

## TECHNICAL MANUAL

### Collection data

## INVERTER DRIVEN MULTI-INDOOR UNIT CLIMATE CONTROL SYSTEM

### Alternative refrigerant R410A use models

#### (OUTDOOR UNIT)

##### **KX series** (Heat pump type)

- All-in-one type  
FDCA140HKXEN4A, 140HKXES4A, 224HKXE4A, 280HKXE4A, 335HKXE4A
- All-in-one type (Used also for combination)  
FDCA335HKXE4A-K, 400HKXE4A, 450HKXE4A, 504HKXE4A, 560HKXE4A, 615HKXE4A, 680HKXE4A
- Combined type  
FDCA735HKXE4A, 800HKXE4A, 850HKXE4A, 900HKXE4A, 960HKXE4A, 1010HKXE4A, 1065HKXE4A, 1130HKXE4A, 1180HKXE4A, 1235HKXE4A, 1300HKXE4A, 1360HKXE4A

##### **KXR series** (Heat recovery type)

- All-in-one type  
FDCA224HKXRE4A, 280HKXRE4A, 335HKXRE4A
- All-in-one type (Used also for combination)  
FDCA335HKXRE4A-K, 400HKXRE4A, 450HKXRE4A, 504HKXRE4A, 560HKXRE4A, 615HKXRE4A, 680HKXRE4A
- Combined type  
FDCA735HKXRE4A, 800HKXRE4A, 850HKXRE4A, 900HKXRE4A, 960HKXRE4A, 1010HKXRE4A, 1065HKXRE4A, 1130HKXRE4A, 1180HKXRE4A, 1235HKXRE4A, 1300HKXRE4A, 1360HKXRE4A

#### (INDOOR UNIT) –KX, KXR series–

FDTCA22KXE4A 28KXE4A 36KXE4A 45KXE4A 56KXE4A	FDTA28KXE4A 36KXE4A 45KXE4A 56KXE4A 71KXE4A 90KXE4A 112KXE4A 140KXE4A	FDTWA28KXE4A 45KXE4A 56KXE4A 71KXE4A 90KXE4A 112KXE4A 140KXE4A	FDTQA22KXE4A 28KXE4A 36KXE4A  FDTSA22KXE4A 28KXE4A 36KXE4A 45KXE4A 71KXE4A	FDRA22KXE4A 28KXE4A 45KXE4A 56KXE4A 71KXE4A 90KXE4A 112KXE4A 140KXE4A
FDQMA22KXE4A 28KXE4A 36KXE4A	FDUMA36KXE4A 45KXE4A 56KXE4A 71KXE4A	FDURA45KXE4A 56KXE4A 71KXE4A 90KXE4A 112KXE4A 140KXE4A	FDEA36KXE4A 45KXE4A 56KXE4A 71KXE4A 112KXE4A 140KXE4A	FDKA22KXE4A 28KXE4A 36KXE4A 45KXE4A 56KXE4A 71KXE4A
FDUUA224KXE4A 280KXE4A	90KXE4A 112KXE4A 140KXE4A			
FDFLA28KXE4A 45KXE4A 71KXE4A	FDFUA28KXE4A 45KXE4A 56KXE4A 71KXE4A			





These materials include the specifications, exterior dimensions, electrical data and selection charts for the indoor and outdoor unit. See the relevant manual below concerning other items.

● **KX Series**

(1) Outdoor Unit

Item Models	Reference Manual	
	Technical Manual	Handbook
FDCA140HKXEN4A	Manual No. '04 • KX-T-082A	'05 Handbook P. 259
FDCA140HKXES4A		
FDCA224HKXE4A	Manual No. '04 • KX-T-081	
FDCA280HKXE4A		
FDCA335HKXE4A	Manual No. '04 • KX-T-092	
FDCA400HKXE4A		
FDCA450HKXE4A		
FDCA504HKXE4A	Manual No. '05 • KX-T-099	Not relevant
FDCA560HKXE4A		
FDCA615HKXE4A		
FDCA680HKXE4A		
FDCA335HKXE4A-K	Manual No. '04 • KX-T-093	'05 Handbook P. 259
FDCA735HKXE4A		
FDCA800HKXE4A		
FDCA850HKXE4A		
FDCA900HKXE4A	Manual No. '05 • KX-T-099	Not relevant
FDCA960HKXE4A		
FDCA1010HKXE4A		
FDCA1065HKXE4A		
FDCA1130HKXE4A		
FDCA1180HKXE4A		
FDCA1235HKXE4A		
FDCA1300HKXE4A		
FDCA1360HKXE4A		

(2) Indoor unit

Item Models	Reference Manual	
	Technical Manual	Handbook
All models	Manual No. '05 • KXR-T-100	'05 Handbook P. 259



● **KXR Series**

**(1) Outdoor Unit**

Item Models	Reference Manual	
	Technical Manual	Handbook
FDCA224HKXRE4A	Manual No. '04 • KXR-T-094	'05 Handbook P. 259
FDCA280HKXRE4A		
FDCA335HKXRE4A		
FDCA400HKXRE4A		
FDCA450HKXRE4A		
FDCA504HKXRE4A	Manual No. '05 • KXR-T-100	Not relevant
FDCA560HKXRE4A		
FDCA615HKXRE4A		
FDCA680HKXRE4A		
FDCA335HKXRE4A-K	Manual No. '04 • KXR-T-094	'05 Handbook P. 259
FDCA735HKXRE4A		
FDCA800HKXRE4A		
FDCA850HKXRE4A		
FDCA900HKXRE4A	Manual No. '05 • KXR-T-100	Not relevant
FDCA960HKXRE4A		
FDCA1010HKXRE4A		
FDCA1065HKXRE4A		
FDCA1130HKXRE4A		
FDCA1180HKXRE4A		
FDCA1235HKXRE4A		
FDCA1300HKXRE4A		
FDCA1360HKXRE4A		

**(2) Indoor unit**

Item Models	Reference Manual	
	Technical Manual	Handbook
All models	Manual No. '05 • KXR-T-100	'05 Handbook P. 259



**KX4 series, KXR series allowed Indoor & Outdoor unit combinations.**


● **Combination Table**

Outdoor unit series		Connectable Indoor unit series – Series mixing is acceptable –	
Series name *1	Sales release date	Series name *1	Sales release date
<b>KXE4</b>	2004.4 ~	<b>KXE4</b>	2004.4 ~
		<b>KXE4A</b>	2004.11 ~
<b>KXE4A</b>	2006.2 ~	<b>KXE4</b>	2004.4 ~
		<b>KXE4A</b>	2004.11 ~
<b>KXRE4</b>	2004.11 ~	<b>KXE4A</b>	2004.11 ~
<b>KXRE4A</b>	2006.2 ~		

\*1: Series name


**Outdoor unit**

e.g.  
**KXE4 : FDCA280HKXE4**



**Indoor unit**

e.g.  
**KXE4A : FDTA71HKXE4A**





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# 1 GENERAL INFORMATION

## 1.1 Specific features

### (1) The new R410A refrigerant is used

The new refrigerant R410A, with an ozone destruction coefficient of zero, is used and the CO<sub>2</sub> discharge volume is reduced, In addition, R410A is a pseudo-azeotropic refrigerant, so there is little change in its consistency that would cause it to divide into the gas and liquid phases, or undergo temperature slide, and it is also possible to add refrigerant on-site.

### (2) Connectable indoor capacity

**Capacity from 80% to 150% is possible.**

Model \ Item	Number of connectable	Connectable capacity
FDCA140HKXEN4A	2 to 6 units	112 ~ 210
FDCA140HKXES4A		

**Capacity from 80% to 130% is possible.**

Model \ Item	Number of connectable	Connectable capacity
FDCA140HKXEN4A	2 to 8 units	112 ~ 182
FDCA140HKXES4A		

**Capacity from 50% to 130% is possible.**

(a) KX series

Model \ Item	Number of connectable	Connectable capacity
FDCA224HKXE4A	1 to 13 units	112 ~ 292
FDCA280HKXE4A	1 to 16 units	140 ~ 364
FDCA335HKXE4A	1 to 20 units	168 ~ 436
FDCA400HKXE4A	1 to 23 units	200 ~ 520
FDCA450HKXE4A	1 to 26 units	225 ~ 585
FDCA504HKXE4A	1 to 29 units	252 ~ 656
FDCA560HKXE4A	1 to 33 units	280 ~ 728
FDCA615HKXE4A	2 to 36 units	307 ~ 800
FDCA680HKXE4A	2 to 40 units	340 ~ 884
FDCA735HKXE4A	2 to 43 units	367 ~ 956
FDCA800HKXE4A	2 to 47 units	400 ~ 1040
FDCA850HKXE4A	2 to 48 units	425 ~ 1105
FDCA900HKXE4A	2 to 48 units	450 ~ 1170
FDCA960HKXE4A	2 to 48 units	480 ~ 1248
FDCA1010HKXE4A	2 to 48 units	505 ~ 1313
FDCA1065HKXE4A	2 to 48 units	532 ~ 1385
FDCA1130HKXE4A	3 to 48 units	565 ~ 1469
FDCA1180HKXE4A	3 to 48 units	590 ~ 1534
FDCA1235HKXE4A	3 to 48 units	617 ~ 1606
FDCA1300HKXE4A	3 to 48 units	650 ~ 1690
FDCA1360HKXE4A	3 to 48 units	680 ~ 1768



(b) KXR series

Model	Item	Number of connectable	Connectable capacity
FDCA224HKXRE4A		1 to 13 units	112 ~ 292
FDCA280HKXRE4A		1 to 16 units	140 ~ 364
FDCA335HKXRE4A		1 to 20 units	168 ~ 436
FDCA400HKXRE4A		1 to 23 units	200 ~ 520
FDCA450HKXRE4A		1 to 26 units	225 ~ 585
FDCA504HKXRE4A		1 to 29 units	252 ~ 656
FDCA560HKXRE4A		1 to 33 units	280 ~ 728
FDCA615HKXRE4A		2 to 36 units	307 ~ 800
FDCA680HKXRE4A		2 to 40 units	340 ~ 884
FDCA735HKXRE4A		2 to 43 units	367 ~ 956
FDCA800HKXRE4A		2 to 47 units	400 ~ 1040
FDCA850HKXRE4A		2 to 48 units	425 ~ 1105
FDCA900HKXRE4A		2 to 48 units	450 ~ 1170
FDCA960HKXRE4A		2 to 48 units	480 ~ 1248
FDCA1010HKXRE4A		2 to 48 units	505 ~ 1313
FDCA1065HKXRE4A		2 to 48 units	532 ~ 1385
FDCA1130HKXRE4A		3 to 48 units	565 ~ 1469
FDCA1180HKXRE4A		3 to 48 units	590 ~ 1534
FDCA1235HKXRE4A		3 to 48 units	617 ~ 1606
FDCA1300HKXRE4A		3 to 48 units	650 ~ 1690
FDCA1360HKXRE4A		3 to 48 units	680 ~ 1768

**(3) Indoor units are available with 11 capacities, in 14 types and 73 models.**

- 11 capacities...22(0.8 HP), 28(1 HP), 36(1.25 HP), 45(1.6 HP), 56(22 HP), 71(2.5 HP), 90(3.2 HP), 112(4 HP), 140(5 HP), 224(8 HP) and 280(10 HP).
- 14 types...Ceiling recessed compact type(FDTC), Ceiling recessed type(FDT), 2-way outlet ceiling recessed type(FDTW), Ceiling recessed single air supply port type (FDTQ), 1-way outlet ceiling recessed type(FDTS), Casseteria type(FDR), Medium static pressure ducted type(FDQM), High static pressure duct type(FDU), Satellite ducted type(FDUM), Ceiling mounted duct type(FDUR), Ceiling suspension type(FDE), Wall mounted type(FDK), Floor standing exposed type(FDFL), and Floor standing hidden type (FDFU) .

**(4) Long piping design offers total piping length of 510 m**

- Indoor and outdoor units can have a level difference of up to 50 m, with a one way piping length of up to 160 m. This is the top-class long piping design in the industry. A level difference of as 15 m between indoor units ensures that the system can meet a wide variety of air conditioning requirements in any building.

**(5) Super lynk system**

- Non polar 2-core signal wires for indoor, outdoor units by means of the automatic polarity selection.
- In addition, the max. 48 units can be controlled with a pair of signal wires. The high speed transmission method same as the computer network system [start up of 48 units can be completed within a few seconds by the determination of operation mode and the start of operation].
- As separate power supplies for the indoor and the outdoor units are employed, a pair of 2 signal wires only are required for the inter connecting wiring of indoor and outdoor units regardless of the number of units so that the installation work can be simplified, the cost of wiring work can be curtailed and causes of wiring error can be minimized.

**(6) Floor layout can be changed by resetting address unit number.**

- For change of floor layout, the control group can be recombined only by resetting address unit number.

**(7) Installation of automatic address setting function**

- The address setting method are divided into three types according to wiring method: “Automatic Address Setting,” “Remote controller Address Setting” and “Manual Address Setting.” In case of the Automatic Address Setting, no address needs be set as usual.



**(8) Layout free refrigerant piping**

- The branch type piping makes the system flexible enough to satisfy any layout plan on the floor or in a room.

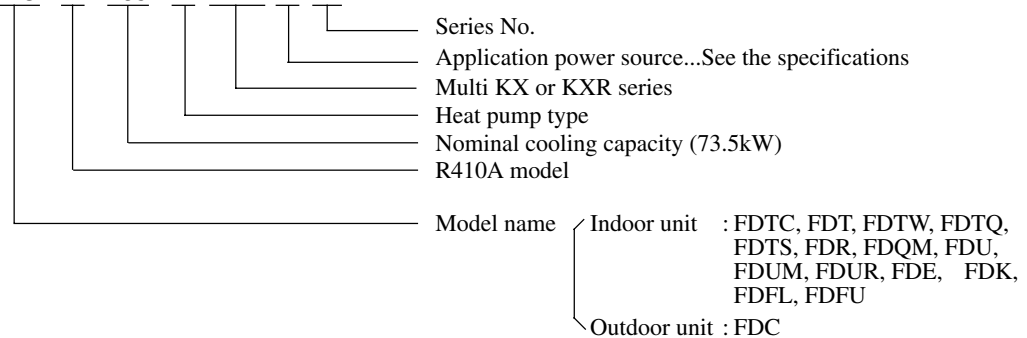
**(9) Improvement of serviceability**

- (a) Failures of indoor unit and outdoor units are shown on the liquid crystal display on the remote controller.
- Failures of indoor unit and outdoor units can be checked by remote controller.
- (b) Easy checking of outdoor inspection LED.
- The LED can be checked without removing the service panel, and faulty units can be easily identified out of several units.

- (10)** For outdoor unit, EN60555-2 and EN60555-3 are not applicable as consent by the utility company or notification to the utility company is given before usage.

## 1.2 How to read the model name

Example: **FDC A 735 H KX E 4A**





### 1.3 Table of models

Model \ Capacity	22	28	36	45	56	71	90	112	140	224	280
Ceiling recessed compact type (FDTC)	○	○	○	○	○						
Ceiling recessed type (FDT)		○	○	○	○	○	○	○	○		
2-way outlet ceiling recessed type (FDTW)		○		○	○	○	○	○	○		
Ceiling recessed single air supply port type (FDTQ)	○	○	○								
1-way outlet ceiling recessed type (FDTS)	○	○	○	○		○					
Casseteria type (FDR)	○	○		○	○	○	○	○	○		
Medium static pressure ducted type (FDQM)	○	○	○								
High static pressure ducted type (FDU)(1)										○	○
Stellite ducted type (FDUM)			○	○	○	○	○	○	○		
Ceiling mounted duct type (FDUR)				○	○	○	○	○	○		
Ceiling suspended type (FDE)			○	○	○	○		○	○		
Wall mounted type (FDK)	○	○	○	○	○	○					
Floor standing exposed type (FDFL)		○		○		○					
Floor standing hidden type (FDFU)		○		○	○	○					
Outdoor units to be combined FDC	K	FDCA140HKXEN4A, 140HKXES4A, FDCA224HKXE4A, 280HKXE4A, 335HKXE4A, 335HKXE4A-K, 400HKXE4A, 450HKXE4A, 504HKXE4A, 560HKXE4A, 615HKXE4A, 680HKXE4A, 735HKXE4A, 800HKXE4A, 850HKXE4A, 900HKXE4A, 960HKXE4A, 1010HKXE4A, 1065HKXE4A, 1130HKXE4A, 1180HKXE4A, 1235HKXE4A, 1300HKXE4A, 1360HKXE4A									
	X	FDCA224HKXRE4A, 280HKXRE4A, 335HKXRE4A, 335HKXRE4A-K, 400HKXRE4A, 450HKXRE4A, 504HKXRE4A, 560HKXRE4A, 615HKXRE4A, 680HKXRE4A, 735HKXRE4A, 800HKXRE4A, 850HKXRE4A, 900HKXRE4A, 960HKXRE4A, 1010HKXRE4A, 1065HKXRE4A, 1130HKXRE4A, 1180HKXRE4A, 1235HKXRE4A, 1300HKXRE4A, 1360HKXRE4A									

Note (1) The FDU224 and 280 indoor units cannot be connected to the FDCA140HKXEN4 and 140HKXES4 outdoor units.

### 1.4 Table of indoor units panel (Optional)

Model	Capacity	Parts Model
FDTC	Capacity:22,28,36,45,56	TC-PSA-24W-E
FDT	Capacity:28,36,45,56, 71,90,112,140	T-PSA-34W-E
FDTW (Standard type)	Capacity:28,45,56	TW-PSA-22W-E
	Capacity:71,90	TW-PSA-32W-E
	Capacity:112,140	TW-PSA-42W-E
FDTW (Attachment of ceiling material type)	Capacity:28,45,56	TW-PSB-28W-E
	Capacity:71,90	TW-PSB-38W-E
	Capacity:112,140	TW-PSB-48W-E
FDTQ (Direct blow panel)	Capacity:22,28,36	TQ-PSA-13W-E
		TQ-PSB-13W-E
FDTQ (Duct panel)	Capacity:22,28,36	QR-PNA-13W-E
		QR-PNB-13W-E
FDTS	Capacity:22, 28, 36, 45	TS-PSA-27W-E
	Capacity:71	TS-PSA-37W-E
FDR (Silent type)	Capacity:22,28,45,56	R-PNLS-26W-E
	Capacity:71,90	R-PNLS-36W-E
	Capacity:112,140	R-PNLS-46W-E
FDR (Canvas duct type)	Capacity:22,28,45,56	R-PNLC-26W-E
	Capacity:71,90	R-PNLC-36W-E
	Capacity:112,140	R-PNLC-46W-E



## 1.5 Outdoor unit combination table

### (1) KX series

(a) Models FDCA735, 800, 850, 900HKXE4A

Item Models	Combination outdoor unit models			Indoor unit	
	FDCA335HKXE4A-K	FDCA400HKXE4A	FDCA450HKXE4A	Connectable capacity	Number of connectable units
FDCA735HKXE4A	1	1	—	367 ~ 956	2 ~ 43
FDCA800HKXE4A	—	2	—	400 ~ 1040	2 ~ 47
FDCA850HKXE4A	—	1	1	425 ~ 1105	2 ~ 48
FDCA900HKXE4A	—	—	2	450 ~ 1170	

(b) Models FDCA900, 1010, 1065, 1130, 1180, 1235, 1300, 1360HKXE4

Item Models	Combination outdoor unit models					Indoor unit	
	FDCA450 HKXE4A	FDCA504 HKXE4A	FDCA560 HKXE4A	FDCA615 HKXE4A	FDCA680 HKXE4A	Connectable capacity	Number of connectable units
FDCA960HKXE4	1	1	—	—	—	480 ~ 1248	2 to 48 unit
FDCA1010HKXE4	—	2	—	—	—	505 ~ 1313	
FDCA1065HKXE4	—	1	1	—	—	532 ~ 1385	
FDCA1130HKXE4	—	—	2	—	—	565 ~ 1469	3 to 48 unit
FDCA1180HKXE4	—	—	1	1	—	590 ~ 1534	
FDCA1235HKXE4	—	—	—	2	—	617 ~ 1606	
FDCA1300HKXE4	—	—	—	1	1	650 ~ 1690	
FDCA1360HKXE4	—	—	—	—	2	680 ~ 1768	

(c) Outdoor unit side branch pipe set (Optional)

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

Note (1) Be sure to use this when combining units.

(d) Branch pipe set (Optional)

Total capacity downstream	Branching pipe set
Less than 180	DIS-22-1
180 or more but less than 371	DIS-180-1
371 or more but less than 540	DIS-371-1
540 or more	DIS-540-1

(e) Header pipe set (Optional)

Total capacity downstream	Header set model type	Number of branches
Less than 180	HEAD4-22-1	4 branches at the most
180 or more but less than 371	HEAD6-180-1	6 branches at the most
371 or more but less than 540	HEAD8-371-1	8 branches at the most
540 or more	HEAD8-540-1	8 branches at the most



## (2) KXR series

### (a) Models FDCA735, 800, 850, 900HKXRE4A

Item Models	Combination outdoor unit models			Indoor unit	
	FDCA335HKXRE4A-K	FDCA400HKXRE4A	FDCA450HKXRE4A	Connectable capacity	Number of connectable units
FDCA735HKXRE4A	1	1	—	367 ~ 956	2 ~ 43
FDCA800HKXRE4A	—	2	—	400 ~ 1040	2 ~ 47
FDCA850HKXRE4A	—	1	1	425 ~ 1105	2 ~ 48
FDCA900HKXRE4A	—	—	2	450 ~ 1170	

### (b) Models FDCA900, 1010, 1065, 1130, 1180, 1235, 1300, 1360HKXRE4

Item Models	Combination outdoor unit models					Indoor unit	
	FDCA450 HKXRE4A	FDCA504 HKXRE4A	FDCA560 HKXRE4A	FDCA615 HKXRE4A	FDCA680 HKXRE4A	Connectable capacity	Number of connectable units
FDCA960HKXRE4	1	1	—	—	—	480 ~ 1248	2 to 48 unit
FDCA1010HKXRE4	—	2	—	—	—	505 ~ 1313	
FDCA1065HKXRE4	—	1	1	—	—	532 ~ 1385	
FDCA1130HKXRE4	—	—	2	—	—	565 ~ 1469	3 to 48 unit
FDCA1180HKXRE4	—	—	1	1	—	590 ~ 1534	
FDCA1235HKXRE4	—	—	—	2	—	617 ~ 1606	
FDCA1300HKXRE4	—	—	—	1	1	650 ~ 1690	
FDCA1360HKXRE4	—	—	—	—	2	680 ~ 1768	

### (c) Outdoor unit side branch pipe set (Optional)

Outdoor unit	Branch pipe set
For two units (for 735 ~ 1360)	DOS-2A-1-R

Note (1) Be sure to use this when combining units.

### (d) Branch pipe set (Optional)

In the upstream of a branching controller

Total capacity downstream	Branching pipe set
Less than 180	DIS-22-1-R
180 or more but less than 371	DIS-180-1-R
371 or more but less than 540	DIS-371-1-R
540 or more	DIS-540-1-R

In the downstream of a branching controller

Total capacity downstream	Branching pipe set
Less than 180	DIS-22-1
180 or more but less than 371	DIS-180-1

### (e) Branching controller model (Optional)

Total capacity downstream	Branching controller model	Number of connectable units
Less than 112	PFD112-E	1 ~ 5
112 or more but less than 180	PFD180-E	1 ~ 8
180 or more but less than 280	PFD280-E	1 ~ 10



## 2 SELECTION DATA

### 2.1 Specifications

#### (1) Indoor unit

##### (a) Ceiling recessed compact type (FDTC)

#### Models FDTCA22KXE4A, 28KXE4A

Item		Models	FDTCA22KXE4A	FDTCA28KXE4A
Nominal cooling capacity* <sup>1</sup>	kW		2.2	2.8
Nominal heating capacity* <sup>2</sup>	kW		2.5	3.2
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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Turbo fan × 1	
Motor	W		50 × 1	
Starting method			Direct line start	
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: φ6.35(1/4") Gas line: φ9.52(3/8")	
Connecting method			Flare piping	
Drain hose			Connectable with VP25(I.D.25mm, O.D.32mm)	
Insulation for piping			Necessary (both Liquid & Gas line)	
Accessories			Mounting kit, Drain hose	
Optional parts			Decorative Panel	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

●Decorative Panel model (Optional)

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



**Models FDTCA36KXE4A, 45KXE4A, 56KXE4A**

Item		Models	FDTCA36KXE4A	FDTCA45KXE4A	FDTCA56KXE4A
Nominal cooling capacity* <sup>1</sup>		kW	3.6	4.5	5.6
Nominal heating capacity* <sup>2</sup>		kW	4.0	5.0	6.3
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 fin & inner grooved tubing		
Refrigerant control			Electronic Expansion Valve		
Air handling equipment Fan type & Q'ty			Turbo fan × 1		
Motor		W	50 × 1		
Starting method			Direct line start		
Air flow(Standard)		CMM	Hi: 10 Me: 9 Lo: 8	Hi: 11 Me: 10 Lo: 9	Hi: 13 Me: 115 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:φ6.35(1/4") Gas line:φ12.7(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		

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

●Decorative Panel model (Optional)

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



(b) Ceiling recessed type (FDT)

Models FDTA28KXE4A, 36KXE4A

Item		Models	FDTA28KXE4A	FDTA36KXE4A
Nominal cooling capacity* <sup>1</sup>	kW		2.8	3.6
Nominal heating capacity* <sup>2</sup>	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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Turbo fan × 1	
Motor	W		14 × 1	
Starting method			Direct line start	
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 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:φ6.35(1/4") Gas line:φ9.52(3/8")	Liquid line:φ6.35(1/4") Gas line:φ12.7(1/2")
Connecting method			Flare piping	
Drain hose			Connectable with VP25(I.D.25mm, O.D.32mm)	
Insulation for piping			Necessary (both Liquid & Gas line)	
Accessories			Mounting kit, Drain hose	
Optional parts			Decorative Panel	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

●Decorative Panel model (Optional)

Item	Panel Part No.
Model	
FDTA28,36 type	T-PSA-34W-E



**Models FDTA45KXE4A, 56KXE4A, 71KXE4A**

Item		Models	FDTA45KXE4A	FDTA56KXE4A	FDTA71KXE4A
Nominal cooling capacity* <sup>1</sup>	kW		4.5	5.6	7.1
Nominal heating capacity* <sup>2</sup>	kW		5.0	6.3	8.0
Power source			1 Phase 220/240V 50Hz		
Noise level	dB(A)		Hi: 35 Me: 33 Lo: 31	Hi: 36 Me: 34 Lo: 32	Hi: 37 Me: 35 Lo: 33
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 fin & inner grooved tubing		
Refrigerant control			Electronic Expansion Valve		
Air handling equipment Fan type & Q'ty			Turbo fan × 1		
Motor	W		14 × 1		20 × 1
Starting method			Direct line start		
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 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")		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		

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

●Decorative Panel model (Optional)

Item	Model
Panel Part No.	FDTA45,56,71 type
	T-PSA-34W-E



## Models FDTA90KXE4A, 112KXE4A, 140KXE4A

Models		FDTA90KXE4A	FDTA112KXE4A	FDTA140KXE4A
Nominal cooling capacity* <sup>1</sup>	kW	9.0	11.2	14.0
Nominal heating capacity* <sup>2</sup>	kW	10.0	12.5	16.0
Power source		1 Phase 220/240V 50Hz		
Noise level	dB(A)	Hi: 43 Me: 41 Lo: 38	Hi: 43 Me: 41 Lo: 38	Hi: 45 Me: 43 Lo: 41
Exterior dimensions Height × Width × Depth	mm	Unit: 295 × 840 × 840 Panel:35 × 950 × 950	Unit: 365 × 840 × 840 Panel:35 × 950 × 950	
Net weight	kg	Unit:26 Panel:7	Unit:31 Panel:7	
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing		
Refrigerant control		Electronic Expansion Valve		
Air handling equipment Fan type & Q'ty		Turbo fan × 1		
Motor	W	40 × 1	120 × 1	
Starting method		Direct line start		
Air flow(Standard)	CMM	Hi: 27 Me: 23 Lo: 20	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 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 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		

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

●Decorative Panel model (Optional)

Item	Panel Part No.
Model	
FDTA90,112,140 type	T-PSA-34W-E



(c) 2-way outlet ceiling recessed type (FDTW)

Models FDTWA28KXE4A, 45KXE4A, 56KXE4A

Models		FDTWA28KXE4A	FDTWA45KXE4A	FDTWA56KXE4A
Nominal cooling capacity <sup>*1</sup>	kW	2.8	4.5	5.6
Nominal heating capacity <sup>*2</sup>	kW	3.2	5.0	6.3
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 fin & inner grooved tubing		
Refrigerant control		Electronic Expansion Valve		
Air handling equipment Fan type & Q'ty		Turbo fan × 1		
Motor	W	30 × 1		
Starting method		Direct line start		
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 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")	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		

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

ISO-T1 "UNITARY AIR-CONDITIONERS"

●Decorative Panel model (Optional)

Item	Panel Part No.	
	Standard type	Attachment of ceiling material type <sup>(1)</sup>
Model		
FDTWA28,45,56 type	TW-PSA-22W-E	TW-PSB-28W-E

Notes (1) When using the decorative panel/ceiling installation panel, the exterior height dimension of height increases by 30 mm.



## Models FDTWA71KXE4A, 90KXE4A

Item		Models	FDTWA71KXE4A	FDTWA90KXE4A
Nominal cooling capacity <sup>*1</sup>		kW	7.1	9.0
Nominal heating capacity <sup>*2</sup>		kW	8.0	10.0
Power source			1 Phase 220/240V 50Hz	
Noise level		dB(A)	Hi: 41 Me: 38 Lo: 35	Hi: 41 Me: 39 Lo: 36
Exterior dimensions Height × Width × Depth		mm	Unit:335 × 1054 × 620	Panel:8 × 1300 × 680
Net weight		kg	Unit:26	Panel:9
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Turbo fan × 1	
Motor		W	35 × 1	40 × 1
Starting method			Direct line start	
Air flow(Standard)		CMM	Hi: 16 Me: 13 Lo: 11	Hi: 19 Me: 16 Lo: 12
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 9.52(3/8"),Gas line:φ 15.88(5/8")	
Connecting method			Flare piping	
Drain hose			Connectable with VP25(L.D.25mm, O.D.32mm)	
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit, Drain hose	
Optional parts			Decorative Panel	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling <sup>*1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating <sup>*2</sup>	20℃	—	7℃	6℃	

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

●Decorative Panel model (Optional)

Item	Panel Part No.	
	Standard type	Attachment of ceiling material type <sup>(1)</sup>
Model		
FDTWA71,90 type	TW-PSA-32W-E	TW-PSB-38W-E

Notes (1) When using the decorative panel/ceiling installation panel, the exterior height dimension of height increases by 30 mm.



## Models FDTWA112KXE4A, 140KXE4A

Item		Models	FDTWA112KXE4A	FDTWA140KXE4A
Nominal cooling capacity* <sup>1</sup>		kW	11.2	14.0
Nominal heating capacity* <sup>2</sup>		kW	12.5	16.0
Power source			1 Phase 220/240V 50Hz	
Noise level		dB(A)	Hi: 44 Me: 41 Lo: 38	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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Turbo fan × 2	
Motor		W	40 × 2	50 × 2
Starting method			Direct line start	
Air flow(Standard)		CMM	Hi: 28 Me: 25 Lo: 23	Hi: 32 Me: 28 Lo: 24
Fresh air intake			Possible	
Air filter, Q'ty			Long life filter × 2(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 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 linse)	
Accessories			Mounting kit, Drain hose	
Optional parts			Decorative Panel	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

●Decorative Panel model (Optional)

Item	Panel Part No.	
	Standard type	Attachment of ceiling material type <sup>(1)</sup>
Model		
FDTWA112,140 type	TW-PSA-42W-E	TW-PSB-48W-E

Notes (1) When using the decorative panel/ceiling installation panel, the exterior height dimension of height increases by 30 mm.



(d) Ceiling recessed single air supply port type (FDTQ)

Models FDTQA22KXE4A

Item		Model	FDTQA22KXE4A			
Panel name		Direct blow panel		Duct panel <sup>(9)</sup>		
Panel model(Optional)		TQ-PSA-13W-E	TQ-PSB-13W-E	QR-PNA-13W-E	QR-PNB-13W-E	
Nominal cooling capacity* <sup>1</sup>	kW	2.2				
Nominal heating capacity* <sup>2</sup>	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 fin & inner grooved tubing				
Refrigerant control		Electronic Expansion Valve				
Air handling equipment Fan type & Q'ty		Centrifugal fan × 1				
Motor	W	20 × 1				
Starting method		Direct line start				
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 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: ϕ6.35(1/4"), Gas line: ϕ9.52(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				

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling <sup>*1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating <sup>*2</sup>	20℃	—	7℃	6℃	

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

(3) This is the panel to be used when modified to the Duct panel type on site. See page 608 of the 2005 Handbook.



## Models FDTQA28KXE4A

Model		FDTQA28KXE4A			
Item					
Panel name		Direct blow panel		Duct panel <sup>(3)</sup>	
Panel model(Optional)		TQ-PSA-13W-E	TQ-PSB-13W-E	QR-PNA-13W-E	QR-PNB-13W-E
Nominal cooling capacity* <sup>1</sup>	kW	2.8			
Nominal heating capacity* <sup>2</sup>	kW	3.2			
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		Slit fin & inner grooved tubing			
Refrigerant control		Electronic Expansion Valve			
Air handling equipment Fan type & Q'ty		Centrifugal fan × 1			
Motor	W	20 × 1			
Starting method		Direct line start			
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 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: φ6.35(1/4"), Gas line: φ9.52(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			

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

(3) This is the panel to be used when modified to the Duct panel type on site. See page 608 of the 2005 Handbook.



## Models FDTQA36KXE4A

Model		FDTQA36KXE4A			
Item					
Panel name		Direct blow panel		Duct panel <sup>(3)</sup>	
Panel model(Optional)		TQ-PSA-13W-E	TQ-PSB-13W-E	QR-PNA-13W-E	QR-PNB-13W-E
Nominal cooling capacity* <sup>1</sup>	kW	3.6			
Nominal heating capacity* <sup>2</sup>	kW	4.0			
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		Slit fin & inner grooved tubing			
Refrigerant control		Electronic Expansion Valve			
Air handling equipment Fan type & Q'ty		Centrifugal fan × 1			
Motor	W	20 × 1			
Starting method		Direct line start			
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 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: ϕ6.35(1/4"), Gas line: ϕ12.7(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			

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

(3) This is the panel to be used when modified to the Duct panel type on site. See page 608 of the 2005 Handbook.



(e) 1-way outlet ceiling recessed type (FDTS)

Models FDTSA22KXE4A, 28KXE4A, 36KXE4A

Models		FDTSA22KXE4A	FDTSA28KXE4A	FDTSA36KXE4A
Nominal cooling capacity* <sup>1</sup>	kW	2.2	2.8	3.6
Nominal heating capacity* <sup>2</sup>	kW	2.5	3.2	4.0
Power source		1 Phase 220/240V 50Hz		
Noise level	dB(A)	Hi: 39 Lo: 38	Hi: 40 Me: 39 Lo: 38	
Exterior dimensions Height × Width × Depth	mm	Unit:194 × 1040 × 650    Panel:10 × 1290 × 770		
Net weight	kg	Unit:26    Panel:6		
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing		
Refrigerant control		Electronic Expansion Valve		
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2		
Motor	W	35×1		
Starting method		Direct line start		
Air flow(Standard)	CMM	Hi: 11    Lo: 8	Hi: 12    Me: 11    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 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		

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
JIS B8616"UNITARY AIR-CONDITIONERS"

●Decorative Panel model (Optional)

Item	Panel Part No.
	With Auto Swing
Model	
FDTSA22, 28, 36 type	TS-PSA-27W-E



## Models FDTSA45KXE4A, 71KXE4A

Item		Models	FDTSA45KXE4A	FDTSA71KXE4A
Nominal cooling capacity* <sup>1</sup>		kW	4.5	7.1
Nominal heating capacity* <sup>2</sup>		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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	Centrifugal fan × 4
Motor		W	40×1	25×2
Starting method			Direct line start	
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 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")	Liquid line:φ 9.52(3/8") Gas line:φ 15.88(5/8")
Connecting method			Flare piping	
Drain hose			Connectable with VP25(L.D.25mm, O.D.32mm)	
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit, Drain hose	
Optional parts			Decorative Panel	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

●Decorative Panel model (Optional)

Model	Item	Panel Part No.
		With Auto Swing
FDTSA45 type		TS-PSA-27W-E
FDTSA71 type		TS-PSA-37W-E



(f) Cassetteria type (FDR)

Models FDRA22KXE4A, 28KXE4A

Item		Models	FDRA22KXE4A		FDRA28KXE4A	
Air inlet panel			Silent panel	Canvas panel	Silent panel	Canvas panel
Panel model (Option)			R-PNLS-26W-E	R-PNLC-26W-E	R-PNLS-26W-E	R-PNLC-26W-E
Nominal cooling capacity* <sup>1</sup>	kW	2.2		2.8		
Nominal heating capacity* <sup>2</sup>	kW	2.5		3.2		
Power source		1 Phase 220/240V 50Hz				
Noise level	dB(A)	Hi: 41 Me: 39 Lo: 36	Hi: 42 Me: 40 Lo: 37	Hi: 42 Me: 40 Lo: 37	Hi: 43 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 fin & inner grooved tubing				
Refrigerant control		Electronic Expansion Valve				
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2				
Motor	W	40 × 1		50 × 1		
Starting method		Direct line start				
Air flow(Standard)	CMM	Hi: 10 Me: 9 Lo: 8		Hi: 12 Me: 11 Lo: 10		
Available static pressure ( at Hi)	Pa	Standard:45, Hi speed:85				
Fresh air intake		Side or back				
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		Silent panel, Canvas panel, Canvas duct				

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling <sup>*1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating <sup>*2</sup>	20℃	—	7℃	6℃	

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

(3) Canvas panel is used in combination with following canvas duct  
Canvas duct: HA01503

(4) Indoor unit height of canvas specification type is higher than the other type for canvas duct portion.



## Models FDRA45KXE4A, 56KXE4A

Item		Models	FDRA45KXE4A		FDRA56KXE4A	
Air inlet panel			Silent panel	Canvas panel	Silent panel	Canvas panel
Panel model (Option)			R-PNLS-26W-E	R-PNLC-26W-E	R-PNLS-26W-E	R-PNLC-26W-E
Nominal cooling capacity* <sup>1</sup>	kW	4.5			5.6	
Nominal heating capacity* <sup>2</sup>	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 fin & inner grooved tubing				
Refrigerant control		Electronic Expansion Valve				
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2				
Motor	W	55×1				
Starting method		Direct line start				
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 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: ϕ6.35(1/4"), Gas line: ϕ12.7(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				

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

**ISO-T1 "UNITARY AIR-CONDITIONERS"**

(3) Canvas panel is used in combination with following canvas duct

Canvas duct: HA01503

(4) Indoor unit height of canvas specification type is higher than the other type for canvas duct portion.



## Models FDRA71KXE4A, 90KXE4A

Models		FDRA71KXE4A		FDRA90KXE4A	
Air inlet panel		Silent panel	Canvas panel	Silent panel	Canvas panel
Panel model (Option)		R-PNLS-36W-E	R-PNLC-36W-E	R-PNLS-36W-E	R-PNLC-36W-E
Nominal cooling capacity* <sup>1</sup>	kW	7.1		9.0	
Nominal heating capacity* <sup>2</sup>	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 fin & inner grooved tubing			
Refrigerant control		Electronic Expansion Valve			
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2			
Motor	W	90 × 1		100 × 1	
Starting method		Direct line start			
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 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 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			

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

**ISO-T1 "UNITARY AIR-CONDITIONERS"**

(3) Canvas panel is used in combination with following canvas duct

Canvas duct: HA01490

(4) Indoor unit height of canvas specification type is higher than the other type for canvas duct portion.



## Models FDRA112KXE4A, 140KXE4A

Models		FDRA112KXE4A		FDRA140KXE4A	
Item		Silent panel	Canvas panel	Silent panel	Canvas panel
Air inlet panel					
Panel model (Option)		R-PNLS-46W-E	R-PNLC-46W-E	R-PNLS-46W-E	R-PNLC-46W-E
Nominal cooling capacity* <sup>1</sup>	kW	11.2		14.0	
Nominal heating capacity* <sup>2</sup>	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 fin & inner grooved tubing			
Refrigerant control		Electronic Expansion Valve			
Air handling equipment Fan type & Q'ty		Centrifugal fan × 3			
Motor	W	45 × 1, 90 × 1		50 × 1, 100 × 1	
Starting method		Direct line start			
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 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 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			

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling <sup>*1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating <sup>*2</sup>	20℃	—	7℃	6℃	

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

**ISO-T1 "UNITARY AIR-CONDITIONERS"**

(3) Canvas panel is used in combination with following canvas duct

Canvas duct: HA01484

(4) Indoor unit height of canvas specification type is higher than the other type for canvas duct portion.



(g) High static pressure duct type (FDU)

Models FDU224KXE4A, 280KXE4A

Item		Models	FDUA224KXE4A	FDUA280KXE4A
Nominal cooling capacity* <sup>1</sup>	kW		22.4	28.0
Nominal heating capacity* <sup>2</sup>	kW		25.0	31.5
Power source			1 Phase 220/240V 50Hz	
Noise level	dB(A)		Hi: 48	Hi: 49
Exterior dimensions Height × Width × Depth	mm		360 × 1570 × 830	
Net weight	kg		92	
Refrigerant equipment Heat exchanger			Louver fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve +Capillary tube	
Air handling equipment Fan type & Q'ty			Multiblade centrifugal fan × 4	
Motor	W		200×2	230×1, 270×1
Starting method			Direct line start	
Air flow(Standard)	CMM		51	68
Available static pressure	Pa		Standard:100, MAX:200	
Fresh air intake			Available	
Air filter, Q'ty			Field purchased	
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: φ9.52(3/8"), Gas line: φ19.05(3/4")	Liquid line: φ9.52(3/8"), Gas line: φ22.22(7/8")
Connecting method			Brazing	
Drain hose			Connectable with VP25 (I.D. 25mm, O.D. 32mm)	
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit	
Optional parts			-	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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



### (h) Medium static pressure ducted type (FDQM)

#### Models FDQMA22KXE4A, 28KXE4A, 36KXE4A

Item		Models	FDQMA22KXE4A	FDQMA28KXE4A	FDQMA36KXE4A
Nominal cooling capacity* <sup>1</sup>	kW		2.2	2.8	3.6
Nominal heating capacity* <sup>2</sup>	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 fin & inner grooved tubing	Slit fin & inner grooved tubing		
Refrigerant control		Electronic Expansion Valve			
Air handling equipment Fan type & Q'ty		Centrifugal fan × 1			
Motor	W	20×1			
Starting method		Direct line start			
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 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: φ6.35(1/4") Gas line: φ9.52(3/8")			Liquid line: φ6.35(1/4") Gas line: φ12.7(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		—			

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

Operation	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling <sup>*1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating <sup>*2</sup>	20℃	—	7℃	6℃	

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



(i) Satellite ducted type (FDUM)

Models FDUMA36KXE4A, 45KXE4A, 56KXE4A

Item		Models	FDUMA36KXE4A	FDUMA45KXE4A	FDUMA56KXE4A
Nominal cooling capacity* <sup>1</sup>	kW		3.6	4.5	5.6
Nominal heating capacity* <sup>2</sup>	kW		4.0	5.0	6.3
Power source		1 Phase 220/240V 50Hz			
Noise level	dB(A)		Hi: 34 Me: 32 Lo: 29	Hi: 35 Me: 32 Lo: 29	
Exterior dimensions Height × Width × Depth	mm	299 × 750 × 635			
Net weight	kg	34			
Refrigerant equipment Heat exchanger		Louver fin & inner grooved tubing			
Refrigerant control		Electronic Expansion Valve			
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2			
Motor	W		50× 1	55× 1	
Starting method		Direct line start			
Air flow(Standard)	CMM		Hi: 12 Me: 11 Lo: 10	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 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:φ6.35(1/4"),Gas line:φ12.7(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		—			

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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



## Models FDUMA71KXE4A, 90KXE4A

Item		Models	FDUMA71KXE4A	FDUMA90KXE4A
Nominal cooling capacity* <sup>1</sup>	kW		7.1	9.0
Nominal heating capacity* <sup>2</sup>	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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	
Motor	W		90 × 1	100 × 1
Starting method			Direct line start	
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 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 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			—	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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



## Models FDUMA112KXE4A, 140KXE4A

Item		Models	FDUMA112KXE4A	FDUMA140KXE4A
Nominal cooling capacity <sup>*1</sup>	kW		11.2	14.0
Nominal heating capacity <sup>*2</sup>	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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Centrifugal fan × 3	
Motor	W		45 × 1, 90 × 1	50 × 1, 100 × 1
Starting method			Direct line start	
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 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:φ9.52(3/8"),Gas line:φ15.88(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			—	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling <sup>*1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating <sup>*2</sup>	20℃	—	7℃	6℃	

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



(j) Ceiling mounted duct type (FDUR)

Models FDURA45KXE4A, 56KXE4A

Item		Models	FDURA45KXE4A	FDURA56KXE4A
Nominal cooling capacity <sup>*1</sup>	kW		4.5	5.6
Nominal heating capacity <sup>*2</sup>	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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion valve	
Air handling equipment Fan type & Q'ty			Multiblade centrifugal fan × 2	
Motor	W		90 × 1	130 × 1
Starting method			Direct line start	
Air flow(Standard)	CMM		Hi: 17 Lo: 13.5	Hi: 21 Lo: 17
Available static pressure (at Hi)	Pa		Standard:50, Max:85	
Fresh air intake			—	
Air filter Q'ty			Polypropylene net × 1(Washable)	
Shock & vibration absorber			Rubber sleeve(for fan motor)	
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: φ6.35 (1/4") Gas line: φ12.7 (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	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling <sup>*1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating <sup>*2</sup>	20℃	—	7℃	6℃	

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

●Silent Panel model (Optional)

Item	Panel Part No.	Color
Model FDURA45, 56KXE4A	UR-PS-27W-E	Ceramic white

●Duct Joint (For flexibleduct) [Optional]

Item	Part No.
Model FDURA45, 56KXE4A	UR-DJ-21-E



## Models FDURA71KXE4A, 90KXE4A

Item		Models	FDURA71KXE4A	FDURA90KXE4A
Nominal cooling capacity*1	kW		7.1	9.0
Nominal heating capacity*2	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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion valve	
Air handling equipment Fan type & Q'ty			Multiblade centrifugal fan × 2	
Motor	W		230 × 1	280 × 1
Starting method			Direct line start	
Air flow(Standard)	CMM		Hi: 25 Lo: 18.5	Hi: 34 Lo: 27
Available static pressure (at Hi)	Pa		Standard:50, Max:130	
Fresh air intake			—	
Air filter Q'ty			Polypropylene net × 1(Washable)	
Shock & vibration absorber			Rubber sleeve(for fan motor)	
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: φ9.52 (3/8") Gas line: φ15.88 (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	

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

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

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

### ●Silent Panel model (Optional)

Model	Item	Panel Part No.	Color
FDURA71KXE4A		UR-PS-27W-E	Ceramic white
FDURA90KXE4A		UR-PS-47W-E	

### ●Duct Joint (For flexibleduct) [Optional]

Model	Item	Part No.
FDURA71KXE4A		UR-DJ-21-E
FDURA90KXE4A		UR-DJ-41-E



## Models FDURA112KXE4A, 140KXE4A

Item		Models	FDURA112KXE4A	FDURA140KXE4A
Nominal cooling capacity*1	kW		11.2	14.0
Nominal heating capacity*2	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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion valve	
Air handling equipment Fan type & Q'ty			Multiblade centrifugal fan × 2	
Motor	W		280×1	460×1
Starting method			Direct line start	
Air flow(Standard)	CMM		Hi: 34 Lo: 27	Hi: 42 Lo: 33.5
Available static pressure (at Hi)	Pa		Standard: 50, Max: 130	
Fresh air intake			—	
Air filter, Q'ty			Polypropylene net × 1(Washable)	
Shock & vibration absorber			Rubber sleeve(for fan motor)	
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: φ9.52 (3/8") Gas line: φ15.88 (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	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling*1	27℃	19℃	35℃	24℃	ISO-T1
Heating*2	20℃	—	7℃	6℃	

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

### ●Silent Panel model (Optional)

Item	Panel Part No.	Color
Model FDURA112, 140KXE4A	UR-PS-47W-E	Ceramic white

### ●Duct Joint (For flexibleduct) [Optional]

Item	Part No.
Model FDURA112, 140KXE4A	UR-DJ-41-E



**(k) Ceiling suspended type (FDE)**

**Models FDEA36KXE4A, 45KXE4A**

Item		Models	FDEA36KXE4A	FDEA45KXE4A
Nominal cooling capacity* <sup>1</sup>		kW	3.6	4.5
Nominal heating capacity* <sup>2</sup>		kW	4.0	5.0
Power source			1 Phase 220/240V 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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	
Motor		W	25 × 1	
Starting method			Direct line start	
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 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 VP20(I.D.20mm, O.D.26mm)	
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit, Drain hose	
Optional parts			—	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

**ISO-T1 "UNITARY AIR-CONDITIONERS"**



## Models FDEA56KXE4A, 71KXE4A

Item		Models	FDEA56KXE4A	FDEA71KXE4A
Nominal cooling capacity* <sup>1</sup>		kW	5.6	7.1
Nominal heating capacity* <sup>2</sup>		kW	6.3	8.0
Power source			1 Phase 220/240V 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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Centrifugal fan × 2	Centrifugal fan × 4
Motor		W	25 × 1	20 × 2
Starting method			Direct line start	
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 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: φ6.35(1/4"), Gas line: φ12.7(1/2")	Liquid line: φ9.52(3/8"), Gas line: φ15.88(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			—	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

**ISO-T1 "UNITARY AIR-CONDITIONERS"**



## Models FDEA112KXE4A, 140KXE4A

Item		Models	FDEA112KXE4A	FDEA140KXE4A
Nominal cooling capacity <sup>*1</sup>		kW	11.2	14.0
Nominal heating capacity <sup>*2</sup>		kW	12.5	16.0
Power source			1 Phase 220/240V 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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Centrifugal fan × 4	
Motor		W	30 × 2	38 × 2
Starting method			Direct line start	
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 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: φ9.52(3/8"), Gas line: φ15.88(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			—	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling <sup>*1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating <sup>*2</sup>	20℃	—	7℃	6℃	

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

**ISO-T1 "UNITARY AIR-CONDITIONERS"**



(I) Wall mounted type (FDK)

Models FDKA22KXE4A, 28KXE4A, 36KXE4A, 45KXE4A

Item		Models	FDKA22KXE4A	FDKA28KXE4A	FDKA36KXE4A	FDKA45KXE4A
Nominal cooling capacity* <sup>1</sup>	kW		2.2	2.8	3.6	4.5
Nominal heating capacity* <sup>2</sup>	kW		2.5	3.2	4.0	5.0
Power source		1 Phase 220/240V 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 fin & inner grooved tubing				
Refrigerant control		Electronic Expansion Valve				
Air handling equipment Fan type & Q'ty		Tangential fan ×1				
Motor	W	33×1				
Starting method		Direct line start				
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 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")			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						

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

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## Models FDKA56KXE4A, 71KXE4A

Item		Models	FDKA56KXE4A	FDKA71KXE4A
Nominal cooling capacity* <sup>1</sup>		kW	5.6	7.1
Nominal heating capacity* <sup>2</sup>		kW	6.3	8.0
Power source			1 Phase 220/240V 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 fin & inner grooved tubing	
Refrigerant control			Electronic Expansion Valve	
Air handling equipment Fan type & Q'ty			Tangential fan ×1	Tangential fan ×2
Motor		W	33 × 1	45 × 1
Starting method			Direct line start	
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 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")	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			—	

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

**ISO-T1 "UNITARY AIR-CONDITIONERS"**



(m) Floor standing exposed type (FDL)

Models FDFLA28KXE4A, 45KXE4A, 71KXE4A

Item		Models	FDFLA28KXE4A	FDFLA45KXE4A	FDFLA71KXE4A
Nominal cooling capacity* <sup>1</sup>	kW		2.8	4.5	7.1
Nominal heating capacity* <sup>2</sup>	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 fin & inner grooved tubing			
Refrigerant control		Electronic Expansion Valve			
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2			
Motor	W	30 × 1	40 × 1		
Starting method		Direct line start			
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 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")	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		—			

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

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(n) Floor standing hidden type (FDFU)

Models FDFUA28KXE4A, 45KXE4A, 56KXE4A, 71KXE4A

Models		FDFUA28KXE4A	FDFUA45KXE4A	FDFUA56KXE4A	FDFUA71KXE4A
Nominal cooling capacity <sup>*1</sup>	kW	2.8	4.5	5.6	7.1
Nominal heating capacity <sup>*2</sup>	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 fin & inner grooved tubing			
Refrigerant control		Electronic Expansion Valve			
Air handling equipment Fan type & Q'ty		Centrifugal fan × 2			
Motor	W	30×1	40×1		
Starting method		Direct line start			
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 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: φ9.52(3/8")	Liquid line:φ 6.35(1/4") Gas line: φ12.7(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		—			

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

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling* <sup>1</sup>	27℃	19℃	35℃	24℃	ISO-T1
Heating* <sup>2</sup>	20℃	—	7℃	6℃	

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

ISO-T1 "UNITARY AIR-CONDITIONERS"



## (2) Outdoor unit

### (a) KX series

#### Models FDCA140HKXEN4A, 140HKXES4A

Item		Model	FDCA140HKXEN4A	FDCA140HKXES4A
Power source			1 Phase 220V 50Hz	3 Phase 380/415V 50Hz
Nominal cooling capacity <sup>(1)</sup>		kW	14.6	
Nominal heating capacity <sup>(1)</sup>		kW	16.6	
Noise level		dB(A)	53	
Exterior dimensions Height × Width × Depth		mm	1300 × 970 × 370	
Net weight		kg	125	
Refrigerant equipment compressor type & Q' ty			GT-C5139ND62	
Motor		kW	3.0	
Starting method			Direct line start	
Capacity control		%	31 ~ 188	
Crankcase heater		W	33	
Heat exchanger			Straight & inner grooved tubing	
Refrigerant control			Electronic expansion Valve +Capillary tube	
Refrigerant			R410A	
Quantity		kg	8.5	
Refrigerant oil		ℓ	1.6 (M-MA32R)	
Defrost control			Microcomputer controlled De-Icer	
Air handling equipment Fan type & Q' ty			Propeller fan × 2	
Motor		W	60 × 2	
Starting method			Line starting	
Air flow(Standard)		CMM	100	
Shock & vibration absorber			Rubber mount (for compressor)	
Safety equipment			Compressor overheat protection, overcurrent protection, power transistor overheating protection, abnormal high pressure protection	
Installation data Refrigerant piping size		mm(in)	Liquid line: φ9.52(3/8") Gas line: φ15.88(5/8")	
Connecting method			Flare piping	
Drain			Hole for drain(φ20 × 3pcs)	
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			Edging	
Indoor units to be combined			FDTCA22, 28, 36, 45, 56 FDTA28, 36, 45, 56, 71, 90, 112, 140 FDTWA28, 45, 56, 71, 90, 112, 140 FDTQA22, 28, 36 FDTSA22, 28, 36, 45, 71 FDRA22, 28, 45, 56, 71, 90, 112, 140 FDQMA22, 28, 36 FDUMA36, 45, 56, 71, 90, 112, 140	FDURA45, 56, 71, 90, 112, 140 FDEA36, 45, 56, 71, 112, 140 FDKA22, 28, 36, 45, 56, 71 FDFLA28, 45, 71 FDFUA28, 45, 56, 71

Note (1) The cooling and heating capabilities imply the values when the indoor unit of rated capacity is connected under the condition specified in ISO-T1.

#### List of branch pipe part numbers (Select parts in accordance with the branching system used.)

Corresponding outdoor unit	Number of indoor units that can be connected	Branching system	
		Branch pipe system	Header system
FDCA140HKXEN4A FDCA140HKXES4A	2~6 units	DIS-22-1	HEAD4-22-1
	2~8 units		



## Models FDCA224HKXE4A, 280HKXE4A, 335HKXE4A

Item		Models	FDCA224HKXE4A	FDCA280HKXE4A	FDCA335HKXE4A
Power source			3 Phase 380/415V 50Hz		
Nominal cooling capacity <sup>(1)</sup>	kW		22.4	28.0	33.5
Nominal heating capacity <sup>(1)</sup>	kW		25.0	31.5	37.5
Noise level	dB(A)		Cooling:57, Heating:57	Cooling:58, Heating:58	Cooling:60.5, Heating:61
Exterior dimensions Height × Width × Depth	mm		1690 × 1350 × 720		
Net weight	kg		245		
Refrigerant equipment compressor type & Q' ty			GT-CS150ND71 × 1		
Motor	kW		3.88	5.78	6.17
Starting method			Direct line start		
Capacity control	%		25 ~ 114	20 ~ 109	19 ~ 109
Crankcase heater	W		33 × 1		
Heat exchanger			Straight & inner grooved tubing		
Refrigerant control			Electronic expansion valve		
Refrigerant			R410A		
Quantity	kg		14.2		14.2
Refrigerant oil	ℓ		2.1(M-MA32R)	2.1(M-MA32R)	2.1(M-MA32R)
Defrost control			Microcomputer controlled De-Icer		
Air handling equipment Fan type & Q'ty			Propeller fan × 2		
Motor	W		120 × 2		386 × 2
Starting method			Direct start		
Air flow(Standard)	CMM		220		Cooling:280, Heating:260
Shock & vibration absorber			Rubber mount (for compressor)		
Safety equipment			Compressor overheat protection, overcurrent protection, power transistor overheating protection, abnormal high pressure protection		
Installation data Refrigerant piping size	mm(in)		Liquid line: φ9.52(3/8") Gas line: φ19.05(3/4")	Liquid line: φ9.52(3/8") Gas line: φ22.22(7/8")	Liquid line: φ12.7(1/2") Gas line: φ25.4(1")
Connecting method			Gas line:Brazing, Liquid line:Flare		
Drain			Hole for drain(φ20 × 6pcs, φ45 × 3pcs)		
Insulation for piping			Necessary (both Liquid & Gas lines)		
Accessories			—		
Indoor units to be combined			FDCA22, 28, 36, 45, 56 FDTA28, 36, 45, 56, 71, 90, 112, 140 FDTWA28, 45, 56, 71, 90, 112, 140 FDTQA22, 28, 36 FDTSA22, 28, 36, 45, 71 FDRA22, 28, 45, 56, 71, 90, 112, 140 FDQMA22, 28, 36 FDUA224, 280 FDUMA36, 45, 56, 71, 90, 112, 140	FDURA45, 56, 71, 90, 112, 140 FDEA36, 45, 56, 71, 112, 140 FDKA22, 28, 36, 45, 56, 71 FDFLA28, 45, 71 FDFUA28, 45, 56, 71	

Notes (1) The cooling and heating capabilities imply the values when the indoor unit of rated capacity is connected under the condition specified in ISO-T1.

(2) The refrigerant quantity in the connecting pipe is not included Charge it additionally at the site.

### List of branch pipe part numbers (Select parts in accordance with the branching system used.)

Corresponding outdoor unit	Number of indoor units that can be connected	Branching system	
		Branch pipe system <sup>(1)</sup> (Total capacity after each branch)	Header system
FDCA224HKXE4A	1~13 units	<ul style="list-style-type: none"> <li>Downstream capacity less than 180 DIS-22-1</li> <li>Downstream capacity 180 to less than 371 DIS-180-1</li> <li>Downstream capacity 371 to less than 540 DIS-371-1</li> </ul>	<ul style="list-style-type: none"> <li>Connection capacity less than 180 HEAD-22-1 (for up to 4 units max)</li> <li>Connection capacity 180 to less than 371 HEAD-180-1 (up to 6 units max)</li> <li>Connection capacity 371 to less than 540 HEAD-371-1 (up to 8 units max)</li> </ul>
FDCA280HKXE4A	1~16 units		
FDCA335HKXE4A	1~20 units		

Note (1) In the branch piping method, the way branch piping is run needs to be in accordance with the total downstream capacity of the indoor units.



**Models FDCA335HKXE4A-K, 400HKXE4A, 450HKXE4A**

Item		Models	FDCA335HKXE4A-K <sup>(3)</sup>	FDCA400HKXE4A	FDCA450HKXE4A
Power source			3 Phase 380/415V		
Nominal cooling capacity <sup>(1)</sup>	kW		33.5	40.0	45.0
Nominal heating capacity <sup>(1)</sup>	kW		37.5	45.0	50.0
Noise level	dB(A)		Cooling: 56, Heating: 57	Cooling: 58.5, Heating: 59	Cooling: 61, Heating: 61
Exterior dimensions Height × Width × Depth	mm		1690 × 1350 × 720		
Net weight	kg		310		
Refrigerant equipment compressor type & Q'ty			GT-C5150ND78 × 2		
Motor	kW		2.99 × 2	3.71 × 2	4.29 × 2
Starting method			Direct line start		
Capacity control	%		19 ~ 142	15 ~ 109	13 ~ 108
Crankcase heater	W		33 × 2		
Heat exchanger			Straight fin & inner grooved tubing		
Refrigerant control			Electronic expansion valve		
Refrigerant			R410A		
Quantity	kg		17		
Refrigerant oil	ℓ		3.7 (M-MA32R)		
Defrost control			Microcomputer controlled De-Icer		
Air handling equipment Fan type & Q'ty			Propeller fan × 2		
Motor	W		386 × 2		
Starting method			Direct start		
Air flow(Standard)	CMM		Cooling: 220, Heating: 180	Cooling: 250, Heating: 220	Cooling: 260, Heating: 240
Shock & vibration absorber			Rubber mount (for compressor)		
Safety equipment			Compressor overheat protection, overcurrent protection, power transistor overheating protection, abnormal high pressure protection		
Installation data Refrigerant piping size	mm(in)		Liquid line: φ12.7(1/2") Gas line: φ25.4(1")		Liquid line: φ12.7(1/2") Gas line: φ28.58(1 1/8")
Connecting method			Gas line: Brazing, Liquid line: Flare		
Drain			Hole for drain (φ20 × 6pcs, φ45 × 3pcs)		
Insulation for piping			Necessary (both Liquid & Gas lines)		
Accessories			—		
Indoor units to be combined			FDTCA22, 28, 36, 45, 56 FDTA28, 36, 45, 56, 71, 90, 112, 140 FDTWA28, 45, 56, 71, 90, 112, 140 FDTQA22, 28, 36 FDTSA22, 28, 36, 45, 71 FDRA22, 28, 45, 56, 71, 90, 112, 140 FDQMA22, 28, 36 FDUA224, 280 FDUMA36, 45, 56, 71, 90, 112, 140		

Notes (1) The cooling and heating capabilities imply the values when the indoor unit of rated capacity is connected under the condition specified in ISO-T1.

(2) The refrigerant quantity in the connecting pipe is not included Charge it additionally at the site.

(3) The FDCA335HKXE4-K is an exclusive combination unit.

**List of branch pipe part numbers (Select parts in accordance with the branching system used.)**

Corresponding outdoor unit	Number of indoor units that can be connected	Branching system	
		Branch pipe system <sup>(1)</sup> (Total capacity after each branch)	Header system
FDCA335HKXE4A-K	—	• Downstream capacity less than 180 DIS-22-1	• Connection capacity less than 180 HEAD4-22-1 (for up to 4 units max)
FDCA400HKXE4A	1~23 units	• Downstream capacity 180 to less than 371 DIS-180-1	• Connection capacity 180 to less than 371 HEAD6-180-1 (up to 6 units max)
FDCA450HKXE4A	1~26 units	• Downstream capacity 371 to less than 540 DIS-371-1 • Downstream capacity 540 or more DIS-540-1	• Connection capacity 371 to less than 540 HEAD8-371-1 (up to 8 units max) • Connection capacity 540 or more HEAD8-540-1 (up to 8 units max)

Note (1) In the branch piping method, the way branch piping is run needs to be in accordance with the total downstream capacity of the indoor units.



## Models FDCA504HKXE4A, 560HKXE4A

Item		Models	FDCA504HKXE4A	FDCA560HKXE4A
Power source			3 Phase 380/415V	
Nominal cooling capacity <sup>(1)</sup>		kW	50.4	56.0
Nominal heating capacity <sup>(1)</sup>		kW	56.5	63.0
Noise level		dB(A)	Cooling: 60, Heating: 60.5	Cooling: 60.5, Heating: 62.5
Exterior dimensions Height × Width × Depth		mm	2048 × 1350 × 720	
Net weight		kg	340	
Refrigerant equipment compressor type & Q' ty			GT-C5150ND78 × 2	
Motor		kW	4.87 × 2	5.78 × 2
Starting method			Direct line start	
Capacity control		%	11 ~ 101	9 ~ 106
Crankcase heater		W	33 × 2	
Heat exchanger			Straight fin & inner grooved tubing	
Refrigerant control			Electronic expansion valve	
Refrigerant			R410A	
Quantity		kg	19.4	
Refrigerant oil		ℓ	4.2 (M-MA32R)	
Defrost control			Microcomputer controlled De-Icer	
Air handling equipment Fan type & Q' ty			Propeller fan × 2	
Motor		W	386 × 2	
Starting method			Direct start	
Air flow(Standard)		CMM	Cooling: 270, Heating: 250	
Shock & vibration absorber			Rubber mount (for compressor)	
Safety equipment			Compressor overheat protection, overcurrent protection, power transistor overheating protection, abnormal high pressure protection	
Installation data Refrigerant piping size		mm(in)	Liquid line: φ12.7(1/2") Gas line: φ28.58(1 1/8")	
Connecting method			Gas line: Brazing, Liquid line: Flare	
Drain			Hole for drain (φ20 × 6pcs, φ45 × 3pcs)	
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			—	
Indoor units to be combined			FDTCA22, 28, 36, 45, 56 FDTA28, 36, 45, 56, 71, 90, 112, 140 FDTWA28, 45, 56, 71, 90, 112, 140 FDTQA22, 28, 36 FDTSA22, 28, 36, 45, 71 FDRA22, 28, 45, 56, 71, 90, 112, 140 FDQMA22, 28, 36 FDUA224, 280 FDUMA36, 45, 56, 71, 90, 112, 140	FDURA45, 56, 71, 90, 112, 140 FDEA36, 45, 56, 71, 112, 140 FDKA22, 28, 36, 45, 56, 71 FDFLA28, 45, 71 FDFUA28, 45, 56, 71

Notes (1) The cooling and heating capabilities imply the values when the indoor unit of rated capacity is connected under the condition specified in ISO-T1.

(2) The refrigerant quantity in the connecting pipe is not included Charge it additionally at the site.

### List of branch pipe part numbers (Select parts in accordance with the branching system used.)

Corresponding outdoor unit	Number of indoor units that can be connected	Branching system	
		Branch pipe system <sup>(1)</sup> (Total capacity after each branch)	Header system
FDCA504HKXE4A	1~29 units	<ul style="list-style-type: none"> <li>Downstream capacity less than 180 DIS-22-1</li> <li>Downstream capacity 180 to less than 371 DIS-180-1</li> </ul>	<ul style="list-style-type: none"> <li>Connection capacity less than 180 HEAD4-22-1 (for up to 4 units max)</li> <li>Connection capacity 180 to less than 371 HEAD6-180-1 (up to 6 units max)</li> </ul>
FDCA560HKXE4A	1~33 units	<ul style="list-style-type: none"> <li>Downstream capacity 371 to less than 540 DIS-371-1</li> <li>Downstream capacity 540 or more DIS-540-1</li> </ul>	<ul style="list-style-type: none"> <li>Connection capacity 371 to less than 540 HEAD8-371-1 (up to 8 units max)</li> <li>Connection capacity 540 or more HEAD8-540-1 (up to 8 units max)</li> </ul>

Note (1) In the branch piping method, the way branch piping is run needs to be in accordance with the total downstream capacity of the indoor units.



## Models FDCA615HKXE4A, 680HKXE4A

Item		Models	FDCA615HKXE4A	FDCA680HKXE4A
Power source			3 Phase 380/415V 50Hz	
Nominal cooling capacity <sup>(1)</sup>		kW	61.5	68.0
Nominal heating capacity <sup>(1)</sup>		kW	69.0	73.0
Noise level		dB(A)	Cooling: 63, Heating: 63	Cooling: 63.5, Heating: 63.5
Exterior dimensions Height × Width × Depth		mm	2048 × 1350 × 720	
Net weight		kg	360	
Refrigerant equipment compressor type & Q'ty			GT-C5150ND78 × 1	
Motor		kW	6.66 × 2	7.15 × 2
Starting method			Direct line start	
Capacity control		%	9 ~ 105	8 ~ 100
Crankcase heater		W	33 × 2	
Heat exchanger			Straight fin & inner grooved tubing	
Refrigerant control			Electronic expansion valve	
Refrigerant			R410A	
Quantity		kg	26.2	
Refrigerant oil		ℓ	4.2 (M-MA32R)	
Defrost control			Microcomputer controlled De-Icer	
Air handling equipment Fan type & Q'ty			Propeller fan × 2	
Motor		W	386 × 2	
Starting method			Direct start	
Air flow(Standard)		CMM	Cooling: 270, Heating: 250	
Shock & vibration absorber			Rubber mount (for compressor)	
Safety equipment			Compressor overheat protection, overcurrent protection, power transistor overheating protection, abnormal high pressure protection	
Installation data Refrigerant piping size		mm(in)	Liquid line: φ 12.7(1/2") Gas line: φ28.58(1 1/8")	
Connecting method			Gas line:Brazing, Liquid line:Flare	
Drain			Hole for drain (φ20 × 6pcs, φ45 × 3pcs)	
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			—	
Indoor units to be combined			FDTCA22, 28, 36, 45, 56 FDTA28, 36, 45, 56, 71, 90, 112, 140 FDTWA28, 45, 56, 71, 90, 112, 140 FDTQA22, 28, 36 FDTSA22, 28, 36, 45, 71 FDRA22, 28, 45, 56, 71, 90, 112, 140 FDQMA22, 28, 36 FDUA224, 280 FDUMA36, 45, 56, 71, 90, 112, 140	FDURA45, 56, 71, 90, 112, 140 FDEA36, 45, 56, 71, 112, 140 FDKA22, 28, 36, 45, 56, 71 FDFLA28, 45, 71 FDFUA28, 45, 56, 71

Notes (1) The cooling and heating capabilities imply the values when the indoor unit of rated capacity is connected under the condition specified in ISO-T1.

(2) The refrigerant quantity in the connecting pipe is not included Charge it additionally at the site.

### List of branch pipe part numbers (Select parts in accordance with the branching system used.)

Corresponding outdoor unit	Number of indoor units that can be connected	Branching system	
		Branch pipe system <sup>(1)</sup> (Total capacity after each branch)	Header system
FDCA615HKXE4A	2~36 units	<ul style="list-style-type: none"> <li>Downstream capacity less than 180 DIS-22-1</li> <li>Downstream capacity 180 to less than 371 DIS-180-1</li> </ul>	<ul style="list-style-type: none"> <li>Connection capacity less than 180 HEAD4-22-1 (for up to 4 units max)</li> <li>Connection capacity 180 to less than 371 HEAD6-180-1 (up to 6 units max)</li> </ul>
FDCA680HKXE4A	2~40 units	<ul style="list-style-type: none"> <li>Downstream capacity 371 to less than 540 DIS-371-1</li> <li>Downstream capacity 540 or more DIS-540-1</li> </ul>	<ul style="list-style-type: none"> <li>Connection capacity 371 to less than 540 HEAD8-371-1 (up to 8 units max)</li> <li>Connection capacity 540 or more HEAD8-540-1 (up to 8 units max)</li> </ul>

Note (1) In the branch piping method, the way branch piping is run needs to be in accordance with the total downstream capacity of the indoor units.



(b) KXR series

Models FDCA224HKXRE4A, 280HKXRE4A, 335HKXRE4A

Models		FDCA224HKXRE4A	FDCA280HKXRE4A	FDCA335HKXRE4A
Item				
Power source		3 Phase 380/415V 50Hz		
Nominal cooling capacity <sup>(1)</sup>	kW	22.4	28.0	33.5
Nominal heating capacity <sup>(1)</sup>	kW	25.0	31.5	37.5
Noise level	dB(A)	Cooling: 57, Heating: 57	Cooling: 57, Heating: 59	Cooling: 60.5, Heating: 62.5
Exterior dimensions Height × Width × Depth	mm	1690 × 1350 × 720		
Net weight	kg	250		
Refrigerant equipment compressor type & Q' ty		GT-C5150ND74 × 1		
Motor	kW	3.98	6.06	6.75
Starting method		Direct line start		
Capacity control	%	24 ~ 114	19 ~ 109	18 ~ 103
Crankcase heater	W	33 × 1		
Heat exchanger		Straigh fin & inner grooved tubing		
Refrigerant control		Electronic expansion valve		
Refrigerant		R410A		
Quantity	kg	14.2		
Refrigerant oil	ℓ	2.2 (M-MA32R)		
Defrost control		Microcomputer controlled De-Icer		
Air handling equipment Fan type & Q'ty		Propeller fan × 2		
Motor	W	126 × 2		386 × 2
Starting method		Direct start		
Air flow(Standard)	CMM	Cooling: 220, Heating: 180	Cooling: 250, Heating: 180	Cooling: 280, Heating: 260
Shock & vibration absorber		Rubber mount (for compressor)		
Safety equipment		Compressor overheat protection, overcurrent protection, power transistor overheating protection, abnormal high pressure protection		
Installation data Refrigerant piping size	mm(in)	Liquid line: φ 9.52(3/8") Suction gas line: φ19.05(3/4") Discharge gas line: φ15.88(5/8")	Liquid line: φ 9.52(3/8") Suction gas line: φ22.22(7/8") Discharge gas line: φ19.05(3/4")	Liquid line: φ12.7 (1/2") Suction gas line: φ22.22(7/8") Discharge gas line: φ19.05(3/4")
Connecting method		Suction or discharge line:Brazing, Liquid line:Flare		
Drain		Hole for drain (φ20 × 6pcs, φ45 × 3pcs)		
Insulation for piping		Necessary (both Liquid & Gas lines)		
Accessories		—		
Indoor units to be combined		FDCA22, 28, 36, 45, 56 FDTA28, 36, 45, 56, 71, 90, 112, 140 FDTWA28, 45, 56, 71, 90, 112, 140 FDTQA22, 28, 36 FDTS22, 28, 36, 45, 71 FDRA22, 28, 45, 56, 71, 90, 112, 140 FDQMA22, 28, 36 FDUA224, 280 FDUMA36, 45, 56, 71, 90, 112, 140	FDURA45, 56, 71, 90, 112, 140 FDEA36, 45, 56, 71, 112, 140 FDKA22, 28, 36, 45, 56, 71 FDFLA28, 45, 71 FDFUA28, 45, 56, 71	

Notes (1) The cooling and heating capabilities imply the values when the indoor unit of rated capacity is connected under the condition specified in ISO-T1.

(2) The refrigerant quantity in the connecting pipe is not included Charge it additionally at the site.

List of branch pipe part numbers (Select parts in accordance with the branching system used.)

Corresponding outdoor unit	Number of indoor units that can be connected	Branching system	
		In the upstream of a branching controller <sup>(1)</sup>	In the downstream of a branching controller <sup>(1)</sup>
FDCA224HKXRE4A	1~13 units	• Downstream capacity less than 180 DIS-22-I-R	• Downstream capacity less than 180 DIS-22-I
FDCA280HKXRE4A	1~16 units	• Downstream capacity 180 to less than 371 DIS-180-I-R	• Connection capacity 180 to less than 371 DIS-180-I
FDCA335HKXRE4A	1~20 units	• Downstream capacity 371 to less than 540 DIS-371-I-R	

Note (1) In the branch piping method, the way branch piping is run needs to be in accordance with the total downstream capacity of the indoor units.

Branching controller part numbers

Branching controller	Number of connectable units
Total capacity downstream Last than 112: PFD112-E	1~5
Total capacity downstream Last than 180: PFD180-E	1~8
Total capacity downstream Last than 280: PFD280-E	1~10



**Models FDCA335HKXRE4A-K, 400HKXRE4A, 450HKXRE4A**

Models		FDCA335HKXRE4A-K <sup>(3)</sup>	FDCA400HKXRE4A	FDCA450HKXRE4A
Item				
Power source		3 Phase 380/415V 50Hz		
Nominal cooling capacity <sup>(1)</sup>	kW	33.5	40.0	45.0
Nominal heating capacity <sup>(1)</sup>	kW	37.5	45.0	50.0
Noise level	dB(A)	Cooling: 57, Heating: 57.5	Cooling: 59.5, Heating: 60	Cooling: 62.5, Heating: 62.5
Exterior dimensions Height × Width × Depth	mm	1690 × 1350 × 720		
Net weight	kg	315		
Refrigerant equipment compressor type & Q' ty		GT-C5150ND78 × 2		
Motor	kW	3.16 + 3.16	3.26 + 3.26	4.40 + 4.40
Starting method		Direct line start		
Capacity control	%	18 ~ 130	14 ~ 113	13 ~ 109
Crankcase heater	W	33 × 2		
Heat exchanger		Straight & inner grooved tubing		
Refrigerant control		Electronic expansion valve		
Refrigerant		R410A		
Quantity	kg	17		
Refrigerant oil	ℓ	4.4 (M-MA32R)		
Defrost control		Microcomputer controlled De-Icer		
Air handling equipment Fan type & Q'ty		Propeller fan × 2		
Motor	W	386 × 2		
Starting method		Direct start		
Air flow(Standard)	CMM	Cooling: 220, Heating: 180	Cooling: 250, Heating: 220	Cooling: 260, Heating: 240
Shock & vibration absorber		Rubber mount (for compressor)		
Safety equipment		Compressor overheat protection, overcurrent protection, power transistor overheating protection, abnormal high pressure protection		
Installation data Refrigerant piping size	mm(in)	Liquid line: φ12.7 (1/2") Suction gas line: φ22.22(7/8") Discharge gas line: φ19.05(3/4")	Liquid line: φ12.7 (1/2") Suction gas line: φ28.58(11/8") Discharge gas line: φ22.22(7/8")	
Connecting method		Suction or discharge line:Brazing, Liquid line:Flare		
Drain		Hole for drain (φ20 × 6pcs, φ45 × 3pcs)		
Insulation for piping		Necessary (both Liquid & Gas lines)		
Accessories		—		
Indoor units to be combined		FDTCA22, 28, 36, 45, 56 FDTA28, 36, 45, 56, 71, 90, 112, 140 FDTWA28, 45, 56, 71, 90, 112, 140 FDTQA22, 28, 36 FDTSA22, 28, 36, 45, 71 FDRA22, 28, 45, 56, 71, 90, 112, 140 FDQMA22, 28, 36 FDUA224, 280 FDUMA36, 45, 56, 71, 90, 112, 140	FDURA45, 56, 71, 90, 112, 140 FDEA36, 45, 56, 71, 112, 140 FDKA22, 28, 36, 45, 56, 71 FDFLA28, 45, 71 FDFUA28, 45, 56, 71	

Notes (1) The cooling and heating capabilities imply the values when the indoor unit of rated capacity is connected under the condition specified in ISO-T1.

(2) The refrigerant quantity in the connecting pipe is not included Charge it additionally at the site.

(3) The FDCA335HKXRE4A-K is an exclusive combination unit.

**List of branch pipe part numbers (Select parts in accordance with the branching system used.)**

Corresponding outdoor unit	Number of indoor units that can be connected	Branching system	
		In the upstream of a branching controller <sup>(1)</sup>	In the downstream of a branching controller <sup>(1)</sup>
FDCA335HKXRE4A-K	—	• Downstream capacity less than 180 DIS-22-1-R	
FDCA400HKXRE4A	1~23 units	• Downstream capacity 180 to less than 371 DIS-180-1-R	• Downstream capacity less than 180 DIS-22-1
FDCA450HKXRE4A	1~26 units	• Downstream capacity 371 to less than 540 DIS-371-1-R • Downstream capacity 540 or more DIS-540-1-R	• Connection capacity 180 to less than 371 DIS-180-1

Note (1) In the branch piping method, the way branch piping is run needs to be in accordance with the total downstream capacity of the indoor units.

**Branching controller part numbers**

Branching controller	Number of connectable units
Total capacity downstream Last than 112: PFD112-E	1~5
Total capacity downstream Last than 180: PFD180-E	1~8
Total capacity downstream Last than 280: PFD280-E	1~10



**Models FDCA504HKXRE4A, 560HKXRE4A**

Models		FDCA504HKXRE4A	FDCA560HKXRE4A
Item			
Power source		3 Phase 380/415V	
Nominal cooling capacity <sup>(1)</sup>	kW	50.4	56.0
Nominal heating capacity <sup>(1)</sup>	kW	56.5	63.0
Noise level	dB(A)	Cooling: 61, Heating: 61.5	Cooling: 62, Heating: 62.5
Exterior dimensions Height × Width × Depth	mm	2048 × 1350 × 720	
Net weight	kg	345	
Refrigerant equipment compressor type & Q'ty		GT-C5150ND78 × 2	
Motor	kW	4.98 × 2	6.06 × 2
Starting method		Direct line start	
Capacity control	%	11 ~ 101	9 ~ 106
Crankcase heater	W	33 × 2	
Heat exchanger		Straight fin & inner grooved tubing	
Refrigerant control		Electronic expansion valve	
Refrigerant		R410A	
Quantity	kg	19.4	
Refrigerant oil	ℓ	4.2 (M-MA32R)	
Defrost control		Microcomputer controlled De-Icer	
Air handling equipment Fan type & Q'ty		Propeller fan × 2	
Motor	W	386 × 2	
Starting method		Direct start	
Air flow(Standard)	CMM	Cooling: 270, Heating: 250	
Shock & vibration absorber		Rubber mount (for compressor)	
Safety equipment		Compressor overheat protection, overcurrent protection, power transistor overheating protection, abnormal high pressure protection	
Installation data Refrigerant piping size	mm(in)	Liquid line: ø12.7(1/2") Suction gas line: ø28.58(1 1/8") Discharge gas line: ø22.22 (7/8")	
Connecting method		Gas line:Brazing, Liquid line:Flare	
Drain		Hole for drain (φ20 × 6pcs, φ45 × 3pcs)	
Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories		—	
Indoor units to be combined		FDTCA22, 28, 36, 45, 56 FDTA28, 36, 45, 56, 71, 90, 112, 140 FDTWA28, 45, 56, 71, 90, 112, 140 FDTQA22, 28, 36 FDTSA22, 28, 36, 45, 71 FDR22, 28, 45, 56, 71, 90, 112, 140 FDQMA22, 28, 36 FDU22, 280 FDUMA36, 45, 56, 71, 90, 112, 140	FDURA45, 56, 71, 90, 112, 140 FDEA36, 45, 56, 71, 112, 140 FDKA22, 28, 36, 45, 56, 71 FDFLA28, 45, 71 FDFUA28, 45, 56, 71

Notes (1) The cooling and heating capabilities imply the values when the indoor unit of rated capacity is connected under the condition specified in ISO-T1.  
 (2) The refrigerant quantity in the connecting pipe is not included Charge it additionally at the site.

**List of branch pipe part numbers (Select parts in accordance with the branching system used.)**

Corresponding Outdoor Unit	Number of Indoor Units that can be Connected	Branching System	
		In the upstream of a branching controller	In the downstream of a branching controller
FDCA504HKXRE4A	1~29 units	• Downstream Capacity less than 180 DIS-22-1-R • Downstream Capacity 180 to less than 371 DIS-180-1-R • Downstream Capacity 371 to less than 540 DIS-371-1-R • Downstream Capacity 540 or more DIS-540-1-R	• Downstream Capacity less than 180 DIS-22-1 • Connection Capacity 180 to less than 371 DIS-180-1
FDCA560HKXRE4A	1~33 units		

Note (1) In the branch piping method, the way branch piping is run needs to be in accordance with the total downstream capacity of the indoor units.

**Branching controller part numbers**

Branching controller	Number of connectable units
Total capacity downstream Last than 112: PFD112-E	1~5
Total capacity downstream Last than 180: PFD180-E	1~8
Total capacity downstream Last than 280: PFD280-E	1~10



## Models FDCA615HKXRE4A, 680HKXRE4A

Models		FDCA615HKXRE4A	FDCA680HKXRE4A
Item			
Power source		3 Phase 380/415V 50Hz	
Nominal cooling capacity <sup>(1)</sup>	kW	61.5	68.0
Nominal heating capacity <sup>(1)</sup>	kW	69.0	73.0
Noise level	dB(A)	Cooling: 64, Heating: 64	Cooling: 64.5, Heating: 64.5
Exterior dimensions Height × Width × Depth	mm	2048 × 1350 × 720	
Net weight	kg	365	
Refrigerant equipment compressor type & Q'ty		GT-C5150ND78 × 1	
Motor	kW	7.01 × 2	7.75 × 2
Starting method		Direct line start	
Capacity control	%	9 ~ 105	8 ~ 100
Crankcase heater	W	33 × 2	
Heat exchanger		Straight fin & inner grooved tubing	
Refrigerant control		Electronic expansion valve	
Refrigerant		R410A	
Quantity	kg	26.2	
Refrigerant oil	ℓ	4.4 (M-MA32R)	
Defrost control		Microcomputer controlled De-Icer	
Air handling equipment Fan type & Q'ty		Propeller fan × 2	
Motor	W	386 × 2	
Starting method		Direct start	
Air flow(Standard)	CMM	Cooling: 270, Heating: 250	
Shock & vibration absorber		Rubber mount (for compressor)	
Safety equipment		Compressor overheat protection, overcurrent protection, power transistor overheating protection, abnormal high pressure protection	
Installation data Refrigerant piping size	mm(in)	Liquid line: ø12.7(1/2") Suction gas line: ø28.58(1 1/8") Discharge gas line: ø25.4 (1")	
Connecting method		Gas line: Brazing, Liquid line: Flare	
Drain		Hole for drain (φ20 × 6pcs, φ45 × 3pcs)	
Insulation for piping		Necessary (both Liquid & Gas lines)	
Accessories		—	
Indoor units to be combined		FDTCA22, 28, 36, 45, 56 FDTA28, 36, 45, 56, 71, 90, 112, 140 FDTWA28, 45, 56, 71, 90, 112, 140 FDTQA22, 28, 36 FDTSA22, 28, 36, 45, 71 FDRA22, 28, 45, 56, 71, 90, 112, 140 FDQMA22, 28, 36 FDUA224, 280 FDUMA36, 45, 56, 71, 90, 112, 140	FDURA45, 56, 71, 90, 112, 140 FDEA36, 45, 56, 71, 112, 140 FDKA22, 28, 36, 45, 56, 71 FDFLA28, 45, 71 FDFUA28, 45, 56, 71

Notes (1) The cooling and heating capabilities imply the values when the indoor unit of rated capacity is connected under the condition specified in ISO-T1.

(2) The refrigerant quantity in the connecting pipe is not included Charge it additionally at the site.

### List of branch pipe part numbers (Select parts in accordance with the branching system used.)

Corresponding Outdoor Unit	Number of Indoor Units that can be Connected	Branching System	
		In the upstream of a branching controller	In the downstream of a branching controller
FDCA615HKXRE4A	2~36 units	<ul style="list-style-type: none"> <li>Downstream Capacity less than 180 DIS-22-1-R</li> <li>Downstream Capacity 180 to less than 371 DIS-180-1-R</li> </ul>	<ul style="list-style-type: none"> <li>Downstream Capacity less than 180 DIS-22-1</li> <li>Connection Capacity 180 to less than 371 DIS-180-1</li> </ul>
FDCA680HKXRE4A	2~40 units	<ul style="list-style-type: none"> <li>Downstream Capacity 371 to less than 540 DIS-371-1-R</li> <li>Downstream Capacity 540 or more DIS-540-1-R</li> </ul>	

Note (1) In the branch piping method, the way branch piping is run needs to be in accordance with the total downstream capacity of the indoor units.

### Branching controller part numbers

Branching controller	Number of connectable units
Total capacity downstream Last than 112: PFD112-E	1~5
Total capacity downstream Last than 180: PFD180-E	1~8
Total capacity downstream Last than 280: PFD280-E	1~10



### (3) Operation chart

Since the Multi KX or KXR series air conditioner units are free multitype to which the indoor units of different capacity and different model can be connected, the operation characteristics of all combinations are very complicated, therefore only the individual operation characteristics of indoor and outdoor units are shown.

#### (a) Operating characteristic of outdoor unit

##### (i) KX Series

##### 1) All-in-one type

(220 V/240 V)

(380 V/415 V)

Models		FDCA140HKXE4A	FDCA140HKXE4A
Item			
Cooling power consumption	kW	4.20/4.20	4.20/4.20
Heating power consumption		4.45/4.45	4.45/4.45
Cooling running current	A	21.2/19.4	6.87/6.29
Heating running current		22.5/20.6	7.27/6.64
Inrush current (MAX.)	A	5	
Cooling power factor	%	90/90	93/93
Heating power factor		90/90	93/93

(380 V/415 V)

Models		FDCA224HKXE4A	FDCA280HKXE4A
Item			
Cooling power consumption	kW	5.70/5.70	8.26/8.26
Heating power consumption		5.98/5.98	8.06/8.06
Cooling running current	A	9.6/8.8	13.6/12.4
Heating running current		9.6/8.8	13.3/12.2
Inrush current (MAX.)	A	5	
Cooling power factor	%	90/90	92/93
Heating power factor		95/95	92/92

(380 V/415 V)

Models		FDCA335HKXE4A
Item		
Cooling power consumption	kW	9.53/9.53
Heating power consumption		9.84/9.84
Cooling running current	A	15.5/14.2
Heating running current		16.3/14.9
Inrush current (MAX.)	A	5
Cooling power factor	%	93/93
Heating power factor		92/92

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 "UNITARY AIR-CONDITIONERS"

##### 2) All-in-one type (also for combined use)

(380 V/415 V)

Models		FDCA400HKXE4A	FDCA450HKXE4A
Item			
Cooling power consumption	kW	11.27/11.27	12.97/12.97
Heating power consumption		11.73/11.73	13.10/13.10
Cooling running current	A	18.4/16.9	21.1/19.3
Heating running current		19.6/17.9	21.7/19.9
Inrush current (MAX.)	A	8	
Cooling power factor	%	93/93	93/93
Heating power factor		91/91	92/92

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 "UNITARY AIR-CONDITIONERS"



(380 V/415 V)

Models		FDCA504HKXE4A	FDCA560HKXE4A
Item			
Cooling power consumption	kW	14.73/14.73	17.21/17.21
Heating power consumption		15.15/15.15	17.07/17.07
Cooling running current	A	24.1/22.0	28.2/25.8
Heating running current		25.2/23.1	28.5/26.1
Inrush current (MAX.)	A	8	
Cooling power factor	%	93/93	
Heating power factor		91/91	

(380 V/415 V)

Models		FDCA615HKXE4A	FDCA680HKXE4A
Item			
Cooling power consumption	kW	20.37/20.37	24.98/24.98
Heating power consumption		18.48/18.48	19.08/19.08
Cooling running current	A	33.1/30.3	40.3/36.9
Heating running current		30.7/28.1	31.6/29.1
Inrush current (MAX.)	A	8	
Cooling power factor	%	94/94	92/92
Heating power factor		91/91	

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 UNITARY AIR-CONDITIONERS

## 2) Combined type

(380 V/415 V)

Models		FDCA735HKXE4A		FDCA800HKXE4A	
Item		FDCA335HKXE4A-K	FDCA400HKXE4A	FDCA400HKXE4A	FDCA400HKXE4A
Nominal cooling capacity	kW	73.5		80.0	
Nominal heating capacity		82.5		90.0	
Cooling power consumption	kW	20.21		22.54	
Heating power consumption		20.66		23.46	
Cooling running current	A	32.9/30.2		36.8/33.8	
Heating running current		34.4/31.4		39.2/35.8	
Inrush current (MAX.)	A	16			
Cooling power factor	%	93/93		93/93	
Heating power factor		91/91		91/91	

(380 V/415 V)

Models		FDCA850HKXE4A		FDCA900HKXE4A	
Item		FDCA400HKXE4A	FDCA450HKXE4A	FDCA450HKXE4A	FDCA450HKXE4A
Nominal cooling capacity	kW	85.0		90.0	
Nominal heating capacity		95.0		100.0	
Cooling power consumption	kW	24.22		25.94	
Heating power consumption		24.83		26.20	
Cooling running current	A	39.5/36.2		42.2/38.6	
Heating running current		41.3/37.8		43.4/39.8	
Inrush current (MAX.)	A	16			
Cooling power factor	%	93/93		94/93	
Heating power factor		92/92		92/92	

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 UNITARY AIR-CONDITIONERS



(380 V/415 V)

Models		FDCA960HKXE4A		FDCA1010HKXE4A	
		FDCA450HKXE4A	FDCA504HKXE4A	FDCA504HKXE4A	FDCA504HKXE4A
Item					
Nominal cooling capacity	kW	96.0		101.0	
Nominal heating capacity		108.0		113.0	
Cooling power consumption	kW	27.70/27.70		29.46/29.46	
Heating power consumption		28.25/28.25		30.30/30.30	
Cooling running current	A	45.1/41.3		48.2/44.0	
Heating running current		43.0		50.4/46.2	
Inrush current (MAX.)	A	16			
Cooling power factor	%	92/92		93/93	
Heating power factor				91/91	

(380 V/415 V)

Models		FDCA1065HKXE4A		FDCA1130HKXE4A	
		FDCA504HKXE4A	FDCA560HKXE4A	FDCA560HKXE4A	FDCA560HKXE4A
Item					
Nominal cooling capacity	kW	106.5		113.0	
Nominal heating capacity		119.5		127.0	
Cooling power consumption	kW	31.93/31.93		34.41/34.41	
Heating power consumption		32.21/32.21		34.13/34.13	
Cooling running current	A	52.3/47.8		56.4/51.6	
Heating running current		53.7/49.2		57.0/52.2	
Inrush current (MAX.)	A	16			
Cooling power factor	%	93/93			
Heating power factor		91/91			

(380 V/415 V)

Models		FDCA1180HKXE4A		FDCA1235HKXE4A	
		FDCA560HKXE4A	FDCA615HKXE4A	FDCA615HKXE4A	FDCA615HKXE4A
Item					
Nominal cooling capacity	kW	118.0		123.5	
Nominal heating capacity		132.0		138.0	
Cooling power consumption	kW	37.57/37.57		40.74/40.74	
Heating power consumption		35.54/35.54		36.96/36.96	
Cooling running current	A	61.3/56.1		66.2/60.6	
Heating running current		59.2/54.2		61.4/56.2	
Inrush current (MAX.)	A	16			
Cooling power factor	%	93/93		94/94	
Heating power factor		91/91			

(380 V/415 V)

Models		FDCA1300HKXE4A		FDCA1360HKXE4A	
		FDCA615HKXE4A	FDCA680HKXE4A	FDCA680HKXE4A	FDCA680HKXE4A
Item					
Nominal cooling capacity	kW	130.0		136.0	
Nominal heating capacity		142.0		146.0	
Cooling power consumption	kW	45.35/45.35		49.96/49.96	
Heating power consumption		37.56/37.56		38.16/38.16	
Cooling running current	A	73.4/67.2		80.6/73.8	
Heating running current		62.3/57.1		63.2/58.2	
Inrush current (MAX.)	A	16			
Cooling power factor	%	94/94			
Heating power factor		92/92			

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 "UNITARY AIR-CONDITIONERS"



**(ii) KXR Series****1) All-in-one type**

(380 V/415 V)

Models		FDCA224HKXRE4A	FDCA280HKXRE4A	FDCA335HKXRE4A
Item				
Cooling power consumption	kW	6.66/6.66	9.23/9.23	10.17/10.17
Heating power consumption		6.33/6.33	8.97/8.97	10.34/10.34
Cooling running current	A	10.1/9.2	14.7/13.4	16.5/15.1
Heating running current		9.8/9.0	14.2/13.0	17.1/15.6
Inrush current (MAX.)	A	5		
Cooling power factor	%	99/99	95/96	94/94
Heating power factor		98/98	96/96	92/92

**2) All-in-one type (also for combined use)**

(380 V/415 V)

Models		FDCA400HKXRE4A	FDCA450HKXRE4A
Item			
Cooling power consumption	kW	11.61/11.61	13.57/13.57
Heating power consumption		12.18/12.18	13.55/13.55
Cooling running current	A	19.0/17.4	21.6/19.8
Heating running current		20.3/18.6	22.4/20.5
Inrush current (MAX.)	A	8	
Cooling power factor	%	93/93	95/95
Heating power factor		91/91	92/92

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 UNITARY AIR-CONDITIONERS

(380 V/415 V)

Models		FDCA504HKXRE4A	FDCA560HKXRE4A
Item			
Cooling power consumption	kW	15.69/15.69	18.76/18.76
Heating power consumption		15.62/15.62	17.69/17.69
Cooling running current	A	24.6/22.5	29.7/27.2
Heating running current		26.1/23.9	29.5/27.0
Inrush current (MAX.)	A	8	
Cooling power factor	%	97/97	96/96
Heating power factor		91/91	

(380 V/415 V)

Models		FDCA615HKXRE4A	FDCA680HKXRE4A
Item			
Cooling power consumption	kW	21.47/21.47	25.99/25.99
Heating power consumption		19.11/19.11	19.69/19.69
Cooling running current	A	34.7/31.8	44.9/41.1
Heating running current		31.6/28.9	34.0/31.1
Inrush current (MAX.)	A	8	
Cooling power factor	%	94/94	88/88
Heating power factor		92/92	88/88

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 UNITARY AIR-CONDITIONERS



## 2) Combined type

(380 V/415 V)

Models		FDCA735HKXRE4A		FDCA800HKXRE4A	
		FDCA335HKXRE4A-K	FDCA400HKXRE4A	FDCA400HKXRE4A	FDCA400HKXRE4A
Item					
Nominal cooling capacity	kW	73.5		80.0	
Nominal heating capacity		82.5		90.0	
Cooling power consumption	kW	21.08/21.08		23.22/23.22	
Heating power consumption		21.55/21.55		24.36/24.36	
Cooling running current	A	34.4/31.5		38.0/34.8	
Heating running current		35.8/32.8		40.6/37.2	
Inrush current (MAX.)	A	16			
Cooling power factor	%	93/93		93/93	
Heating power factor		92/92		91/91	

(380 V/415 V)

Models		FDCA850HKXRE4A		FDCA900HKXRE4A	
		FDCA400HKXRE4A	FDCA450HKXRE4A	FDCA450HKXRE4A	FDCA450HKXRE4A
Item					
Nominal cooling capacity	kW	85.0		90.0	
Nominal heating capacity		95.0		100.0	
Cooling input	kW	25.18/25.18		27.14/27.14	
Heating input		25.73/25.73		27.1/27.1	
Cooling running current	A	40.6/37.3		43.2/39.6	
Heating running current		42.7/39.1		44.8/41.0	
Inrush current (MAX.)	A	16			
Cooling power factor	%	94/94		95/95	
Heating power factor		92/92		92/92	

(380 V/415 V)

Models		FDCA960HKXRE4A		FDCA1010HKXRE4A	
		FDCA450HKXRE4A	FDCA504HKXRE4A	FDCA504HKXRE4A	FDCA504HKXRE4A
Item					
Nominal cooling capacity	kW	96.0		101.0	
Nominal heating capacity		108.0		113.0	
Cooling power consumption	kW	29.26/29.26		31.88/31.88	
Heating power consumption		29.17/29.17		31.24/31.24	
Cooling running current	A	46.2/42.3		49.2/45.0	
Heating running current		48.5/44.4		52.2/47.8	
Inrush current (MAX.)	A	16			
Cooling power factor	%	96/96		98/99	
Heating power factor		91/91			

(380 V/415 V)

Models		FDCA1065HKXRE4A		FDCA1130HKXRE4A	
		FDCA504HKXRE4A	FDCA560HKXRE4A	FDCA560HKXRE4A	FDCA560HKXRE4A
Item					
Nominal cooling capacity	kW	106.5		113.0	
Nominal heating capacity		119.5		127.0	
Cooling power consumption	kW	34.45/34.45		37.52/37.52	
Heating power consumption		33.31/33.31		35.38/35.38	
Cooling running current	A	54.3/49.7		59.4/54.4	
Heating running current		55.6/50.9		59.0/54.0	
Inrush current (MAX.)	A	16			
Cooling power factor	%	96/96			
Heating power factor		91/91			

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 UNITARY AIR-CONDITIONERS



(380 V/415 V)

Models		FDCA1180HKXRE4A		FDCA1235HKXRE4A	
		FDCA560HKXRE4A	FDCA615HKXRE4A	FDCA615HKXRE4A	FDCA615HKXRE4A
Item					
Nominal cooling capacity	kW	118.0		123.5	
Nominal heating capacity		132.0		138.0	
Cooling power consumption	kW	40.23/40.23		42.94/42.94	
Heating power consumption		36.80/36.80		38.22/38.22	
Cooling running current	A	64.4/59.0		69.4/63.6	
Heating running current		61.1/55.9		63.2/57.8	
Inrush current (MAX.)	A	16			
Cooling power factor	%	95/95		94/94	
Heating power factor		92/92			

(380 V/415 V)

Models		FDCA1300HKXRE4A		FDCA1360HKXRE4A	
		FDCA615HKXRE4A	FDCA680HKXRE4A	FDCA680HKXRE4A	FDCA680HKXRE4A
Item					
Nominal cooling capacity	kW	130.0		136.0	
Nominal heating capacity		142.0		146.0	
Cooling power consumption	kW	47.46/47.46		51.98/51.98	
Heating power consumption		38.80/38.80		39.38/39.38	
Cooling running current	A	79.6/72.9		89.8/82.2	
Heating running current		65.6/60.0		68.0/62.2	
Inrush current (MAX.)	A	16			
Cooling power factor	%	91/91		88/88	
Heating power factor		90/90		88/88	

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 UNITARY AIR-CONDITIONERS

### (iii) Operating characteristic of indoor unit

#### FDTC Series

(220 V/240 V)

Models		FDTC Series				
		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

#### FDT Series

(220 V/240 V)

Models		FDT Series							
		28	36	45	56	71	90	112	140
Item		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
Power consumption (kW)		0.05/0.05				0.06/0.07	0.10/0.11	0.20/0.24	0.23/0.27
Running current (A)		0.23/0.21				0.32/0.30	0.46/0.46	0.90/0.98	1.03/1.13

#### FDTW Series

(220 V/240 V)

Models		FDTW Series						
		28	45	56	71	90	112	140
Item		0.09/0.10			0.10/0.11	0.12/0.13	0.18/0.20	0.20/0.24
Power consumption (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

#### FDTQ Series

(220 V/240 V)

Models		FDTQ Series(Direct blow panel)			FDTQ Series(Duct panel)		
		22	28	36	22	28	36
Power consumption (kW)		0.045/0.050			0.050/0.055		
Running current (A)		0.21/0.22			0.23/0.24		

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 UNITARY AIR-CONDITIONERS

(2) The values shown in the above table are common to both cooling and heating operations.



**FDTs Series**

(220 V/240 V)

Item	Models	FDTs Series				
		22	28	36	45	71
Power consumption (kW)		0.07/0.08			0.09/0.11	0.12/0.15
Running current (A)		0.33/0.36			0.43/0.46	0.58/0.63

**FDR Series**

(220 V/240 V)

Models	FDR Series							
	22	28	45	56	71	90	112	140
Item								
Power consumption (kW)	0.09/0.11	0.11/0.13	0.14/0.16		0.15/0.17	0.16/0.19	0.24/0.28	0.28/0.32
Running current (A)	0.41/0.46	0.51/0.56	0.63/0.67		0.68/0.71	0.73/0.79	1.07/1.17	1.28/1.32

**FDQM, FDUM Series**

(220 V/240 V)

<div>Models</div> <div>Item</div>	FDQM Series			FDUM Series					
	22	28	36	36	45, 56	71	90	112	140
Power consumption (kW)	0.050/0.055			0.11/0.13	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			0.51/0.56	0.63/0.67	0.68/0.71	0.73/0.79	1.07/1.17	1.28/1.32

**FDE, FDU Series**

(220 V/240 V)

Item	Models	FDE Series						FDU Series	
		36	45	56	71	112	140	224	280
Power consumption (kW)		0.07/0.08			0.09/0.10	0.14/0.15	0.16/0.17	0.42/0.49	0.51/0.61
Running current (A)		0.3/0.3			0.4/0.4	0.6/0.6	0.7/0.7	1.88/2.05	2.31/2.52

**FDK, FDFL, FDFU Series**

(220 V/240 V)

<div>Models</div> <div>Item</div>	FDK Series						FDFL, FDFU 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

**FDUR Series**

(220 V/240 V)

Item	Models	FDUR Series					
		45	56	71	90	112	140
Power consumption (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

Note (1) This packaged air-conditioner is manufactured and tested in conformity with the following standard.  
ISO-T1 "UNITARY AIR-CONDITIONERS"

(2) The values shown in the above table are common to both cooling and heating operations.



#### (iv) Calculation of total operation characteristics

Since the operation characteristics of series Multi-KX or KXR depend on combination of indoor unit, calculate the total operation characteristics of the system by using the formulas below according to specifications of each indoor unit or outdoor unit.

##### 1) Total power consumption

Total power consumption (kW) = Power consumption of outdoor unit +  $\Sigma$  (Power consumption of indoor unit)

##### 2) Total running current

Total running current (A) = Running current of outdoor unit + [ $\Sigma$  (Running current of indoor unit)  $\times$  2/3]

##### 3) Total power factor

Total power factor (%) = [Total power consumption (W) /  $\sqrt{3} \times$  Total running current (A)  $\times$  Power source]  $\times$  100

Total operation characteristics = Operation characteristic value of outdoor unit + Operation characteristic value of indoor unit

[Example]

(Conditions)      Operation Voltage ..... Indoor unit: 220 V, 50 Hz  
   Outdoor unit: 380 V, 50 Hz  
   Operation mode ..... Cooling and Heating  
   Unit..... Outdoor unit: FDCA735HKXRE4A  $\times$  1 unit  
   Indoor unit:    FDTA71KXE4A  $\times$  8 units  
       FDTA45KXE4A  $\times$  6 units

Operation characteristics of each unit

(Cooling/Heating)

Item \ Models	FDCA735HKXRE4A	FDTA71KXE4A	FDTA45KXE4A
Power consumption (kW)	20.21/20.66	0.06/0.06	0.05/0.05
Running current (A)	32.9/34.4	0.32/0.32	0.23/0.23

##### ① Total power consumption (kW)

(Cooling)  $20.21 + (0.06 \times 8 + 0.05 \times 6) = 20.99$  (kW)

(Heating)  $20.66 + (0.06 \times 8 + 0.05 \times 6) = 21.44$  (kW)

##### ② Total running current (A)

(Cooling)  $32.9 + (0.32 \times 8 + 0.23 \times 6) \times \frac{2}{3} \approx 35.5$  (A)

(Heating)  $34.4 + (0.32 \times 8 + 0.23 \times 6) \times \frac{2}{3} \approx 37.0$  (A)

##### ③ Total power factor (%)

(Cooling)  $\frac{20.99 \times 1000}{\sqrt{3} \times 35.5 \times 380} \times 100 \approx 90$  %

(Heating)  $\frac{21.44 \times 1000}{\sqrt{3} \times 37.0 \times 380} \times 100 \approx 88$  %



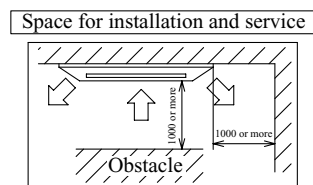
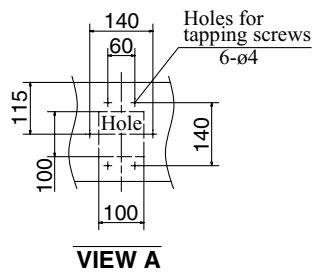
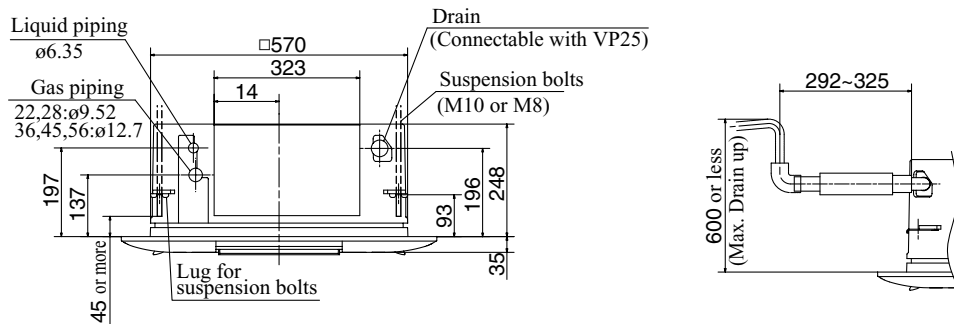
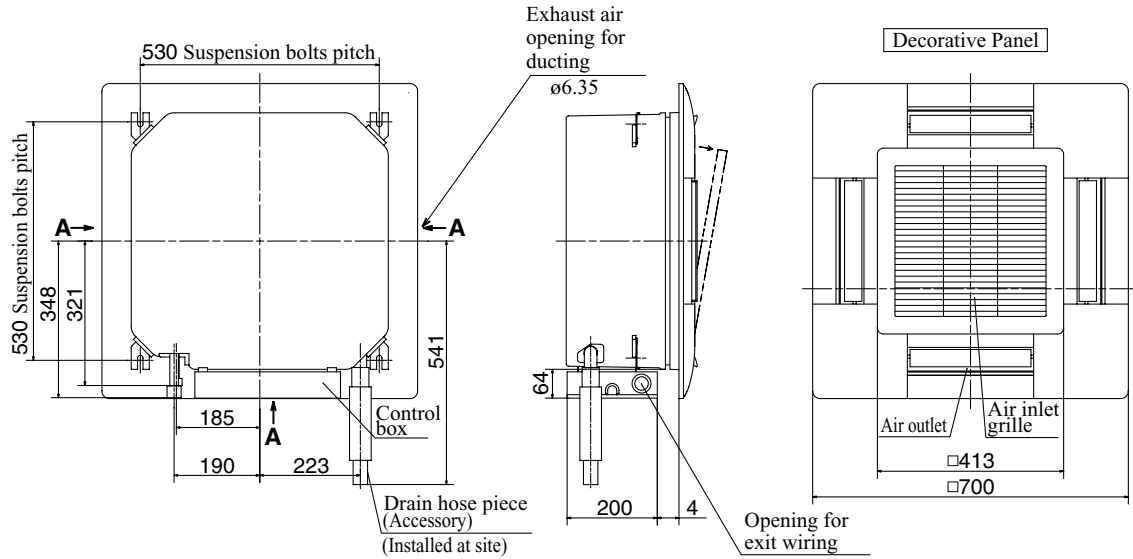
## 2.3 Exterior dimensions

### (1) Indoor unit

#### (a) Ceiling recessed compact type (FDTC)

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

Unit:mm

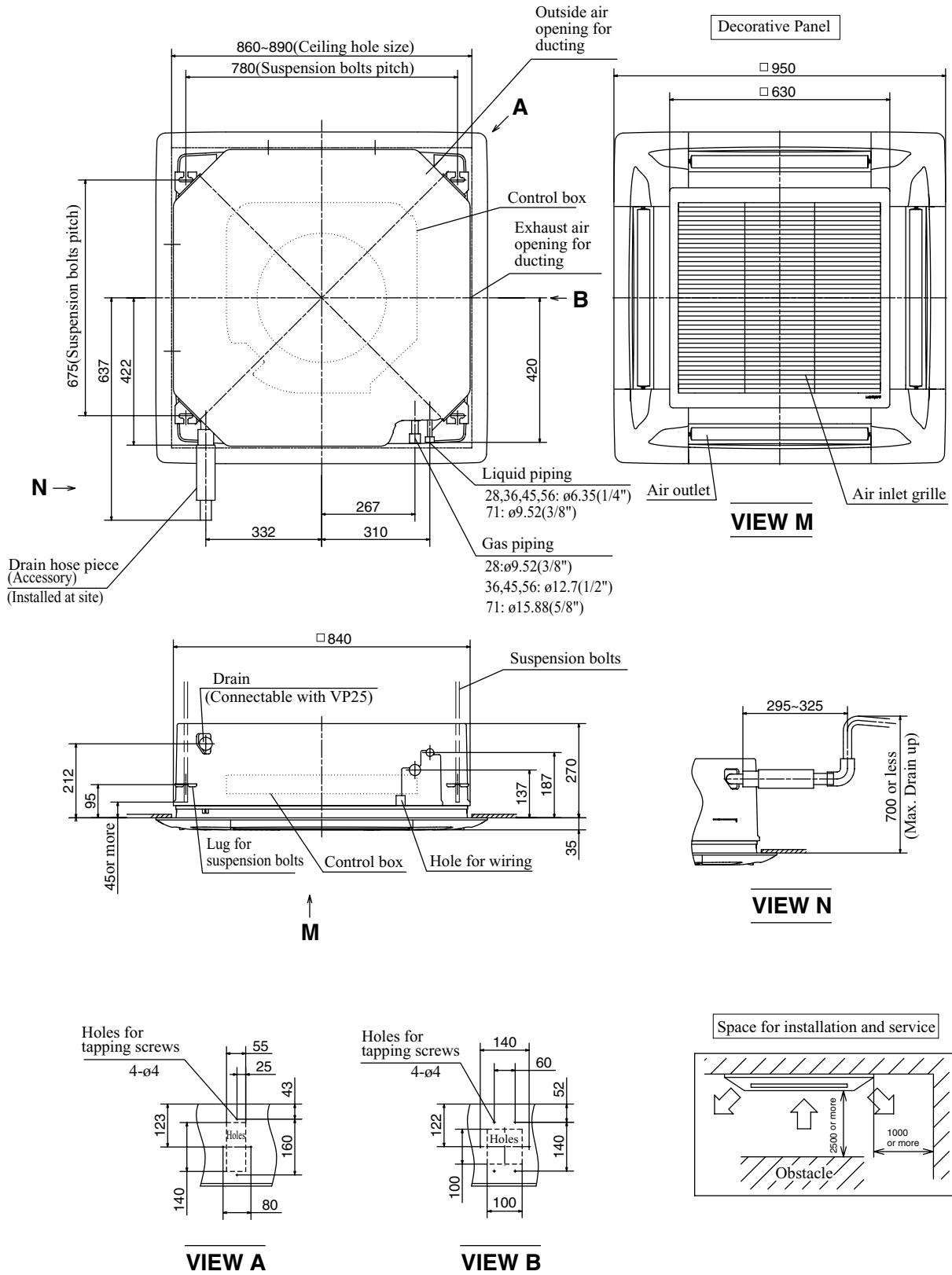




(b) Ceiling recessed compact type (FDT)

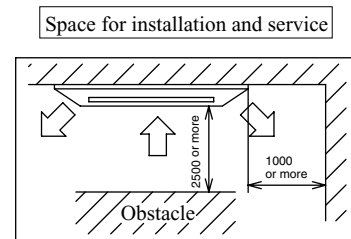
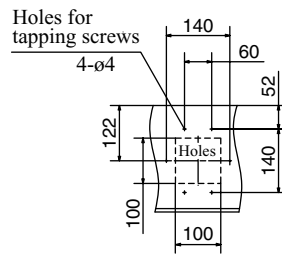
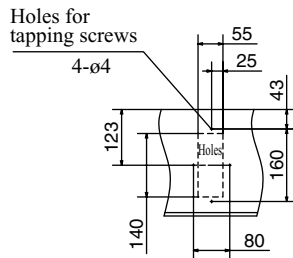
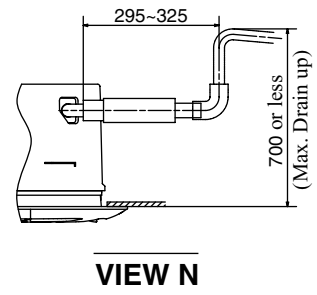
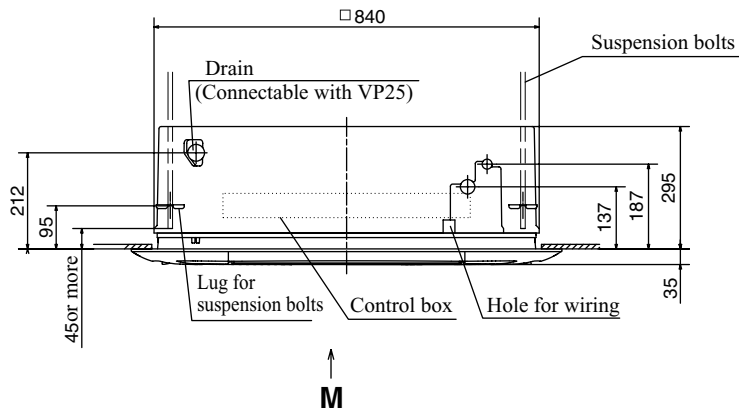
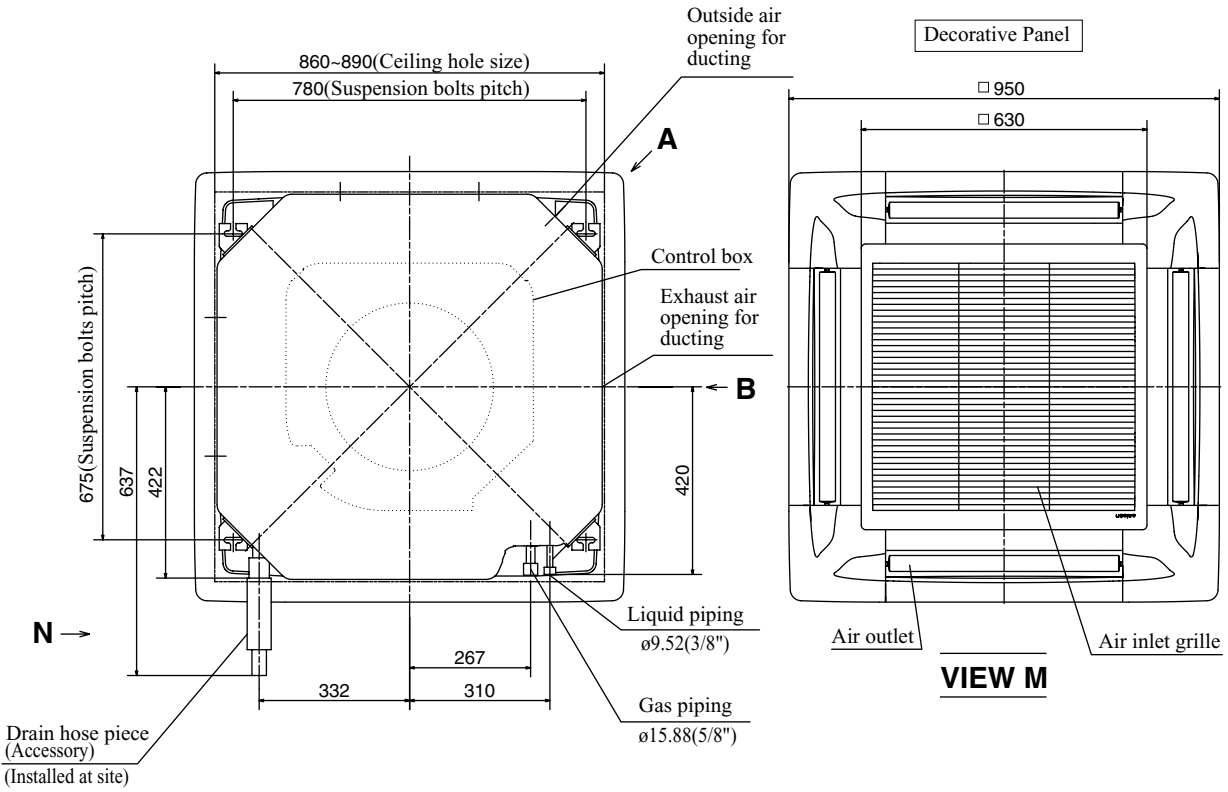
Models FDTA28KXE4A, 36KXE4A, 45KXE4A, 56KXE4A, 71KXE4A

unit : mm





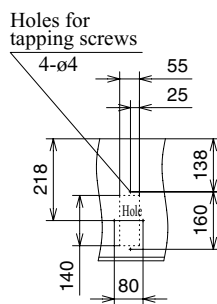
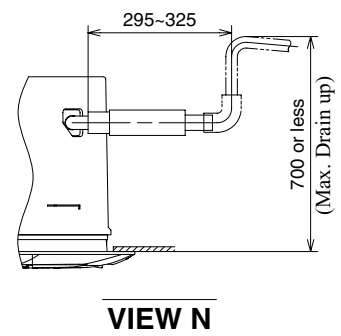
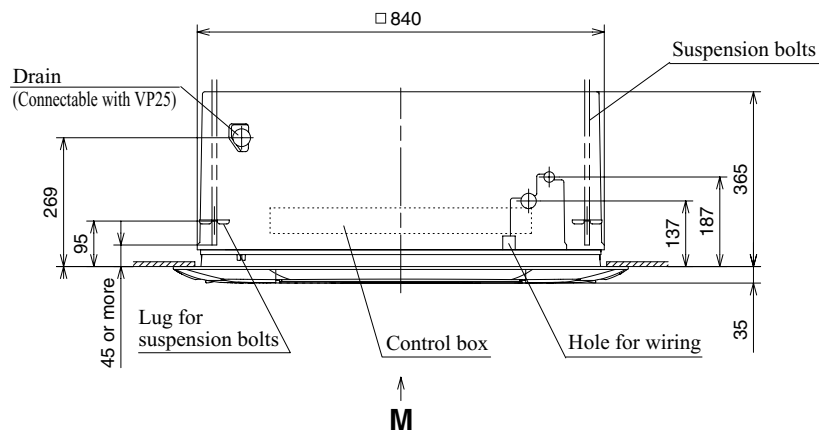
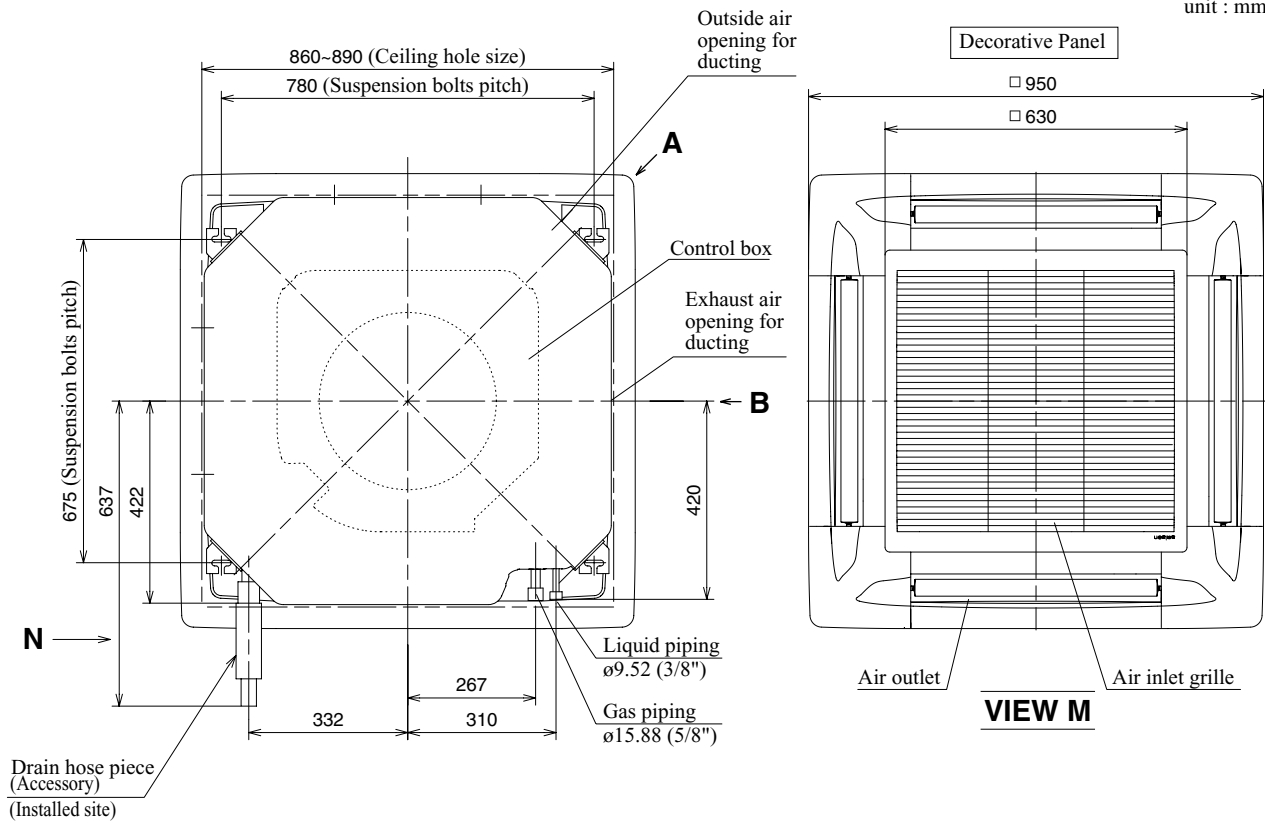
**Models FDTA90KXE4A**



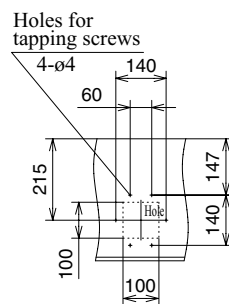


**Models FDTA112KXE4A, 140KXE4A**

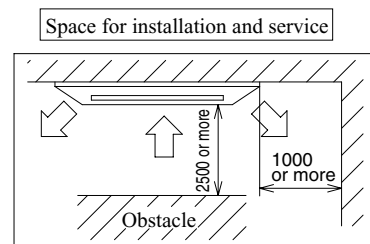
unit : mm



**VIEW A**



**VIEW B**

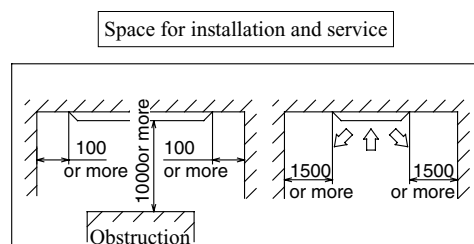
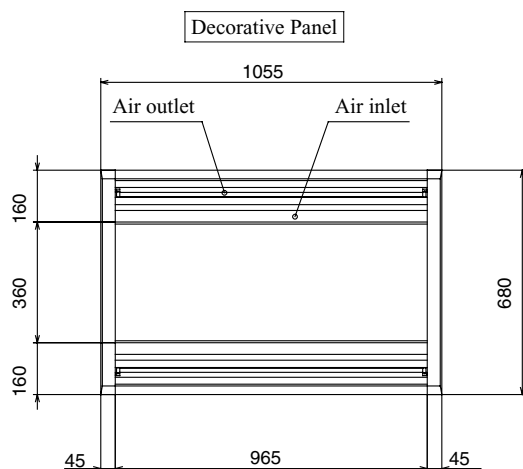
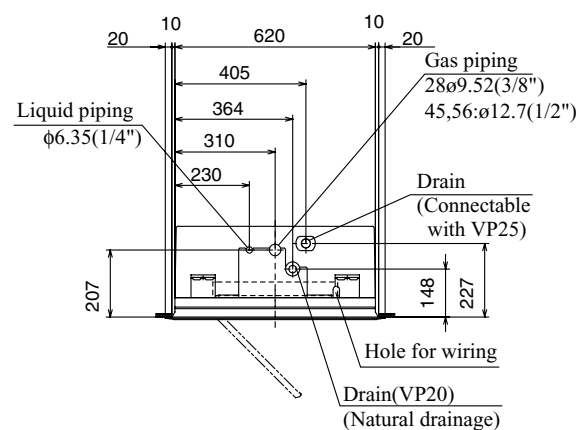




**Models** FDTWA28KXE4A, 45KXE4A, 56KXE4A

Technical drawing of the front view of the control panel. The drawing includes the following dimensions and labels:

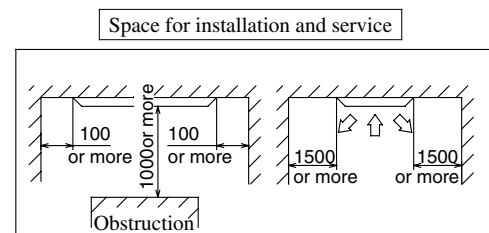
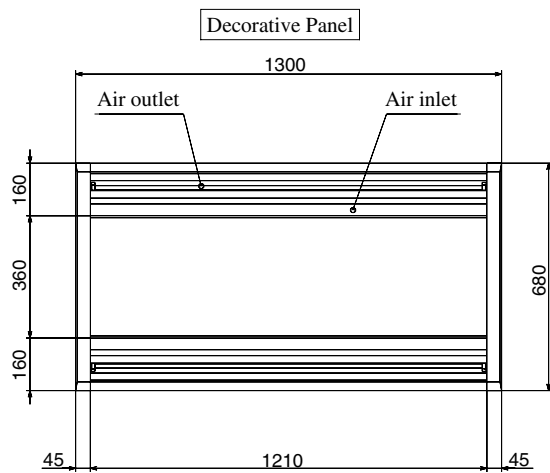
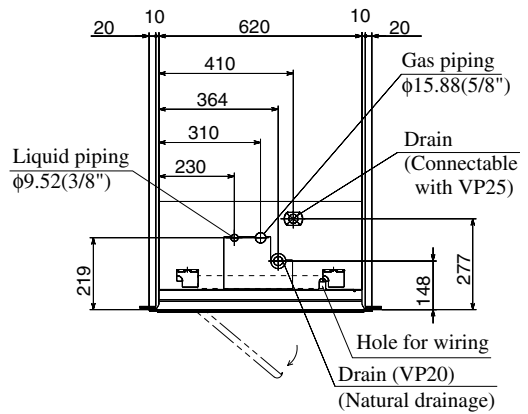
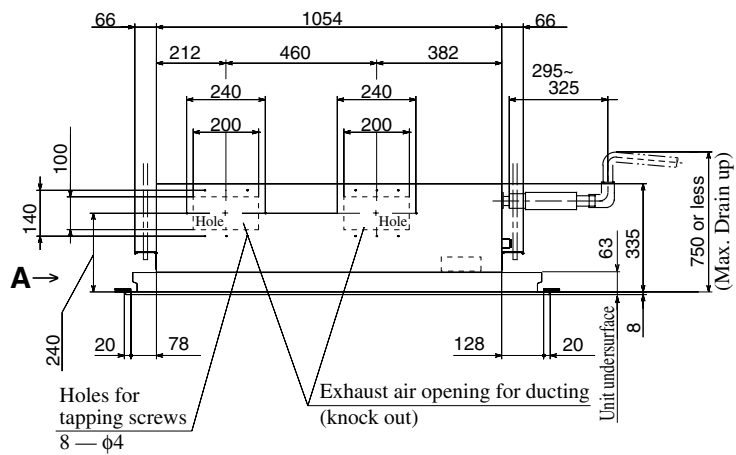
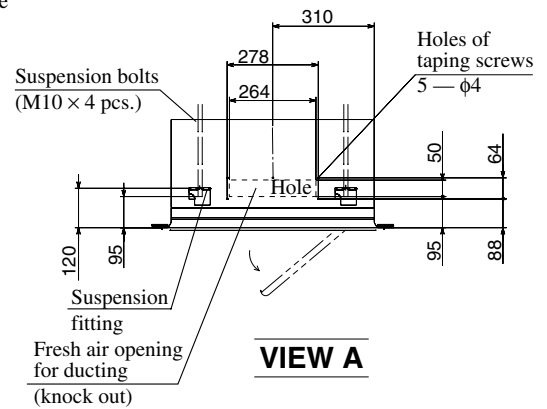
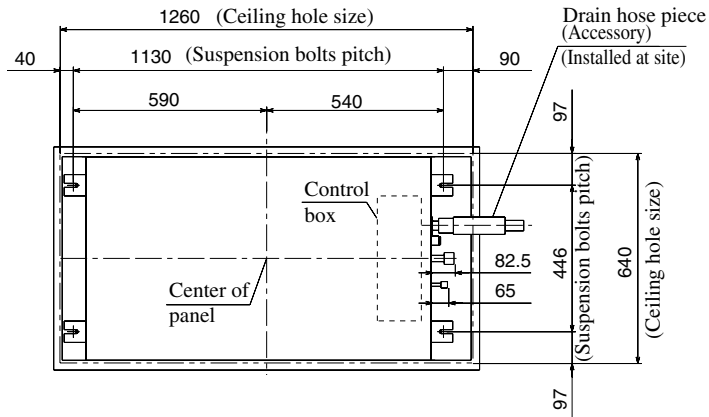
- 1015 (Ceiling hole size)**: Total width of the panel.
- 885 (Suspension bolts pitch)**: Distance between suspension bolts.
- 90**: Distance from the right edge of the panel to the rightmost suspension bolt.
- 40**: Distance from the left edge of the panel to the leftmost suspension bolt.
- 468**: Distance from the left edge of the panel to the center of the control box.
- 417**: Distance from the center of the control box to the rightmost suspension bolt.
- Control box**: A dashed rectangular area representing the control box.
- Center of panel**: A dashed line indicating the center of the panel.
- 70**: Distance from the center of the control box to the top edge of the panel.
- 60**: Distance from the center of the control box to the bottom edge of the panel.
- 446 (Suspension bolts pitch)**: Distance between the top and bottom suspension bolts.
- 640 (Ceiling hole size)**: Total height of the panel.
- 97**: Distance from the top edge of the panel to the top suspension bolt.
- 97**: Distance from the bottom edge of the panel to the bottom suspension bolt.
- Drain hose piece (Accessory) (Installed at site)**: A component connected to the right side of the panel.





Models FDTWA71KXE4A, 90KXE4A

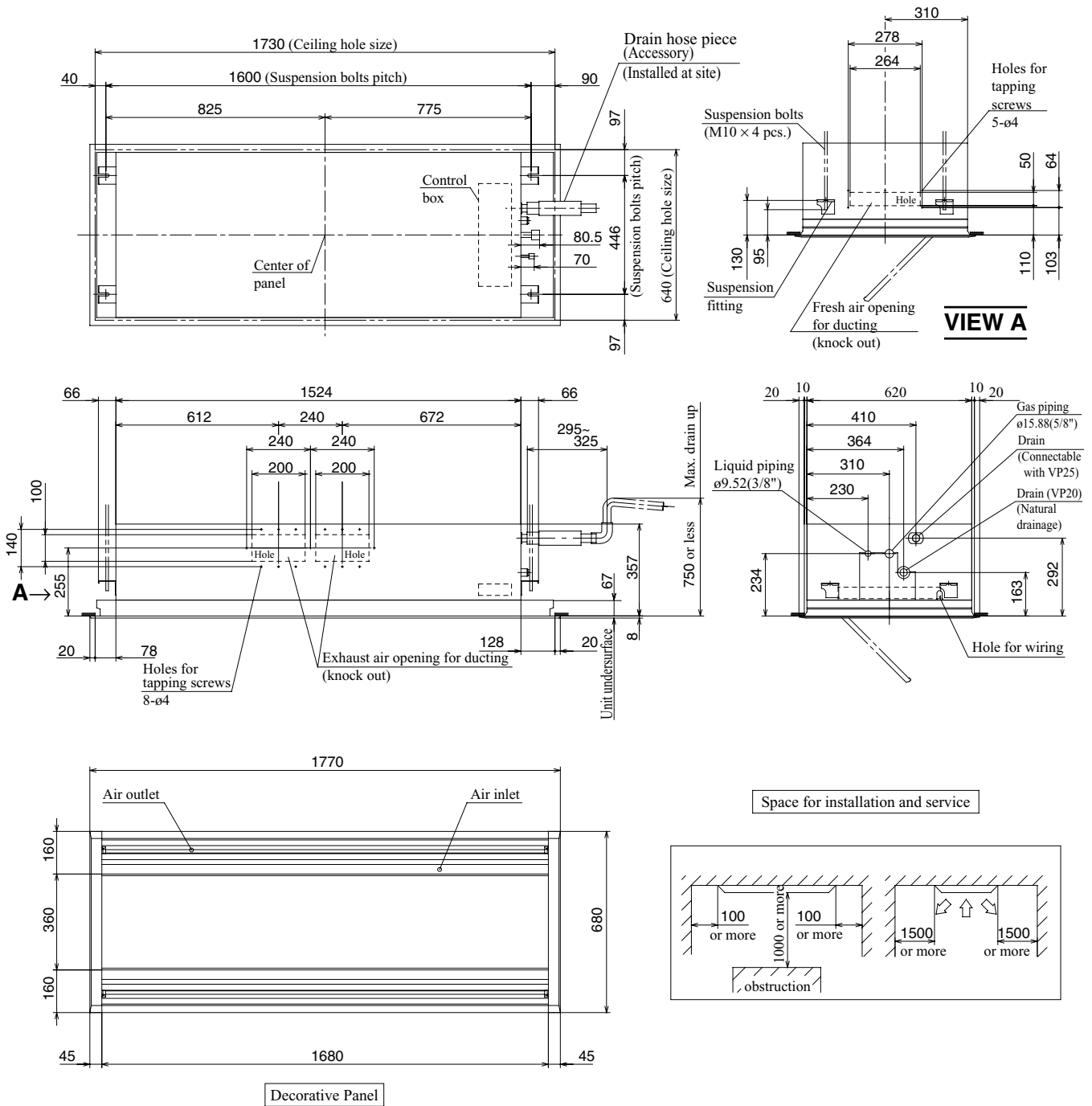
Unit : mm





**Models FDTW112KXE4A, 140KXE4A**

Unit: mm

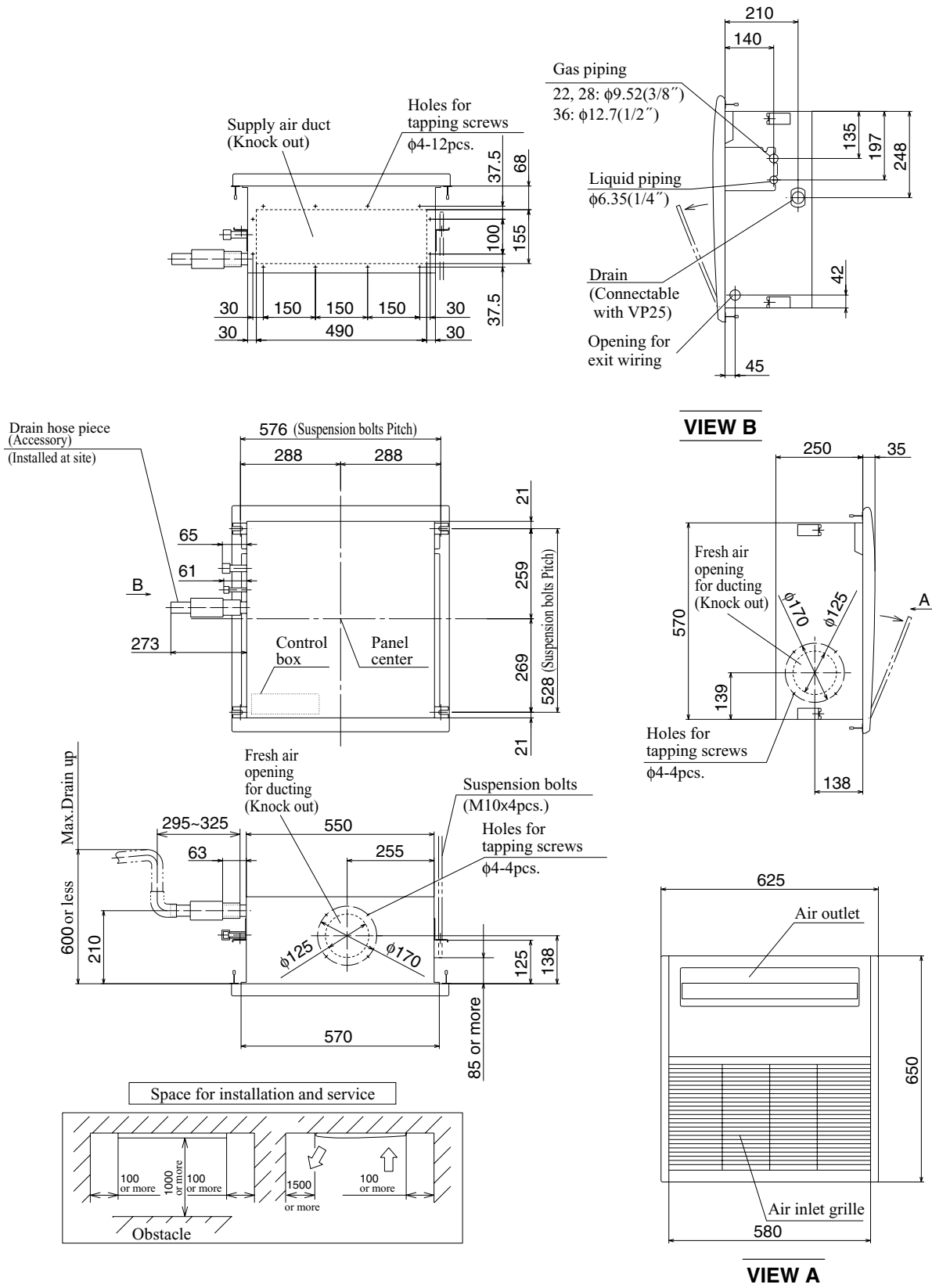




(d) Ceiling recessed single air supply port type (FDTQ)

Models FDTQA22KXE4A, 28KXE4A, 36KXE4A

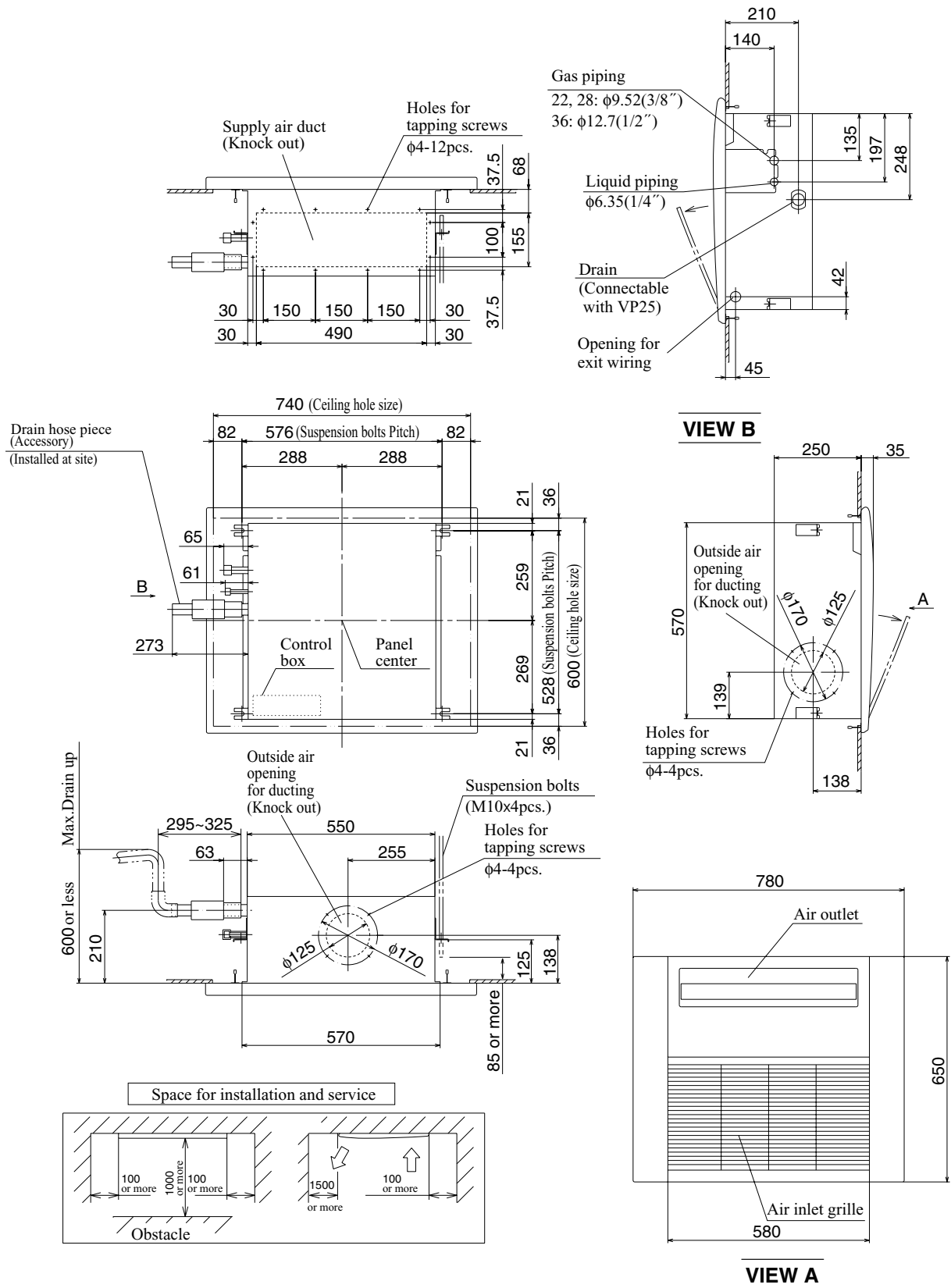
Direct blow panel (TQ-PSA-13W-E)





Models FDTQA22KXE4A, 28KXE4A, 36KXE4A

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

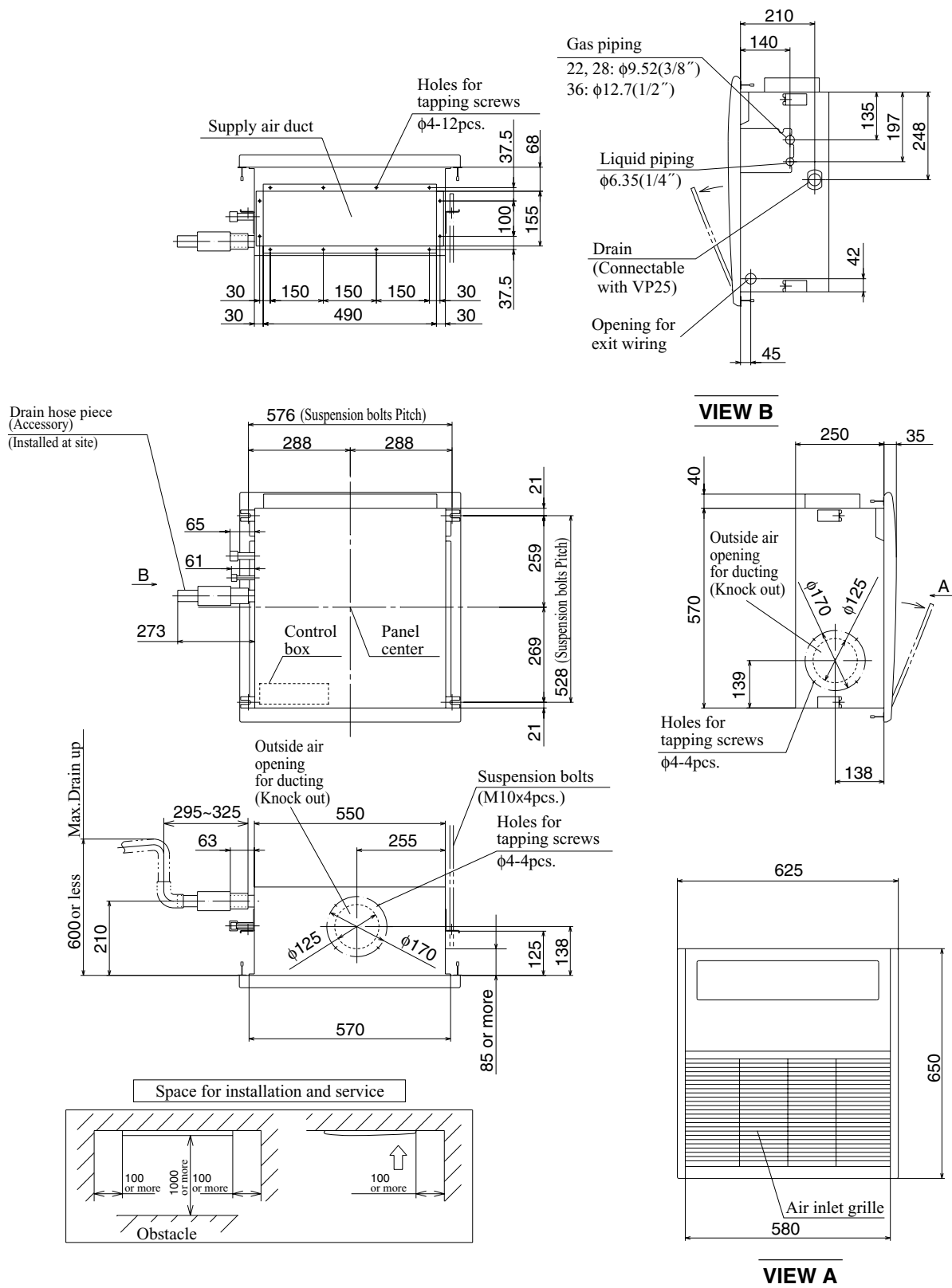




- When modified to the Duct panel type at site.

Models FDTQA22KXE4A, 28KXE4A 36KXE4A

**Duct panel (QR-PNA-13W-E)**

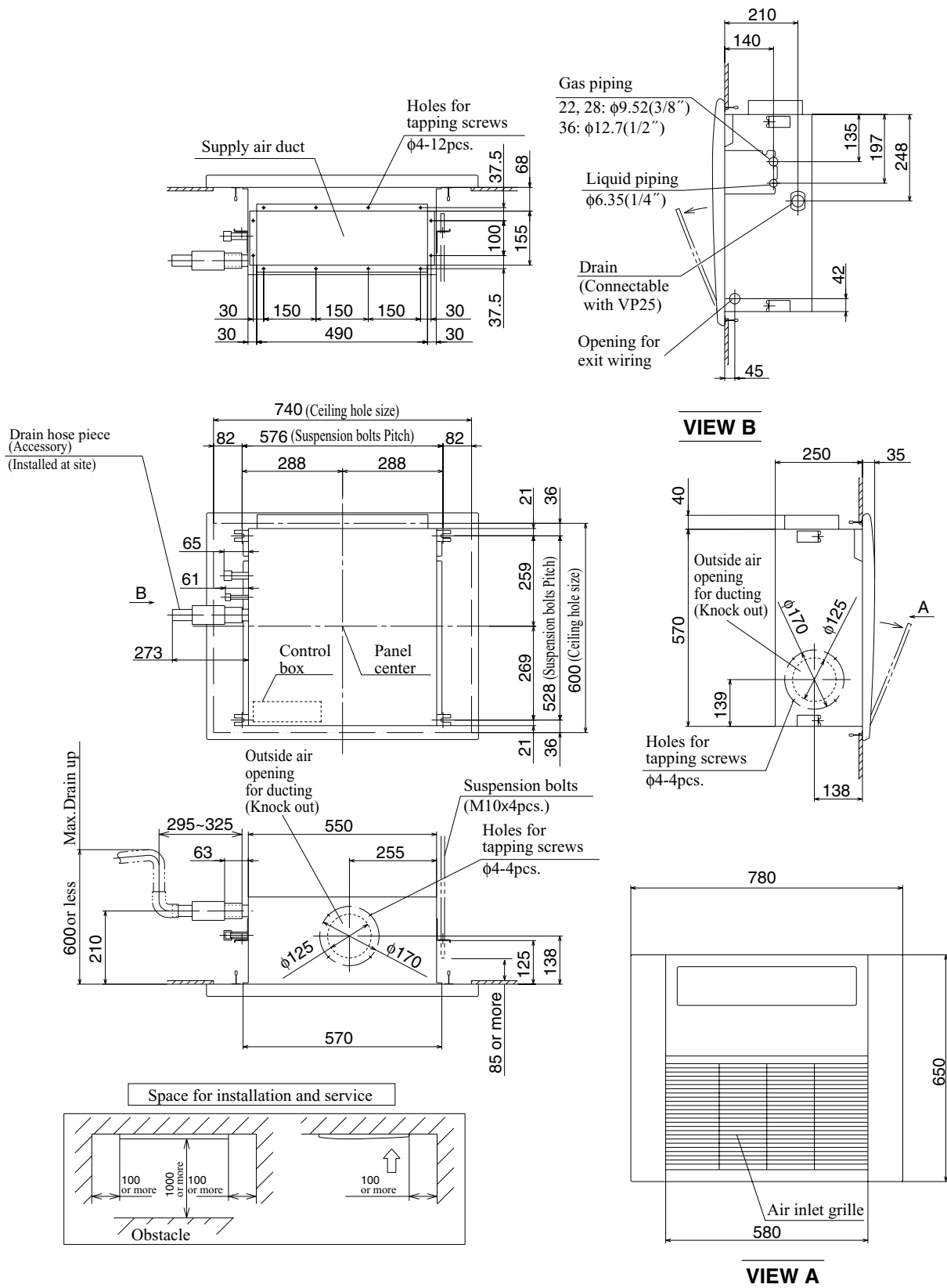




- When modified to the Duct Cassetteria type at site.

Models FDTQA22KXE4A, 28KXE4A, 36KXE4A

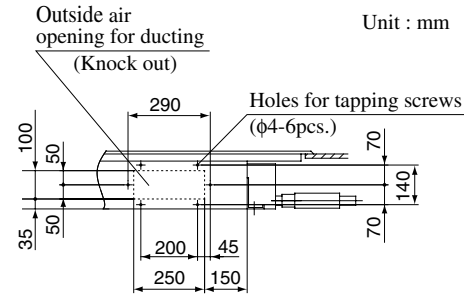
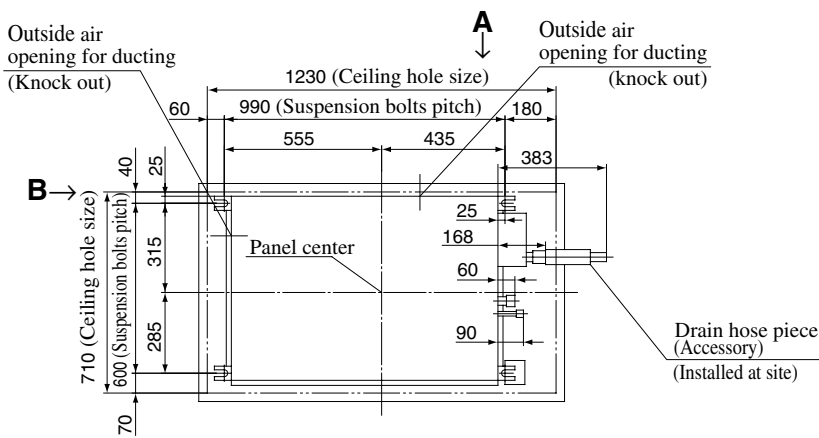
**Duct panel (QR-PNB-13W-E)**



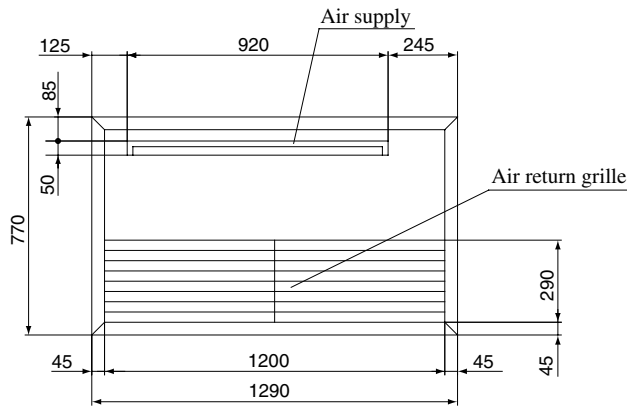
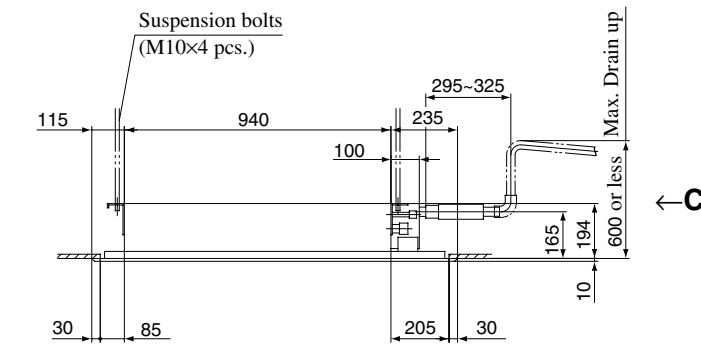


(e) 1-way outlet ceiling recessed type (FDTS)

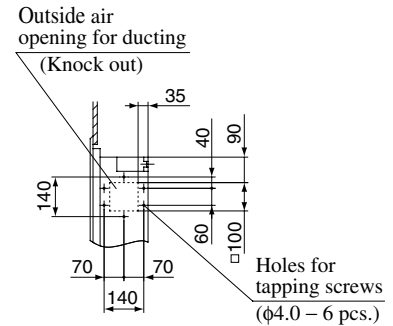
Models FDTSA22KXE4A, 28KXE4A, 36KXE4A, 45KXE4A



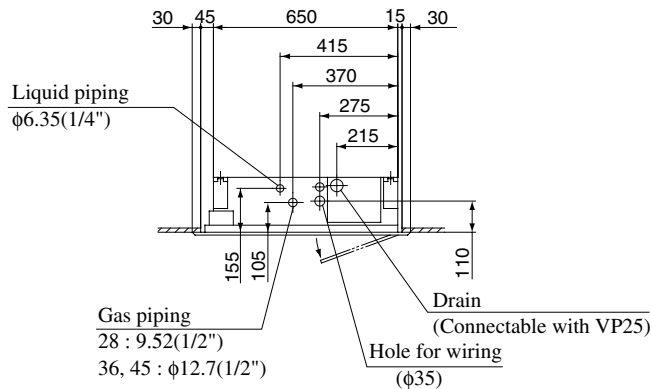
VIEW A



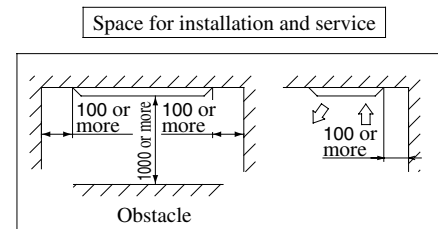
Decorative Panel



VIEW B



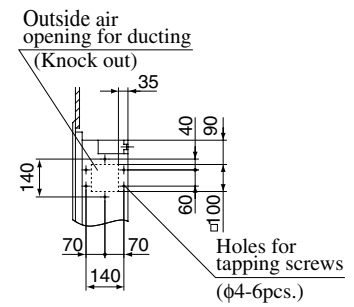
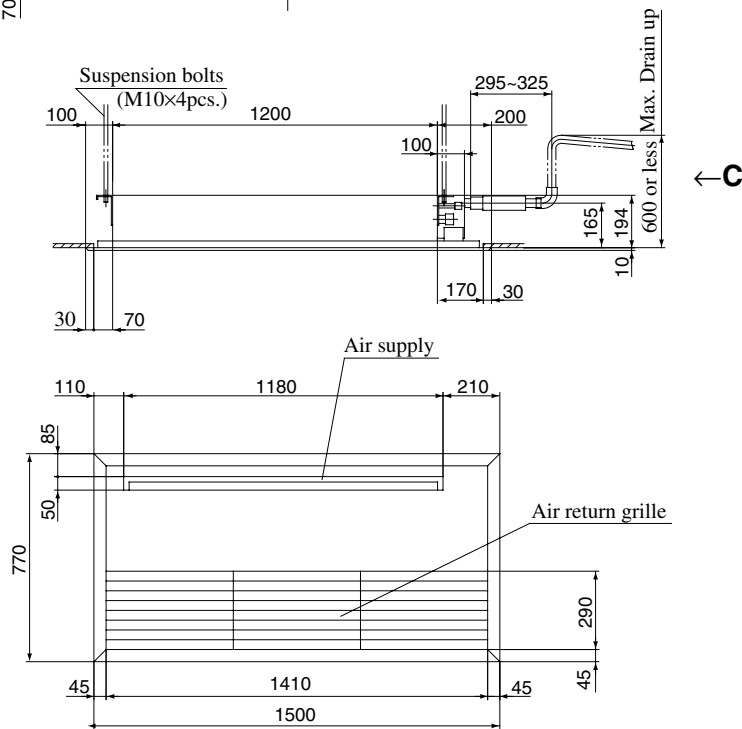
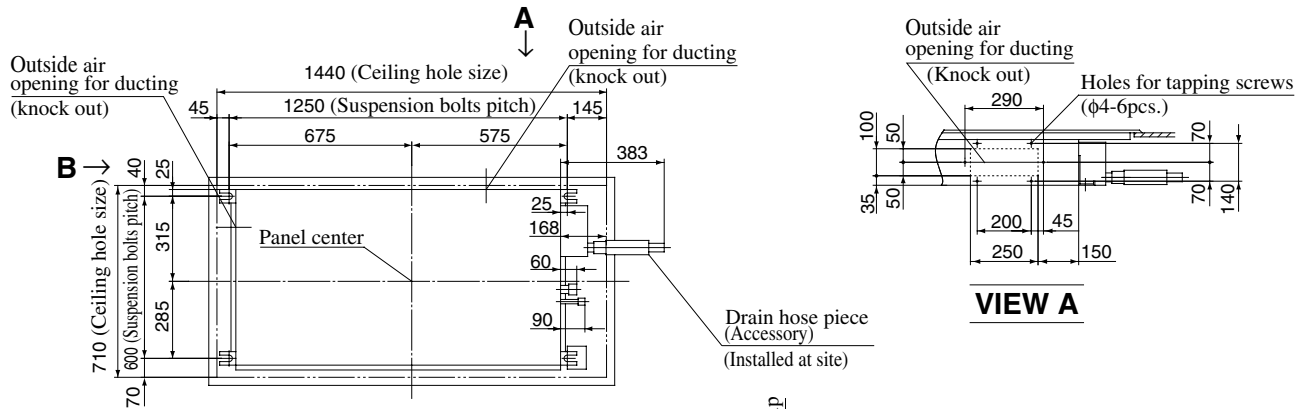
VIEW C



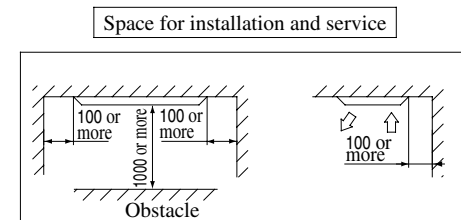
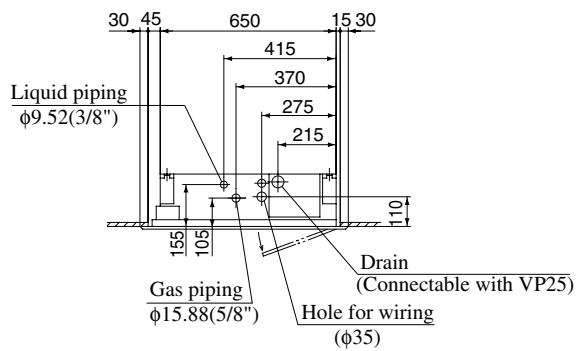


## Models FDTSA71KXE4A

Unit : mm



### Decorative Panel



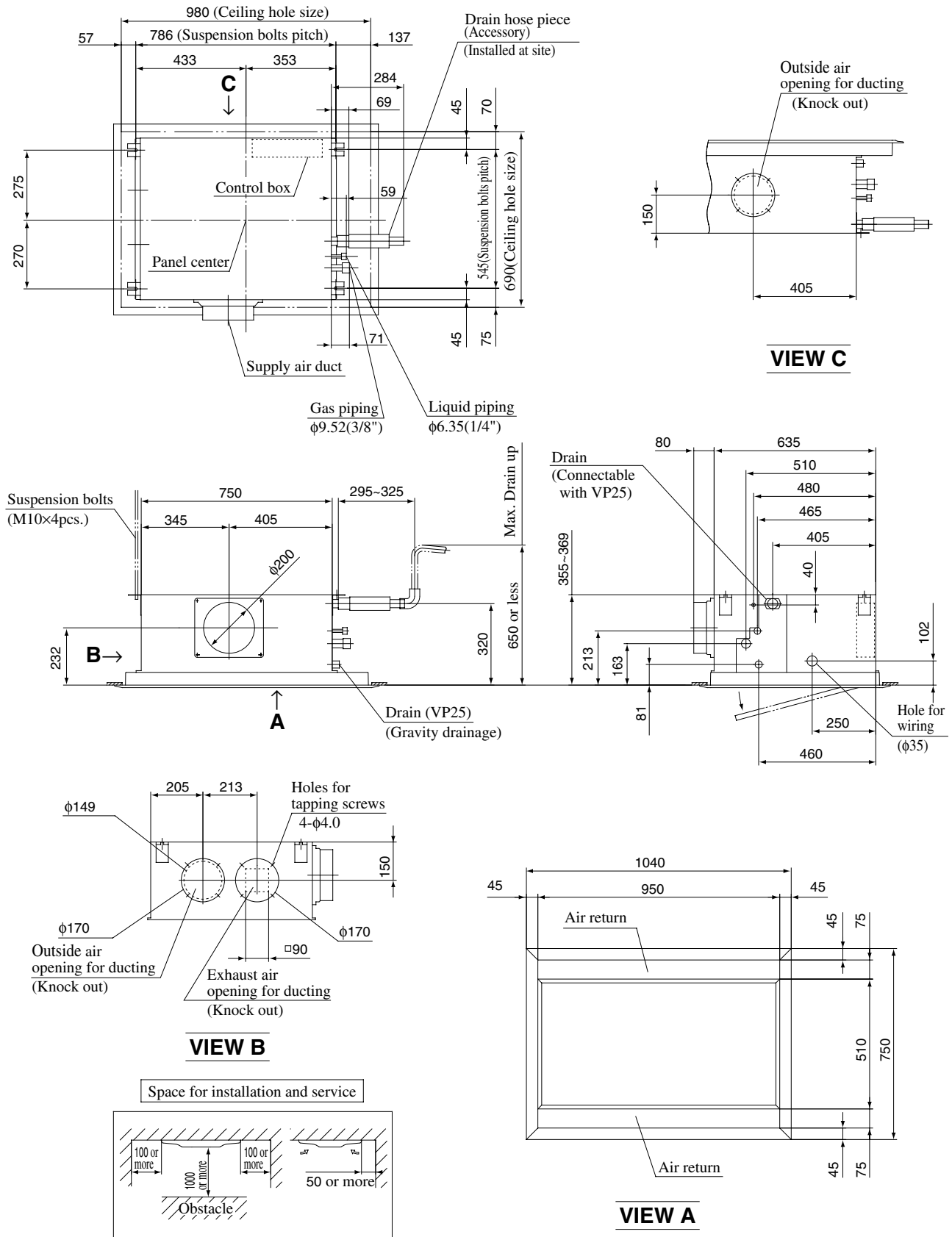


(f) Cassetteria type (FDR)

Models FDRA22KXE4A

Silent Panel (Model: R-PNLS-26W-E)

Unit : mm

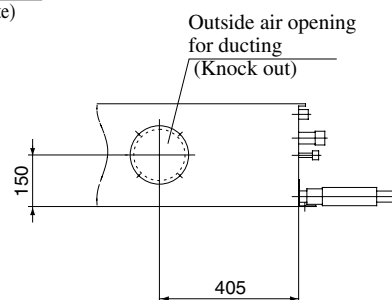
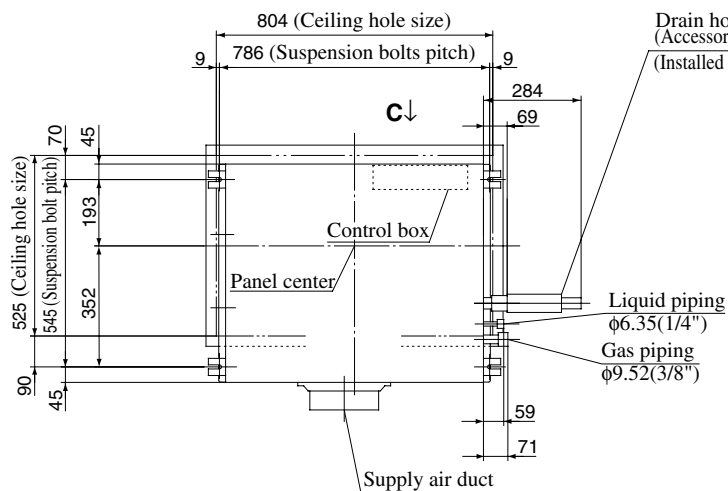




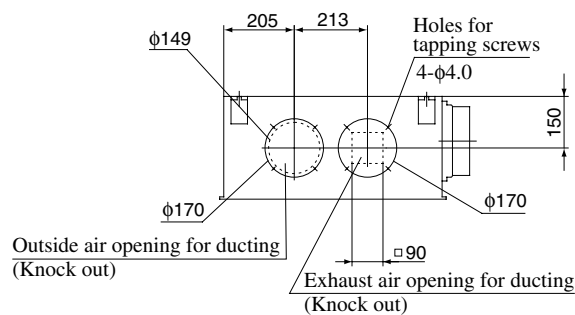
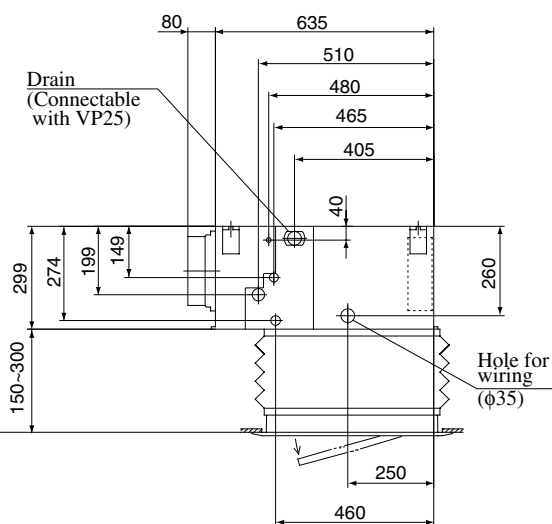
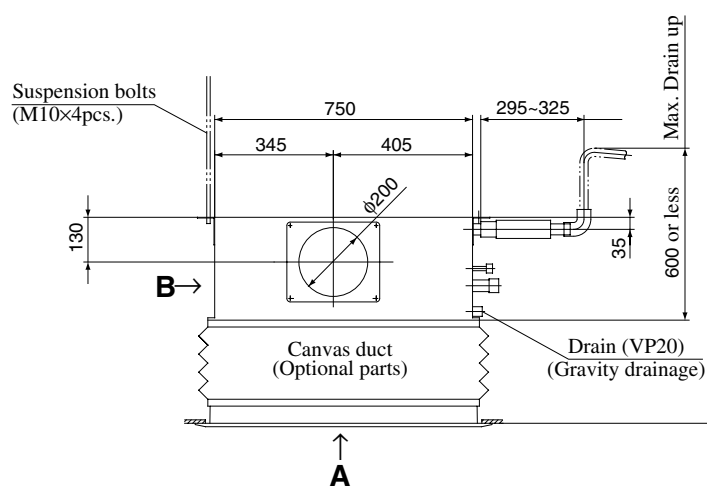
## Models FDRA22KXE4A

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

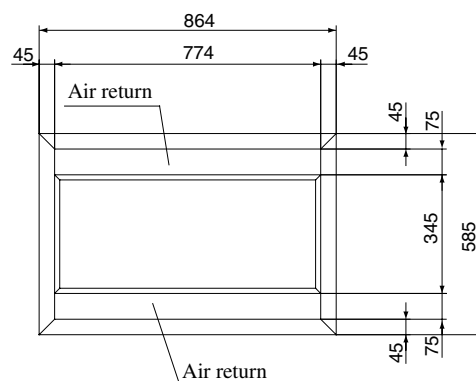
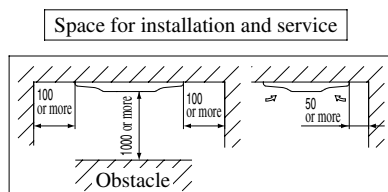
Unit : mm



**VIEW C**



**VIEW B**



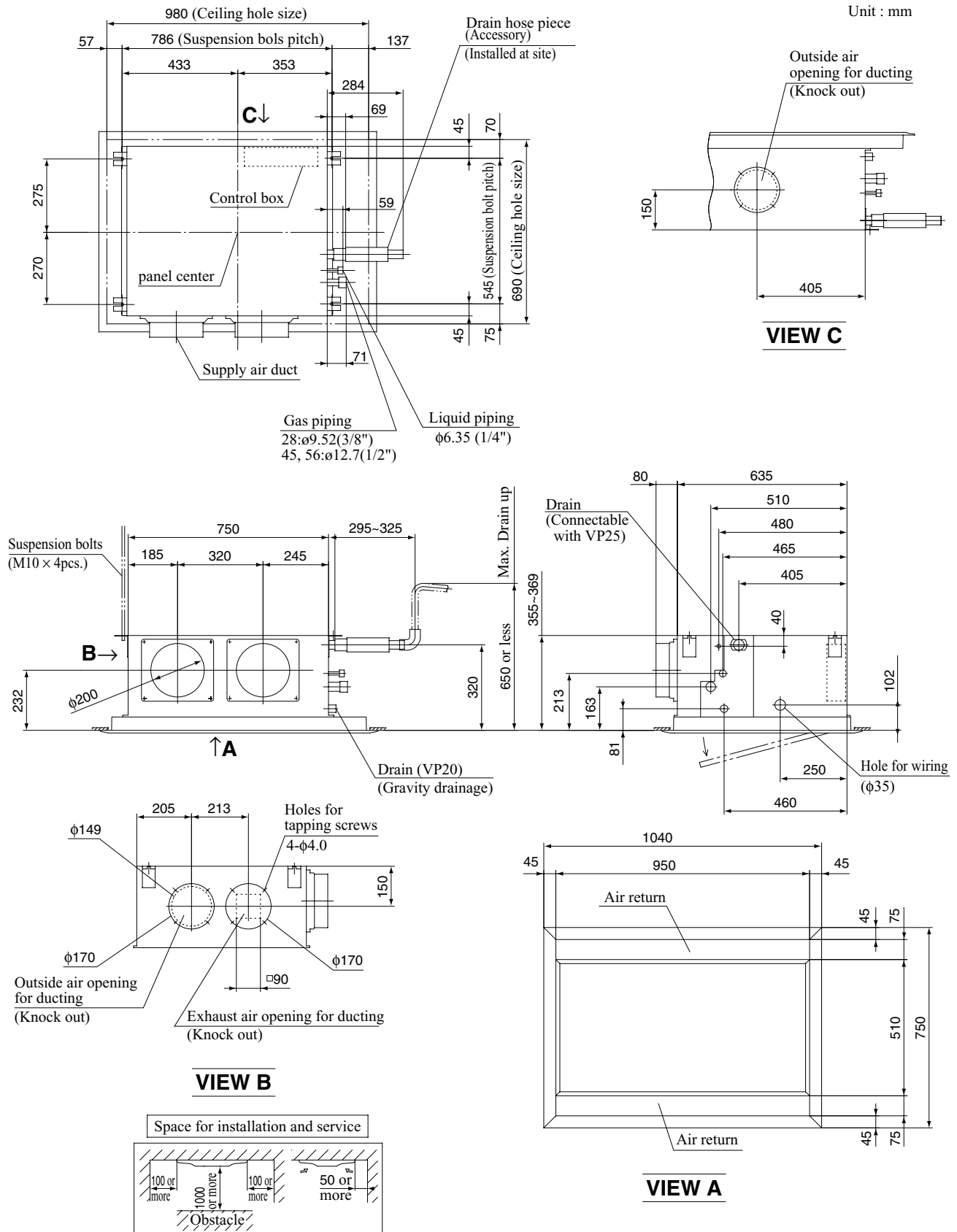
**VIEW A**



**Models FDRA28KXE4A, 45KXE4A, 56KXE4A**

**Silent Panel (Model: R-PNLS-26W-E)**

Unit : mm

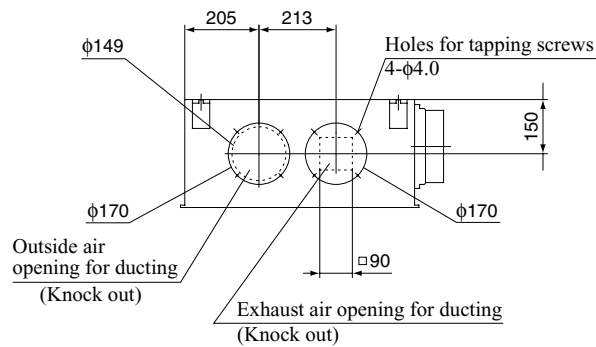
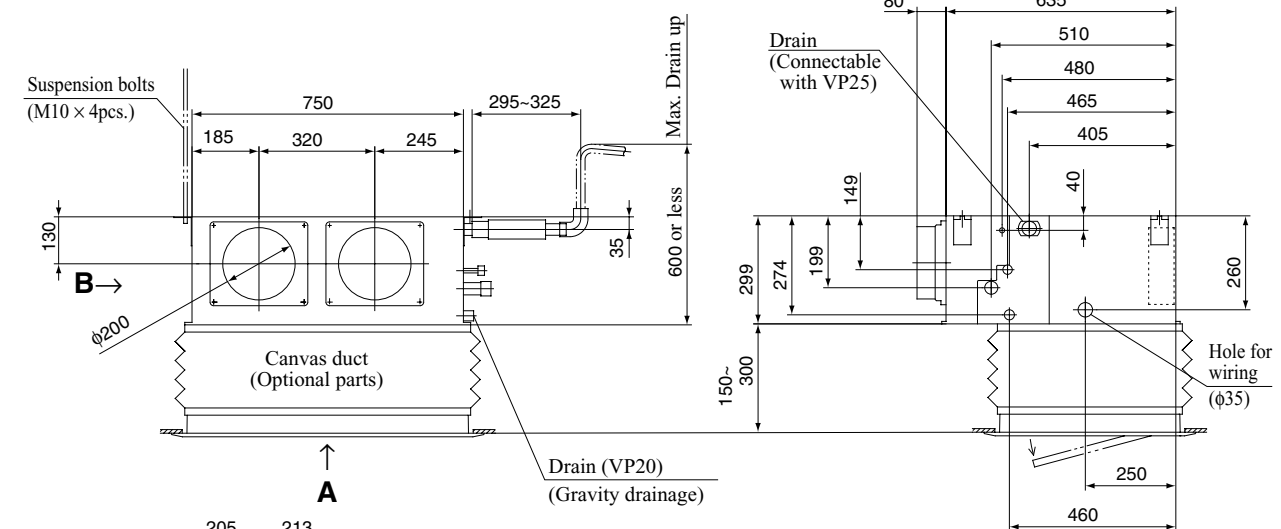
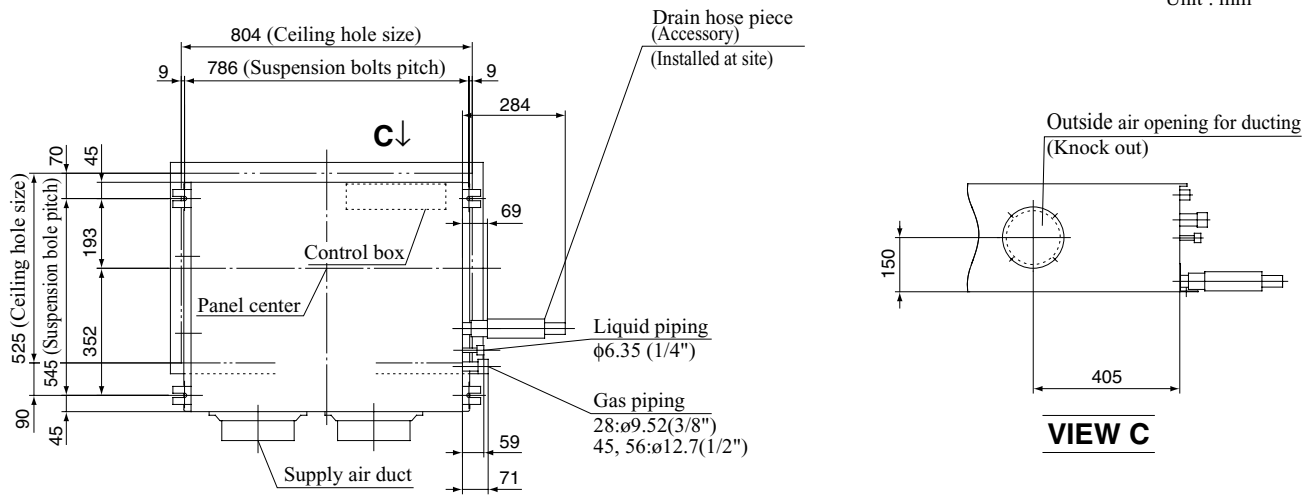




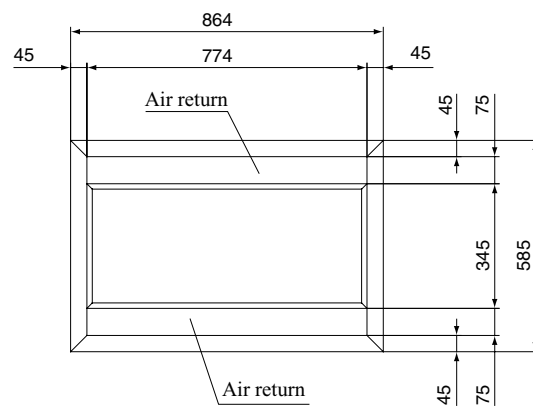
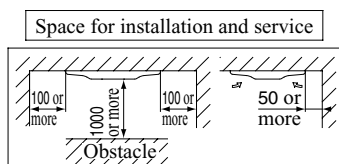
**Models FDRA28KXE4A, 45KXE4A, 56KXE4A**

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

Unit : mm



**VIEW B**



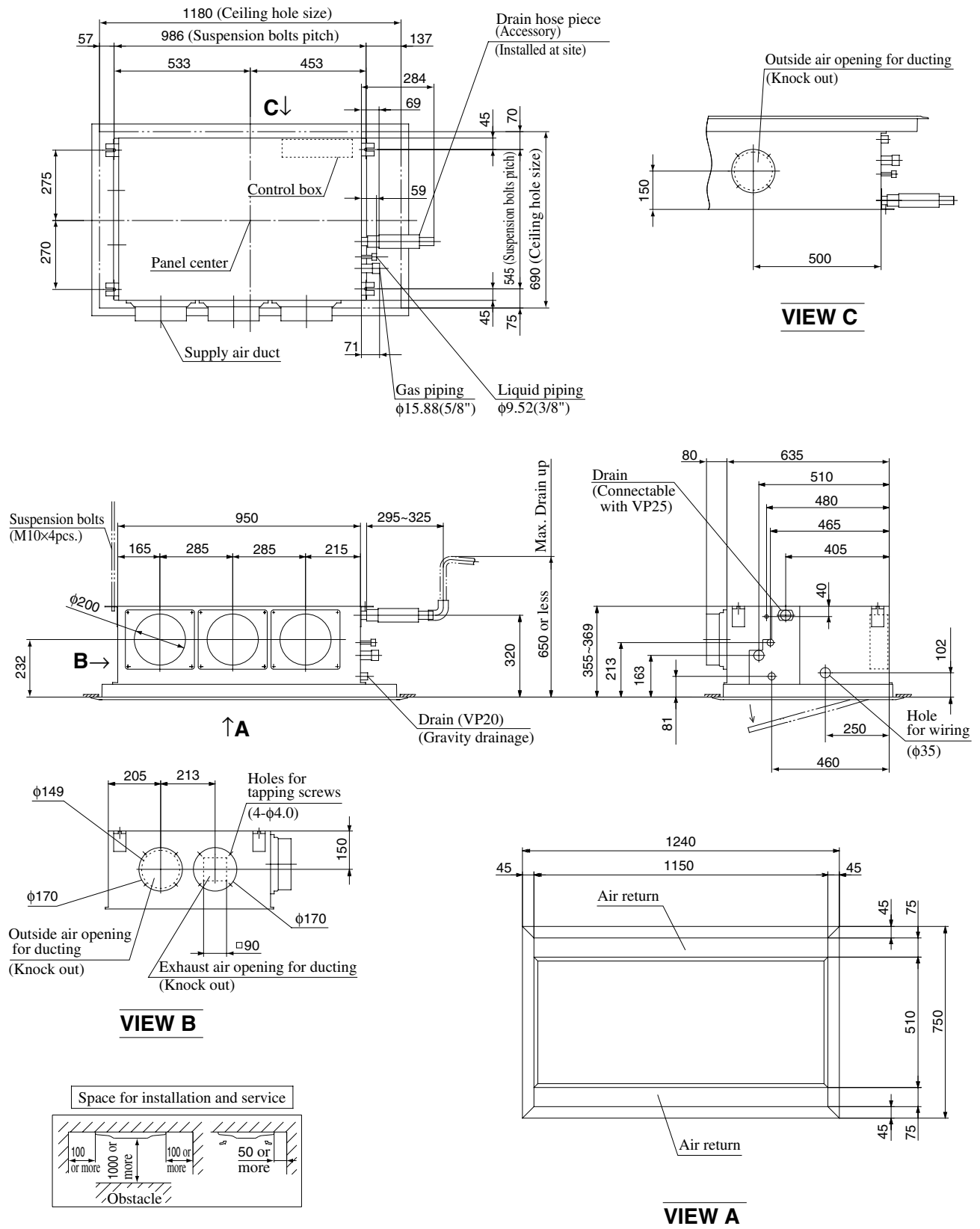
**VIEW A**



# Models FDRA71KXE4A, 90KXE4A

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

Unit : mm

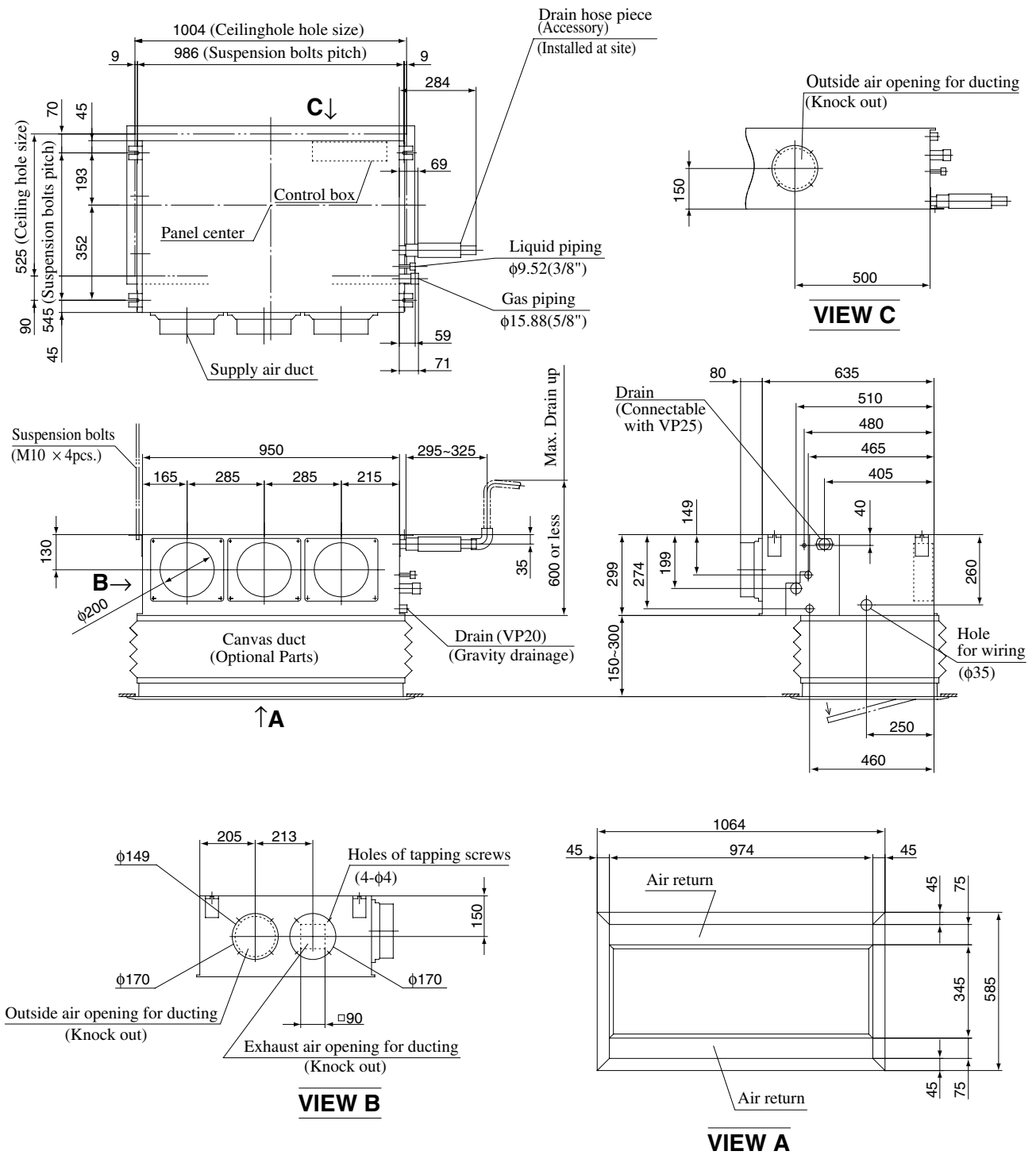




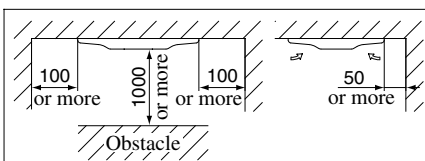
**Models FDRA71KXE4A, 90KXE4A**

### Canvas Panel (Model: R-PNLC-36W-E)

Unit : mm



Space for installation and service





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

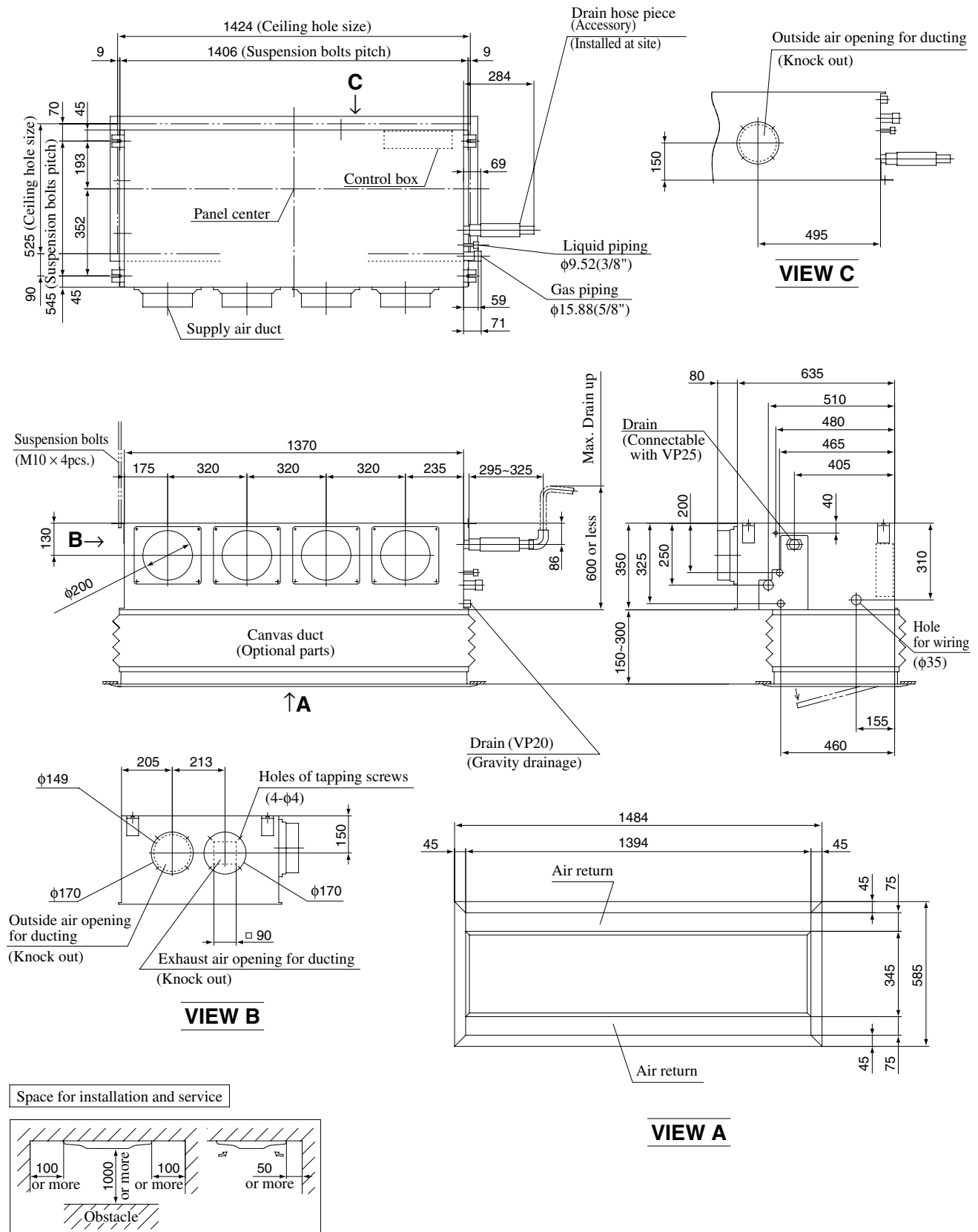
[illegible]



**Models FDRA112KXE4A, 140KXE4A**

**Canvas Panel (Model: R-PNLC-46W-E)**

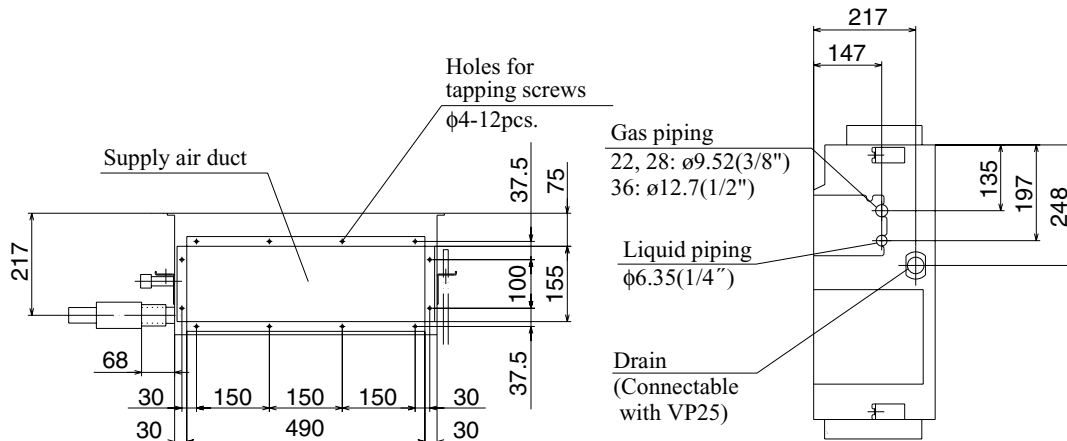
Unit : mm



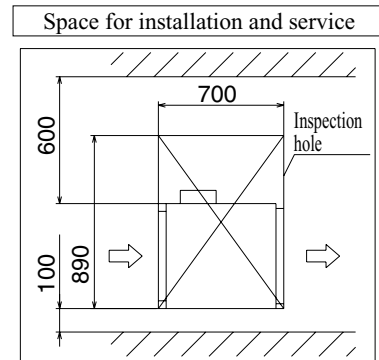
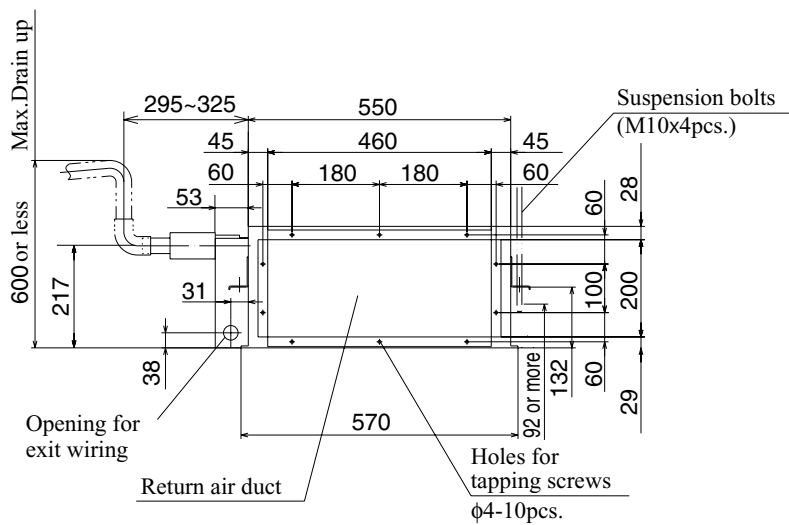
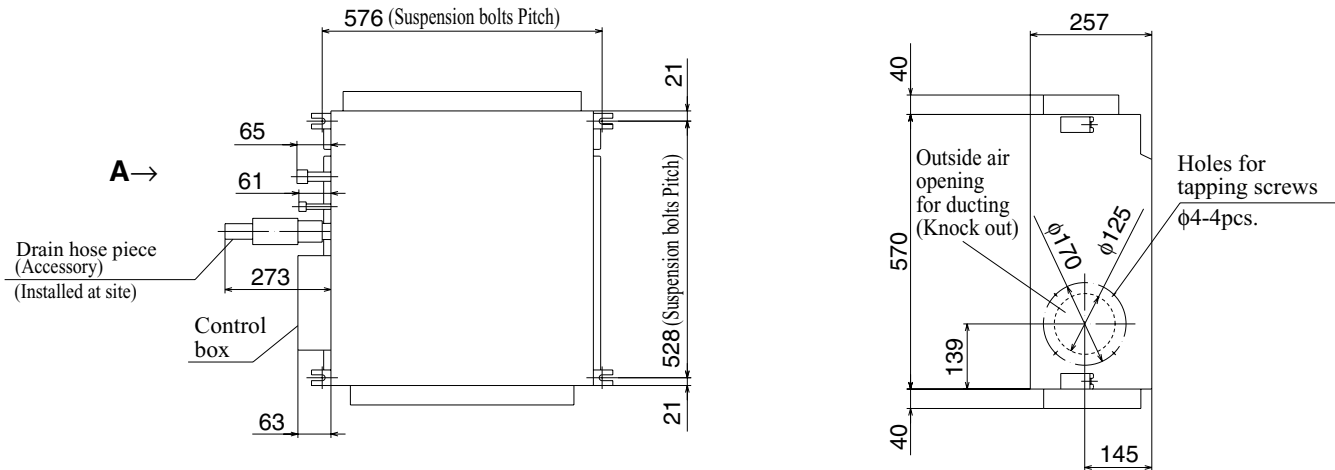


**(g) Medium static pressure ducted type (FDQM)**

**Models FDQMA22KXE4A, 28KXE4A, 36KXE4A**



**VIEW A**





**Model FDUA224KXE4A, 280KXE4A**

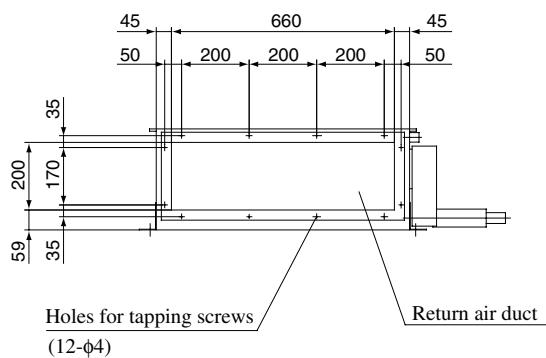
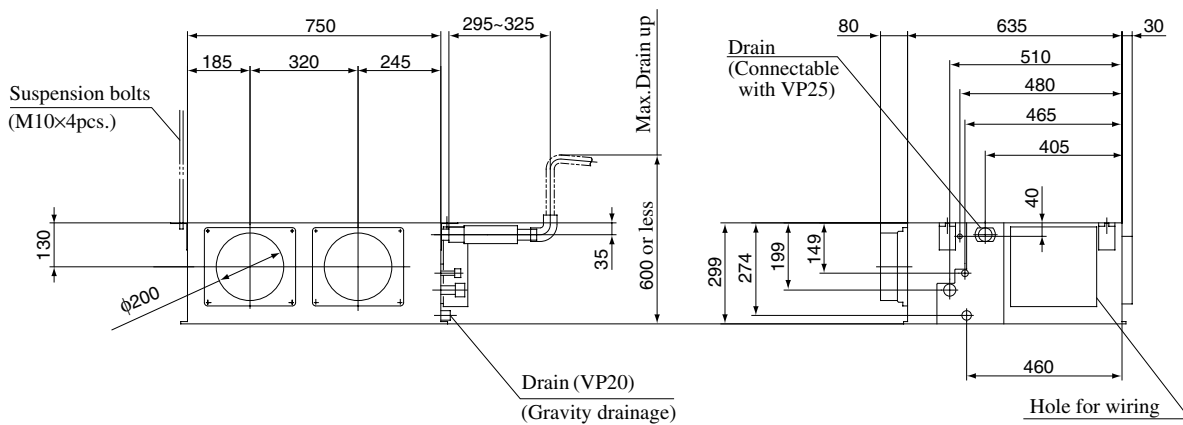
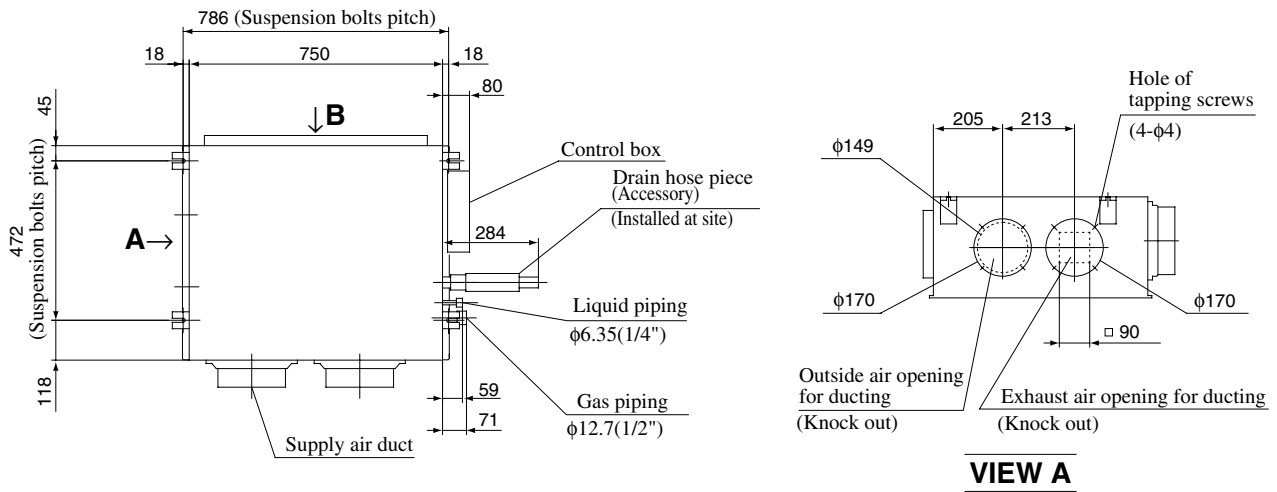




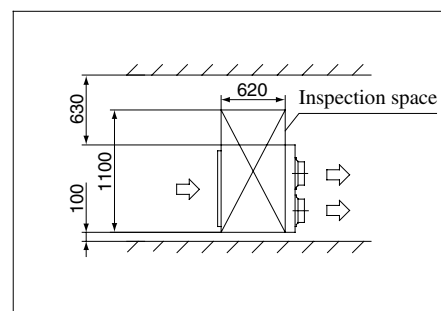
(i) Satellite ducted type (FDUM)

Models FDUMA36KXE4A, 45KXE4A, 56KXE4A

Unit : mm



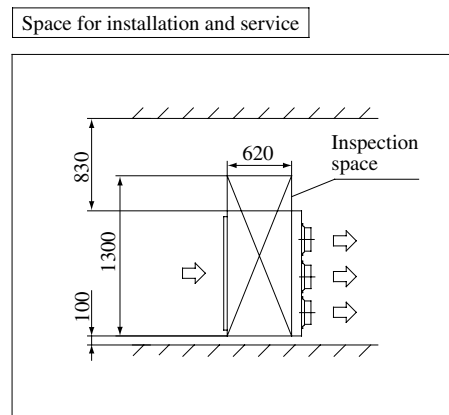
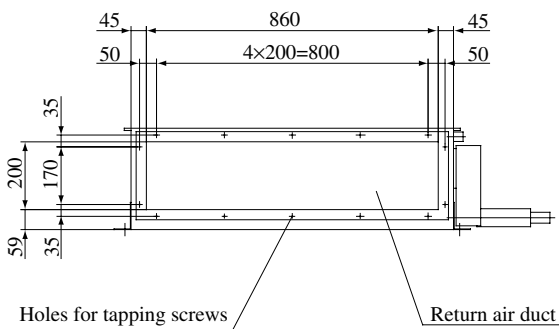
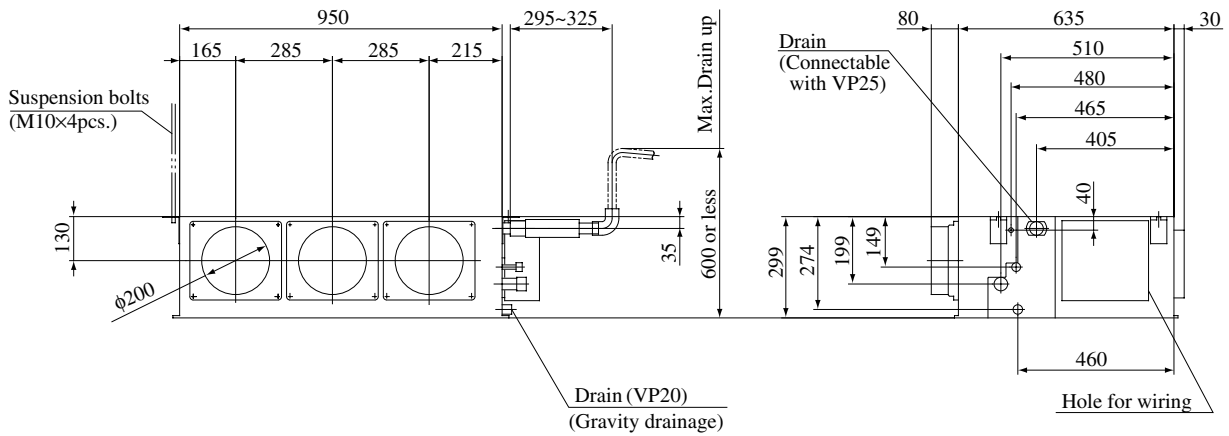
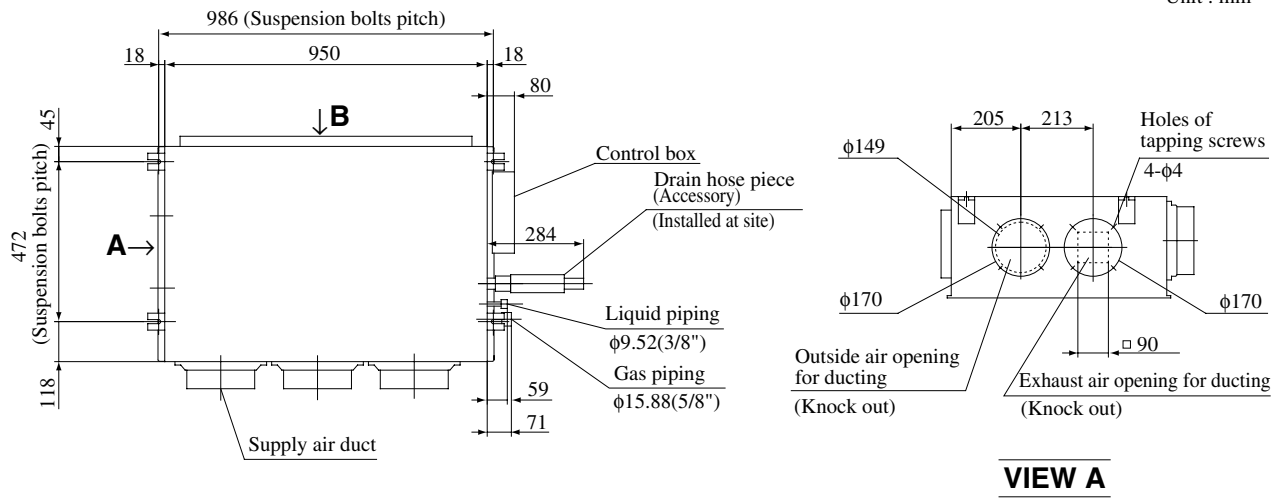
Space for installation and service





**Models FDUMA71KXE4A, 90KXE4A**

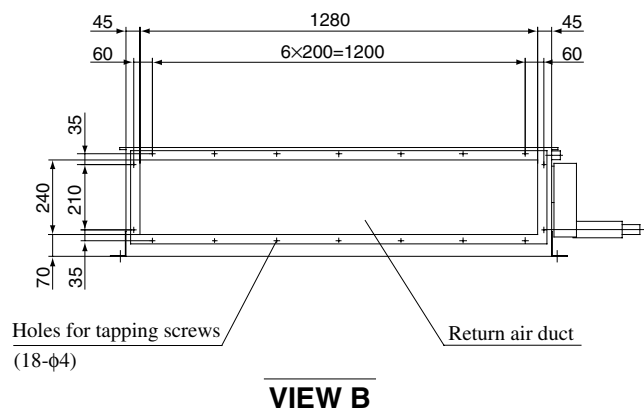
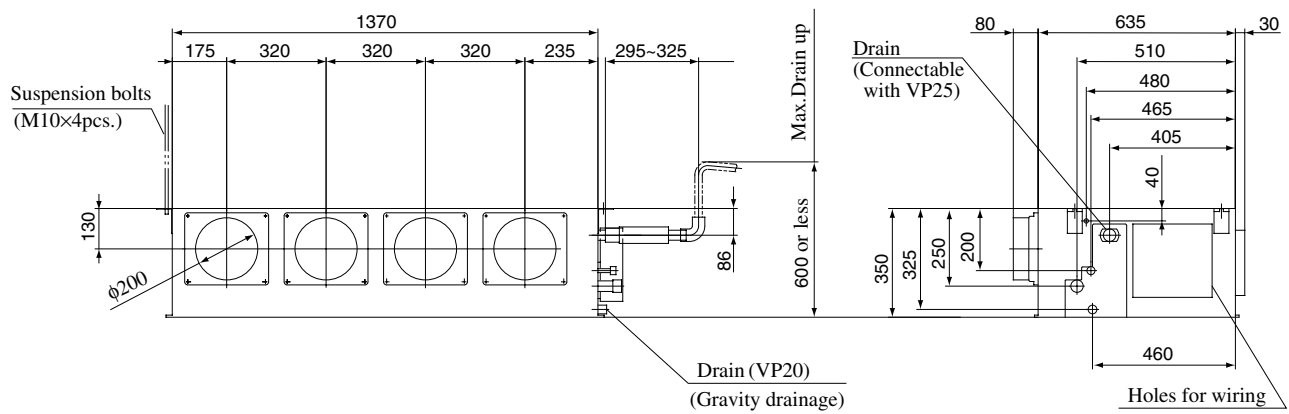
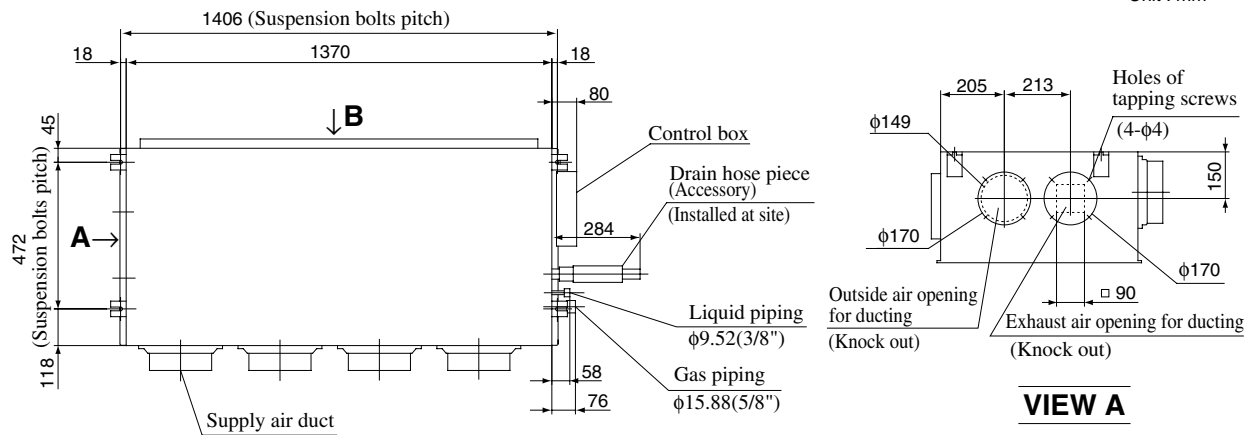
Unit : mm



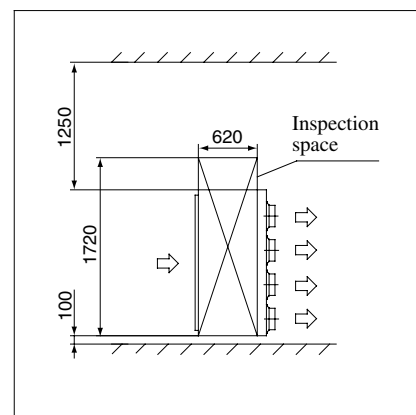


**Models FDUMA112KXE4A, 140KXE4A**

Unit : mm



Space for installation and service





**Models** FDURA45KXE4A, 56KXE4A, 71KXE4A[illegible]

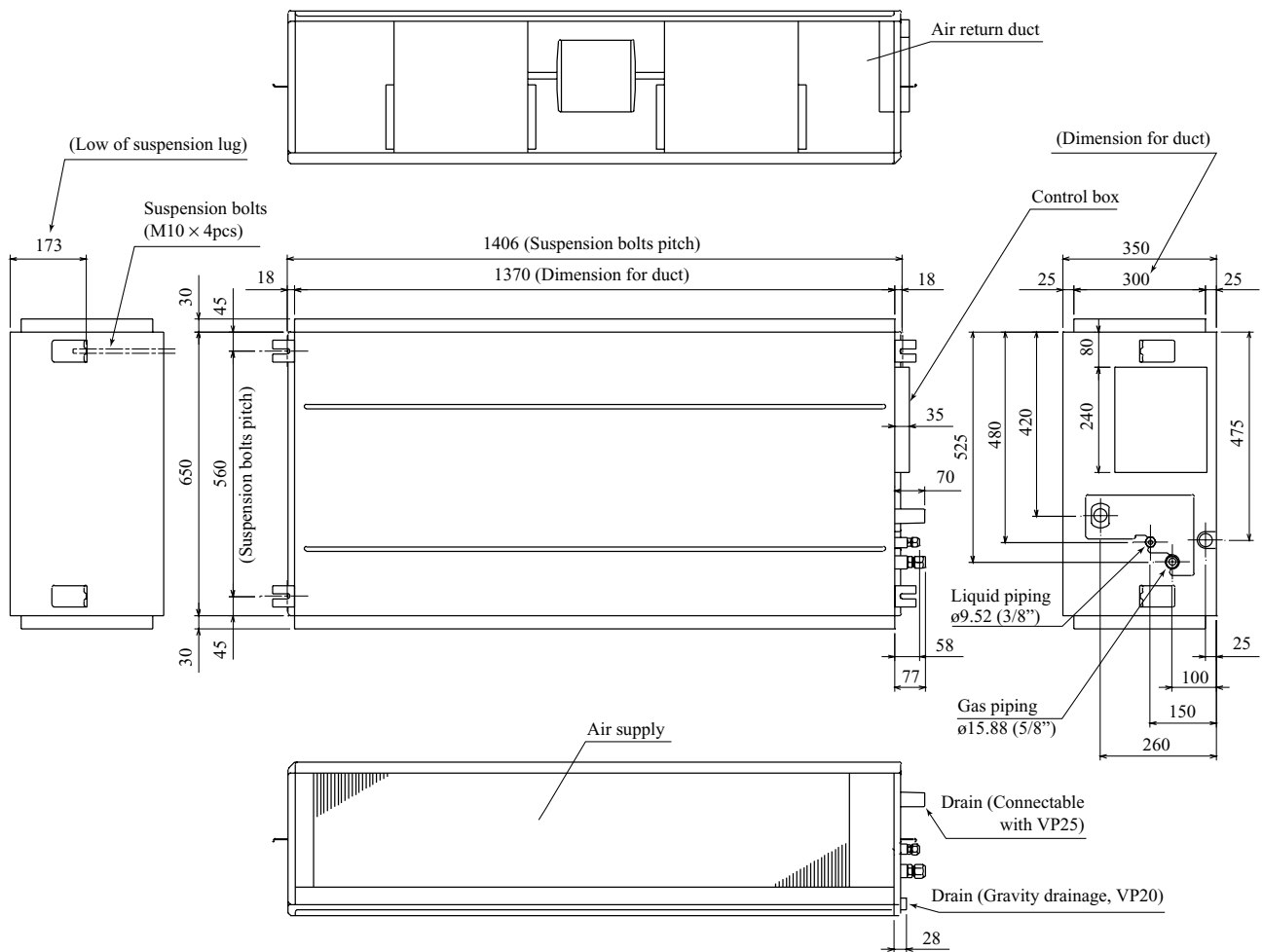
Technical drawing of a rectangular container. The overall width is 1200, divided into sections of 600, 850, and 100. The overall height is 635. The container has a top flange of 850 and a bottom flange of 100. An inspection hole is located on the left side, with a label pointing to it. The container is shown with internal structural lines and is flanked by hatched areas representing walls or supports.



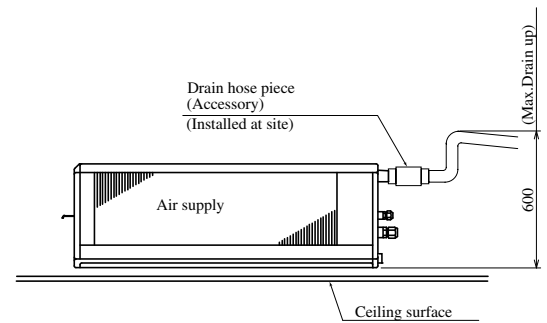
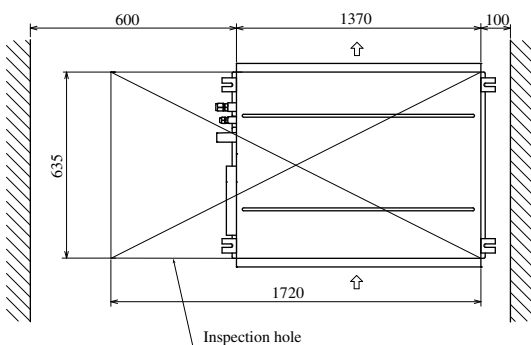


**Models FDURA90KXE4A, 112KXE4A, 140KXE4A**

Unit : mm



**Space for installation and service**

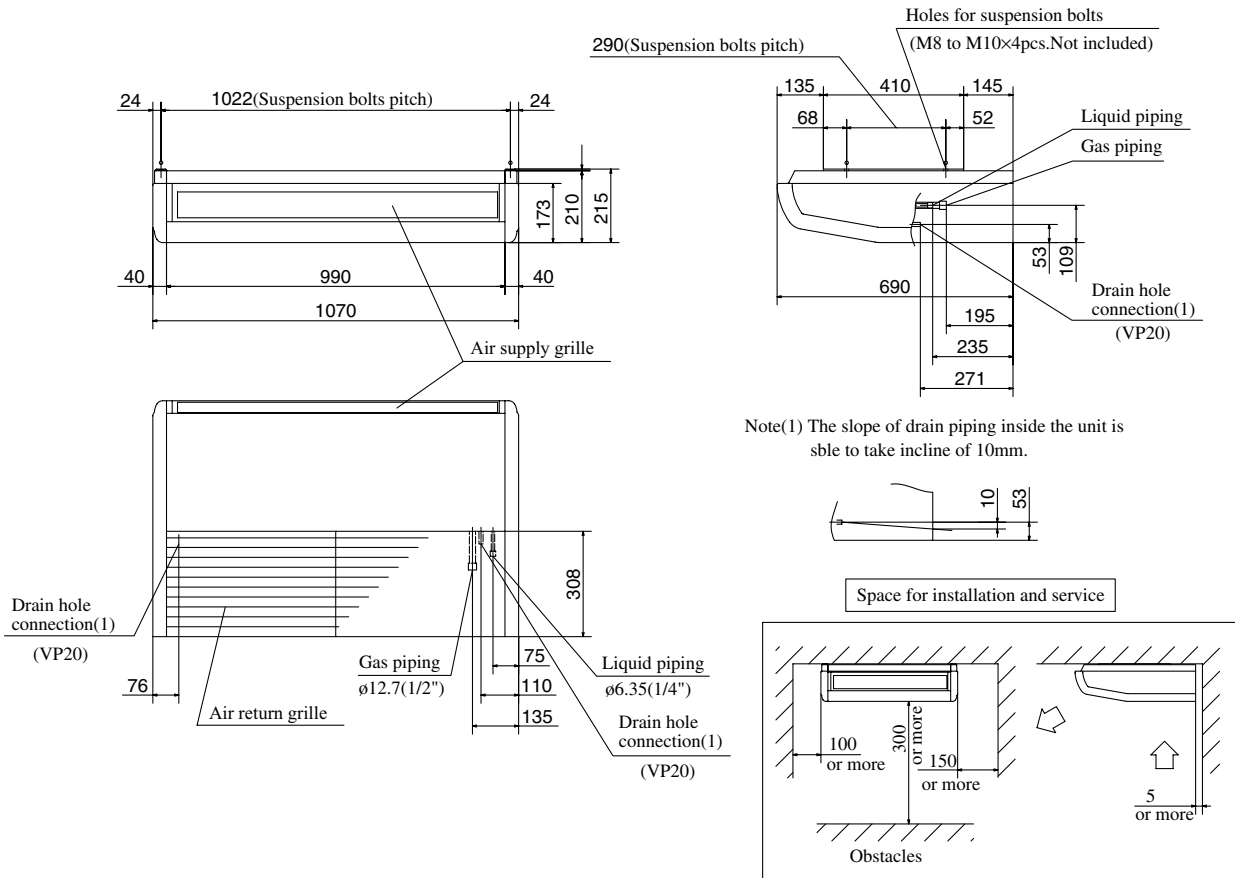




**(k) Ceiling suspended type (FDE)**

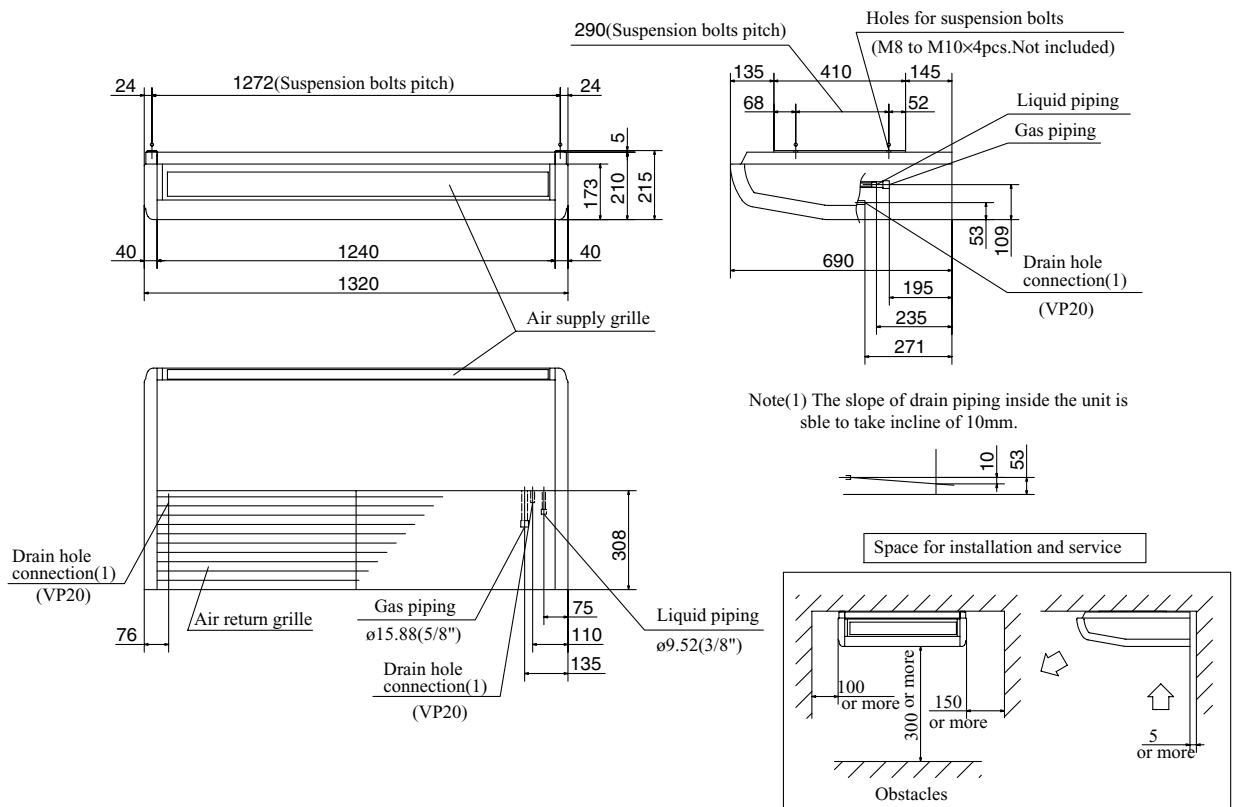
**Models FDEA36KXE4A, 45KXE4A, 56KXE4A**

Unit : mm



**Models FDEA71KXE4A**

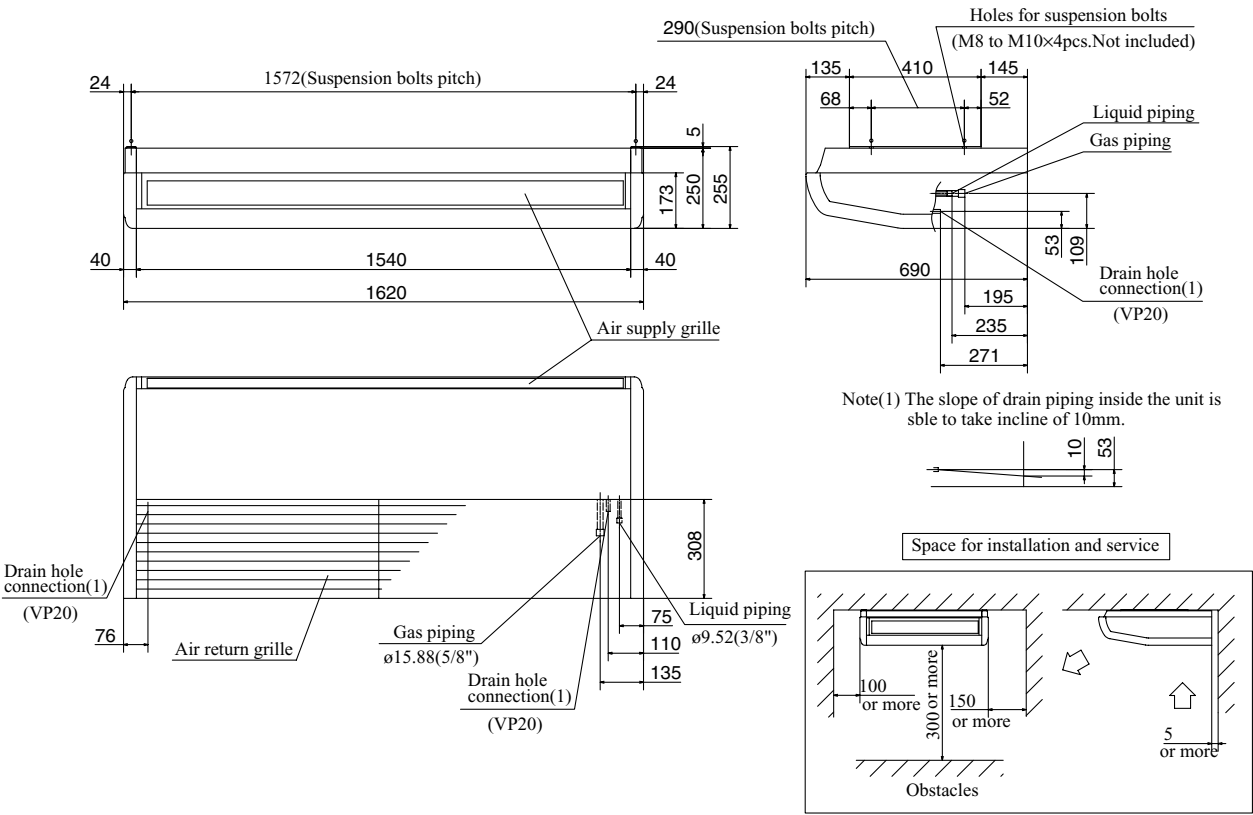
Unit : mm





Models FDEA112KXE4A, 140KXE4A

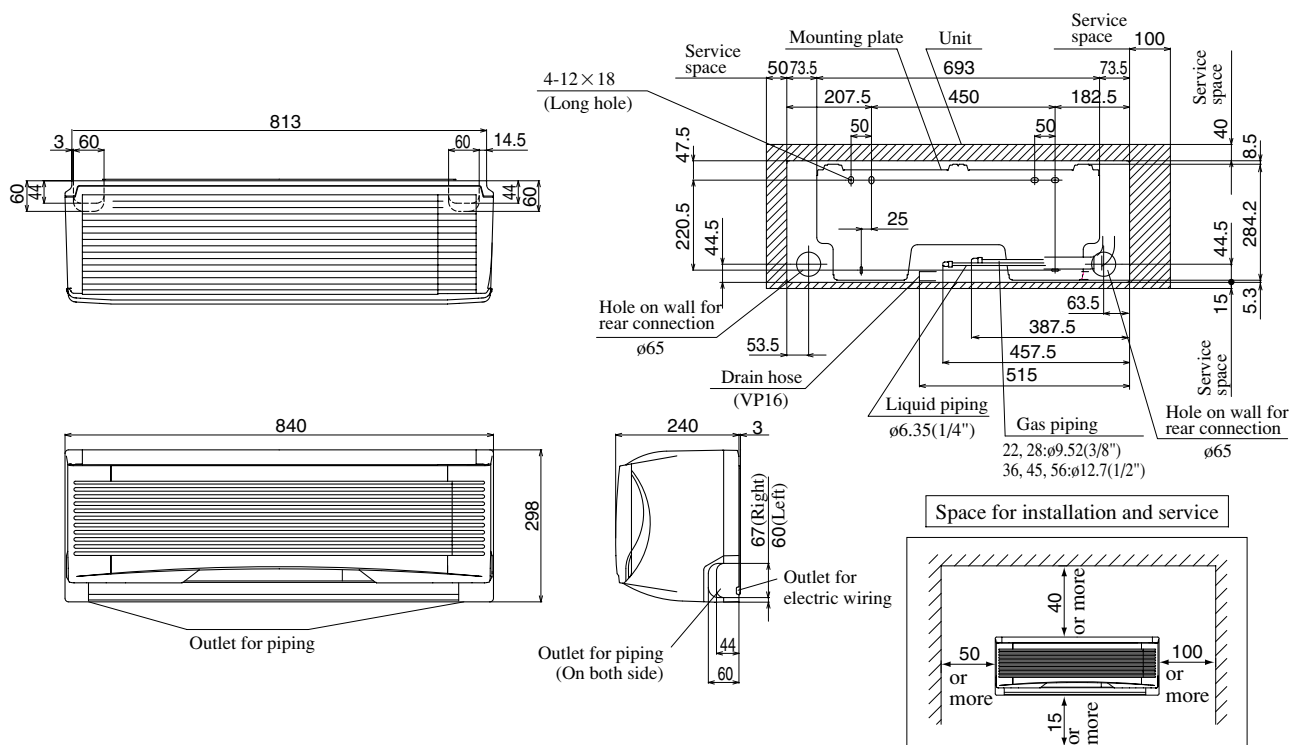
Unit : mm



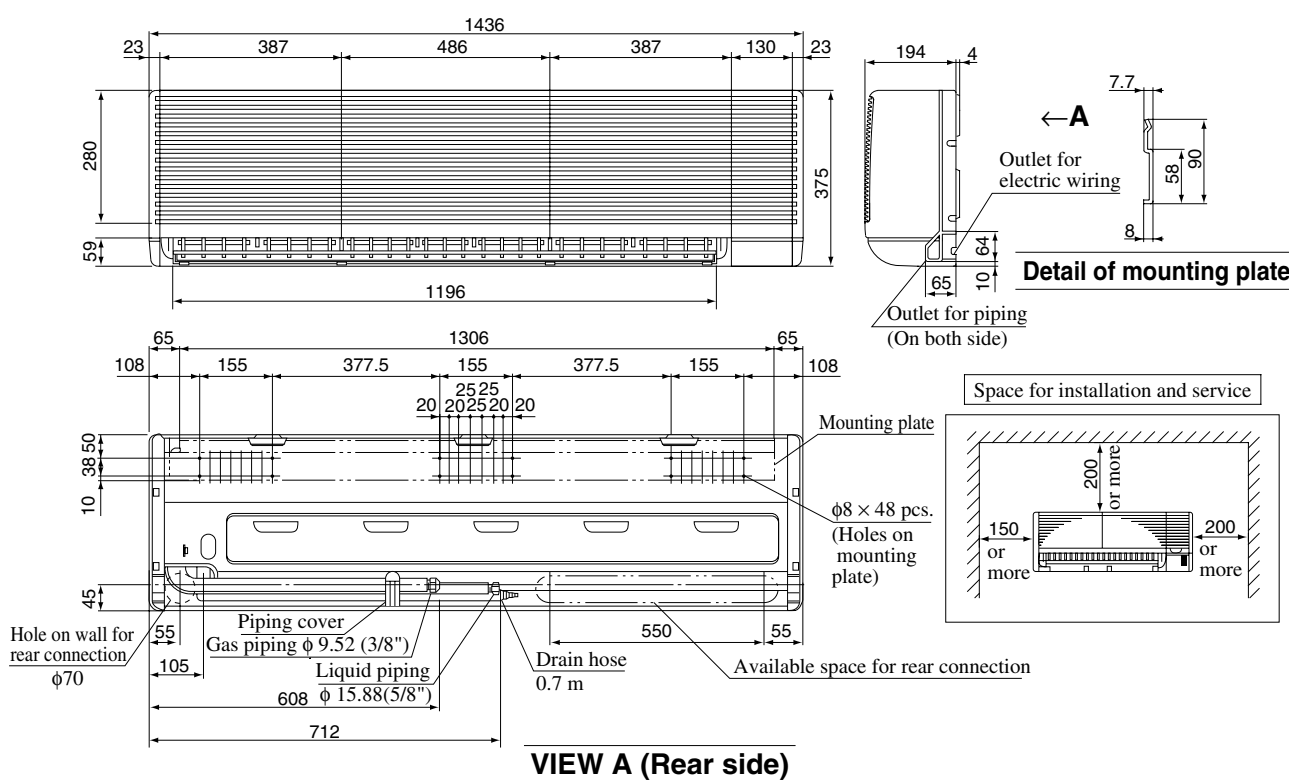


**Models FDKA22KXE4A, 28KXE4A, 36KXE4A, 45KXE4A, 56KXE4A**

**Installation Position Diagram when viewed from the front and installation space.**



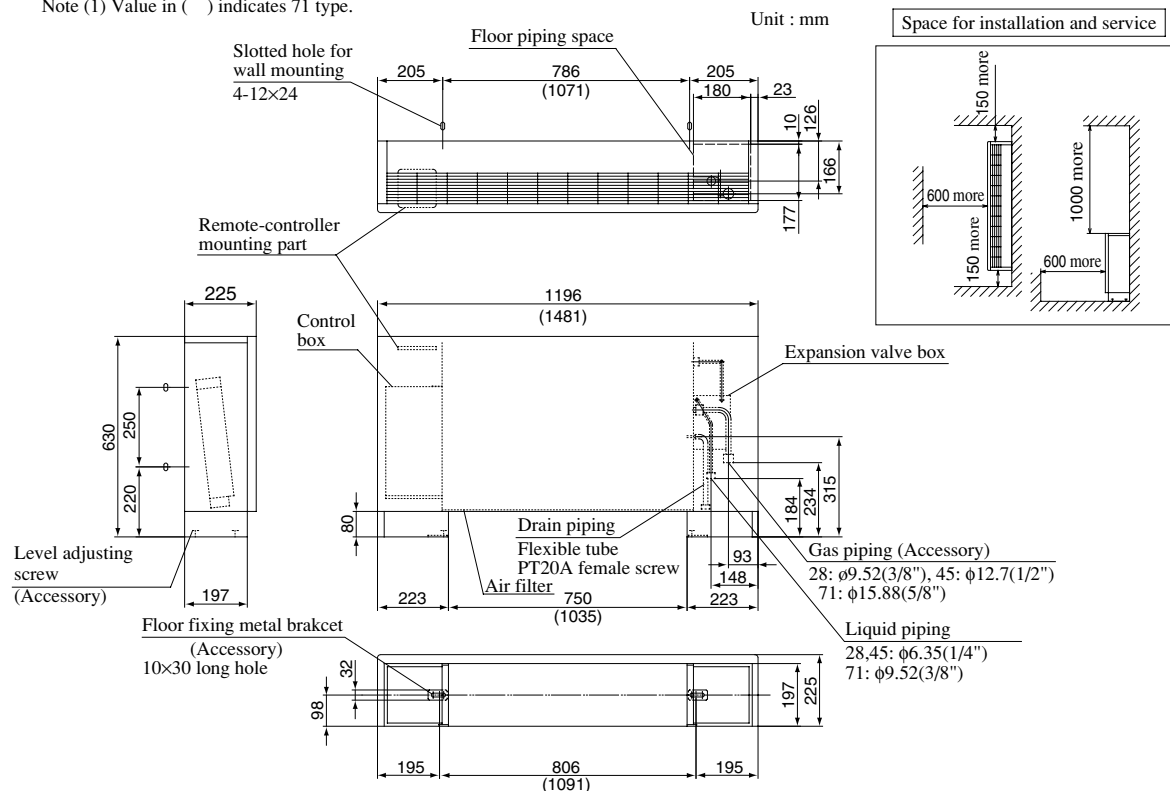
## Unit : mm



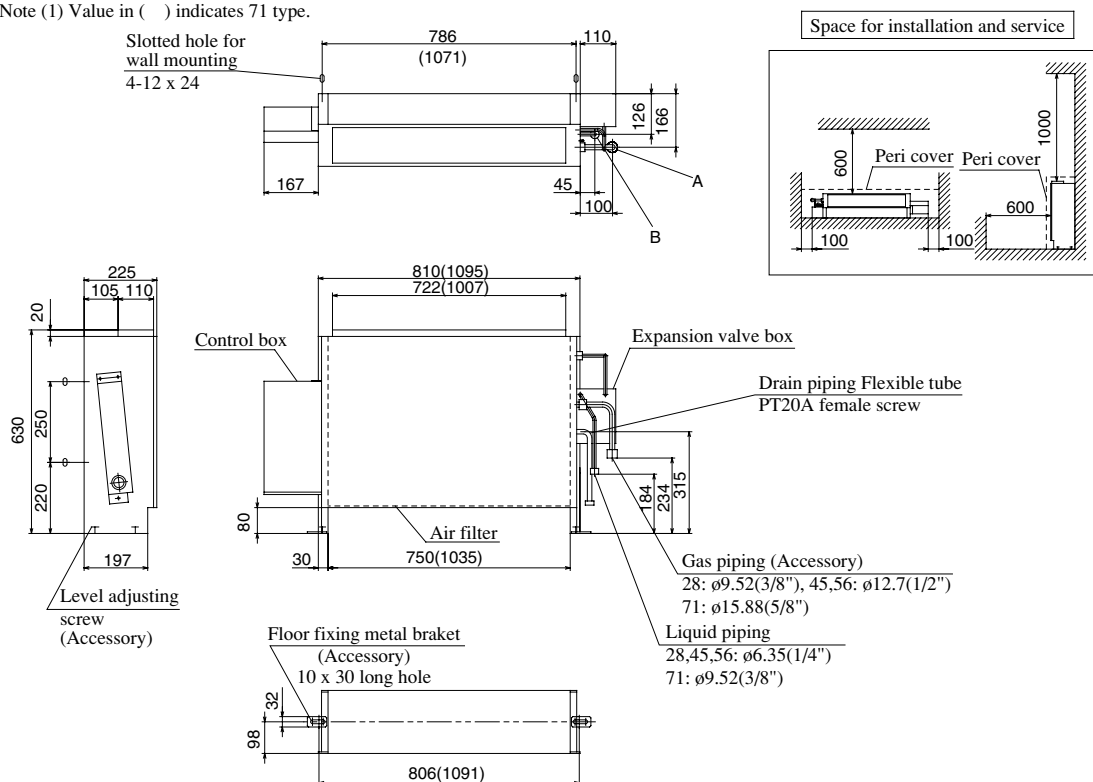


**Models** FDFLA28KXE4A, 45KXE4A, 71KXE4A

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

**Models FDFUA28KXE4A, 45KXE4A, 56KXE4A, 71KXE4A**

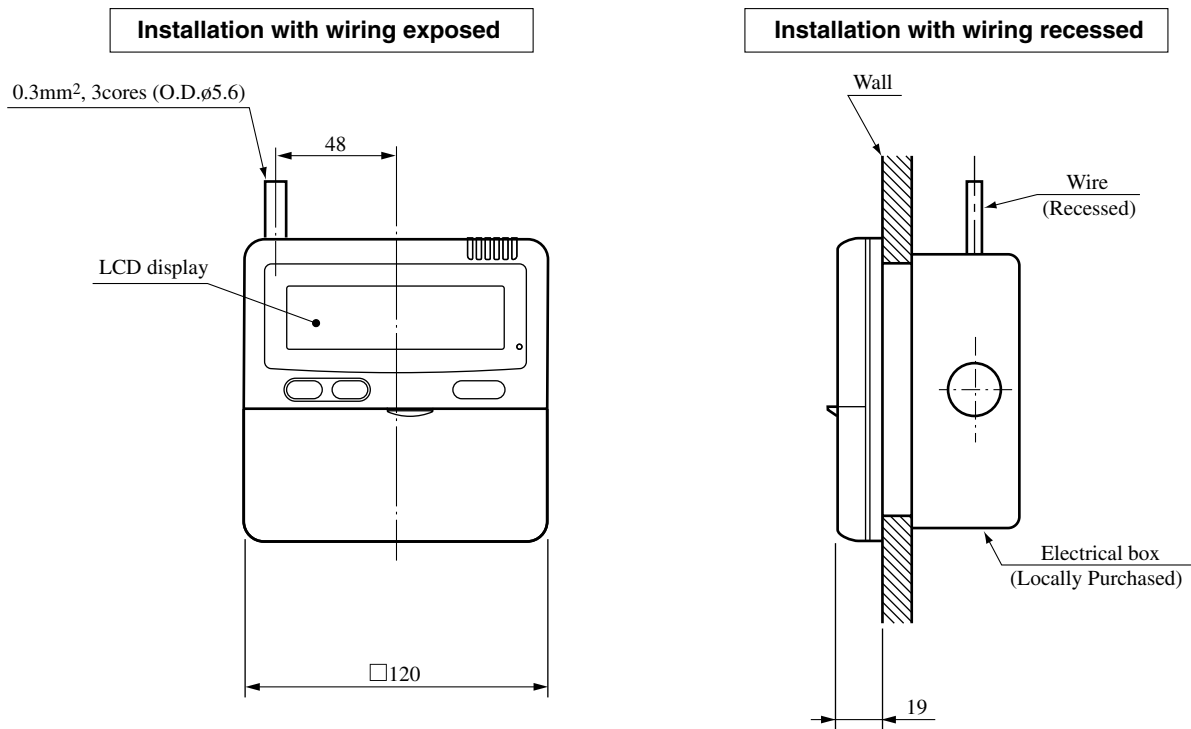
Note (1) Value in ( ) indicates 71 type.



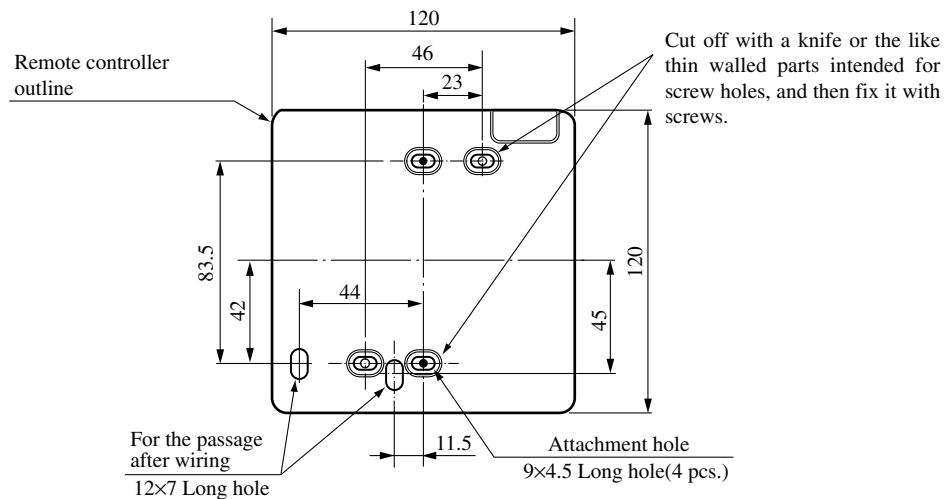


## (2) Remote controller (Optional parts)

Unit : mm



### Remote controller mounting dimensions



### Precaution in extending the remote controller cord

► Maximum total extension 600m.

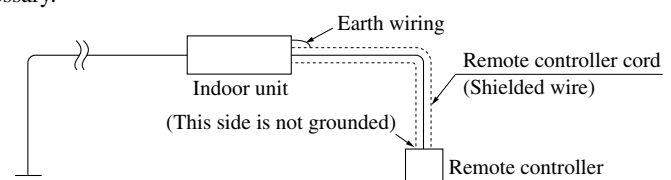
The cord should be a shielded wire.

● For all types : 0.3mm<sup>2</sup> × 3 cores

Note: (1) Use cables up to 0.5mm<sup>2</sup> (maximum) for those laid inside the remote controller casing and connect to a different size cable at a vicinity point outside the remote controller, if necessary.

Within 100-200m	0.5 mm <sup>2</sup> × 3 cores
Within 300m	0.75 mm <sup>2</sup> × 3 cores
Within 400m	1.25 mm <sup>2</sup> × 3 cores
Within 600m	2.0 mm <sup>2</sup> × 3 cores

● The shielded wire should be grounded at one side only.



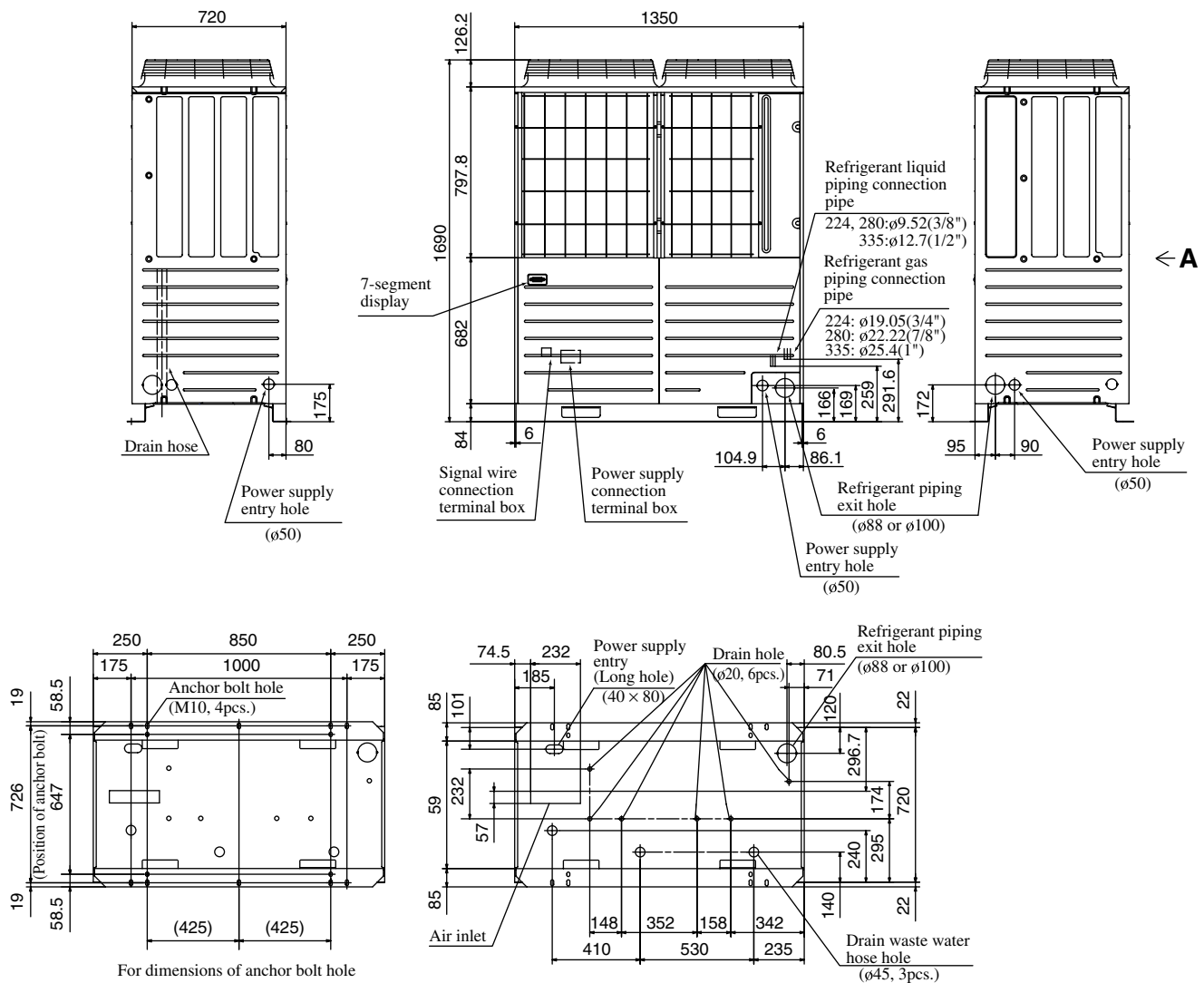




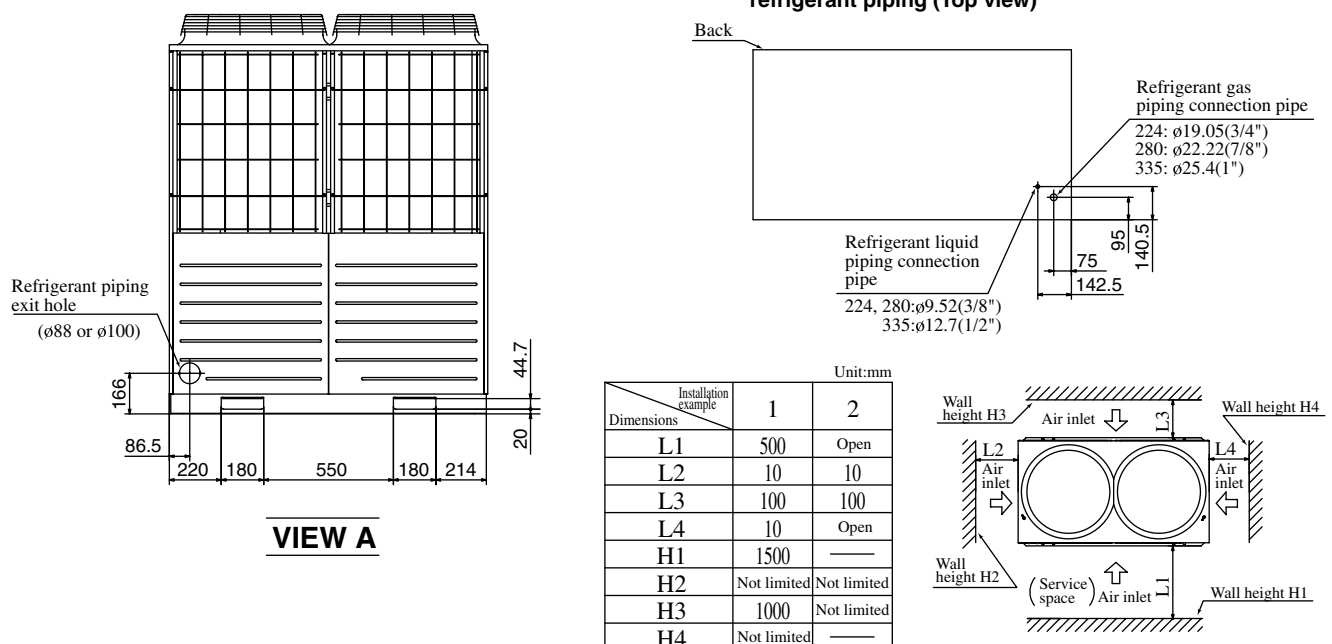


**Models FDCA224HKXE4A, 280HKXE4A, 335HKXE4A**

Unit : mm



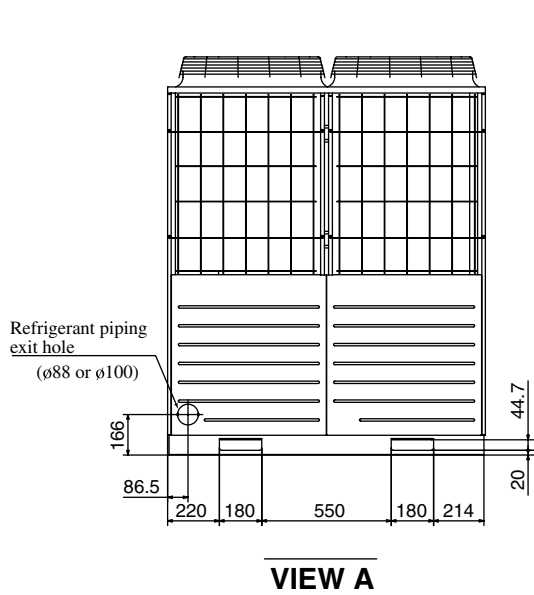
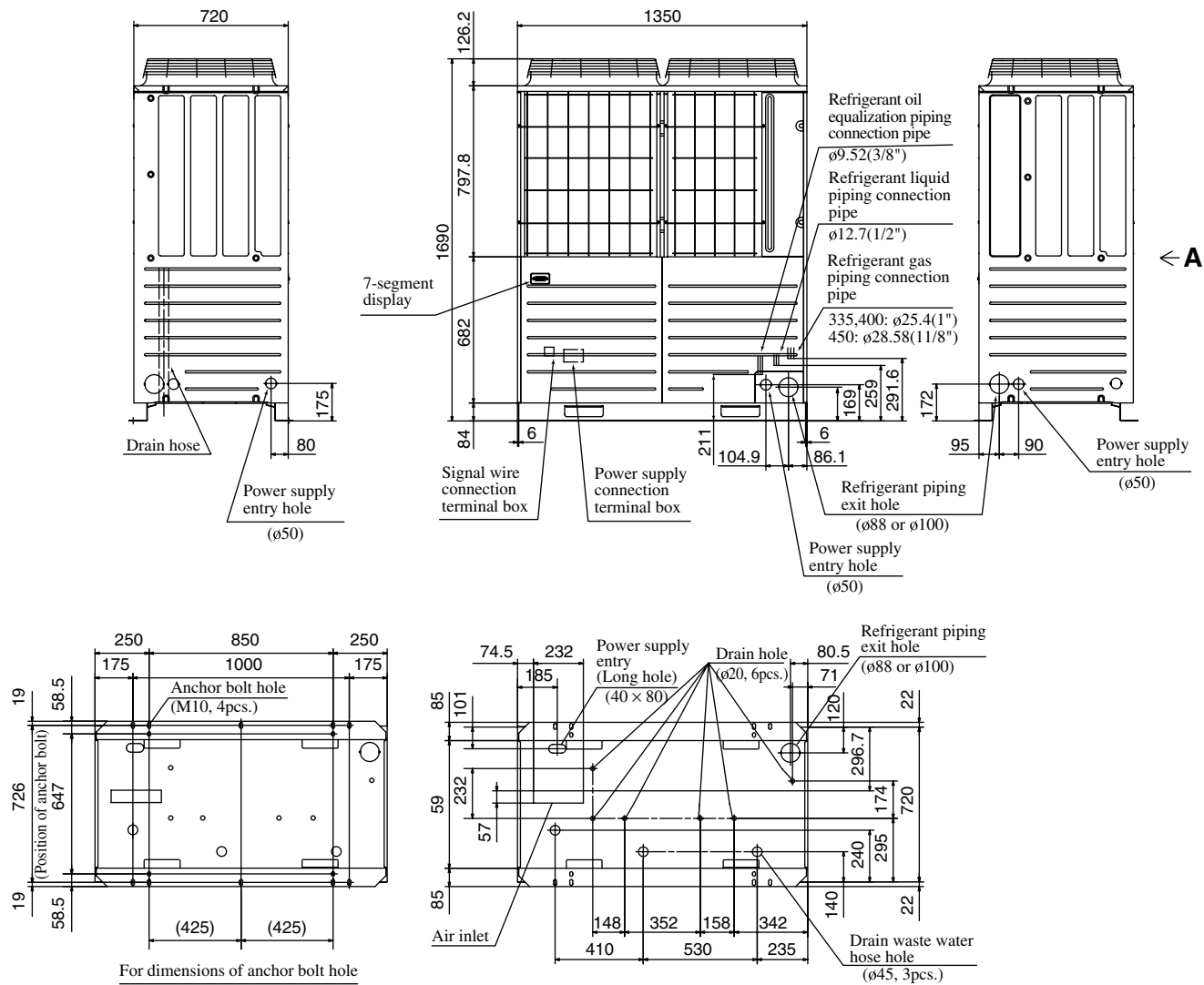
**Dimensions after connecting included refrigerant piping (Top view)**





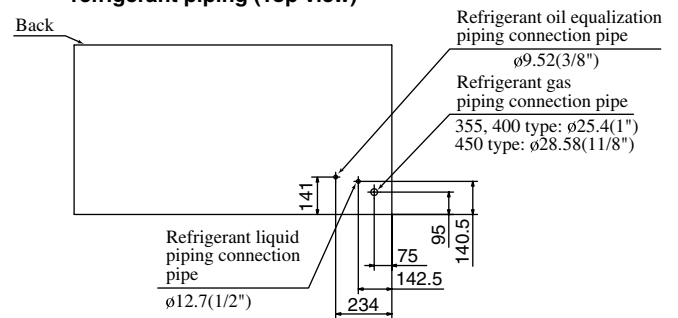
**Models FDCA335HKXE4A-K, 400HKXE4A, 450HKXE4A**

Unit : mm



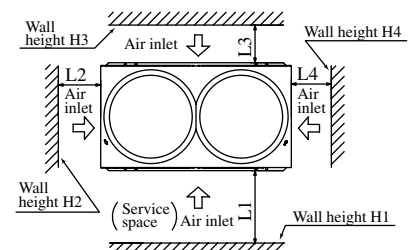
**VIEW A**

**Dimensions after connecting included refrigerant piping (Top view)**



Unit:mm

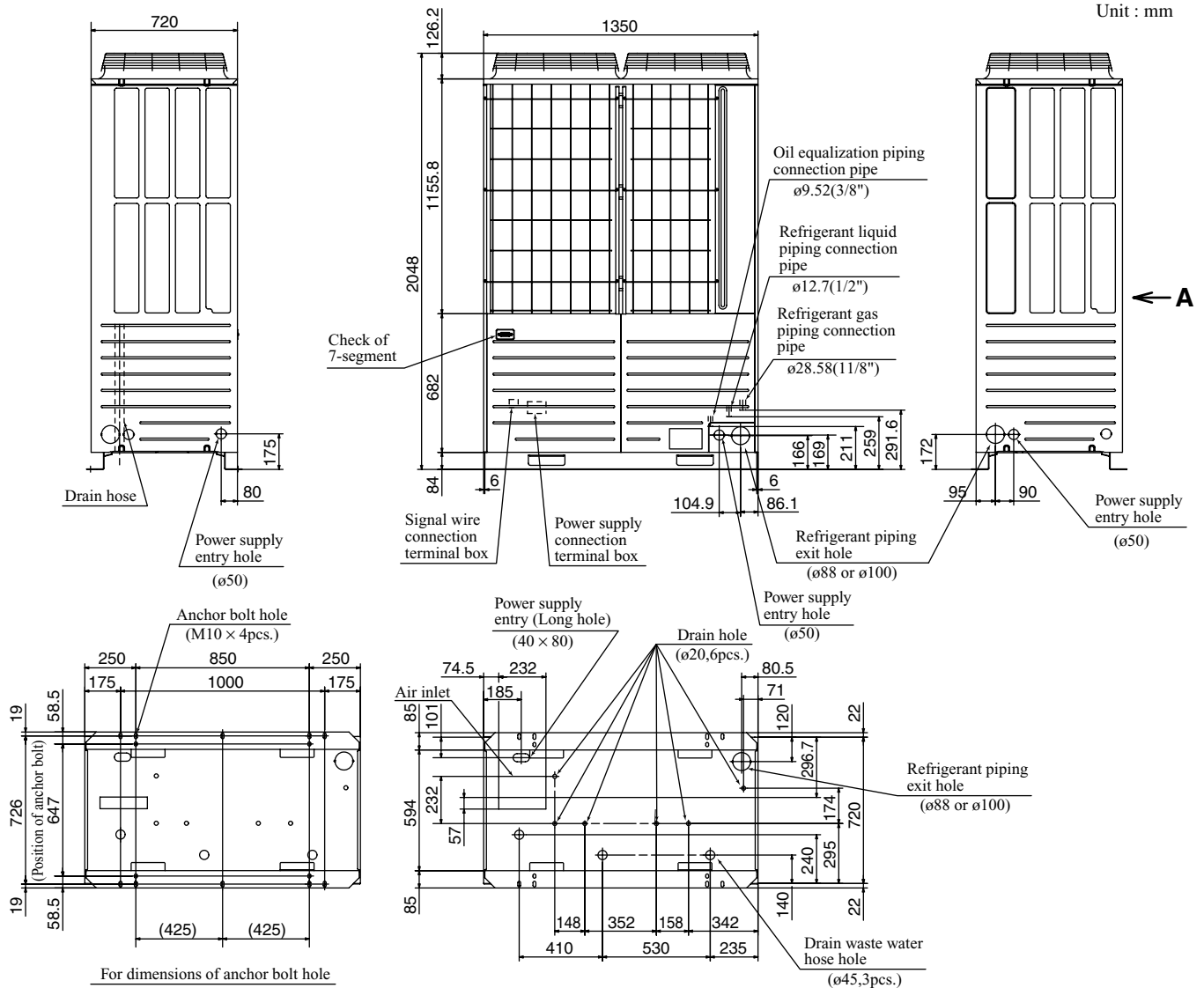
Dimensions	1	2
L1	500	Open
L2	10	10
L3	100	100
L4	10	Open
H1	1500	—
H2	Not limited	Not limited
H3	1000	Not limited
H4	Not limited	—



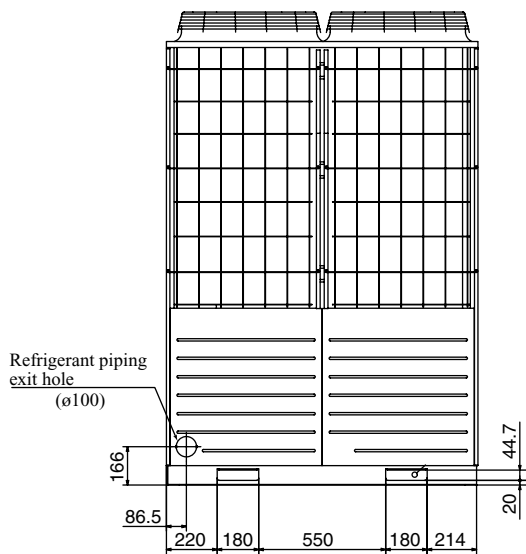


**Models FDCP504HKXE4A, 560HKXE4A, 615HKXE4A, 680HKXE4A**

Unit : mm

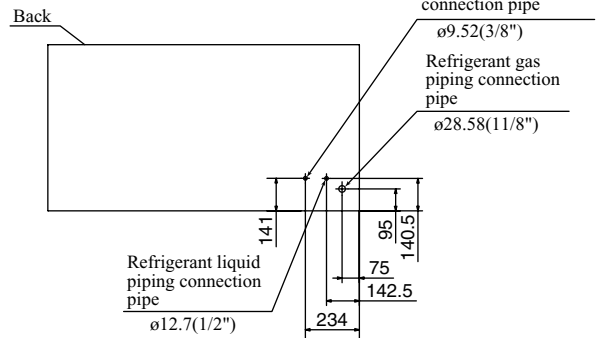


For dimensions of anchor bolt hole



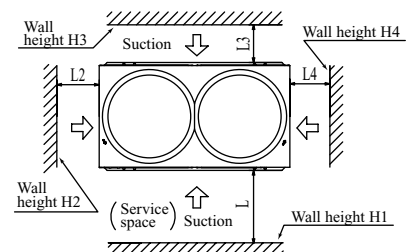
**VIEW A**

**Dimensions after connecting included refrigerant piping (Top view)**



Unit:mm

Dimensions	1	2
L	500	Open
L2	10	10
L3	100	100
L4	10	Open
H	1500	—
H2	Not limited	Not limited
H3	1000	Not limited
H4	Not limited	—





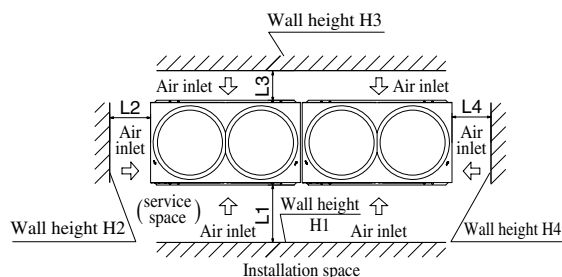
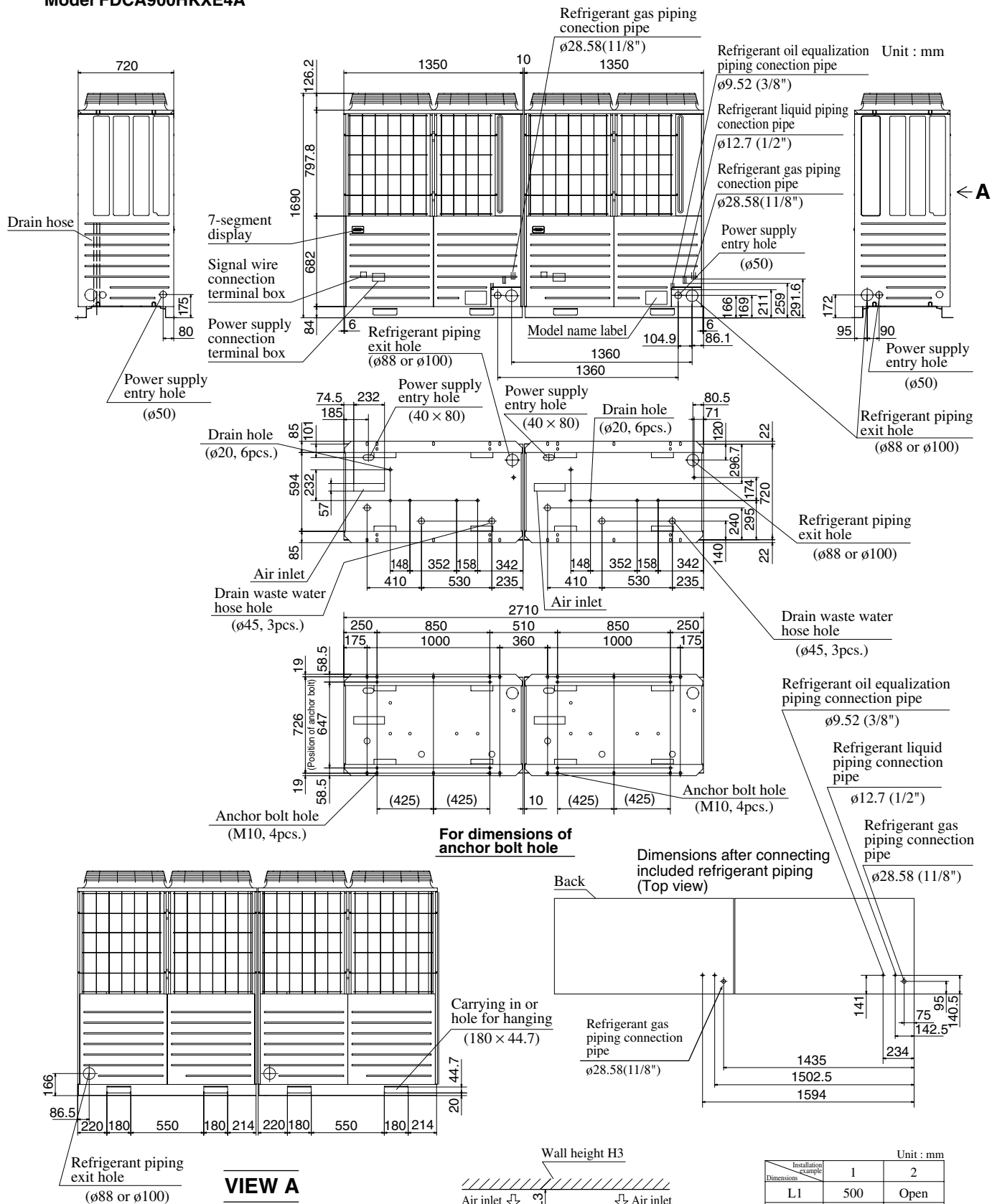
[illegible]



[illegible]



# Model FDCA900HKXE4A



Unit : mm		
Dimensions	1	2
L1	500	Open
L2	10	10
L3	100	100
L4	10	Open
H1	1500	—
H2	No limited	No limited
H3	1000	No limited
H4	No limited	—



**Model FDCA224HKXRE4A, 280HKXRE4A, 335HKXRE4A**[illegible]

**Dimensions after connecting included refrigerant piping (Top view)**

Refrigerant suction gas piping connection pipe  
224:ø19.05(3/4")  
280,335:ø22.22(7/8")

Refrigerant discharge gas piping connection pipe  
224:ø15.88(5/8")  
280,335:ø19.05(3/4")

Refrigerant liquid piping connection pipe  
224,280:ø9.52(3/8")  
335:ø12.7(1/2")

Refrigerant piping exit hole  
(ø88 or ø100)

Carrying in or hole for hanging

**VIEW A**

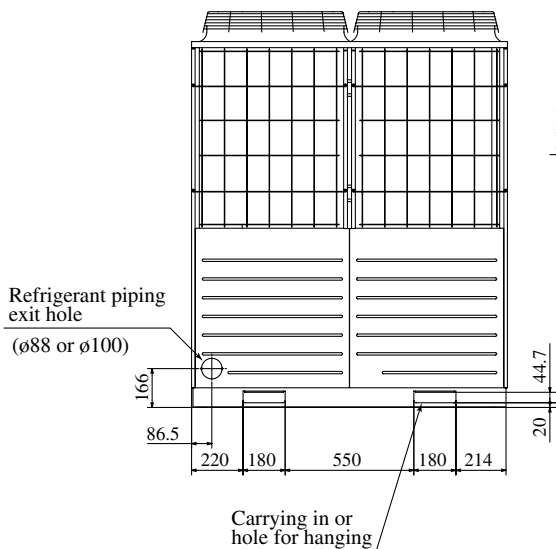
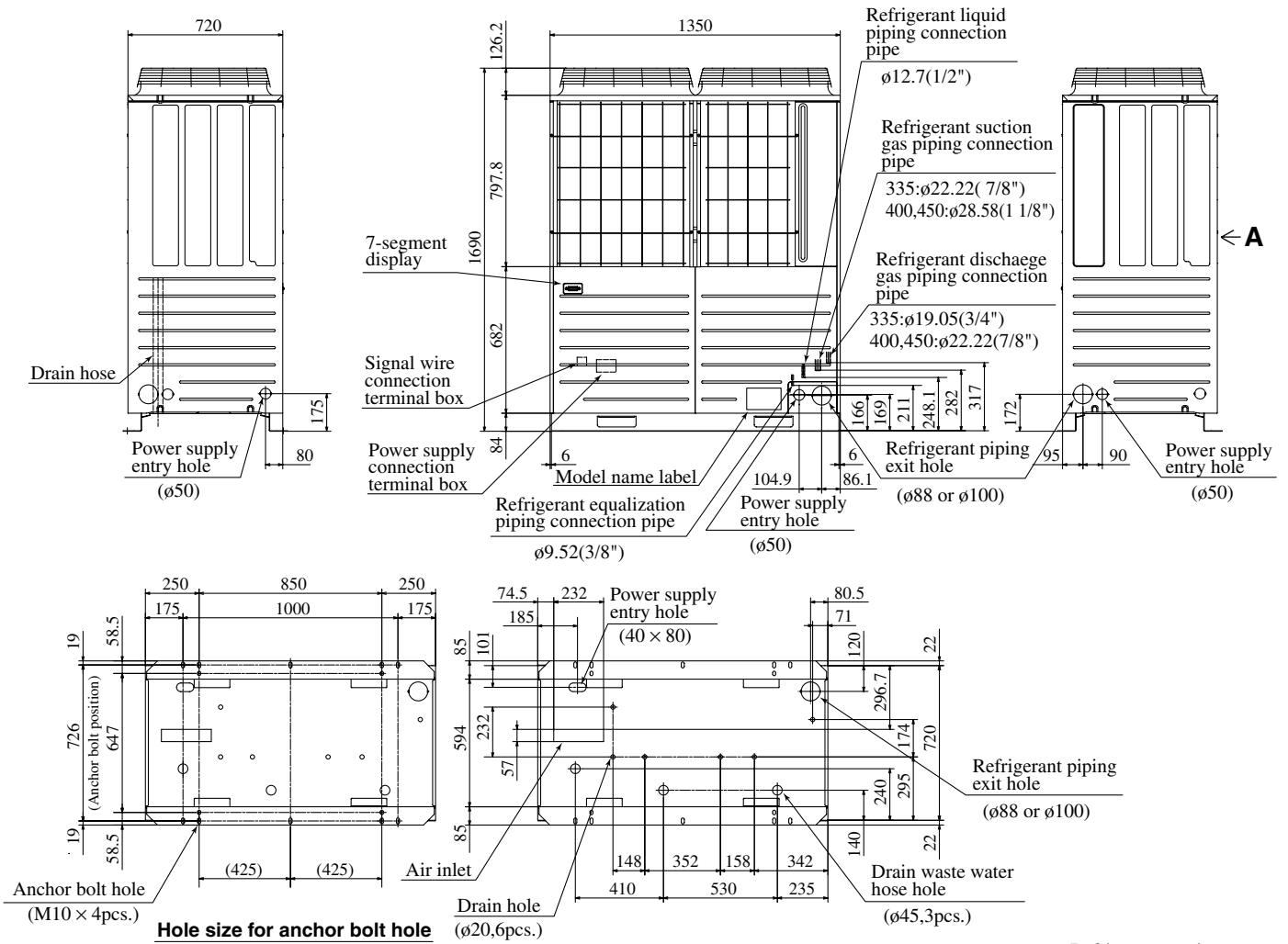
Unit:mm

Installation example	1	2
Dimensions		
L	500	Open
L2	10	10
L3	100	100
L4	10	Open
H	1500	—
H2	Not limited	Not limited
H3	1000	Not limited
H4	Not limited	—

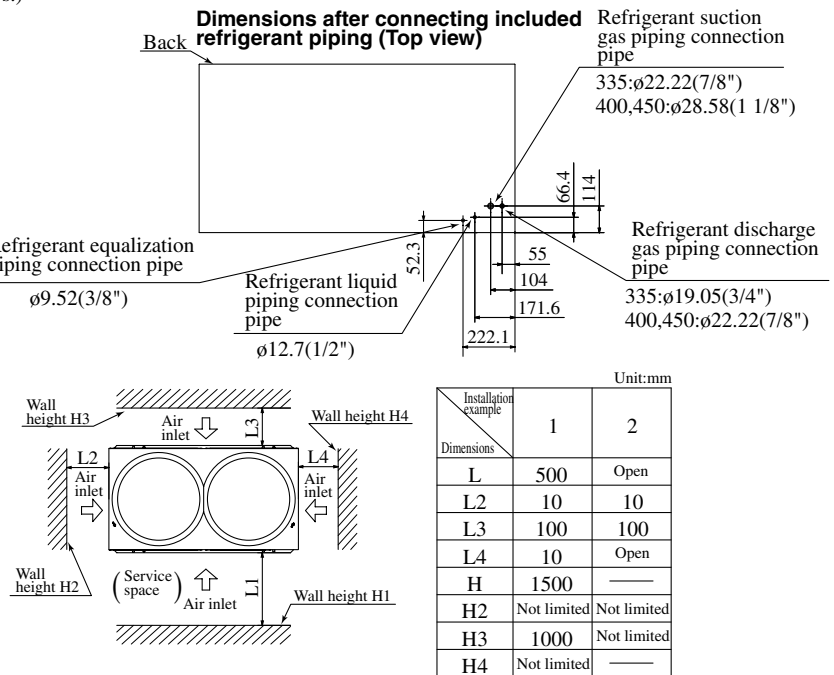


Model FDCA335HKXRE4A-K, 400HKXRE4A, 450HKXRE4A

Unit:mm



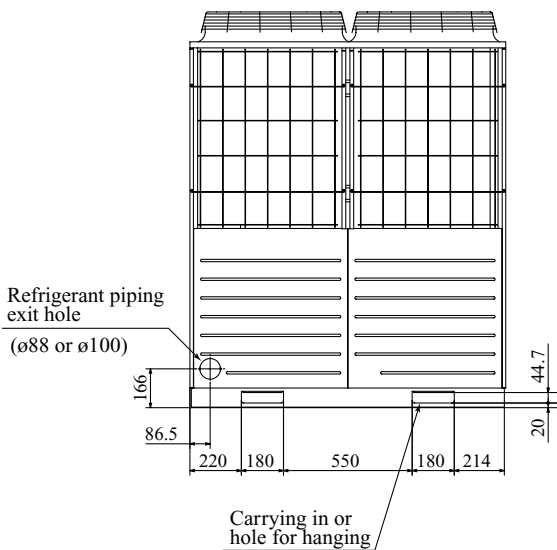
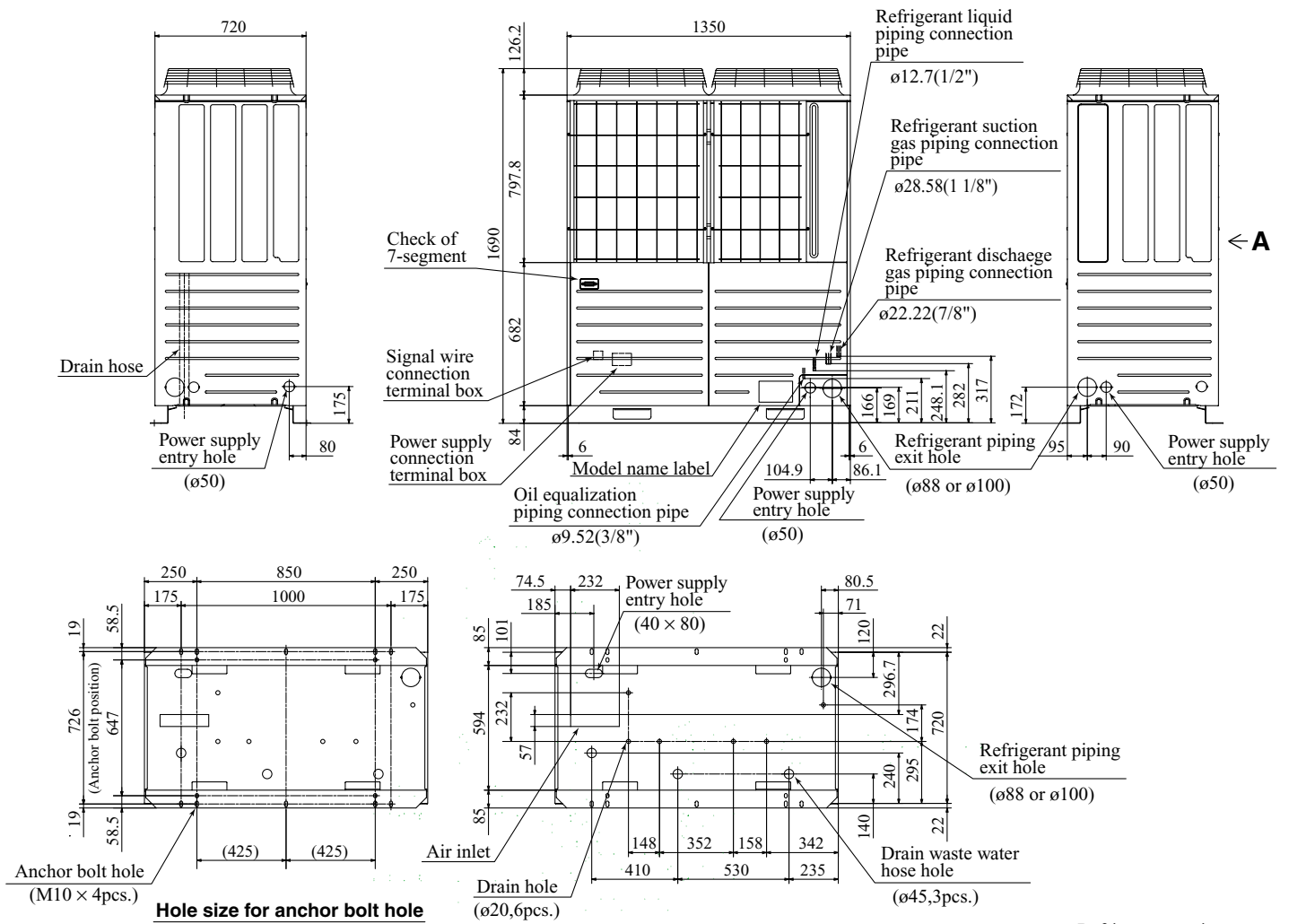
VIEW A



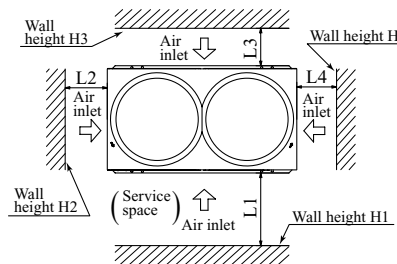
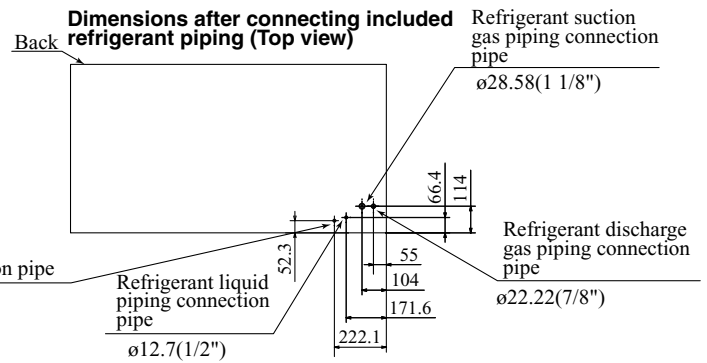


# Model FDCA450HKXRE4A

Unit:mm



VIEW A



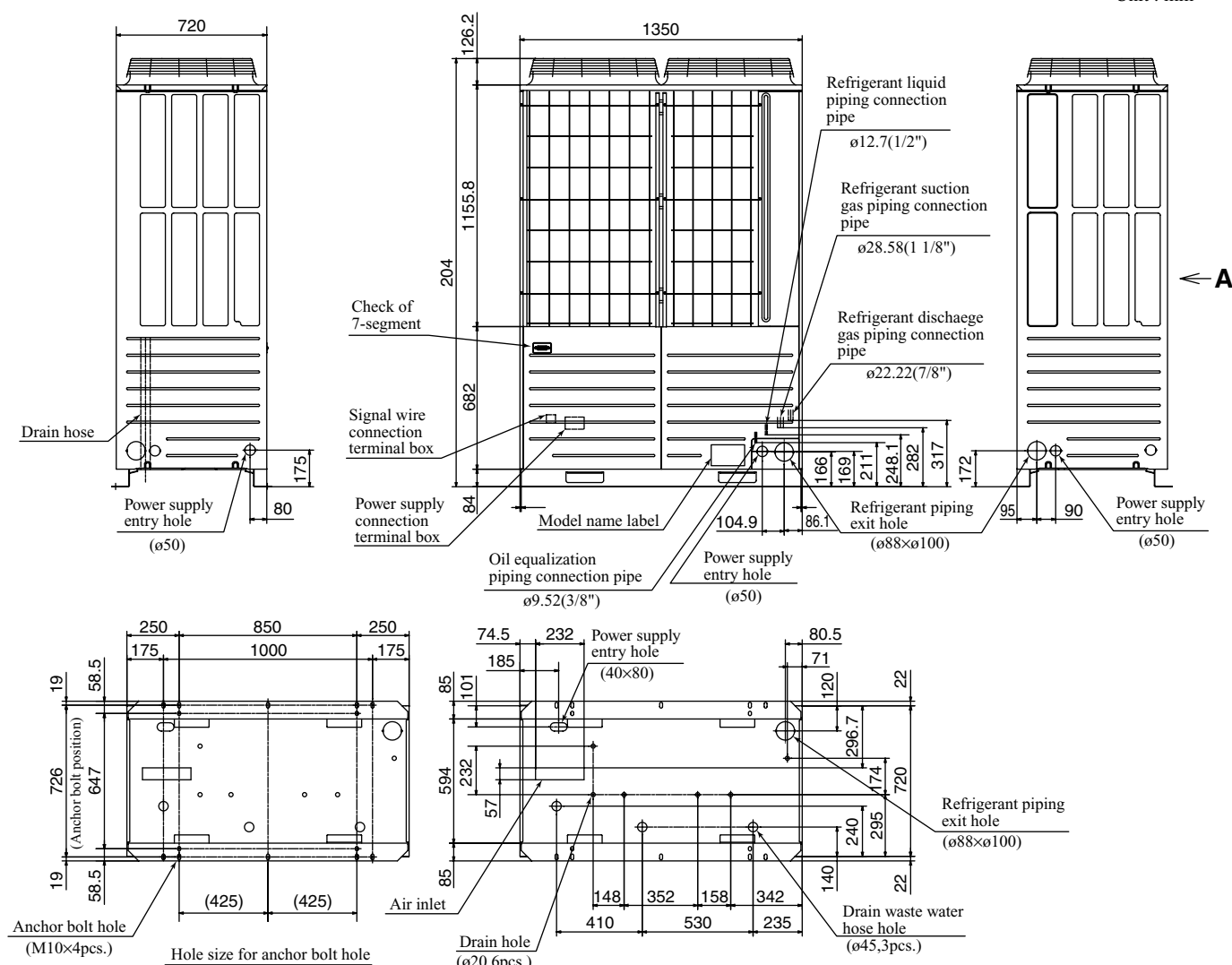
Unit:mm

Installation example	1	2
Dimensions		
L	500	Open
L2	10	10
L3	100	100
L4	10	Open
H	1500	—
H2	Not limited	Not limited
H3	1000	Not limited
H4	Not limited	—

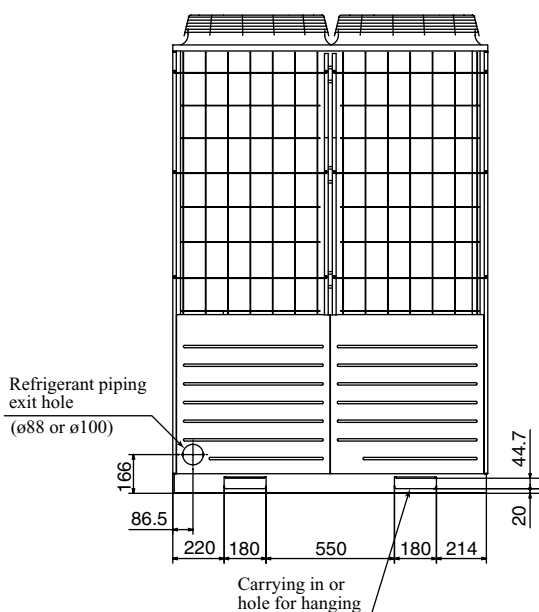
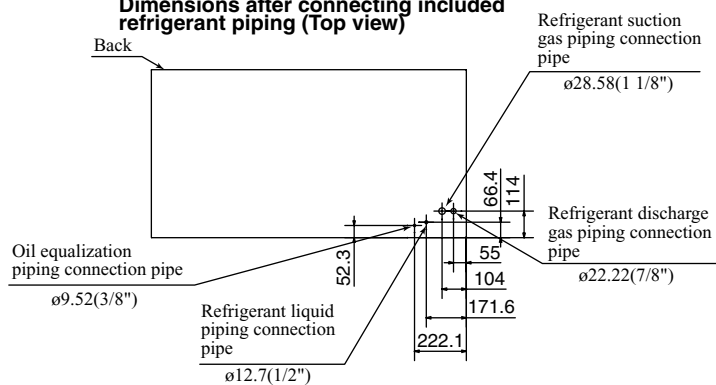


**Models FDCP504HKXRE4A, 560HKXRE4A, 615HKXRE4A, 680HKXRE4A**

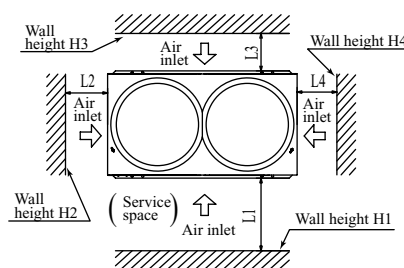
Unit : mm



**Dimensions after connecting included refrigerant piping (Top view)**



**VIEW A**

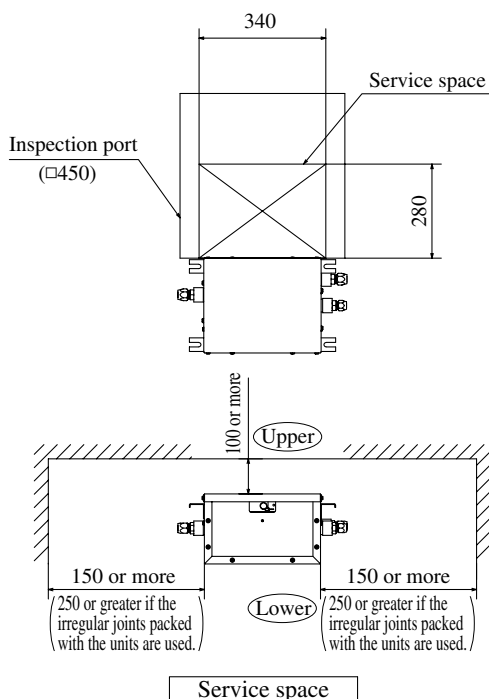
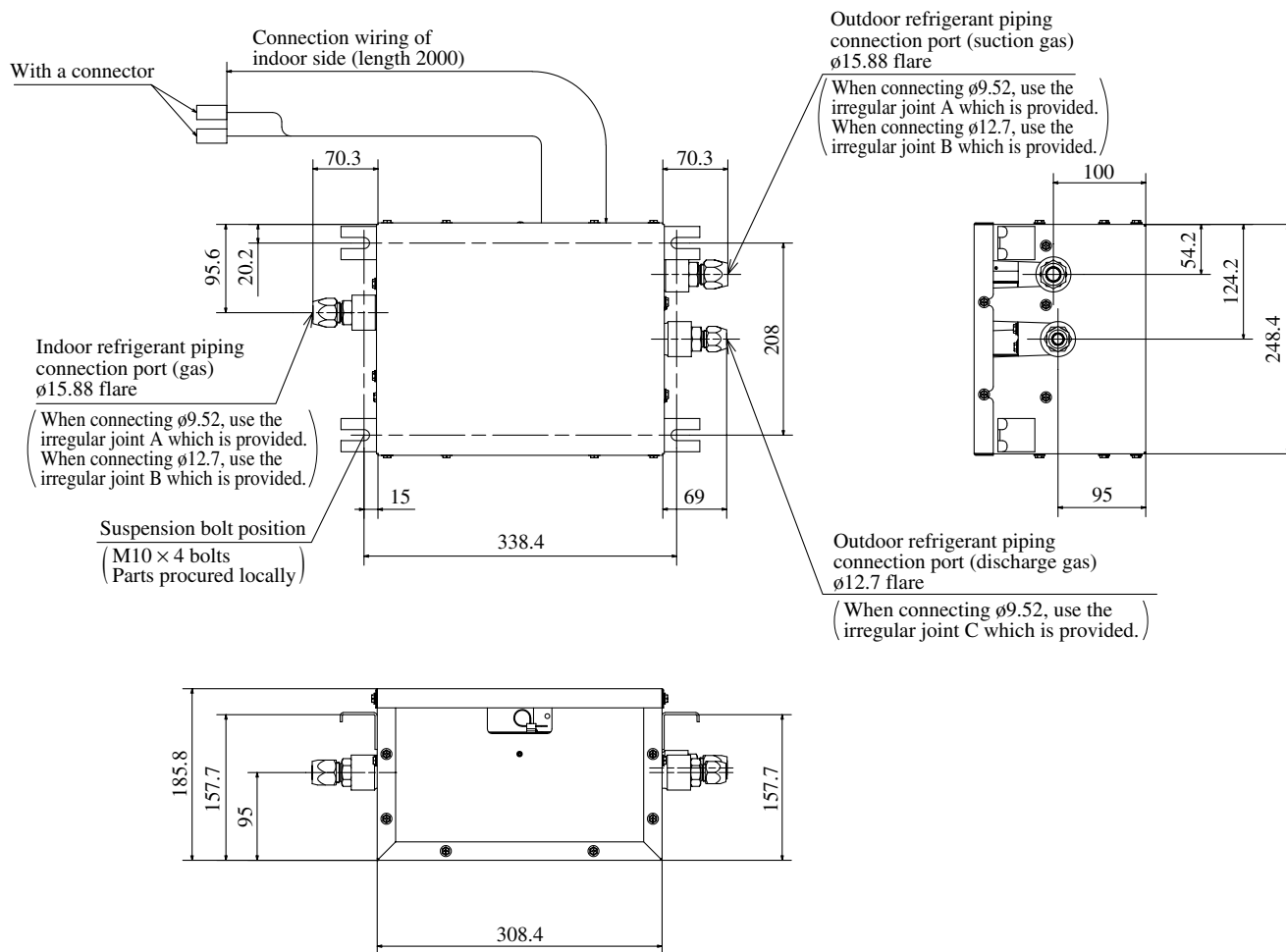


Unit:mm		
Installation example	1	2
L	500	Open
L2	10	10
L3	100	100
L4	10	Open
H	1500	—
H2	Not limited	Not limited
H3	1000	Not limited
H4	Not limited	—



#### (4) Branching controller(Heat recovery type only)

##### Model PFD112-E



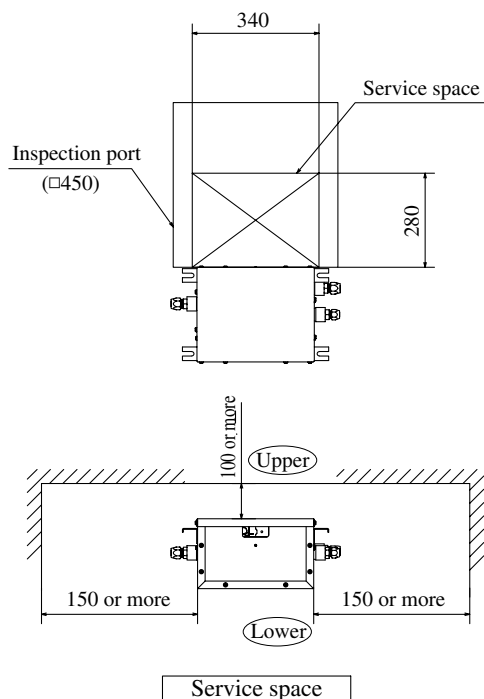
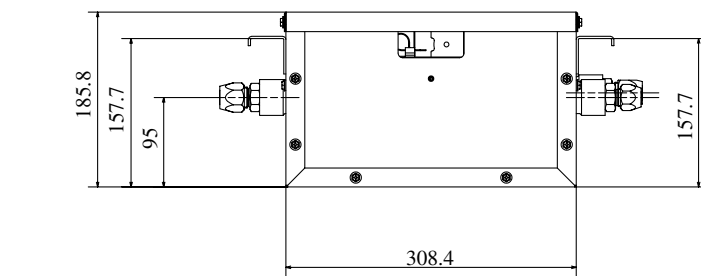
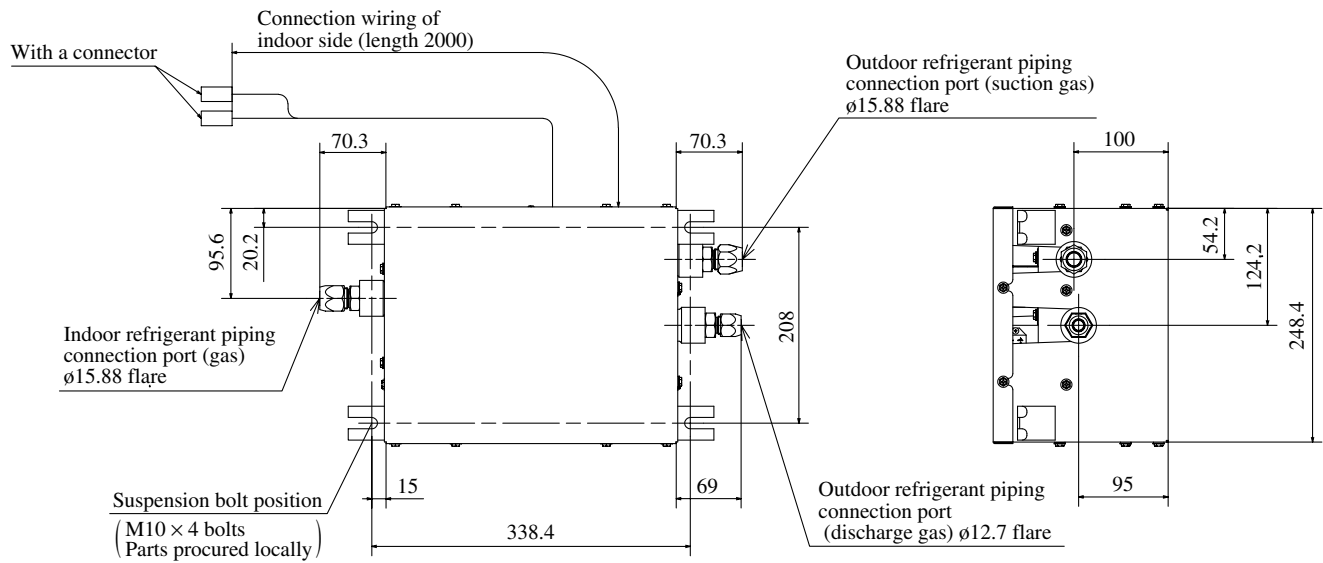
- Notes (1) Do not operate a unit when it is not connected to the branch controller.
- (2) Branch controllers cannot be installed above and below each other. Install them so that they are level with respect to each other.
- (3) Connection wires should be run from a surface facing the inspection opening.
- (4) Be sure to provide the servicing space specified in the diagram at left.
- (5) If multiple indoor units are connected to a single branching controller, please control them with a single remote controller. Also activate the remote control sensor when this is done.
- (6) Connect the irregular joints shown in the following table in accordance with the connection pipe diameter.  
(Use the flare nuts provided for the branch controller.)

Irregular size joints		
For outdoor unit suction gas piping For indoor unit gas piping	For outdoor unit discharge gas piping	
2 pcs.	2 pcs.	1 pcs.
 A	 B	 C

- (7) A noise may be emitted by the branching controller as a result of control during operation or stopping of an indoor unit. If it is installed in the ceiling where it is exposed, take adequate precautions with the installation location.



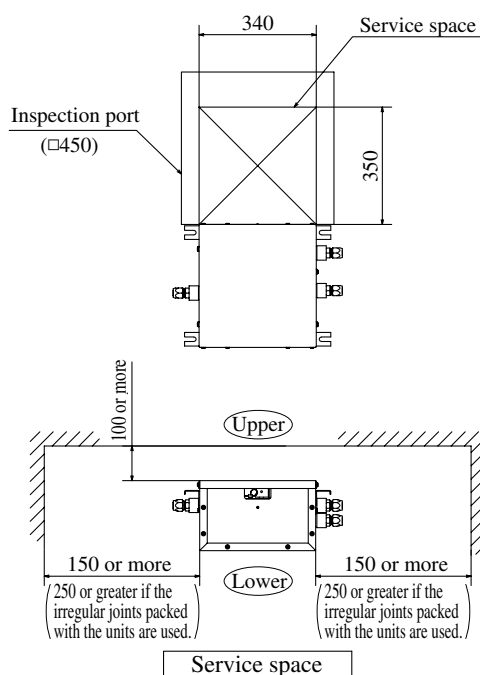
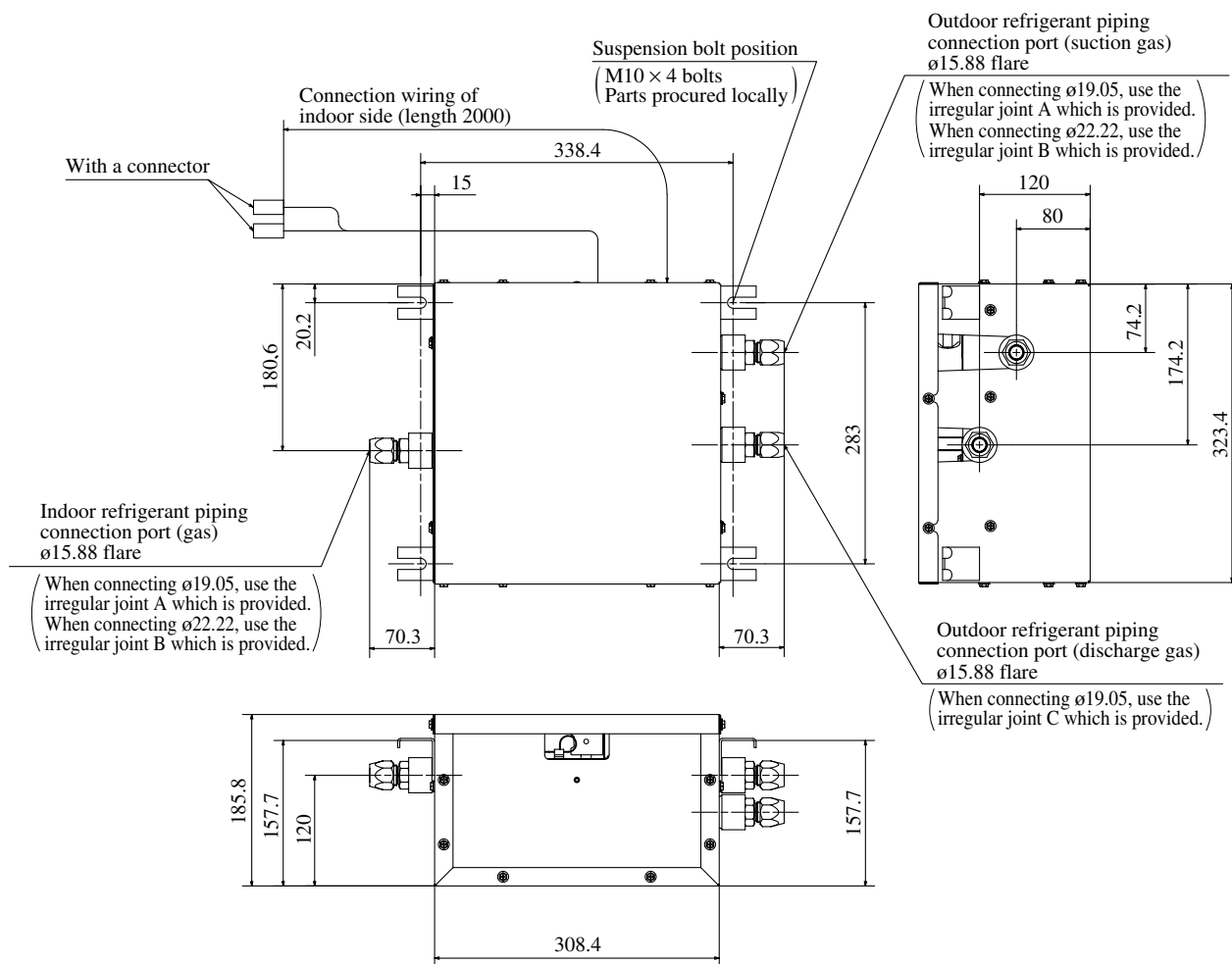
## Model PFD180-E



- Notes (1) Do not operate a unit when it is not connected to the branch controller.
- (2) Branch controllers cannot be installed above and below each other. Install them so that they are level with respect to each other.
- (3) Connection wires should be run from a surface facing the inspection opening.
- (4) Be sure to provide the servicing space specified in the diagram at left.
- (5) If multiple indoor units are connected to a single branching controller, please control them with a single remote controller. Also activate the remote control sensor when this is done.
- (6) A noise may be emitted by the branching controller as a result of control during operation or stopping of an indoor unit. If it is installed in the ceiling where it is exposed, take adequate precautions with the installation location.



## Model PFD280-E



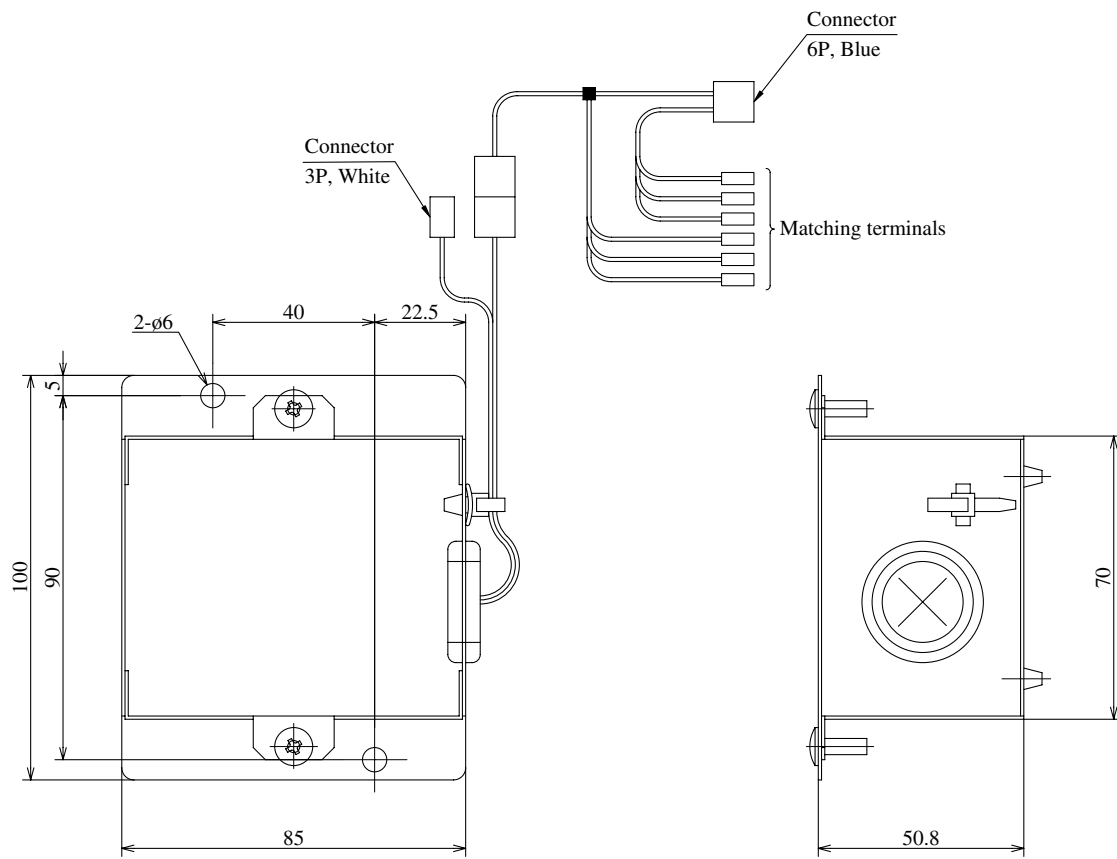
- Notes (1) Do not operate a unit when it is not connected to the branch controller.
- (2) Branch controllers cannot be installed above and below each other. Install them so that they are level with respect to each other.
- (3) Connection wires should be run from a surface facing the inspection opening.
- (4) Be sure to provide the servicing space specified in the diagram at left.
- (5) If multiple indoor units are connected to a single branching controller, please control them with a single remote controller. Also activate the remote control sensor when this is done.
- (6) Connect the irregular joints shown in the following table in accordance with the connection pipe diameter.

Irregular size joints		
For outdoor unit suction gas piping For indoor unit gas piping	For outdoor unit discharge gas piping	
2 pcs.	2 pcs.	1 pcs.
 ID 19.05 ID 15.88 A	 ID 22.22 ID 15.88 B	 ID 19.05 ID 15.88 C

- (7) A noise may be emitted by the branching controller as a result of control during operation or stopping of an indoor unit. If it is installed in the ceiling where it is exposed, take adequate precautions with the installation location.



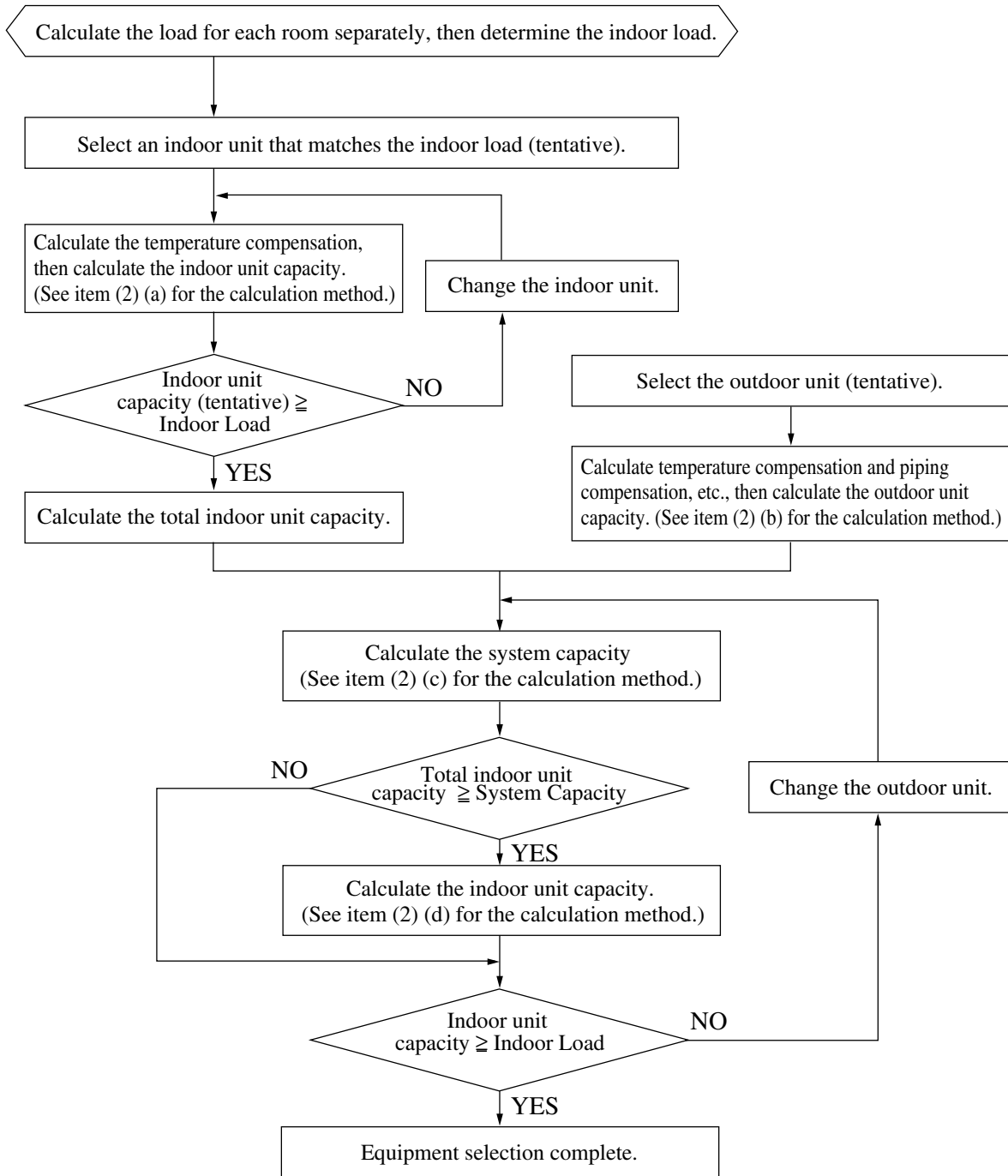
■ Relay kit with branch controller





## 2.4 Selection chart

### (1) Equipment selection flow





## (2) Capacity calculation method

### (a) Calculating the indoor unit capacity compensation

Indoor unit capacity (cooling, heating) = Indoor unit total rated capacity  
× Capacity compensation coefficient according to temperature conditions  
See item (3) (a) concerning the capacity compensation coefficient according to temperature conditions.

### (b) Calculating the outdoor unit capacity compensation

Outdoor Unit Capacity (Cooling, Heating) = Outdoor unit rated capacity (rated capacity when 100% connected)  
× Capacity compensation coefficient according to temperature conditions  
× Capacity compensation coefficient according to piping length  
× Capacity compensation coefficient according to height difference  
× Correction of heating capacity in relation to the frost on the outdoor unit heat exchanger  
× Capacity compensation coefficient according to indoor unit connection capacity

① See item (3) (a) concerning the capacity compensation coefficient according to temperature conditions.

② See item (3) (b) concerning the capacity compensation coefficient according to piping length.

In the case of cooling capacity compensation, the compensation coefficient differs depending on the piping size if the length exceeds 90 m, so exercise caution. The compensation coefficient is the same in the case of heating capacity compensation regardless of the model (horsepower).

③ See item (3) (c) concerning the capacity compensation coefficient according to height difference. This compensation should be carried out only in cases where the outdoor unit is lower during cooling and higher during heating.

④ See item (3) (d) correction of heating capacity in relation to the frost on the outdoor unit heat exchanger. This compensation should be carried out only when calculating the heating capacity.

⑤ See item (3) (e) concerning the capacity compensation coefficient according to indoor unit connected capacity. This compensation should be carried out only in cases where the indoor unit total capacity is 100% or higher.

### (c) Calculating system capacity

Compare the capacities determined in items (a) and (b) above and let the smaller value be the system capacity (cooling, heating).

① In cases where indoor unit total capacity (cooling, heating) > outdoor unit capacity (cooling, heating)

System capacity (cooling, heating) = Outdoor unit capacity (cooling, heating)

② In cases where indoor unit total capacity (cooling, heating) < outdoor unit capacity (cooling, heating)

System capacity (cooling, heating) = Indoor unit capacity (cooling, heating)

### (d) Calculating indoor unit capacity [item (c) ① only]

Indoor unit capacity (cooling, heating) = System capacity (cooling, heating)  
× [(Indoor unit capacity) / (Indoor unit total capacity)]

## Capacity calculation examples

### Example 1

#### Cooling (when the indoor unit connected total capacity is less than 100%)

- Outdoor unit FDCA735HKXE4A ..... 1 Unit
- Indoor unit FDKA71KXE4A ..... 8 Units
- Piping length ..... 60 m (Equivalent length)
- Indoor, outdoor unit height difference ..... 15 m (Outdoor unit is lower)
- Temperature conditions ..... Outdoor temperature: 33°C DB
- Temperature conditions ..... Indoor temperature: 19°C WB

#### <Indoor unit total cooling capacity>: Item (2) (a) calculation.

- Indoor unit rated cooling capacity: 7.1 kW
- Capacity compensation coefficient according to temperature conditions:  
1.0 (Calculated according to Indoor 19°C WB / Outdoor 33°C DB);  
Indoor unit cooling capacity: 7.1 kW × 1.0 = 7.1 kW
- Indoor unit total cooling capacity calculation;  
indoor unit total cooling capacity: 7.1 kW × 8 units = 56.8 kW

#### <Outdoor unit maximum cooling capacity> : Item (2) (b) calculation

- Outdoor unit rated cooling capacity: 73.5 kW
- Capacity compensation coefficient according to temperature conditions:  
1.0 (Calculated according to Indoor 19°C WB / Outdoor 33°C DB);  
Outdoor unit cooling capacity: 73.5 kW × 1.0 = 73.5 kW
- Capacity compensation coefficient according to piping length: 0.96 (calculated according to 60 m length);  
73.5 kW × 0.96 = 70.6 kW



- Capacity compensation coefficient according to height difference: 0.97 (calculated according to 15 m difference);  
 $70.6 \text{ kW} \times 0.97 \approx 68.5 \text{ kW}$
- Capacity compensation coefficient according to indoor unit connected total capacity:  $1.0 \leftarrow (71 \times 8) / 735 < 100\%$   
 No compensation

#### <System cooling capacity>: Item (2) (c) calculation

Compare the indoor unit total cooling capacity and the outdoor unit maximum cooling capacity. The smaller value is the actual system cooling capacity.

- Indoor unit total cooling capacity: 56.8 kW
  - Outdoor unit maximum cooling capacity: 68.5 kW
- $\Rightarrow$  System cooling capacity: 56.8 kW

#### <Indoor unit capacity compensation> No compensation (7.1 kW)

### Example 2

#### Cooling (when the indoor unit connected total capacity is 100% or higher)

- Outdoor unit FDCA735HKXE4A ..... 1 Unit
- Indoor unit FDKA71KXE4A ..... 11 Units
- Piping length ..... 120 m (Equivalent length)
- Indoor, outdoor unit height difference ..... 15 m (Outdoor unit is higher)
- Temperature conditions ..... Outdoor temperature: 35°C DB
- Temperature conditions ..... Indoor temperature: 18°C WB

#### <Indoor unit total cooling capacity>: Item (2) (a) calculation.

- Indoor unit rated cooling capacity: 7.1 kW
- Capacity compensation coefficient according to temperature conditions:  
 0.95 (Calculated according to Indoor 18°C WB / Outdoor 35°C DB);  
 Indoor unit cooling capacity:  $7.1 \text{ kW} \times 0.95 \approx 6.75 \text{ kW}$
- Indoor unit total cooling capacity calculation;  
 indoor unit total cooling capacity:  $6.75 \text{ kW} \times 11 \text{ units} \approx 74.3 \text{ kW}$

#### <Outdoor unit maximum cooling capacity> : Item (2) (b) calculation

- Outdoor unit rated cooling capacity: 73.5 kW
- Capacity compensation coefficient according to temperature conditions:  
 0.95 (Calculated according to Indoor 18°C WB / Outdoor 35°C DB);  
 Outdoor unit cooling capacity:  $73.5 \text{ kW} \times 0.95 \approx 69.8 \text{ kW}$
- Capacity compensation coefficient according to piping length: 0.91 (calculated according to 120 m length);  
 $69.8 \text{ kW} \times 0.91 \approx 63.5 \text{ kW}$
- Capacity compensation coefficient according to height difference: 1.0 (the outdoor unit is higher during cooling)  
 No compensation
- Capacity compensation coefficient according to indoor unit connected total capacity:  $1.07 \leftarrow (71 \times 11) / 735 = 106\%$   
 $63.5 \text{ kW} \times 1.07 \approx 67.9 \text{ kW}$

#### <System cooling capacity>: Item (2) (c) calculation

Compare the indoor unit total cooling capacity and the outdoor unit maximum cooling capacity. The smaller value is the actual system cooling capacity.

- Indoor unit total cooling capacity : 74.3 kW
  - Outdoor unit maximum cooling capacity : 67.9 kW
- $\Rightarrow$  System cooling capacity: 67.9 kW

#### <Indoor unit cooling capacity Compensation>: Item (2) (d) calculation.

$$\frac{67.9 \text{ kW} \times 6.75 \text{ kW}}{74.3 \text{ kW}} \approx 6.2 \text{ kW}$$

### Example 3

#### Heating (when the indoor unit connected total capacity is 100% or higher)

- Outdoor unit FDCA735HKXE4A ..... 1 Unit
- Indoor unit FDKA71KXE4A ..... 11 Units
- Piping length ..... 60 m (Equivalent length)
- Indoor, outdoor unit height difference ..... 20 m (Outdoor unit is higher)
- Temperature conditions ..... Outdoor temperature: 6°C WB
- Temperature conditions ..... Indoor temperature: 19°C DB

#### <Indoor unit total heating capacity>: Item (2) (a) calculation.

- Indoor unit rated heating capacity: 8.0 kW
- Capacity compensation coefficient according to temperature conditions:  
 1.04 (Calculated according to Outdoor 6°C WB / Indoor 19°C DB);  
 Indoor unit heating capacity:  $8.0 \text{ kW} \times 1.04 \approx 8.3 \text{ kW}$
- Indoor unit total heating capacity calculation;  
 indoor unit total heating capacity:  $8.3 \text{ kW} \times 11 \text{ units} \approx 91.3 \text{ kW}$



### <Outdoor unit maximum heating capacity> : Item (2) (b) calculation

- Outdoor unit rated heating capacity: 82.5 kW
- Capacity compensation coefficient according to temperature conditions:  
1.04 (Calculated according to Outdoor 6°C WB / Indoor 19°C DB);  
Outdoor unit heating capacity:  $82.5 \text{ kW} \times 1.04 = 85.8 \text{ kW}$
- Capacity compensation coefficient according to piping length: 0.96 (calculated according to 60 m length);  
 $85.8 \text{ kW} \times 0.96 \approx 82.4 \text{ kW}$
- Capacity compensation coefficient according to height difference: 0.96 (calculated according to 20 m difference);  
 $82.4 \text{ kW} \times 0.96 \approx 79.1 \text{ kW}$
- Correction of heating capacity in relation to the frost on the outdoor unit heat exchanger: 1.0;  
 $79.1 \text{ kW} \times 1.0 \approx 79.1 \text{ kW}$ .
- Capacity compensation coefficient according to indoor unit connected total capacity:  $1.07 \leftarrow (71 \times 11) / 735 = 106\%$   
 $79.1 \text{ kW} \times 1.07 \approx \underline{84.6 \text{ kW}}$ .

### <System heating capacity>: Item (2) (c) calculation

Compare the indoor unit total heating capacity and the outdoor unit maximum heating capacity. The smaller value is the actual system heating capacity.

- Indoor unit total heating capacity : 91.3 kW  $\Rightarrow$  System heating capacity: 84.6 kW
- Outdoor unit maximum heating capacity : 84.6 kW

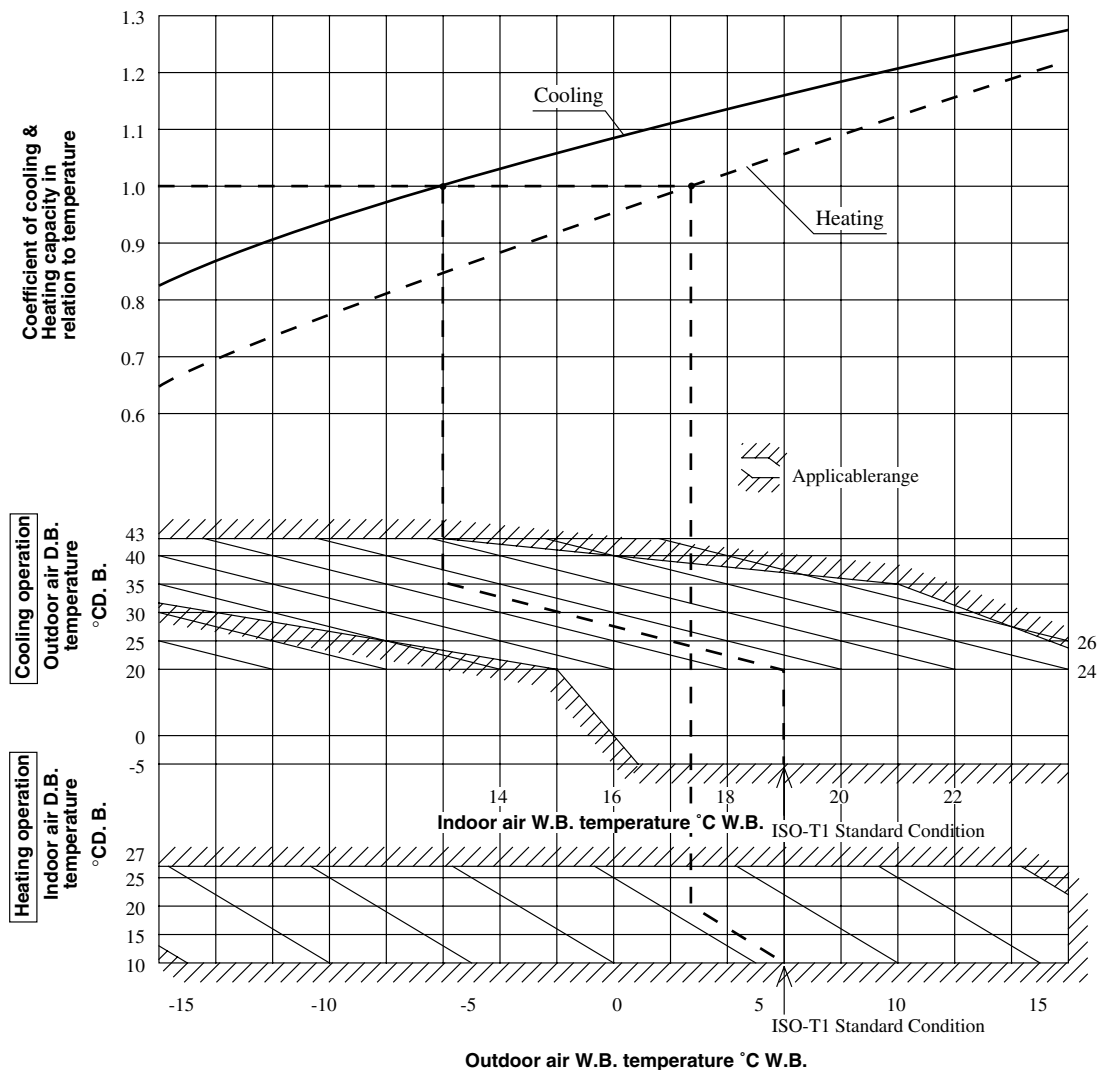
### <Indoor unit heating capacity compensation> (Item (2) (d) calculation

$$\frac{84.6 \text{ kW} \times 8.3 \text{ kW}}{91.3 \text{ kW}} \approx \underline{7.7 \text{ kW}}$$

## (3) Capacity compensation coefficient

### (a) Range of usage & limitations or Coefficient of cooling and heating capacity in relation to temperatures

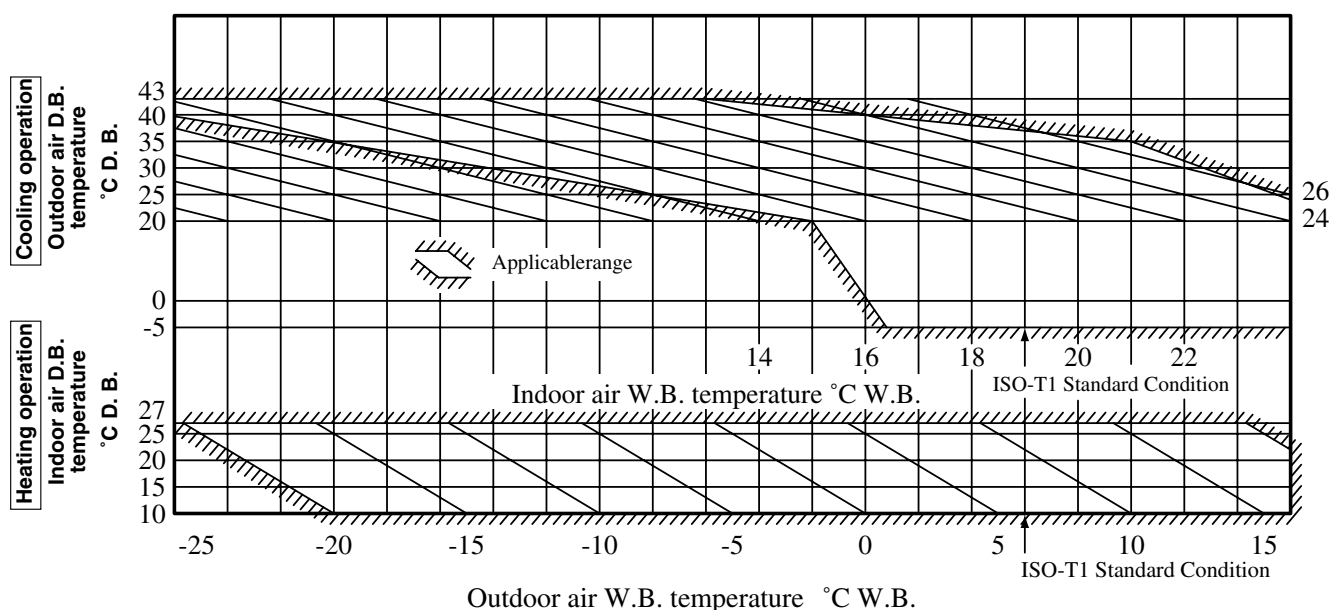
#### (i) Models FDCA140HKXEN4A, 140HKXES4A





(ii) Models FDCA224~1360HKXE4A, 224~1360HKXRE4A

1) Range of usage & limitations



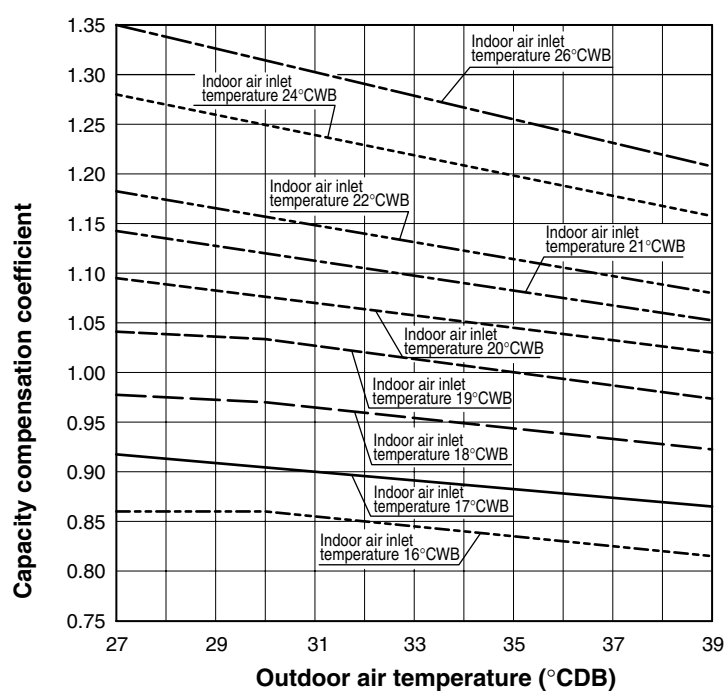
2) Coefficient of cooling and heating capacity in relation to temperatures

Notes (1) When there is simultaneous cooling operation with an outside temperature of 5°C or less, there is a reduction in cooling capacity compared with cooling operation only. (KXR series only)  
(Not suitable for year-round cooling applications in server rooms and the like.)

(b) Capacity compensation coefficient and power consumption compensation coefficient according to indoor and outdoor temperature conditions.

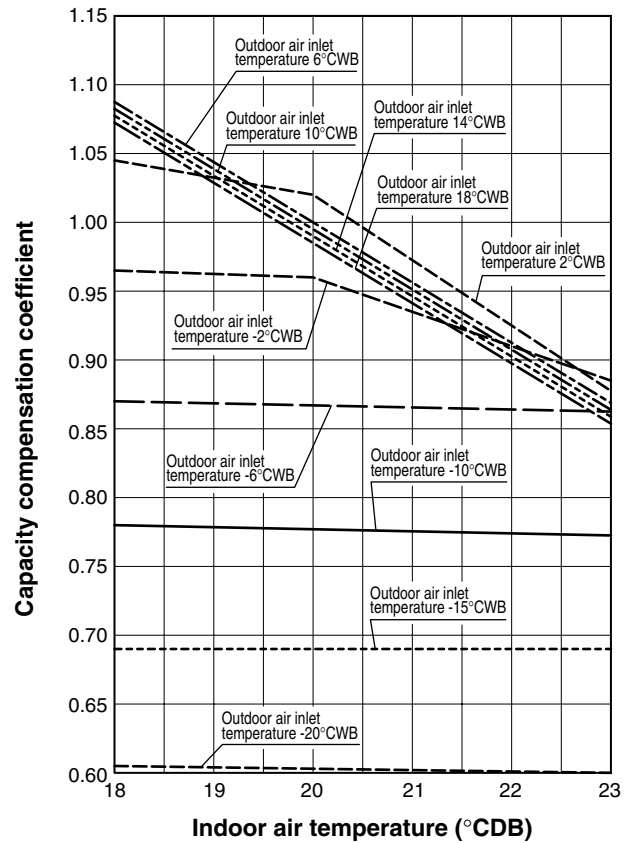
1) Capacity compensation coefficient

◆ Cooling



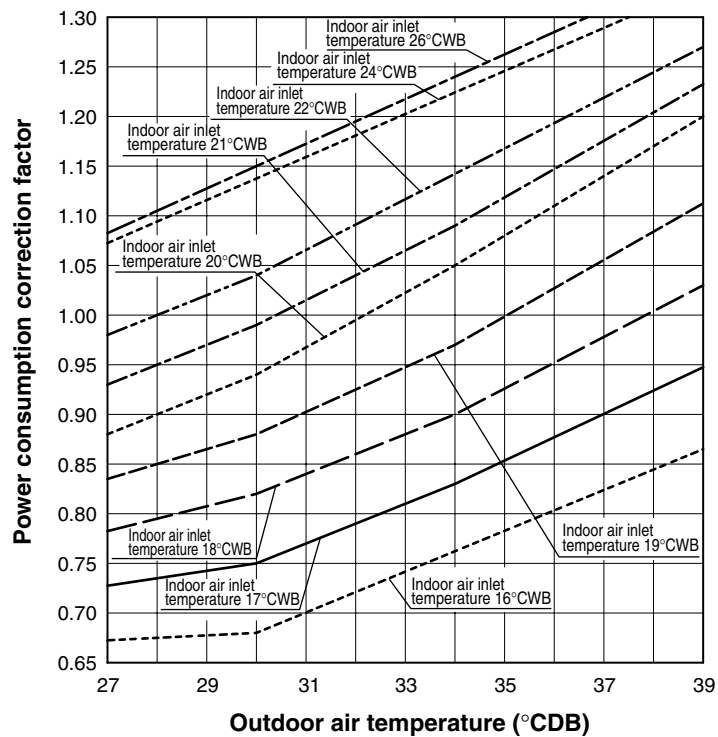


### ◆ Heating



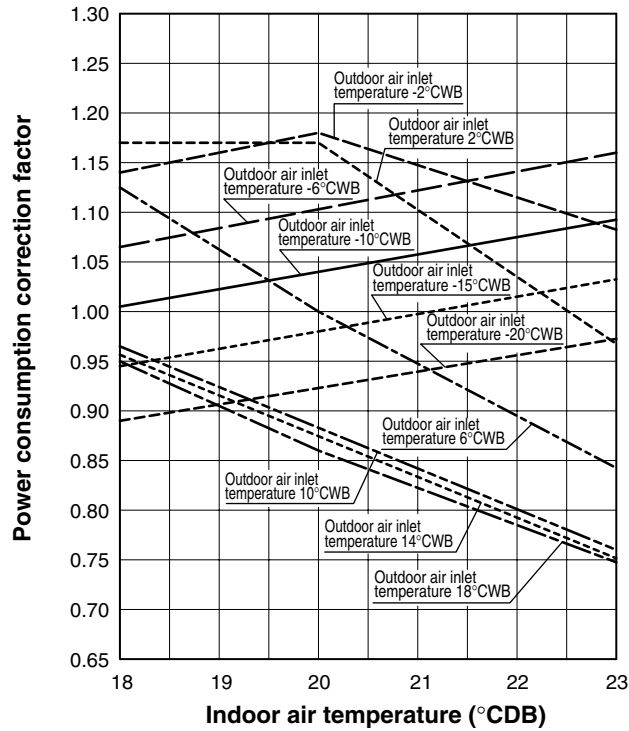
## 2) Power consumption correction factor

### ◆ Cooling





◆ Heating

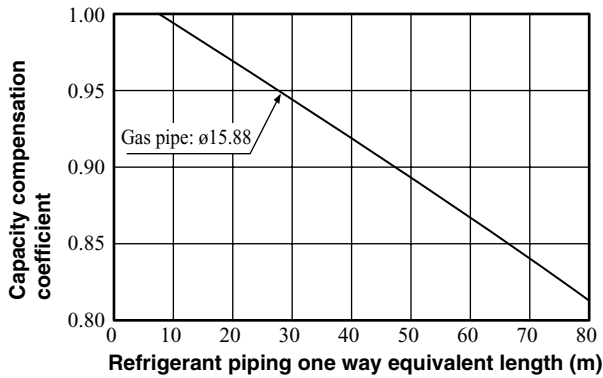


(c) Correction of cooling and heating capacity in relation to one way length of refrigerant piping.

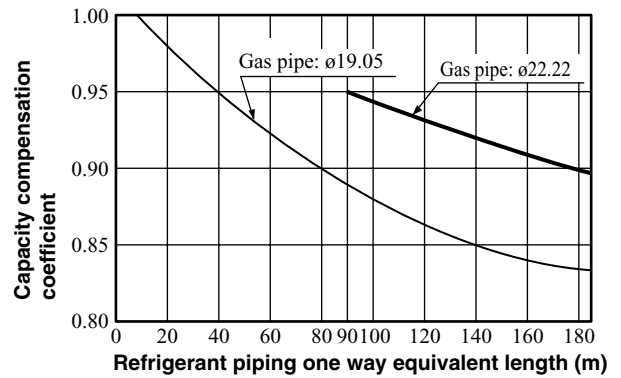
1) Cooling

a) KX series

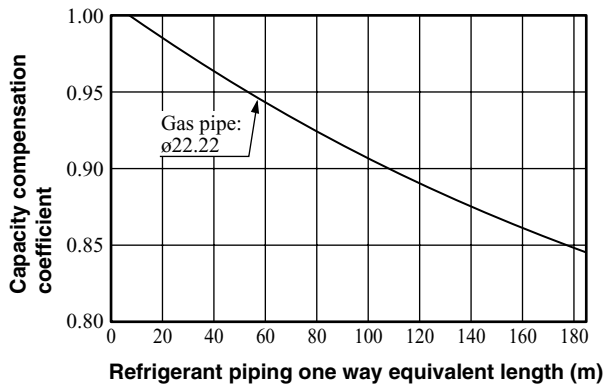
Models FDCA140HKXEN4A, 140HKXES4A



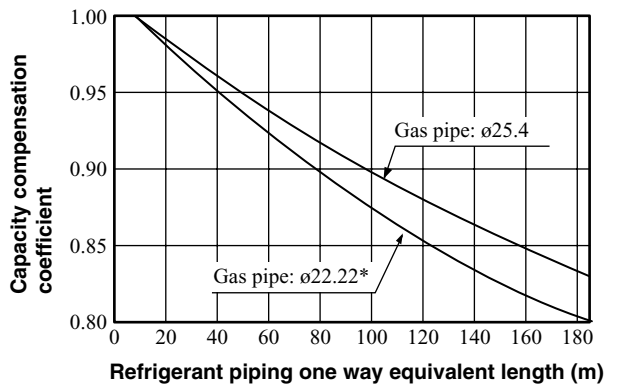
Model FDCA224HKXE4A



Model FDCA280HKXE4A

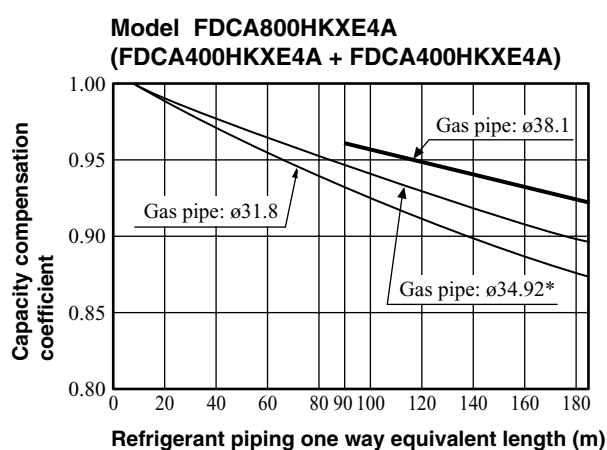
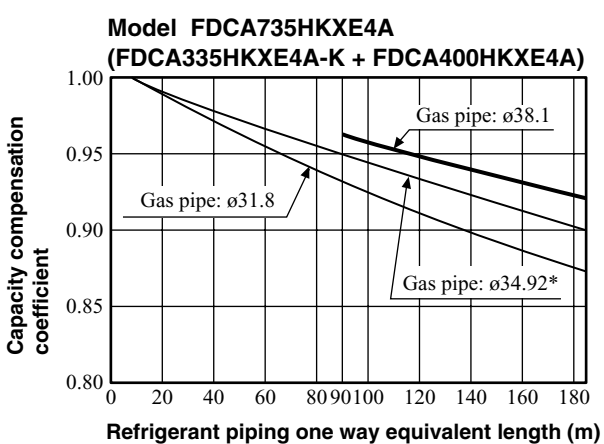
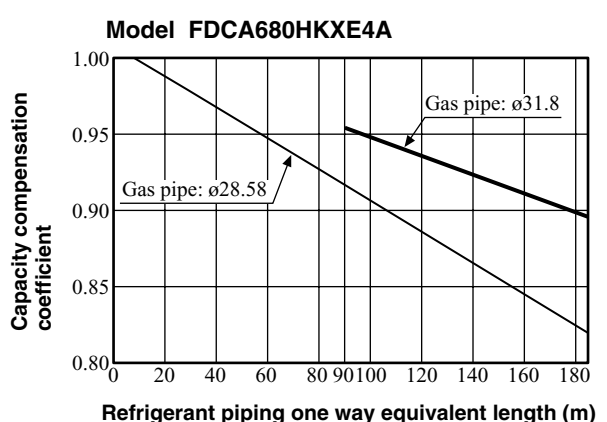
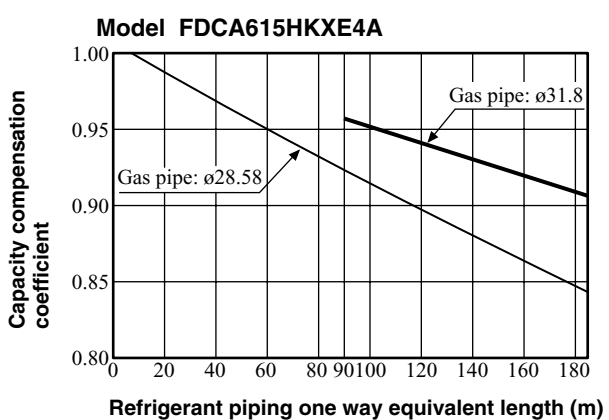
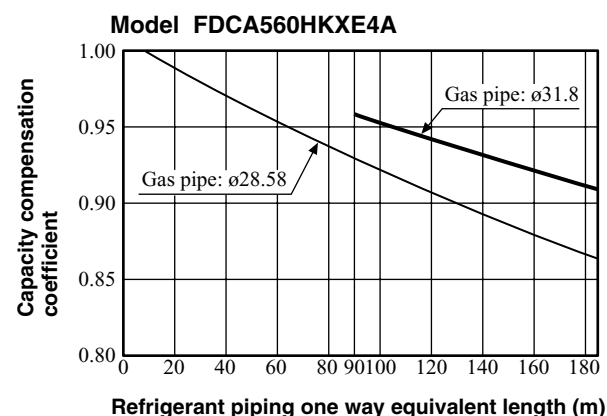
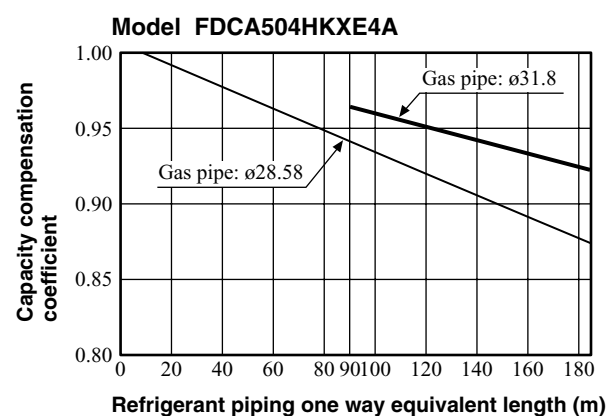
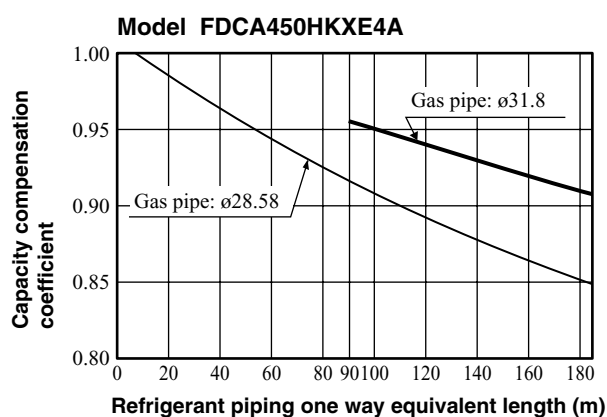
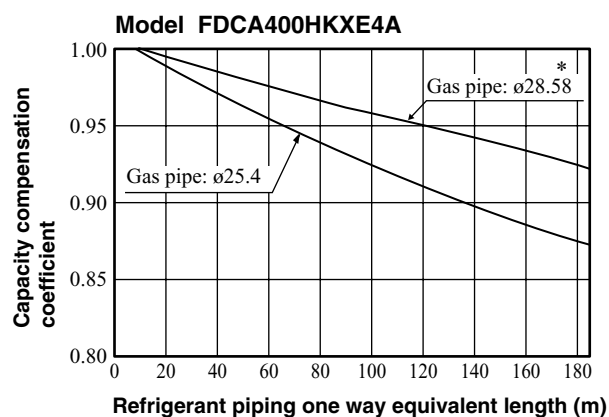


Model FDCA335HKXE4A



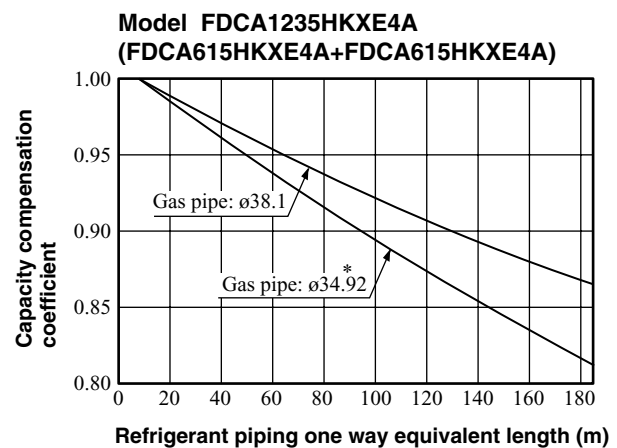
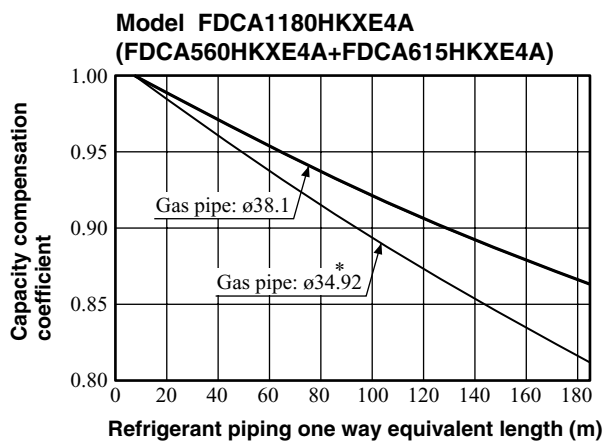
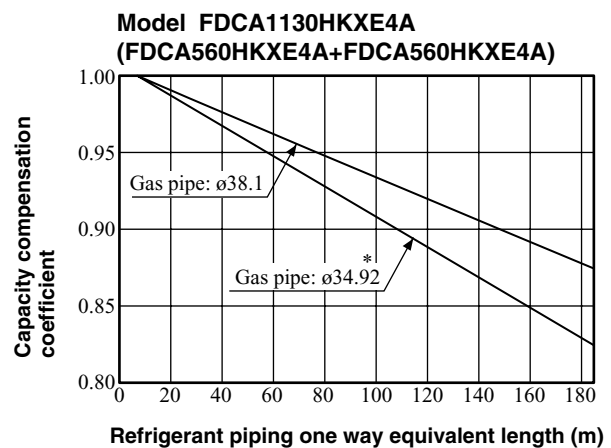
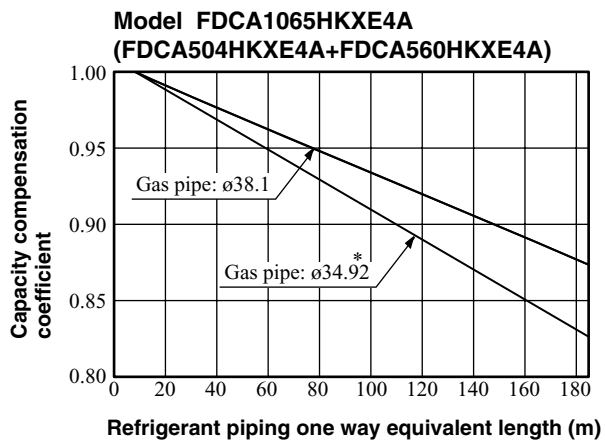
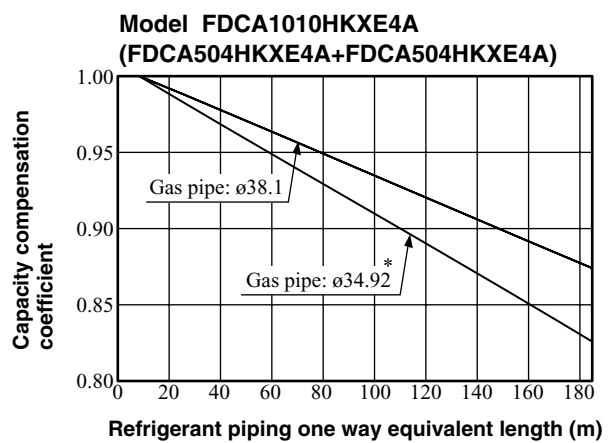
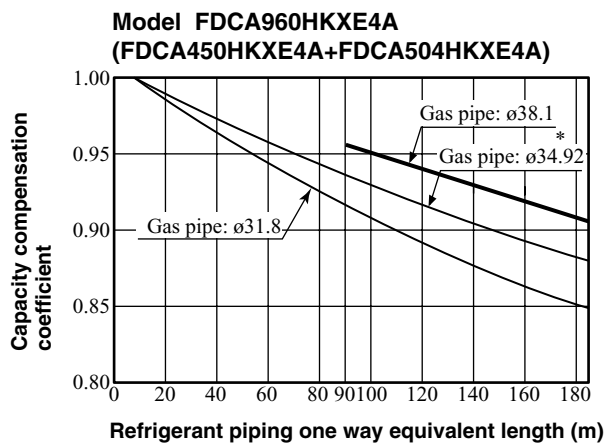
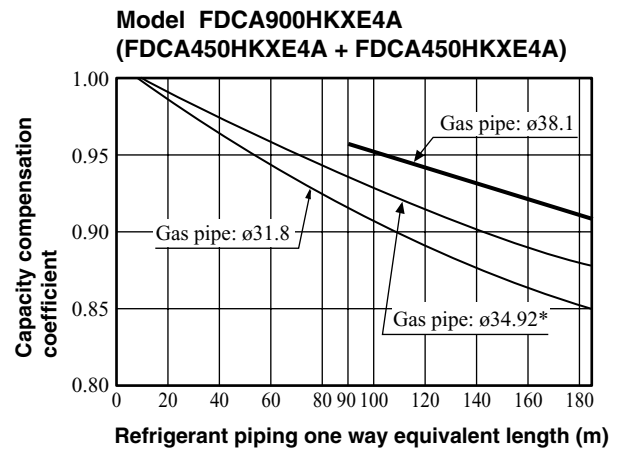
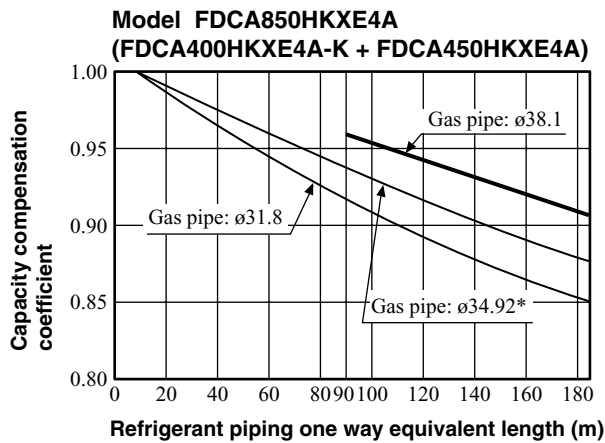
Note (1) Parts with the \* mark show the piping size in the case where the parts are used in Europe.





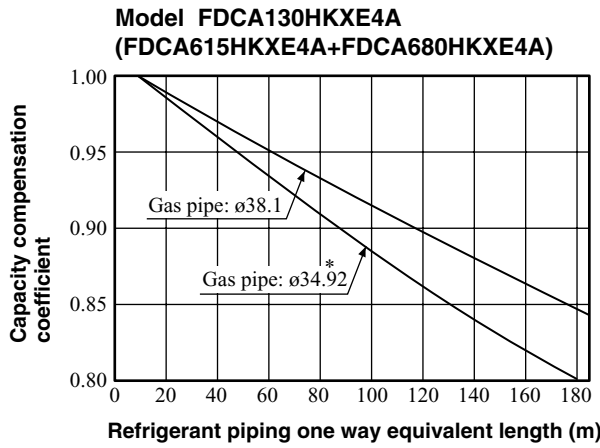
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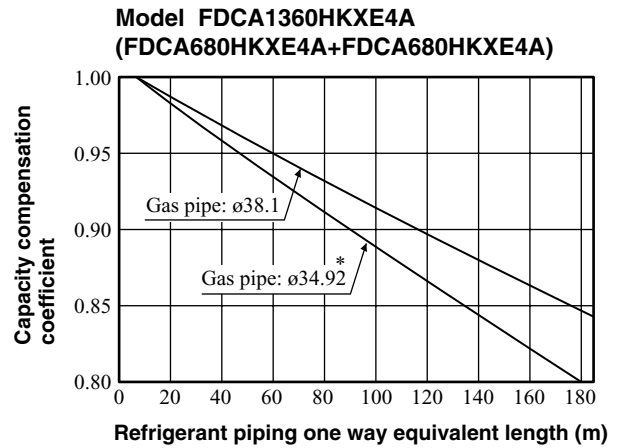


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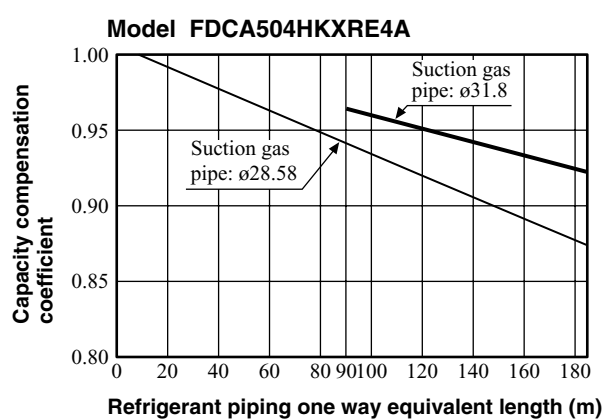
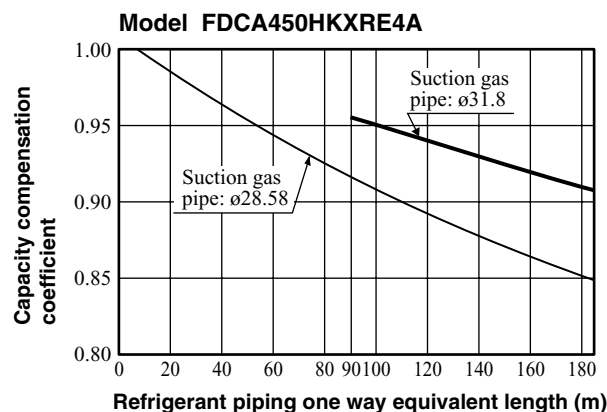
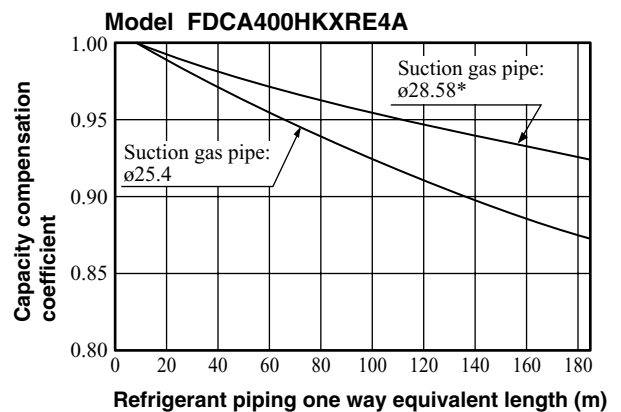
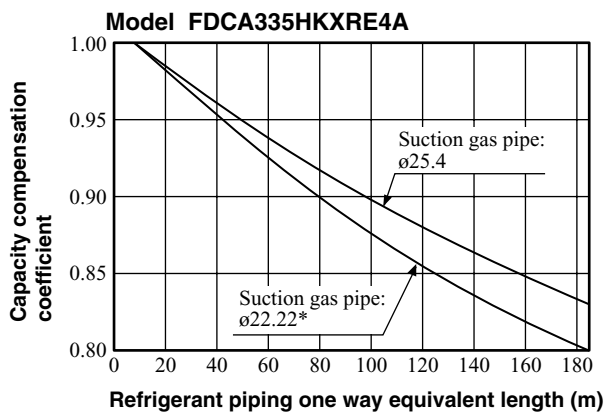
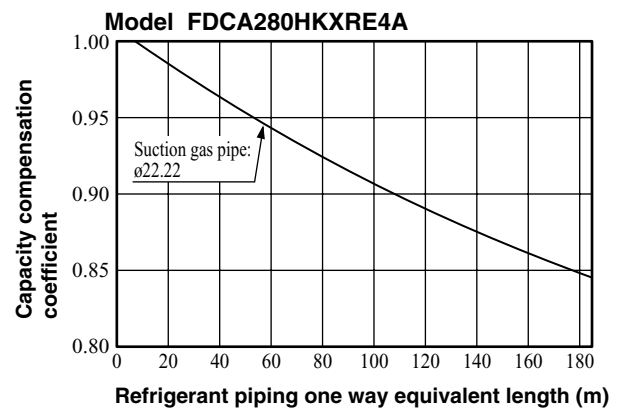
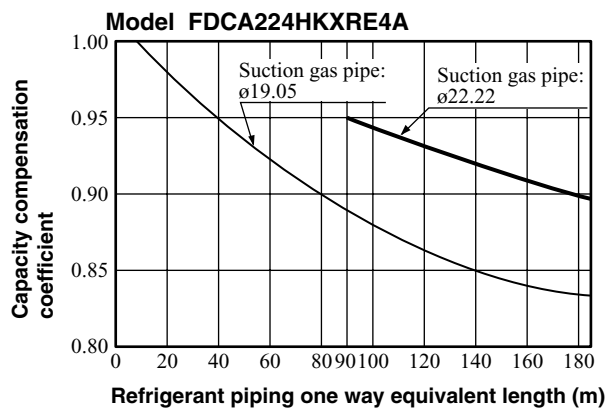




Note (1) Parts with the \* mark show the piping size in the case where the parts are used in Europe.

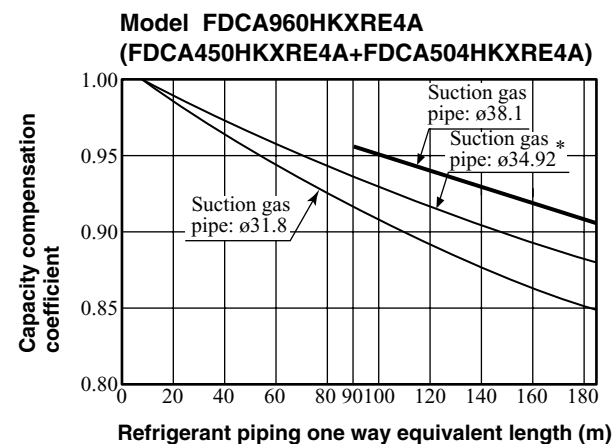
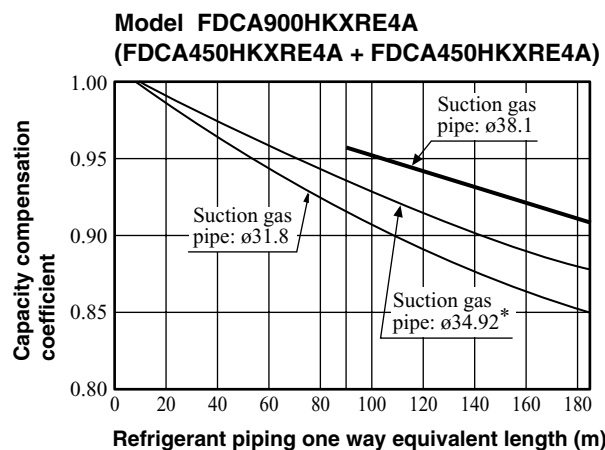
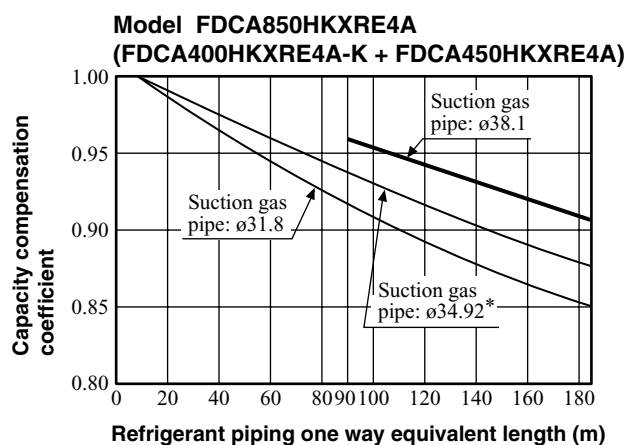
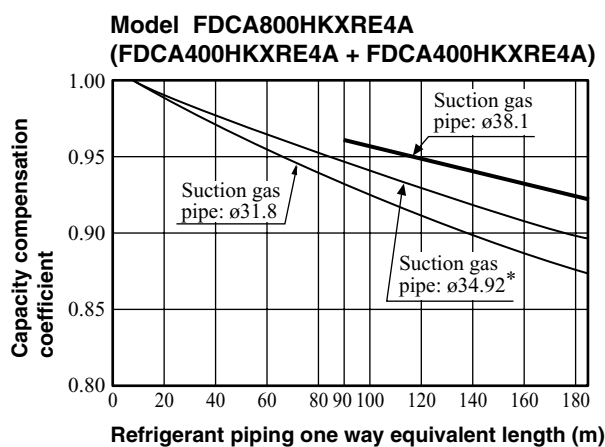
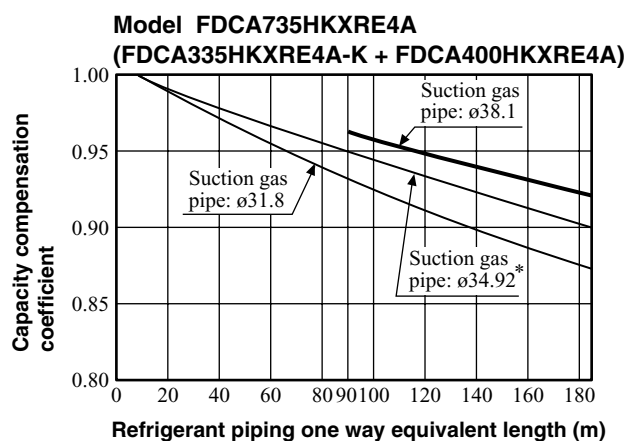
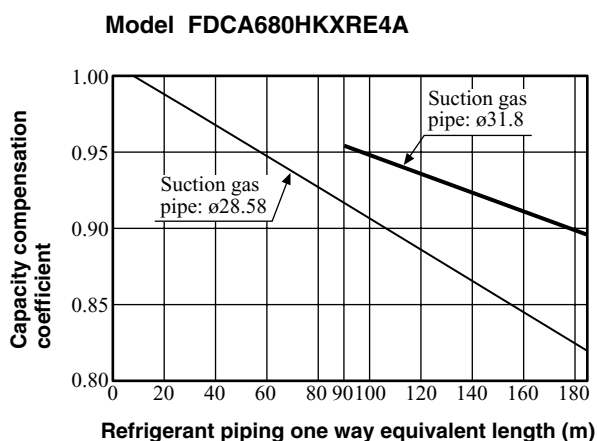
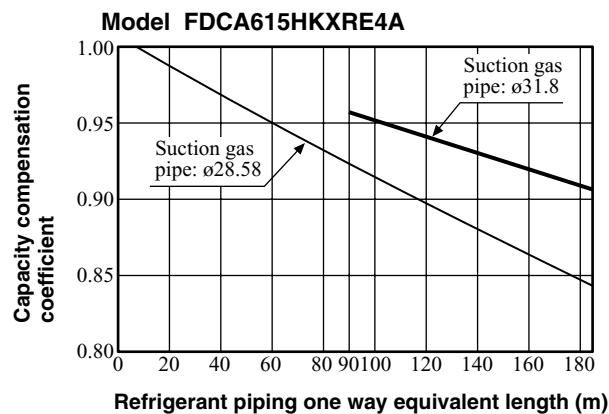
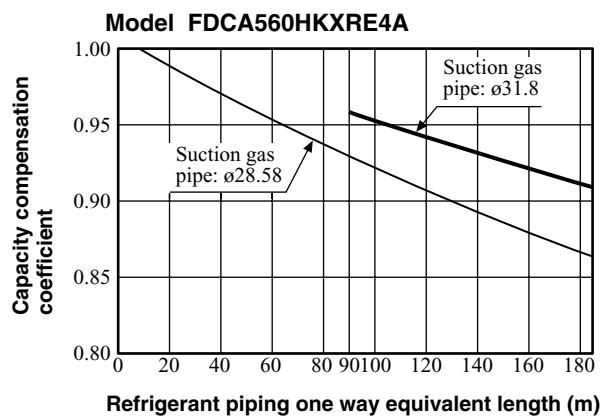


#### b) KXR series



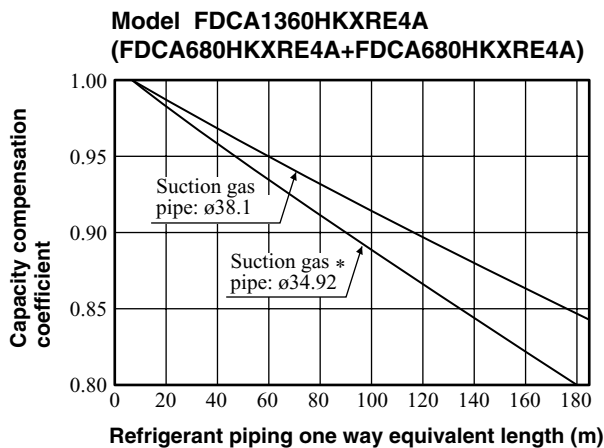
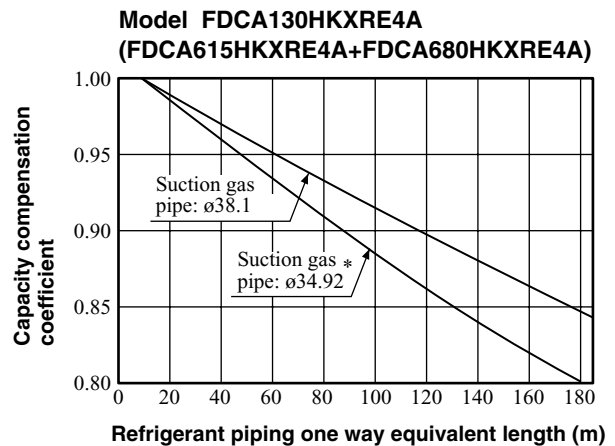
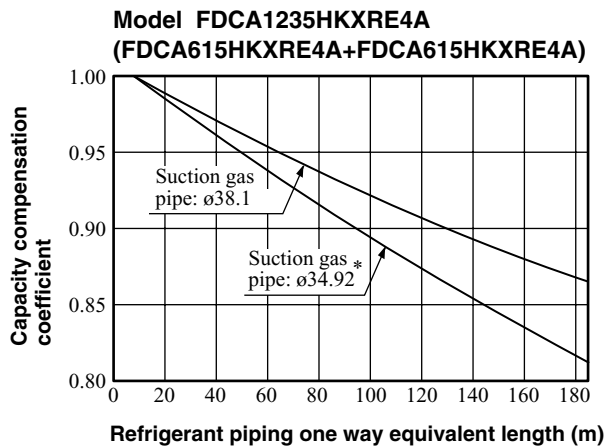
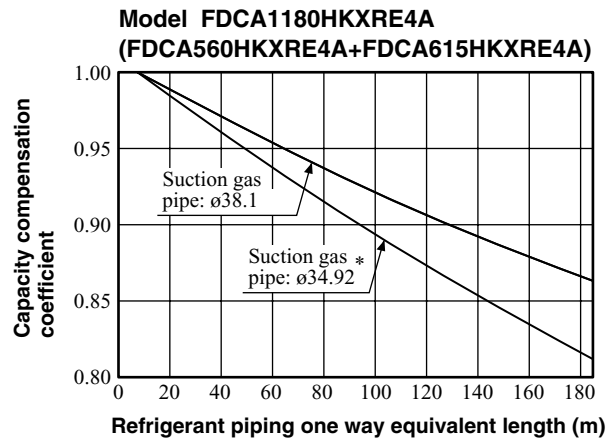
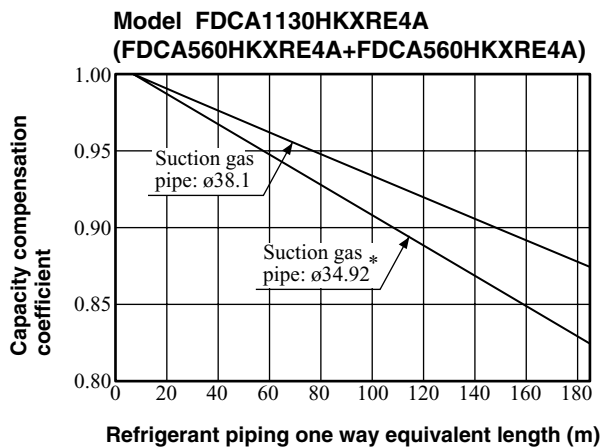
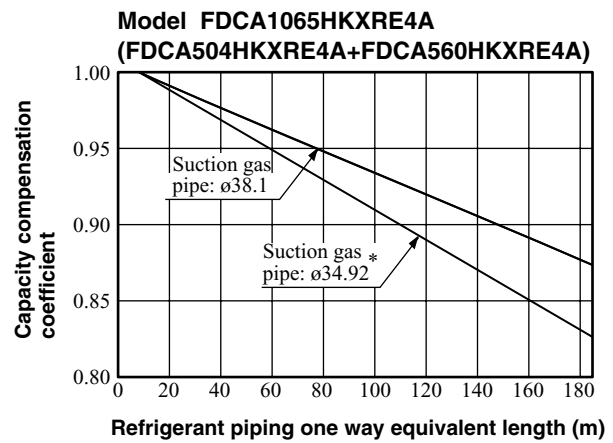
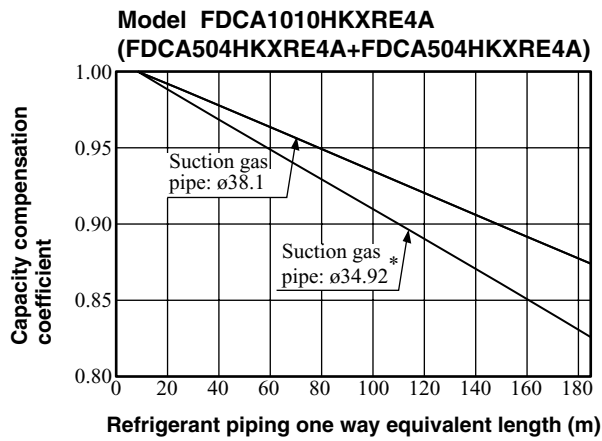
Note (1) Parts with the \* mark show the piping size in the case where the parts are used in Europe.





Note (1) Parts with the \* mark show the piping size in the case where the parts are used in Europe.

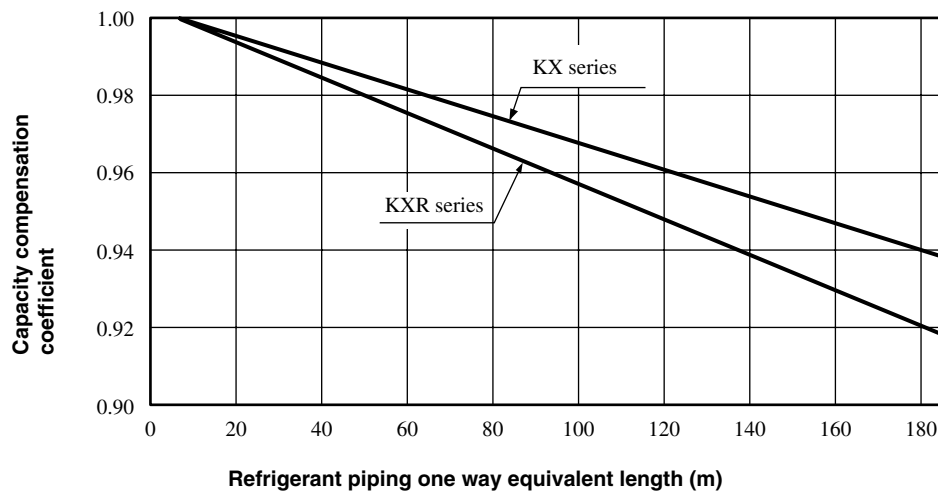




Note (1) Parts with the \* mark show the piping size in the case where the parts are used in Europe.



## 2) Heating (Common)



Note (1) Equivalent piping length can be obtained by calculating as follows.

equivalent piping length = Real gas piping length + Number of bends in gas piping × Equivalent piping length of bends.

Equivalent length of each joint

Unit : m/one part

Gas piping size	φ9.52	φ12.7	φ15.88	φ19.05	φ25.4	φ28.58	φ31.8
Joint (90°elbow)	0.15	0.20	0.25	0.30	0.40	0.45	0.55

- (d) When the outdoor unit is located at a lower height than the indoor unit in cooling operation and when the outdoor unit is located at a higher height than the indoor unit in heating operation, the following values should be subtracted from the values in the above table.

Height difference between the indoor unit and outdoor unit in the vertical height difference	5 m	10 m	15 m	20 m	25 m	30 m
Adjustment coefficient	0.99	0.98	0.97	0.96	0.95	0.94

Height difference between the indoor unit and outdoor unit in the vertical height difference	35 m	40 m	45 m	50 m
Adjustment coefficient	0.93	0.92	0.91	0.90

- (e) Correction of heating capacity in relation to the frost on the outdoor unit heat exchanger

Air inlet temperature of outdoor unit in °C WB	-15	-13	-11	-9	-7	-5	-3	-1	1	3	5 or more
Adjustment coefficient	0.96	0.96	0.95	0.94	0.93	0.91	0.88	0.86	0.87	0.92	1

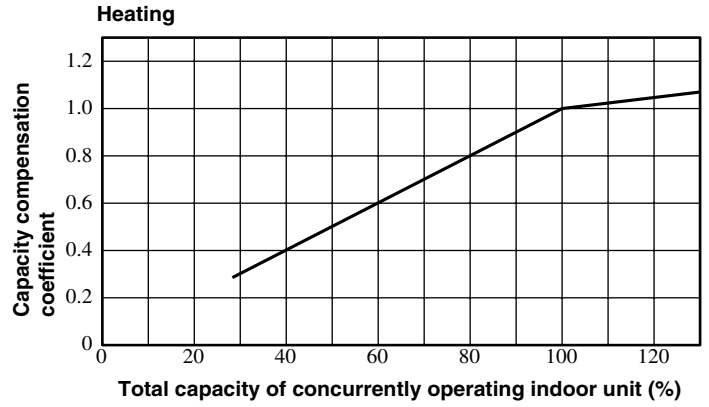
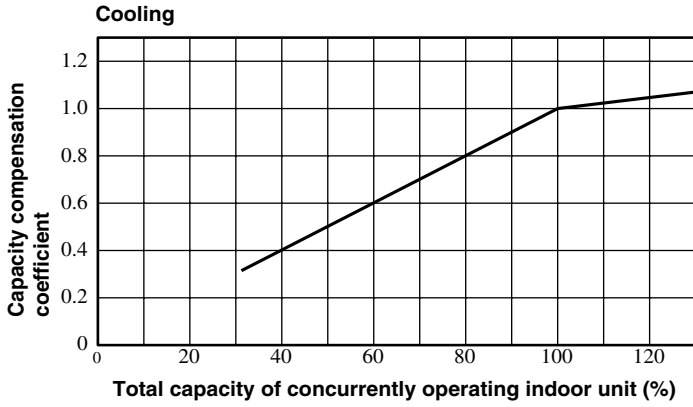
The correction factors will change drastically according to weather conditions. So necessary adjustment should be made empirically according to the weather data of the particular area.

- (f) The capacity compensation coefficient and power consumption compensation coefficient vary according to the total capacity of concurrently operating indoor units, as shown next page.

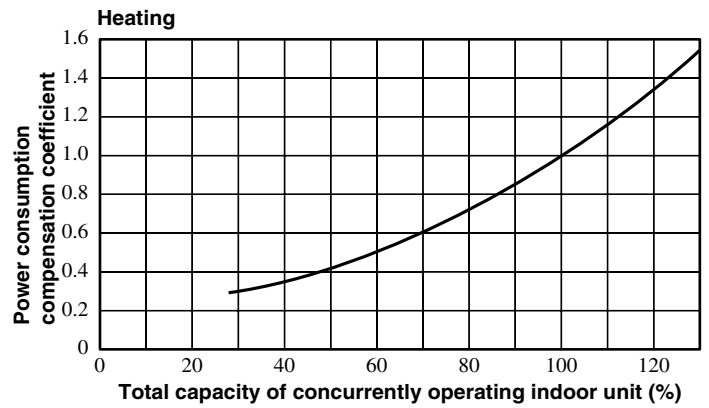
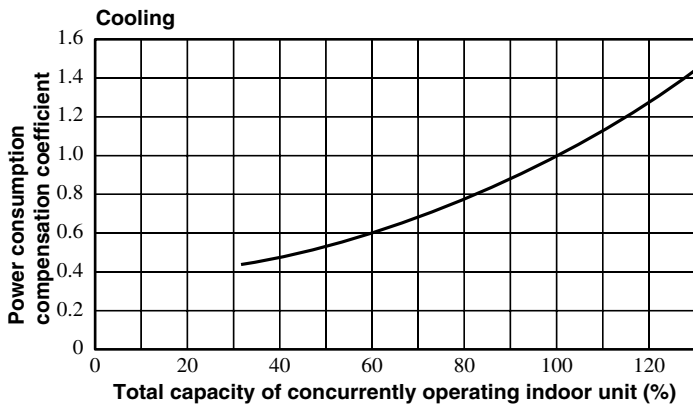


**Model FDCA140HKXEN4A, 140HKXES4A**

◆ Capacity compensation coefficient

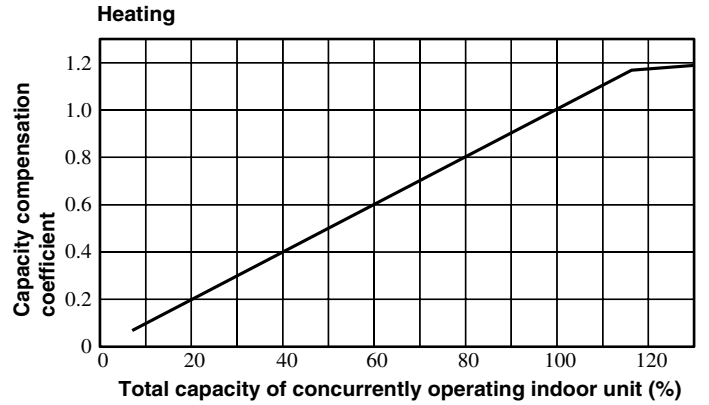
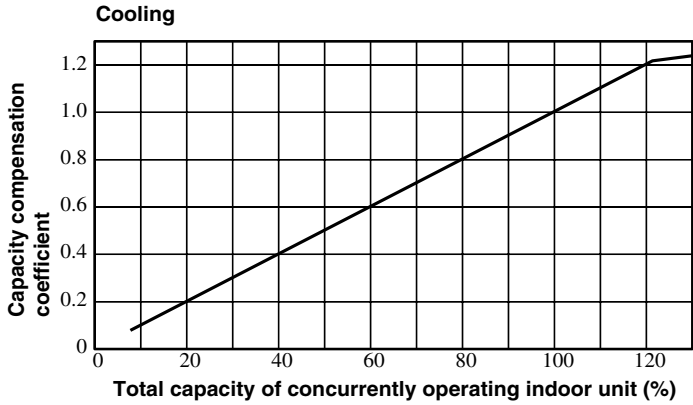


◆ Power consumption compensation coefficient

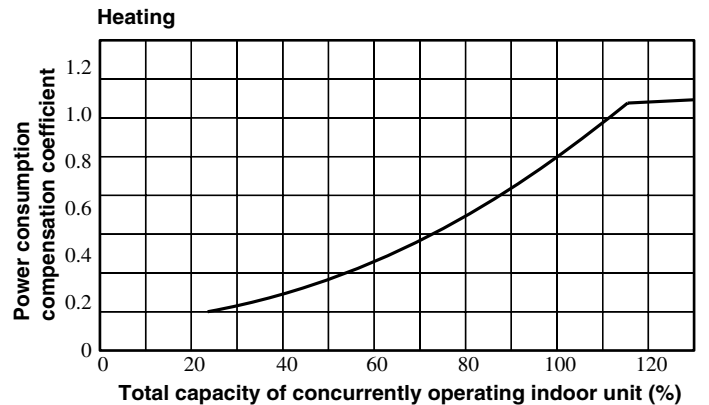
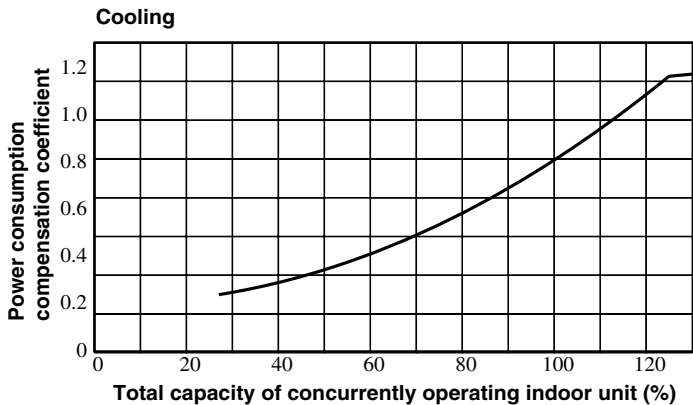


**Model FDCA224HKXE4A  
224HKXRE4A**

◆ Capacity compensation coefficient



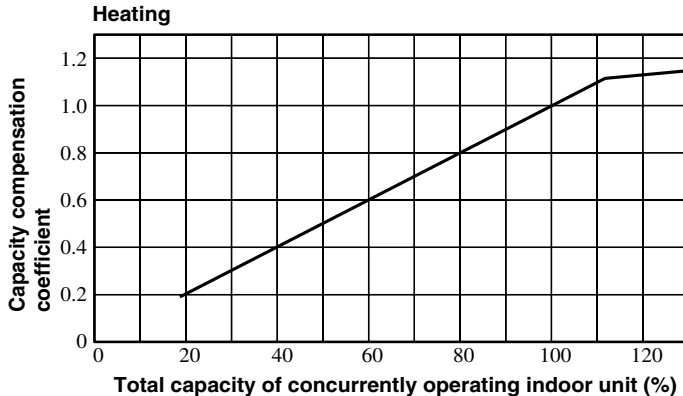
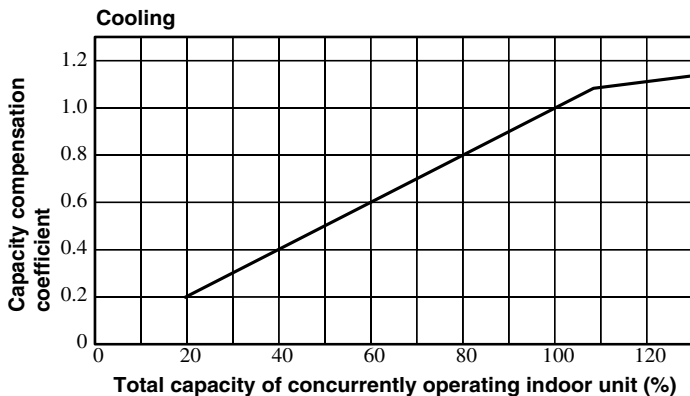
◆ Power consumption compensation coefficient



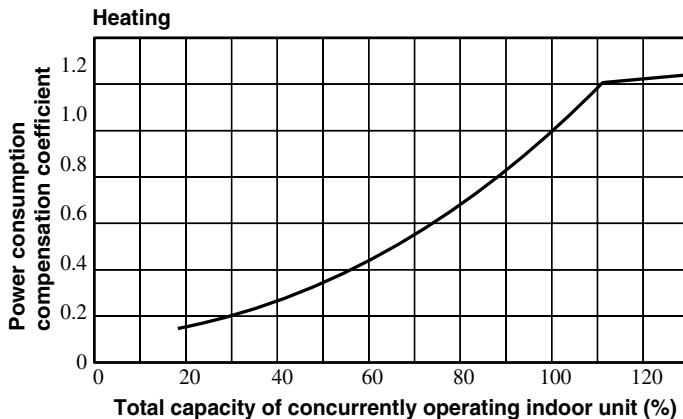
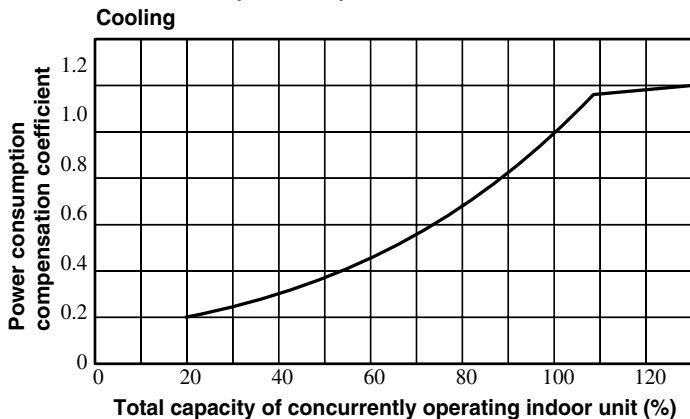


## 280HKXRE4A

◆ Capacity compensation coefficient

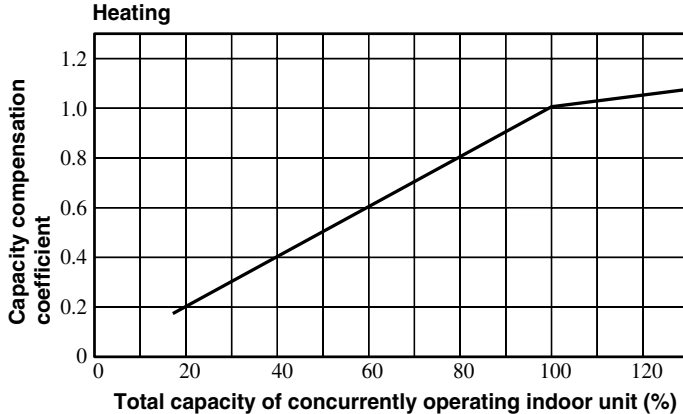
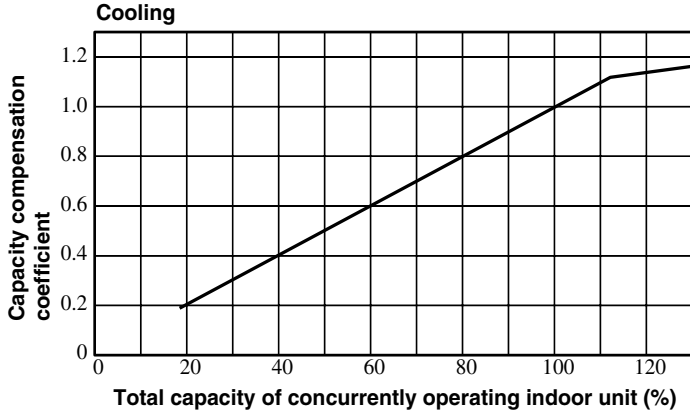


◆ Power consumption compensation coefficient

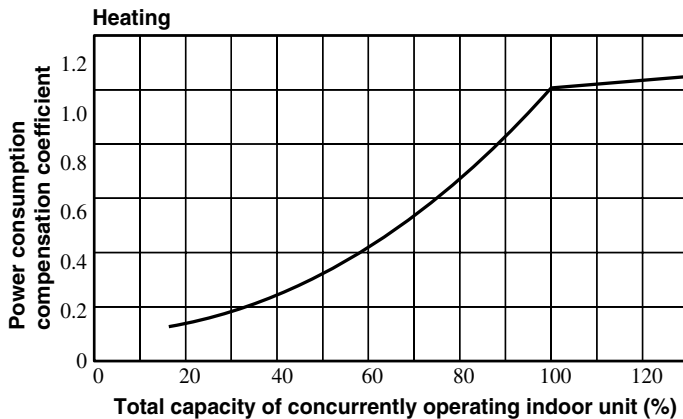
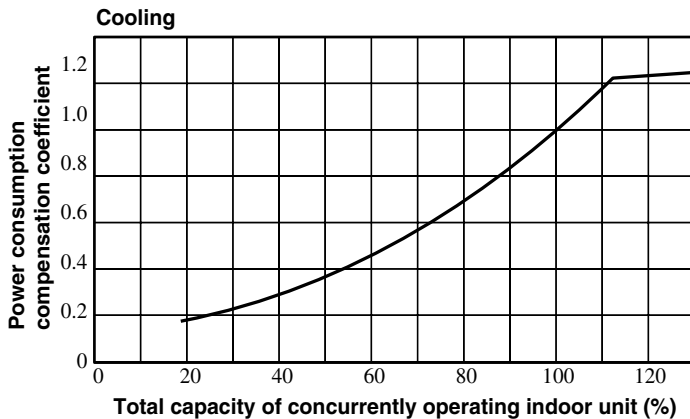


**335HKXRE4A**

◆ Capacity compensation coefficient



◆ Power consumption compensation coefficient

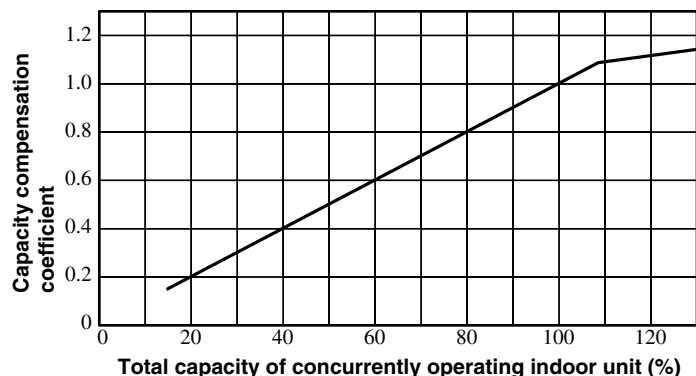




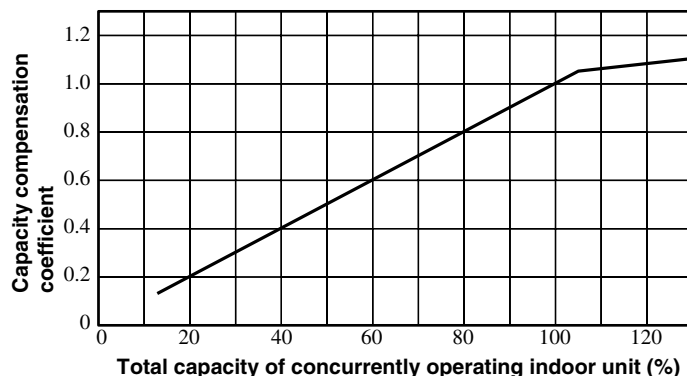
**Model FDCA400HKXE4A  
400HKXRE4A**

◆ Capacity compensation coefficient

Cooling

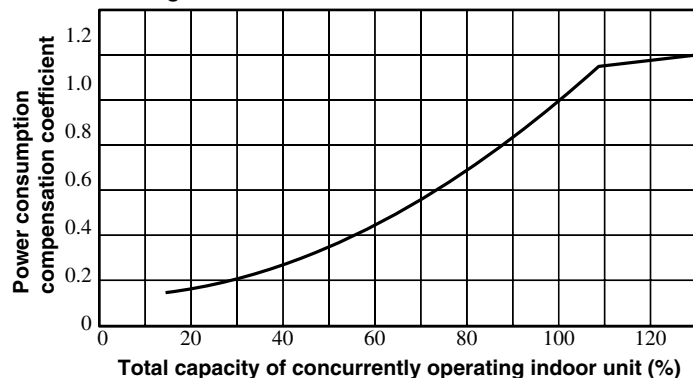


Heating

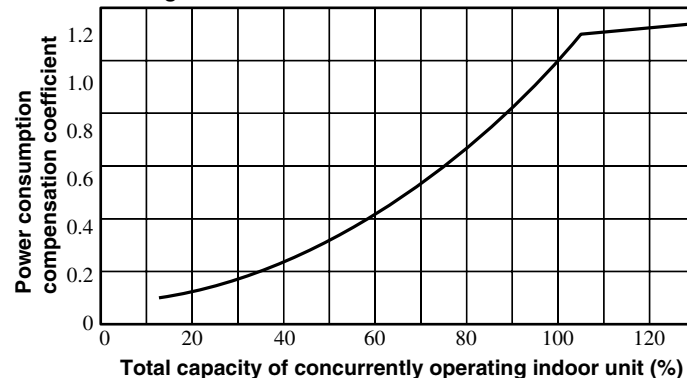


◆ Power consumption compensation coefficient

Cooling



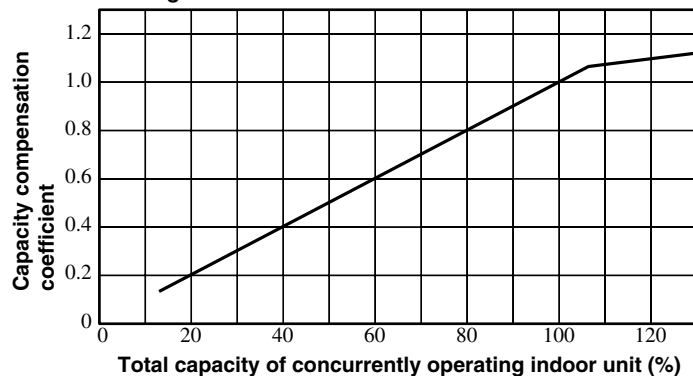
Heating



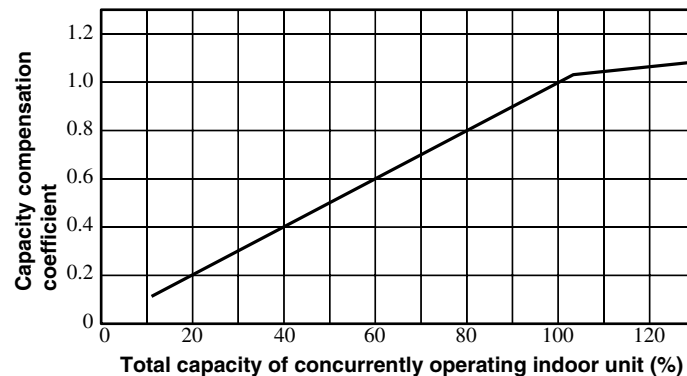
**Model FDCA450HKXE4A  
450HKXRE4A**

◆ Capacity compensation coefficient

Cooling

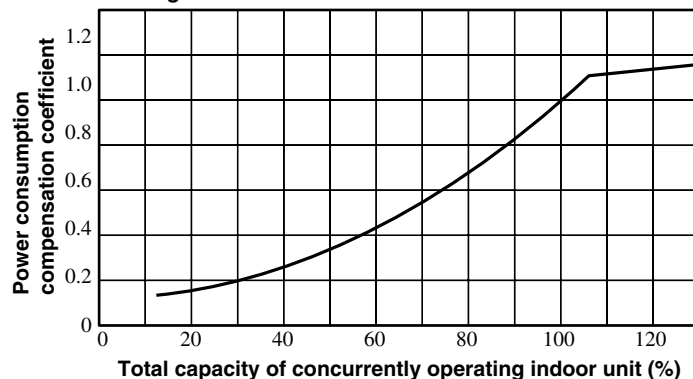


Heating

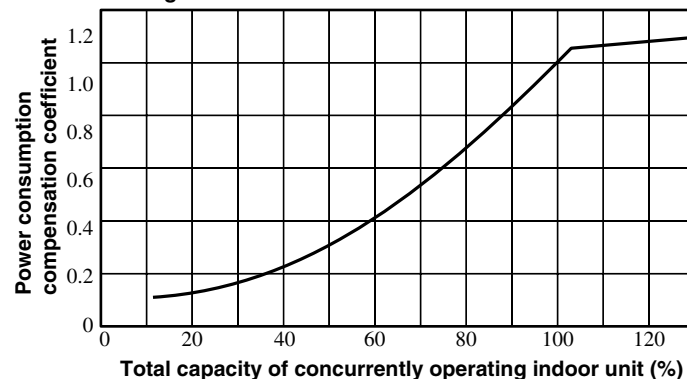


◆ Power consumption compensation coefficient

Cooling



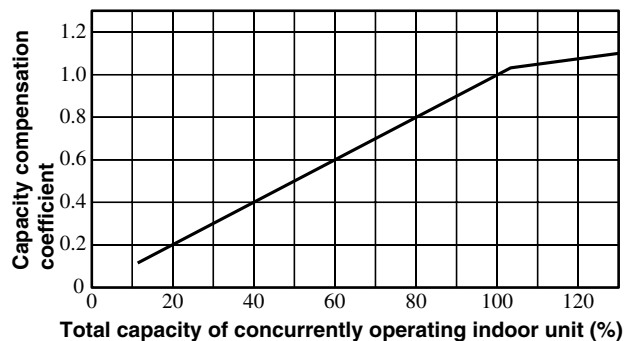
Heating



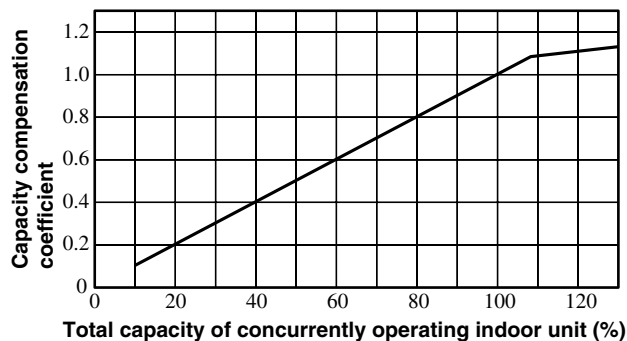


**Model FDCA504HKXE4A**  
**504HKXRE4A**

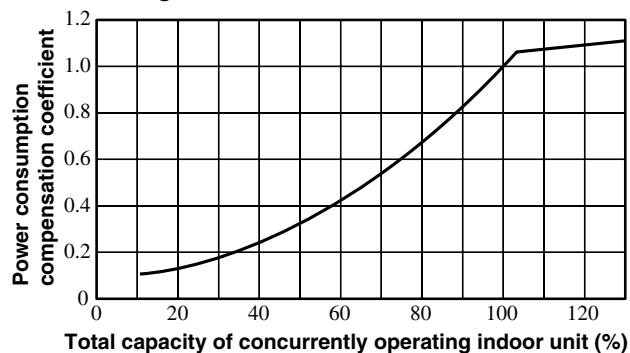
◆ **Capacity compensation coefficient**  
**Cooling**



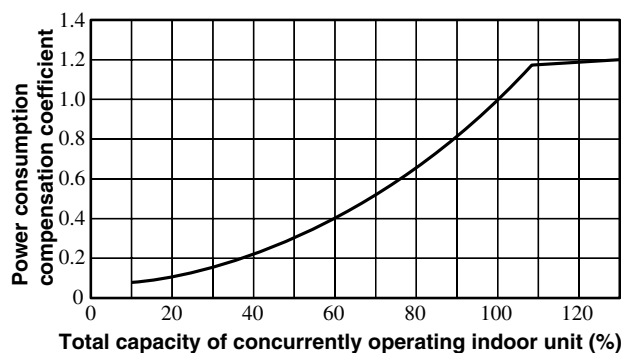
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**

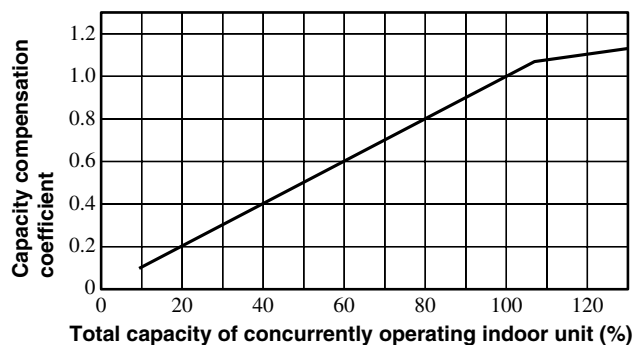


**Heating**

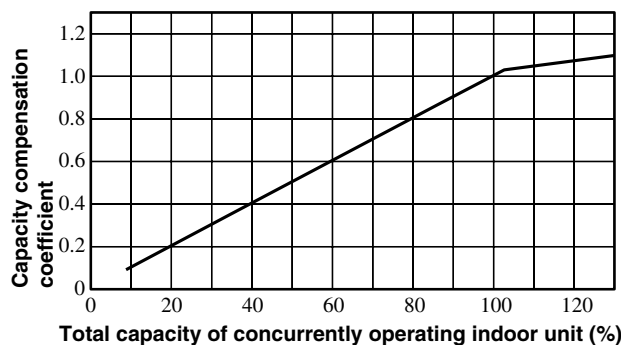


**Model FDCA560HKXE4A**  
**560HKXRE4A**

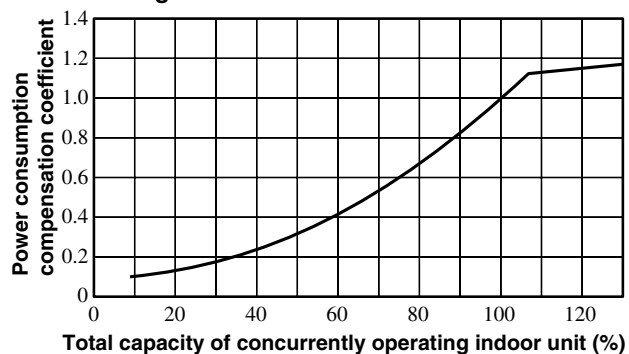
◆ **Capacity compensation coefficient**  
**Cooling**



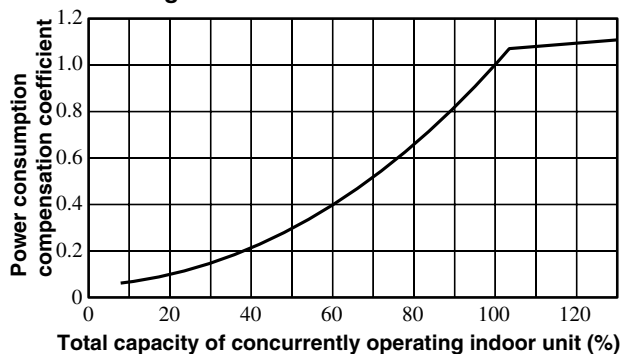
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**



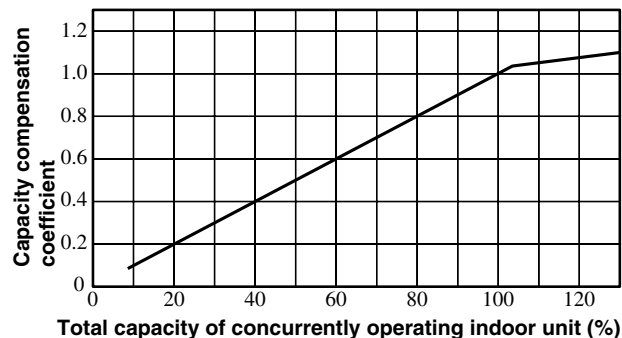
**Heating**



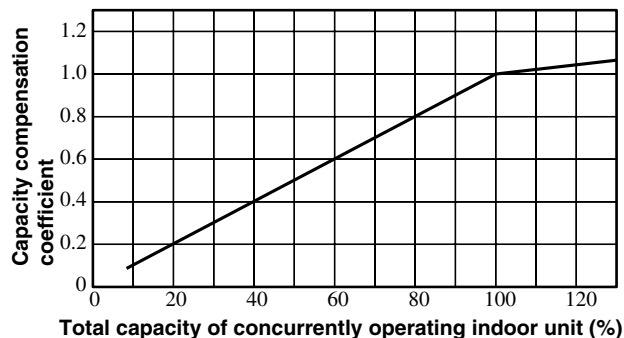


**Model FDCA615HKXE4A  
615HKXRE4A**

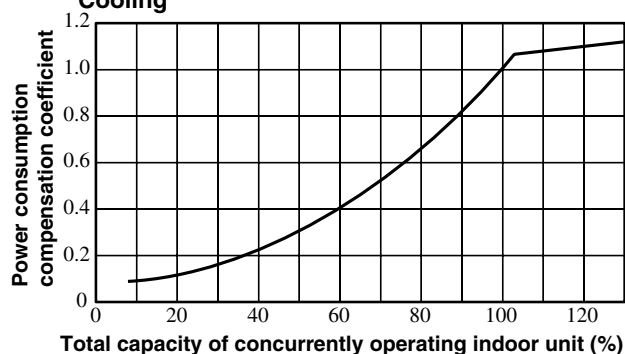
◆ **Capacity compensation coefficient**  
**Cooling**



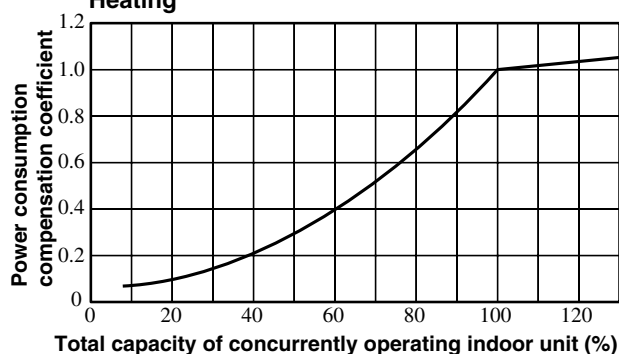
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**

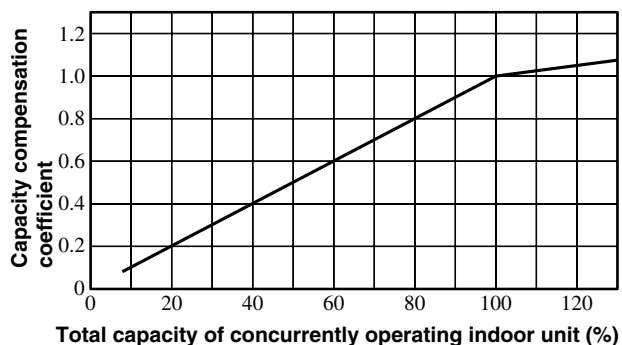


**Heating**

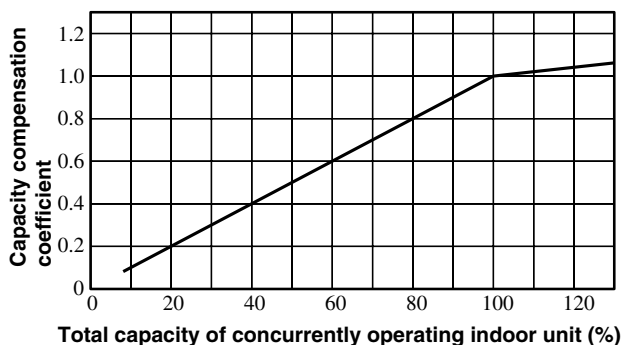


**Model FDCA680HKXE4A  
680HKXRE4A**

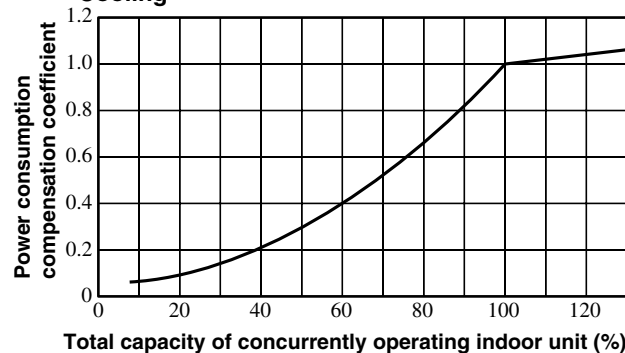
◆ **Capacity compensation coefficient**  
**Cooling**



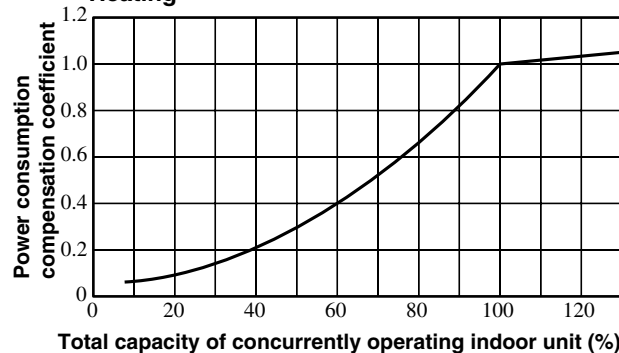
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**



**Heating**

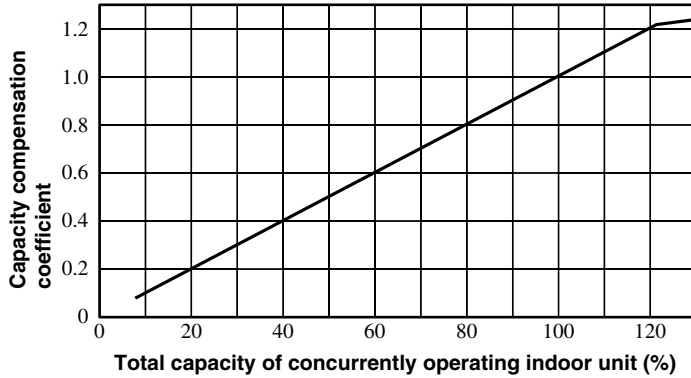




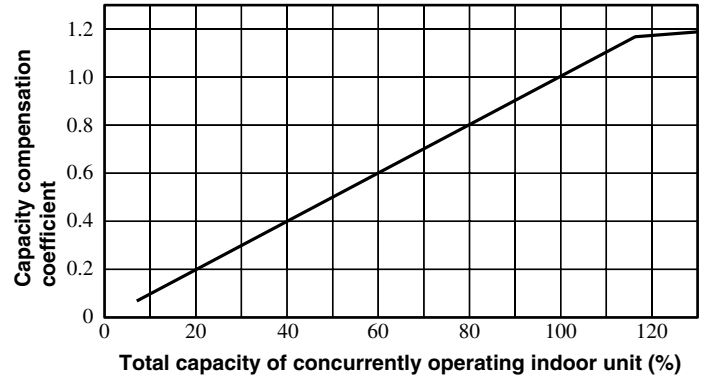
**Model FDCA735HKXE4A**  
**735HKXRE4A**

◆ **Capacity compensation coefficient**

**Cooling**

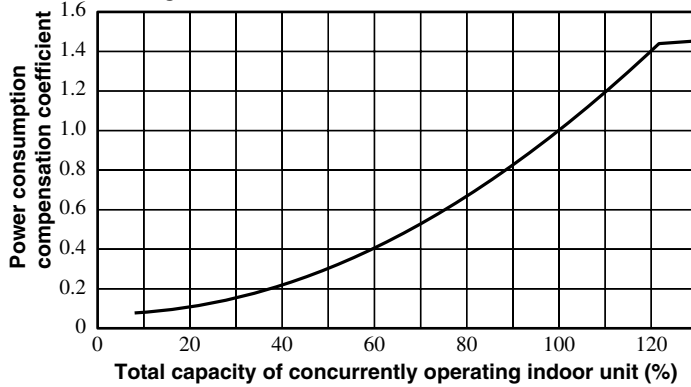


**Heating**

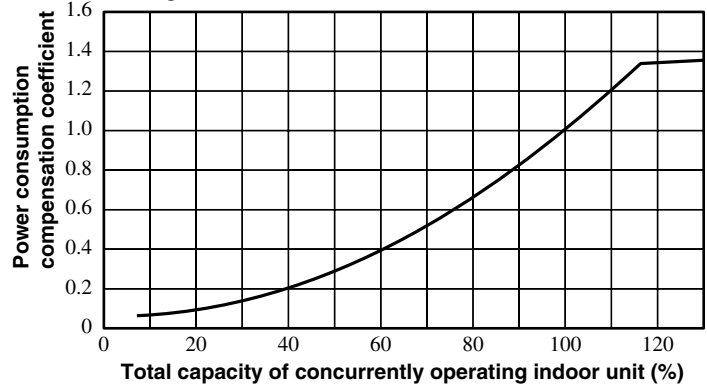


◆ **Power consumption compensation coefficient**

**Cooling**



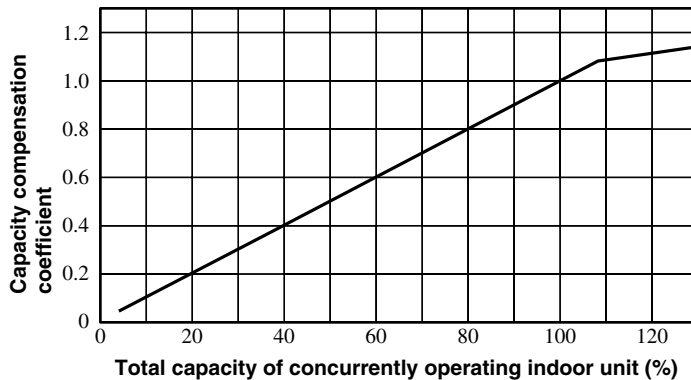
**Heating**



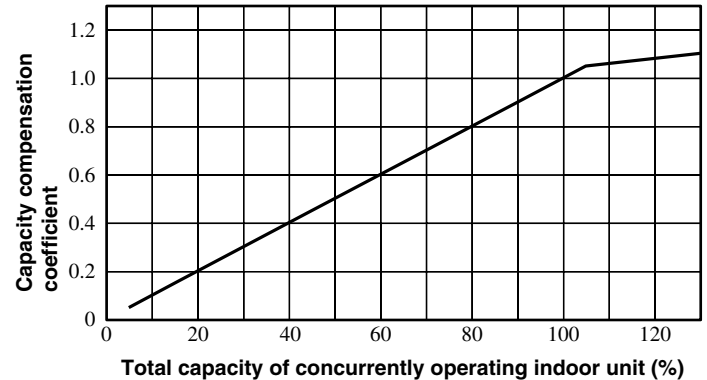
**Model FDCA800HKXE4A**  
**800HKXRE4A**

◆ **Capacity compensation coefficient**

**Cooling**

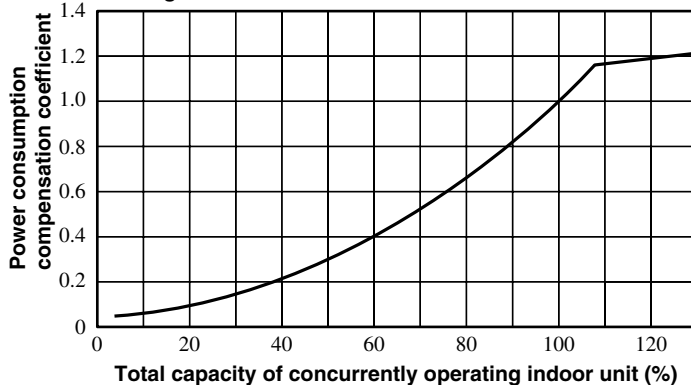


**Heating**

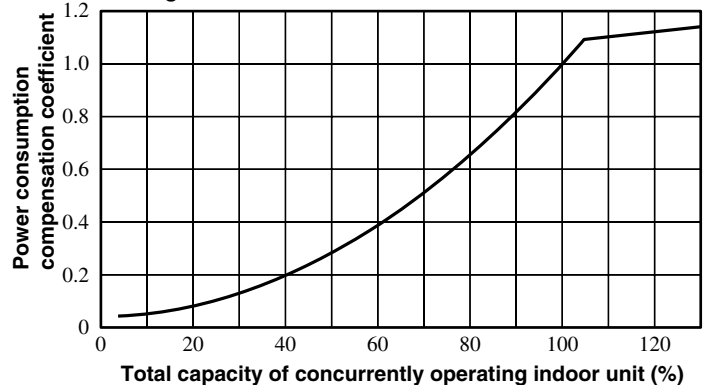


◆ **Power consumption compensation coefficient**

**Cooling**



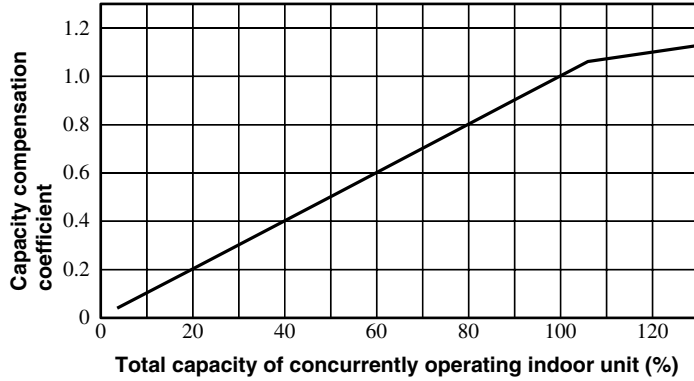
**Heating**



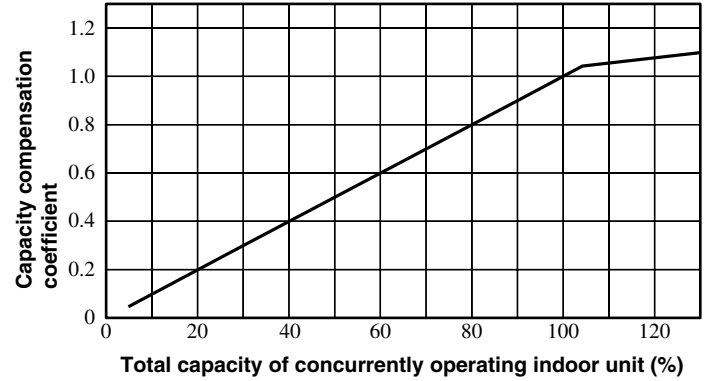


**Model FDCA850HKXE4A**  
**850HKXRE4A**

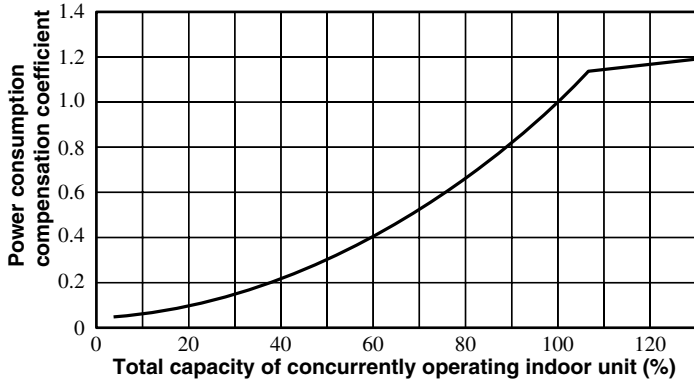
◆ **Capacity compensation coefficient**  
**Cooling**



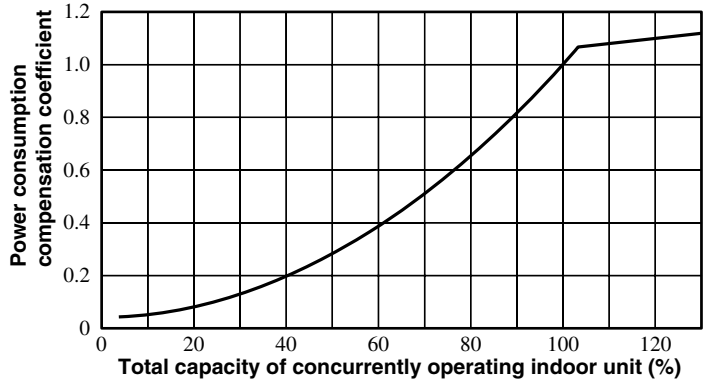
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**

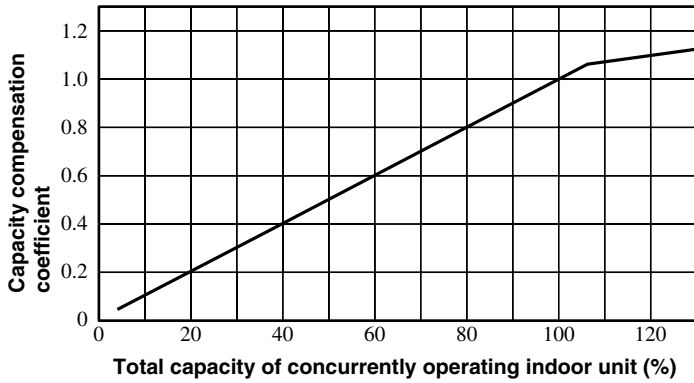


**Heating**

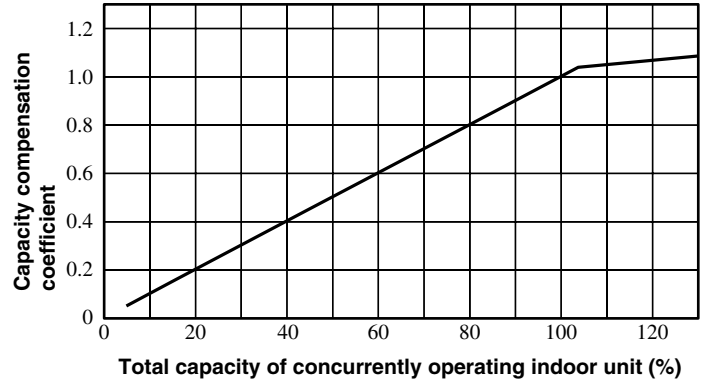


**Model FDCA900HKXE4A**  
**900HKXRE4A**

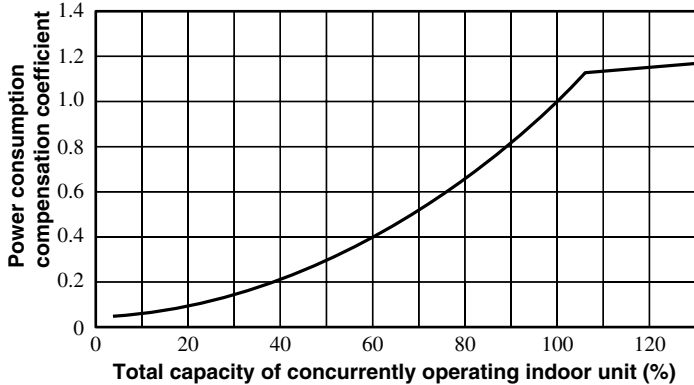
◆ **Capacity compensation coefficient**  
**Cooling**



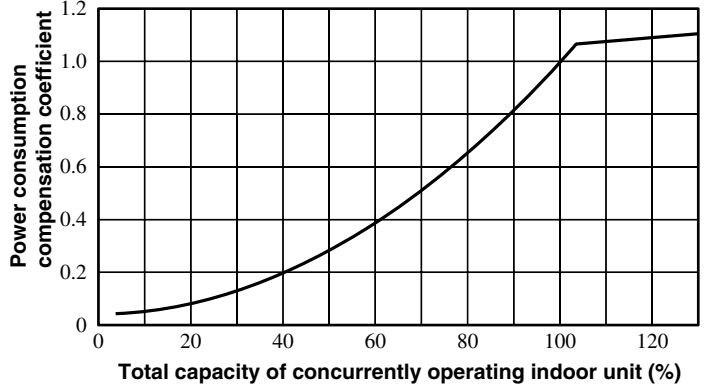
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**



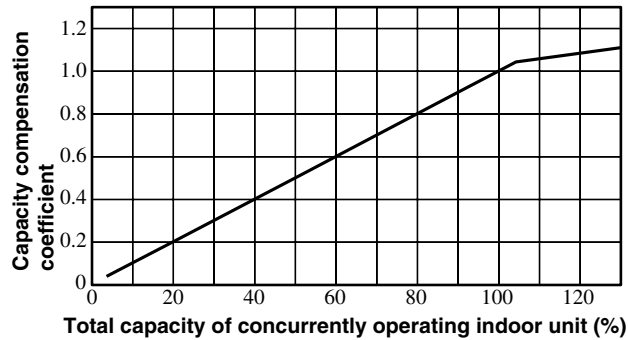
**Heating**



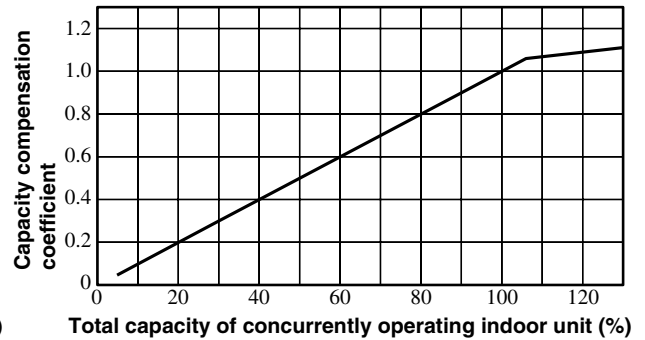


**Model FDCA960HKXE4A  
960HKXRE4A**

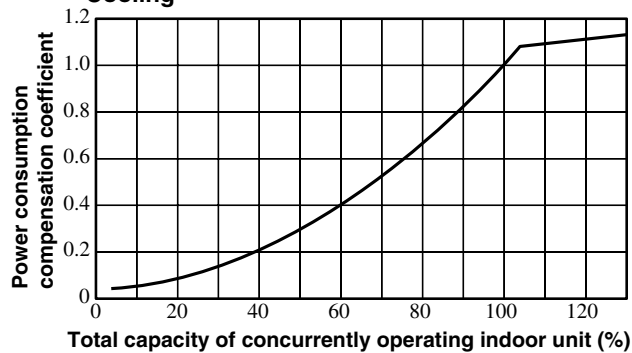
◆ **Capacity compensation coefficient**  
**Cooling**



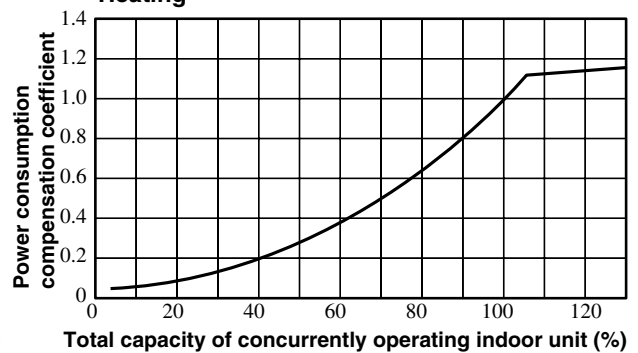
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**

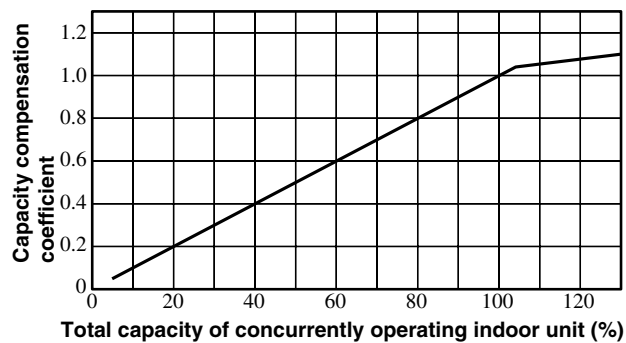


**Heating**

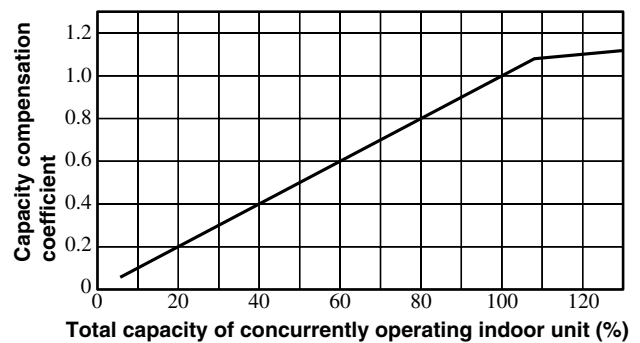


**Model FDCA1010HKXE4A  
1010HKXRE4A**

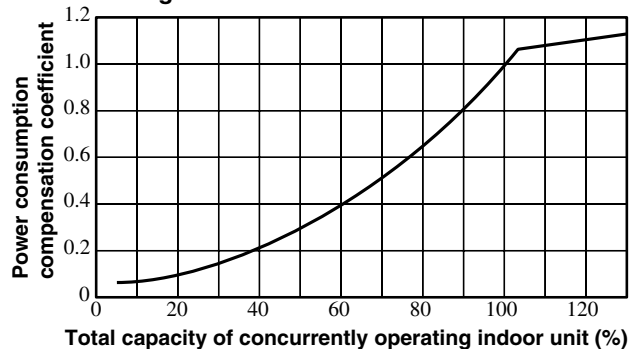
◆ **Capacity compensation coefficient**  
**Cooling**



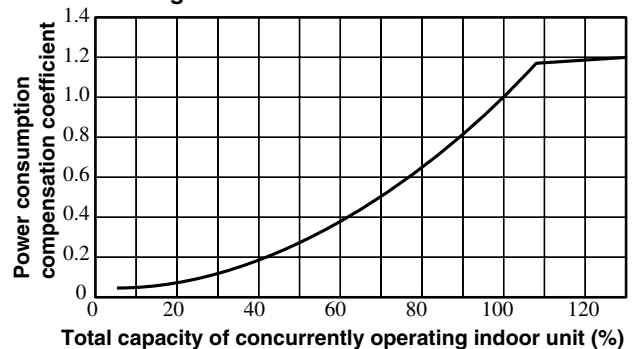
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**



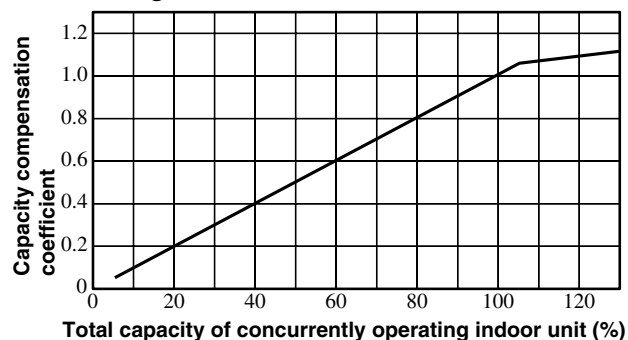
**Heating**



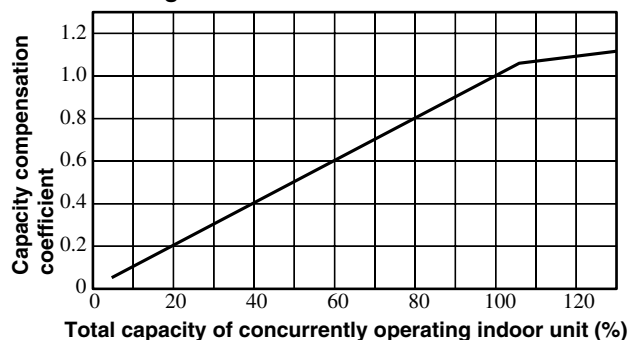


**Model FDCA1065HKXE4A**  
**1065HKXRE4A**

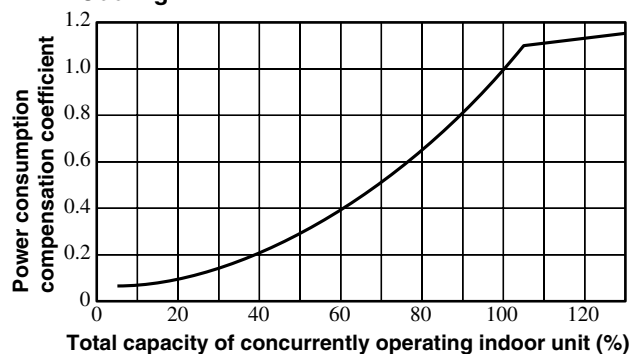
◆ **Capacity compensation coefficient**  
**Cooling**



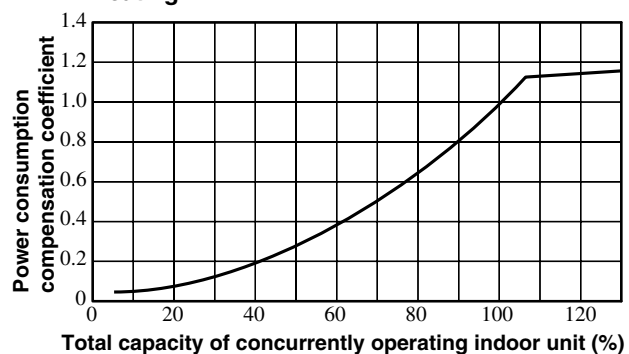
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**

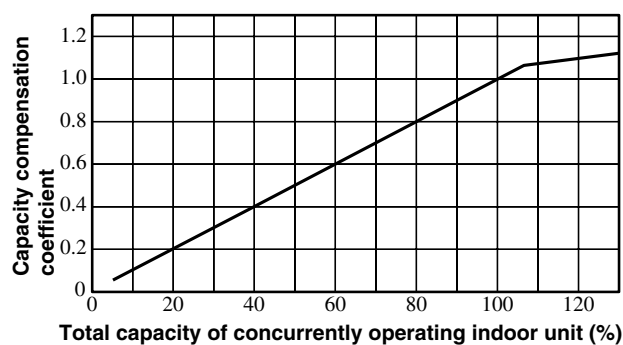


**Heating**

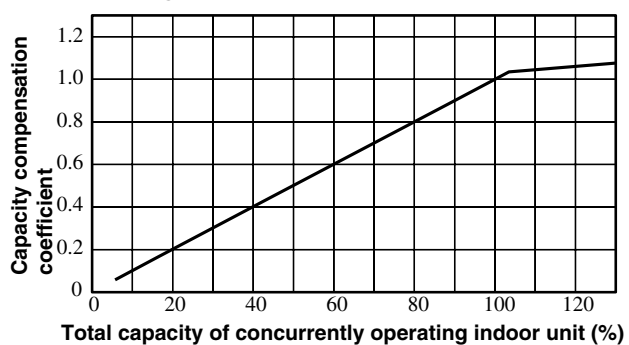


**Model FDCA1130HKXE4A**  
**1130HKXRE4A**

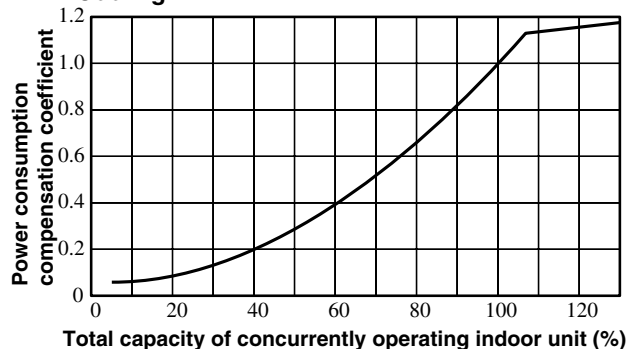
◆ **Capacity compensation coefficient**  
**Cooling**



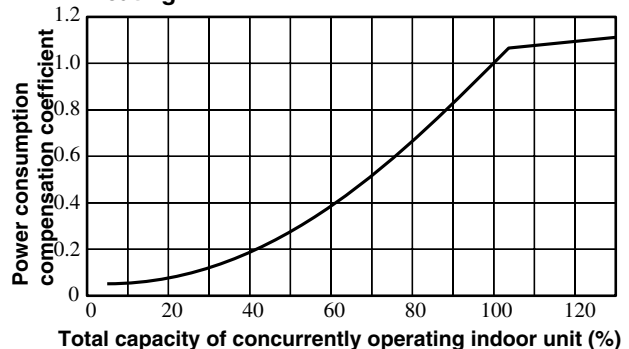
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**



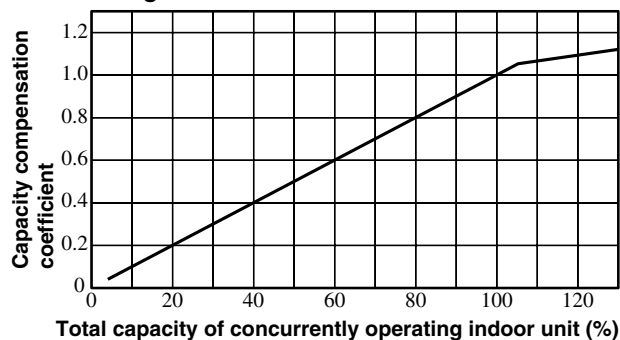
**Heating**



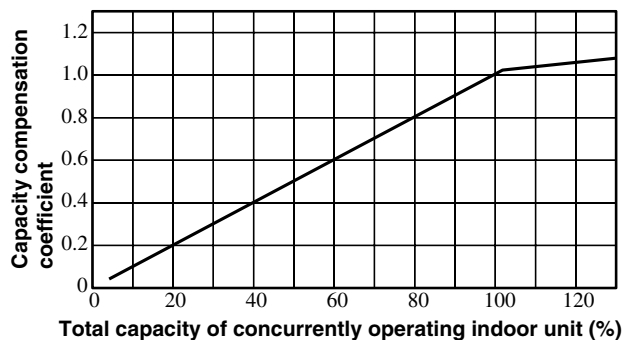


**Model FDCA1180HKXE4A  
1180HKXRE4A**

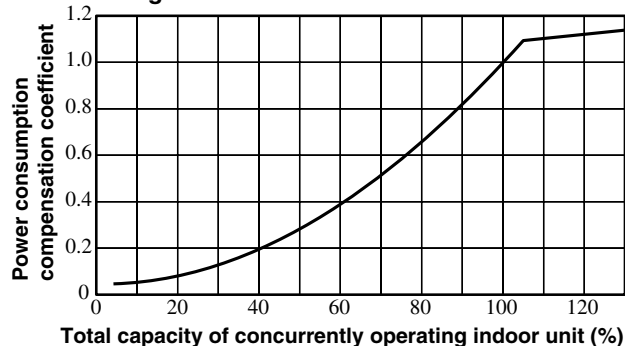
◆ **Capacity compensation coefficient**  
**Cooling**



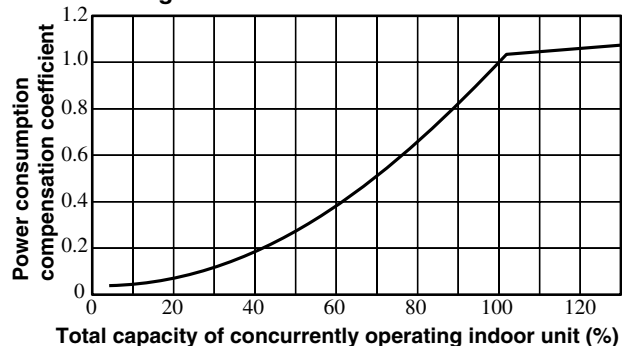
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**

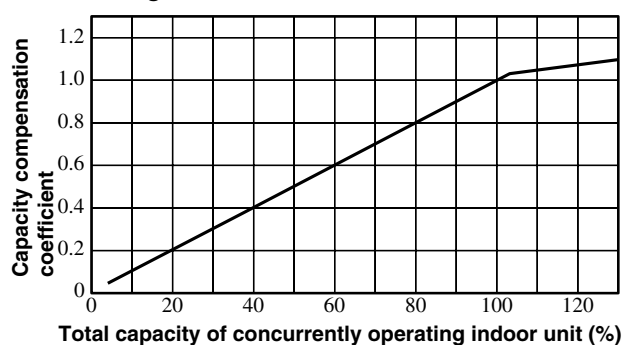


**Heating**

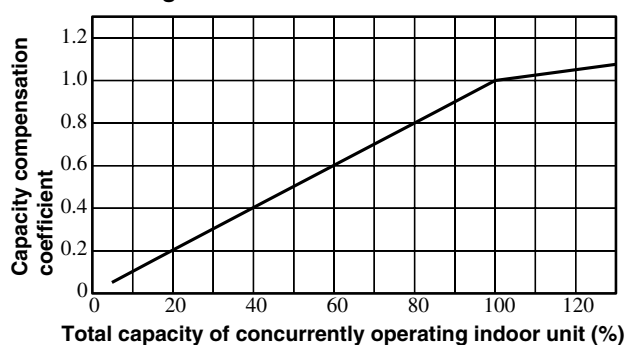


**Model FDCA1235HKXE4A  
1235HKXRE4A**

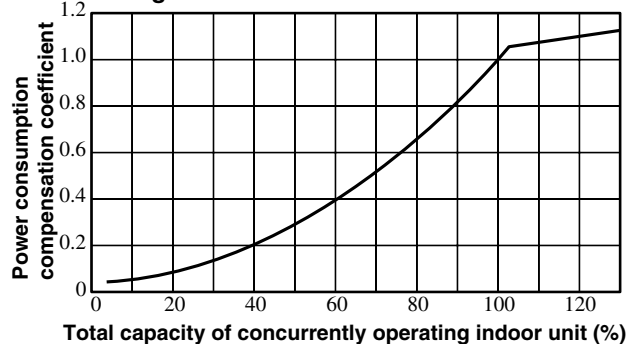
◆ **Capacity compensation coefficient**  
**Cooling**



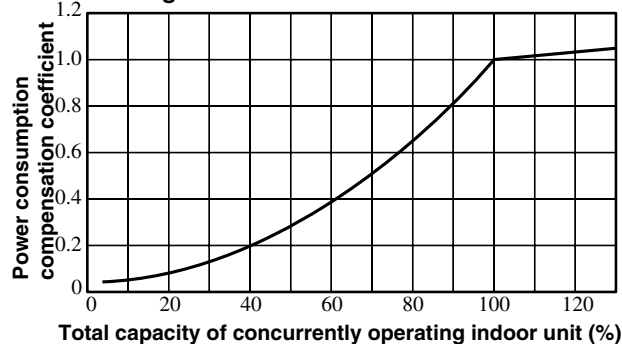
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**



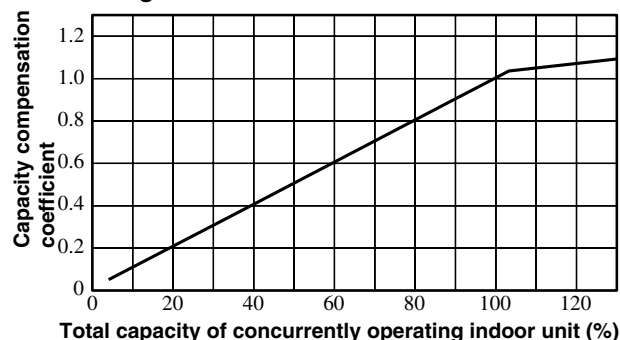
**Heating**



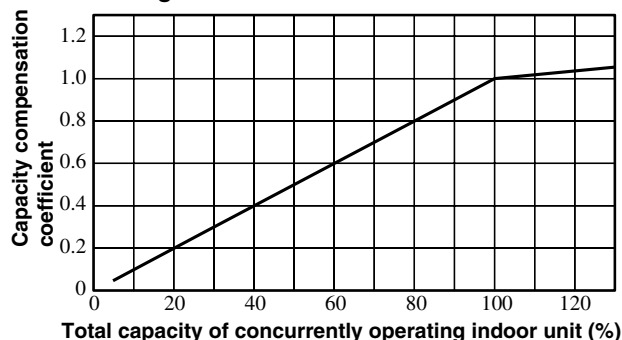


**Model FDCA1300HKXE4A  
1300HKXRE4A**

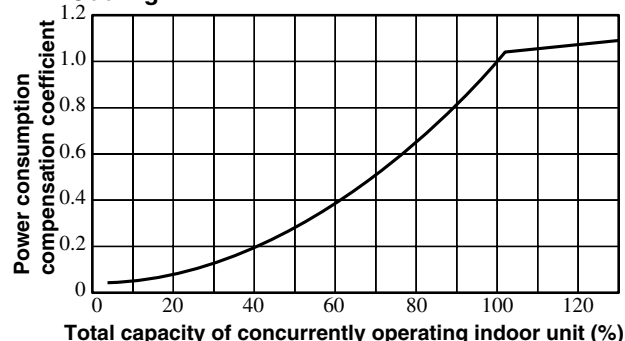
◆ **Capacity compensation coefficient**  
**Cooling**



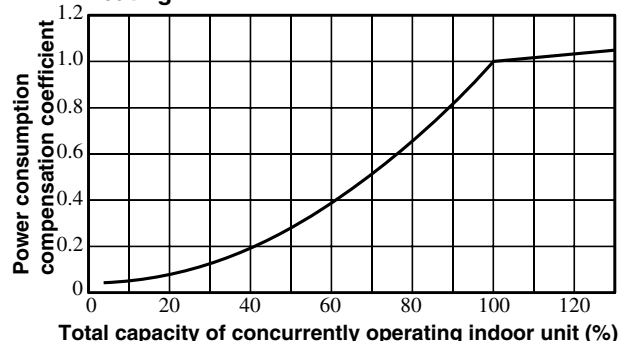
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**

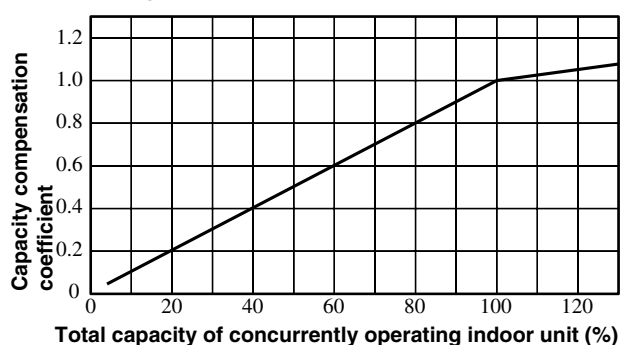


**Heating**

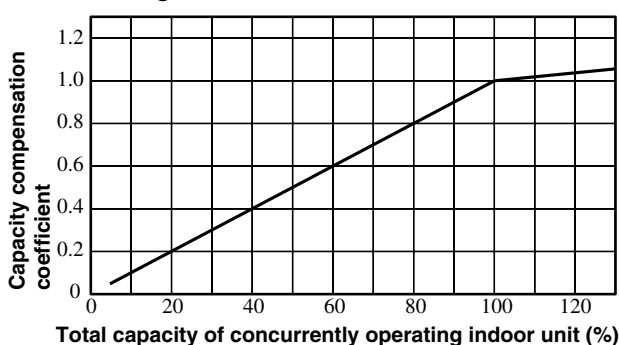


**Model FDCA1360HKXE4A  
1360HKXRE4A**

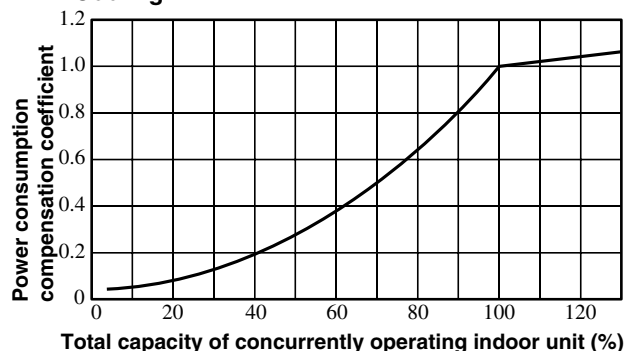
◆ **Capacity compensation coefficient**  
**Cooling**



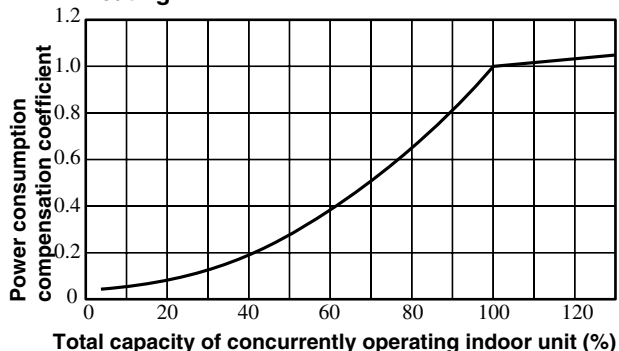
**Heating**



◆ **Power consumption compensation coefficient**  
**Cooling**



**Heating**





(4) Sensible heat capacity

(a) FDT Series

Model FDTCA22KXE4A

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
9.5	27	1.98	1.84	2.09	1.88	2.20	1.92	2.44	2.00	2.68	2.08	2.79	2.10
	29	1.98	1.84	2.09	1.88	2.20	1.92	2.42	1.99	2.66	2.07	2.73	2.08
	31	1.98	1.84	2.09	1.88	2.20	1.92	2.42	1.99	2.62	2.05	2.68	2.06
	33	1.98	1.84	2.09	1.88	2.20	1.92	2.38	1.97	2.57	2.04	2.64	2.05
	35	1.98	1.84	2.09	1.88	2.20	1.92	2.35	1.97	2.53	2.02	2.60	2.03
	37	1.98	1.84	2.09	1.88	2.20	1.92	2.33	1.96	2.49	2.00	2.55	2.02
	39	1.98	1.84	2.09	1.88	2.20	1.92	2.31	1.95	2.44	1.99	2.51	2.00

Model FDTCA28KXE4A

Model: FDCALORRA-7A													
Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
9.5	27	2.52	2.06	2.66	2.11	2.80	2.15	3.11	2.25	3.42	2.35	3.56	2.38
	29	2.52	2.06	2.66	2.11	2.80	2.15	3.08	2.24	3.39	2.34	3.47	2.34
	31	2.52	2.06	2.66	2.11	2.80	2.15	3.08	2.24	3.33	2.32	3.42	2.32
	33	2.52	2.06	2.66	2.11	2.80	2.15	3.02	2.22	3.28	2.30	3.36	2.30
	35	2.52	2.06	2.66	2.11	2.80	2.15	3.00	2.21	3.22	2.27	3.30	2.28
	37	2.52	2.06	2.66	2.11	2.80	2.15	2.97	2.20	3.16	2.25	3.25	2.26
	39	2.52	2.06	2.66	2.11	2.80	2.15	2.94	2.19	3.11	2.23	3.19	2.24

Model FDTCA36KXE4A

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	27	3.24	2.65	3.42	2.70	3.60	2.76	4.00	2.89	4.39	3.01	4.57	3.04
	29	3.24	2.65	3.42	2.70	3.60	2.76	3.96	2.87	4.36	3.00	4.46	3.00
	31	3.24	2.65	3.42	2.70	3.60	2.76	3.96	2.87	4.28	2.97	4.39	2.97
	33	3.24	2.65	3.42	2.70	3.60	2.76	3.89	2.84	4.21	2.94	4.32	2.95
	35	3.24	2.65	3.42	2.70	3.60	2.76	3.85	2.83	4.14	2.91	4.25	2.92
	37	3.24	2.65	3.42	2.70	3.60	2.76	3.82	2.82	4.07	2.88	4.18	2.89
	39	3.24	2.65	3.42	2.70	3.60	2.76	3.78	2.80	4.00	2.86	4.10	2.87

Model FDTCA45KXE4A

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
11	27	4.05	3.12	4.28	3.18	4.50	3.24	5.00	3.41	5.49	3.56	5.72	3.60
	29	4.05	3.12	4.28	3.18	4.50	3.24	4.95	3.39	5.45	3.55	5.58	3.55
	31	4.05	3.12	4.28	3.18	4.50	3.24	4.95	3.39	5.36	3.51	5.49	3.51
	33	4.05	3.12	4.28	3.18	4.50	3.24	4.86	3.35	5.27	3.47	5.40	3.48
	35	4.05	3.12	4.28	3.18	4.50	3.24	4.82	3.33	5.18	3.44	5.31	3.44
	37	4.05	3.12	4.28	3.18	4.50	3.24	4.77	3.32	5.09	3.40	5.22	3.41
	39	4.05	3.12	4.28	3.18	4.50	3.24	4.73	3.30	5.00	3.36	5.13	3.37

Note (1) Symbols are as follows :

TC : Total cooling capacity (kW)  
SHC : Sensible heat capacity (kW)



**Model FDT56KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	5.04	3.77	5.32	3.86	5.60	3.93	6.22	4.14	6.83	4.33	7.11	4.38
	29	5.04	3.77	5.32	3.86	5.60	3.93	6.16	4.11	6.78	4.31	6.94	4.31
	31	5.04	3.77	5.32	3.86	5.60	3.93	6.16	4.11	6.66	4.26	6.83	4.26
	33	5.04	3.77	5.32	3.86	5.60	3.93	6.05	4.07	6.55	4.22	6.72	4.22
	35	5.04	3.77	5.32	3.86	5.60	3.93	5.99	4.04	6.44	4.17	6.61	4.17
	37	5.04	3.77	5.32	3.86	5.60	3.93	5.94	4.02	6.33	4.12	6.50	4.13
	39	5.04	3.77	5.32	3.86	5.60	3.93	5.88	4.00	6.22	4.08	6.38	4.09

**(a) FDT Series**
**Model FDTA28KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
15	27	2.52	2.42	2.66	2.48	2.80	2.52	3.11	2.62	3.42	2.71	3.56	2.74
	29	2.52	2.42	2.66	2.48	2.80	2.52	3.08	2.61	3.39	2.70	3.47	2.71
	31	2.52	2.42	2.66	2.48	2.80	2.52	3.08	2.61	3.33	2.68	3.42	2.69
	33	2.52	2.42	2.66	2.48	2.80	2.52	3.02	2.59	3.28	2.66	3.36	2.67
	35	2.52	2.42	2.66	2.48	2.80	2.52	3.00	2.58	3.22	2.64	3.30	2.66
	37	2.52	2.42	2.66	2.48	2.80	2.52	2.97	2.57	3.16	2.62	3.25	2.65
	39	2.52	2.42	2.66	2.48	2.80	2.52	2.94	2.56	3.11	2.61	3.19	2.63

**Model FDTA36KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
15	27	3.24	2.82	3.42	2.88	3.60	2.94	4.00	3.07	4.39	3.19	4.57	3.23
	29	3.24	2.82	3.42	2.88	3.60	2.94	3.96	3.06	4.36	3.18	4.46	3.19
	31	3.24	2.82	3.42	2.88	3.60	2.94	3.96	3.06	4.28	3.15	4.39	3.17
	33	3.24	2.82	3.42	2.88	3.60	2.94	3.89	3.03	4.21	3.13	4.32	3.14
	35	3.24	2.82	3.42	2.88	3.60	2.94	3.85	3.01	4.14	3.10	4.25	3.12
	37	3.24	2.82	3.42	2.88	3.60	2.94	3.82	3.00	4.07	3.07	4.18	3.09
	39	3.24	2.82	3.42	2.88	3.60	2.94	3.78	2.99	4.00	3.05	4.10	3.07

**Model FDTA45KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
15	27	4.05	3.33	4.28	3.40	4.50	3.47	5.00	3.63	5.49	3.79	5.72	3.83
	29	4.05	3.33	4.28	3.40	4.50	3.47	4.95	3.61	5.45	3.77	5.58	3.78
	31	4.05	3.33	4.28	3.40	4.50	3.47	4.95	3.61	5.36	3.73	5.49	3.74
	33	4.05	3.33	4.28	3.40	4.50	3.47	4.86	3.58	5.27	3.70	5.40	3.71
	35	4.05	3.33	4.28	3.40	4.50	3.47	4.82	3.56	5.18	3.67	5.31	3.68
	37	4.05	3.33	4.28	3.40	4.50	3.47	4.77	3.54	5.09	3.63	5.22	3.65
	39	4.05	3.33	4.28	3.40	4.50	3.47	4.73	3.53	5.00	3.60	5.13	3.61

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDTA56KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
15	27	5.04	3.77	5.32	3.85	5.60	3.92	6.22	4.13	6.83	4.33	7.11	4.38
	29	5.04	3.77	5.32	3.85	5.60	3.92	6.16	4.11	6.78	4.31	6.94	4.31
	31	5.04	3.77	5.32	3.85	5.60	3.92	6.16	4.11	6.66	4.26	6.83	4.26
	33	5.04	3.77	5.32	3.85	5.60	3.92	6.05	4.06	6.55	4.21	6.72	4.22
	35	5.04	3.77	5.32	3.85	5.60	3.92	5.99	4.04	6.44	4.17	6.61	4.17
	37	5.04	3.77	5.32	3.85	5.60	3.92	5.94	4.02	6.33	4.12	6.50	4.13
	39	5.04	3.77	5.32	3.85	5.60	3.92	5.88	3.99	6.22	4.08	6.38	4.08

**Model FDTA71KXE4A**

Model: FDB17/18/19/20/21/22													
Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
15	27	6.39	4.68	6.75	4.78	7.10	4.87	7.88	5.14	8.66	5.39	9.02	5.44
	29	6.39	4.68	6.75	4.78	7.10	4.87	7.81	5.11	8.59	5.36	8.80	5.36
	31	6.39	4.68	6.75	4.78	7.10	4.87	7.81	5.11	8.45	5.30	8.66	5.30
	33	6.39	4.68	6.75	4.78	7.10	4.87	7.67	5.05	8.31	5.24	8.52	5.24
	35	6.39	4.68	6.75	4.78	7.10	4.87	7.60	5.02	8.17	5.18	8.38	5.18
	37	6.39	4.68	6.75	4.78	7.10	4.87	7.53	4.99	8.02	5.12	8.24	5.12
	39	6.39	4.68	6.75	4.78	7.10	4.87	7.46	4.96	7.88	5.06	8.09	5.07

**Model FDTA90KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
27	27	8.10	6.90	8.55	7.04	9.00	7.17	9.99	7.50	10.98	7.81	11.43	7.89
	29	8.10	6.90	8.55	7.04	9.00	7.17	9.90	7.46	10.89	7.77	11.16	7.79
	31	8.10	6.90	8.55	7.04	9.00	7.17	9.90	7.46	10.71	7.70	10.98	7.73
	33	8.10	6.90	8.55	7.04	9.00	7.17	9.72	7.39	10.53	7.64	10.80	7.66
	35	8.10	6.90	8.55	7.04	9.00	7.17	9.63	7.36	10.35	7.57	10.62	7.60
	37	8.10	6.90	8.55	7.04	9.00	7.17	9.54	7.33	10.17	7.50	10.44	7.53
	39	8.10	6.90	8.55	7.04	9.00	7.17	9.45	7.29	9.99	7.43	10.26	7.47

**Model FDTA112KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
27	27	10.08	7.81	10.64	7.98	11.20	8.13	12.43	8.54	13.66	8.92	14.22	9.01
	29	10.08	7.81	10.64	7.98	11.20	8.13	12.32	8.49	13.55	8.88	13.89	8.88
	31	10.08	7.81	10.64	7.98	11.20	8.13	12.32	8.49	13.33	8.79	13.66	8.80
	33	10.08	7.81	10.64	7.98	11.20	8.13	12.10	8.40	13.10	8.70	13.44	8.71
	35	10.08	7.81	10.64	7.98	11.20	8.13	11.98	8.35	12.88	8.61	13.22	8.62
	37	10.08	7.81	10.64	7.98	11.20	8.13	11.87	8.31	12.66	8.52	12.99	8.54
	39	10.08	7.81	10.64	7.98	11.20	8.13	11.76	8.26	12.43	8.43	12.77	8.45

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDTA140KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
29	27	12.60	9.18	13.30	9.38	14.00	9.56	15.54	10.09	17.08	10.59	17.78	10.69
	29	12.60	9.18	13.30	9.38	14.00	9.56	15.40	10.03	16.94	10.53	17.36	10.52
	31	12.60	9.18	13.30	9.38	14.00	9.56	15.40	10.03	16.66	10.41	17.08	10.40
	33	12.60	9.18	13.30	9.38	14.00	9.56	15.12	9.91	16.38	10.28	16.80	10.28
	35	12.60	9.18	13.30	9.38	14.00	9.56	14.98	9.85	16.10	10.16	16.52	10.17
	37	12.60	9.18	13.30	9.38	14.00	9.56	14.84	9.79	15.82	10.05	16.24	10.05
	39	12.60	9.18	13.30	9.38	14.00	9.56	14.70	9.72	15.54	9.93	15.96	9.94

**(b) FDTW Series**
**Model FDTWA28KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	2.52	2.32	2.66	2.37	2.80	2.42	3.11	2.52	3.42	2.62	3.56	2.65
	29	2.52	2.32	2.66	2.37	2.80	2.42	3.08	2.51	3.39	2.61	3.47	2.62
	31	2.52	2.32	2.66	2.37	2.80	2.42	3.08	2.51	3.33	2.59	3.42	2.60
	33	2.52	2.32	2.66	2.37	2.80	2.42	3.02	2.49	3.28	2.57	3.36	2.58
	35	2.52	2.32	2.66	2.37	2.80	2.42	3.00	2.48	3.22	2.55	3.30	2.56
	37	2.52	2.32	2.66	2.37	2.80	2.42	2.97	2.47	3.16	2.53	3.25	2.55
	39	2.52	2.32	2.66	2.37	2.80	2.42	2.94	2.46	3.11	2.51	3.19	2.53

**Model FDTWA45KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	4.05	3.39	4.28	3.46	4.50	3.52	5.00	3.69	5.49	3.84	5.72	3.88
	29	4.05	3.39	4.28	3.46	4.50	3.52	4.95	3.67	5.45	3.82	5.58	3.83
	31	4.05	3.39	4.28	3.46	4.50	3.52	4.95	3.67	5.36	3.79	5.49	3.80
	33	4.05	3.39	4.28	3.46	4.50	3.52	4.86	3.64	5.27	3.76	5.40	3.77
	35	4.05	3.39	4.28	3.46	4.50	3.52	4.82	3.62	5.18	3.72	5.31	3.74
	37	4.05	3.39	4.28	3.46	4.50	3.52	4.77	3.60	5.09	3.69	5.22	3.70
	39	4.05	3.39	4.28	3.46	4.50	3.52	4.73	3.58	5.00	3.65	5.13	3.67

**Model FDTWA56KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	5.04	3.86	5.32	3.94	5.60	4.02	6.22	4.22	6.83	4.42	7.11	4.46
	29	5.04	3.86	5.32	3.94	5.60	4.02	6.16	4.20	6.78	4.40	6.94	4.40
	31	5.04	3.86	5.32	3.94	5.60	4.02	6.16	4.20	6.66	4.35	6.83	4.35
	33	5.04	3.86	5.32	3.94	5.60	4.02	6.05	4.15	6.55	4.30	6.72	4.31
	35	5.04	3.86	5.32	3.94	5.60	4.02	5.99	4.13	6.44	4.26	6.61	4.27
	37	5.04	3.86	5.32	3.94	5.60	4.02	5.94	4.11	6.33	4.21	6.50	4.22
	39	5.04	3.86	5.32	3.94	5.60	4.02	5.88	4.09	6.22	4.17	6.38	4.18

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDTWA71KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
16	27	6.39	4.76	6.75	4.86	7.10	4.95	7.88	5.22	8.66	5.46	9.02	5.52
	29	6.39	4.76	6.75	4.86	7.10	4.95	7.81	5.19	8.59	5.43	8.80	5.43
	31	6.39	4.76	6.75	4.86	7.10	4.95	7.81	5.19	8.45	5.37	8.66	5.37
	33	6.39	4.76	6.75	4.86	7.10	4.95	7.67	5.12	8.31	5.31	8.52	5.32
	35	6.39	4.76	6.75	4.86	7.10	4.95	7.60	5.09	8.17	5.26	8.38	5.26
	37	6.39	4.76	6.75	4.86	7.10	4.95	7.53	5.06	8.02	5.20	8.24	5.20
	39	6.39	4.76	6.75	4.86	7.10	4.95	7.46	5.03	7.88	5.14	8.09	5.15

**Model FDTWA90KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
19	27	8.10	5.85	8.55	5.97	9.00	6.09	9.99	6.43	10.98	6.76	11.43	6.82
	29	8.10	5.85	8.55	5.97	9.00	6.09	9.90	6.39	10.89	6.72	11.16	6.71
	31	8.10	5.85	8.55	5.97	9.00	6.09	9.90	6.39	10.71	6.64	10.98	6.63
	33	8.10	5.85	8.55	5.97	9.00	6.09	9.72	6.31	10.53	6.56	10.80	6.56
	35	8.10	5.85	8.55	5.97	9.00	6.09	9.63	6.27	10.35	6.48	10.62	6.48
	37	8.10	5.85	8.55	5.97	9.00	6.09	9.54	6.23	10.17	6.40	10.44	6.41
	39	8.10	5.85	8.55	5.97	9.00	6.09	9.45	6.19	9.99	6.33	10.26	6.33

**Model FDTWA112KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
28	27	10.08	7.83	10.64	8.00	11.20	8.15	12.43	8.56	13.66	8.95	14.22	9.04
	29	10.08	7.83	10.64	8.00	11.20	8.15	12.32	8.51	13.55	8.90	13.89	8.91
	31	10.08	7.83	10.64	8.00	11.20	8.15	12.32	8.51	13.33	8.81	13.66	8.82
	33	10.08	7.83	10.64	8.00	11.20	8.15	12.10	8.42	13.10	8.72	13.44	8.73
	35	10.08	7.83	10.64	8.00	11.20	8.15	11.98	8.38	12.88	8.63	13.22	8.65
	37	10.08	7.83	10.64	8.00	11.20	8.15	11.87	8.33	12.66	8.54	12.99	8.56
	39	10.08	7.83	10.64	8.00	11.20	8.15	11.76	8.28	12.43	8.45	12.77	8.48

**Model FDTWA140KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
32	27	12.60	9.38	13.30	9.59	14.00	9.77	15.54	10.29	17.08	10.78	17.78	10.89
	29	12.60	9.38	13.30	9.59	14.00	9.77	15.40	10.23	16.94	10.72	17.36	10.72
	31	12.60	9.38	13.30	9.59	14.00	9.77	15.40	10.23	16.66	10.61	17.08	10.61
	33	12.60	9.38	13.30	9.59	14.00	9.77	15.12	10.11	16.38	10.49	16.80	10.49
	35	12.60	9.38	13.30	9.59	14.00	9.77	14.98	10.05	16.10	10.37	16.52	10.38
	37	12.60	9.38	13.30	9.59	14.00	9.77	14.84	9.99	15.82	10.26	16.24	10.27
	39	12.60	9.38	13.30	9.59	14.00	9.77	14.70	9.94	15.54	10.14	15.96	10.16

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**(c) FDTQ, FDQM Series****Models FDTQA22KXE4A  
FDQMA22KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
7	27	1.98	1.50	2.09	1.54	2.20	1.57	2.44	1.65	2.68	1.73	2.79	1.75
	29	1.98	1.50	2.09	1.54	2.20	1.57	2.42	1.64	2.66	1.72	2.73	1.72
	31	1.98	1.50	2.09	1.54	2.20	1.57	2.42	1.64	2.62	1.70	2.68	1.70
	33	1.98	1.50	2.09	1.54	2.20	1.57	2.38	1.62	2.57	1.68	2.64	1.68
	35	1.98	1.50	2.09	1.54	2.20	1.57	2.35	1.61	2.53	1.66	2.60	1.67
	37	1.98	1.50	2.09	1.54	2.20	1.57	2.33	1.60	2.49	1.65	2.55	1.65
	39	1.98	1.50	2.09	1.54	2.20	1.57	2.31	1.60	2.44	1.63	2.51	1.63

**Models FDTQA28KXE4A  
FDQMA28KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
7	27	2.52	1.95	2.66	1.99	2.80	2.03	3.11	2.14	3.42	2.23	3.56	2.26
	29	2.52	1.95	2.66	1.99	2.80	2.03	3.08	2.12	3.39	2.22	3.47	2.22
	31	2.52	1.95	2.66	1.99	2.80	2.03	3.08	2.12	3.33	2.20	3.42	2.20
	33	2.52	1.95	2.66	1.99	2.80	2.03	3.02	2.10	3.28	2.18	3.36	2.18
	35	2.52	1.95	2.66	1.99	2.80	2.03	3.00	2.09	3.22	2.15	3.30	2.16
	37	2.52	1.95	2.66	1.99	2.80	2.03	2.97	2.08	3.16	2.13	3.25	2.14
	39	2.52	1.95	2.66	1.99	2.80	2.03	2.94	2.07	3.11	2.11	3.19	2.11

**Models FDTQA36KXE4A  
FDQMA36KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
7	27	3.24	2.32	3.42	2.38	3.60	2.42	4.00	2.56	4.39	2.69	4.57	2.71
	29	3.24	2.32	3.42	2.38	3.60	2.42	3.96	2.54	4.36	2.67	4.46	2.67
	31	3.24	2.32	3.42	2.38	3.60	2.42	3.96	2.54	4.28	2.64	4.39	2.64
	33	3.24	2.32	3.42	2.38	3.60	2.42	3.89	2.51	4.21	2.61	4.32	2.61
	35	3.24	2.32	3.42	2.38	3.60	2.42	3.85	2.49	4.14	2.58	4.25	2.58
	37	3.24	2.32	3.42	2.38	3.60	2.42	3.82	2.48	4.07	2.55	4.18	2.55
	39	3.24	2.32	3.42	2.38	3.60	2.42	3.78	2.46	4.00	2.51	4.10	2.52

**(d) FDTs Series****Model FDTSA22KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
11	27	1.98	1.90	2.09	1.95	2.20	1.98	2.44	2.05	2.68	2.12	2.79	2.14
	29	1.98	1.90	2.09	1.95	2.20	1.98	2.42	2.05	2.66	2.11	2.73	2.13
	31	1.98	1.90	2.09	1.95	2.20	1.98	2.42	2.05	2.62	2.10	2.68	2.11
	33	1.98	1.90	2.09	1.95	2.20	1.98	2.38	2.04	2.57	2.08	2.64	2.08
	35	1.98	1.90	2.09	1.95	2.20	1.98	2.35	2.02	2.53	2.07	2.60	2.08
	37	1.98	1.90	2.09	1.95	2.20	1.98	2.33	2.02	2.49	2.07	2.55	2.08
	39	1.98	1.90	2.09	1.95	2.20	1.98	2.31	2.01	2.44	2.05	2.51	2.07

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDTSA28KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
12	27	2.52	2.22	2.66	2.27	2.80	2.31	3.11	2.41	3.42	2.51	3.56	2.54
	29	2.52	2.22	2.66	2.27	2.80	2.31	3.08	2.40	3.39	2.50	3.47	2.51
	31	2.52	2.22	2.66	2.27	2.80	2.31	3.08	2.40	3.33	2.48	3.42	2.49
	33	2.52	2.22	2.66	2.27	2.80	2.31	3.02	2.38	3.28	2.46	3.36	2.47
	35	2.52	2.22	2.66	2.27	2.80	2.31	3.00	2.37	3.22	2.44	3.30	2.45
	37	2.52	2.22	2.66	2.27	2.80	2.31	2.97	2.36	3.16	2.42	3.25	2.43
	39	2.52	2.22	2.66	2.27	2.80	2.31	2.94	2.35	3.11	2.40	3.19	2.41

**Model FDTSA36KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
12	27	3.24	2.86	3.42	2.92	3.60	2.97	4.00	3.10	4.39	3.23	4.57	3.26
	29	3.24	2.86	3.42	2.92	3.60	2.97	3.96	3.09	4.36	3.21	4.46	3.22
	31	3.24	2.86	3.42	2.92	3.60	2.97	3.96	3.09	4.28	3.18	4.39	3.20
	33	3.24	2.86	3.42	2.92	3.60	2.97	3.89	3.06	4.21	3.16	4.32	3.17
	35	3.24	2.86	3.42	2.92	3.60	2.97	3.85	3.05	4.14	3.13	4.25	3.15
	37	3.24	2.86	3.42	2.92	3.60	2.97	3.82	3.03	4.07	3.11	4.18	3.12
	39	3.24	2.86	3.42	2.92	3.60	2.97	3.78	3.02	4.00	3.08	4.10	3.10

**Model FDTSA45KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	4.05	3.54	4.28	3.62	4.50	3.68	5.00	3.85	5.49	4.00	5.72	4.04
	29	4.05	3.54	4.28	3.62	4.50	3.68	4.95	3.83	5.45	3.98	5.58	3.99
	31	4.05	3.54	4.28	3.62	4.50	3.68	4.95	3.79	5.36	3.95	5.49	3.96
	33	4.05	3.54	4.28	3.62	4.50	3.68	4.86	3.78	5.27	3.92	5.40	3.93
	35	4.05	3.54	4.28	3.62	4.50	3.68	4.82	3.76	5.18	3.88	5.31	3.90
	37	4.05	3.54	4.28	3.62	4.50	3.68	4.77	3.74	5.09	3.85	5.22	3.87
	39	4.05	3.54	4.28	3.62	4.50	3.68	4.73	3.74	5.00	3.82	5.13	3.84

**Model FDTSA71KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
18	27	6.39	5.06	6.75	5.17	7.10	5.27	7.88	5.52	8.66	5.77	9.02	5.83
	29	6.39	5.06	6.75	5.17	7.10	5.27	7.81	5.50	8.59	5.74	8.80	5.74
	31	6.39	5.06	6.75	5.17	7.10	5.27	7.81	5.50	8.45	5.68	8.66	5.69
	33	6.39	5.06	6.75	5.17	7.10	5.27	7.67	5.44	8.31	5.63	8.52	5.64
	35	6.39	5.06	6.75	5.17	7.10	5.27	7.60	5.41	8.17	5.57	8.38	5.58
	37	6.39	5.06	6.75	5.17	7.10	5.27	7.53	5.38	8.02	5.51	8.24	5.53
	39	6.39	5.06	6.75	5.17	7.10	5.27	7.46	5.35	7.88	5.46	8.09	5.48

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**(e) FDR Series****Model FDRA22KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	27	1.98	1.84	2.09	1.87	2.20	1.91	2.44	1.99	2.68	2.07	2.79	2.09
	29	1.98	1.84	2.09	1.87	2.20	1.91	2.42	1.98	2.66	2.06	2.73	2.07
	31	1.98	1.84	2.09	1.87	2.20	1.91	2.42	1.98	2.62	2.05	2.68	2.06
	33	1.98	1.84	2.09	1.87	2.20	1.91	2.38	1.97	2.57	2.03	2.64	2.04
	35	1.98	1.84	2.09	1.87	2.20	1.91	2.35	1.96	2.53	2.01	2.60	2.03
	37	1.98	1.84	2.09	1.87	2.20	1.91	2.33	1.95	2.49	2.00	2.55	2.01
	39	1.98	1.84	2.09	1.87	2.20	1.91	2.31	1.94	2.44	1.98	2.51	2.00

**Model FDRA28KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
12	27	2.52	2.21	2.66	2.26	2.80	2.30	3.11	2.40	3.42	2.50	3.56	2.53
	29	2.52	2.21	2.66	2.26	2.80	2.30	3.08	2.39	3.39	2.49	3.47	2.50
	31	2.52	2.21	2.66	2.26	2.80	2.30	3.08	2.39	3.33	2.47	3.42	2.48
	33	2.52	2.21	2.66	2.26	2.80	2.30	3.02	2.37	3.28	2.45	3.36	2.46
	35	2.52	2.21	2.66	2.26	2.80	2.30	3.00	2.36	3.22	2.43	3.30	2.44
	37	2.52	2.21	2.66	2.26	2.80	2.30	2.97	2.35	3.16	2.41	3.25	2.42
	39	2.52	2.21	2.66	2.26	2.80	2.30	2.94	2.34	3.11	2.39	3.19	2.40

**Model FDRA45KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	4.05	3.41	4.28	3.48	4.50	3.55	5.00	3.71	5.49	3.86	5.72	3.91
	29	4.05	3.41	4.28	3.48	4.50	3.55	4.95	3.69	5.45	3.85	5.58	3.86
	31	4.05	3.41	4.28	3.48	4.50	3.55	4.95	3.69	5.36	3.81	5.49	3.82
	33	4.05	3.41	4.28	3.48	4.50	3.55	4.86	3.66	5.27	3.78	5.40	3.79
	35	4.05	3.41	4.28	3.48	4.50	3.55	4.82	3.64	5.18	3.74	5.31	3.76
	37	4.05	3.41	4.28	3.48	4.50	3.55	4.77	3.62	5.09	3.71	5.22	3.73
	39	4.05	3.41	4.28	3.48	4.50	3.55	4.73	3.61	5.00	3.68	5.13	3.69

**Model FDRA56KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	5.04	3.96	5.32	4.05	5.60	4.12	6.22	4.33	6.83	4.52	7.11	4.57
	29	5.04	3.96	5.32	4.05	5.60	4.12	6.16	4.31	6.78	4.50	6.94	4.50
	31	5.04	3.96	5.32	4.05	5.60	4.12	6.16	4.31	6.66	4.45	6.83	4.46
	33	5.04	3.96	5.32	4.05	5.60	4.12	6.05	4.26	6.55	4.41	6.72	4.42
	35	5.04	3.96	5.32	4.05	5.60	4.12	5.99	4.24	6.44	4.36	6.61	4.37
	37	5.04	3.96	5.32	4.05	5.60	4.12	5.94	4.21	6.33	4.32	6.50	4.33
	39	5.04	3.96	5.32	4.05	5.60	4.12	5.88	4.19	6.22	4.28	6.38	4.29

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDRA71KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
18	27	6.39	5.06	6.75	5.17	7.10	5.26	7.88	5.52	8.66	5.77	9.02	5.83
	29	6.39	5.06	6.75	5.17	7.10	5.26	7.81	5.49	8.59	5.74	8.80	5.74
	31	6.39	5.06	6.75	5.17	7.10	5.26	7.81	5.49	8.45	5.68	8.66	5.69
	33	6.39	5.06	6.75	5.17	7.10	5.26	7.67	5.44	8.31	5.62	8.52	5.64
	35	6.39	5.06	6.75	5.17	7.10	5.26	7.60	5.41	8.17	5.57	8.38	5.58
	37	6.39	5.06	6.75	5.17	7.10	5.26	7.53	5.38	8.02	5.51	8.24	5.53
	39	6.39	5.06	6.75	5.17	7.10	5.26	7.46	5.35	7.88	5.46	8.09	5.48

**Model FDRA90KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	27	8.10	6.05	8.55	6.18	9.00	6.30	9.99	6.64	10.98	6.95	11.43	7.02
	29	8.10	6.05	8.55	6.18	9.00	6.30	9.90	6.60	10.89	6.91	11.16	6.91
	31	8.10	6.05	8.55	6.18	9.00	6.30	9.90	6.60	10.71	6.84	10.98	6.84
	33	8.10	6.05	8.55	6.18	9.00	6.30	9.72	6.52	10.53	6.76	10.80	6.77
	35	8.10	6.05	8.55	6.18	9.00	6.30	9.63	6.48	10.35	6.69	10.62	6.69
	37	8.10	6.05	8.55	6.18	9.00	6.30	9.54	6.45	10.17	6.61	10.44	6.62
	39	8.10	6.05	8.55	6.18	9.00	6.30	9.45	6.41	9.99	6.54	10.26	6.55

**Model FDRA112KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
28	27	10.08	7.96	10.64	8.13	11.20	8.28	12.43	8.69	13.66	9.07	14.22	9.17
	29	10.08	7.96	10.64	8.13	11.20	8.28	12.32	8.65	13.55	9.03	13.89	9.04
	31	10.08	7.96	10.64	8.13	11.20	8.28	12.32	8.65	13.33	8.94	13.66	8.95
	33	10.08	7.96	10.64	8.13	11.20	8.28	12.10	8.55	13.10	8.85	13.44	8.87
	35	10.08	7.96	10.64	8.13	11.20	8.28	11.98	8.51	12.88	8.76	13.22	8.78
	37	10.08	7.96	10.64	8.13	11.20	8.28	11.87	8.46	12.66	8.67	12.99	8.70
	39	10.08	7.96	10.64	8.13	11.20	8.28	11.76	8.42	12.43	8.59	12.77	8.61

**Model FDRA140KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
34	27	12.60	9.79	13.30	9.99	14.00	10.18	15.54	10.70	17.08	11.18	17.78	11.29
	29	12.60	9.79	13.30	9.99	14.00	10.18	15.40	10.64	16.94	11.12	17.36	11.13
	31	12.60	9.79	13.30	9.99	14.00	10.18	15.40	10.64	16.66	11.01	17.08	11.02
	33	12.60	9.79	13.30	9.99	14.00	10.18	15.12	10.52	16.38	10.89	16.80	10.91
	35	12.60	9.79	13.30	9.99	14.00	10.18	14.98	10.47	16.10	10.78	16.52	10.80
	37	12.60	9.79	13.30	9.99	14.00	10.18	14.84	10.41	15.82	10.67	16.24	10.69
	39	12.60	9.79	13.30	9.99	14.00	10.18	14.70	10.35	15.54	10.56	15.96	10.59

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**(f) FDU Series****Model FDUA224KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
27	27	20.16	14.64	21.28	14.96	22.40	15.25	24.86	16.09	27.33	16.89	28.45	17.05
	29	20.16	14.64	21.28	14.96	22.40	15.25	24.64	15.99	27.10	16.79	27.78	16.77
	31	20.16	14.64	21.28	14.96	22.40	15.25	24.64	15.99	26.66	16.59	27.33	16.58
	33	20.16	14.64	21.28	14.96	22.40	15.25	24.19	15.79	26.21	16.40	26.88	16.39
	35	20.16	14.64	21.28	14.96	22.40	15.25	23.97	15.70	25.76	16.21	26.43	16.21
	37	20.16	14.64	21.28	14.96	22.40	15.25	23.74	15.60	25.31	16.02	25.98	16.03
	39	20.16	14.64	21.28	14.96	22.40	15.25	23.52	15.50	24.86	15.83	25.54	15.84

**Model FDUA280KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
29	27	25.20	18.05	26.60	18.45	28.00	18.80	31.08	19.87	34.16	20.88	35.56	21.09
	29	25.20	18.05	26.60	18.45	28.00	18.80	30.80	19.75	33.88	20.76	34.72	20.72
	31	25.20	18.05	26.60	18.45	28.00	18.80	30.80	19.75	33.32	20.51	34.16	20.48
	33	25.20	18.05	26.60	18.45	28.00	18.80	30.24	19.50	32.76	20.26	33.60	20.25
	35	25.20	18.05	26.60	18.45	28.00	18.80	29.96	19.37	32.20	20.01	33.04	20.01
	37	25.20	18.05	26.60	18.45	28.00	18.80	29.68	19.25	31.64	19.77	32.48	19.78
	39	25.20	18.05	26.60	18.45	28.00	18.80	29.40	19.13	31.08	19.53	31.92	19.55

**(g) FDUM Series****Model FDUMA36KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
12	27	3.24	3.07	3.42	3.14	3.60	3.20	4.00	3.33	4.39	3.46	4.57	3.50
	29	3.24	3.07	3.42	3.14	3.60	3.20	3.96	3.32	4.36	3.44	4.46	3.46
	31	3.24	3.07	3.42	3.14	3.60	3.20	3.96	3.32	4.28	3.42	4.39	3.44
	33	3.24	3.07	3.42	3.14	3.60	3.20	3.89	3.29	4.21	3.39	4.32	3.41
	35	3.24	3.07	3.42	3.14	3.60	3.20	3.85	3.28	4.14	3.37	4.25	3.39
	37	3.24	3.07	3.42	3.14	3.60	3.20	3.82	3.27	4.07	3.34	4.18	3.36
	39	3.24	3.07	3.42	3.14	3.60	3.20	3.78	3.25	4.00	3.32	4.10	3.34

**Model FDUMA45KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
12	27	4.05	3.41	4.28	3.48	4.50	3.55	5.00	3.71	5.49	3.86	5.72	3.91
	29	4.05	3.41	4.28	3.48	4.50	3.55	4.95	3.69	5.45	3.85	5.58	3.86
	31	4.05	3.41	4.28	3.48	4.50	3.55	4.95	3.69	5.36	3.81	5.49	3.82
	33	4.05	3.41	4.28	3.48	4.50	3.55	4.86	3.66	5.27	3.78	5.40	3.79
	35	4.05	3.41	4.28	3.48	4.50	3.55	4.82	3.64	5.18	3.74	5.31	3.76
	37	4.05	3.41	4.28	3.48	4.50	3.55	4.77	3.62	5.09	3.71	5.22	3.73
	39	4.05	3.41	4.28	3.48	4.50	3.55	4.73	3.61	5.00	3.68	5.13	3.69

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDUMA56KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	5.04	3.96	5.32	4.05	5.60	4.12	6.22	4.33	6.83	4.52	7.11	4.57
	29	5.04	3.96	5.32	4.05	5.60	4.12	6.16	4.31	6.78	4.50	6.94	4.50
	31	5.04	3.96	5.32	4.05	5.60	4.12	6.16	4.31	6.66	4.45	6.83	4.46
	33	5.04	3.96	5.32	4.05	5.60	4.12	6.05	4.26	6.55	4.41	6.72	4.42
	35	5.04	3.96	5.32	4.05	5.60	4.12	5.99	4.24	6.44	4.36	6.61	4.37
	37	5.04	3.96	5.32	4.05	5.60	4.12	5.94	4.21	6.33	4.32	6.50	4.33
	39	5.04	3.96	5.32	4.05	5.60	4.12	5.88	4.19	6.22	4.28	6.38	4.29

**Model FDUMA71KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
18	27	6.39	5.06	6.75	5.17	7.10	5.26	7.88	5.52	8.66	5.77	9.02	5.83
	29	6.39	5.06	6.75	5.17	7.10	5.26	7.81	5.49	8.59	5.74	8.80	5.74
	31	6.39	5.06	6.75	5.17	7.10	5.26	7.81	5.49	8.45	5.68	8.66	5.69
	33	6.39	5.06	6.75	5.17	7.10	5.26	7.67	5.44	8.31	5.62	8.52	5.64
	35	6.39	5.06	6.75	5.17	7.10	5.26	7.60	5.41	8.17	5.57	8.38	5.58
	37	6.39	5.06	6.75	5.17	7.10	5.26	7.53	5.38	8.02	5.51	8.24	5.53
	39	6.39	5.06	6.75	5.17	7.10	5.26	7.46	5.35	7.88	5.46	8.09	5.48

**Model FDUMA90KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	27	8.10	6.05	8.55	6.18	9.00	6.30	9.99	6.64	10.98	6.95	11.43	7.02
	29	8.10	6.05	8.55	6.18	9.00	6.30	9.90	6.60	10.89	6.91	11.16	6.91
	31	8.10	6.05	8.55	6.18	9.00	6.30	9.90	6.60	10.71	6.84	10.98	6.84
	33	8.10	6.05	8.55	6.18	9.00	6.30	9.72	6.52	10.53	6.76	10.80	6.77
	35	8.10	6.05	8.55	6.18	9.00	6.30	9.63	6.48	10.35	6.69	10.62	6.69
	37	8.10	6.05	8.55	6.18	9.00	6.30	9.54	6.45	10.17	6.61	10.44	6.62
	39	8.10	6.05	8.55	6.18	9.00	6.30	9.45	6.41	9.99	6.54	10.26	6.55

**Model FDUMA112KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
28	27	10.08	7.96	10.64	8.13	11.20	8.28	12.43	8.69	13.66	9.07	14.22	9.17
	29	10.08	7.96	10.64	8.13	11.20	8.28	12.32	8.65	13.55	9.03	13.89	9.04
	31	10.08	7.96	10.64	8.13	11.20	8.28	12.32	8.65	13.33	8.94	13.66	8.95
	33	10.08	7.96	10.64	8.13	11.20	8.28	12.10	8.55	13.10	8.85	13.44	8.87
	35	10.08	7.96	10.64	8.13	11.20	8.28	11.98	8.51	12.88	8.76	13.22	8.78
	37	10.08	7.96	10.64	8.13	11.20	8.28	11.87	8.46	12.66	8.67	12.99	8.70
	39	10.08	7.96	10.64	8.13	11.20	8.28	11.76	8.42	12.43	8.59	12.77	8.61

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDUMA140KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
34	27	12.60	9.79	13.30	9.99	14.00	10.18	15.54	10.70	17.08	11.18	17.78	11.29
	29	12.60	9.79	13.30	9.99	14.00	10.18	15.40	10.64	16.94	11.12	17.36	11.13
	31	12.60	9.79	13.30	9.99	14.00	10.18	15.40	10.64	16.66	11.01	17.08	11.02
	33	12.60	9.79	13.30	9.99	14.00	10.18	15.12	10.52	16.38	10.89	16.80	10.91
	35	12.60	9.79	13.30	9.99	14.00	10.18	14.98	10.47	16.10	10.78	16.52	10.80
	37	12.60	9.79	13.30	9.99	14.00	10.18	14.84	10.41	15.82	10.67	16.24	10.69
	39	12.60	9.79	13.30	9.99	14.00	10.18	14.70	10.35	15.54	10.56	15.96	10.59

**(h) FDUR Series**
**Model FDURA45KXE4A**

Model: F-D0H45KX2-7A													
Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
17	27	4.05	3.90	4.28	3.98	4.50	4.05	5.00	4.22	5.49	4.36	5.72	4.42
	29	4.05	3.90	4.28	3.98	4.50	4.05	4.95	4.19	5.45	4.35	5.58	4.36
	31	4.05	3.90	4.28	3.98	4.50	4.05	4.95	4.19	5.36	4.32	5.49	4.34
	33	4.05	3.90	4.28	3.98	4.50	4.05	4.86	4.16	5.27	4.28	5.40	4.30
	35	4.05	3.90	4.28	3.98	4.50	4.05	4.82	4.15	5.18	4.26	5.31	4.27
	37	4.05	3.90	4.28	3.98	4.50	4.05	4.77	4.13	5.09	4.22	5.22	4.25
	39	4.05	3.90	4.28	3.98	4.50	4.05	4.73	4.11	5.00	4.20	5.13	4.22

**Model FDURA56KXE4A**

Model: FDBAS000													
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**Model FDURA71KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
25	27	6.39	5.88	6.75	6.00	7.10	6.11	7.88	6.37	8.66	6.62	9.02	6.69
	29	6.39	5.88	6.75	6.00	7.10	6.11	7.81	6.35	8.59	6.59	8.80	6.62
	31	6.39	5.88	6.75	6.00	7.10	6.11	7.81	6.35	8.45	6.54	8.66	6.57
	33	6.39	5.88	6.75	6.00	7.10	6.11	7.67	6.30	8.31	6.49	8.52	6.52
	35	6.39	5.88	6.75	6.00	7.10	6.11	7.60	6.27	8.17	6.44	8.38	6.47
	37	6.39	5.88	6.75	6.00	7.10	6.11	7.53	6.24	8.02	6.39	8.24	6.42
	39	6.39	5.88	6.75	6.00	7.10	6.11	7.46	6.22	7.88	6.34	8.09	6.37

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDURA90KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
34	27	8.10	7.81	8.55	7.97	9.00	8.10	9.99	8.42	10.98	8.72	11.43	8.82
	29	8.10	7.81	8.55	7.97	9.00	8.10	9.90	8.40	10.89	8.69	11.16	8.73
	31	8.10	7.81	8.55	7.97	9.00	8.10	9.90	8.40	10.71	8.63	10.98	8.67
	33	8.10	7.81	8.55	7.97	9.00	8.10	9.72	8.33	10.53	8.57	10.80	8.62
	35	8.10	7.81	8.55	7.97	9.00	8.10	9.63	8.30	10.35	8.51	10.62	8.56
	37	8.10	7.81	8.55	7.97	9.00	8.10	9.54	8.26	10.17	8.45	10.44	8.50
	39	8.10	7.81	8.55	7.97	9.00	8.10	9.45	8.23	9.99	8.39	10.26	8.58

**Model FDURA112KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
34	27	10.08	8.71	10.64	8.89	11.20	9.05	12.43	9.46	13.66	9.84	14.22	9.94
	29	10.08	8.71	10.64	8.89	11.20	9.05	12.32	9.41	13.55	9.79	13.89	9.82
	31	10.08	8.71	10.64	8.89	11.20	9.05	12.32	9.41	13.33	9.71	13.66	9.74
	33	10.08	8.71	10.64	8.89	11.20	9.05	12.10	9.33	13.10	9.63	13.44	9.66
	35	10.08	8.71	10.64	8.89	11.20	9.05	11.98	9.29	12.88	9.55	13.22	9.58
	37	10.08	8.71	10.64	8.89	11.20	9.05	11.87	9.24	12.66	9.46	12.99	9.50
	39	10.08	8.71	10.64	8.89	11.20	9.05	11.76	9.20	12.43	9.38	12.77	9.42

**Model FDURA140KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
42	27	12.60	10.75	13.30	10.97	14.00	11.17	15.54	11.68	17.08	12.16	17.78	12.29
	29	12.60	10.75	13.30	10.97	14.00	11.17	15.40	11.63	16.94	12.10	17.36	12.14
	31	12.60	10.75	13.30	10.97	14.00	11.17	15.40	11.63	16.66	12.00	17.08	12.03
	33	12.60	10.75	13.30	10.97	14.00	11.17	15.12	11.52	16.38	11.89	16.80	11.93
	35	12.60	10.75	13.30	10.97	14.00	11.17	14.98	11.46	16.10	11.79	16.52	11.83
	37	12.60	10.75	13.30	10.97	14.00	11.17	14.84	11.41	15.82	11.68	16.24	11.73
	39	12.60	10.75	13.30	10.97	14.00	11.17	14.70	11.36	15.54	11.58	15.96	11.63

**(i) FDE Series**
**Model FDEA36KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
11	27	3.24	2.77	3.42	2.82	3.60	2.88	4.00	3.01	4.39	3.13	4.57	3.16
	29	3.24	2.77	3.42	2.82	3.60	2.88	3.96	2.99	4.36	3.12	4.46	3.12
	31	3.24	2.77	3.42	2.82	3.60	2.88	3.96	2.99	4.28	3.09	4.39	3.10
	33	3.24	2.77	3.42	2.82	3.60	2.88	3.89	2.97	4.21	3.06	4.32	3.07
	35	3.24	2.77	3.42	2.82	3.60	2.88	3.85	2.95	4.14	3.03	4.25	3.05
	37	3.24	2.77	3.42	2.82	3.60	2.88	3.82	2.94	4.07	3.01	4.18	3.02
	39	3.24	2.77	3.42	2.82	3.60	2.88	3.78	2.92	4.00	2.98	4.10	2.99

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDEA45KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
11	27	4.05	3.12	4.28	3.18	4.50	3.24	5.00	3.41	5.49	3.56	5.72	3.60
	29	4.05	3.12	4.28	3.18	4.50	3.24	4.95	3.39	5.45	3.54	5.58	3.55
	31	4.05	3.12	4.28	3.18	4.50	3.24	4.95	3.39	5.36	3.51	5.49	3.51
	33	4.05	3.12	4.28	3.18	4.50	3.24	4.86	3.35	5.27	3.47	5.40	3.48
	35	4.05	3.12	4.28	3.18	4.50	3.24	4.82	3.33	5.18	3.44	5.31	3.44
	37	4.05	3.12	4.28	3.18	4.50	3.24	4.77	3.31	5.09	3.40	5.22	3.41
	39	4.05	3.12	4.28	3.18	4.50	3.24	4.73	3.30	5.00	3.36	5.13	3.37

**Model FDEA56KXE4A**

Model: FDB000RE-1A													
Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
11	27	5.04	3.63	5.32	3.71	5.60	3.78	6.22	3.99	6.83	4.19	7.11	4.24
	29	5.04	3.63	5.32	3.71	5.60	3.78	6.16	3.97	6.78	4.17	6.94	4.16
	31	5.04	3.63	5.32	3.71	5.60	3.78	6.16	3.97	6.66	4.12	6.83	4.12
	33	5.04	3.63	5.32	3.71	5.60	3.78	6.05	3.92	6.55	4.07	6.72	4.07
	35	5.04	3.63	5.32	3.71	5.60	3.78	5.99	3.89	6.44	4.02	6.61	4.02
	37	5.04	3.63	5.32	3.71	5.60	3.78	5.94	3.87	6.33	3.97	6.50	3.98
	39	5.04	3.63	5.32	3.71	5.60	3.78	5.88	3.85	6.22	3.93	6.38	3.93

**Model FDEA71KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
18	27	6.39	5.08	6.75	5.19	7.10	5.28	7.88	5.54	8.66	5.79	9.02	5.85
	29	6.39	5.08	6.75	5.19	7.10	5.28	7.81	5.51	8.59	5.76	8.80	5.76
	31	6.39	5.08	6.75	5.19	7.10	5.28	7.81	5.51	8.45	5.70	8.66	5.71
	33	6.39	5.08	6.75	5.19	7.10	5.28	7.67	5.46	8.31	5.65	8.52	5.66
	35	6.39	5.08	6.75	5.19	7.10	5.28	7.60	5.43	8.17	5.59	8.38	5.60
	37	6.39	5.08	6.75	5.19	7.10	5.28	7.53	5.40	8.02	5.53	8.24	5.55
	39	6.39	5.08	6.75	5.19	7.10	5.28	7.46	5.37	7.88	5.48	8.09	5.50

**Model FDEA112KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
26	27	10.08	7.73	10.64	7.90	11.20	8.04	12.43	8.46	13.66	8.84	14.22	8.93
	29	10.08	7.73	10.64	7.90	11.20	8.04	12.32	8.41	13.55	8.80	13.89	8.80
	31	10.08	7.73	10.64	7.90	11.20	8.04	12.32	8.41	13.33	8.70	13.66	8.71
	33	10.08	7.73	10.64	7.90	11.20	8.04	12.10	8.32	13.10	8.61	13.44	8.62
	35	10.08	7.73	10.64	7.90	11.20	8.04	11.98	8.27	12.88	8.52	13.22	8.54
	37	10.08	7.73	10.64	7.90	11.20	8.04	11.87	8.23	12.66	8.43	12.99	8.45
	39	10.08	7.73	10.64	7.90	11.20	8.04	11.76	8.18	12.43	8.34	12.77	8.36

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDEA140KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
29	27	12.60	9.23	13.30	9.43	14.00	9.61	15.54	10.13	17.08	10.63	17.78	10.73
	29	12.60	9.23	13.30	9.43	14.00	9.61	15.40	10.07	16.94	10.57	17.36	10.56
	31	12.60	9.23	13.30	9.43	14.00	9.61	15.40	10.07	16.66	10.45	17.08	10.44
	33	12.60	9.23	13.30	9.43	14.00	9.61	15.12	9.95	16.38	10.33	16.80	10.33
	35	12.60	9.23	13.30	9.43	14.00	9.61	14.98	9.89	16.10	10.21	16.52	10.21
	37	12.60	9.23	13.30	9.43	14.00	9.61	14.84	9.83	15.82	10.09	16.24	10.10
	39	12.60	9.23	13.30	9.43	14.00	9.61	14.70	9.77	15.54	9.97	15.96	9.99

**(j) FDK Series**
**Model FDKA22KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
8	27	1.98	1.88	2.09	1.92	2.20	1.95	2.44	2.04	2.68	2.11	2.79	2.14
	29	1.98	1.88	2.09	1.92	2.20	1.95	2.42	2.03	2.66	2.10	2.73	2.11
	31	1.98	1.88	2.09	1.92	2.20	1.95	2.42	2.03	2.62	2.09	2.68	2.10
	33	1.98	1.88	2.09	1.92	2.20	1.95	2.38	2.01	2.57	2.07	2.64	2.08
	35	1.98	1.88	2.09	1.92	2.20	1.95	2.35	2.00	2.53	2.06	2.60	2.07
	37	1.98	1.88	2.09	1.92	2.20	1.95	2.33	2.00	2.49	2.04	2.55	2.05
	39	1.98	1.88	2.09	1.92	2.20	1.95	2.31	1.99	2.44	2.02	2.51	2.04

**Model FDKA28KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
8	27	2.52	2.10	2.66	2.15	2.80	2.19	3.11	2.29	3.42	2.38	3.56	2.41
	29	2.52	2.10	2.66	2.15	2.80	2.19	3.08	2.28	3.39	2.37	3.47	2.38
	31	2.52	2.10	2.66	2.15	2.80	2.19	3.08	2.28	3.33	2.35	3.42	2.36
	33	2.52	2.10	2.66	2.15	2.80	2.19	3.02	2.26	3.28	2.33	3.36	2.34
	35	2.52	2.10	2.66	2.15	2.80	2.19	3.00	2.24	3.22	2.31	3.30	2.32
	37	2.52	2.10	2.66	2.15	2.80	2.19	2.97	2.23	3.16	2.29	3.25	2.30
	39	2.52	2.10	2.66	2.15	2.80	2.19	2.94	2.22	3.11	2.27	3.19	2.28

**Model FDKA36KXE4A**

Air flow (m³/min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	27	3.24	2.65	3.42	2.70	3.60	2.75	4.00	2.88	4.39	3.01	4.57	3.04
	29	3.24	2.65	3.42	2.70	3.60	2.75	3.96	2.87	4.36	2.99	4.46	3.00
	31	3.24	2.65	3.42	2.70	3.60	2.75	3.96	2.87	4.28	2.96	4.39	2.97
	33	3.24	2.65	3.42	2.70	3.60	2.75	3.89	2.84	4.21	2.94	4.32	2.94
	35	3.24	2.65	3.42	2.70	3.60	2.75	3.85	2.83	4.14	2.91	4.25	2.92
	37	3.24	2.65	3.42	2.70	3.60	2.75	3.82	2.81	4.07	2.88	4.18	2.89
	39	3.24	2.65	3.42	2.70	3.60	2.75	3.78	2.80	4.00	2.85	4.10	2.87

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Model FDKA45KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
11	27	4.05	3.16	4.28	3.22	4.50	3.28	5.00	3.45	5.49	3.60	5.72	3.64
	29	4.05	3.16	4.28	3.22	4.50	3.28	4.95	3.43	5.45	3.59	5.58	3.59
	31	4.05	3.16	4.28	3.22	4.50	3.28	4.95	3.43	5.36	3.55	5.49	3.55
	33	4.05	3.16	4.28	3.22	4.50	3.28	4.86	3.39	5.27	3.51	5.40	3.52
	35	4.05	3.16	4.28	3.22	4.50	3.28	4.82	3.38	5.18	3.48	5.31	3.48
	37	4.05	3.16	4.28	3.22	4.50	3.28	4.77	3.36	5.09	3.44	5.22	3.45
	39	4.05	3.16	4.28	3.22	4.50	3.28	4.73	3.34	5.00	3.41	5.13	3.42

**Model FDKA56KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	5.04	3.94	5.32	4.03	5.60	4.10	6.22	4.31	6.83	4.50	7.11	4.55
	29	5.04	3.94	5.32	4.03	5.60	4.10	6.16	4.28	6.78	4.48	6.94	4.48
	31	5.04	3.94	5.32	4.03	5.60	4.10	6.16	4.28	6.66	4.43	6.83	4.44
	33	5.04	3.94	5.32	4.03	5.60	4.10	6.05	4.24	6.55	4.39	6.72	4.39
	35	5.04	3.94	5.32	4.03	5.60	4.10	5.99	4.22	6.44	4.34	6.61	4.35
	37	5.04	3.94	5.32	4.03	5.60	4.10	5.94	4.19	6.33	4.30	6.50	4.31
	39	5.04	3.94	5.32	4.03	5.60	4.10	5.88	4.17	6.22	4.25	6.38	4.27

**Model FDKA71KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
21	27	6.39	5.33	6.75	5.44	7.10	5.54	7.88	5.80	8.66	6.04	9.02	6.11
	29	6.39	5.33	6.75	5.44	7.10	5.54	7.81	5.77	8.59	6.01	8.80	6.03
	31	6.39	5.33	6.75	5.44	7.10	5.54	7.81	5.77	8.45	5.96	8.66	5.98
	33	6.39	5.33	6.75	5.44	7.10	5.54	7.67	5.72	8.31	5.90	8.52	5.92
	35	6.39	5.33	6.75	5.44	7.10	5.54	7.60	5.69	8.17	5.85	8.38	5.87
	37	6.39	5.33	6.75	5.44	7.10	5.54	7.53	5.66	8.02	5.80	8.24	5.82
	39	6.39	5.33	6.75	5.44	7.10	5.54	7.46	5.63	7.88	5.74	8.09	5.77

**(k) FDFL, FDFU Series**  
**Models FDFLA28KXE4A**  
**FDFUA28KXE4A**

Air flow (m³/min)	Indoor air temperature												
	Outdoor air temp. (°CDB)	17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
12	27	2.52	2.43	2.66	2.48	2.80	2.52	3.11	2.62	3.42	2.70	3.56	2.73
	29	2.52	2.43	2.66	2.48	2.80	2.52	3.08	2.61	3.39	2.69	3.47	2.70
	31	2.52	2.43	2.66	2.48	2.80	2.52	3.08	2.61	3.33	2.67	3.42	2.69
	33	2.52	2.43	2.66	2.48	2.80	2.52	3.02	2.59	3.28	2.66	3.36	2.67
	35	2.52	2.43	2.66	2.48	2.80	2.52	3.00	2.58	3.22	2.64	3.30	2.65
	37	2.52	2.43	2.66	2.48	2.80	2.52	2.97	2.57	3.16	2.62	3.25	2.64
	39	2.52	2.43	2.66	2.48	2.80	2.52	2.94	2.56	3.11	2.61	3.19	2.62

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



**Models FDFLA45KXE4A  
FDFUA45KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	4.05	3.52	4.28	3.60	4.50	3.66	5.00	3.83	5.49	3.98	5.72	4.02
	29	4.05	3.52	4.28	3.60	4.50	3.66	4.95	3.81	5.45	3.96	5.58	3.97
	31	4.05	3.52	4.28	3.60	4.50	3.66	4.95	3.81	5.36	3.93	5.49	3.94
	33	4.05	3.52	4.28	3.60	4.50	3.66	4.86	3.78	5.27	3.90	5.40	3.91
	35	4.05	3.52	4.28	3.60	4.50	3.66	4.82	3.76	5.18	3.86	5.31	3.88
	37	4.05	3.52	4.28	3.60	4.50	3.66	4.77	3.74	5.09	3.83	5.22	3.85
	39	4.05	3.52	4.28	3.60	4.50	3.66	4.73	3.72	5.00	3.80	5.13	3.81

**Model FDFUA56KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	27	5.04	3.95	5.32	4.03	5.60	4.10	6.22	4.31	6.83	4.50	7.11	4.55
	29	5.04	3.95	5.32	4.03	5.60	4.10	6.16	4.29	6.78	4.48	6.94	4.48
	31	5.04	3.95	5.32	4.03	5.60	4.10	6.16	4.29	6.66	4.44	6.83	4.44
	33	5.04	3.95	5.32	4.03	5.60	4.10	6.05	4.24	6.55	4.39	6.72	4.40
	35	5.04	3.95	5.32	4.03	5.60	4.10	5.99	4.22	6.44	4.35	6.61	4.35
	37	5.04	3.95	5.32	4.03	5.60	4.10	5.94	4.20	6.33	4.30	6.50	4.31
	39	5.04	3.95	5.32	4.03	5.60	4.10	5.88	4.17	6.22	4.26	6.38	4.27

**Models FDFLA71KXE4A  
FDFUA71KXE4A**

Air flow (m <sup>3</sup> /min)	Outdoor air temp. (°CDB)	Indoor air temperature											
		17.0°CWB		18.0°CWB		19.0°CWB		20.0°CWB		21.0°CWB		22.0°CWB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
18	27	6.39	5.06	6.75	5.16	7.10	5.26	7.88	5.52	8.66	5.76	9.02	5.82
	29	6.39	5.06	6.75	5.16	7.10	5.26	7.81	5.49	8.59	5.73	8.80	5.74
	31	6.39	5.06	6.75	5.16	7.10	5.26	7.81	5.49	8.45	5.68	8.66	5.68
	33	6.39	5.06	6.75	5.16	7.10	5.26	7.67	5.43	8.31	5.62	8.52	5.63
	35	6.39	5.06	6.75	5.16	7.10	5.26	7.60	5.40	8.17	5.56	8.38	5.58
	37	6.39	5.06	6.75	5.16	7.10	5.26	7.53	5.37	8.02	5.51	8.24	5.52
	39	6.39	5.06	6.75	5.16	7.10	5.26	7.46	5.35	7.88	5.45	8.09	5.47

Note (1) Symbols are as follows :

**TC** : Total cooling capacity (kW)  
**SHC** : Sensible heat capacity (kW)



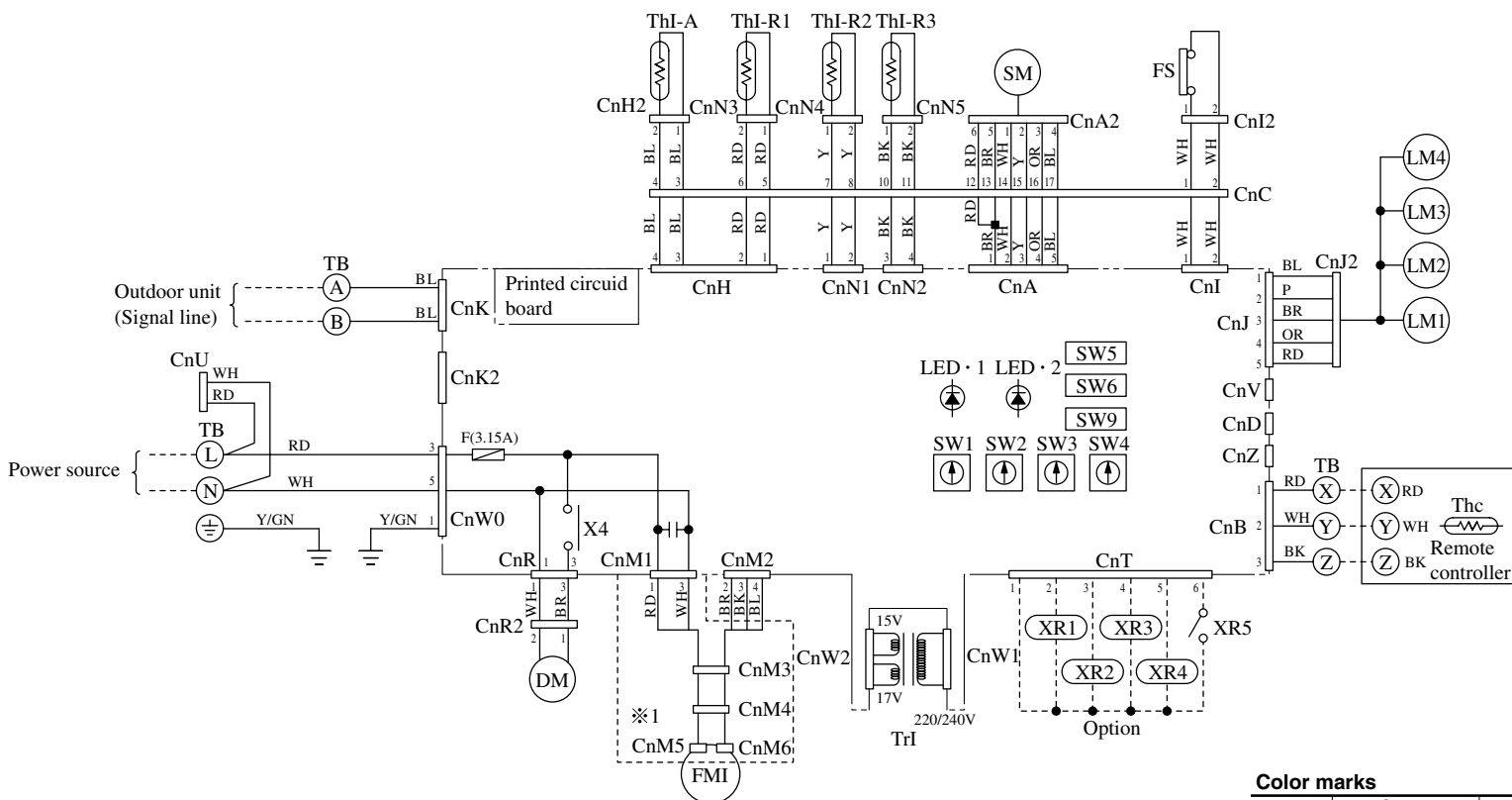
### 3. ELECTRICAL DATA

#### 3.1 Electrical wiring

(1) Indoor unit

(a) Ceiling recessed compact type (FDTc)

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

#### Color marks

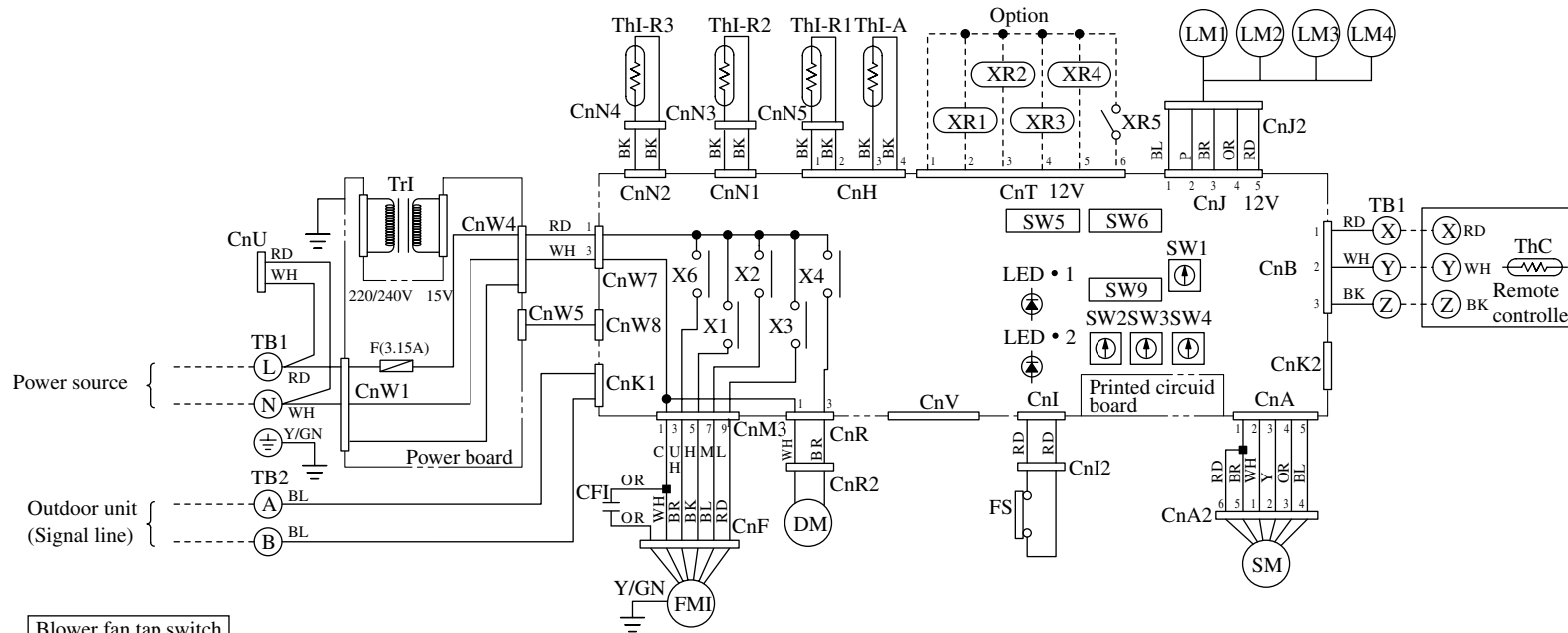
Mark	Color	Mark	Color
BK	Black	WH	White
BL	Blue	Y	Yellow
BR	Brown	P	Pink
OR	Orange	Y/GN	Yellow/Green
RD	Red		

#### Function of switches

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



(b) Ceiling recessed type (FDT)  
Models FDTA28KXE4A, 36KXE4A, 45KXE4A,  
56KXE4A, 71KXE4A, 90KXE4A



Blower fan tap switch

When increasing of static pressure is required, the following two methods are available in switching 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

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		

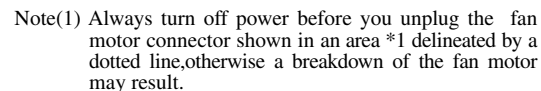
Function of switches

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

Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
FMI	Fan motor	SW1	Indoor unit address ten's place	XR3	Thermo ON output (DC12V output)
CFI	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 (voltage-free contact)
FS	Float switch	SW4	Outdoor unit address unit's place	X1,2,3,6	Auxiliary relay (For FM)
LM1~4	Louver motor	SW6	Model capacity setting	X4	Auxiliary relay (For DM)
SM	Stepping motor (For Exp.v)	Tr1	Transformer	TB1,2	Terminal block (○ mark)
ThI-A	Thermistor	F	Fuse	CnA~Z	Connector
ThI-R1	Thermistor	LED1	Indication lamp (Red)	■ mark	Closed-end connector
ThI-R2	Thermistor	LED2	Indication lamp (Green)		
ThI-R3	Thermistor	XR1	Operation output (DC12V output)		
ThC	Thermistor	XR2	Heating output (DC12V output)		





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

- ② By means of function setting from the remote controller unit, set the setting ㉟ of "I/U FUNCTION▲" (indoor unit function) to "Hi CEILING 1" (high-speed tap).

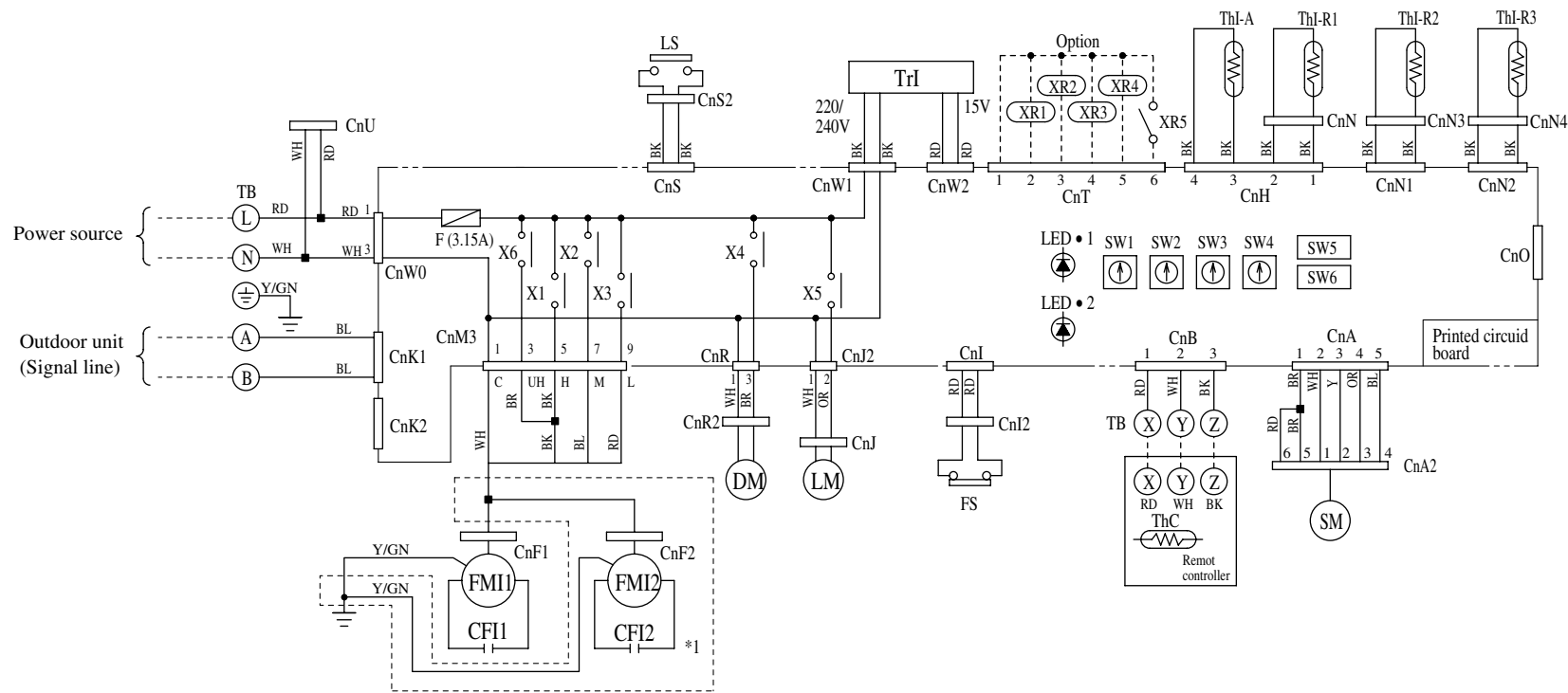
Function number ㉠	Function description ㉢	Setting ㉣
01	Hi CEILING SET	Hi CEILING

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

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

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	





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

#### Meaning of marks

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

#### Color marks

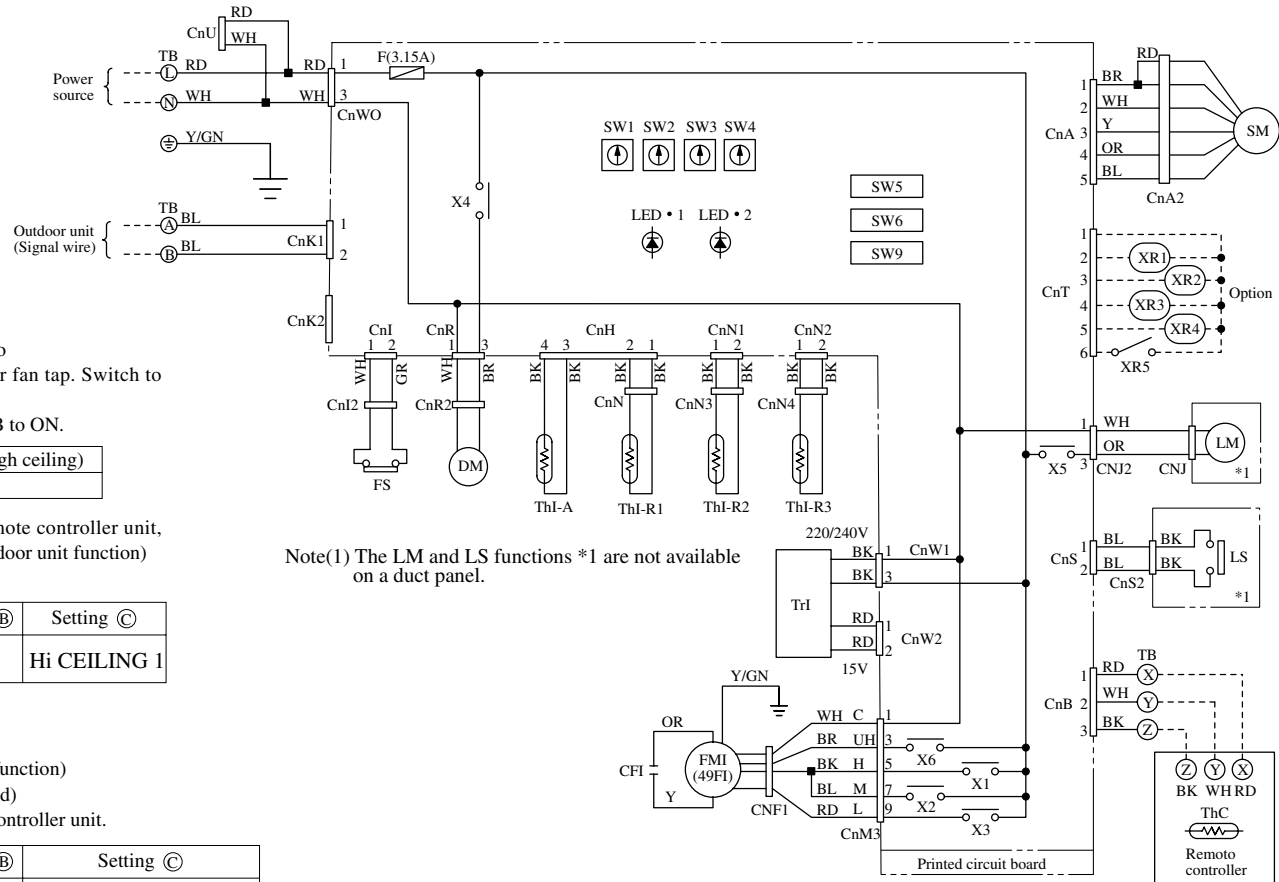
Mark	Color	Mark	Color
<b>BK</b>	Black	<b>RD</b>	Red
<b>BL</b>	Blue	<b>WH</b>	White
<b>BR</b>	Brown	<b>Y</b>	Yellow
<b>OR</b>	Orange	<b>Y/GN</b>	Yellow/Green

#### Function of switches

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



(d) Ceiling recessed single air supply port type(FDTQ)  
Models FDTQA22KXE4A, 28KXE4A, 36KXE4A



Note(1) The LM and LS functions \*1 are not available on a duct panel.

**Blower fan tap switch**

In case of using duct panel, the following two methods are available in switching 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

**LOUVER switch disabled setting**

In case of using duct panel, set the setting ③ of "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 S/W	INVALID

**Meaning of marks**

Mark	Parts name	Mark	Parts name	Mark	Parts name
<b>FMI</b>	Fan motor	<b>ThI-R3</b>	Thermistor	<b>XR1</b>	Operation output(DC12V output)
<b>49FI</b>	Internal thermostat for FMI	<b>ThC</b>	Thermistor	<b>XR2</b>	Heating output(DC12V output)
<b>CFI</b>	Capacitor for FMI	<b>SW1</b>	Indoor unit address ten's place	<b>XR3</b>	Thermo ON output(DC12V output)
<b>DM</b>	Drain motor	<b>SW2</b>	Indoor unit address unit's place	<b>XR4</b>	Inspection output(DC12V output)
<b>FS</b>	Float switch	<b>SW3</b>	Outdoor unit address ten's place	<b>XR5</b>	Remote operation input(volt-free contact)
<b>LM</b>	Louver motor	<b>SW4</b>	Outdoor unit address unit's place	<b>X1,2,3,6</b>	Auxiliary relay(For FM)
<b>LS</b>	Limit switch	<b>SW6</b>	Model capacity setting	<b>X4</b>	Auxiliary relay(For DM)
<b>SM</b>	Stepping motor(For Exp.v)	<b>TrI</b>	Transformer	<b>X5</b>	Auxiliary relay(For LM)
<b>ThI-A</b>	Thermistor	<b>F</b>	Fuse	<b>TB</b>	Terminal block(○ mark)
<b>ThI-R1</b>	Thermistor	<b>LED1</b>	Indication lamp(Red)	<b>CnA~Z</b>	Connector
<b>ThI-R2</b>	Thermistor	<b>LED2</b>	Indication lamp(Green)	<b>■mark</b>	Closed-end connector

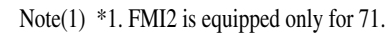
**Color marks**

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

**Function of switches**

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





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

- ② By means of function setting from the remote controller unit, set the setting ㉔ of "I/U FUNCTION▲" (indoor unit function) to "Hi CEILING 1" (high-speed tap).

Function number ㉠	Function description ㉢	Setting ㉣
01	Hi CEILING SET	Hi CEILING 1

### Color marks

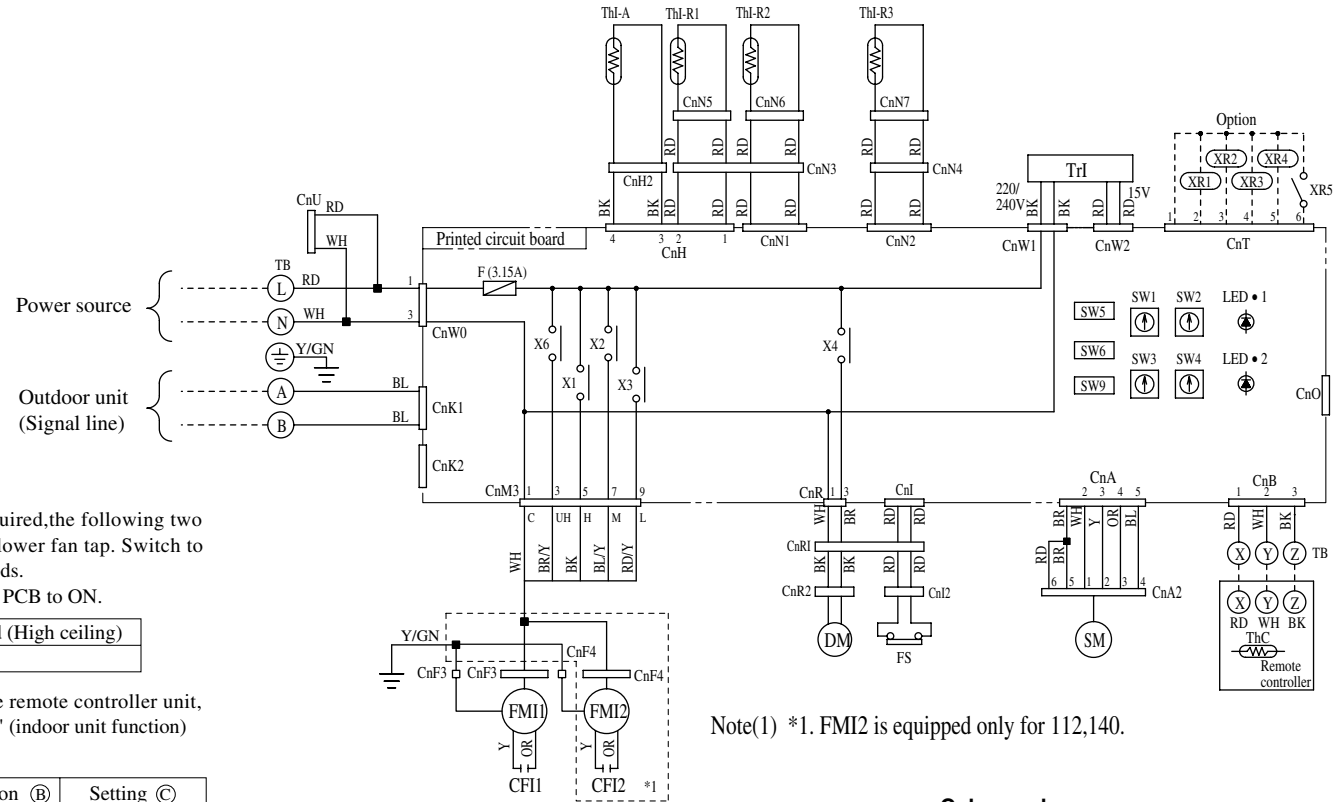
## Function of switches

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	

Mark	Parts name	Mark	Parts name	Mark	Parts name
<b>FM1,2</b>	Fan motor	<b>ThC</b>	Thermistor	<b>XR2</b>	Heating output(DC12V output)
<b>CF1,2</b>	Capacitor for FMI	<b>SW1</b>	Indoor unit address ten's place	<b>XR3</b>	Thermo ON output(DC12V output)
<b>DM</b>	Drain motor	<b>SW2</b>	Indoor unit address unit's place	<b>XR4</b>	Inspection output(DC12V output)
<b>FS</b>	Float switch	<b>SW3</b>	Outdoor unit address ten's place	<b>XR5</b>	Remote operation input(volt-free contact)
<b>LM</b>	Louver motor	<b>SW4</b>	Outdoor unit address unit's place	<b>X1,2,3,6</b>	Auxiliary relay(For FM)
<b>LS</b>	Louver switch	<b>SW6</b>	Model capacity setting	<b>X4</b>	Auxiliary relay(For DM)
<b>SM</b>	Stepping motor(For Exp.v)	<b>Trl</b>	Transformer	<b>X5</b>	Auxiliary relay(For LM)
<b>Thl-A</b>	Thermistor	<b>F</b>	Fuse	<b>TB</b>	Terminal block(○ mark)
<b>Thl-R1</b>	Thermistor	<b>LED1</b>	Indication lamp(Red)	<b>CnA~Z</b>	Connector
<b>Thl-R2</b>	Thermistor	<b>LED2</b>	Indication lamp(Green)	<b>■mark</b>	Closed-end connector
<b>Thl-R3</b>	Thermistor	<b>XR1</b>	Operation output(DC12V output)		



(f) Casseteria type (FDR)  
Models All models



**Blower fan tap switch**

When increasing of static pressure is required, the following two methods are available in switching 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	Mark	Parts name
<b>FMI1,2</b>	Fan motor	<b>SW1</b>	Indoor unit address ten's place	<b>XR2</b>	Heating output(DC12V output)
<b>CFI1,2</b>	Capacitor for FMI	<b>SW2</b>	Indoor unit address unit's place	<b>XR3</b>	Thermo ON output(DC12V output)
<b>DM</b>	Drain motor	<b>SW3</b>	Outdoor unit address ten's place	<b>XR4</b>	Inspection output(DC12V output)
<b>FS</b>	Float switch	<b>SW4</b>	Outdoor unit address unit's place	<b>XR5</b>	Remote operation input(volt-free contact)
<b>SM</b>	Stepping motor(For Exp.v)	<b>SW6</b>	Model capacity setting	<b>X1,2,3,6</b>	Auxiliary relay(For FM)
<b>ThI-A</b>	Thermistor	<b>TrI</b>	Transformer	<b>X4</b>	Auxiliary relay(For DM)
<b>ThI-R1</b>	Thermistor	<b>F</b>	Fuse	<b>TB</b>	Terminal block(○ mark)
<b>ThI-R2</b>	Thermistor	<b>LED1</b>	Indication lamp(Red)	<b>CnA~Z</b>	Connector
<b>ThI-R3</b>	Thermistor	<b>LED2</b>	Indication lamp(Green)	<b>■mark</b>	Closed-end connector
<b>ThC</b>	Thermistor	<b>XR1</b>	Operation output(DC12V output)		

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

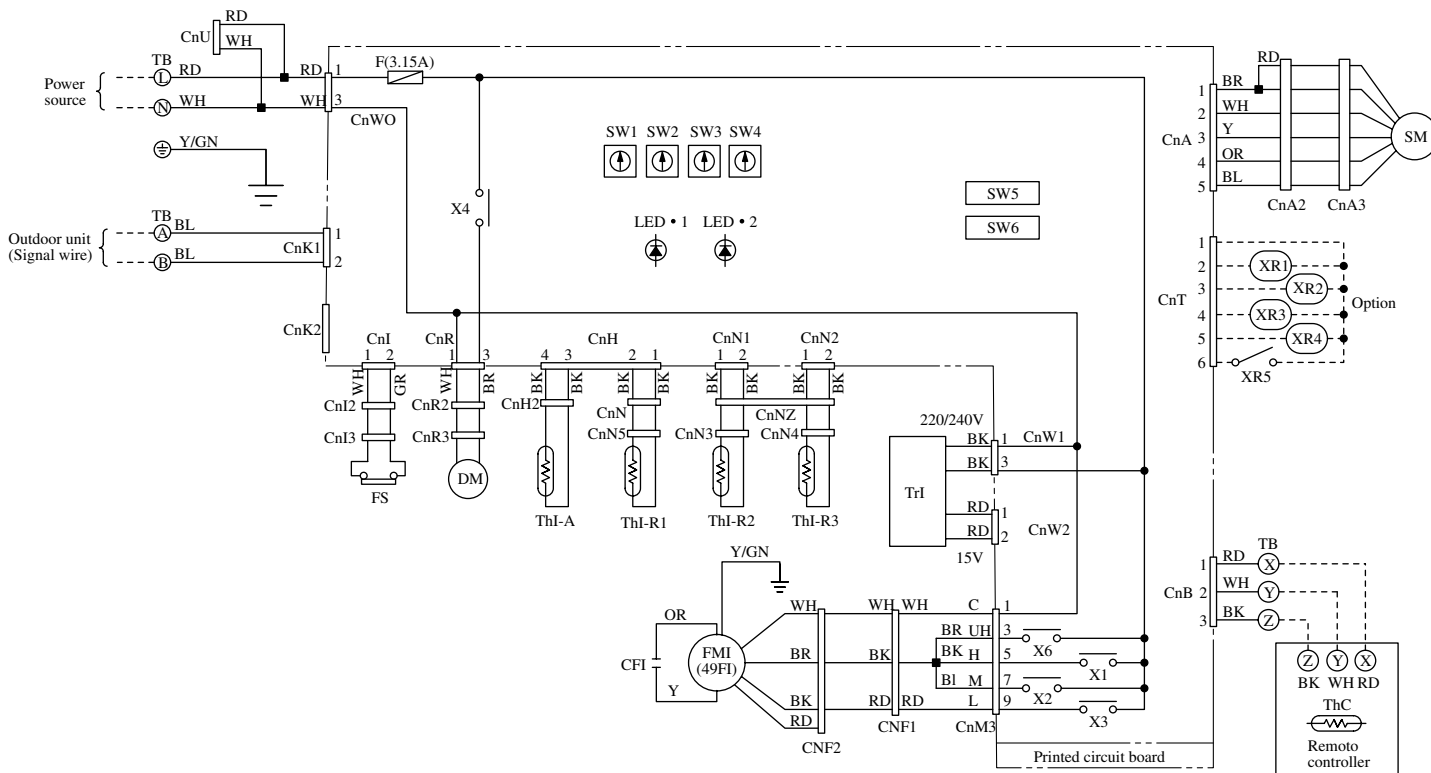
**Color marks**

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

**Function of switches**

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





## Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
<b>FMI</b>	Fan motor	<b>ThC</b>	Thermistor	<b>XR1</b>	Operation output(DC12V output)
<b>49FI</b>	Internal thermostat for FMI	<b>SW1</b>	Indoor unit address ten's place	<b>XR2</b>	Heating output(DC12V output)
<b>CFI</b>	Capacitor for FMI	<b>SW2</b>	Indoor unit address unit's place	<b>XR3</b>	Thermo ON output(DC12V output)
<b>DM</b>	Drain motor	<b>SW3</b>	Outdoor unit address ten's place	<b>XR4</b>	Inspection output(DC12V output)
<b>FS</b>	Float switch	<b>SW4</b>	Outdoor unit address unit's place	<b>XR5</b>	Remote operation input(volt-free contact)
<b>SM</b>	Stepping motor(For Exp.v)	<b>SW6</b>	Model capacity setting	<b>X1,2,3,6</b>	Auxiliary relay(For FM)
<b>ThI-A</b>	Thermistor	<b>TrI</b>	Transformer	<b>X4</b>	Auxiliary relay(For DM)
<b>ThI-R1</b>	Thermistor	<b>F</b>	Fuse	<b>TB</b>	Terminal block(○ mark)
<b>ThI-R2</b>	Thermistor	<b>LED1</b>	Indication lamp(Red)	<b>CnA~Z</b>	Connector
<b>ThI-R3</b>	Thermistor	<b>LED2</b>	Indication lamp(Green)	<b>■mark</b>	Closed-end connector

### Color marks

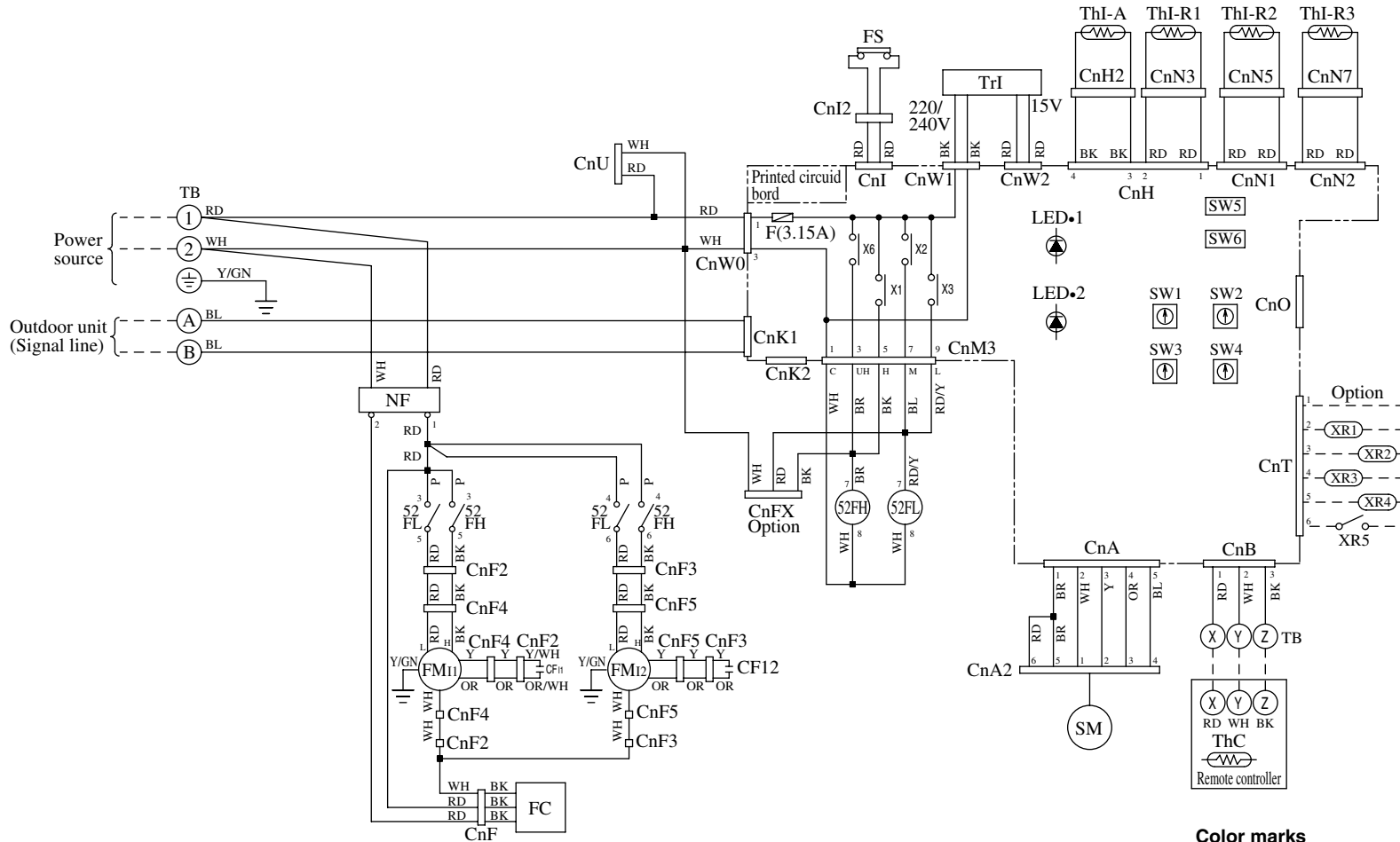
Mark	Color	Mark	Color
<b>BK</b>	Black	<b>RD</b>	Red
<b>BL</b>	Blue	<b>WH</b>	White
<b>BR</b>	Brown	<b>Y</b>	Yellow
<b>GR</b>	Gray	<b>Y/GN</b>	Yellow/Green
<b>OR</b>	Orange		

## 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	



(h) High static pressure ducted type (FDU)  
Models All models



Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
FM1,2	Fan motor (with thermostat)	TrI	Transformer	TB	Terminal block (○ mark)
CF1,2	FMi condenser	SM	Stepping motor (For Exp.v)	52FL,FH	Electromagnetic contactor for FMi
FC	Fan controller	SW1	Indoor unit address ten's place	X1~3,6	Auxiliary relay (For FM)
NF	Noise filter	SW2	Indoor unit address unit's place	XR1	Operation output (DC12V output)
FS	Float switch	SW3	Outdoor unit address ten's place	XR2	Heating output (DC12V output)
ThI-A	Thermistor	SW4	Outdoor unit address unit's place	XR3	Thermo ON output (DC12V output)
ThI-R1	Thermistor	SW6	Model capacity selector	XR4	Inspection output (DC12V output)
ThI-R2	Thermistor	LED1	Indication lamp (Red)	XR5	Remote operation (volt-free contact)
ThI-R3	Thermistor	LED2	Indication lamp (Green)	CnA~Z	Connector
Thc	Thermistor	F	Fuse	■ mark	Closed-end connector

Color marks

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

Function of switches

Mark	Function	
SW5-3	ON	Input Reverse Invalid
	OFF	signal Rus stop
SW5-4	ON	Emergency stop signal:Invalid
	OFF	Emergency stop signal:valid

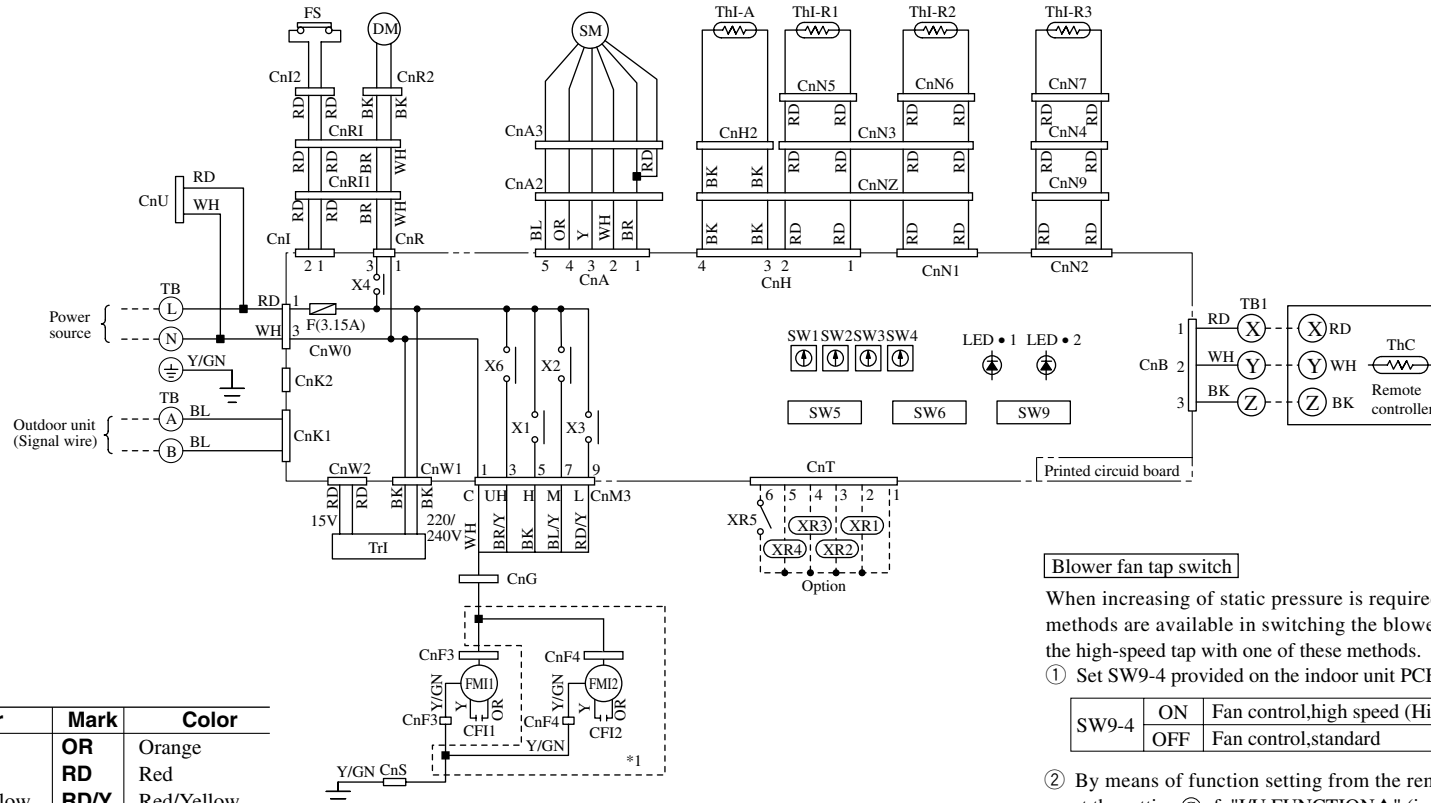


### Color marks

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

### Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
<b>FMI1,2</b>	Fan motor	<b>SW1</b>	Indoor unit address ten's place	<b>XR2</b>	Heating output(DC12V output)
<b>CF11,2</b>	Capacitor for FMI	<b>SW2</b>	Indoor unit address unit's place	<b>XR3</b>	Thermo ON output(DC12V output)
<b>DM</b>	Drain motor	<b>SW3</b>	Outdoor unit address ten's place	<b>XR4</b>	Inspection output(DC12V output)
<b>FS</b>	Float switch	<b>SW4</b>	Outdoor unit address unit's place	<b>XR5</b>	Remote operation input(volt-free contact)
<b>SM</b>	Stepping motor(For Exp.v)	<b>SW6</b>	Model capacity setting	<b>X1,2,3,6</b>	Auxiliary relay(For FM)
<b>ThI-A</b>	Thermistor	<b>TrI</b>	Transformer	<b>X4</b>	Auxiliary relay(For DM)
<b>ThI-R1</b>	Thermistor	<b>F</b>	Fuse	<b>TB</b>	Terminal block(○ mark)
<b>ThI-R2</b>	Thermistor	<b>LED1</b>	Indication lamp(Red)	<b>CnA~Z</b>	Connector
<b>ThI-R3</b>	Thermistor	<b>LED2</b>	Indication lamp(Green)	<b>■mark</b>	Closed-end connector
<b>ThC</b>	Thermistor	<b>XR1</b>	Operation output(DC12V output)		



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

### Blower fan tap switch

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

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

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

- 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).

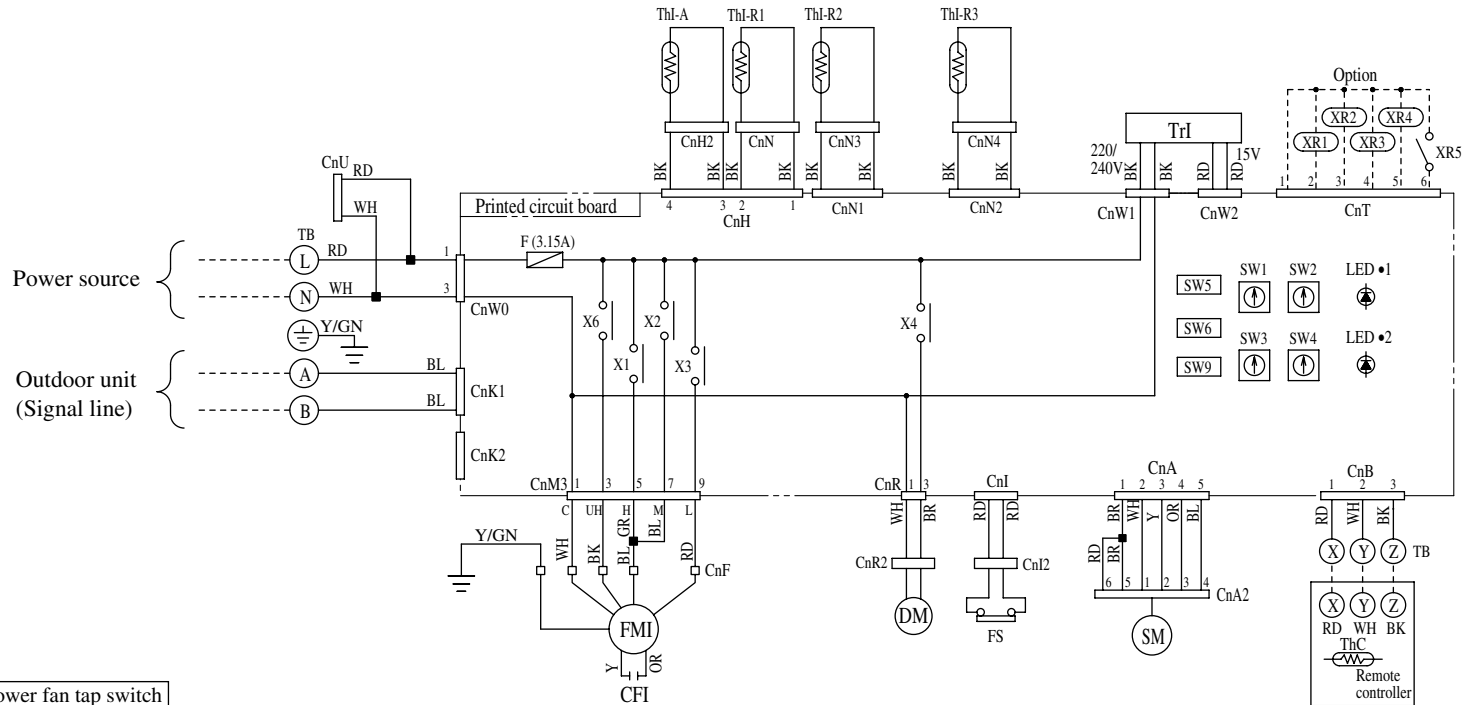
Function number ①	Function description ②	Setting ③
01	Hi CEILING SET	Hi CEILING 1

### Function of switches

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

(i) Satellite ducted type (FDUM)  
Models All models





#### Blower fan tap switch

When increasing of static pressure is required, the following two methods are available in switching 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	Mark	Parts name
<b>FMI</b>	Fan motor	<b>SW1</b>	Indoor unit address ten's place	<b>XR2</b>	Heating output(DC12V output)
<b>CFI</b>	Capacitor for FMI	<b>SW2</b>	Indoor unit address unit's place	<b>XR3</b>	Thermo ON output(DC12V output)
<b>DM</b>	Drain motor	<b>SW3</b>	Outdoor unit address ten's place	<b>XR4</b>	Inspection output(DC12V output)
<b>FS</b>	Float switch	<b>SW4</b>	Outdoor unit address unit's place	<b>XR5</b>	Remote operation input(volt-free contact)
<b>SM</b>	Stepping motor(For Exp.v)	<b>SW6</b>	Model capacity setting	<b>X1,2,3,6</b>	Auxiliary relay(For FM)
<b>ThI-A</b>	Thermistor	<b>TrI</b>	Transformer	<b>X4</b>	Auxiliary relay(For DM)
<b>ThI-R1</b>	Thermistor	<b>F</b>	Fuse	<b>TB</b>	Terminal block(○ mark)
<b>ThI-R2</b>	Thermistor	<b>LED1</b>	Indication lamp(Red)	<b>CnA~Z</b>	Connector
<b>ThI-R3</b>	Thermistor	<b>LED2</b>	Indication lamp(Green)	<b>■mark</b>	Closed-end connector
<b>ThC</b>	Thermistor	<b>XR1</b>	Operation output(DC12V output)		

#### Color marks

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

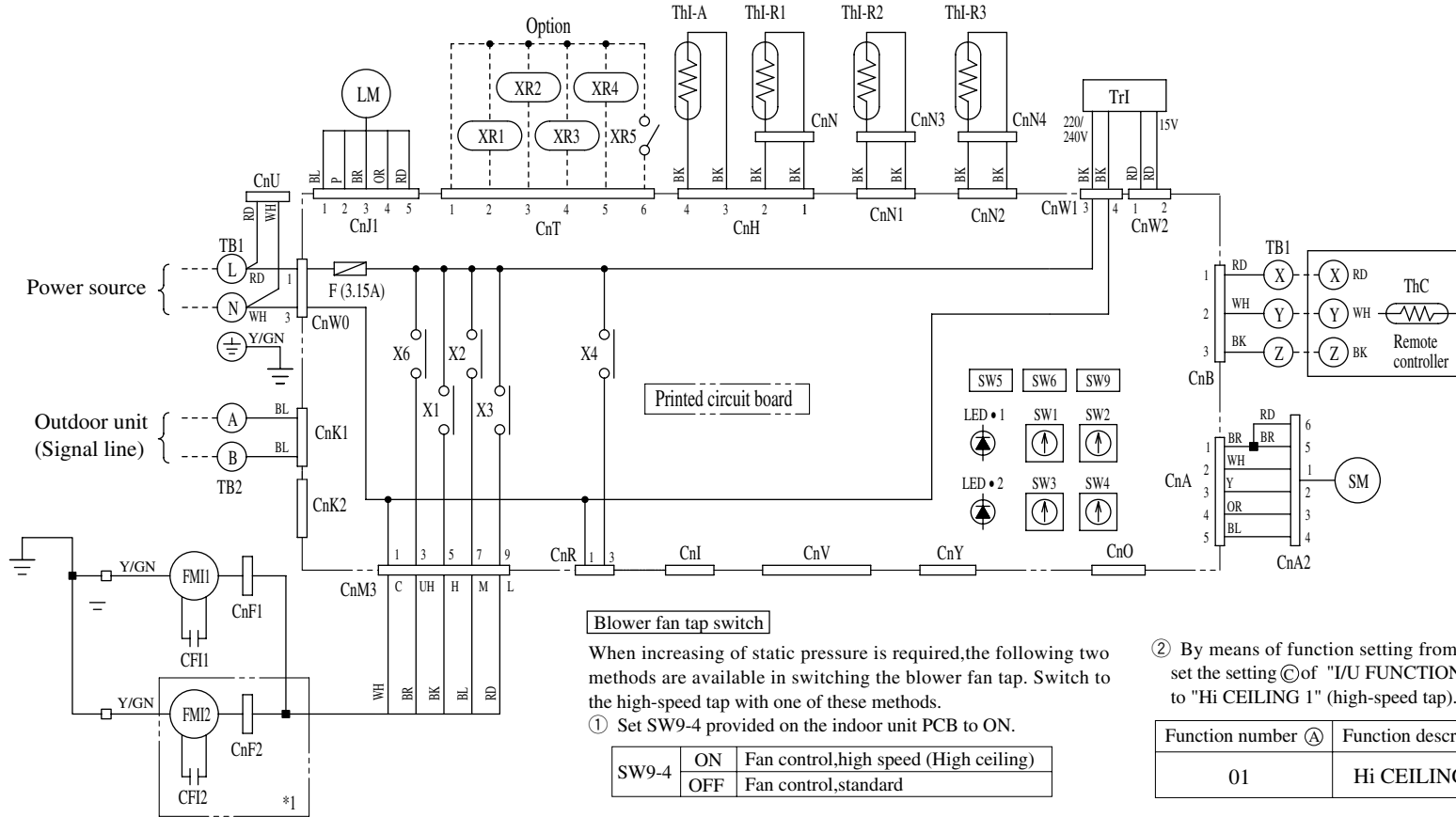
#### Function of switches

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

(i) Ceiling mounted duct type (FDMR)  
Models All models



(k) Ceiling suspended type (FDE)  
Models All models



Note(1) \*1. FMI2 is equipped only for 71,112,140.

Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
FMI1,2	Fan motor	SW2	Indoor unit address unit's place	XR3	Thermo ON output(DC12V output)
CFI1,2	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(volt-free contact)
SM	Stepping motor(For Exp.v)	SW6	Model capacity setting	X1,2,3,6	Auxiliary relay(For FM)
ThI-A	Thermistor	TrI	Transformer	TB1,2	Terminal block(○ mark)
ThI-R1	Thermistor	F	Fuse	CnA~Z	Connector
ThI-R2	Thermistor	LED1	Indication lamp(Red)	■mark	Closed-end connector
ThI-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

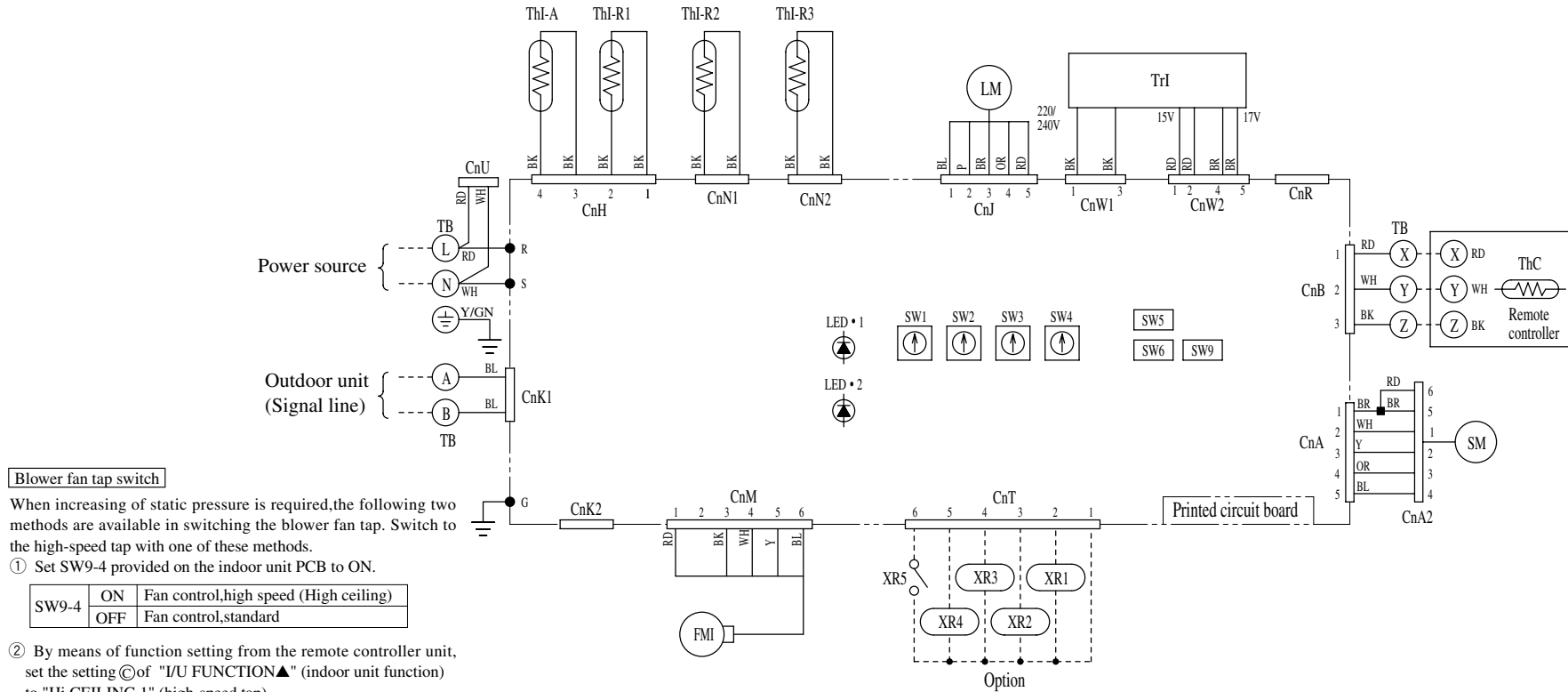
Mark	Color	Mark	Color
BK	Black	WH	White
BL	Blue	Y	Yellow
BR	Brown	P	Pink
OR	Orange	Y/GN	Yellow/Green
RD	Red		

Function of switches

Mark	Function
SW5-3	ON Input Reverse Invalid
	OFF signal Run stop
SW5-4	ON Emergency stop signal:valid
	OFF Emergency stop signal:Invalid



(I) Wall mounted type (FDK)  
Models FDKA22KXE4A, 28KXE4A, 36KXE4A, 45KXE4A, 56KXE4A



Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
FMI	Fan motor	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(volt-free contact)
SM	Stepping motor(For Exp.v)	SW6	Model capacity setting	TB	Terminal block(○ mark)
ThI-A	Thermistor	TrI	Transformer	CnA~Z	Connector
ThI-R1	Thermistor	F	Fuse	■mark	Closed-end connector
ThI-R2	Thermistor	LED1	Indication lamp(Red)		
ThI-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)		
SW2	Indoor unit address unit's place	XR3	Thermo ON output(DC12V output)		

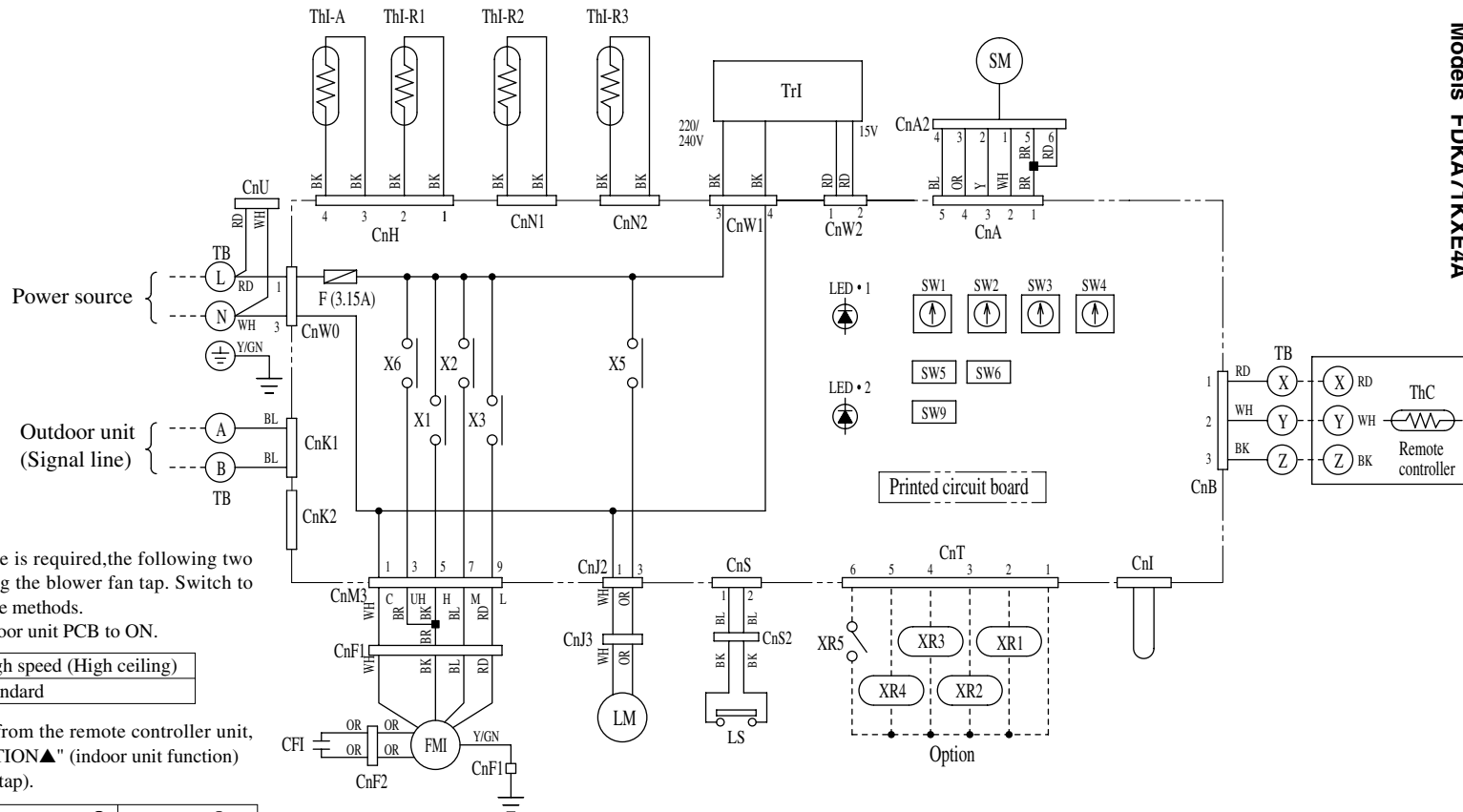
Color marks

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





#### Blower fan tap switch

When increasing of static pressure is required, the following two methods are available in switching 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	Mark	Parts name
<b>FMI</b>	Fan motor	<b>SW2</b>	Indoor unit address unit's place	<b>XR3</b>	Thermo ON output(DC12V output)
<b>CFI</b>	Capacitor for FMI	<b>SW3</b>	Outdoor unit address ten's place	<b>XR4</b>	Inspection output(DC12V output)
<b>LM</b>	Louver motor	<b>SW4</b>	Outdoor unit address unit's place	<b>XR5</b>	Remote operation input(volt-free contact)
<b>SM</b>	Stepping motor(For Exp.v)	<b>SW6</b>	Model capacity setting	<b>X1,2,3,6</b>	Auxiliary relay(For FM)
<b>ThI-A</b>	Thermistor	<b>TrI</b>	Transformer	<b>X5</b>	Auxiliary relay(For LM)
<b>ThI-R1</b>	Thermistor	<b>F</b>	Fuse	<b>TB</b>	Terminal block(○ mark)
<b>ThI-R2</b>	Thermistor	<b>LED1</b>	Indication lamp(Red)	<b>CnA~Z</b>	Connector
<b>ThI-R3</b>	Thermistor	<b>LED2</b>	Indication lamp(Green)	<b>■mark</b>	Closed-end connector
<b>ThC</b>	Thermistor	<b>XR1</b>	Operation output(DC12V output)		
<b>SW1</b>	Indoor unit address ten's place	<b>XR2</b>	Heating output(DC12V output)		

#### Color marks

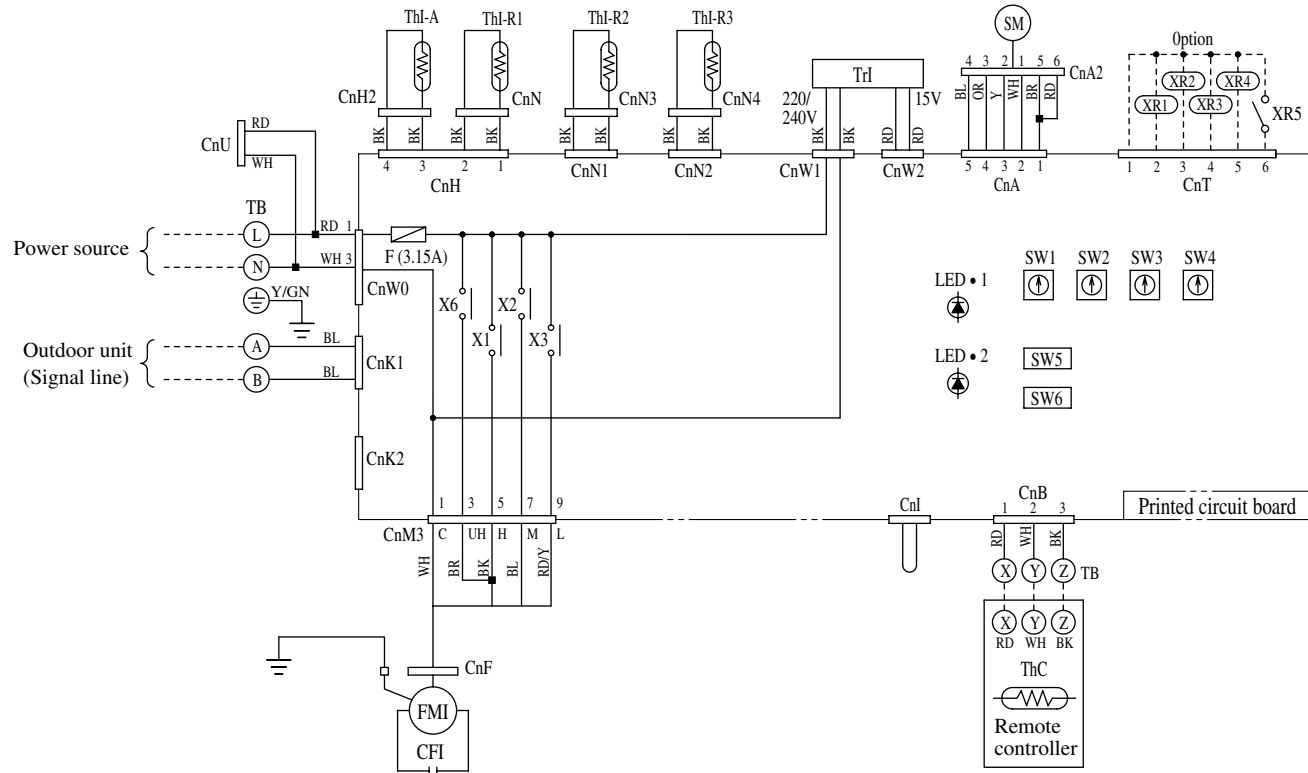
Mark	Color	Mark	Color
<b>BK</b>	Black	<b>WH</b>	White
<b>BL</b>	Blue	<b>Y</b>	Yellow
<b>BR</b>	Brown	<b>P</b>	Pink
<b>OR</b>	Orange	<b>Y/GN</b>	Yellow/Green
<b>RD</b>	Red		

#### Function of switches

Mark	Function
<b>SW5-3</b>	ON Input Reverse Invalid
	OFF signal Run stop
<b>SW5-4</b>	ON Emergency stop signal:valid
	OFF Emergency stop signal:Invalid



(m) Floor standing exposed type (FDL)  
(n) Floor standing hidden type (FDL)  
Models All models



### Meaning of marks

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

### Color marks

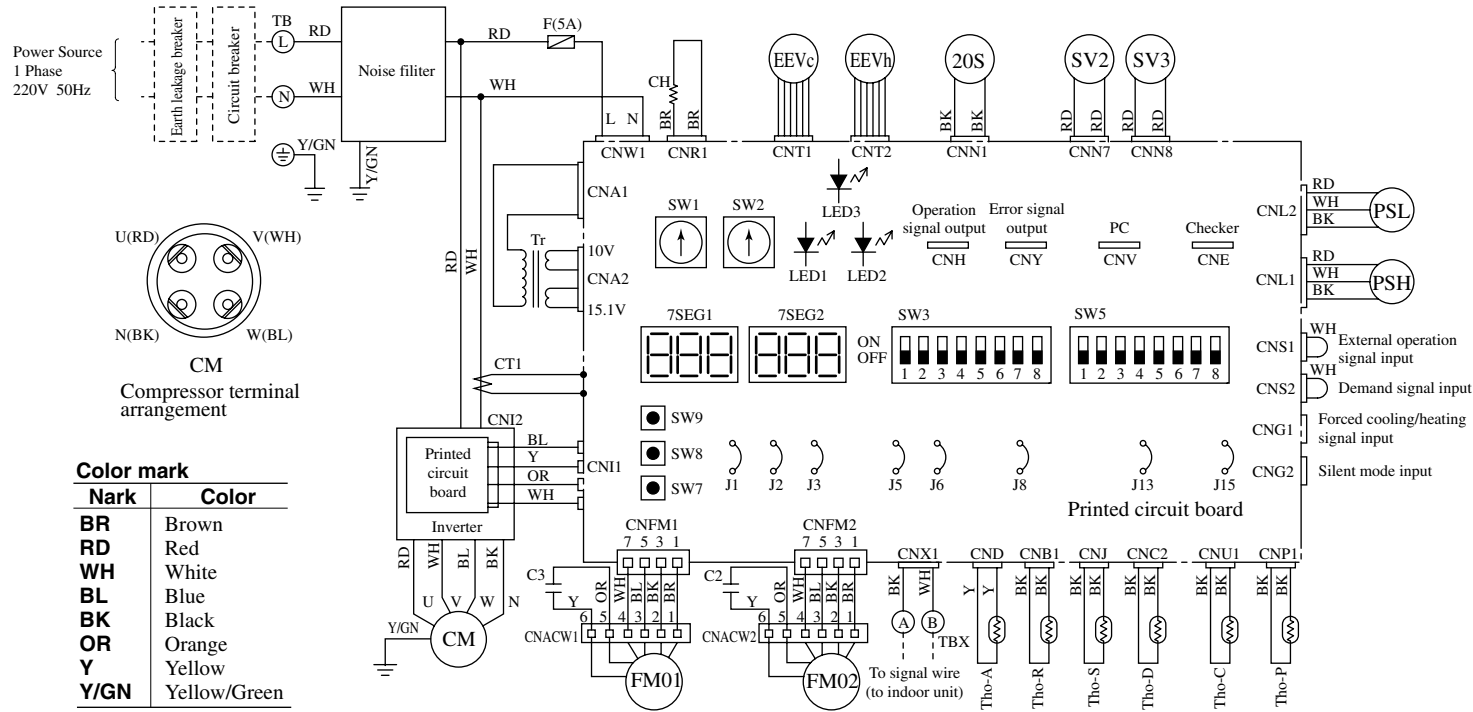
Mark	Color	Mark	Color
<b>BK</b>	Black	<b>RD/Y</b>	Red/Yellow
<b>BL</b>	Blue	<b>WH</b>	White
<b>BR</b>	Brown	<b>Y</b>	Yellow
<b>OR</b>	Orange	<b>Y/GN</b>	Yellow/Green
<b>RD</b>	Red		

### Function of switches

Mark	Function
<b>ON</b>	Emergency stop signal : Valid
<b>SW5-4</b>	OFF Emergency stop signal : Invalid



(2) Outdoor unit  
(a) KX series  
Model FDCA140HKXEN4A



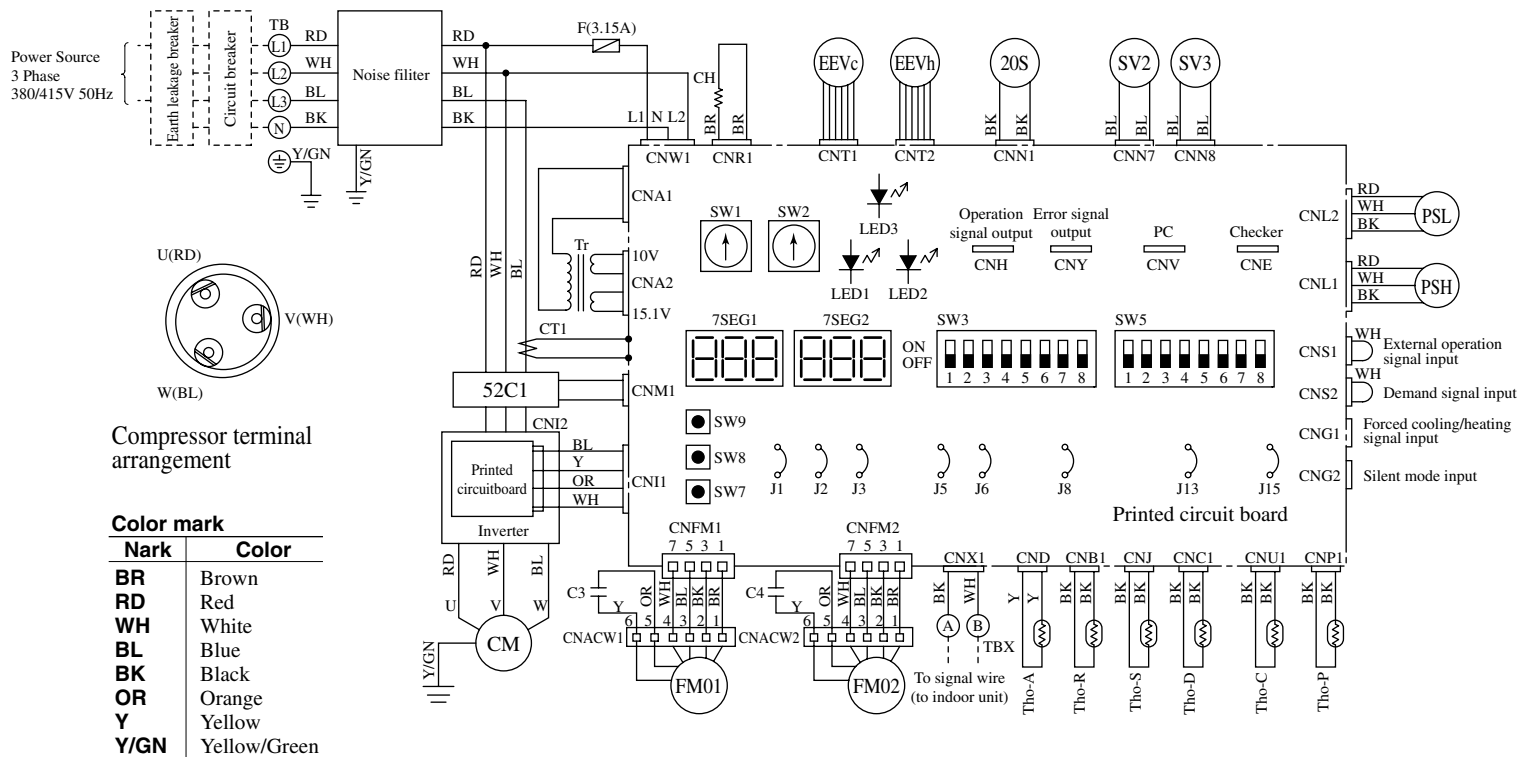
**Meaning of marks**

Mark	Parts name	Mark	Parts name
CM	Compressor motor	CNA~X	Connector
FMO1,2	Fan motor	SW1	Address setting SW for the number of tens
CH	Crankcase heater	SW2	Address setting SW for the number of units
20S	Four-way valve (coil)	SW3-1	Inspection LED reset
SV2,3	Solenoid valve (oil separator)	SW5-6,7,8	Capacity measurement mode
EEVc,h	Electronic expansion valve	SW7	Clear data
Tho-A	Thermistor (outdoor temp.)	SW8	7-segment display up (number of units)
Tho-C	Thermistor (dome underneath)	SW9	7-segment display up (number of tens)
Tho-D	Thermistor (discharge pipe)	J1~J3	Unit selector
Tho-R	Thermistor (heat exchanger)	J5,6	Demand capacity selector
Tho-P	Thermistor (power transistor)	J8	Anti-snow measures
Tho-S	Thermistor (suction pipe)	J13	External input selector level/pulse
PSL	Low pressure sensor	J15	Defrost start temperature selector
PSH	High pressure sensor	LED1	Inspection indication (red)
CT	Current sensor	LED2	Inspection indication (green)
Tr	Transformer	LED3	Inspection indication (green)
TB,TBX	Terminal block	7SEG1	7-segment LED (function indication)
F	Fuse	7SEG2	7-segment LED (data indication)

**Function of switches**

Mark	Function
SW3-4	ON For servicing use OFF Normal operation
SW3-5	ON Check operation OFF Normal operation
SW3-7	ON Forced cooling/heating mode OFF Normal operation
SW3-8	ON Test mode OFF Normal operation
SW5-1	ON Test run OFF Normal operation
SW5-2	ON Cooling during test run OFF Heating during test run
SW5-3	ON Pump down operation OFF Normal operation





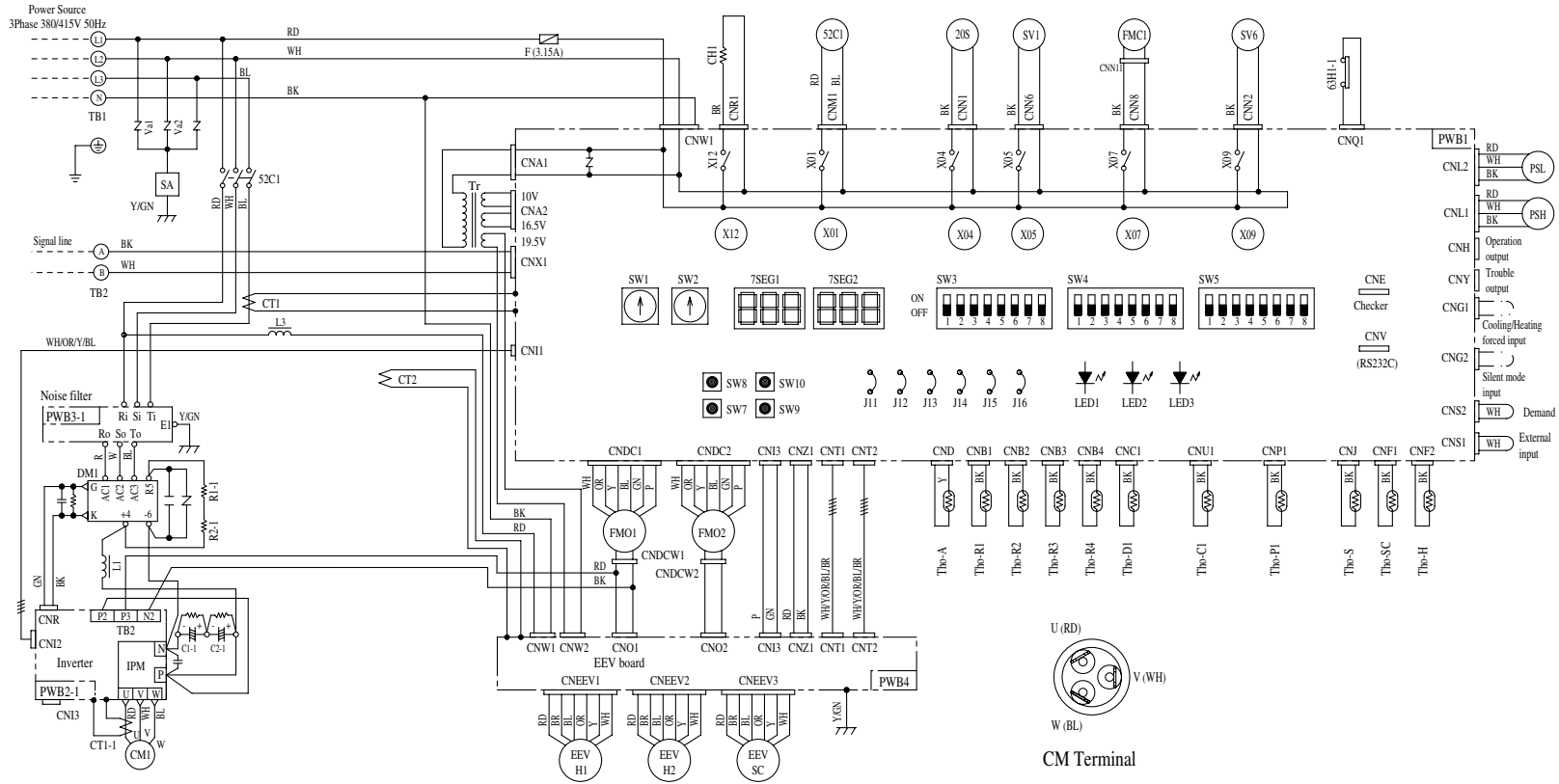
### Meaning of marks

Mark	Parts name	Mark	Parts name
CM	Compressor motor	CNA-X	Connector
FMO1,2	Fan motor	SW1	Address setting SW for the number of tens
52C1	Magnetic contactor for CM	SW2	Address setting SW for the number of units
CH	Crankcase heater	SW3-1	Inspection LED reset
20S	Four-way valve (coil)	SW5-6,7,8	Capacity measurement mode
SV2,3	Solenoid valve (oil separator)	SW7	Clear data
EEVc,h	Electronic expansion valve	SW8	7-segment display up (number of units)
Tho-A	Thermistor (outdoor temp.)	SW9	7-segment display up (number of tens)
Tho-C	Thermistor (dome underneath)	J1~J3	Unit selector
Tho-D	Thermistor (discharge pipe)	J5,6	Demand capacity selector
Tho-R	Thermistor (heat exchanger)	J8	Anti-snow measures
Tho-P	Thermistor (power transistor)	J13	External input selector level/pulse
Tho-S	Thermistor (suction pipe)	J15	Defrost start temperature selector
PSL	Low pressure sensor	LED1	Inspection indication (red)
PSH	High pressure sensor	LED2	Inspection indication (green)
CT	Current sensor	LED3	Inspection indication (green)
Tr	Transformer	7SEG1	7-segment LED (function indication)
TB, TBX	Terminal block	7SEG2	7-segment LED (data indication)
F	Fuse		

### Function of switches

Mark	Function
SW3-4	ON For servicing use
	OFF Normal operation
SW3-5	ON Check operation
	OFF Normal operation
SW3-7	ON Forced cooling/heating mode
	OFF Normal operation
SW3-8	ON Test mode
	OFF Normal operation
SW5-1	ON Test run
	OFF Normal operation
SW5-2	ON Cooling during test run
	OFF Heating during test run
SW5-3	ON Pump down operation
	OFF Normal operation





### Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
CM1	Compressor motor	Tho-R2	Thermistor (outdoor H.X. temp exhaust)	SW7	Data clear/insert
FMO1,2	Fan motor (outdoor unit)	Tho-R3	Thermistor (outdoor H.X. temp inlet)	SW8	7seg indicate (unit's place)
52C1	Magnetic contactor for CM	Tho-R4	Thermistor (outdoor H.X. temp inlet)	SW9	7seg indicate (ten's place)
CH1	Crankcase heater	PSL	Low pressure sensor	SW10	Reset
X01-12	Auxiliary relay	PSH	High pressure sensor	J11,12	Set up model (volt)
20S	4way valve	CT1	Current sensor	J13	External input select level/pulse
SV1	Solenoid valve (CM1:bypass)	SA	Arrestor	J14	Defrost recover temp
SV6	Solenoid valve (oil separator CM1)	Tr	Transformer	J15	Defrost start temp
EEVH1,2	Expansion valve for heating	Va1-3	Varistor	J16	Heat recovery unit
EEVSC	Expansion valve for SC	TB1,2	Terminal block	LED1	Indication lamp (red)
63H1-1	High pressure switch (for protection)	F	Fuse	LED2	Indication lamp (green)
Tho-A	Thermistor (outdoor air temp)	CNA-Z	Connector	LED3	Indication lamp (green for service)
Tho-C1	Thermistor (dome temp)	SW1	Outdoor unit address (ten's place)	7SEG1	7seg L.E.D. (function indication)
Tho-D1	Thermistor (discharge temp)	SW2	Outdoor unit address (unit's place)	7SEG2	7seg L.E.D. (data indication)
Tho-P1	Thermistor (IPM temp)	SW3-1	L.E.D.reset	L1,L2	D.C.reactior
Tho-S	Thermistor (suction temp)	SW4-1-4	Set up model	C1-1,2,C2-1,2	Condensor
Tho-SC	Thermistor (SC1 temp)	SW4-5	Demand	PWB1-4	Printed wiring board
Tho-H	Thermistor (SC2 temp)	SW4-6	Demand	IPM	Intelligent power module
Tho-R1	Thermistor (outdoor H.X. temp exhaust)	SW4-7	Address setting switch (master-slave)	FMC1,2	Fan for IPM
		SW4-8	Address setting switch (master-slave)		
		SW5-4-8	Spare		

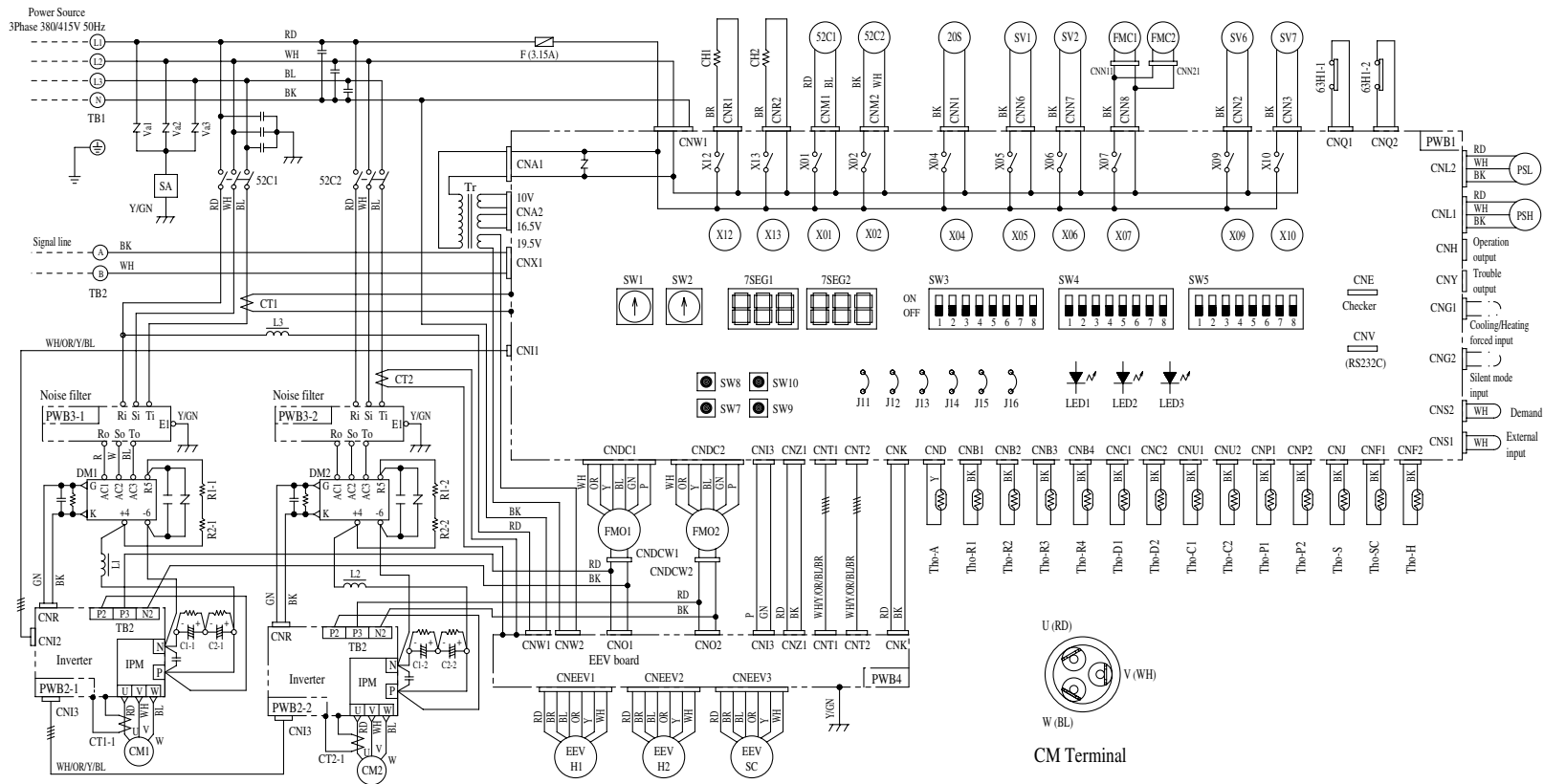
### Function of switches

Mark	Function
SW3-2	ON Auto backup operation
	OFF Regular operation
SW3-3	ON Set of renewal
	OFF Regular operation
SW3-4	ON Check mode non-available
	OFF Check mode available
SW3-5	ON Check of trial operation
	OFF Regular operation
SW3-6	ON Pipe wash mode
	OFF Regular operation
SW3-7	ON Forced cooling/heating
	OFF Regular operation
SW3-8	ON Test mode
	OFF Regular operation
SW5-1	ON Trial operation
	OFF Regular operation
SW5-2	ON Trial operation mode/cooling
	OFF Trial operation mode/heating
SW5-3	ON Pump down operation
	OFF Regular operation

### Color marks

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



**Meaning of marks**

Mark	Parts name	Mark	Parts name	Mark	Parts name
CM1,2	Compressor motor	Tho-R2	Thermistor (outdoor H.X. temp exhaust)	SW7	Data clear/insert
FMO1,2	Fan motor (outdoor unit)	Tho-R3	Thermistor (outdoor H.X. temp inlet)	SW8	7seg indicate (unit's place)
52C1,2	Magnetic contactor for CM	Tho-R4	Thermistor (outdoor H.X. temp inlet)	SW9	7seg indicate (ten's place)
CH1,2	Crankcase heater	PSL	Low pressure sensor	SW10	Reset
X01~13	Auxiliary relay	PSH	High pressure sensor	J11,12	Set up model (volt)
20S	4way valve	CT1,CT2	Current sensor	J13	External input select level/pulse
SV1	Solenoid valve (CM1:bypass)	SA	Arrestor	J14	Defrost recover temp
SV2	Solenoid valve (CM2:bypass)	Tr	Transformer	J15	Defrost start temp
SV6	Solenoid valve (oil separator CM1)	Va1~3	Varistor	J16	Heat recovery unit
SV7	Solenoid valve (oil separator CM2)	TB1,2	Terminal block	LED1	Indication lamp (red)
EEVH1,2	Expansion valve for heating	F	Fuse	LED2	Indication lamp (green)
EEVSC	Expansion valve for SC	CNA-Z	Connector	LED3	Indication lamp (green for service)
63H1-1,2	High pressure switch (for protection)	SW1	Outdoor unit address (ten's place)	7SEG1	7seg L.E.D. (function indication)
Tho-A	Thermistor (outdoor air temp)	SW2	Outdoor unit address (unit's place)	7SEG2	7seg L.E.D. (data indication)
Tho-C1,2	Thermistor (dome temp)	SW3-1	L.E.D.reset	L1,L2	D.C.reactor
Tho-D1,2	Thermistor (discharge temp)	SW4-1~4	Set up model	C1-1,2,C2-1,2	Condensor
Tho-P1,2	Thermistor (IPM temp)	SW4-5	Demand	PWB1-4	Printed wiring board
Tho-S	Thermistor (suction temp)	SW4-6	Demand	IPM	Intelligent power module
Tho-SC	Thermistor (SC1 temp)	SW4-7	Address setting switch (master-slave)	FMC1,2	Fan for IPM
Tho-H	Thermistor (SC2 temp)	SW4-8	Address setting switch (master-slave)		
Tho-R1	Thermistor (outdoor H.X. temp exhaust)	SW5-4~8	Spare		

**Function of switches**

Mark	Function
SW3-2	ON Auto backup operation OFF Regular operation
SW3-3	ON Set of renewal OFF Regular operation
SW3-4	ON Check mode non-available OFF Check mode available
SW3-5	ON Check of trial operation OFF Regular operation
SW3-6	ON Pipe wash mode OFF Regular operation
SW3-7	ON Forced cooling/heating OFF Regular operation
SW3-8	ON Test mode OFF Regular operation
SW5-1	ON Trial operation OFF Regular operation
SW5-2	ON Trial operation mode/cooling OFF Trial operation mode/heating
SW5-3	ON Pump down operation OFF Regular operation

**Color marks**

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

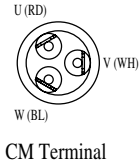


Mark	Parts name	Mark	Parts name	Mark	Parts name
CM1,2	Compressor motor	Tho-R2	Thermistor (outdoor H.X. temp exhaust)	SW7	Data clear/insert
FMO1,2	Fan motor (outdoor unit)	Tho-R3	Thermistor (outdoor H.X. temp inlet)	SW8	7seg indicate (unit's place)
52C1,2	Magnetic contactor for CM	Tho-R4	Thermistor (outdoor H.X. temp inlet)	SW9	7seg indicate (ten's place)
CH1,2	Crankcase heater	PSL	Low pressure sensor	SW10	Reset
X01-13	Auxiliary relay	PSH	High pressure sensor	J11,12	Set up model (volt)
20S	4way valve	CT1,CT2	Current sensor	J13	External input select level/pulse
SV1	Solenoid valve (CM1:bypass)	SA	Arrestor	J14	Defrost recover temp
SV2	Solenoid valve (CM2:bypass)	Tr	Transformer	J15	Defrost start temp
SV6	Solenoid valve (oil separator CM1)	Va1~3	Varistor	J16	Heat recovery unit
SV7	Solenoid valve (oil separator CM2)	TB1,2	Terminal block	LED1	Indication lamp (red)
EEVH1,2	Expansion valve for heating	F	Fuse	LED2	Indication lamp (green)
EEVSC	Expansion valve for SC	CNA-Z	Connector	LED3	Indication lamp (green for service)
63H1-1,2	High pressure switch (for protection)	SW1	Outdoor unit address (ten's place)	7SEG1	7seg L.E.D. (function indication)
Tho-A	Thermistor (outdoor air temp)	SW2	Outdoor unit address (unit's place)	7SEG2	7seg L.E.D. (data indication)
Tho-C1,2	Thermistor (dome temp)	SW3-1	L.E.D.reset	L1,1,2	D.C.reactior
Tho-D1,2	Thermistor (discharge temp)	SW4-1~4	Set up model	L3	D.C.reactior (only FDCA450 type)
Tho-P1,2	Thermistor (IPM temp)	SW4-5	Demand	C1-1,2,C2-1,2	Condensor
Tho-S	Thermistor (suction temp)	SW4-6	Demand	PWB1~4	Printed wiring board
Tho-SC	Thermistor (SC1 temp)	SW4-7	Address setting switch (master-slave)	IPM	Intelligent power module
Tho-H	Thermistor (SC2 temp)	SW4-8	Address setting switch (master-slave)	FMC1,2	Fan for IPM
Tho-R1	Thermistor (outdoor H.X. temp exhaust)	SW5-4~8	Spare		

Mark		Function
SW3-2	ON	Auto backup operation
	OFF	Regular operation
SW3-3	ON	Set of renewal
	OFF	Regular operation
SW3-4	ON	Check mode non-available
	OFF	Check mode available
SW3-5	ON	Check of trial operation
	OFF	Regular operation
SW3-6	ON	Pipe wash mode
	OFF	Regular operation
SW3-7	ON	Forced cooling/heating
	OFF	Regular operation
SW3-8	ON	Test mode
	OFF	Regular operation
SW5-1	ON	Trial operation
	OFF	Regular operation
SW5-2	ON	Trial operation mode/cooling
	OFF	Trial operation mode/heating
SW5-3	ON	Pump down operation
	OFF	Regular operation

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



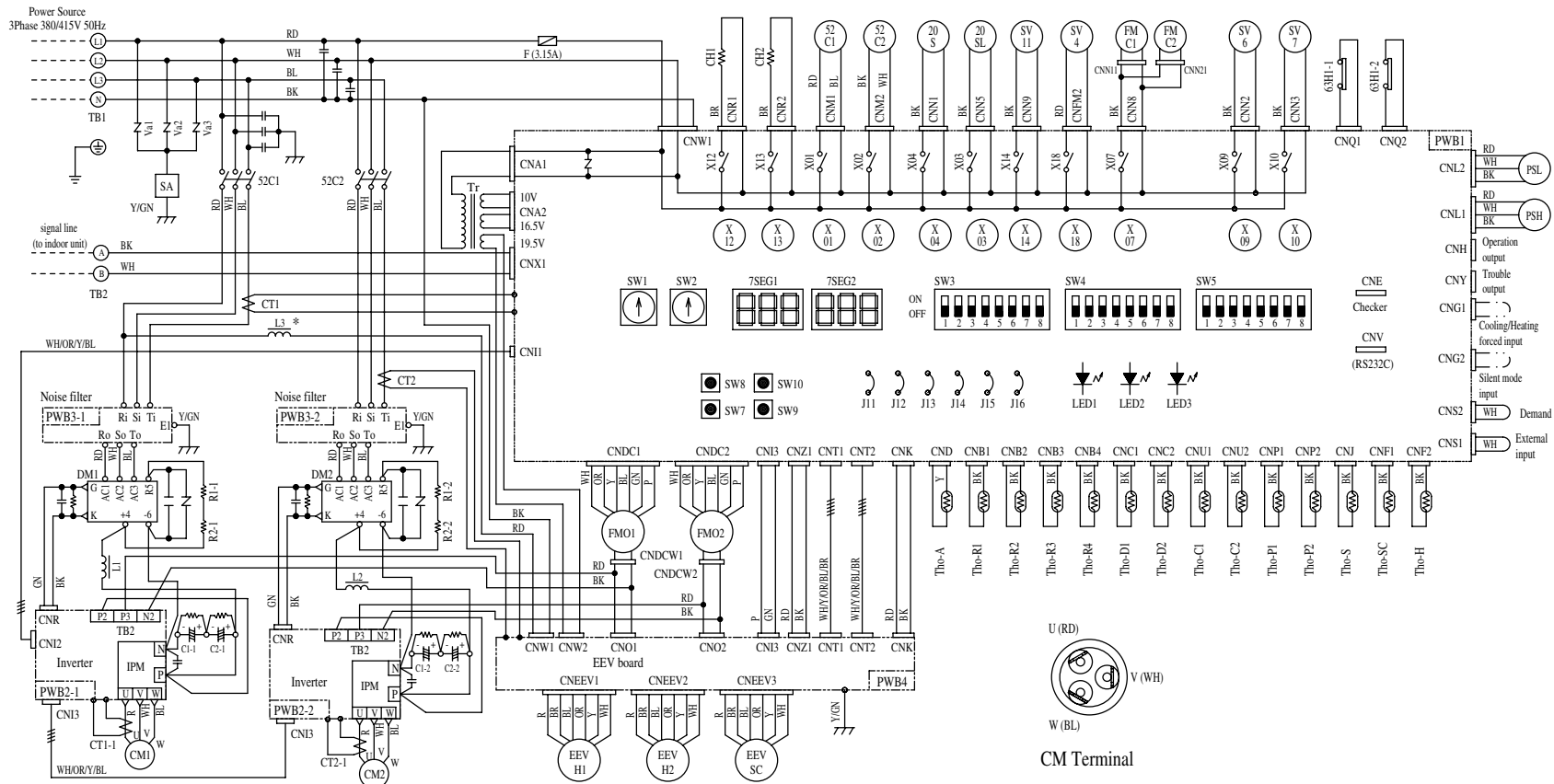


Meaning of marks					
Mark	Parts name	Mark	Parts name	Mark	Parts name
CM1	Compressor motor	Tho-R1	Thermistor (outdoor H.X. temp exhaust)	SW7	Data clear/insert
FMO1	Fan motor (outdoor unit)	Tho-R2	Thermistor (outdoor H.X. temp exhaust)	SW8	7seg indicate (unit's place)
52C1,2	Magnetic contactor for CM	Tho-R3	Thermistor (outdoor H.X. temp inlet)	SW9	7seg indicate (ten's place)
CH1,2	Crankcase heater	Tho-R4	Thermistor (outdoor H.X. temp inlet)	SW10	Reset
X01~14	Auxiliary relay	PSL	Low pressure sensor	J11,12	Set up model (volt)
20S	4way valve	PSH	High pressure sensor	J13	External input select level/pulse
20SL	4way valve	CT1	Current sensor	J14	Defrost recover temp
SV6	Solenoid valve (oil separator CM1)	SA	Arrestor	J15	Defrost start temp
SV11	Solenoid valve (gas bypass)	Tr	Transformer	J16	Heat recovery unit
EEVH1,2	Expansion valve for heating	Va1~3	Varistor	LED1	Indication lamp (red)
EEVSC	Expansion valve for SC	TB1,2	Terminal block	LED2	Indication lamp (green)
63H1~4	High pressure switch (for protection)	F	Fuse	LED3	Indication lamp (green for service)
Tho-A	Thermistor (outdoor air temp)	SW1	Outdoor unit address (ten's place)	7SEG1	7seg L.E.D. (function indication)
Tho-C1	Thermistor (dome temp)	SW2	Outdoor unit address (unit's place)	7SEG2	7seg L.E.D. (data indication)
Tho-D1	Thermistor (discharge temp)	SW3~1	L.E.D.reset	L1,L2	D.C.reactord
Tho-P1	Thermistor (IPM temp)	SW4-1~4	Set up model	L3	D.C.reactord (* only 335~450 type)
Tho-S	Thermistor (suction temp)	SW4-5	Demand	C1,1-2,C2,1,2	Condenser
Tho-SC	Thermistor (SC1 temp)	SW4-6	Demand	PWB1~4	Printed wiring board
Tho-H	Thermistor (SC2 temp)	SW4-7	Address setting switch (master · slave)	IPM	Intelligent power module
		SW4-8	Address setting switch (master · slave)	FMC1,2	Fan for IPM
		SW5-4~8	Spare	CNA-Z	Connector

Function of switches		
Mark		Function
SW3-2	ON	Auto backup operation
	OFF	Regular operation
SW3-3	ON	Set of renewal
	OFF	Regular operation
SW3-4	ON	Check mode non-available
	OFF	Check mode available
SW3-5	ON	Check of trial operation
	OFF	Regular operation
SW3-6	ON	Pipe wash mode
	OFF	Regular operation
SW3-7	ON	Forced cooling/heating
	OFF	Regular operation
SW3-8	ON	Test mode
	OFF	Regular operation
SW5-1	ON	Trial operation
	OFF	Regular operation
SW5-2	ON	Trial operation mode/cooling
	OFF	Trial operation mode/heating
SW5-3	ON	Pump down operation
	OFF	Regular operation

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





#### Meaning of marks

Mark	Parts name	Mark	Parts name	Mark	Parts name
CM1.2	Compressor motor	Tho-R1	Thermistor (outdoor H.X. temp exhaust)	SW7	Data clear/insert
FMO1.2	Fan motor (outdoor unit)	Tho-R2	Thermistor (outdoor H.X. temp exhaust)	SW8	7seg indicate (unit's place)
52C1.2	Magnetic contactor for CM	Tho-R3	Thermistor (outdoor H.X. temp inlet)	SW9	7seg indicate (ten's place)
CH1.2	Crankcase heater	Tho-R4	Thermistor (outdoor H.X. temp inlet)	SW10	Reset
X01-18	Auxiliary relay	PSL	Low pressure sensor	J11, J12	Set up model (volt)
20S	4way valve	PSH	High pressure sensor	J13	External input select level/pulse
20SL	4way valve	CT1, CT2	Current sensor	J14	Defrost recover temp
SV4	Solenoid valve (outdoor H.X.)	SA	Arrestor	J15	Defrost start temp
SV6	Solenoid valve (oil separator CM1)	Tr	Transformer	J16	Heat recovery unit
SV7	Solenoid valve (oil separator CM2)	Va1-3	Varistor	LED1	Indication lamp (red)
SV11	Solenoid valve (gas bypass)	TB1.2	Terminal block	LED2	Indication lamp (green)
EEVH1.2	Expansion valve for heating	F	Fuse	LED3	Indication lamp (green for service)
EEVSC	Expansion valve for SC	SW1	Outdoor unit address (ten's place)	7SEG1	7seg L.E.D. (function indication)
63H1-1.2	High pressure switch (for protection)	SW2	Outdoor unit address (unit's place)	7SEG2	7seg L.E.D. (data indication)
Tho-A	Thermistor (outdoor air temp)	SW3-1	L.E.D.reset	L1, L2	D.C.reactior
Tho-C1.2	Thermistor (dome temp)	SW4-1-4	Set up model	L3	D.C.reactior (* only 335-450 type)
Tho-D1.2	Thermistor (discharge temp)	SW4-5	Demand	C1-1,2,C2-1,2	Condensor
Tho-P1.2	Thermistor (IPM temp)	SW4-6	Demand	PWB1-4	Printed wiring board
Tho-S	Thermistor (suction temp)	SW4-7	Address setting switch (master Æ slave)	IPM	Intelligent power module
Tho-SC	Thermistor (SC1 temp)	SW4-8	Address setting switch (master Æ slave)	FM1,2	Fan for IPM
Tho-H	Thermistor (SC2 temp)	SW5-4-8	Spare	CNA-Z	Connector

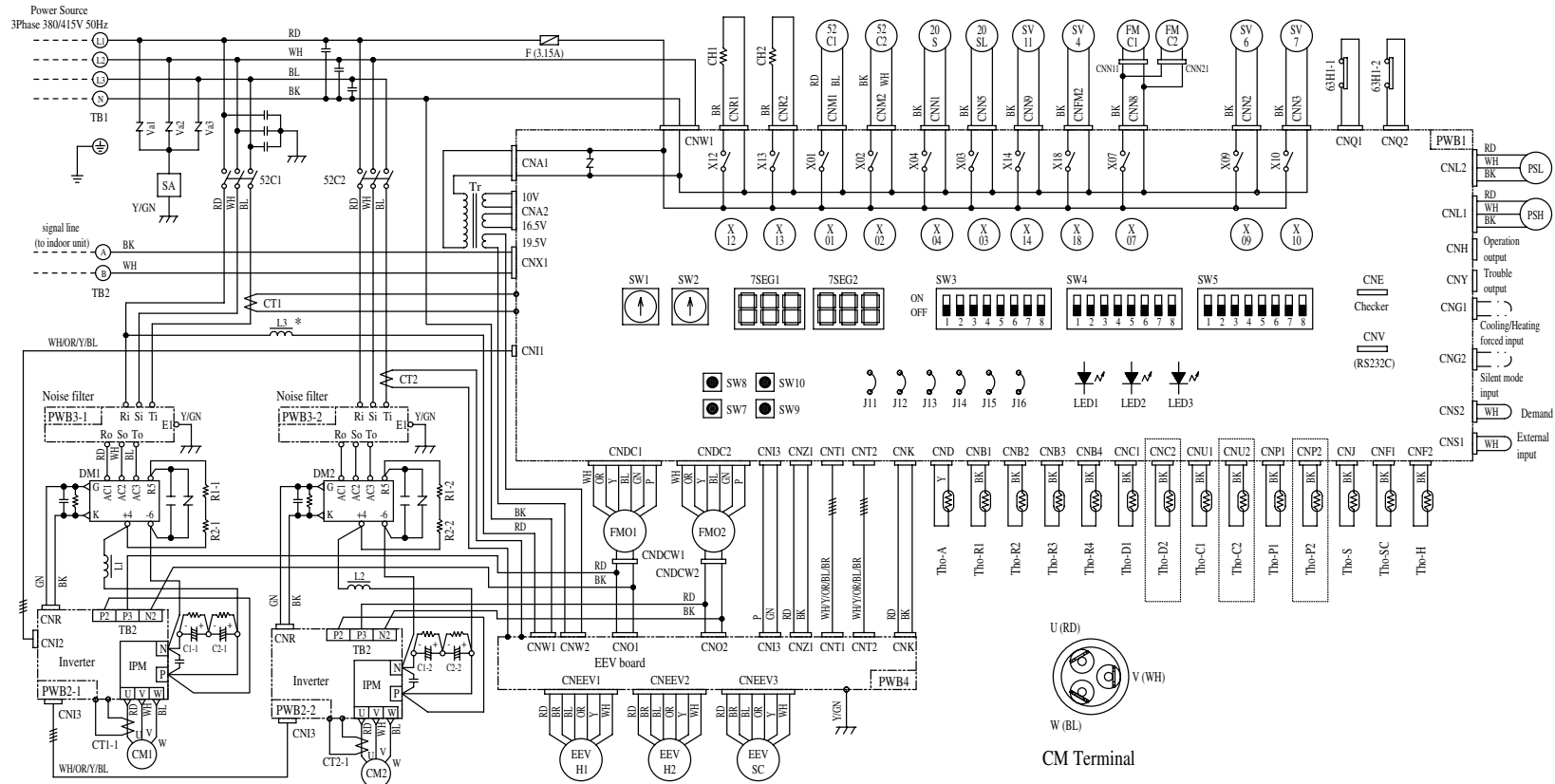
#### Function of switches

Mark	Function
SW3-2	ON Auto backup operation
	OFF Regular operation
SW3-3	ON Set of renewal
	OFF Regular operation
SW3-4	ON Check mode non-available
	OFF Check mode available
SW3-5	ON Check of trial operation
	OFF Regular operation
SW3-6	ON Pipe wash mode
	OFF Regular operation
SW3-7	ON Forced cooling/heating
	OFF Regular operation
SW3-8	ON Test mode
	OFF Regular operation
SW5-1	ON Trial operation
	OFF Regular operation
SW5-2	ON Trial operation mode/cooling
	OFF Trial operation mode/heating
SW5-3	ON Pump down operation
	OFF Regular operation

#### Color marks

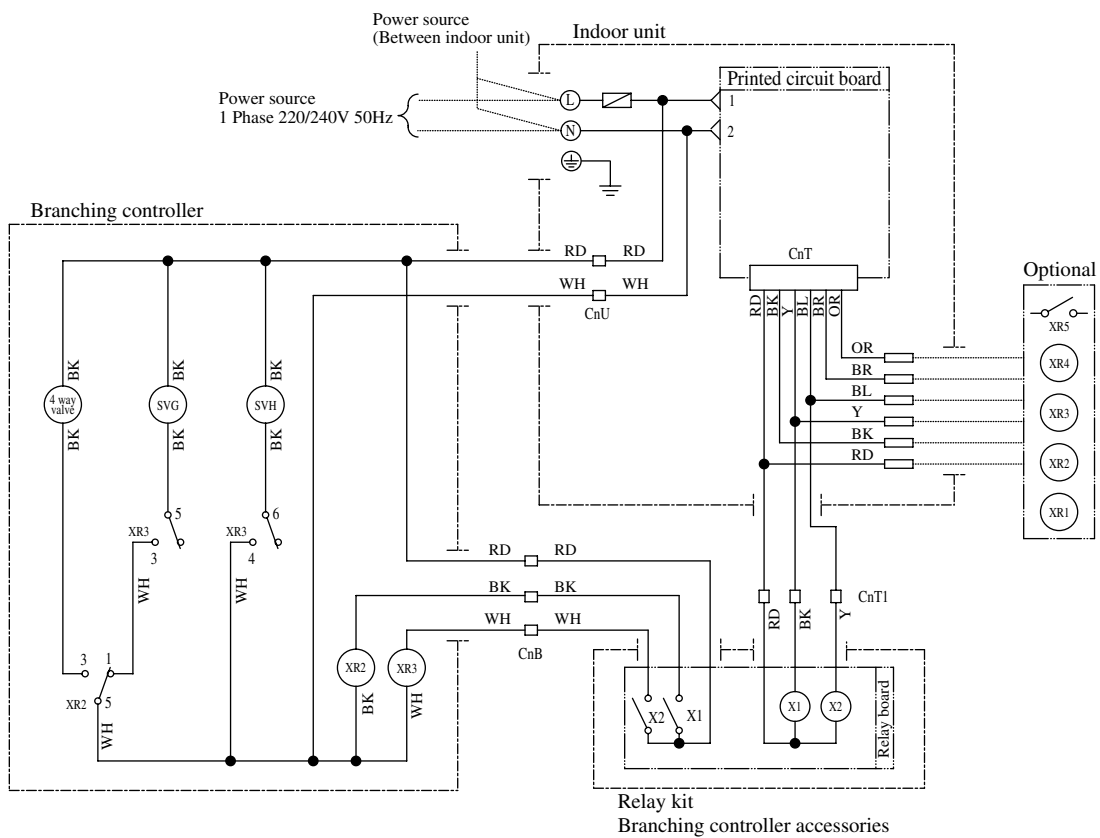
Mark	Color
BK	Black
BL	Blue
BR	Brown
GN	Green
GR	Gray
OR	Orange
RD	Red
WH	White
Y	Yellow
P	Pink
Y/GN	Yellow/Green







(3) Branching controller (Heat recovery type only)  
Models PFD112-E, 180-E, 280-E



4 way valve	4-way valve for switching between cooling and heating.
SVH	Solenoid valve for heating
SVG	Solenoid valve for oil return
XR1	Relay for operation output
X2,XR2	Relay for heating output
X3,XR3	Thermostat ON output, operating mode switching
XR4	Check output
CnB-U	Connector

- Notes 1. This diagram shows the circuit diagram when the branch flow controller and relay kit (product with a branching controller attached) is connected.
2. ——— shows the current wiring.
3. The option shows when the remote start/stop/monitoring kit is connected.
4. If the branching controller is installed apart from the indoor unit, please extend the wiring to connectors CnU and CnB.  
(The connection wiring to connector CnT should not be extended.)



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# **INVERTER DRIVEN MULTI-INDOOR-UNIT CLIMATE CONTROL SYSTEM**

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