

Part 2

Product Specifications

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3. Indoor Unit

3.1 Ceiling Recessed Type (FDTA)

3.1.1 Specifications

FDTA28KXE4A, 36KXE4A

Item		Models		
		FDTA28KXE4A	FDTA36KXE4A	
Nominal cooling capacity ^{*1}	kW	2.9	3.7	
Nominal cooling capacity ^{*2}	kW	2.8	3.6	
Nominal heating capacity ^{*3}	kW	3.2	4.0	
Power source		1 Phase 220/240V 50Hz		
Noise level	dB(A)	Hi: 35 Me: 33 Lo: 31		
Exterior dimensions (Height × Width × Depth)	mm	Unit: 270 × 840 × 840 Panel: 35 × 950 × 950		
Net weight	kg	Unit: 24 Panel: 7		
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing		
	Refrigerant control	Electronic Expansion Valve		
Air handling equipment	Fan type & Q'ty	Turbo fan × 1		
	Motor & Q'ty	W	14 × 1	
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 15 Me: 14 Lo: 13	
	Fresh air intake		Possible	
	Air filter & Q'ty		Long life filter × 1 (Washable)	
Shock & vibration isolator		Rubber sleeve (for fan motor)		
Insulation (noise & heat)		Polyurethane foam		
Operation control Operation switch		Remote control switch (Optional: RC-E1)		
Room temperature control		Thermostat by electronics		
Safety equipment		Internal thermostat for fan motor. Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories		Mounting kit, Drain hose		
Optional parts		Decorative Panel		

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDTA45KXE4A, 56KXE4A

Item		Models	
		FDTA45KXE4A	FDTA56KXE4A
Nominal cooling capacity ^{*1}	kW	4.7	5.8
Nominal cooling capacity ^{*2}	kW	4.5	5.6
Nominal heating capacity ^{*3}	kW	5.0	6.3
Power source		1 Phase 220/240V 50Hz	
Noise level	dB(A)	Hi: 35 Me: 33 Lo: 31	Hi: 36 Me: 34 Lo: 32
Exterior dimensions (Height × Width × Depth)	mm	Unit: 270 × 840 × 840 Panel: 35 × 950 × 950	
Net weight	kg	Unit: 24 Panel: 7	
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing	
	Refrigerant control	Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty	Turbo fan × 1	
	Motor & Q'ty	W	14 × 1
	Starting method	Line starting	
	Air flow (Standard)	CMM	Hi: 15 Me: 14 Lo: 13
	Fresh air intake	Possible	
	Air filter & Q'ty	Long life filter × 1 (Washable)	
Shock & vibration isolator	Rubber sleeve (for fan motor)		
Insulation (noise & heat)	Polyurethane foam		
Operation control Operation switch	Remote control switch (Optional: RC-E1)		
Room temperature control	Thermostat by electronics		
Safety equipment	Internal thermostat for fan motor. Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")
	Connecting method	Flare piping	
	Drain hose	Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping	Necessary (both Liquid & Gas lines)	
Accessories	Mounting kit, Drain hose		
Optional parts	Decorative Panel		

Product Specifications

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDTA71KXE4A, 90KXE4A

Item		Models	
		FDTA71KXE4A	FDTA90KXE4A
Nominal cooling capacity ^{*1}	kW	7.3	9.3
Nominal cooling capacity ^{*2}	kW	7.1	9.0
Nominal heating capacity ^{*3}	kW	8.0	10.0
Power source		1 Phase 220/240V 50Hz	
Noise level	dB(A)	Hi: 37 Me: 35 Lo: 33	Hi: 43 Me: 41 Lo: 38
Exterior dimensions (Height × Width × Depth)	mm	Unit: 270 × 840 × 840 Panel: 35 × 950 × 950	Unit: 295 × 840 × 840 Panel: 35 × 950 × 950
Net weight	kg	Unit: 24 Panel: 7	Unit: 26 Panel: 7
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing	
	Refrigerant control	Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty	Turbo fan × 1	
	Motor & Q'ty	W	20 × 1 40 × 1
	Starting method	Line starting	
	Air flow (Standard)	CMM	Hi: 15 Me: 14 Lo: 13 Hi: 21 Me: 19 Lo: 17
	Fresh air intake	Possible	
	Air filter & Q'ty	Long life filter × 1 (Washable)	
Shock & vibration isolator	Rubber sleeve (for fan motor)		
Insulation (noise & heat)	Polyurethane foam		
Operation control Operation switch	Remote control switch (Optional: RC-E1)		
Room temperature control	Thermostat by electronics		
Safety equipment	Internal thermostat for fan motor. Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
	Connecting method	Flare piping	
	Drain hose	Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping	Necessary (both Liquid & Gas lines)	
Accessories	Mounting kit, Drain hose		
Optional parts	Decorative Panel		

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDTA112KXE4A, 140KXE4A

Item		Models		
		FDTA112KXE4A	FDTA140KXE4A	
Nominal cooling capacity ^{*1}	kW	11.6	14.5	
Nominal cooling capacity ^{*2}	kW	11.2	14.0	
Nominal heating capacity ^{*3}	kW	12.5	16.0	
Power source		1 Phase 220/224V 50Hz		
Noise level	dB(A)	Hi: 43 Me: 41 Lo: 38	Hi: 45 Me: 43 Lo: 41	
Exterior dimensions (Height × Width × Depth)	mm	Unit: 365 × 840 × 840 Panel: 35 × 950 × 950		
Net weight	kg	Unit: 31 Panel: 7		
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing		
	Refrigerant control	Electronic Expansion Valve		
Air handling equipment	Fan type & Q'ty	Turbo fan × 1		
	Motor & Q'ty	W	120 × 1	
	Starting method	Line starting		
	Air flow (Standard)	CMM	Hi: 27 Me: 23 Lo: 20	Hi: 29 Me: 26 Lo: 23
	Fresh air intake	Possible		
	Air filter & Q'ty	Long life filter × 1 (Washable)		
Shock & vibration isolator		Rubber sleeve (for fan motor)		
Insulation (noise & heat)		Polyurethane foam		
Operation control Operation switch		Remote control switch (Optional: RC-E1)		
Room temperature control		Thermostat by electronics		
Safety equipment		Internal thermostat for fan motor. Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")	
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories		Mounting kit, Drain hose		
Optional parts		Decorative Panel		

Product Specifications

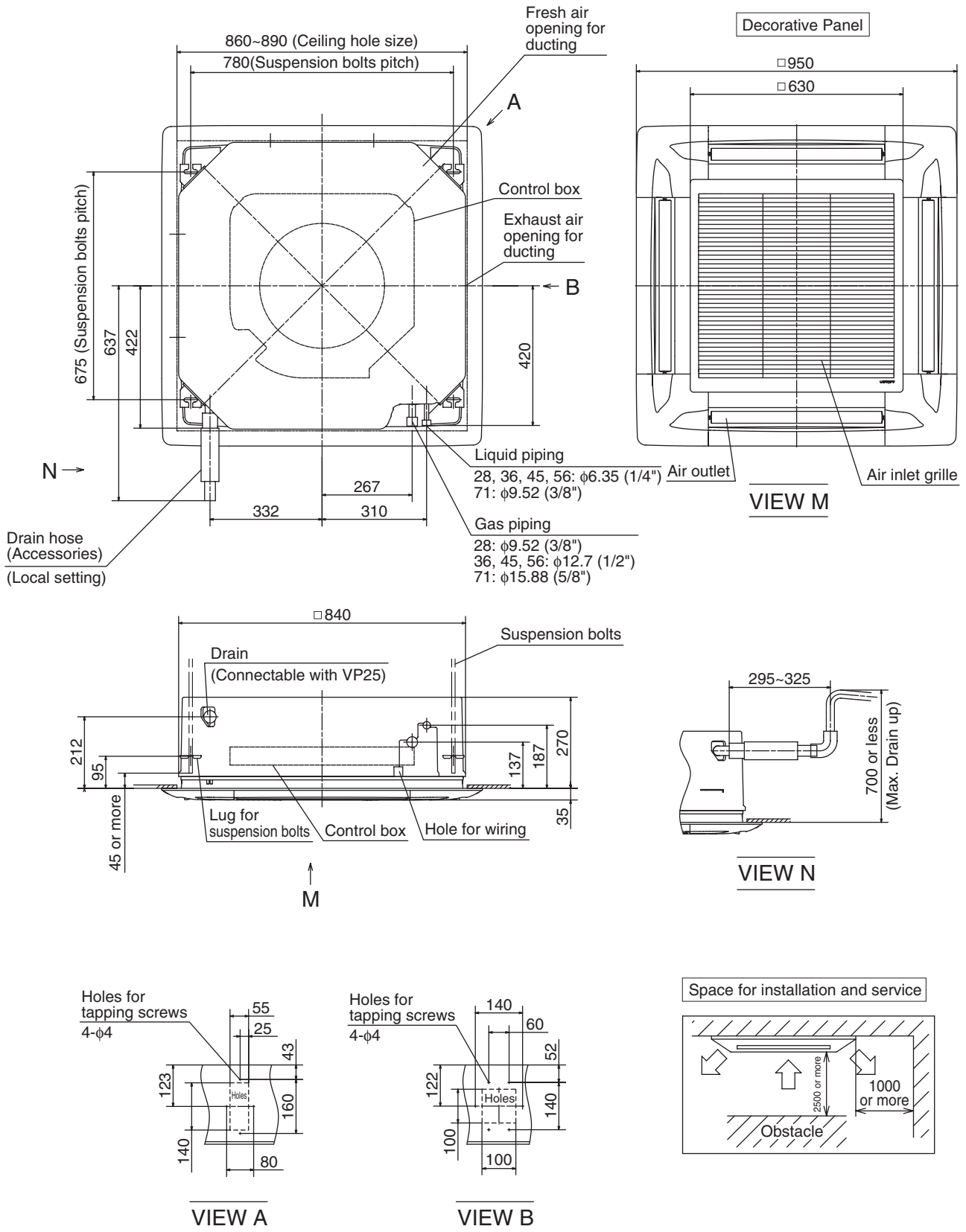
*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

3.1.2 Exterior dimensions

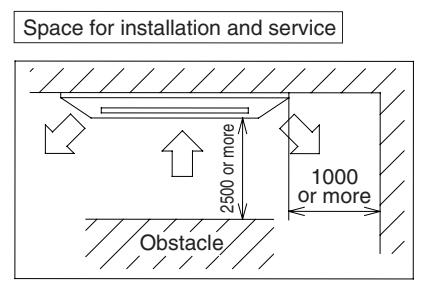
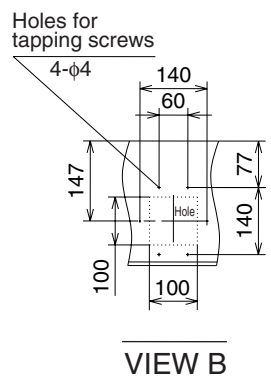
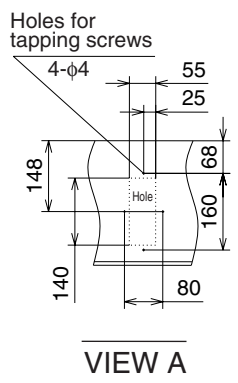
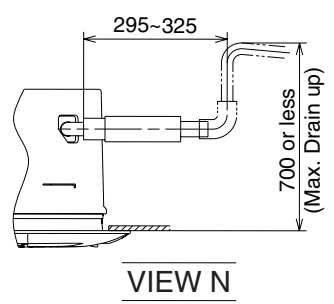
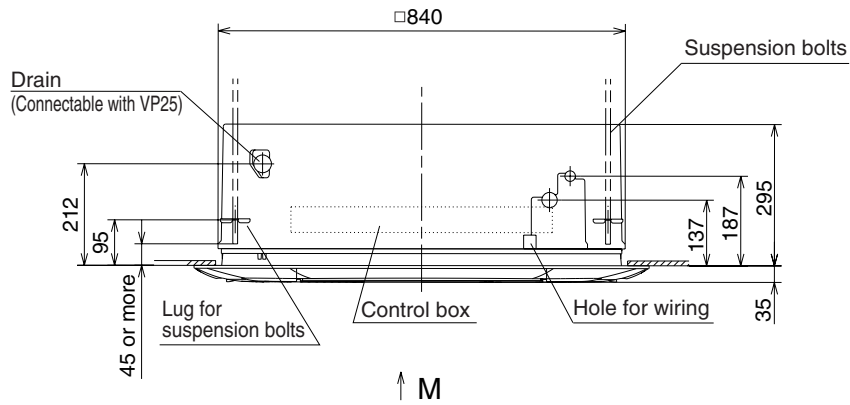
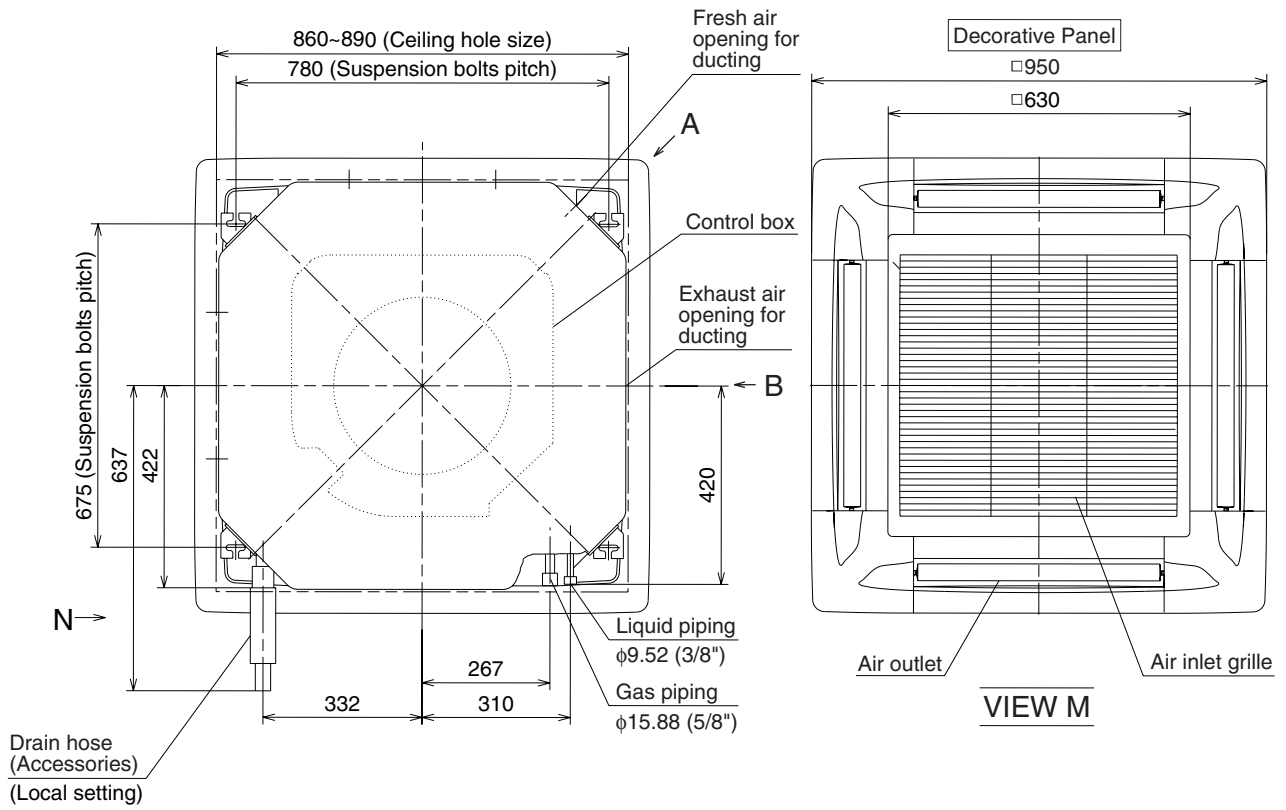
FDTA28KXE4A, 36KXE4A, 45KXE4A, 56KXE4A, 71KXE4A

Unit: mm



FDTA90KXE4A

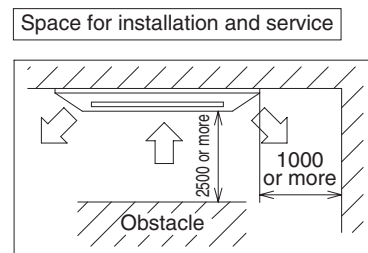
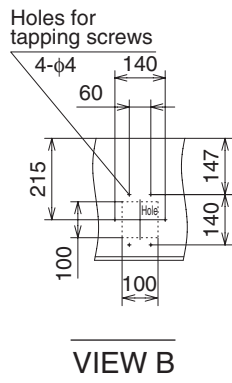
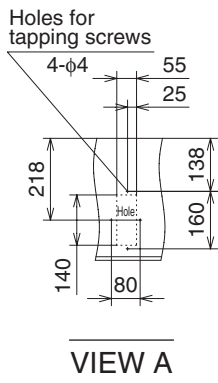
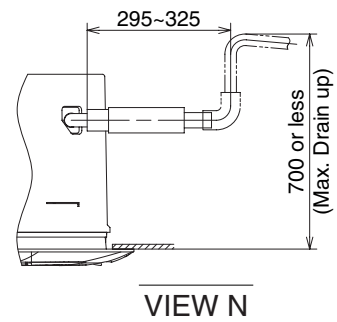
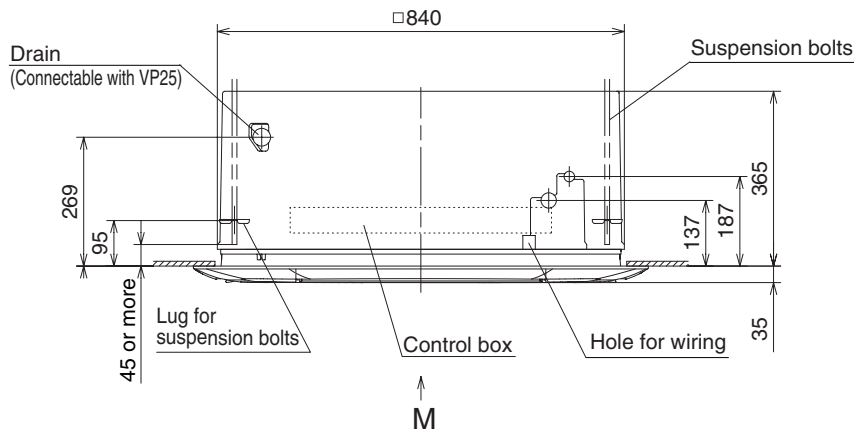
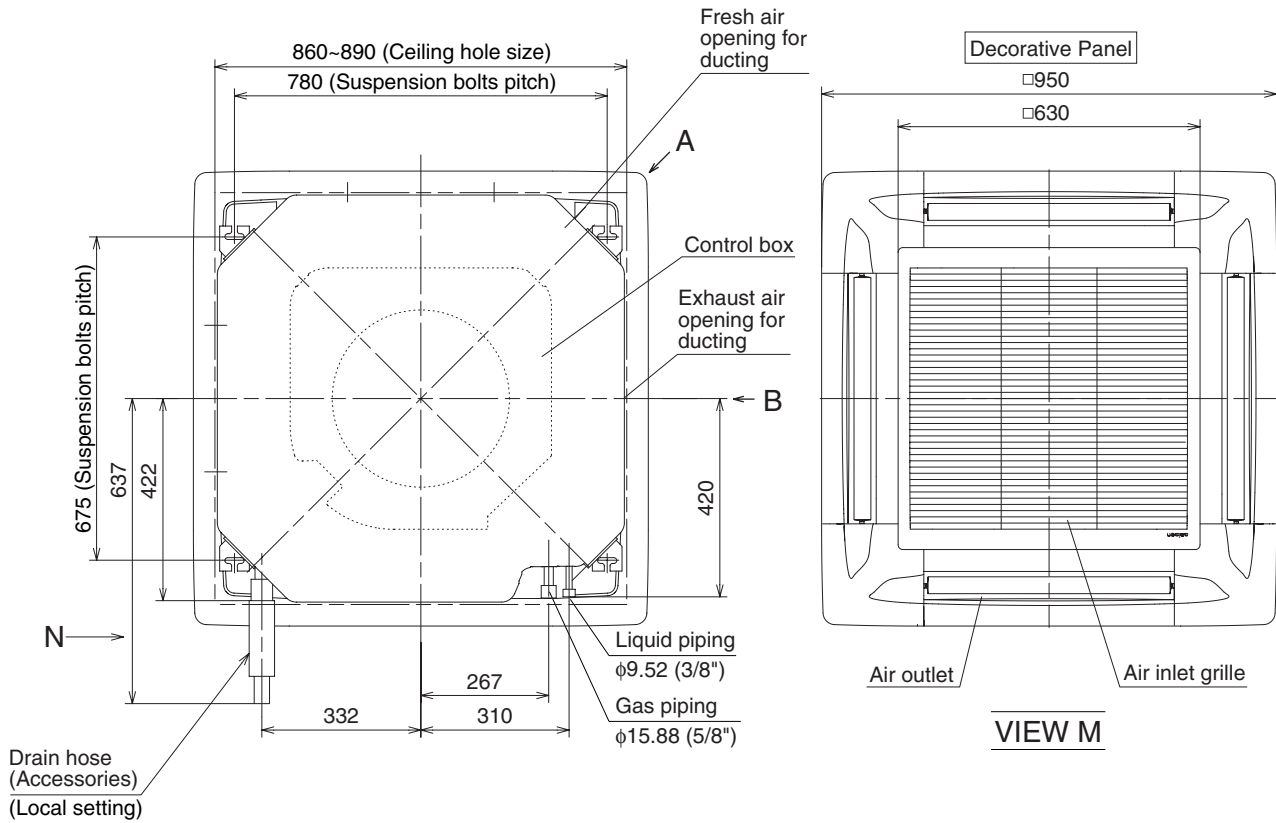
Unit: mm



Product Specifications

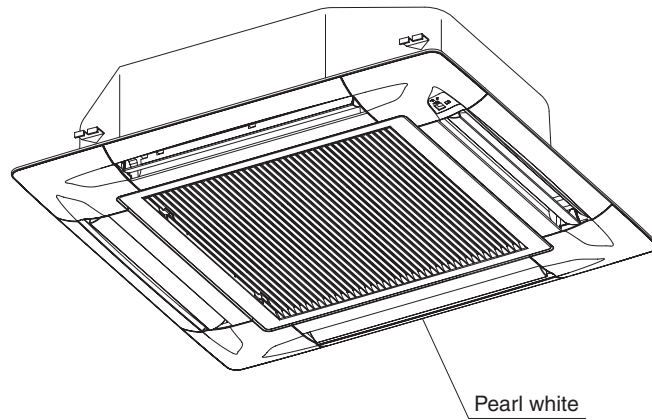
FDTA112KXE4A, 140KXE4A

Unit: mm



3.1.3 Exterior appearance

All models

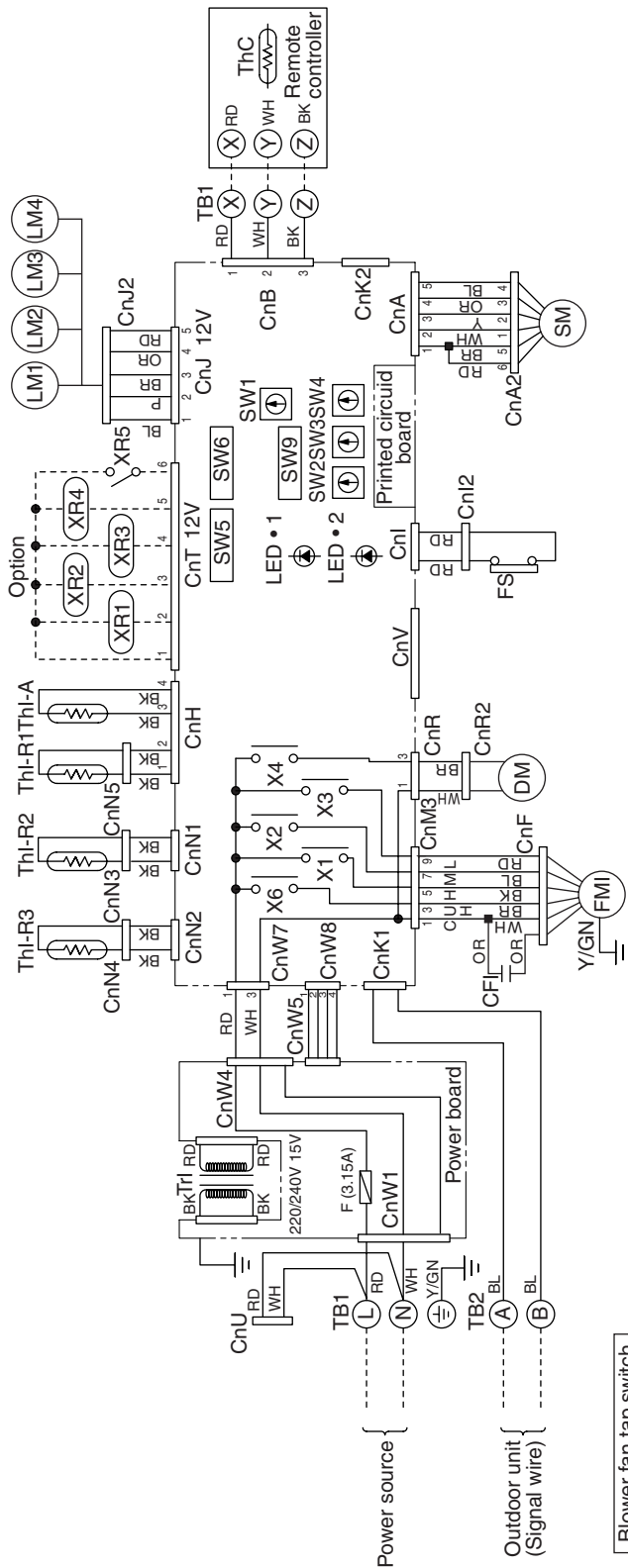


Decorative panel model (Optional)

Model	Panel Part No.
All models	T - PSA - 34W - E

3.1.4 Electrical wiring

FDTA28KXE4A, 36KXE4A, 45KXE4A, 56KXE4A, 71KXE4A, 90KXE4A



Blower fan tap switch

When increasing of static pressure is required, the following two methods are available to switch the blower fan tap. Switch to the high-speed tap with one of these methods.

- ① Set SW9-4 provided on the indoor unit PCB to ON.

② By means of function setting from the remote controller unit, set the setting ③ of "I/U FUNCTION▲" (indoor unit function) to "Hi CEILING 1" (high-speed tap).

Function number ①	Function description ②	Setting ③
01	Hi CEILING SET	Hi CEILING 1

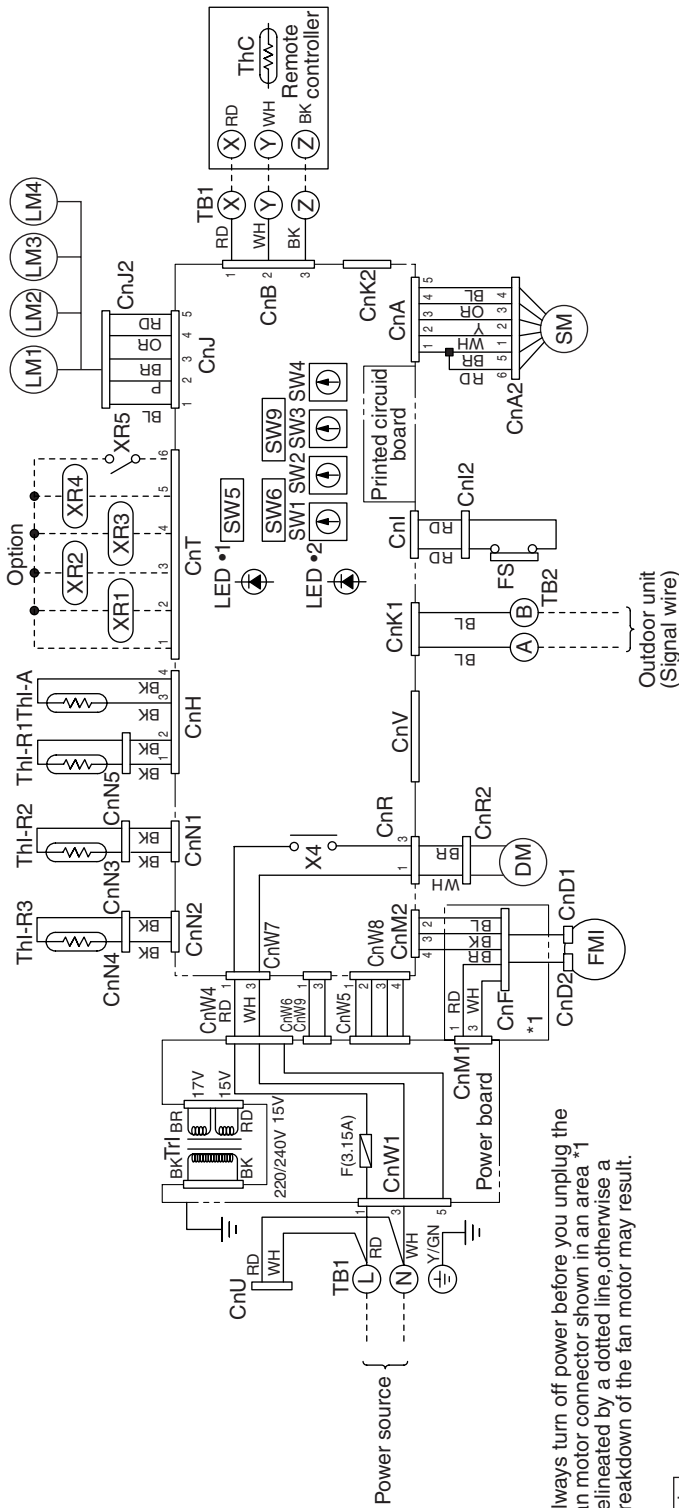
Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	WH	White
BR	Brown	Y	Yellow
BR/WH	Brown/White	P	Pink
OR	Orange	Y/GN	Yellow/Green
OR/WH	Orange/White		

Function of switches		Function	
Mark	Function	Mark	Function
SW5-1	ON OFF	ON	Test run of condensate pump motor
SW5-3	ON OFF	ON	Input signal
SW5-4	ON OFF	ON	Emergency stop signal: valid
		OFF	Emergency stop signal: invalid

Meaning of marks

Mark	Parts name	Mark	Parts name
FMI	Fan motor	XR3	Thermo ON output (DC12V output)
CFI	Capacitor for FMI	XR4	Inspection output (DC12V output)
DM	Drain motor	XR5	Remote operation input (volt-free contact)
FS	Float switch	X1,2,3,6	Auxiliary relay (For FM)
LM1~4	Louver motor	X4	Auxiliary relay (For DM)
SM	Stepping motor (For Exp.v)	TB1,2	Terminal block (O mark)
Thi-A	Thermistor	CnA~Z	Connector
Thi-R1	Thermistor	■mark	Closed-end connector
Thi-R2	Thermistor		
Thi-R3	Thermistor		
ThC	Thermistor		

FDTA112KXE4A, 140KXE4A



Note(1) Always turn off power before you unplug the fan motor connector shown in an area *1 delineated by a dotted line, otherwise a breakdown of the fan motor may result.

Blower fan tap switch

When increasing of static pressure is required, the following two methods are available to switch the blower fan tap. Switch to the high-speed tap with one of these methods.

- ① Set SW9-4 provided on the indoor unit PCB to ON.

- ② By means of function setting from the remote controller unit, set the setting ③ of "/U FUNCTION▲" (indoor unit function) to "Hi CEILING 1" (high-speed tap).

Function number ①	Function description ②	Setting ③
01	Hi CEILING SET	HI CEILING 1

Color marks	Mark	Color	Mark	Color
	BK	Black	RD	Red
	BL	Blue	WH	White
	BR	Brown	Y	Yellow
	BR/WH	Brown/White	P	Pink
	OR	Orange	Y/GN	Yellow/Green
	OR/WH	Orange/White		

Function of switches	Mark	Function
SW5-1	ON	Test run of condensate pump motor
	OFF	Normal
SW5-3	ON	Input
	OFF	Reverse Invalid
SW5-4	ON	Emergency stop signal: valid
	OFF	Emergency stop signal: invalid

Mark	Parts name	Mark	Parts name	Mark	Parts name
FMI	Fan motor	SW2	Indoor unit address unit's place	XR4	Inspection output (DC12V output)
DM	Drain motor	SW3	Outdoor unit address ten's place	XR5	Remote operation input (volt-free contact)
FS	Float switch	SW4	Outdoor unit address unit's place	X4	Auxiliary relay (For DM)
LM1~4	Louver motor	SW6	Model capacity setting	TB1, 2	Terminal block (O mark)
SM	Stepping motor (For Exp.v)	Tr1	Transformer	CnA~Z	Connector
Th1-A	Thermistor	F	Fuse	■mark	Closed-end connector
Th1-R1	Thermistor	LED1	Indication lamp (Red)		
Th1-R2	Thermistor	LED2	Indication lamp (Green)		
Th1-R3	Thermistor	XR1	Operation output (DC12V output)		
ThC	Thermistor	XR2	Heating output (DC12V output)		
SW1	Indoor unit address ten's place	XR3	Thermo ON output (DC12V output)		

Product Specifications

3.1.5 Noise level

Notes(1) The data are based on the following conditions.

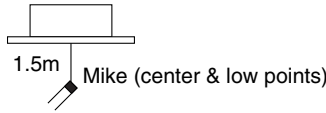
Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB

(2) The data in the chart are measured in an anechoic room.

(3) The noise levels measured in the field are usually higher than the data because of reflection.

Measured based on JIS B 8616

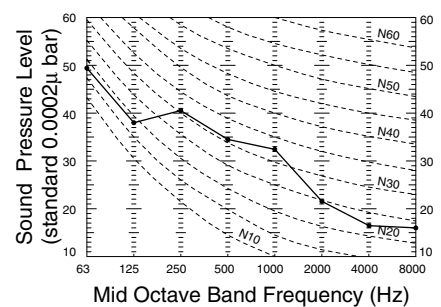
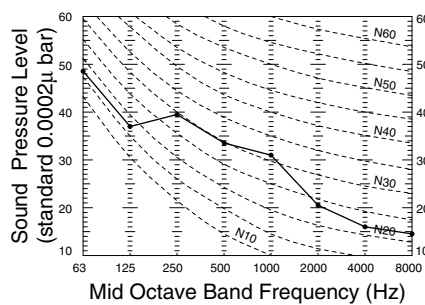
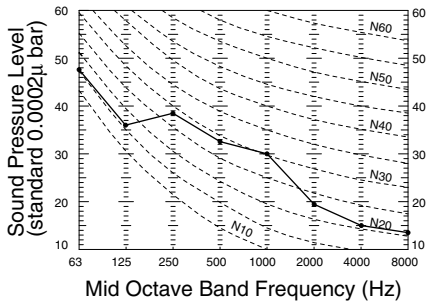
Mike position as below



Models FDTA28KXE4A, 36KXE4A,
45KXE4A
Noise level 35 dB (A) at HIGH
33 dB (A) at MEDIUM
31 dB (A) at LOW

Model FDTA56KXE4A
Noise level 36 dB (A) at HIGH
34 dB (A) at MEDIUM
32 dB (A) at LOW

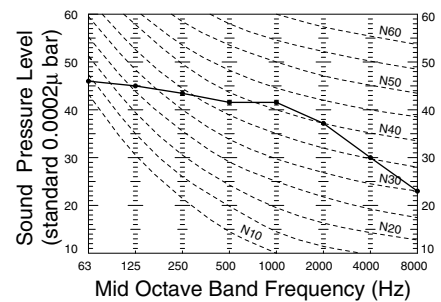
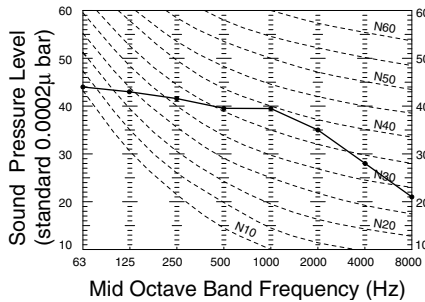
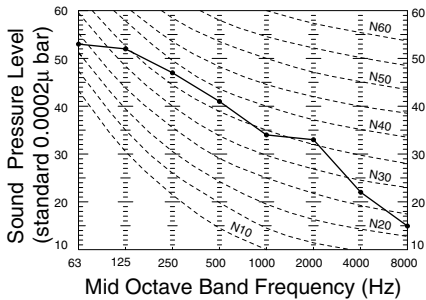
Model FDTA71KXE4A
Noise level 37 dB (A) at HIGH
35 dB (A) at MEDIUM
33 dB (A) at LOW



Model FDTA90KXE4A
Noise level 43 dB (A) at HIGH
41 dB (A) at MEDIUM
38 dB (A) at LOW

Model FDTA112KXE4A
Noise level 43 dB (A) at HIGH
41 dB (A) at MEDIUM
38 dB (A) at LOW

Model FDTA140KXE4A
Noise level 45 dB (A) at HIGH
43 dB (A) at MEDIUM
41 dB (A) at LOW



3.2 Ceiling Recessed Compact Type (FDTCA)

3.2.1 Specifications

FDTCA224KXE4A, 28KXE4A

Item		Models	FDTCA22KXE4A	FDTCA28KXE4A
Nominal cooling capacity ^{*1}		W	2200	2800
Nominal heating capacity ^{*2}		W	2500	3200
Power source			1 Phase 220 / 240V 50Hz	
Noise level		dB(A)	Hi: 35 Me: 33 Lo: 32	
Exterior dimensions (Height × Width × Depth)		mm	Unit: 248 × 570 × 570 Panel: 35 × 700 × 700	
Net weight		kg	Unit: 15 Panel: 3.5	
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing	
	Refrigerant control		Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty		Turbo fan × 1	
	Motor	W	50 × 1	
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 9.5 Me: 8.5 Lo: 8	
	Fresh air intake		Possible	
	Air filter & Q'ty		Long life filter × 1 (Washable)	
Shock & vibration absorber			Rubber sleeve (for fan motor)	
Insulation (noise & heat)			Polyurethane foam	
Operation control Operation switch			Remote control switch (Optional: RC-E1)	
Room temperature control			Thermostat by electronics	
Safety equipment			Internal thermostat for fan motor. Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit, Drain hose	
Optional parts			Decorative Panel	

*1 ~ 2 The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19°C	35°C	24°C	ISO-T1
Heating ^{*2}		20°C	—	7°C	6°C	

Note This packaged air-conditioner is manufactured and tested in conformity with the following standard.

ISO-T1 "UNITARY AIR-CONDITIONERS"

FDTCA36KXE4A, 45KXE4A, 56KXE4A

Item		Models			
		FDTCA36KXE4A	FDTCA45KXE4A	FDTCA56KXE4A	
Nominal cooling capacity ^{*1}	W	3600	4500	5600	
Nominal heating capacity ^{*2}	W	4000	5000	6300	
Power source		1 Phase 220 / 240V 50Hz			
Noise level	dB(A)	Hi: 38 Me: 36 Lo: 34	Hi: 40 Me: 38 Lo: 36	Hi: 45 Me: 42 Lo: 39	
Exterior dimensions (Height × Width × Depth)	mm	Unit: 248 × 570 × 570 Panel: 35 × 700 × 700			
Net weight	kg	Unit: 16 Panel: 3.5			
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing			
	Refrigerant control	Electronic Expansion Valve			
Air handling equipment	Fan type & Q'ty	Turbo fan × 1			
	Motor	W	50 × 1		
	Starting method	Line starting			
	Air flow (Standard)	CMM	Hi: 10 Me: 9 Lo: 8	Hi: 11 Me: 10 Lo: 9	Hi: 13 Me: 11.5 Lo: 10
	Fresh air intake	Possible			
	Air filter & Q'ty	Long life filter × 1 (Washable)			
Shock & vibration absorber	Rubber sleeve (for fan motor)				
Insulation (noise & heat)	Polyurethane foam				
Operation control Operation switch	Remote control switch (Optional: RC-E1)				
Room temperature control	Thermostat by electronics				
Safety equipment	Internal thermostat for fan motor. Frost protection thermostat				
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")		
	Connecting method	Flare piping			
	Drain hose	Connectable with VP25 (I.D. 25mm, O.D. 32mm)			
	Insulation for piping	Necessary (both Liquid & Gas lines)			
Accessories	Mounting kit, Drain hose				
Optional parts	Decorative Panel				

*1 ~ 2 The data are measured at the following conditions.

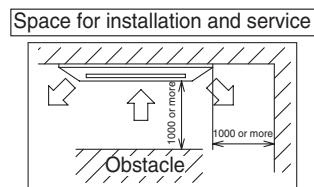
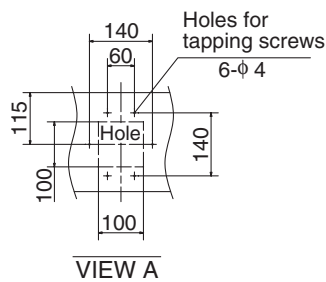
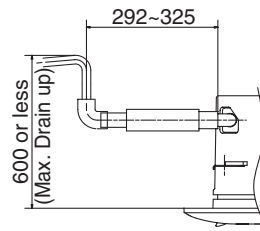
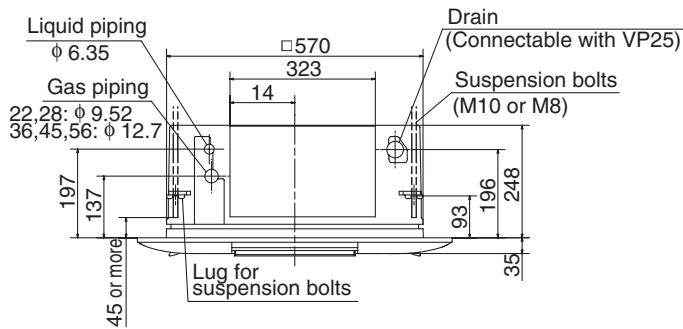
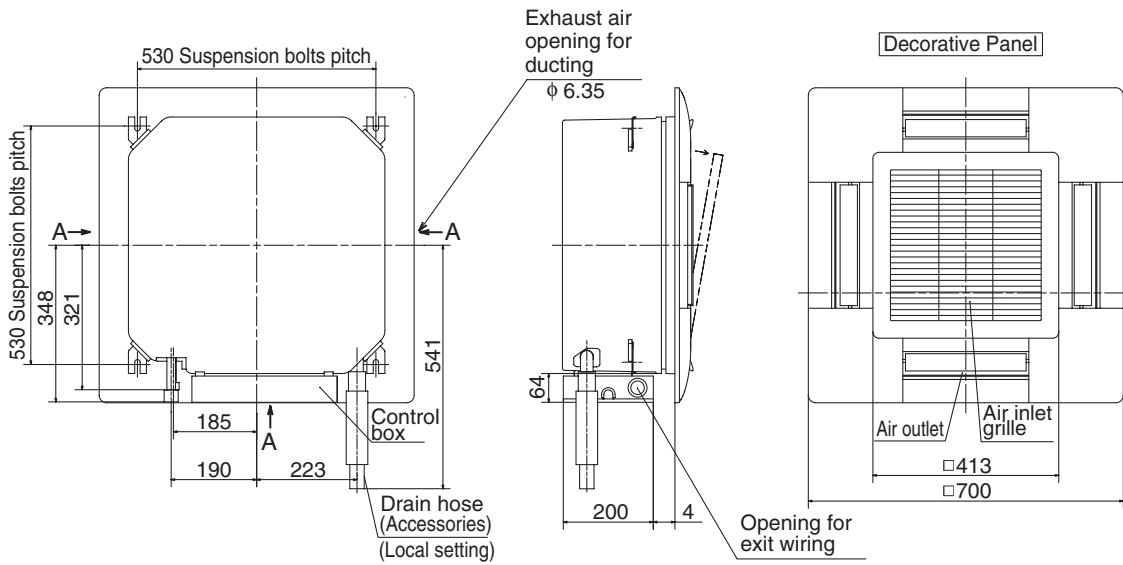
Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19°C	35°C	24°C	ISO-T1
Heating ^{*2}		20°C	—	7°C	6°C	

Note This packaged air-conditioner is manufactured and tested in conformity with the following standard.
ISO-T1 "UNITARY AIR-CONDITIONERS"

3.2.2 Exterior dimensions

FDTCA22KXE4A, 28KXE4A, 36KXE4A, 45KXE4A, 56KXE4A

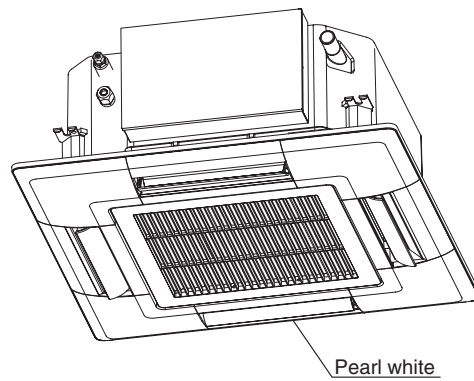
Unit:mm



Product Specifications

3.2.3 Exterior appearance

All models

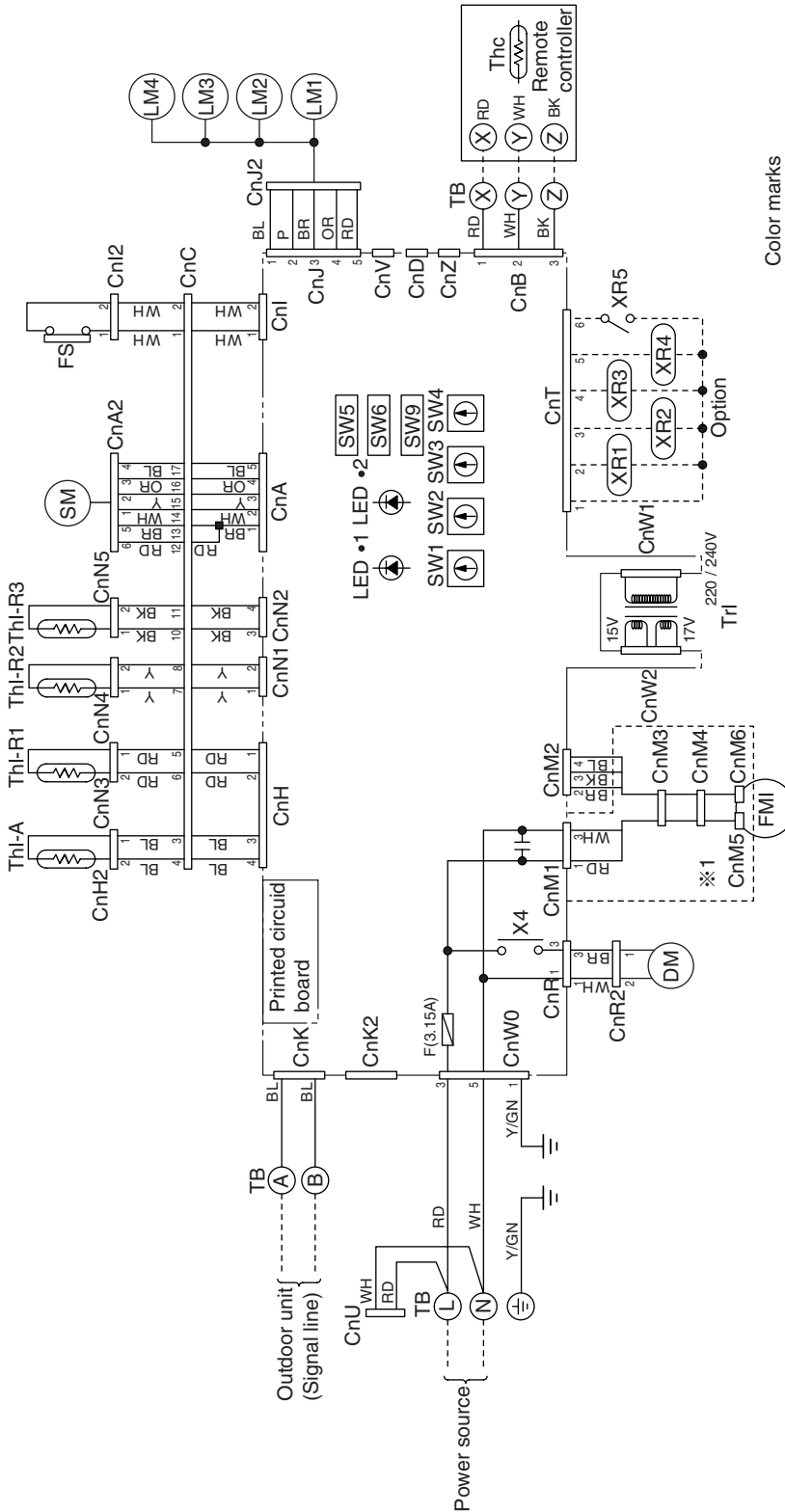


Decorative Panel model(Optional)

Model \ Item	Panel Part No.
FDTCA22, 28 type	T-PSA-24W-E
FDTCA36, 45, 56 type	T-PSA-24W-E

3.2.4 Electrical wiring

FDTCA22KXE4A, 28KXE4A, 36KXE4A, 45KXE4A, 56KXE4A



Note (1) Always turn off power before you unplug the fan motor connector shown in an area※1 delineated by a dotted line, otherwise a breakdown of the fan motor may result.

Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
FMI	Fan motor	SW2	Indoor unit address unit's place	XR4	Inspection output (DC12V output)
DM	Drain motor	SW3	Outdoor unit address ten's place	XR5	Remote operation input (volt-free contact)
FS	Float switch	SW4	Outdoor unit address unit's place	X4	Auxiliary relay (For DM)
LM1~4	Louver motor	SW6	Model capacity setting	TB	Terminal block (Omark)
SM	Stepping motor (For Exp.v)	Tr1	Transformer	CnA~Z	Connector
Thi-A	Thermistor	F	Fuse	■ mark	Closed-end connector
Thi-R1	Thermistor	LED1	Indication lamp (Red)		
Thi-R2	Thermistor	LED2	Indication lamp (Green)		
Thi-R3	Thermistor	XR1	Operation output (DC12V output)		
Thc	Thermistor	XR2	Heating output (DC12V output)		
SW1	Indoor unit address ten's place	XR3	Thermo ON output (DC12V output)		

Color marks

Mark	Color	Mark	Color
BK	Black	WH	White
BL	Blue	Y	Yellow
BR	Brown	P	Pink
OR	Orange	Y / GN	Yellow / Green
RD	Red		

Function of switches

Mark	Function
SW5-1	Testrun of condensate pump motor
SW5-1	OFF Normal
SW5-3	ON Input signal
SW5-3	OFF Reverse Invalid
SW5-4	ON Emergency stop signal: Invalid
SW5-4	OFF Emergency stop signal: valid
SW9-4	ON Fan control: UH, H, M
SW9-4	OFF Fan control: H, M, L



3.2.5 Noise level

Notes (1) The data are based on the following conditions.

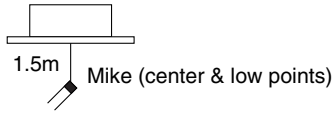
Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB

(2) The data in the chart are measured in an anechoic room.

(3) The noise levels measured in the field are usually higher than the data because of reflection.

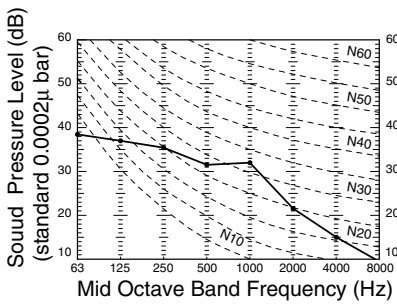
Measured based on JIS B 8616

Mike position as below



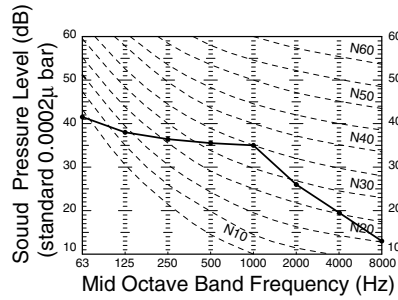
Model FDTCA22KXE4A, 28KXE4A

Noise level 35 dB (A) at HIGH
33 dB (A) at MEDIUM
32 dB (A) at LOW



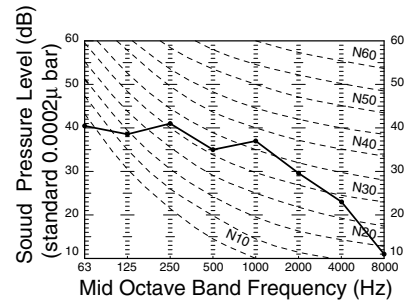
Model FDTCA36KXE4A

Noise level 38 dB (A) at HIGH
36 dB (A) at MEDIUM
34 dB (A) at LOW



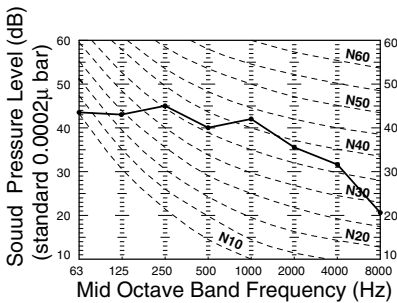
Model FDTCA45KXE4A

Noise level 40 dB (A) at HIGH
38 dB (A) at MEDIUM
36 dB (A) at LOW



Model FDTCA56KXE4A

Noise level 45 dB (A) at HIGH
42 dB (A) at MEDIUM
39 dB (A) at LOW



3.3 2-way Outlet Ceiling Recessed Type (FDTWA)

3.3.1 Specifications

FDTWA28KXE4A, 45KXE4A

Item		Models	FDTWA28KXE4A	FDTWA45KXE4A
Nominal cooling capacity ^{*1}	kW		2.9	4.7
Nominal cooling capacity ^{*2}	kW		2.8	4.5
Nominal heating capacity ^{*3}	kW		3.2	5.0
Power source			1 Phase 220/240V 50Hz	
Noise level	dB(A)		Hi: 39 Me: 36 Lo: 33	
Exterior dimensions (Height × Width × Depth)	mm		Unit: 285 × 817 × 620 Panel: 8 × 1055 × 680	
Net weight	kg		Unit: 19 Panel: 7	
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing	
	Refrigerant control		Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty		Turbo fan × 1	
	Motor & Q'ty	W	30 × 1	
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 14 Me: 12 Lo: 10	
	Fresh air intake		Possible	
	Air filter & Q'ty		Long life filter × 1 (Washable)	
Shock & vibration isolator			Rubber sleeve (for fan motor)	
Insulation (noise & heat)			Polyurethane foam	
Operation control Operation switch			Remote control switch (Optional: RC-E1)	
Room temperature control			Thermostat by electronics	
Safety equipment			Internal thermostat for fan motor. Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit, Drain hose	
Optional parts			Decorative Panel	

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDTWA56KXE4A, 71KXE4A

Item		Models	
		FDTWA56KXE4A	FDTWA71KXE4A
Nominal cooling capacity ^{*1}	kW	5.8	7.3
Nominal cooling capacity ^{*2}	kW	5.6	7.1
Nominal heating capacity ^{*3}	kW	6.3	8.0
Power source		1 Phase 220/224V 50Hz	
Noise level	dB(A)	Hi: 39 Me: 36 Lo: 33	Hi: 41 Me: 38 Lo: 35
Exterior dimensions (Height × Width × Depth)	mm	Unit: 285 × 817 × 620 Panel: 8 × 1055 × 680	Unit: 335 × 1054 × 620 Panel: 8 × 1300 × 680
Net weight	kg	Unit: 19 Panel: 7	Unit: 26 Panel: 9
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing	
	Refrigerant control	Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty	Turbo fan × 1	
	Motor & Q'ty	W	30 × 1 35 × 1
	Starting method	Line starting	
	Air flow (Standard)	CMM	Hi: 14 Me: 12 Lo: 10 Hi: 16 Me: 13 Lo: 11
	Fresh air intake	Possible	
	Air filter & Q'ty	Long life filter × 1 (Washable)	
Shock & vibration isolator	Rubber sleeve (for fan motor)		
Insulation (noise & heat)	Polyurethane foam		
Operation control Operation switch	Remote control switch (Optional: RC-E1)		
Room temperature control	Thermostat by electronics		
Safety equipment	Internal thermostat for fan motor. Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2") Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
	Connecting method	Flare piping	
	Drain hose	Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping	Necessary (both Liquid & Gas lines)	
Accessories	Mounting kit, Drain hose		
Optional parts	Decorative Panel		

*1 ~ *3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDTWA90KXE4A, 112KXE4A

Item		Models	
		FDTWA90KXE4A	FDTWA112KXE4A
Nominal cooling capacity ^{*1}	kW	9.3	11.6
Nominal cooling capacity ^{*2}	kW	9.0	11.2
Nominal heating capacity ^{*3}	kW	10.0	12.5
Power source		1 Phase 220/224V 50Hz	
Noise level	dB(A)	Hi: 41 Me: 39 Lo: 36	Hi: 44 Me: 41 Lo: 38
Exterior dimensions (Height × Width × Depth)	mm	Unit: 335 × 1054 × 620 Panel: 8 × 1300 × 680	Unit: 357 × 1524 × 620 Panel: 8 × 1770 × 680
Net weight	kg	Unit: 26 Panel: 9	Unit: 38 Panel: 11
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing	
	Refrigerant control	Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty	Turbo fan × 1	Turbo fan × 2
	Motor & Q'ty	W 40 × 1	40 × 2
	Starting method	Line starting	
	Air flow (Standard)	CMM Hi: 45 Me: 42 Lo: 39	Hi: 28 Me: 25 Lo: 23
	Fresh air intake	Possible	
	Air filter & Q'ty	Long life filter × 1 (Washable)	Long life filter × 2 (Washable)
Shock & vibration isolator		Rubber sleeve (for fan motor)	
Insulation (noise & heat)		Polyurethane foam	
Operation control Operation switch		Remote control switch (Optional: RC-E1)	
Room temperature control		Thermostat by electronics	
Safety equipment		Internal thermostat for fan motor. Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
	Connecting method		Flare piping
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)
	Insulation for piping		Necessary (both Liquid & Gas lines)
Accessories		Mounting kit, Drain hose	
Optional parts		Decorative Panel	

Product Specifications

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDTWA140KXE4A

Item		Models	FDTWA140KXE4A
		Nominal cooling capacity ^{*1}	kW
Nominal cooling capacity ^{*2}	kW	14.0	
Nominal heating capacity ^{*3}	kW	16.0	
Power source		1 Phase 220/224V 50Hz	
Noise level	dB(A)	Hi: 45 Me: 42 Lo: 39	
Exterior dimensions (Height × Width × Depth)	mm	Unit: 357 × 1524 × 620 Panel: 8 × 1770 × 680	
Net weight	kg	Unit: 38 Panel: 11	
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing
	Refrigerant control		Electronic Expansion Valve
Air handling equipment	Fan type & Q'ty		Turbo fan × 2
	Motor & Q'ty	W	50 × 2
	Starting method		Line starting
	Air flow (Standard)	CMM	Hi: 32 Me: 28 Lo: 24
	Fresh air intake		Possible
	Air filter & Q'ty		Long life filter × 2 (Washable)
Shock & vibration isolator		Rubber sleeve (for fan motor)	
Insulation (noise & heat)		Polyurethane foam	
Operation control Operation switch		Remote control switch (Optional: RC-E1)	
Room temperature control		Thermostat by electronics	
Safety equipment		Internal thermostat for fan motor. Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
	Connecting method		Flare piping
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)
	Insulation for piping		Necessary (both Liquid & Gas lines)
Accessories		Mounting kit, Drain hose	
Optional parts		Decorative Panel	

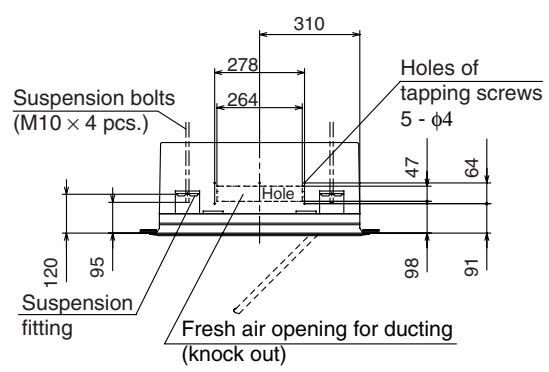
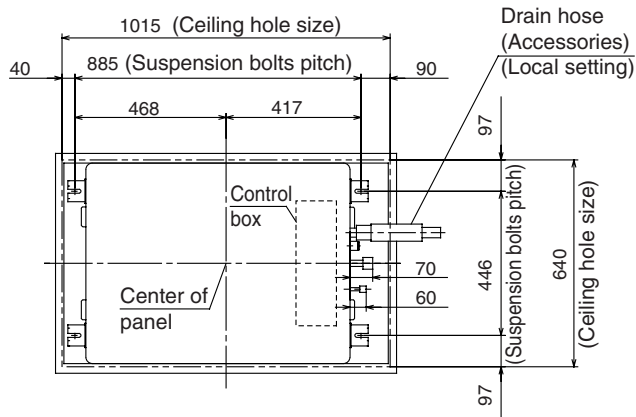
*1 ~ *3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

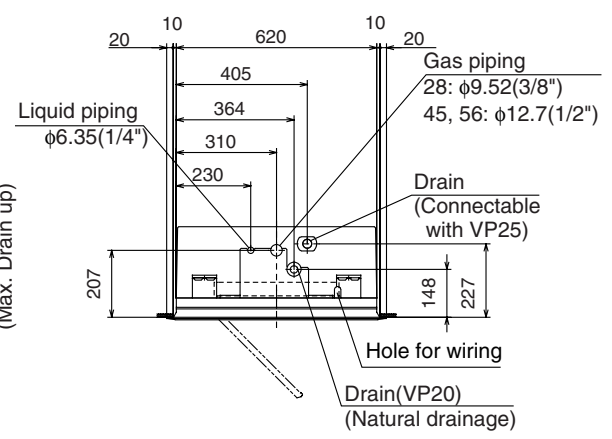
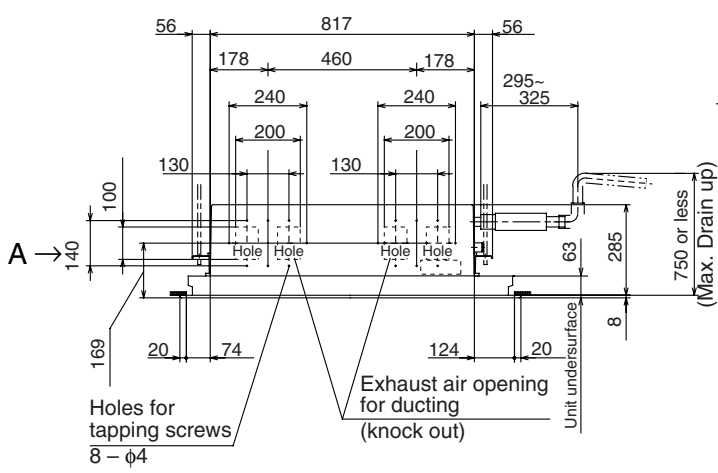
3.3.2 Exterior dimensions

FDTWA28KXE4A, 45KXE4A, 56KXE4A

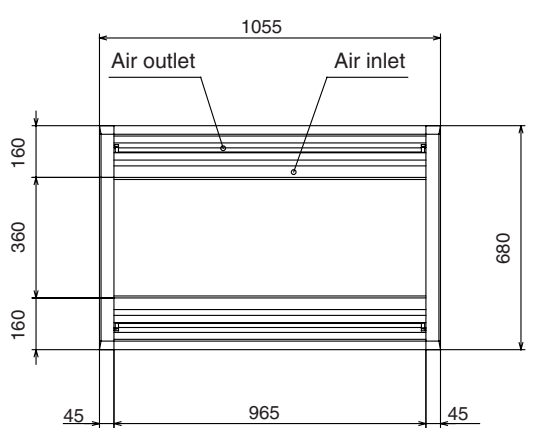
Unit : mm



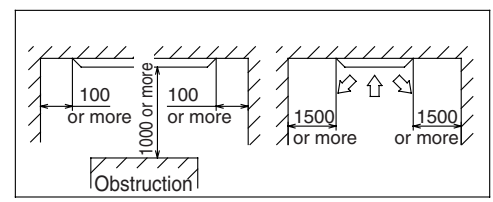
VIEW A



Decorative Panel



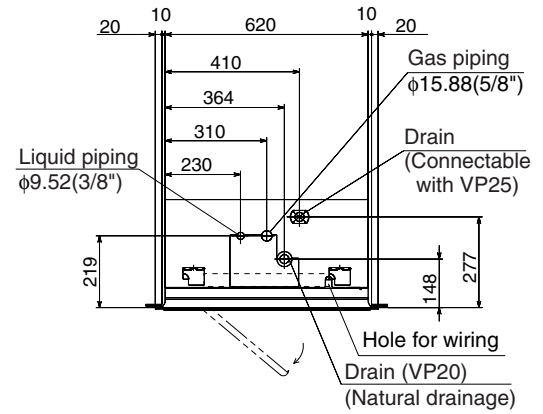
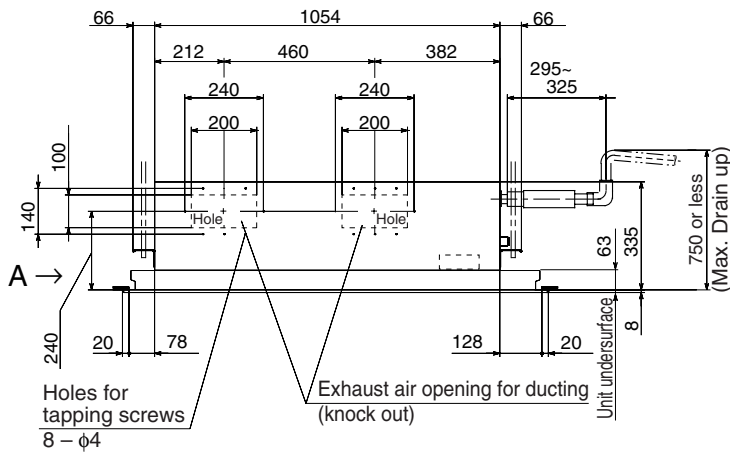
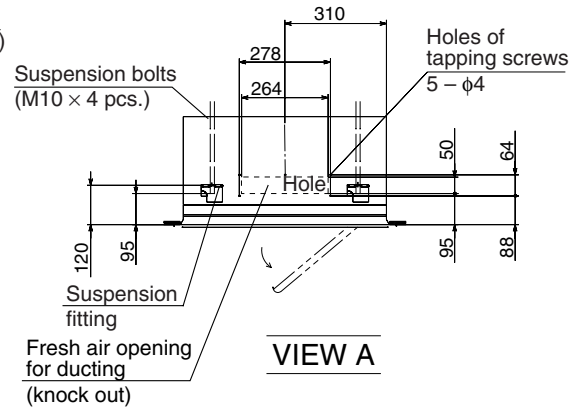
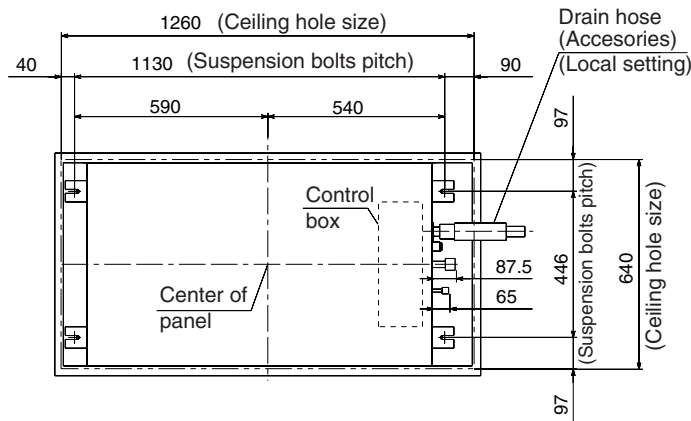
Space for installation and service



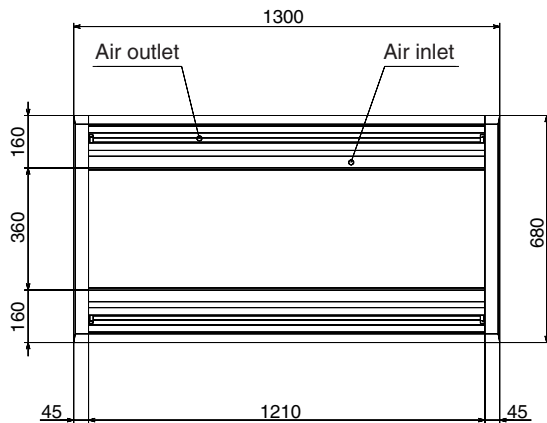
Product Specifications

FDTWA71KXE4A, 90KXE4A

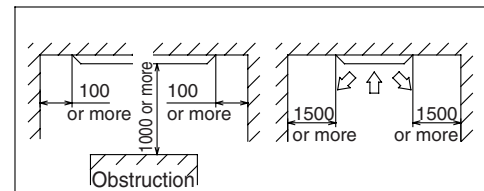
Unit : mm



Decorative Panel

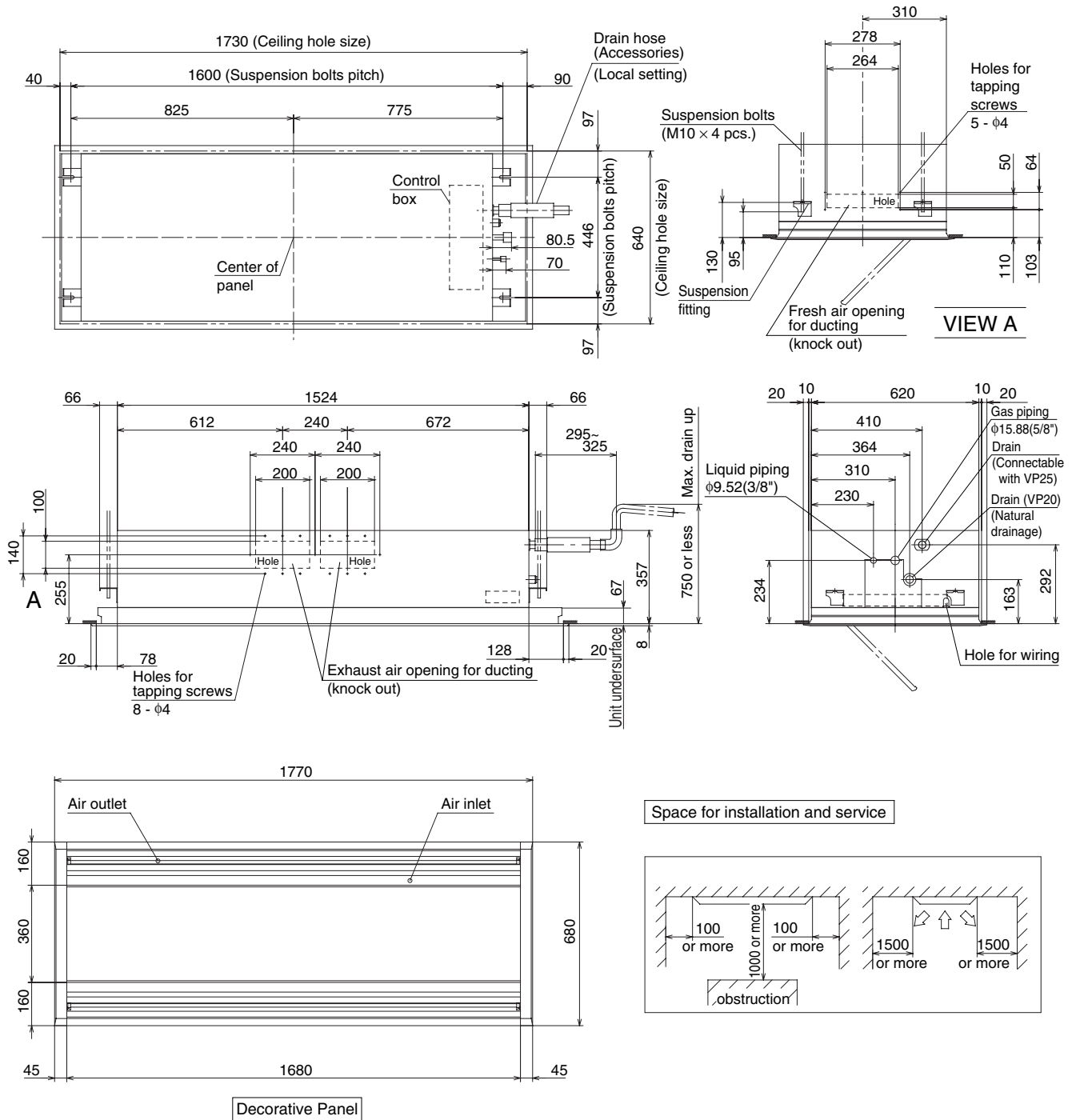


Space for installation and service



FDTWA112KXE4A, 140KXE4A

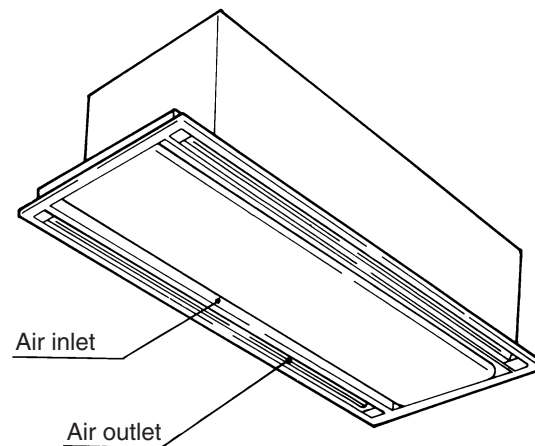
Unit : mm



Product Specifications

3.3.3 Exterior appearance

All models



Decorative panel

(i) Standard type

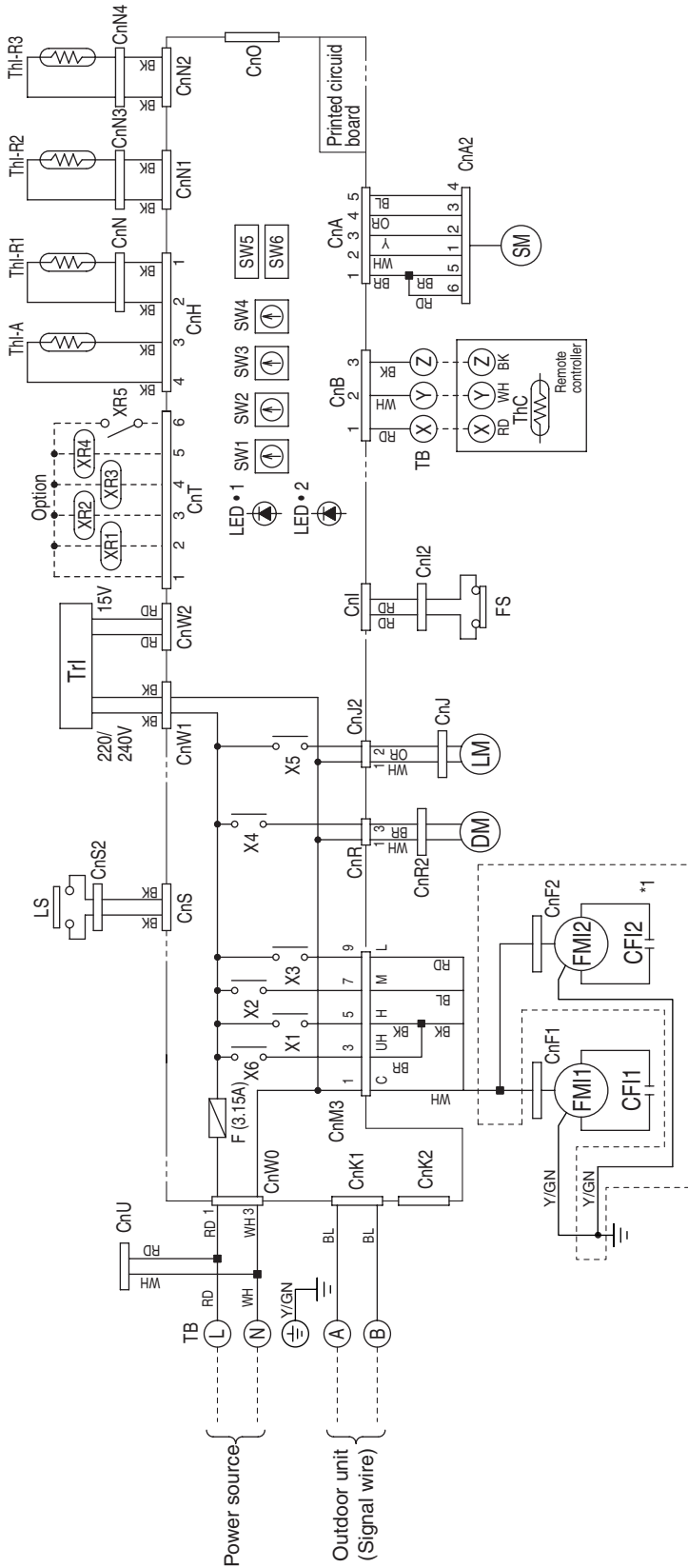
Panel part No.	Type	Panel color	Applicable model
TW-PSA-22W-E	With Auto swing	Pearl white	FDTWA28,45,56
TW-PSA-32W-E			FDTWA71,90
TW-PSA-42W-E			FDTWA112,140

(ii) Attachment of ceiling material type

Panel part No.	Type	Panel color	Applicable model
TW-PSB-28W-E	With Auto swing	Misty white	FDTWA28,45,56
TW-PSB-38W-E			FDTWA71,90
TW-PSB-48W-E			FDTWA112,140

3.3.4 Electrical wiring

All models



Note(1) *1. FMI12 is equipped only for 112,140.

Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
FMI1,2	Fan motor	SW1	Indoor unit address ten's place	XR3	Thermo ON output(DC12V output)
CFI1,2	Capacitor for FMI	SW2	Indoor unit address unit's place	XR4	Inspection output(DC12V output)
DM	Drain motor	SW3	Outdoor unit address ten's place	XR5	Remote operation input(volt-free contact)
FS	Float switch	SW4	Outdoor unit address unit's place	X1,2,3,6	Auxiliary relay(For FM)
LM	Louver motor	SW6	Model capacity setting	X4	Auxiliary relay(For DM)
SM	Stepping motor(For Exp.v)	Tr1	Transformer	X5	Terminal relay(For LM)
Th1-A	Thermistor	F	Fuse	TB	Terminal block(O mark)
Th1-R1	Thermistor	LED1	Indication lamp(Red)	CnA~Z	Connector
Th1-R2	Thermistor	LED2	Indication lamp(Green)	■mark	Closed-end connector
Th1-R3	Thermistor	XR1	Operation output(DC12V output)		
ThC	Thermistor	XR2	Heating output(DC12V output)		

Color marks

Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	WH	White
BR	Brown	Y	Yellow
OR	Orange	Y/GN	Yellow/Green

Function of switches

Mark	Function
SW5-1	ON Test run of condensate pump motor
SW5-1	OFF Normal
SW5-3	ON Input
SW5-3	OFF Reverse Invalid
SW5-3	OFF Run stop
SW5-4	ON Emergency stop signal:Invalid
SW5-4	OFF Emergency stop signal:valid

3.3.5 Noise level

Notes(1) The data are based on the following conditions.

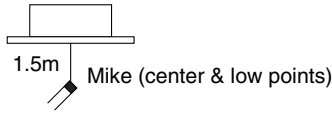
Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB

(2) The data in the chart are measured in an anechoic room.

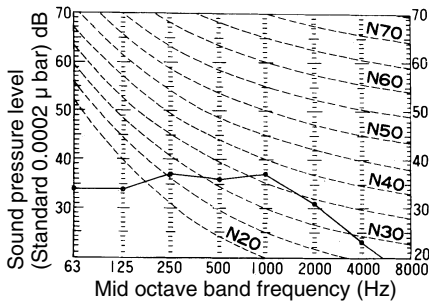
(3) The noise levels measured in the field are usually higher than the data because of reflection.

Measured based on JIS B 8616

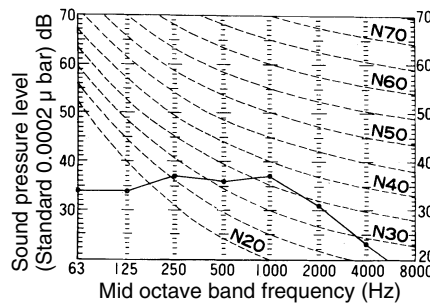
Mike position as below



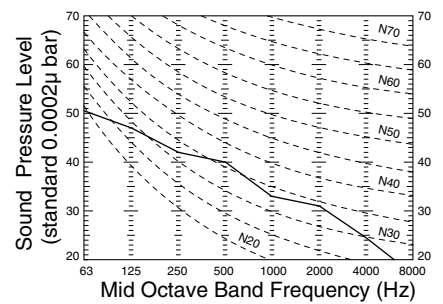
Model FDTWA28KXE4, 45KXE4, 56KXE4
 Noise level 39 dB (A) at HIGH
 36 dB (A) at MEDIUM
 33 dB (A) at LOW



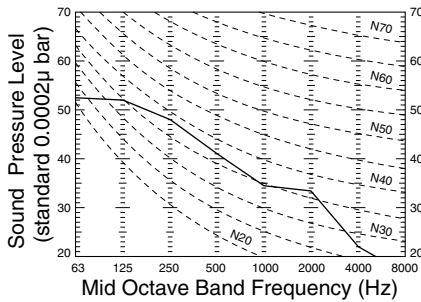
Model FDTWA71KXE4
 Noise level 41 dB (A) at HIGH
 38 dB (A) at MEDIUM
 35 dB (A) at LOW



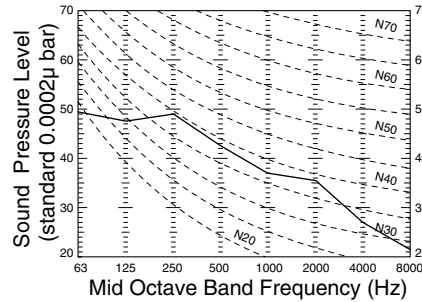
Model FDTWA90KXE4
 Noise level 41 dB (A) at HIGH
 39 dB (A) at MEDIUM
 36 dB (A) at LOW



Model FDTWA112KXE4
 Noise level 44 dB (A) at HIGH
 41 dB (A) at MEDIUM
 38 dB (A) at LOW



Model FDTWA140KXE4
 Noise level 45 dB (A) at HIGH
 42 dB (A) at MEDIUM
 39 dB (A) at LOW



3.4 Ceiling Recessed Single Air Supply Port Type (FDTQA)

3.4.1 Specifications

FDTQA22KXE4A

Item		Model	FDTQA22KXE4A			
Panel name			Direct blow panel		Duct panel ^{*4}	
Panel model (Option)			TQ-PSA-13W-E	TQ-PSB-13W-E	QR-PNA-13W-E	QR-PNB-13W-E
Nominal cooling capacity ^{*1}		kW	2.3			
Nominal cooling capacity ^{*2}		kW	2.2			
Nominal heating capacity ^{*3}		kW	2.5			
Power source			1 Phase 220/240V 50Hz			
Noise level		dB(A)	Hi: 38 Lo: 34		Hi: 42 Lo: 39	
Exterior dimensions (Height × Width × Depth)		mm	Unit: 250 × 570 × 570 Panel: 35 × 625 × 650	Unit: 250 × 570 × 570 Panel: 35 × 780 × 650	Unit: 250 × 570 × 570 Panel: 35 × 625 × 650	Unit: 250 × 570 × 570 Panel: 35 × 780 × 650
Net weight		kg	Unit: 19 Panel: 2.5	Unit: 19 Panel: 3	Unit: 19 Panel: 2.5	Unit: 19 Panel: 3
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing			
	Refrigerant control		Electronic Expansion Valve			
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 1			
	Motor & Q'ty	W	20 × 1			
	Starting method		Line starting			
	Air flow (Standard)	CMM	Hi: 7 Lo: 5.4		Hi: 7 Lo: 6.5	
	Fresh air intake		Possible			
	Air filter & Q'ty		Long life filter × 1 (Washable)			
Shock & vibration isolator			Rubber sleeve (for fan motor)			
Insulation (noise & heat)			Polyurethane foam			
Operation control Operation switch			Remote control switch (Optional: RC-E1)			
Room temperature control			Thermostat by electronics			
Safety equipment			Internal thermostat for fan motor. Frost protection thermostat			
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4"), Gas line: φ 9.52 (3/8")			
	Connecting method		Flare piping			
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)			
	Insulation for piping		Necessary (both Liquid & Gas lines)			
Accessories			Mounting kit, Drain hose			
Optional parts			Decorative Panel			

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

*4 This is the panel to be used when modified to the Duct panel type on site. See page 289 for the execution.

FDTQA28KXE4A

Item		Model	FDTQA28KXE4A			
Panel name			Direct blow panel		Duct panel ^{*4}	
Panel model (Option)			TQ-PSA-13W-E	TQ-PSB-13W-E	QR-PNA-13W-E	QR-PNB-13W-E
Nominal cooling capacity ^{*1}		kW	2.9			
Nominal cooling capacity ^{*2}		kW	2.8			
Nominal heating capacity ^{*3}		kW	3.2			
Power source			1 Phase 220V 50Hz			
Noise level		dB(A)	Hi: 38 Lo: 34		Hi: 42 Lo: 39	
Exterior dimensions (Height × Width × Depth)		mm	Unit: 250 × 570 × 570 Panel: 35 × 625 × 650	Unit: 250 × 570 × 570 Panel: 35 × 780 × 650	Unit: 250 × 570 × 570 Panel: 35 × 625 × 650	Unit: 250 × 570 × 570 Panel: 35 × 780 × 650
Net weight		kg	Unit: 19 Panel: 2.5	Unit: 19 Panel: 3	Unit: 19 Panel: 2.5	Unit: 19 Panel: 3
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing			
	Refrigerant control		Electronic Expansion Valve			
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 1			
	Motor & Q'ty	W	20 × 1			
	Starting method		Line starting			
	Air flow (Standard)	CMM	Hi: 7 Lo: 5.4		Hi: 7 Lo: 6.5	
	Available static pressure (at Hi)	Pa	—		30	
	Fresh air intake		Possible			
	Air filter & Q'ty		Long life filter × 1 (Washable)			
Shock & vibration isolator			Rubber sleeve (for fan motor)			
Insulation (noise & heat)			Polyurethane foam			
Operation control Operation switch			Remote control switch (Optional: RC-E1)			
Room temperature control			Thermostat by electronics			
Safety equipment			Internal thermostat for fan motor, Frost protection thermostat			
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4"), Gas line: φ 9.52 (3/8")			
	Connecting method		Flare piping			
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)			
	Insulation for piping		Necessary (both Liquid & Gas lines)			
Accessories			Mounting kit, Drain hose			
Optional parts			Decorative Panel			

*1 ~ *3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

*4 This is the panel to be used when modified to the Duct panel type on site. See page 289 for the execution.

FDTQA36KXE4A

Item		Model	FDTQA36KXE4A			
Panel name			Direct blow panel		Duct panel ^{*4}	
Panel model (Option)			TQ-PSA-13W-E	TQ-PSB-13W-E	QR-PNA-13W-E	QR-PNB-13W-E
Nominal cooling capacity ^{*1}		kW	3.7			
Nominal cooling capacity ^{*2}		kW	3.6			
Nominal heating capacity ^{*3}		kW	4.0			
Power source			1 Phase 220V 50Hz			
Noise level		dB(A)	Hi: 38 Lo: 34		Hi: 42 Lo: 39	
Exterior dimensions (Height × Width × Depth)		mm	Unit: 250 × 570 × 570 Panel: 35 × 625 × 650	Unit: 250 × 570 × 570 Panel: 35 × 780 × 650	Unit: 250 × 570 × 570 Panel: 35 × 625 × 650	Unit: 250 × 570 × 570 Panel: 35 × 780 × 650
Net weight		kg	Unit: 19 Panel: 2.5	Unit: 19 Panel: 3	Unit: 19 Panel: 2.5	Unit: 19 Panel: 3
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing			
	Refrigerant control		Electronic Expansion Valve			
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 1			
	Motor & Q'ty	W	20 × 1			
	Starting method		Line starting			
	Air flow (Standard)	CMM	Hi: 7 Lo: 5.4		Hi: 7 Lo: 6.5	
	Available static pressure (at Hi)	Pa	—		30	
	Fresh air intake		Possible			
	Air filter & Q'ty		Long life filter × 1 (Washable)			
Shock & vibration isolator			Rubber sleeve (for fan motor)			
Insulation (noise & heat)			Polyurethane foam			
Operation control Operation switch			Remote control switch (Optional: RC-E1)			
Room temperature control			Thermostat by electronics			
Safety equipment			Internal thermostat for fan motor, Frost protection thermostat			
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4"), Gas line: φ 12.7 (1/2")			
	Connecting method		Flare piping			
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)			
	Insulation for piping		Necessary (both Liquid & Gas lines)			
Accessories			Mounting kit, Drain hose			
Optional parts			Decorative Panel			

*1 ~ 3The data are measured at the following conditions.

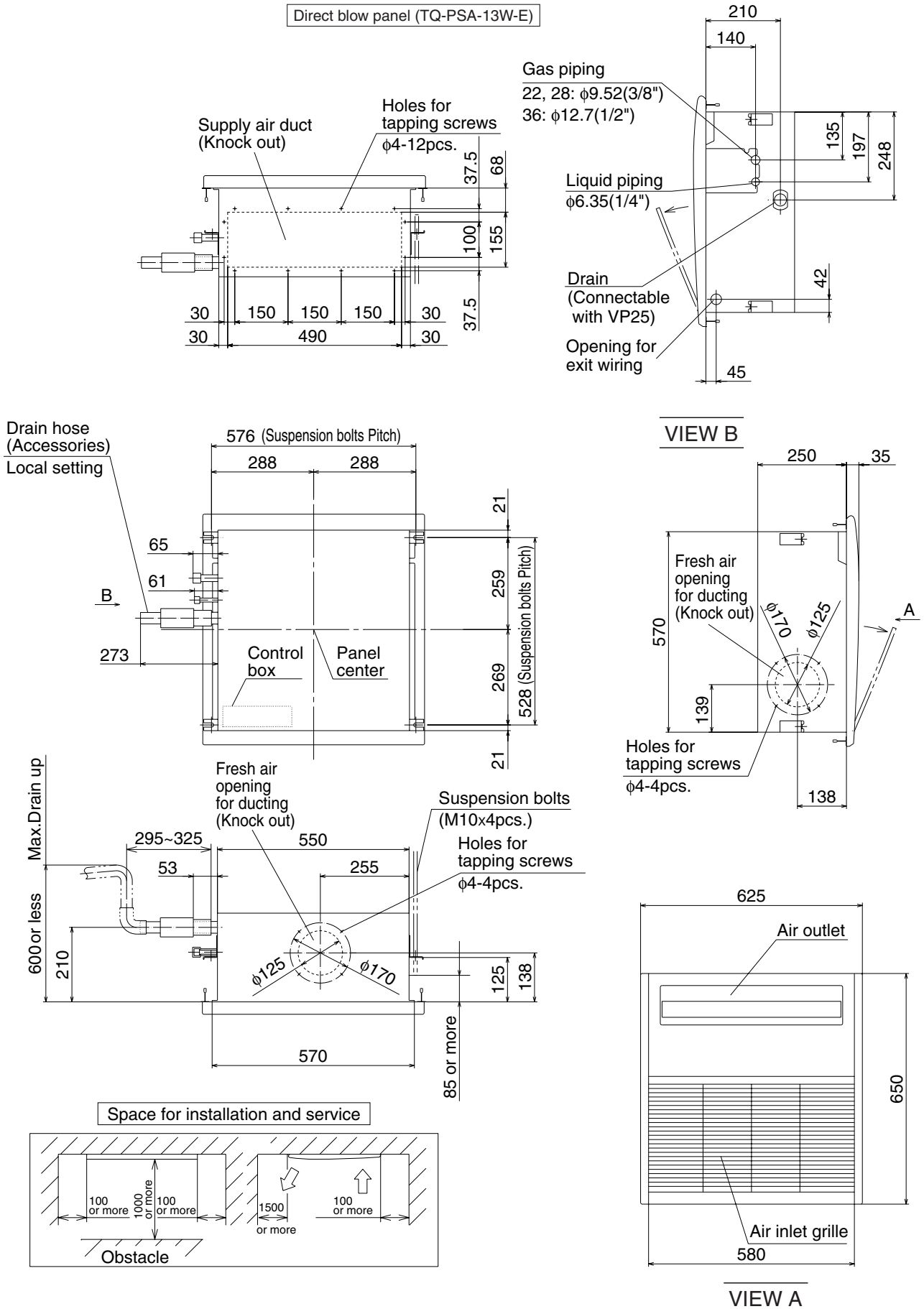
Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

*4 This is the panel to be used when modified to the Duct panel type on site. See page 289 for the execution.

3.4.2 Exterior dimensions

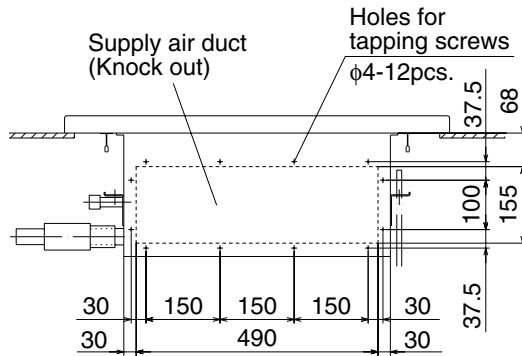
FDTQA22KXE4A, 28KXE4A, 36KXE4A

Unit : mm



Unit : mm

Direct blow panel (TQ-PSB-13W-E)

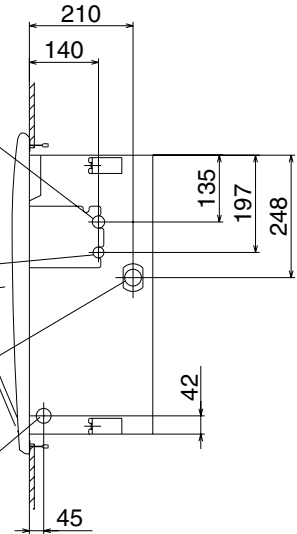


Gas piping
 22, 28: $\phi 9.52(3/8")$
 36: $\phi 12.7(1/2")$

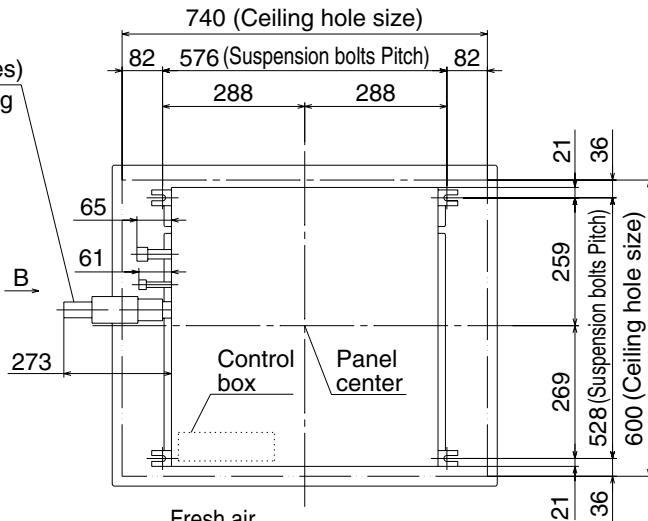
Liquid piping
 $\phi 6.35(1/4")$

Drain
 (Connectable with VP25)

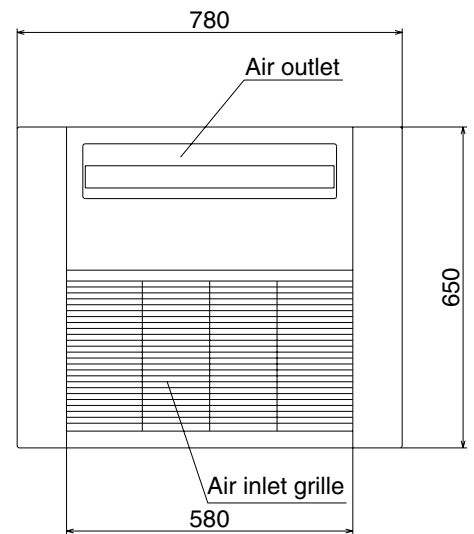
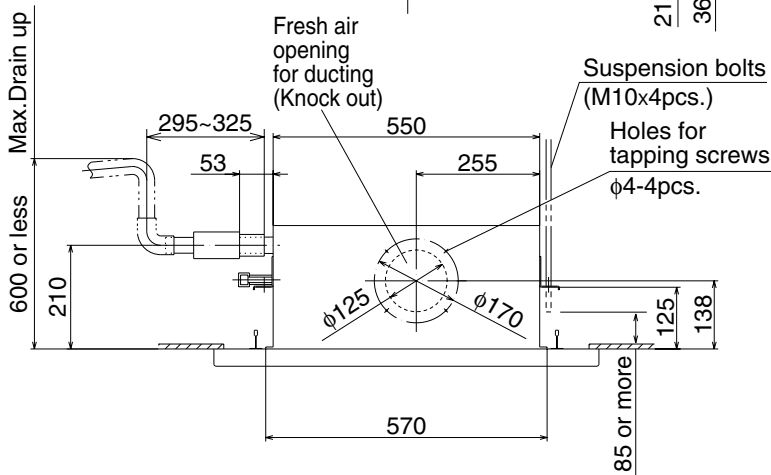
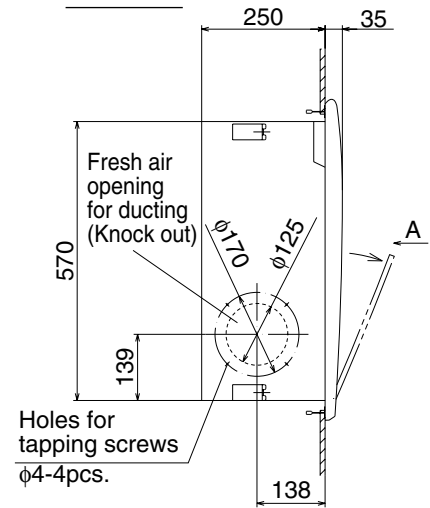
Opening for exit wiring



Drain hose (Accessories)
 Local setting

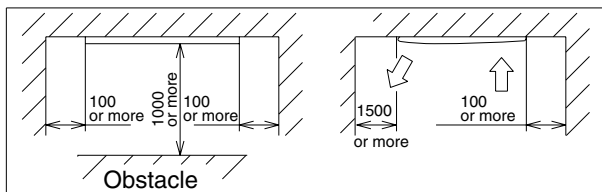


VIEW B



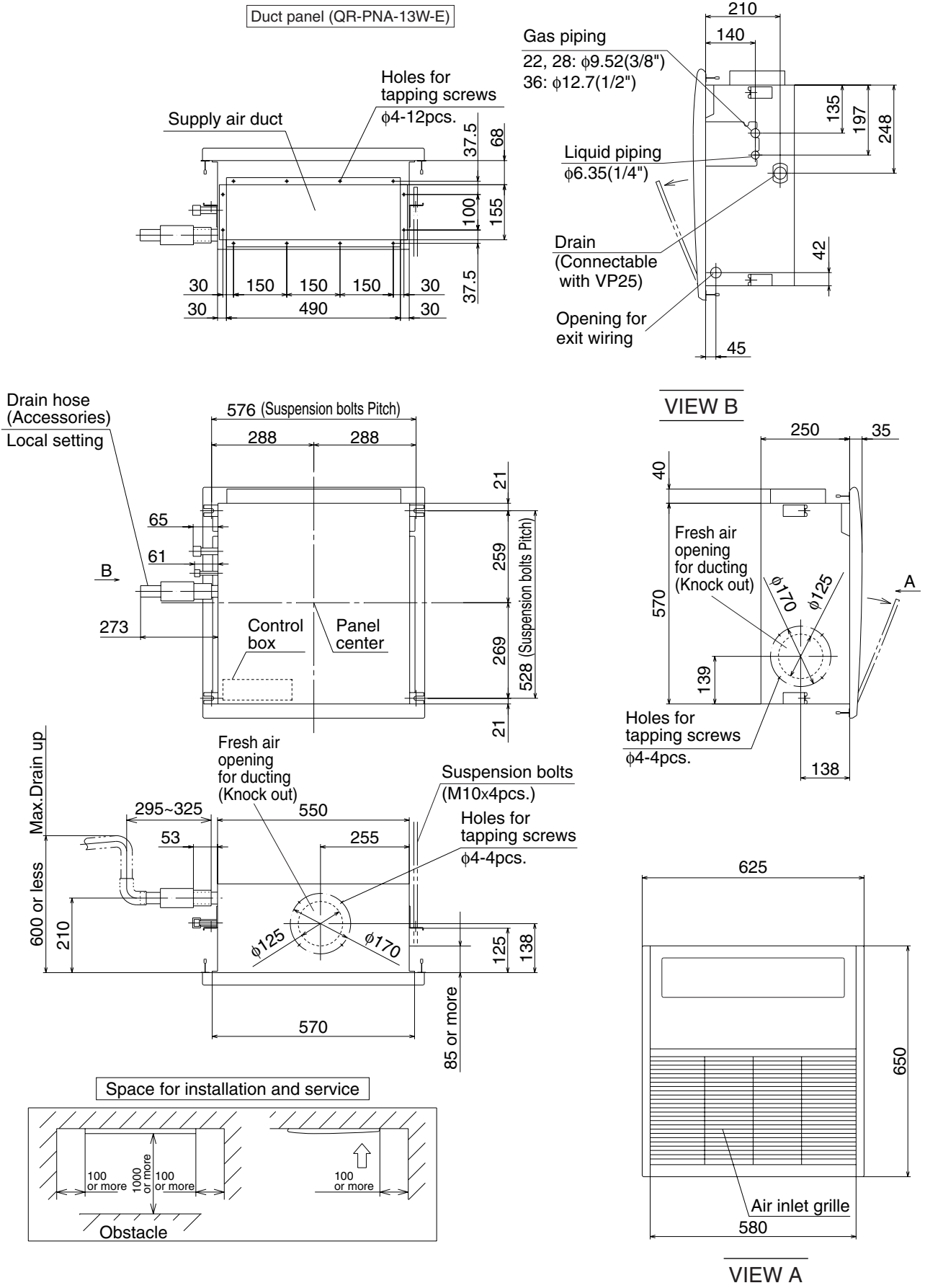
VIEW A

Space for installation and service

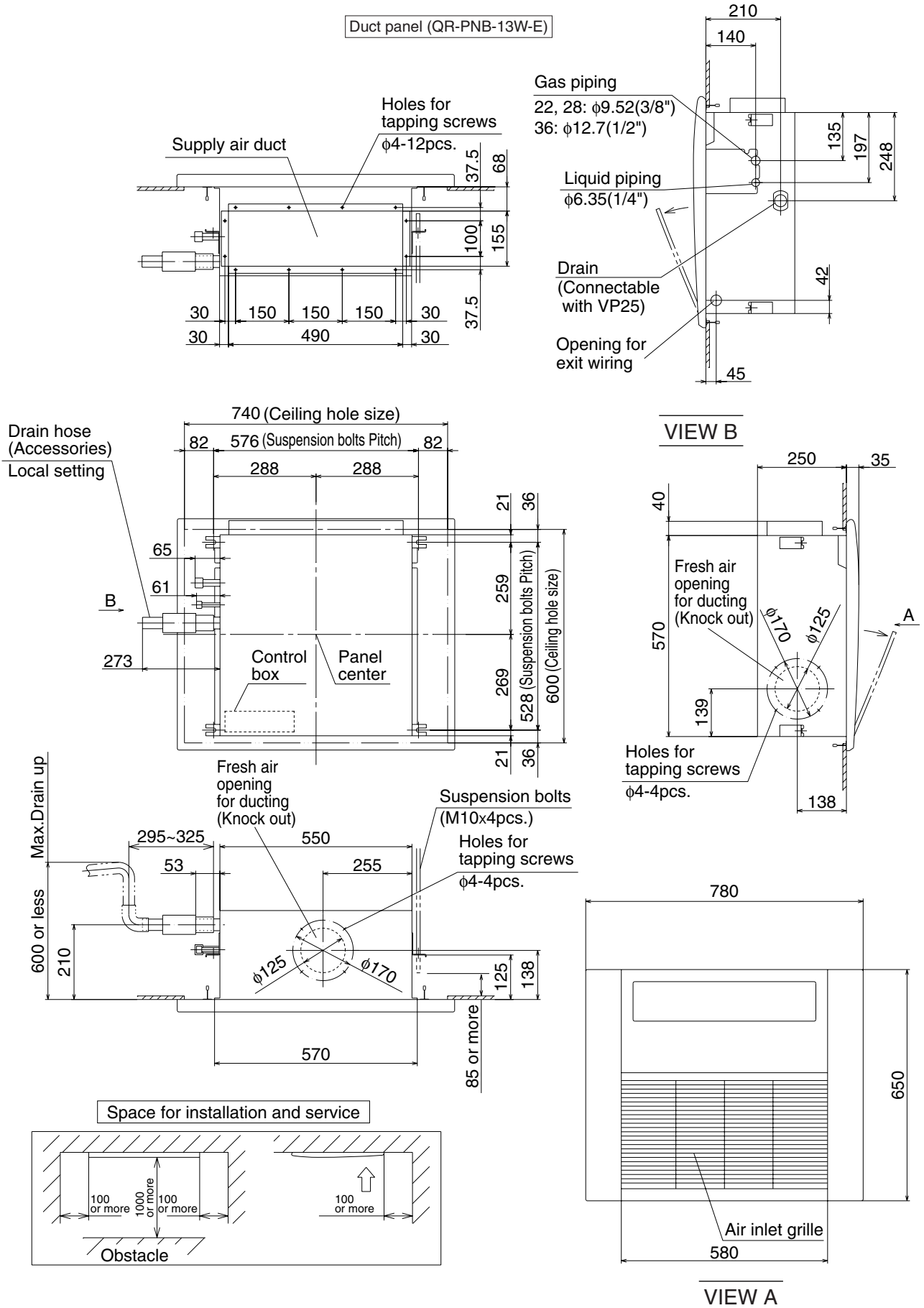


Product Specifications

Unit : mm



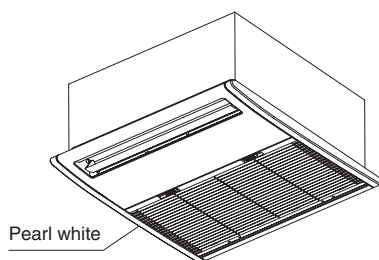
Unit : mm



Product Specifications

3.4.3 Exterior appearance

All models

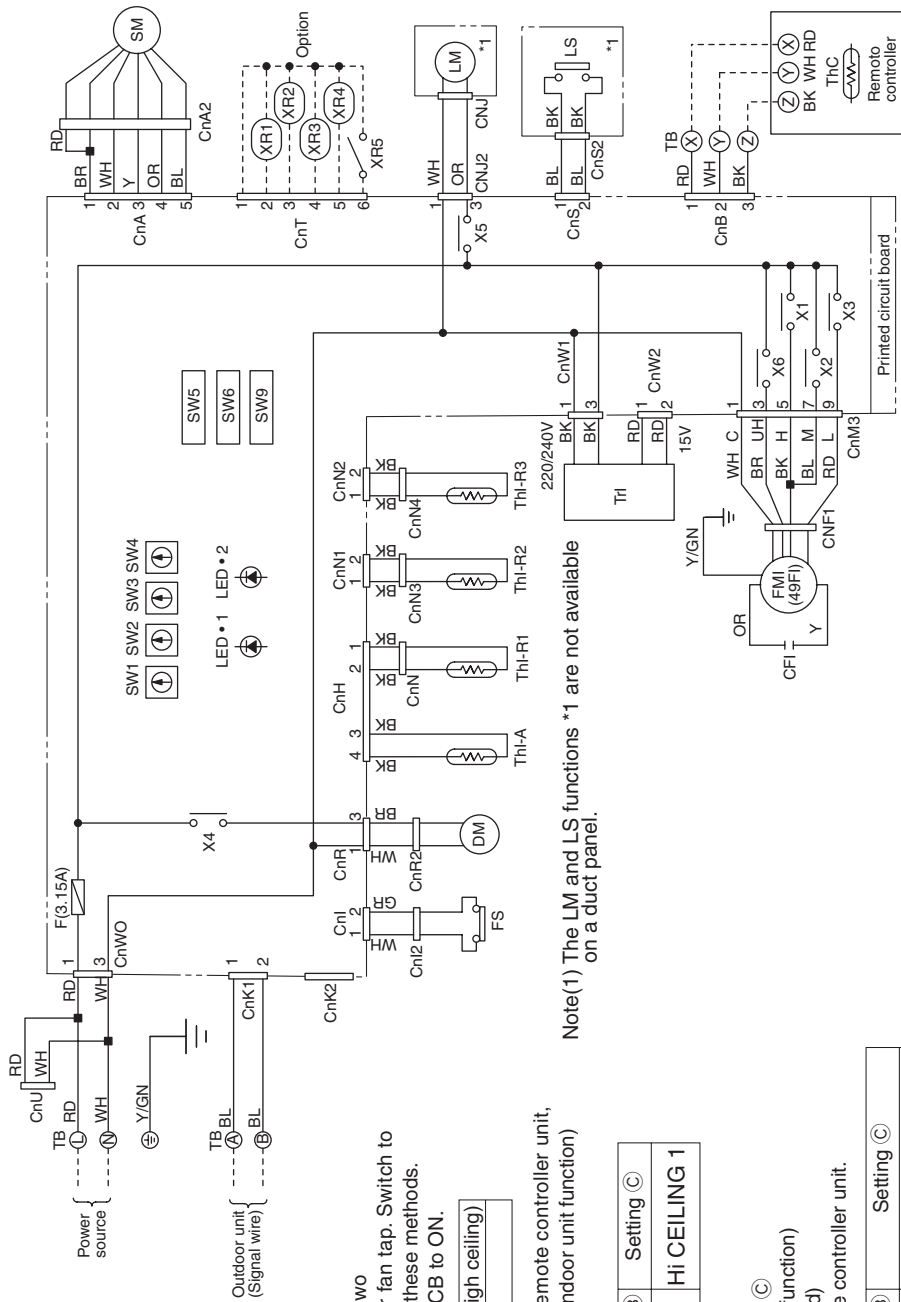


Decorative panel

Panel part No.		Type	Panel color	Applicable model
Direct blow panel	TQ-PSA-13W-E	With Auto swing	Pearl white	FDTQA22, 28, 36
	TQ-PSB-13W-E			
Duct panel	QR-PNA-13W-E	Non Auto swing	Pearl white	FDTQA22, 28, 36
	QR-PNB-13W-E			

3.4.4 Electrical wiring

All models



Blower fan tap switch

In case of using duct panel, the following two methods are available to switch the blower fan tap. Switch to the high-speed tap can be done with one of these methods.

- ① Set SW9-4 provided on the indoor unit PCB to ON.

SW9-4	ON	Fan control, high speed (High ceiling)
	OFF	Fan control, standard

- ② By means of function setting from the remote controller unit, set the setting ③ of "I/U FUNCTION▲" (indoor unit function) to "Hi CEILING 1" (high-speed tap).

Function number ①	Function description ②	Setting ③
01	Hi CEILING SET	Hi CEILING 1

LOUVER switch disabled setting

In case of using duct panel, set the setting ③ of "I/U FUNCTION▲" (remote control unit function) to "INVALID" (LOUVER switch disabled) by means of function setting from the remote controller unit.

Function number ①	Function description ②	Setting ③
07	LOUVER SW	INVALID

Color marks

Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	WH	White
BR	Brown	Y	Yellow
GR	Gray	Y/GN	Yellow/Green
OR	Orange		

Function of switches

Mark	Function
SW5-1	Test run of condensate pump motor
SW5-2	Normal
SW5-3	Reverse Invalid
SW5-4	Run stop
ON	Emergency stop signal: valid
OFF	Emergency stop signal: invalid

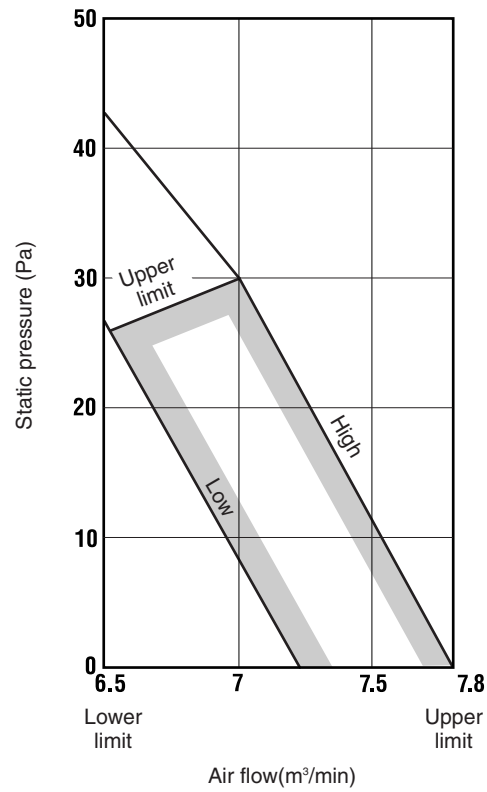
Meaning of marks

Mark	Parts name	Mark	Parts name
FMI	Fan motor	XR1	Operation output(DC12V output)
49FI	Internal thermostat for FMI	XR2	Heating output(DC12V output)
CFI	Capacitor for FMI	XR3	Thermo ON output(DC12V output)
DM	Drain motor	XR4	Inspection output(DC12V output)
FS	Float switch	XR5	Remote operation input(volt-free contact)
LM	Louver motor	X1,2,3,6	Auxiliary relay(For FM)
LS	Limit switch	X4	Auxiliary relay(For DM)
SM	Stepping motor(For Exp.v)	X5	Auxiliary relay(For LM)
Thi-A	Thermistor	TB	Terminal block(O mark)
Thi-R1	Thermistor	CnA-Z	Connector
Thi-R2	Thermistor	■mark	Closed-end connector

3.4.5 Characteristics of fan

(Only when FDTQA22, 28 and 36 model are used for the Duct panel type.)

Models FDTQA22, 28, 36KXE4A



3.4.6 Noise level

Notes(1) The data are based on the following conditions.

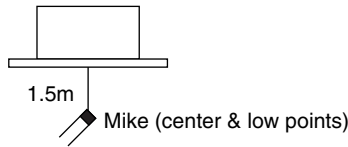
Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB

(2) The data in the chart are measured in an anechoic room.

(3) The noise levels measured in the field are usually higher than the data because of reflection.

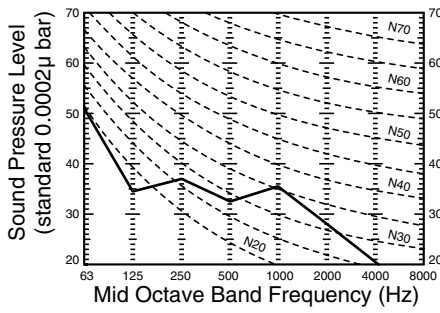
Measured based on JIS B 8616

Mike position as below



Models FDTQA22KXE4A, 28KXE4A,
36KXE4A

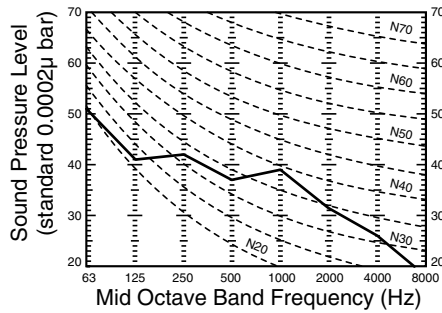
Noise level 38 dB (A) at HIGH
33 dB (A) at LOW



When used as the Duct panel type

Models FDTQA22KXE4A, 28KXE4A,
36KXE4A

Noise level 42 dB (A) at HIGH
39 dB (A) at LOW



3.5 1-way Outlet Ceiling Recessed Type (FDTSA)

3.5.1 Specifications

FDTSA45KXE4A, 71KXE4A

Item		Models	FDTSA45KXE4A	FDTSA71KXE4A
Nominal cooling capacity ^{*1}	kW		4.7	7.3
Nominal cooling capacity ^{*2}	kW		4.5	7.1
Nominal heating capacity ^{*3}	kW		5.0	8.0
Power source			1 Phase 220/240V 50Hz	
Noise level	dB(A)		Hi: 43 Me: 40 Lo: 38	Hi: 44 Me: 40 Lo: 38
Exterior dimensions (Height × Width × Depth)	mm		Unit: 194 × 1040 × 650 Panel: 10 × 1290 × 770	Unit: 194 × 1300 × 650 Panel: 10 × 1500 × 790
Net weight	kg		Unit: 26 Panel: 6	Unit: 30 Panel: 7
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing	
	Refrigerant control		Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 2	Centrifugal fan × 4
	Motor & Q'ty	W	40 × 1	25 × 2
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 14 Me: 12 Lo: 10	Hi: 18 Me: 15 Lo: 12
	Fresh air intake		Possible	
	Air filter & Q'ty		Long life filter × 1 (Washable)	
Shock & vibration isolator			Rubber sleeve (for fan motor)	
Insulation (noise & heat)			Polyurethane foam	
Operation control Operation switch			Remote control switch (Optional: RC-E1)	
Room temperature control			Thermostat by electronics	
Safety equipment			Internal thermostat for fan motor. Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit, Drain hose	
Optional parts			Decorative Panel	

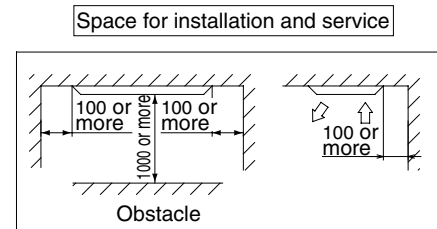
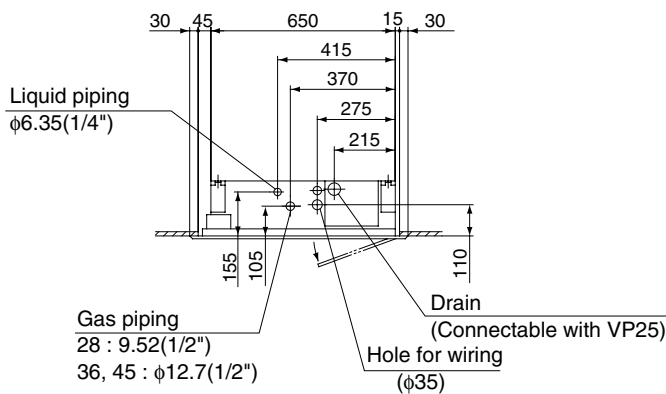
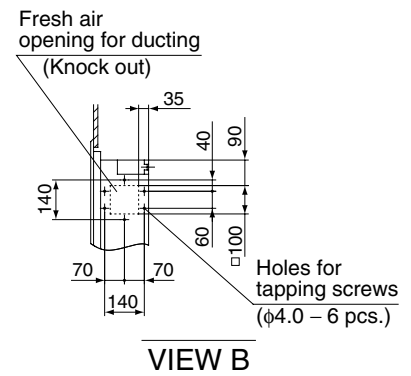
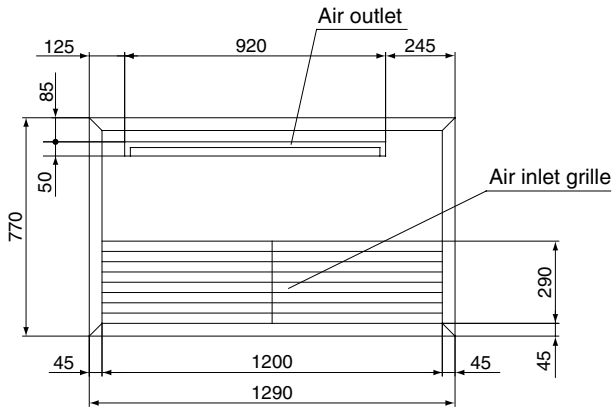
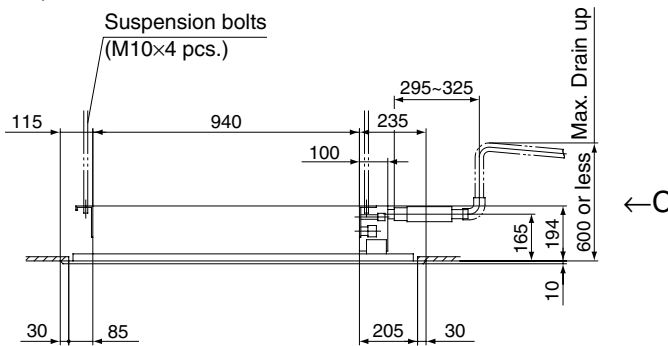
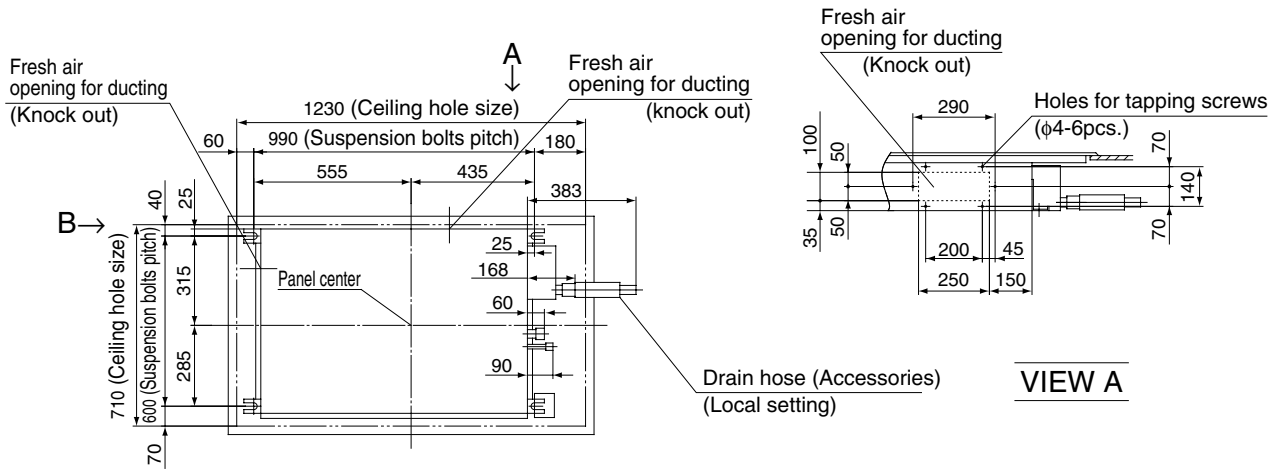
*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

3.5.2 Exterior dimensions

FD TSA45KXE4A

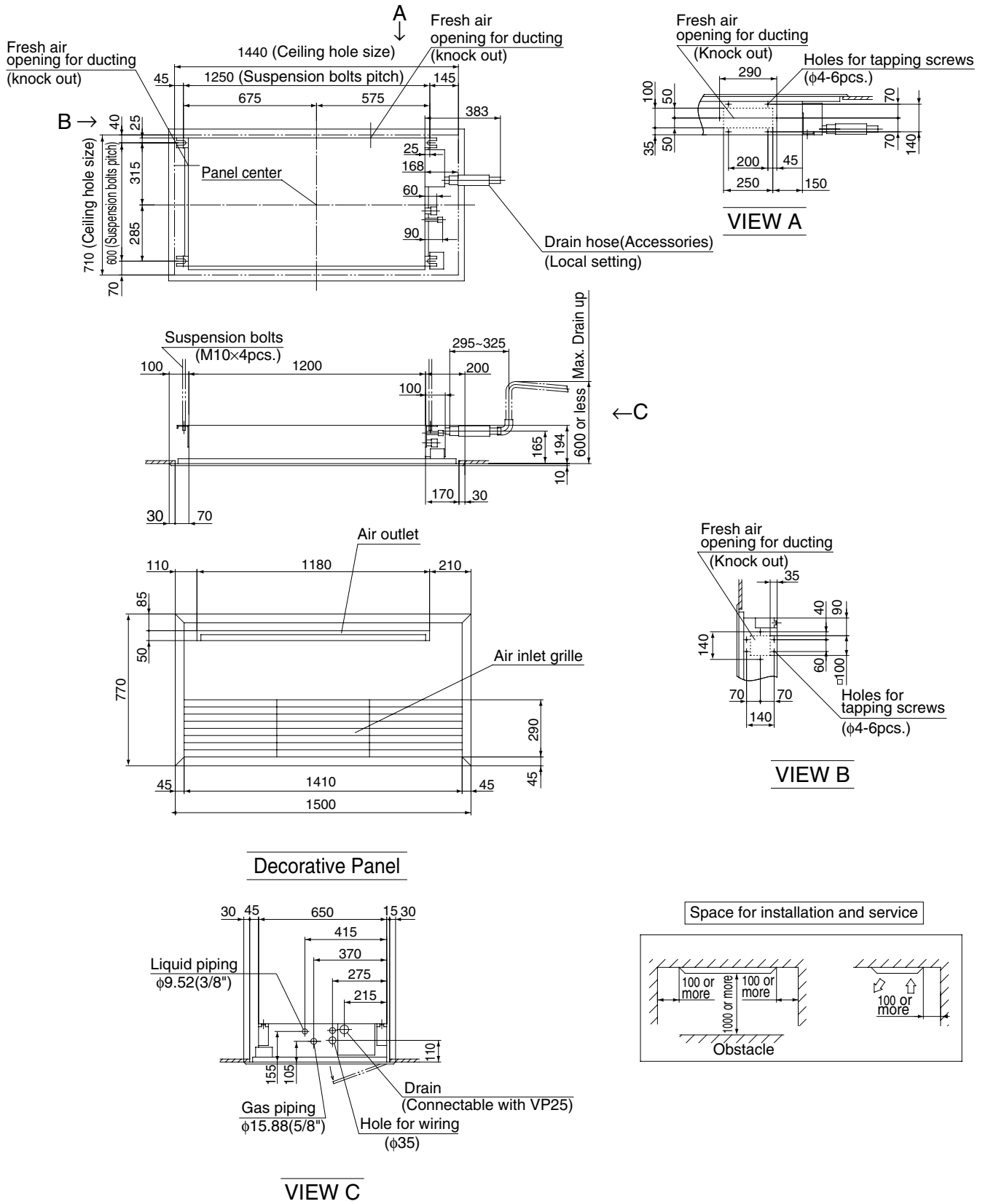
Unit : mm



Product Specifications

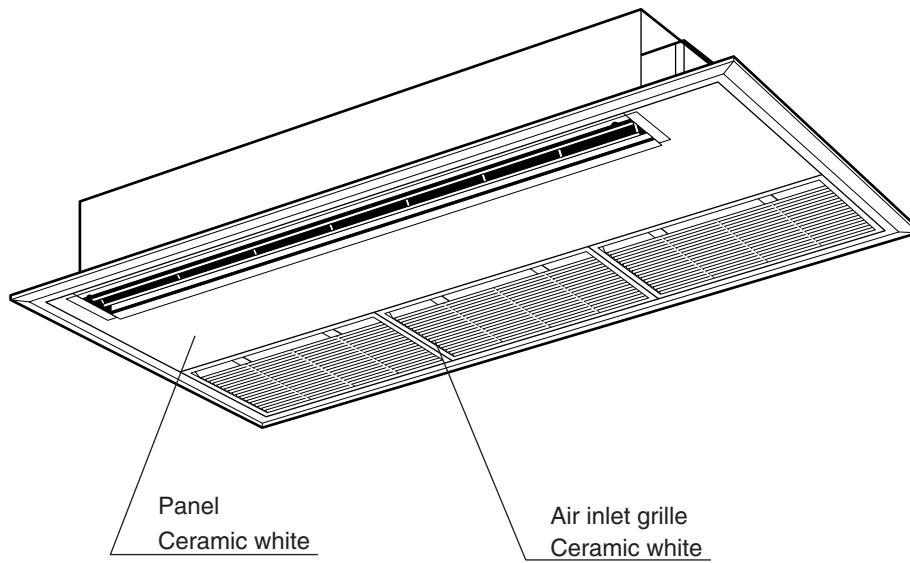
FD TSA71KXE4A

Unit : mm



3.5.3 Exterior appearance

All models

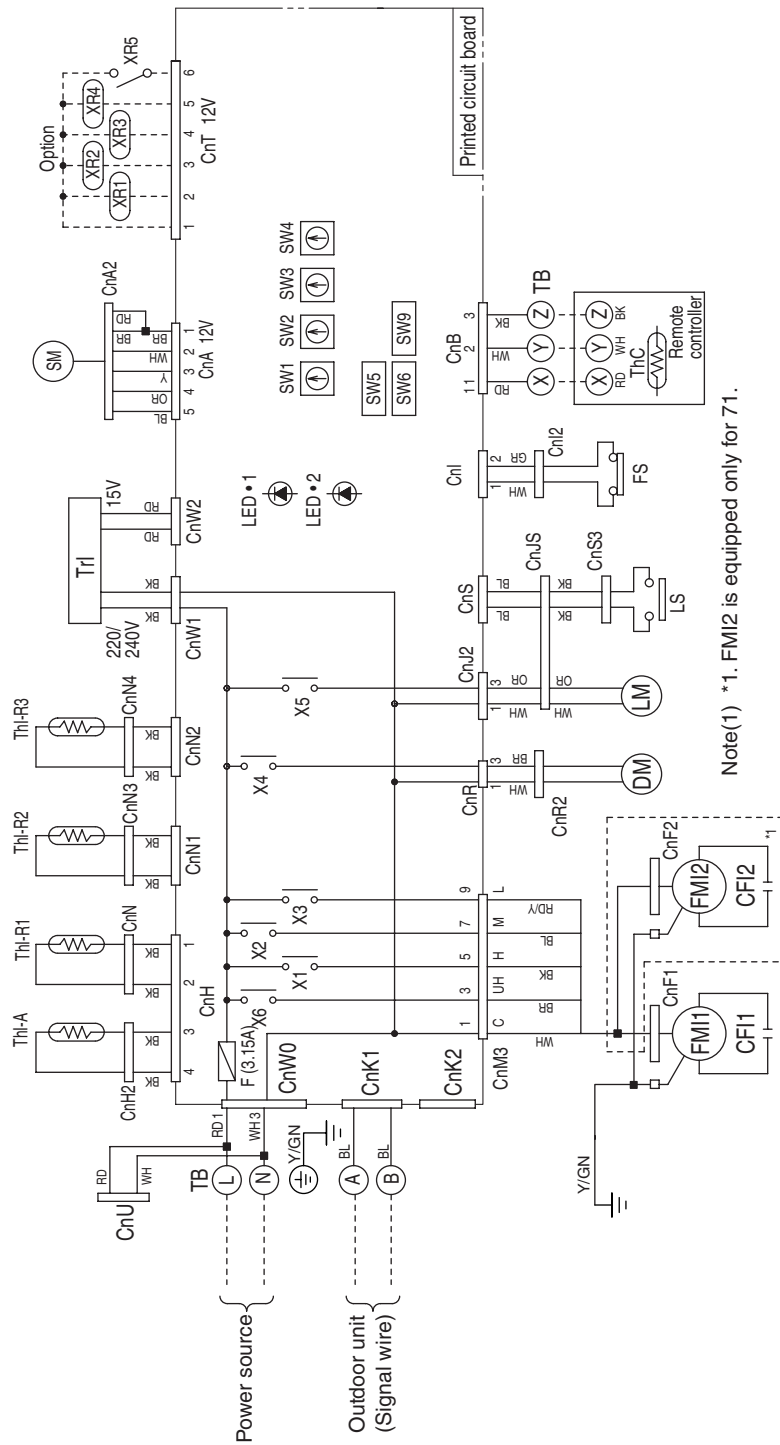


Decorative panel

Panel part No.	Type	Panel color	Applicable model
TS-PSA-27W-E	With Auto swing	Ceramic white	FD TSA45
TS-PSB-37W-E			FD TSA71

3.5.4 Electrical wiring

All models



Note(1) *1. FMI2 is equipped only for 71.

Blower fan tap switch

When increasing of static pressure is required, the following two methods are available to switch the blower fan tap. Switch to the high-speed tap can be done with one of these methods.

- ① Set SW9-4 provided on the indoor unit PCB to ON.

- ② By means of function setting from the remote controller unit, set the setting ① of "I/U FUNCTION▲" (indoor unit function) to "Hi CEILING 1" (high-speed tap).

Function number ①	Function description ②	Setting ③
01	Hi CEILING SET	Hi CEILING 1

SW9-4	ON	Fan control, high speed (High ceiling)
SW9-4	OFF	Fan control, standard

Meaning of marks

Mark	Parts name	Mark	Parts name
FMI1, 2	Fan motor	XR2	Heating output (DC12V output)
CF1, 2	Capacitor for FMI	XR3	Thermo ON output (DC12V output)
DM	Drain motor	XR4	Inspection output (DC12V output)
FS	Float switch	XR5	Remote operation input (volt-free contact)
LM	Louver motor	X1,2,3,6	Auxiliary relay (For FM)
LS	Limit switch	X4	Auxiliary relay (For DM)
SM	Stepping motor (For Exp.v)	X5	Auxiliary relay (For LM)
Th-A	Thermistor	TB	Terminal block (○ mark)
Th-R1	Thermistor	CnA-Z	Connector
Th-P2	Thermistor	■mark	Closed-end connector
Th-P3	Thermistor		Operation output (DC12V output)

Color marks

Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	RD/Y	Red/Yellow
BR	Brown	WH	White
GR	Gray	Y	Yellow
OR	Orange	Y/GN	Yellow/Green

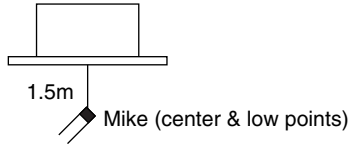
Function of switches

Mark	Function
SW5-1	ON Test run of condensate pump motor
	OFF Normal
SW5-3	ON Input Reverse Invalid
	OFF signal Run stop
SW5-4	ON Emergency stop signal: valid
	OFF Emergency stop signal: Invalid

3.5.5 Noise level

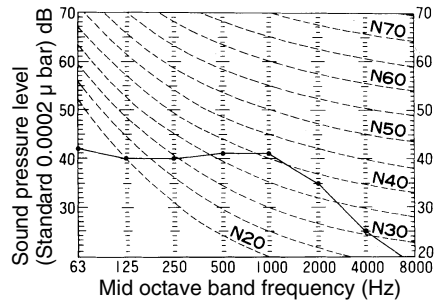
- Notes(1) The data are based on the following conditions.
 Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB
 (2) The data in the chart are measured in an anechoic room.
 (3) The noise levels measured in the field are usually higher than the data because of reflection.

Measured based on JIS B 8616
 Mike position as below



Model FD TSA45KXE4A
 Noise level 43 dB (A) at HIGH
 40 dB (A) at MEDIUM
 38 dB (A) at LOW

Model FD TSA71KXE4A
 Noise level 44 dB (A) at HIGH
 40 dB (A) at MEDIUM
 38 dB (A) at LOW



3.6 Cassetteria Type (FDRA)

3.6.1 Specifications

FDRA45KXE4A, 56KXE4A

Item		Models		FDRA45KXE4A		FDRA56KXE4A	
Nominal cooling capacity ^{*1}		kW		4.7		5.8	
Nominal cooling capacity ^{*2}		kW		4.5		5.6	
Nominal heating capacity ^{*3}		kW		5.0		6.3	
Power source				1 Phase 220/240V 50Hz			
Noise level		dB(A)		Hi: 43 Me: 40 Lo: 37	Hi: 44 Me: 41 Lo: 38	Hi: 43 Me: 40 Lo: 37	Hi: 44 Me: 41 Lo: 38
Exterior dimensions (Height × Width × Depth)		mm		Unit: 355×750×635 Panel: 10×1040×750	Unit: (355+α)×750×635 Panel: 10×864×585	Unit: 355×750×635 Panel: 10×1040×750	Unit: (355+α)×750×635 Panel: 10×864×585
Net weight		kg		Unit: 30 Panel: 7	Unit: 30 Panel: 5	Unit: 30 Panel: 7	Unit: 30 Panel: 5
Refrigerant equipment	Heat exchanger			Louver fins & inner grooved tubing			
	Refrigerant control			Electronic Expansion Valve			
Air handling equipment	Fan type & Q'ty			Centrifugal fan × 2			
	Motor & Q'ty		W	55 × 1			
	Starting method			Line starting			
	Air flow (Standard)		CMM	Hi: 14 Me: 12 Lo: 11			
	Available static pressure (at Hi)		Pa	Standard: 50, Hi speed: 85			
	Fresh air intake			Side or back			
	Air filter & Q'ty			Long life filter × 1 (Washable)			
Shock & vibration isolator			Rubber sleeve (for fan motor)				
Insulation (noise & heat)			Polyurethane foam				
Operation control Operation switch			Remote control switch (Optional: RC-E1)				
Room temperature control			Thermostat by electronics				
Safety equipment			Internal thermostat for fan motor, Frost protection thermostat				
Installation data	Refrigerant piping size		mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")			
	Connecting method			Flare piping			
	Drain hose			Connectable with VP25 (I.D. 25mm, O.D. 32mm)			
	Insulation for piping			Necessary (both Liquid & Gas lines)			
Accessories			Mounting kit, Drain hose				
Optional parts			Silent panel, Canvas panel, Canvas duct				

*1 ~ *3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDRA71KXE4A, 90KXE4A

Item		Models		FDRA71KXE4A		FDRA90KXE4A	
Nominal cooling capacity ^{*1}		kW	7.3		9.3		
Nominal cooling capacity ^{*2}		kW	7.1		9.0		
Nominal heating capacity ^{*3}		kW	8.0		10.0		
Power source			1 Phase 220/240V 50Hz				
Noise level		dB(A)	Hi: 43 Me: 40 Lo: 37	Hi: 44 Me: 41 Lo: 38	Hi: 43 Me: 40 Lo: 37	Hi: 44 Me: 41 Lo: 38	
Exterior dimensions (Height × Width × Depth)		mm	Unit: 355×950×635 Panel: 10×1240×750	Unit: (355+α)×950×635 Panel: 10×1064×585	Unit: 355×950×635 Panel: 10×1240×750	Unit: (355+α)×950×635 Panel: 10×1064×585	
Net weight		kg	Unit: 35 Panel: 8	Unit: 35 Panel: 6	Unit: 35 Panel: 8	Unit: 35 Panel: 6	
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing				
	Refrigerant control		Electronic Expansion Valve				
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 2				
	Motor & Q'ty	W	90 × 1		100 × 1		
	Starting method		Line starting				
	Air flow (Standard)	CMM	Hi: 18 Me: 16 Lo: 14		Hi: 20 Me: 18 Lo: 15		
	Available static pressure (at Hi)	Pa	Standard: 45, Hi speed: 80				
	Fresh air intake		Side or back				
	Air filter & Q'ty		Long life filter × 1 (Washable)				
Shock & vibration isolator			Rubber sleeve (for fan motor)				
Insulation (noise & heat)			Polyurethane foam				
Operation control Operation switch			Remote control switch (Optional: RC-E1)				
Room temperature control			Thermostat by electronics				
Safety equipment			Internal thermostat for fan motor, Frost protection thermostat				
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")				
	Connecting method		Flare piping				
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)				
	Insulation for piping		Necessary (both Liquid & Gas lines)				
Accessories			Mounting kit, Drain hose				
Optional parts			Silent panel, Canvas panel, Canvas duct				

Product Specifications

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDRA112KXE4A, 140KXE4A

Item		Models		FDRA112KXE4A		FDRA140KXE4A		
Nominal cooling capacity ^{*1}		kW	11.6		14.5			
Nominal cooling capacity ^{*2}		kW	11.2		14.0			
Nominal heating capacity ^{*3}		kW	12.5		16.0			
Power source			1 Phase 220/240V 50Hz					
Noise level		dB(A)	Hi: 45 Me: 42 Lo: 38	Hi: 46 Me: 43 Lo: 39	Hi: 46 Me: 43 Lo: 39	Hi: 47 Me: 44 Lo: 40		
Exterior dimensions (Height × Width × Depth)		mm	Unit: 406×1370×635 Panel: 10×1660×750	Unit: (406+α)×1370×635 Panel: 10×1484×585	Unit: 406×1370×635 Panel: 10×1660×750	Unit: (406+α)×1370×635 Panel: 10×1484×585		
Net weight		kg	Unit: 52 Panel: 9	Unit: 52 Panel: 7	Unit: 52 Panel: 9	Unit: 52 Panel: 7		
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing					
			Electronic Expansion Valve					
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 3					
	Motor & Q'ty		W	45 × 1, 90 × 1		50 × 1, 100 × 1		
	Starting method		Line starting					
	Air flow (Standard)		CMM	Hi: 28 Me: 25 Lo: 22		Hi: 34 Me: 31 Lo: 27		
	Available static pressure (at Hi)		Pa	Standard: 50, Hi speed: 80				
	Fresh air intake		Side or back					
	Air filter & Q'ty		Long life filter × 2 (Washable)					
Shock & vibration isolator		Rubber sleeve (for fan motor)						
Insulation (noise & heat)		Polyurethane foam						
Operation control Operation switch		Remote control switch (Optional: RC-E1)						
Room temperature control		Thermostat by electronics						
Safety equipment		Internal thermostat for fan motor, Frost protection thermostat						
Installation data	Refrigerant piping size		mm (in)	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")				
	Connecting method		Flare piping					
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)					
	Insulation for piping		Necessary (both Liquid & Gas lines)					
Accessories		Mounting kit, Drain hose						
Optional parts		Silent panel, Canvas panel, Canvas duct						

*1 ~ 3The data are measured at the following conditions.

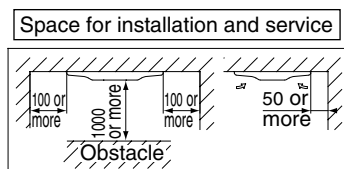
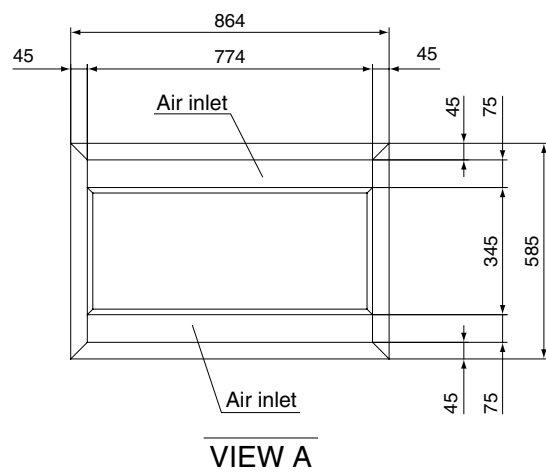
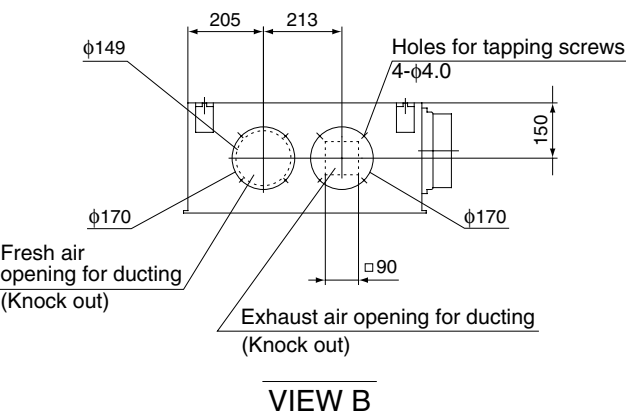
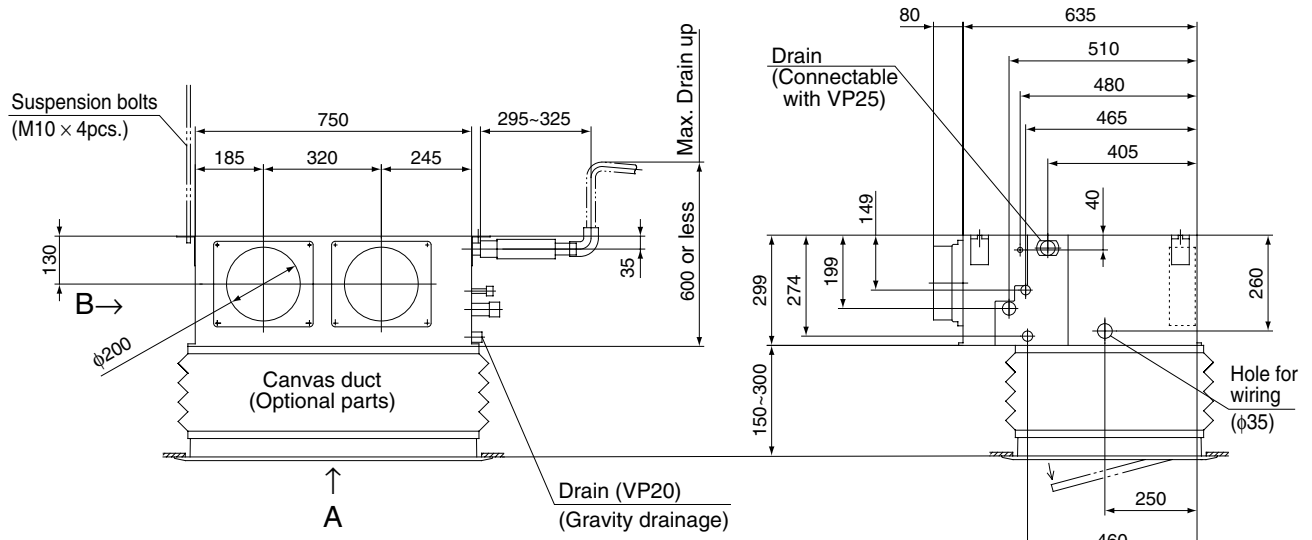
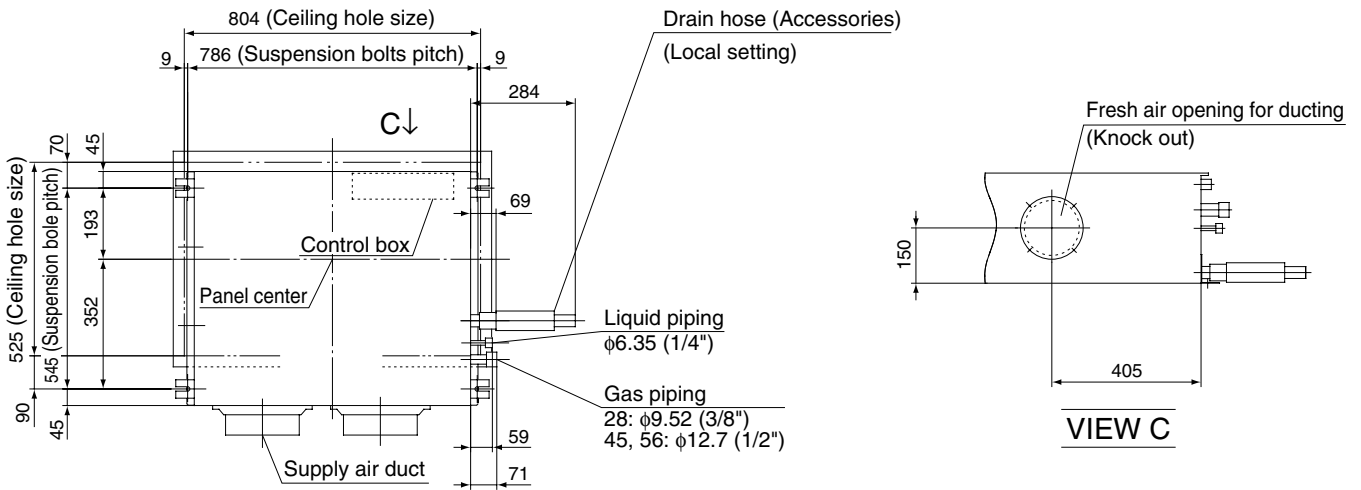
Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

3.6.2 Exterior dimensions

FDRA45KXE4A, 56KXE4A

Unit : mm

Canvas Panel (Model: R-PNLC-26W-E)

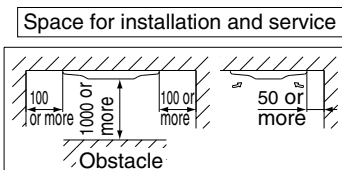
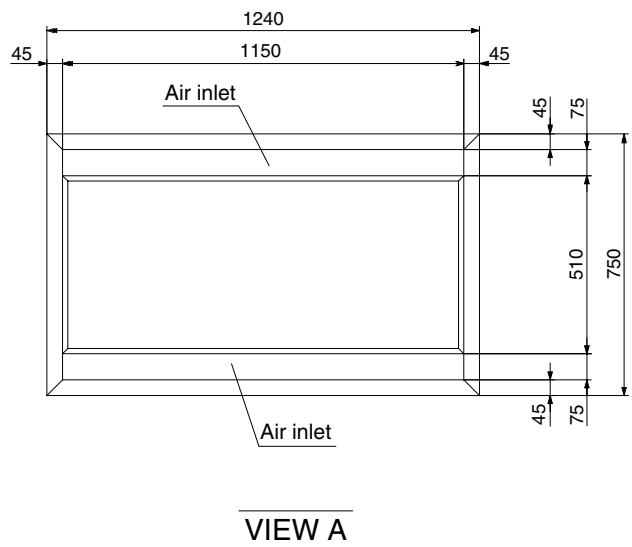
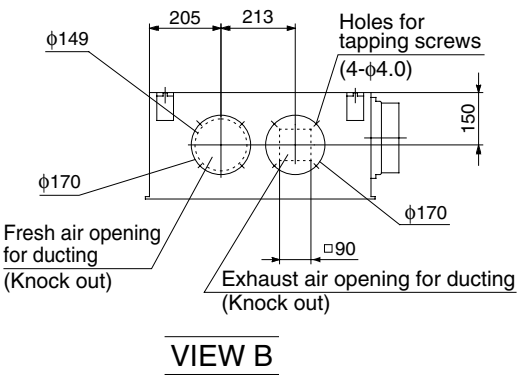
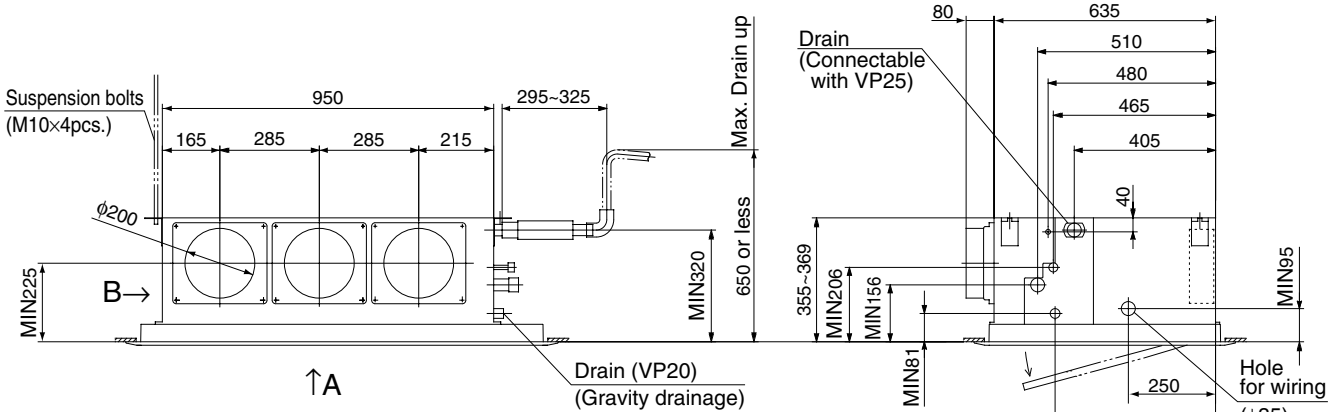
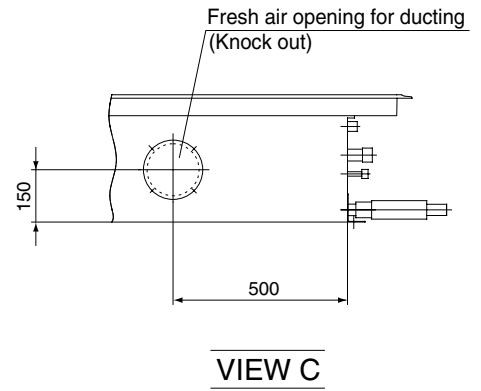
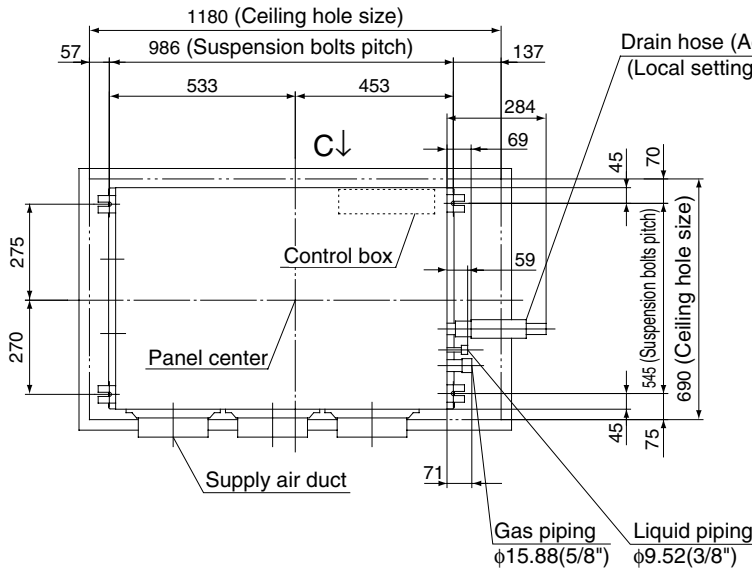


Product Specifications

FDRA71KXE4A, 90KXE4A

Unit : mm

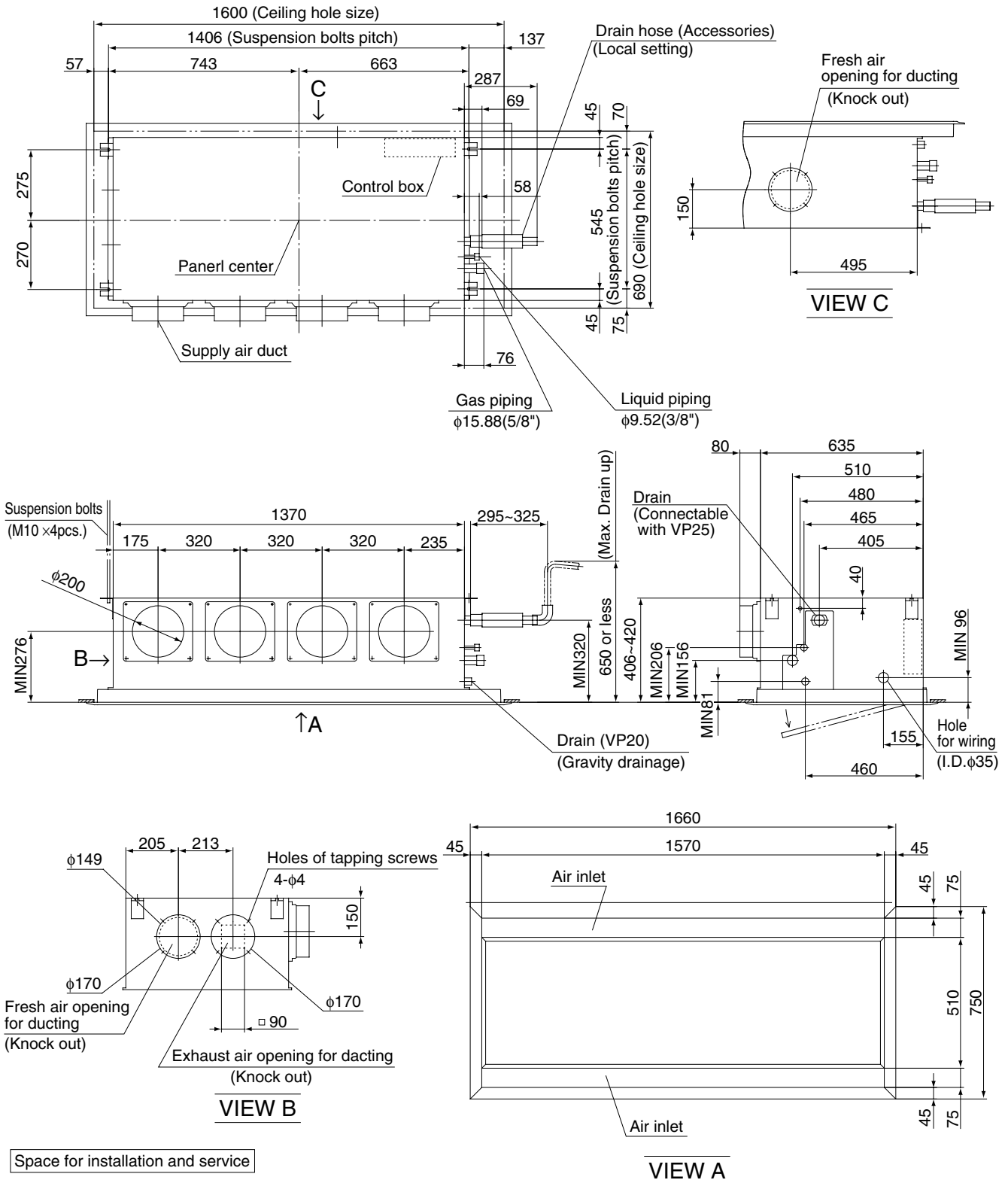
Silent Panel (Model: R-PNLS-36W-E)



FDRA112KXE4A, 140KXE4A

Unit : mm

Silent Panel (Model: R-PNLS-46W-E)

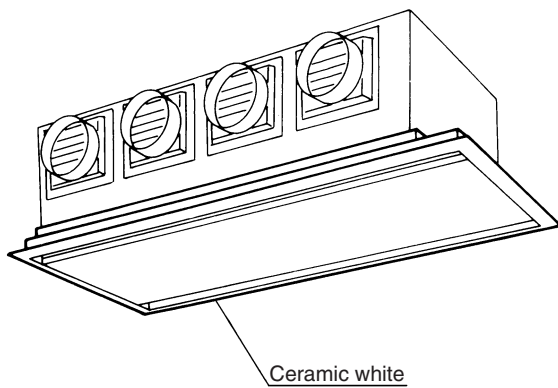


Product Specifications

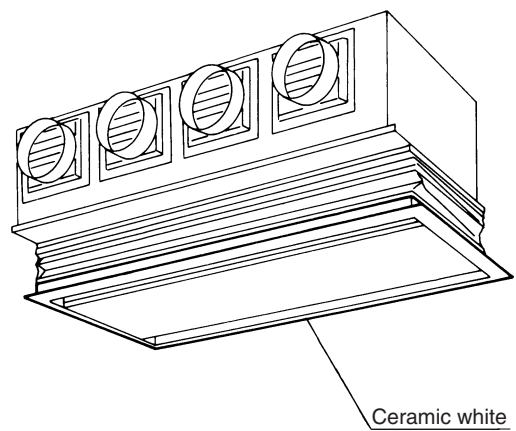
3.6.3 Exterior appearance

All models

Silent panel type

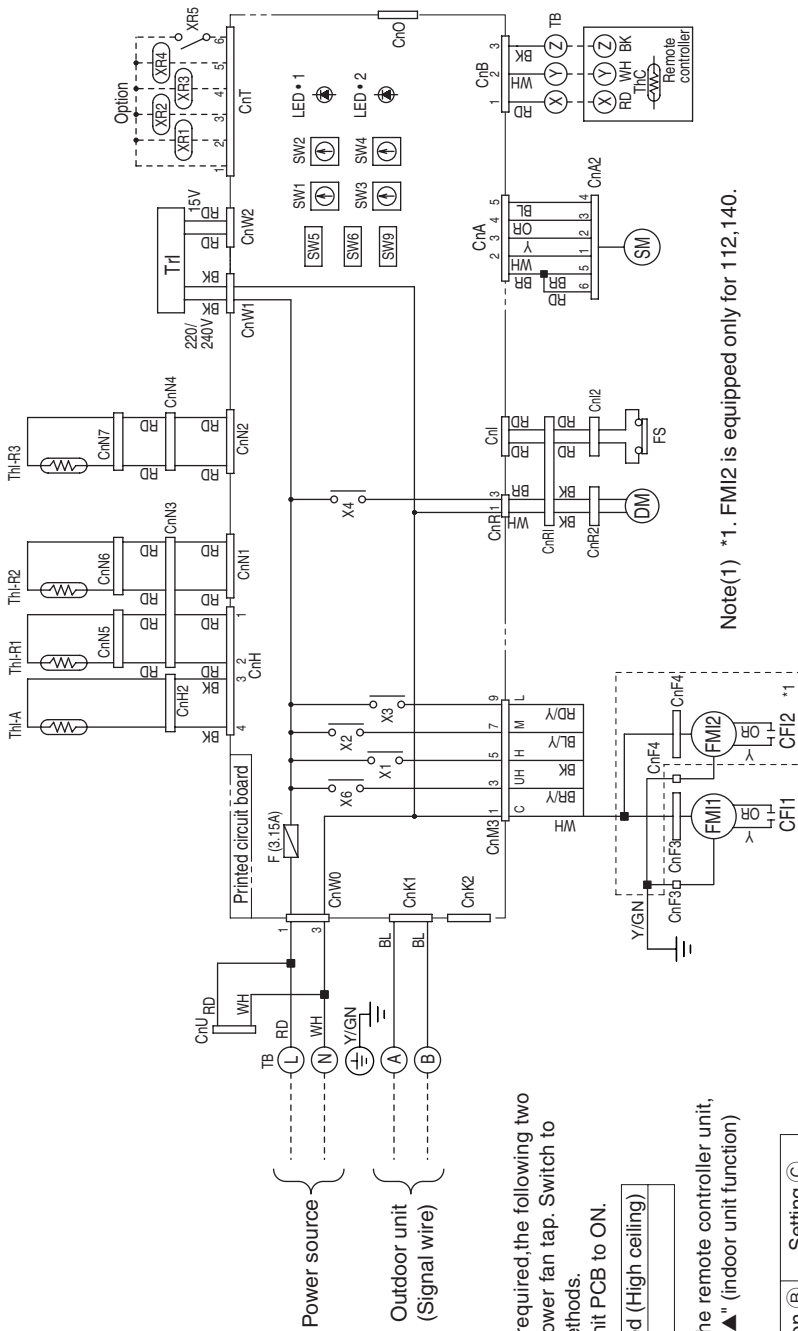


Canvas-duct panel type



3.6.4 Electrical wiring

All models



Note(1) *1. FMI2 is equipped only for 112,140.

Blower fan tap switch

When increasing of static pressure is required, the following two methods can be taken to switch the blower fan tap. Switch to the high-speed tap with one of these methods.

- ① Set SW9-4 provided on the indoor unit PCB to ON.
- | | | |
|-------|-----|--|
| SW9-4 | ON | Fan control, high speed (High ceiling) |
| | OFF | Fan control, standard |

- ② By means of function setting from the remote controller unit, set the setting ③ of "I/U FUNCTION▲" (indoor unit function) to "Hi CEILING 1" (high-speed tap).

Function number ①	Function description ②	Setting ③
01	Hi CEILING SET	Hi CEILING 1

Meaning of marks

Mark	Parts name	Mark	Parts name
FMI1,2	Fan motor	XR2	Heating output (DC12V output)
CFI1,2	Capacitor for FMI	XR3	Thermo ON output (DC12V output)
DM	Drain motor	XR4	Inspection output (DC12V output)
FS	Float switch	XR5	Remote operation input (volt-free contact)
SM	Stepping motor (For Exp.v)	X1,2,3,6	Auxiliary relay (For FM)
Th1-A	Thermistor	X4	Auxiliary relay (For DM)
Th1-R1	Thermistor	TB	Terminal block (O maek)
Th1-R2	Thermistor	CnA-Z	Connector
Th1-R3	Thermistor	■mark	Closed-end connector
ThC	Thermistor		Operation output (DC12V output)

Color marks

Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	RD/Y	Red/Yellow
BL/Y	Blue/Yellow	WH	White
BR	Brown	Y	Yellow
BR/Y	Brown/Yellow	Y/GN	Yellow/Green
OR	Orange		

Function of switches

Mark	Function
SW5-1	ON Test run of condensate pump motor
	OFF Normal
SW5-3	ON Input signal
	OFF Reverse Invalid
	ON Run stop
	OFF Emergency stop signal:Invalid
	ON Emergency stop signal:valid



3.6.5 Characteristics of fan

■ External static pressure table

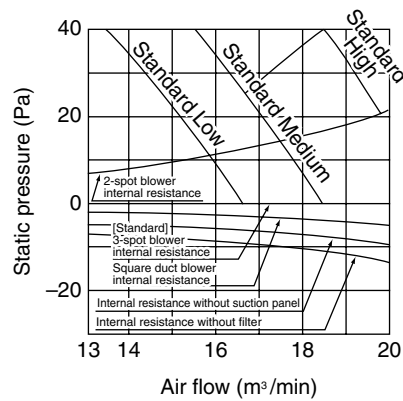
Unit : Pa

Model	Air flow (m ³ /min)	Duct specs.	1 spot (1) closing		Standard (2)		Square duct (3)	
			Standard	High(4) speed	Standard	High(4) speed	Standard	High(4) speed
FDRA22	10		-	-	45	85	50	90
FDRA28	12		-	-	45	85	45	85
FDRA45 56	14		-	-	50	85	50	90
FDRA71	18		30	65	45	80	50	85
FDRA90	20		25	60	45	80	50	85
FDRA112	28		40	70	50	80	55	85
FDRA140	34		40	70	50	80	55	85

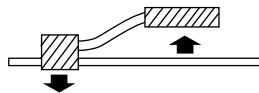
- Notes (1) 1 spot closing: Round duct flange at center is removed and shield with a special panel (option).
 (2) Standard: φ200 duct are installed at all blowout holes.
 (3) Square duct: All round ducts are removed and replaced with special square duct flanges (option).
 (4) When using the high speed setting, turn the dip switch SW9-4 on the indoor unit PCB to the ON position.
 (When setting from the remote controller, select "HiCEILING 1".)

■ How to interpret the blower characteristics table

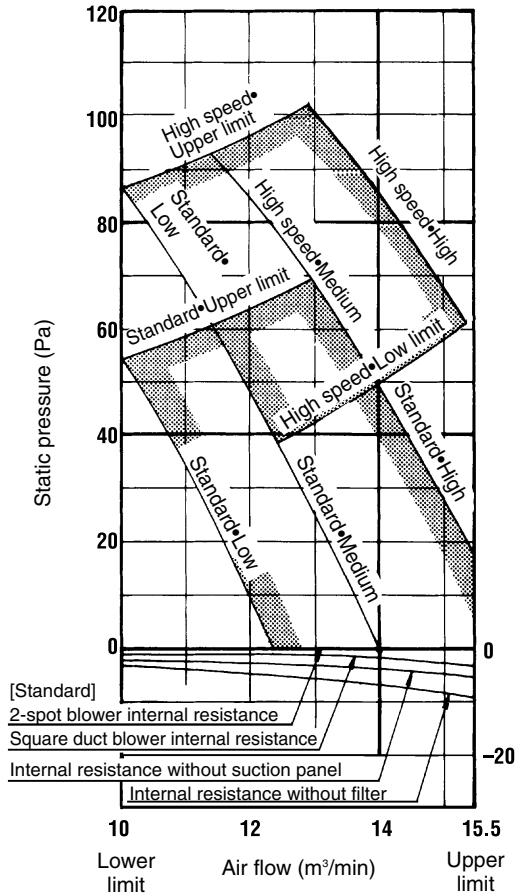
Example: Case of FDRA71KXE4A



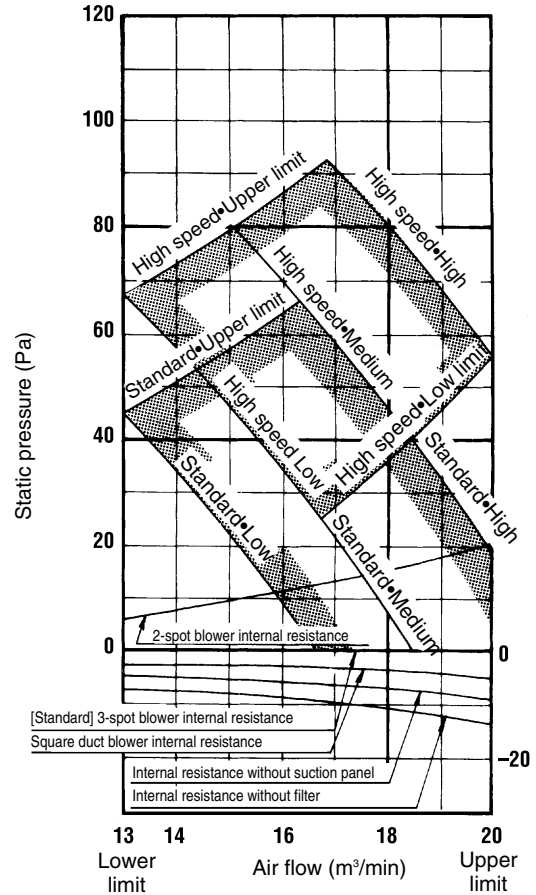
- (1) 2-spot blowout
Internal resistance increases more than the standard 3-spot blowout.
Approx. 14 Pa at 17m³/min
- (2) Square duct blowout
Internal resistance decreases more than the standard round duct (φ 200 3-spot). 3 Pa at 17m³/min.
(External static pressure increases in reverse.)
- (3) Suction panel
When the suction panel is not used with the ceiling return type, the part of internal resistance related to the panel decrease. 3 Pa (= 0.6–0.3) at 17mm³/min.



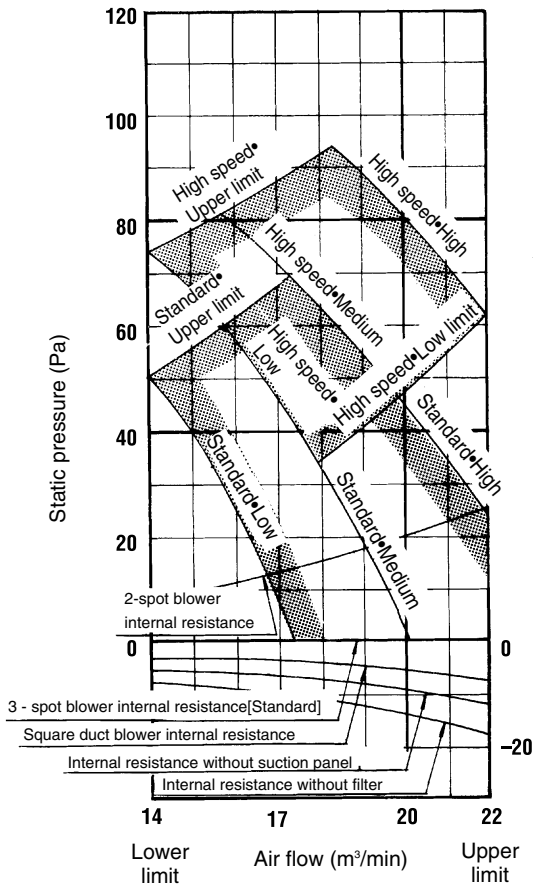
Models FDRA45KXE4A, 56KXE4A



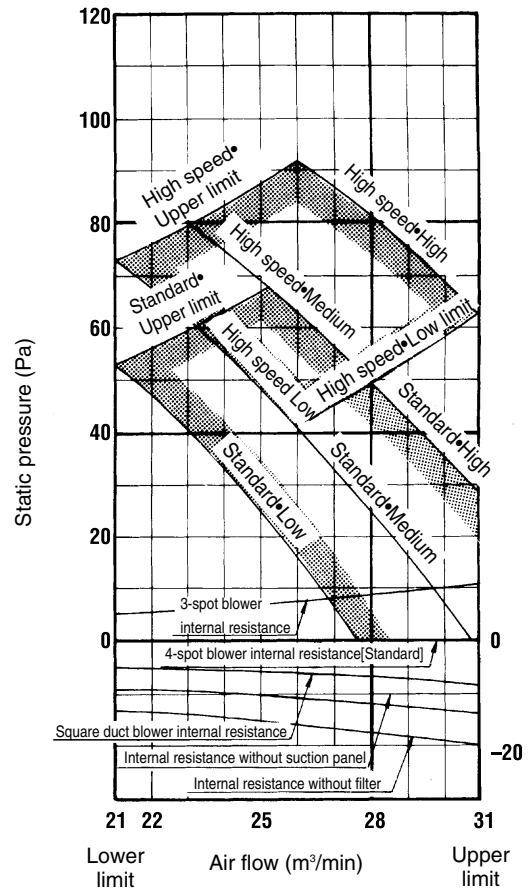
Model FDRA71KXE4A



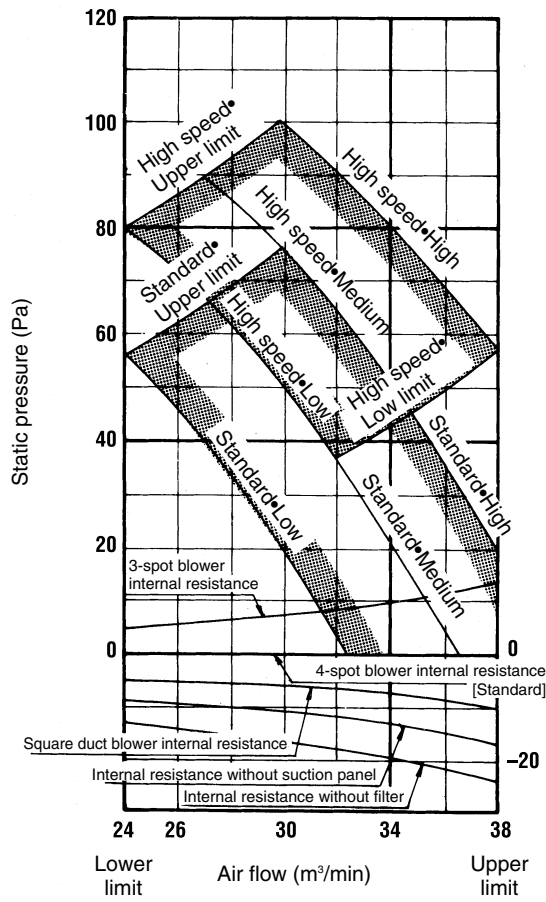
Model FDRA90KXE4A



Model FDRA112KXE4A



Model FDRA140KXE4A



3.6.6 Noise level

Note (1) The data are based on the following conditions.

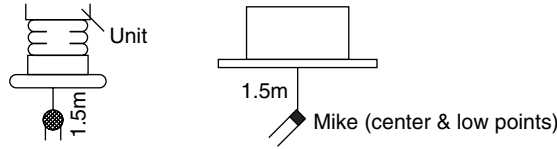
Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB

(2) The data in the chart are measured in an anechoic room.

(3) The noise levels measured in the field are usually higher than the data because of reflection.

Measured based on JIS B 8616

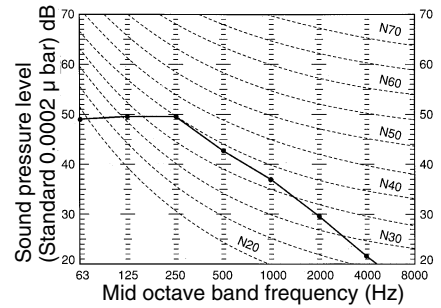
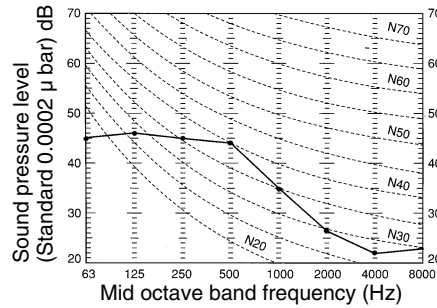
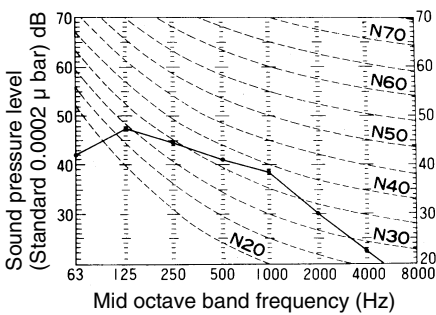
Mike position as below



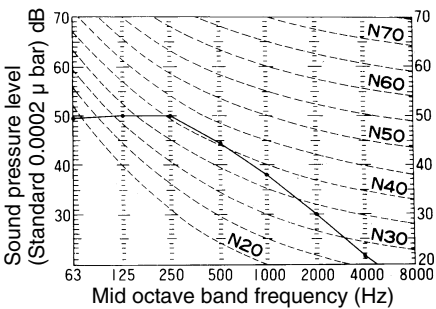
Models FDRA45KXE4A, 56KXE4A
 Noise level 43 dB (A) at HIGH
 40 dB (A) at MEDIUM
 37 dB (A) at LOW

Models FDRA71KXE4A, 90KXE4A
 Noise level 43 dB (A) at HIGH
 40 dB (A) at MEDIUM
 37 dB (A) at LOW

Model FDRA112KXE4A
 Noise level 45 dB (A) at HIGH
 42 dB (A) at MEDIUM
 38 dB (A) at LOW



Model FDRA140KXE4A
 Noise level 46 dB (A) at HIGH
 43 dB (A) at MEDIUM
 39 dB (A) at LOW



3.7 Medium Static Pressure Ducted Type (FDQMA)

3.7.1 Specifications

FDQMA22KXE4A, 28KXE4A, 36KXE4A

Item		Models		
		FDQMA22KXE4A	FDQMA28KXE4A	FDQMA36KXE4A
Nominal cooling capacity ^{*1}	kW	2.3	2.9	3.7
Nominal cooling capacity ^{*2}	kW	2.2	2.8	3.6
Nominal heating capacity ^{*3}	kW	2.5	3.2	4.0
Power source		1 Phase 220 / 240V 50Hz		
Noise level	dB(A)	Hi: 34 Lo: 31		
Exterior dimensions (Height × Width × Depth)	mm	257 × 570 × 570		
Net weight	kg	21		
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing	Slit fins & inner grooved tubing	
	Refrigerant control	Electronic Expansion Valve		
Air handling equipment	Fan type & Q'ty	Centrifugal fan × 1		
	Motor & Q'ty	W	20 × 1	
	Starting method	Line starting		
	Air flow (Standard)	CMM	Hi: 7 Lo: 6.5	
	Available static pressure (at Hi)	Pa	30	
	Fresh air intake	Side		
	Air filter & Q'ty	—		
Shock & vibration isolator	Rubber sleeve(for fan motor)			
Insulation (noise & heat)	Polyurethane foam			
Operation control Operation switch	Remote control switch (Optional:RC-E1)			
Room temperature control	Thermostat by electronics			
Safety equipment	Internal thermostat for fan motor, Frost protection thermostat			
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35(1/4") Gas line: φ 9.52(3/8")	Liquid line: φ 6.35(1/4") Gas line: φ 12.7(1/2")
	Connecting method	Flare piping		
	Drain hose	Connectable with VP25 (I.D. 25mm, O.D. 32mm)		
	Insulation for piping	Necessary (both Liquid & Gas lines)		
Accessories	Mounting kit Drain hose			
Optional parts	—			

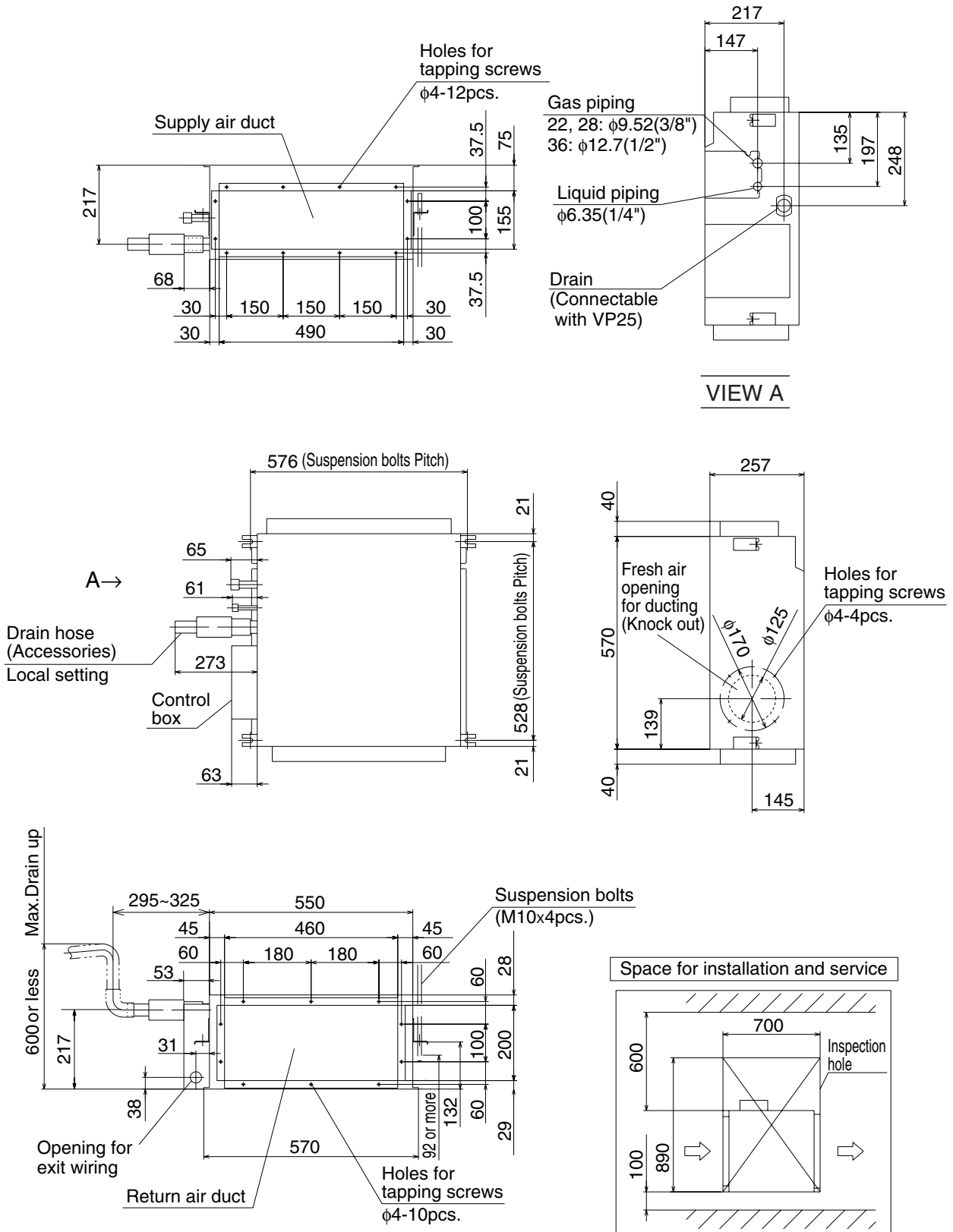
*1 ~ 3The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling ^{*1}	27°C	19.5°C	35°C	24°C	ISO-T1 JIS B8616
Cooling ^{*2}	27°C	19°C	35°C	24°C	
Heating ^{*3}	20°C	—	7°C	6°C	

3.7.2 Exterior dimensions

FDQMA22KXE4A, 28KXE4A, 36KXE4A

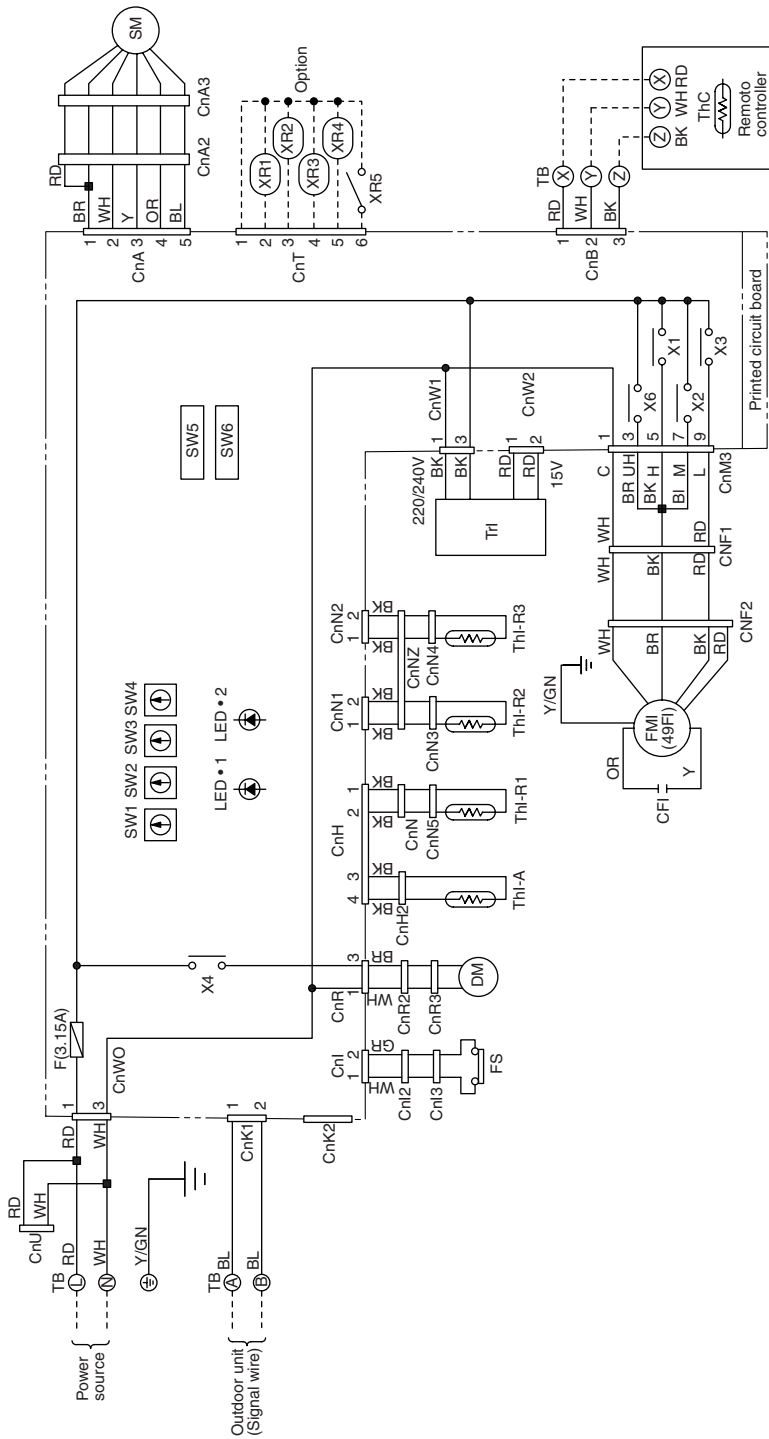
Unit : mm



Product Specifications

3.7.3 Electrical wiring

All models



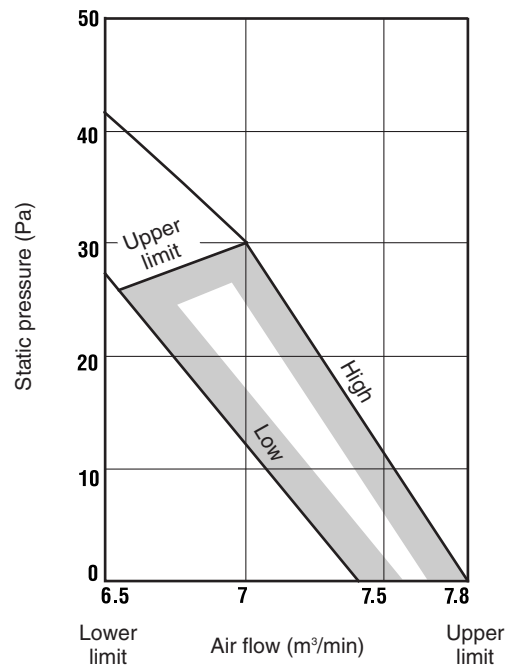
Color marks	Mark	Color	Mark	Color
	BK	Black	RD	Red
	BL	Blue	WH	White
	BR	Brown	Y	Yellow
	GR	Gray	Y/GN	Yellow/Green
	OR	Orange		

Function of switches	Mark	Function
SW5-1	ON	Test run of condensate pump motor
	OFF	Normal
SW5-3	ON	Input signal
	OFF	Reverse Invalid
	ON	Run stop
SW5-4	ON	Emergency stop signal : Valid
	OFF	Emergency stop signal : Invalid

Meaning of marks	Mark	Parts name	Mark	Parts name
FMI	ThC	Thermistor	XR1	Operation output (DC12V output)
49FI	SW1	Indoor unit address ten's place	XR2	Heating output (DC12V output)
CFI	SW2	Outdoor unit address ten's place	XR3	Thermo ON output (DC12V output)
DM	SW3	Outdoor unit address ten's place	XR4	Inspection output (DC12V output)
FS	SW4	Outdoor unit address unit's place	XR5	Remote operation input (volt-free contact)
SM	SW6	Model capacity setting	X1,2,3,6	Auxiliary relay (For FM)
Th1-A	Tr1	Transformer	X4	Auxiliary relay (For DM)
Th1-R1	F	Fuse	TB	Terminal block (O mark)
Th1-R2	LED1	Indication lamp (Red)	CnA ~ Z	Connector
Th1-R3	LED2	Indication lamp (Green)	■mark	Closed-end connector

3.7.4 Characteristics of fan

FDQMA22KXE4A, 28KXE4A, 36KXE4A

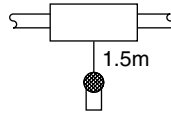


Product Specifications

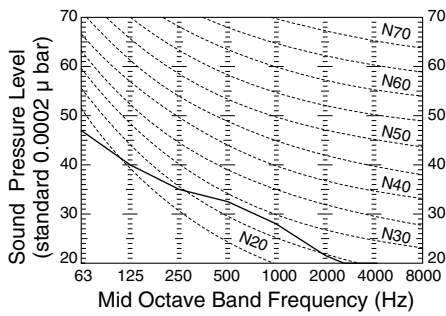
3.7.5 Noise level

- Note (1) The data are based on the following conditions.
 Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB
- (2) The data in the chart are measured in an anechoic room.
- (3) The noise levels measured in the field are usually higher than the data because of reflection.

Measured based on JIS B 8616
 Mike position as below



Models FDQMA22KXE4A, 28KXE4A,
 36KXE4A
 Noise level 34 dB (A) at HIGH
 31 dB (A) at LOW



3.8 Satellite Ducted Type (FDUMA)

3.8.1 Specifications

FDUMA45KXE4A, 56KXE4A

Item		Models	
		FDUMA45KXE4A	FDUMA56KXE4A
Nominal cooling capacity ^{*1}	kW	4.7	5.8
Nominal cooling capacity ^{*2}	kW	4.5	5.6
Nominal heating capacity ^{*3}	kW	5.0	6.3
Power source		1 Phase 220 / 240V 50Hz	
Noise level	dB(A)	Hi: 35 Me: 32 Lo: 29	
Exterior dimensions (Height × Width × Depth)	mm	299 × 750 × 635	
Net weight	kg	34	
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing	
	Refrigerant control	Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty	Centrifugal fan × 2	
	Motor & Q'ty	W	55 × 1
	Starting method	Line starting	
	Air flow (Standard)	CMM	Hi: 14 Me: 12 Lo: 11
	Available static pressure (at Hi)	Pa	Standard: 50, Hi speed: 85
	Fresh air intake	Side	
	Air filter & Q'ty	—	
Shock & vibration isolator	Rubber sleeve(for fan motor)		
Insulation (noise & heat)	Polyurethane foam		
Operation control Operation switch	Remote control switch (Optional:RC-E1)		
Room temperature control	Thermostat by electronics		
Safety equipment	Internal thermostat for fan motor, Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35(1/4"), Gas line: φ 12.7(1/2")
	Connecting method	Flare piping	
	Drain hose	Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping	Necessary (both Liquid & Gas lines)	
Accessories	Mounting kit Drain hose		
Optional parts	—		

*1 ~ *3The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling ^{*1}	27°C	19.5°C	35°C	24°C	ISO-T1 JIS B8616
Cooling ^{*2}	27°C	19°C	35°C	24°C	
Heating ^{*3}	20°C	—	7°C	6°C	

FDUMA71KXE4A, 90KXE4A

Item		Models	FDUMA71KXE4A	FDUMA90KXE4A
Nominal cooling capacity ^{*1}	kW		7.3	9.3
Nominal cooling capacity ^{*2}	kW		7.1	9.0
Nominal heating capacity ^{*3}	kW		8.0	10.0
Power source			1 Phase 220 / 240V 50Hz	
Noise level	dB(A)		Hi: 35 Me: 32 Lo: 29	Hi: 36 Me: 33 Lo: 30
Exterior dimensions (Height × Width × Depth)	mm		299 × 950 × 635	
Net weight	kg		40	
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing	
	Refrigerant control		Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 2	
	Motor & Q'ty	W	90 × 1	100 × 1
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 18 Me: 16 Lo: 14	Hi: 20 Me: 18 Lo: 15
	Available static pressure (at Hi)	Pa	Standard: 50, Hi speed: 85	
	Fresh air intake		Side	
	Air filter & Q'ty		—	
Shock & vibration isolator			Rubber sleeve(for fan motor)	
Insulation (noise & heat)			Polyurethane foam	
Operation control Operation switch			Remote control switch (Optional:RC-E1)	
Room temperature control			Thermostat by electronics	
Safety equipment			Internal thermostat for fan motor, Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 9.52(3/8"), Gas line: φ 15.88(5/8")	
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit Drain hose	
Optional parts			—	

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1 JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDUMA112KXE4A, 140KXE4A

Item		Models	FDUMA112KXE4A	FDUMA140KXE4A
Nominal cooling capacity ^{*1}	kW		11.6	14.5
Nominal cooling capacity ^{*2}	kW		11.2	14.0
Nominal heating capacity ^{*3}	kW		12.5	16.0
Power source			1 Phase 220 / 240V 50Hz	
Noise level	dB(A)		Hi: 38 Me: 35 Lo: 32	Hi: 39 Me: 37 Lo: 34
Exterior dimensions (Height × Width × Depth)	mm		350 × 1370 × 635	
Net weight	kg		59	59
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing	
	Refrigerant control		Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 3	
	Motor & Q'ty	W	45 × 1, 90 × 1	50 × 1, 100 × 1
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 28 Me: 25 Lo: 22	Hi: 34 Me: 31 Lo: 27
	Available static pressure (at Hi)	Pa	Standard: 60, Hi speed: 90	Standard: 60, Hi speed: 85
	Fresh air intake		Side	
	Air filter & Q'ty		—	
Shock & vibration isolator			Rubber sleeve(for fan motor)	
Insulation (noise & heat)			Polyurethane foam	
Operation control Operation switch			Remote control switch (Optional:RC-E1)	
Room temperature control			Thermostat by electronics	
Safety equipment			Internal thermostat for fan motor, Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 9.52(3/8"), Gas line: φ 15.88(5/8")	
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25	
	Insulation for piping		Necessary (both Liquid & Gas lines) (I.D. 25mm, O.D. 32mm)	
Accessories			Mounting kit Drain hose	
Optional parts			—	

Product Specifications

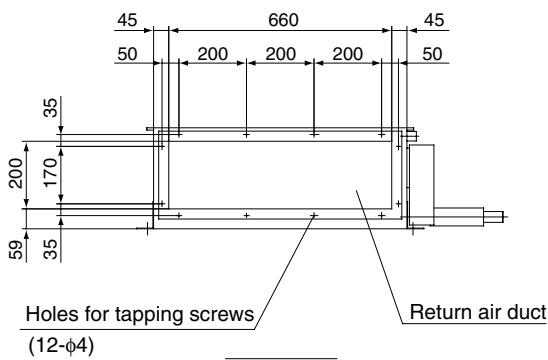
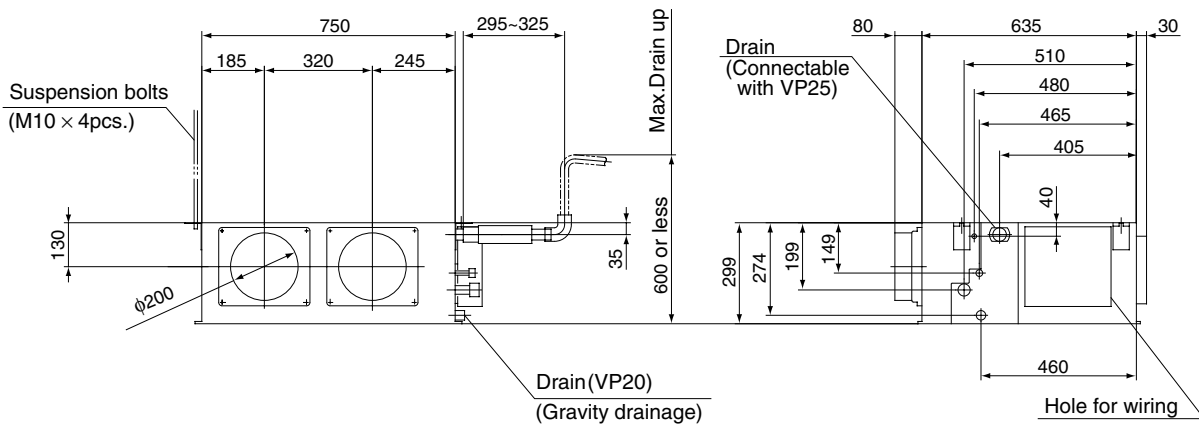
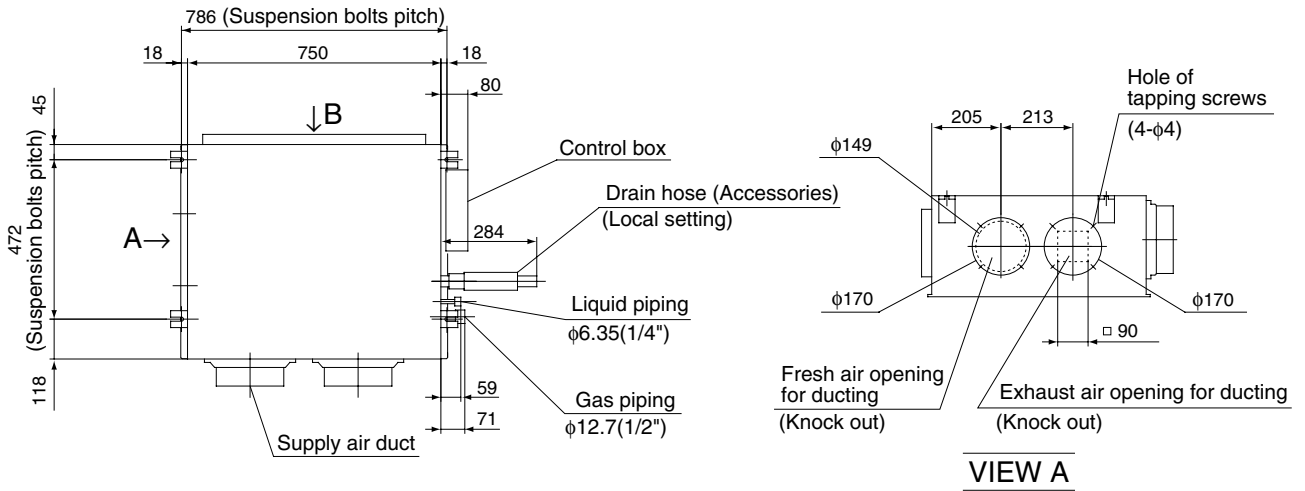
*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1 JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

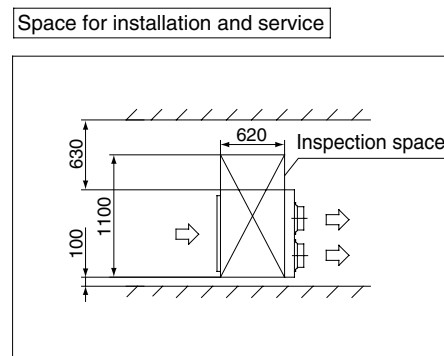
3.8.2 Exterior dimensions

FDUMA45KXE4A, 56KXE4A

Unit : mm

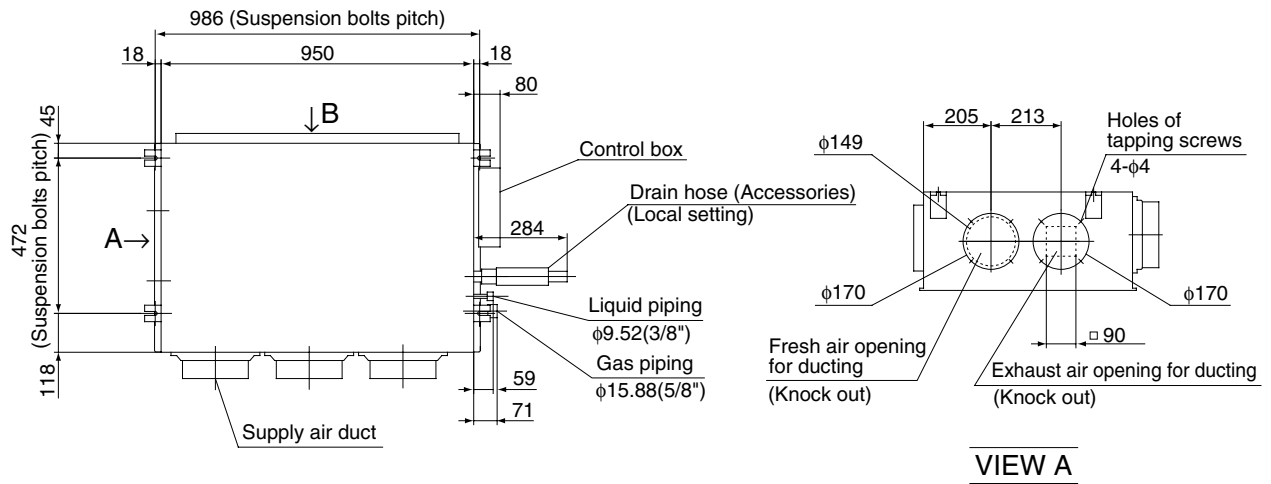


VIEW B

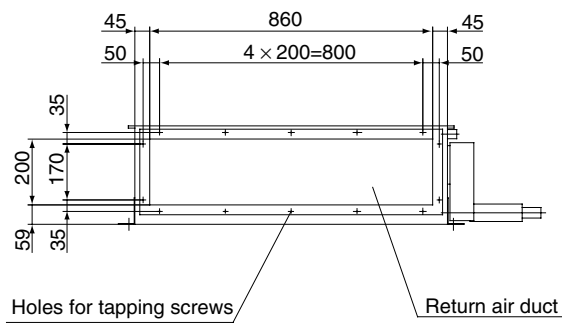
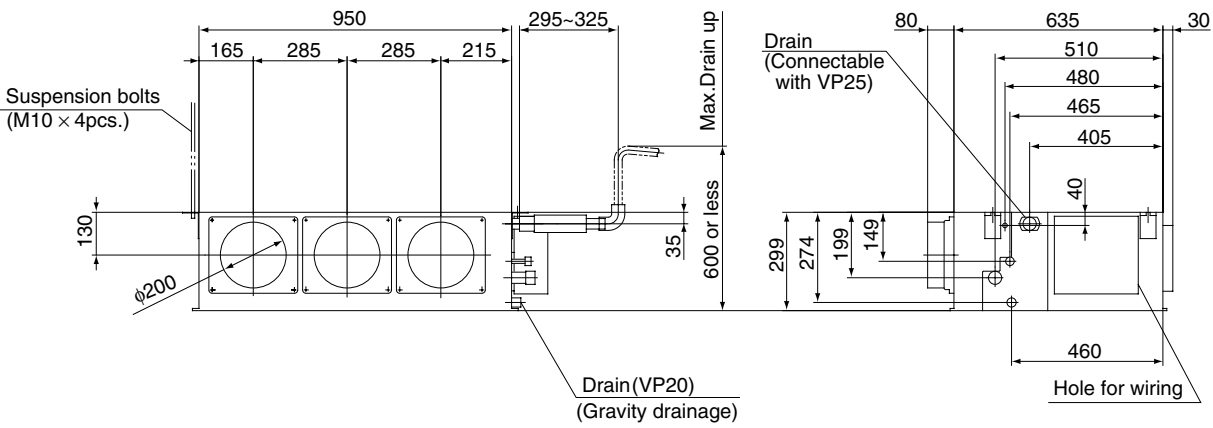


FDUMA71KXE4A, 90KXE4A

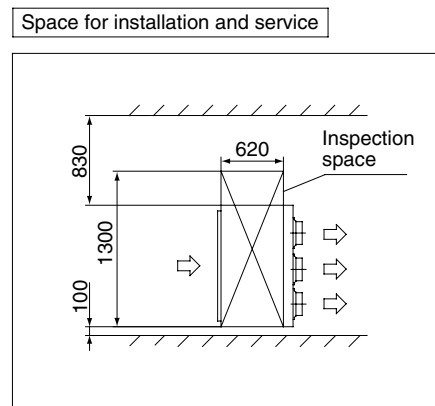
Unit : mm



VIEW A



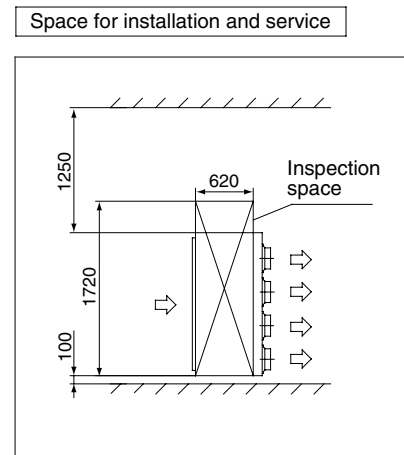
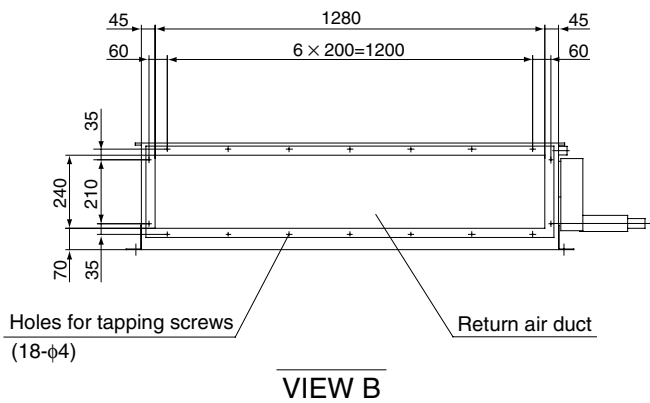
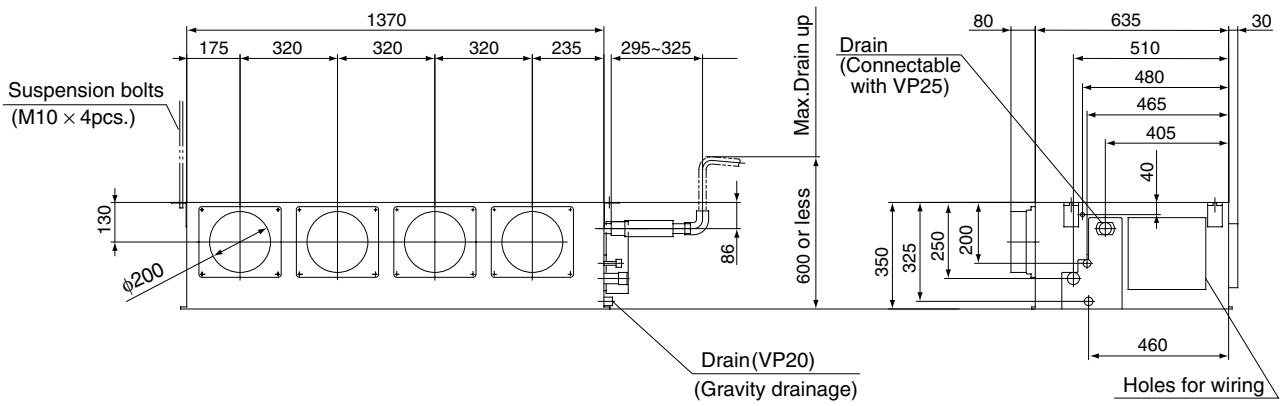
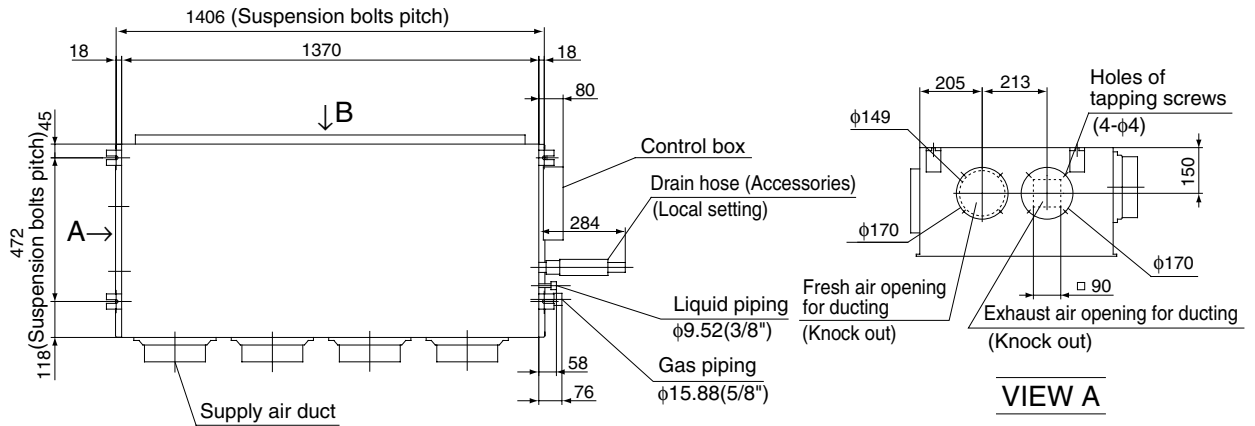
VIEW B



Product Specifications

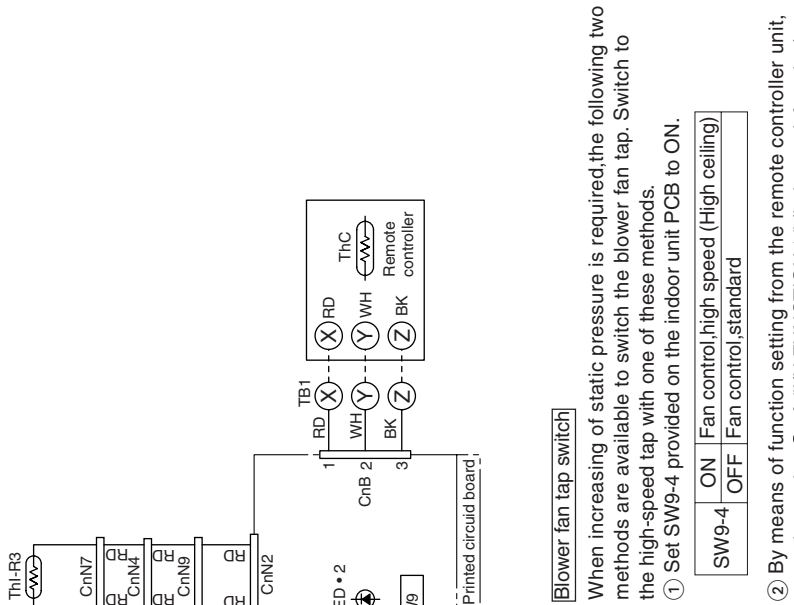
FDUMA112KXE4A, 140KXE4A

Unit : mm



3.8.3 Electrical wiring

All models



Blower fan tap switch

When increasing of static pressure is required, the following two methods are available to switch the blower fan tap. Switch to the high-speed tap with one of these methods.

- ① Set SW9-4 provided on the indoor unit PCB to ON.

SW9-4	ON	Fan control, high speed (High ceiling)
	OFF	Fan control, standard

- ② By means of function setting from the remote controller unit, set the setting ① of "/U FUNCTION▲" (indoor unit function) to "Hi CEILING 1" (high-speed tap).

Function number ①	Function description ②	Setting ③
01	Hi CEILING SET	Hi CEILING 1

Note (1) A one-motor type installation does not have the circuits shown in an area *1 delineated by a dotted line.

Color marks	Color	Mark	Color
BK	Black	OR	Orange
BL	Blue	RD	Red
BL/Y	Blue/yellow	RD/Y	Red/Yellow
BR	Brown	WH	White
BR/Y	Brown/yellow	Y	Yellow
GR	Gray	Y/GN	Yellow/Green

Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
FMI1,2	Fan motor	XR2	Heating output (DC12V output)		
CF1,2	Capacitor for FMI	XR3	Thermo ON output (DC12V output)		
DM	Drain motor	XR4	Inspection output (DC12V output)		
FS	Float switch	XR5	Remote operation input (volt-free contact)		
SM	Stepping motor (For Exp.v)	X1,2,3,6	Auxiliary relay (For FM)		
Thi-A	Thermistor	X4	Auxiliary relay (For DM)		
Thi-R1	Thermistor	TB	Terminal block (O mark)		
Thi-R2	Thermistor	CnA-Z	Connector		
Thi-R3	Thermistor	■ mark	Closed-end connector		
ThC	Thermistor		Operation output (DC12V output)		

Function of switches

Mark	Function
SW5-1	Test run of condensate pump motor
SW5-2	Normal
SW5-3	Input signal
SW5-4	Reverse Invalid
SW5-5	Run stop
SW5-6	Emergency stop signal: valid
SW5-7	Emergency stop signal: invalid

3.8.4 Characteristics of fan

Satellite ducted type(FDUMA)

● External static pressure table

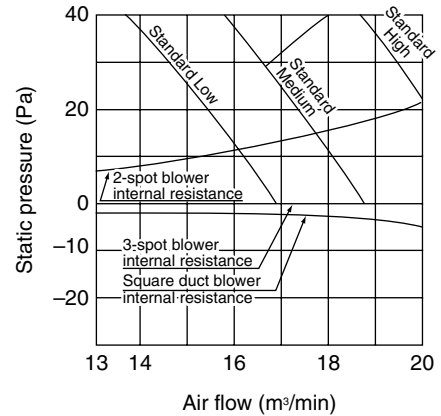
Unit : Pa

Model	Duct specs. Air flow (m ³ /min)	1 spot ⁽¹⁾ closing		Standard ⁽²⁾		Square duct ⁽³⁾	
		Stan- dard	High ⁽⁴⁾ speed	Stan- dard	High ⁽⁴⁾ speed	Stan- dard	High ⁽⁴⁾ speed
FDQMA22 28 36	7	-	-	30	-	-	-
FDUMA36	12	-	-	50	85	50	90
FDUMA45 56	14	-	-	50	85	50	90
FDUMA71	18	35	70	50	85	55	90
FDUMA90	20	30	65	50	85	55	90
FDUMA112	28	50	80	60	90	65	95
FDUMA140	34	50	75	60	85	65	95

- Note (1) 1 spot closing: Round duct flange at center is removed and shield with a special panel (option).
 (2) Standard: φ200 duct are installed at blowout holes.
 (3) Square duct: All round ducts are removed and replaced with special square duct flanges (option).
 (4) When using the high speed setting, turn the dip switch SW9-4 on the indoor PCB to the ON position.
 (When setting from the remote controller, select "HiCEILING 1".)

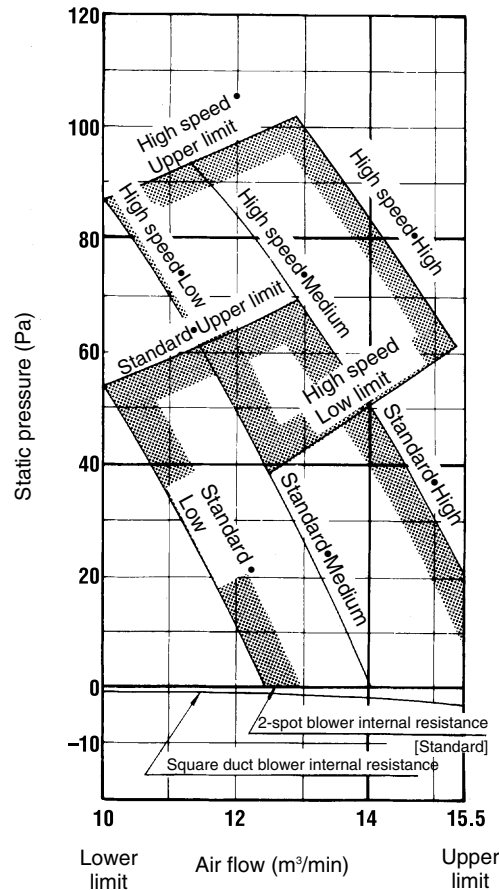
■ How to interpret the blower characteristics table

Example : Case of FDUMA71KXE4A

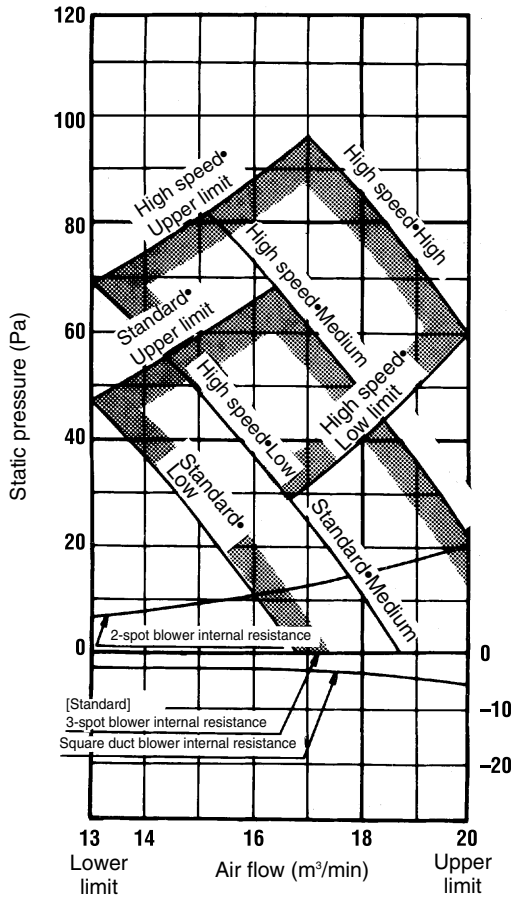


- ① 2-spot blowout.....
Internal resistance increases more than the standard 3-spot blowout. Approx. 14Pa at 17m³ / min.
- ② Square duct blowout.....
Internal resistance decreases more than the standard round duct (φ 200 3-spot). 3Pa at 17 m³ / min. (External static pressure increases in reverse.)

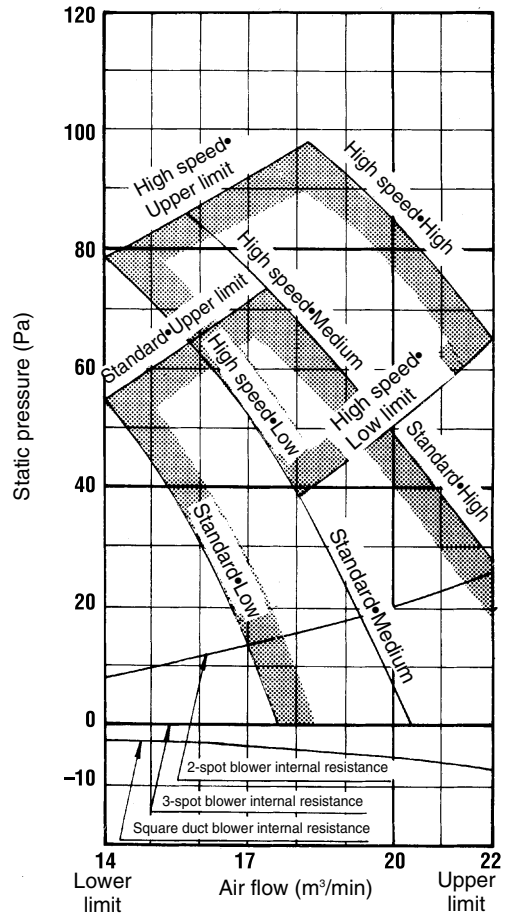
FDUMA45KXE4A, 56KXE4A



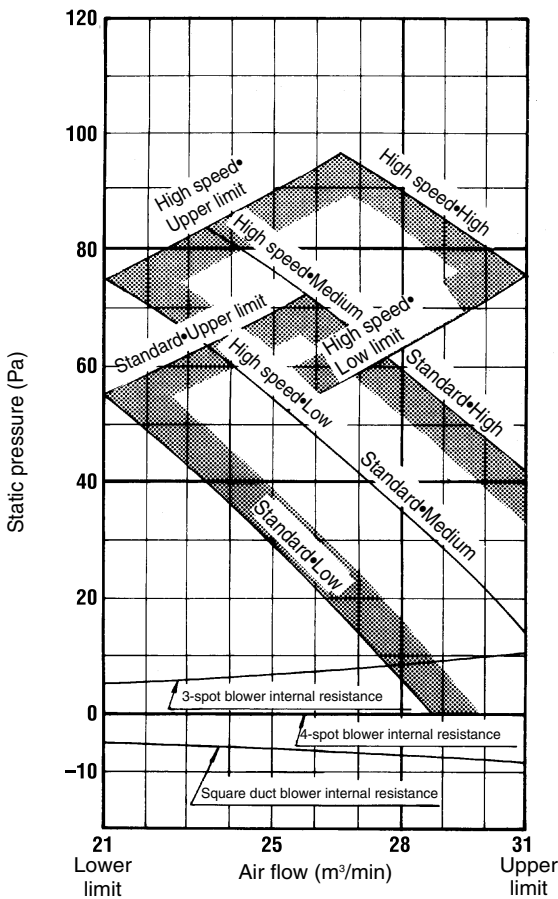
FDUMA71KXE4A



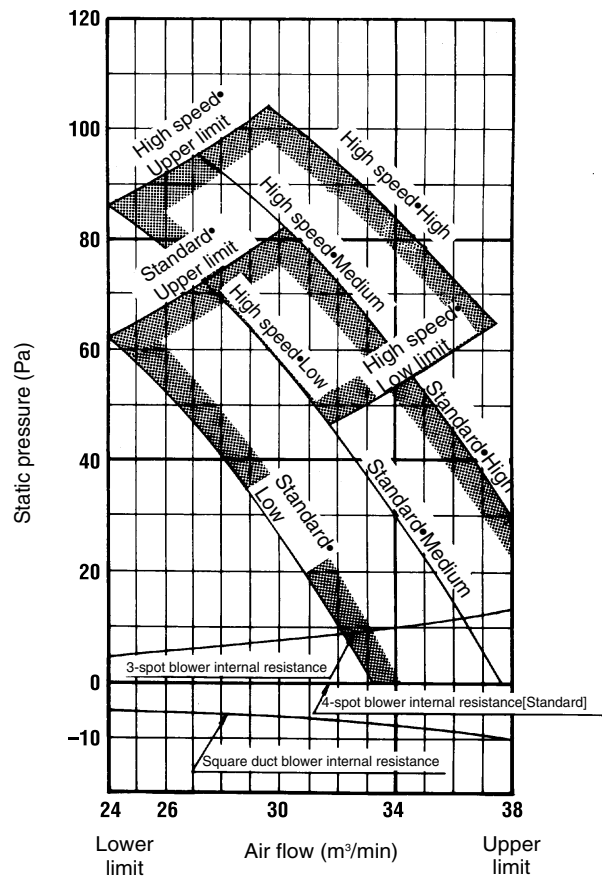
FDUMA90KXE4A



FDUMA112KXE4A



FDUMA140KXE4A

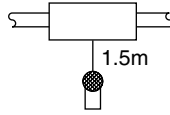


Product Specifications

3.8.5 Noise level

- Note (1) The data are based on the following conditions.
 Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB
- (2) The data in the chart are measured in an anechoic room.
- (3) The noise levels measured in the field are usually higher than the data because of reflection.

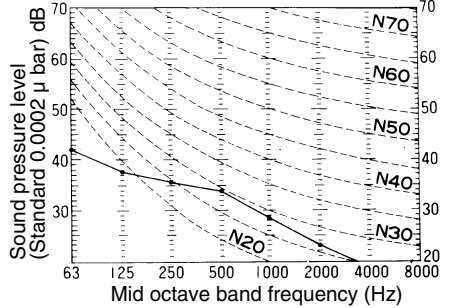
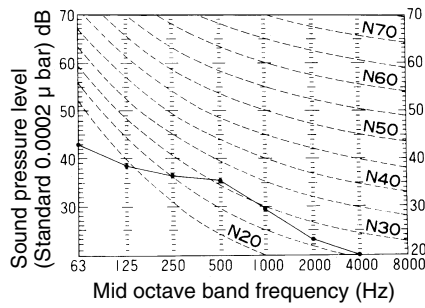
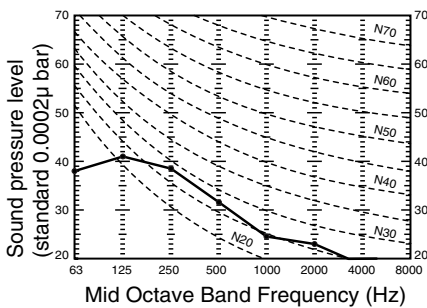
Measured based on JIS B 8616
 Mike position as below



Model FDUMA36KXE4A
 Noise level 34 dB (A) at HIGH
 32 dB (A) at MEDIUM
 29 dB (A) at LOW

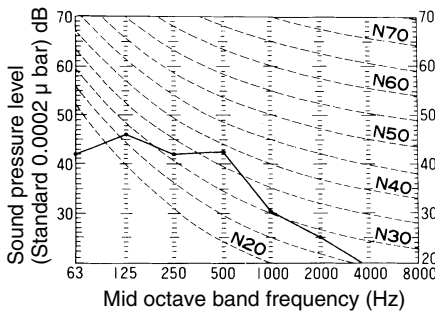
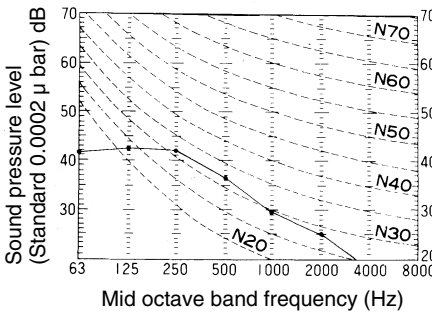
Models FDUMA45KXE4A, 56KXE4A,
 71KXE4A
 Noise level 35 dB (A) at HIGH
 32 dB (A) at MEDIUM
 29 dB (A) at LOW

Model FDUMA90KXE4A
 Noise level 36 dB (A) at HIGH
 33 dB (A) at MEDIUM
 30 dB (A) at LOW



Model FDUMA112KXE4A
 Noise level 38 dB (A) at HIGH
 35 dB (A) at MEDIUM
 32 dB (A) at LOW

Model FDUMA140KXE4A
 Noise level 39 dB (A) at HIGH
 37 dB (A) at MEDIUM
 34 dB (A) at LOW



3.9 Ceiling Mounted Duct Type (FDURA)

3.9.1 Specifications

FDURA45KXE4A, 56KXE4A

Item		Models	FDURA45KXE4A	FDURA56KXE4A
Nominal cooling capacity ^{*1}	kW		4.7	5.8
Nominal cooling capacity ^{*2}	kW		4.5	5.6
Nominal heating capacity ^{*3}	kW		5.0	6.3
Power source			1 Phase 220/240V 50Hz	
Noise level	dB(A)		Hi: 40 Lo: 36	Hi: 41 Lo: 37
Exterior dimensions (Height × Width × Depth)	mm		295 × 850 × 650	
Net weight	kg		39	39
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing	
	Refrigerant control		Electronic Expansion valve	
Air handling equipment	Fan type & Q'ty		Multiblade centrifugal fan × 2	
	Motor & Q'ty	W	90 × 1	130 × 1
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 17 Lo: 13.5	Hi: 21 Lo: 17
	Available static pressure (at Hi)	Pa	Standard: 50, Hi speed: 85	
	Fresh air intake		—	
	Air filter & Q'ty		Polypropylene net × 1 (Washable)	
Shock & vibration isolator		Rubber sleeve (for fan motor)		
Insulation (noise & heat)		Polyurethane foam		
Operation control Operation switch		Remote control switch (Optional: RC-E1)		
Room temperature control		Thermostat by electronics		
Safety equipment		Internal thermostat for fan motor, Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4"), Gas line: φ 12.7 (1/2")	
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories		Mounting kit, Drain hose		
Optional parts		Silent panel, Duct joint		

*1 ~ *3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1 JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDURA71KXE4A, 90KXE4A

Item		Models	FDURA71KXE4A	FDURA90KXE4A
Nominal cooling capacity ^{*1}	kW		7.3	9.1
Nominal cooling capacity ^{*2}	kW		7.1	9.0
Nominal heating capacity ^{*3}	kW		8.0	10.0
Power source			1 Phase 220/240V 50Hz	
Noise level	dB(A)		Hi: 41 Lo: 37	Hi: 42 Lo: 37
Exterior dimensions (Height × Width × Depth)	mm		295 × 850 × 650	350 × 1370 × 650
Net weight	kg		40	63
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing	
	Refrigerant control		Electronic Expansion valve	
Air handling equipment	Fan type & Q'ty		Multiblade centrifugal fan × 2	
	Motor & Q'ty	W	230 × 1	280 × 1
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 25 Lo: 18.5	Hi: 34 Lo: 27
	Available static pressure (at Hi)	Pa	Standard: 50, Hi speed: 130	
	Fresh air intake		—	
	Air filter & Q'ty		Polypropylene net × 1 (Washable)	
Shock & vibration isolator		Rubber sleeve (for fan motor)		
Insulation (noise & heat)		Polyurethane foam		
Operation control Operation switch		Remote control switch (Optional: RC-E1)		
Room temperature control		Thermostat by electronics		
Safety equipment		Internal thermostat for fan motor, Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 9.52 (3/8"), Gas line: φ 15.88 (5/8")	
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories		Mounting kit, Drain hose		
Optional parts		Silent panel, Duct joint		

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1 JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDURA112KXE4A, 140KXE4A

Item		Models	FDURA112KXE4A	FDURA140KXE4A
Nominal cooling capacity ^{*1}	kW		11.6	14.5
Nominal cooling capacity ^{*2}	kW		11.2	14.0
Nominal heating capacity ^{*3}	kW		12.5	16.0
Power source			1 Phase 220/240V 50Hz	
Noise level	dB(A)		Hi: 42 Lo: 38	Hi: 43 Lo: 39
Exterior dimensions (Height × Width × Depth)	mm		350 × 1370 × 650	
Net weight	kg		63	65
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing	
	Refrigerant control		Electronic Expansion valve	
Air handling equipment	Fan type & Q'ty		Multiblade centrifugal fan × 2	
	Motor & Q'ty	W	280 × 1	460 × 1
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 34 Lo: 27	Hi: 42 Lo: 33.5
	Available static pressure (at Hi)	Pa	Standard: 50, Hi speed: 130	
	Fresh air intake		—	
	Air filter & Q'ty		Polypropylene net × 1 (Washable)	
Shock & vibration isolator			Rubber sleeve (for fan motor)	
Insulation (noise & heat)			Polyurethane foam	
Operation control Operation switch			Remote control switch (Optional: RC-E1)	
Room temperature control			Thermostat by electronics	
Safety equipment			Internal thermostat for fan motor, Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 9.52 (3/8"), Gas line: φ 15.88 (5/8")	
	Connecting method		Flare piping	
	Drain hose		Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit, Drain hose	
Optional parts			Silent panel, Duct joint	

Product Specifications

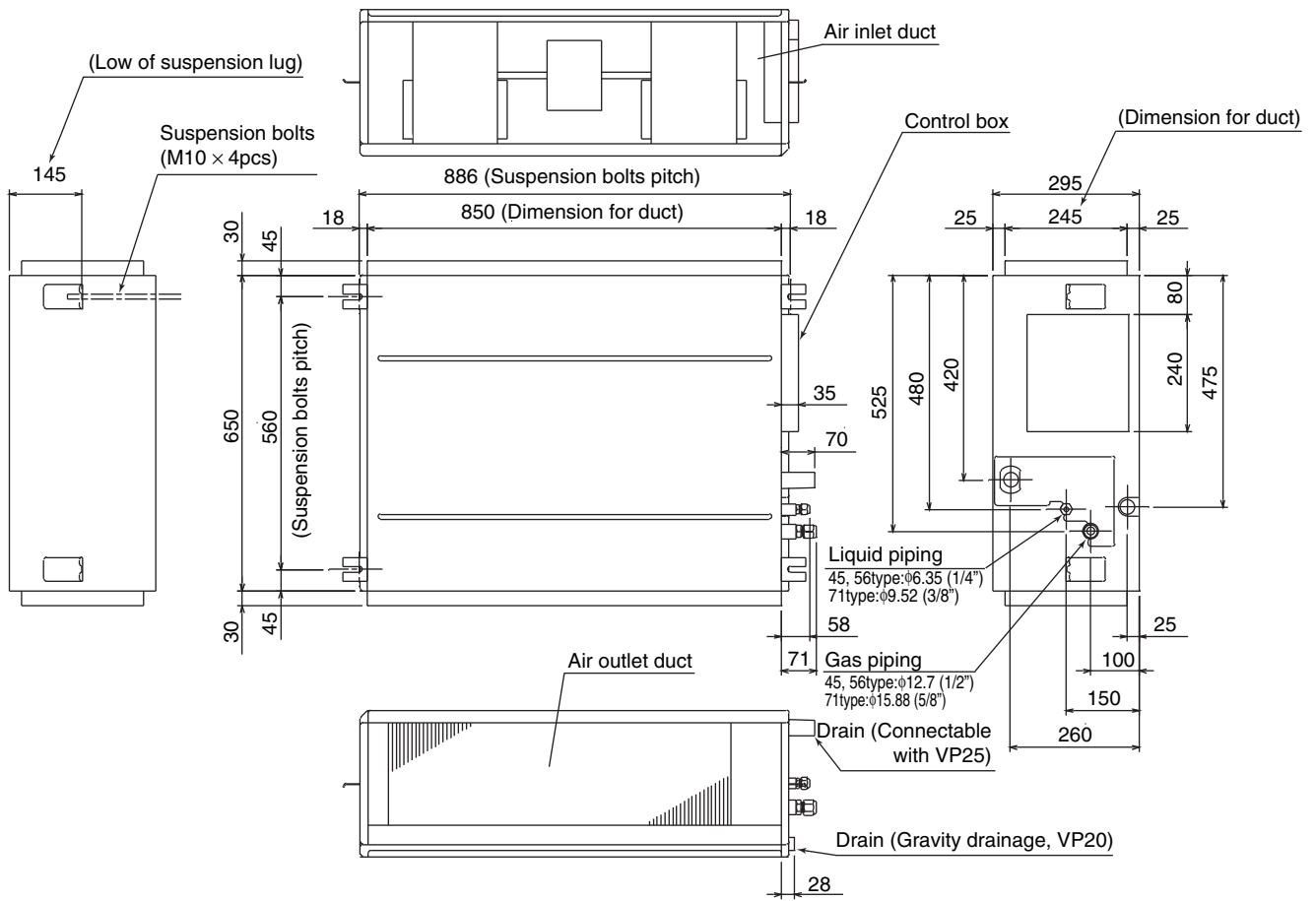
*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1 JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

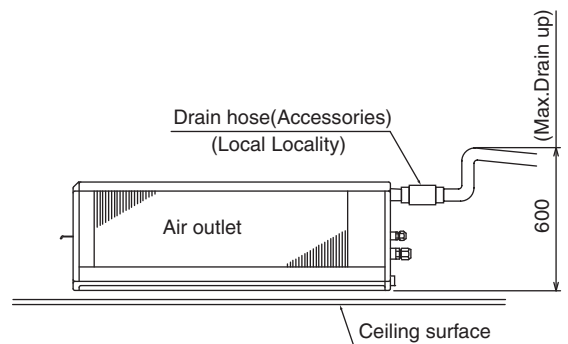
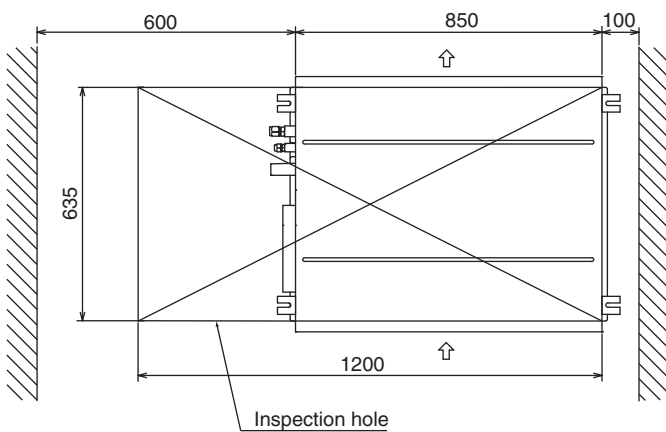
3.9.2 Exterior dimensions

FDURA45KXE4A, 56KXE4A, 71KXE4A

Unit : mm

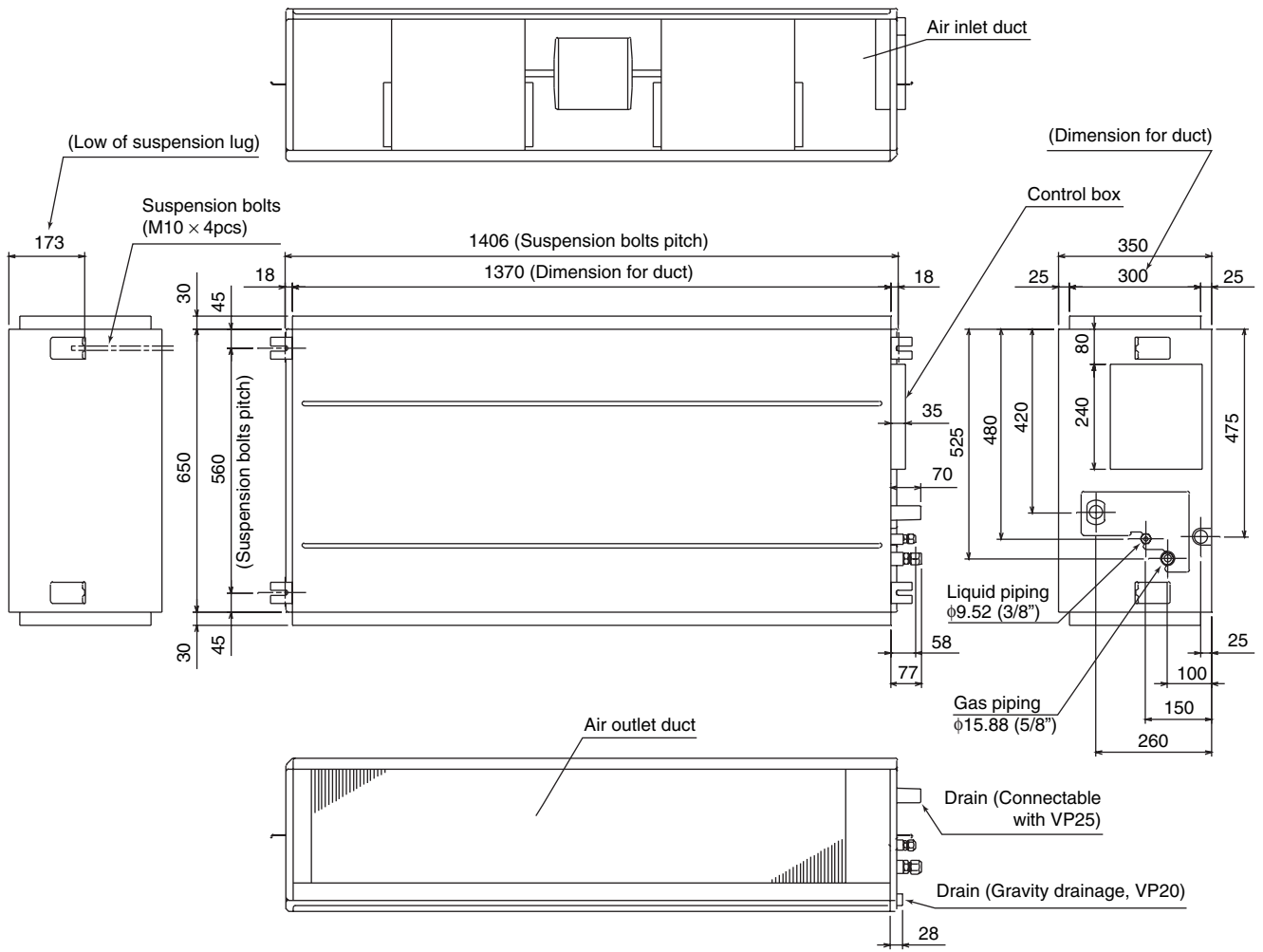


Space for installation and service



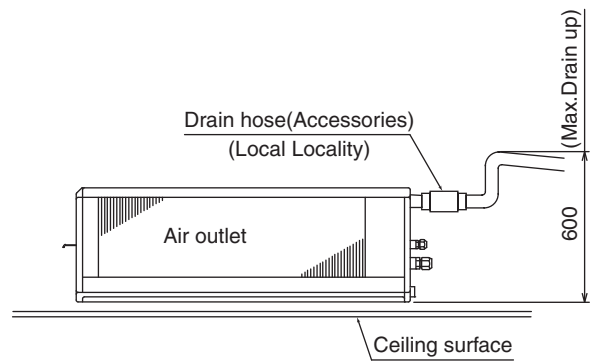
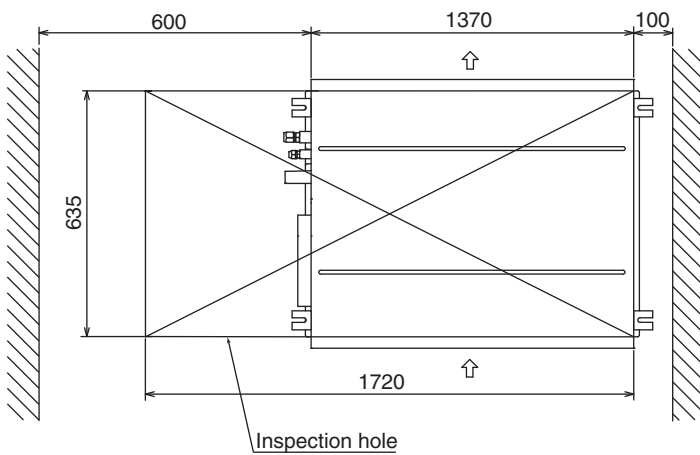
FDURA90KXE4A, 112KXE4A, 140KXE4A

Unit : mm



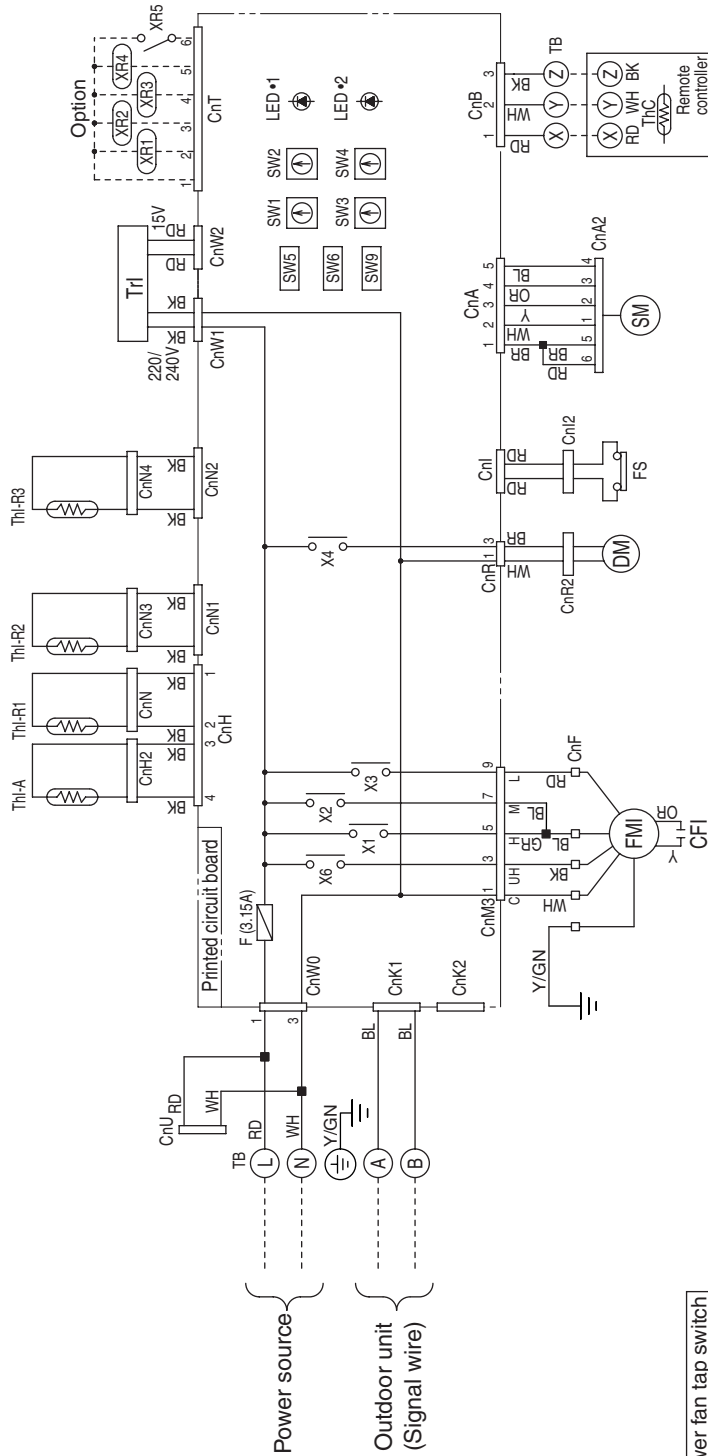
Product Specifications

Space for installation and service



3.9.3 Electrical wiring

All models



Blower fan tap switch

When increasing of static pressure is required, the following two methods are available to switch the blower fan tap. Switch to the high-speed tap with one of these methods.

① Set SW9-4 provided on the indoor unit PCB to ON.

SW9-4	ON	Fan control, high speed (High ceiling)
	OFF	Fan control, standard

Function number (A)	Function description (B)	Setting (C)
01	Hi CEILING SET	Hi CEILING 1

Meaning of marks

Mark	Parts name	Mark	Parts name
FMI	Fan motor	XR2	Indoor unit address ten's place
CFI	Capacitor for FMI	XR3	Indoor unit address unit's place
DM	Drain motor	XR4	Outdoor unit address ten's place
FS	Float switch	XR5	Outdoor unit address unit's place
SM	Stepping motor (For Exp.v)	X1,2,3,6	Model capacity setting
ThI-A	Thermistor	X4	Transformer
ThI-R1	Thermistor	TB	Fuse
ThI-R2	Thermistor	CnA-Z	Indication lamp (Red)
ThI-R3	Thermistor	■mark	Indication lamp (Green)
ThC	Thermistor	XR1	Operation output (DC12V output)

Color marks

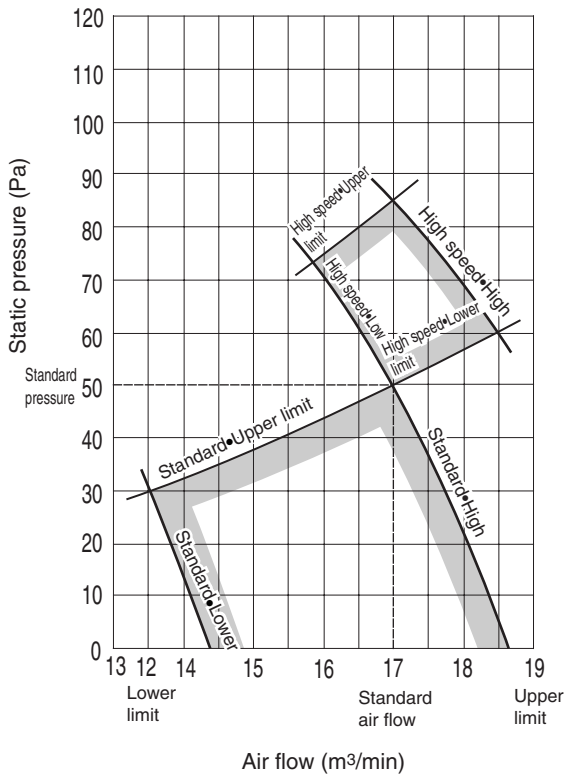
Mark	Color	Mark	Color
BK	Black	RD	Red
BL	Blue	WH	White
BR	Brown	Y	Yellow
GR	Gray	Y/GN	Yellow/Green
OR	Orange		

Function of switches

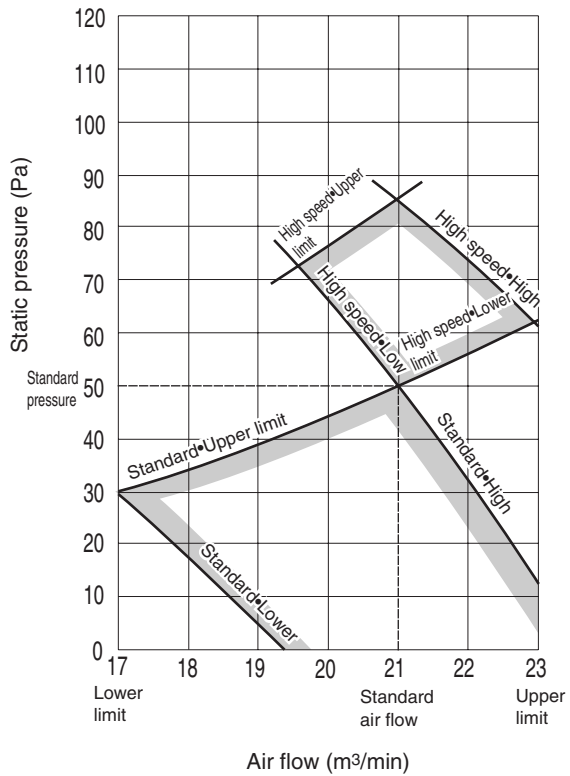
Mark	Function
ON	Test run of condensate pump motor
SW5-1	OFF Normal
ON	Input
SW5-3	OFF Reverse Invalid
ON	Emergency stop signal: valid
SW5-4	OFF Emergency stop signal: invalid

3.9.4 Characteristics of fan

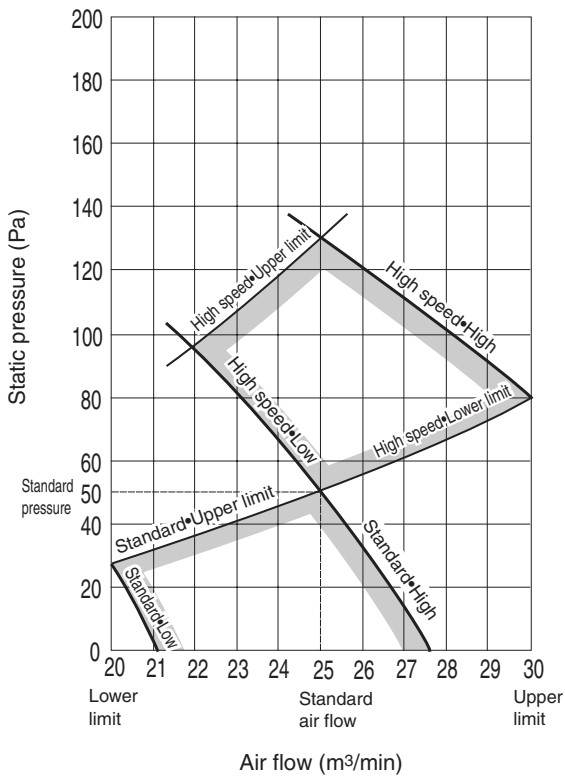
FDURA45KXE4A



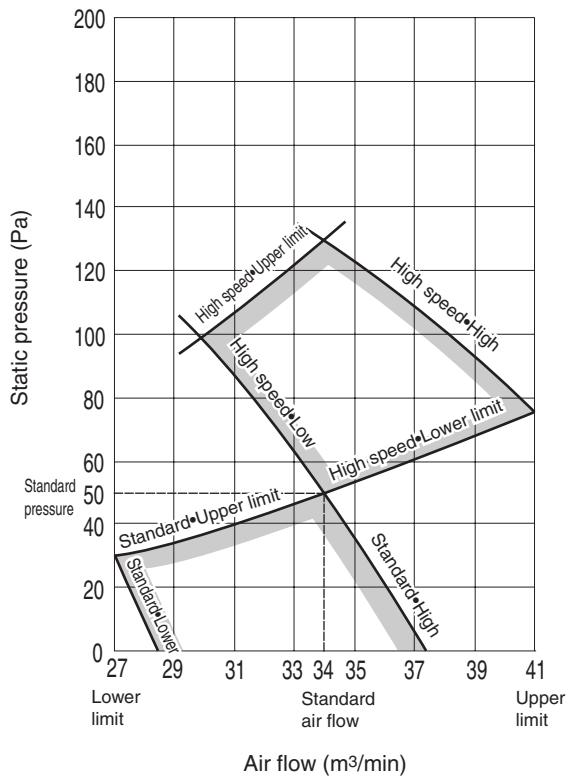
FDURA56KXE4A



FDURA71KXE4A

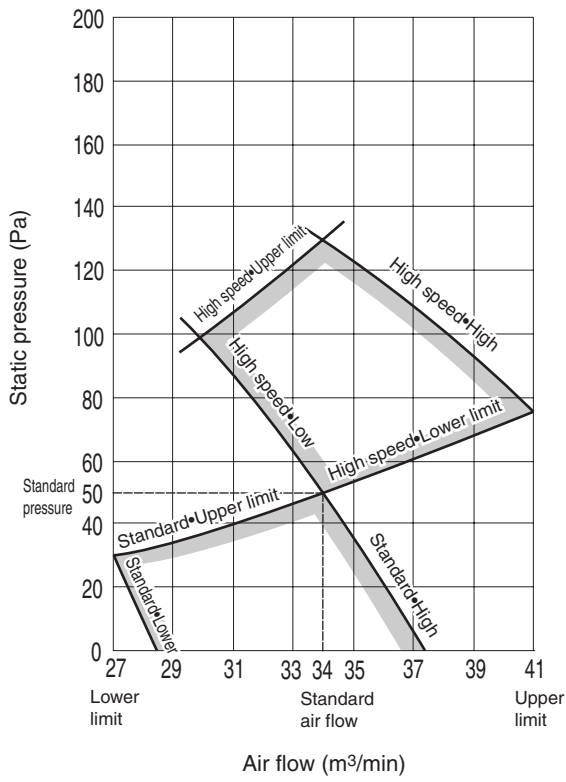


FDURA90KXE4A

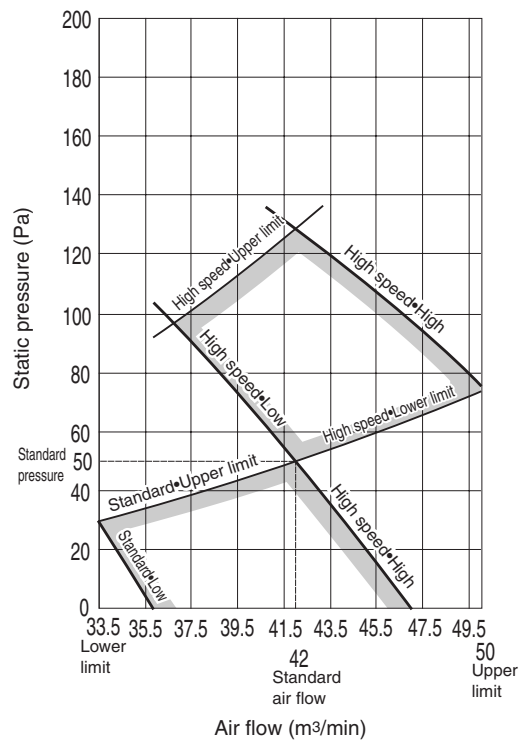


Product Specifications

FDURA112KXE4A



FDURA140KXE4A



3.9.5 Noise level

Note (1) The data are based on the following conditions.

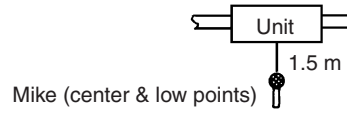
Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB

(2) The data in the chart are measured in an anechoic room.

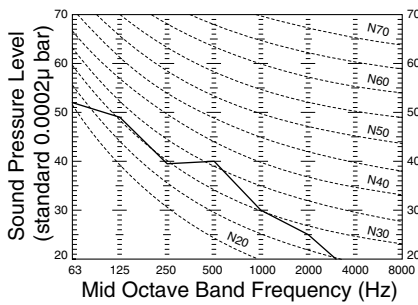
(3) The noise levels measured in the field are usually higher than the data because of reflection.

Measured based on JIS B 8616

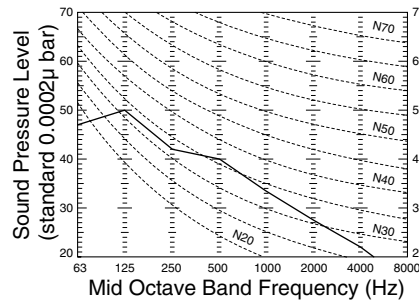
Mike position as below



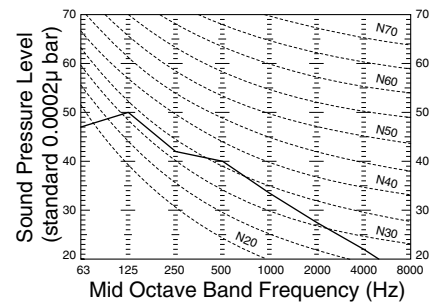
Model FDURA45KXE4A
Noise level 40 dB (A) at HIGH
36 dB (A) at LOW



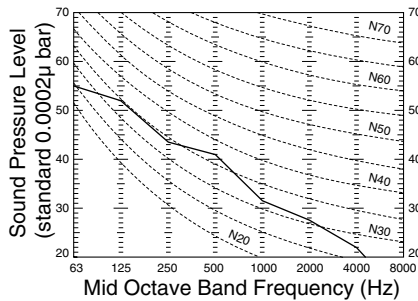
Model FDURA56KXE4A
Noise level 41 dB (A) at HIGH
37 dB (A) at LOW



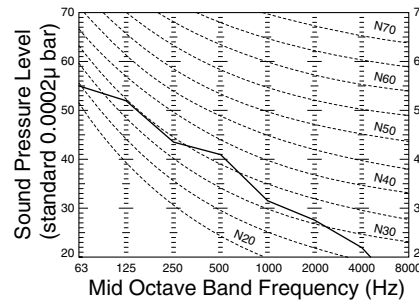
Model FDURA71KXE4A
Noise level 41 dB (A) at HIGH
37 dB (A) at LOW



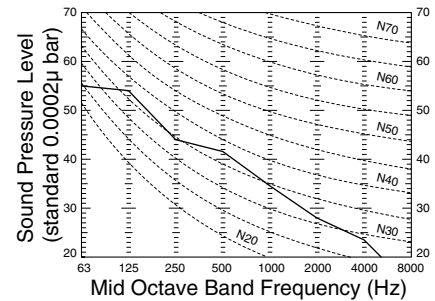
Model FDURA90KXE4A
Noise level 42 dB (A) at HIGH
37 dB (A) at LOW



Model FDURA112KXE4A
Noise level 42 dB (A) at HIGH
38 dB (A) at LOW



Model FDURA140KXE4A
Noise level 43 dB (A) at HIGH
49 dB (A) at LOW



3.10 Ceiling Suspension Type (FDEA)

3.10.1 Specifications

FDEA36KXE4A, 45KXE4A

Item		Models	FDEA36KXE4A	FDEA45KXE4A
Nominal cooling capacity ^{*1}	kW		3.7	4.7
Nominal cooling capacity ^{*2}	kW		3.6	4.5
Nominal heating capacity ^{*3}	kW		4.0	5.0
Power source			1 Phase 220V 50Hz	
Noise level	dB(A)		Hi: 39 Me: 38 Lo: 36	
Exterior dimensions (Height × Width × Depth)	mm		210 × 1070 × 690	
Net weight	kg		30	
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing	
	Refrigerant control		Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 2	
	Motor & Q'ty	W	25 × 1	
	Starting method		Line starting	
	Air flow (Standard)	CMM	Hi: 11 Me: 9 Lo: 7	
	Fresh air intake		Not possible	
	Air filter & Q'ty		Polypropylene net × 2 (Washable)	
Shock & vibration isolator			Rubber sleeve (for fan motor)	
Insulation (noise & heat)			Polyurethane foam	
Operation control Operation switch			Remote control switch (Optional:RC-E1)	
Room temperature control			Thermostat by electronics	
Safety equipment			Internal thermostat for fan motor. Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4"), Gas line: φ 12.7 (1/2")	
	Connecting method		Flare piping	
	Drain hose		Connectable with VP20 (I.D. 20mm, O.D. 26mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit, Drain hose	
Optional parts			—	

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDEA56KXE4A, 71KXE4A

Item		Models	
		FDEA56KXE4A	FDEA71KXE4A
Nominal cooling capacity ^{*1}	kW	5.8	7.3
Nominal cooling capacity ^{*2}	kW	5.6	7.1
Nominal heating capacity ^{*3}	kW	6.3	8.0
Power source		1 Phase 220V 50Hz	
Noise level	dB(A)	Hi: 39 Me: 38 Lo: 36	Hi: 41 Me: 39 Lo: 37
Exterior dimensions (Height × Width × Depth)	mm	210 × 1070 × 690	210 × 1320 × 690
Net weight	kg	30	36
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing	
	Refrigerant control	Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty	Centrifugal fan × 2	Centrifugal fan × 4
	Motor & Q'ty	W 25 × 1	25 × 2
	Starting method	Line starting	
	Air flow (Standard)	CMM Hi: 11 Me: 9 Lo: 7	Hi: 18 Me: 14 Lo: 12
	Fresh air intake	Not possible	
	Air filter & Q'ty	Polypropylene net × 2 (Washable)	
Shock & vibration isolator		Rubber sleeve (for fan motor)	
Insulation (noise & heat)		Polyurethane foam	
Operation control Operation switch		Remote control switch (Optional:RC-E1)	
Room temperature control		Thermostat by electronics	
Safety equipment		Internal thermostat for fan motor. Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in) Liquid line: φ 6.35 (1/4"), Gas line: φ 12.7 (1/2")	Liquid line: φ 9.52 (3/8"), Gas line: φ 15.88 (5/8")
	Connecting method	Flare piping	
	Drain hose	Connectable with VP20 (I.D. 20mm, O.D. 26mm)	
	Insulation for piping	Necessary (both Liquid & Gas lines)	
Accessories		Mounting kit, Drain hose	
Optional parts		—	

Product Specifications

*1 ~ *3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDEA112KXE4A, 140KXE4A

Item		Models		FDEA112KXE4A	FDEA140KXE4A
Nominal cooling capacity ^{*1}	kW			11.6	14.5
Nominal cooling capacity ^{*2}	kW			11.2	14.0
Nominal heating capacity ^{*3}	kW			12.5	16.0
Power source				1 Phase 220V 50Hz	
Noise level	dB(A)			Hi: 44 Me: 41 Lo: 39	Hi: 46 Me: 44 Lo: 43
Exterior dimensions (Height × Width × Depth)	mm			250 × 1620 × 690	
Net weight	kg			46	
Refrigerant equipment	Heat exchanger			Louver fins & inner grooved tubing	
	Refrigerant control			Electronic Expansion Valve	
Air handling equipment	Fan type & Q'ty			Centrifugal fan × 4	
	Motor & Q'ty	W		30 × 2	38 × 2
	Starting method			Line starting	
	Air flow (Standard)	CMM		Hi: 26 Me: 23 Lo: 21	Hi: 29 Me: 26 Lo: 23
	Fresh air intake			Not possible	
	Air filter & Q'ty			Polypropylene net × 2 (Washable)	
Shock & vibration isolator				Rubber sleeve (for fan motor)	
Insulation (noise & heat)				Polyurethane foam	
Operation control Operation switch				Remote control switch (Optional:RC-E1)	
Room temperature control				Thermostat by electronics	
Safety equipment				Internal thermostat for fan motor. Frost protection thermostat	
Installation data	Refrigerant piping size	mm (in)		Liquid line: φ 9.52 (3/8"), Gas line: φ .15.88 (5/8")	
	Connecting method			Flare piping	
	Drain hose			Connectable with VP20 (I.D. 20mm, O.D. 26mm)	
	Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories				Mounting kit, Drain hose	
Optional parts				—	

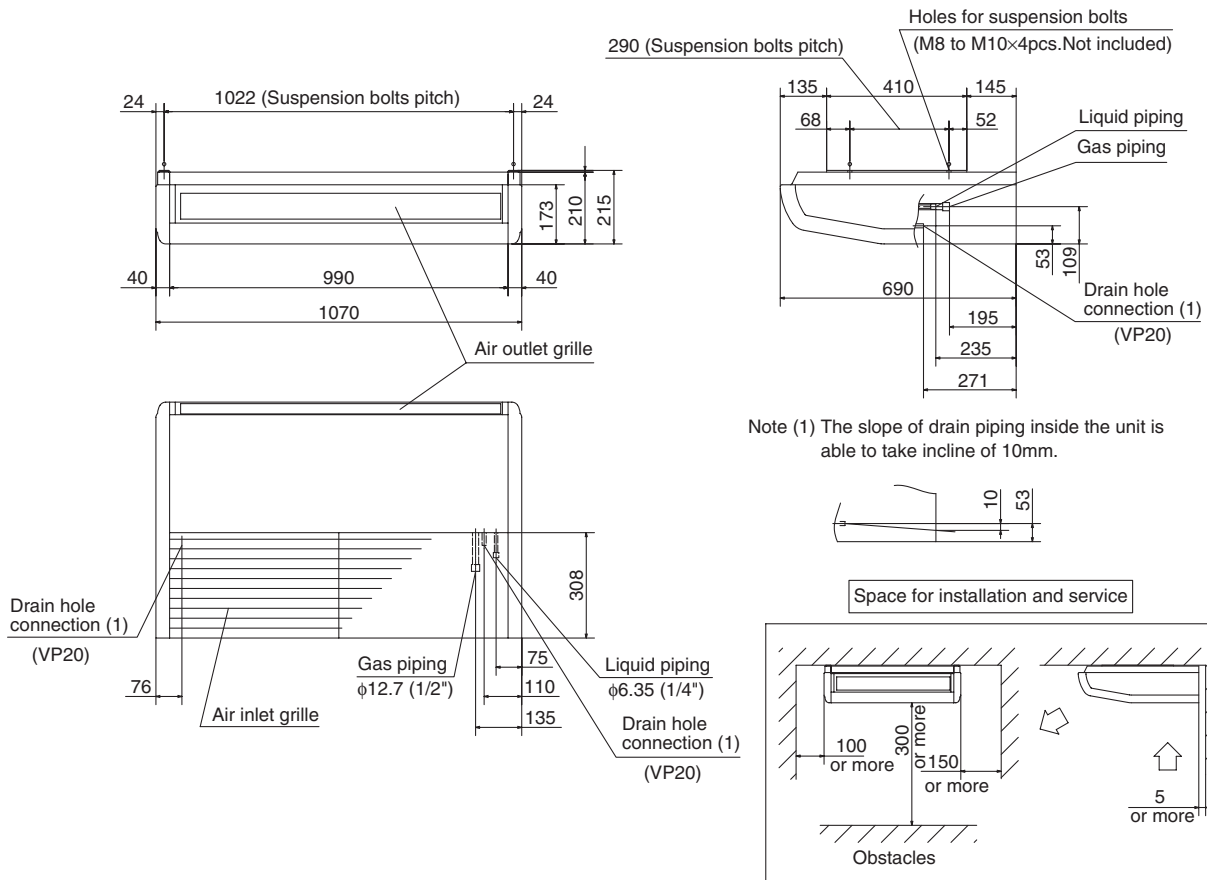
*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

3.10.2 Exterior dimensions

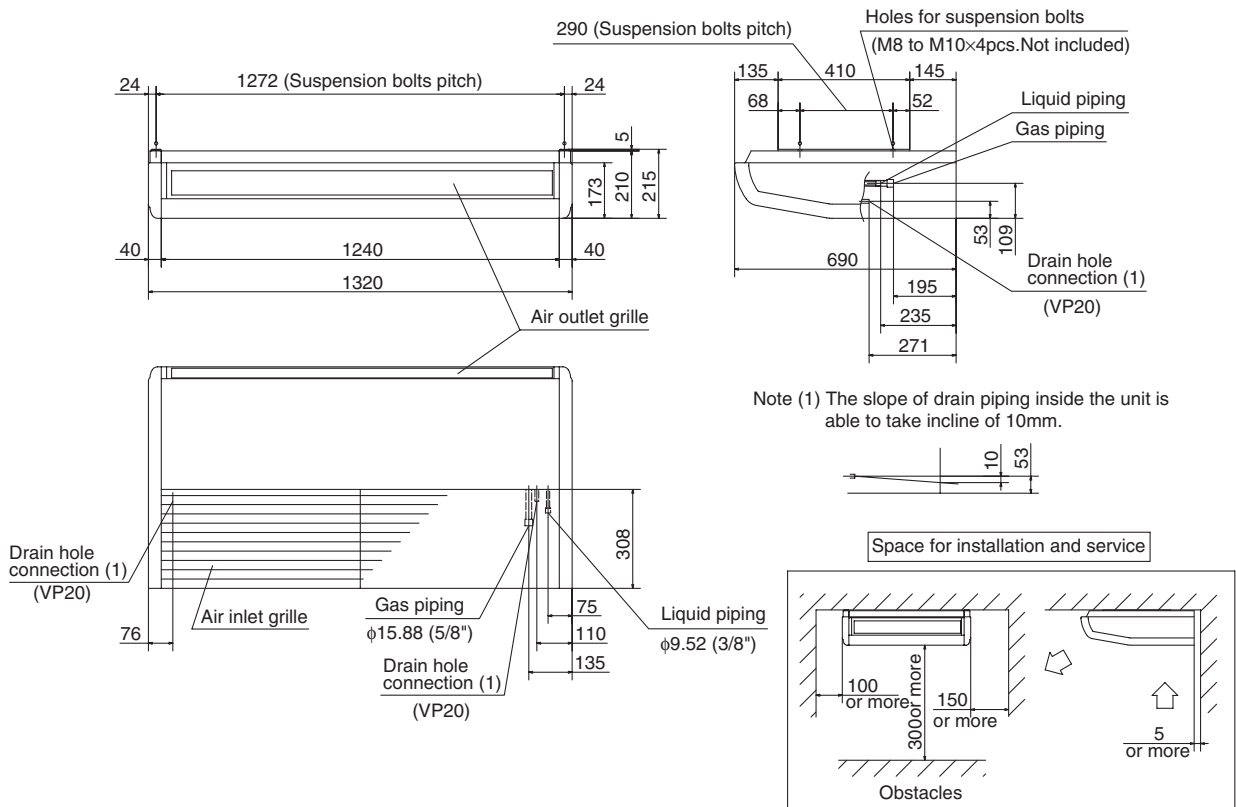
FDEA36KXE4A, 45KXE4A, 56KXE4A

Unit : mm



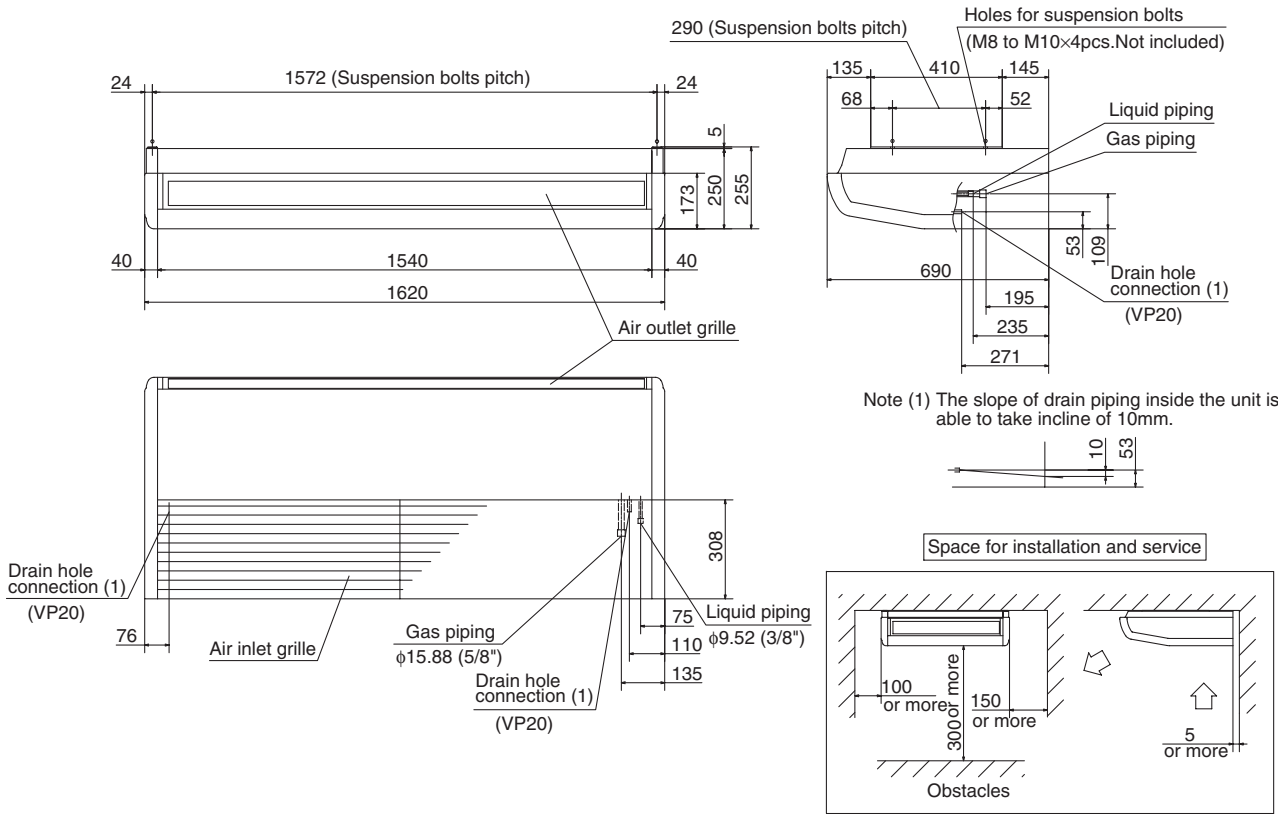
FDEA71KXE4A

Unit : mm



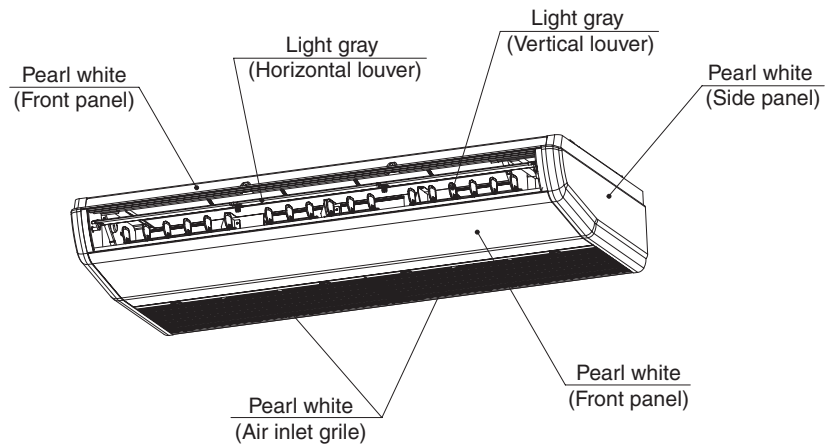
FDEA112KXE4A, 140KXE4A

Unit : mm



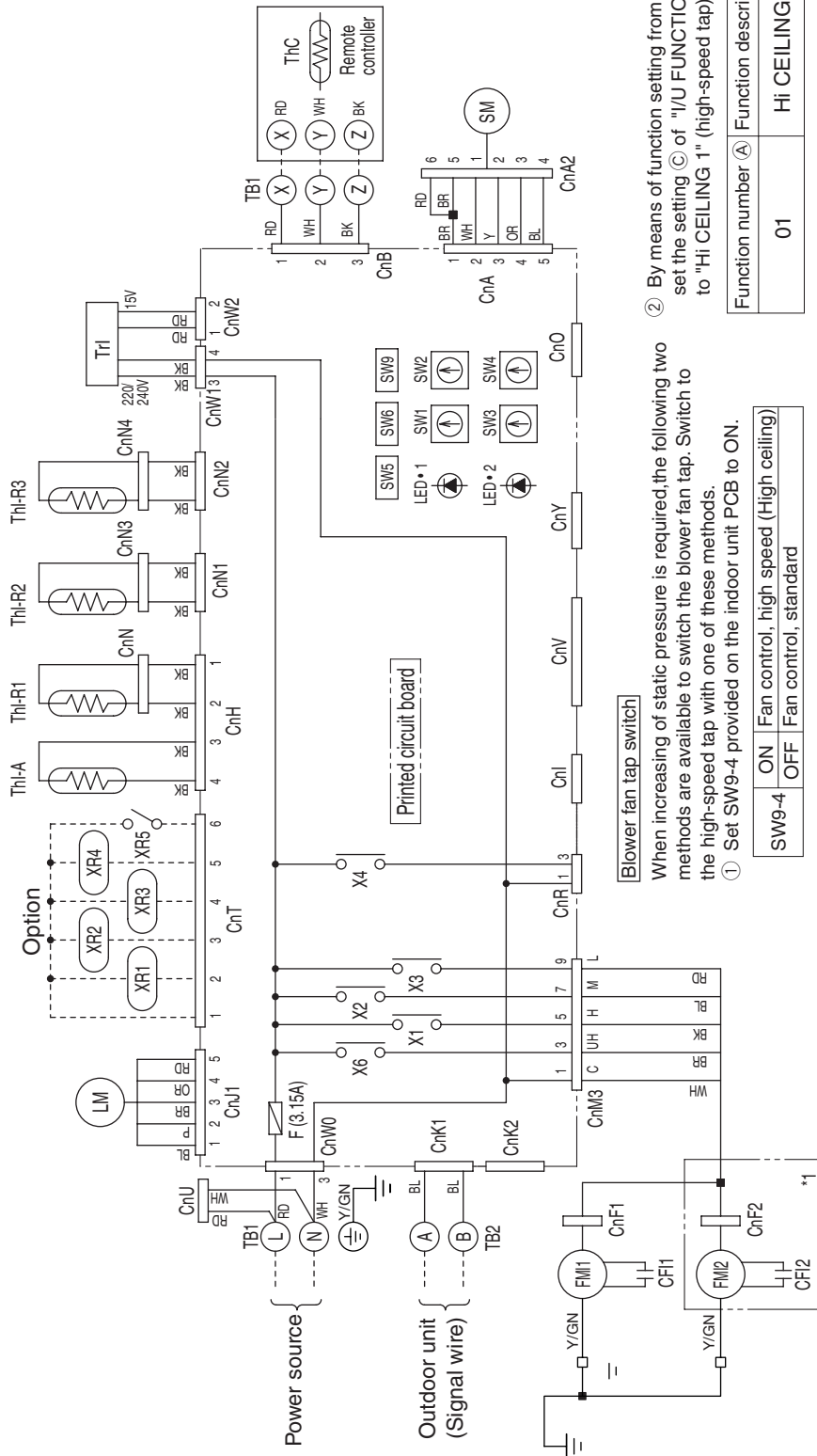
3.10.3 Exterior appearance

All models



3.10.4 Electrical wiring

All models



② By means of function setting from the remote controller unit, set the setting ③ of "I/U FUNCTION▲" (indoor unit function) to "HI CEILING 1" (high-speed tap).

Function number ①	Function description ②	Setting ③
01	HI CEILING SET	HI CEILING 1

When increasing of static pressure is required, the following two methods are available to switch the blower fan tap. Switch to the high-speed tap with one of these methods.

① Set SW9-4 provided on the indoor unit PCB to ON.

SW9-4	ON	OFF
	Fan control, high speed (High ceiling)	Fan control, standard

Note (1) *1. FM12 is equipped only for 71, 112, 140.

Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
FM1,2	Fan motor	SW2	Indoor unit address unit's place	XR3	Thermo ON output (DC12V output)
CF1,2	Capacitor for FMI	SW3	Outdoor unit address ten's place	XR4	Inspection output (DC12V output)
LM	Louver motor	SW4	Outdoor unit address unit's place	XR5	Remote operation input (voltage-free contact)
SM	Stepping motor (For Exp.v)	SW6	Model capacity setting	X1,2,3,6	Auxiliary relay (For FM)
Th1-A	Thermistor	Tr1	Transformer	TB1,2	Terminal block (O mark)
Th1-R1	Thermistor	F	Fuse	CnA-Z	Connector
Th1-R2	Thermistor	LED1	Indication lamp (Red)	■ mark	Closed-end connector
Th1-R3	Thermistor	LED2	Indication lamp (Green)		
ThC	Thermistor	XR1	Operation output (DC12V output)		
SW1	Indoor unit address ten's place	XR2	Heating output (DC12V output)		

Color marks

Mark	Color	Mark	Color
BK	Black	WH	White
BL	Blue	Y	Yellow
BR	Brown	P	Pink
OR	Orange	Y/GN	Yellow/Green
RD	Red		

Function of switches

Mark	Function
ON	Input
OFF	Reverse Invalid
ON	signal Run stop
ON	Emergency stop signal:valid
OFF	Emergency stop signal:invalid

Product Specifications

3.10.5 Noise level

Note (1) The data are based on the following conditions.

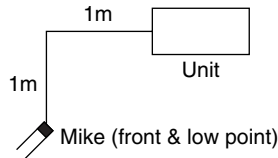
Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB

(2) The data in the chart are measured in an anechoic room.

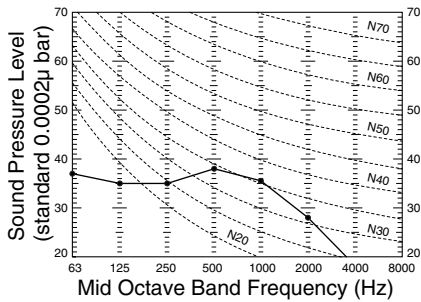
(3) The noise levels measured in the field are usually higher than the data because of reflection.

Measured based on JIS B 8616

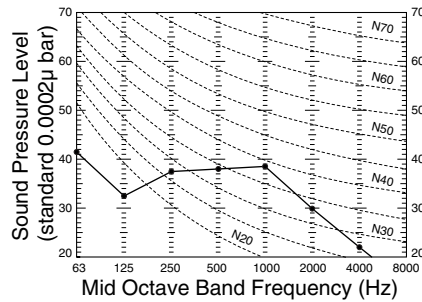
Mike position as below



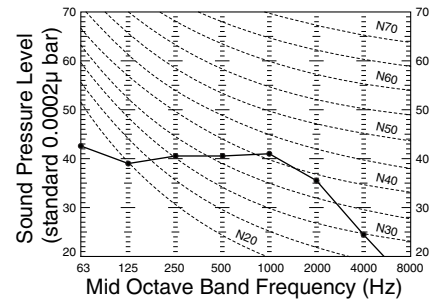
Models FDEA 36KXE4A, 45KXE4A,
56KXE4A
Noise level 39 dB (A) at HIGH
38 dB (A) at MEDIUM
36 dB (A) at LOW



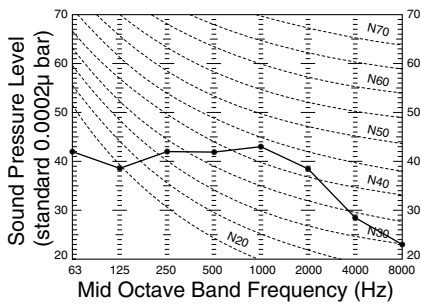
Model FDEA71KXE4A
Noise level 41 dB (A) at HIGH
39 dB (A) at MEDIUM
37 dB (A) at LOW



Model FDEA112KXE4A
Noise level 44 dB (A) at HIGH
41 dB (A) at MEDIUM
39 dB (A) at LOW



Model FDEA140KXE4A
Noise level 46 dB (A) at HIGH
44 dB (A) at MEDIUM
43 dB (A) at LOW



3.11 Wall Mounted Type (FDK)

3.11.1 Specifications

FDKA22KXE4A, 28KXE4A, 36KXE4A, 45KXE4A

Item		Models	FDKA22KXE4A	FDKA28KXE4A	FDKA36KXE4A	FDKA45KXE4A
		Nominal cooling capacity ^{*1}	kW	2.3	2.9	3.7
Nominal cooling capacity ^{*2}	kW	2.2	2.8	3.6	4.5	
Nominal heating capacity ^{*3}	kW	2.5	3.2	4.0	5.0	
Power source		1 Phase 220/224V 50Hz				
Noise level	dB(A)	Hi: 40 Me: 36 Lo: 32			Hi: 41 Me: 37 Lo: 33	Hi: 41 Me: 37 Lo: 32
Exterior dimensions (Height × Width × Depth)	mm	298 × 840 × 240				
Net weight	kg	12				12.5
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing				
	Refrigerant control	Electronic Expansion Valve				
Air handling equipment	Fan type & Q'ty	Tangential fan × 1				
	Motor & Q'ty	W	33 × 1			
	Starting method	Line starting				
	Air flow (Standard)	CMM	Hi: 8 Me: 7 Lo: 6		Hi: 10 Me: 9 Lo: 7	Hi: 11 Me: 9 Lo: 7
	Fresh air intake	Not possible				
	Air filter & Q'ty	Polypropylene net × 2 (Washable)				
Shock & vibration isolator		Rubber sleeve (for fan motor)				
Insulation (noise & heat)		Polyurethane foam				
Operation control Operation switch		Remote control switch (Optional:RC-E1)				
Room temperature control		Thermostat by electronics				
Safety equipment		Internal thermostat for fan motor. Frost protection thermostat				
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")		Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	
	Connecting method		Flare piping			
	Drain hose		Connectable with VP16 (I.D. 16mm, O.D. 22mm)			
	Insulation for piping		Necessary (both Liquid & Gas lines)			
Accessories		Mounting kit, Drain hose				
Optional parts		—				

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

FDKA56KXE4A, 71KXE4A

Item		Models		
		FDKA56KXE4A	FDKA71KXE4A	
Nominal cooling capacity ^{*1}	kW	5.7	7.3	
Nominal cooling capacity ^{*2}	kW	5.6	7.1	
Nominal heating capacity ^{*3}	kW	6.3	8.0	
Power source		1 Phase 220/224V 50Hz		
Noise level	dB(A)	Hi: 46 Me: 43 Lo: 39	Hi: 47 Me: 44 Lo: 40	
Exterior dimensions (Height × Width × Depth)	mm	298 × 840 × 240	375 × 1436 × 194	
Net weight	kg	13	22	
Refrigerant equipment	Heat exchanger	Louver fins & inner grooved tubing		
	Refrigerant control	Electronic Expansion Valve		
Air handling equipment	Fan type & Q'ty	Tangential fan × 1	Tangential fan × 2	
	Motor & Q'ty	W	33 × 1	
	Starting method	Line starting		
	Air flow (Standard)	CMM	Hi: 14 Me: 12 Lo: 10	Hi: 21 Me: 18 Lo: 15
	Fresh air intake	Not possible		
	Air filter & Q'ty		Polypropylene net × 2 (Washable)	Polypropylene net × 3 (Washable)
Shock & vibration isolator		Rubber sleeve (for fan motor)		
Insulation (noise & heat)		Polyurethane foam		
Operation control Operation switch		Remote control switch (Optional:RC-E1)		
Room temperature control		Thermostat by electronics		
Safety equipment		Internal thermostat for fan motor. Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
	Connecting method		Flare piping	
	Drain hose		Connectable with VP16 (I.D. 16mm, O.D. 22mm)	
	Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories		Mounting kit, Drain hose		
Optional parts		—		

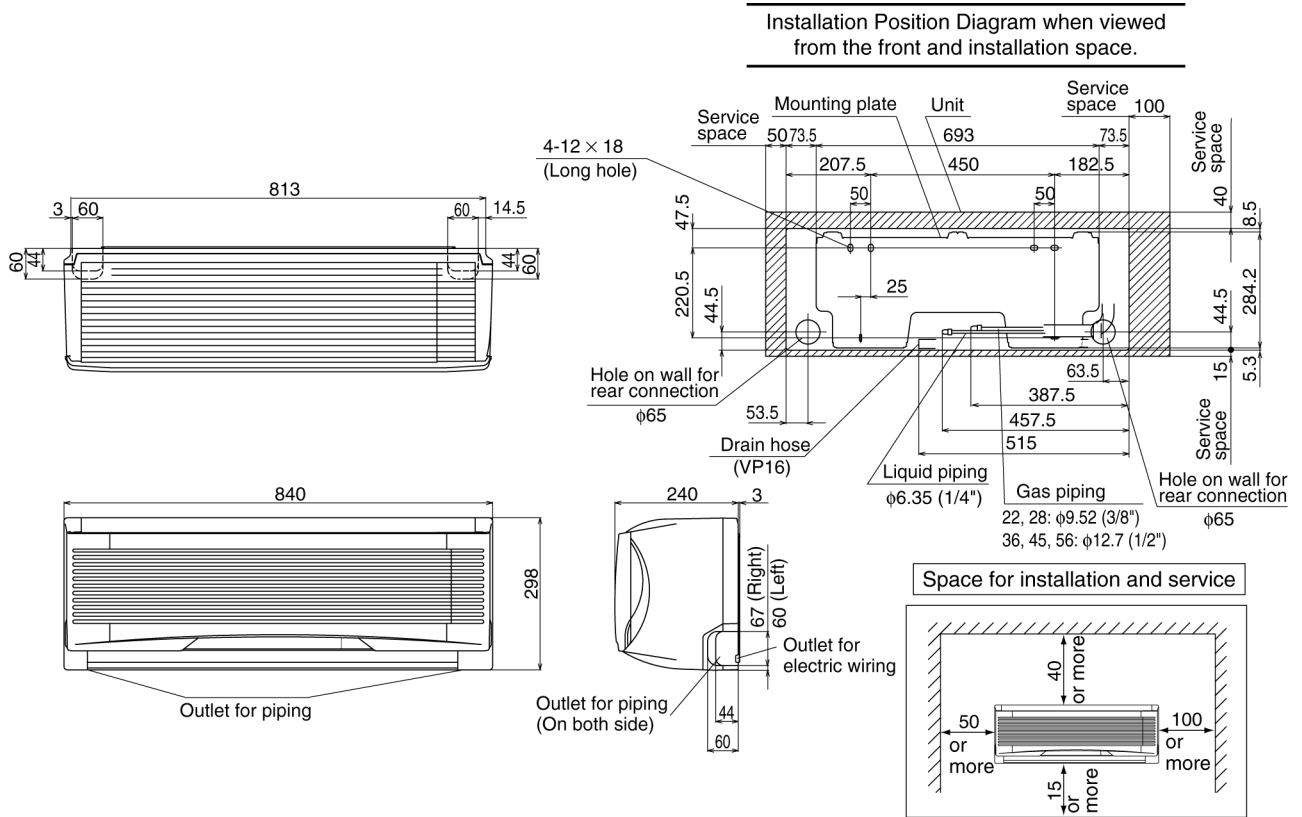
*1 ~ *3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19.5°C	35°C	24°C	ISO-T1, JIS B8616
Cooling ^{*2}		27°C	19°C	35°C	24°C	
Heating ^{*3}		20°C	—	7°C	6°C	

3.11.2 Exterior dimensions

FDKA22KXE4A, 28KXE4A, 36KXE4A, 45KXE4A, 56KXE4A

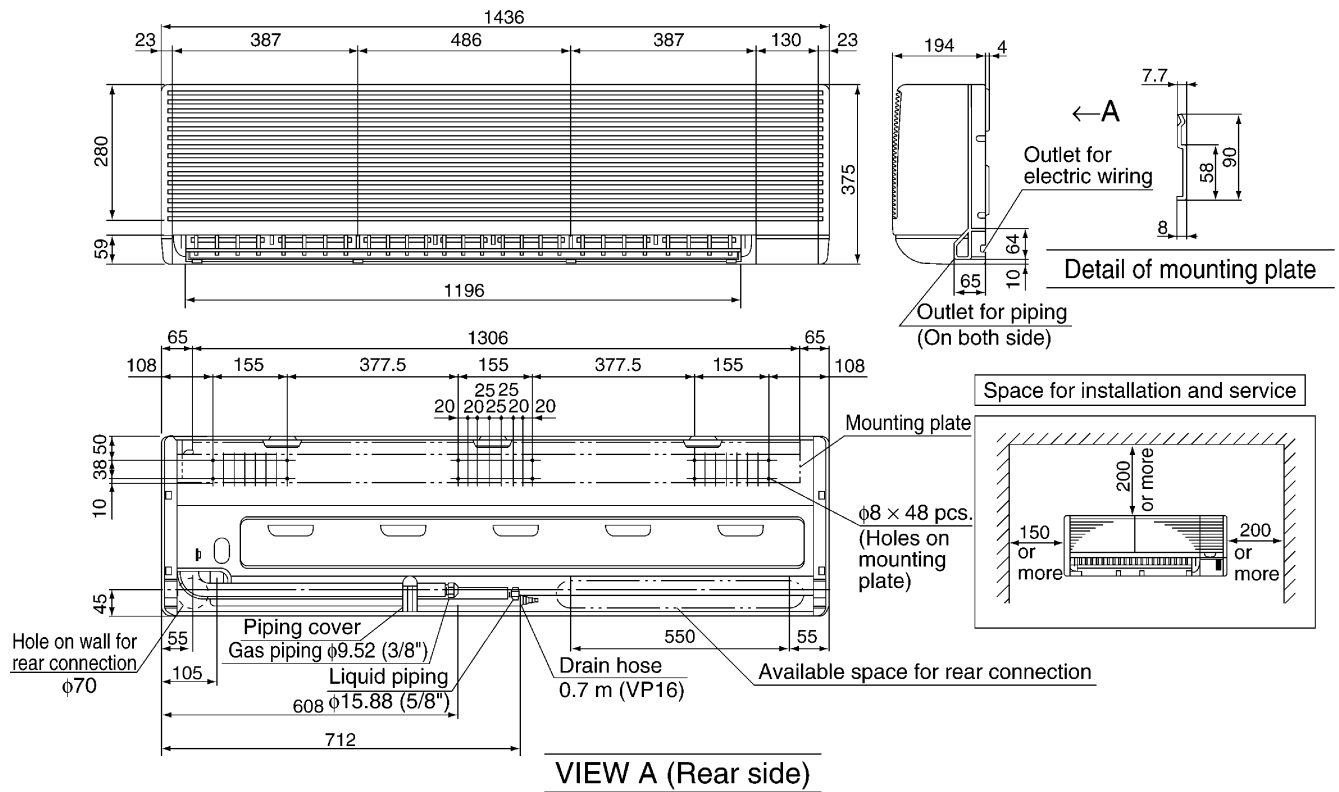
Unit : mm



Product Specifications

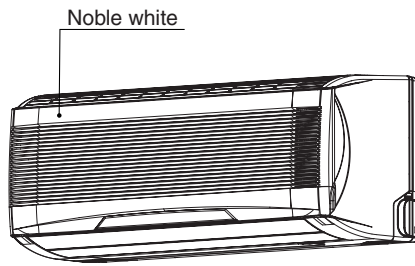
FDKA71KXE4A

Unit : mm

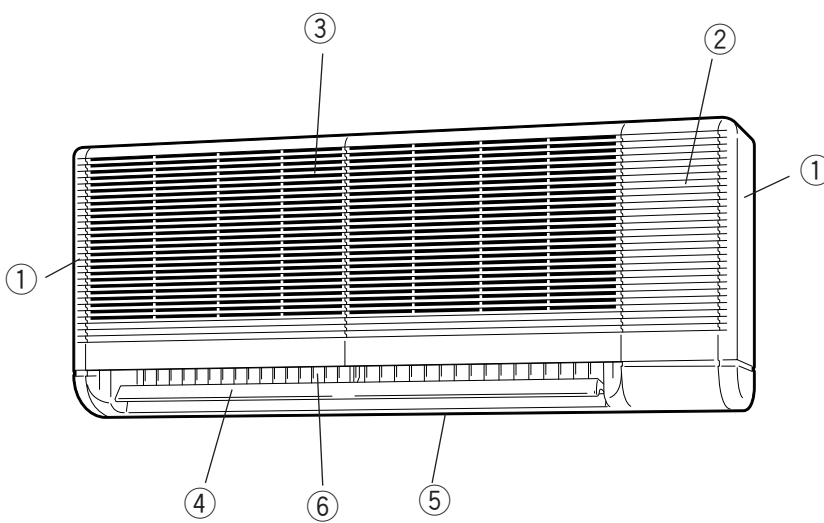


3.11.3 Exterior appearance

FDKA22 ~ 56KXE4A



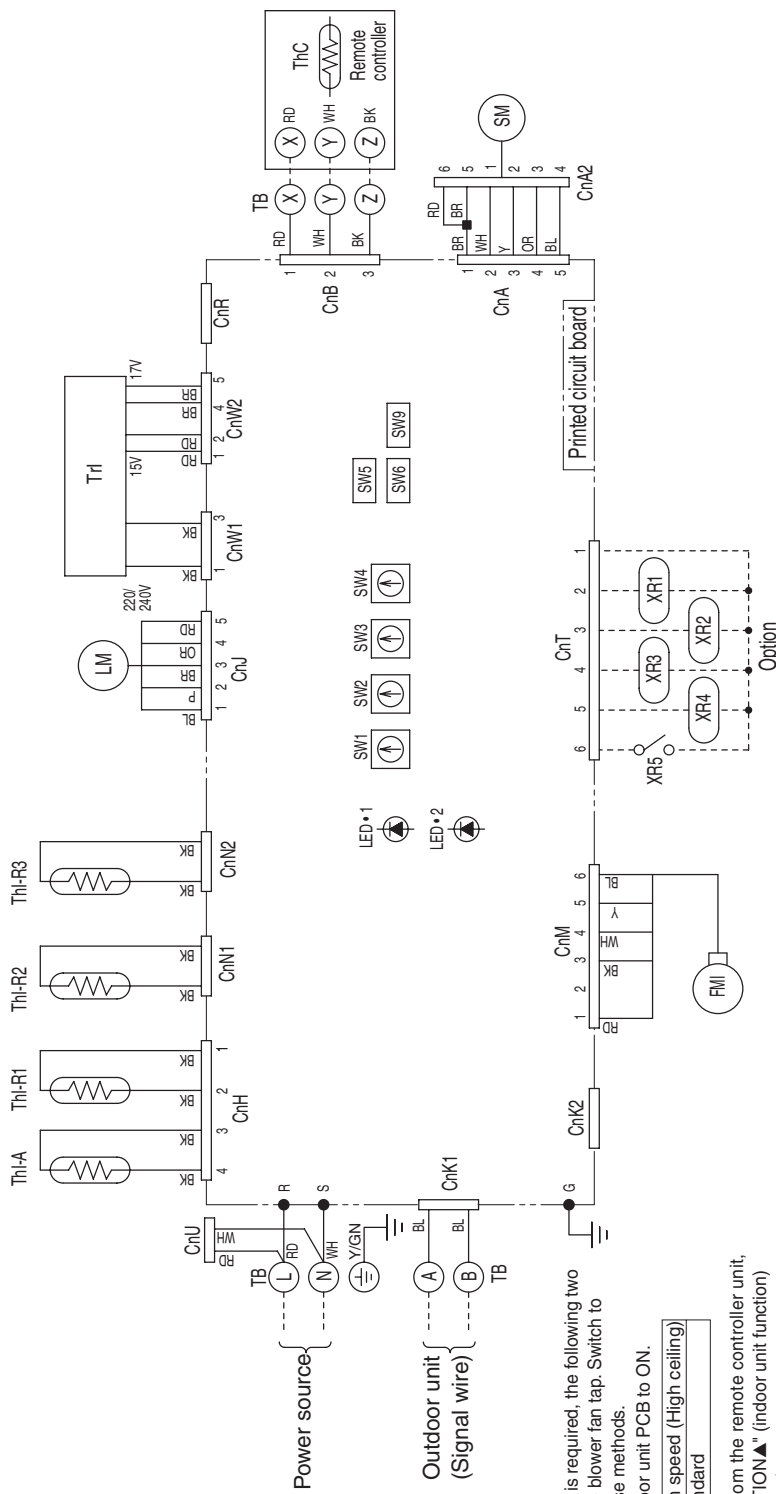
FDKA71KXE4A



No.	Parts name	Color
①	Side plate	Ceramic white
②	Front panel	
③	Inlet grill	
④	Flap	
⑤	Bottom plate	
⑥	louver	Light gray

3.11.4 Electrical wiring

FDKA22KXE4A, 28KXE4A, 36KXE4A, 45KXE4A, 56KXE4A



Blower fan tap switch
 When increasing of static pressure is required, the following two methods are available to switch the blower fan tap. Switch to the high-speed tap with one of these methods.
 ① Set SW9-4 provided on the indoor unit PCB to ON.
 ② By means of function setting from the remote controller unit, set the setting ③ of "I/U FUNCTION▲" (indoor unit function) to "Hi CEILING 1" (high-speed tap).

Function number④	Function description⑥	Setting③
01	Hi CEILING SET	Hi CEILING 1

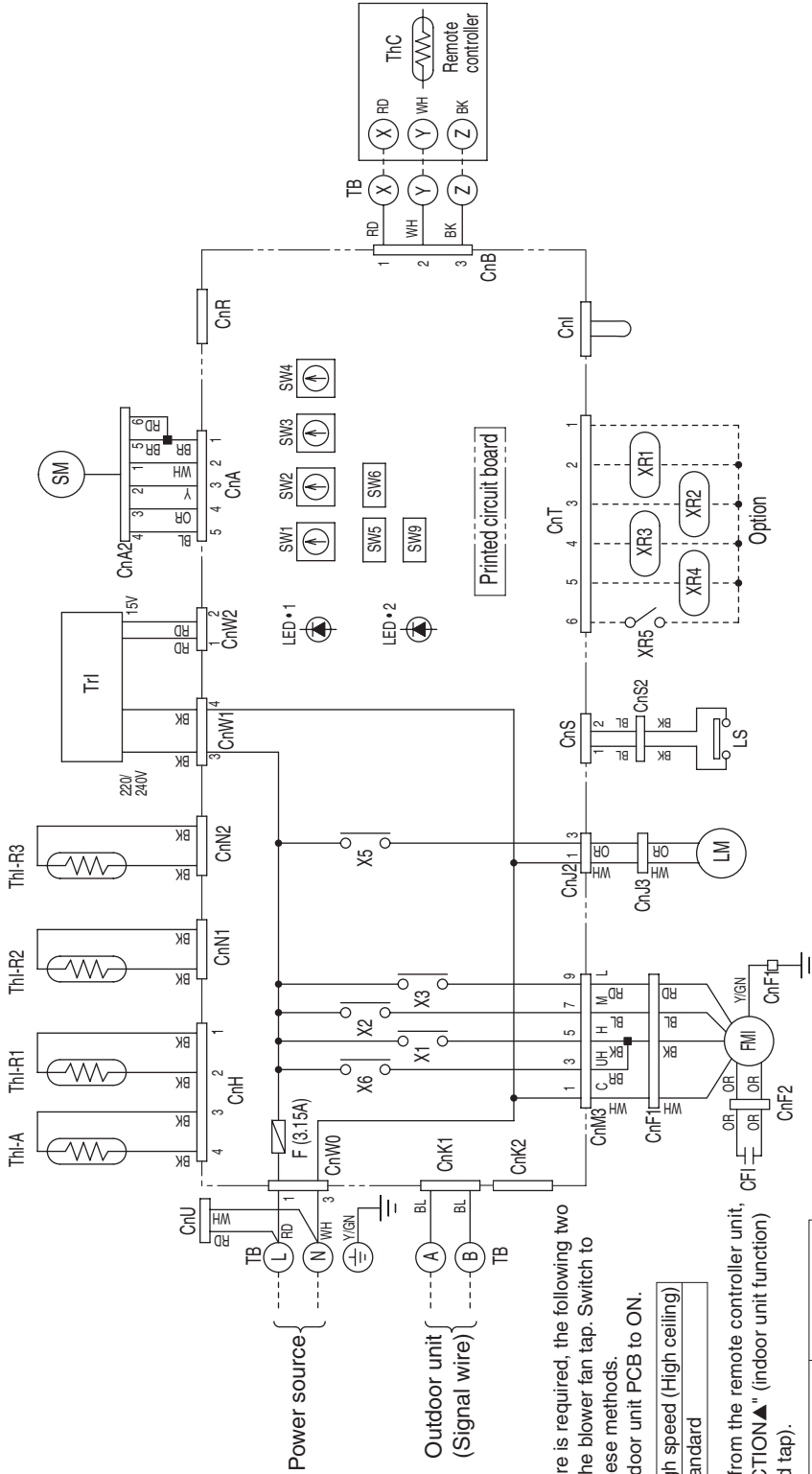
Meaning of marks

Mark	Parts name	Mark	Parts name
FMI	Fan motor	XR4	Inspection output (DC12V output)
LM	Louver motor	XR5	Remote operation input (volt-free contact)
SM	Stepping motor (For Exp.v)	TB	Terminal block (O mark)
Thi-A	Thermistor	CnA-Z	Connector
Thi-R1	Thermistor	■ mark	Closed-end connector
Thi-R2	Thermistor		
Thi-R3	Thermistor		
ThC	Thermistor		
SW1	Indoor unit address ten's place		
SW2	Indoor unit address ten's place		
	Outdoor unit address ten's place		
	Outdoor unit address unit's place		
	Model capacity setting		
	Transformer		
	Fuse		
	Indication lamp (Red)		
	Indication lamp (Green)		
	Operation output (DC12V output)		
	Heating output (DC12V output)		
	Thermo ON output (DC12V output)		

Color marks			
Mark	Color	Mark	Color
BK	Black	WH	White
BL	Blue	Y	Yellow
BR	Brown	P	Pink
OR	Orange	Y/GN	Yellow/Green
RD	Red		

Function of switches		
Mark	Input	Function
SW5-3	ON	Reverse Invalid
	OFF	Run stop
SW5-4	ON	Emergency stop signal: vali
	OF	Emergency stop signal: Invalid

FDKA71KXE4A



Blower fan tap switch

When increasing of static pressure is required, the following two methods are available to switch the blower fan tap. Switch to the high-speed tap with one of these methods.

- ① Set SW9-4 provided on the indoor unit PCB to ON.

SW9-4	ON	Fan control, high speed (High ceiling)
	OFF	Fan control, standard

- ② By means of function setting from the remote controller unit, set the setting ① of "I/J FUNCTION▲" (indoor unit function) to "HI CEILING 1" (high-speed tap).

Function number ①	Function description ②	Setting ③
01	HI CEILING SET	HI CEILING 1

Meaning of marks

Mark	Parts name	Mark	Parts name
FMI	Fan motor	XR3	Thermo ON output (DC12V output)
CFI	Capacitor for FMI	XR4	Inspection output (DC12V output)
LM	Louver motor	XR5	Remote operation input (volt-free contact)
SM	Stepping motor(For Exp.v)	X1,2,3,6	Auxiliary relay (For FM)
Thi-A	Thermistor	X5	Auxiliary relay (For LM)
Thi-R1	Thermistor	TB	Terminal block (O mark)
Thi-R2	Thermistor	CnA-Z	Connector
Thi-R3	Thermistor	■mark	Closed-end connector
ThC	Thermistor		
SW1	Indoor unit address ten's place		

Color marks		Function of switches	
Mark	Color	Mark	Function
BK	Black	ON	Input
BL	Blue	OFF	Reverse Invalid
BR	Brown	SW5-3	OFF signal
OR	Orange	ON	Emergency stop signal: valid
RD	Red	SW5-4	OFF
			Emergency stop signal: invalid

3.11.5 Noise level

Notes (1) The data are based on the following conditions.

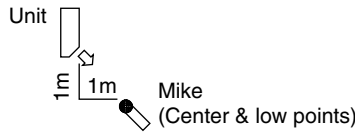
Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB

(2) The data in the chart are measured in an anechoic room.

(3) The noise levels measured in the field are usually higher than the data because of reflection.

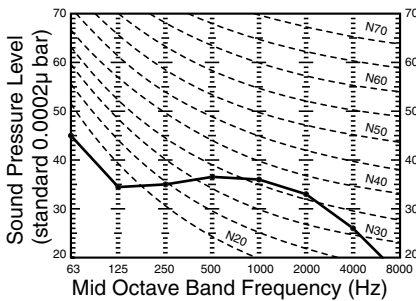
Measured based on JIS B 8616

Mike position as below



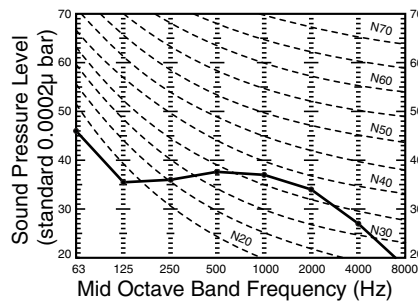
Models FDKA22KXE4A, 28KXE4A

Noise level 40 dB (A) at HIGH
36 dB (A) at MEDIUM
32 dB (A) at LOW



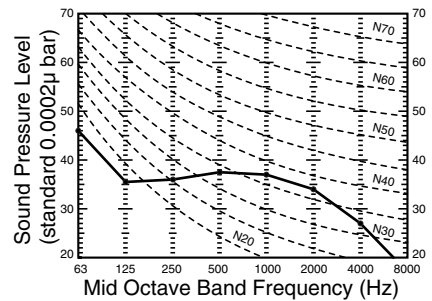
Model FDKA36KXE4A

Noise level 41 dB (A) at HIGH
37 dB (A) at MEDIUM
33 dB (A) at LOW



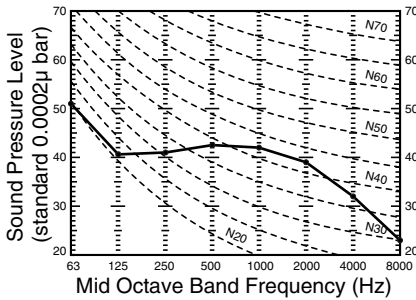
Model FDKA45KXE4A

Noise level 41 dB (A) at HIGH
37 dB (A) at MEDIUM
32 dB (A) at LOW



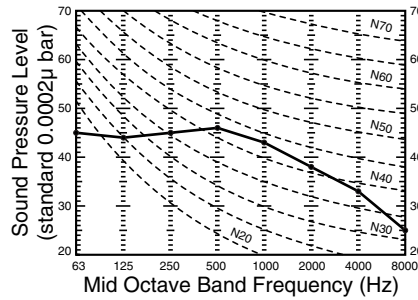
Model FDKA56KXE4A

Noise level 46 dB (A) at HIGH
43 dB (A) at MEDIUM
39 dB (A) at LOW



Model FDKA71KXE4A

Noise level 47 dB (A) at HIGH
44 dB (A) at MEDIUM
40 dB (A) at LOW



3.12 Floor Standing Exposed Type (FDFLA/FDFUA)

3.12.1 Specifications

3.12.1.1 Floor standing exposed type (FDFLA)

FDFLA28KXE4, 45KXE4, 71KXE4

Item		Models	FDFLA28KXE4	FDFLA45KXE4	FDFLA71KXE4
Nominal cooling capacity ^{*1}	kW		2.8	4.5	7.1
Nominal heating capacity ^{*2}	kW		3.2	5.0	8.0
Power source			1 Phase 220/240V 50Hz		
Noise level	dB(A)		Hi: 41 Me: 38 Lo: 36	Hi: 43 Me: 41 Lo: 40	
Exterior dimensions (Height × Width × Depth)	mm		630 × 1196 × 225		630 × 1481 × 225
Net weight	kg		32		40
Refrigerant equipment	Heat exchanger		Louver fins & inner grooved tubing		
	Refrigerant control		Electronic Expansion Valve		
Air handling equipment	Fan type & Q'ty		Centrifugal fan × 2		
	Motor & Q'ty	W	30 × 1	40 × 1	
	Starting method		Line starting		
	Air flow (Standard)	CMM	Hi: 12 Me: 11 Lo: 10	Hi: 14 Me: 12 Lo: 10	Hi: 18 Me: 15 Lo: 12
	Fresh air intake		Not possible		
	Air filter & Q'ty		Polypropylene net *2 (Washable)		
Shock & vibration isolator			Rubber sleeve (for fan motor)		
Insulation (noise & heat)			Polyurethane foam		
Operation control Operation switch			Remote control switch (Optional: RC-E1)		
Room temperature control			Thermostat by electronics		
Safety equipment			Internal thermostat for fan motor. Frost protection thermostat		
Installation data	Refrigerant piping size	mm (in)	Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")	Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
	Connecting method		Flare piping		
	Drain hose		Connectable with PT20A		
	Insulation for piping		Necessary (both Liquid & Gas lines)		
Accessories			Mounting kit, Drain hose		
Optional parts			—		

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19°C	35°C	24°C	ISO-T1
Heating ^{*2}		20°C	—	7°C	6°C	

3.12.1.2 Floor standing hidden type (FDFUA)
FDFUA28KXE4, 45KXE4, 71KXE4

Item		Models		FDFUA28KXE4	FDFUA45KXE4	FDFUA56KXE4	FDFUA71KXE4
Nominal cooling capacity ^{*1}	kW			2.8	4.5	5.6	7.1
Nominal heating capacity ^{*2}	kW			3.2	5.0	6.3	8.0
Power source				1 Phase 220/240V 50Hz			
Noise level	dB(A)			Hi: 41 Me: 38 Lo: 36	Hi: 43 Me: 41 Lo: 40		
Exterior dimensions (Height × Width × Depth)	mm			630 × 1077 × 225			630 × 1362 × 225
Net weight	kg			25			32
Refrigerant equipment	Heat exchanger			Louver fins & inner grooved tubing			
	Refrigerant control			Electronic Expansion Valve			
Air handling equipment	Fan type & Q'ty			Centrifugal fan × 2			
	Motor & Q'ty	W		30 × 1	40 × 1		
	Starting method			Line starting			
	Air flow (Standard)	CMM		Hi: 12 Me: 11 Lo: 10	Hi: 14 Me: 12 Lo: 10		Hi: 18 Me: 15 Lo: 12
	Fresh air intake			Not possible			
	Air filter & Q'ty			Polypropylene net *2 (Washable)			
Shock & vibration isolator				Rubber sleeve (for fan motor)			
Insulation (noise & heat)				Polyurethane foam			
Operation control Operation switch				Remote control switch (Optional: RC-E1)			
Room temperature control				Thermostat by electronics			
Safety equipment				Internal thermostat for fan motor. Frost protection thermostat			
Installation data	Refrigerant piping size	mm (in)		Liquid line: φ 6.35 (1/4") Gas line: φ 9.52 (3/8")	Liquid line: φ 6.35 (1/4") Gas line: φ 12.7 (1/2")		Liquid line: φ 9.52 (3/8") Gas line: φ 15.88 (5/8")
	Connecting method			Flare piping			
	Drain hose			Connectable with PT20A			
	Insulation for piping			Necessary (both Liquid & Gas lines)			
Accessories				Mounting kit, Drain hose			
Optional parts				—			

Product Specifications

*1 ~ 3The data are measured at the following conditions.

Operation	Item	Indoor air temperature		Outdoor air temperature		Standards
		DB	WB	DB	WB	
Cooling ^{*1}		27°C	19°C	35°C	24°C	ISO-T1
Heating ^{*2}		20°C	—	7°C	6°C	

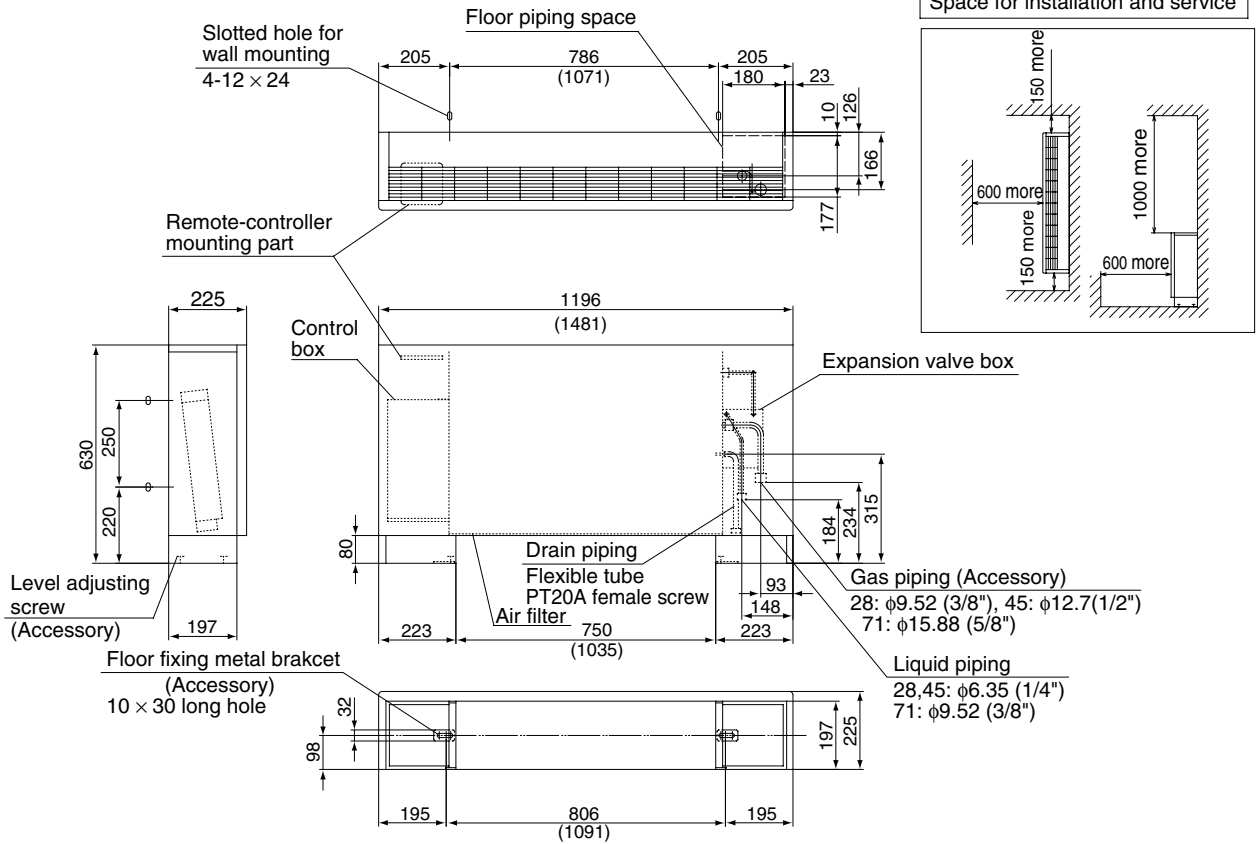
3.12.2 Exterior dimensions

3.12.2.1 Floor standing exposed type (FDFLA)

FDFLA28KXE4, 45KXE4, 71KXE4

Unit : mm

Note (1) Value in () indicates 71 type.

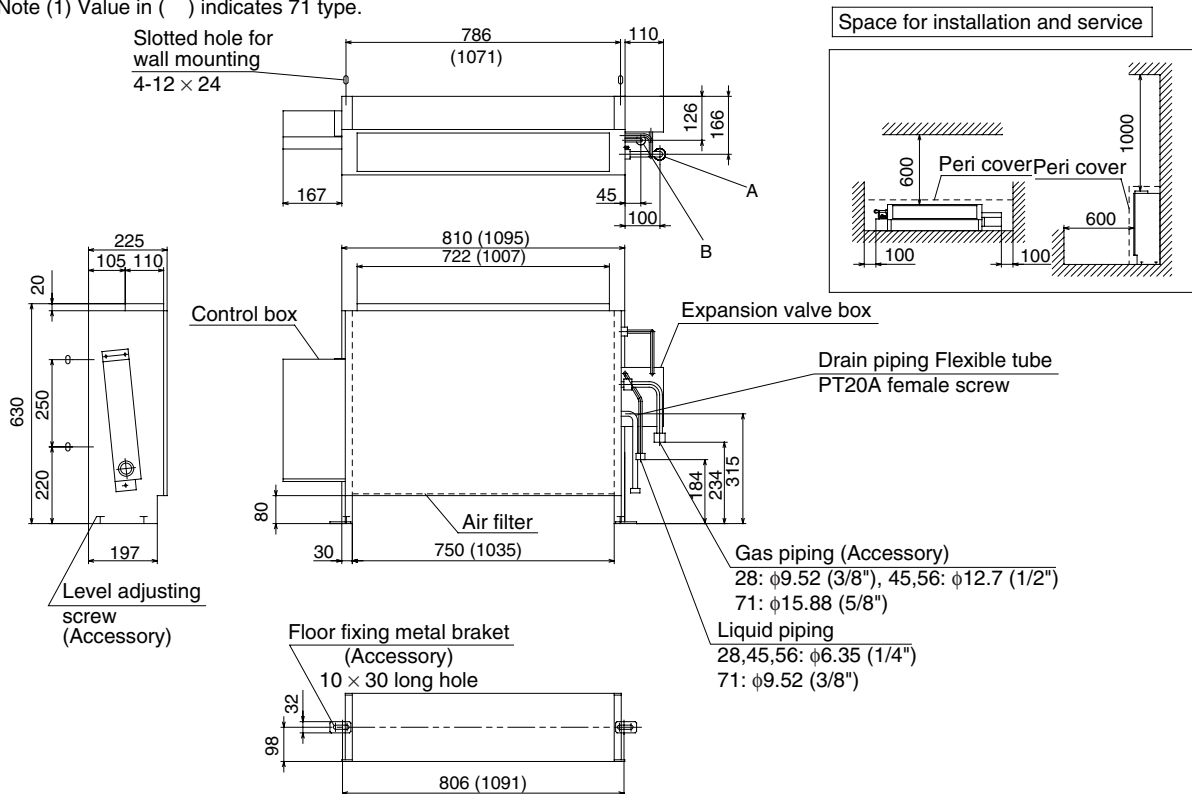


3.12.2.2 Floor standing hidden type (FDFA)

FDFA28KXE4, 45KXE4, 56KXE4, 71KXE4

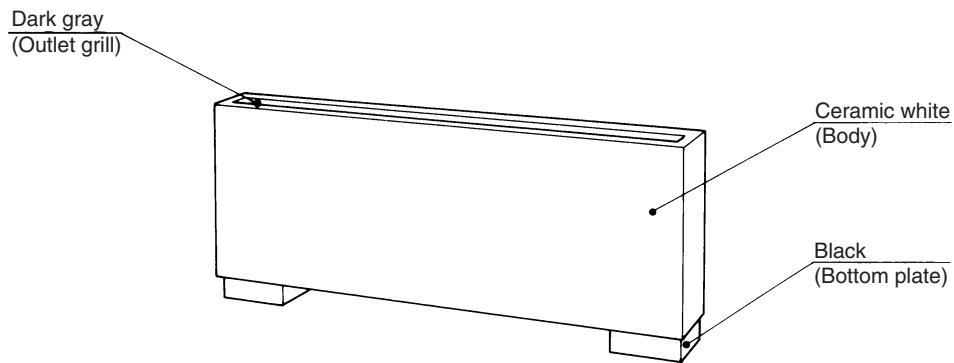
Unit : mm

Note (1) Value in () indicates 71 type.



3.12.3 Exterior appearance

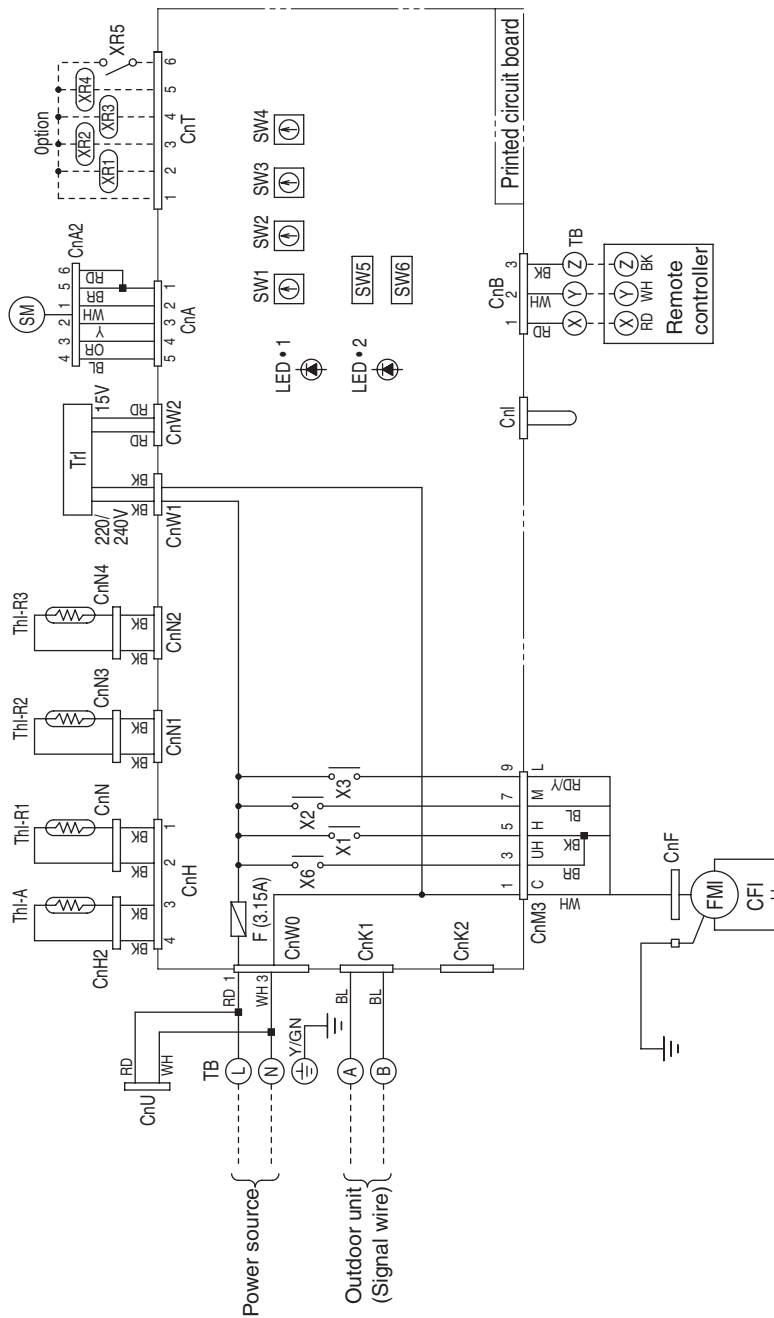
3.12.3.1 Floor standing exposed type (FDFL)



3.12.3.2 Floor standing hidden type (FDFU).....Zinc steel plate

3.12.4 Electrical wiring

All models



Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
FMI	Fan motor	SW3	Outdoor unit address ten's place	XR3	Thermo ON output (DC12V output)
CFI	Capacitor for FMI	SW4	Outdoor unit address unit's place	XR4	Inspection output (DC12V output)
SM	Stepping motor (For Exp.v)	SW6	Model capacity setting	XR5	Remote operation input (volt-free contact)
Thi-A	Thermistor	Tr1	Transformer	X1,2,3,6	Auxiliary relay (For FM)
Thi-R1	Thermistor	F	Fuse	TB	Terminal block (O mark)
Thi-R2	Thermistor	LED1	Indication lamp (Red)	CnA-Z	Connector
Thi-R3	Thermistor	LED2	Indication lamp (Green)	■mark	Closed-end connector
SW1	Indoor unit address ten's place	XR1	Operation output (DC12V output)		
SW2	Indoor unit address unit's place	XR2	Heating output (DC12V output)		

Color marks

Mark	Color	Mark	Color
BK	Black	RD/Y	Red/Yellow
BL	Blue	WH	White
BR	Brown	Y	Yellow
OR	Orange	Y/GN	Yellow/Green
RD	Red		

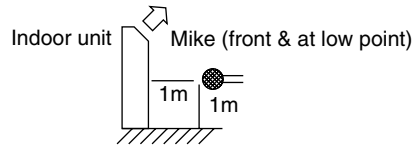
Function of switches

Mark	Function
ON	Emergency stop signal: Valid
OFF	Emergency stop signal: Invalid

3.12.5 Noise level

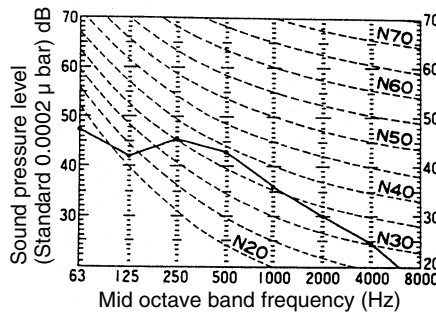
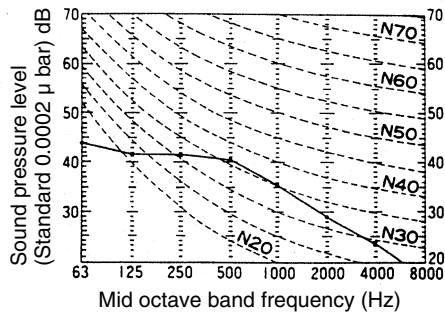
- Note (1) The data are based on the following conditions.
Ambient air temperature: Indoor unit 27°C DB, 19°C WB. Outdoor unit 35°C DB
- (2) The data in the chart are measured in an anechoic room.
- (3) The noise levels measured in the field are usually higher than the data because of reflection.

Measured based on JIS B 8616
Mike position as below



Models FDFLA28KXE4, FDFUA28KXE4
Noise level 41 dB (A) at HIGH
38 dB (A) at MEDIUM
36 dB (A) at LOW

Models FDLA45KXE4, 71KXE4,
FDFUA45KXE4, 56KXE4, 71KXE4
Noise level 43 dB (A) at HIGH
41 dB (A) at MEDIUM
40 dB (A) at LOW



3.13 Exchange Unit (SAF)

3.13.1 Specifications

SAF250E4, 350E4, 500E4

Item		Model	SAF250E4	SAF350E4	SAF500E4	
Power source			1 Phase 220~240V/220V 50/60Hz			
Exterior dimensions (Height × Width × Depth)		mm	270 × 882 × 599	270 × 882 × 804	270 × 962 × 904	
Exterior appearance			Galvanized steel sheet			
Operation data	Power input	W	99-114/118	124-137/149	169-188/202	
	Running current	A	0.46-0.48/0.55	0.59-0.60/0.75	0.79-0.81/1.00	
Capacity	UHi	Enthalpy exchange efficiency	Cooling	63	66	62
			Heating	70	69	67
		Temperature exchange efficiency	75	75	75	
	Hi	Enthalpy exchange efficiency	Cooling	63	66	62
			Heating	70	69	67
		Temperature exchange efficiency	75	75	75	
	Lo	Enthalpy exchange efficiency	Cooling	66/68	69/71	77/79
			Heating	73/75	71/73	67/69
		Temperature exchange efficiency	77/78	77/79	75/79	
Motor & Q' ty		W	20 × 2	18 × 2	35 × 2	
Air handling equipment Fan type & Q' ty			Sirroco fan × 2			
Air flow	UHi	m ³ /h	250	350	500	
	Hi		250	350	500	
	Lo		170/135	280/240	370/310	
Available static pressure	UHi	Pa	90/125	95/155	105/165	
	Hi		80/100	65/90	70/85	
	Lo		37/30	42/43	38/33	
Air filter	Outside intake air		Protection for element (Washable) PS400			
	Exhaust air					
Operation time for air filter		h	3000			
Noise level	UHi	dB(A)	27-28/28	31-32/33	33-34/35	
	Hi		26-27/26	29-30/30	31-32/31	
	Lo		21-22/21	25-26/22	25-26/23	
Net weight		kg	29	37	43	
Operation control	Operation switch		Control switch (Accessories)			
	Operation		Ventilation (ON/OFF)			
	Fan speed		Hi/Lo			
	Function		Heat exchange/Normal Ventilation			
Safety equipment			Internal thermostat for fan motor			

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

		Summer	Winter
Indoor side (Supply air)	DB	27°C	20°C
	WB	19°C	12.5°C
Outdoor side (Outside air)	DB	35°C	7°C
	WB	28.5°C	5°C
Unit around	DB	27°C	20°C

SAF800E4, 1000E4, 1000E4S

Item		Model	SAF800E4	SAF1000E4	
Power source			1 Phase 220~240V/220V 50/60Hz		
Exterior dimensions (Height × Width × Depth)		mm	388 × 1322 × 884	388 × 1322 × 1134	
Exterior appearance			Galvanized steel sheet		
Operation data	Power input	W	309-329/391	360-399	
	Running current	A	1.48-1.50/1.92	1.85-1.93	
Capacity	UHi	Enthalpy exchange efficiency	Cooling	65	65
			Heating	71	71
		Temperature exchange efficiency		75	75
	Hi	Enthalpy exchange efficiency	Cooling	65	65
			Heating	71	71
		Temperature exchange efficiency		75	75
	Lo	Enthalpy exchange efficiency	Cooling	68/69	68
			Heating	74/75	73
		Temperature exchange efficiency		76/77	76
Motor & Q' ty		W	81/117 × 2	118 × 2	
Air handling equipment Fan type & Q' ty			Sirroco fan × 2		
Air flow	UHi	m ³ /h	800	1000	
	Hi		800	1000	
	Lo		650/575	810	
Available static pressure	UHi	Pa	140/190	90	
	Hi		110/100	55	
	Lo		70/50	35	
Air filter	Outside intake air Exhaust air		Protection for element (Washable) PS400		
Operation time for air filter		h	3000		
Noise level	UHi	dB(A)	38-39/39	37.5-38.5	
	Hi		36.5-37.5/36	36-37	
	Lo		32-34/31	31-33	
Net weight		kg	71	83	
Operation control	Operation switch		Control switch (Accessories)		
	Operation		Ventilation (ON/OFF)		
	Fan speed		Hi/Lo		
	Function		Heat exchange/Normal Ventilation		
Safety equipment			Internal thermostat for fan motor		

Product Specifications

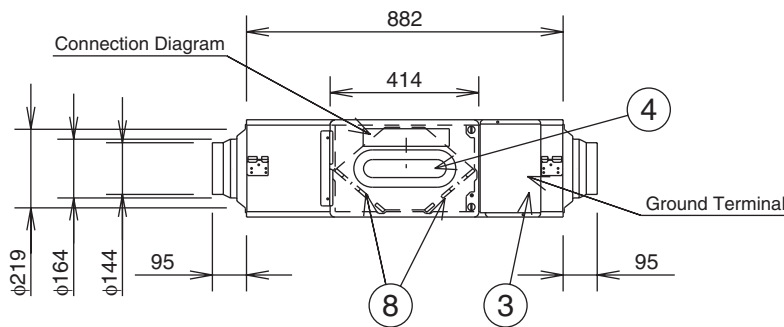
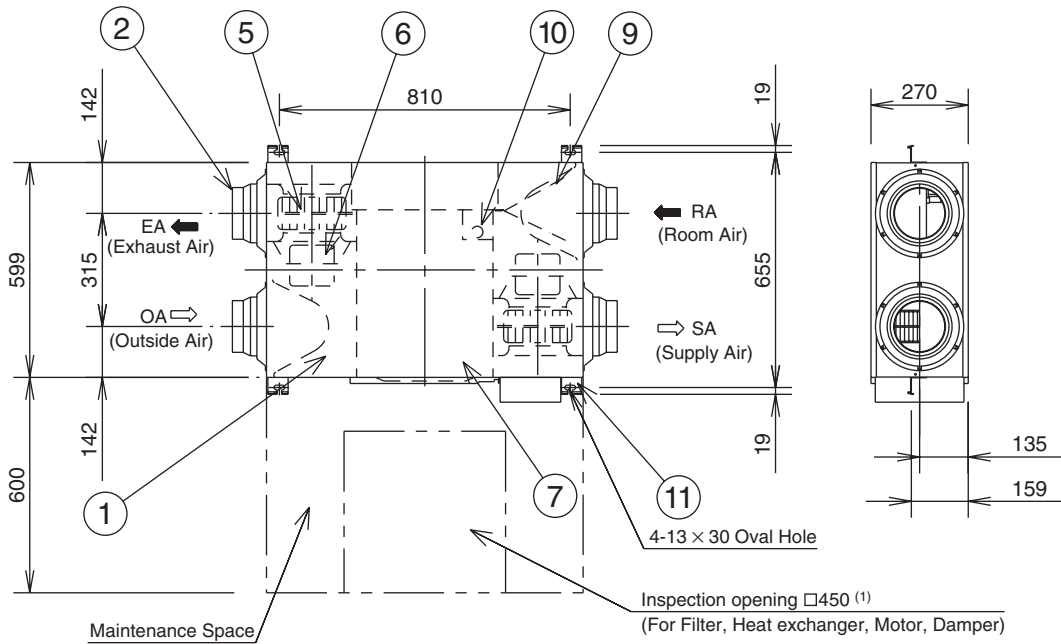
Notes (1) The data are measured at the following conditions.

		Summer	Winter
Indoor side (Supply air)	DB	27°C	20°C
	WB	19°C	12.5°C
Outdoor side (Outside air)	DB	35°C	7°C
	WB	28.5°C	5°C
Unit around	DB	27°C	20°C

3.13.2 Exterior dimensions

SAF250E4

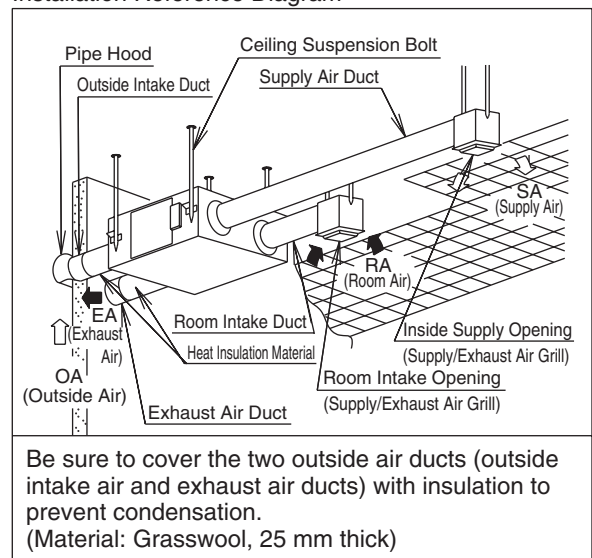
Unit : mm



No.	Name	Quantity	Material	Remarks
1	Frame	1	Zinc-plated Steel	
2	Adapter	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	1	Flame Retardant Paper + Plastic	Entire Heat Exchanger
8	Filter	2	Non-woven Cloth	Collection Efficiency Weighing 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.

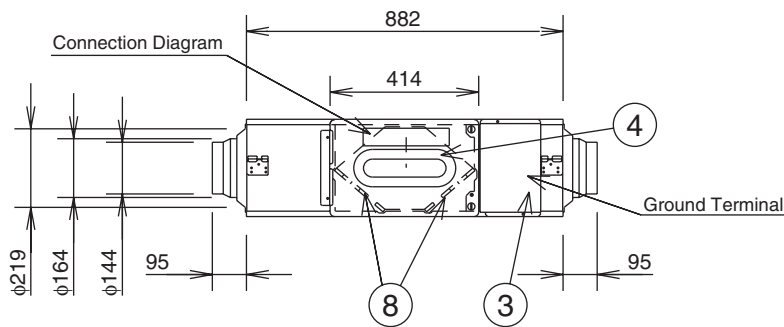
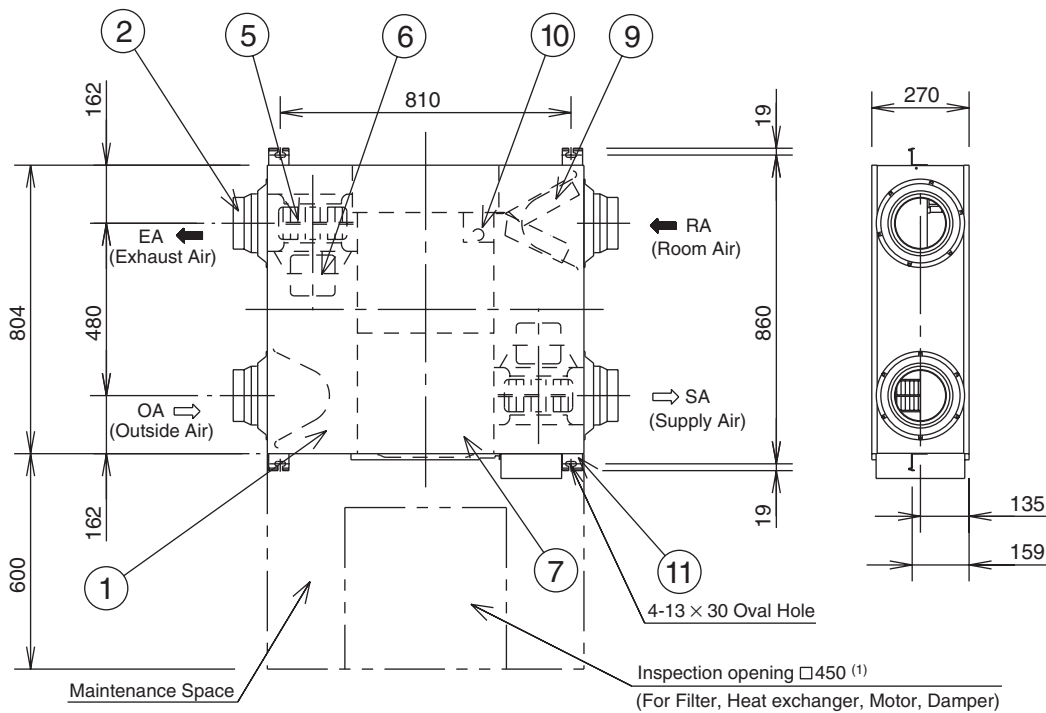
Installation Reference Diagram



Caution 1. Connection Duct: Nominal diameter φ150
 2. The above dimensions do not include the thickness of the insulation.

SAF350E4

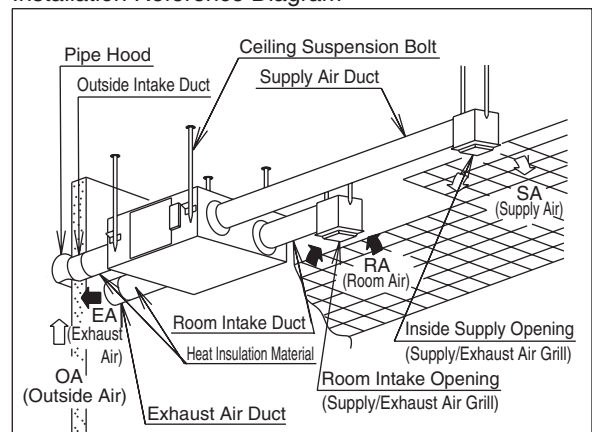
Unit : mm



No.	Name	Quantity	Material	Remarks
1	Frame	1	Zinc-plated Steel	
2	Adapter	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	Entire Heat Exchanger
8	Filter	2	Non-woven Cloth	Collection Efficiency Weighing 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.

Installation Reference Diagram



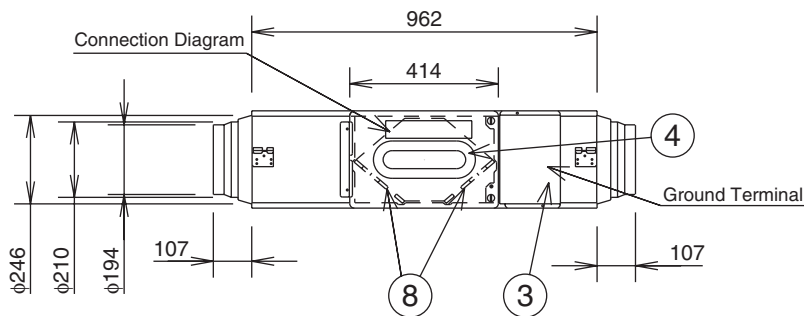
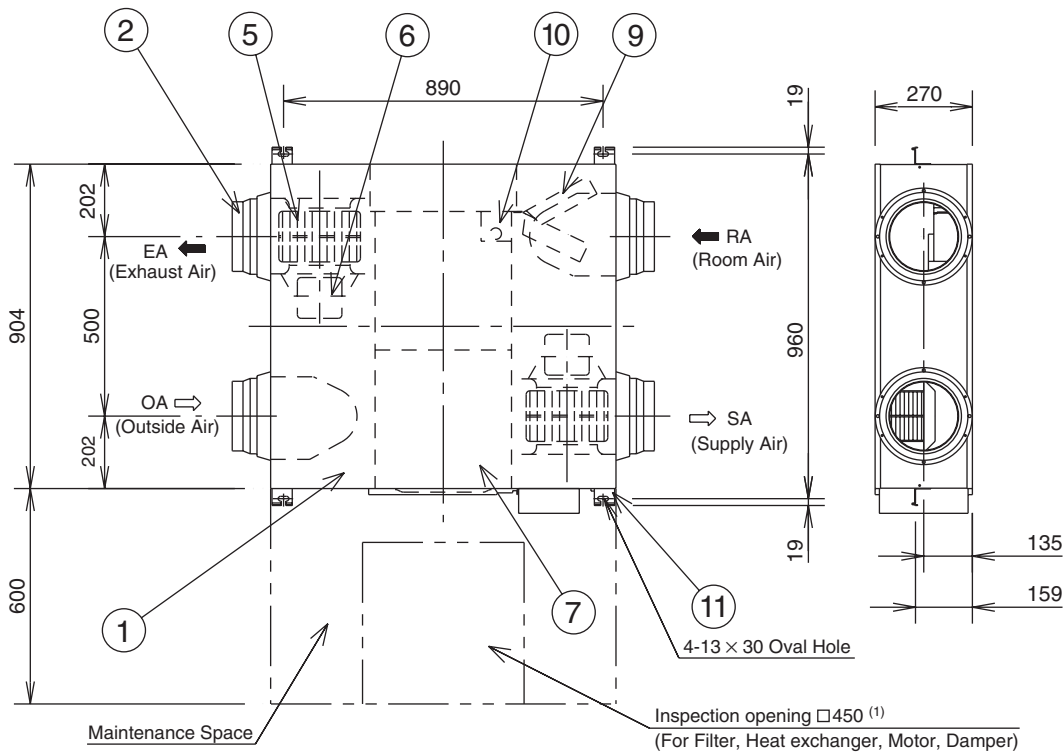
Be sure to cover the two outside air ducts (outside intake air and exhaust air ducts) with insulation to prevent condensation.
(Material: Grasswool, 25 mm thick)

Caution 1. Connection Duct: Nominal diameter φ150
2. The above dimensions do not include the thickness of the insulation.

Product Specifications

SAF500E4

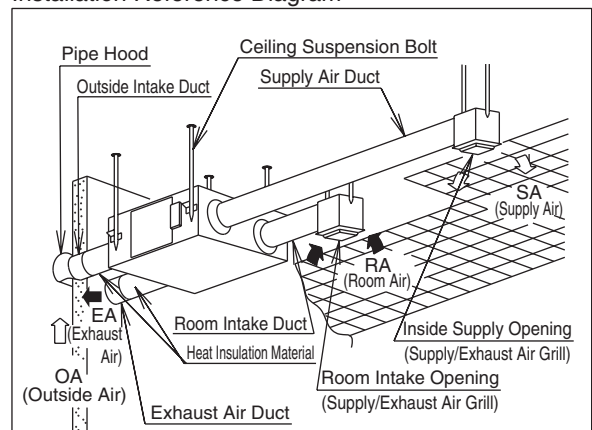
Unit : mm



No.	Name	Quantity	Material	Remarks
1	Frame	1	Zinc-plated Steel	
2	Adapter	4	Zinc-plated Steel	
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	Entire Heat Exchanger
8	Filter	2	Non-woven Cloth	Collection Efficiency Weighing 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.

Installation Reference Diagram



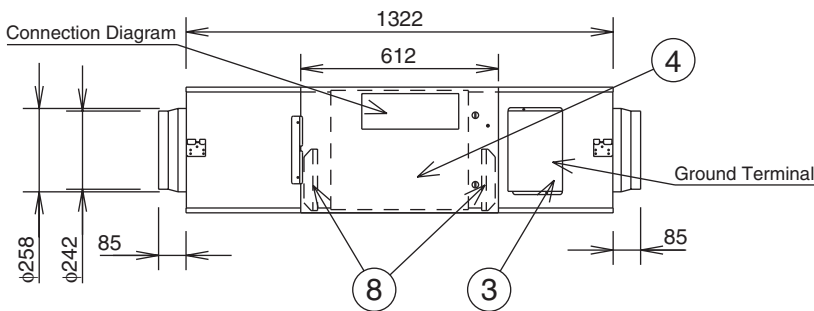
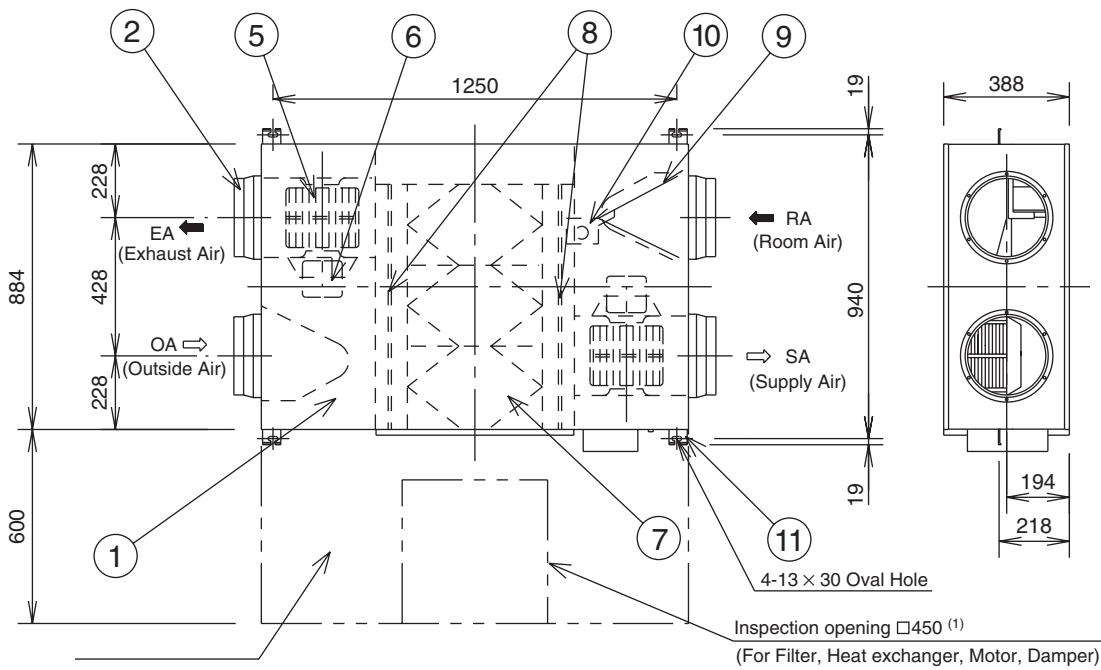
Be sure to cover the two outside air ducts (outside intake air and exhaust air ducts) with insulation to prevent condensation.
(Material: Grasswool, 25 mm thick)

Caution 1. Connection Duct: Nominal diameter $\phi 200$
2. The above dimensions do not include the thickness of the insulation.

SAF800E4

Unit : mm

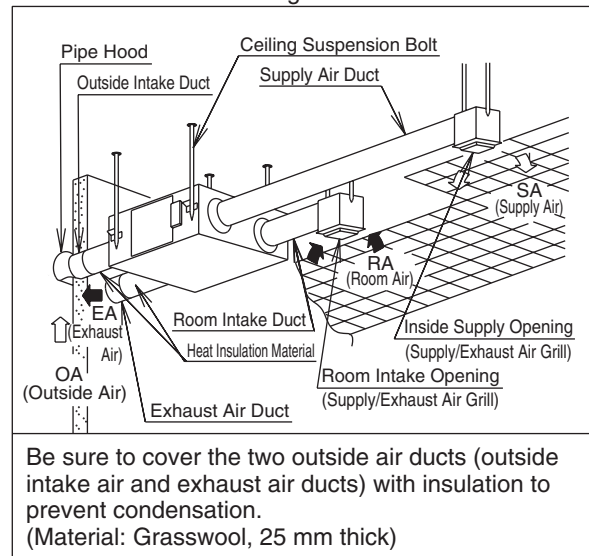
Product Specifications



No.	Name	Quantity	Material	Remarks
1	Frame	1	Zinc-plated Steel	
2	Adapter	4	Zinc-plated Steel	
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	Entire Heat Exchanger
8	Filter	2	Non-woven Cloth	Collection Efficiency Weighing 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.

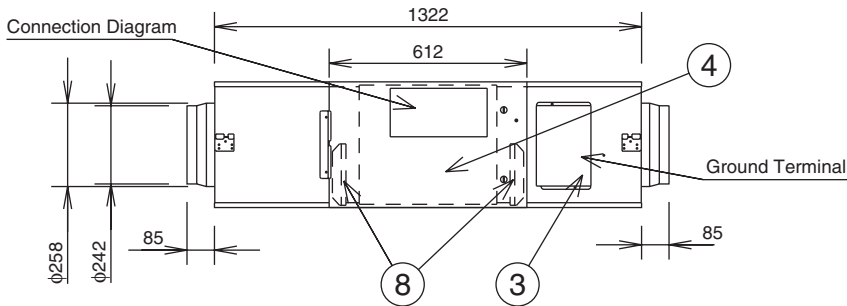
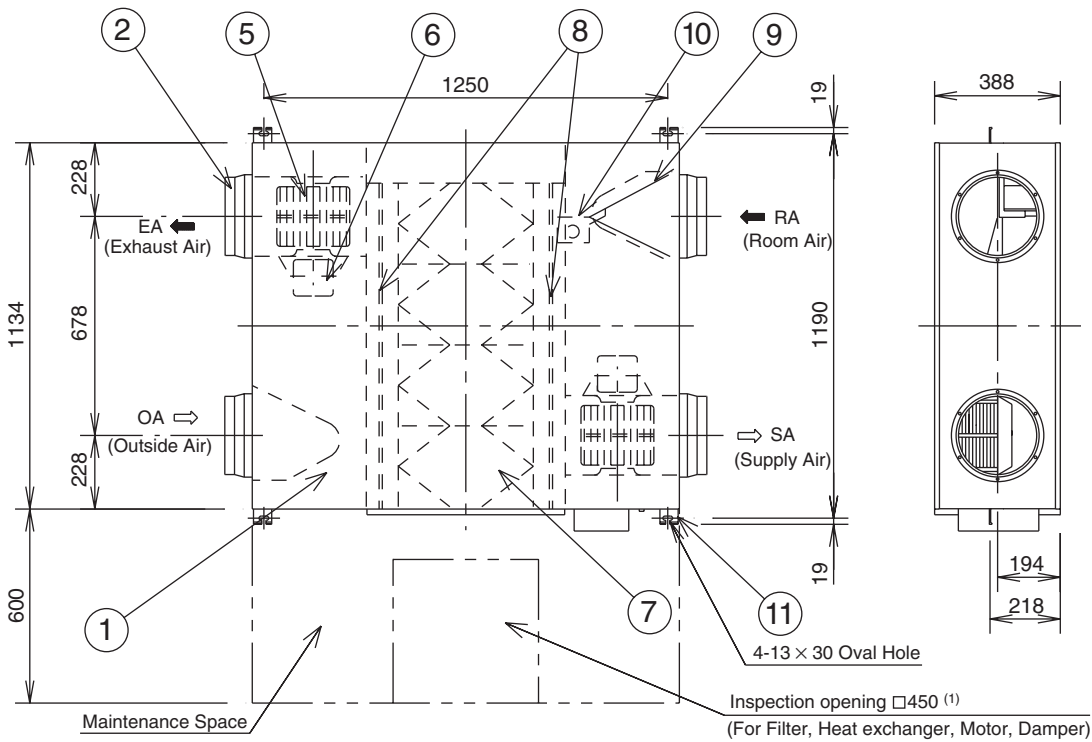
Installation Reference Diagram



Caution 1. Connection Duct: Nominal diameter $\phi 250$
 2. The above dimensions do not include the thickness of the insulation.

SAF1000E4

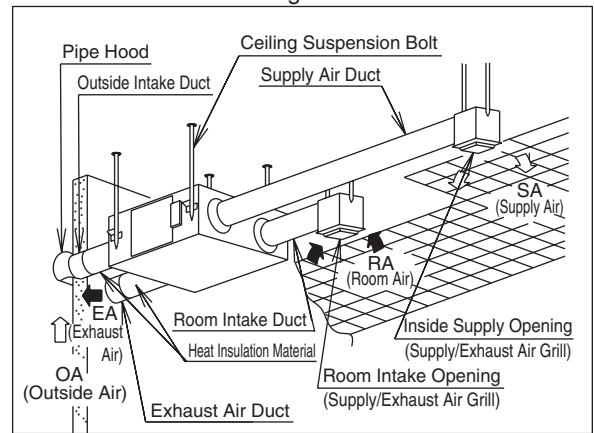
Unit : mm



No.	Name	Quantity	Material	Remarks
1	Frame	1	Zinc-plated Steel	
2	Adapter	4	Zinc-plated Steel	
3	Electrical Equipment Box	1		
4	Inspection Cover	1	Zinc-plated Steel	
5	Fan	2	ABS Resin	
6	Motor	2		
7	Heat Exchange Element	4	Flame Retardant Paper + Plastic	Entire Heat Exchanger
8	Filter	2	Non-woven Cloth	Collection Efficiency Weighing 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.

Installation Reference Diagram

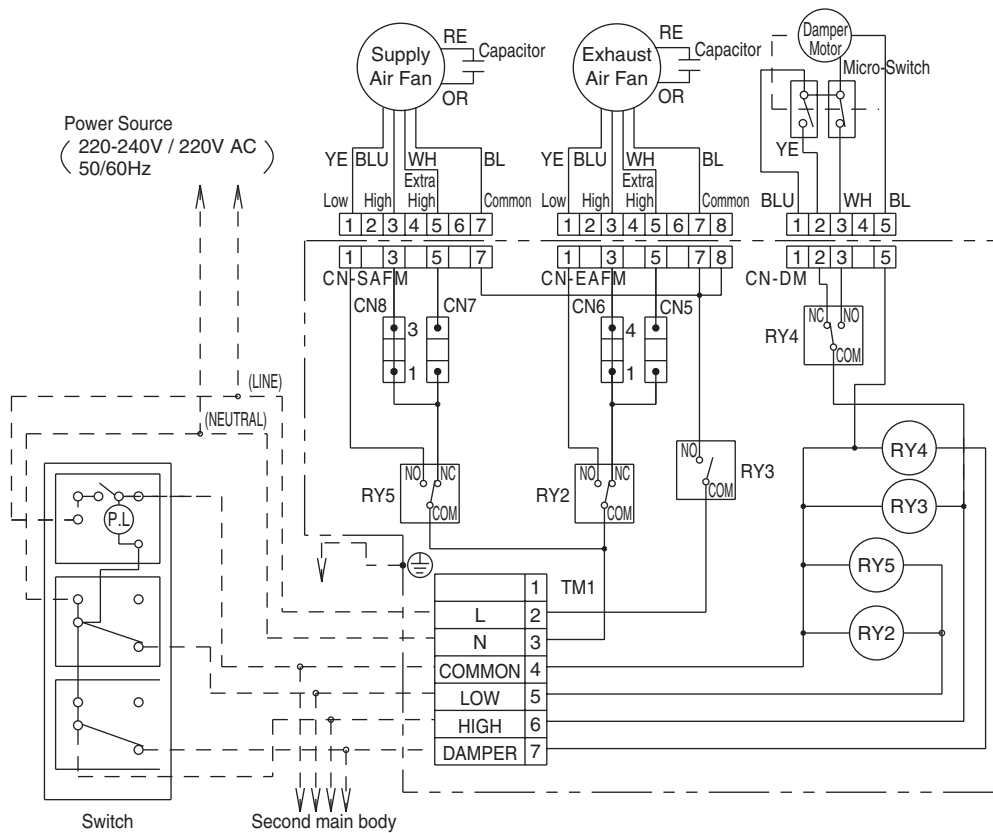


Be sure to cover the two outside air ducts (outside intake air and exhaust air ducts) with insulation to prevent condensation.
(Material: Grasswool, 25 mm thick)

Caution 1. Connection Duct: Nominal diameter $\phi 250$
2. The above dimensions do not include the thickness of the insulation.

3.13.3 Electrical wiring

SAF250E4, 350E4, 500E4



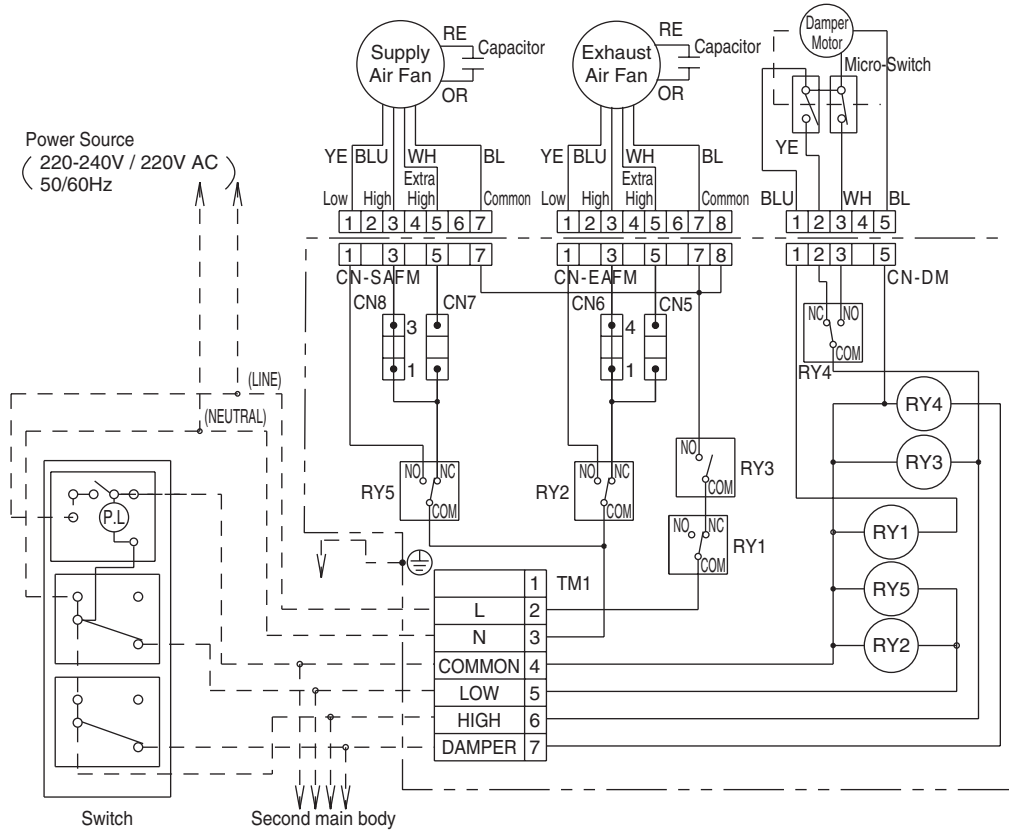
Model No.	Capacitor
SAF250E4	2.0 μ F 450VAC
SAF350E4	3.0 μ F 450VAC
SAF500E4	3.5 μ F 450VAC

Color mark

Mark	Color	Mark	Color	Mark	Color
BL	Black	GR	Gray	RE	Red
BLU	Blue	OR	Orange	WH	White
BR	Brown	PR	Purple	YE	Yellow

- Notes
- (1) Have an electrical contractor perform wire connections in hard wired units.
 - (2) It is set on the "Hi" or "Lo" notch when shipped from the factory.
If you use it set on the "UHi" notch, change CN6 to CN5 and change CN8 to CN7, respectively.
 - (3) Check the wiring connections carefully once more before turning on the power when installation is completed.
 - (4) Use IEC60227-4 compatible 1.6~2.0 mm or 2.0~3.1 mm PVC insulated cable with sheathing when wiring this unit.

SAF800E4, 1000E4



Model No.	Capacitor
SAF800E4	8.0μF 450VAC
SAF1000E4 (50Hz)	10.0μF 450VAC
SAF1000E4S (60Hz)	10.0μF 450VAC

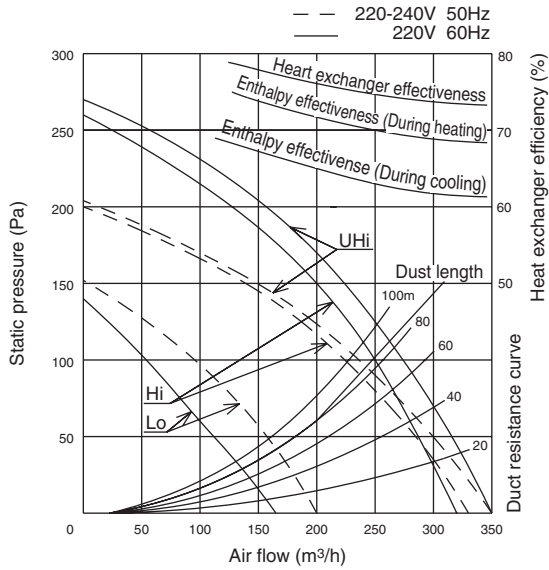
Color mark

Mark	Color	Mark	Color	Mark	Color
BL	Black	GR	Gray	RE	Red
BLU	Blue	OR	Orange	WH	White
BR	Brown	PR	Purple	YE	Yellow

- Notes
- (1) Have an electrical contractor perform wire connections in hard wired units.
 - (2) It is set on the "Hi" or "Lo" notch when shipped from the factory.
If you use it set on the "UHi" notch, change CN6 to CN5 and change CN8 to CN7, respectively.
 - (3) Check the wiring connections carefully once more before turning on the power when installation is completed.
 - (4) Use IEC60227-4 compatible 1.6~2.0 mm or 2.0~3.1 mm PVC insulated cable with sheathing when wiring this unit.

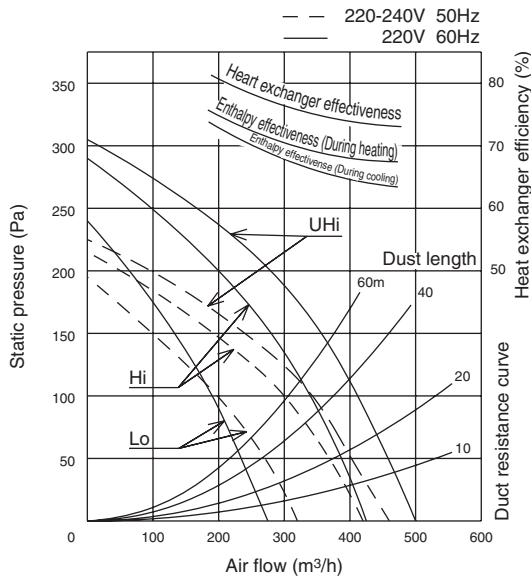
3.13.4 Characteristics of fan

SAF250E4



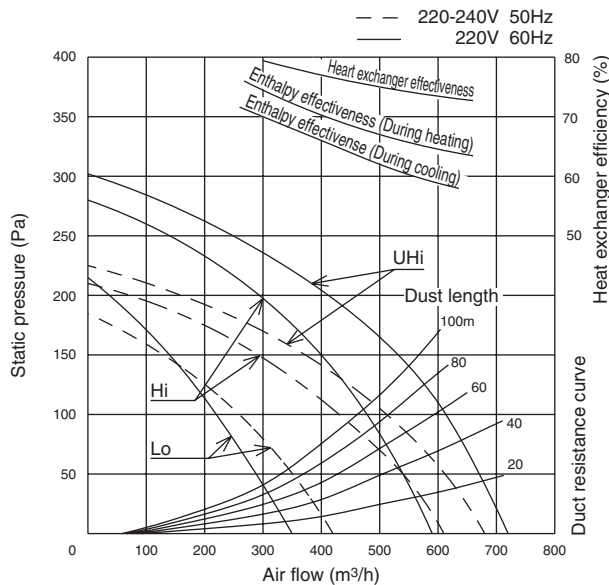
Note (1) Duct length is equivalent to the length of straight pipe when λ (Resistance coefficient) = 0.020 (Friction loss coefficient).

SAF350E4



Note (1) Duct length is equivalent to the length of straight pipe when λ (Resistance coefficient) = 0.020 (Friction loss coefficient).

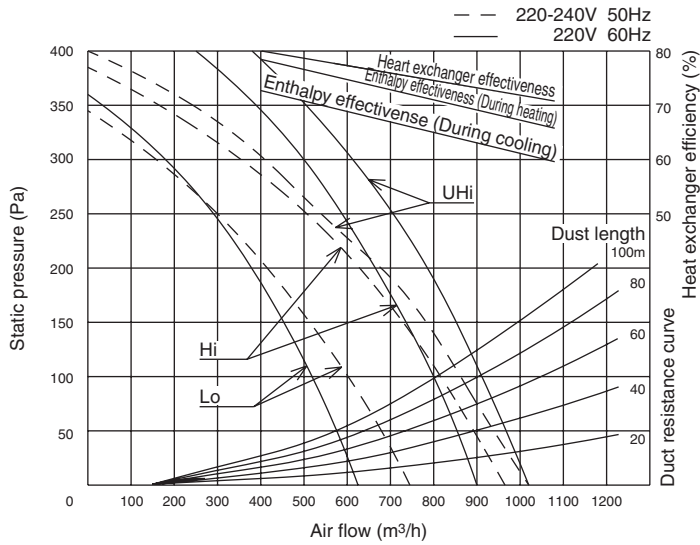
SAF500E4



Note (1) Duct length is equivalent to the length of straight pipe when λ (Resistance coefficient) = 0.020 (Friction loss coefficient).

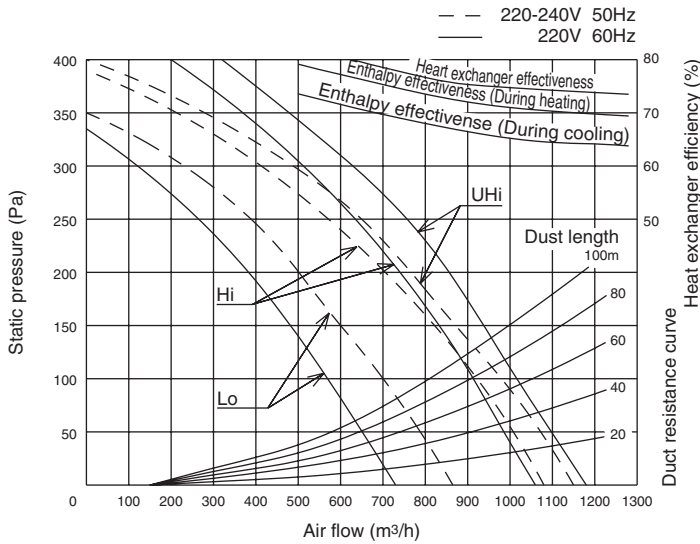
Product Specifications

SAF800E4



Note (1) Duct length is equivalent to the length of straight pipe when λ (Resistance coefficient) = 0.020 (Friction loss coefficient).

SAF1000E4



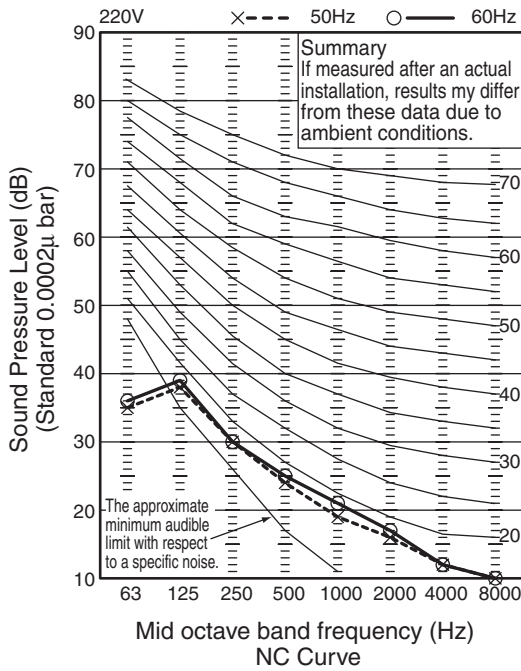
Note (1) Duct length is equivalent to the length of straight pipe when λ (Resistance coefficient) = 0.020 (Friction loss coefficient).

3.13.5 Noise level

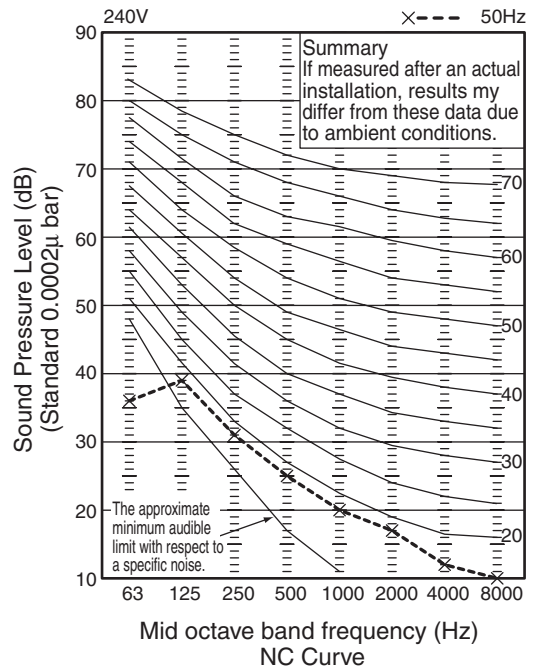
- Notes (1) The data are based on the following condition.
 Distance center & low point: 1.5 m.
 (2) The data in the chart are measured in an anechoic room.
 (3) The noise level measured in the field are usually higher than data because of reflection.

Model SAF250E4

Noise level 27/28 dB (A) at UHi
 26/26 dB (A) at Hi
 21/21 dB (A) at Lo

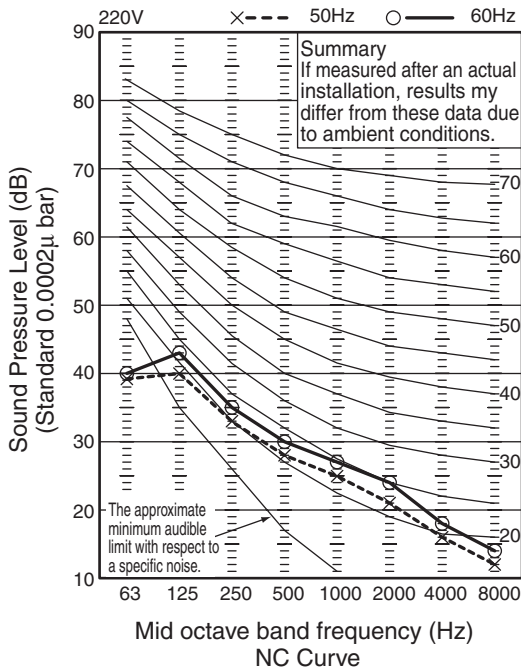


Noise level 28 dB (A) at UHi
 27 dB (A) at Hi
 27 dB (A) at Lo

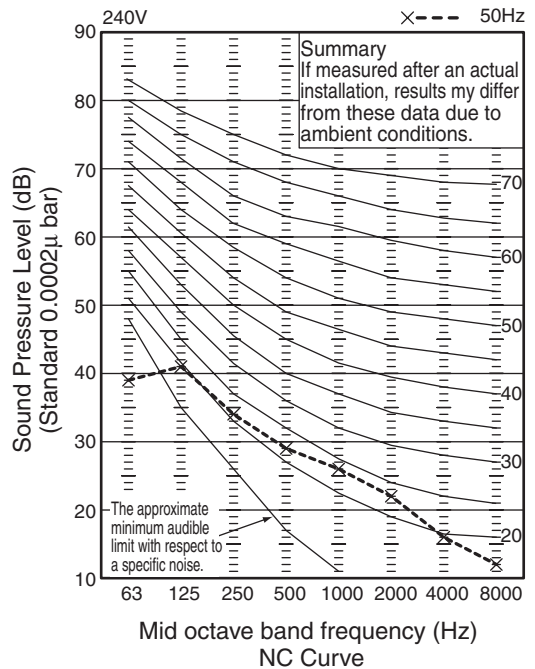


Model SAF350E4

Noise level 31/33 dB (A) at UHi
 29/30 dB (A) at Hi
 25/22 dB (A) at Lo

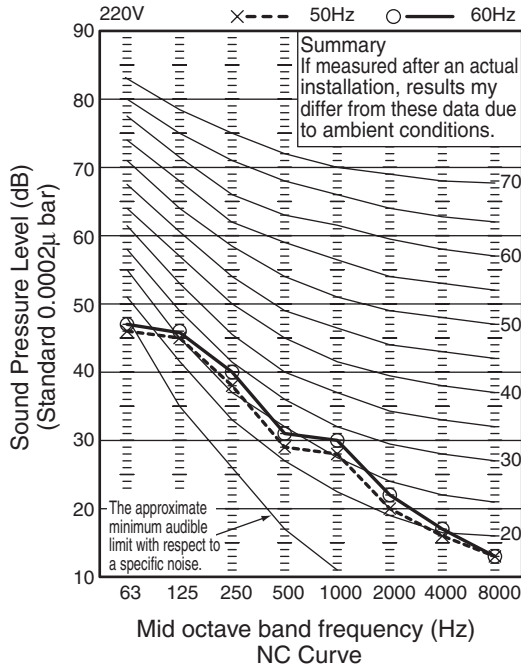


Noise level 32 dB (A) at UHi
 30 dB (A) at Hi
 26 dB (A) at Lo

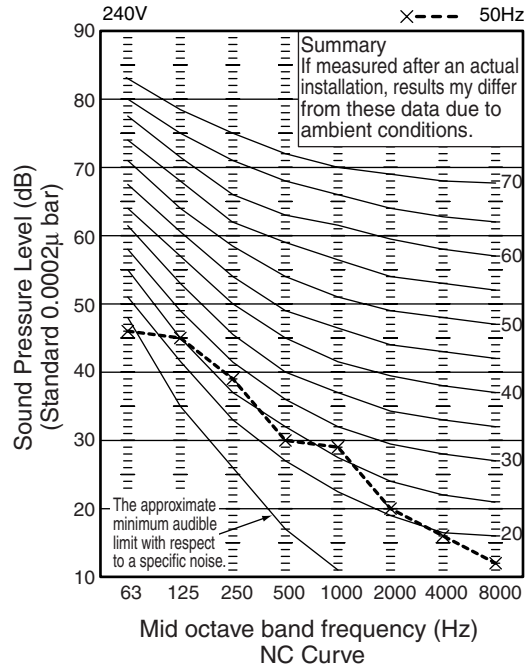


Model SAF500E4

Noise level 33/35 dB (A) at UHi
 31/31 dB (A) at Hi
 25/23 dB (A) at Lo

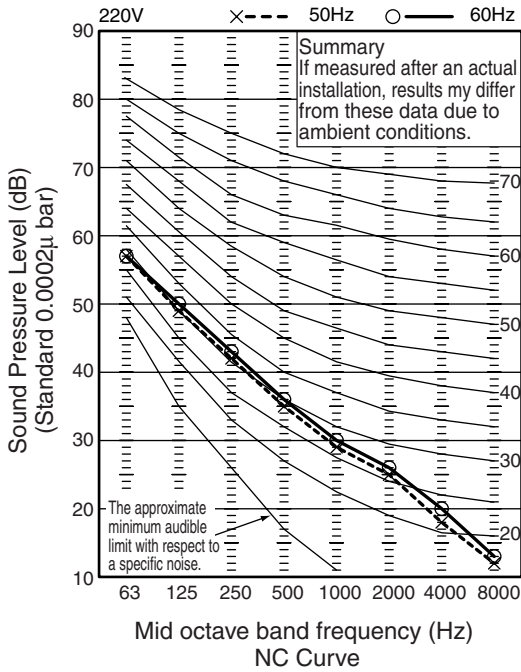


Noise level 34 dB (A) at UHi
 32 dB (A) at Hi
 26 dB (A) at Lo

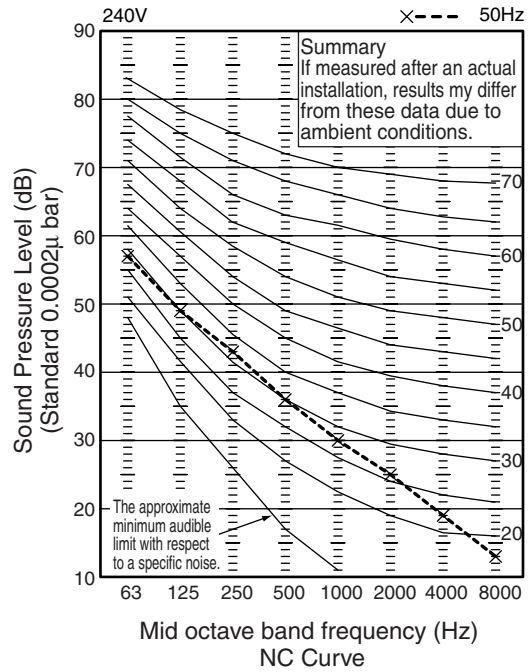


Model SAF800E4

Noise level 38/39 dB (A) at UHi
 36.5/36 dB (A) at Hi
 32/31 dB (A) at Lo

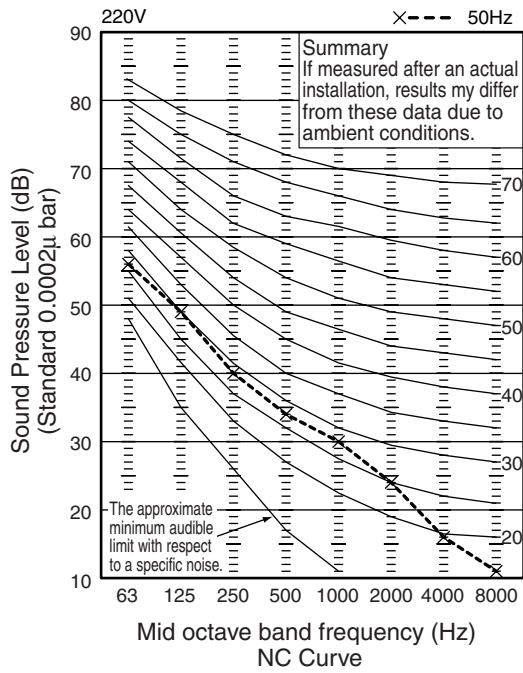


Noise level 39 dB (A) at UHi
 37.5 dB (A) at Hi
 34 dB (A) at Lo

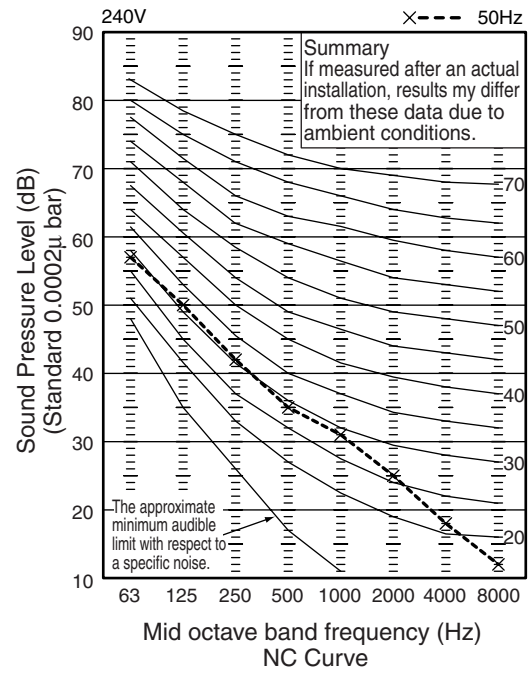


Model SAF1000E4

Noise level 37.5 dB (A) at UHi
 36 dB (A) at Hi
 31 dB (A) at Lo



Noise level 38.5 dB (A) at UHi
 37 dB (A) at Hi
 33 dB (A) at Lo



Product Specifications

3.14 Operating characteristic of indoor unit

FDTA Series

(220/240V)

Models		FDTA							
Item		28	36	45	56	71	90	112	140
Power input (kW)		Cooling: 0.05/0.05, Heating: 0.04/0.05		0.05/0.05		0.06/0.07	0.10/0.11	0.20/0.24	0.23/0.27
Running current (A)		0.23				0.32/0.30	0.46/0.46	0.90/0.98	1.03/1.13

FDTCA Series

(220/240V)

Models		FDTCA Series				
Item		22	28	36	45	56
Power consumption (kW)		0.027/0.027		0.034/0.034	0.043/0.043	0.046/0.046
Running current (A)		0.10/0.09		0.11/0.10	0.15/0.13	0.15/0.14

FDTWA Series

(220/240V)

Models		FDTWA						
Item		28	45	56	71	90	112	140
Power input (kW)		0.09/0.10			0.10/0.11	0.12/0.13	0.18/0.20	0.20/0.24
Running current (A)		0.43/0.44			0.48/0.50	0.57/0.59	0.86/0.89	0.90/0.98

FDTQA Series

(220/240V)

Models		FDTQA (direct blow panel)			FDTQA (duct panel)		
Item		22	28	36	22	28	36
Power input (kW)		0.045/0.050			0.050/0.055		
Running current (A)		0.21/0.22			0.23/0.24		

FDTSA Series

(220/240V)

Models		FDTSA	
Item		45	71
Power input (kW)		0.09/0.11	0.12/0.15
Running current (A)		0.43/0.46	0.58/0.63

FDRA Series

(220/240V)

Models		FDRA					
Item		45	56	71	90	112	140
Power input (kW)		0.14/0.16		0.15/0.17	0.16/0.19	0.24/0.28	0.28/0.32
Running current (A)		0.63/0.67		0.68/0.71	0.73/0.79	1.07/1.17	1.28/1.32

FDQMA, FDUMA Series

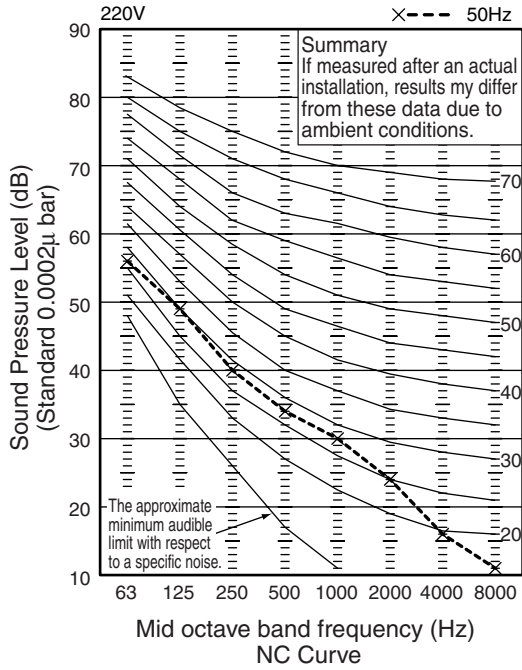
(220/240V)

Models		FDQMA			FDUMA					
Item		22	28	36	45	56	71	90	112	140
Power input (kW)		0.050/0.055			0.14/0.16		0.15/0.17	0.16/0.19	0.24/0.28	0.28/0.32
Running current (A)		0.23/0.24			0.63/0.67		0.68/0.71	0.73/0.79	1.07/1.17	1.28/1.32

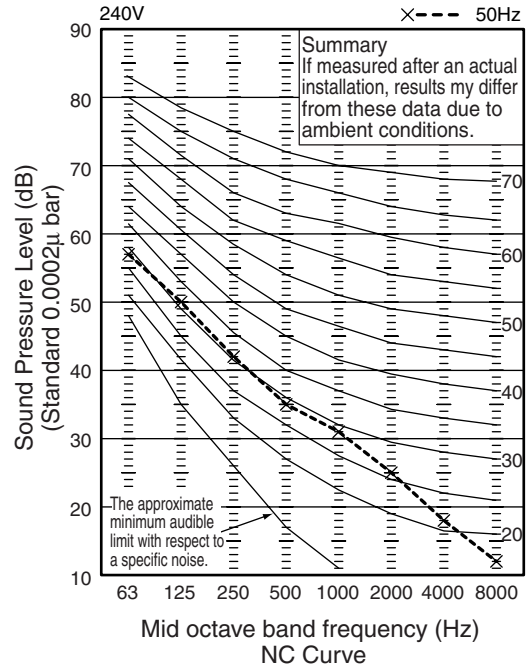
Note (1) The above table is common for both cooling and heating.

Model SAF1000E4

Noise level 37.5 dB (A) at UHi
 36 dB (A) at Hi
 31 dB (A) at Lo



Noise level 38.5 dB (A) at UHi
 37 dB (A) at Hi
 33 dB (A) at Lo



Product Specifications

3.14 Operating characteristic of indoor unit

FDTA Series

(220/240V)

Models		FDTA							
Item		28	36	45	56	71	90	112	140
Power input (kW)		Cooling: 0.05/0.05, Heating: 0.04/0.05		0.05/0.05		0.06/0.07	0.10/0.11	0.20/0.24	0.23/0.27
Running current (A)		0.23				0.32/0.30	0.46/0.46	0.90/0.98	1.03/1.13

FDTCA Series

(220/240V)

Models		FDTCA Series				
Item		22	28	36	45	56
Power consumption (kW)		0.027/0.027		0.034/0.034	0.043/0.043	0.046/0.046
Running current (A)		0.10/0.09		0.11/0.10	0.15/0.13	0.15/0.14

FDTWA Series

(220/240V)

Models		FDTWA						
Item		28	45	56	71	90	112	140
Power input (kW)		0.09/0.10			0.10/0.11	0.12/0.13	0.18/0.20	0.20/0.24
Running current (A)		0.43/0.44			0.48/0.50	0.57/0.59	0.86/0.89	0.90/0.98

FDTQA Series

(220/240V)

Models		FDTQA (direct blow panel)			FDTQA (duct panel)		
Item		22	28	36	22	28	36
Power input (kW)		0.045/0.050			0.050/0.055		
Running current (A)		0.21/0.22			0.23/0.24		

FDTSA Series

(220/240V)

Models		FDTSA	
Item		45	71
Power input (kW)		0.09/0.11	0.12/0.15
Running current (A)		0.43/0.46	0.58/0.63

FDRA Series

(220/240V)

Models		FDRA					
Item		45	56	71	90	112	140
Power input (kW)		0.14/0.16		0.15/0.17	0.16/0.19	0.24/0.28	0.28/0.32
Running current (A)		0.63/0.67		0.68/0.71	0.73/0.79	1.07/1.17	1.28/1.32

FDQMA, FDUMA Series

(220/240V)

Models		FDQMA			FDUMA					
Item		22	28	36	45	56	71	90	112	140
Power input (kW)		0.050/0.055			0.14/0.16		0.15/0.17	0.16/0.19	0.24/0.28	0.28/0.32
Running current (A)		0.23/0.24			0.63/0.67		0.68/0.71	0.73/0.79	1.07/1.17	1.28/1.32

Note (1) The above table is common for both cooling and heating.

FDURA Series (220/240V)

Item \ Models	FDURA					
	45	56	71	90	112	140
Power input (kW)	0.15/0.17	0.21/0.24	0.23/0.26	0.34/0.40		0.39/0.45
Running current (A)	0.69/0.73	0.95/1.01	1.05/1.11	1.55/1.64		1.79/1.90

FDEA Series (220/240V)

Item \ Models	FDEA					
	36	45	56	71	112	140
Power input (kW)	0.07/0.08			0.09/0.10	0.14/0.15	0.16/0.17
Running current (A)	0.3/0.3			0.4/0.4	0.6/0.6	0.7/0.7

FDKA, FDFLA, FDFUA Series (220/240V)

Item \ Models	FDK Series							FDFLA, FDFUA Series	
	22	28	36	45	56	71	28	45, 56	71
Power consumption (kW)	Cooling: 0.05/0.05 Heating: 0.04/0.05			0.05/0.05		0.09/0.11	0.09/0.10	0.09/0.10	0.09/0.10
Running current (A)	0.23/0.21			0.23/0.21		0.41/0.48	0.41/0.42	0.40/0.41	0.40/0.41

Note (1) The above table is common for both cooling and heating.