R410A

eco-lution

High Performance Air Conditioning

HyperMulti KX

VRF inverter multi-system
air-conditioning products

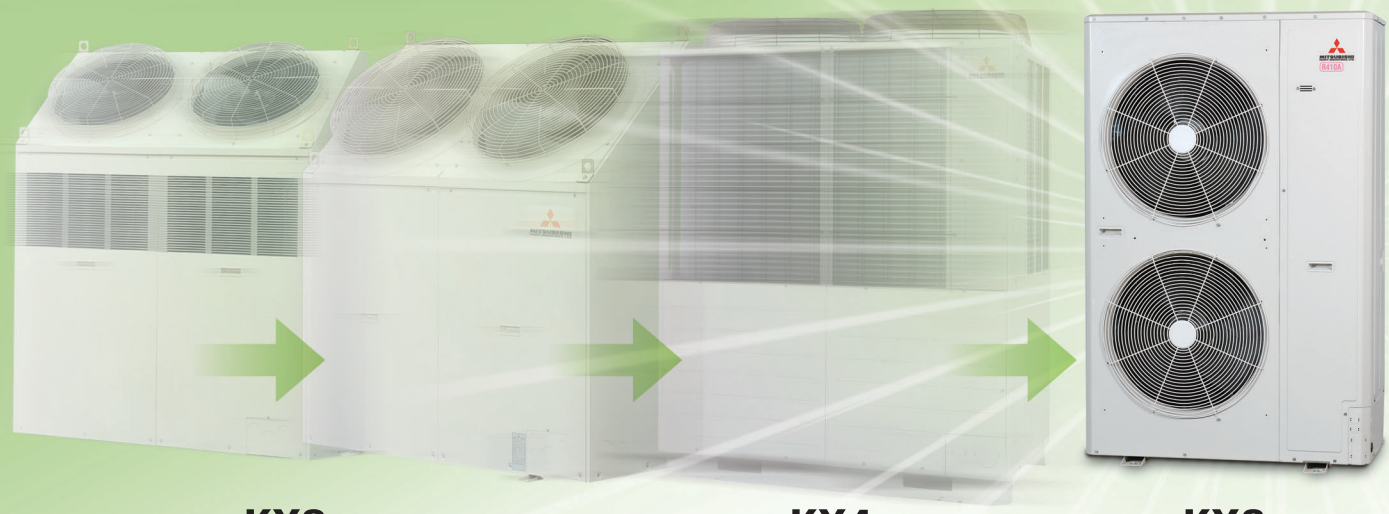
MITSUBISHI HEAVY INDUSTRIES, LTD.

50Hz

09KX01E-A-0

History of Technologies

more efficient , more sophisticated



KX2 KX4 KX6 (8~12HP)

New Line Up

MicroKX

KX6

Contents

Product Line Up

<Outdoor units>

from 11.2kW up to 136.0kW(24models)

1 Outdoor unit type												
Capacity	4HP	5HP	6HP	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP
Model Index	11.2	14.0	15.5	22.4	28.0	33.5	40.0	45.0	50.4	56.0	61.5	68.0

2 Outdoor units type												
Capacity	26HP	28HP	30HP	32HP	34HP	36HP	38HP	40HP	42HP	44HP	46HP	48HP
Model Index	73.5	80.0	85.0	90.0	96.0	101.0	106.5	113.0	118.0	123.5	130.0	136.0

MicroKX

4HP	5HP	6HP
FDC112KXEN6	FDC140KXEN6	FDC155KXEN6
FDC112KXES6	FDC140KXES6	FDC155KXES6

☐ 1-phase
☐ 3-phase

MicroKX

8HP	10HP	12HP
FDC224KXE6	FDC280KXE6	FDC335KXE6

KX6

12HP	14HP	16HP	18HP
FDC335KXE6-K	FDC400KXE6	FDC450KXE6	FDC504KXE6

20HP	20HP	22HP	24HP
FDC560KXE6	FDC560KXE6-K	FDC615KXE6	FDC680KXE6

KX6

26HP	28HP	30HP	32HP	34HP	36HP
FDC735KXE6	FDC800KXE6	FDC850KXE6	FDC900KXE6	FDC960KXE6	FDC1010KXE6
12+14	14+14	14+16	16+16	16+18	18+18
FDC335KXE6-K FDC400KXE6	FDC400KXE6 FDC400KXE6	FDC400KXE6 FDC450KXE6	FDC450KXE6 FDC450KXE6	FDC450KXE6 FDC504KXE6	FDC504KXE6 FDC504KXE6

38HP	40HP	42HP	44HP	46HP	48HP
FDC1065KXE6	FDC1130KXE6	FDC1180KXE6	FDC1235KXE6	FDC1300KXE6	FDC1360KXE6
18+20	20+20	20+22	22+22	22+24	24+24
FDC504KXE6 FDC560KXE6	FDC560KXE6 FDC560KXE6	FDC560KXE6-K FDC615KXE6	FDC615KXE6 FDC615KXE6	FDC615KXE6 FDC680KXE6	FDC680KXE6 FDC680KXE6

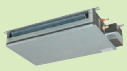
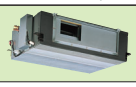
1.FDC335KXE6(12HP), FDC560KXE6-K, FDC615KXE6(22HP) & FDC680KXE6(24HP)are applied 3D compressor.
2.FDC335KXE6-K & FDC560KXE6-K are only used for combining with other models.

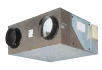
<Indoor units>

Wide variety of 15 types 77 models

A range of 15 types of exposed or concealed indoor units, in wide capacities, 77 indoor models. The best selection of indoor units for many kinds of rooms and preference can be available from our full lineup.

Indoor units lineup 15 types 77 models

Type			Capacity	0.8HP	1HP	1.25HP	1.6HP	2HP	2.5HP	3.2HP	4HP	5HP	6HP	8HP	10HP
			Model Index	22	28	36	45	56	71	90	112	140	160	224	280
Ceiling Cassette	4way	FDT			●	●	●	●	●	●	●	●	●		
	4way Compact (600 x 600)	FDTC		●	●	●	●	●							
	2way	FDTW			●		●	●	●	●	●	●			
	1way Compact	FDTQ		●	●	●									
	1way	FDTS					●		●						
Duct Connected	High Static Pressure	FDU							●	●	●	●		●	●
	Low/Middle Static Pressure	FDUM		●	●	●	●	●	●	●	●	●			
	Low Static Pressure (Ultra thin)	FDQS		●	●	●	●	●							
	Compact & Flexible	FDUH		●	●	●									
Wall Mounted		FDK		●	●	●	●	●	●						
Ceiling Suspended		FDE				●	●	●	●		●	●			
Floor Standing	with casing	FDFL			●		●		●						
	without casing	FDFU			●		●	●	●						
OA Processing unit		FDU-F								●		●		●	●

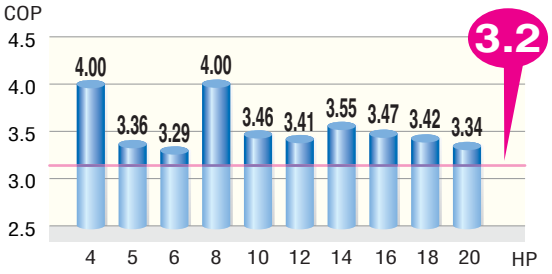
Type		Air flow M³/h	250	350	500	800	1000
Fresh Air Ventilation and Heat Exchange unit	SAF		●	●	●	●	●

1. High Efficiency

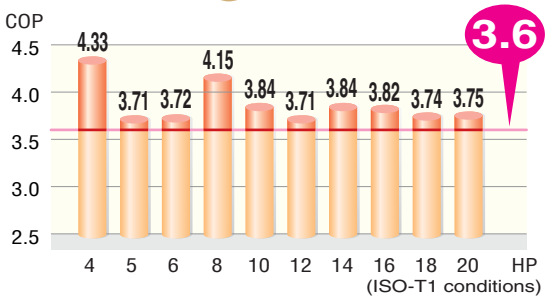
The industry's highest COP levels

We have cleared the class A standard, the highest energy saving level, with our high COP (Coefficient Of Performance).

EER in Cooling



COP in Heating



*COP = Capacity[kW] / Power Consumption[kW]
*COP across the KX6 range ensures reduced running costs and reduced environmental impact.

2. Compact Design

4~6HP

Volume
35% reduced
Weight
34% reduced

1FAN

Previous Model
H1300 x W970 x D370mm
125kg / 0.47m³

- **Transportation Becomes much easier**
- **Easier to hide behind the fence (Harmonic Appearance)**

New Model
H845 x W970 x D370mm
82kg / 0.30m³

8~12HP

Volume
47% reduced
Weight
10% reduced

2FAN

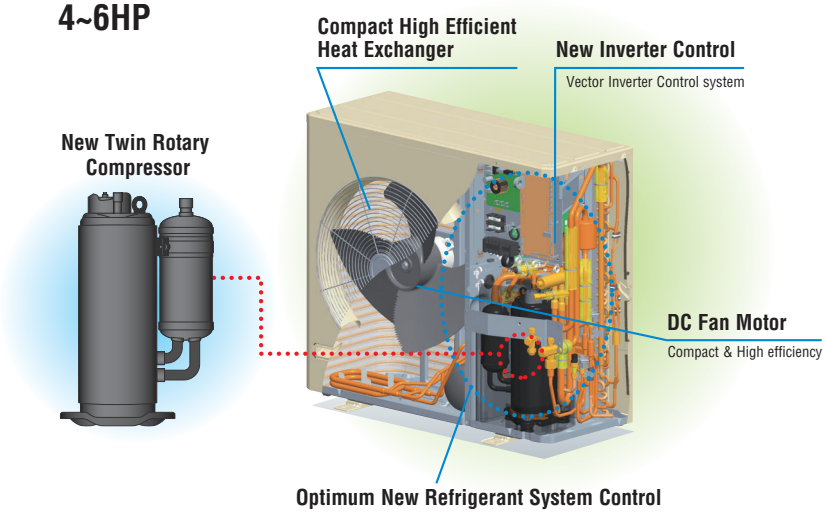
Previous Model
H1690 x W1350 x D720mm
245kg / 0.97m³

- **Transportation Becomes much easier**

New Model
H1675 x W1080 x D480mm
221kg / 0.52m³ (FDC224KXE6)

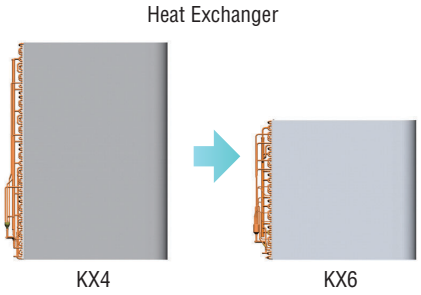
High efficiency and compact design are realized applying the various advanced functions

4~6HP

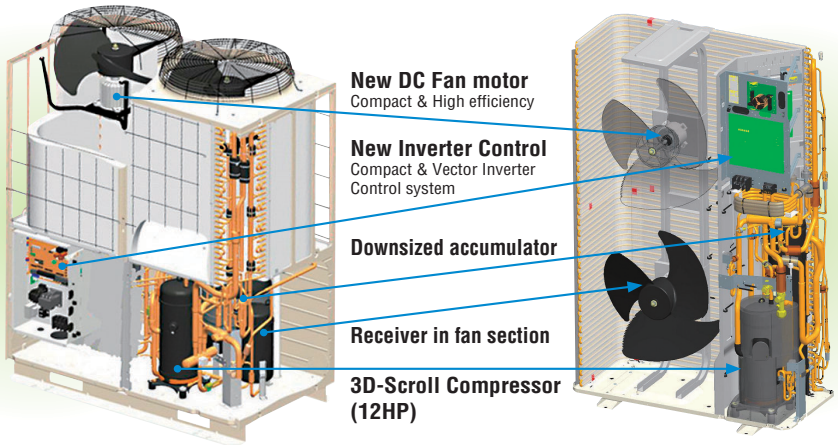


Compact high efficiency Heat Exchanger

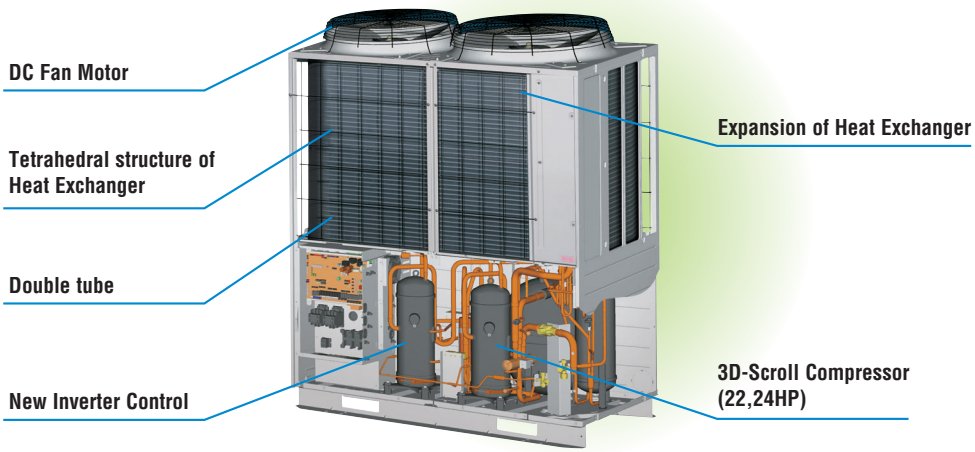
- Optimizing relationship of the air flow velocity & fin pattern
- Improvement of air distribution Maximizing efficiency of heat exchanger



8~12HP

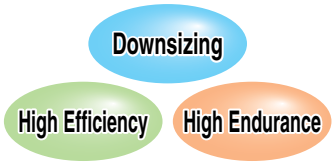


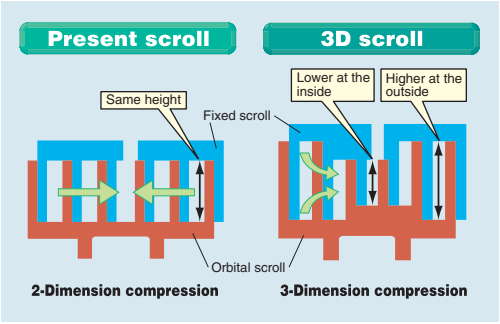
14~48HP



3D Scroll Compressor

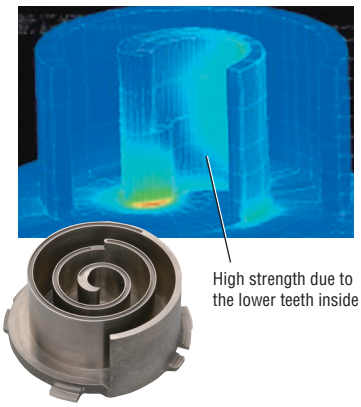
Unit start up speed in heating mode drastically improved for lower outdoor temperature operation.





3D scroll compressor has the different height scroll at the outside and the inside.

A high compression ratio is improved by compressing the refrigerant both radially and axially.
3-Dimension Compression has been realized with a much higher efficiency even if compression ratio is high.



The strength of the scroll is improved by reducing the height of the inner wrap, which receives a heavy load.

New Inverter Control (Vector control)

New Inverter Control has applied new advanced technology of Vector control and has realized high efficiency.

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

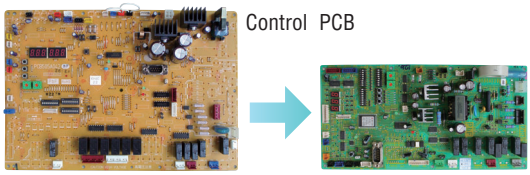
Optimum Refrigerant System Control

We have improved refrigeration circuit from our long experience and have realized following Optimum Refrigerant System Control.

- Optimum heat exchanger refrigerant distribution
- Advanced refrigerant liquid return protection control system
- High speed system control by new Superlink system
- Use of larger diameter for suction piping and discharge piping and redesigned of double tube

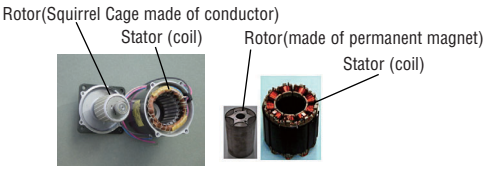
Compact Integrated PCB

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



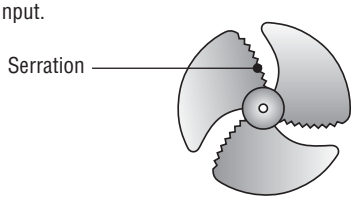
DC Fan Motor

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



Long-chorded 3 propeller fan with serration

Fan blade design adapted from MHI's aerospace division - with serrated edges that deliver increased air volume with less power input.



3. Design Flexibility

Increased indoor unit connection capacity

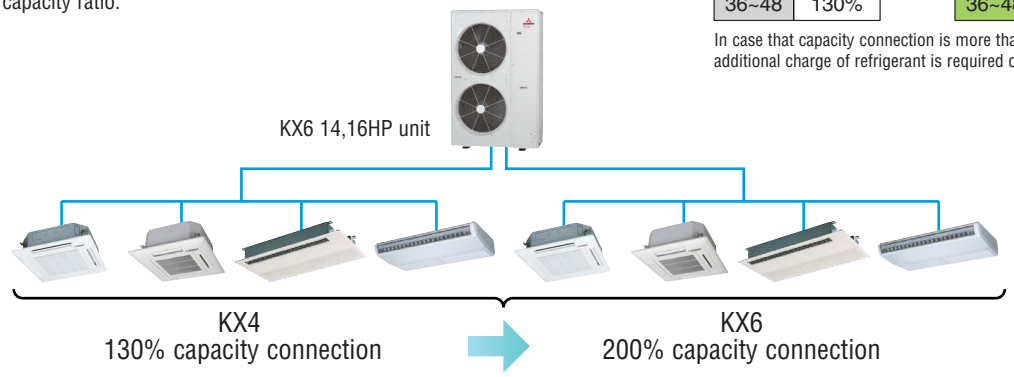
KX6 series(4~34HP) can connect indoor unit capacity up to 150~200% from 130% of previous models.
If the connection capacity of indoor units is more than 100%, capacity of each indoor unit may be affected by connection capacity ratio.

Capacity connection

HP	KX4
4~12	130%
14,16	130%
18~34	130%
36~48	130%

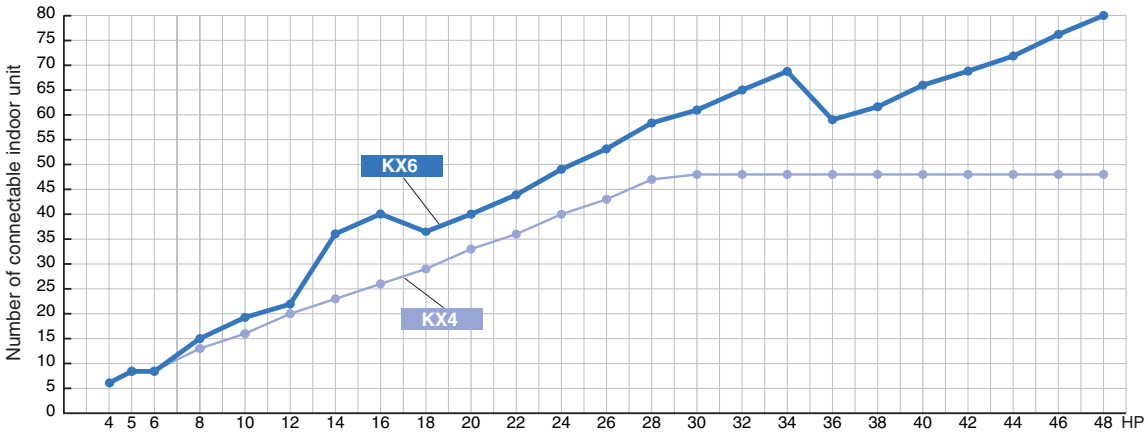
HP	KX6
4~12	**150%**
14,16	**200%**
18~34	**160%**
36~48	130%

In case that capacity connection is more than 130%, additional charge of refrigerant is required on site.



More connectable indoor units

KX6 enable more connectable indoor units (per kW), compared with former model KX4.



Control Systems

KX6 series offer wide variation of control system and provide the best solution.

[KX6 Control system units with "New" SUPERLINK-Ⅱ]

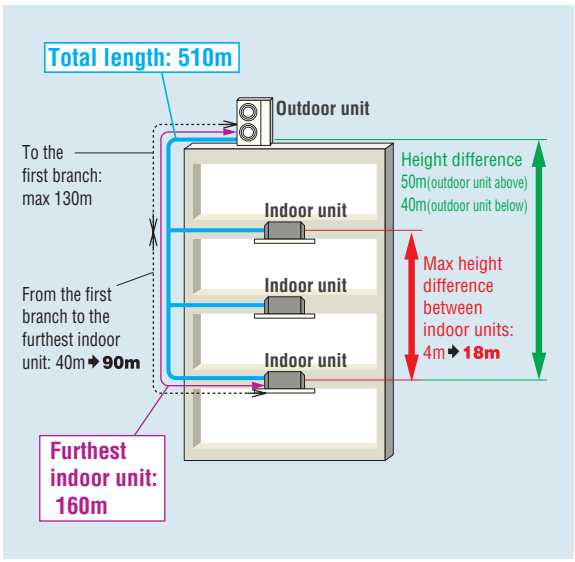
Classification	Type		Model	Connectable Indoor units (Maximum)	Electric power calculation
Individual controller	Wired		**RC-E3**	1	—
	Wireless		**RCN-T-36W-E etc.**	1	—
Center Console	Push buttons		**SC-SL1N-E**	16	—
			SC-SL2N-E	64	—
	Touch screen		**SC-SL3N-AE**	128	—
			SC-SL3N-BE	128	●
	PC windows interface units		**SC-WGWN-A**	128(64x2)	—
			SC-WGWN-B	128(64x2)	●
	BMS interface units	BACnet	**SC-BGWN-A**	128(64x2)	—
			SC-BGWN-B	128(64x2)	●
		Lonworks	**SC-LGWN-A**	96(48x2)	—

Long Pipe Length

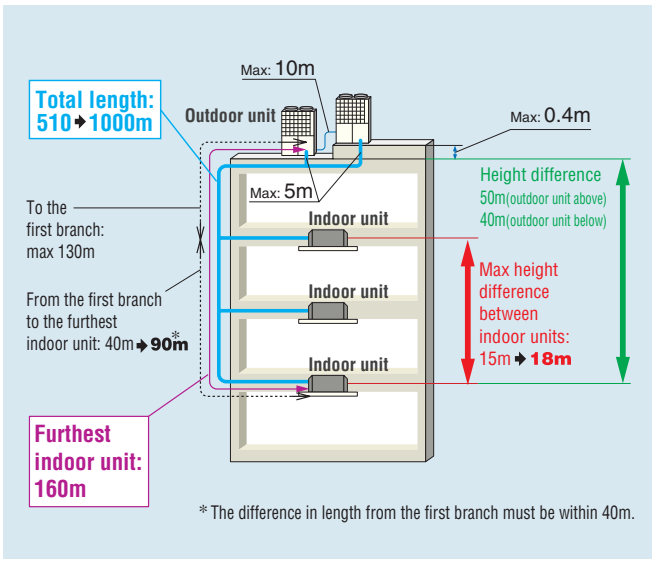
Piping length has extended max height difference between indoor units from 4m to 18m and enables us to put indoor unit on extra three floors.

As a result of the adoption of thinner refrigerant piping and refrigerant volume reductions, the industry's longest 160 m actual piping length or 1000m total piping length is realized.

8~12HP



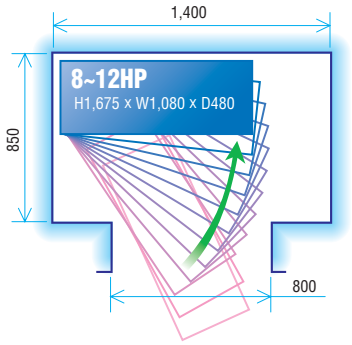
14~48HP

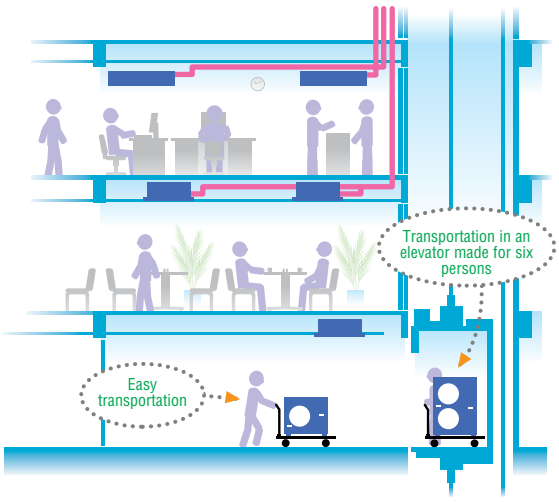


(1)Divide up the refrigerant system into independent refrigeration circuit systems in case required additional refrigerant on site is 50kg or more for 14~24HP and 100kg or more for 26~48HP.
(2)In case indoor unit connection capacity is 130% or more or total piping length is 510m or more, additional charge of refrigerant and oil on site is required. Refer to our Installation Manual for details.

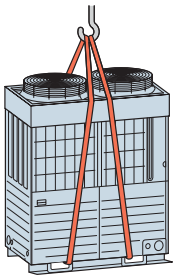
Easy Transportation & Installation

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.



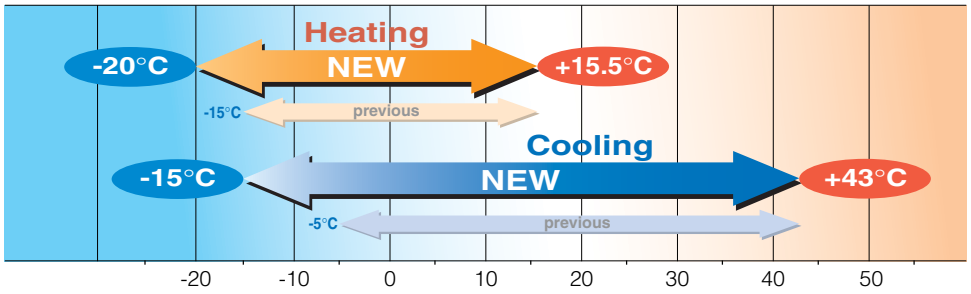


KX6(14~48HP) is portable and the uniform reduced footprint allows neat, continuous installation.



Range of Operation

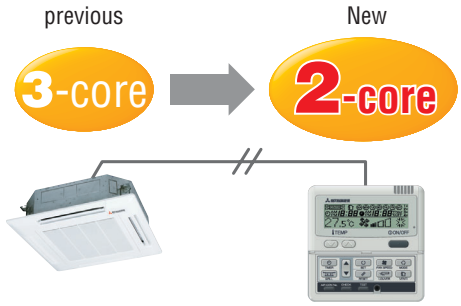
KX6 series permits a system design considering a heating range operation under a low temperature condition up to -20°C from -15°C of previous model and a cooling range operation under -15°C from -5°C of that.



✻For the capacities under low temperature conditions, refer to technical manual.

New remote control for all indoor units

Applying nonpolar 2-core in new remote control line, it is very convenient for installation including renewal case.



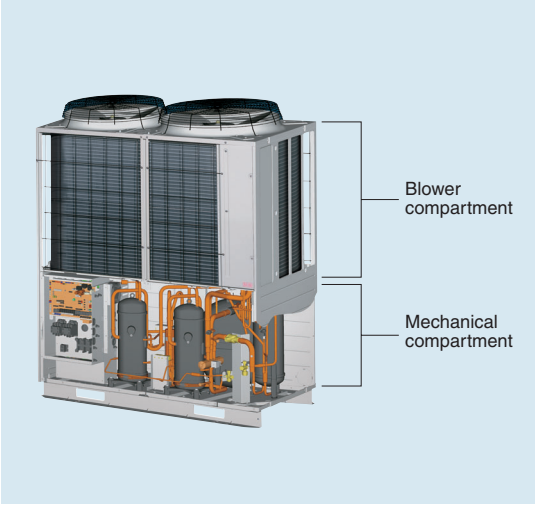
Max length of electrical wiring

The wiring must be a 2-core shielded cable size 0.75mm^2 to 1.25mm^2.
The max length of 2-core can be 1500m from 1000m of previous models.

4. Serviceability

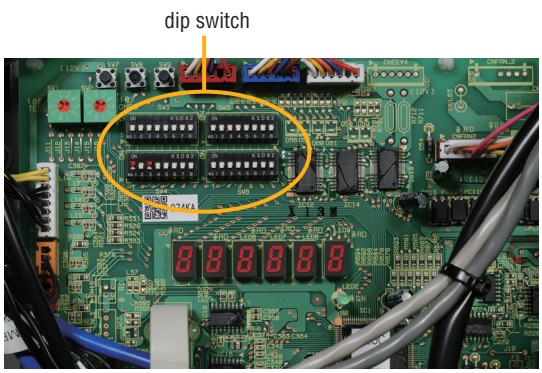
Easy Service

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



Check Operation (8~48HP)

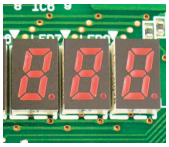
Closing of Service valve, crossing connection of refrigerant piping and electrical wiring, proper operation of EEV (Electrical Expansion Valve) can be checked automatically in cooling operation. This check operation can be done at 0~43°C outdoor temperature and 10~32°C indoor temperature by use of outdoor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



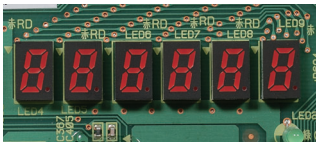
Monitoring Function

KX6 series includes new feature to assist with servicing and trouble shooting.
Various data can be monitored through 3-degit display on the outdoor unit PCB.

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

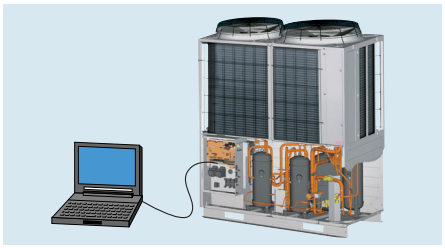


4~6HP



8~48HP

Equipped with RS232C for connection directly to your PC monitoring and service tasks made simple with our service software (“Mente PC”).
all KX6 series

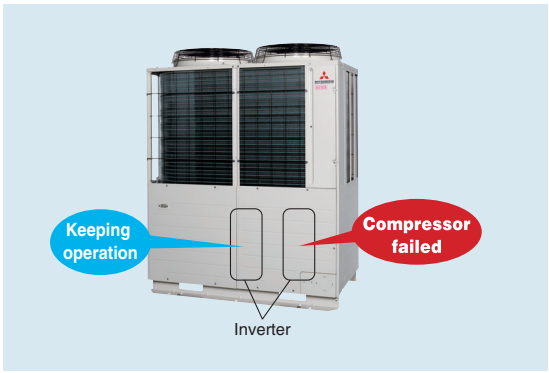


3 Layer Construction (14~48HP)

Thanks to improvement of control box structure from 4 to 3 layer construction and by use of hinged lays, service and maintenance has been made much easier for inverter components.

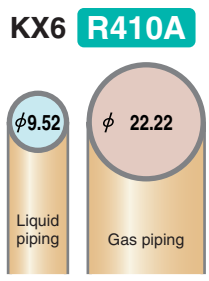
Back-up Operation

In, 2-compressor module, in the event of the compressor failure, the system will keep operating with good compressor. In combined module, in the event that one unit has a failure, the system will keep operating with another unit.



Reduced Refrigerant Volume

To use the new refrigerant R410A, KX6 series have adopted thinner diameter refrigerant pipes, which will help reduce piping work cost.



ex.10HP

Outdoor unit

HP	KX6	
	Liquid piping	Gas piping
4	ø9.52	ø15.88
5		
6		
8		ø19.05
10		ø22.22
12	ø12.7	ø25.4[ø28.58]
14		
16		ø28.58
18		
20		
22		
24		
26	ø15.88	ø31.8[ø34.92]
28		
30		
32		
34		
36		ø38.1[ø34.92]
38	ø19.05	
40		
42		
44		
46		
48		

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

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

Blue Fin

Due to application of blue coated fins (KS101) for the heat exchanger of new outdoor unit, corrosion resistance has been improved compared to current models.

Refrigerant charge amount check function

(1)It is supplementary function. Weight of refrigerant charge amount should be measured in any case.
(2)In case check result is not satisfied, it is necessary to take countermeasure.
(3)Even in case check result is ok, it might vary with different temperature conditions. So that only one time check can not cover every temperature condition. For the safety sake it is recommended to check refrigerant charge amount continuously every year.
(4)Refer to operation manual for details.

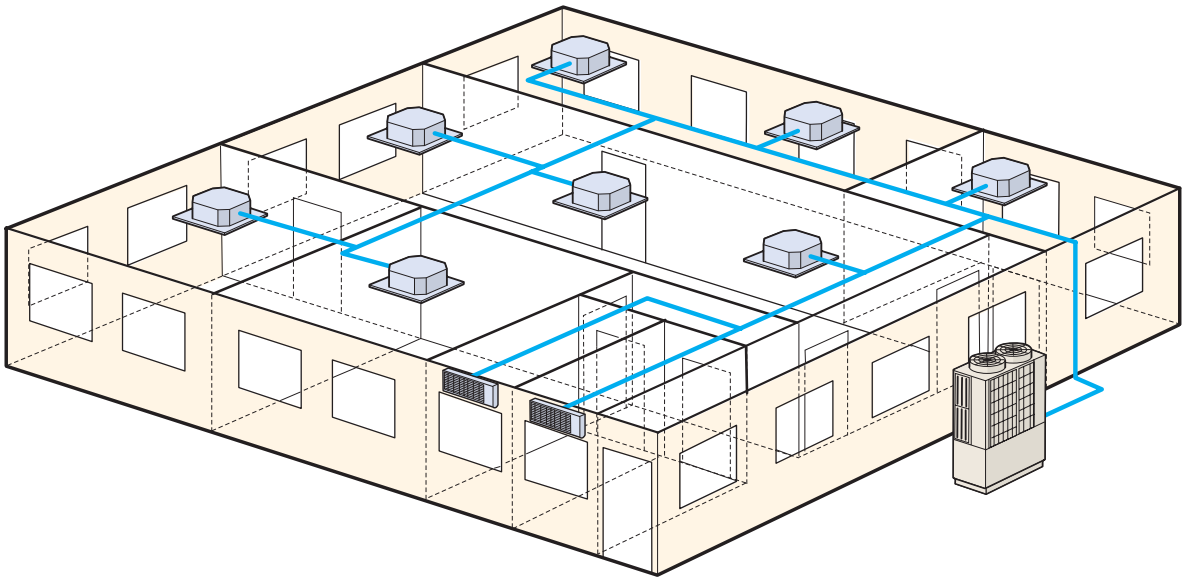
KX6 heat pump systems

KX6 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 (with "Micro KX", 1/phase system) 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 the largest capacity single outdoor unit in the industry (24hp) with 68.0kW cooling capacity. Outdoor units can also be “twinned” providing up to 48HP/136.0kW on a single system.

The KX6 range has a total piping length of 1000m (14HP+) and the furthest indoor unit can be connected up to 160m (8HP+) from the outdoor unit.



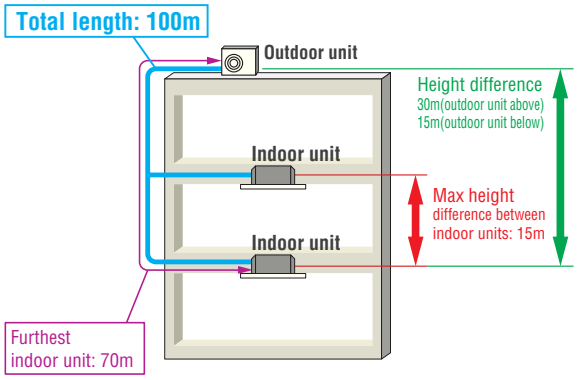
Fixed Cooling mode/fixed heating mode (summer/winter switch):
It is possible to fix the operational mode of the system (either cooling or heating) using a switch (SW3-7) on the outdoor unit PC board - this enables the building user to decide the operation of the system (e.g. cooling only in summer/heating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

MicroKX Outdoor units
Heat pump systems 4, 5, 6hp (11.2kW~15.5kW)

Model No.	Nominal Cooling Capacity
FDC112KXEN6	11.2kW (1phase)
FDC140KXEN6	14.0kW (1phase)
FDC155KXEN6	15.5kW (1phase)
FDC112KXES6	11.2kW (3phase)
FDC140KXES6	14.0kW (3phase)
FDC155KXES6	15.5kW (3phase)

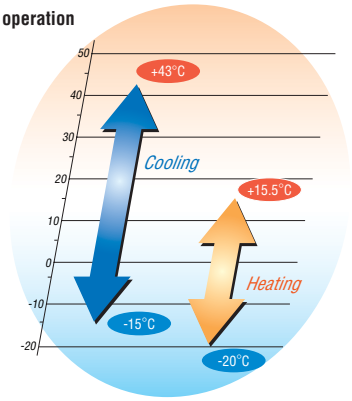
Blue Fin

- The KX6 heat pump 2-pipe systems offer high performance VRF for applications that require either cooling only or heating only, ideal for open plan areas.
- Connect up to 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.



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

Range of operation



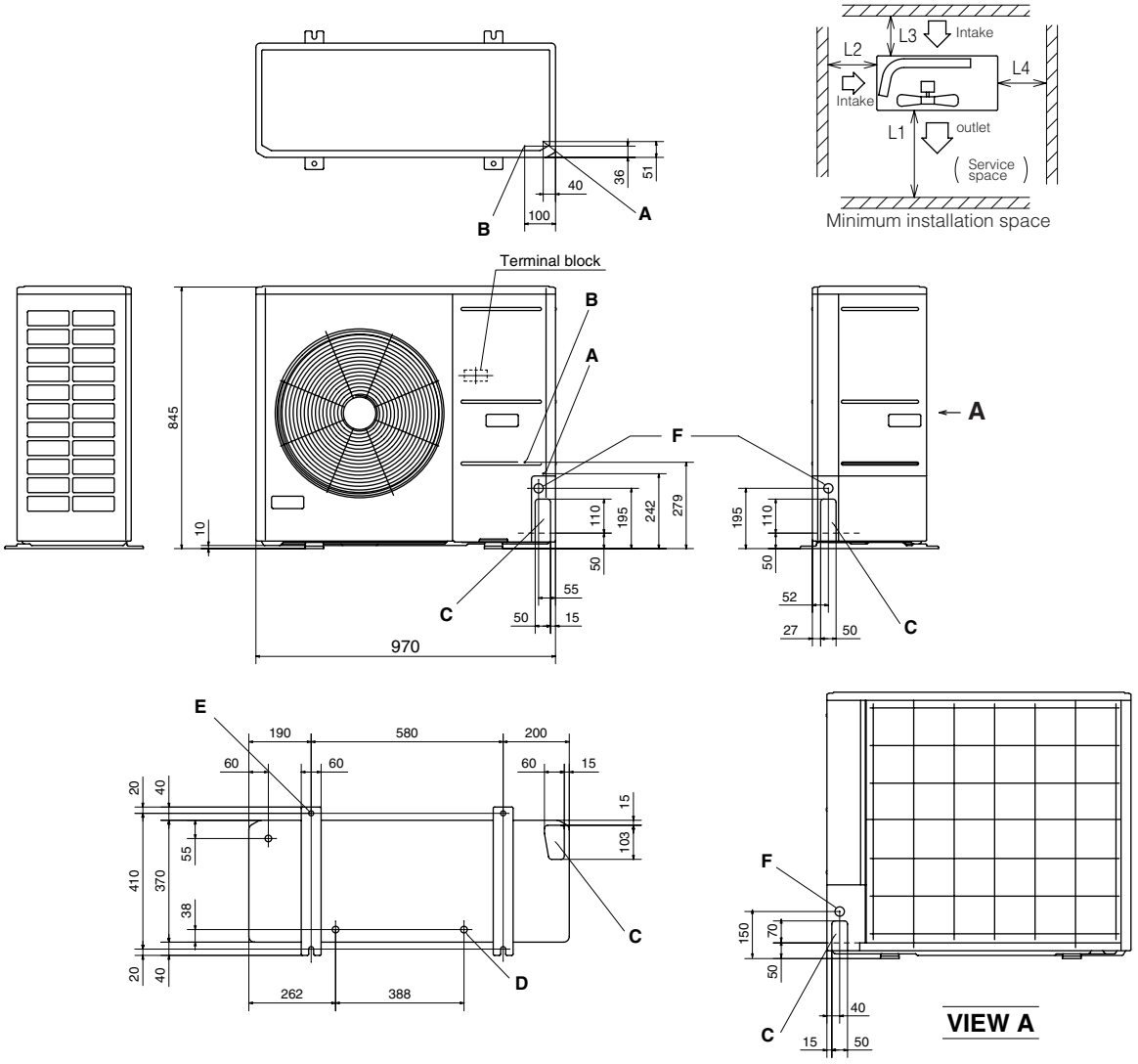
Specifications

Item			Model	FDC112KXEN6	FDC140KXEN6	FDC155KXEN6	FDC112KXES6	FDC140KXES6	FDC155KXES6
Nominal horse power				4HP	5HP	6HP	4HP	5HP	6HP
Power source				1 Phase 220-240V, 50Hz			3 Phase 380-415V, 50Hz		
Nominal capacity	Cooling		kW	11.2	14.0	15.5	11.2	14.0	15.5
	Heating			12.5	16.0	16.3	12.5	16.0	16.3
Electrical characteristics	Starting current		A	5					
	Power consumption	Cooling	kW	2.80	4.17	4.71	2.80	4.17	4.71
		Heating		2.89	4.31	4.38	2.89	4.31	4.38
	Running current	Cooling	A	13.5-12.4	20.6-18.9	23.3-21.3	4.5-4.1	6.9-6.3	7.8-7.1
		Heating		14.1-12.9	21.5-19.7	21.9-20.1	4.7-4.3	7.2-6.6	7.3-6.7
Exterior dimensions	HxWxD		mm	845x970x370					
Net weight			kg	82					
Refrigerant charge	R410A		kg	5.0					
Sound pressure level	Cooling/Heating		dB(A)	52/54	53/55	53/56	52/54	53/55	53/56
Refrigerant piping size	Liquid line		mm(in)	ø9.52(3/8")					
	Gas line			ø15.88(5/8")					
Capacity connection			%	50~150					
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.

Dimensions

All measurements in mm.



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

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

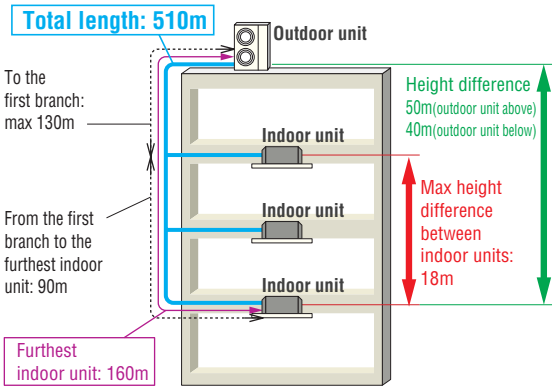
1m overhead clearance required

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 unit name plate is attached on the lower right corner of the front panel.

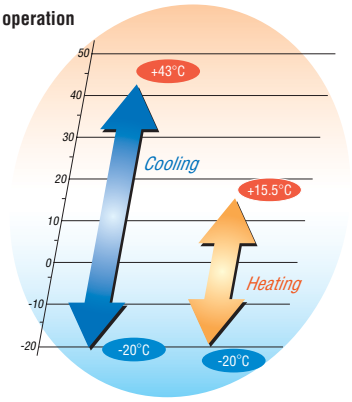
MicroKX Outdoor units
Heat pump systems 8, 10, 12hp (22.4kW~33.5kW)

Model No.	Nominal Cooling Capacity
FDC224KXE6	22.4kW
FDC280KXE6	28.0kW
FDC335KXE6	33.5kW

- The KX6 heat pump 2-pipe systems offer high performance VRF for applications that require either cooling only or heating only, ideal for open plan areas.
- Connect up to 22 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.



Range of operation



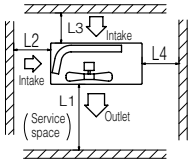
Specifications

Item			Model	FDC224KXE6	FDC280KXE6	FDC335KXE6
Nominal horse power				8HP	10HP	12HP
Power source				3 Phase 380V-415V, 50Hz		
Nominal capacity	Cooling		kW	22.4	28.0	33.5
	Heating			25.0	31.5	37.5
Electrical characteristics	Starting current		A	5		
	Power consumption	Cooling	kW	5.60	8.09	9.82
		Heating		6.03	8.21	10.12
	Operating current	Cooling	A	9.25-8.47	13.22-12.10	15.87-14.53
		Heating		9.85-9.02	13.41-12.28	16.36-14.98
Exterior dimensions	HxWxD		mm	1675x1080x480		
Net weight			kg	221		224
Refrigerant charge	R410A		kg	11.5		
Sound pressure level	Cooling/Heating		dB(A)	58/58	59/60	61/61
Refrigerant piping size	Liquid line		mm(in)	ø9.52(3/8")		ø12.7(1/2")
	Gas line			ø19.05(3/4")	ø22.22(7/8")	ø25.4(1") [ø28.58(1 1/8")]
Capacity connection			%	50~150		
Number of connectable indoor units				15	19	22

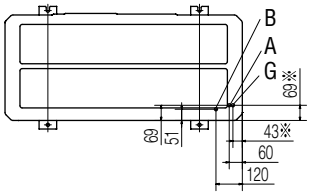
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB. Piping length is 7.5m.
2. Sound pressure level indicates the value in an anechoic chamber. During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

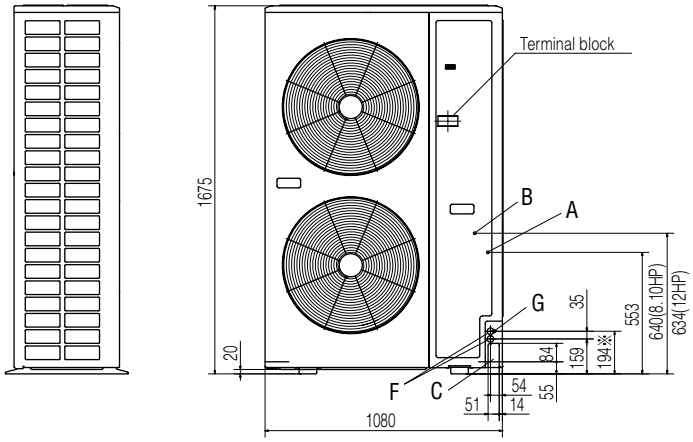
Dimensions

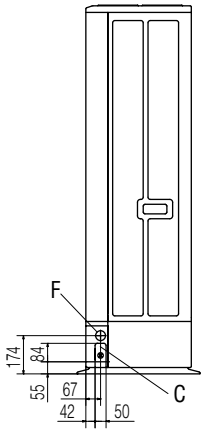
All measurements in mm.

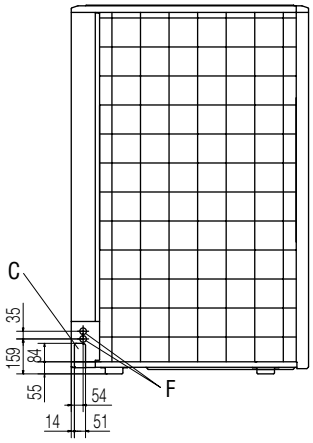


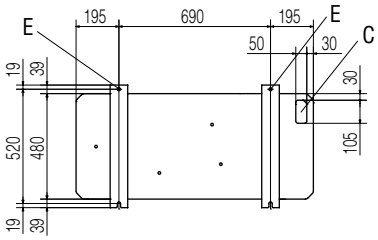
Minimum installation space

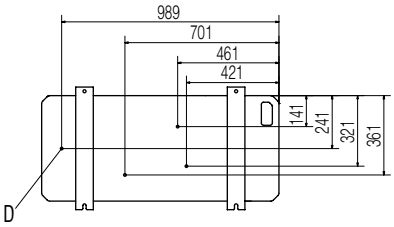












Mark	Item	FDC224KXE6	FDC280KXE6	FDC335KXE6
A	Service valve connection of the attached connecting pipe (gas side)	ø19.05 (3/4") (Flare)	ø19.05 (3/4") (Flare)	ø19.05 (3/4") (Flare)
B	Service valve connection (liquid side)	ø9.52 (3/8") (Flare)	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)
C	Pipe/cable draw-out hole			
D	Drain discharge hole	ø20 x 4places	ø20 x 4places	ø20 x 4places
E	Anchor bolt hole	M10 x 4places	M10 x 4places	M10 x 4places
F	Cable draw-out hole	ø30 x 2places (front) ø45 (side) ø30 x 2places (back)	ø30 x 2places (front) ø45 (side) ø30 x 2places (back)	ø30 x 2places (front) ø45 (side) ø30 x 2places (back)
G	Connecting position of the local pipe. (gas side)	ø19.05 (3/4")(Brazing)	ø22.22 (7/8")(Brazing)	ø25.4 (1")(Brazing)

Notes:
(1) It must not be surrounded by walls on the four sides.
(2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
(3) Where the unit is subject to strong winds, 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)

	I	II	II
L_1	Open	Open	1500
L_2	300	5	Open
L_3	300	300	300
L_4	5	5	5

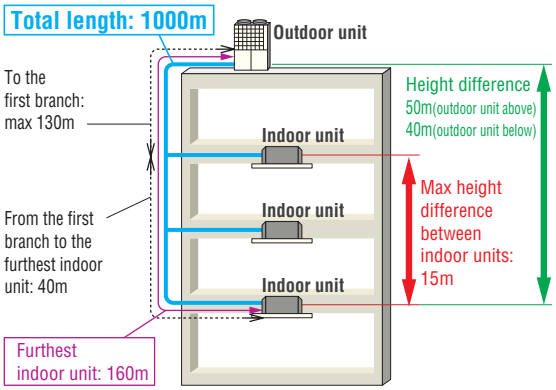
KX6 Outdoor units
Heat pump systems 14, 16hp (40.0kW~45.0kW)

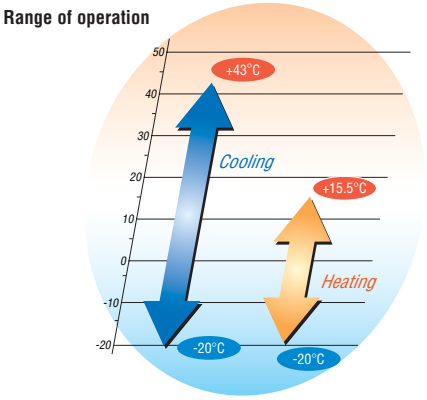
Model No.	Nominal Cooling Capacity
FDC400KXE6	40.0kW
FDC450KXE6	45.0kW

Blue Fin

Uniform footprint of models (14,16hp) allows continuous side-by-side installation

- The KX6 heat pump 2-pipe systems offer high performance VRF for applications that require either cooling only or heating only, ideal for open plan areas.
- Connect up to 40 indoor units/up to 200% capacity.
- High efficiency with COP (in cooling) up to 3.6.
- KX6 employs DC inverter compressors ONLY.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.





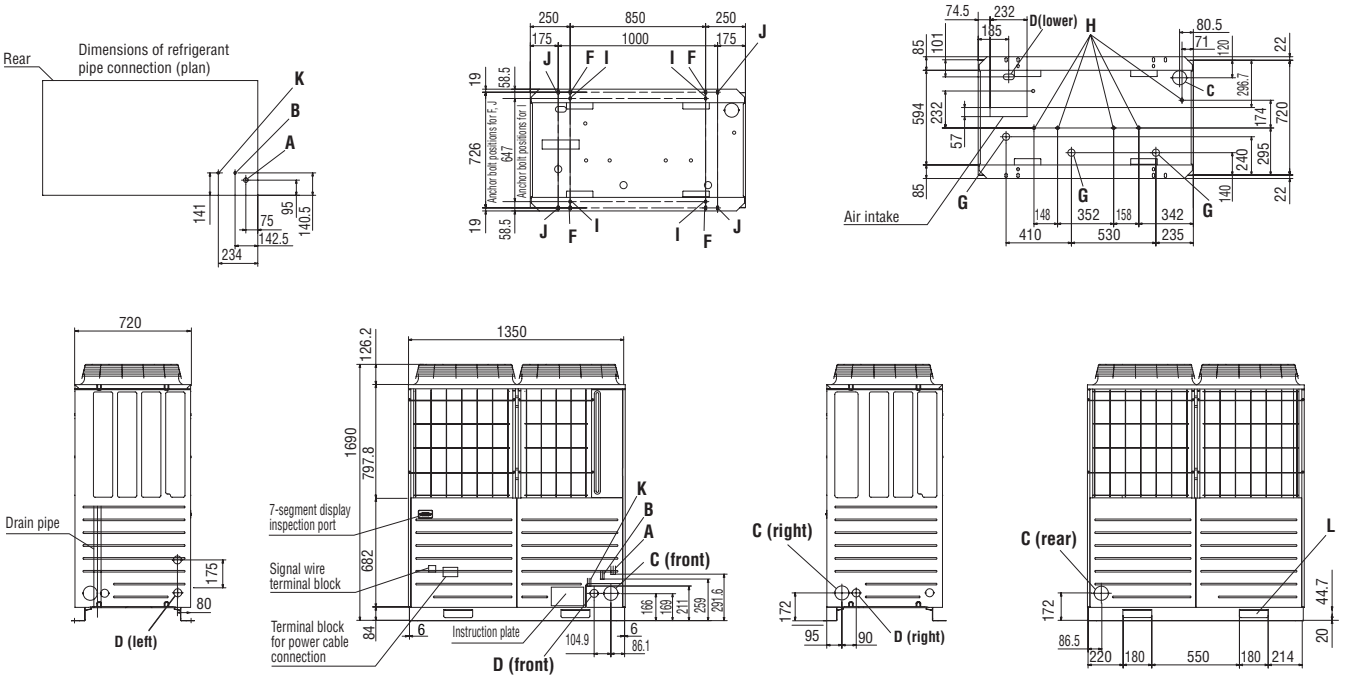
Specifications

Item			Model	FDC400KXE6	FDC450KXE6
Nominal horse power				14HP	16HP
Power source				3 Phase 380-415V, 50Hz	
Nominal capacity	Cooling		kW	40.0	45.0
	Heating			45.0	50.0
Electrical characteristics	Starting current		A	8	
	Power consumption	Cooling	kW	11.27	12.97
		Heating		11.73	13.10
	Operating current	Cooling	A	18.4-16.9	21.1-19.3
		Heating		19.6-17.9	21.719.9
Exterior dimensions	HxWxD		mm	1690x1350x720	
Net weight			kg	317	
Refrigerant charge	R410A		kg	11.5	
Sound pressure level	Cooling/Heating		dB(A)	59.5/60	62.5/62.5
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			%	50~200	
Number of connectable indoor units				36	40

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

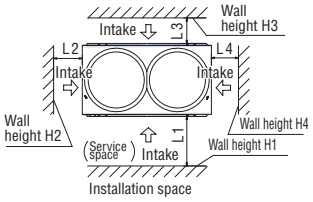
All measurements in mm.



Mark	Item	
A	Service valve connection (gas side)	For refrigerant piping, please refer to the unit specifications.
B	Service valve connection (liquid line)	
C	Refrigerant pipe draw-out port	ø88
D	Power cable draw-in port	ø50
F	Anchor bolt hole	M10 x 4 places
G	Drain hose hole	ø45 x 3 places
H	Drain discharge port	ø20 x 6 places
K*	Oil-equalising pipe joint	ø3/8" flare
L	Sling holes for haulage or hoisting	180 x 44.7

*14 + 16HP models only

Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10	200
L_3	100	300
L_4	10	Open
H_1	1500	–
H_2	No restrictions	No restrictions
H_3	1000	No restrictions
H_4	No restrictions	–

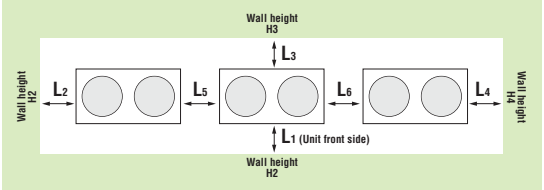


2m overhead clearance required

Notes:

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

When more than one unit is installed



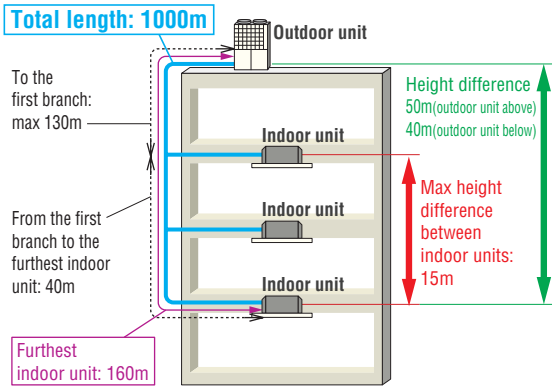
Installation example		
Dimensions	A	B
L_1	500	Open
L_2	10	200
L_3	100	300
L_4	10	Open
L_5	0	400
L_6	0	400
H_1	1500	No restrictions
H_2	No restrictions	No restrictions
H_3	1000	No restrictions
H_4	No restrictions	No restrictions

Heat pump systems 18, 20, 22, 24hp (50.4kW~68.0kW)

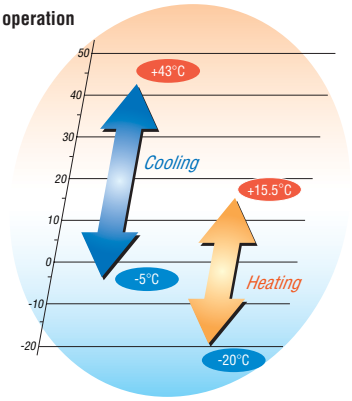
Model No.	Nominal Cooling Capacity
FDC504KXE6	50.4kW
FDC560KXE6	56.0kW
FDC615KXE6	61.5kW
FDC680KXE6	68.0kW

- The KX6 heat pump 2-pipe systems offer high performance VRF for applications that require either cooling only or heating only, ideal for open plan areas.
- Connect up to 49 indoor units/up to 160% capacity.
- High efficiency with COP (in cooling) up to 3.4.
- KX6 employs DC inverter compressors ONLY.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.

Uniform footprint of all models (from 8hp~24hp) allows continuous side-by-side installation



Range of operation



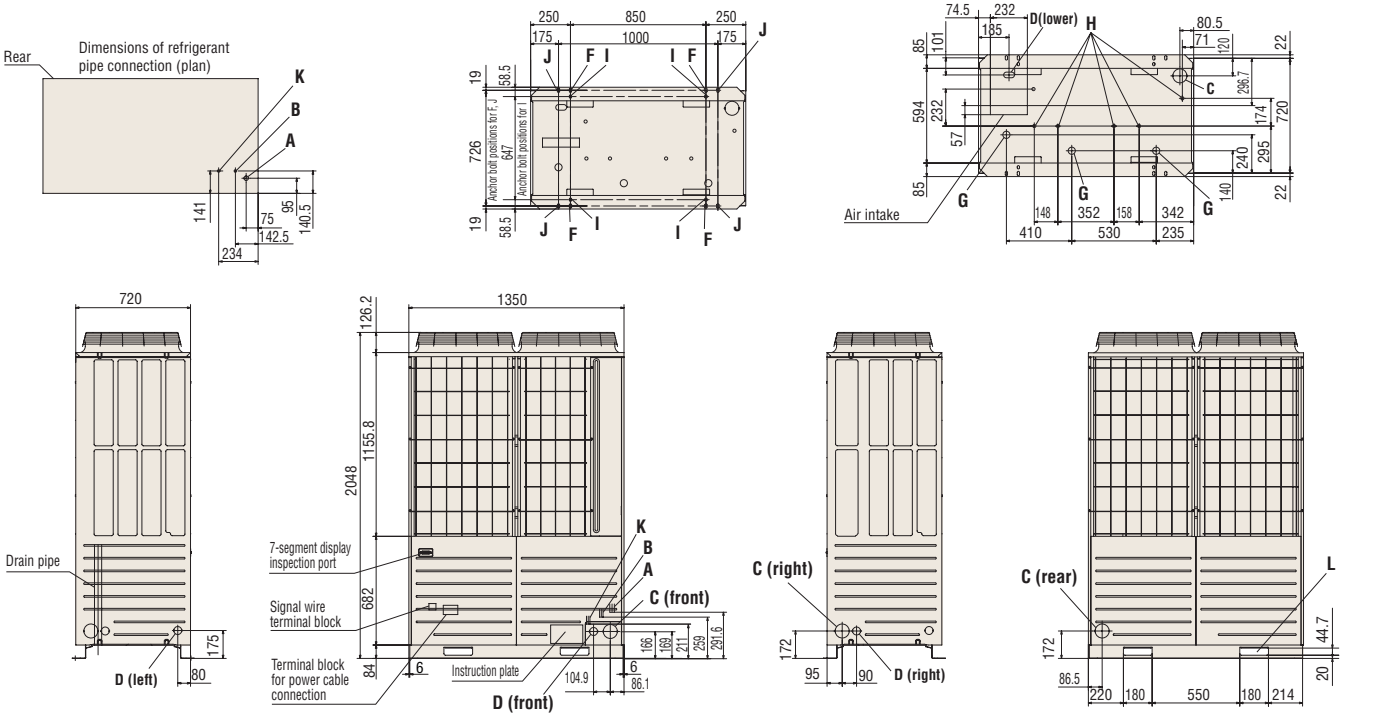
Specifications

Item			Model	FDC504KXE6	FDC560KXE6	FDC615KXE6	FDC680KXE6
Nominal horse power				18HP	20HP	22HP	24HP
Power source				3 Phase 380-415V, 50Hz			
Nominal capacity	Cooling		kW	50.4	56.0	61.5	68.0
	Heating			56.5	63.0	69.0	73.0
Electrical characteristics	Starting current		A	8			
	Power consumption	Cooling	kW	14.73	16.79	20.37	24.98
		Heating		15.12	16.79	18.48	19.08
	Operating current	Cooling	A	24.1-22.0	27.4-25.1	33.1-30.3	40.3-36.9
		Heating		25.2-23.1	28.0-25.7	30.7-28.1	31.6-29.0
Exterior dimensions	HxWxD		mm	2048x1350x720			
Net weight			kg	341		355	
Refrigerant charge	R410A		kg	11.5			
Sound pressure level	Cooling/Heating		dB(A)	61.5/62.0	63.0/63.5	64.5/64.0	65.0/65.0
Refrigerant piping size	Liquid line		mm(in)	ø12.7(1/2")			
	Gas line			ø28.58(1 1/8")			
Capacity connection			%	50~200	50~160		
Number of connectable indoor units				36	40	44	49

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.

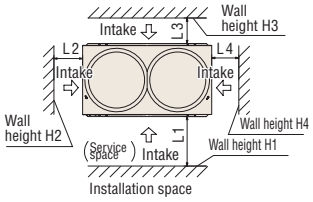
Dimensions

All measurements in mm.



Mark	Item	
A	Service valve connection (gas side)	For refrigerant piping, please refer to the unit specifications.
B	Service valve connection (liquid line)	
C	Refrigerant pipe draw-out port	ø100
D	Power cable draw-in port	ø50
F	Anchor bolt hole	M10 x 4 places
G	Drain hose hole	ø45.3 x 3 places
H	Drain discharge port	ø20.5 x 3 places
K	Oil-equalising pipe joint	ø9.52 flare
L	Sling holes for haulage or hoisting	180 x 44.7

Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10	200
L_3	100	300
L_4	10	Open
H_1	1500	–
H_2	No restrictions	No restrictions
H_3	1000	No restrictions
H_4	No restrictions	–



2m overhead clearance required

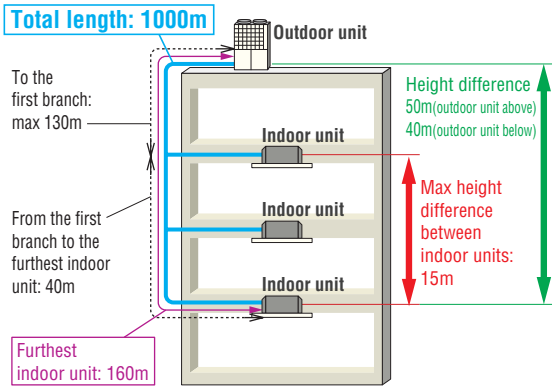
Notes:
(1) The unit must be fixed with anchor bolts.
(2) Leave a 2m or larger space above the unit.
(3) The unit name plate is attached on the lower right corner of the front panel.
(4) The ports for refrigerant pipe and power cable penetrations are covered with half-blanks. Please cut off a half-blank 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.

Heat pump combination systems
26, 28, 30, 32hp (73.5kW~90.0kW)

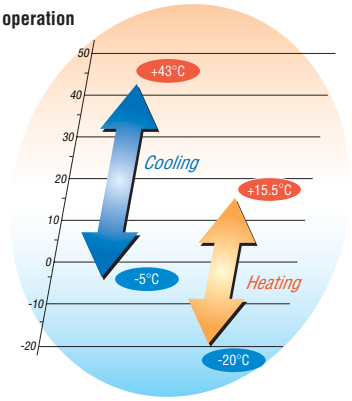
Model No.	Nominal Cooling Capacity
FDC735KXE6 (FDC335+FDC400)	73.5kW
FDC800KXE6 (FDC400x2)	80.0kW
FDC850KXE6 (FDC400+FDC450)	85.0kW
FDC900KXE6 (FDC450x2)	90.0kW

- The KX6 heat pump 2-pipe systems offer high performance VRF for applications that require either cooling only or heating only, ideal for open plan areas.
- Connect up to 65 indoor units/up to 160% capacity.
- High efficiency with COP (in cooling) up to 3.6.
- KX6 employs DC inverter compressors ONLY.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.

Uniform footprint of all models (from 8hp~24hp) allows continuous side-by-side installation



Range of operation



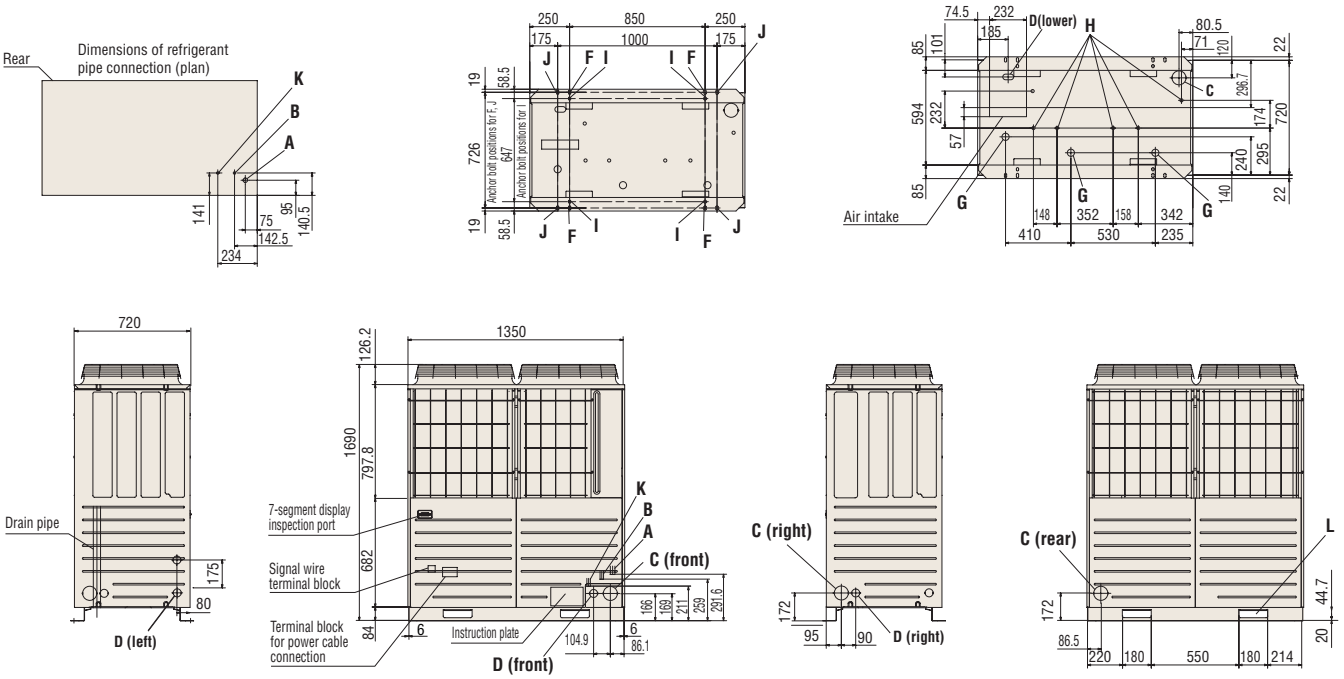
Specifications

Item			Model	FDC735KXE6	FDC800KXE6	FDC850KXE6	FDC900KXE6
Combination (FDC)				335KXE6-K	400KXE6	400KXE6	450KXE6
				400KXE6	400KXE6	450KXE6	450KXE6
Nominal horse power				26HP	28HP	30HP	32HP
Power source				3 Phase 380-415V, 50Hz			
Nominal capacity	Cooling		kW	73.5	80.0	85.0	90.0
	Heating			82.5	90.0	95.0	100.0
Electrical characteristics	Starting current		A	16			
	Power consumption	Cooling	kW	20.21	22.54	24.24	25.94
		Heating		20.66	23.46	24.83	26.20
	Operating current	Cooling	A	32.9-30.2	36.8-33.8	39.5-36.2	42.2-38.6
		Heating		34.4-31.4	39.2-35.8	41.3-37.8	43.4-39.8
Exterior dimensions	HxWxD		mm	1690x2700x720			
Net weight			kg	317x2			
Refrigerant charge	R410A		kg	11.5x2			
Refrigerant piping size	Liquid line		mm(in)	ø15.88(5/8")			
	Gas line			ø31.8(1 1/4") [ø34.92(1 3/8")]			
Capacity connection			%	50~160			
Number of connectable indoor units				53	58	61	65

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	Item	
A	Service valve connection (gas side)	For refrigerant piping, please refer to the unit specifications.
B	Service valve connection (liquid line)	
C	Refrigerant pipe draw-out port	ø88
D	Power cable draw-in port	ø50
F	Anchor bolt hole	M10 x 4 places
G	Drain hose hole	ø45 x 3 places
H	Drain discharge port	ø20 x 6 places
K	Oil-equalising pipe joint	ø3/8" flare
L	Sling holes for haulage or hoisting	180 x 44.7

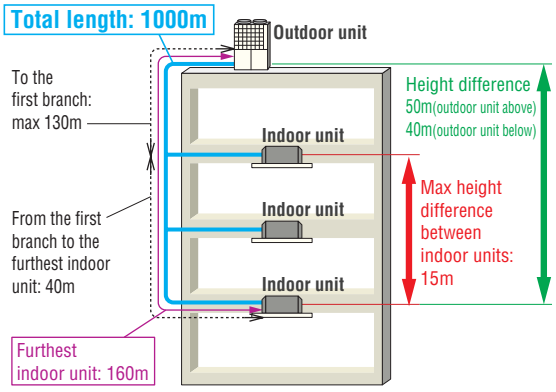
Notes:

(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.

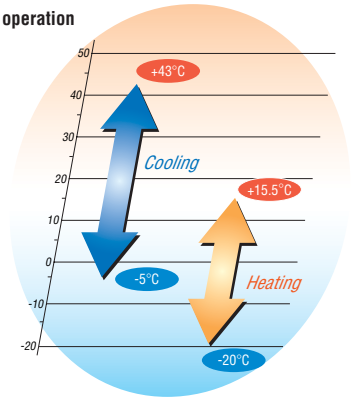
Heat pump combination systems
34, 36, 38, 40, 42, 44, 46, 48hp (96.0kW~136.0kW)

Model No.	Nominal Cooling Capacity
FDC960KXE6 (FDC450+FDC504)	96.0kW
FDC1010KXE6 (FDC504x2)	101.0kW
FDC1065KXE6 (FDC504+FDC560)	106.5kW
FDC1130KXE6 (FDC560x2)	113.0kW
FDC1180KXE6 (FDC560+FDC615)	118.0kW
FDC1235KXE6 (FDC615x2)	123.5kW
FDC1300KXE6 (FDC615+FDC680)	130.0kW
FDC1360KXE6 (FDC680x2)	136.0kW

- The KX6 heat pump 2-pipe systems offer high performance VRF for applications that require either cooling only or heating only, ideal for open plan areas.
- Connect up to 80 indoor units/up to 130% (960KXE6:160%) capacity.
- High efficiency with COP (in cooling) up to 3.5.
- KX6 employs DC inverter compressors ONLY.
- Industry leading total piping length up to 1000m and a maximum pipe run of 160m.



Range of operation



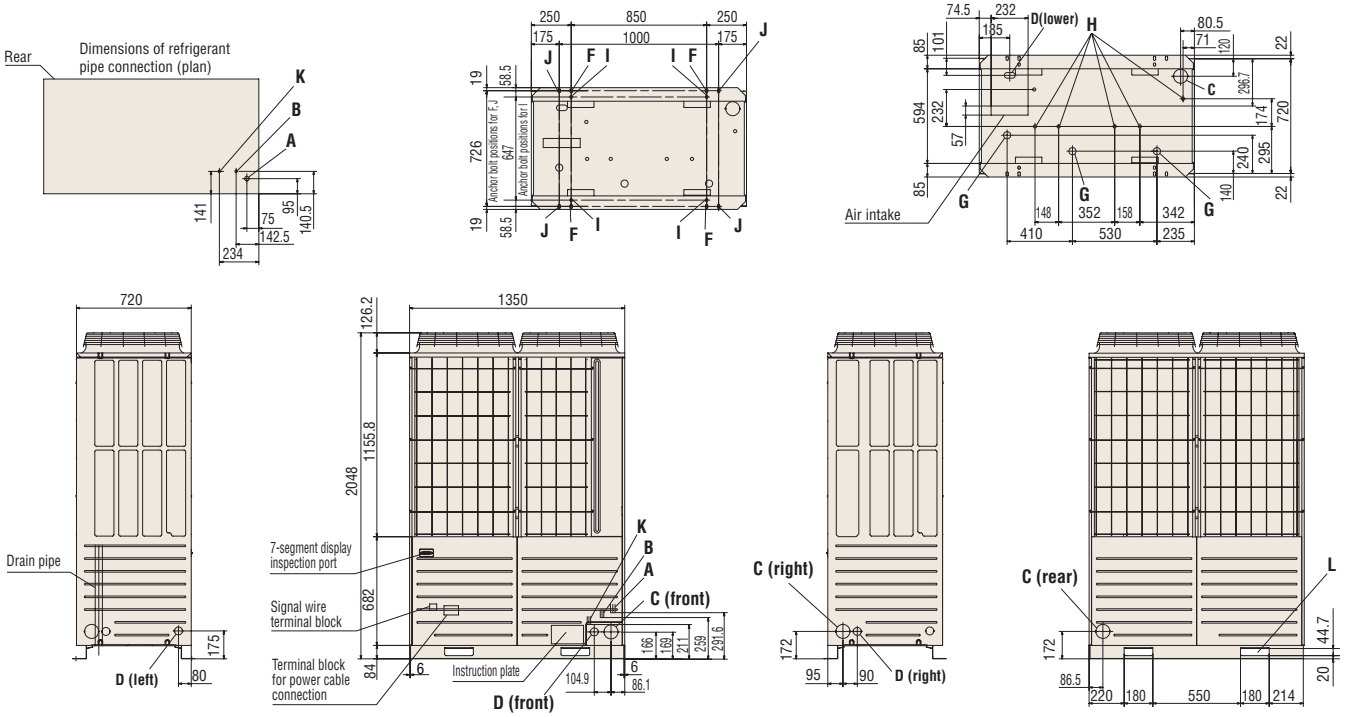
Specifications

Item			Model	FDC960KXE6	FDC1010KXE6	FDC1065KXE6	FDC1130KXE6	FDC1180KXE6	FDC1235KXE6	FDC1300KXE6	FDC1360KXE6
Combination (FDC)				450KXE6	504KXE6	504KXE6	560KXE6	560KXE6	615KXE6	615KXE6	680KXE6
				504KXE6	504KXE6	560KXE6	560KXE6	615KXE6	615KXE6	680KXE6	680KXE6
Nominal horse power				34HP	36HP	38HP	40HP	42HP	44HP	46HP	48HP
Power source				3 Phase 380-415V, 50Hz							
Nominal capacity	Cooling		kW	96.0	101.0	106.5	113.0	118.0	123.5	130.0	136.0
	Heating			108.0	113.0	119.5	127.0	132.0	138.0	142.0	146.0
Electrical characteristics	Starting current		A	16							
	Power consumption	Cooling	kW	27.70	29.46	31.52	33.58	37.16	40.74	45.35	49.96
		Heating		28.22	30.24	31.91	33.58	35.27	36.96	37.56	38.16
	Operating current	Cooling	A	45.2-41.3	48.2-44.0	51.5-47.1	54.8-50.2	60.5-55.4	66.2-60.6	73.4-67.2	80.6-73.8
		Heating		46.9-43	50.4-46.2	53.2-48.8	56-51.4	58.7-53.8	61.4-56.2	62.3-57.1	63.2-58.0
Exterior dimensions	HxWxD		mm	2048x2700x720							
Net weight			kg	341+317	341x2			360+340	355x2		
Refrigerant charge	R410A		kg		11.5x2						
Refrigerant piping size	Liquid line		mm(in)	ø15.88(5/8")		ø19.05(3/4")					
	Gas line			ø34.92(1 3/8")							
Capacity connection			%	50~130							
Number of connectable indoor units				69	59	62	66	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.

Dimensions

All measurements in mm.



Mark	Item	
A	Service valve connection (gas side)	For refrigerant piping, please refer to the unit specifications.
B	Service valve connection (liquid line)	
C	Refrigerant pipe draw-out port	ø100
D	Power cable draw-in port	ø50
F	Anchor bolt hole	M10 x 4 places
G	Drain hose hole	ø45.3 x 3 places
H	Drain discharge port	ø20.5 x 3 places
K	Oil-equalising pipe joint	ø9.52 flare
L	Sling holes for haulage or hoisting	180 x 44.7

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.

KX6 refrigerant piping

Installation of Interconnecting Pipework
Mitsubishi 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.

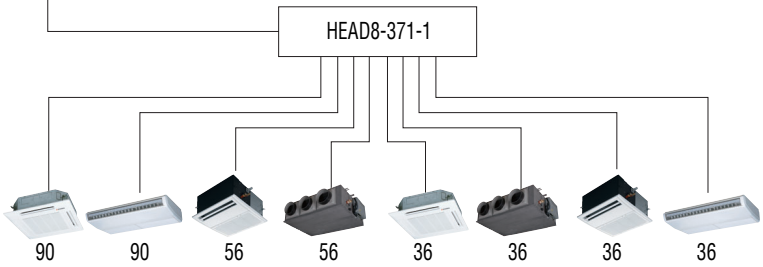
The supplied branch pipe kits, must be used to make connections to indoor units, and the supplied manifold kits must be used to make connections between outdoor units (where applicable); it is not permitted to use standard fittings such as elbows, tees etc. The branch pipes shall be installed in accordance with the manufacturer's instructions, allowing unrestricted flow of refrigerant, and in accordance with European standard E378:2000. All brazed joints shall be made with dry nitrogen purge to ensure the prevention of oxidisation 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. The pipe ends must be crimped and brazed, and a suitable service valve connection will need to be fitted (supplied by installer).

Pipe Insulation
The refrigeration pipework must be insulated with close cell Class 'O' fire performance with a minimum wall thickness of 13mm.

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 manufacturerís data, based on the length and diameter of each section of the liquid refrigerant pipework of the system.

Single outdoor unit piping examples:

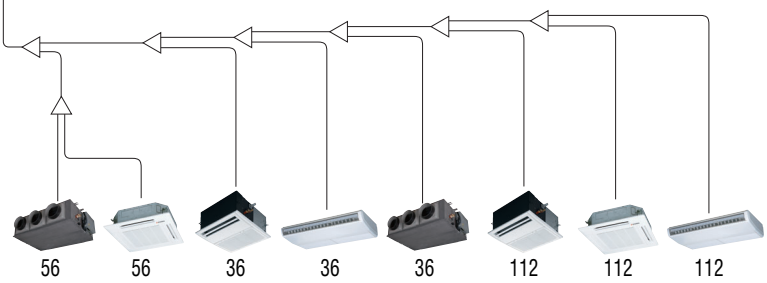
Piping arrangement using header



FDC335KXE6

Liquid pipe
Gas pipe

Piping arrangement using branch pipe kits



KX6 refrigerant piping

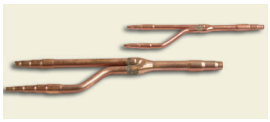
Pipe sizes applicable to European installations.

Outdoor unit (HP)		8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
Liquid pipe	Furthest indoor unit =<90m	ø9.52		ø12.7							ø15.88						ø19.05					
Gas pipe		ø19.05	ø22.22	ø28.58							ø34.92											
Liquid pipe	Furthest indoor unit =>90m	ø12.7					ø15.88				ø19.05						ø22.22					
Gas pipe		ø22.22		ø28.58							ø34.92											

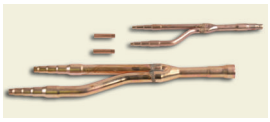
mm	inch
ø9.52	3/8"
ø12.7	1/2"
ø15.88	5/8"
ø19.05	3/4"
ø22.22	7/8"
ø25.4	1"

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

Branch pipes



DIS-22-1/DIS-180-1

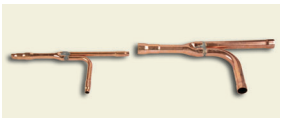


DIS-540-2/DIS-371-1

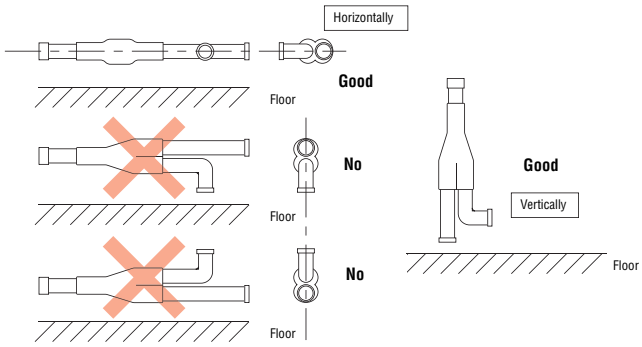
Header pipe

HEAD6-180-1R

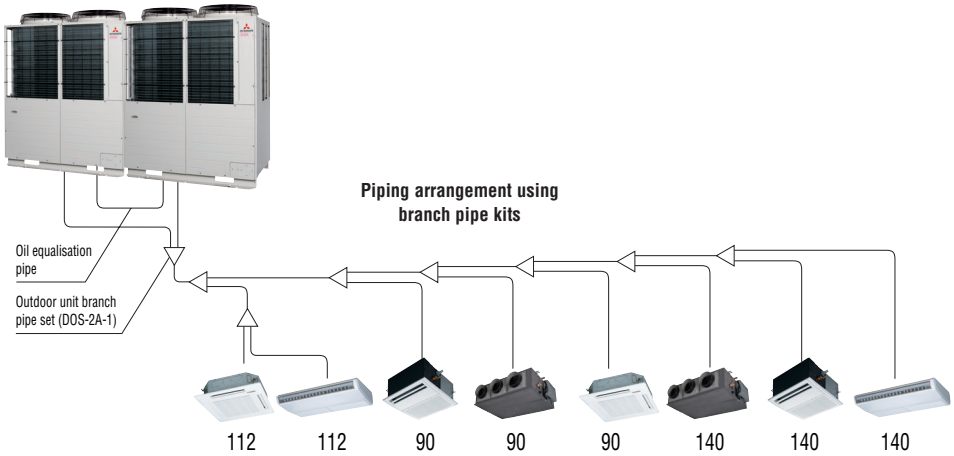
Combination outdoor unit manifold

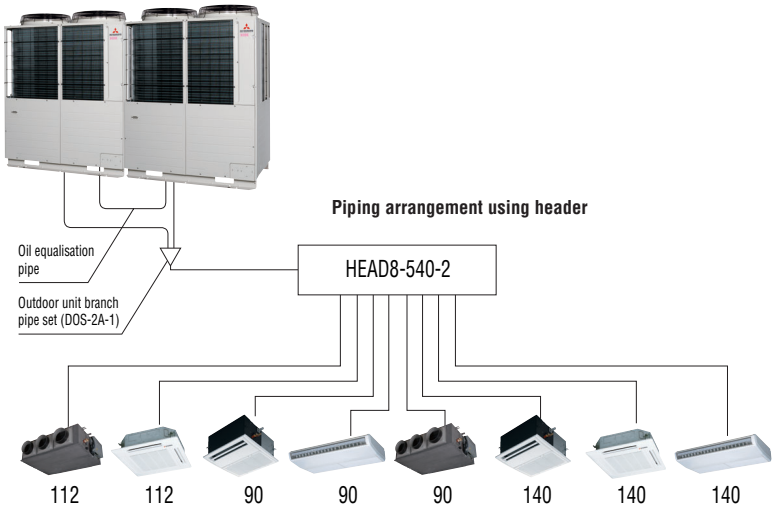


DOS-2A-1



Combination outdoor unit piping examples:





Outdoor unit's branching piping

Outdoor unit	Branch piping set
2 units (for 735~1360)	DOS-2A-1

Indoor unit's first branching piping

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

KX6 electrical wiring – power supply

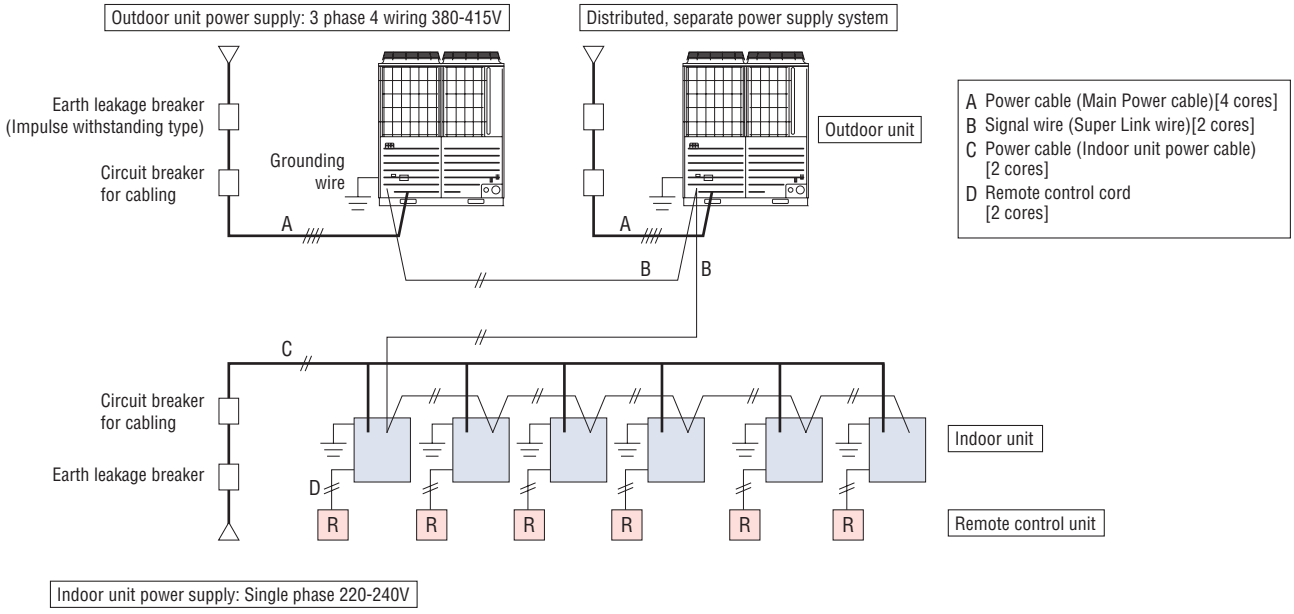
KX6 new design includes greatly simplified wiring requirements utilising a 'polarity-free' two wire control loop connecting the indoor units.

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 (3/phase) and the indoor units (1/phase).

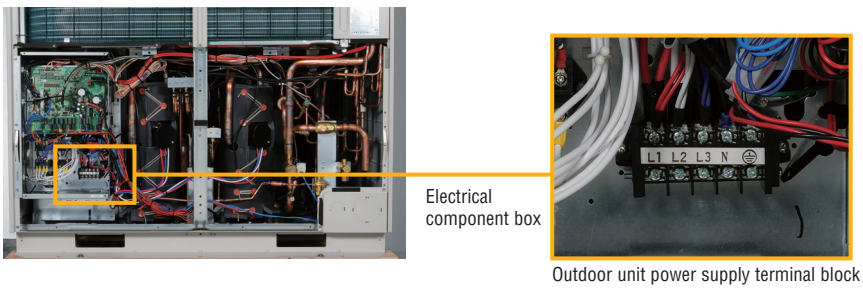
Only control wiring is connected from outdoor to indoor unit.



CAUTION

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

KX6 outdoor unit mechanical compartment



Outdoor unit power supply terminal block

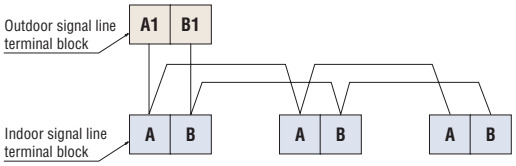
KX6 electrical wiring – control wiring

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

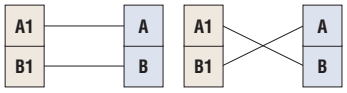
	0.75mm²	1.25mm²
~1000m	YES	YES
1000~1500m	YES	NO

3. We recommend only one end of the shield of the cable is connected to ground (earth) at one of the outdoor units. At all other terminal connections on the same network, connect all the shields together and electrically insulate them. This will prevent accidental grounding at 2 points and eliminate any electrical noise.
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 MHI dealer.

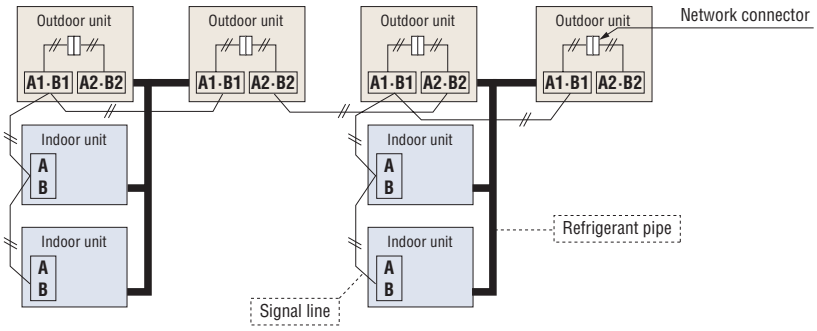
(1) When one outdoor unit is used



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



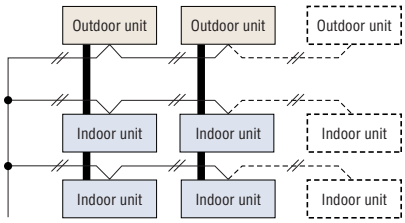
(2) When plural outdoor units are used



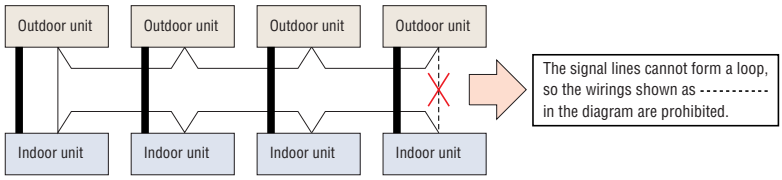
(a) The maximum number of indoor units that can be connected in a system is 128 and it is possible to configure outdoor units and/or indoor units as an outdoor or indoor unit group connected with each other with two wires.

(b) The signal wires can also be connected using the method shown below.

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



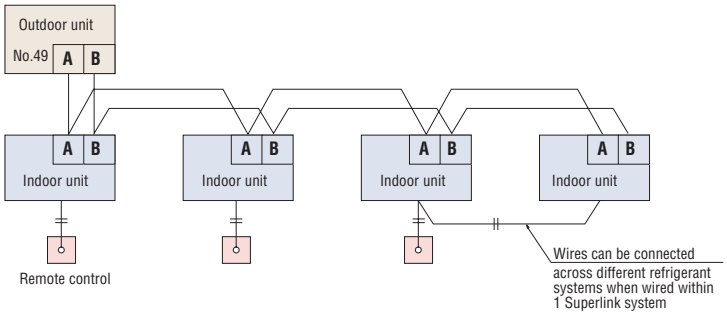
Important ○ Loop wiring prohibited



Remote control wiring specifications

1. For interconnecting wiring between the remote control and indoor units (XY wiring) use 2-core shielded 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 opposite.
2. Be sure to ground (earth) only one end of the shield of the cable. When connecting more than one indoor unit to a remote control, we recommend the shield of the cable is connected to ground (earth) at the first indoor unit only. At all subsequent terminal connections on the same loop, connect all the shields together and electrically insulate them. This will prevent accidental grounding at 2 points and eliminate any electrical noise.
3. For current specification of 2-core (XY) wiring, please consult your dealer.

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



Indoor units

Ceiling Cassette -4way- FDT

Model No.

FDT28KXE6A
FDT36KXE6A
FDT45KXE6A
FDT56KXE6A
FDT71KXE6A
FDT90KXE6A
FDT112KXE6A
FDT140KXE6A
FDT160KXE6A

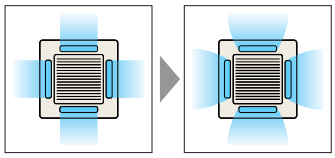
Wireless remote control

RCN-T-36W-E (option)

Individual flap control system

According to room temperature conditions, four directions of air flow can be controlled by individual flap as preferred.
As individual flap control is available even after installation, installation area became wider than before.

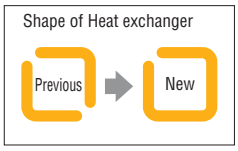
Due to optimization of outlet design of air flow with our new advanced technology, sufficient air flow is secured and long reach of air flow is realized.

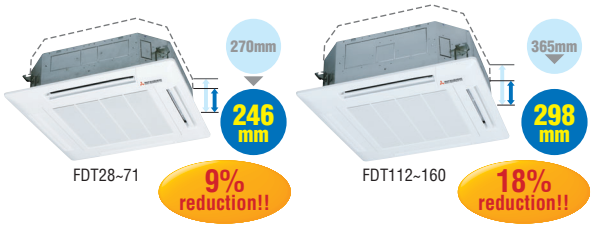


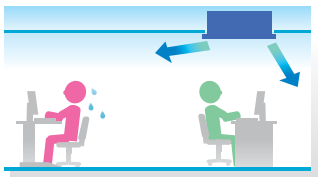
Previous New

The thinnest design

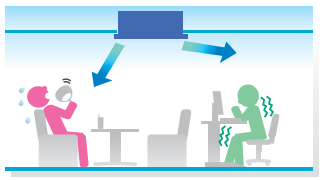
Thanks to new design of heat exchanger changed from 2 parts to 1 part, the height of indoor unit is reduced drastically.
Furthermore applying DC fan motors to FDT models, the highest energy efficiency level, reduction of weight and significant compact design are realized.



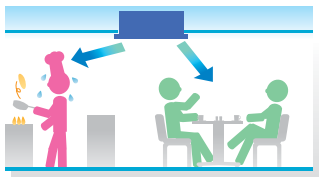




for person who is far from the indoor unit



for both persons who are feeling hot or cold



can cool both the kitchen and the guests

Specifications

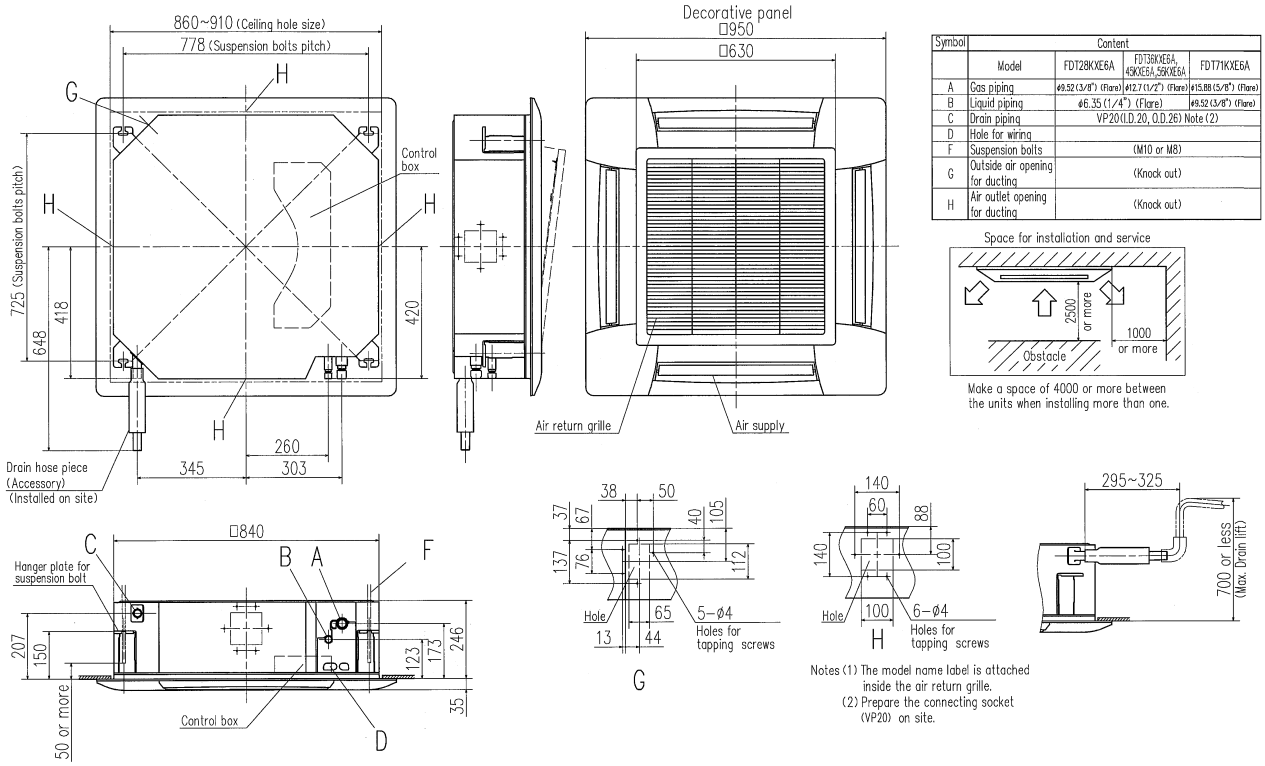
Item		Model	FDT28KXE6A	FDT36KXE6A	FDT45KXE6A	FDT56KXE6A	FDT71KXE6A	FDT90KXE6A	FDT112KXE6A	FDT140KXE6A	FDT160KXE6A
Nominal cooling capacity		kW	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0
Nominal heating capacity		kW	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0	18.0
Power source			1 Phase 220-240V, 50Hz								
Power consumption	Cool	kW	0.03-0.03			0.04-0.04	0.10-0.10	0.14-0.14			
	Heat		0.03-0.03			0.04-0.04	0.10-0.10	0.14-0.14			
Sound pressure level		dB(A)	Hi:33 Me:31 Lo:30					Hi:40 Me:37 Lo:35		Hi:42 Me:40 Lo:37	Hi:43 Me:41 Lo:38
Exterior dimensions H x W x D		mm	Unit:246x840x840 Panel:35x950x950					Unit:298x840x840 Panel:35x950x950			
Net weight		kg	Unit:22 Panel:5.5			Unit:24 Panel:5.5		Unit:27 Panel:5.5			
Air flow (Standard)		CMM	Hi:18 Me:16 Lo:14					Hi:27 Me:24 Lo:20		Hi:30 Me:27 Lo:23	
Outside air intake			Possible								
Panel			T-PSA-36W-E								
Air filter, Q'ty			Pocket Plastic net x1 (Washable)								
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-T-36W-E								
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")				
Accessories			Mounting kit, Drain hose								

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.

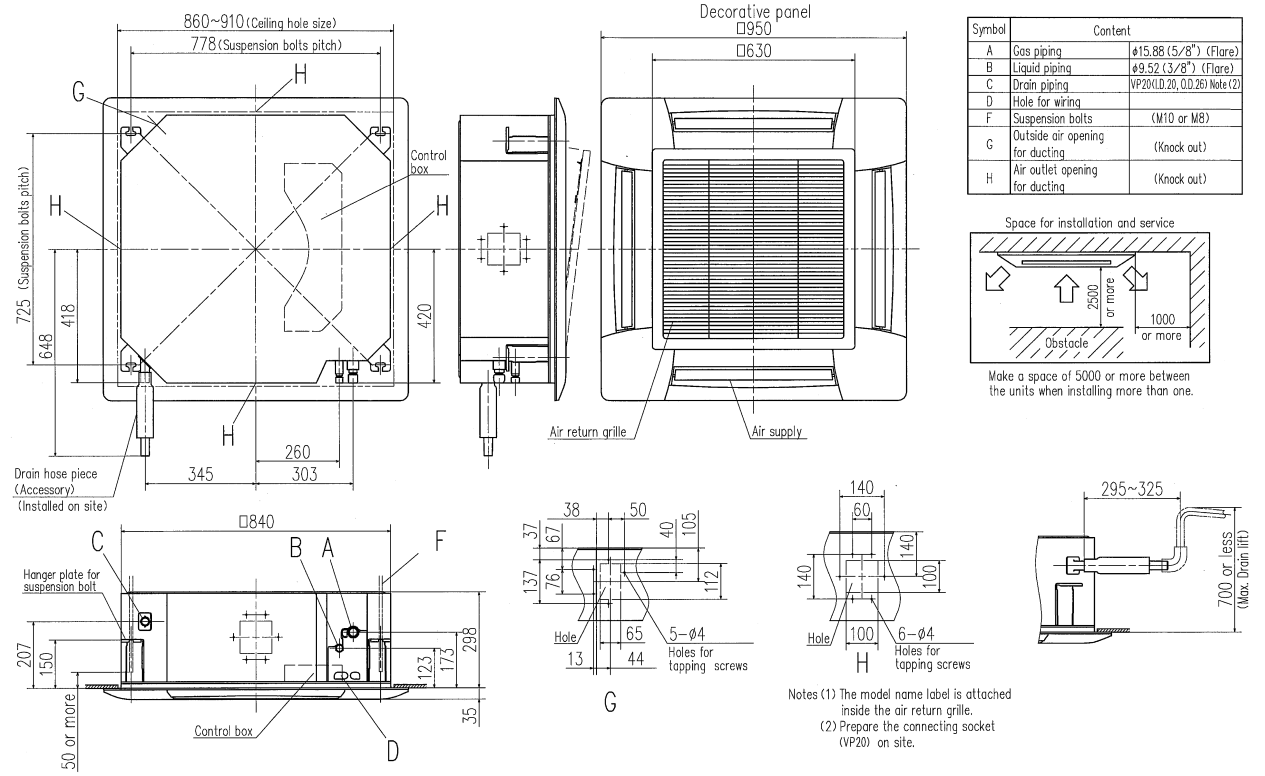
FDT28KXE6A, 36KXE6A, 45KXE6A, 56KXE6A, 71KXE6A



Symbol	Content			
	Model	FDT28KXE6A	FDT36KXE6A, 45KXE6A, 56KXE6A	FDT71KXE6A
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)	ø15.88 (5/8") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)		ø9.52 (3/8") (Flare)
C	Drain piping	VP20 (I.D.20, O.D.26) Note (2)		
D	Hole for wiring			
F	Suspension bolts	(M10 or M8)		
G	Outside air opening for ducting	(Knock out)		
H	Air outlet opening for ducting	(Knock out)		

Notes (1) The model name label is attached inside the air return grille.
(2) Prepare the connecting socket (VP20) on site.

FDT90KXE6A, 112KXE6A, 140KXE6A, 160KXE6A



Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C	Drain piping	VP20 (I.D.20, O.D.26) Note (2)
D	Hole for wiring	
F	Suspension bolts	(M10 or M8)
G	Outside air opening for ducting	(Knock out)
H	Air outlet opening for ducting	(Knock out)

Notes (1) The model name label is attached inside the air return grille.
(2) Prepare the connecting socket (VP20) on site.

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

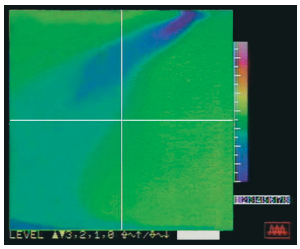
Model No.

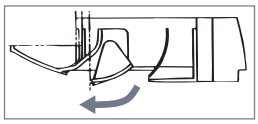
FDTC22KXE6A
FDTC28KXE6A
FDTC36KXE6A
FDTC45KXE6A
FDTC56KXE6A

Wireless remote control

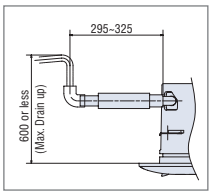
RCN-TC-24W-ER (option)

"CLEARER" AIR FLOW





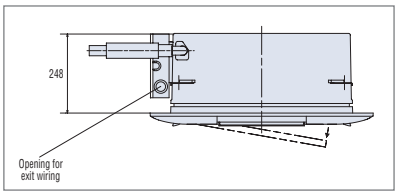
New shape & angled louvre re-directs the air current away from the ceiling, to reduce ceiling stains



Condensate drain pump included as standard

INSTALLATION WORKABILITY

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



Ultra slim design at just 248mm above the ceiling

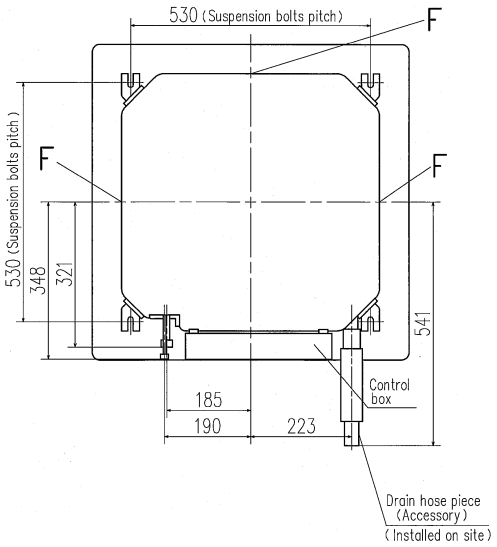
Specifications

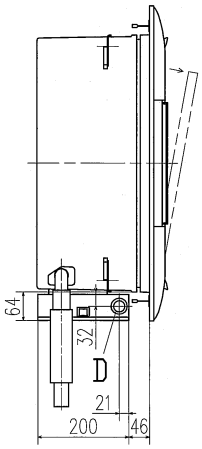
Item		Model	FDTC22KXE6A	FDTC28KXE6A	FDTC36KXE6A	FDTC45KXE6A	FDTC56KXE6A
Nominal cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
Nominal heating capacity		kW	2.5	3.2	4.0	5.0	6.3
Power source			1 Phase 220-240V, 50Hz				
Power consumption	Cool	kW	0.03-0.03			0.04-0.04	
	Heat		0.03-0.03			0.04-0.04	
Sound pressure level		dB(A)	Hi:35 Me:33 Lo:32		Hi:38 Me:36 Lo:34	Hi:40 Me:38 Lo:36	Hi:45 Me:42 Lo:39
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 (Standard)		CMM	Hi:9.5 Me:8.5 Lo:8		Hi:10 Me:9 Lo:8	Hi:11 Me:10 Lo:9	Hi:13 Me:11.5 Lo:10
Outside air intake			Not possible				
Panel			TC-PSA-24W-ER				
Air filter, Q'ty			Pocket Plastic net x1 (Washable)				
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-TC-24W-ER				
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")		

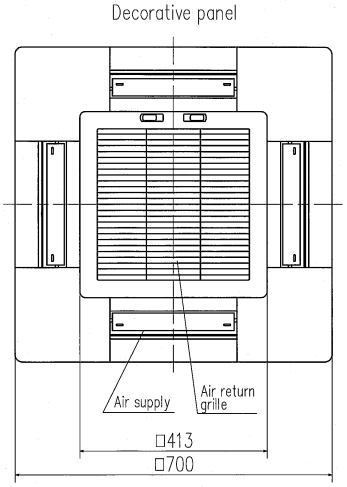
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

Dimensions

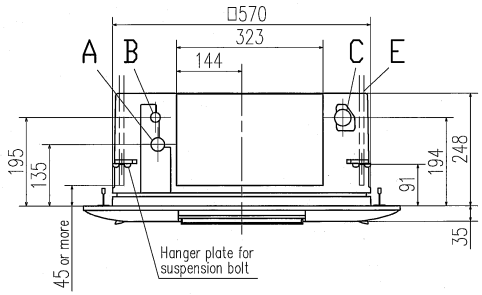
All measurements in mm.

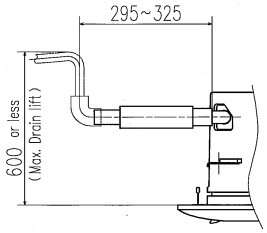


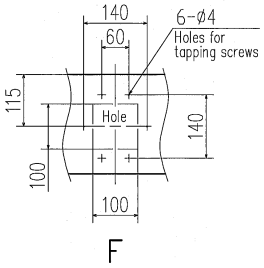


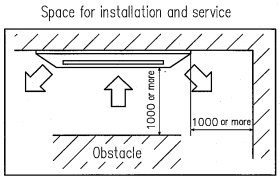


Notes (1) The model name label is attached on the control box lid.
(2) Prepare the connecting socket (VP20) on site.
(3) This unit is designed for 2x2 grid ceiling.
If it is installed on a ceiling other than 2x2 grid ceiling, provide an inspection port on the control box side.









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

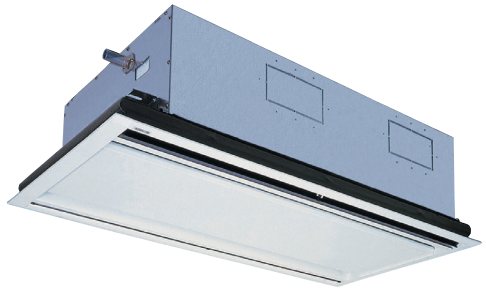
Symbol	Content		
	Model	FDTC22KXE6A, 28KXE6A	FDTC36KXE6A, 45KXE6A, 56KXE6A
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Drain piping	VP20 (I.D.20, O.D.26) Note (2)	
D	Hole for wiring	ϕ25	
E	Suspension bolts	(M10 or M8)	
F	Air outlet opening for ducting	(Knock out)	

R410A INVERTER

Ceiling Cassette -2way- FDTW

Model No.

FDTW28KXE6
FDTW45KXE6
FDTW56KXE6
FDTW71KXE6
FDTW90KXE6
FDTW112KXE6
FDTW140KXE6



Specifications

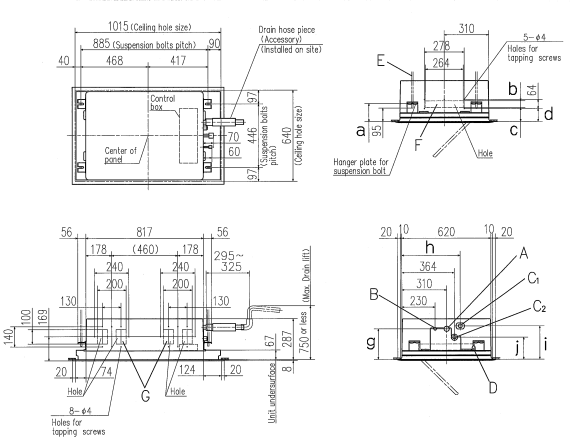
Item		Model	FDTW28KXE6	FDTW45KXE6	FDTW56KXE6	FDTW71KXE6	FDTW90KXE6	FDTW112KXE6	FDTW140KXE6
Nominal cooling capacity		kW	2.8	4.5	5.6	7.1	9.0	11.2	14.0
Nominal heating capacity		kW	3.2	5.0	6.3	8.0	10.0	12.5	16.0
Power source			1 Phase 220-240V, 50Hz						
Power consumption	Cool	kW	0.09-0.10			0.10-0.11	0.12-0.13	0.18-0.20	0.20-0.24
	Heat	kW	0.09-0.10			0.10-0.11	0.12-0.13	0.18-0.20	0.20-0.24
Sound pressure level		dB(A)	Hi:39 Me:34 Lo:32			Hi:41 Me:36 Lo:35	Hi:41 Me:37 Lo:36	Hi:44 Me:38 Lo:37	Hi:45 Me:41 Lo:39
Exterior dimensions H x W x D		mm	Unit:287x817x620 Panel:8x1055x680			Unit:342x1054x620 Panel:8x1300x680		Unit:357x1524x620 Panel:8x1770x680	
Net weight		kg	Unit:18 Panel:7	Unit:19 Panel:7		Unit:26 Panel:9		Unit:38 Panel:11	
Air flow (Standard)		CMM	Hi:14 Me:12 Lo:10			Hi:16 Me:13 Lo:11	Hi:19 Me:16 Lo:12	Hi:28 Me:25 Lo:23	Hi:32 Me:28 Lo:24
Outside air intake			Possible						
Panel			TW-PSA-24W-E			TW-PSA-34W-E		TW-PSA-44W-E	
Air filter, Q'ty			Pocket Plastic net x1 (Washable)					Pocket Plastic net x2 (Washable)	
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-KIT3-E						
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")		Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")			

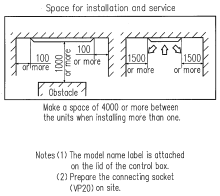
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

Dimensions

All measurements in mm.

FDTW28KXE6, 45KXE6, 56KXE6

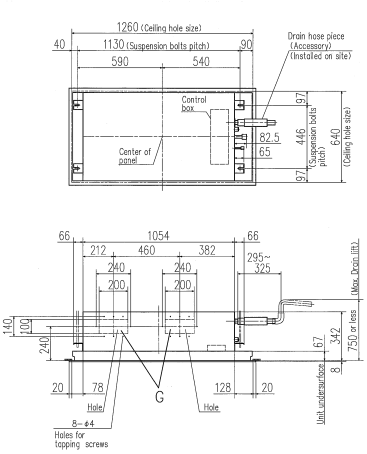




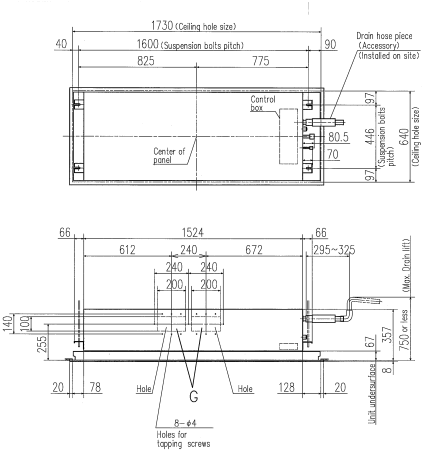
Notes (1) The model name label is attached on the lid of the control box.
(2) Prepare the connecting socket (VP20) on site.

Symbol	Content			
	Model	FDTW28KXE6	FDTW45KXE6, 56KXE6	FDTW71KXE6, 90KXE6, 112KXE6, 140KXE6
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)	ø15.88 (5/8") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)		ø9.52 (3/8") (Flare)
C1	Drain piping	VP20 (I.D. 20, O.D. 26) Note (2)		VP20 (I.D. 20, O.D. 26) Note (2)
C2	Drain piping (Gravity drainage)	VP20		VP20
D	Hole for wiring			
E	Suspension bolts	(M10)		(M10)
F	Outside air opening for ducting	(Knock out)		(Knock out)
G	Air outlet opening for ducting	(Knock out)		(Knock out)

FDTW71KXE6, 90KXE6



FDTW112KXE6, 140KXE6



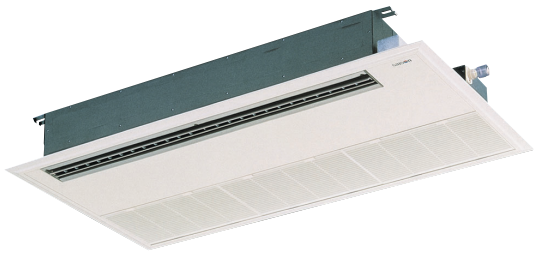
Dimension Table

Unit:mm

model	a	b	c	d	e	f	g	h	i	j
FDTW28,45,56KXE6	127	47	98	91	1055	965	214	405	234	155
FDTW71,90KXE6	127	50	95	88	1300	1210	226	410	284	155
FDTW112,140KXE6	137	50	110	103	1770	1680	241	410	299	170

Ceiling Cassette -1way-
FDTS

Model No.
FDTS45KXE6
FDTS71KXE6



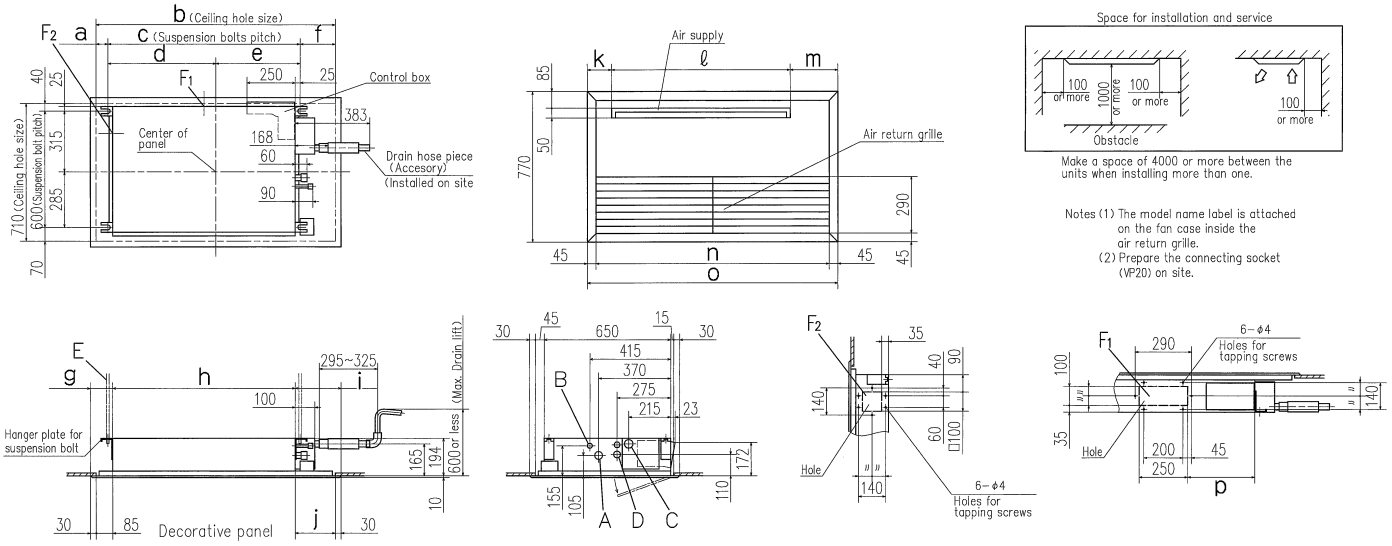
Specifications

Item	Model		FDTS45KXE6	FDTS71KXE6
Nominal cooling capacity		kW	4.5	7.1
Nominal heating capacity		kW	5.0	8.0
Power source			1 Phase 220-240V, 50Hz	
Power consumption	Cool	kW	0.09-0.11	0.12-0.15
	Heat		0.09-0.11	0.12-0.15
Sound pressure level		dB(A)	Hi:43 Me:38 Lo:36	Hi:44 Me:38 Lo:36
Exterior dimensions H x W x D		mm	Unit:194x1040x650 Panel:10x1290x770	Unit:194x1300x650 Panel:10x1500x770
Net weight		kg	Unit:27 Panel:6	Unit:31 Panel:7
Air flow (Standard)		CMM	Hi:14 Me:12 Lo:10	Hi:18 Me:15 Lo:12
Outside air intake			Possible	
Panel			TS-PSA-29W-E	TS-PSA-39W-E
Air filter, Q'ty			Pocket plastic net x2 (Washable)	Pocket plastic net x3 (Washable)
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-KIT3-E	
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")	Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")

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

Dimensions

All measurements in mm.



Symbol	Content		
	Model	FDTS45KXE6	FDTS71KXE6
A	Gas piping	ø12.7 (1/2") (Flare)	ø15.88 (5/8") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)	ø9.52 (3/8") (Flare)
C	Drain piping	VP20(I.D.20, O.D.26) Note (2)	VP20(I.D.20, O.D.26) Note (2)
D	Hole for wiring	ø35	ø35
E	Suspension bolts	(M10)	(M10)
F1,2	Outside air opening for ducting	(Knock out)	(Knock out)

Dimension Table

Unit:mm

model	a	b	c	d	e	f	g	h	i	j	k	ℓ	m	n	o	p
FDTS45KXE6	60	1230	990	555	435	180	115	940	235	205	125	920	245	1200	1290	345
FDTS71KXE6	45	1440	1250	675	575	145	100	1200	200	70	110	1180	210	1410	1500	475

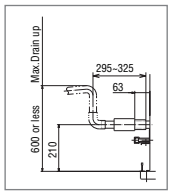
Ceiling Cassette -1way Compact- FDTQ

Model No.
FDTQ22KXE6
FDTQ28KXE6
FDTQ36KXE6

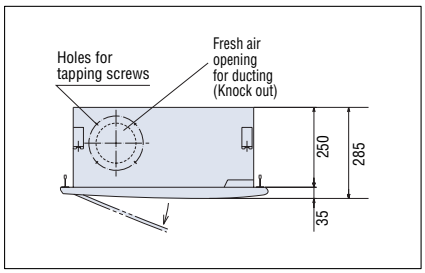
Fits into standard 600 x 600 ceiling

- **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

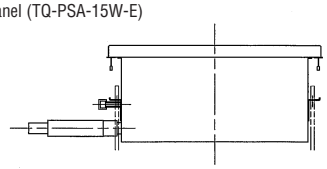
Item	Model	FDTQ22KXE6				FDTQ28KXE6				FDTQ36KXE6			
Panel Name		Direct blow panel		Duct panel		Direct blow panel		Duct panel		Direct blow panel		Duct panel	
Panel mode (Option)		TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER	TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER	TQ-PSA-15W-E	TQ-PSB-15W-E	QR-PNA-14W-ER	QR-PNB-14W-ER
Nominal cooling capacity	kW	2.2				2.8				3.6			
Nominal heating capacity	kW	2.5				3.2				4.0			
Power source		1 Phase 220-240V, 50Hz											
Power consumption Cool	kW	0.04-0.05				0.04-0.05				0.04-0.05			
Power consumption Heat	kW	0.04-0.05				0.04-0.05				0.04-0.05			
Sound pressure level	dB(A)	Hi:38 Lo:33		Hi:42 Lo:39		Hi:38 Lo:33		Hi:42 Lo:39		Hi:38 Lo:33		Hi:42 Lo:39	
Exterior dimensions H x W x D Unit	mm	250x570x570				250x570x570				250x570x570			
Exterior dimensions H x W x D Panel	mm	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650	35x625x650	35x780x650
Net weight	kg	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3	Unit:19 Panel:2.5	Unit:19 Panel:3
Air flow (Standard)	CMM	Hi:7 Lo:5.4		Hi:7 Lo:6.5		Hi:7 Lo:5.4		Hi:7 Lo:6.5		Hi:7 Lo:5.4		Hi:7 Lo:6.5	
Outside air intake		Possible											
Air filter, Q'ty		Pocket Plastic net x1 (Washable)											
Remote control		wired:RC-E3, RCH-E3 wireless:RCN-KIT3-E											
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.

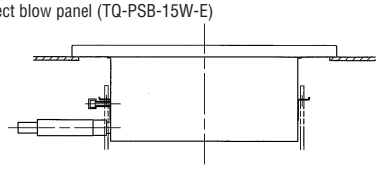
Dimensions

All measurements in mm.

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

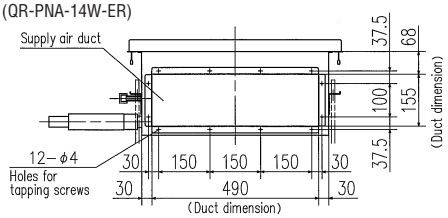


Direct blow panel (TQ-PSB-15W-E)

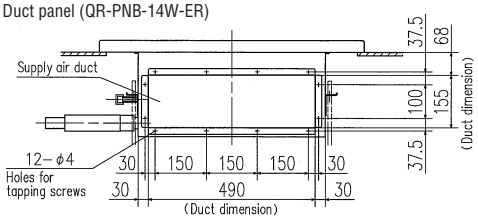


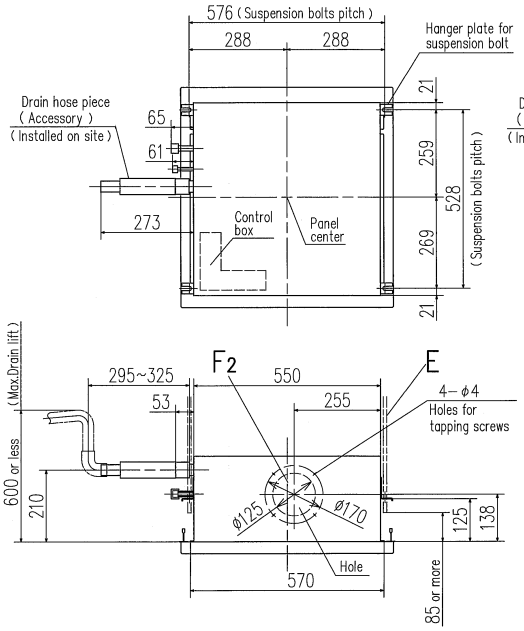
Symbol	Content		
	Model	FDTQ22KXE6,28KXE6	FDTQ36KXE6
A	Gas piping	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)	
C	Drain piping	VP20 (I.D.20, O.D.26) Note (2)	
D	Hole for wiring	ϕ30	
E	Suspension bolts	(M10)	
F1,2	Outside air opening for ducting	(Knock out)	

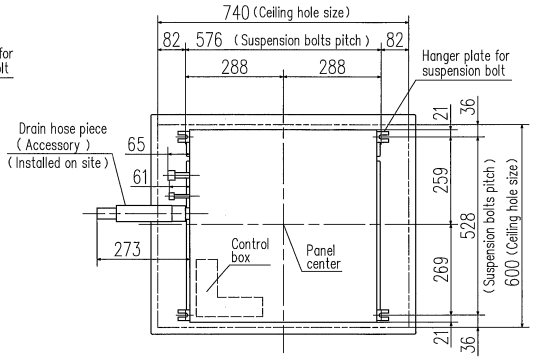
Duct panel (QR-PNA-14W-ER)

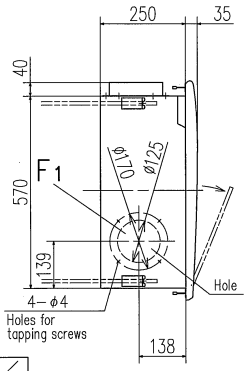


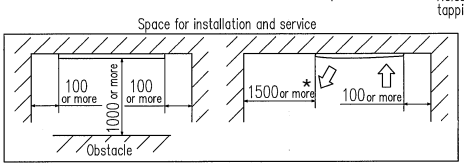
Duct panel (QR-PNB-14W-ER)









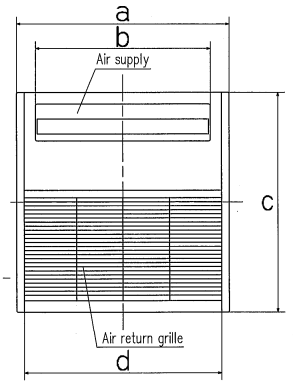


Make a space of 3000 or more between the units when installing more than one.

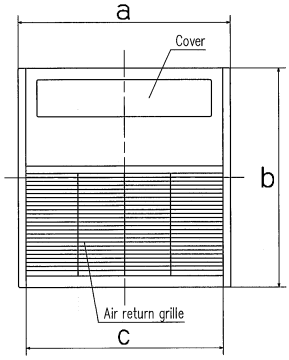
Notes

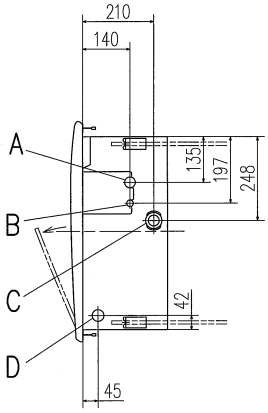
(1) The model name label is attached on the fan case inside the air return grille.
(2) Prepare the connecting socket (VP20) on site.
(3) This unit is designed for 2X2 grid ceiling.
* In case of Direct blow panel

Decorative panel



Decorative panel





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

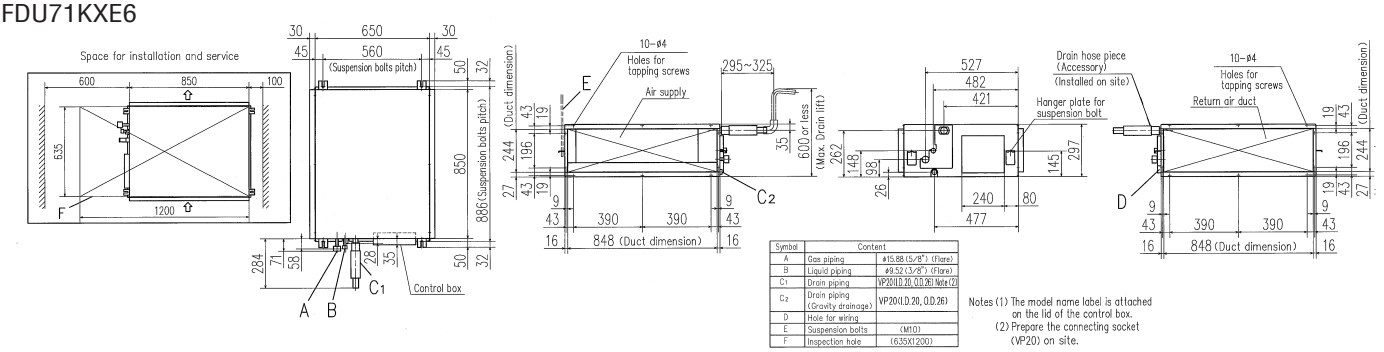
Model No.

FDU71KXE6
FDU90KXE6
FDU112KXE6
FDU140KXE6

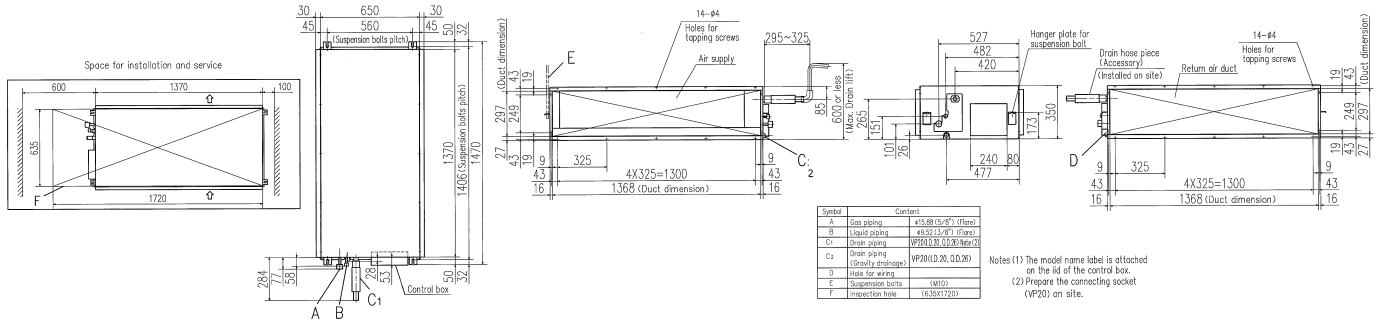
Dimensions

All measurements in mm.

FDU71KXE6



FDU90KXE6, 112KXE6, 140KXE6



Specifications

Item	Model	FDU71KXE6	FDU90KXE6	FDU112KXE6	FDU140KXE6
Nominal cooling capacity	kW	7.1	9.0	11.2	14.0
Nominal heating capacity	kW	8.0	10.0	12.5	16.0
Power source		1 Phase 220-240V, 50Hz			
Power consumption	Cool / kW	0.29-0.32	0.35-0.39	0.39-0.45	
	Heat / kW	0.27-0.30	0.34-0.38	0.34-0.39	
Sound pressure level	dB(A)	Hi:41 Lo:37	Hi:42 Lo:37	Hi:42 Lo:38	Hi:43 Lo:39
Exterior dimensions H x W x D	mm	295x850x650	350x1370x650		
Net weight	kg	40	63		
Air flow (Standard)	CMM	Hi:25 Lo:20	Hi:34 Lo:27		Hi:42 Lo:33.5
Available Static pressure	Pa	Standard 50, Max 130			
Outside air intake		Possible(on Return duct)			
Air filter, Q'ty		Procure locally			
Remote control		wired:RC-E3, RCH-E3 wireless:RCN-KIT3-E			
Installation data Refrigerant piping size	mm(in)	Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")			

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

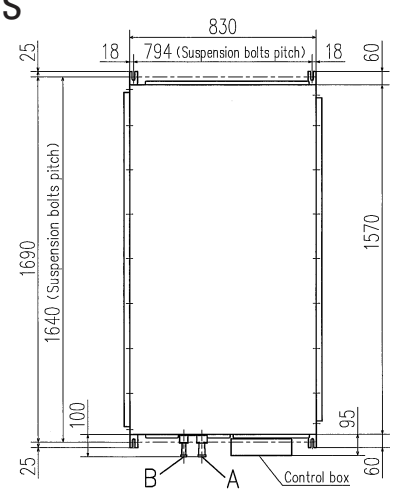
Duct Connected -High Static Pressure-
FDU

Model No.
FDU224KXE6
FDU280KXE6

Fan control kit
(100~200Pa)
U-FCRA(option)

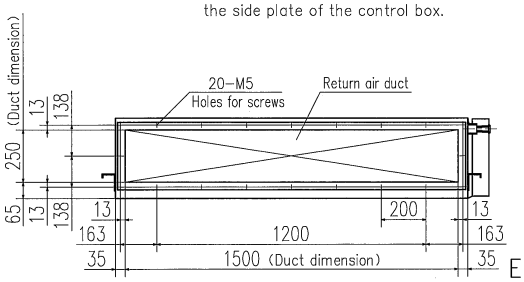
Dimensions

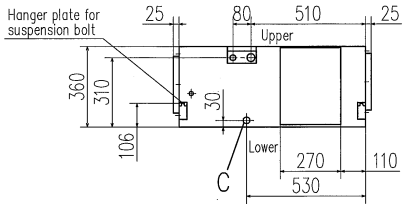
All measurements in mm.

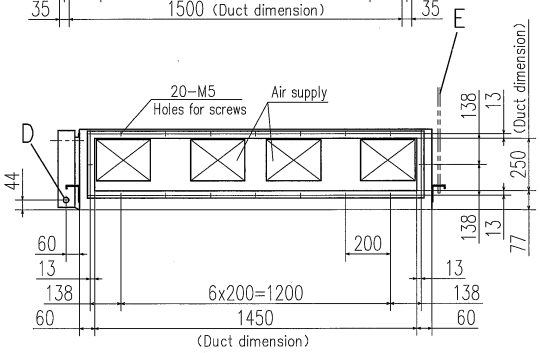


Symbol	Content		
	Model	FDU224KXE6	FDU280KXE6
A	Gas piping	ϕ25.4 (1") (Brazing)	
B	Liquid piping	ϕ9.52 (3/8") (Brazing)	ϕ12.7 (1/2") (Brazing)
C	Drain piping	VP20 (I.D. 20, O.D. 26)	
D	Hole for wiring	ϕ25	
E	Suspension bolts	(M10)	
F	Inspection hole	(600X600)	
G	Inspection hole	(900X1730)	

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







Specifications

Item		Model	FDU224KXE6	FDU280KXE6
Nominal cooling capacity		kW	22.4	28.0
Nominal heating capacity		kW	25.0	31.5
Power source			1 Phase 220-240V, 50Hz	
Power consumption	Cool	kW	0.94-1.03	0.96-1.05
	Heat		0.86-0.90	0.88-0.96
Sound pressure level		dB(A)	Hi:51	Hi:52
Exterior dimensions H x W x D		mm	360x1570x830	
Net weight		kg	92	
Air flow (Standard)		CMM	Hi:51	Hi:68
Available Static pressure		Pa	Standard 100, Max 200	
Outside air intake			Possible(on Return duct)	
Air filter, Q'ty			Procure locally	
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-KIT3-E	
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")

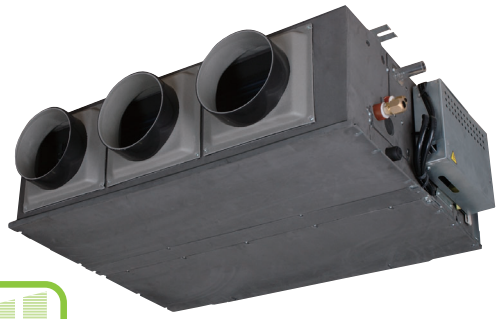
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

R410A INVERTER

Duct Connected -Low/Middle Static Pressure- FDUM

Model No.

FDUM22KXE6
FDUM28KXE6
FDUM36KXE6
FDUM45KXE6
FDUM56KXE6
FDUM71KXE6
FDUM90KXE6
FDUM112KXE6
FDUM140KXE6



LOW NOISE

Filter kit

UM-FL1E : for 22~56
UM-FL2E : for 71, 90
UM-FL3E : for 112, 140
(option)

Specifications

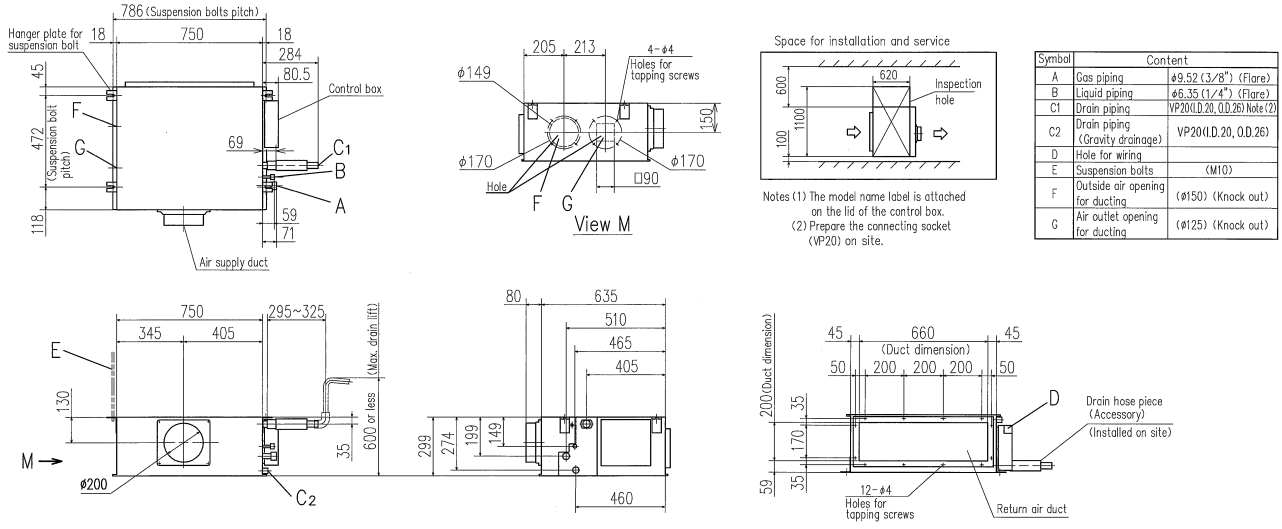
Item		Model	FDUM22KXE6	FDUM28KXE6	FDUM36KXE6	FDUM45KXE6	FDUM56KXE6	FDUM71KXE6	FDUM90KXE6	FDUM112KXE6	FDUM140KXE6
Nominal cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0
Nominal heating capacity		kW	2.5	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0
Power source			1 Phase 220-240V, 50Hz								
Power consumption	Cool	kW	0.09-0.11	0.11-0.13		0.14-0.16		0.15-0.17	0.16-0.19	0.24-0.28	0.28-0.32
	Heat	kW	0.09-0.11	0.11-0.13		0.14-0.16		0.15-0.17	0.16-0.19	0.24-0.28	0.28-0.32
Sound pressure level		dB(A)	Hi:33 Me:31 Lo:28	Hi:34 Me:31 Lo:28		Hi:35 Me:32 Lo:29			Hi:36 Me:33 Lo:30	Hi:37 Me:35 Lo:32	Hi:38 Me:36 Lo:33
Exterior dimensions H x W x D		mm	299 x 750 x 635					299 x 950 x 635		350 x 1370 x 635	
Net weight		kg	33	34				40		59	
Air flow (Standard)		CMM	Hi:10 Me:9 Lo:8	Hi:12 Me:11 Lo:10		Hi:14 Me:12 Lo:11		Hi:18 Me:16 Lo:14	Hi:20 Me:18 Lo:15	Hi:28 Me:25 Lo:22	Hi:34 Me:31 Lo:27
Available Static pressure		Pa	Standard:50 Max:85							Standard:60 Max:85	
Outside air intake			Possible								
Air filter, Q'ty			Procure locally								
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-KIT3-E								
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")		Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")			

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

Dimensions

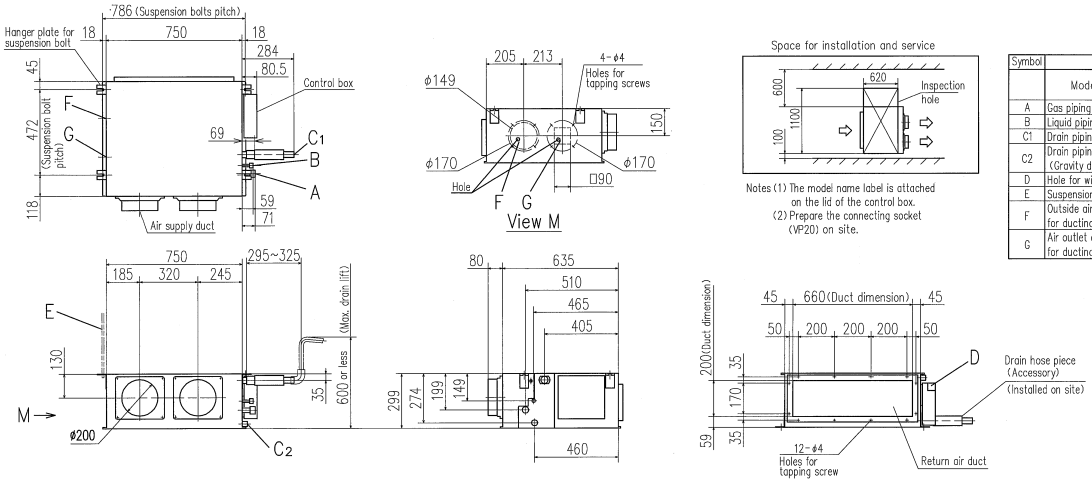
All measurements in mm.

FDUM22KXE6



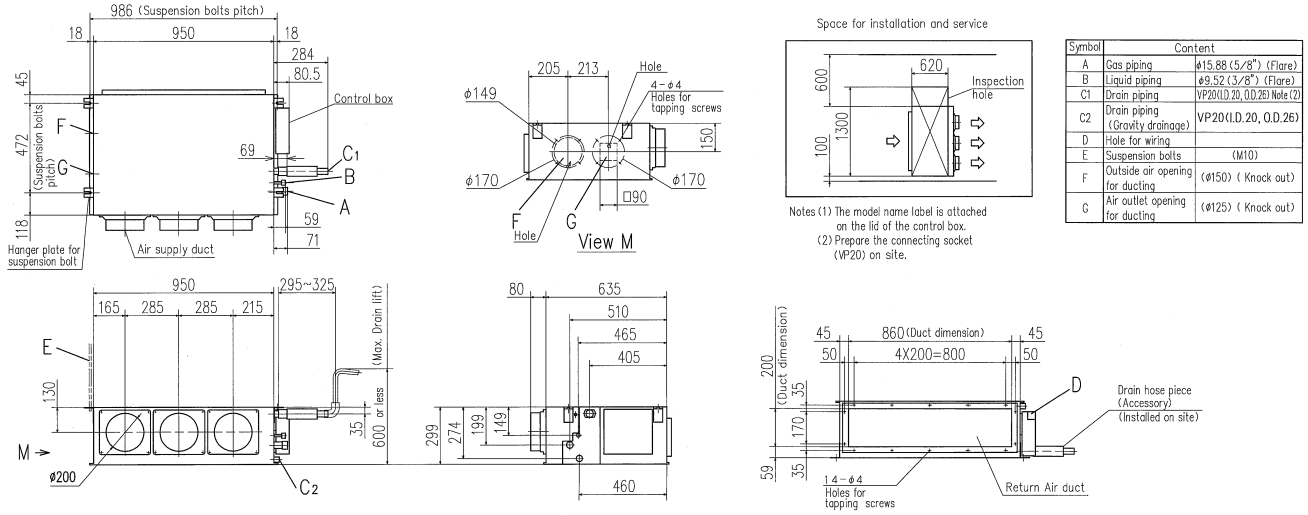
Symbol	Content	
A	Gas piping	ø9.52 (3/8") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)
C1	Drain piping	VP20(I.D.20, O.D.26) Note (2)
C2	Drain piping (Gravity drainage)	VP20(I.D.20, O.D.26)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(ø150) (Knock out)
G	Air outlet opening for ducting	(ø125) (Knock out)

FDUM28KXE6, 36KXE6, 45KXE6, 56KXE6



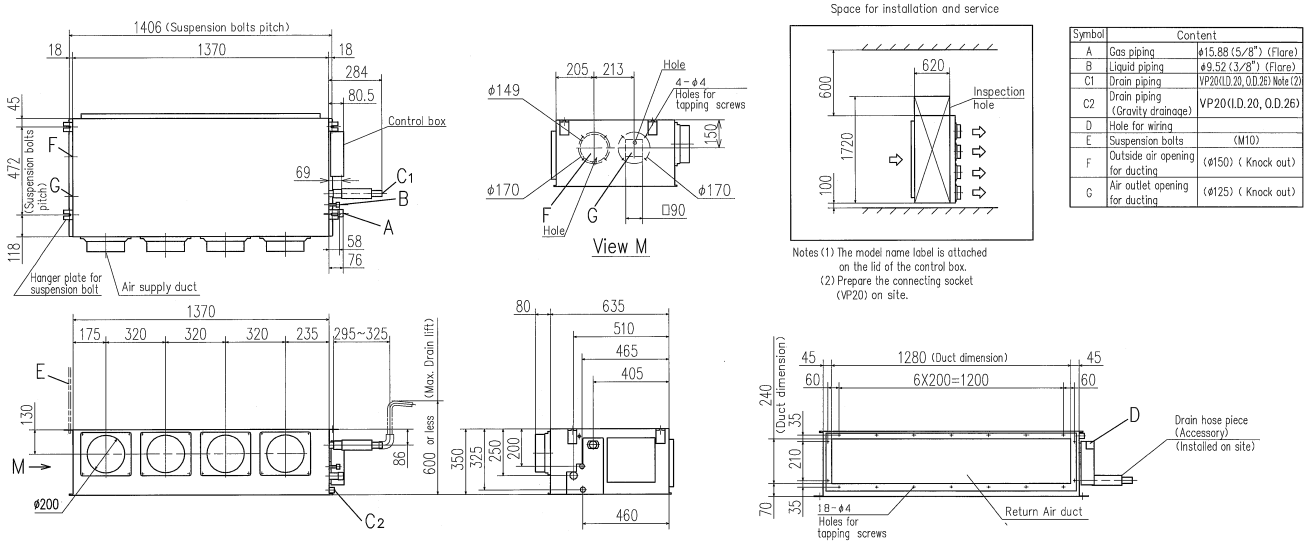
Symbol	Content		
	Model	FDUM28KXE6	FDUM36KXE6, 45KXE6,56KXE6
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)	
C1	Drain piping	VP20(I.D.20, O.D.26) Note (2)	
C2	Drain piping (Gravity drainage)	VP20(I.D.20, O.D.26)	
D	Hole for wiring		
E	Suspension bolts	(M10)	
F	Outside air opening for ducting	(ø150) (Knock out)	
G	Air outlet opening for ducting	(ø125) (Knock out)	

FDUM71KXE6, 90KXE6



Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C1	Drain piping	VP20(I.D.20, O.D.26) Note (2)
C2	Drain piping (Gravity drainage)	VP20(I.D.20, O.D.26)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(ø150) (Knock out)
G	Air outlet opening for ducting	(ø125) (Knock out)

FDUM112KXE6, 140KXE6



Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C1	Drain piping	VP20(I.D.20, O.D.26) Note (2)
C2	Drain piping (Gravity drainage)	VP20(I.D.20, O.D.26)
D	Hole for wiring	
E	Suspension bolts	(M10)
F	Outside air opening for ducting	(ø150) (Knock out)
G	Air outlet opening for ducting	(ø125) (Knock out)

Duct Connected(Ultra thin) -Low Static Pressure- FDQS

Model No.

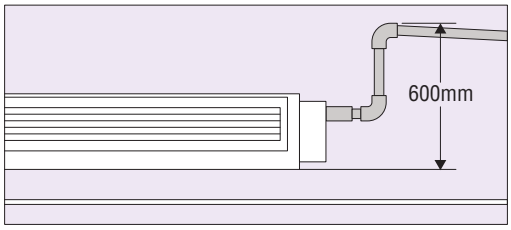
FDQS22KXE6
FDQS28KXE6
FDQS36KXE6
FDQS45KXE6
FDQS56KXE6

Filter kit
QS-FL1E
(option)

Ultra thin design

Ultra thin design at just 30kg in weight means quick, easy and neat installation in various kinds of room types.

600mm Drain Pump



Drain can be discharged upwards by 600mm from the unit bottom. It allows a piping layout with a high degree of freedom depending on the installation location.

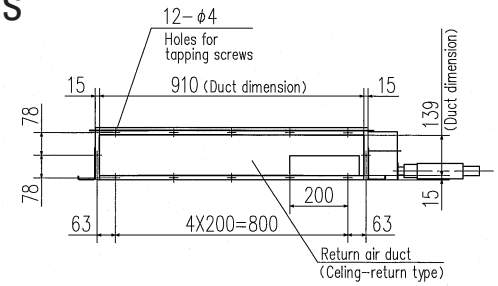
Specifications

Item		Model	FDQS22KXE6	FDQS28KXE6	FDQS36KXE6	FDQS45KXE6	FDQS56KXE6
Nominal cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
Nominal heating capacity		kW	2.5	3.2	4.0	5.0	6.0
Power source			1 Phase 220-240V, 50Hz				
Power consumption	Cool	kW	0.06-0.07		0.07-0.08		0.08-0.09
	Heat		0.06-0.07		0.07-0.08		0.08-0.09
Sound pressure level		dB(A)	Rear air return Hi:37 Me:35 Lo:33 Bottom air return Hi:43 Me:41 Lo:39				
Exterior dimensions H x W x D		mm	180 x 940 x 580				
Net weight		kg	27		28		
Air flow (Standard)		CMM	Hi:9 Me:8 Lo:7.5		Hi:9 Me:8 Lo:7.5	Hi:11 Me:10 Lo:9	
Outside air intake			Not possible				
Air filter, Q'ty			Procure locally				
Available Static pressure		Pa	Standard:15, Max:30				
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-KIT3-E				
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")		

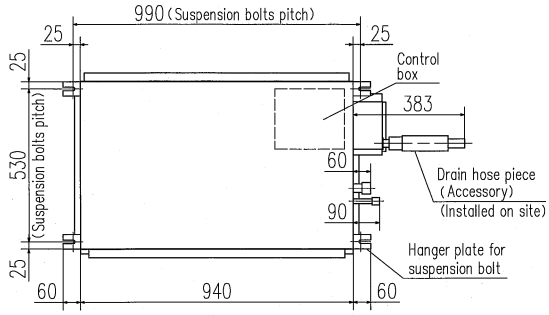
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

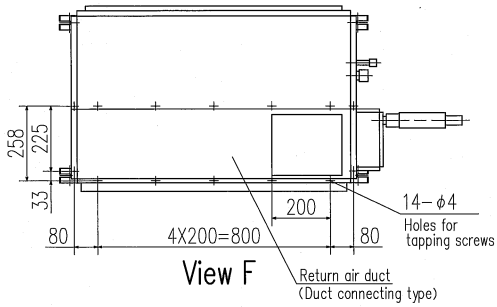
Dimensions

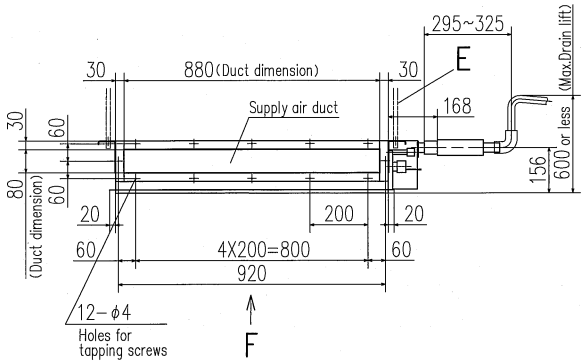
All measurements in mm.

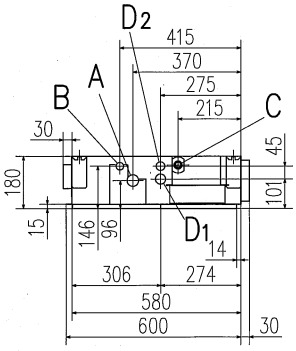


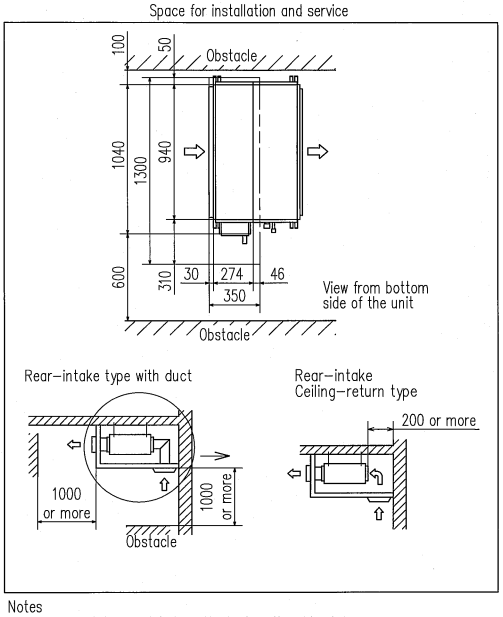
Symbol	Content		
	Model	FDQS22KXE6,28KXE6	FDQS36KXE6,45KXE6,56KXE6
A	Gas piping	φ9.52 (3/8") (Flare)	φ12.7 (1/2") (Flare)
B	Liquid piping	φ6.35 (1/4") (Flare)	
C	Drain piping	VP20 (I.D. 20, O.D. 26) Note (2)	
D1	Hole for power source wiring	φ35	
D2	Hole for remote controller wiring and signal wiring	φ30	
E	Suspension bolts	(M10)	

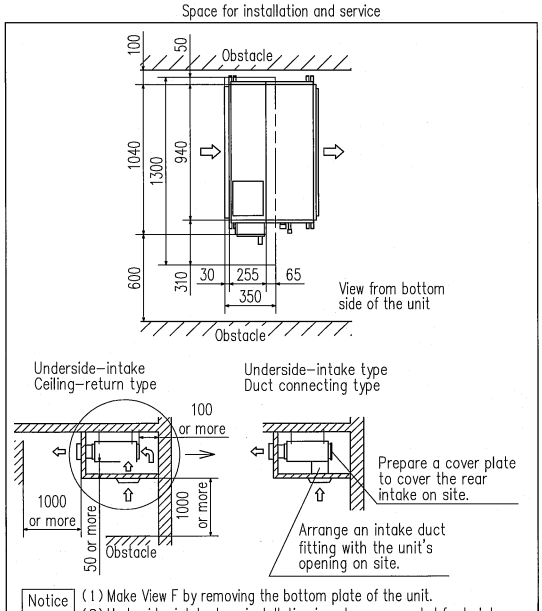












Notes
(1) The model name label is attached on the side plate.
(2) Prepare the connecting socket (VP20) on site.

Notice
(1) Make View F by removing the bottom plate of the unit.
(2) Underside–intake type installation is not recommended for hotel and residential installations due to a high noise level.

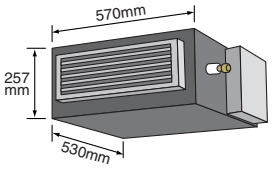
Duct Connected (Compact & Flexible)
FDUH

Model No.
FDUH22KXE6
FDUH28KXE6
FDUH36KXE6

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

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.

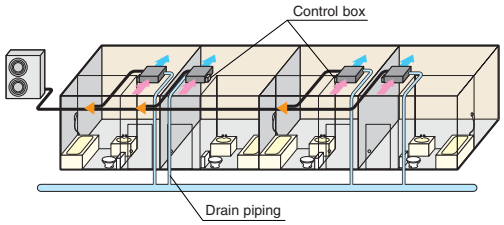


Quiet operation

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.



Remote control

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.

NEW

Wired RCH-E3
(option)

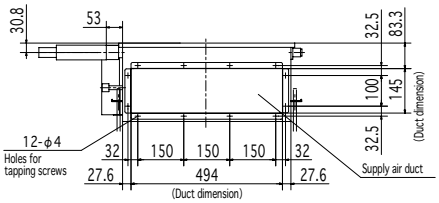
Specifications

Item		Model	FDUH22KXE6	FDUH28KXE6	FDUH36KXE6
Nominal cooling capacity		kW	2.2	2.8	3.6
Nominal heating capacity		kW	2.5	3.2	4.0
Power source			1 Phase 220-240V, 50Hz		
Power consumption	Cool	kW	0.050-0.055/0.053		
	Heat		0.050-0.055/0.053		
Sound pressure level		dB(A)	HI: 33 Me: 30 Lo: 27		
Exterior dimensions HxWxD		mm	257x570x530		
Net weight		kg	20		
Air flow (Standard)		CMM	HI: 7 Me: 6.5 Lo: 6		
Available static pressure		Pa	30		
Air filter, Q'ty			Procure locally		
Remote control			wired:RCH-E3,RC-E3 wireless:RCN-KIT3-E		
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4")		
			Gas line:ø9.52(3/8")		Gas line:ø12.7(1/2")

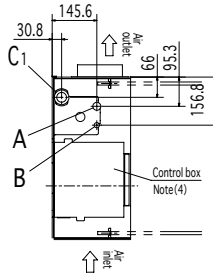
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

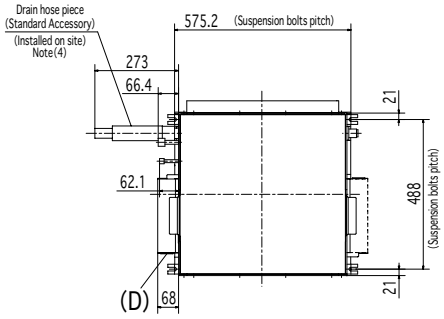
Dimensions

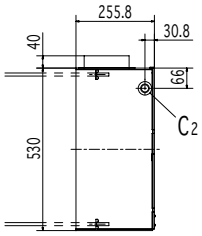
All measurements in mm.

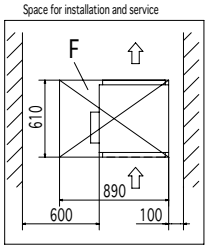


Symbol	Content		
	Model	FDUH22KXE6,28KXE6	FDUH36KXE6
A	Gas piping	φ9.52(3/8") (Flare)	φ12.7(1/2") (Flare)
B	Liquid piping	φ6.35(1/4") (Flare)	
C1,C2	Drain piping	VP20(I.D.20, O.D.26) Note (2)	
D	Hole for wiring	φ30	
E	Suspension bolts	(M10)	
F	Inspection hole	(635X890) Note (3)	

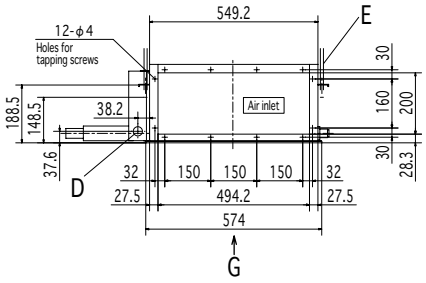






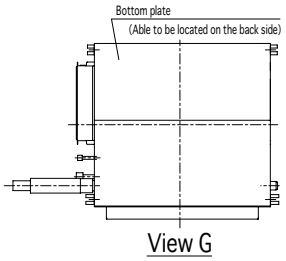


Unit:mm

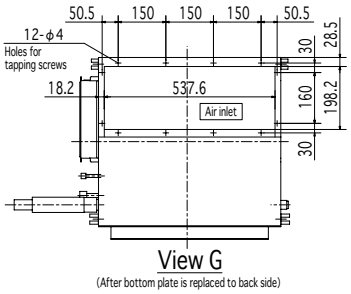


Notes

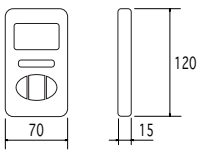
(1) The model name label is attached on the fan case inside the air return grille.
(2) Prepare the connecting socket (VP20) on site. (As for drain piping, it is possible to choose C1 or C2)
(3) When control box is located on the reverse side, Installation space should be modified to new location.
(4)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



In case of Bottom air intake



Simple remote control



R410A INVERTER

Wall Mounted FDK

Model No.

FDK22KXE6
FDK28KXE6
FDK36KXE6
FDK45KXE6
FDK56KXE6
FDK71KXE6

FDK22~56

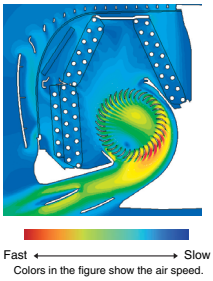
FDK71

coming soon

Wireless
remote control

RCN-K-E : FDK22~56
RCN-K71-E : FDK71
(option)

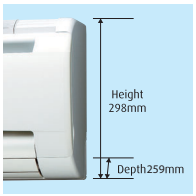
INNOVATIVE DESIGN



Colors in the figure show the air speed.

New 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.

INSTALLATION WORKABILITY



The new slimmer design allows easy & neat installation even in tight spaces.

IMPROVED MAINTAINABILITY

Also included is a new easy clean mechanism where the front panel is opened/closed simply from the bottom to easily access the detachable filters.

Specifications

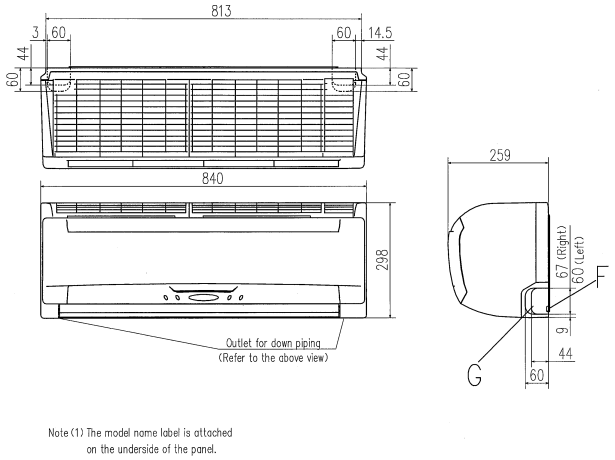
Item		Model	FDK22KXE6	FDK28KXE6	FDK36KXE6	FDK45KXE6	FDK56KXE6	FDK71KXE6
Nominal cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
Nominal heating capacity		kW	2.5	3.2	4.0	5.0	6.3	8.0
Power source			1 Phase 220-240V, 50Hz					
Power consumption	Cool	kW	0.05			0.05		0.09
	Heat		0.04			0.05		0.09
Sound pressure level		dB(A)	Hi:35 Me:33 Lo:31		Hi:39 Me:35 Lo:31	Hi:42 Me:37 Lo:33	Hi:46 Me:42 Lo:37	Hi:47 Me:43 Lo:39
Exterior dimensions H x W x D		mm	298 x 840 x 259					318 x 1098 x 248
Net weight		kg	12			12.5	13	15.5
Air flow (Standard)		CMM	Hi:8 Me:7 Lo:6		Hi:10 Me:9 Lo:7	Hi:11 Me:9 Lo:7	Hi:14 Me:12 Lo:10	Hi:21 Me:18 Lo:15
Outside air intake			Not possible					
Air filter, Q'ty			Polypropylene net x2 (Washable)					
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-K-E (for FDK22~56), RCN-K71-E (for FDK71)					
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")		Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")

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

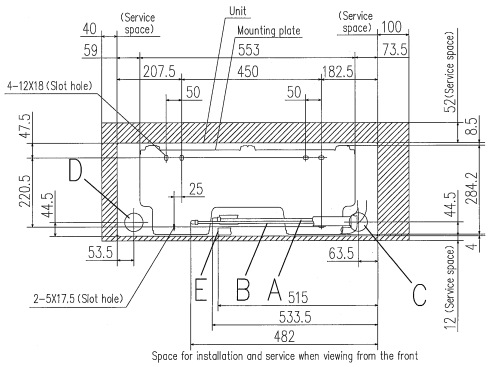
Dimensions

All measurements in mm.

FDK22~56KXE6



Symbol	Content		
	Model	FDK22KXE6,28KXE6	FDK36KXE6,45KXE6,56KXE6
A	Gas piping	ø9.52 (3/8") (Flare)	ø12.7 (1/2") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)	
C	Hole on wall for right rear piping	(ø65)	
D	Hole on wall for left rear piping	(ø65)	
E	Drain piping	VP16(I.D.16)	
F	Outlet for wiring		
G	Outlet for piping (on both side)		

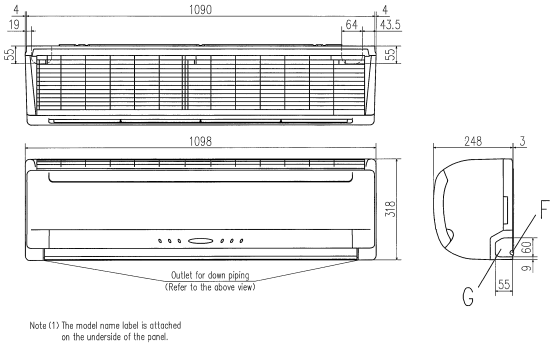


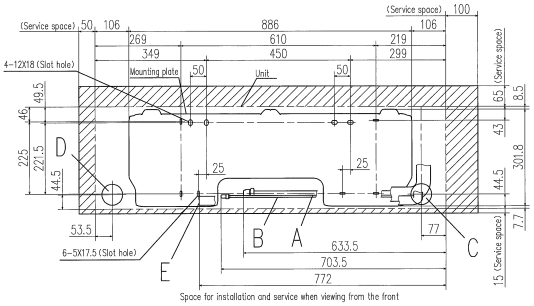
Note (1) The model name label is attached on the underside of the panel.

Space for installation and service when viewing from the front

FDK71KXE6

Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø9.52 (3/8") (Flare)
C	Hole on wall for right rear piping	(ø65)
D	Hole on wall for left rear piping	(ø65)
E	Drain piping	VP16(I.D.16)
F	Outlet for wiring	
G	Outlet for piping (on both side)	





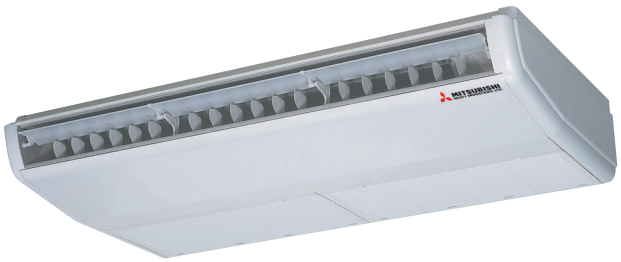
Note (1) The model name label is attached on the underside of the panel.

Space for installation and service when viewing from the front

Ceiling Suspended
FDE

Model No.

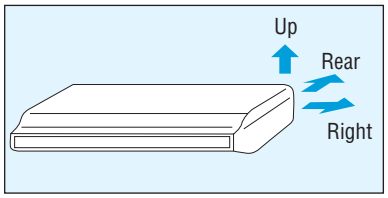
FDE36KXE6A
FDE45KXE6A
FDE56KXE6A
FDE71KXE6A
FDE112KXE6A
FDE140KXE6A



Wireless
remote control
RCN-E-E(option)

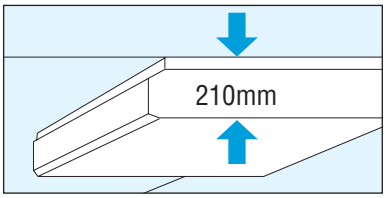
- **Small**
- **Light-weight**
- **Quiet**
- **Sleek, intelligent design**

INSTALLATION WORKABILITY



Refrigerant piping can be routed in three directions (rear, up, right) & drain piping in left or right directions, allowing free layout to meet installation conditions.

NEW SLIM DESIGN



Slim and sleek design starting at just 28kgs in weight means quick, easy & neat installation.

Specifications

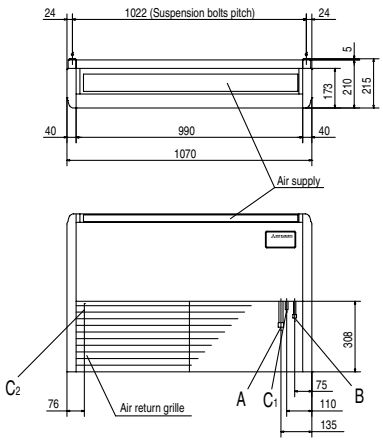
Item		Model	FDE36KXE6A	FDE45KXE6A	FDE56KXE6A	FDE71KXE6A	FDE112KXE6A	FDE140KXE6A
Nominal cooling capacity		kW	3.6	4.5	5.6	7.1	11.2	14.0
Nominal heating capacity		kW	4.0	5.0	6.3	8.0	12.5	16.0
Power source			1 Phase 220-240V, 50Hz					
Power consumption	Cool	kW	0.04-0.05			0.08-0.09	0.12-0.14	0.14-0.15
	Heat		0.04-0.05			0.07-0.08	0.11-0.13	0.13-0.14
Sound pressure level		dB(A)	Hi:39 Me:38 Lo:36			Hi:41 Me:39 Lo:37	Hi:44 Me:41 Lo:39	Hi:46 Me:44 Lo:43
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			37	49	
Air flow (Standard)		CMM	Hi:11 Me:9 Lo:7			Hi:18 Me:14 Lo:12	Hi:26 Me:23 Lo:21	Hi:29 Me:26 Lo:23
Outside air intake			Not possible					
Air filter, Q'ty			Pocket Plastic net x2 (Washable)					
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-E-E					
Installation data Refrigerant piping size		mm(in)	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")			Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")		

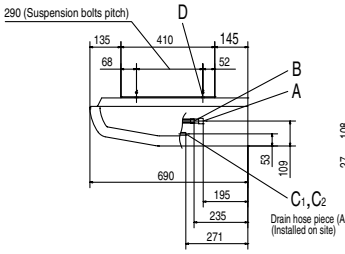
1. The data are measured under the following conditions(ISO-T1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
2. Sound pressure level indicates the value in an anechoic chamber. During operation these values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

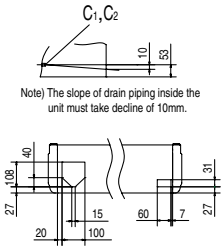
Dimensions

All measurements in mm.

FDE36KXE6A, 45KXE6A, 56KXE6A

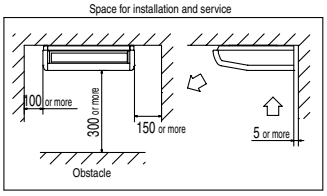




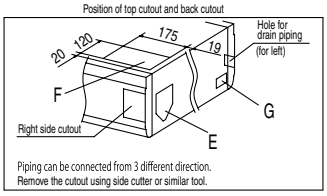


Note) The slope of drain piping inside the unit must take decline of 10mm.

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

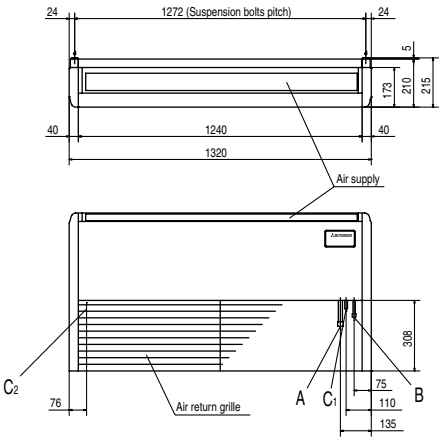


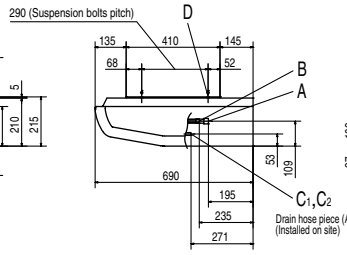
Make a space of 4000 or more between the units when installing more than one.

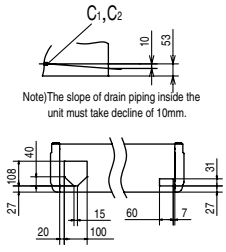


Note(1)The model name label is attached on the fan casing inside the air return grille.

FDE71KXE6A

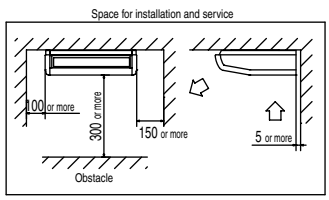




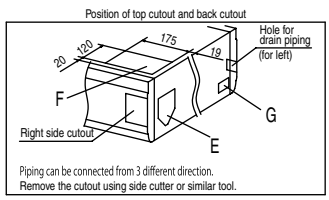


Note)The slope of drain piping inside the unit must take decline of 10mm.

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

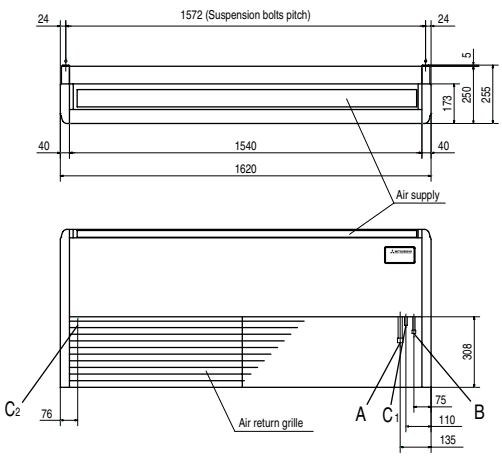


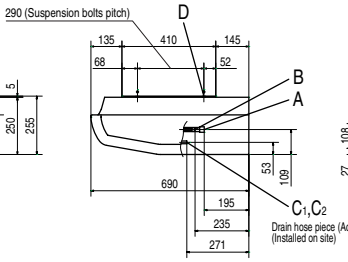
Make a space of 4500 or more between the units when installing more than one.

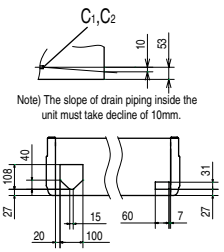


Note(1)The model name label is attached on the fan casing inside the air return grille.

FDE112KXE6A, 140KXE6A

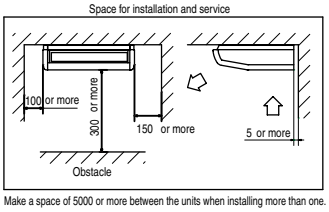




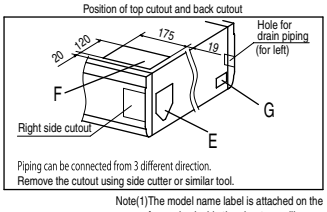


Note) The slope of drain piping inside the unit must take decline of 10mm.

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



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



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

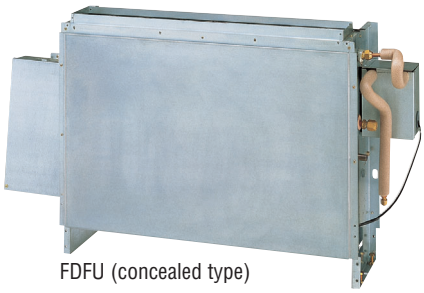
Floor Standing (with casing)
FDFL
Floor Standing (without casing)
FDFU

Model No.

FDFL28KXE6
FDFL45KXE6
FDFL71KXE6

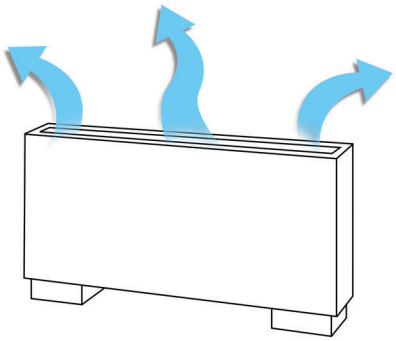
FDFU28KXE6
FDFU45KXE6
FDFU56KXE6
FDFU71KXE6

FDFL



FDFU (concealed type)

Compact design at 630mm height



Wider airflow for optimum comfort

Specifications

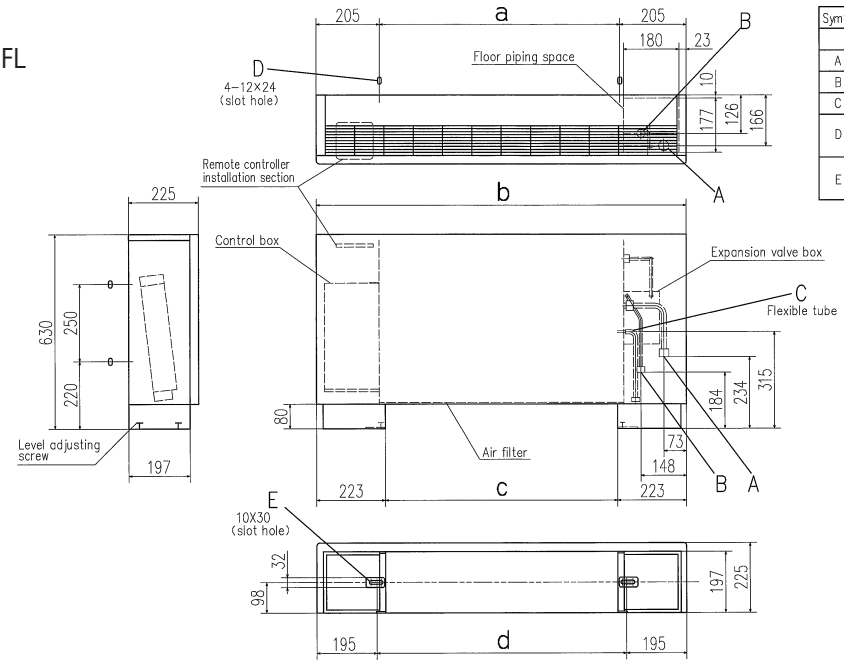
Item		Model	FDFL28KXE6	FDFL45KXE6	FDFL71KXE6	FDFU28KXE6	FDFU45KXE6	FDFU56KXE6	FDFU71KXE6
Nominal cooling capacity		kW	2.8	4.5	7.1	2.8	4.5	5.6	7.1
Nominal heating capacity		kW	3.2	5.0	8.0	3.2	5.0	6.3	8.0
Power source			1 Phase 220-240V, 50Hz						
Power consumption	Cool	kW	0.09-0.10			0.09-0.10			
	Heat		0.09-0.10			0.09-0.10			
Sound pressure level		dB(A)	Hi:41 Me:38 Lo:36	Hi:43 Me:41 Lo:40		Hi:41 Me:38 Lo:36	Hi:43 Me:41 Lo:40		
Exterior dimensions H x W x D		mm	630x1196x225		630x1481x225	630x1077x225			630x1362x225
Net weight		kg	32		40	25			32
Air flow (Standard)		CMM	Hi:12 Me:11 Lo:10	Hi:14 Me:12 Lo:10	Hi:18 Me:15 Lo:12	Hi:12 Me:11 Lo:10	Hi:14 Me:12 Lo:10		Hi:18 Me:15 Lo:12
Air filter, Q'ty			Polypropylene net x1 (Washable)						
Remote control			wired:RC-E3, RCH-E3 wireless:RCN-KIT3-E						
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")	Liquid line:ø6.35(1/4") Gas line:ø9.52(3/8")	Liquid line:ø6.35(1/4") Gas line:ø12.7(1/2")		Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")

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

Dimensions

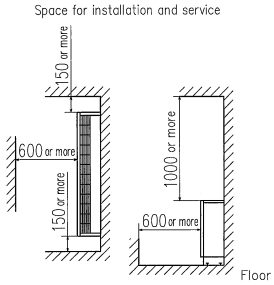
All measurements in mm.

FDFL



Symbol	Content			
	Model	FDFL28KXE6	FDFL45KXE6	FDFL71KXE6
A	Gas piping (Accessory)	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)		ϕ9.52 (3/8") (Flare)
C	Drain piping (Accessory)	PT20A female screw, 360mm		PT20A female screw, 360mm
D	Slot hole for wall mounting	(M10)		(M10)
E	Metal plate for floor mounting (Accessory)	(M8)		(M8)

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

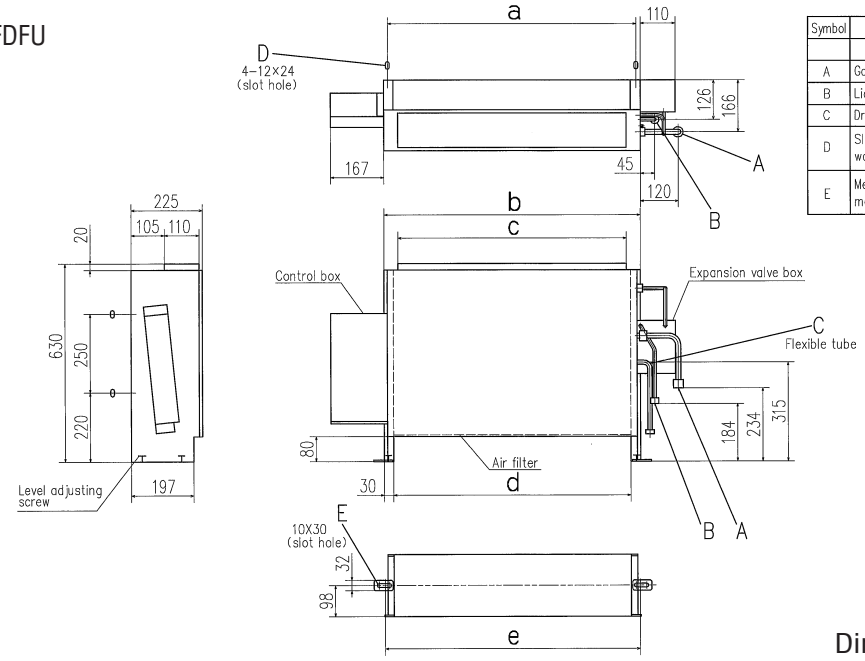


Dimension Table

Unit:mm

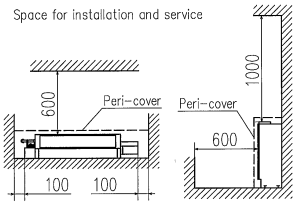
model	a	b	c	d
FDFL28KXE6, 45KXE6	786	1196	750	806
FDFL71KXE6	1071	1481	1035	1091

FDFU



Symbol	Content			
	Model	FDFU28KXE6	FDFU45KXE6,56KXE6	FDFU71KXE6
A	Gas piping (Accessory)	ϕ9.52 (3/8") (Flare)	ϕ12.7 (1/2") (Flare)	ϕ15.88 (5/8") (Flare)
B	Liquid piping	ϕ6.35 (1/4") (Flare)		ϕ9.52 (3/8") (Flare)
C	Drain piping (Accessory)	PT20A female screw, 360mm		PT20A female screw, 360mm
D	Slot hole for wall mounting	(M10)		(M10)
E	Metal plate for floor mounting (Accessory)	(M8)		(M8)

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



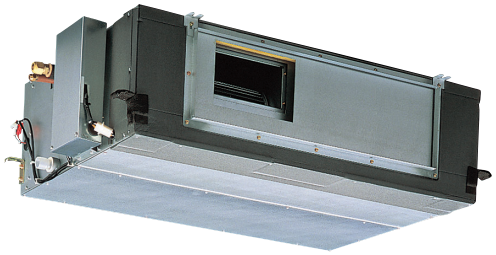
Dimension Table

Unit:mm

model	a	b	c	d	e
FDFU28KXE6, 45KXE6, 56KXE6	786	810	722	750	806
FDFU71KXE6	1071	1095	1007	1035	1091

Outdoor Air Processing unit
FDU-F

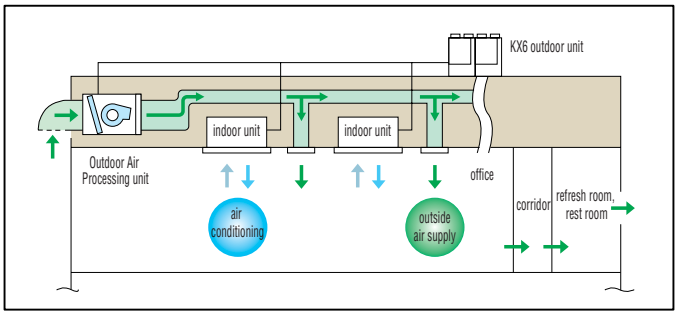
Model No.
FDU500FKXE6
FDU850FKXE6
FDU1300FKXE6
FDU1800FKXE6



Fan control kit
(100~200Pa)
U-FCRB(option)

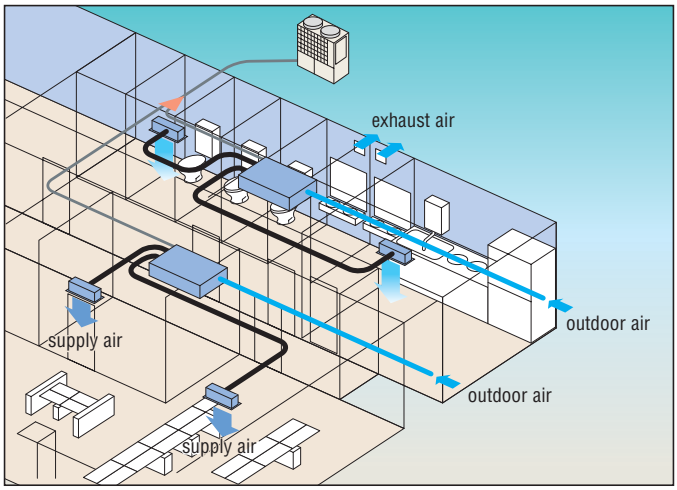
Air conditioning and intake of outdoor air are in the same system

Outdoor Air processing unit can be connected in a KX6 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 360mm 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.



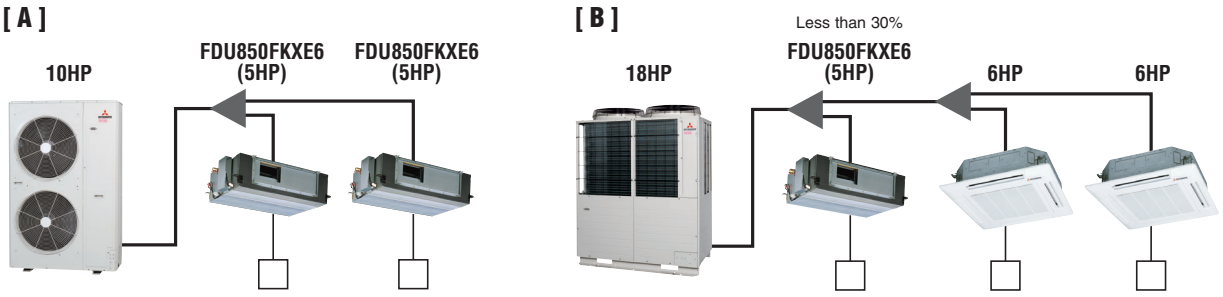
(1) This unit is the specific unit for processing the outdoor air temperature closer to the room temperature. For conditioning the room temperature a dedicated air-conditioner is required additionally.
(2) This unit monitors the outdoor air temperature and controls thermostat ON/OFF at the setting temperature 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 KX6 series

FDU-F series are connectable to 8~48HP KX6 outdoor units, not connectable to 4~6HP.
8 ~ 48 HP : Yes , 4 ~ 6 HP : No

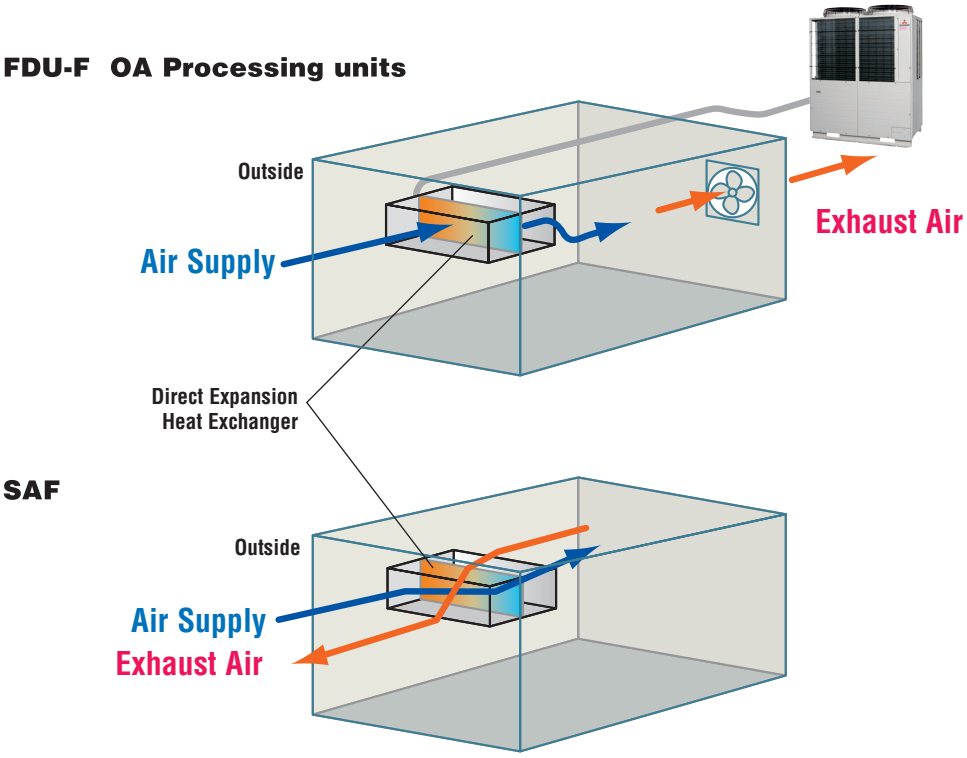
Combination with KX6 series

	case	Combination
A	In case OA processing units only are connected with KX6 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 KX6 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 (Difference between FDU-F and SAF)

SAF is the energy recovery ventilation unit which can recover heat energy from exhaust air to supply air and "has no air processing function, but FDU-F is air processing unit which can treat the supply air closer to room temperature by cooling or heating in connection with KX6 refrigerant system and exhaust air is discharged to outside of the room.



Specifications

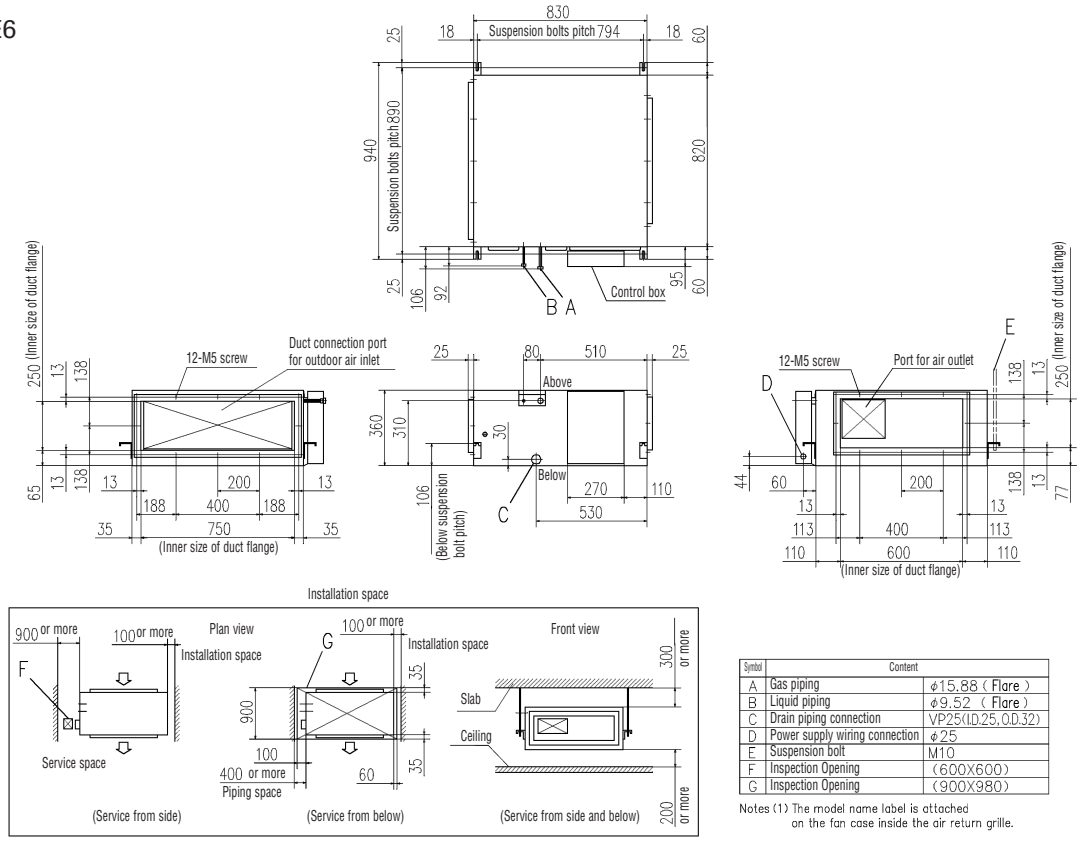
Item		Model	FDU500FKXE6	FDU850FKXE6	FDU1300FKXE6	FDU1800FKXE6
Nominal cooling capacity		kW	9.0	14.0	22.4	28.0
Nominal heating capacity		kW	4.2	7.0	10.9	14.8
Power source			1 Phase 220-240V, 50Hz			
Power consumption	Cool	kW	0.11	0.16	0.27	0.31
	Heat		0.11	0.16	0.27	0.31
Sound pressure level		dB(A)	43	46	48	51
Exterior dimension HxWxD		mm	360x820x830	360x1200x830	360x1570x830	
Net weight		kg	48	62	82	84
Air flow (Standard)		CMM	8.5	14	22	30
		CMH	510	840	1320	1800
Available static pressure		Pa	Max:200			
Remote control			wired:RC-E3 wireless:RCN-KIT3-E			
Installation data Refrigerating piping size		mm (in)	Liquid line:ø9.52(3/8") Gas line:ø15.88(5/8")		Liquid line:ø9.52(3/8") Gas line:ø19.05(3/4")	Liquid line:ø9.52(3/8") Gas line:ø22.22(7/8")

1. Cooling capacity is measured at 33°CDB/28°CWB (68%RH) and heating capacity is measured at 0°CDB/2.9°CWB under OA processing mode.
2. Operation range of outdoor air temperature is 20°C-40°CDB in cooling, and 0°C-24°CDB in heating.
3. Indicated sound level value is measured in anechoic chamber. Actual operation value may become higher due to the surrounding conditions
4. Indicated sound level values are measured at 200Pa static pressure. Indicated air flow volume is measured at 200Pa static pressure.
5. Total connection capacity of dedicated air conditioning units and OA processing units should be within 50% to 100% of the outdoor unit capacity. Total connection capacity of OA processing units should not exceed 30% of outdoor unit capacity.
6. OA processing unit can be used alone, but connecting number of OA processing units should not exceed two (2). The connection capacity of OA processing units should be within 50% to 100% of outdoor unit capacity.
7. When optional fan control kit (U-FCRB) is used and operated at 100Pa static pressure, the sound level value becomes 5dB(A) lower than the above indicated value.

Dimensions

All measurements in mm.

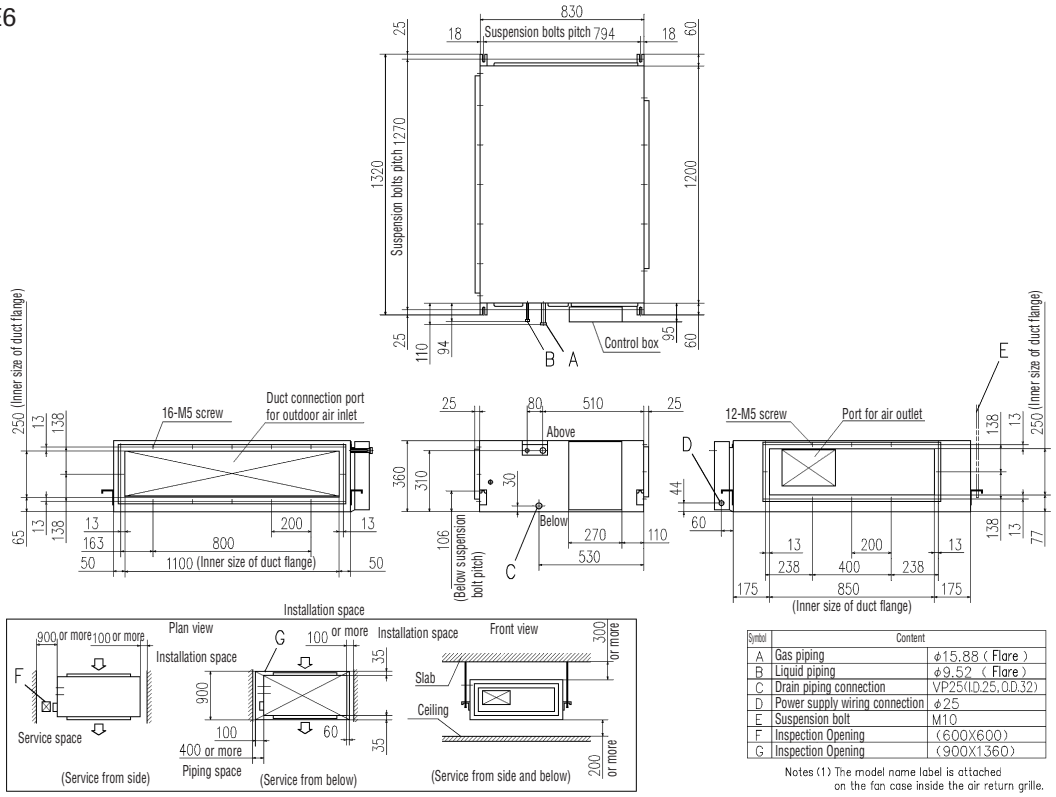
FDU500FKXE6



Symbol	Content	
A	Gas piping	ϕ15.88 (Flare)
B	Liquid piping	ϕ9.52 (Flare)
C	Drain piping connection	VP25(I.D.25, O.D.32)
D	Power supply wiring connection	ϕ25
E	Suspension bolt	M10
F	Inspection Opening	(600X600)
G	Inspection Opening	(900X980)

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

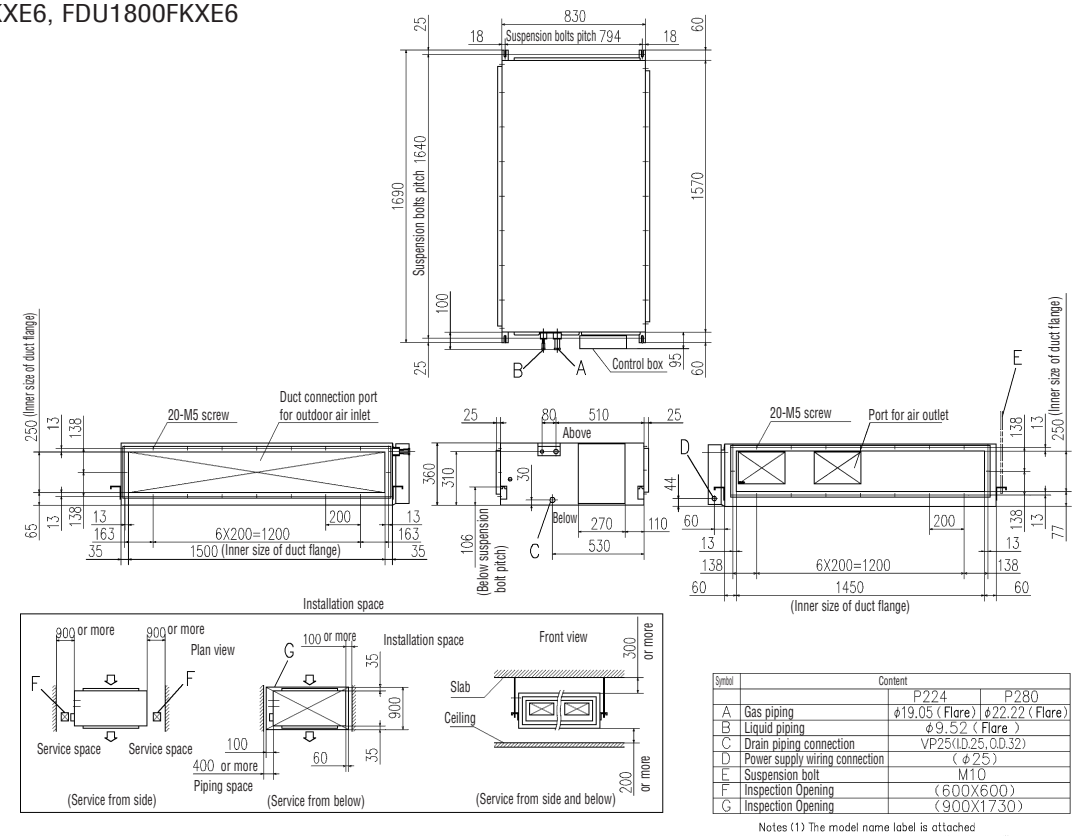
FDU850FKXE6



Symbol	Content	
A	Gas piping	φ15.88 (Flare)
B	Liquid piping	φ9.52 (Flare)
C	Drain piping connection	VP25(ID.25,OD.32)
D	Power supply wiring connection	φ25
E	Suspension bolt	M10
F	Inspection Opening	(600X600)
G	Inspection Opening	(900X1360)

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

FDU1300FKXE6, FDU1800FKXE6



Symbol	Content		
		P224	P280
A	Gas piping	φ19.05 (Flare)	φ22.22 (Flare)
B	Liquid piping	φ9.52 (Flare)	
C	Drain piping connection	VP25(ID.25,OD.32)	
D	Power supply wiring connection	(φ25)	
E	Suspension bolt	M10	
F	Inspection Opening	(600X600)	
G	Inspection Opening	(900X1730)	

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

Fresh Air Ventilation and Heat Exchange unit SAF-E4

Model No.

SAF250E4
SAF350E4
SAF500E4
SAF800E4
SAF1000E4

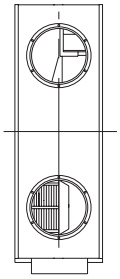
Re; Building Regulations Part L2

The Part L2 (April 2006) regulations limit the amount of electrical/gas power to be used to provide heating or cooling in commercial buildings. Therefore the building designer needs to select energy efficient heating/cooling equipment, and to minimise energy losses through ventilation systems.

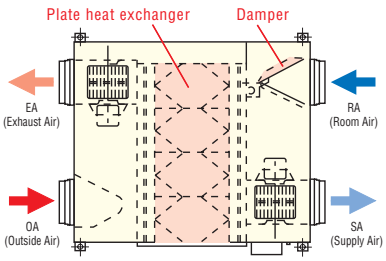
The SAF recovers heat energy which would otherwise be exhausted to atmosphere, and uses this energy to warm the air entering the building. The reverse happens in warmer climates, where the exhausted cool air is used to partially cool the incoming air.

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

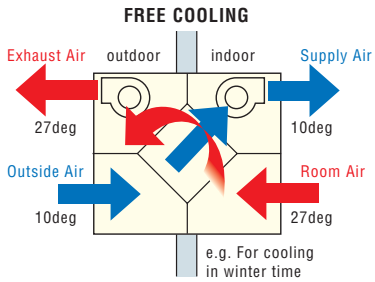
The inclusion of the SAF energy recovery ventilation units in the building design, will reduce the total amount of carbon emissions.



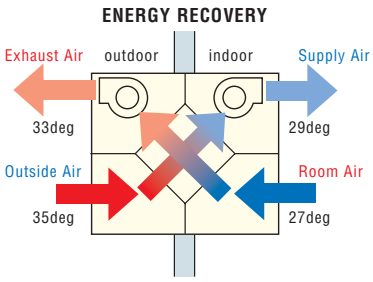
Structure (SAF1000E4)



Principle of operation (simple ventilation)



Principle of operation (heat exchanging)



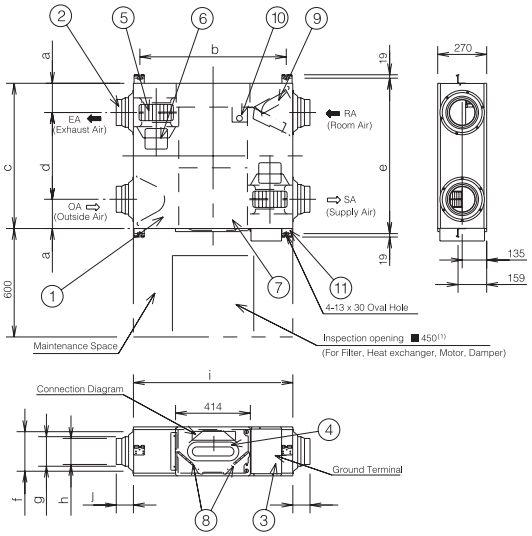
Specifications

Item			Model	SAF250E4	SAF350E4	SAF500E4	SAF800E4	SAF1000E4
Power source				1 Phase 220-240V, 50Hz				
Exterior dimensions Height x Width x Depth			mm	270x882x599	170x882x804	270x962x904	388x1322x884	388x1322x1135
Exterior appearance				Galvanised steel sheet				
	Power input		W	99-114	124-137	169-188	309-359	360-399
	Running current		A	0.46-0.48	0.59-0.60	0.79-0.81	1.48-1.50	1.85-1.93
Capacity	UHi	Enthalpy exchange efficiency Cooling	%	63	66	62	65	
		Enthalpy exchange efficiency Heating		70	69	67	71	
		Temperature exchange efficiency		75				
	Hi	Enthalpy exchange efficiency Cooling		63	66	62	65	
		Enthalpy exchange efficiency Heating		70	69	67	71	
		Temperature exchange efficiency		75				
	Lo	Enthalpy exchange efficiency Cooling		66	69	77	68	68
		Enthalpy exchange efficiency Heating		73	71	67	74	73
		Temperature exchange efficiency		77	77	75	76	76
Motor & Q'ty			kW	0.02x2	0.044x2	0.062x2	0.117x2	0.137x2
Air handling equipment Fan type & Q'ty				Sirocco fan x 2				
Air flow		UHi	m^3/h	250	350	500	800	1000
		Hi		250	350	500	800	1000
		Lo		170	280	370	650	810
Available static pressure		UHi	Pa	90	95	105	140	90
		Hi		80	65	70	110	55
		Lo		37	42	38	70	35
Air filter	Out take intake air			Protection for element (Washable) PS400				
	Exhaust air							

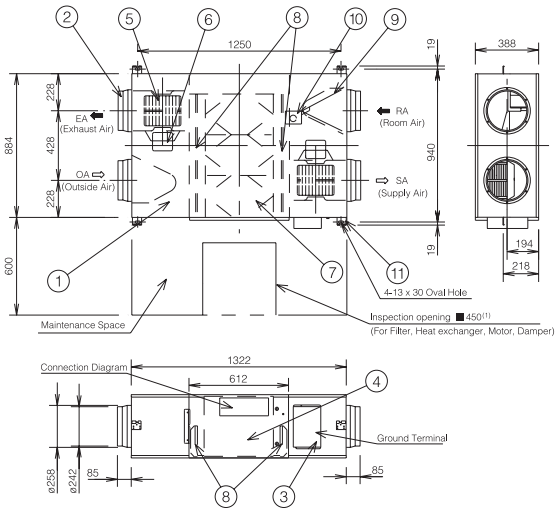
Dimensions

All measurements in mm.

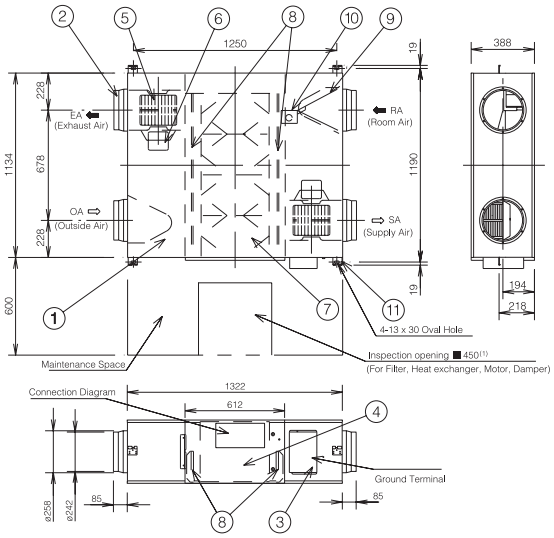
SAF250E4,350E4,500E4



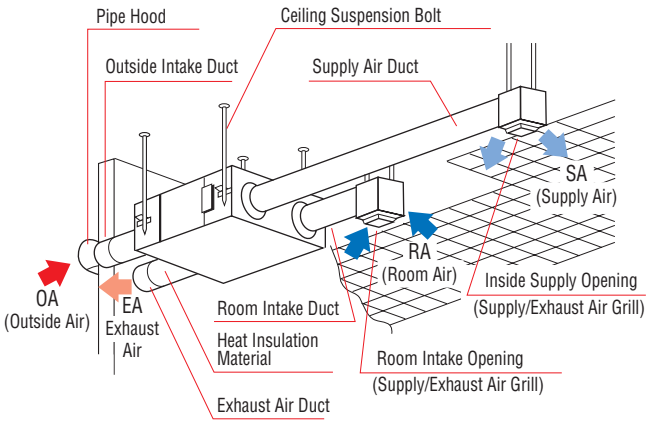
SAF800E4



SAF1000E4



Installation reference



NO.	Name	Quantity	Material	Remarks
1	Frame	1	Zinc-plated steel	
2	Adaptor	4	ABS Resin	
3	Electrical Equipment Box	1		
4	Inspection Cover	1	Zinc-plated steel	
5	Fan	2	ABS Resin	
6	Motor	2		
7	Heat Exchange Element	2	Flame Retardant Paper + Plastic	Air to air Heat Exchanger
8	Filter	2	Non-woven Cloth	Collection Efficiency Gravimetric Method 82%
9	Damper	1		
10	Damper Motor	1		
11	Ceiling Suspension Fixture	4	Zinc-plated Steel	

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

Dimension table

Unit:mm

Model	a	b	c	d	e
SAF250E4	142	810	599	315	655
SAF350E4	162	810	804	480	860
SAF500E4	202	890	904	500	960

Model	f	g	h	i	j
SAF250E4	ø219	ø164	ø144	882	95
SAF350E4	ø219	ø164	ø144	882	95
SAF500E4	ø246	ø210	ø194	962	107

Control Systems <Individual control>

Remote Control line up

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

	indoor unit	remote control	indoor unit	remote control
wireless	FDT	RCN-T-36W-E	FDK22~56	RCN-K-E
	FDTC	RCN-TC-24W-ER	FDK71	RCN-K71-E
	FDE	RCN-E-E	others	RCN-KIT3-E

Wired remote control with weekly timer (option)

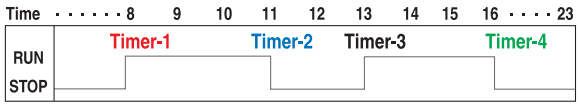
RC-E3

The RC-E3 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-E3 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-E3 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-E3 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)

NEW

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.

Wireless remote control (option)

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

RCN-T-36W-E, RCN-TC-24W-ER

RCN-E-E NEW

RCN-KS-E, RCN-K71-E NEW

RCN-KIT3-E

Thermistor (option)

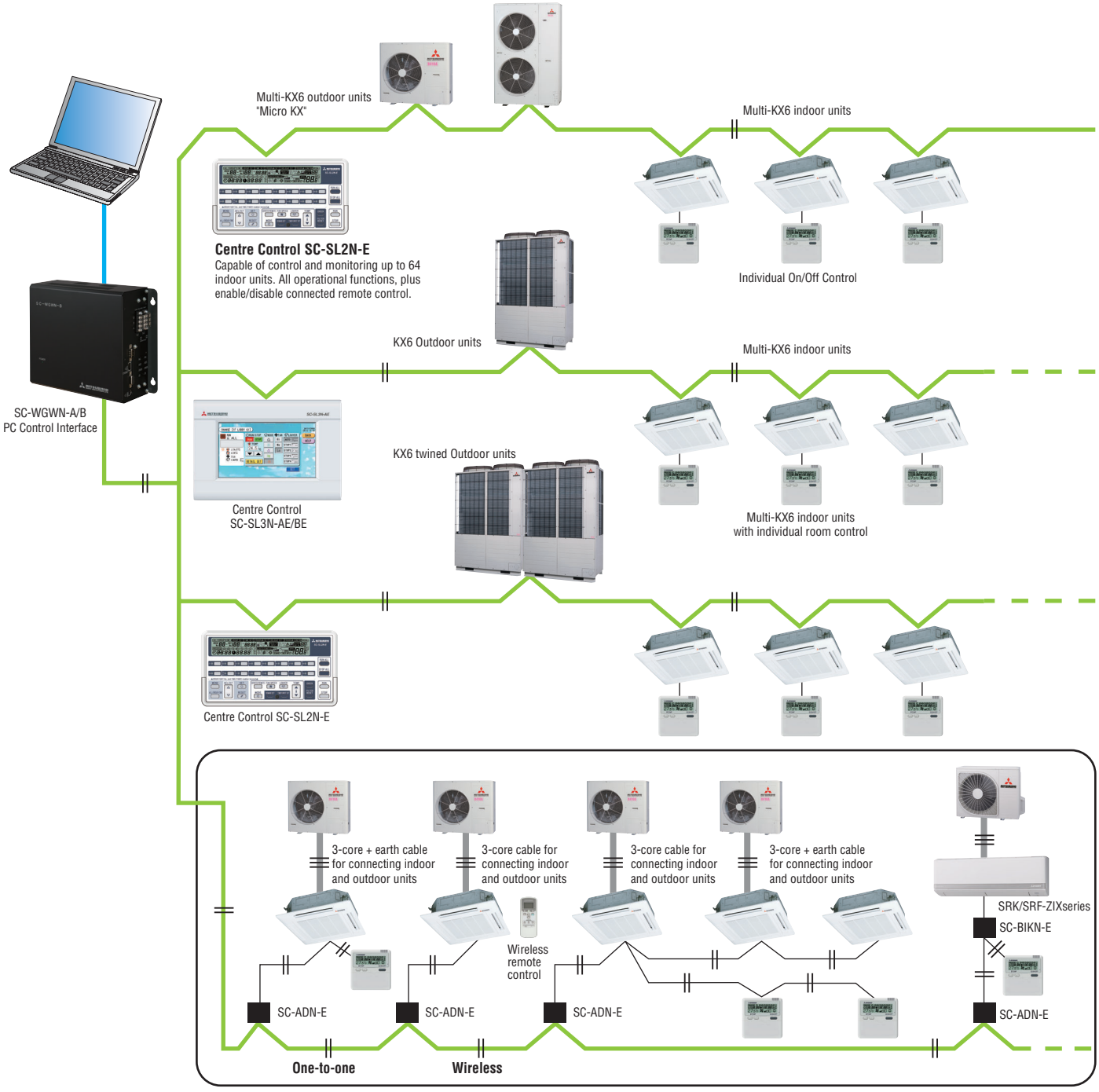
SC-THB-E3

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 censor is required (as when center control system is in place), install SC-THB-E3 at proper place in the rooms.

<Control System>
SUPERLINK-Ⅱ

MHI 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. MHI 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 MHI split systems can also be integrated on to the Superlink-Ⅱ network using SC-ADN-E.



<Central Control>

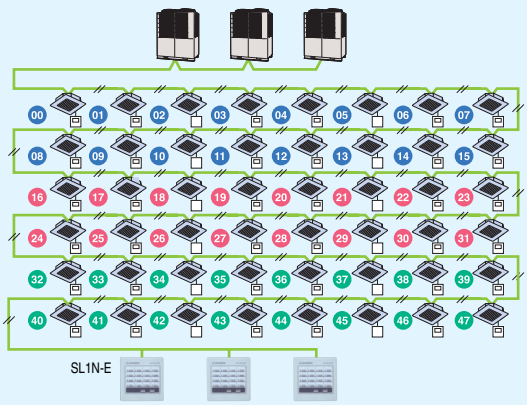
SC-SL1N-E

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

Simple centralised control.

1. The SC-SL1N-E is connected to the Superlink-Ⅱ network via 2-core, non-polar wires ('AB' connection).
2. It will monitor and control the start/stop function of up to 16 units, with the sixteen operation button.
3. The unit or group numbers in operation or in need of service are displayed with an LED.
4. Collective start/stop is also available through the simultaneous on/off button.
5. Up to 12 SC-SL1N-E units can be connected to a Superlink-Ⅱ network (consisting of up to 128 indoor units).
6. If a power failure occurs, the SC-SL1N-E will resume the operation of the system according to a stored operation condition, once power is restored.
7. This central control can be connected anywhere on the Superlink-Ⅱ network, at indoor units as well as outdoor units. This can substantially reduce the amount of electrical installation work.
   This feature is common to both SC-SL1N-E and SC-SL2N-E controls.

Example of control by a centre control SC-SL1N-E

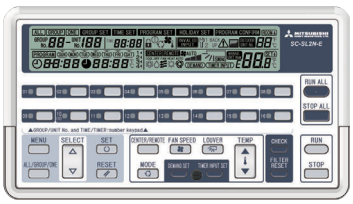


More than one unit (up to 16) can be controlled for individual or collective start/stop operation and indication of unit statuses such as in operation or in need of service.

• Outer dimensions: H120 x W120 x D15+62*mm.
62* is the measurement including the part contained in a recess.

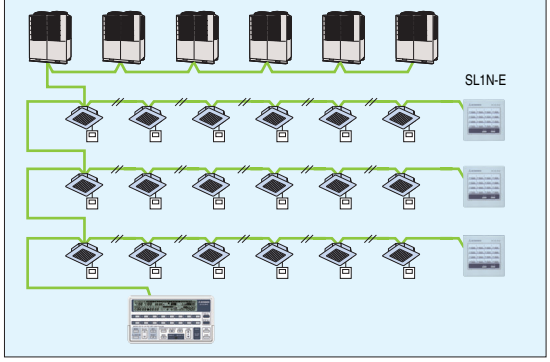
SC-SL2N-E

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



1. The SC-SL2N-E is connected to the Superlink-Ⅱ network via 2-core, non-polar wires ('AB' connection).
2. It will monitor and control the start/stop function of up to16 units, or 16 groups of units, with the sixteen operation buttons.
3. It also monitors and controls the following functions for individual units, groups of units or the complete network: operation mode, set point temperature, return air temperature, louvre position, error code.
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-SL1N-E will resume the operation of the system according to a stored operation condition, once power is restored.
7. The SC-SL2N-E can be connected to an external timer to facilitate timed on/off cycles.
8. The number of SC-SL1N-E and SC-SL2N-E units connected to one network are detailed on the table below.
9. This central control can be connected anywhere on the Superlink-Ⅱ network, at indoor units as well as outdoor units. This can substantially reduce the amount of electrical installation work. This feature is common to both SC-SL1N-E and SC-SL2N-E controls.

Example of control by a centre control SC-SL2N-E



An SC-SL2N-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: H215 x W120 x D25+35*mm.
35* is the measurement including the part contained in a recess.

Combination of Center Control and BMS interface unit

Yes:connectable No:not connectable

	SC-SL1N-E	SC-SL2N-E	SC-SL3N-AE/BE	SC-WGWN-A/B	SC-BGWN-A/B	SC-LGWN-A
SC-SL1N-E	Yes(∗1)	Yes(∗1)	Yes(∗1)	Yes(∗2)	Yes(∗2)	Yes(∗2)
SC-SL2N-E	Yes(∗1)	Yes(∗1)	Yes(∗1)	Yes(∗2)	Yes(∗2)	Yes(∗2)
SC-SL3N-AE/BE	Yes(∗1)	Yes(∗1)	Yes(∗1)	Yes(∗2)	Yes(∗2)	Yes(∗2)
SC-WGWN-A/B	Yes(∗2)	Yes(∗2)	Yes(∗2)	No	No	No
SC-BGWN-A/B	Yes(∗2)	Yes(∗2)	Yes(∗2)	No	No	No
SC-LGWN-A	Yes(∗2)	Yes(∗2)	Yes(∗2)	No	No	No

(∗1) Number of units in combination of SC-SL1N-E, SC-SL2N-E and SC-SL3N-AE/BE

	Connectable number of controls in one superlink-Ⅱ network									
SC-SL3N-AE/BE	0				1			2		
SC-SL2N-E	0	1-2	3-4	5-8	0-2	3-4	5-8	0-2	3-4	5-8
SC-SL1N-E	12	8	4	0	8	4	0	8	4	0

Regarding previous Superlink, refer to Technical Manual '06 SC-T-111, '08 SC-T-119.

(∗2) Number of units in combination of SC-WGWN-A/B, SC-BGWN-A/B, SC-LGW-A, SC-SL3N-AE/BE, SC-SL2N-E and SC-SL1N-E

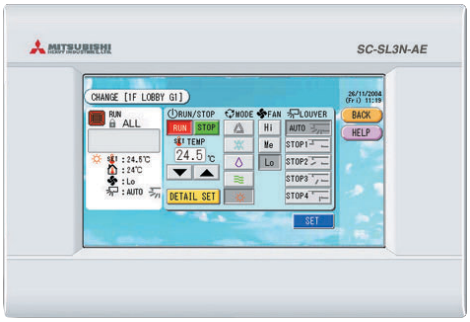
Connectable number of controls in one superlink-Ⅱ network			
SC-WGWN-A/B or SC-BGWN-A/B or SC-LGWN-A	SC-SL1N-E	SC-SL2N-E	SC-SL3N-E-AE/BE
1	0-4	0-1	0-1

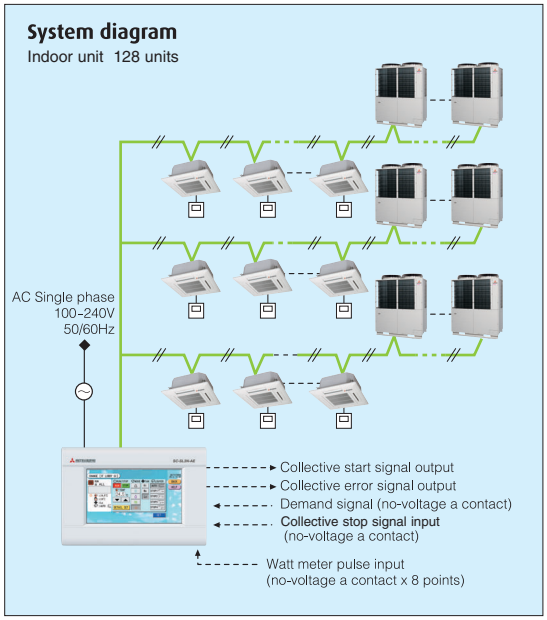
Regarding previous Superlink, refer to Technical Manual '06 SC-T-111, '08 SC-T-119.

SC-SL3N-AE/BE

MHI introduces the full colour touch screen central control SC-SL3N-AE/BE, with 7 inch interactive LCD display. Offers control, monitoring, scheduling and service/maintenance functions for up to 128 indoor units.

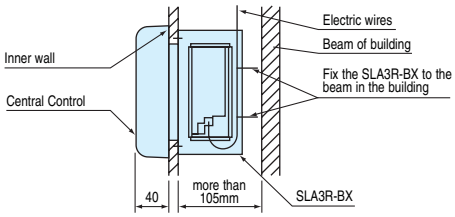
Indoor units can be controlled, scheduled, monitored and interrogated either individually, as groups or as blocks of groups with the following functions:

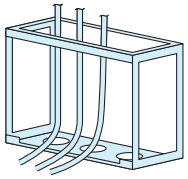




SLA3R-BX Control Box (option) NEW

In case SC-SL3N-AE/BE is fixed in the wall, use SLA3R-BX as optional parts.





Control	Monitoring	Scheduling	Administration/Service
Run/Stop	Operating state	Yearly schedule	Block definition
Mode (cool/heat/fan)	Mode	Today's schedule	Group definition
Set temperature	Set temperature	Special day schedule	Unit definition
Operation permitted/prohibited	Room temperature		Time and date setting
Fan speeds	Operation enabled		Alarm history
Air direction	Fan speed		Energy consumption calculation period
Filter reset	Air direction		Energy consumption cumulative operation time
Filter sign			
Maintenance (1, 2 or back-up)			Demand control
Breakdown			Emergency stop
			Power failure recovery control

Electric power calculation function:

(for SC-SL3N-BE only)

SC-SL3N-BE gives outputs as "electric power consumption kW data -each indoor unit, each group, each SUPERLINK-Ⅱ system and each power pulse system-" and uses USB memory.
The data can be edited by using the software that comes with the unit.

	SC-SL3N-BE
Method of data saving	USB
Calculation software	Standard
Air-conditioner power proportional distribution pulse input	8 systems
Connecting indoor units number (Maximum)	128

Item / Model		SC-SL3N-AE/SC-SL3N-BE
Ambient temperature during use		0 ~ 40℃
Power supply		1 Phase 100-240V 50/60Hz
Power consumption		18W
External dimensions (Height x Width x Depth)		162mm x 240mm x 108mm
Net weight		2.0kg
Number of connectable units (indoor units)		up to 128 units
LCD touch panel		Colour LCD, 7 inches wide
Inputs	SL (Superlink) signal inputs	3 systems
	Gas, Power pulse input*	8-point pulse width 100ms or more
	Emergency stop signal input*	1 point non-voltage a contact input continuous input (closed, forced stop)
	Demand signal input*	1 point non-voltage a contact input continuous input (closed, demand control)
Outputs	Simultaneous operation output	1 point maximum rated current 40mA, 24 V During full stop; Open. If even one unit is operating; Closed
	Simultaneous error output	1 point maximum rated current 40mA, 24 V Normal; closed. If even one unit is abnormal; Open

* The receiving side power supply is DC 12V (10mA).
The air conditioning charges calculations of this unit are based on OIML, the international standard.
* In case embodying in a wall, please be sure to special box SLA3R-BX (option).

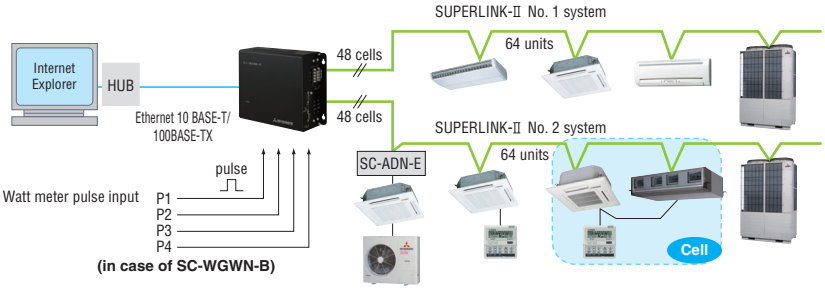
<PC windows central control>

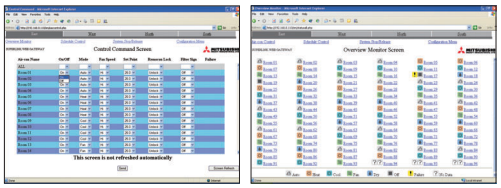
SC-WGWN-A/SC-WGWN-B Production by order

(SC-WGWN-B is with electric power calculation function)

Control and monitoring of up to 96 cells (some cells can have two or more indoor units and total number of indoor units can be up to 128 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.

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





PC requirements: Windows 2000 or Windows XP.
Monitor resolution 1024 x 768.
Web browser requirements: Internet Explorer 6.0 or later.

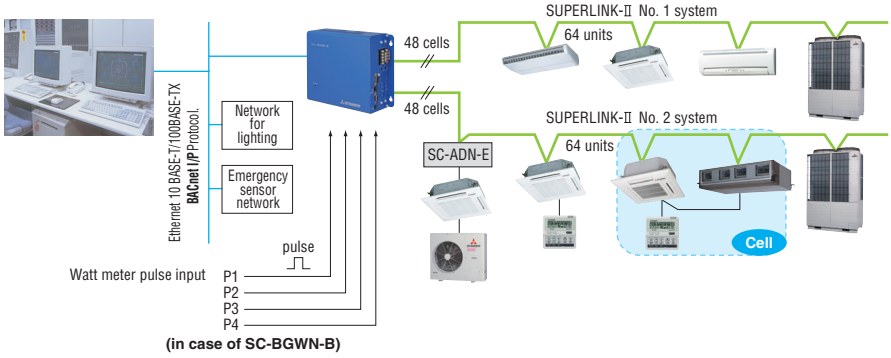
<BMS interface unit>

SC-BGWN-A/SC-BGWN-B (BACnet gateway) Production by order

(SC-BGWN-B is with electric power calculation function)

SC-BGWN-A/B is an interface device that converts MHI's Superlink-Ⅱ communication data to BACnet code. Control and monitoring functions of the a/c system for up to 96 cells (some cells can have two or more indoor units and total number of indoor units can be up to 128 units) can be integrated to a central control point via the building management system network.

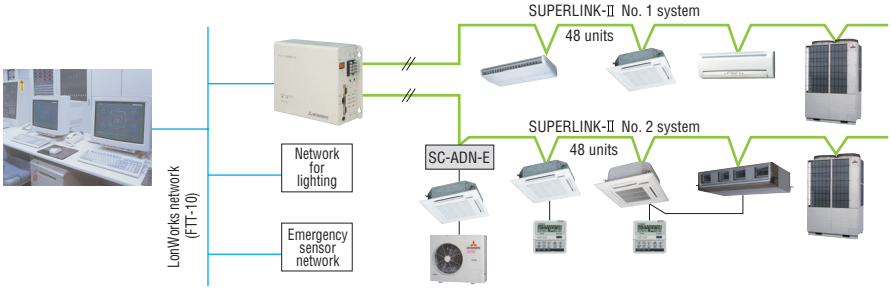
Additional engineering service cost etc. is required.
In case of SC-BGWN-B, communication test by qualified person regarding electric cost calculation function is required before commissioning.
Please consult your dealer when using this gateway.



SC-LGWN-A (LonWorks gateway) Production by order

SC-LGWN-A is an interface device that converts MHI's 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.



KX6 Service/maintenance and monitoring

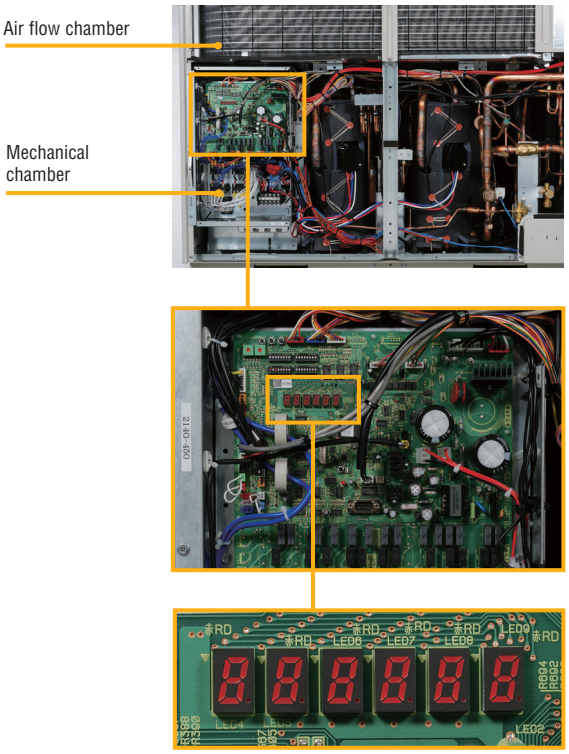
The design of the outdoor units separates the air flow compartment from the mechanical compartment, allowing easy access to serviceable parts by simply removing the panel.

This design also means that the base plate of the air flow compartment acts as a drain tray connected to a drain pipe that runs through the mechanical compartment, so a simple connection of a drain hose to the base of the unit is all that is required, no need for a separate drain tray to be installed.

Service maintenance and trouble shooting tasks can be carried out easily via the wired remote controller, as well as a cooling test operation to assist commissioning.

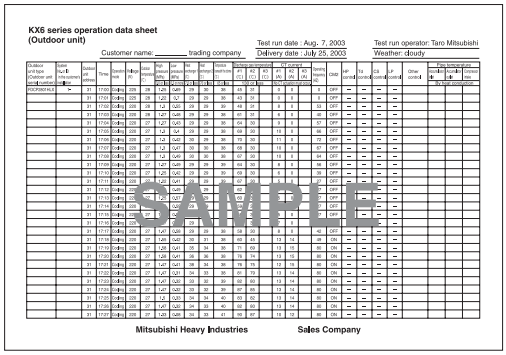
The outdoor unit control box is also equipped with a switch to invoke a 'test-run' mode. This function can be used to help detect any installation errors, indoor/outdoor unit matching errors, EEV and valve operation. A 'pump-down' switch on the PCB allows refrigerant to be recovered with the compressor protected.

All outdoor unit PCBs are also equipped with a 7-segment digital display for detailed operation history and fault finding. Operation data is stored for the 30 minute period preceding a fault occurring and details are displayed on the 7-segment reading.



Outdoor unit PCB 7-segment display

Automatically produced test-run report


KX6 series operation data sheet
(Outdoor unit)

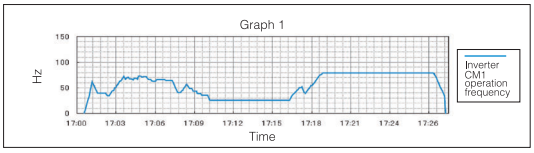
Customer name: _____ trading company

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

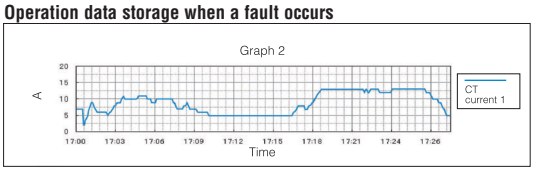
Test run operator: Taro Mitsubishi
Weather: cloudy

Mitsubishi Heavy Industries Sales Company

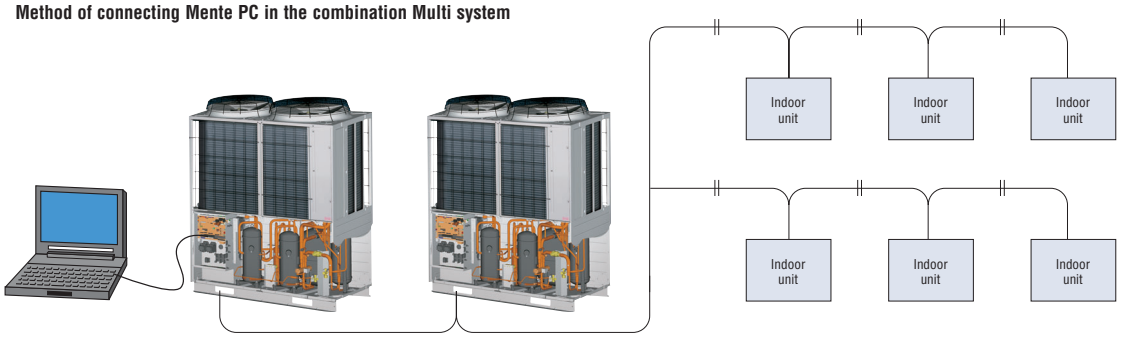
Operation data storage during servicing



Operation data storage when a fault occurs



Method of connecting Mente PC in the combination Multi system

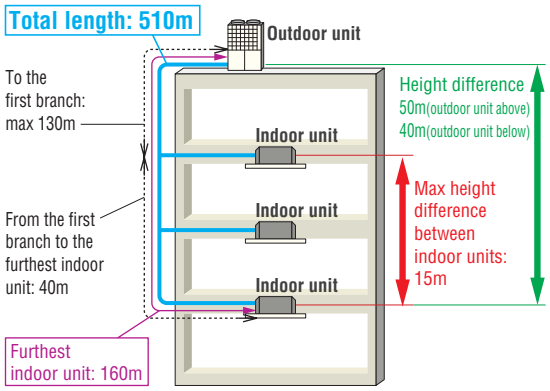


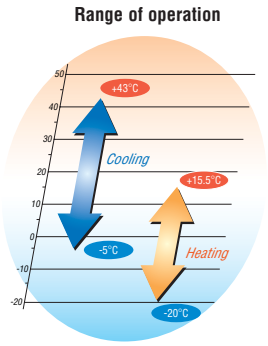
KX4 Outdoor units
Heat pump systems 8, 10, 12hp (22.4kW~33.5kW)

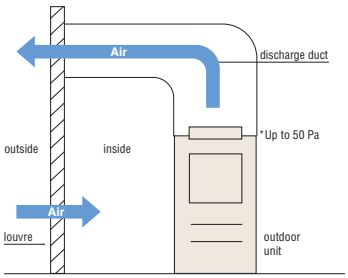
Model No.	Nominal Cooling Capacity
FDCA224HKXE4D	22.4kW
FDCA280HKXE4D	28.0kW
FDCA335HKXE4D	33.5kW

- Production by order
- Superlink models (not Superlink-Ⅱ models)
- The KX4 heat pump 2-pipe systems offer high performance VRF for applications that require either cooling only or heating only.
- Connect up to 20 indoor units/up to 130% capacity.
- High efficiency with COP (in cooling) from 3.6 to 3.9.

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







In case an outdoor unit is installed inside the building and outdoor exhaust air is discharged to outside the building through duct system, these units have necessary minimum external static pressure (50Pa).

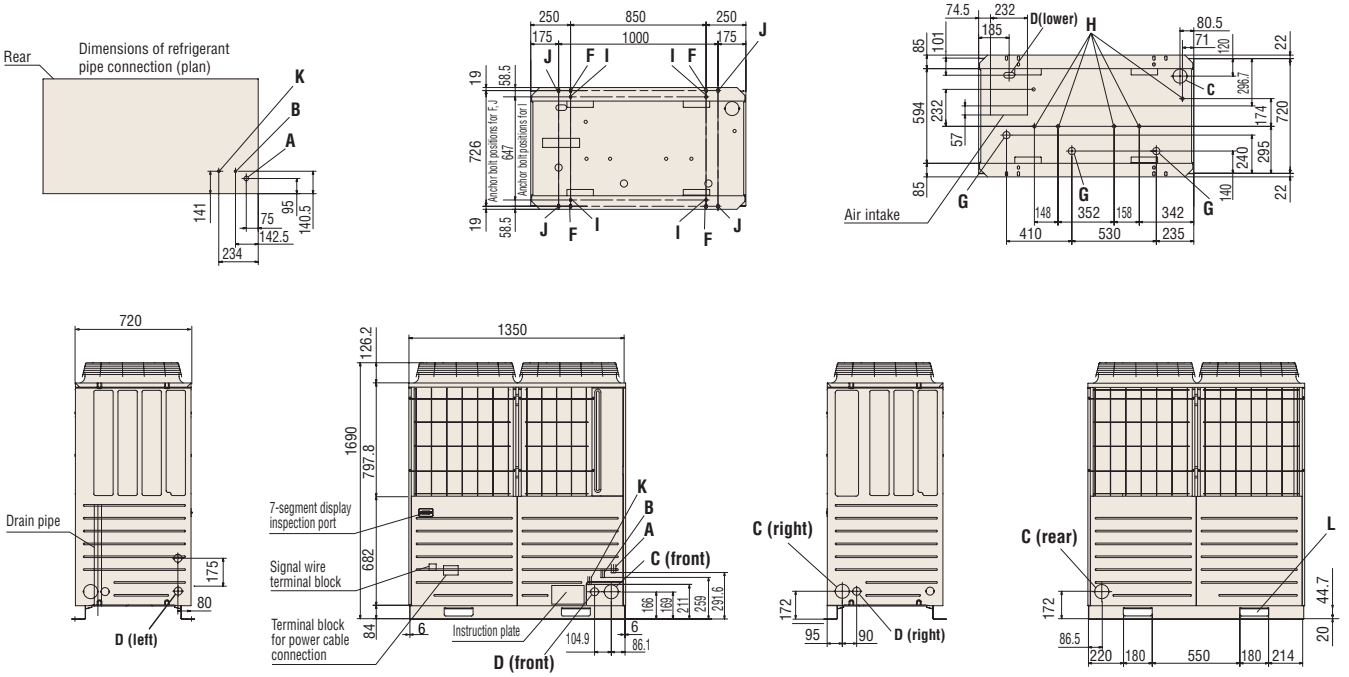
Specifications

Item			Model	FDCA224HKXE4D	FDCA280HKXE4D	FDCA335HKXE4D
Nominal horse power				8HP	10HP	12HP
Power source				3 Phase 380V-415V, 50Hz		
Nominal capacity	Cooling		kW	22.4	28.0	33.5
	Heating			25.0	31.5	37.5
Electrical characteristics	Starting current		A	5		
	Power consumption	Cooling	kW	5.70	8.26	9.53
		Heating		5.98	8.06	9.84
	Operating current	Cooling	A	9.6-8.8	13.6-12.4	15.5-14.2
		Heating		9.6-8.8	13.3-12.4	16.3-14.9
Exterior dimensions	HxWxD		mm	1690x1350x720		
Net weight			kg	245		
Refrigerant charge	R410A		kg	11.5		
Sound pressure level	Cooling/Heating		dB(A)	57/57	57/58	60.5/61
Refrigerant piping size	Liquid line		mm(in)	ø9.52(3/8")		ø12.7(1/2")
	Gas line			ø19.05(3/4")	ø22.22(7/8")	
Capacity control			%	27~126	20~114	19~117
Number of connectable indoor units				13	16	20

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

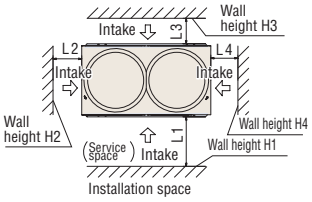
All measurements in mm.



Mark	Item	
A	Service valve connection (gas side)	For refrigerant piping, please refer to the unit specifications.
B	Service valve connection (liquid line)	
C	Refrigerant pipe draw-out port	ø88
D	Power cable draw-in port	ø50
F	Anchor bolt hole	M10 x 4 places
G	Drain hose hole	ø45 x 3 places
H	Drain discharge port	ø20 x 6 places
K*	Oil-equalising pipe joint	ø3/8" flare
L	Sling holes for haulage or hoisting	180 x 44.7

*14 + 16HP models only

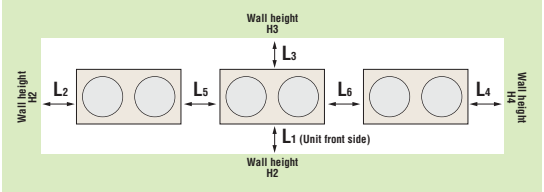
Installation example		
Dimensions	1	2
L_1	500	Open
L_2	10	200
L_3	100	300
L_4	10	Open
H_1	1500	–
H_2	No restrictions	No restrictions
H_3	1000	No restrictions
H_4	No restrictions	–



2m overhead clearance required

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.

When more than one unit is installed



Installation example		
Dimensions	A	B
L_1	500	Open
L_2	10	200
L_3	100	300
L_4	10	Open
L_5	0	400
L_6	0	400
H_1	1500	No restrictions
H_2	No restrictions	No restrictions
H_3	1000	No restrictions
H_4	No restrictions	No restrictions

Mitsubishi Heavy Industries KX6/further information

Mitsubishi Heavy Industries operates a continuous CSR (Corporate Social Responsibility) policy, with a role to realise a sustainable society through it's various areas of business.

Creed

- We strongly believe that the customer comes first and that we are obliged to be an innovative partner to society.
- We base our activities on honesty, harmony, and a clear distinction between public and private life.
- We shall strive for innovative management and technological development from an international perspective.

Reason for Instituting the Creed

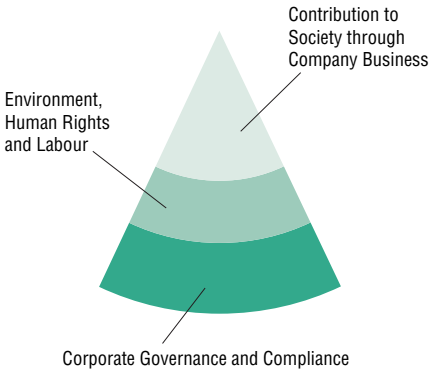
In Japan there are many enterprises with their own "creeds" which simply represent their management concept.

Mitsubishi Heavy Industries, Ltd. has a creed of this type, also. It was instituted in 1970 on the basis of the policy advocated by Koyata Iwasaki, president of Mitsubishi Goshi Kaisha in the 1920's, to indicate the essential attitude of the company, the mental attitude of the employees, and the future directions of the company.

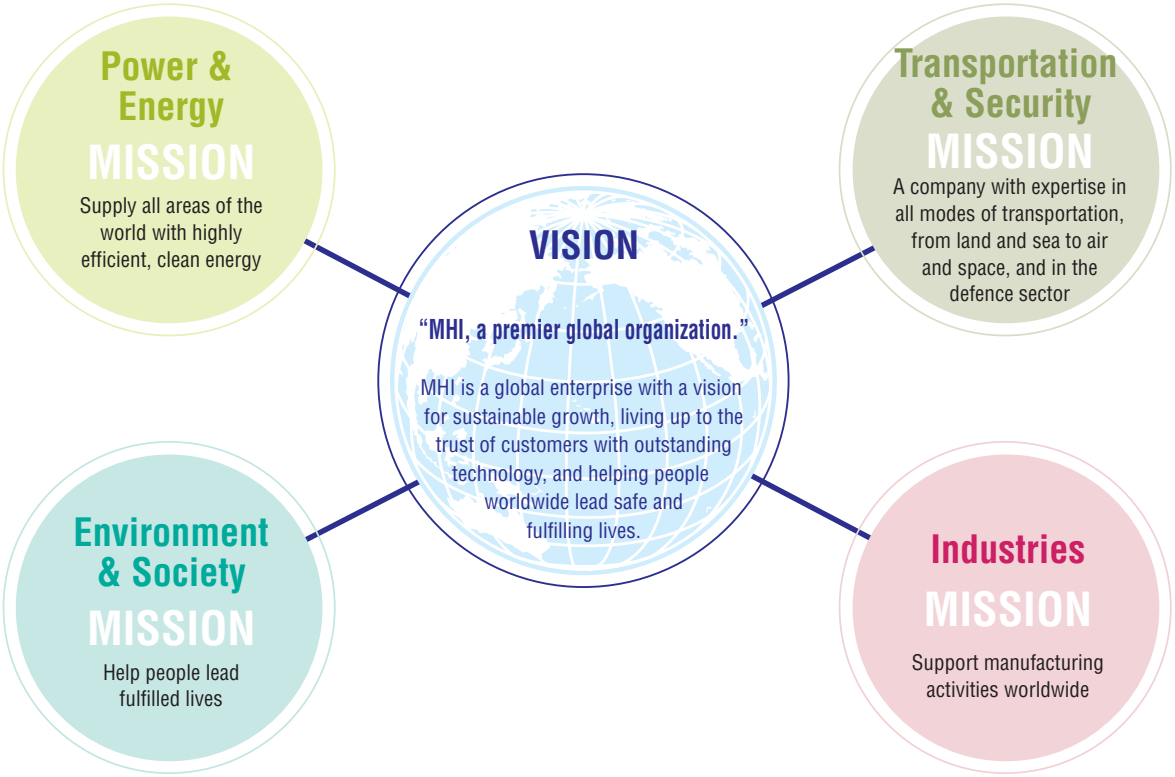
The reason for instituting the present creed is so that all of us can call to mind our one hundred years of tradition, and strive for further development in the future.

Issued 1 June 1970

MHI's creed was established based on "The Three Corporate Principles" shared by the Mitsubishi Group from the company's beginnings. In the spirit of this creed, MHI continues its efforts to fulfil its three corporate social responsibilities (CSRs): "corporate governance and compliance," "the environment, human rights and labour," and "contribution to society through business activities."



Contribution to Society through Company Business



The KX6 product range has been developed in compliance with the Mitsubishi Heavy Industries Policy on the Environment.

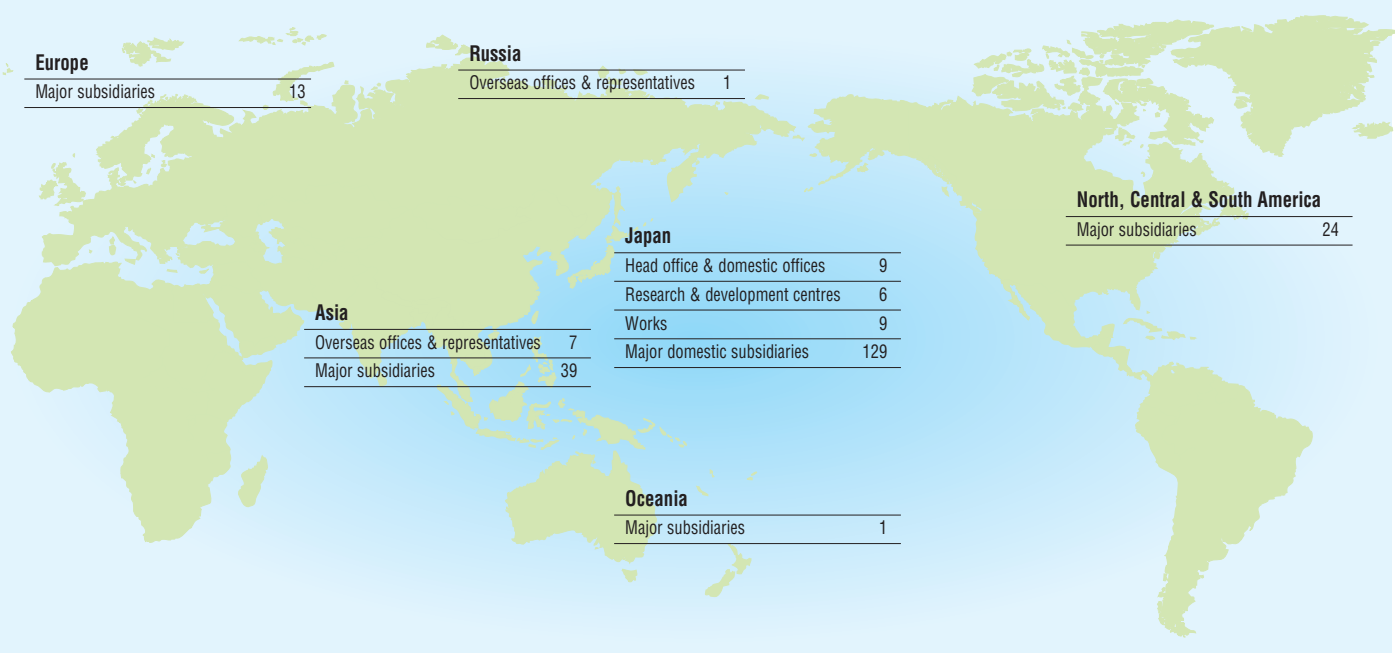
In order to make the sustainable development of society possible, a basic policy on environmental matters has been established.

Pursuant to the express provision of Section 1 of its creed that "We strongly believe that customers come first and that we are obligated to be an innovative partner to society," MHI shall, as a matter of primary importance, strive, through its R&D, manufacturing and other business activities, to play a useful role in the development of society. To this end, while remaining aware that a business enterprise is a member of society, MHI shall endeavour, in all aspects of its business activities, to reduce the burden on the environment and shall concentrate and fully utilise its technological capabilities for the development of technologies and products that will protect the environment, thus contributing to the establishment of a society in which sustainable development is possible.

In order to realise its basic policy, MHI has set the following seven conduct guidelines.

1. Recognise that environmental protection is top priority in the companyís operations, and encourage the entire company in its endeavours to protect and improve the environment.
2. Define roles and responsibilities regarding environmental protection by developing and maintaining a corporate organisation designated for environmental protection, and create and implement corporate policies and procedures on environmental matters.
3. Endeavour to reduce the burden on the environment by preventing pollution, saving resources, saving energy, reducing waste, reusing materials, and recycling in all aspects of the companyís business activities in R&D, designing, procurement of materials, manufacturing, transportation, use, service and disposal.
4. Endeavour to develop and provide advanced, highly reliable, unique technologies and products that contribute to solving environmental and energy problems.
5. Comply with national and local environmental laws and regulations, beyond mere compliance by enacting, implementing and evaluating voluntary standards where necessary, and to endeavour to continuously improve and promote environmental protection activities by establishing environmental goals and targets.
6. Endeavour to protect the environments of foreign countries by carefully examining the consequences of the companyís overseas business operations and the exportation of its products, and to become actively involved in technological co-operation overseas in areas of environmental protection.
7. Provide environmental training and other programs to enhance the environmental awareness of all company employees, and take steps to expand public relations activities, such as providing environment-related information to the public and social contribution activities.

Number of offices/plants and employees by region (Consolidated) as of June, 2008

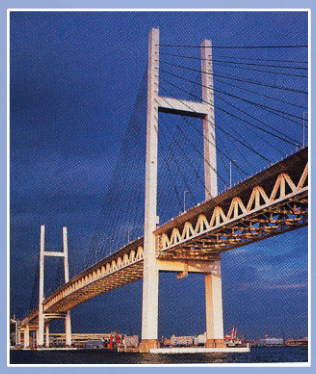


On the land and sea, in the sky and even in space, MHIís stage of operations is expanding limitlessly. We manufacture more than 700 different products which support various industrial and civil activities in both domestic and international markets.

Ships, steel structures, power systems, machinery for both industrial and general use, air-conditioners, pollution reduction and environmental control systems, aerospace systems – the MHI product lines which create rich and comfortable living environments, are as harmonious as an orchestra.

What creates this harmony is MHIís general technological expertise developed over more than a century of hard work. We are highly esteemed in the world for providing high quality products through untiring technological research and development. From new energy development and environmental concerns to the exploration of space, with the advent of the 21st century MHI is confronting a variety of issues to ensure the realisation of a society in which there is harmony between mankind and technology.

- Crude Oil Storage Barges
- LNG Tanks
- Boilers & Turbines
- Oil Production Plants
- Contra-Rotating Propellers
- Thermal Power Plants
- Combined Cycle Plants
- Fuel Cells
- Water Turbines
- Wind Turbines
- Geothermal Power Plants
- PWR Nuclear Power Plants
- Uranium Enrichment Equipment
- FBRs
- Co-Generation Systems



- Ultra-High Steel Stacks
- Refuse Incineration Plants
- Night Soil Treatment Plants
- Electrostatic Precipitators
- Flue Gas Desulfurization System
- Fluidized Incinerators
- CFC Collecting Equipment

- Spillway Radial Gates
- Steel Bridges
- Penstocks
- Desalination Plants
- Physical Distribution Equipment
- Engines

- Unloader & Container Cranes
- Mechanical Parking Facilities
- Integrated Automated Storage Systems
- Rubber & Tyre Machinery
- Skyrails
- Monorail Cars
- New Transportation Systems
- Passenger Boarding Bridges

- Toll Collection Machine Systems
- Forklift Trucks
- Helicopters
- Aircraft
- Railway Maintenance Equipment
- LNG Carrier
- Container Ships

TRANSPORTATION
LOCAL DEVELOPMENT
ENVIRONMENT
RESOURCES/ENERGY

MITSUBISHI HEAVY INDUSTRIES, LTD.

INDUSTRIAL

- Chemical Plants
- Wind Tunnel/Experiment Equipment
- Casting Machines
- Strip Mill
- Cement Plant
- Stepless Variable Speed Gears
- Industrial Robots
- Injection Moulding Machines
- Pulp & Paper Machinery
- Corrugation Machines
- Box Making Machines
- Machine Tools

LEISURE/LIFESTYLE

- Ceiling Recess Packaged Air Conditioners
- Automotive Air Conditioners
- Residential Use Split Air Conditioners
- Refrigeration Units
- Dry Cleaning Machines
- Food Machinery
- Cruise Ships
- Multi-purpose Dome
- Stage Machinery Systems

INFORMATION SYSTEM

- Cable Layer
- Printing Machinery

DEVELOPMENT

- Oceanographic Research Ships
- Deep Submergence Research Vehicles
- Communications Satellite Rockets
- Space Transportation
- Rockets & Engines

DEFENCE

- Submarines
- Naval Vessels
- Jet Fighters
- Helicopters
- Missiles
- Tanks & Infantry Fighting Vehicles

Before starting use

Heating performance
The heating performance values (kW) described in catalog are the values obtained by operating at an outdoor temperature of 7℃ and indoor temperature of 20℃ as set forth in the ISO Standards. As the heating performance decreases as 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 catalog due to the effect of surrounding noise and echo. Take this into consideration when installing.

Use in oil atmosphere
Avoid installing this unit in as 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 catalog is a dedicated cooling/heating device for human use.
Do not use it for special applications such as the storage of foodstuffs, animals or plants, precision devices or valuable art, etc.
This could cause the quality of the items to drop, etc.
Do not use this for cooling vehicles or ships. Water leakage or current leaks could occur.

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

Installation
Always commission the installation to a dealer or specialist. Improper installation will lead to water leakage, electric shocks and fires.
Make sure that the outdoor unit is stable in installation. Fix the unit to stable base.

Usage place
Do not install in places where combustible gas could leak or where there are sparks.
Installation in a place where combustible gas could be generated, flow or accumulate, or places containing carbon fibers could lead to fires.

MITSUBISHI HEAVY INDUSTRIES, LTD.

Japan Head Office:
Mitsubishi Heavy Industries Ltd
16-5 2-Chome Kounan Minato-ku Tokyo
108-8215, Japan
www.mhi.co.jp

Our factories are ISO9001 and ISO14001 certified.

Certified ISO 9001

BIWAJIMA PLANT
Mitsubishi Heavy Industries, Ltd.
Air-conditioning & Refrigeration Systems Headquarters

MITSUBISHI HEAVY INDUSTRIES-MAHAJAK AIR CONDITIONERS CO., LTD.


Mitsubishi Heavy Industries-Haier (Qumgdao) Air-conditioners Co.,Ltd.

Certified ISO 14001

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