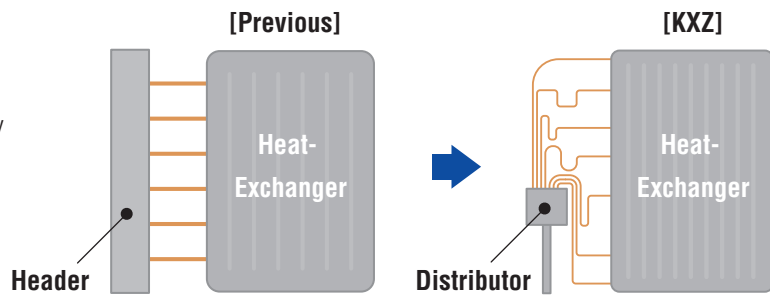
Multiport compressor that achieves high efficiency (KXZ, KXZ Lite)

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



Improved Heat-exchanger

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



Strengthened resistance against frost

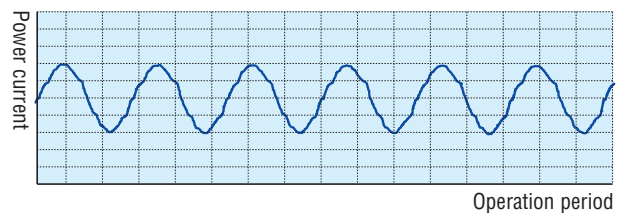
Resistance against frost has been strengthened by achieving improved heat-exchanger.

Vector control

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

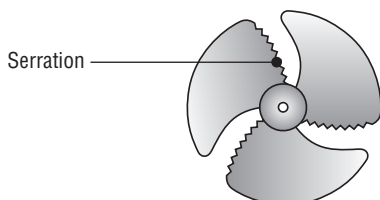
- Smooth operation from low speed to high speed
- Smooth Sine Voltage Wave form are attained
- Energy efficiency is further improved in low speed range

Vector Control



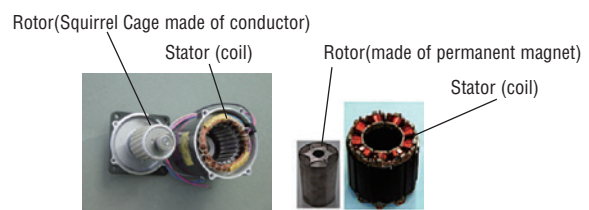
Long-chorded 3 propeller fan with serration

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



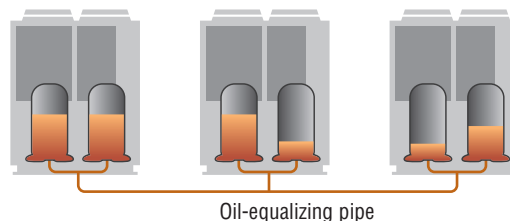
DC Fan Motor

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



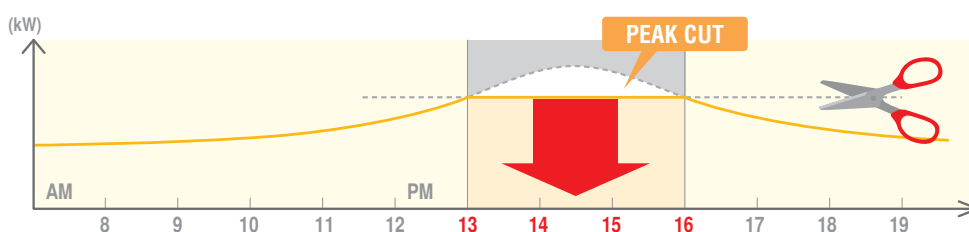
Oil level control capability

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

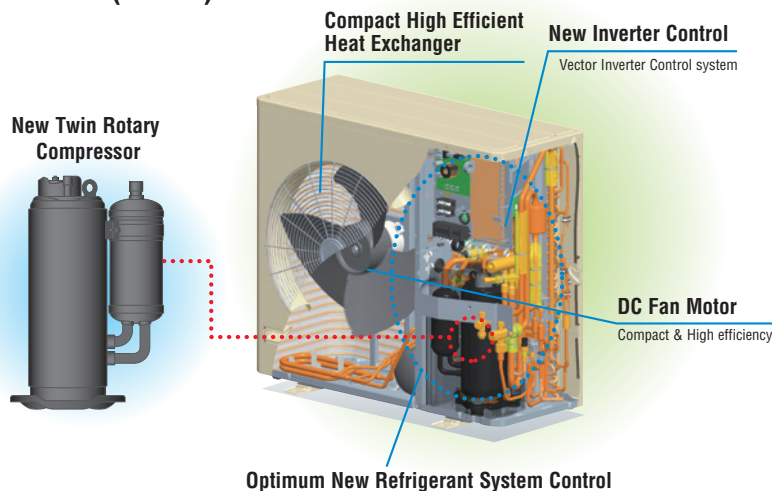


Capacity control (KXZ)

Capacity control can be set by peak cut function with RC-EX3 for better energy saving. Five-step capacity control is available. (100-80-60-40-0%)

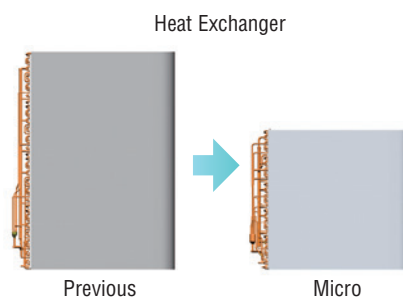


4~6HP (Micro)

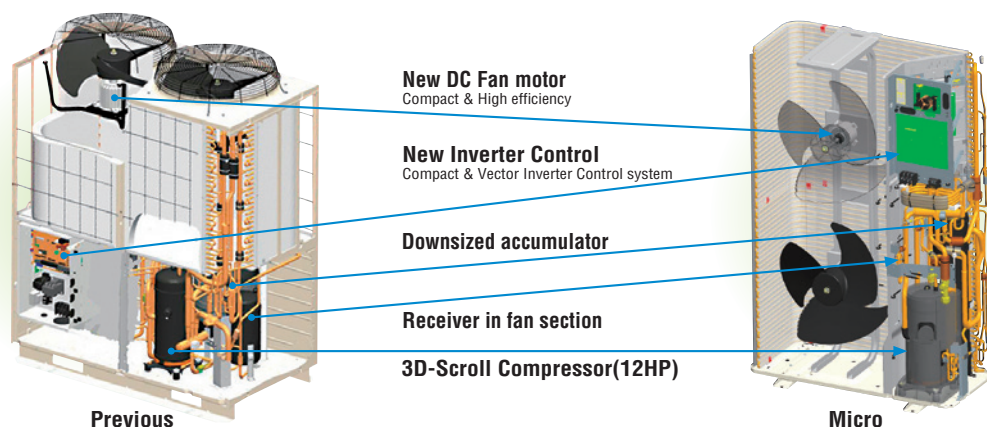


Compact high efficiency Heat Exchanger

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

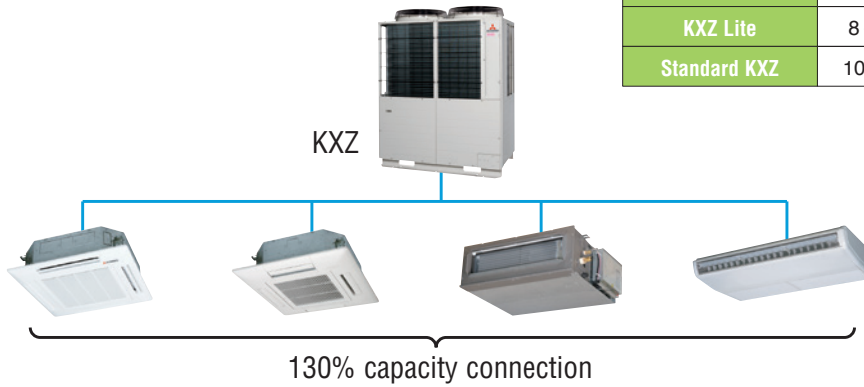


8~12HP (Micro)



2. Design Flexibility

Indoor unit capacity connection



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

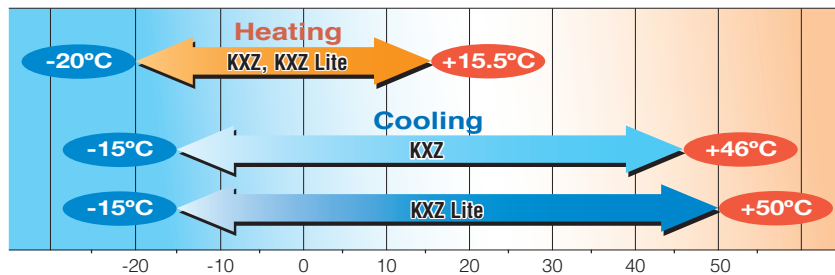
Connectable indoor units

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

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

Wide Range of Operation (KXZ, KXZ Lite)

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



Control Systems

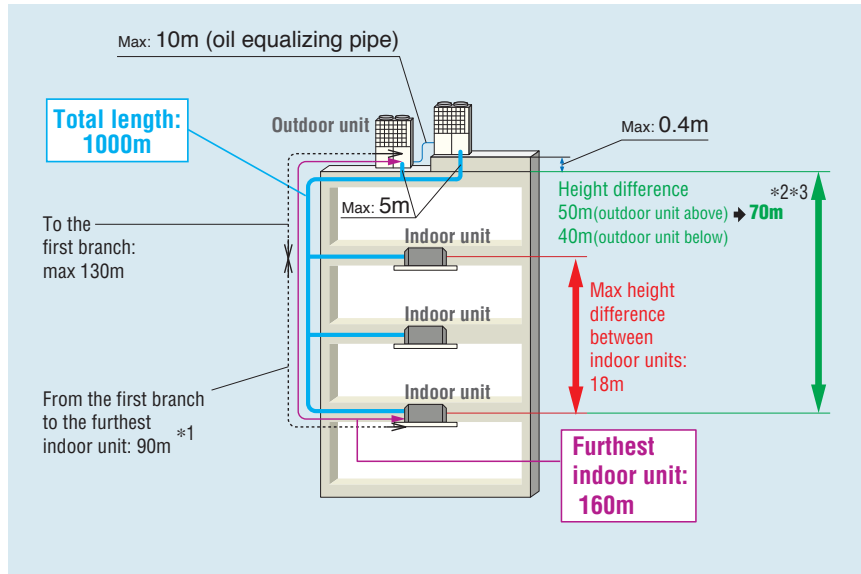
All series offer wide variation of control system and provide the best solution.

[Control system units with SUPERLINK- II]

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

Long Pipe Length 10~60HP(KXZ)

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



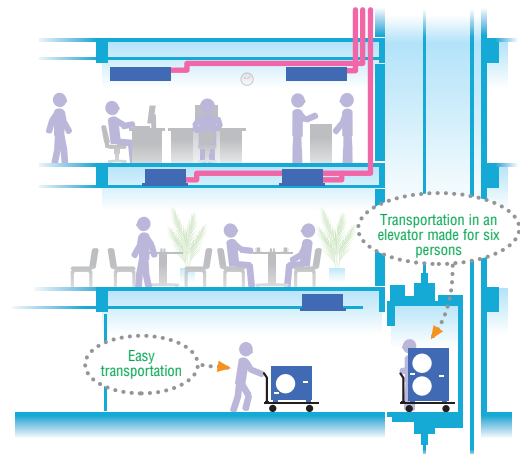
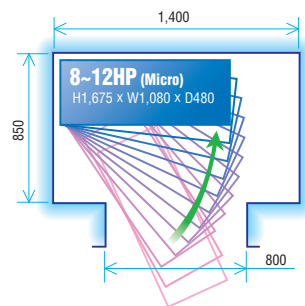
*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)

*2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page 104.

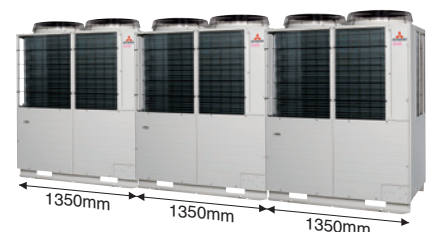
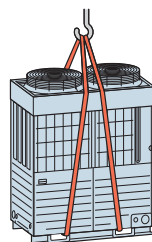
*3 It must be 40m or less, when it is required to use at the outdoor air temperature higher than 43°C. (In case of KXZE1M)

Easy Transportation & Installation

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



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





Automatic Select functions for capacity control (KXZ Lite)

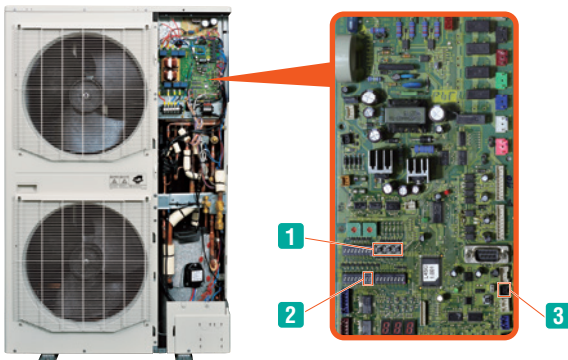
The following 3 items are available for capacity control function.
 User can select one item individually or select 2or3 items at the same time.
 In case of selecting 2or3 items, the unit will operate with the most effective function automatically.

Compressor speed control

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

How to set "Compressor speed"

- **1** Set the function of external input (CNS1) to "Capacity control input" using P07 of 7SEG setting.
- **2** Set the Demand rate using SW4-7, 4-8 according to the following chart.
- The input signal will be through **3** CNS1. ON/ connected, OFF/ not connected



SW4-7	SW4-8	Compressor speed
OFF	OFF	80%
ON	OFF	60%
OFF	ON	40%
ON	ON	0%

Capacity control timer

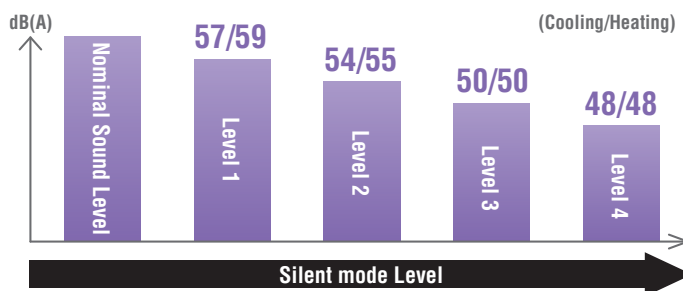
User can set[※] capacity control with RC-EX3 up to 4 times per day maximum.
 The timer setting can be changed using 5 minute intervals.

※Please refer to page 11.

Silent mode

Considering noise regulations or surrounding circumstances, you can now select 4 levels of silent mode. [1] & [2]
 Setting the combination of silent mode is available by using timer function of RC-EX3.

- Silent mode [1] : Priority for capacity
 This is an effective function during low load operation conditions.
 This setting may be cancelled in overload conditions.
- Silent mode [2] : Priority for silent mode
 Regardless of operation conditions, the outdoor unit will keep the operation at the selected sound level.



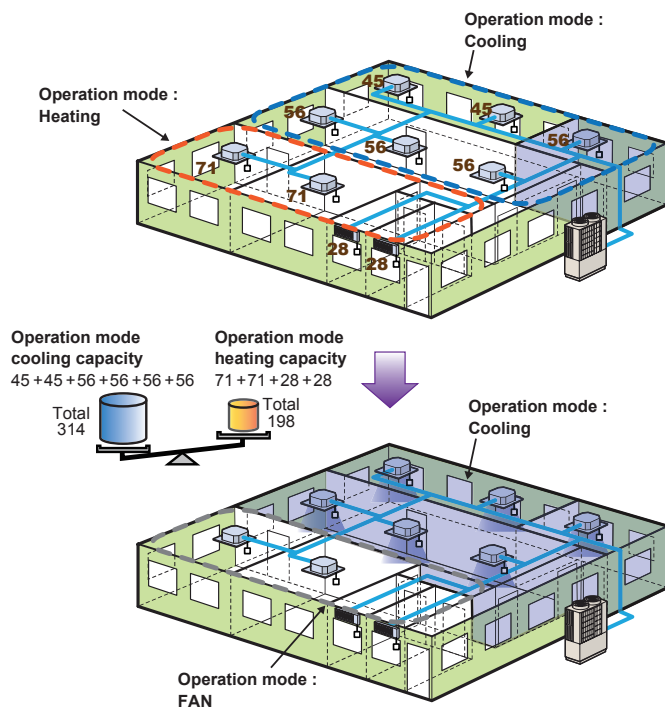
Priority operation mode rule (KXZ, KXZ Lite)

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

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

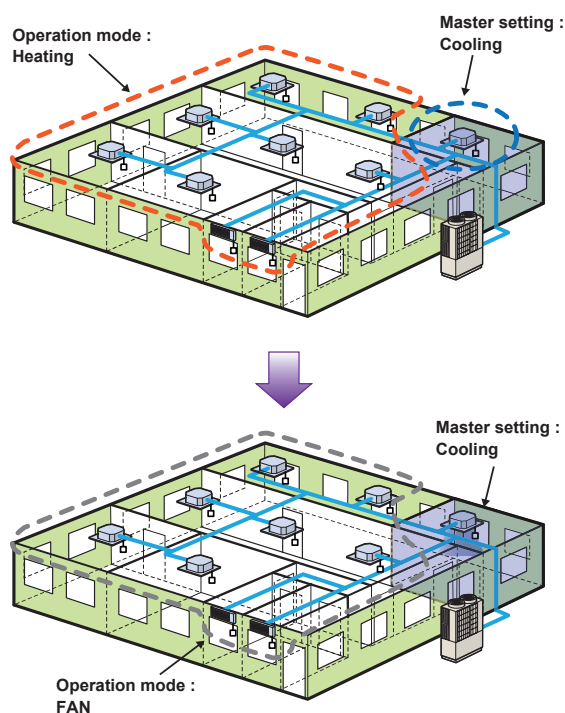
<Majority operation mode>

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



<Master operation mode>

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



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

It is possible to fix the operational mode of the system (either cooling or heating) using a switch (SW3-7) on the outdoor unit PC board - this enables the building user to decide the operation of the system (e.g. cooling only in summer/heating only in winter), to avoid unnecessary energy wastage.

It is also possible to wire the control switch to a remote location (inside the building) to a control room, or even linked to an ambient thermostat.

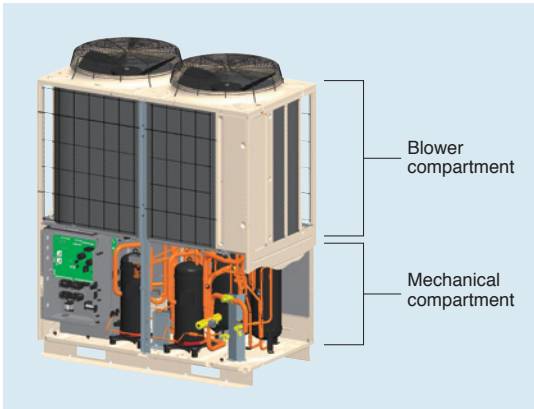




3. Serviceability

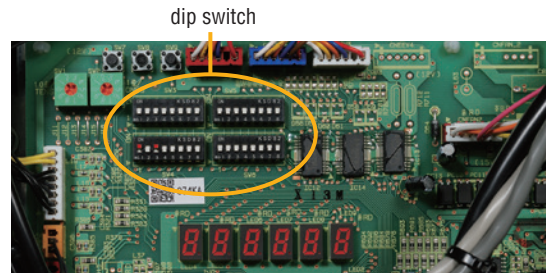
Easy Service

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



Check Operation (10~60HP)

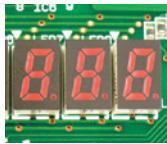
Closing of Service valve, crossing connection of refrigerant piping and electrical wiring, proper operation of EEV (Electrical Expansion Valve) can be checked automatically in cooling operation. This check operation can be done at 0~43°C outdoor temperature and 10~32°C indoor temperature by use of outdoor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



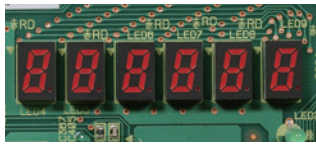
Monitoring Function

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

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

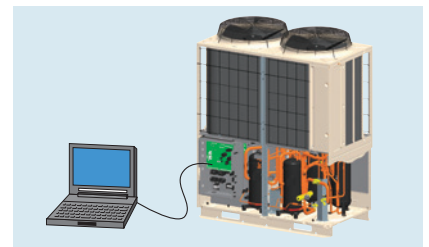


4~6HP
8~10HP(KXZ Lite)



8~60HP

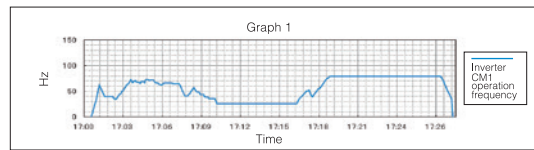
Equipped with RS232C for connection directly to your PC monitoring and service tasks made simple with our service software ("Mente PC").
All series



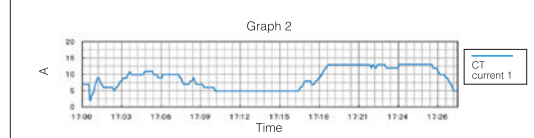
Automatically produced test-run report

Table with columns for test run data including date, time, and various parameters. Includes a sample header and footer.

Operation data storage during servicing

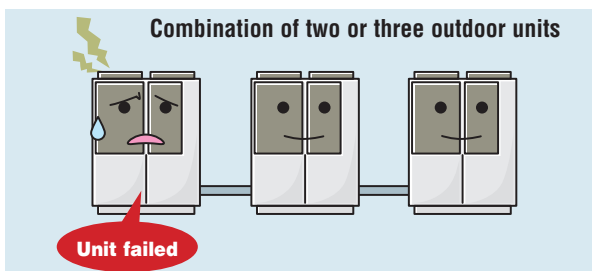


Operation data storage when a fault occurs

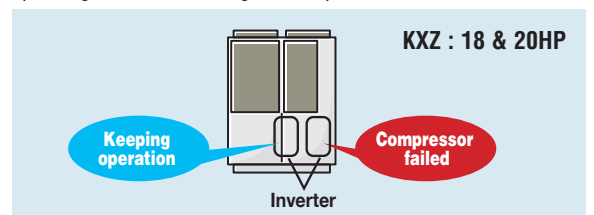


Back-up Operation

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



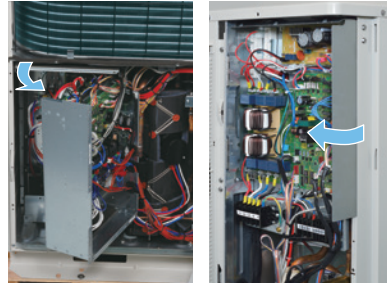
In the event that one compressor has a failure, the unit will keep operating with the another good compressor.



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

3 Layer Construction

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

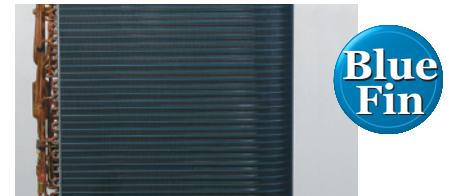


KXZ
(3 layer)

KXZ Lite
(2 layer)

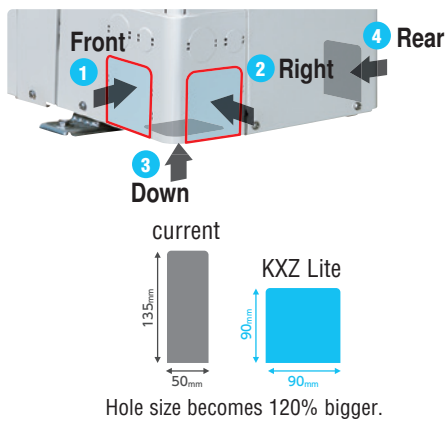
Blue Fin

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



Improved features (KXZ Lite)

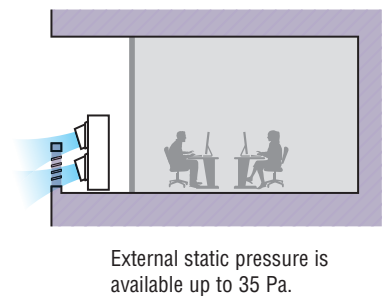
Improved freedom of piping layout



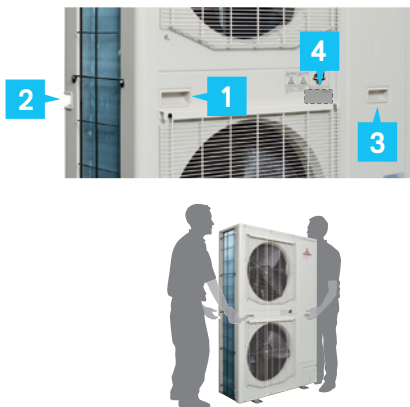
Wire insertion holes for fall prevention



External static pressure



Four handles



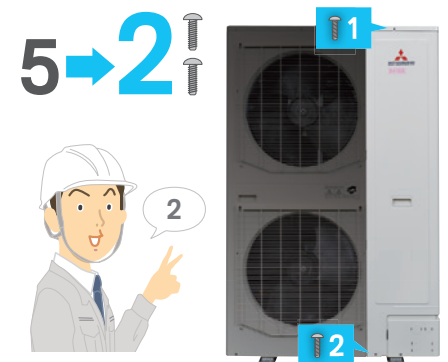
Located at the same level for easy transport and transfer.

A transparent rain cover



Attached as a standard for easy maintenance.

Fixing screws to service panel



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



New Generation **FDT**

Automatic energy saving control

Keep maximum comfort with minimal draft

Quiet operation

New!

Draft Prevention Panel (Option)

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

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

User can position Draft Prevention Panel panels by using the remote controller only (RC-EX3, RCN-T-5AW-E2).

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



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

New!

Motion Sensor (Option)

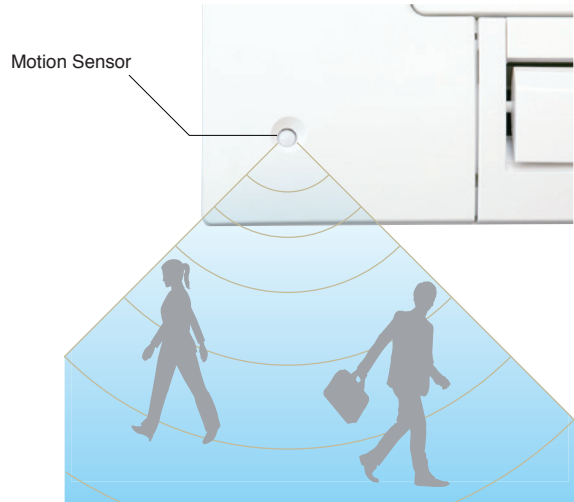
Two energy saving control by detecting human moving

Power Control

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

Auto-off

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





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



Ceiling cassette
FDT series

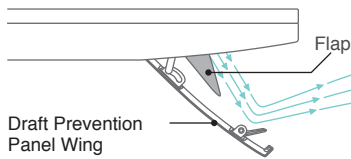
Draft Prevention Panel

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

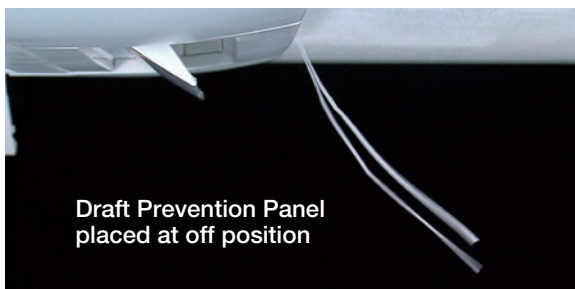
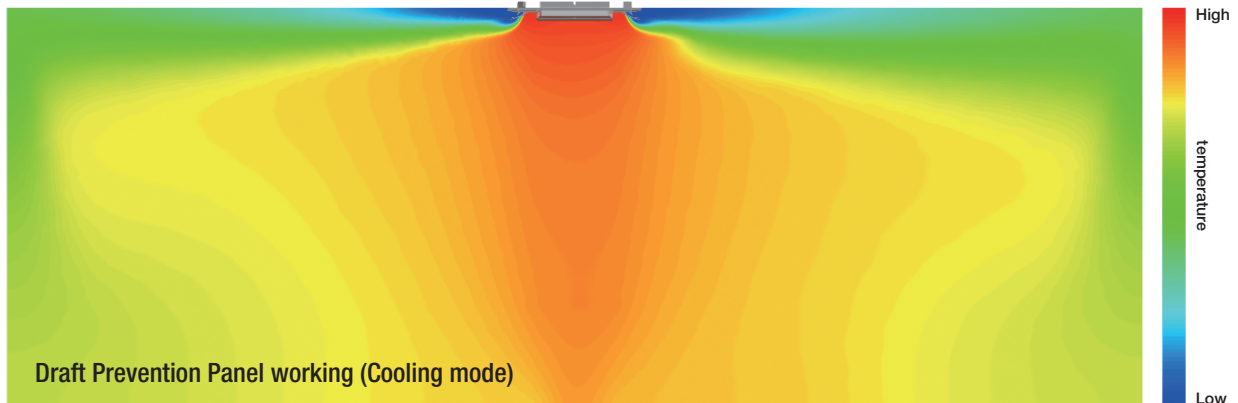
User



Draft Prevention Panel Operating Image



New Generation!



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



Motion sensor

Energy saving control by detecting human moving



3 Step Control

Power Control

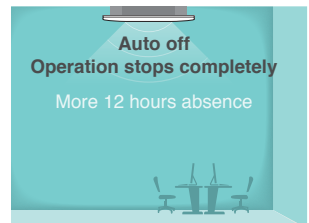
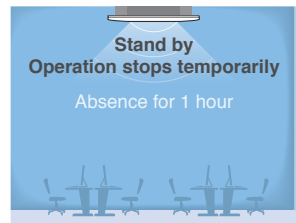
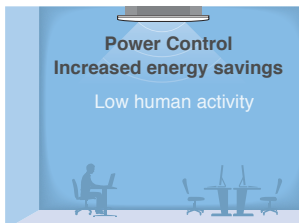
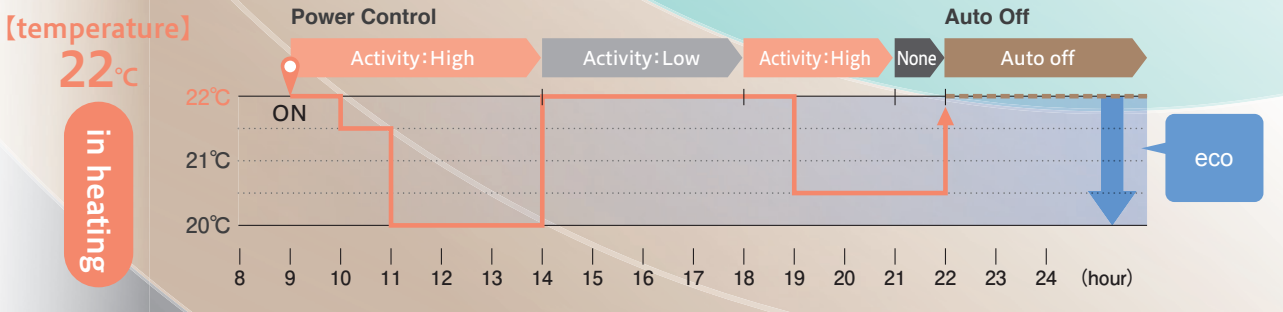
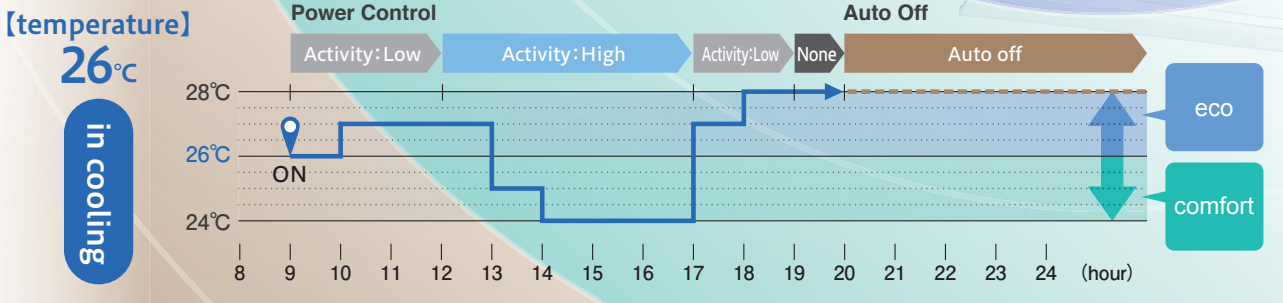
New motion sensor (option) detects human activity. Energy saving control is achieved by shift set temperature according to detected amount of activity.

Stand by

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

Auto Off

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



Operation mode and Control of Motion sensor		Human activity		Operation mode				
				Auto	Cool	Heat	Dry	Fan
Power Control ※1	Low	Cooling +2°C Heating +2°C	+2°C	+2°C	—	—		
	High	Cooling -2°C Heating -2°C	-2°C	-2°C	—	—		
Auto Off ※2			●	●	●	●		

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

Serviceability & workability

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

Builder Maintenance



Quick positioning !

<p>1 Adjustable easier positioning of unit by new slits</p> <p>New shape of slit is suitable to install the unit with more flexibility, according to many kinds of suspending bolt pitch on site. Any rectangular or squared pitch of suspending bolts are available with this slit.</p> <p>Compatible with both square or rectangular bolt pitch</p>	<p>2 New slit in panel allows easier installation on site.</p> <p>Flexible positioning is available, which helps adjusting the direction of panel according to lines or pattern on the ceiling.</p> <p>4 long slits are available.</p>
---	---

Quick installation and maintenance

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

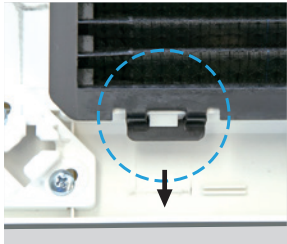



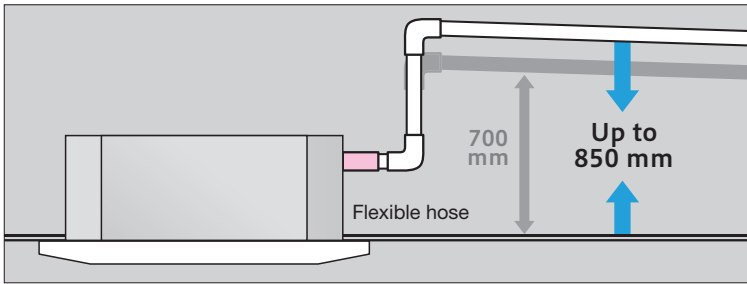
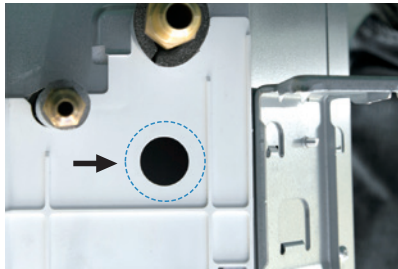
Builder Maintenance

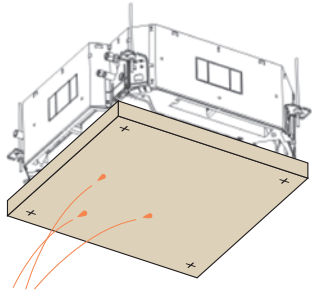
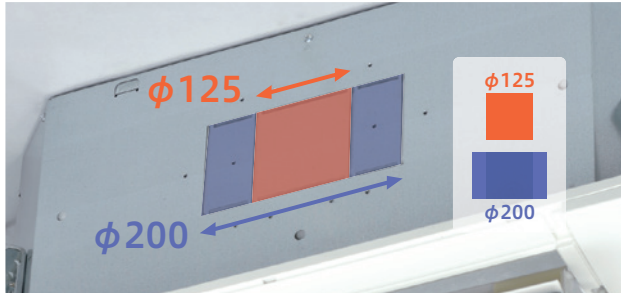


For smooth and easy working

Good help for installation and maintenance

<p>1 Easy and flexible hook to remove the filter</p>	<p>2 Surely fix the corner lid by strap</p>
<p>Hook of soft material helps to remove the filter without dust spreading.</p>  <p>Press the filter tab to the outside and remove the filter.</p>	<p>The direction of the strap hook part has been changed from longitudinal to lateral. Furthermore, a barb has been added to the hook pin to prevent the strap from coming off.</p>  <p>Easy to hook but not easy to loose</p>

<p>3 Drain-up-lift increases up to 850 mm (previous:700mm)</p>	<p>4 New port to check drain water flow</p>
<p>The drain can be lifted up to 850 mm from the ceiling surface.</p> 	<p>A water supply port has been provided in the piping lid for easier testing of the drain water flow. (The port is usually sealed with a rubber cap.)</p> 

<p>5 Re-use of packages during construction work</p>	<p>6 More flexible outlet for ducting</p>
<p>Package material (carton) help to protect the unit from unexpected welding spatter or coming dust to the new unit.</p> 	<p>Both $\phi 125$ and $\phi 200$ (oval shaped) are available.</p> 

New Generation FDK



Elegant Timeless Design (22-56KXZE1)

European design

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



FDK22-56KXZE1

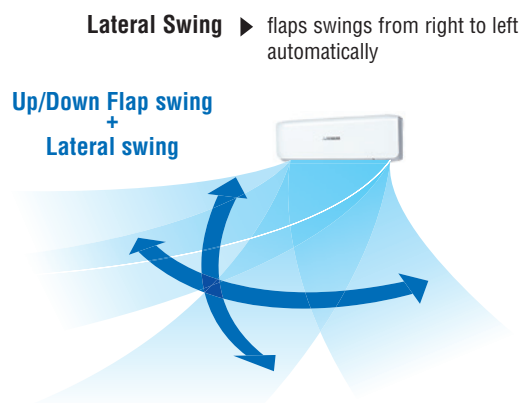


FDK71KXZE1

Flap control system

Multi motors make 3 independent controls

Air flow and its direction is controlled with 3-dimensional.

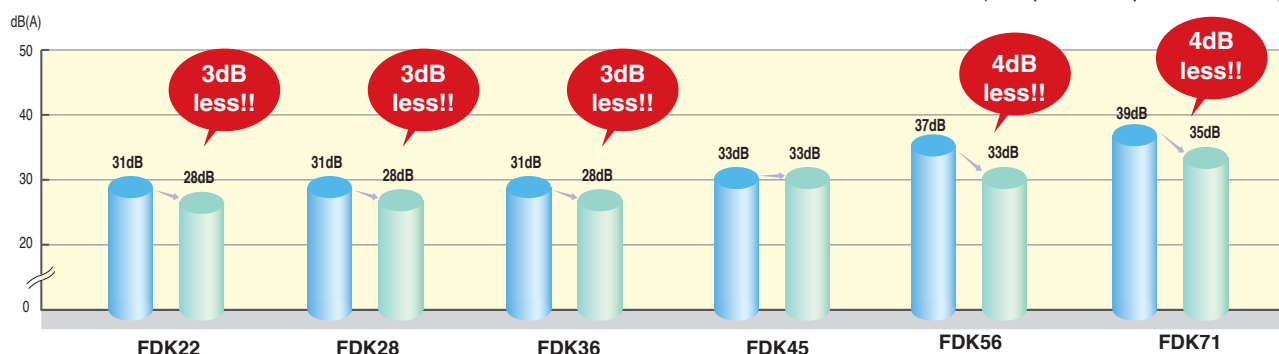


More quiet noise

Reduction of sound pressure level (Lo mode)

Quiet airflow is realized by Jet Technology.

(Comparison of previous model)





Simple use with advanced setting **REMOTE CONTROL**

Easy touch and Easy view with full dot Liquid Crystal display



RC-EX1A



RC-EX3

Bright screen

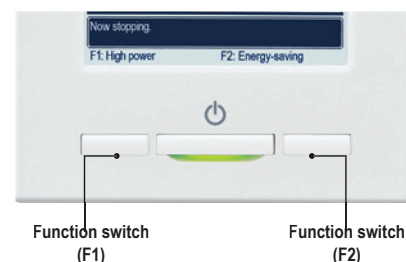
New!

New functions

Function Switch

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

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



1 High Power Mode

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



2 Energy Saving Mode

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



3 Quiet Mode

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



4 Home Leave Mode

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



5 Favorite Mode

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

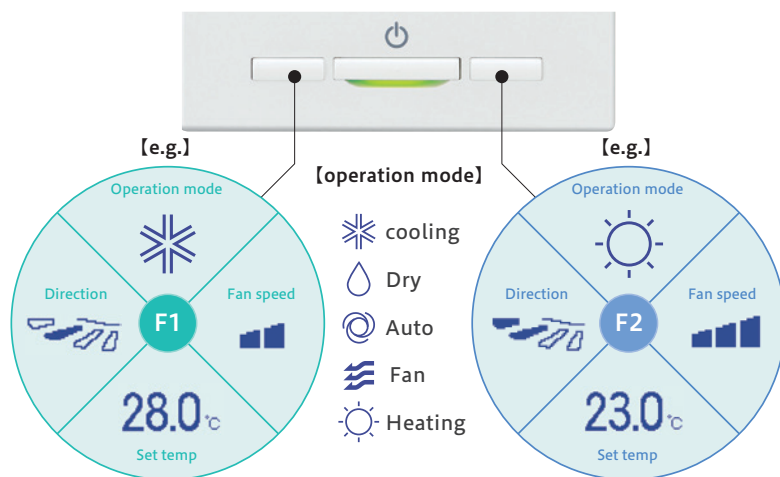


6 Filter Sign

Announces the due time for cleaning the air filter.

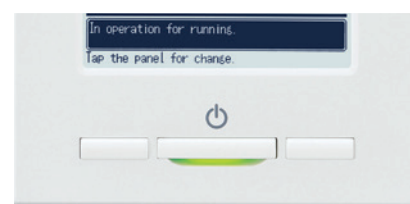
Favorite Mode

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



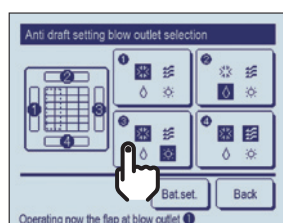
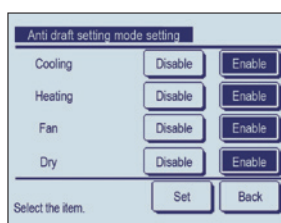
Adjusting Brightness of the Operation lamp

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



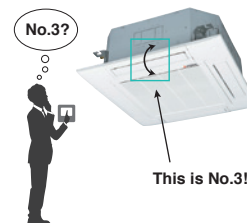
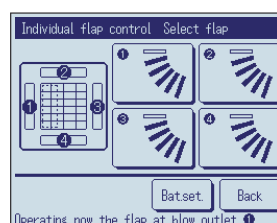
Draft prevention setting (only FDT series)

User can enable/disable the motion of panel with anti draft for each blow outlet for each operation mode.



Easy modification of Air Flow

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





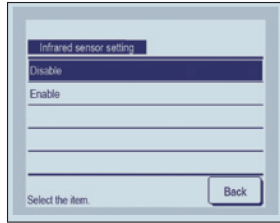
Motion sensor control

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

- 1 Select Enable / Disable
Motion sensor control



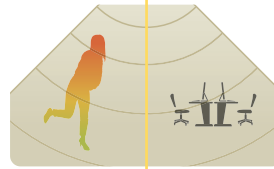
Enable / Disable



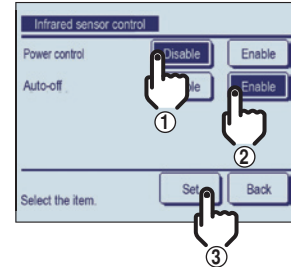
Select [Enable] / [Disable] for the motion sensor of the indoor unit connected to the R/C.

- 2 Select Enable / Disable per control

- Power control
- Auto-off



Enable / Disable



Backup Control

Control restricted to two indoor units (two groups)

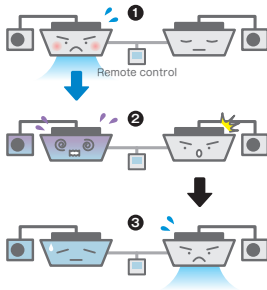


Fault backup control



Keep back up all the time!

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

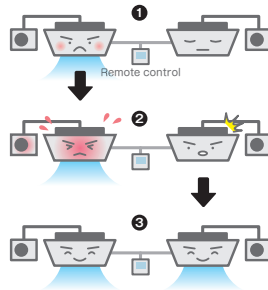


Capacity backup control



Maintains users' comfort!

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

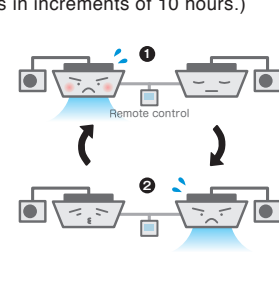


Rotational operation control



Energy saving and longer life!

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



Additional functions of External Input / Output

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



Remote surveillance system



Card key on-off

External Input

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

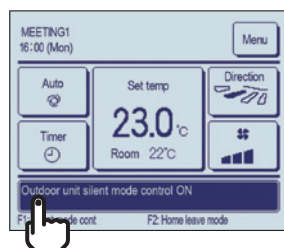
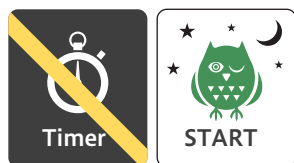
External Output

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

Newly added

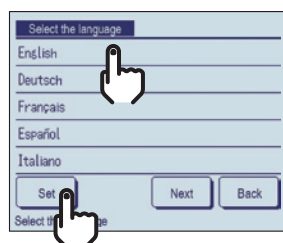
Silent mode control

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



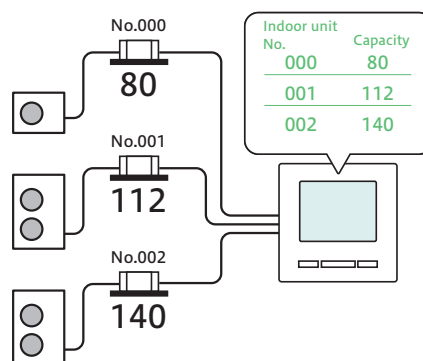
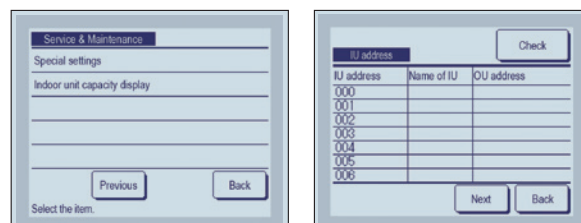
Language Switching

User can select from the following languages: English/German/French/Spanish/Italian/Dutch/Turkish/Portugal/Russian/Polish/Japanese/Chinese.



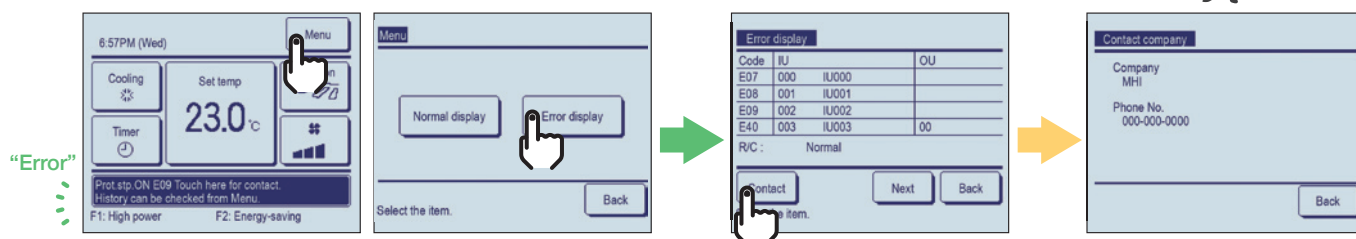
Indoor unit capacity display

Capacities of Indoor units connected to the RC-EX3 are displayed.



Contact company & Error display

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



New Wireless Kit & New Wireless Remote Controller

■ New Line-up

Model	Wireless kit
FDT	RCN-T-5AW-E2
FDTC	RCN-TC-24W-E2
FDTW	RCN-TW-E2
FDTs	RCN-TS-E2
FDK	RCN-K-E2, RCN-K71-E2
FDE	RCN-E-E2
FDFW	RCN-FW-E2
FDTQ, FDU, FDUM, FDUT, FDUH, FDFL, FDFU, FDU-F	RCN-KIT4-E2

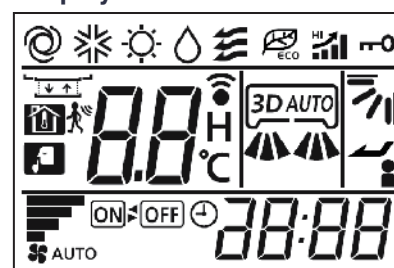
■ Function added

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

■ The functions and the operations will be improved.



Display



Outdoor units

Micro model Heat pump systems

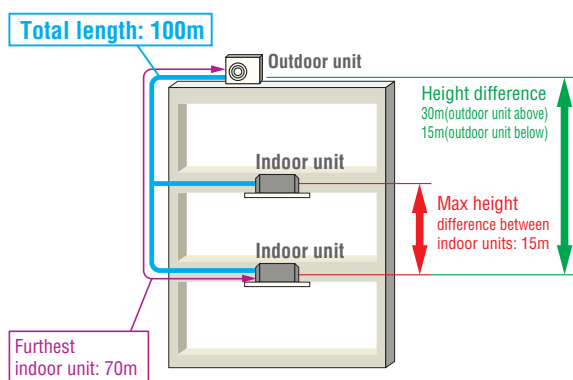
4, 5, 6HP (11.2kW~15.5kW)

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

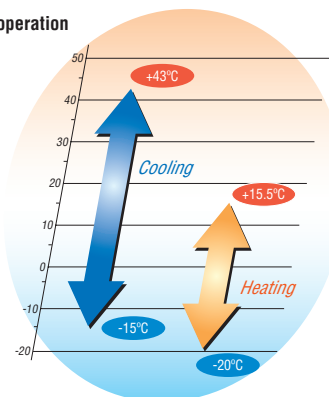
- Connect up to 8 indoor units/up to 150% capacity.
- High efficiency with COP (in cooling) up to 4.0.
- KX6 employs DC inverter compressors ONLY.
- Industry leading total piping length up to 100m and a maximum pipe run of 70m.



Note: FDUT15KXE6F-E and FDTC15KXE6F can not be connected to the above systems.



Range of operation



Specifications

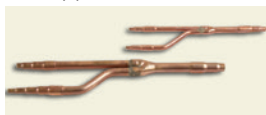
Item	Model	FDC112KXEN6	FDC140KXEN6	FDC155KXEN6	FDC112KXES6	FDC140KXES6	FDC155KXES6	
Nominal horse power		4HP	5HP	6HP	4HP	5HP	6HP	
Power source		1 Phase 220V, 60Hz			3 Phase 380V, 60Hz			
Starting current	A	5						
Max current	A	23			13.5			
Nominal capacity	Cooling	11.2	14.0	15.5	11.2	14.0	15.5	
	Heating	12.5	16.0	16.3	12.5	16.0	16.3	
Electrical characteristics	Power consumption	Cooling	2.80	4.17	4.71	2.80	4.17	4.71
		Heating	2.89	4.31	4.38	2.89	4.31	4.38
Exterior dimensions	HxWxD	mm 845x970x370						
Net weight	kg	85			87			
Sound pressure level	Cooling/Heating	52/54	53/57	53/57	52/54	53/57	53/57	
Refrigerant	Type/GWP	R410A/2088						
	Charge	kg/TCO ₂ Eq 5.0/10.44						
Refrigerant piping size	Liquid line	mm(in) $\phi 9.52(3/8")$						
	Gas line	mm(in) $\phi 15.88(5/8")$						
Capacity connection	%	80~150						
Number of connectable indoor units		6	8	8	6	8	8	

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

Refrigerant piping

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

Branch pipes



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

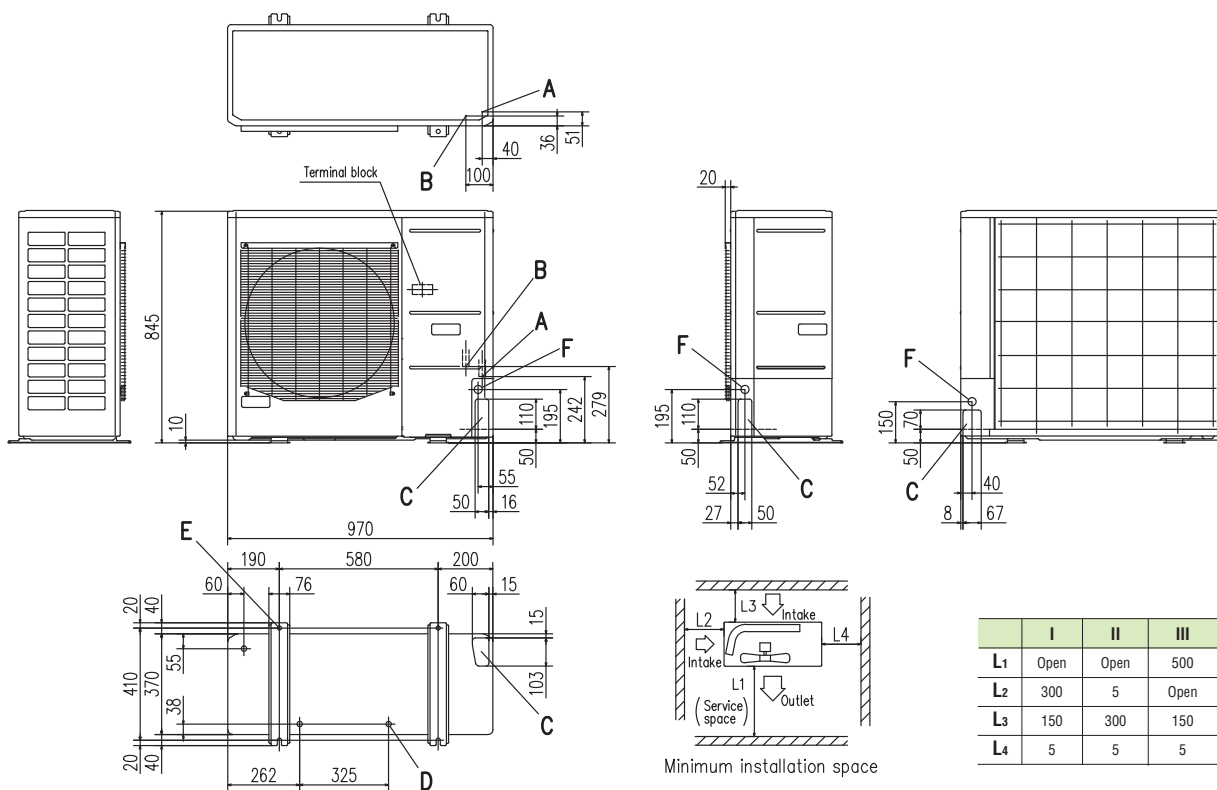
Header pipe



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

Dimensions

All measurements in mm.



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

Notes:

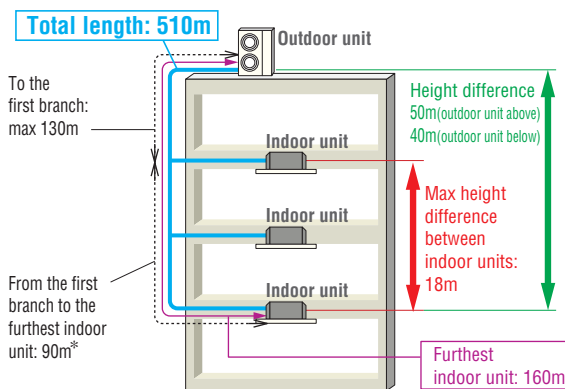
- (1) It must not be surrounded by walls on the four sides.
- (2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
- (3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.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



Micro model Heat pump systems 8, 10, 12HP (22.4kW~33.5kW)

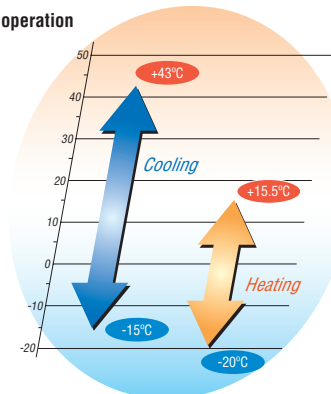
Model No.	Nominal Cooling Capacity
FDC224KXE6M	22.4kW (220V)
FDC280KXE6M	28.0kW (220V)
FDC335KXE6M	33.5kW (220V)
FDC224KXE6G	22.4kW (380V)
FDC280KXE6G	28.0kW (380V)
FDC335KXE6G	33.5kW (380V)

- Connect up to 24 indoor units/up to 150% capacity.
- High efficiency with COP (in cooling) up to 4.0.
- KX6 employs DC inverter compressors ONLY.
- Industry leading total piping length up to 510m and a maximum pipe run of 160m.



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

Range of operation



Specifications

Item	Model	FDC224KXE6M	FDC280KXE6M	FDC335KXE6M	FDC224KXE6G	FDC280KXE6G	FDC335KXE6G	
Nominal horse power		8HP	10HP	12HP	8HP	10HP	12HP	
Power source		3Ph-3wire 220V, 60Hz / 3Ph-4wire 220V, 60Hz			3 Phase 380V, 60Hz			
Starting current	A	5			5			
Max current	A	33	35	36	20	20	23	
Nominal capacity	Cooling	22.4	28.0	33.5	22.4	28.0	33.5	
	Heating	25.0	31.5	37.5	25.0	31.5	37.5	
Electrical characteristics	Power consumption	Cooling	5.85	8.57	9.82	5.60	8.09	9.82
		Heating	6.38	8.70	10.12	6.03	8.21	10.12
Exterior dimensions	HxWxD	mm 1675x1080x480						
Net weight	kg	212			215		218	
Sound pressure level	Cooling/Heating	58/58	59/60	61/61	58/58	59/60	61/61	
Refrigerant	Type/GWP	R410A/2088						
	Charge	kg/TCO ₂ Eq 11.5/24.012						
Refrigerant piping size	Liquid line	ø9.52(3/8")		ø12.7(1/2")	ø9.52(3/8")		ø12.7(1/2")	
	Gas line	ø19.05(3/4")	ø22.22(7/8")	ø25.4(1") [ø28.58(1 1/8")]	ø19.05(3/4")	ø22.22(7/8")	ø25.4(1") [ø28.58(1 1/8")]	
Capacity connection	%	50~150			50~150			
Number of connectable indoor units		22	24	24	22	24	24	

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 3. [] : Pipe sizes applicable to European installations are shown in parentheses.
 4. Do not connect N-phase wire to the unit when the power supply is 3-phase and 4-wire.

Refrigerant piping

Pipe sizes applicable to European installations.

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

Branch pipes



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



DIS-371-1G

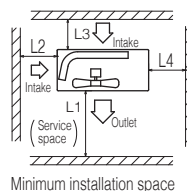
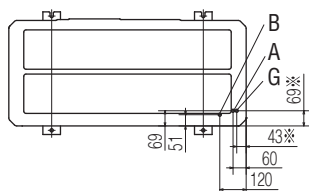
Header pipe



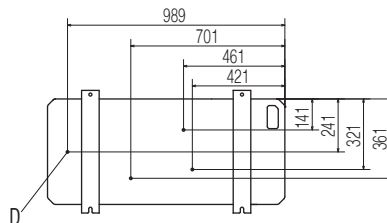
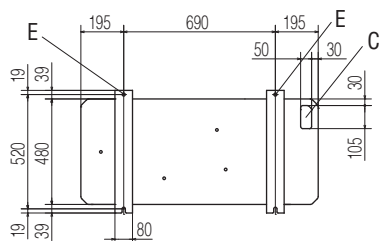
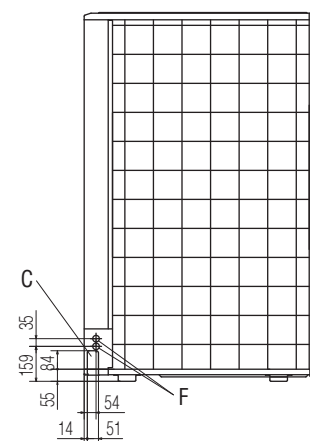
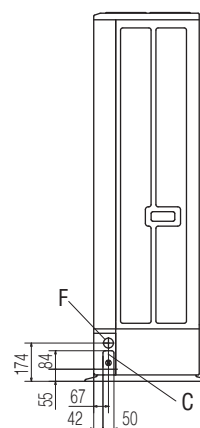
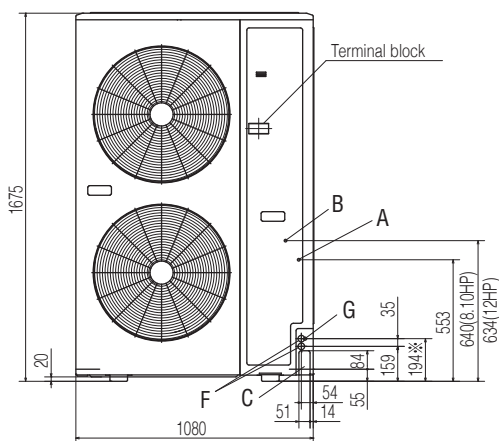
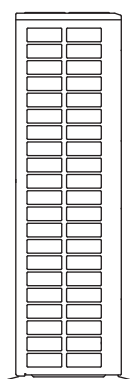
HEAD4-22-1G
HEAD6-180-1G
HEAD8-371-1G

Dimensions

All measurements in mm.



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



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

Notes:

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

KXZ Heat pump systems

10, 12HP (28.0kW, 33.5kW)

Model No.	Nominal Cooling Capacity
FDC280KXZE1M	28.0kW(220V)
FDC335KXZE1M	33.5kW(220V)

NEW

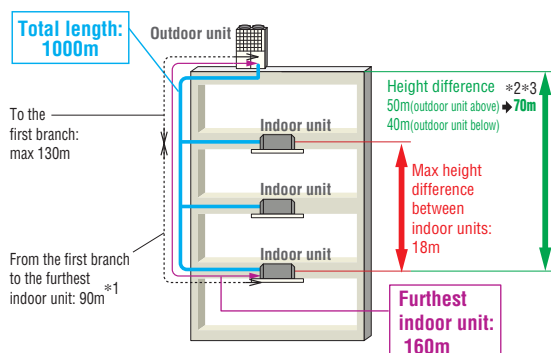


Blue Fin



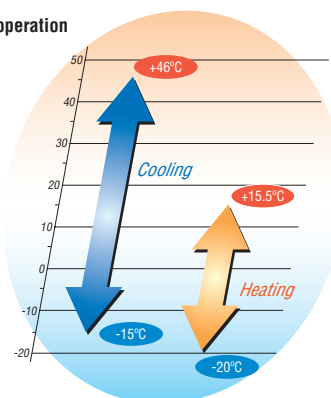
Uniform footprint of models (10,12HP) allows continuous side-by-side installation

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



- *1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.
- *3 It must be 40m or less, when it is required to use at the outdoor air temperature higher than 43°C.

Range of operation



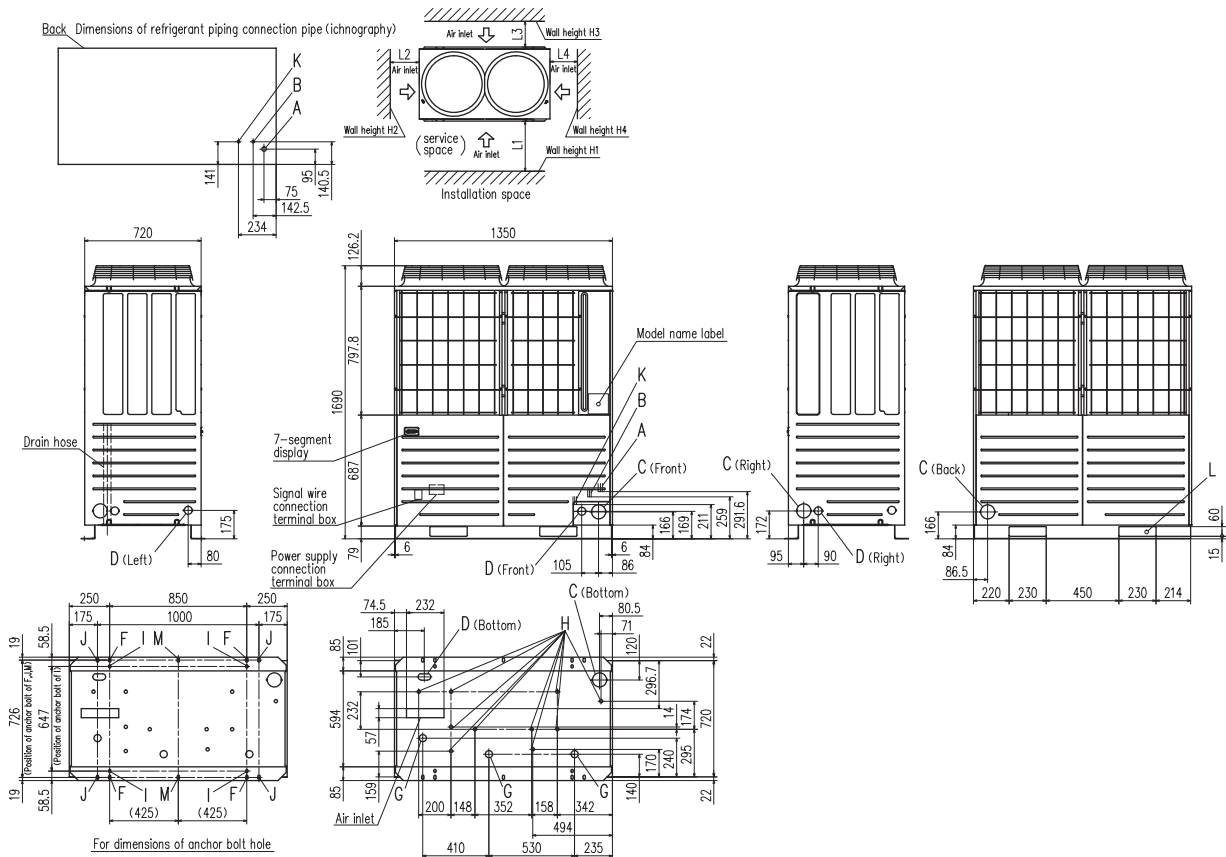
Specifications

Item		Model	FDC280KXZE1M	FDC335KXZE1M
Nominal horse power			10HP	12HP
Power source			3 Phase 3wiring 220V, 60Hz	
Starting current		A	5	
Max current		A	33	
Nominal capacity	Cooling	kW	28.0	33.5
	Heating		31.5	37.5
Electrical characteristics	Power consumption	Cooling/Heating kW	7.24	8.96
			7.28	9.04
Exterior dimensions		HxWxD mm	1690x1350x720	
Net weight		kg	266	
Sound pressure level		Cooling/Heating dB(A)	55/57	61/58
Refrigerant	Type/GWP		R410A/2088	
	Charge	kg/TCO ₂ Eq	11.0/22.968	
Refrigerant piping size	Liquid line	mm(in)	ø9.52(3/8")	ø12.7(1/2")
	Gas line	mm(in)	ø22.22(7/8")	ø25.4(1") [ø22.22(7/8")]
Capacity connection		%	50~130	
Number of connectable indoor units			24	29

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

Dimensions

All measurements in mm.

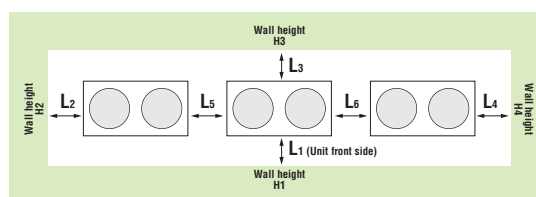


Mark	Content	280	335
A	Refrigerant gas piping connection pipe	ø22.22(Brazing)	ø25.4(Brazing)
B	Refrigerant liquid piping connection pipe	ø9.52(Flare)	ø12.7(Flare)
C	Refrigerant piping exit hole	ø88(or ø100)	
D	Power supply entry hole	ø50 (right · left · front), long hole 40 x 80 (bottom)	
F	Anchor bolt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

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

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

When more than one unit is installed



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

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

KXZ Heat pump systems

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

Model No.	Nominal Cooling Capacity
FDC400KXZE1M	40.0kW(220V)
FDC450KXZE1M	45.0kW(220V)
FDC475KXZE1M	47.5kW(220V)
FDC500KXZE1M	50.0kW(220V)
FDC560KXZE1M	56.0kW(220V)

NEW

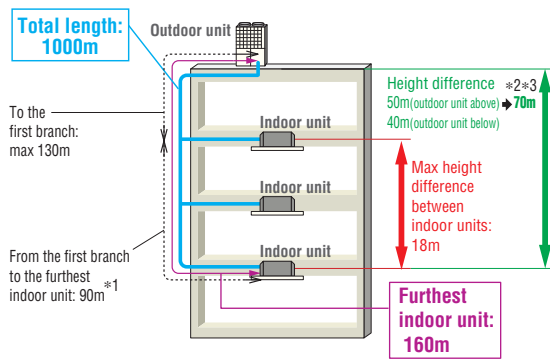


Blue Fin



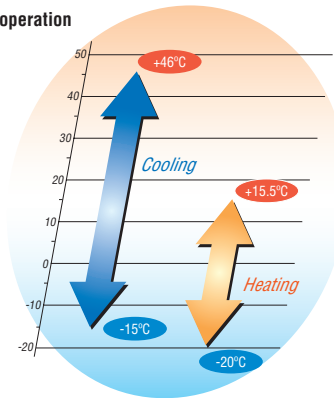
Uniform footprint of all models (from 14HP~20HP) allows continuous side-by-side installation

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



- *1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.
- *3 It must be 40m or less, when it is required to use at the outdoor air temperature higher than 43°C.

Range of operation



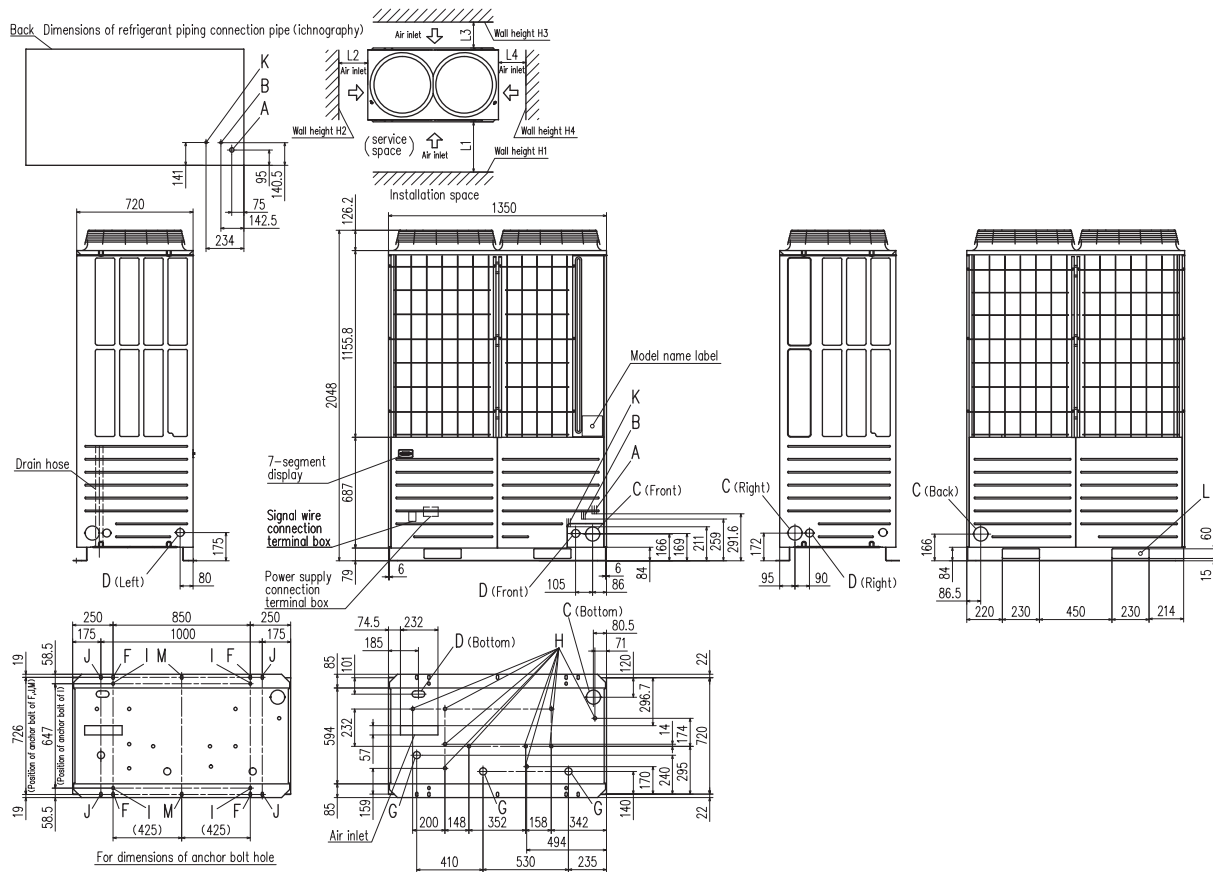
Specifications

Item	Model	FDC400KXZE1M	FDC450KXZE1M	FDC475KXZE1M	FDC500KXZE1M	FDC560KXZE1M	
Nominal horse power		14HP	16HP	17HP	18HP	20HP	
Power source		3 Phase 3wiring 220V, 60Hz					
Starting current	A	5			8		
Max current	A	59			62		
Nominal capacity	Cooling	40.0	45.0	47.5	50.0	56.0	
	Heating	45.0	50.0	53.0	56.0	63.0	
Electrical characteristics	Power consumption	Cooling	10.96	13.98	13.98	13.97	16.62
		Heating	10.69	12.50	13.00	13.49	15.95
Exterior dimensions	HxWxD	mm 2048x1350x720					
Net weight	kg	321					
Sound pressure level	Cooling/Heating	60/62	61/62	61/61	61/62	64/66	
Refrigerant	Type/GWP	R410A/2088					
	Charge	kg/TCO ₂ Eq 11.5/24.012					
Refrigerant piping size	Liquid line	mm(in) ø12.7(1/2")					
	Gas line	ø25.4(1") [ø28.58(1 1/8")]		ø28.58(1 1/8")			
Capacity connection	%	50~130					
Number of connectable indoor units		34	39	41	43	48	

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

Dimensions

All measurements in mm.



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

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

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



KXZ Heat pump combination systems

22, 24HP (61.5kW, 67.0kW)



Model No.

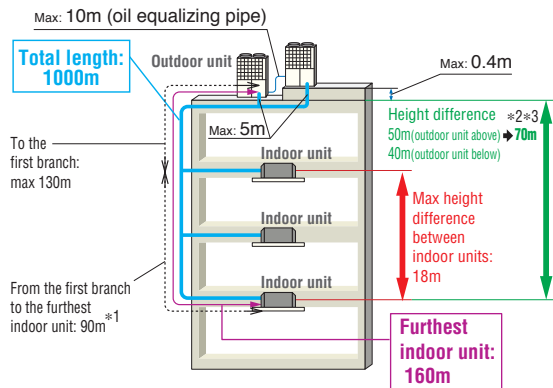
FDC615KXZE1M (FDC280+FDC335)
FDC670KXZE1M (FDC335+FDC335)

Nominal Cooling Capacity

61.5kW(220V)
67.0kW(220V)



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

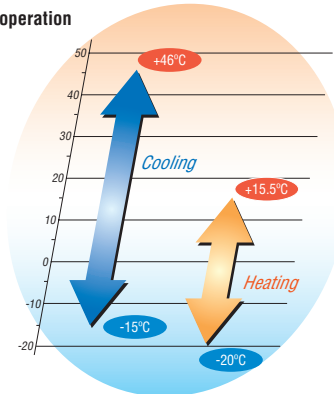


- *1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.
- *3 It must be 40m or less, when it is required to use at the outdoor air temperature higher than 43°C.



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

Range of operation



Specifications

Exterior dimension : Please refer to page33.

Item	Model	FDC615KXZE1M	FDC670KXZE1M
Combination (FDC)		280KXZE1M	335KXZE1M
		335KXZE1M	335KXZE1M
Nominal horse power		22HP	24HP
Power source		3 Phase 3wiring 220V, 60Hz	
Starting current	A	10	
Max current	A	42.4	
Nominal capacity	Cooling	61.5	67.0
	Heating	69.0	75.0
Electrical characteristics	Power consumption	Cooling	16.20
		Heating	16.32
Exterior dimensions	HxWxD	mm 1690x2700x720	
Net weight	kg	532	
Refrigerant charge	R410A	kg 11.0x2	
Refrigerant piping size	Liquid line	mm(in) ø12.7(1/2")	
	Gas line	mm(in) ø28.58(1 1/8")	
Capacity connection	%	50~130	
Number of connectable indoor units		53	58

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

KXZ Heat pump combination systems

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

Model No.

FDC735KXZE1M (FDC335+FDC400)	73.5kW(220V)
FDC800KXZE1M (FDC400+FDC400)	80.0kW(220V)
FDC850KXZE1M (FDC400+FDC450)	85.0kW(220V)
FDC900KXZE1M (FDC450+FDC450)	90.0kW(220V)
FDC950KXZE1M (FDC475+FDC475)	95.0kW(220V)
FDC1000KXZE1M (FDC500+FDC500)	100.0kW(220V)
FDC1060KXZE1M (FDC500+FDC560)	106.0kW(220V)
FDC1120KXZE1M (FDC560+FDC560)	112.0kW(220V)

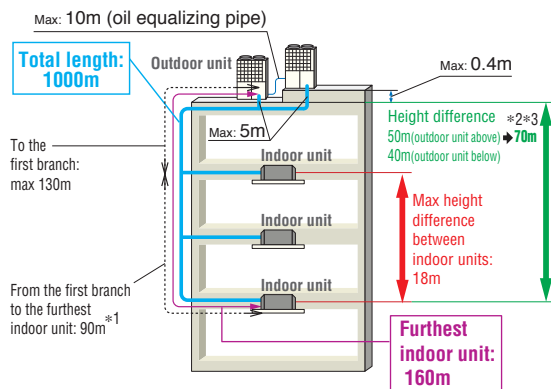
Nominal Cooling Capacity

NEW



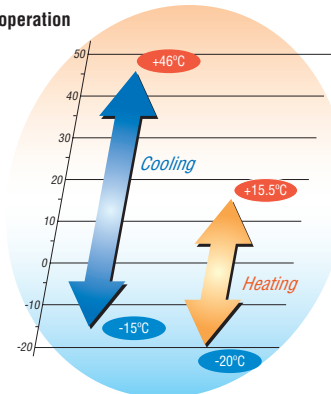
• In case of 26HP

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



- *1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.
- *3 It must be 40m or less, when it is required to use at the outdoor air temperature higher than 43°C.

Range of operation



Specifications

Exterior dimension : Please refer to page33,35.

Item	Model	FDC735KXZE1M	FDC800KXZE1M	FDC850KXZE1M	FDC900KXZE1M	FDC950KXZE1M	FDC1000KXZE1M	FDC1060KXZE1M	FDC1120KXZE1M	
Combination (FDC)		335KXZE1M	400KXZE1M	400KXZE1M	450KXZE1M	475KXZE1M	500KXZE1M	500KXZE1M	560KXZE1M	
		400KXZE1M	400KXZE1M	450KXZE1M	450KXZE1M	475KXZE1M	500KXZE1M	560KXZE1M	560KXZE1M	
Nominal horse power		26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP	
Power source		3 Phase 3wiring 220V, 60Hz								
Starting current	A	10					16			
Max current	A	53.2	64			84.8				
Nominal capacity	Cooling	kW								
	Heating	kW								
Electrical characteristics	Power consumption	Cooling	kW							
		Heating	kW							
Exterior dimensions	HxWxD	mm								
Net weight	kg	587	642			734				
Refrigerant charge	R410A	kg		kg						
Refrigerant piping size	Liquid line	mm(in)							mm(in)	
	Gas line	mm(in)							mm(in)	
Capacity connection	%	%								
Number of connectable indoor units		63	69	73	78	80				

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

KXZ Heat pump combination systems

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

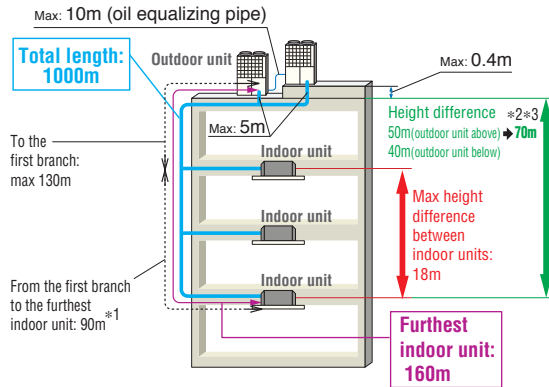
Model No.	Nominal Cooling Capacity
FDC1200KXZE1M (FDC400+FDC400+FDC400)	120.0kW(220V)
FDC1250KXZE1M (FDC400+FDC400+FDC450)	125.0kW(220V)
FDC1300KXZE1M (FDC400+FDC450+FDC450)	130.0kW(220V)
FDC1350KXZE1M (FDC450+FDC450+FDC450)	135.0kW(220V)

NEW

Blue Fin

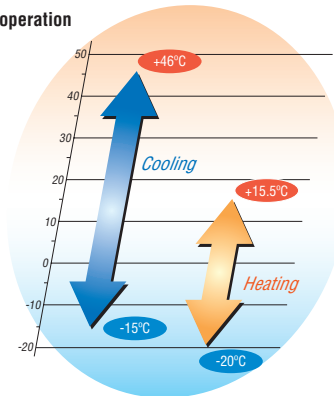


- Connect up to 80 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) up to 3.6.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.



- *1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.
- *3 It must be 40m or less, when it is required to use at the outdoor air temperature higher than 43°C.

Range of operation



Specifications

Exterior dimension : Please refer to page35.

Item	Model	Model				
		FDC1200KXZE1M	FDC1250KXZE1M	FDC1300KXZE1M	FDC1350KXZE1M	
Combination (FDC)		400KXZE1M	400KXZE1M	400KXZE1M	450KXZE1M	
		400KXZE1M	400KXZE1M	450KXZE1M	450KXZE1M	
		400KXZE1M	450KXZE1M	450KXZE1M	450KXZE1M	
Nominal horse power		42HP	44HP	46HP	48HP	
Power source		3 Phase 3wiring 220V, 60Hz				
Starting current	A	15				
Max current	A	96				
Nominal capacity	Cooling	kW				
	Heating	kW				
Electrical characteristics	Power consumption	Cooling	kW			
		Heating	kW			
Exterior dimensions	HxWxD	mm				
Net weight		kg				
Refrigerant charge	R410A	kg				
Refrigerant piping size	Liquid line	mm(in)				
	Gas line	mm(in)				
Capacity connection	%	50-130				
Number of connectable indoor units		80				

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

KXZ Heat pump combination systems

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

Model No. Nominal Cooling Capacity

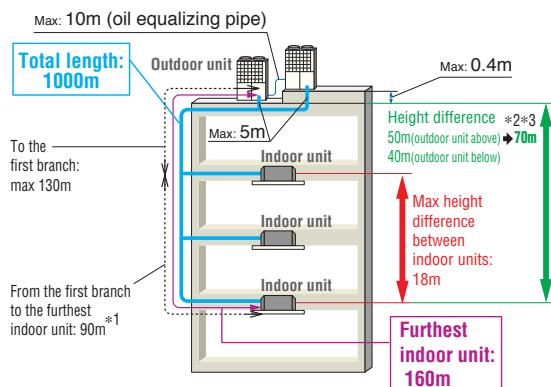
FDC1425KXZE1M (FDC475+FDC475+FDC475)	142.5kW(220V)
FDC1450KXZE1M (FDC475+FDC475+FDC500)	145.0kW(220V)
FDC1500KXZE1M (FDC500+FDC500+FDC500)	150.0kW(220V)
FDC1560KXZE1M (FDC500+FDC500+FDC560)	156.0kW(220V)
FDC1620KXZE1M (FDC500+FDC560+FDC560)	162.0kW(220V)
FDC1680KXZE1M (FDC560+FDC560+FDC560)	168.0kW(220V)

NEW

Blue Fin

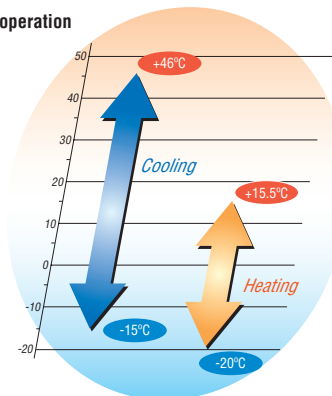


- Connect up to 80 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) up to 3.6.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.



- *1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
- *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.
- *3 It must be 40m or less, when it is required to use at the outdoor air temperature higher than 43°C.

Range of operation



Specifications

Exterior dimension : Please refer to page35.

Item	Model	FDC1425KXZE1M	FDC1450KXZE1M	FDC1500KXZE1M	FDC1560KXZE1M	FDC1620KXZE1M	FDC1680KXZE1M
		Combination (FDC)	475KXZE1M	475KXZE1M	500KXZE1M	500KXZE1M	500KXZE1M
		475KXZE1M	475KXZE1M	500KXZE1M	500KXZE1M	560KXZE1M	560KXZE1M
		475KXZE1M	500KXZE1M	500KXZE1M	560KXZE1M	560KXZE1M	560KXZE1M
Nominal horse power		50HP	52HP	54HP	56HP	58HP	60HP
Power source		3 Phase 3wiring 220V, 60Hz					
Starting current	A	24					
Max current	A	127.2					
Nominal capacity	Cooling	kW					
	Heating	kW					
Electrical characteristics	Power consumption	Cooling	kW				
		Heating	kW				
Exterior dimensions	HxWxD	mm					
Net weight		kg					
Refrigerant charge	R410A	kg					
Refrigerant piping size	Liquid line	mm(in)					
	Gas line	mm(in)					
Capacity connection		%					
Number of connectable indoor units							

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



Refrigerant piping

Installation of Interconnecting Pipework

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

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

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

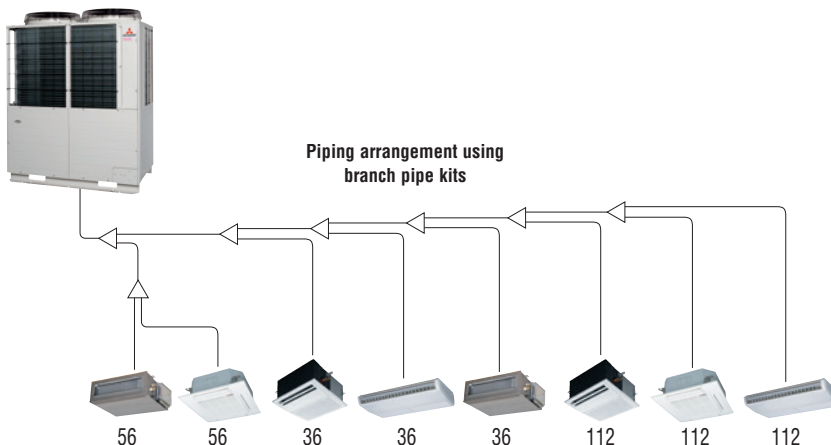
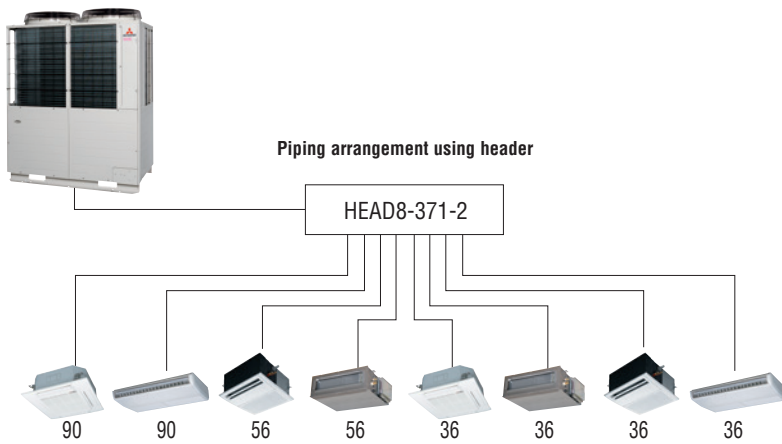
connection of the outdoor units, and sealing of insulation joints, the pipework must be pressure tested for leakage, using dry nitrogen.

Additional Refrigerant

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

The products contains fluorinated greenhouse gases covered by Kyoto protocol.

Single outdoor unit piping examples:



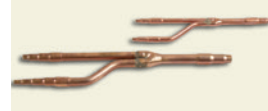
Main (Outdoor unit side branching pipe – Indoor unit side first branching pipe)

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

Outdoor unit	Main pipe size (normal)		Pipe size for an actual length of 90m or longer		mm	inch			
	Gas pipe	Liquid pipe	Gas pipe	Liquid pipe					
280	ø22.22 × t 1.0	ø9.52 × t 0.8	ø25.4 (ø22.22) × t 1.0	ø12.7 × t 0.8	ø9.52	3/8"			
335	ø25.4 (ø22.22) × t 1.0	ø12.7 × t 0.8			ø28.58 × t 1.0	ø12.7	1/2"		
400	ø25.4 (ø28.58) × t 1.0		ø31.8 × t 1.1 (ø28.58 × t 1.0)	ø15.88 × t 1.0	ø15.88	5/8"			
450	ø28.58 × t 1.0				ø19.05 × t 1.0	ø19.05	ø19.05	3/4"	
475			ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø22.22	ø22.22	7/8"
500					ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø19.05 × t 1.0		ø22.22 × t 1.0	ø25.4
560			ø28.58 × t 1.0	ø15.88 × t 1.0			ø19.05 × t 1.0		ø28.58
615	ø31.8 × t 1.1 (ø34.92 × t 1.2)								
670			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0		ø34.92
735	ø31.8 × t 1.1 (ø34.92 × t 1.2)								
800			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0		ø44.5
850	ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0							
900			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0		ø28.58
950	ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0							
1000			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0		ø34.92
1060	ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø38.1		1 1/2"	
1120			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø44.5	1 3/4"
1200	ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø50.8			2"
1250			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø28.58	1 1/8"
1300	ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø31.8			1 1/4"
1350			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø34.92	1 3/8"
1425	ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø38.1			1 1/2"
1450			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø44.5	1 3/4"
1500	ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø50.8			2"
1560			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø28.58	1 1/8"
1620	ø31.8 × t 1.1 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø31.8			1 1/4"
1680			ø38.1 × t 1.35 (ø34.92 × t 1.2)	ø15.88 × t 1.0			ø19.05 × t 1.0	ø34.92	1 3/8"

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

Branch pipes



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

Header pipe



HEAD6-180-1G

Combination outdoor unit manifold

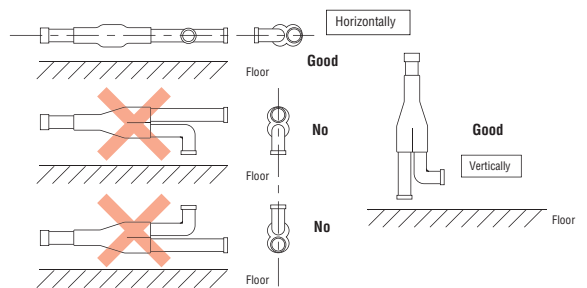


DIS-371-1G/DIS-540-3

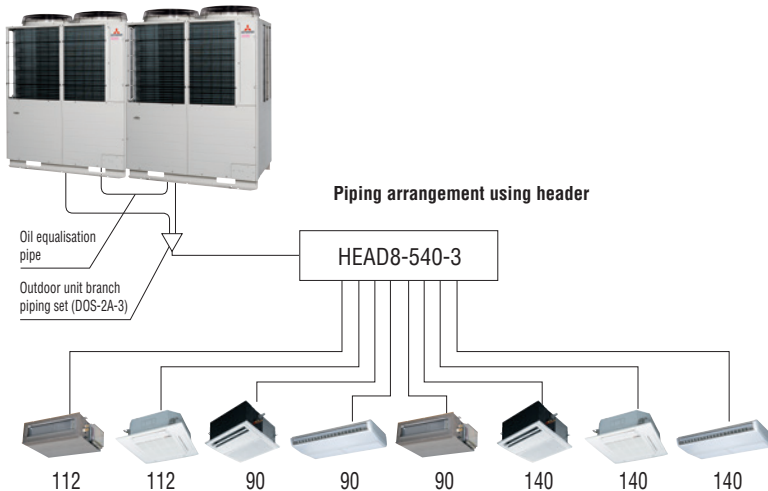
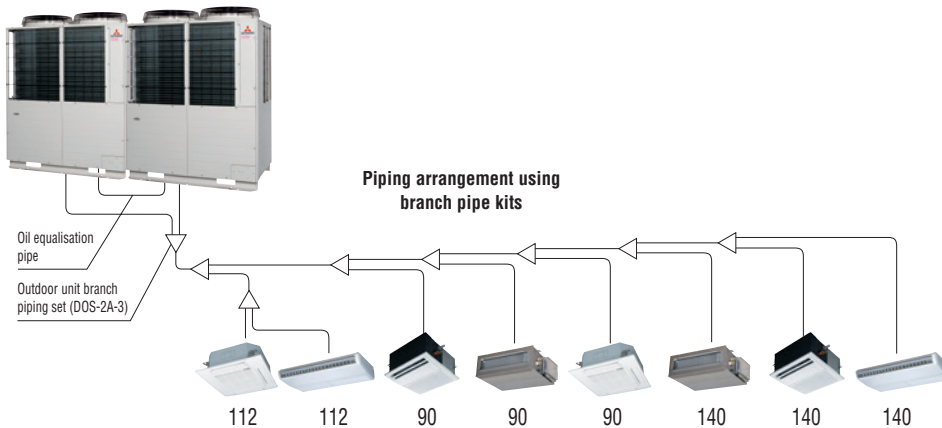


DOS-2A-3

DOS-3A-3



Combination outdoor unit piping examples:



Outdoor unit's branch piping set

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

Indoor unit's first branch piping set

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

Electrical wiring – power supply

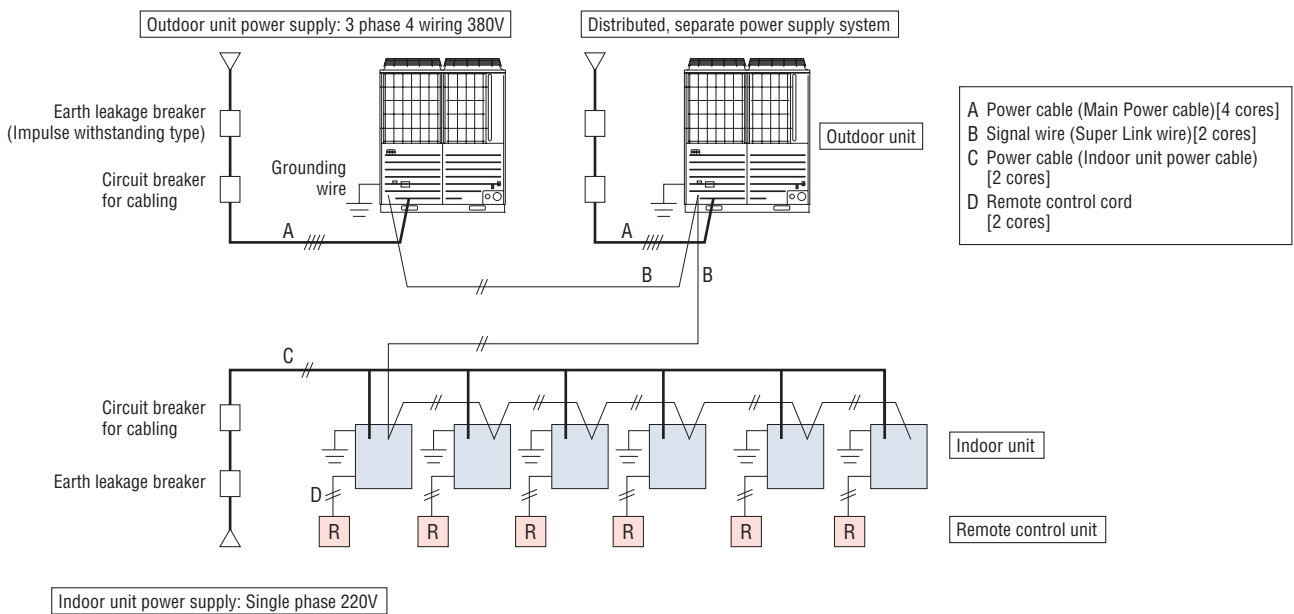
KXZ/KX6 includes greatly simplified wiring requirements utilising a 'polarity-free' two wire control loop connecting the indoor units.

Power wiring

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

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

Only control wiring is connected from outdoor to indoor unit.



CAUTION

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

Electrical wiring – control wiring

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

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

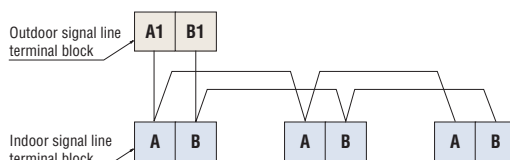
	0.75mm ²	1.25mm ²
~1000m	YES	YES
1000~1500m	YES	NO

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

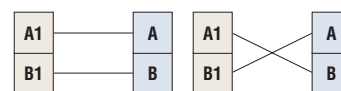
4. When plural outdoor units are used,
 -Connect the signal cable between indoor and outdoor units and the signal cable between outdoor units belonging to the same refrigerant line to A1 and B1.
 -Connect the signal line between outdoor units on different refrigerant lines to A2 and B2.

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

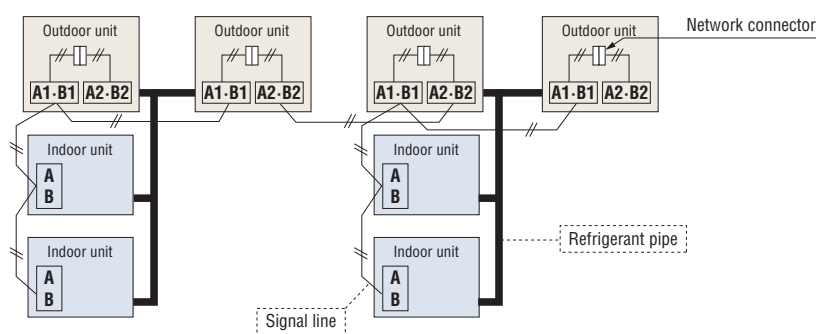
(1) When one outdoor unit is used



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

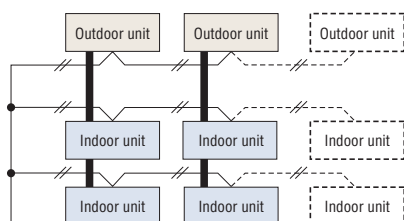


(2) When plural outdoor units are used



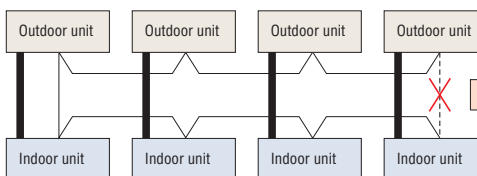
The maximum number of indoor units that can be connected in a system is 128 and it is possible to configure outdoor units and/or indoor units as an outdoor or indoor unit group connected with each other with two wires.

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



Important

o Loop wiring prohibited

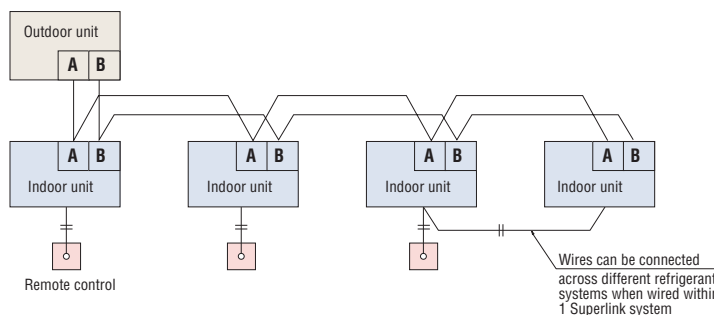


The signal lines cannot form a loop, so the wirings shown as ----- in the diagram are prohibited.

Remote control wiring specifications

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

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





Indoor units

Benefits Summary

When using RC-EX3 (Remote control), functions with symbol ● are available.
However, for RC-E5 (Remote control), functions with ※ are not available.

Economy	Inverter technology	Inverter control technology functions at high efficiency with smooth operation from high speed to low speed. A smooth sine voltage wave is attained.
	Energy-saving ※	Since the capacity is controlled automatically based on the outdoor temperature, energy can be saved without losing comfort.
	Home leave operation ※	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.
	Set temperature auto return ※	The temperature automatically returns to the previously set temperature.
Comfort	Automatic operation	The air conditioner automatically selects from among heating, cooling operations.
	Silent mode	The unit can be set to prioritise the period of time it operates at a lower noise level.
	Draught prevention	When starting to warm up or when the thermostat is off, the air discharge direction is set horizontally and the fan to low speed, to prevent draught. After warming up, air discharge and fan speed are set as desired.
	Hi power mode ※	The high power operation adjusts the room temperature quickly to a pleasant level by increasing the operation capacity. The high power operation continues for 15 minutes at maximum and returns to the normal operation automatically.
Air flow	Individual flap control	Motion range (upper and lower limit positions) of the flap at each air outlet can be set at a desired range individually.
	Vertical auto swing	Flap moves up and down continuously. The Up/Down flap swing can be fixed at the preferred operation angle.
	Ceiling stain prevention	The shape & angled louver redirects the air current away from the ceiling reducing ceiling stains.
	Automatic fan speed	The micro-computer automatically adjusts the airflow effectively to follow the changes of return air temperature.
Timer	Sleep timer	Set the time period from start to stop of operation. The selectable range of setting time is from 30 to 240 minutes (at 10-minute intervals).
	Peak-cut timer ※	Capacity control can be set by using peak cut function on RC-EX3 for better energy saving. Five-step capacity control is available.
	Weekly timer	On or Off timer can be set on a weekly basis.
Convenient	Function Switch ※	The function switch allows you to select and set two functions among six available functions. (Cannot be used when a centralied control remote is connected)
	Favorite setting ※	Operation mode, set temperature, fan speed and air flow direction automatically adjust to the programmed favorite setting.
	Static pressure adjustment	This is operable when connecting duct type indoor units equipped with the external static pressure adjustment function. It will adjust the airflow accordingly based on the connected duct static pressure.
	Remote control	You can select wired remote controls, wireless remote controls or central remote controls.
	Select the language ※	Set the language to be displayed on the remote control.
	Air filter	Removes airborne dust particles through the air filter to ensure a steady supply of clean air.
	Filter sign	Announces the due time for cleaning of the air filter.
Others	Outside air intake	Outside fresh air can be taken inside.
	Self-diagnosis	In the case that the air conditioner malfunctions, an internal microcomputer automatically runs a self-diagnosis. (Inspection and repair should be performed by authorized dealers.)
	Drain up	It allows for a flexible piping layout for condensate allowing a high degree of freedom depending on the installation location



Ceiling Cassette -4way- FDT

NEW

Model No.

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



Draft Prevention Panel (Option)

Remote control (option)

Wired



RC-EX3



RC-E5



RCH-E3

Wireless

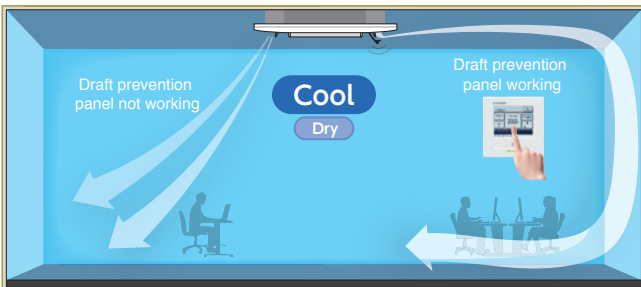


RCN-T-5AW-E2

Draft Prevention Panel

(Option)

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

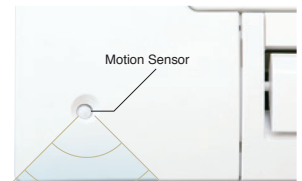


User can position Draft Prevention Panel panels by using the remote controller only (RC-EX3, RCN-T-5AW-E2).

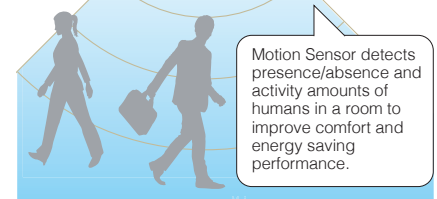
Motion Sensor

(Option)

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



LB-T-5W-E

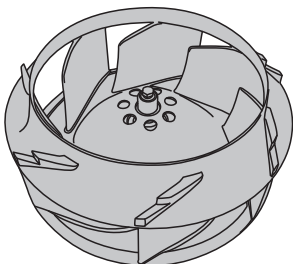


Improve the aerodynamic performance of the unit

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

● **New design turbo fan**

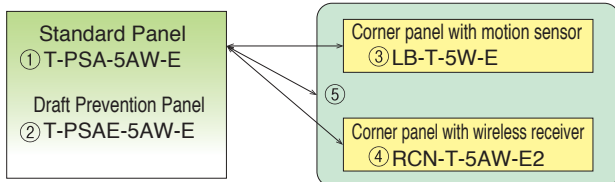
● **Fan guard (standard equipment)**



Panel select pattern

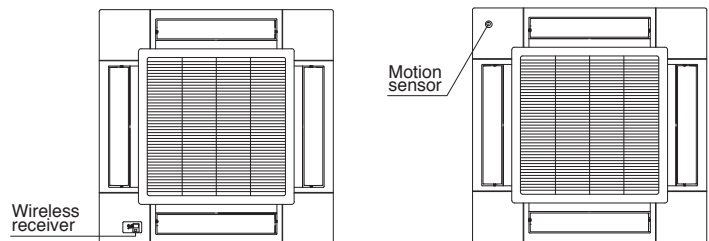
(Option)

8 patterns of panel are available.



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

Installation position of Wireless kit and Motion sensor kit



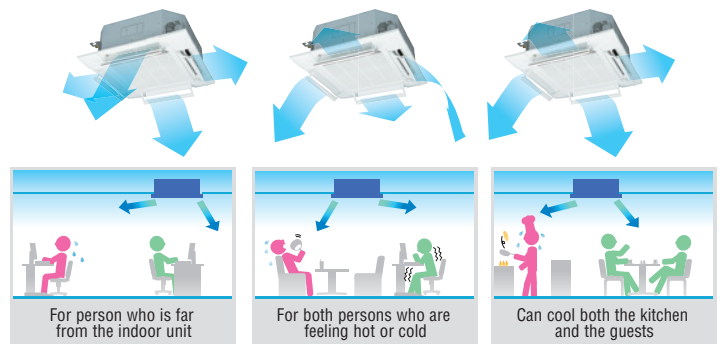
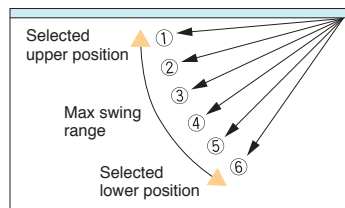
*Wireless receiver and Motion sensor can be installed to the position as shown

Individual flap control system

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

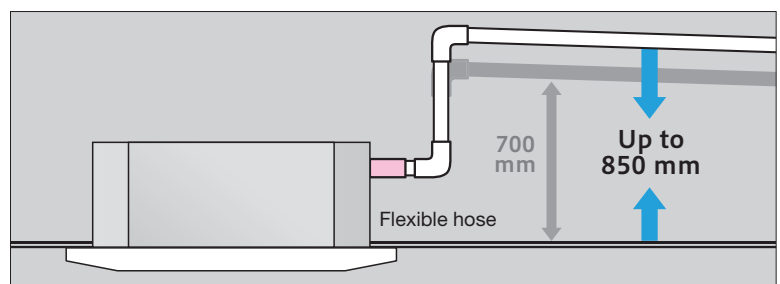
Flap can swing within an upper and lower flap range position within can be selected with a wired remote control.

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



850mm Drain Pump

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

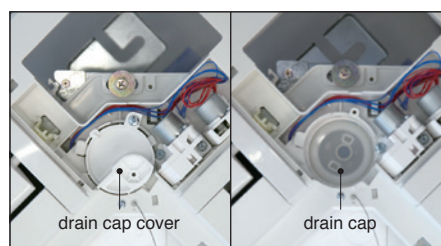


Easy check of drain pan

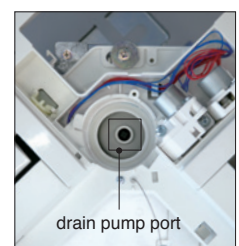
Easy check of drain pan condition is available by removing corner lid only.



Remove corner lid.



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



Clean up the area around the drain pump port.



Specifications

Item	Model	FDT28KXZE1	FDT36KXZE1	FDT45KXZE1	FDT56KXZE1	FDT71KXZE1	FDT90KXZE1	FDT112KXZE1	FDT140KXZE1	FDT160KXZE1	
Nominal cooling capacity	kW	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0	
Nominal heating capacity	kW	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	18.0	
Power source		1 Phase 220V, 60Hz									
Power consumption	Cooling	0.02		0.03		0.04		0.08		0.13	
	Heating	0.02		0.03		0.04		0.08		0.13	
Sound power level **	dB(A)	49		50		55		62		65	
Sound pressure level **	dB(A)	Hi:33 Me:30 Lo:28		Hi:33 Me:31 Lo:29		Hi:35 Me:32 Lo:28		Hi:38 Me:36 Lo:31		Hi:39 Me:37 Lo:31	
Exterior dimensions H x W x D	mm	Unit:236x840x840 Panel:35x950x950					Unit:298x840x840 Panel:35x950x950				
	kg	Unit:20 Standard Panel:5			Unit:21.5 Standard Panel:5			Unit:25 Standard Panel:5			
Air flow **	m ³ /min	Hi:14 Me:12 Lo:10		Hi:15 Me:13 Lo:10		Hi:16 Me:13 Lo:11		Hi:17 Me:14 Lo:12		Hi:25 Me:22 Lo:15	
Outside air intake		Possible									
Panel		T-PSA-5AW-E, T-PSAE-5AW-E									
Air filter, Q'ty		Pocket Plastic net x1 (Washable)									
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-T-5AW-E2									
Installation data Refrigerant piping size	mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")		Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")				

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

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

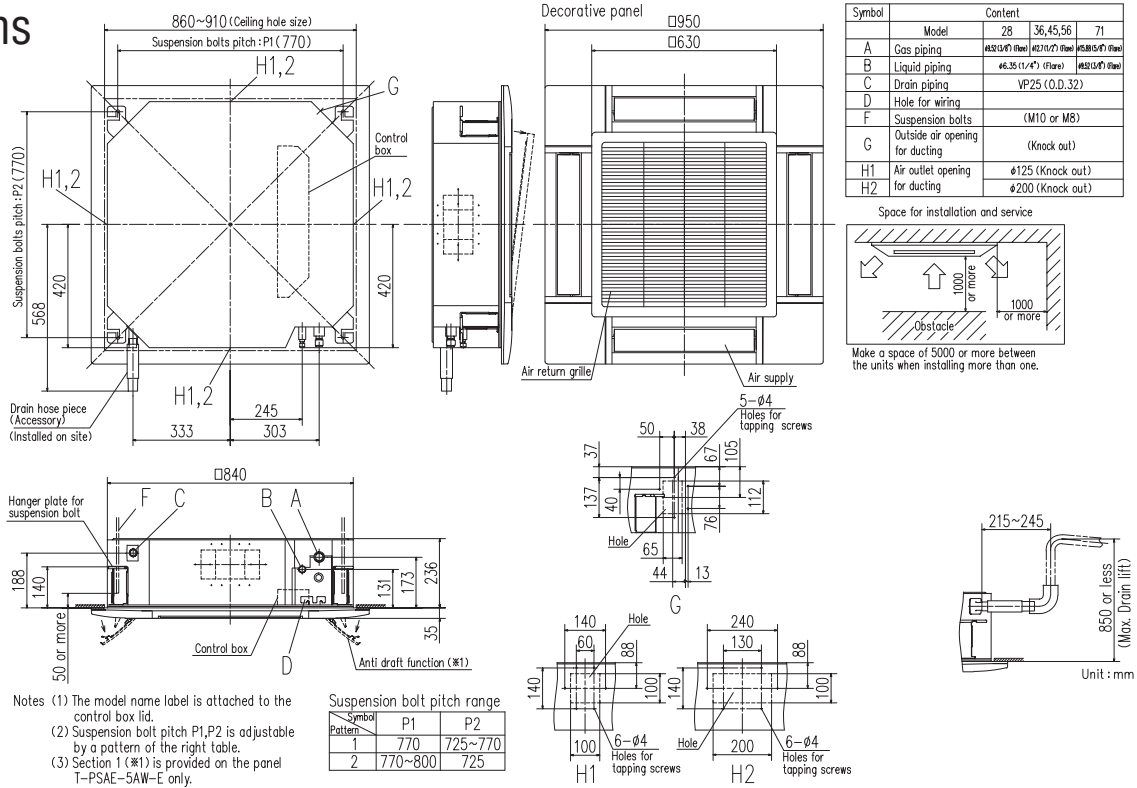
** Powerful-Hi can be selected. Sound pressure level: FDT28/36 37dB(A), FDT45/56 38dB(A), FDT71 47dB(A), FDT90/112/140/160 49dB(A). Air flow: FDT28 15m³/min, FDT36 16m³/min, FDT45 17m³/min, FDT56 20m³/min, FDT71 28m³/min, FDT90 37m³/min., FDT112/140/160 38m³/min.



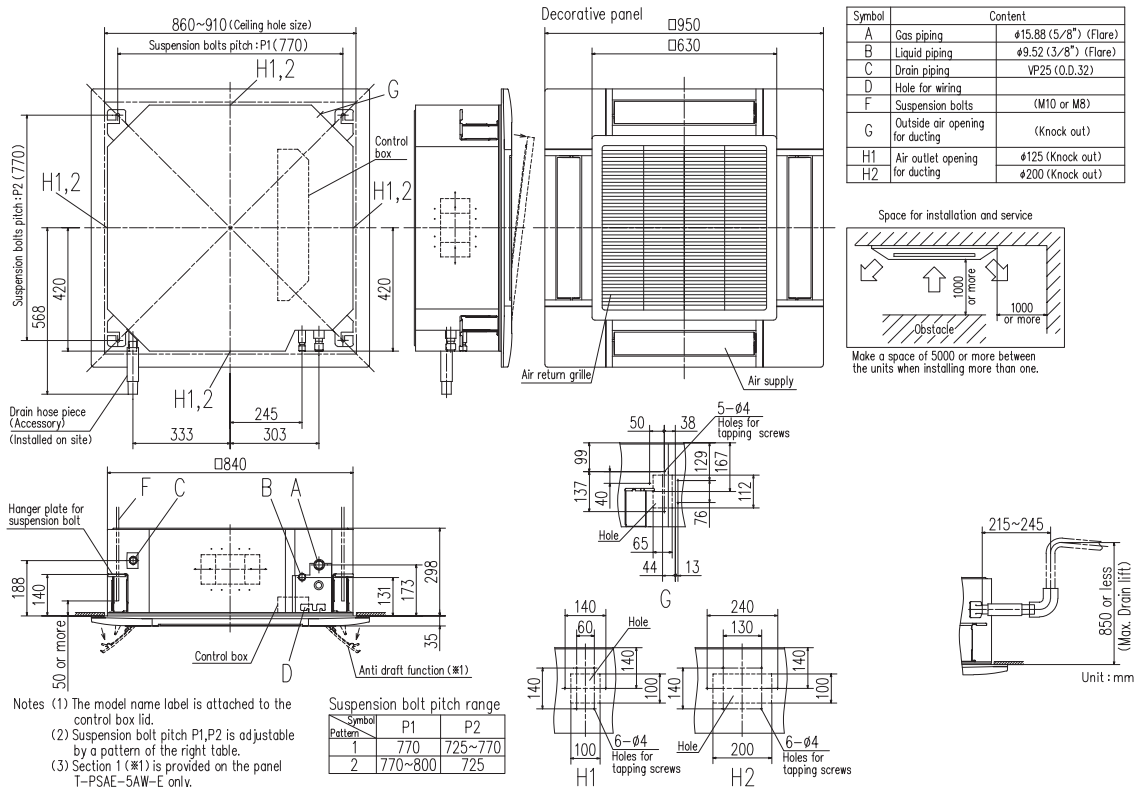
Dimensions

All measurements in mm.

FDT28KXZE1
36KXZE1
45KXZE1
56KXZE1
71KXZE1



FDT90KXZE1
112KXZE1
140KXZE1
160KXZE1





Ceiling Cassette -4way Compact (600x600mm)- FDTC

Fits into standard
600 x 600 ceiling

Model No.

FDTC15KXE6F
FDTC22KXE6F
FDTC28KXE6F
FDTC36KXE6F
FDTC45KXE6F
FDTC56KXE6F



Remote control (option)

Wired



Wireless

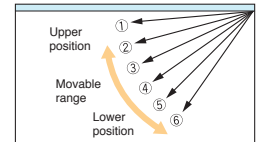


Individual flap control system

According to room temperature conditions, four directions of air flow can be controlled by individual flap as preferred. Individual flap control is available even after installation.



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



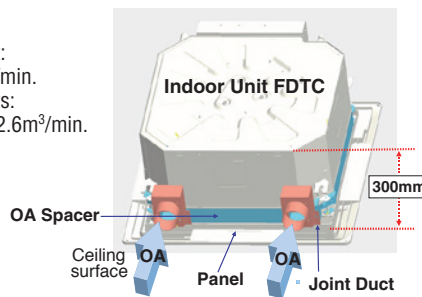
*The wireless remote control is not applicable to the Individual flap control system.

Taking OA (Outside Air) into inside

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

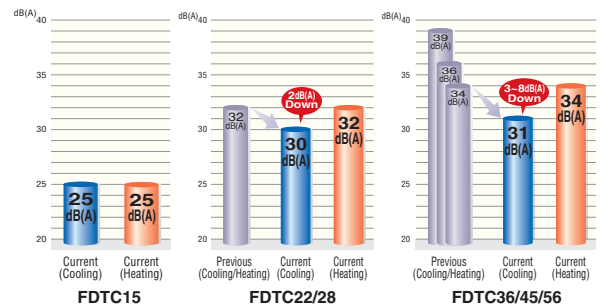
Utilizing OA spacer which comes as optional equipment, outside air can be taken inside.

Using 1 joint duct:
OA up to 1.3m³/min.
Using 2 joint ducts:
OA from 1.3 to 2.6m³/min.



Quiet operation (Sound pressure level in the Lo mode.)

The industry's lowest sound pressure level:25dB(A) of FDTC15KXE6F was achieved by Optimizing fan speed and distributor size.



Specifications

Item	Model	FDTC15KXE6F	FDTC22KXE6F	FDTC28KXE6F	FDTC36KXE6F	FDTC45KXE6F	FDTC56KXE6F
Nominal cooling capacity	kW	1.5	2.2	2.8	3.6	4.5	5.6
Nominal heating capacity	kW	1.7	2.5	3.2	4.0	5.0	6.3
Power source		1 Phase 220V, 60Hz					
Power consumption	Cooling	0.02		0.03			0.05
	Heating	0.02		0.03			0.05
Sound power level	dB(A)	56			58	60	
Sound pressure level **	Cooling	Hi:32 Me:28 Lo:25		Hi:35 Me:33 Lo:30	Hi:38 Me:36 Lo:31	Hi:40 Me:37 Lo:31	Hi:45 Me:39 Lo:31
	Heating	Hi:32 Me:28 Lo:25		Hi:35 Me:33 Lo:32	Hi:38 Me:36 Lo:34	Hi:40 Me:37 Lo:34	Hi:45 Me:39 Lo:34
Exterior dimensions H x W x D	mm	Unit:248x570x570 Panel:35x700x700					
Net weight	kg	Unit:14 Panel:3.5			Unit:15 Panel:3.5		
Air flow **	Cooling	Hi:7 Me:5.5 Lo:4.5		Hi:9.5 Me:8.5 Lo:7	Hi:10 Me:9 Lo:7	Hi:11 Me:9 Lo:7	Hi:13 Me:10 Lo:7
	Heating	Hi:7 Me:5.5 Lo:4.5		Hi:9.5 Me:8.5 Lo:8	Hi:10 Me:9 Lo:8	Hi:11 Me:9 Lo:8	Hi:13 Me:10 Lo:8
Outside air intake		Possible with OA Spacer TC-OAS-E & Joint Duct TC-OAD-E					
Panel		TC-PSA-25W-E					
Air filter, Q'ty		Pocket Plastic net x1 (Washable)					
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-TC-24W-E2					
Installation data		Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")			Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")		

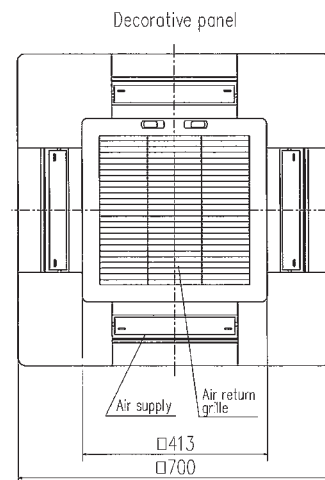
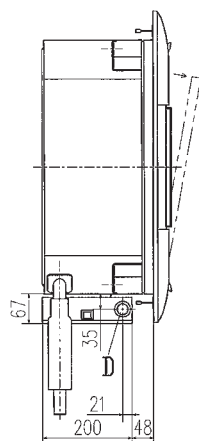
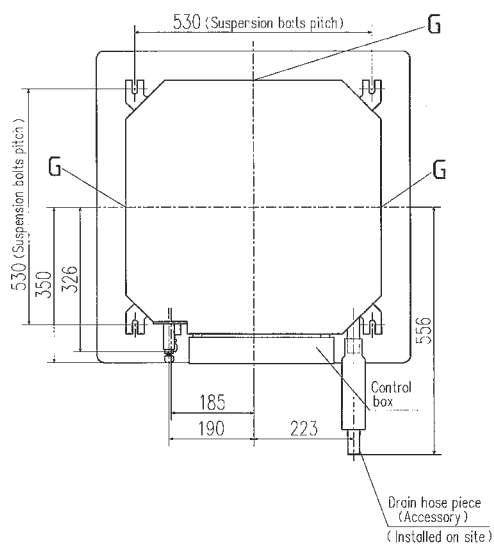
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.

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

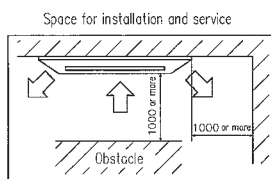
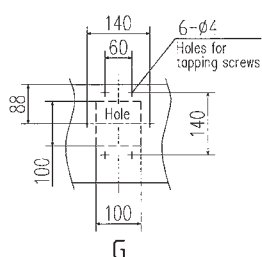
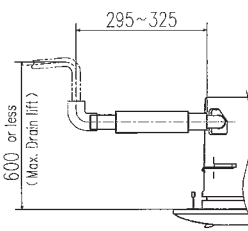
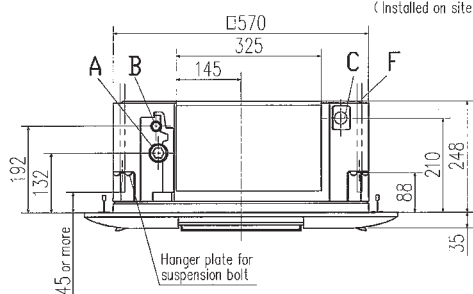
** Powerful-Hi can be selected. Sound pressure level: FDTC15 34dB(A), FDTC22/28 44dB(A), FDTC36 46dB(A), FDTC45 48dB(A), FDTC56 49dB(A). Air flow: FDTC15 8m³/min, FDTC22/28 12m³/min, FDTC36 13m³/min, FDTC45 15m³/min, FDTC56 16m³/min.

Dimensions

All measurements in mm.



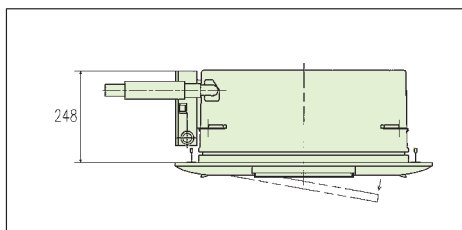
Notes (1) The model name label is attached on the control box lid.
 (2) This unit is designed for 2x2 grid ceiling. If it is installed on a ceiling other than 2x2 grid ceiling, provide an inspection port on the control box side.



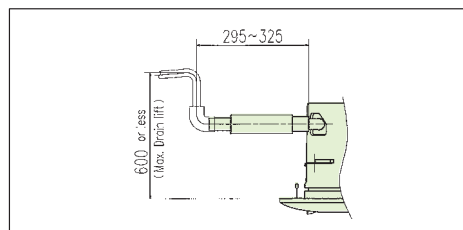
Make a space of 4000 or more between the units when installing more than one.

Symbol	Content	
	Model	
		FDTC18KXE6F, 28KXE6F, 38KXE6F
		FDTC36KXE6F, 45KXE6F, 56KXE6F
A	Cos piping	φ9.52 (3/8") (Flare) φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)
C	Drain piping	VP25 (OD 25)
D	Hole for wiring	φ25
F	Suspension bolts	(M10 or M8)
G	Air outlet opening for ducting	(Knock out)

Ultra slim design at just 248mm above the ceiling



Condensate drain pump included as standard



Ceiling Cassette -2way- FDTW

Model No.

FDTW28KXE6F	FDTW90KXE6F
FDTW45KXE6F	FDTW112KXE6F
FDTW56KXE6F	FDTW140KXE6F
FDTW71KXE6F	



Remote control (option)

Wired



RC-EX3 RC-E5 RCH-E3

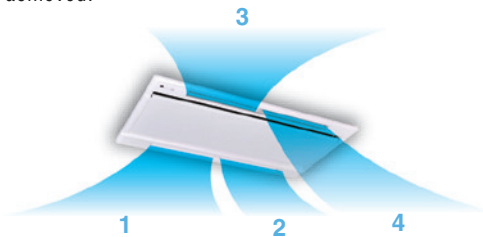
Wireless



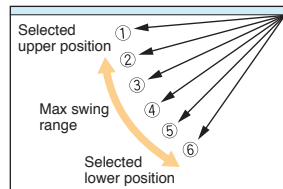
RCN-TW-E2

Individual flap control system

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



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

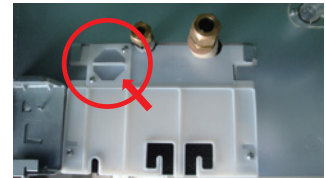


*The wireless remote control is not applicable to the individual flap control system.

Installation workability

Drainage spout

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



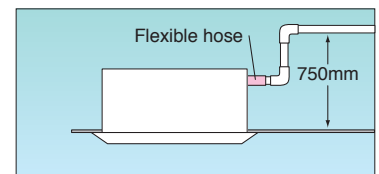
Transparent access hole to drain pan

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



750mm Drain Pump

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



Specifications

Item	Model	FDTW28KXE6F	FDTW45KXE6F	FDTW56KXE6F	FDTW71KXE6F	FDTW90KXE6F	FDTW112KXE6F	FDTW140KXE6F
Nominal cooling capacity	kW	2.8	4.5	5.6	7.1	9.0	11.2	14.0
Nominal heating capacity	kW	3.2	5.0	6.3	8.0	10.0	12.5	16.0
Power source		1 Phase 220V, 60Hz						
Power consumption	Cooling	0.09		0.10		0.14		0.19
	Heating	0.09		0.10		0.14		0.19
Sound power level	dB(A)	58				65	—	
Sound pressure level**	dB(A)	Hi:38 Me:34 Lo:31				Hi:45 Me:41 Lo:37		
Exterior dimensions H x W x D	mm	Unit:325x820x620 Panel:20x1120x680				Unit:325x1535x620 Panel:20x1835x680		
	kg	Unit:20 Panel:8.5	Unit:21 Panel:8.5		Unit:23 Panel:8.5	Unit:35 Panel:13		
Air flow**	m³/min	Hi:12 Me:10 Lo:9				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-EX3, 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 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.

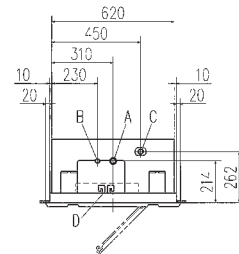
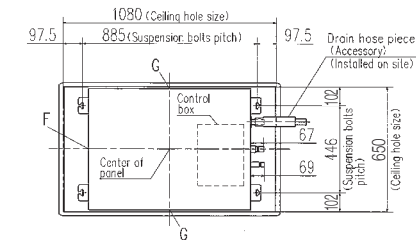
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

** Powerful-Hi can be selected. Sound pressure level: FDTW28/45/56/71 42dB(A), FDTW90/112/140 48dB(A). Air flow: FDTW28/45/56/71 14.5m³/min, FDTW90/112/140 31m³/min.

Dimensions

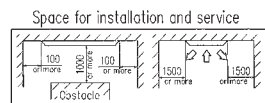
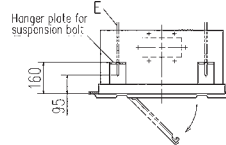
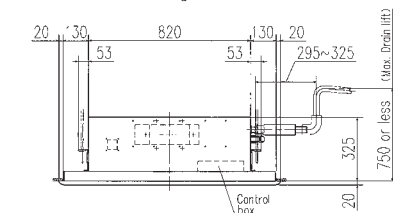
All measurements in mm.

FDTW28KXE6F, 45KXE6F, 56KXE6F, 71KXE6F

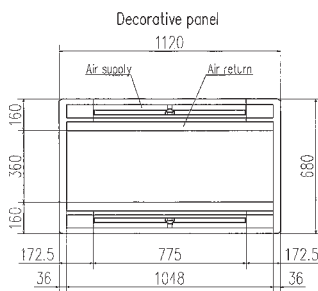


Symbol	Model	Content
	28	45.56
A	Gas piping	φ15.88 (5/8") (Flare)
B	Liquid piping	φ9.52 (3/8") (Flare)
C	Drain piping	φ25.4 (1") (Flare)
D	Hole for wiring	VP25 (O.D. 32)
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)

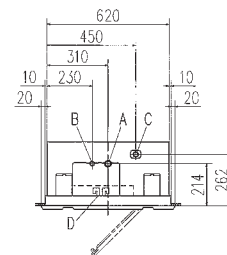
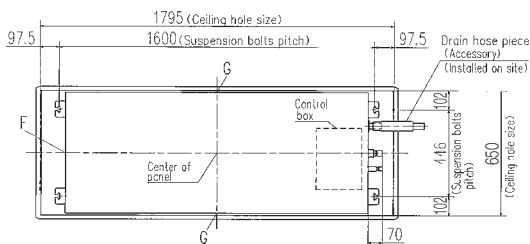
Notes (1) The model name label is attached on the lid of the control box.



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

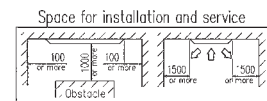
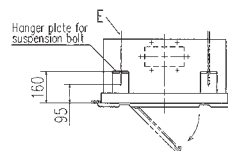
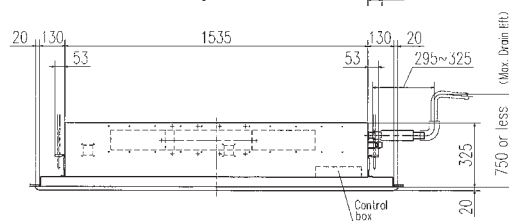


FDTW90KXE6F, 112KXE6F, 140KXE6F

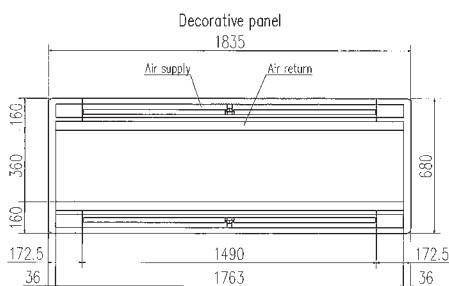


Symbol	Content
A	Gas piping
B	Liquid piping
C	Drain piping
D	Hole for wiring
E	Suspension bolts
F	Outside air opening for ducting
G	Air outlet opening for ducting

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



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





Ceiling Cassette -1way- FDTS

Model No.
FDTS45KXE6F
FDTS71KXE6F



Remote control (option)

Wired



RC-EX3 RC-E5 RCH-E3

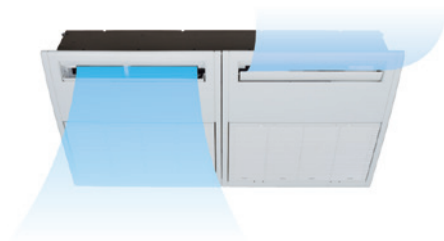
Wireless



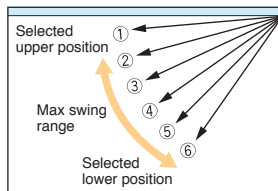
RCN-TS-E2

Individual flap control system

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



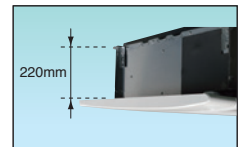
The flap can swing within the range of upper and lower flap position selected with wired remote control.



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

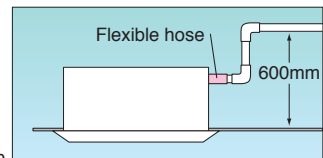
Compact design

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



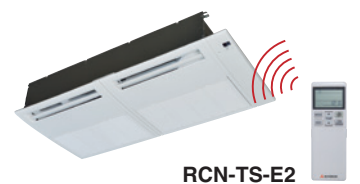
600mm Drain Pump

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



Wireless remote control

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



Specifications

Item	Model	FDTS45KXE6F	FDTS71KXE6F
Nominal cooling capacity	kW	4.5	7.1
Nominal heating capacity	kW	5.0	8.0
Power source		1 Phase 220V, 60Hz	
Power consumption	Cooling	0.04	0.09
	Heating	0.04	0.09
Sound power level	dB(A)	60	61
Sound pressure level**	dB(A)	Hi:40 Me:38 Lo:35	Hi:46 Me:41 Lo:36
Exterior dimensions H x W x D	mm	Unit:220x1150x565 Panel:35x1250x650	
Net weight	kg	Unit:27 Panel:5	Unit:28 Panel:5
Air flow**	m ³ /min	Hi:12 Me:11 Lo:9.5	Hi:15 Me:12 Lo:9.5
Outside air intake		Possible	
Panel		TS-PSA-3AW-E	
Air filter, Q'ty		Pocket Plastic net x2 (Washable)	
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-TS-E2	
Installation data Refrigerant piping size	mm(in)	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")	Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")

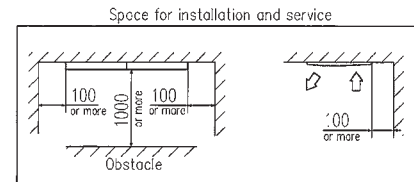
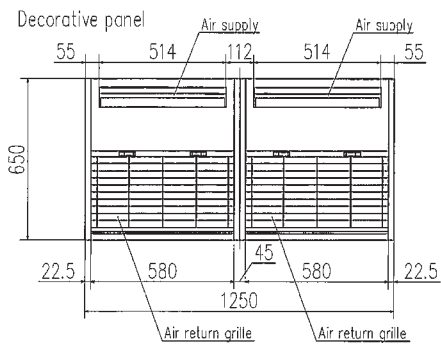
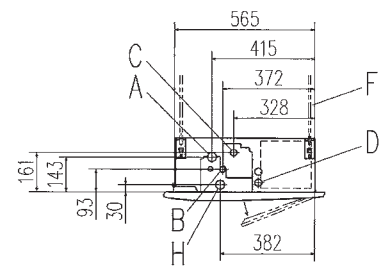
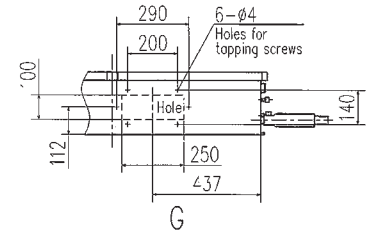
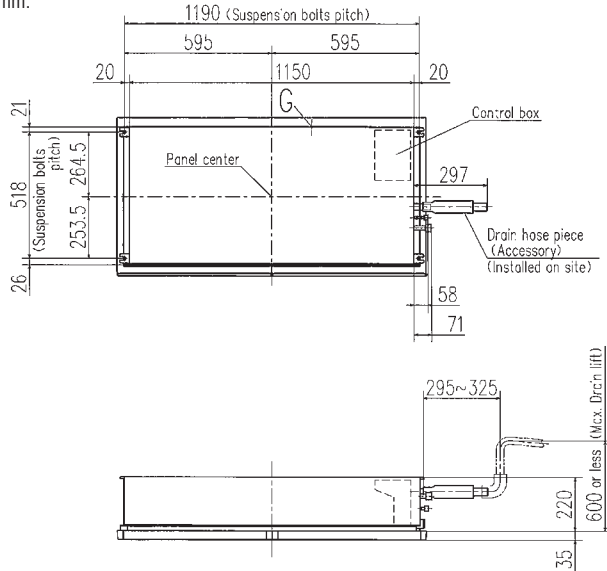
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.

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

* Powerful-Hi can be selected. Sound pressure level: FDTS45 42dB(A), FDTS71 49dB(A). Air flow: FDTS45 13m³/min, FDTS71 17m³/min.

Dimensions

All measurements in mm.



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

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



Ceiling Cassette -1way Compact-FDTQ

Model No.
 FDTQ22KXE6F
 FDTQ28KXE6F
 FDTQ36KXE6F



Fits into standard
 600 x 600 ceiling

Remote control (option)

Wired



Wireless



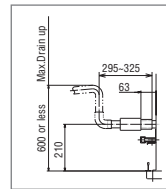
RCN-KIT4-E2

Compact design

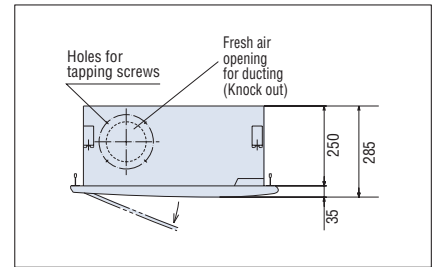
- Comfortable effective cooling for small rooms, with low fan speed air flow at just 5.4m³/min.



Optional wide panel shown for solid ceiling



Condensate drain pump included as standard



Ultra slim design at just 250mm above the ceiling

Specifications

Item	Model	FDTQ22KXE6F				FDTQ28KXE6F				FDTQ36KXE6F			
Panel Name		Direct blow panel		Duct panel		Direct blow panel		Duct panel		Direct blow panel		Duct panel	
Panel mode (Option)		TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER	TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER	TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER
Nominal cooling capacity	kW	2.2				2.8				3.6			
Nominal heating capacity	kW	2.5				3.2				4.0			
Power source		1 Phase 220V, 60Hz											
Power consumption	Cooling	0.07				0.07				0.07			
	Heating	0.07				0.07				0.07			
Sound power level	dB(A)	60											
Sound pressure level	dB(A)	Hi:41 Me:38 Lo:33		Hi:41 Me:38 Lo:33		Hi:41 Me:38 Lo:33		Hi:41 Me:38 Lo:33		Hi:41 Me:38 Lo:33		Hi:41 Me:38 Lo:33	
Exterior dimensions	Unit	250x570x570											
	H x W x D Panel	mm	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650
Net weight	kg	Unit:23 Panel:2.5	Unit:23 Panel:3	Unit:23 Panel:2.5	Unit:23 Panel:3	Unit:23 Panel:2.5	Unit:23 Panel:3	Unit:23 Panel:2.5	Unit:23 Panel:3	Unit:23 Panel:2.5	Unit:23 Panel:3	Unit:23 Panel:2.5	Unit:23 Panel:3
Air flow	m ³ /min	Hi:7 Me:6 Lo:5		Hi:7 Me:6 Lo:5		Hi:7 Me:6 Lo:5		Hi:7 Me:6 Lo:5		Hi:7 Me:6 Lo:5		Hi:7 Me:6 Lo:5	
Outside air intake		Possible											
Air filter, Q'ty		Pocket Plastic net x1 (Washable)											
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-KIT4-E2											
Installation data	Refrigerant piping size	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")											
		Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")											

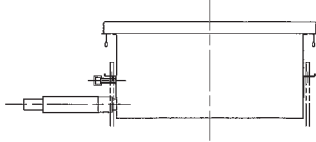
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

※ Powerful-Hi can be selected. Sound pressure level: FDTQ22/38/36 45dB(A). Air flow: FDTQ22/38/36 8m³/min.

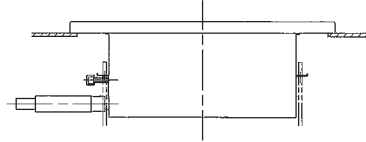
Dimensions

All measurements in mm.

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

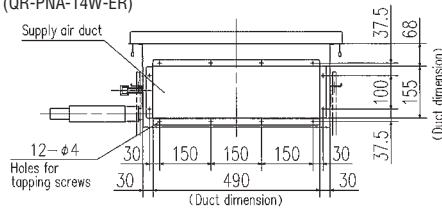


Direct blow panel (TQ-PSB-15W-E)

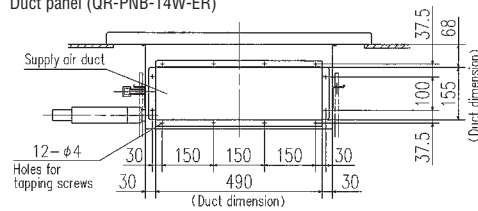


Symbol	Model	Content
		FDTQ22KXE6F, 28KXE6F FDTQ36KXE6F
A	Gas piping	φ9.52 (3/8") (Flare) φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)
C	Drain piping	VP25 (O.D.32)
D	Hole for wiring	φ30
E	Suspension bolts	(M10)
F 1, 2	Outside air opening for ducting	(Knock out)

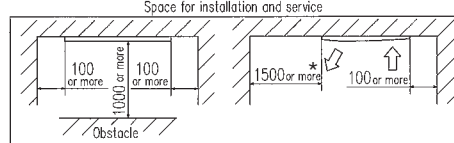
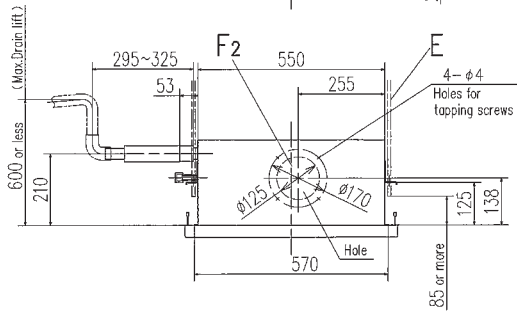
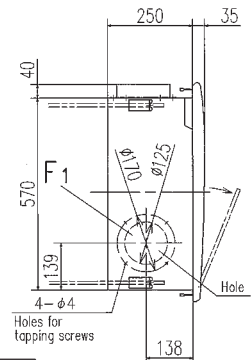
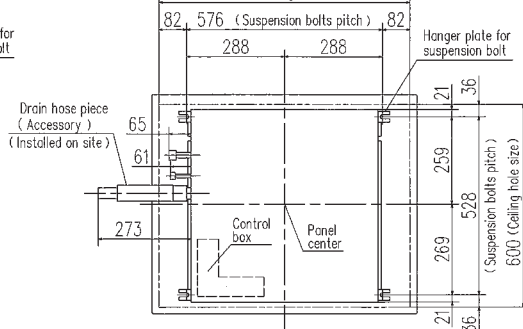
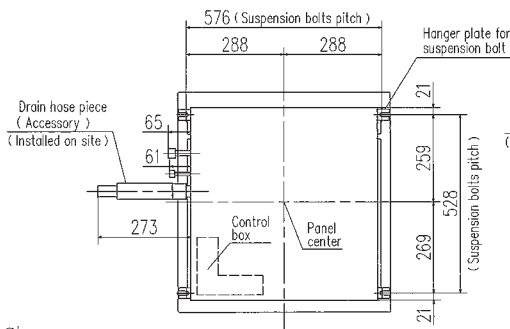
Duct panel (QR-PNA-14W-ER)



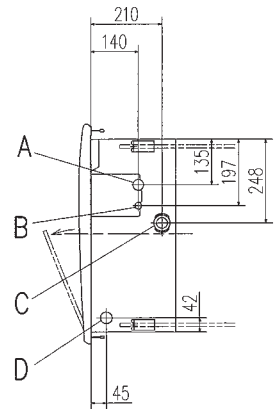
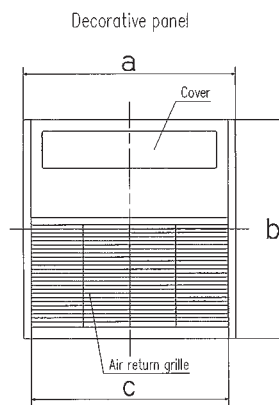
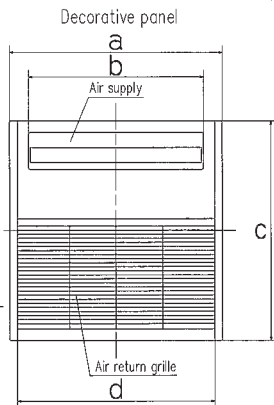
Duct panel (QR-PNB-14W-ER)



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.



Dimension Table

Unit:mm

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

Dimension Table

Unit:mm

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

Duct Connected -High Static Pressure- FDU

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



Remote control (option)



External Static Pressure(E.S.P) control

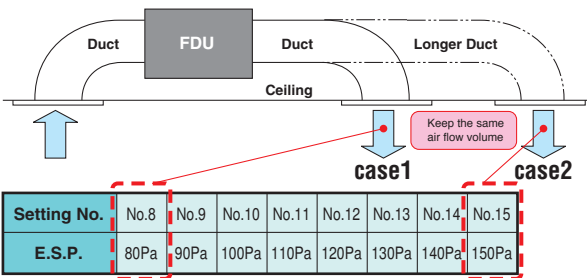
You can set External Static Pressure (E.S.P.) by method of manual setting on remote control. Indoor unit will control fan-speed to keep rated air flow volume at each fan speed setting. You can set required E.S.P. by wired remote control that calculated with the set air flow rate and pressure loss of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



RC-E5

E.S.P. button

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



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

<Expansion of external static pressure range>

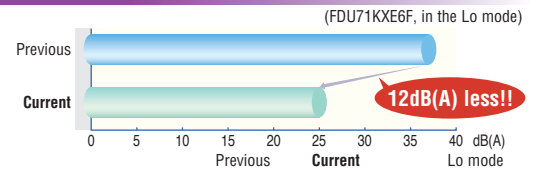
Previous **10~130Pa** → Current **10~200Pa**

Thin design



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

Reduction of sound pressure level



	Previous	Current	
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 P52)

Round duct adapter

In case of requirements of round duct adapter, please refer to P61.

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

Specifications

Item	Model	FDU45KXE6F	FDU56KXE6F	FDU71KXE6F	FDU90KXE6F	FDU112KXE6F	FDU140KXE6F	FDU160KXE6F		
Nominal cooling capacity	kW	4.5	5.6	7.1	9.0	11.2	14.0	16.0		
Nominal heating capacity	kW	5.0	6.3	8.0	10.0	12.5	16.0	18.0		
Power source		1 Phase 220V, 60Hz								
Power consumption	Cooling	0.10		0.24		0.31		0.42		
	Heating	0.10		0.24		0.32		0.35		
Sound power level	dB(A)	60			65		—			
Sound pressure level ※	dB(A)	Hi:32 Me:29 Lo:26			Hi:33 Me:29 Lo:25		Hi:38 Me:36 Lo:30		Hi:40 Me:34 Lo:29	
Exterior dimensions H x W x D	mm	280x750x635			280x950x635		280x1370x740			
Net weight	kg	29			34		54			
Air flow (Standard)	m ³ /min	Hi:10 Me:9 Lo:8			Hi:19 Me:15 Lo:10		Hi:28 Me:25 Lo:19		Hi:32 Me:26 Lo:20	
Maximum external static pressure	Pa	200								
Outside air intake		Possible								
Air filter		Procure locally								
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-KIT4-E2								
Installation data		Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")					

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

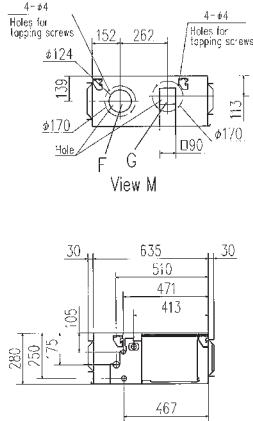
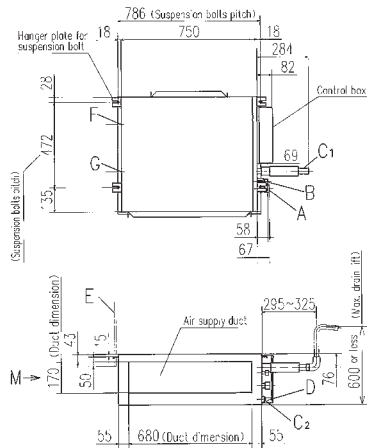
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.

※ Powerful-Hi can be selected. Sound pressure level: FDU45/56 37dB(A), FDU71/90 38dB(A), FDU112 44dB(A), FDU140 45dB(A), FDU160 47dB(A). Air flow: FDU45/56 13m³/min, FDU71/90 24m³/min, FDU112 36m³/min, FDU140 39m³/min, FDU160 48m³/min.

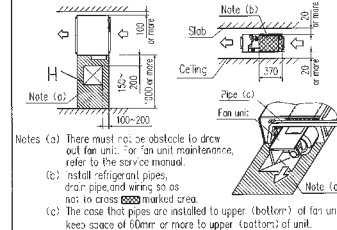
Dimensions

All measurements in mm.

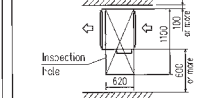
FDU45KXE6F, 56KXE6F



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

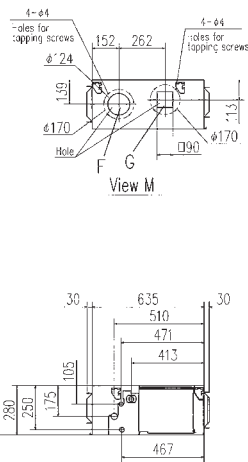
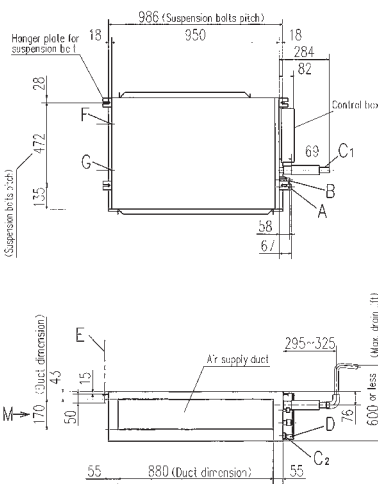


(Case 2) From bottom of unit

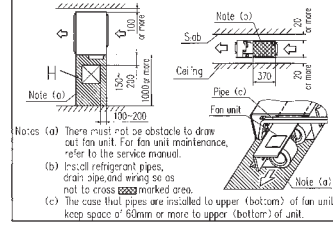


Symbol	Content
A	Gas piping $\phi 2.7 (1/2")$ (Flare)
B	Liquid piping $\phi 6.35 (1/4")$ (Flare)
C1	Drain piping VP25 (G.D.32)
C2	Drain piping (Gravity drainage) VP20
D	Hole for wiring
F	Suspension bolts (M10)
F	Outside air opening for ducting (Knock out)
G	Air outlet opening for ducting (Knock out)
U	Inspection hole (450x450)

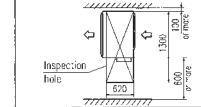
FDU71KXE6F, 90KXE6F



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

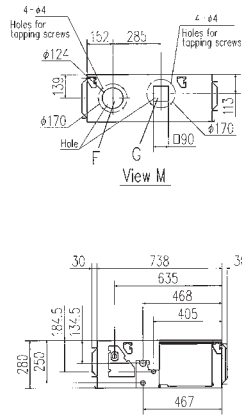
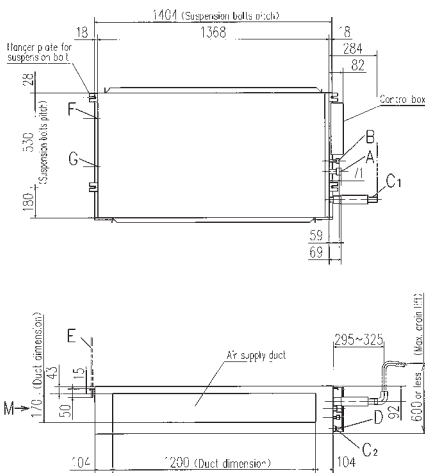


(Case 2) From bottom of unit

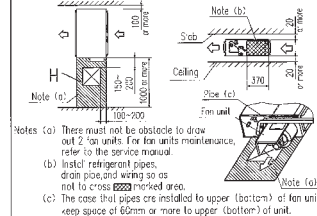


Symbol	Content
A	Gas piping $\phi 3.88 (5/8")$ (Flare)
B	Liquid piping $\phi 9.52 (3/8")$ (Flare)
C1	Drain piping VP25 (G.D.32)
C2	Drain piping (Gravity drainage) VP20
D	Hole for wiring
F	Suspension bolts (M10)
F	Outside air opening for ducting (Knock out)
G	Air outlet opening for ducting (Knock out)
U	Inspection hole (450x450)

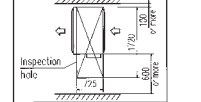
FDU112KXE6F, 140KXE6F, 160KXE6F



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



(Case 2) From bottom of unit



Symbol	Content
A	Gas piping $\phi 15.88 (5/8")$ (Flare)
B	Liquid piping $\phi 9.52 (3/8")$ (Flare)
C1	Drain piping VP25 (G.D.32)
C2	Drain piping (Gravity drainage) VP20
D	Hole for wiring
F	Suspension bolts (M10)
F	Outside air opening for ducting (Knock out)
G	Air outlet opening for ducting (Knock out)
U	Inspection hole (450x450)

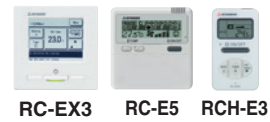
Duct Connected -High Static Pressure- FDU

Model No.
FDU224KXZE1
FDU280KXZE1



Remote control (option)

Wired



Wireless



External Static Pressure(E.S.P) control

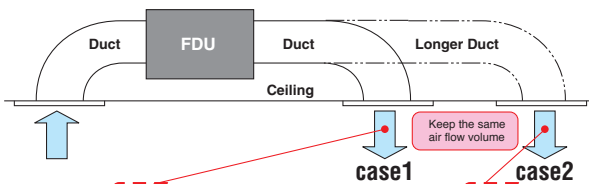
You can set External Static Pressure (E.S.P.) by method of manual setting on remote control. Indoor unit will control fan-speed to keep rated air flow volume at each fan speed setting. You can set required E.S.P. by wired remote control that calculated with the set air flow rate and pressure loss of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



RC-E5

E.S.P. button

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

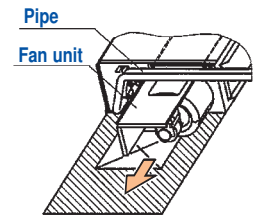
*Range of 80~150 Pa is set at ex-factory default.
Range of 10~200 Pa is available by setting SW8-4 switch on at site.

Quiet operation:45dB(A)

Thanks to use of DC fan motor, fan steps increase from two to four and quiet operation is achieved. (Sound pressure level 45dB(A) in the Lo mode).

Improvement of the serviceability

Fan unit (impeller and motor) can be pulled out from the right side of the unit. Maintenance can be available from the right side or the bottom side. (Common for FDUM22~160KXE6F & FDU45~160KXE6F)



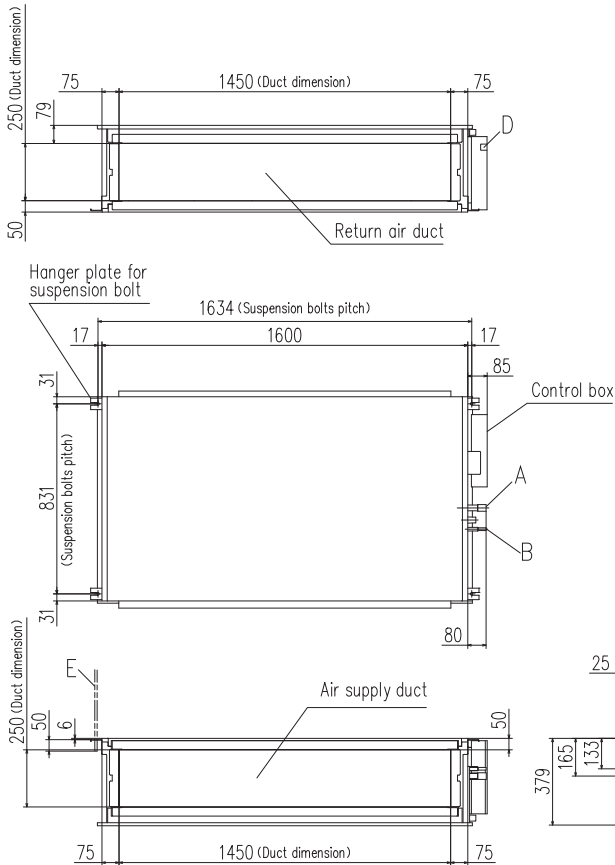
Specifications

Item	Model	FDU224KXZE1	FDU280KXZE1
Nominal cooling capacity	kW	22.4	28.0
Nominal heating capacity	kW	25.0	31.5
Power source		1 Phase 220V, 60Hz	
Power consumption	Cooling Heating kW	1.16 1.16	1.16 1.16
Sound power level	dB(A)	—	
Sound pressure level ※	dB(A)	Hi:50 Me:47 Lo:45	
Exterior dimensions H x W x D	mm	379x1600x893	
Net weight	kg	89	
Air flow ※	m³/min	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-EX3, RC-E5, RCH-E3 wireless:RCN-KIT4-E2	
Installation data Refrigerant piping size	mm(in)	Liquid line:ø9.52(3/8") Gas line:ø19.05(3/4")	Liquid line:ø9.52(3/8") Gas line:ø22.22(7/8")

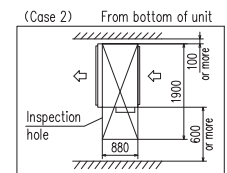
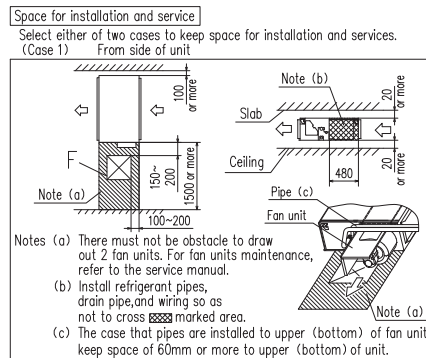
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. External static pressure of indoor unit is 72Pa.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
※ Powerful-Hi can be selected. Sound pressure level: FDU224/280 52dB(A). Air flow: FDU224/280 80m³/min.

Dimensions

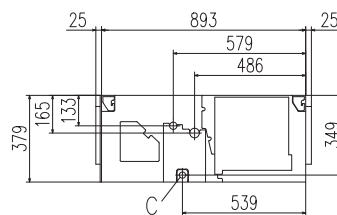
All measurements in mm.



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



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



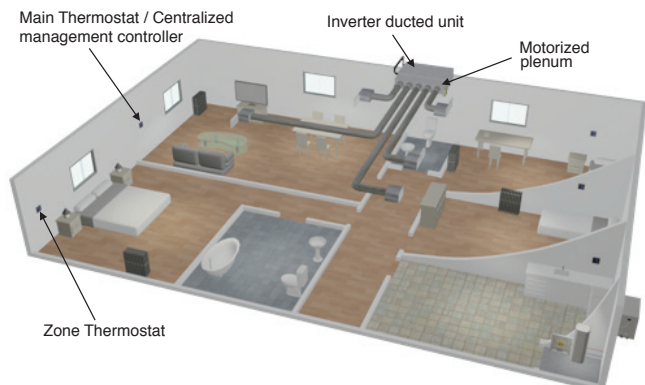
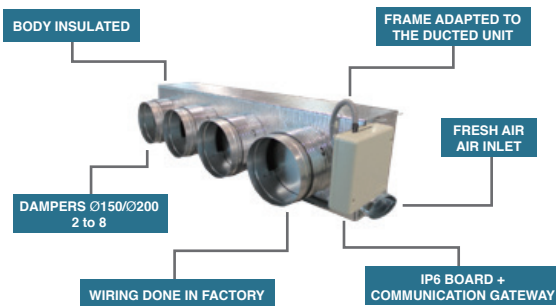
Round duct adapter (FDU 45~160KXE6F, FDUM 22~160KXE6F)

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

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



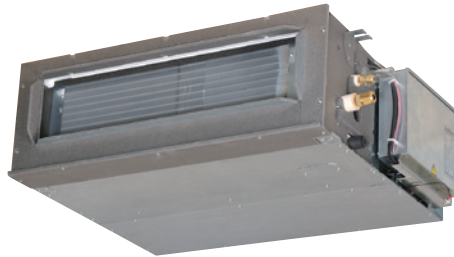
Main components



Duct Connected -Low/Middle Static Pressure- FDUM

Model No.

FDUM22KXE6F	FDUM71KXE6F
FDUM28KXE6F	FDUM90KXE6F
FDUM36KXE6F	FDUM112KXE6F
FDUM45KXE6F	FDUM140KXE6F
FDUM56KXE6F	FDUM160KXE6F



Filter kit (option)

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



* Filter pressure loss:5pa

Remote control (option)

Wired



RC-EX3 RC-E5 RCH-E3

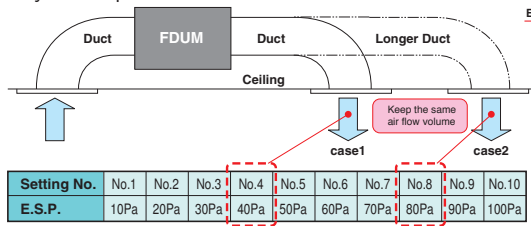
Wireless



RCN-KIT4-E2

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

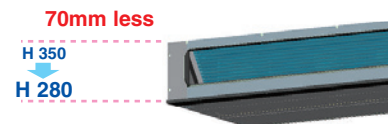
Duct design was simplified.
 Using DC motor, the most optimum air flow volume can be achieved by this automatic control.
 Indoor unit will recognize external static pressure by itself automatically and keep rated air flow volume.



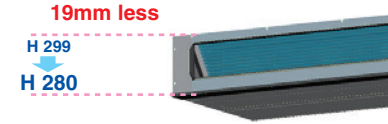
E.S.P. button RC-E5
 External static pressure (E.S.P.) can be set by E.S.P. button.

Thin design

The height of all FDUM models is only 280mm.



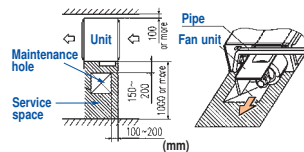
FDUM112/140KXE6F



FDUM22-90KXE6F

Improvement of the serviceability

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



Transparent inspection window

Dirt condition of the bottom of a drain pan can be checked through this transparent inspection window without removing drain pan. (Please refer to P52)

Specifications

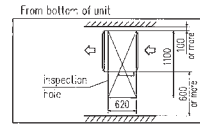
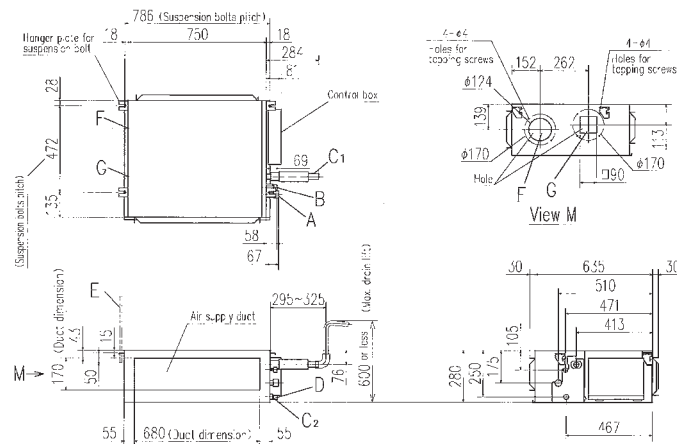
Item	Model	FDUM22KXE6F	FDUM28KXE6F	FDUM36KXE6F	FDUM45KXE6F	FDUM56KXE6F	FDUM71KXE6F	FDUM90KXE6F	FDUM112KXE6F	FDUM140KXE6F	FDUM160KXE6F			
Nominal cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0			
Nominal heating capacity	kW	2.5	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	18.0			
Power source		1 Phase 220V, 60Hz												
Power consumption	Cooling	0.10			0.20			0.29		0.33		0.45		
	Heating	0.10			0.20			0.29		0.33		0.45		
Sound power level	dB(A)	60						65			—			
Sound pressure level ※	dB(A)	Hi:32 Me:29 Lo:26						Hi:33 Me:29 Lo:25			Hi:38 Me:36 Lo:30		Hi:40 Me:34 Lo:29	Hi:40 Me:35 Lo:30
Exterior dimensions H x W x D	mm	280 x 750 x 635						280 x 950 x 635			280 x 1370 x 740			
Net weight	kg	29						34			54			
Air flow ※	m ³ /min	Hi:10 Me:9 Lo:8						Hi:19 Me:15 Lo:10			Hi:28 Me:25 Lo:19		Hi:32 Me:26 Lo:20	Hi:35 Me:28 Lo:22
Maximum external static pressure	Pa	100												
Outside air intake		Possible												
Air filter		Filter kit:UM-FL1EF/UM-FL2EF/UM-FL3EF(option)												
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-KIT4-E2												
Installation data Refrigerant piping size	mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")			Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")						

1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. External static pressure of indoor unit is 35Pa(22/28/36/45/56/71/90), 60Pa(112/140/160).
 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 ※ Powerful-Hi can be selected. Sound pressure level: FDUM22/28/36/45/56 37dB(A), FDUM71/90 38dB(A), FDUM112 44dB(A), FDUM140 45dB(A), FDUM160 47dB(A). Air flow: FDUM22/28/36/45/56 13m³/min, FDUM71/90 24m³/min, FDUM112 36m³/min, FDUM140 39m³/min, FDUM160 48m³/min.

Dimensions

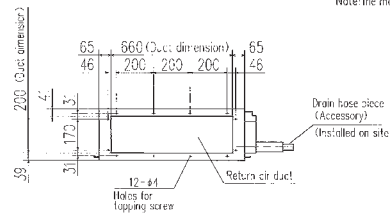
All measurements in mm.

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

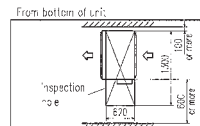
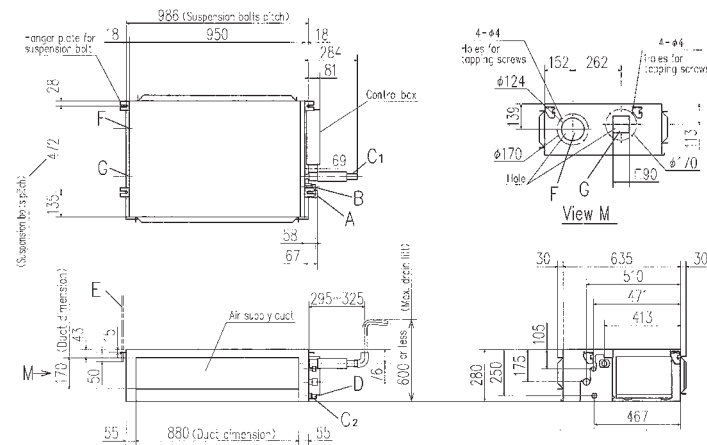


Symbol	Content
A	Gas piping 22.28 (3/8") 36.45(5/8")
B	Liquid piping φ9.52 (3/8") (Flare) φ12.7 (1/2") (Flare)
C	Drain piping VP25 (O.D. 32)
C2	Drain piping (Gravity drainage) VP20 (O.D. 26)
D	Hole for wiring φ4.75
E	Suspension bolts (M10)
F	Outside or opening for ducting (φ150) (Knock out)
G	Air outlet opening for ducting (φ125) (Knock out)
H	Inspection hole (450x450)

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

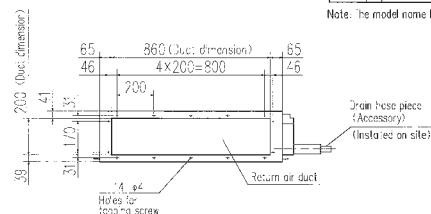


FDUM71KXE6F, 90KXE6F

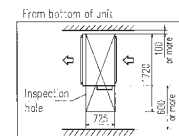
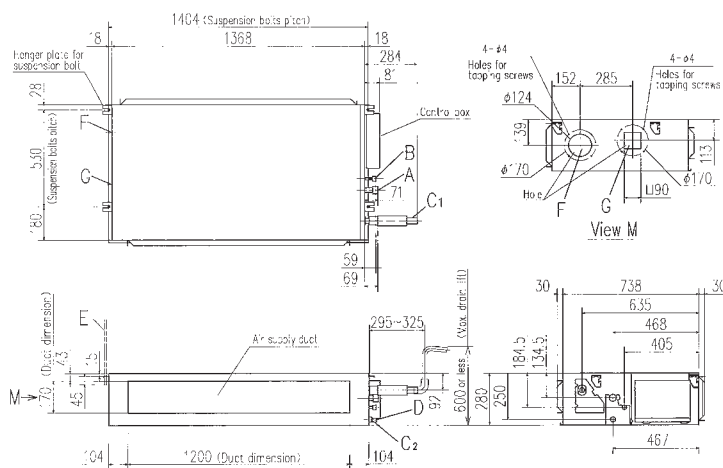


Symbol	Content
A	Gas piping φ5.88 (5/8") (Flare)
B	Liquid piping φ9.52 (3/8") (Flare)
C1	Drain piping VP25 (O.D. 32)
C2	Drain piping (Gravity drainage) VP20 (O.D. 26)
D	Hole for wiring φ4.75
E	Suspension bolts (M10)
F	Outside or opening for ducting (φ150) (Knock out)
G	Air outlet opening for ducting (φ125) (Knock out)
H	Inspection hole (450x450)

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

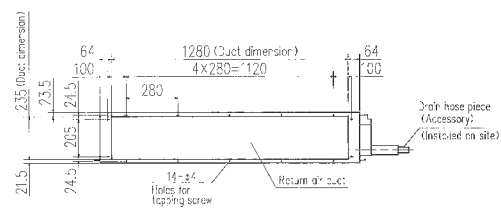


FDUM112KXE6F, 140KXE6F, 160KXE6F



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 (O.D. 26)
D	Hole for wiring φ4.75
E	Suspension bolts (M10)
F	Outside or opening for ducting (φ150) (Knock out)
G	Air outlet opening for ducting (φ125) (Knock out)
H	Inspection hole (450x450)

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



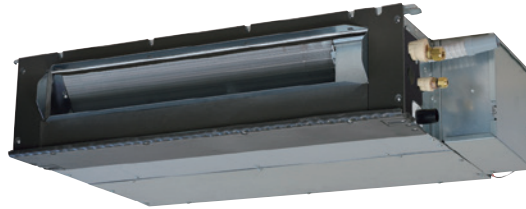
Round duct adapter

In case of requirements of round duct adapter, please refer to P61.

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

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



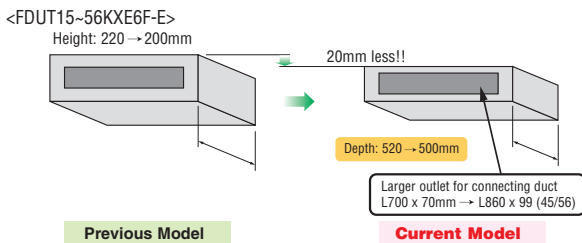
RC-EX3 RC-E5 RCH-E3

Wireless

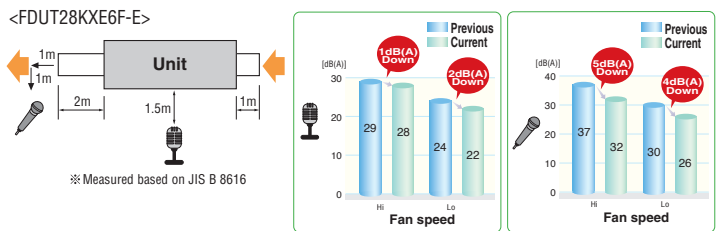


RCN-KIT4-E2

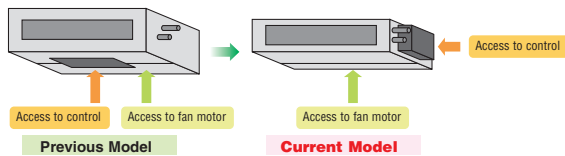
Compact design



Lower noise



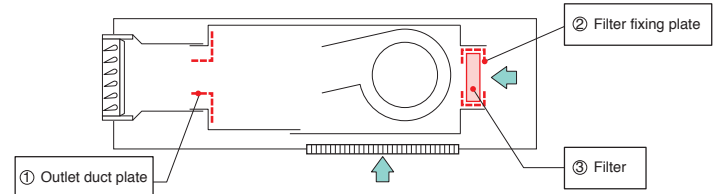
Serviceability



Duct kit and filter options

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

Filter pressure loss : 5 Pa



Specifications

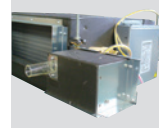
Item	Model	FDUT15KXE6F-E	FDUT22KXE6F-E	FDUT28KXE6F-E	FDUT36KXE6F-E	FDUT45KXE6F-E	FDUT56KXE6F-E	FDUT71KXE6F-E
Nominal cooling capacity	kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1
Nominal heating capacity	kW	1.7	2.5	3.2	4.0	5.0	6.0	8.0
Power source		1 Phase 220V, 60Hz						
Power consumption	Cooling	0.06		0.07		0.09		0.08
	Heating	0.06		0.08		0.09		0.07
Sound power level	dB(A)	52			57	58	59	
Sound pressure level ①	dB(A)	Hi:28 Me:26 Lo:22	Hi:28 Me:26 Lo:22		Hi:33 Me:30 Lo:26	Hi:34 Me:32 Lo:28	Hi:35 Me:33 Lo:30	Hi:35 Me:31 Lo:28
Sound pressure level ②	dB(A)	Hi:32 Me:29 Lo:25	Hi:32 Me:29 Lo:26		Hi:37 Me:34 Lo:28	Hi:36 Me:33 Lo:27	Hi:38 Me:33 Lo:29	Hi:41 Me:37 Lo:32
Exterior dimensions H x W x D	mm	200x750x500				200x950x500		220x1150x565
Net weight	kg	21			22	25		31
Air flow (Standard)	m ³ /min	Hi:6 Me:5 Lo:4	Hi:7.5 Me:6 Lo:5		Hi:8.5 Me:7 Lo:5.5	Hi:11.5 Me:9 Lo:7	Hi:12.5 Me:9 Lo:7.2	Hi:16 Me:13 Lo:9.5
External static pressure	Pa	Standard:10, Max:35				Standard:10, Max:50		
Outside air intake		Possible from return duct						
Air filter		Filter set:UT-FL1EF/UT-FL2EF/UT-FL3EF(option)						
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-KIT4-E2						
Installation data Refrigerant piping size	mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")			Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")

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



Duct Connected (Compact & Flexible) FDUH

Model No.
FDUH22KXE6F
FDUH28KXE6F
FDUH36KXE6F



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

Remote control (option)

Wired



RC-EX3 RC-E5 RCH-E3

Wireless



RCN-KIT4-E2

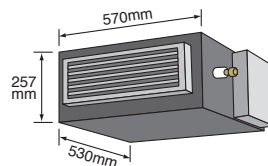
Filter kit (option)
UH-FL1E



*Filter pressure loss:5pa

Compact and thin size, light weight

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

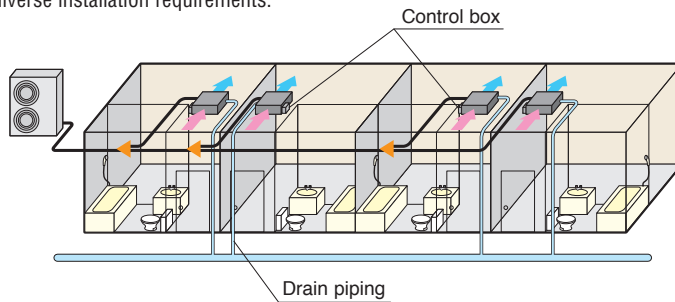


Quiet operation

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

Installation Flexibility

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



Wired remote control



RCH-E3 (option)

Simple remote control

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

Specifications

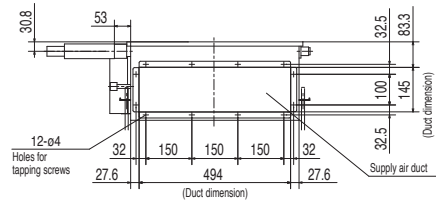
Item	Model	FDUH22KXE6F	FDUH28KXE6F	FDUH36KXE6F
Nominal cooling capacity	kW	2.2	2.8	3.6
Nominal heating capacity	kW	2.5	3.2	4.0
Power source		1 Phase 220V, 60Hz		
Power consumption	Cooling	0.07		
	Heating	0.07		
Sound power level	dB(A)	60		
Sound pressure level ※	dB(A)	HI: 33 Me: 30 Lo: 27		
Exterior dimensions	HxWxD	257x570x530		
Net weight	kg	22		
Air flow ※	m ³ /min	HI: 7 Me: 6.5 Lo: 6		
External static pressure	Pa	30		
Outside air intake		Possible from return duct		
Air filter		Filter kit:UH-FL1E(option)		
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-KIT4-E2		
Installation data	mm(in)	Liquid line:ø6.35(1/4")		Liquid line:ø6.35(1/4")
	Refrigerant piping size	Gas line:ø9.52(3/8")		Gas line:ø12.7(1/2")

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

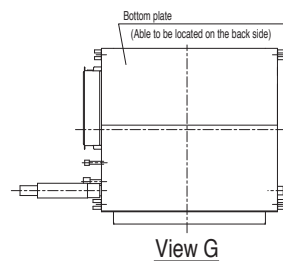
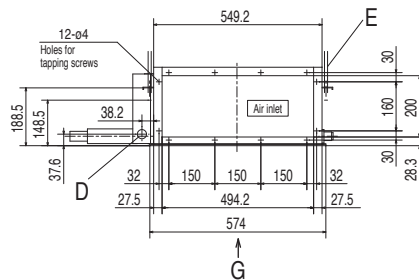
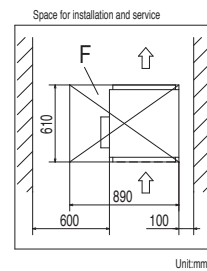
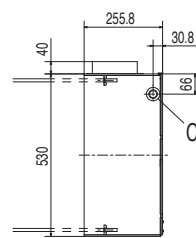
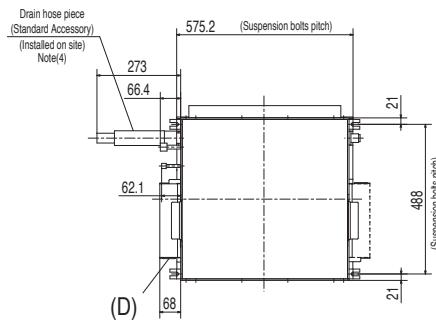
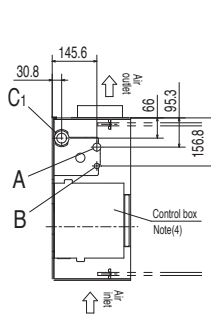
※ Powerful-Hi can be selected. Sound pressure level: FDUH22/28/36 39dB(A). Air flow: FDUH22/28/36 8.5m³/min.

Dimensions

All measurements in mm.



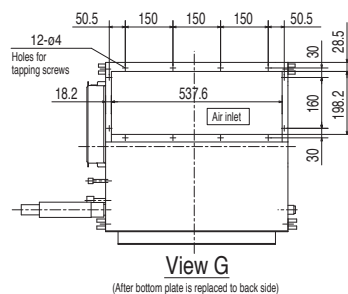
Symbol	Content		
	Model	FDUH22KXE6F/28KXE6F	FDUH36KXE6F
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)	
C ₁ , C ₂	Drain piping	VP20(O.D.26)	
D	Hole for wiring	ø30	
E	Suspension bolts	(M10)	
F	Inspection hole	(635X890) Note (2)	



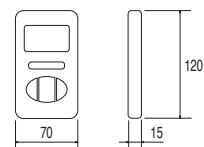
Notes

- (1) The model name label is attached on the fan case inside the air return grille.
- (2) When control box is located on the reverse side, Installation space should be modified to new location.
- (3) Control box and Drain hose piece are able to be relocated on the reverse side.

In case of Bottom air intake



Simple remote control





Wall Mounted FDK

NEW

Model No.

- FDK22KXZE1
- FDK28KXZE1
- FDK36KXZE1
- FDK45KXZE1
- FDK56KXZE1
- FDK71KXZE1



FDK22~56



FDK71

Remote control (option)

Wired



RC-EX3 RC-E5 RCH-E3

Wireless

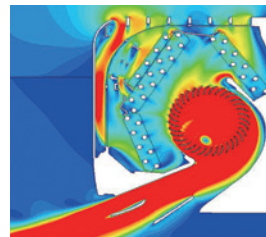
- RCN-K-E2:FDK22~56
- RCN-K71-E2:FDK71

Elegant Timeless Design

The new FDK series air-conditioners have been stylishly designed with rounded contours that fit beautifully into any of Europe's diverse interior settings. The design was created by the Italian industrial design studio Tensa srl, based in Milan, to respond to a broad spectrum of local user needs. (22~56KXZE1)



Jet Technology



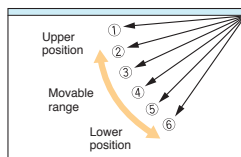
Fast ← Slow
Colors in the figure show the air speed.

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.

Flap control system

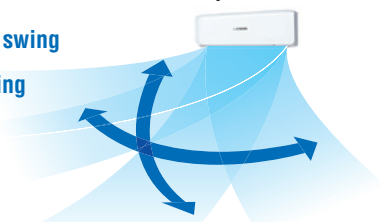
Selection of flap position is possible. A flap can be set at different angles.

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



Lateral Swing ▶ flap swings from right to left automatically

Up/Down Flap swing + Lateral swing



Specifications

Item	Model	FDK22KXZE1	FDK28KXZE1	FDK36KXZE1	FDK45KXZE1	FDK56KXZE1	FDK71KXZE1	
Nominal cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	7.1	
Nominal heating capacity	kW	2.5	3.2	4.0	5.0	6.3	8.0	
Power source		1 Phase 220V, 60Hz						
Power consumption	Cooling	0.02			0.03		0.04	
	Heating	0.02			0.03		0.04	
Sound pressure level **	Cooling	Hi:36 Me:32 Lo:28		Hi:38 Me:33 Lo:28		Hi:41 Me:36 Lo:33		
	Heating	Hi:36 Me:32 Lo:28		Hi:38 Me:33 Lo:28		Hi:41 Me:36 Lo:33		
Exterior dimensions	mm	290 x 870 x 230					339 x 1197 x 262	
H x W x D								
Net weight	kg	11			11.5		17	
Air flow **	m ³ /min	Hi:8 Me:6 Lo:5		Hi:10 Me:8 Lo:7		Hi:11 Me:9 Lo:8		
Outside air intake		Not possible						
Air filter, Q'ty		Polypropylene net x2 (Washable)						
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3, wireless:RCN-K-E2, RCN-K71-E2						
Installation data		Liquid line:ø6.35(1/4")			Liquid line:ø6.35(1/4")		Liquid line:ø9.52(3/8")	
Refrigerant piping size	mm(in)	Gas line:ø9.52(3/8")			Gas line:ø12.7(1/2")		Gas line:ø15.88(5/8")	

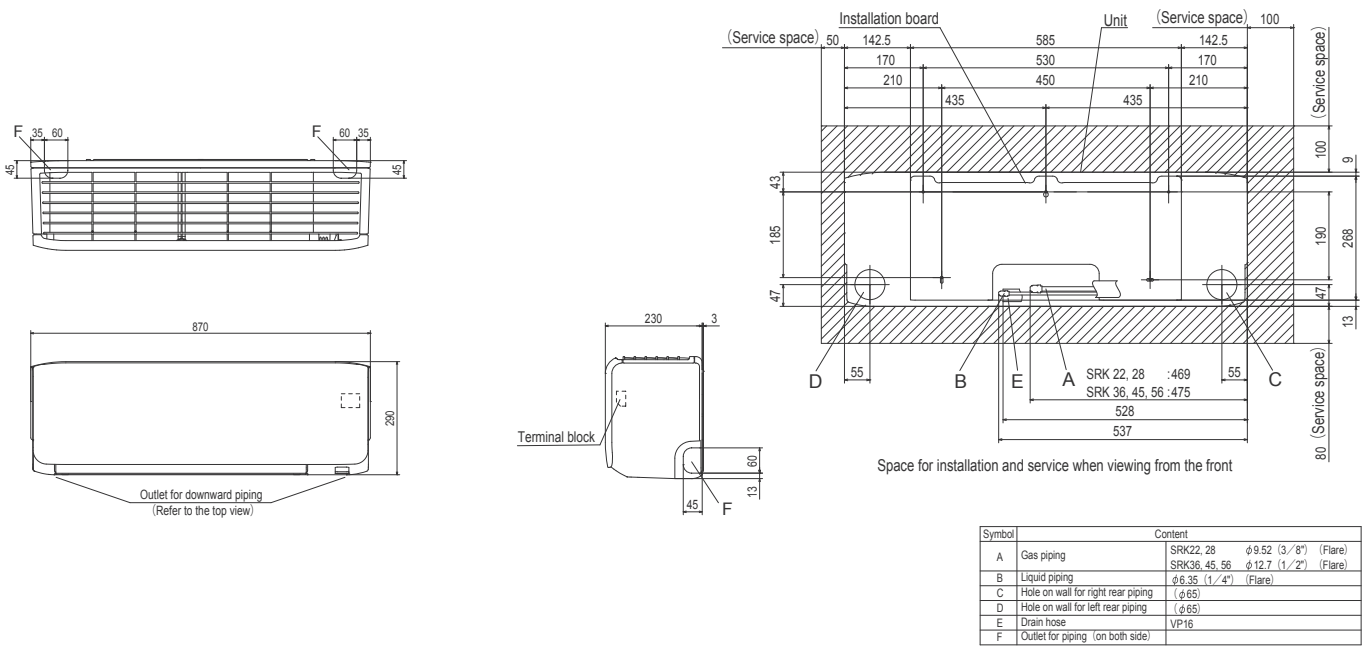
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

** Powerful-Hi can be selected. Sound pressure level: FDK22/28 38dB(A), FDK36 40dB(A), FDK45 43dB(A), FDK56 43dB(A)(Cooling)&44dB(A)(Heating), FDK71 42dB(A). Air flow: FDK22/28 8.5m³/min, FDK36 11m³/min, FDK45 12m³/min, FDK56 12m³/min(Cooling), 13m³/min(Heating) FDK71 21m³/min.

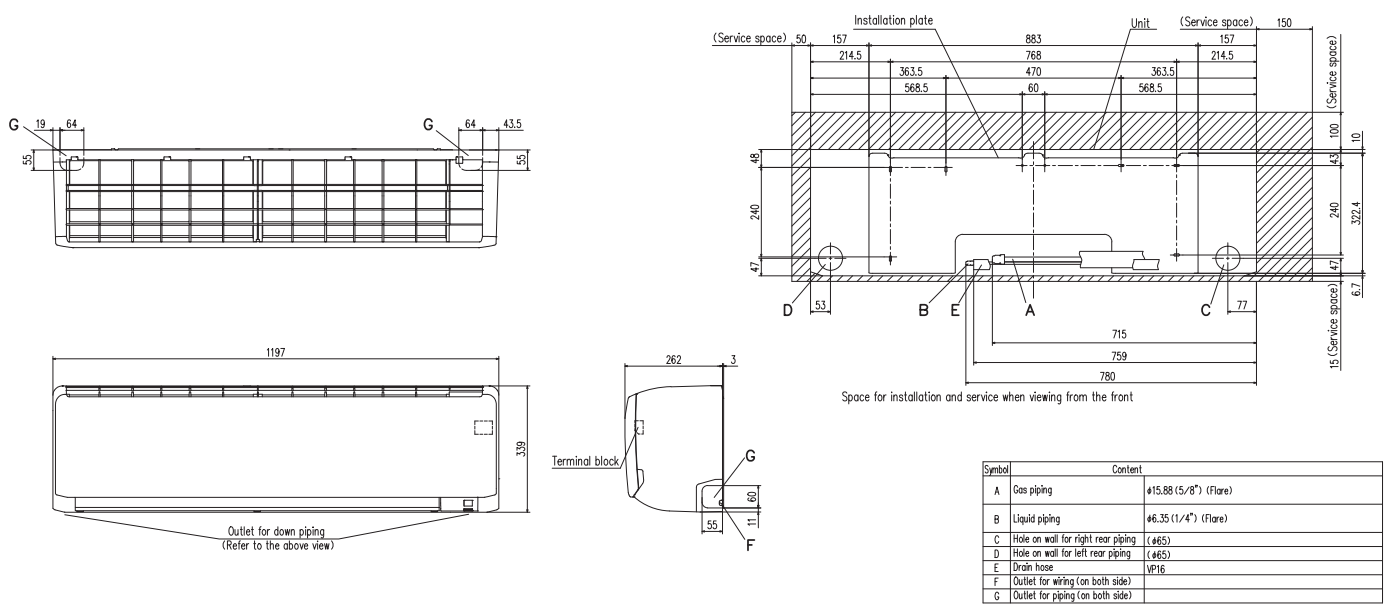
Dimensions

All measurements in mm.

FDK22KXZE1, 28KXZE1, 36KXZE1, 45KXZE1, 56KXZE1



FDK71KXZE1





Ceiling Suspended FDE

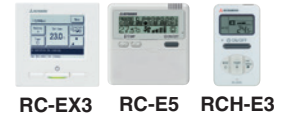
Model No.

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



Remote control (option)

Wired

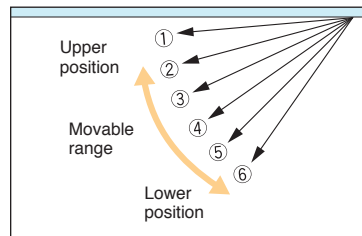


Wireless



Flap control system

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



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

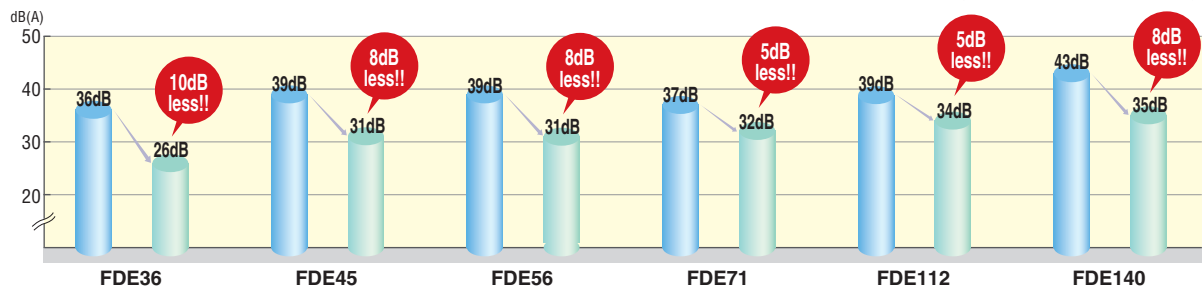
Reduction of weight

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

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

Reduction of sound pressure level (Lo mode)

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



Specifications

Item	Model	FDE36KXZE1	FDE45KXZE1	FDE56KXZE1	FDE71KXZE1	FDE112KXZE1	FDE140KXZE1
Nominal cooling capacity	kW	3.6	4.5	5.6	7.1	11.2	14.0
Nominal heating capacity	kW	4.0	5.0	6.3	8.0	12.5	16.0
Power source		1 Phase 220V, 60Hz					
Power consumption	Cooling	0.05			0.07	0.10	0.13
	Heating	0.05			0.07	0.10	0.13
Sound power level	dB(A)	60					
Sound pressure level ※	dB(A)	Hi:38 Me:31 Lo:26	Hi:38 Me:36 Lo:31	Hi:38 Me:36 Lo:31	Hi:39 Me:37 Lo:32	Hi:42 Me:38 Lo:34	Hi:43 Me:40 Lo:35
Exterior dimensions H x W x D	mm	210 x 1070 x 690			210 x 1320 x 690	250 x 1620 x 690	
Net weight	kg	28			33	43	
Air flow ※	m ³ /min	Hi:10 Me:7 Lo:5.5	Hi:10 Me:9 Lo:7		Hi:15 Me:13 Lo:10	Hi:25 Me:21 Lo:16.5	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-EX3, RC-E5, RCH-E3 wireless:RCN-E-E2					
Installation data Refrigerant piping size	mm(in)	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")		

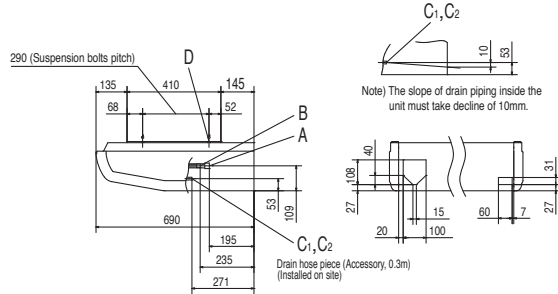
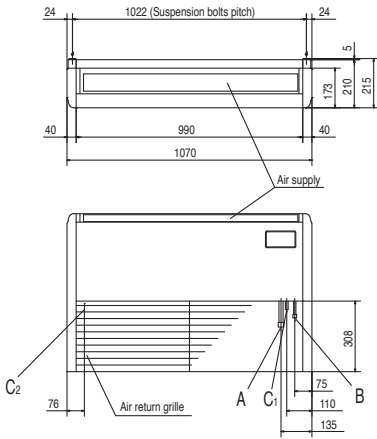
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. 2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

※ Powerful-Hi can be selected. Sound pressure level: FDE36/45/56 46dB(A), FDE71 47dB(A), FDE112 45dB(A), FDE140 48dB(A). Air flow: FDE36/45/56 13m³/min, FDE71 20m³/min, FDE112 28m³/min, FDE140 32m³/min.

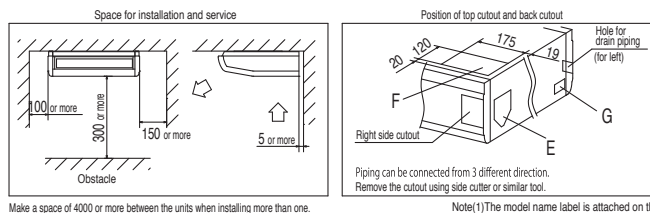
Dimensions

All measurements in mm.

FDE36KXZE1, 45KXZE1, 56KXZE1



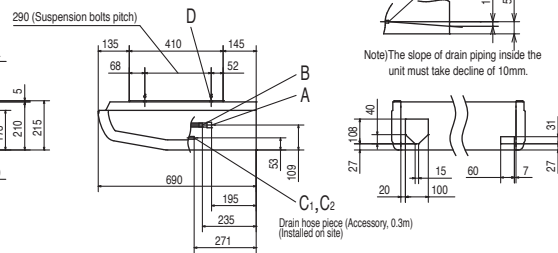
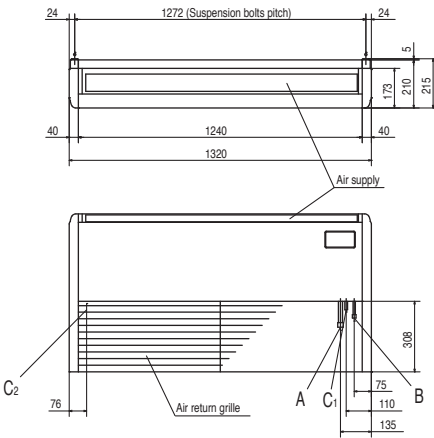
Symbol	Content
A	Gas piping ø12.7 (1/2") (Flare)
B	Liquid piping ø6.35 (1/4") (Flare)
C _{1,2}	Drain piping VP20 (O.D.26)
D	Hole for suspension bolt (M10 or M8)
E	Back cutout PE cover
F	Top cutout Plate cover
G	Hole for drain piping (for left back) (Knock out)



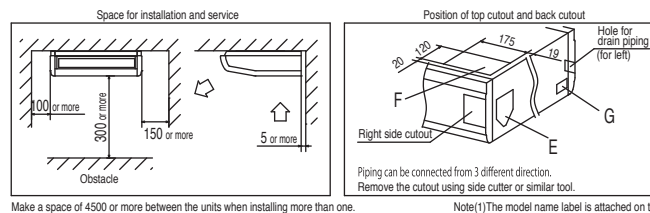
Make a space of 4000 or more between the units when installing more than one.

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

FDE71KXZE1



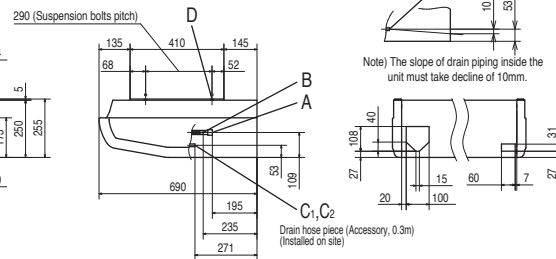
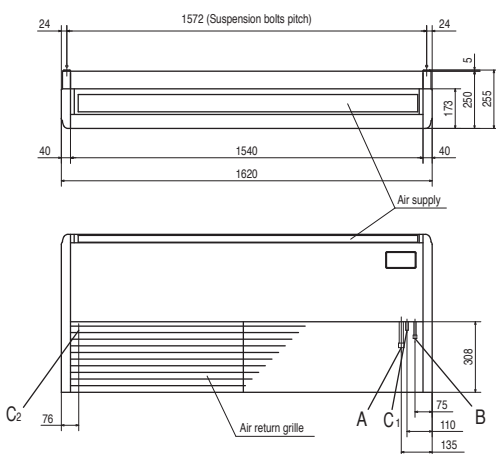
Symbol	Content
A	Gas piping ø15.88 (5/8") (Flare)
B	Liquid piping ø9.52 (3/8") (Flare)
C _{1,2}	Drain piping VP20 (O.D.26)
D	Hole for suspension bolt (M10 or M8)
E	Back cutout PE cover
F	Top cutout Plate cover
G	Hole for drain piping(for left back) (Knock out)



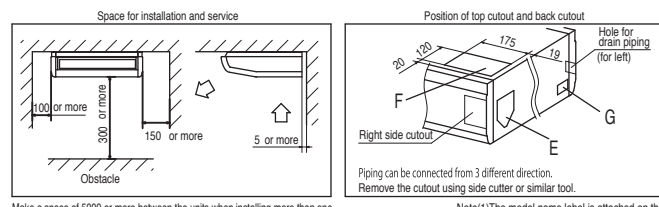
Make a space of 4500 or more between the units when installing more than one.

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

FDE112KXZE1, 140KXZE1



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



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-EX3

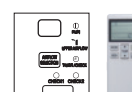


RC-E5



RCH-E3

Wireless



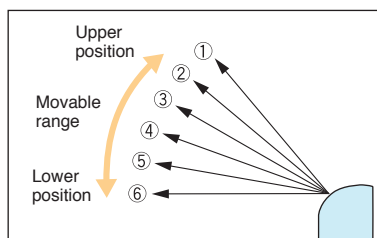
RCN-FW-E2

Sophisticated Design

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

Flap control system

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



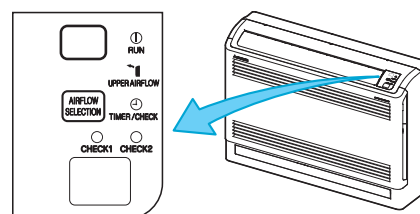
*The wireless remote control is not applicable to the flap control system.

Quiet Operation

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

Convenient to use operation

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



(In case of use of wireless remote control)

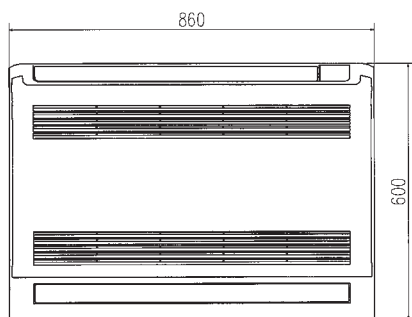
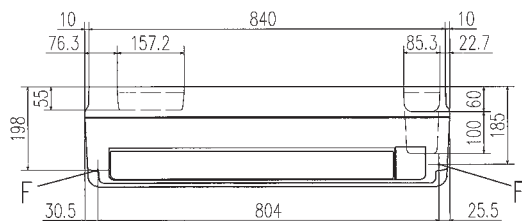
Specifications

Item	Model	FDFW28KXE6F	FDFW45KXE6F	FDFW56KXE6F
Nominal cooling capacity	kW	2.8	4.5	5.6
Nominal heating capacity	kW	3.2	5.0	6.3
Power source		1 Phase 220V, 60Hz		
Power consumption	Cooling	0.02	0.02	0.03
	Heating	0.02	0.02	0.03
Sound power level	dB(A)	55	57	60
Sound pressure level	dB(A)	Hi:36 Me:34 Lo:30	Hi:38 Me:36 Lo:33	Hi:44 Me:37 Lo:33
Exterior dimensions H x W x D	mm	600x860x238		
Net weight	kg	19	20	
Air flow (Standard)	m ³ /min	Hi:9 Me:8 Lo:7		Hi:11 Me:9 Lo:8
Air filter, Q'ty		Polypropylene net x1 (Washable)		
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-FW-E2		
Installation data Refrigerant piping size	mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")		Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")

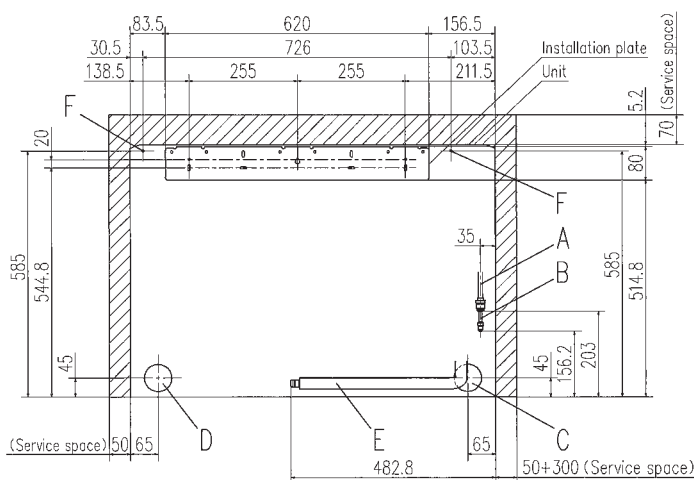
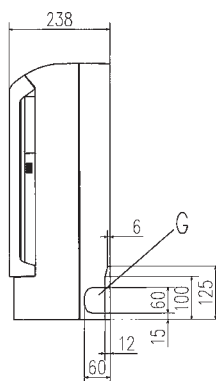
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

Dimensions

All measurements in mm.



Outlet for down piping
(Refer to the above view)



Space for installation and service when viewing from the front

Symbol	Model	Content	
A	Gas piping	FDFW28KXE6F φ9.52 (3/8") (Flare)	FDFW45KXE6F, 56KXE6F φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Hole on wall for right rear piping	(φ65)	
D	Hole on wall for left rear piping	(φ65)	
E	Drain hose	VP16 (O.D.22)	
F	Screw point fasten the indoor unit	φ5	
G	Outlet for piping (on both side)		

Notes

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



Outdoor Air Processing unit FDU-F

Model No.

FDU650FKXZE1
FDU1100FKXZE1
FDU1800FKXZE1
FDU2400FKXZE1



Remote control (option)

Wired



RC-EX3 RC-E5 RCH-E3

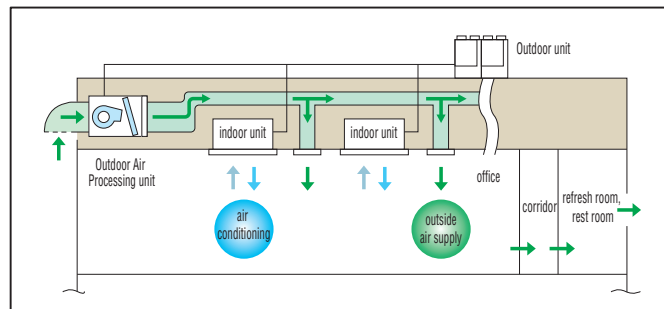
Wireless



RCN-KIT4-E2

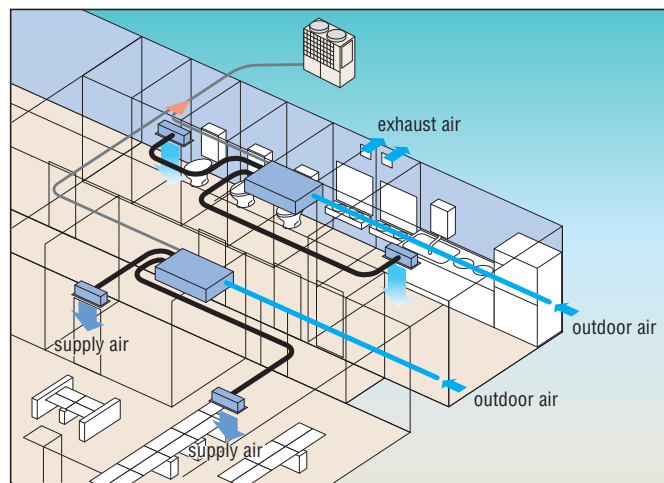
Air conditioning and intake of outdoor air are in the same system

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



Compact design

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



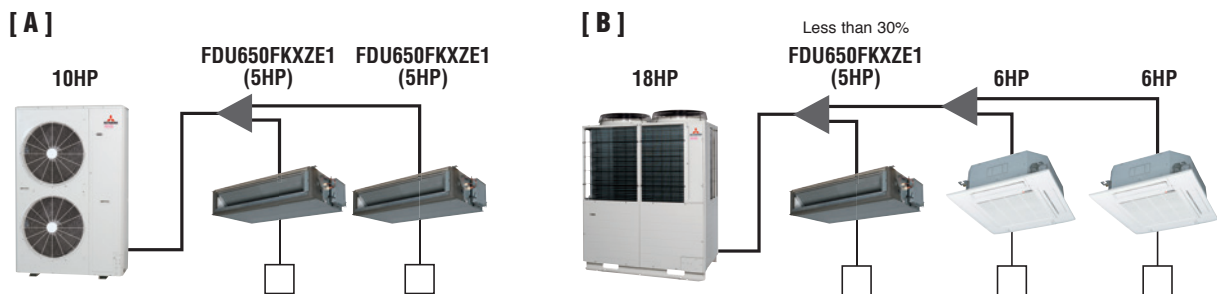
- (1) This unit is the specific unit for processing the outdoor air temperature closer to the room temperature. For conditioning the room temperature a dedicated air-conditioner is required additionally.
- (2) This unit monitors the outdoor air temperature and controls thermostat ON/OFF at the setting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

Connectivity with Outdoor unit

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

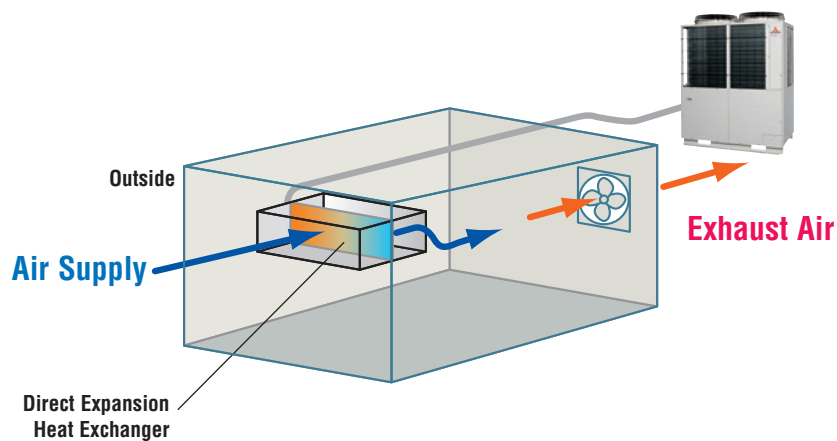
Combination with Outdoor units

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



Concept

FDU-F is 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

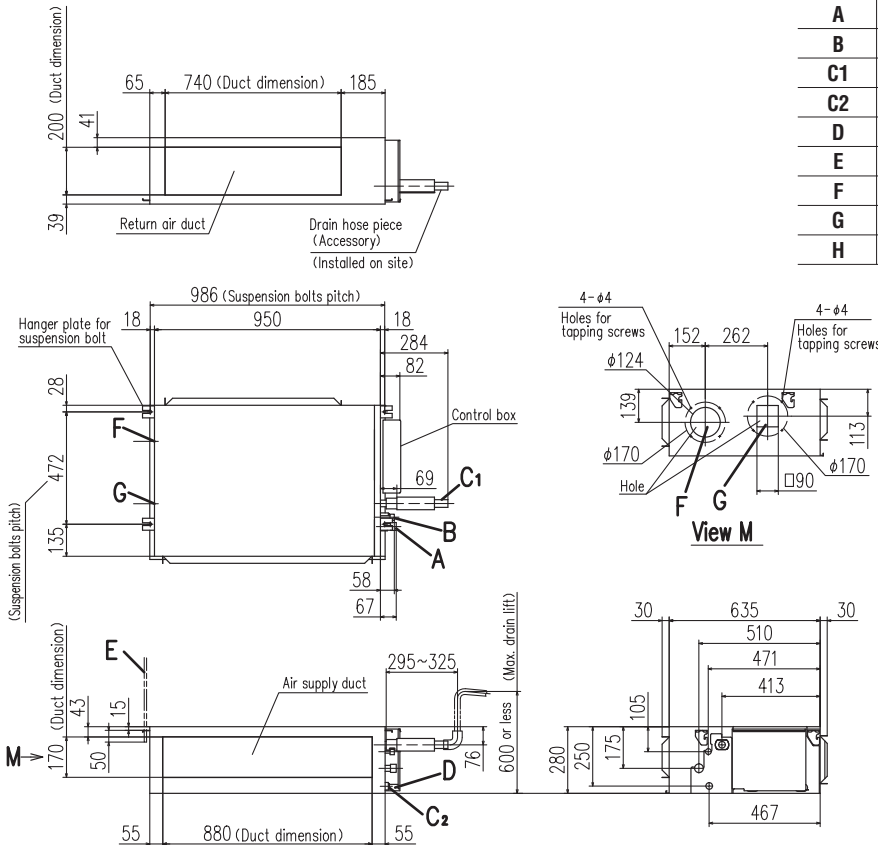
Item	Model	FDU650FKXZE1	FDU1100FKXZE1	FDU1800FKXZE1	FDU2400FKXZE1
Nominal cooling capacity	kW	9.0	14.0	22.4	28.0
Nominal heating capacity	kW	6.5	10.5	16.0	21.5
Power source		1 Phase 220V, 60Hz			
Power consumption	Cooling	0.24	0.35	1.16	1.16
	Heating	0.24	0.35	1.16	1.16
Sound pressure level	dB(A)	Hi:31	Hi:37	Hi:42	Hi:45
Exterior dimension HxWxD	mm	280x950x635	280x1370x740	379x1600x893	
Net weight	kg	34	54	89	89
Air flow (Standard)	m ³ /min	Hi:11	Hi:18	Hi:30	Hi:40
External static pressure	Pa	200(at Hi Air flow)			
Air filter, Q'ty		Procure locally			
Remote control(option)		wired:RC-EX3, RC-E5, RCH-E3 wireless:RCN-KIT4-E2			
Installation data	mm	Liquid line:ø9.52(3/8")		Liquid line:ø9.52(3/8")	
	(in)	Gas line:ø15.88(5/8")		Gas line:ø19.05(3/4")	
Refrigerating piping size				Liquid line:ø9.52(3/8") Gas line:ø22.22(7/8")	

- The data are measured at 33°CDB 28°CWB (68%RH) during cooling and 0°CDB-2.9°CWB (50%RH) during heating (no frost).
- Temperature range of outdoor air must be 20-40°CDB (32°CWB) during cooling and 0-24°CDB during heating.
- Sound level indicates the value in an anechoic chamber. During operation these value are somewhat higher due to ambient conditions.
- The factory E.S.P. setting is set within the range of 10 - 120Pa.If SW8-4 is turned to "ON", E.S.P. setting range can be changed to 10 - 200 Pa. (with RC-EX3 and RC-E5 only)

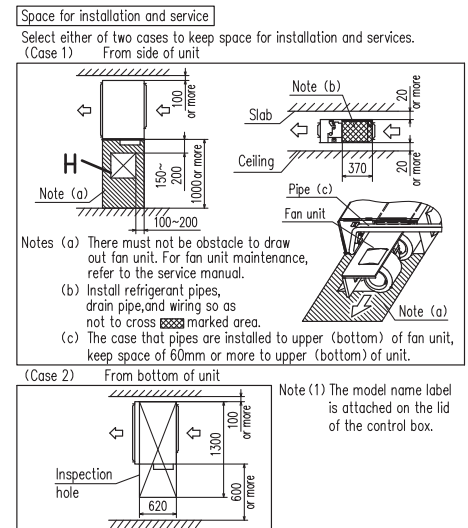
Dimensions

All measurements in mm.

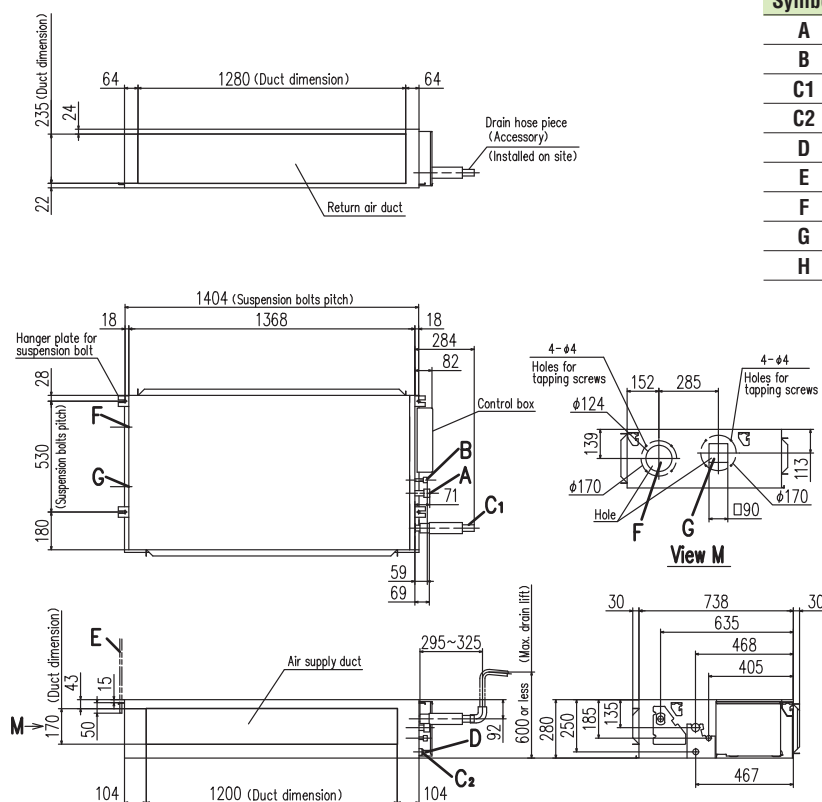
FDU650FKXZE1



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



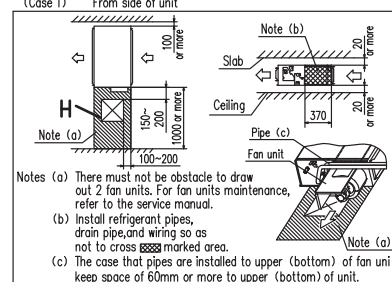
FDU1100FKXZE1



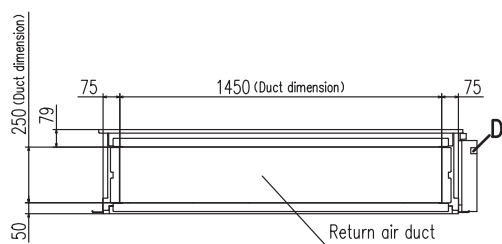
Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C1	Drain piping	VP25(O.D.32)
C2	Drain piping(Gravity drainage)	V20(O.D.26)
D	Hole for wiring	
E	Suspension bolts	M10
F	Outside air opening for ducting	(Knock out)
G	Air outlet opening for ducting	(Knock out)
H	Inspection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

Space for installation and service

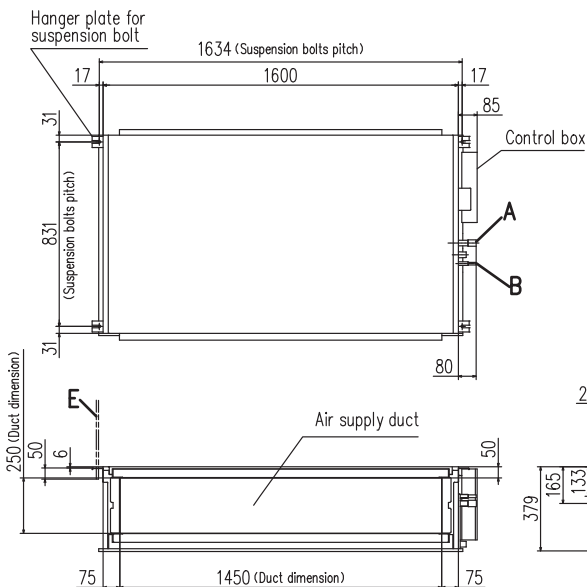
Select either of two cases to keep space for installation and services.
(Case 1) From side of unit



FDU1800FKXZE1, FDU2400FKXZE1

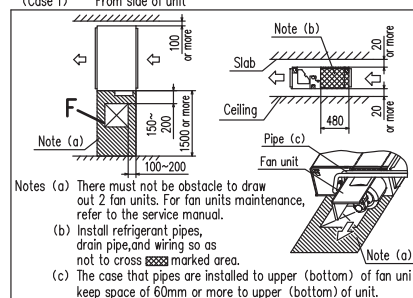


Symbol	Content	MODEL	
		1800	2400
A	Gas piping	ø19.05 (3/4")	ø22.22 (7/8")
B	Liquid piping	ø9.52 (3/8") (Brazing)	
C	Drain piping(Gravity drainage)	VP25(O.D.32)	
D	Hole for wiring		
E	Suspension bolts	M10	
F	Inspection hole	(450X450)	



Space for installation and service

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





Control Systems

<Individual control>

Remote Control line up

	indoor unit	remote control		indoor unit	remote control		indoor unit	remote control		
wired	all models	RC-EX3	wireless	FDT	RCN-T-5AW-E2	FDTS	RCN-TS-E2	FDE	RCN-E-E2	
		RC-E5		FDTC	RCN-TG-24W-E2		FDK22~56	RCN-K-E2	FDLFW	RCN-FW-E2
		RCN-E3		FDTW	RCN-TW-E2		FDK71	RCN-K71-E2	others*	RCN-KIT4-E2

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

Wired remote control (option)

RC-EX3

Easy touch and Easy view with full dot Liquid Crystal display

User friendly

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

NEW

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

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

Operation mode

- Cooling
- Fan
- Dry
- Heating
- Auto

Run / Stop

High power operation
The highest capacity operation (Max 15 minutes)
•Increasing compressor speed
•Increasing air flow volume

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

2. Main functions

	Function name	Description
Economy & Timer	Energy-saving operation	Since the capacity is controlled automatically based on the outdoor temperature, energy can be saved without losing comfort.
	Sleep timer	Set the time period from start to stop of operation. The selectable range of setting time is from 30 to 240 minutes (at 10-minute intervals).
	Set temperature auto return	The temperature automatically returns to the previously set temperature.
	Set ON timer by hour	When the set time elapses, the air conditioner starts.
	Set OFF timer by hour	When the set time elapses, the air conditioner stops.
	Set ON timer by clock	The air conditioner starts at the set time.
	Set OFF timer by clock	The air conditioner stops at the set time.
	Weekly timer	On or Off timer can be set on a weekly basis.
Comfort	Peak-cut timer	Capacity control can be set by using peak cut function on RC-EX3 for better energy saving. Five-step capacity control is available.
	Home leave operation	When the unit is not used for a long period of time, the room temperature is maintained at a moderate level, avoiding extremely hot or cool temperatures.
	Big LCD & Touch screen panel	Large 3.8 inch screen has resulted in improved visibility and operability.
	Easy modification of Individual flap control New	User can visually confirm and set the direction of louvres 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.
Convenience	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.
	Function switch New	The function switch allows user to select and set two functions among seven available functions.
	Favorite setting New	Operation mode, set temperature, fan speed and air flow direction automatically adjust to the programmed favorite setting.
	Adjusting Brightness of the background light New	The brightness of the background light can be adjusted by 10 stages.
	LCD contrast setting New	This function allows user to adjust LCD display contrast.
	High power operation	High Power Mode increases the unit operating ability for 15 minutes to quickly adjust the room temperature to a comfortable level.
	Back light setting	This convenient function allows user to set controls under low light conditions.
	Administrator settings	This function only allows specific individuals to operate the unit.
Service	Setting temp range	Limited range of setting temperature in the heating or the cooling operation can be selected.
	External Input/Output Function New	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.
	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

NEW

**RCN-T-5AW-E2,
RCN-TC-24W-E2**



RCN-TW-E2



RCN-TS-E2



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



RCN-E-E2



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

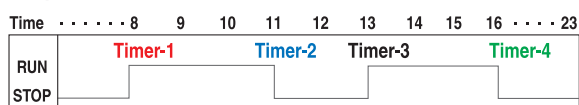


The RC-E5 controller enables extensive access to service and maintenance technical data combined with easy to use functions and a clear LCD display.

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

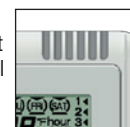


Run hour meters to facilitate maintenance checking

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)



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

Up to 16 units

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

AUTO restart

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

*RCH-E3 is not applicable to the Individual flap control system.
*When RCH-E3 is used, the fan has 3 speed settings (Hi-Me-Low) only.

Thermistor (option)

SC-THB-E3

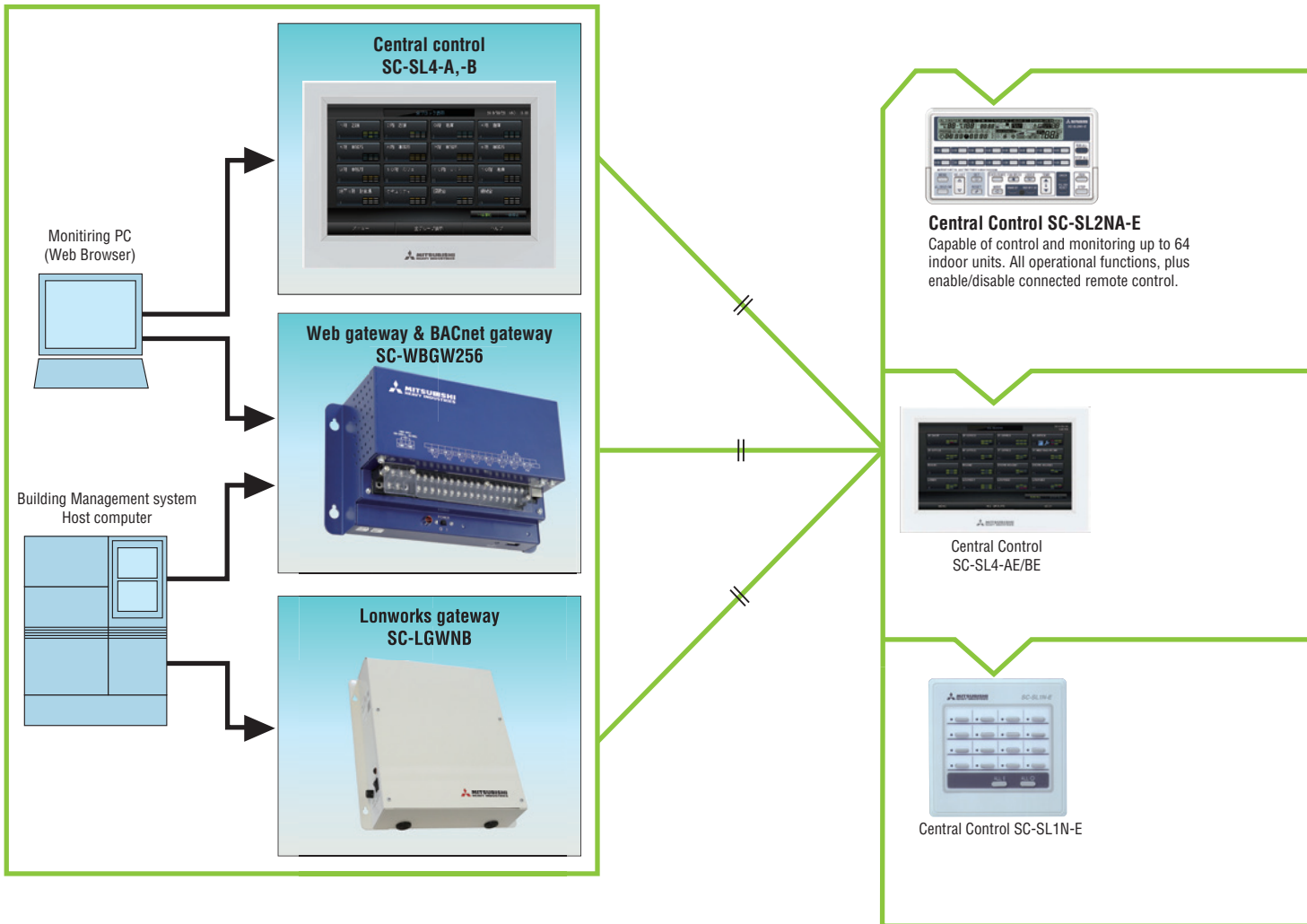
In case sensor in the indoor units or the remote control sensor can not sense the room temperature correctly, or individual remote control in each room is not required but only sensor is required (as when center control system is in place), install SC-THB-E3 at proper place in the rooms.





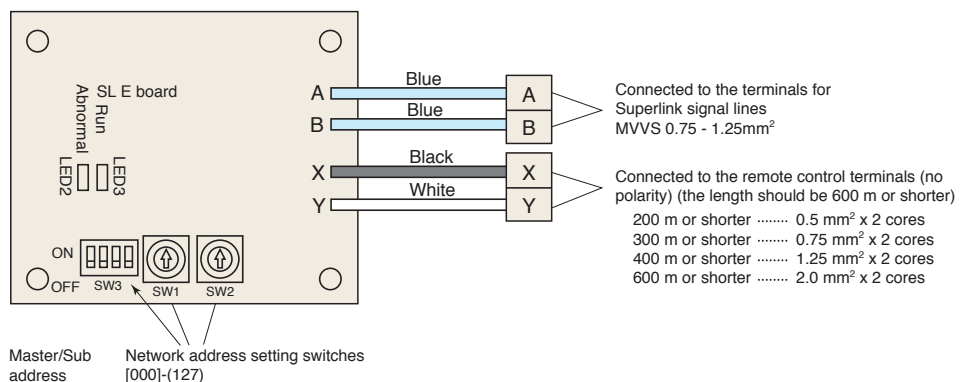
<SUPERLINK® - II Control System>

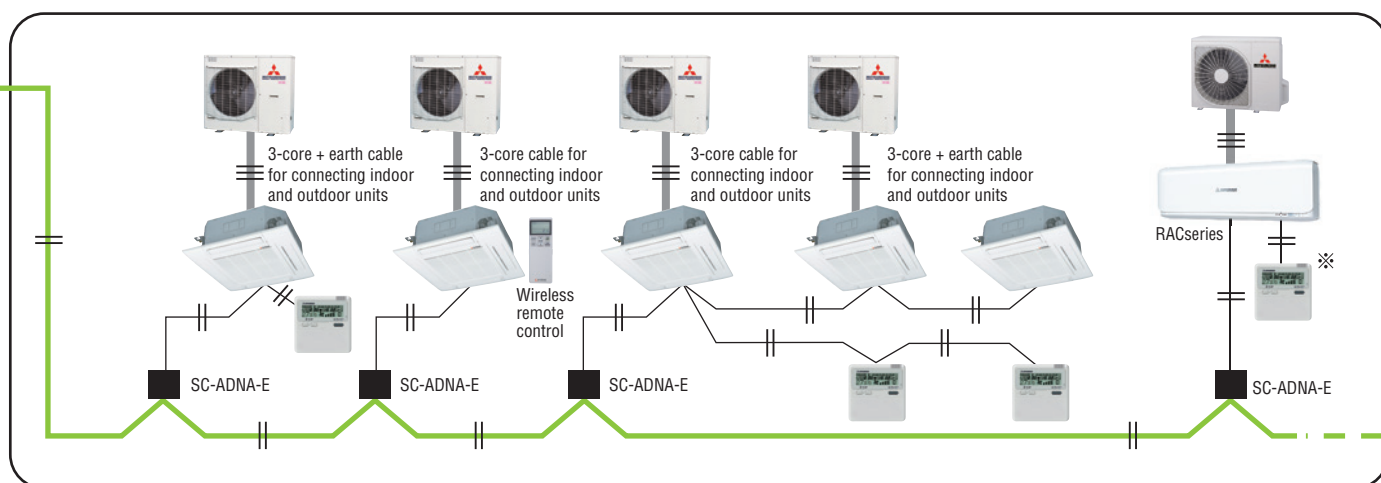
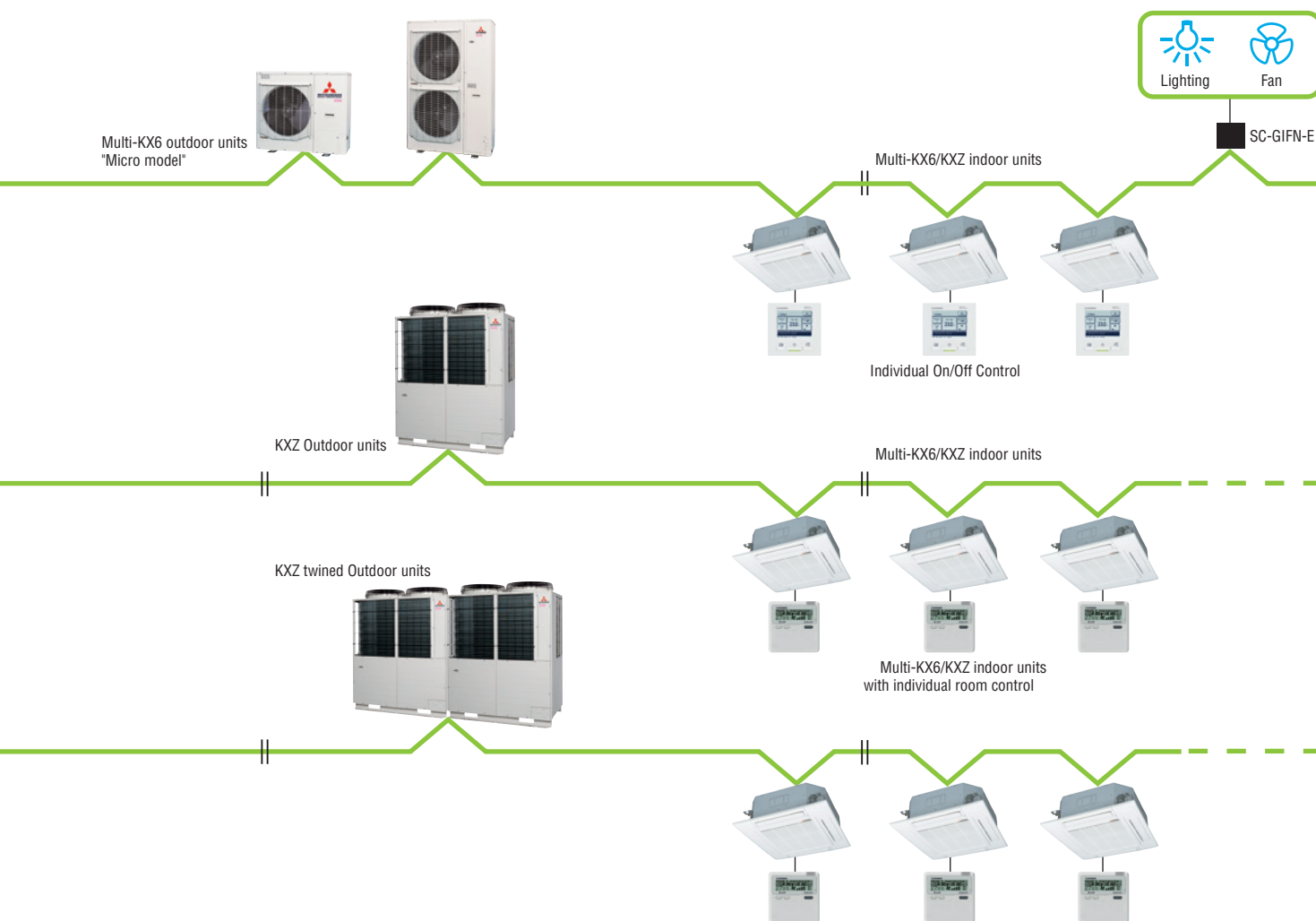
Mitsubishi Heavy Industries Thermal Systems has now combined simplicity of installation with our highly sophisticated Superlink-II control system, to offer building owners and occupiers a comprehensive control and management system, while providing complete commissioning and service maintenance assistance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

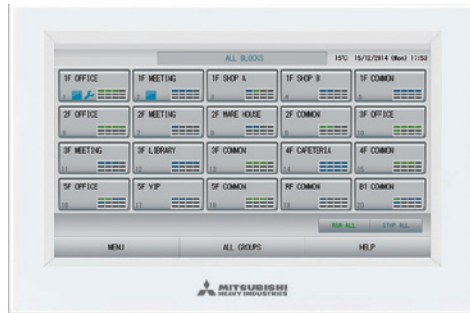




※ SC-BIKN is necessary to connect to wired remote controller.

<Central Control> SC-SL4-AE/BE

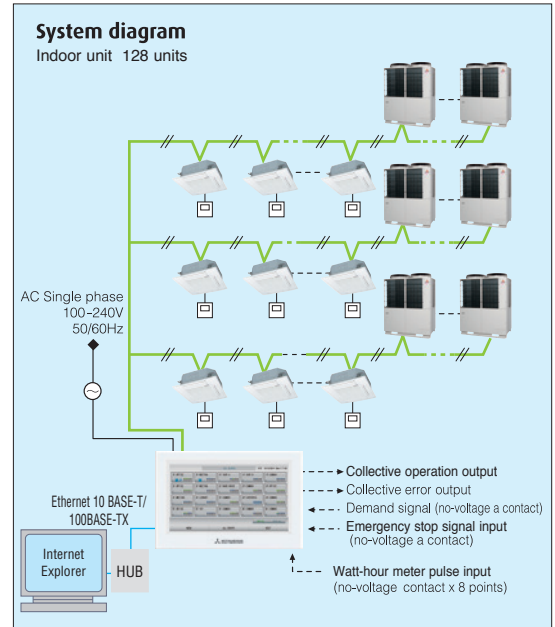
Mitsubishi Heavy Industries Thermal Systems introduces the full colour touch screen central control SC-SL4-AE/BE, with 9 inch interactive LCD display. Offers control, monitoring, scheduling and service/maintenance functions for up to 128 indoor units.



Control with PC is available by use of internet explorer.

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 Vista or Windows 7, 8.1
Monitor resolution 1280 x 1024 or more.
Web browser requirements: Internet Explorer 9, 11

Schedule setting

For each group

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



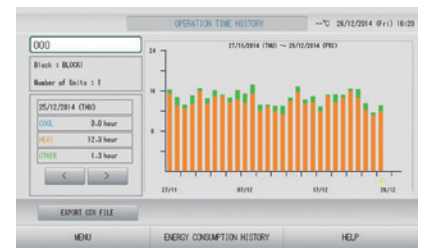
Yearly Schedule

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



Operation time history

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

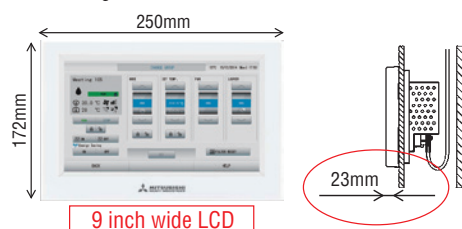


Alarm history

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

High visibility

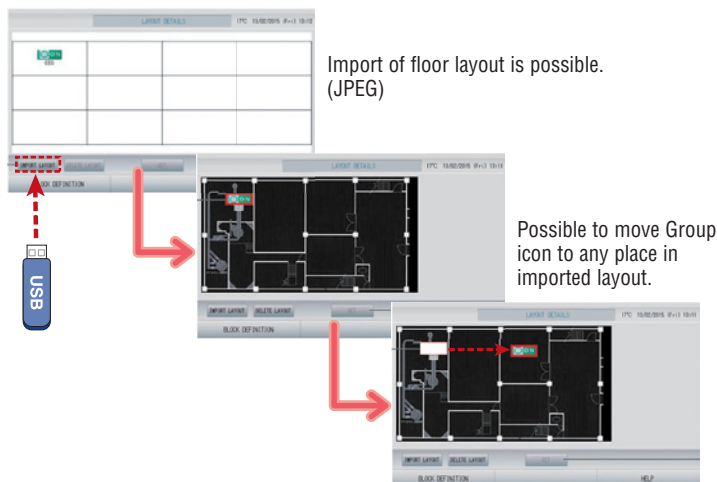
Increasing in size from 7 to 9 inches



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

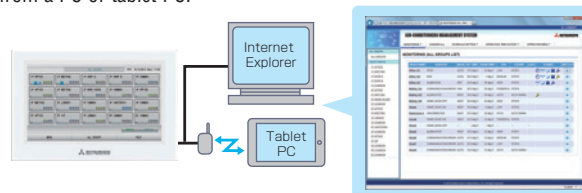
- Green : in operation
- Blue : stop
- Red : error
- Yellow : communication error
- Gray : no groups

Block layout function

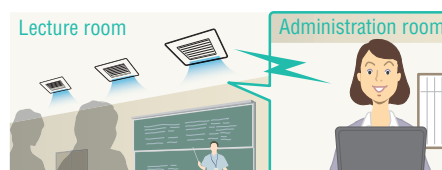


Web function

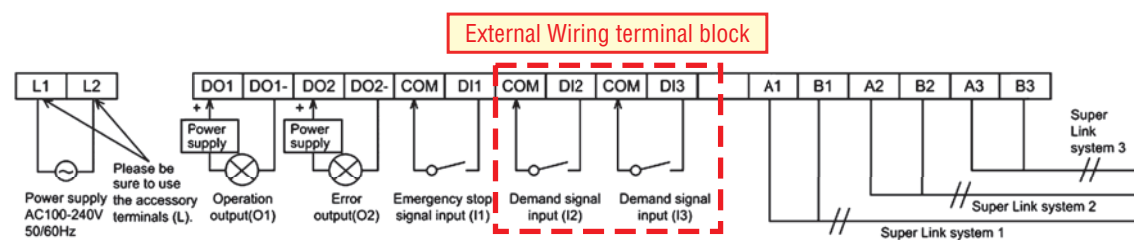
You can monitor and control up to 128 indoor units (Max.128 groups) from a PC or tablet PC.



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



3 levels of demand control from 2 external inputs



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

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

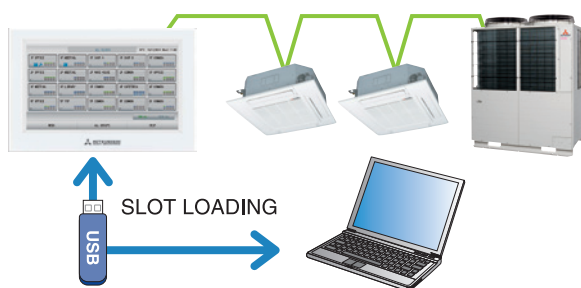
Demand level 2 – Any indoor unit set to D1 or D2 switch to fan only mode and cannot be operated from the local remote controller

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

Electric power calculation function:

(for SC-SL4-BE only)

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



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

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

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



SC-SL1N-E

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

Simple centralised control.

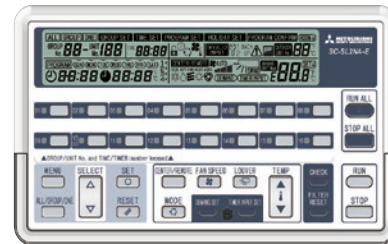
1. The SC-SL1N-E is connected to the Superlink- network via 2-core, non-polar wires ('AB' connection).
2. It will monitor and control the start/stop function of up to 16 units, with the sixteen operation buttons.
3. The unit or group numbers in operation or in need of service are displayed with an LED.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



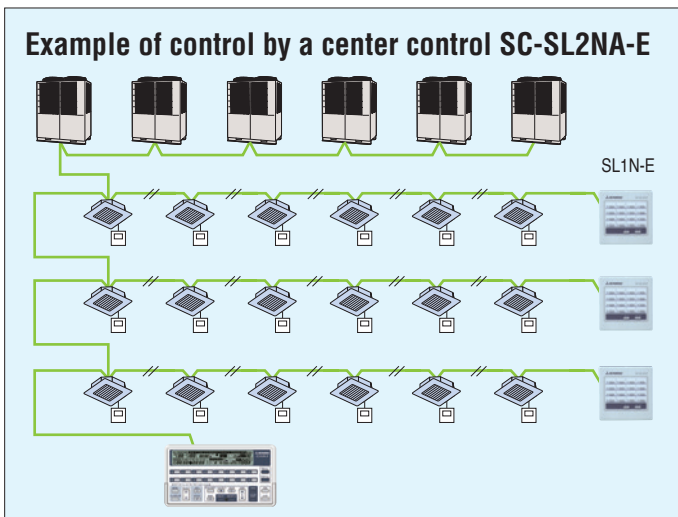
SC-SL2NA-E

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

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



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



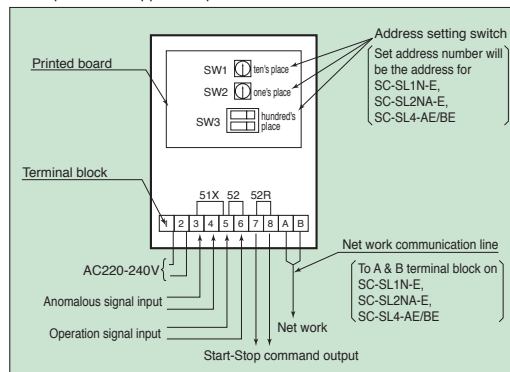
An SC-SL2NA-E performs the start/stop control, monitoring and mode setting of up to 64 units. It is a high quality air conditioner control system that allows up to 64 indoor units to be freely grouped into 1 to 16 groups.

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

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

SC-GIFN-E Interface kit

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



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

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

NEW

Production by order

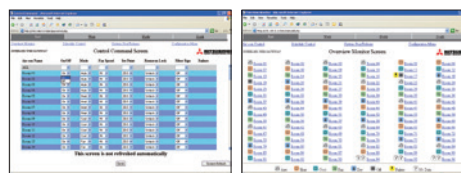
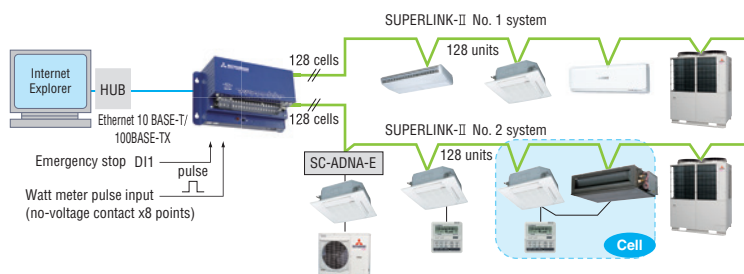
SC-WBGW256 control and monitoring of up to 256 cells (some cells can have two or more indoor units and total number of indoor units can be up to 256 units) centralised to a network PC using the Superlink-II web gateway. Simple installation is assured with no special software requirements, operation is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

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



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

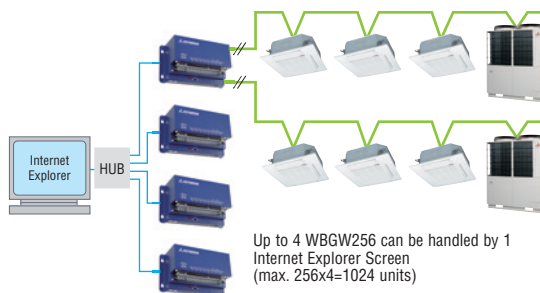
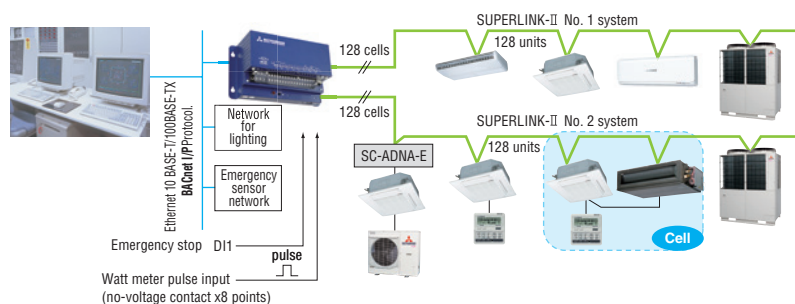
[In case of web gateway]



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

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

[In case of BACnet gateway]



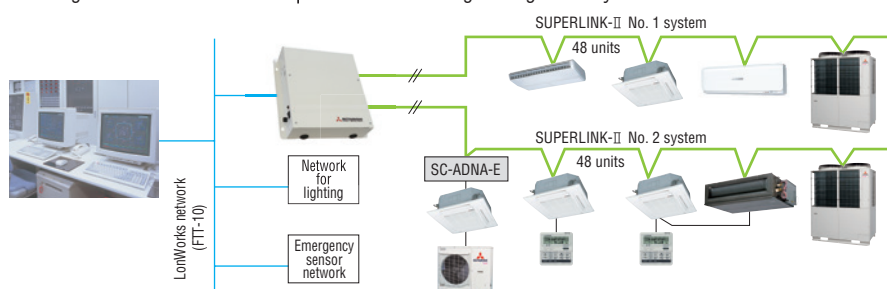
Up to 4 WBGW256 can be handled by 1 Internet Explorer Screen (max. 256x4=1024 units)

SC-LGWNB (LonWorks gateway)

Production by order

NEW

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



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

INTESIS BMS Interface for Mitsubishi Heavy Industries Thermal Systems air conditioners

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

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

MH-AC-KNX-48

(Max 48 indoor units / Superlink I & II)

MH-AC-KNX-128

(Max 128 indoor units / Superlink II)

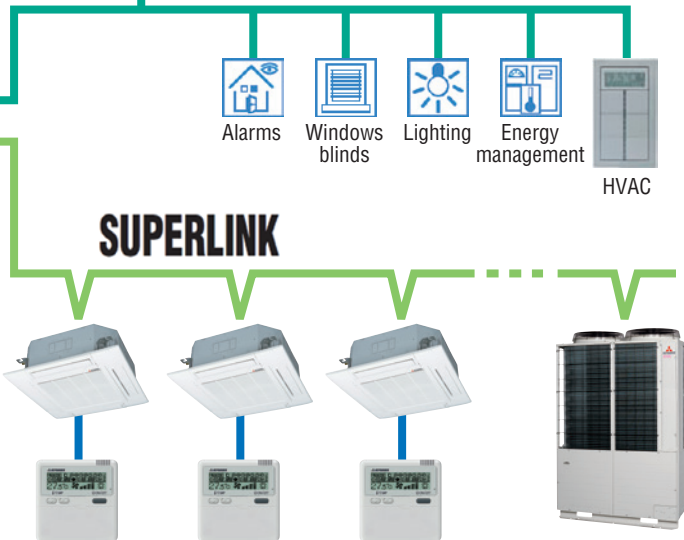


INTEGRATED GATEWAY

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



TOUCH SCREEN



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

MH-AC-MBS-48

(Max 48 indoor units / Superlink I & II)

MH-AC-MBS-128

(Max 128 indoor units / Superlink II)

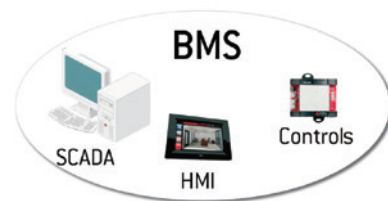


INTEGRATED GATEWAY

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



MODBUS



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

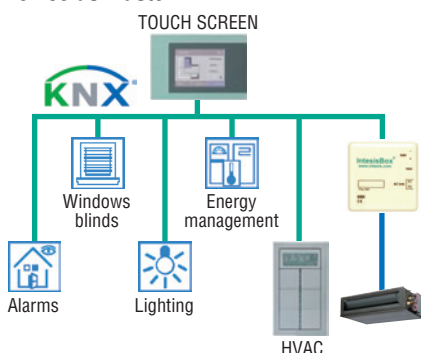
MH-RC-KNX-1i



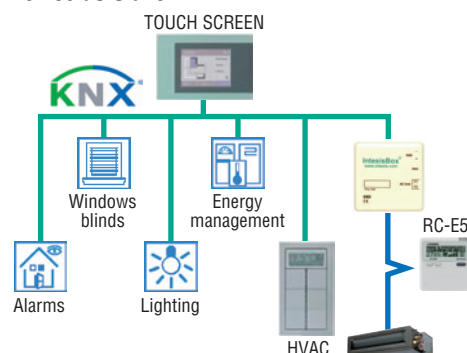
IntesisBox

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

Example : Device as Master



Example : Device as Slave



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

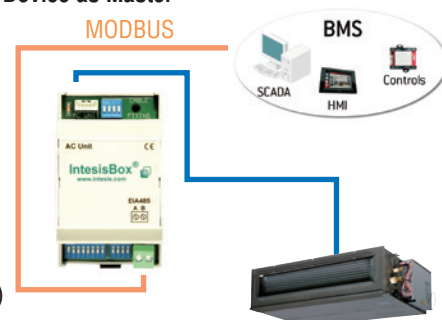
MH-RC-MBS-1



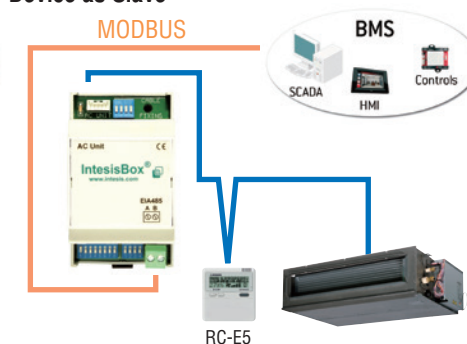
IntesisBox

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

Example : Device as Master



Example : Device as Slave



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

MH-RC-ENO-1i/1iC



IntesisBox

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

Example : Device as Master



Example : Device as Slave



Please access the followings for details.



URL | <http://www.intesis.com>



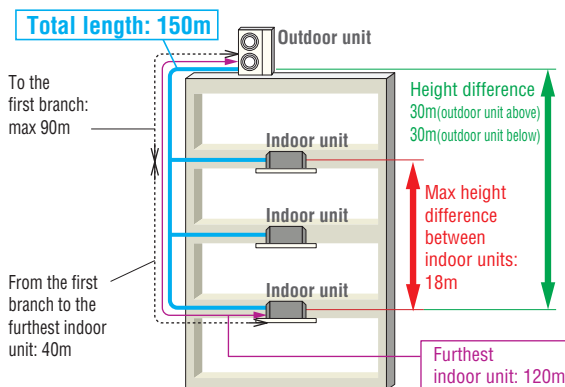
Outdoor units

KXZ Lite Heat pump systems

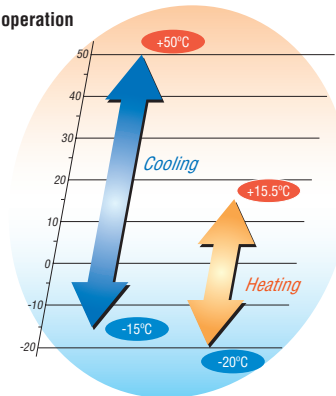
8, 10HP (22.4kW · 28.0kW)

Model No.	Nominal Cooling Capacity
FDC224KXZPE1	22.4kW(380V)
FDC280KXZPE1	28.0kW(380V)

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



Range of operation



Specifications

Item	Model	FDC224KXZPE1	FDC280KXZPE1
Nominal horse power		8HP	10HP
Power source		3 Phase 380V, 60Hz	
Starting current	A	5	
Max current	A	21	22
Nominal capacity	Cooling	22.4	28.0
	Heating	22.4	28.0
Electrical characteristics	Power consumption	Cooling	5.6
		Heating	4.8
Exterior dimensions	HxWxD	1505x970x370	
Net weight	kg	165	
Sound pressure level	Cooling/Heating	59/60	60/63
Refrigerant	Type/GWP	R410A/2088	
	Charge	kg/TCO ₂ Eq 8.9/18.583	
Refrigerant piping size	Liquid line	ø9.52(3/8")	
	Gas line	ø22.22(7/8")	
Capacity connection	%	50~120	
Number of connectable indoor units		8	8

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

Refrigerant piping

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

Branch pipes



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

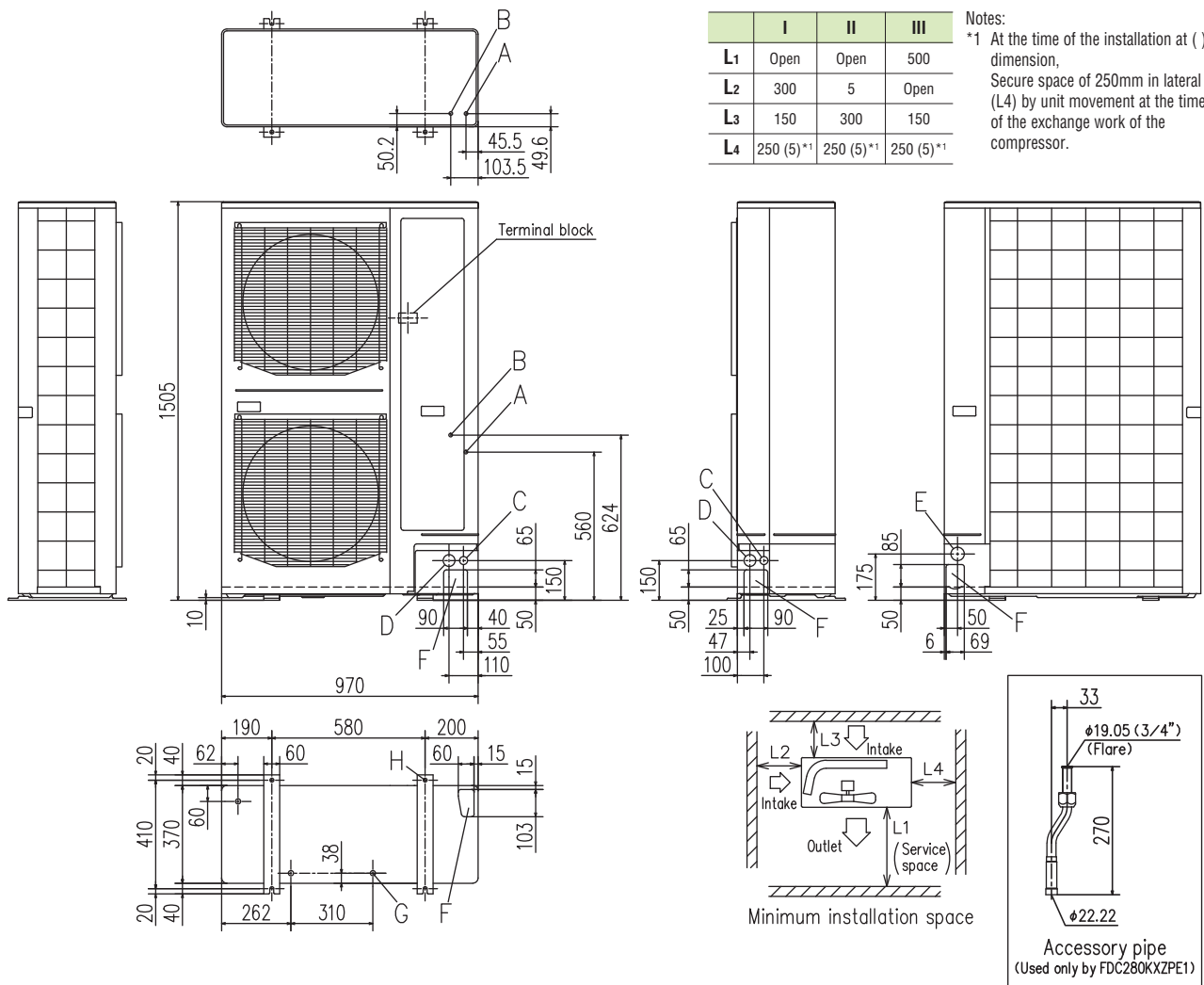
Header pipe



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

Dimensions

All measurements in mm.



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

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

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

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



KXZ Heat pump systems

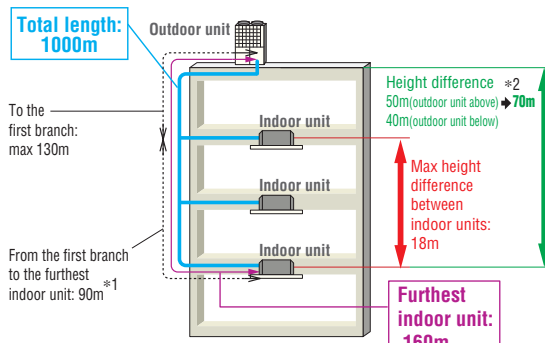
10, 12HP (28.0kW, 33.5kW)

Model No.	Nominal Cooling Capacity
FDC280KXZE1	28.0kW(380V)
FDC335KXZE1	33.5kW(380V)

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

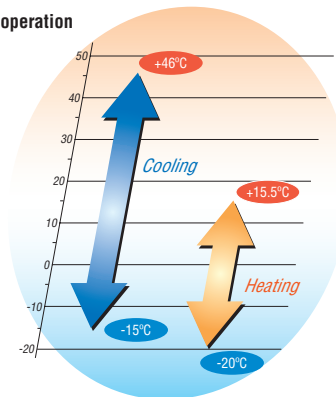


Uniform footprint of models (10,12HP) allows continuous side-by-side installation



*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
*2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.

Range of operation



Specifications

Item		Model	FDC280KXZE1	FDC335KXZE1
Nominal horse power			10HP	12HP
Power source			3 Phase 380V, 60Hz	
Starting current		A	5	
Max current		A	21.2	
Nominal capacity	Cooling	kW	28.0	33.5
	Heating	kW	31.5	37.5
Electrical characteristics	Power consumption	Cooling	7.24	8.96
		Heating	7.28	9.04
Exterior dimensions		HxWxD mm	1690x1350x720	
Net weight		kg	272	
Sound pressure level		Cooling/Heating dB(A)	55/57	61/58
Refrigerant	Type/GWP		R410A/2088	
	Charge	kg/TCO ₂ Eq	11.0/22.968	
Refrigerant piping size	Liquid line	mm(in)	ø9.52(3/8")	ø12.7(1/2")
	Gas line	mm(in)	ø22.22(7/8")	ø25.4(1") [ø22.22(7/8")]
Capacity connection		%	50~130	
Number of connectable indoor units			24	29

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

KXZ Heat pump systems

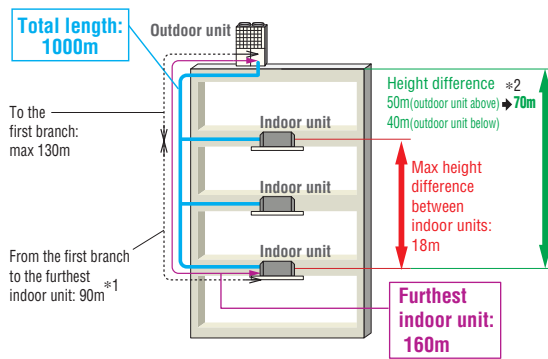
14, 16, 17, 18, 20HP (40.0kW~56.0kW)

Model No.	Nominal Cooling Capacity
FDC400KXZE1	40.0kW(380V)
FDC450KXZE1	45.0kW(380V)
FDC475KXZE1	47.5kW(380V)
FDC500KXZE1	50.0kW(380V)
FDC560KXZE1	56.0kW(380V)

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

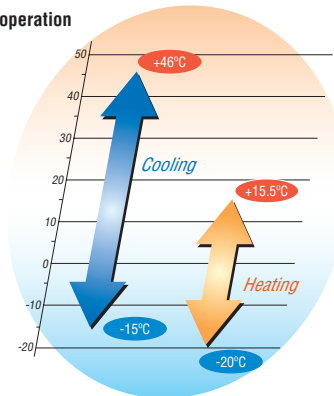


Uniform footprint of all models (from 14HP~20HP) allows continuous side-by-side installation



*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
 *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.

Range of operation



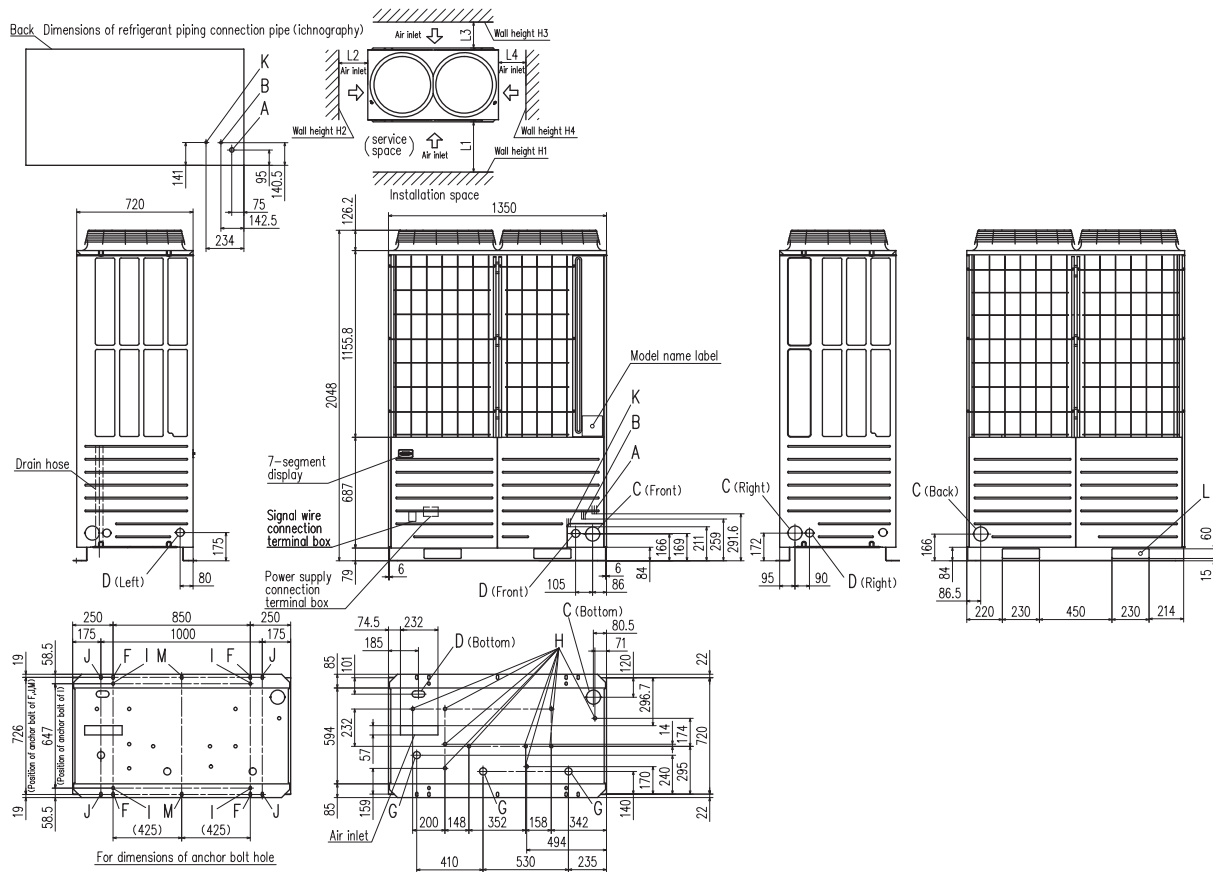
Specifications

Item	Model	FDC400KXZE1	FDC450KXZE1	FDC475KXZE1	FDC500KXZE1	FDC560KXZE1	
Nominal horse power		14HP	16HP	17HP	18HP	20HP	
Power source		3 Phase 380V, 60Hz					
Starting current	A	5		8			
Max current	A	32		42.4			
Nominal capacity	Cooling	40.0	45.0	47.5	50.0	56.0	
	Heating	45.0	50.0	53.0	56.0	63.0	
Electrical characteristics	Power consumption	Cooling	10.96	13.98	13.98	13.97	16.62
		Heating	10.69	12.50	13.00	13.49	15.95
Exterior dimensions	HxWxD	mm 2048x1350x720					
Net weight	kg	317		370			
Sound pressure level	Cooling/Heating	60/62	61/62	61/61	61/62	64/66	
Refrigerant	Type/GWP	R410A/2088					
	Charge	kg/TCO ₂ Eq 11.5/24.012					
Refrigerant piping size	Liquid line	mm(in) ø12.7(1/2")					
	Gas line	ø25.4(1") [ø28.58(1 1/8")]		ø28.58(1 1/8")			
Capacity connection	%	50~130					
Number of connectable indoor units		34	39	41	43	48	

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

Dimensions

All measurements in mm.



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

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

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

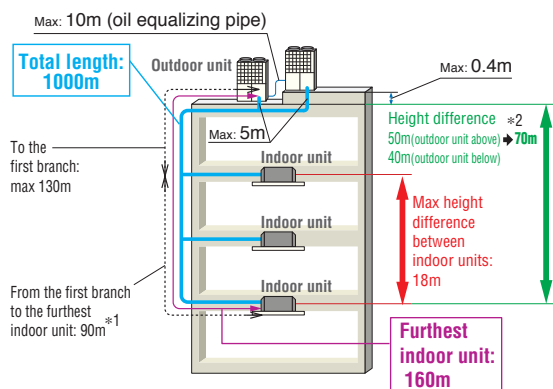
KXZ Heat pump combination systems

22, 24HP (61.5kW, 67.0kW)



Model No.	Nominal Cooling Capacity
FDC615KXZE1 (FDC280+FDC335)	61.5kW(380V)
FDC670KXZE1 (FDC335+FDC335)	67.0kW(380V)

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

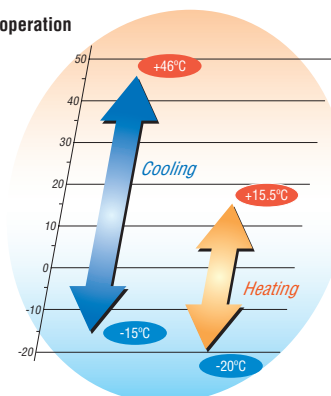


*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
 *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.



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

Range of operation



Specifications

Exterior dimension : Please refer to page91.

Item		Model	FDC615KXZE1	FDC670KXZE1
Combination (FDC)			280KXZE1 335KXZE1	335KXZE1 335KXZE1
Nominal horse power			22HP	24HP
Power source			3 Phase 380V, 60Hz	
Starting current		A	10	
Max current		A	42.4	
Nominal capacity	Cooling	kW	61.5	67.0
	Heating	kW	69.0	75.0
Electrical characteristics	Power consumption	Cooling	16.20	17.92
		Heating	16.32	18.08
Exterior dimensions		HxWxD	1690x2700x720	
Net weight		kg	544	
Refrigerant charge		R410A	11.0x2	
Refrigerant piping size	Liquid line	mm(in)	ø12.7(1/2")	
	Gas line	mm(in)	ø28.58(1 1/8")	
Capacity connection		%	50~130	
Number of connectable indoor units			53	58

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

KXZ Heat pump combination systems

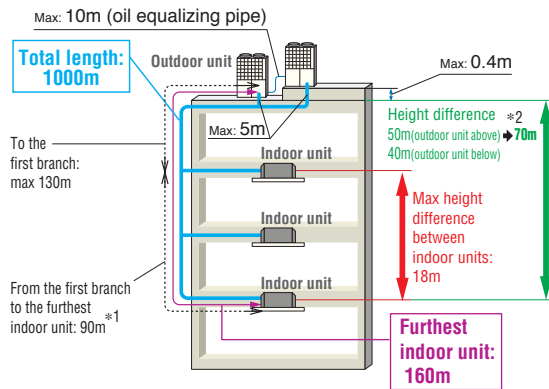
26, 28, 30, 32, 34, 36, 38, 40HP (73.5kW~112.0kW)

Model No.	Nominal Cooling Capacity
FDC735KXZE1 (FDC335+FDC400)	73.5kW(380V)
FDC800KXZE1 (FDC400+FDC400)	80.0kW(380V)
FDC850KXZE1 (FDC400+FDC450)	85.0kW(380V)
FDC900KXZE1 (FDC450+FDC450)	90.0kW(380V)
FDC950KXZE1 (DC475+FDC475)	95.0kW(380V)
FDC1000KXZE1 (FDC500+FDC500)	100.0kW(380V)
FDC1060KXZE1 (DC500+FDC560)	106.0kW(380V)
FDC1120KXZE1 (FDC560+FDC560)	112.0kW(380V)

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

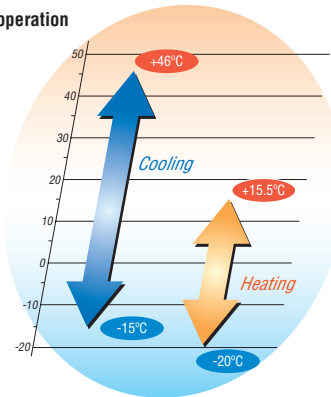


• In case of 26HP



*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
 *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.

Range of operation



Specifications

Exterior dimension : Please refer to page91,93.

Item	Model	FDC735KXZE1	FDC800KXZE1	FDC850KXZE1	FDC900KXZE1	FDC950KXZE1	FDC1000KXZE1	FDC1060KXZE1	FDC1120KXZE1	
		Combination (FDC)	335KXZE1 400KXZE1	400KXZE1 400KXZE1	400KXZE1 450KXZE1	450KXZE1 450KXZE1	475KXZE1 475KXZE1	500KXZE1 500KXZE1	500KXZE1 560KXZE1	560KXZE1 560KXZE1
Nominal horse power		26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP	
Power source		3 Phase 380V, 60Hz								
Starting current	A	10				16				
Max current	A	53.2	64			84.8				
Nominal capacity	Cooling	73.5	80.0	85.0	90.0	95.0	100.0	106.0	112.0	
	Heating	82.5	90.0	95.0	100.0	106.0	112.0	119.0	126.0	
Electrical characteristics	Power consumption	Cooling	19.92	21.92	24.94	27.96	27.96	27.94	30.59	33.24
		Heating	19.73	21.38	23.19	25.00	26.00	26.98	29.44	31.90
Exterior dimensions	HxWxD	mm 2048x2700x720								
Net weight	kg	589	634			740				
Refrigerant charge	R410A	kg 11.0+11.5	11.5x2							
Refrigerant piping size	Liquid line	mm(in) ø15.88(5/8")						ø19.05(3/4")		
	Gas line	ø31.75(1 1/4") [ø34.92(1 3/8")]						ø38.1(1 1/2") [ø34.92(1 3/8")]		
Capacity connection	%	50~130								
Number of connectable indoor units		63	69	73	78	80				

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

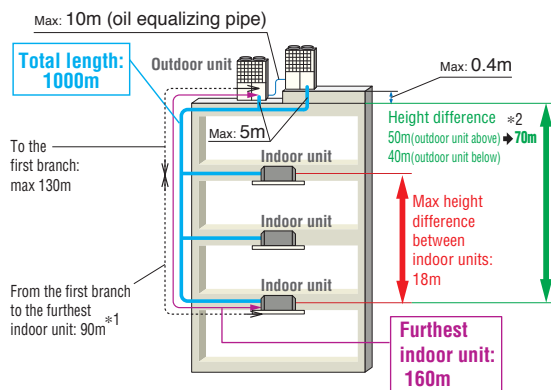
KXZ Heat pump combination systems

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

Model No.	Nominal Cooling Capacity
FDC1200KXZE1 (FDC400+FDC400+FDC400)	120.0kW(380V)
FDC1250KXZE1 (FDC400+FDC400+FDC450)	125.0kW(380V)
FDC1300KXZE1 (FDC400+FDC450+FDC450)	130.0kW(380V)
FDC1350KXZE1 (FDC450+FDC450+FDC450)	135.0kW(380V)

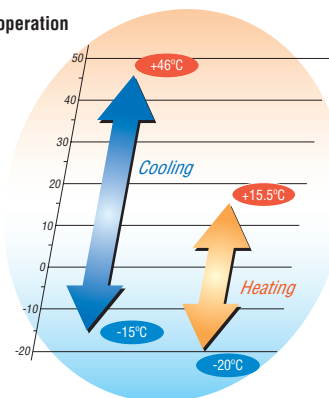


- Connect up to 80 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) up to 3.6.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.



*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
 *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.

Range of operation



Specifications

Exterior dimension : Please refer to page93.

Item		Model	FDC1200KXZE1	FDC1250KXZE1	FDC1300KXZE1	FDC1350KXZE1
Combination (FDC)			400KXZE1	400KXZE1	400KXZE1	450KXZE1
			400KXZE1	400KXZE1	450KXZE1	450KXZE1
			400KXZE1	450KXZE1	450KXZE1	450KXZE1
Nominal horse power			42HP	44HP	46HP	48HP
Power source			3 Phase 380V, 60Hz			
Starting current		A	15			
Max current		A	96			
Nominal capacity	Cooling	kW	120.0	125.0	130.0	135.0
	Heating	kW	135.0	140.0	145.0	150.0
Electrical characteristics	Power consumption	Cooling	32.88	35.90	38.92	41.94
		Heating	32.07	33.88	35.69	37.50
Exterior dimensions		HxWxD	2048x4050x720			
Net weight		kg	951			
Refrigerant charge		R410A	11.5x3			
Refrigerant piping size	Liquid line	mm(in)	ø19.05(3/4")			
	Gas line	mm(in)	ø38.1(1 1/2") [ø34.92(1 3/8")]			
Capacity connection		%	50-130			
Number of connectable indoor units			80			

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

KXZ Heat pump combination systems

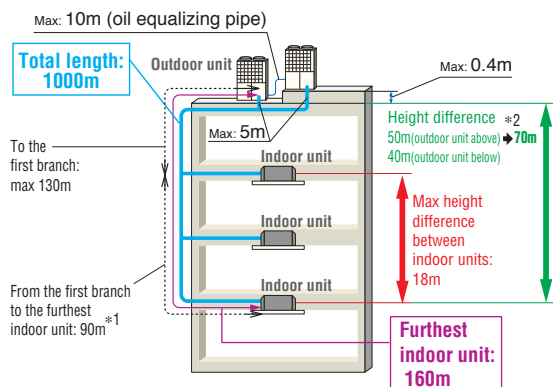
50, 52, 54, 56, 58, 60HP (142.5kW~168.0kW)



Model No. Nominal Cooling Capacity

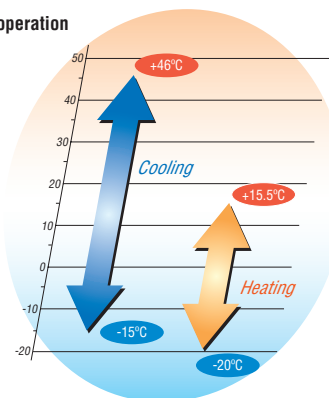
FDC1425KXZE1 (FDC475+FDC475+FDC475)	142.5kW(380V)
FDC1450KXZE1 (FDC475+FDC475+FDC500)	145.0kW(380V)
FDC1500KXZE1 (FDC500+FDC500+FDC500)	150.0kW(380V)
FDC1560KXZE1 (FDC500+FDC500+FDC560)	156.0kW(380V)
FDC1620KXZE1 (FDC500+FDC560+FDC560)	162.0kW(380V)
FDC1680KXZE1 (FDC560+FDC560+FDC560)	168.0kW(380V)

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



*1 The difference between the longest and the shortest indoor unit piping from the first branch must be within 40m. (MAX85m)
 *2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.

Range of operation



Specifications

Exterior dimension : Please refer to page93.

Item	Model	FDC1425KXZE1	FDC1450KXZE1	FDC1500KXZE1	FDC1560KXZE1	FDC1620KXZE1	FDC1680KXZE1
		Combination (FDC)	475KXZE1	475KXZE1	500KXZE1	500KXZE1	500KXZE1
		475KXZE1	475KXZE1	500KXZE1	500KXZE1	560KXZE1	560KXZE1
		475KXZE1	500KXZE1	500KXZE1	560KXZE1	560KXZE1	560KXZE1
Nominal horse power		50HP	52HP	54HP	56HP	58HP	60HP
Power source		3 Phase 380V, 60Hz					
Starting current	A	24					
Max current	A	127.2					
Nominal capacity	Cooling	kW					
	Heating	kW					
Electrical characteristics	Power consumption	Cooling	kW				
		Heating	kW				
Exterior dimensions	HxWxD	mm					
Net weight		kg					
Refrigerant charge	R410A	kg					
Refrigerant piping size	Liquid line	mm(in)					
	Gas line	mm(in)					
Capacity connection		%					
Number of connectable indoor units							

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

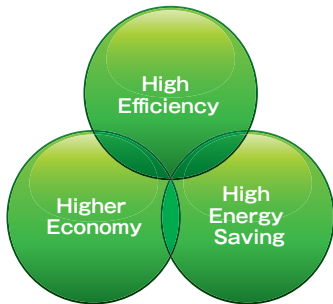


KXZ Hi-COP series

8~36HP(22.4kW~100.0kW)

Model No.	Nominal Cooling Capacity
FDC224KXZXE1	22.4kW(380V)
FDC280KXZXE1	28.0kW(380V)
FDC335KXZXE1	33.5kW(380V)

Model No.	Nominal Cooling Capacity
FDC450KXZXE1 (FDC224+FDC224)	45.0kW(380V)
FDC500KXZXE1 (FDC224+FDC280)	50.0kW(380V)
FDC560KXZXE1 (FDC280+FDC280)	56.0kW(380V)
FDC615KXZXE1 (FDC280+FDC335)	61.5kW(380V)
FDC670KXZXE1 (FDC335+FDC335)	67.0kW(380V)
FDC735KXZXE1 (FDC224+FDC224+FDC280)	73.5kW(380V)
FDC800KXZXE1 (FDC224+FDC280+FDC280)	80.0kW(380V)
FDC850KXZXE1 (FDC280+FDC280+FDC280)	85.0kW(380V)
FDC900KXZXE1 (FDC280+FDC280+FDC335)	90.0kW(380V)
FDC950KXZXE1 (FDC280+FDC335+FDC335)	95.0kW(380V)
FDC1000KXZXE1 (FDC335+FDC335+FDC335)	100.0kW(380V)



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

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

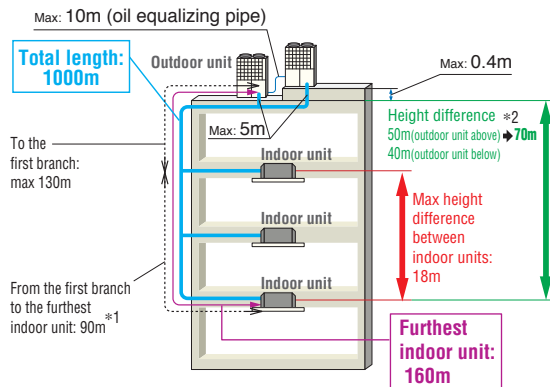
- High efficiency with COP (in cooling) up to 4.5.
- These units employ DC inverter multiport compressors with concentrated winding motor.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.



FDC224KXZXE1



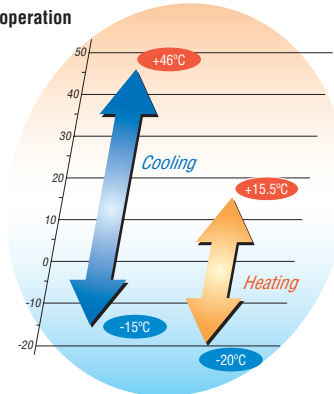
FDC280KXZXE1
FDC335KXZXE1



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

*2 In case of height difference up to 70m, please contact your dealer. Height difference up to 100m is possible with High Head series. Please refer to page104.

Range of operation



Specifications

Item	Model	FDC224KXZE1	FDC280KXZE1	FDC335KXZE1
Nominal horse power		8HP	10HP	12HP
Power source		3Phase 380V, 60Hz		
Starting current	A	5		
Max current	A	21.2	32	
Nominal capacity	Cooling	22.4	28.0	33.5
	Heating	25.0	31.5	37.5
Electrical characteristics	Power consumption	4.98	6.95	8.68
	Cooling Heating	5.56	6.83	8.39
Exterior dimensions	H x W x D	1690x1350x720	2048x1350x720	
Net weight	kg	280	325	
Sound pressure level	Cooling / Heating	56/57	56/56	62/57
Refrigerant	Type/GWP	R410A/2088		
	Charge	11.0/22.968	11.5/24.012	
Refrigerant piping size	Liquid line	ø9.52(3/8")		
	Gas line	ø19.05(3/4")	ø22.22(7/8")	ø25.4(1") [ø22.22(7/8")]
Capacity connection	%	200		
Number of connectable indoor units		29	37	44

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

Item	Model	FDC735KXZE1	FDC800KXZE1	FDC850KXZE1	FDC900KXZE1	FDC950KXZE1	FDC1000KXZE1	
Combination (FDC)		224KXZE1	224KXZE1	280KXZE1	280KXZE1	280KXZE1	335KXZE1	
		224KXZE1	280KXZE1	280KXZE1	280KXZE1	335KXZE1	335KXZE1	
		280KXZE1	280KXZE1	280KXZE1	335KXZE1	335KXZE1	335KXZE1	
Nominal horse power		26HP	28HP	30HP	32HP	34HP	36HP	
Power source		3Phase 380V, 60Hz						
Starting current	A	15						
Max current	A	74.4			85.2		96	
Nominal capacity	Cooling	73.5	80.0	85.0	90.0	95.0	100.0	
	Heating	82.5	90.0	95.0	100.0	106.0	112.0	
Electrical characteristics	Power consumption	17.1	19.3	21.1	22.7	24.3	25.9	
	Cooling Heating	18.2	19.7	20.6	21.9	23.5	25.1	
Exterior dimensions	H x W x D	2048x4050x720						
Net weight	kg	885	930	975	975			
Refrigerant charge	R410A	11.0x2+11.5	11.0+11.5x2	11.5x3				
Refrigerant piping size	Liquid line	ø15.88(5/8")						
	Gas line	ø31.75(1 1/4") [ø34.92(1 3/8")]					ø38.1(1 1/2") [ø34.92(1 3/8")]	
	Oil equalization	ø9.52(3/8")						
Capacity connection	%	160						
Number of connectable indoor units		78	80	80	80	80	80	

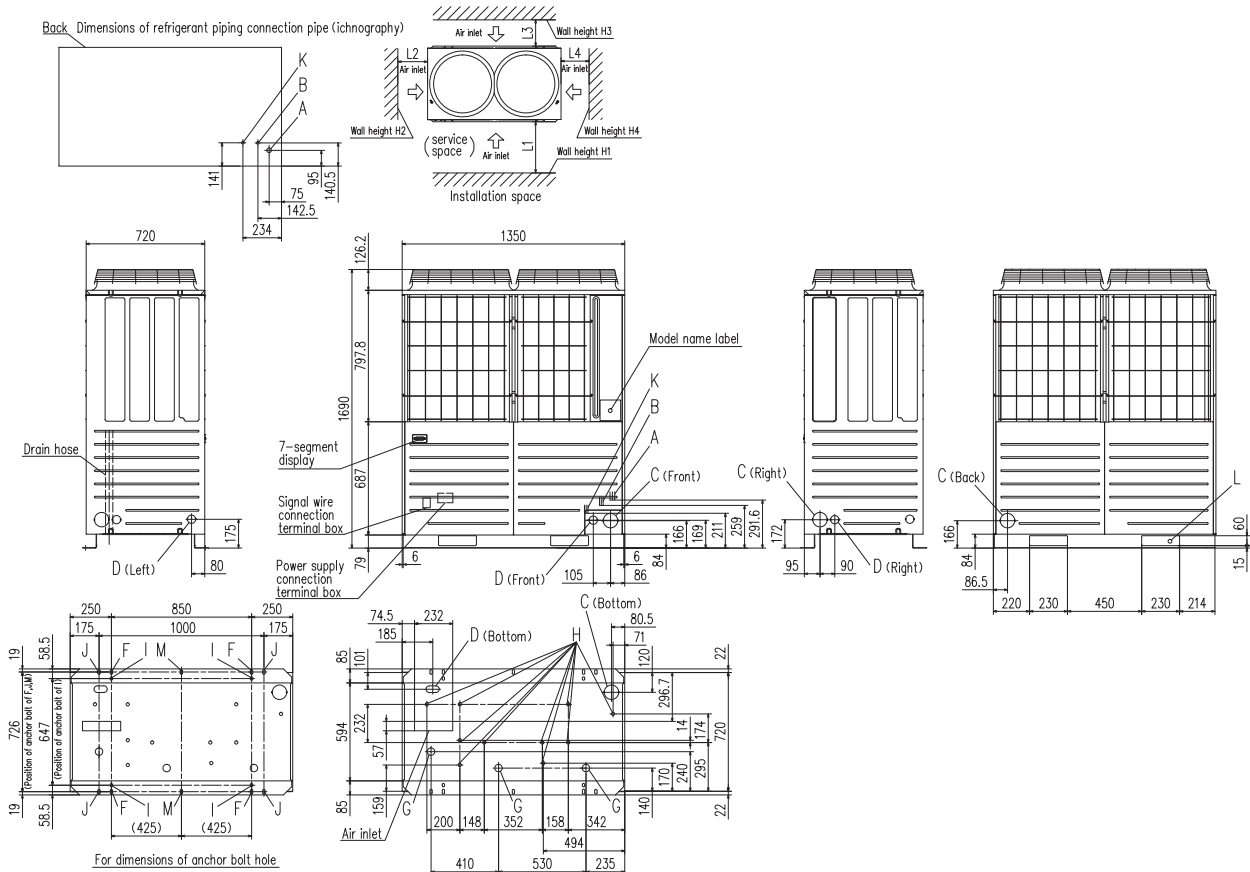
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
2. Sound pressure level indicates the value in an anechoic chamber. During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



Dimensions

All measurements in mm.

FDC224KXZE1

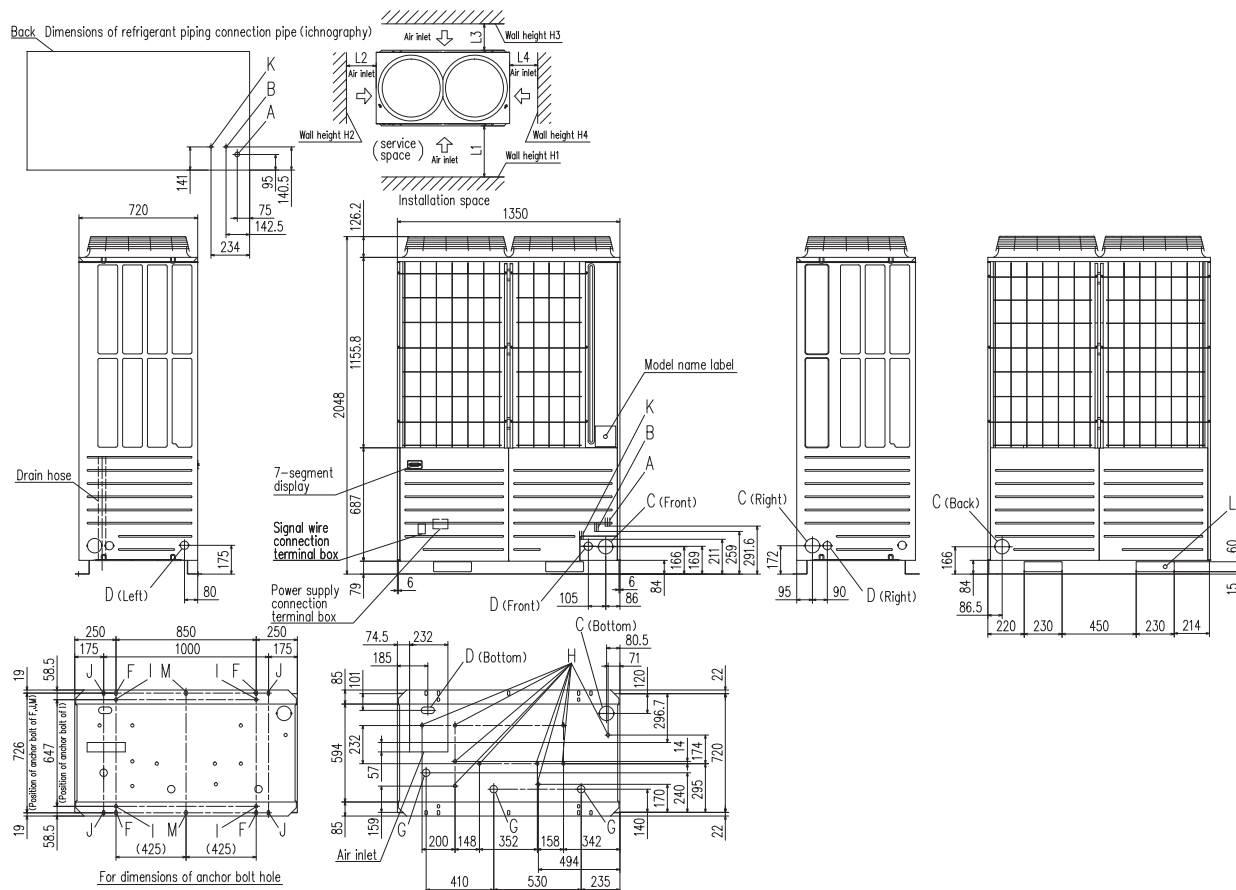


Mark	Content	224
A	Refrigerant gas piping connection pipe	ø19.05 (Brazing)
B	Refrigerant liquid piping connection pipe	ø9.52 (Flare)
C	Refrigerant piping exit hole	ø88 (or ø100)
D	Power supply entry hole	ø50 (Right · Left · Front), Long hole 40 x 80 (Bottom)
F	Anchor bolt hole	M10 x 4 places
G	Drain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

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

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

FDC280KXZE1, 335KXZE1



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

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

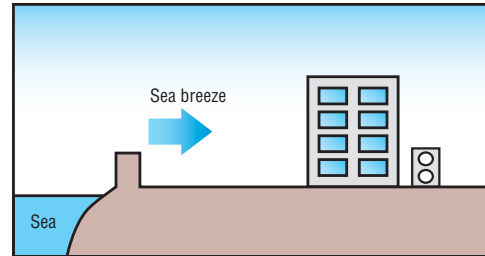
In case the ambient temperature becomes 43°C or higher during cooling operation



KX6 Corrosion Protection Treatment series

4~48HP (11.2kW~136.0kW)

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



Model No.	Nominal Cooling Capacity
FDCS112KXEN6	11.2kW (220V)
FDCS140KXEN6	14.0kW (220V)
FDCS155KXEN6	15.5kW (220V)
FDCS224KXE6M	22.4kW (220V)
FDCS280KXE6M	28.0kW (220V)
FDCS335KXE6M	33.5kW (220V)
FDCS335KXE6M-K	33.5kW (220V)
FDCS400KXE6M	40.0kW (220V)
FDCS450KXE6M	45.0kW (220V)
FDCS504KXE6M	50.4kW (220V)
FDCS560KXE6M	56.0kW (220V)
FDCS560KXE6M-K	56.0kW (220V)
FDCS615KXE6M	61.5kW (220V)
FDCS680KXE6M	68.0kW (220V)

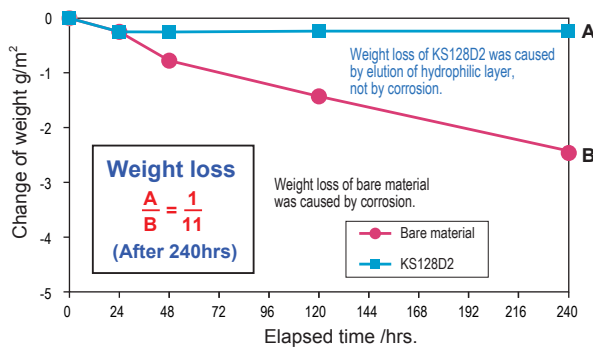
Model No.	Nominal Cooling Capacity
FDCS112KXES6	11.2kW (380V)
FDCS140KXES6	14.0kW (380V)
FDCS155KXES6	15.5kW (380V)
FDCS224KXE6G	22.4kW (380V)
FDCS280KXE6G	28.0kW (380V)
FDCS335KXE6G	33.5kW (380V)

- Combination systems:26~48HP (73.5kW~136.0kW) are the same as that of the standard KX6 series showed on previous pages.
- Specifications and Dimensions are the same as that of the standard KX6 series showed on previous pages.
- Non-CE Marking models.

Corrosion resistance performance of high anticorrosion fin

Comparison of weight loss by corrosion

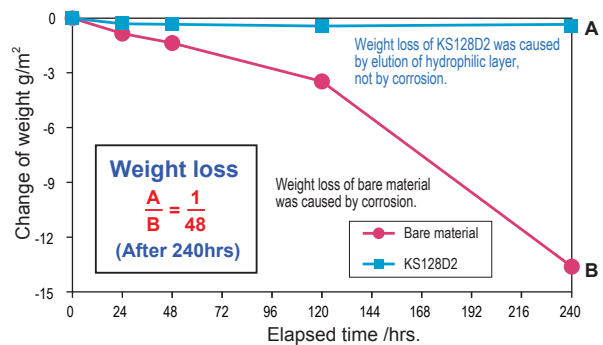
Neutral salt water spray test



<Test conditions>

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

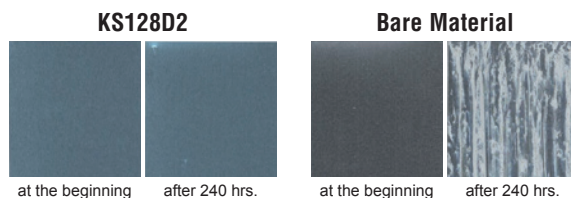
Acetic acid salt water spray test



<Test conditions>

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

Appearance comparison before and after acetic acid salt water spray test





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

Preventing corrosion by salt damage or sulfurous acid gas has made service life of KX6 series longer while its exterior appearance has been greatly improved.

Durability of KX6 series for anticorrosion is about two times that of standard outdoor units under the same conditions.

Additional treatment from the standard series

*FD3S335KXE6M-K, FD3S560KXE6M-K (For combination)

		4~12HP	12~20* · 14~24HP
Exterior panel		undercoat: Cation electrodeposition coating topcoat: polyester powder coating or acrylic baked coating	undercoat: Cation electrodeposition coating topcoat: acrylic baked coating
Base plate		undercoat: Cation electrodeposition coating topcoat: polyester powder coating or acrylic baked coating	undercoat: Cation electrodeposition coating topcoat: acrylic baked coating
Drain pan		—————	undercoat: Cation electrodeposition coating topcoat: acrylic baked coating
Fan motor		application of anticorrosion compound	application of anticorrosion compound
Fan motor base	4~6HP	—————	application of anticorrosion compound
	8~12HP	application of anticorrosion compound	
Heat exchanger	Fin	Precoated Aluminum Blue Fins in high anticorrosion specification	Precoated Aluminum Blue Fins in high anticorrosion specification
	pipe	application of anticorrosion compound	application of anticorrosion compound
	Side plate	application of anticorrosion compound	application of anticorrosion compound
Compressor		application of anticorrosion compound	application of anticorrosion compound
Accumulator		application of anticorrosion compound	application of anticorrosion compound
Receiver		application of anticorrosion compound	application of anticorrosion compound
Control box	4~6HP	—————	galvanized steel sheet + undercoat: Cation electrodeposition coating + topcoat: acrylic baked finish
	8~12HP	application of anticorrosion compound	
Baffle plate	4~6HP	—————	—————
	8~12HP	application of anticorrosion compound	
Service valve bracket	4~6HP	—————	galvanized steel sheet + undercoat: Cation electrodeposition coating + topcoat: acrylic baking finish
	8~12HP	application of anticorrosion compound	
Screw tap for exterior panel		zinc coating + chromate treatment + fluorine coating	zinc coating + chromate treatment + fluorine coating
Screw tap for inside of exterior panel		zinc coating + chromate treatment + fluorine coating	zinc coating + chromate treatment + fluorine coating

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

Caution

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

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

Installation

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

Maintenance

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



KX6 High Head series (100m) 14~48HP (40.0~136.0kW)

cooling only

Model No. Nominal Cooling Capacity

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

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

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

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

- Non-CE Marking models.

Model No. Nominal Cooling Capacity

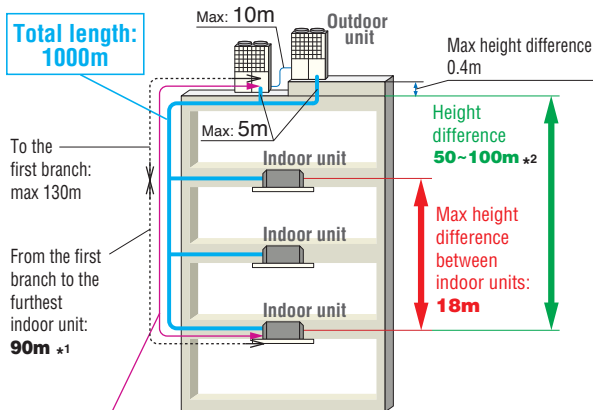
FDCH735CKXE6G (FDCH335-K+FDCH400)	73.5 kW(380V)
FDCH800CKXE6G (FDCH400x2)	80.0 kW(380V)
FDCH850CKXE6G (FDCH400+FDCH450)	85.0 kW(380V)
FDCH900CKXE6G (FDCH450x2)	90.0 kW(380V)
FDCH960CKXE6G (FDCH450+FDCH504)	96.0 kW(380V)
FDCH1010CKXE6G (FDCH504x2)	101.0 kW(380V)
FDCH1065CKXE6G (FDCH504+FDCH560)	106.5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



**FDCH335CKXE6G-K
FDCH400CKXE6G
FDCH450CKXE6G**



FDCH504~680CKXE6G

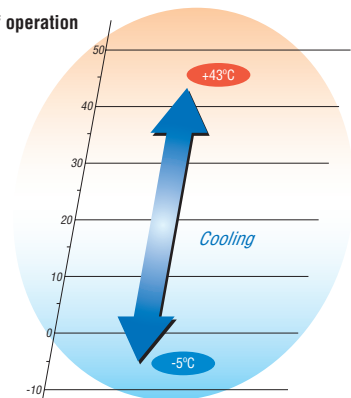


Furthest indoor unit : 160m

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

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

Range of operation



Specifications

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

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

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

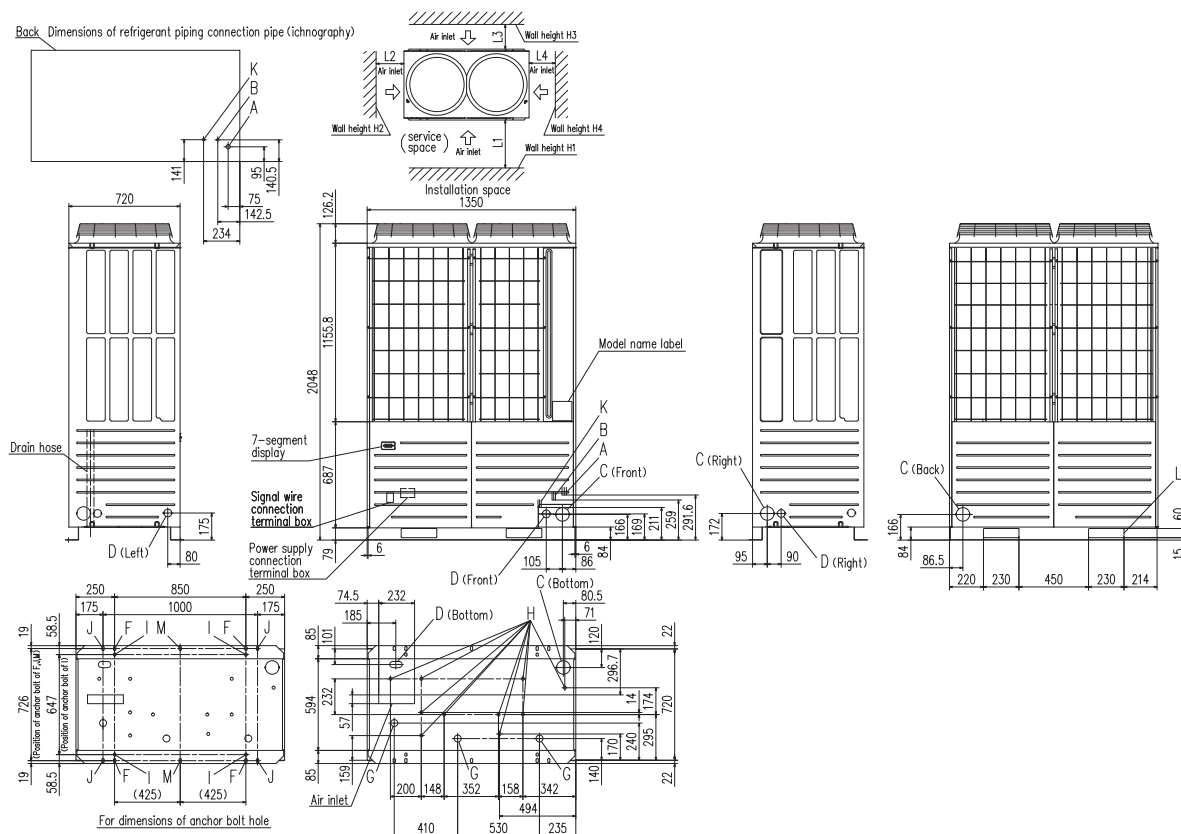
Item	Model	FDCH1180CKXE6G	FDCH1235CKXE6G	FDCH1300CKXE6G	FDCH1360CKXE6G		
Combination (FDCH)		560CKXE6G-K	615CKXE6G	615CKXE6G	680CKXE6G		
		615CKXE6G	615CKXE6G	680CKXE6G	680CKXE6G		
Nominal horse power		42HP	44HP	46HP	48HP		
Power source		3 Phase 380V, 60Hz					
Starting current	A	16					
Max current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

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

Dimensions

All measurements in mm.

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



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

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

Notes:

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

Before starting use

Heating performance

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

Indication of sound values

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

Use in oil atmosphere

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

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

Use in acidic or alkaline atmosphere

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

Use in places with high ceilings

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

Refrigerant leakage

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

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

Use in snowy areas

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

·Snow prevention

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

·Snow piling

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

Automatic defrosting device

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

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

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

Servicing the air-conditioner

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

⚠ Safety Precautions

Air-conditioner usage target

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

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

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

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

Before use

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

Installation

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

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

Usage place

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

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



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CE
Not on
FDCS, FDCH series