

Refrigerant
R407C

BIG MULTI

Multi Air Conditioning System for Buildings



HEAT PUMP & COOLING ONLY TYPE

DESIGN & TECHNICAL DATA

FUJITSU GENERAL LIMITED

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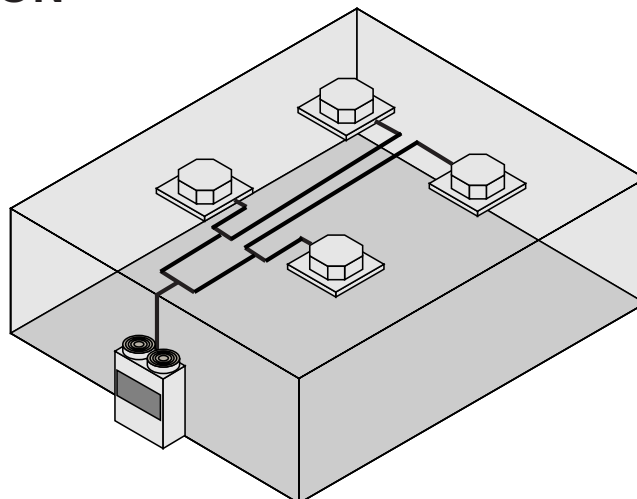
1 . GENERAL INFORMATION

1-1 FEATURES OF SYSTEM

1-1-1 SIMULTANEOUS OPERATION

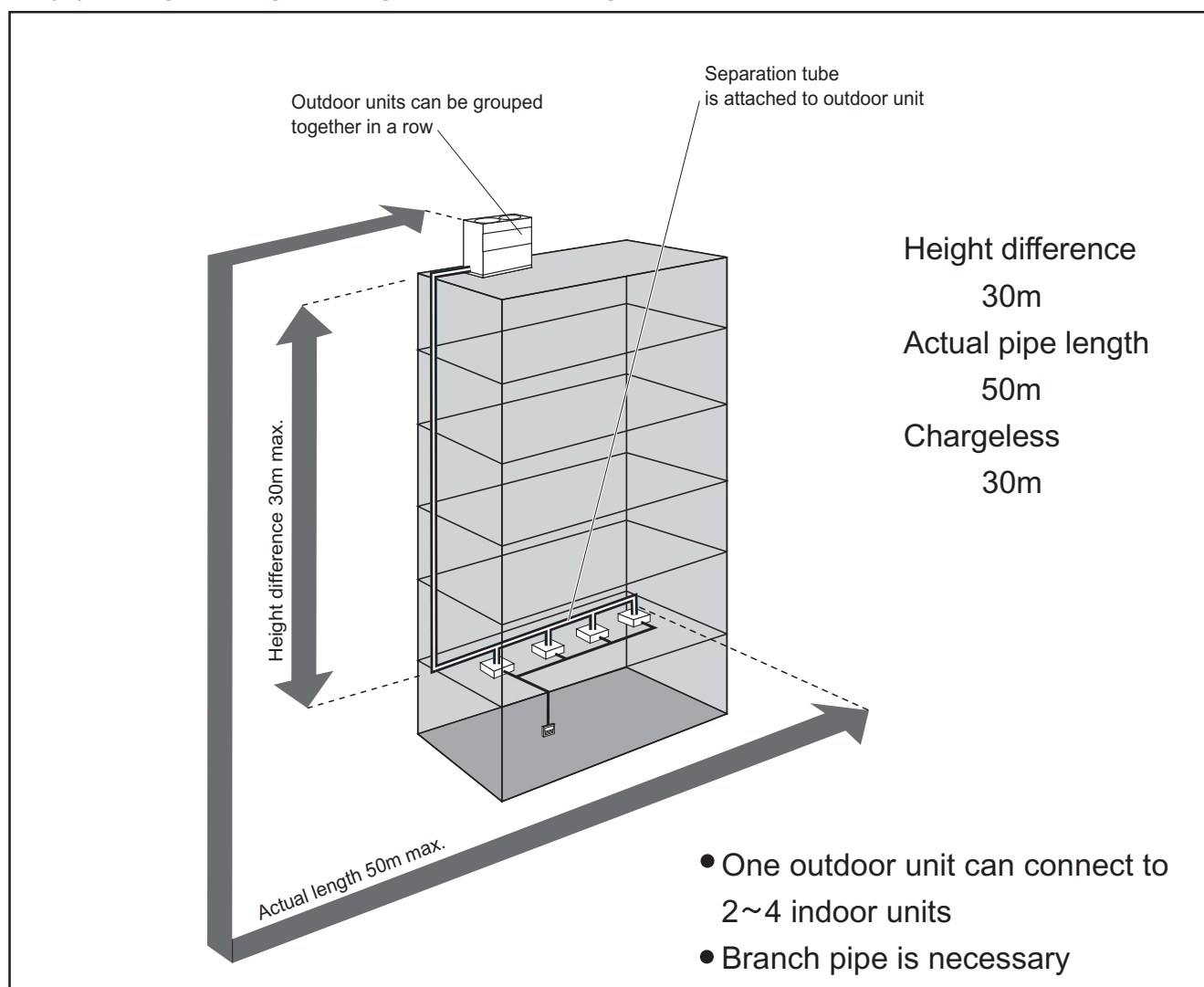
■ FEATURES

- Simultaneous Operating System suitable for large spaces such as offices, lobbies or waiting rooms of high-rise buildings.
- One controller can simultaneously control cooling or heating by 2~4 indoor units.



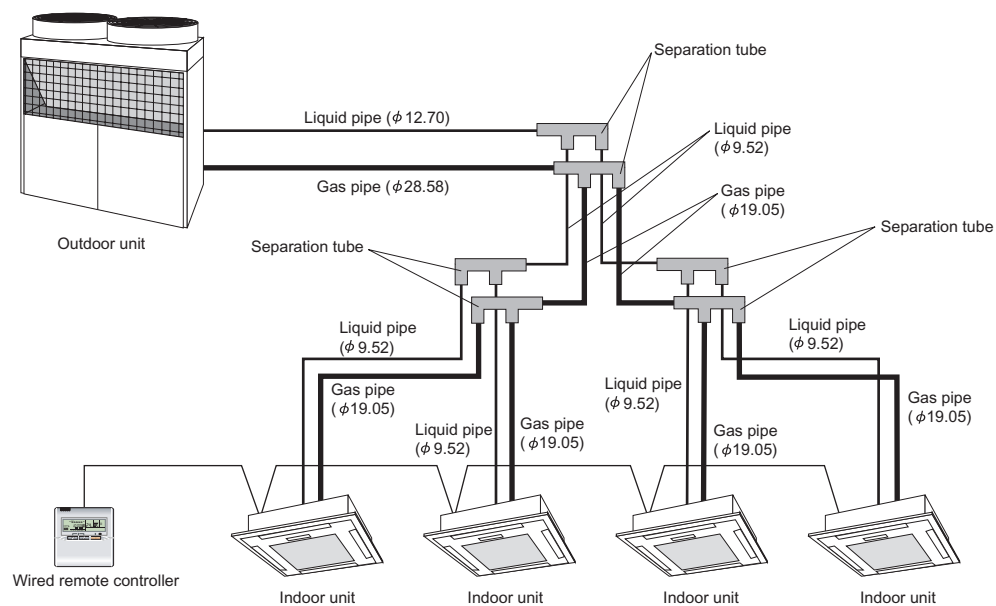
- (1) Long piping for high-rise buildings
- (2) Various combinations of indoor unit type and capacity
- (3) Centralized control by wired remote controller
- (4) Space saving
- (5) Easy installation
- (6) Cooling & heating at low outdoor temperatures

(1) Long piping for high-rise buildings



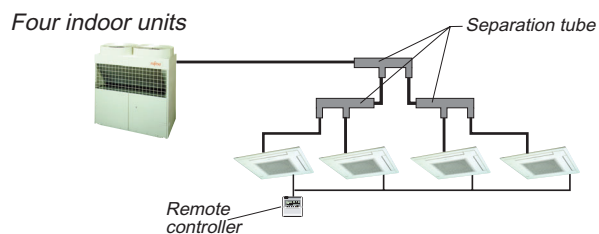
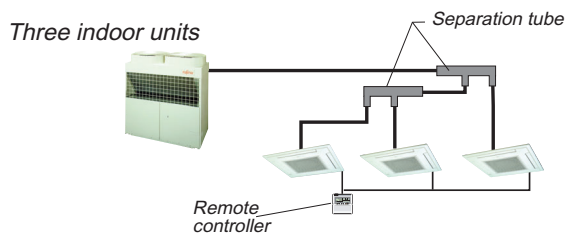
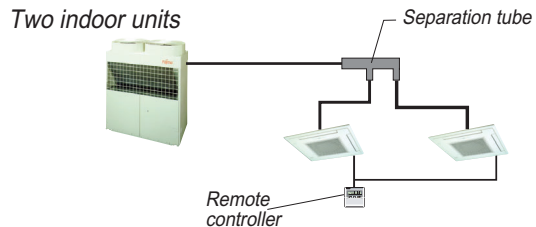
(2) Various Combinations of Indoor Unit Type and Capacity

Simultaneous Operation

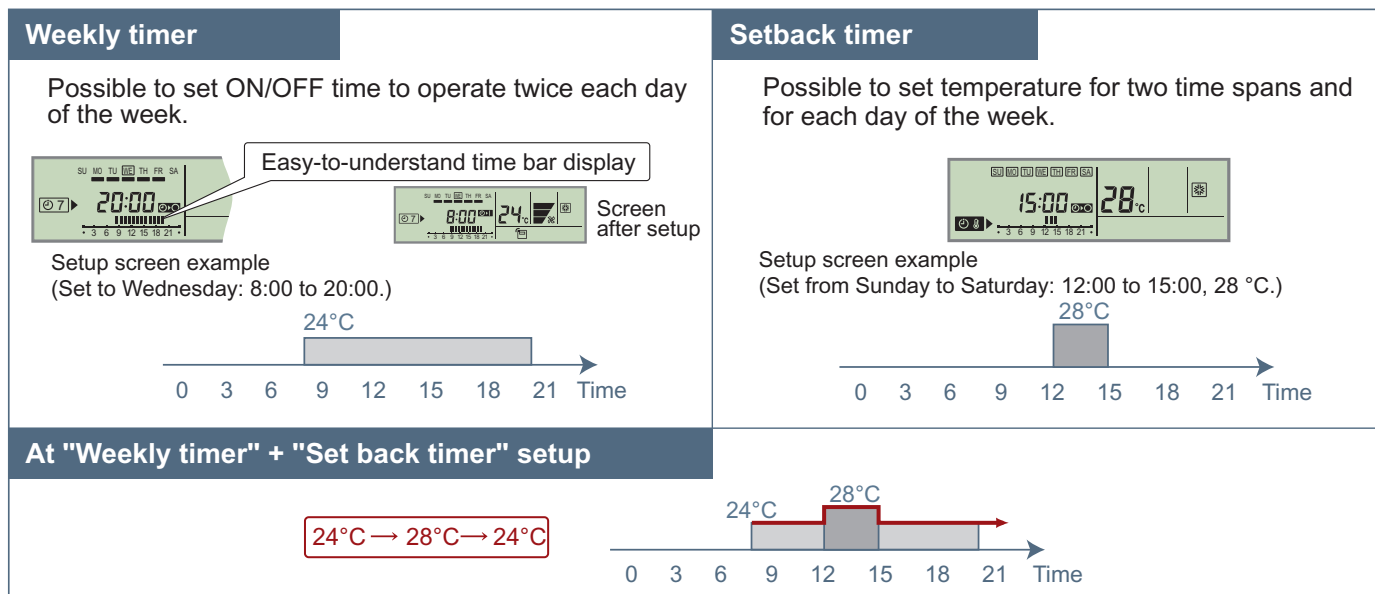


Cooling or Heating

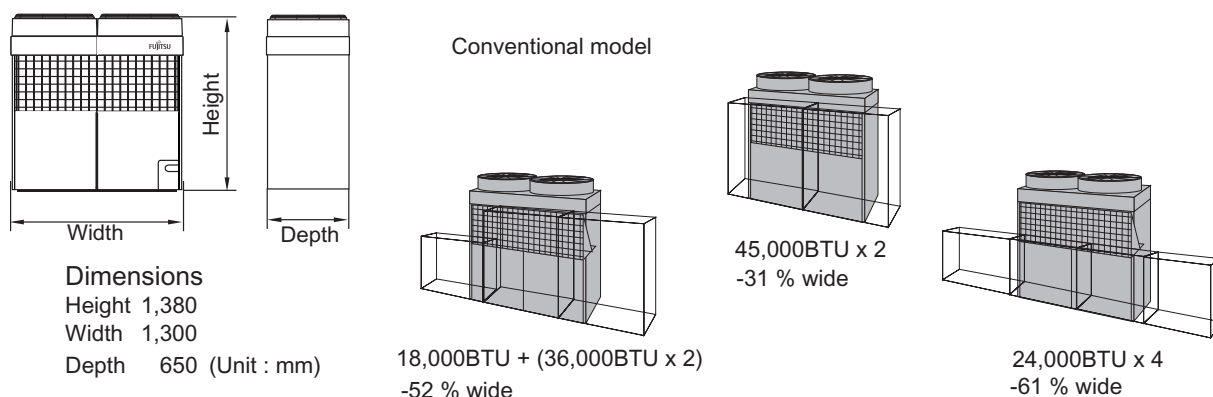
Piping pattern variations



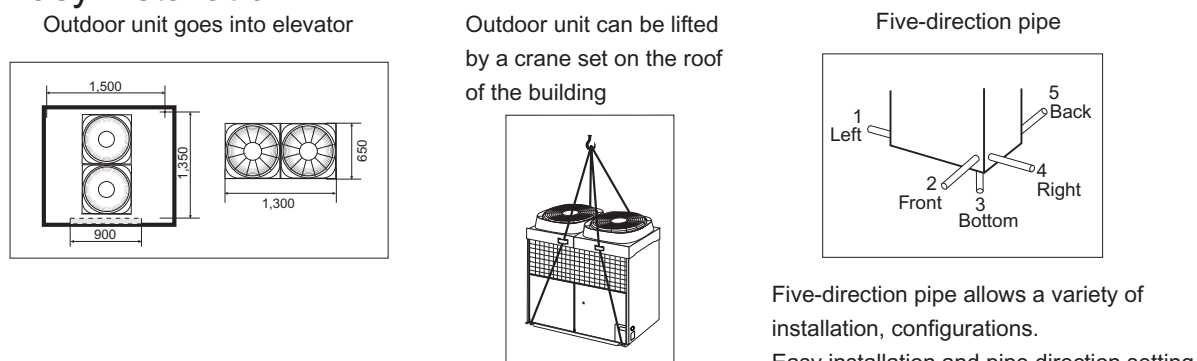
(3) Built-in timers



(4) Space Saving



(5) Easy installation



(6) Cooling or heating at low outdoor temperatures

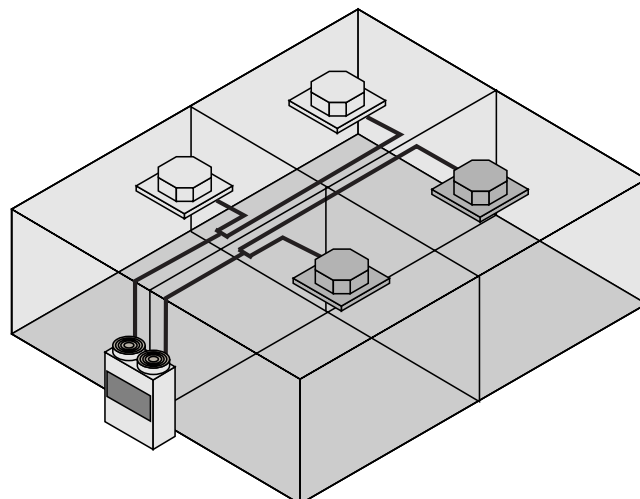
Cooling Possible at Low Outdoor-temperature 0 °C

Heating Possible at Low Outdoor-temperature -10 °C

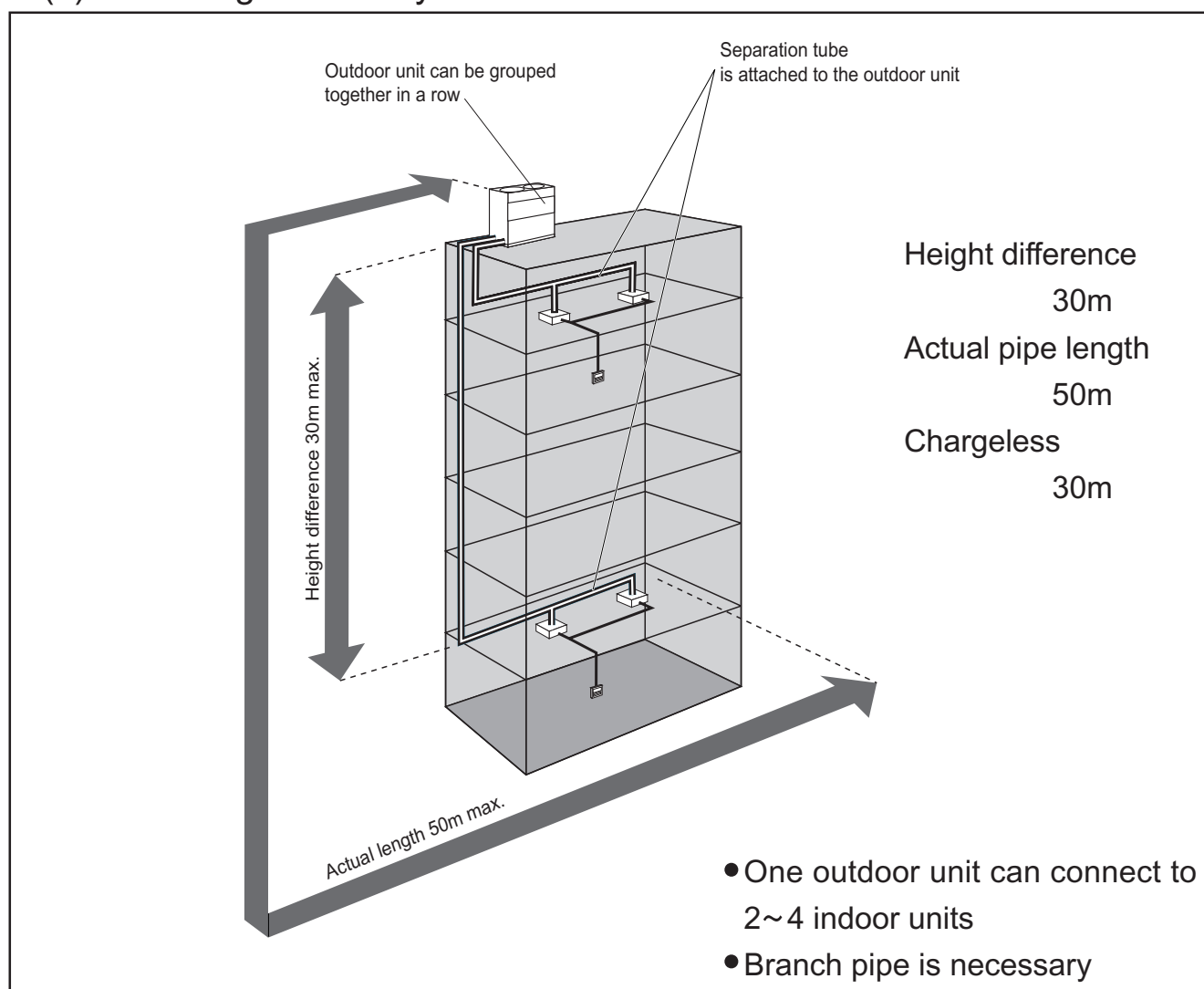
1-1-2 INDIVIDUAL OPERATION

■ FEATURES

- Individual Operating System is suitable for large spaces such as hotels, commercial spaces, offices and restaurants.
- The system can cool and heat individually, because the system has two refrigeration cycles.
 - (1) Two refrigeration cycles
 - (2) Various combinations of indoor unit type and capacity
 - (3) Centralized control by wired remote controller
 - (4) Space saving
 - (5) Easy installation
 - (6) Cooling & heating at low outdoor temperatures

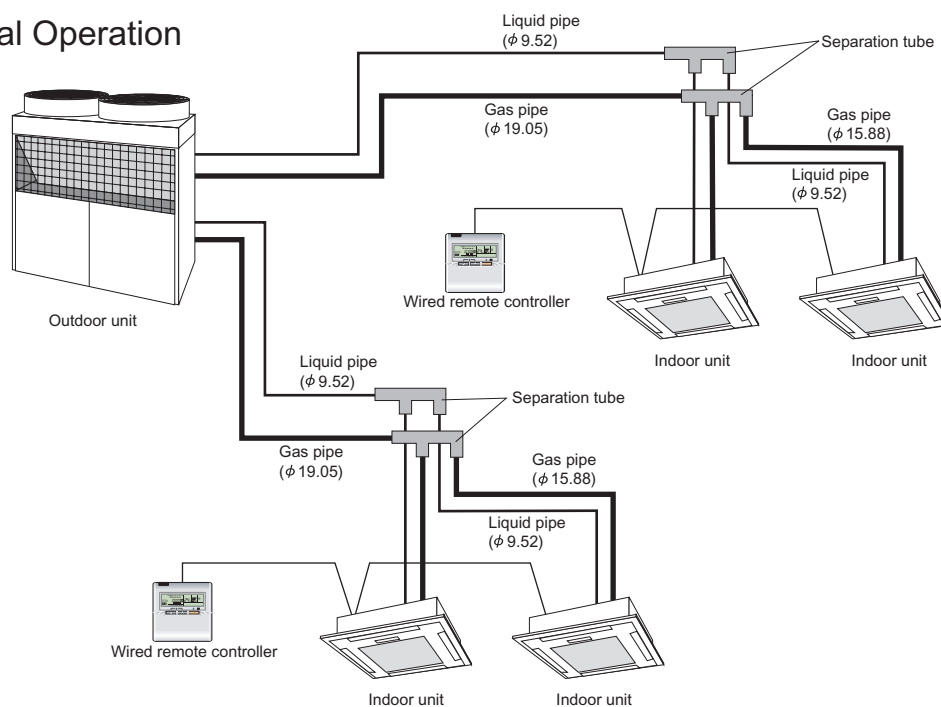


(1) Two refrigeration cycles



(2) Various Combinations of Indoor Unit Type and Capacity

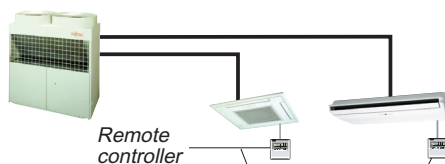
Individual Operation



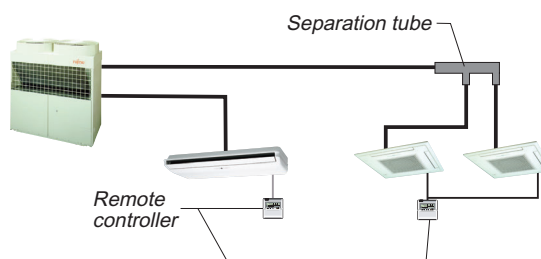
Cooling or Heating

Cooling & Heating

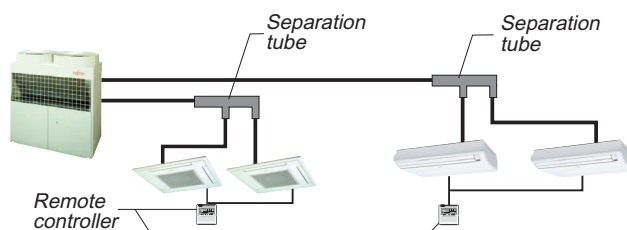
One + One



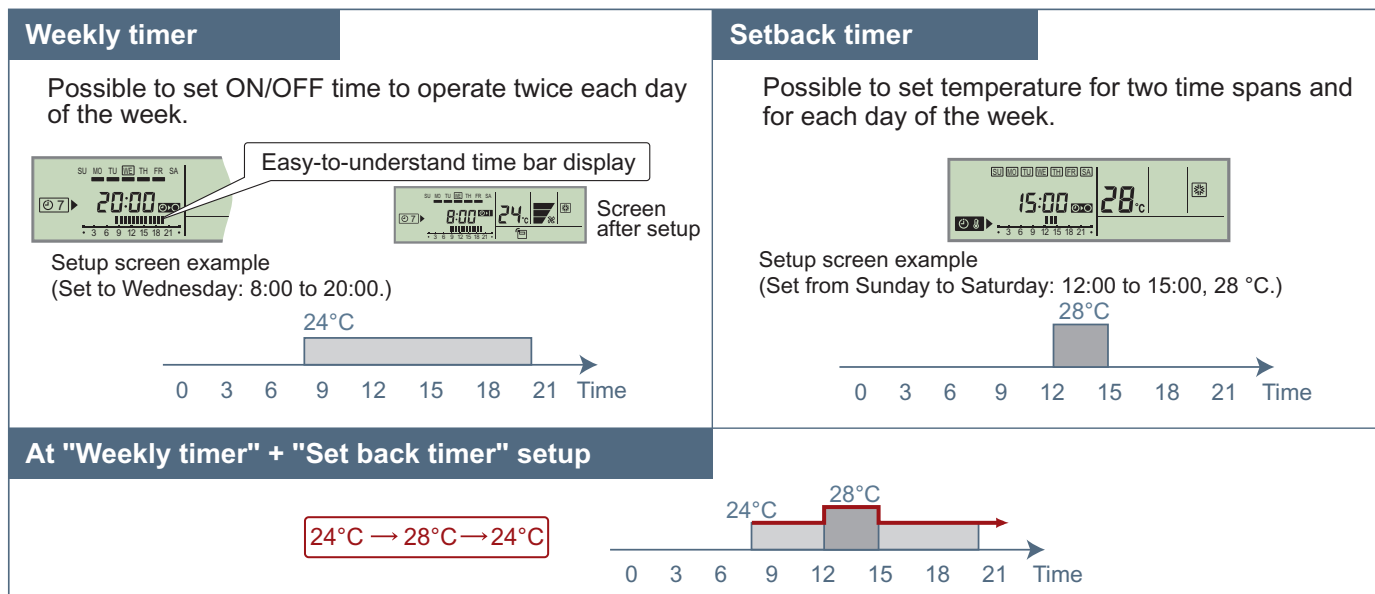
One + Two



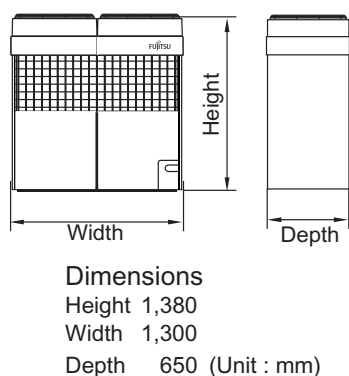
Two + Two



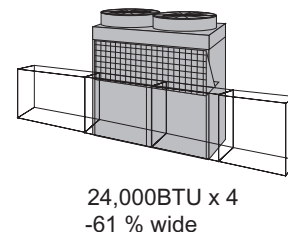
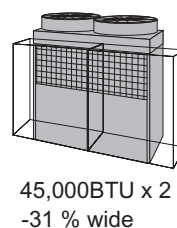
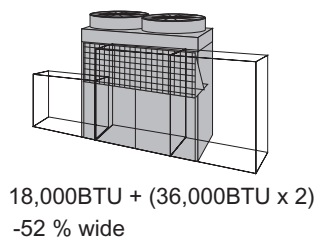
(3) Built-in timers



(4) Space Saving

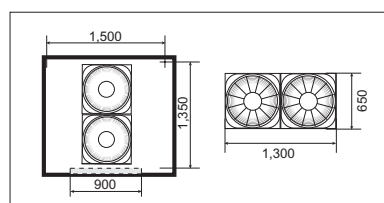


Conventional model

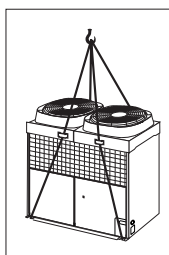


(5) Easy installation

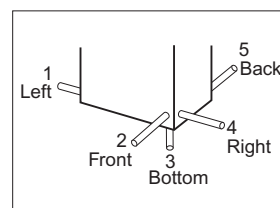
Outdoor unit goes into elevator



Outdoor unit can be lifted by a crane set on the roof of the building



Five-direction pipe



Five-direction pipe allows a variety of installation, configurations.

Easy installation and pipe direction setting

(6) Cooling or heating at low outdoor temperatures

Cooling Possible at Low Outdoor-temperature 0 °C

Heating Possible at Low Outdoor-temperature -10 °C

1-2 MODEL LINE UP

1-2-1 SIMULTANEOUS OPERATION

■ OUTDOOR UNIT

TYPE	CAPACITY	MODEL	Maximum Connectable Indoor unit
Heat pump type	25.4kW	AJ*A90TATB	4
Cooling only type	25.4kW	AJ*A90EATB	4

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- **Heat pump type**
AJ*A90TATB



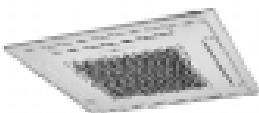
- **Cooling only type**
AJ*A90EATB



■ INDOOR UNIT

5 types, 14 models ranging from 5.30kW to 12.7kW

Capacity (kW)	Type Model code	Duct (Standard Static Pressure)	Cassette (compact)	Cassette	Universal Floor/Ceiling	Ceiling
12.7	45	●		●		●
10.5	36	●		●		●
8.80	30	●		●		●
7.05	25	●		●		
6.80	24				●	
5.30	18		●		●	

• Duct TYPE (Standard Static Pressure) AR25 AR30 AR36 AR45 	• Compact Cassette TYPE AU18 	• Cassette TYPE AU25 AU30 AU36 AU45 
• Universal Floor / Ceiling TYPE AB18 AB24 	• Large Ceiling TYPE AB30 AB36 AB45 	

1-2-2 INDIVIDUAL OPERATION

■ OUTDOOR UNIT

TYPE	CAPACITY	MODEL	Maximum Connectable Indoor unit
Heat pump type	25.4kW	AJ* A90TATA	4 (2 + 2)
Cooling only type	25.4kW	AJ* A90EATA	4 (2 + 2)

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- **Heat pump type**
AJ* A90TATA



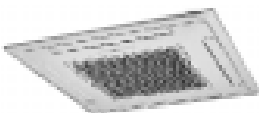
- **Cooling only type**
AJ* A90EATA



■ INDOOR UNIT

5 types, 11 models ranging from 5.30kW to 12.7kW

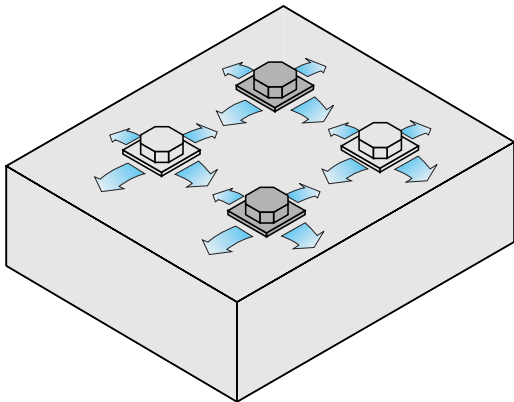
Type Capacity (kW) Model code		Duct (Standard Static Pressure)	Cassette (compact)	Cassette	Universal Floor/Ceiling	Ceiling
12.7	45	●		●		●
8.80	30	●		●		●
7.05	25	●		●		
6.80	24				●	
5.30	18		●		●	

• Duct TYPE (Standard Static Pressure) AR25 AR30 AR45 	• Compact Cassette TYPE AU18 	• Cassette TYPE AU25 AU30 AU45 
• Universal Floor / Ceiling TYPE AB18 AB24 	• Large Ceiling TYPE AB30 AB45 	

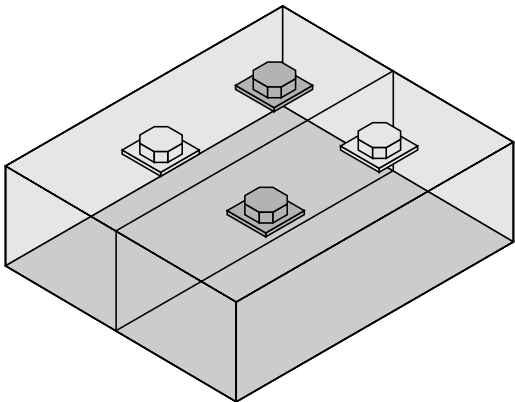
2 . MODEL SELECTION

2-1. MODEL SELECTION PROCEDURE

SIMULTANEOUS OPERATION



INDIVIDUAL OPERATION



■ OUTDOOR UNIT

SIMULTANEOUS OPERATION	INDIVIDUAL OPERATION
Heat Pump / Cooling only	Heat Pump / Cooling only

■ INDOOR UNIT

	SIMULTANEOUS OPERATION	INDIVIDUAL OPERATION	
		A	B
Two	45 + 45	45	45
Three (One + Two)	45 + 30 + 18	45	30 + 18
	45 + 24 + 24	45	24 + 24
	36 + 36 + 18		
	36 + 30 + 24		
	30 + 30 + 30		
Four (Two + Two)	36 + 18 + 18 + 18	30 + 18	30 + 18
	30 + 24 + 18 + 18	30 + 18	24 + 24
	24 + 24 + 24 + 24	24 + 24	24 + 24

For details, see page (02-02) to (02-14).

2-2. MODEL LINE UP (SIMULTANEOUS OPERATION)

2-2-1. OUTDOOR UNIT LINE UP

TYPE	CAPACITY	MODEL NAME (FUJITSU)	MODEL NAME (GENERAL)	Maximum Connectable Indoor unit
Heat pump type	25.4kW	AJYA90TATB	AJGA90TATB	4
Cooling only type	25.4kW	AJYA90EATB	AJGA90EATB	4

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2-2-2. INDOOR UNIT LINE UP AND COMBINATIONS

■ INDOOR UNIT LINE UP

TYPE	CAPACITY (kW)		MODEL NAME (FUJITSU)	MODEL NAME (GENERAL)
COMPACT CASSETTE	5.30	AU18	*1 AUXA18TATA	
CASSETTE	7.05	AU25	AUYA25TATA	AUGA25TATA
	8.80	AU30	AUYA30TATA	AUGA30TATA
	10.5	AU36	AUYA36TATA	AUGA36TATA
	12.7	AU45	AUYA45TATA	AUGA45TATA
STANDARD STATIC PRESSURE DUCT	7.05	AR25	ARXA25TATA	
	8.80	AR30	ARXA30TATA	
	10.5	AR36	ARXA36TATA	
	12.7	AR45	ARXA45TATA	
UNIVERSAL FLOOR/CEILING	5.30	AB18	ABYA18TATA	ABGA18TATA
	6.80	AB24	ABYA24TATA	ABGA24TATA
CEILING	8.80	AB30	ABYA30TATA	ABGA30TATA
	10.5	AB36	ABYA36TATA	ABGA36TATA
	12.7	AB45	ABYA45TATA	ABGA45TATA

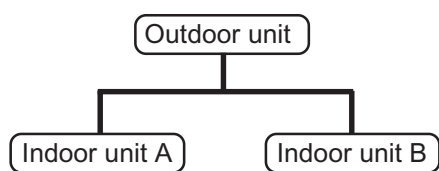
*1 One of the following grilles is necessary for the compact cassette type.

- UTG-UDYD-W (FUJITSU MODEL)
- UTG-UDGD-W (GENERAL MODEL)

■ INDOOR UNIT COMBINATIONS

CONNECTABLE INDOOR UNIT	COMBINATION TYPE	CAPACITY (kW)
Two	45+45	12.7+12.7
Three	45+30+18	12.7+8.80+5.30
	45+24+24	12.7+6.80+6.80
	36+36+18	10.5+10.5+5.30
	36+30+24	10.5+8.80+6.80
	30+30+30	8.80+8.80+8.80
Four	36+18+18+18	10.5+5.30+5.30+5.30
	30+24+18+18	8.80+6.80+5.30+5.30
	24+24+24+24	6.80+6.80+6.80+6.80

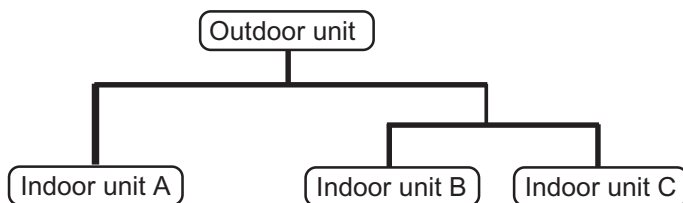
■ TWO INDOOR UNIT COMBINATIONS



● Two 45 + 45

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B
45+45	Two 1	AU45	AU45
	Two 2	AU45	AR45
	Two 3	AU45	AB45
	Two 4	AR45	AR45
	Two 5	AR45	AB45
	Two 6	AB45	AB45

■ THREE INDOOR UNIT COMBINATIONS



● Three 45+30+18

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C
45+30+18	Three 1	AU45	AU30	AU18
	Three 2	AU45	AU30	AB18
	Three 3	AU45	AR30	AU18
	Three 4	AU45	AR30	AB18
	Three 5	AU45	AB30	AU18
	Three 6	AU45	AB30	AB18
	Three 7	AR45	AU30	AU18
	Three 8	AR45	AU30	AB18
	Three 9	AR45	AR30	AU18
	Three 10	AR45	AR30	AB18
	Three 11	AR45	AB30	AU18
	Three 12	AR45	AB30	AB18
	Three 13	AB45	AU30	AU18
	Three 14	AB45	AU30	AB18
	Three 15	AB45	AR30	AU18
	Three 16	AB45	AR30	AB18
	Three 17	AB45	AB30	AU18
	Three 18	AB45	AB30	AB18

● Three 45+24+24

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C
45+24+24	Three 19	AU45	AU25	AU25
	Three 20	AU45	AU25	AR25
	Three 21	AU45	AU25	AB24
	Three 22	AU45	AR25	AR25
	Three 23	AU45	AB24	AR25
	Three 24	AU45	AB24	AB24
	Three 25	AR45	AU25	AU25
	Three 26	AR45	AU25	AR25
	Three 27	AR45	AU25	AB24
	Three 28	AR45	AR25	AR25
	Three 29	AR45	AB24	AR25
	Three 30	AR45	AB24	AB24
	Three 31	AB45	AU25	AU25
	Three 32	AB45	AU25	AR25
	Three 33	AB45	AU25	AB24
	Three 34	AB45	AR25	AR25
	Three 35	AB45	AB24	AR25
	Three 36	AB45	AB24	AB24

● Three 36+36+18

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C
36+36+18	Three 37	AU36	AU36	AU18
	Three 38	AU36	AU36	AB18
	Three 39	AU36	AR36	AU18
	Three 40	AU36	AR36	AB18
	Three 41	AU36	AB36	AU18
	Three 42	AU36	AB36	AB18
	Three 43	AR36	AR36	AU18
	Three 44	AR36	AR36	AB18
	Three 45	AR36	AB36	AU18
	Three 46	AR36	AB36	AB18
	Three 47	AB36	AB36	AU18
	Three 48	AB36	AB36	AB18

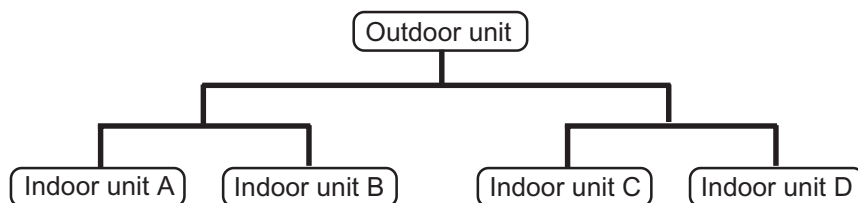
● Three 36+30+24

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C
36+30+24	Three 49	AU36	AU30	AU25
	Three 50	AU36	AU30	AU25
	Three 51	AU36	AU30	AB24
	Three 52	AU36	AR30	AU25
	Three 53	AU36	AR30	AU25
	Three 54	AU36	AR30	AB24
	Three 55	AU36	AB30	AU25
	Three 56	AU36	AB30	AU25
	Three 57	AU36	AB30	AB24
	Three 58	AR36	AU30	AU25
	Three 59	AR36	AU30	AU25
	Three 60	AR36	AU30	AB24
	Three 61	AR36	AR30	AU25
	Three 62	AR36	AR30	AU25
	Three 63	AR36	AR30	AB24
	Three 64	AR36	AB30	AU25
	Three 65	AR36	AB30	AU25
	Three 66	AR36	AB30	AB24
	Three 67	AB36	AU30	AU25
	Three 68	AB36	AU30	AU25
	Three 69	AB36	AU30	AB24
	Three 70	AB36	AR30	AU25
	Three 71	AB36	AR30	AU25
	Three 72	AB36	AR30	AB24
	Three 73	AB36	AB30	AU25
	Three 74	AB36	AB30	AU25
	Three 75	AB36	AB30	AB24

● Three 30+30+30

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C
30+30+30	Three 76	AU30	AU30	AU30
	Three 77	AU30	AU30	AR30
	Three 78	AU30	AU30	AB30
	Three 79	AU30	AR30	AR30
	Three 80	AU30	AB30	AR30
	Three 81	AU30	AB30	AB30
	Three 82	AR30	AR30	AR30
	Three 83	AR30	AB30	AB30
	Three 84	AB30	AB30	AB30

■ FOUR INDOOR UNIT COMBINATIONS



● Four 36+18+18+18

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C	Indoor unit D
36+18+18+18	Four 1	AU36	AU18	AU18	AU18
	Four 2	AU36	AU18	AU18	AB18
	Four 3	AU36	AU18	AB18	AB18
	Four 4	AU36	AB18	AB18	AB18
	Four 5	AR36	AU18	AU18	AU18
	Four 6	AR36	AU18	AU18	AB18
	Four 7	AR36	AU18	AB18	AB18
	Four 8	AR36	AB18	AB18	AB18
	Four 9	AB36	AU18	AU18	AU18
	Four 10	AB36	AU18	AU18	AB18
	Four 11	AB36	AU18	AB18	AB18
	Four 12	AB36	AB18	AB18	AB18

● Four 30+18+24+18

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C	Indoor unit D
30+18+24+18	Four 13	AU30	AU18	AU25	AU18
	Four 14	AU30	AU18	AU25	AB18
	Four 15	AU30	AB18	AU25	AB18
	Four 16	AU30	AU18	AR25	AU18
	Four 17	AU30	AU18	AR25	AB18
	Four 18	AU30	AB18	AR25	AB18
	Four 19	AU30	AU18	AB24	AU18
	Four 20	AU30	AU18	AB24	AB18
	Four 21	AU30	AB18	AB24	AB18
	Four 22	AR30	AU18	AU25	AU18
	Four 23	AR30	AU18	AU25	AB18
	Four 24	AR30	AB18	AU25	AB18
	Four 25	AR30	AU18	AR25	AU18
	Four 26	AR30	AU18	AR25	AB18
	Four 27	AR30	AB18	AR25	AB18
	Four 28	AR30	AU18	AB24	AU18
	Four 29	AR30	AU18	AB24	AB18
	Four 30	AR30	AB18	AB24	AB18
	Four 31	AB30	AU18	AU25	AU18
	Four 32	AB30	AU18	AU25	AB18
	Four 33	AB30	AB18	AU25	AB18
	Four 34	AB30	AU18	AR25	AU18
	Four 35	AB30	AU18	AR25	AB18
	Four 36	AB30	AB18	AR25	AB18
	Four 37	AB30	AU18	AB24	AU18
	Four 38	AB30	AU18	AB24	AB18
	Four 39	AB30	AB18	AB24	AB18

● Four 24+24+24+24

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C	Indoor unit D
24+24+24+24	Four 40	AU25	AU25	AU25	AU25
	Four 41	AU25	AU25	AU25	AB24
	Four 42	AU25	AU25	AU25	AR25
	Four 43	AU25	AU25	AR25	AR25
	Four 44	AU25	AU25	AB24	AB24
	Four 45	AU25	AU25	AB24	AR25
	Four 46	AU25	AR25	AR25	AR25
	Four 47	AU25	AB24	AB24	AB24
	Four 48	AU25	AB24	AB24	AR25
	Four 49	AR25	AU25	AB24	AR25
	Four 50	AR25	AR25	AR25	AR25
	Four 51	AR25	AB24	AB24	AR25
	Four 52	AB24	AU25	AR25	AR25
	Four 53	AB24	AR25	AR25	AR25
	Four 54	AB24	AB24	AB24	AB24
	Four 55	AB24	AB24	AB24	AR25

2-3. MODEL LINE UP (INDIVIDUAL OPERATION)

2-3-1. OUTDOOR UNIT LINE UP

TYPE	CAPACITY	MODEL NAME (FUJITSU)	MODEL NAME (GENERAL)	Maximum Connectable Indoor unit
Heat pump type	25.4kW	AJYA90TATA	AJGA90TATA	$\begin{matrix} 4 \\ (2 + 2) \end{matrix}$
Cooling only type	25.4kW	AJYA90EATA	AJGA90EATA	$\begin{matrix} 4 \\ (2 + 2) \end{matrix}$

■ REFRIGERANT R407C

2-3-2. INDOOR UNIT LINE UP AND COMBINATIONS

■ INDOOR UNIT LINE UP

TYPE	CAPACITY (kW)		MODEL NAME (FUJITSU)	MODEL NAME (GENERAL)
COMPACT CASSETTE	5.30	AU18	*1 AUXA18TATA	
CASSETTE	7.05	AU25	AUYA25TATA	AUGA25TATA
	8.80	AU30	AUYA30TATA	AUGA30TATA
	12.7	AU45	AUYA45TATA	AUGA45TATA
STANDARD STATIC PRESSURE DUCT	7.05	AR25	ARXA25TATA	
	8.80	AR30	ARXA30TATA	
	12.7	AR45	ARXA45TATA	
UNIVERSAL FLOOR/CEILING	5.30	AB18	ABYA18TATA	ABGA18TATA
	6.80	AB24	ABYA24TATA	ABGA24TATA
CEILING	8.80	AB30	ABYA30TATA	ABGA30TATA
	12.7	AB45	ABYA45TATA	ABGA45TATA

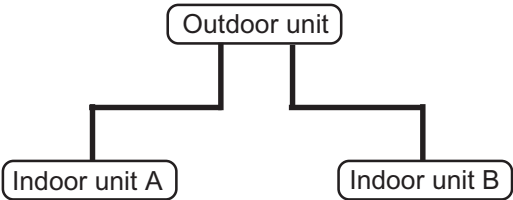
*1 One of the following grilles is necessary for the compact cassette type.

- UTG-UDYD-W (FUJITSU MODEL)
- UTG-UDGD-W (GENERAL MODEL)

■ INDOOR UNIT COMBINATIONS

CONNECTABLE INDOOR UNIT	COMBINATION TYPE	CAPACITY (kW)
One+One	45+45	12.7+12.7
One+<Two>	45+<30+18>	12.7+<8.80+5.30>
	45+<24+24>	12.7+<6.80+6.80>
<Two>+<Two>	<30+18>+<30+18>	<8.80+5.30>+<8.80+5.30>
	<30+18>+<24+24>	<8.80+5.30>+<6.80+6.80>
	<24+24>+<24+24>	<6.80+6.80>+<6.80+6.80>

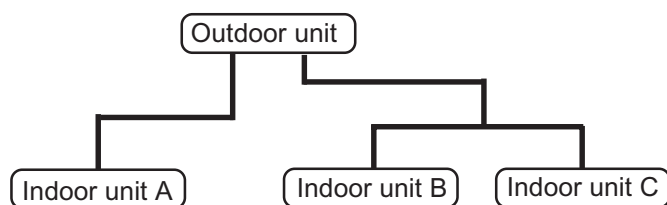
■ TWO INDOOR UNIT COMBINATIONS



● One+One 45 + 45

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B
45+45	One+One 1	AU45	AU45
	One+One 2	AU45	AR45
	One+One 3	AU45	AB45
	One+One 4	AR45	AR45
	One+One 5	AR45	AB45
	One+One 6	AB45	AB45

■ THREE INDOOR UNIT COMBINATIONS



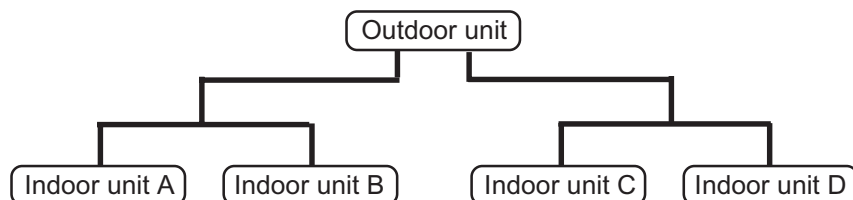
● One + <Two> 45 + <30+18>

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C
45+<30+18>	One+Two 1	AU45	AU30	AU18
	One+Two 2	AU45	AU30	AB18
	One+Two 3	AU45	AR30	AU18
	One+Two 4	AU45	AR30	AB18
	One+Two 5	AU45	AB30	AU18
	One+Two 6	AU45	AB30	AB18
	One+Two 7	AR45	AU30	AU18
	One+Two 8	AR45	AU30	AB18
	One+Two 9	AR45	AR30	AU18
	One+Two 10	AR45	AR30	AB18
	One+Two 11	AR45	AB30	AU18
	One+Two 12	AR45	AB30	AB18
	One+Two 13	AB45	AU30	AU18
	One+Two 14	AB45	AU30	AB18
	One+Two 15	AB45	AR30	AU18
	One+Two 16	AB45	AR30	AB18
	One+Two 17	AB45	AB30	AU18
	One+Two 18	AB45	AB30	AB18

● One + <Two> 45 + <24+24>

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C
45+<24+24>	One+Two 19	AU45	AU25	AU25
	One+Two 20	AU45	AU25	AR25
	One+Two 21	AU45	AU25	AB24
	One+Two 22	AU45	AR25	AR25
	One+Two 23	AU45	AR25	AB24
	One+Two 24	AU45	AB24	AB24
	One+Two 25	AR45	AU25	AU25
	One+Two 26	AR45	AU25	AR25
	One+Two 27	AR45	AU25	AB24
	One+Two 28	AR45	AR25	AR25
	One+Two 29	AR45	AR25	AB24
	One+Two 30	AR45	AB24	AB24
	One+Two 31	AB45	AU25	AU25
	One+Two 32	AB45	AU25	AR25
	One+Two 33	AB45	AU25	AB24
	One+Two 34	AB45	AR25	AR25
	One+Two 35	AB45	AR25	AB24
	One+Two 36	AB45	AB24	AB24

■ FOUR INDOOR UNIT COMBINATIONS



● <Two> + <Two> <30+18> + <30+18>

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C	Indoor unit D
<30+18>+<30+18>	Two+Two 1	AU30	AU18	AU30	AU18
	Two+Two 2	AU30	AU18	AU30	AB18
	Two+Two 3	AU30	AU18	AR30	AU18
	Two+Two 4	AU30	AU18	AR30	AB18
	Two+Two 5	AU30	AU18	AB30	AU18
	Two+Two 6	AU30	AU18	AB30	AB18
	Two+Two 7	AU30	AB18	AU30	AB18
	Two+Two 8	AU30	AB18	AR30	AU18
	Two+Two 9	AU30	AB18	AR30	AB18
	Two+Two 10	AU30	AB18	AB30	AU18
	Two+Two 11	AU30	AB18	AB30	AB18
	Two+Two 12	AR30	AU18	AR30	AU18
	Two+Two 13	AR30	AU18	AR30	AB18
	Two+Two 14	AR30	AU18	AB30	AU18
	Two+Two 15	AR30	AU18	AB30	AB18
	Two+Two 16	AR30	AB18	AR30	AB18
	Two+Two 17	AR30	AB18	AB30	AU18
	Two+Two 18	AR30	AB18	AB30	AB18
	Two+Two 19	AB30	AU18	AB30	AU18
	Two+Two 20	AB30	AU18	AB30	AB18
	Two+Two 21	AB30	AB18	AB30	AB18

● <Two> + <Two> <30+18> + <24+24>

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C	Indoor unit D
<30+18>+<24+24>	Two+Two 22	AU30	AU18	AU25	AU25
	Two+Two 23	AU30	AU18	AU25	AR25
	Two+Two 24	AU30	AU18	AU25	AB24
	Two+Two 25	AU30	AU18	AR25	AR25
	Two+Two 26	AU30	AU18	AR25	AB24
	Two+Two 27	AU30	AU18	AB24	AB24
	Two+Two 28	AU30	AB18	AU25	AU25
	Two+Two 29	AU30	AB18	AU25	AR25
	Two+Two 30	AU30	AB18	AU25	AB24
	Two+Two 31	AU30	AB18	AR25	AR25
	Two+Two 32	AU30	AB18	AR25	AB24
	Two+Two 33	AU30	AB18	AB24	AB24
	Two+Two 34	AR30	AU18	AU25	AU25
	Two+Two 35	AR30	AU18	AU25	AR25
	Two+Two 36	AR30	AU18	AU25	AB24
	Two+Two 37	AR30	AU18	AR25	AR25
	Two+Two 38	AR30	AU18	AR25	AB24
	Two+Two 39	AR30	AU18	AB24	AB24
	Two+Two 40	AR30	AB18	AU25	AU25
	Two+Two 41	AR30	AB18	AU25	AR25
	Two+Two 42	AR30	AB18	AU25	AB24
	Two+Two 43	AR30	AB18	AR25	AR25
	Two+Two 44	AR30	AB18	AR25	AB24
	Two+Two 45	AR30	AB18	AB24	AB24
	Two+Two 46	AB30	AU18	AU25	AU25
	Two+Two 47	AB30	AU18	AU25	AR25
	Two+Two 48	AB30	AU18	AU25	AB24
	Two+Two 49	AB30	AU18	AR25	AR25
	Two+Two 50	AB30	AU18	AR25	AB24
	Two+Two 51	AB30	AU18	AB24	AB24
	Two+Two 52	AB30	AB18	AU25	AU25
	Two+Two 53	AB30	AB18	AU25	AR25
	Two+Two 54	AB30	AB18	AU25	AB24
	Two+Two 55	AB30	AB18	AR25	AR25
	Two+Two 56	AB30	AB18	AR25	AB24
	Two+Two 57	AB30	AB18	AB24	AB24

● <Two> + <Two> <24+24> + <24+24>

COMBINATION TYPE	System No.	Indoor unit A	Indoor unit B	Indoor unit C	Indoor unit D
<24+24>+<24+24>	Two+Two 58	AU25	AU25	AU25	AU25
	Two+Two 59	AU25	AU25	AU25	AR25
	Two+Two 60	AU25	AU25	AU25	AB24
	Two+Two 61	AU25	AU25	AR25	AR25
	Two+Two 62	AU25	AU25	AR25	AB24
	Two+Two 63	AU25	AU25	AB24	AB24
	Two+Two 64	AU25	AR25	AU25	AR25
	Two+Two 65	AU25	AR25	AR25	AR25
	Two+Two 66	AU25	AR25	AR25	AB24
	Two+Two 67	AU25	AR25	AB24	AB24
	Two+Two 68	AU25	AB24	AU25	AB24
	Two+Two 69	AU25	AB24	AU25	AR25
	Two+Two 70	AU25	AB24	AR25	AR25
	Two+Two 71	AU25	AB24	AR25	AB24
	Two+Two 72	AU25	AB24	AB24	AB24
	Two+Two 73	AR25	AR25	AR25	AR25
	Two+Two 74	AR25	AB24	AR25	AR25
	Two+Two 75	AR25	AB24	AR25	AB24
	Two+Two 76	AB24	AB24	AR25	AR25
	Two+Two 77	AB24	AB24	AR25	AB24
	Two+Two 78	AB24	AB24	AB24	AB24

2-4. OPTIONAL PARTS

■ Separation Tube

SIMULTANEOUS OPERATION			INDIVIDUAL OPERATION		
	model	Q'ty		model	Q'ty
Two	*1		One + One	-	-
Three	UTR - BP901	1	One + Two	UTR - BP901	1
Four	UTR - BP901	2	Two + Two	UTR - BP901	2

*1 Accessory standard parts is attached in Outdoor Unit.

■ Remote Controller

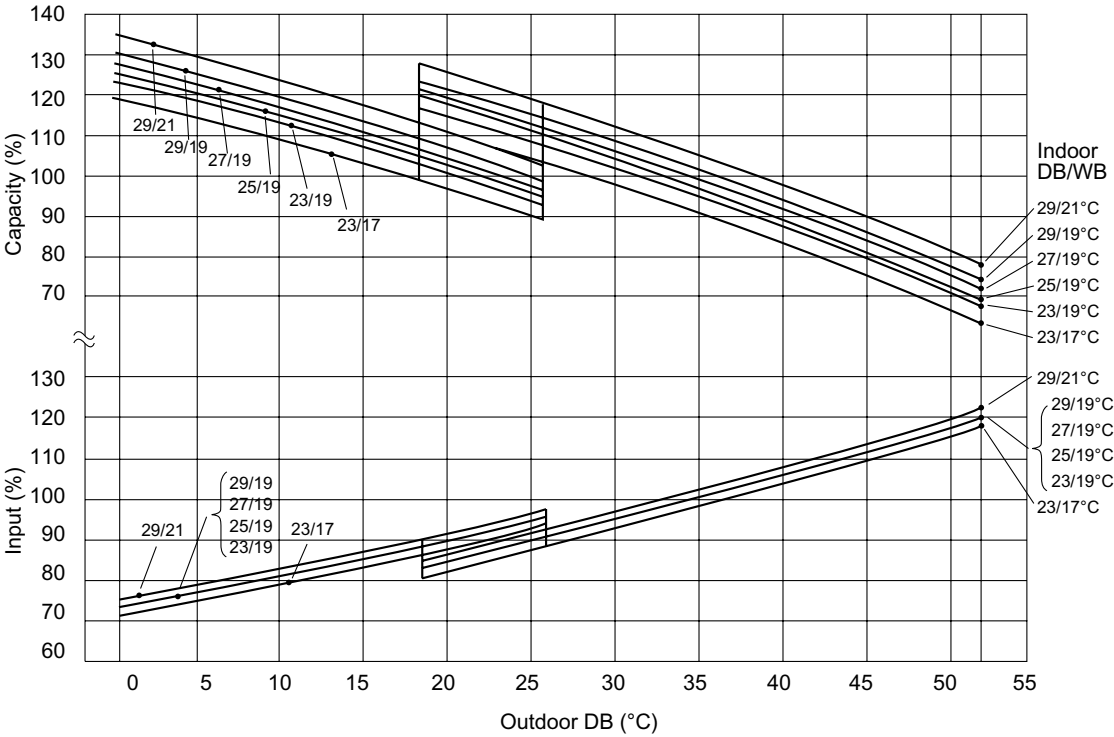
	UTB - YUB UTB - GUB	WIRED REMOTE CONTROLLER
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■ OPTIONAL PARTS

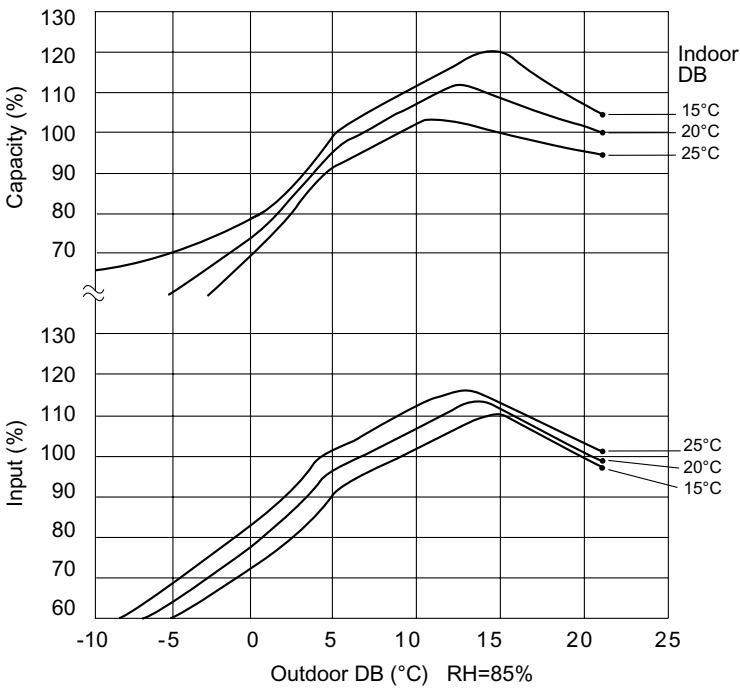
	model	Applicable Model
Flange (square)	UTD - SF045T	AR25 30 36 45
Flange (round)	UTD - RF204	
Flexible Duct	UTD - RD202	
Long Life Filter	UTD - LF270	
Drain Pump	UTR - DPB241	AB30 36 45
Grille kit	UTD - UDYD - W UTD - UDGD - W	AU18

2-5 CAPACITY TABLE

COOLING



HEATING



3 . OUTDOOR UNITS

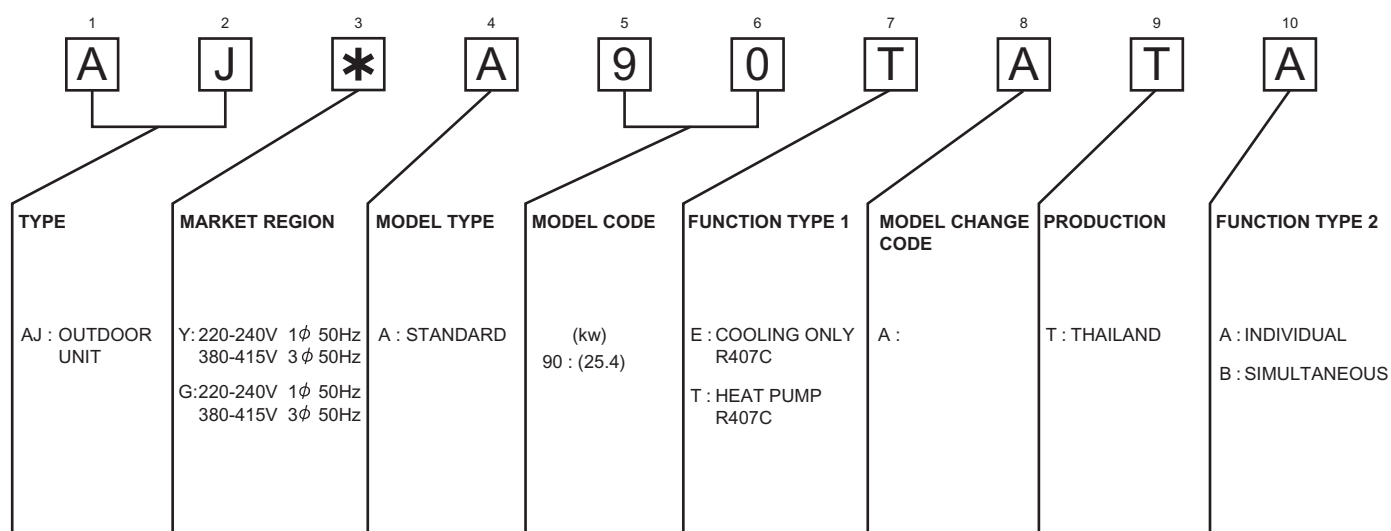
3-1 MODEL LINE UP

■ LINE UP

OPERATION TYPE	TYPE	CAPACITY	MODEL NAME	Maximum Connectable Indoor unit
SIMULTANEOUS OPERATION	Heat pump	25.4 kW	AJ*A90TATB	4
	Cooling only	25.4 kW	AJ*A90EATB	4
INDIVIDUAL OPERATION	Heat pump	25.4 kW	AJ*A90TATA	4 (2 + 2)
	Cooling only	25.4 kW	AJ*A90EATA	4 (2 + 2)

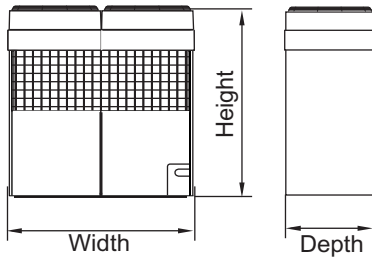
■ REFRIGERANT R407C

■ MODEL DESIGNATION



3-2 FEATURES

■ NEW COMPACT



Dimensions

Height **1,380**

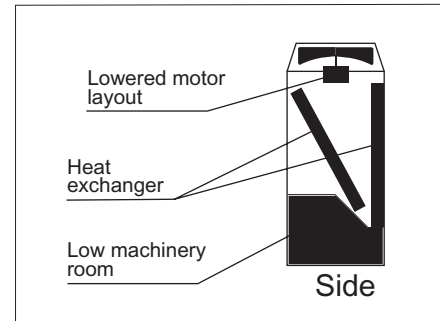
Width **1,300**

Depth **650**

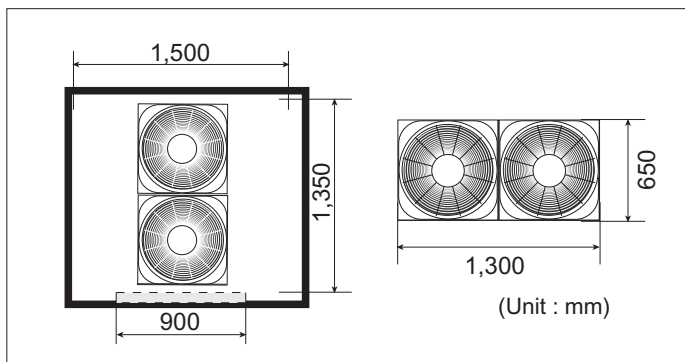
(Unit : mm)

■ COMPACT CONSTRUCTION

Layout of evaporator and fan allows us to reduce the height.



■ OUTDOOR UNIT GOES INTO ELEVATOR



■ SPACE SAVING

Space saved by setting side by side without space in between.

Setting size

5.32 (Unit : m²)



Only a small area is needed for outdoor unit (total capacity 30HP, height of surrounding wall 1.5m)

■ LOW NOISE LEVEL

Large 590mm diameter fan provides top class low noise level.

Low outdoor unit (10HP)
noise level

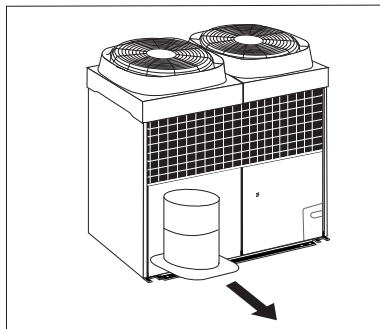
57 (unit : dB)

■ EASY MAINTENANCE

Indication of operating status on PCB.

Indicating the operating status and details of failures on PCB in the outdoor unit allows better service and quick and easy maintenance.

Easy to replace compressors

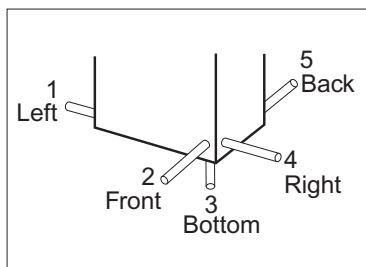


■ EASY INSTALLATION

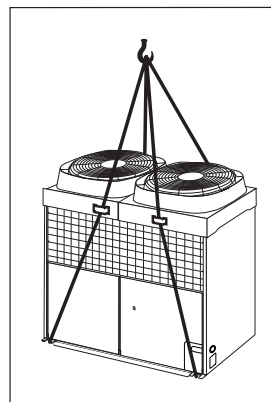
Five-direction pipe allows a variety of installation, configurations

Easy installation and pipe direction setting

Five-direction pipe



Outdoor unit can be lifted by a crane set on the roof of the building



■ OTHERS

- Power requirement 3-phase 4-wire
- Alternate refrigerant R407C

	Simultaneous / Individual Operation
Maximum Length	50m
Height Difference	30m

- Chargeless design 30m
- Cooling operation possible at low outdoor-temperature 0°C
- Heating operation possible at low outdoor-temperature -10°C

3-3 SPECIFICATIONS

■ SIMULTANEOUS OPERATION

Model				AJ* A90EATB	AJ* A90TATB
Power Requirement				3N~380-415V,50Hz	
Total Capacity	Cooling		kW	25.4	25.4
	Heating		kW	—	28.6
Total Input	Cooling		kW	9.4	9.4
	Heating		kW	—	10.0
Total Current	Cooling		A	16.2	16.2
	Heating		A	—	17.0
Starting Current			A	63	63
Fan Speed	High		r.p.m	730	
	Low		r.p.m	360	
Air Circulation	High		m³/h	9800	
Heat Exchanger				Plate Fin Coil	
Fan Type x Q'ty				Propeller x 2	
Fan Motor Output			W	150 x 2	
Compressor	Motor Output		kW	4.2 x 2	
	Protection			Internal Protector(OCR),High Pressure Relief Valve	
Dimensions (H x W x D)	Net		mm	1,380 x 1,300 x 650	
	Gross		mm	1,535 x 1,400 x 770	
Weight	Net		kg	243	245
	Gross		kg	280	282
Noise Level (Sound Pressure)			dB(A)	57	57
Condition	Indoor Air Temp.	Cooling	DB/WB	27°C/19°C	
		Heating	DB/WB	20°C/(15)°C	
	Outdoor Air Temp.	Cooling	DB/WB	35°C/24°C	
		Heating	DB/WB	7°C/6°C	
Refrigerant	Type			R407C	
	Charge		kg	6.0	6.0
Pipe	Size	Liquid	mm(inch)	12.70(1/2")	
		Gas	mm(inch)	28.58(1-1/8")	
	Connection Method	Liquid		Flare	
		Gas		Flange	
	Max Length		m	50	
	Max Height		m	30	
	Max Chargeless Length		m	30	
Operation	Cooling/Heating		°C	0 — 52 / -10 — 21	

■ INDIVIDUAL OPERATION

Model				AJ * A90EATA	AJ * A90TATA
Power Requirement				3N~380-415V,50Hz	
Total Capacity	Cooling		kW	25.4	25.4
	Heating		kW	—	28.6
Total Input	Cooling		kW	9.4	9.4
	Heating		kW	—	10.0
Total Current	Cooling		A	16.2	16.2
	Heating		A	—	17.0
Starting Current			A	63	63
Fan Speed	High		r.p.m	730	
	Low		r.p.m	360	
Air Circulation	High		m³/h	9800	
Heat Exchanger				Plate Fin Coil	
Fan Type x Q'ty				Propeller x 2	
Fan Motor Output			W	150 x 2	
Compressor	Motor Output		kW	4.2 x 2	
	Protection			Internal Protector(OCR),High Pressure Relief Valve	
Dimensions (H x W x D)	Net		mm	1,380 x 1,300 x 650	
	Gross		mm	1,535 x 1,400 x 770	
Weight	Net		kg	243	245
	Gross		kg	280	282
Noise Level (Sound Pressure)			dB(A)	57	57
Condition	Indoor Air Temp.	Cooling	DB/WB	27°C/19°C	
		Heating	DB/WB	20°C/(15)°C	
	Outdoor Air Temp.	Cooling	DB/WB	35°C/24°C	
		Heating	DB/WB	7°C/6°C	
Refrigerant	Type			R407C	
	Charge		kg	3.1 x 2	3.1 x 2
Pipe	Size	Liquid	mm(inch)	9.52(3/8")	
		Gas	mm(inch)	19.05(3/4")	
	Connection Method	Liquid		Flare	
		Gas		Flare	
	Max Length		m	50	
	Max Height		m	30	
	Max Chargeless Length		m	30	
Operation	Cooling/Heating		°C	0—52 / -10—21	

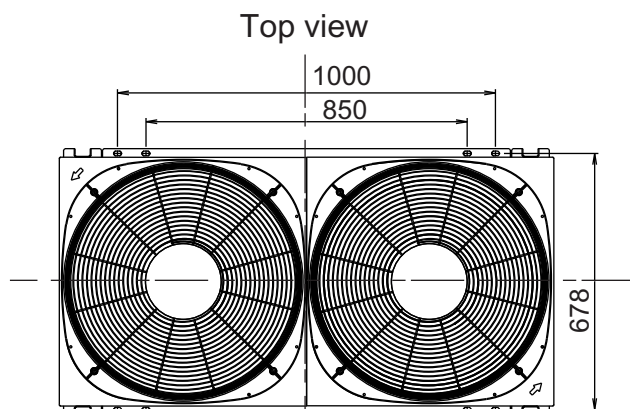
OUTDOOR
UNITS

OUTDOOR
UNITS

3-4 DIMENSIONS

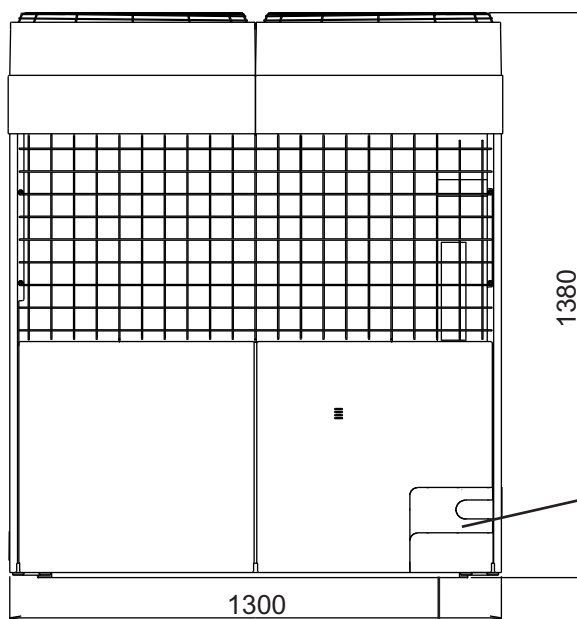
■ OUTDOOR UNIT

- MODELS : AJ * A90EATB , AJ * A90TATB
AJ * A90EATA , AJ * A90TATA

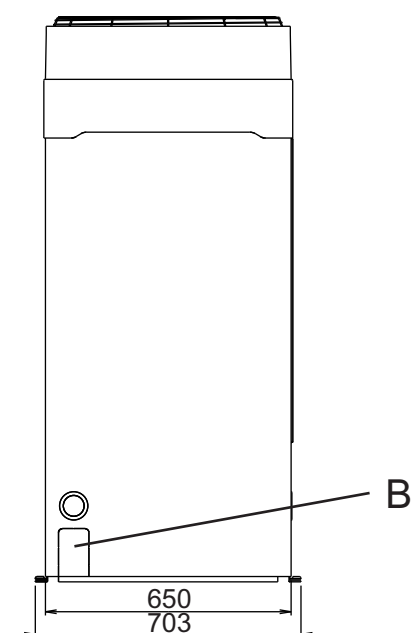


(Unit : mm)

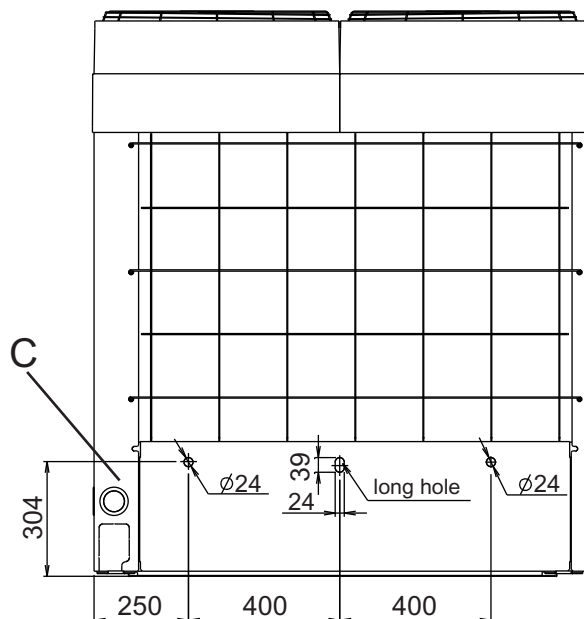
Front view



Right view



Rear view

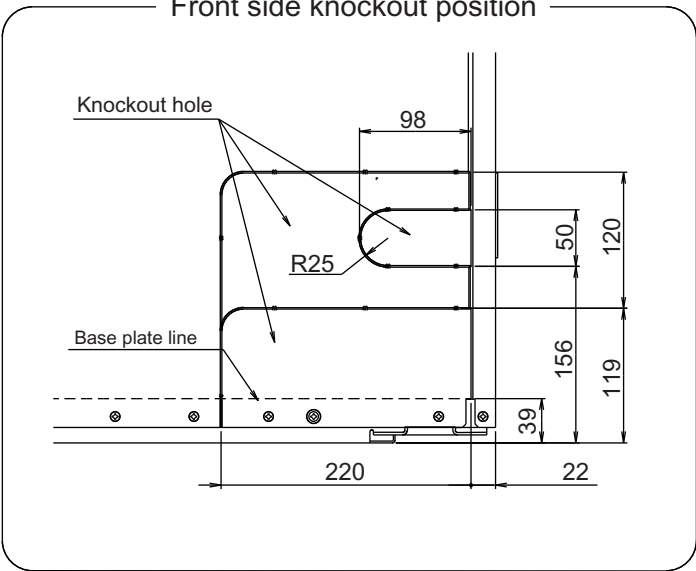


■ PIPING POSITION DETAIL

(Unit : mm)

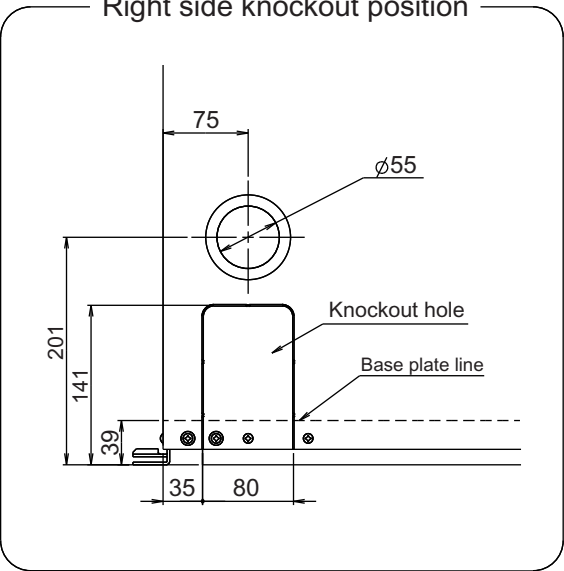
A

Front side knockout position



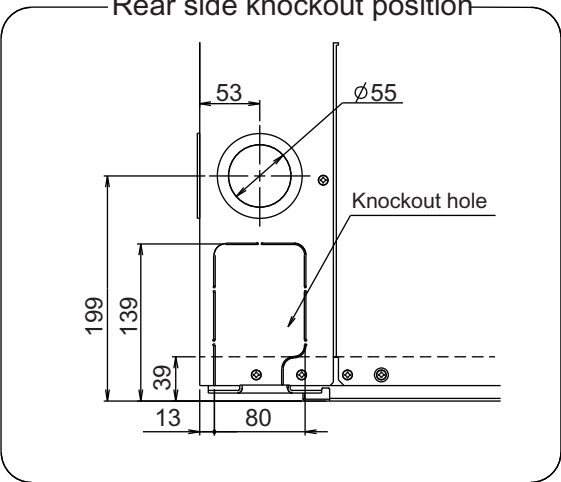
B

Right side knockout position



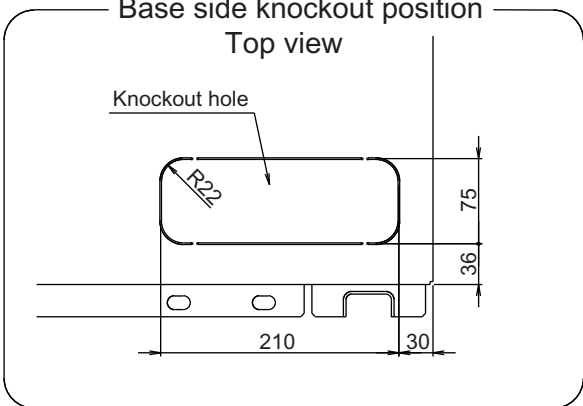
C

Rear side knockout position



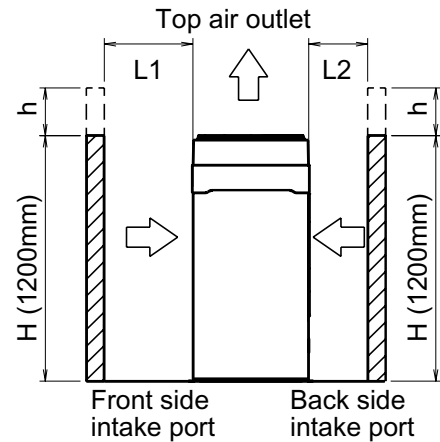
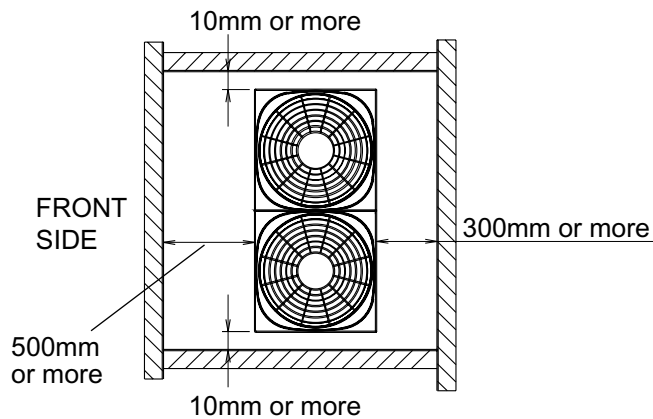
D

Base side knockout position
Top view



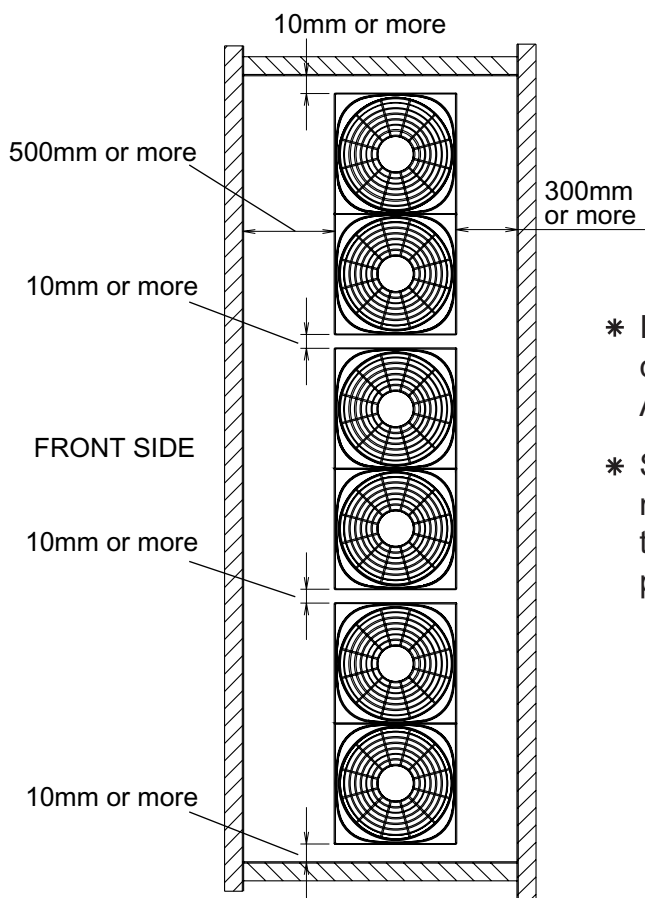
3-5 INSTALLATION SPACE

■ FOR INDIVIDUALLY



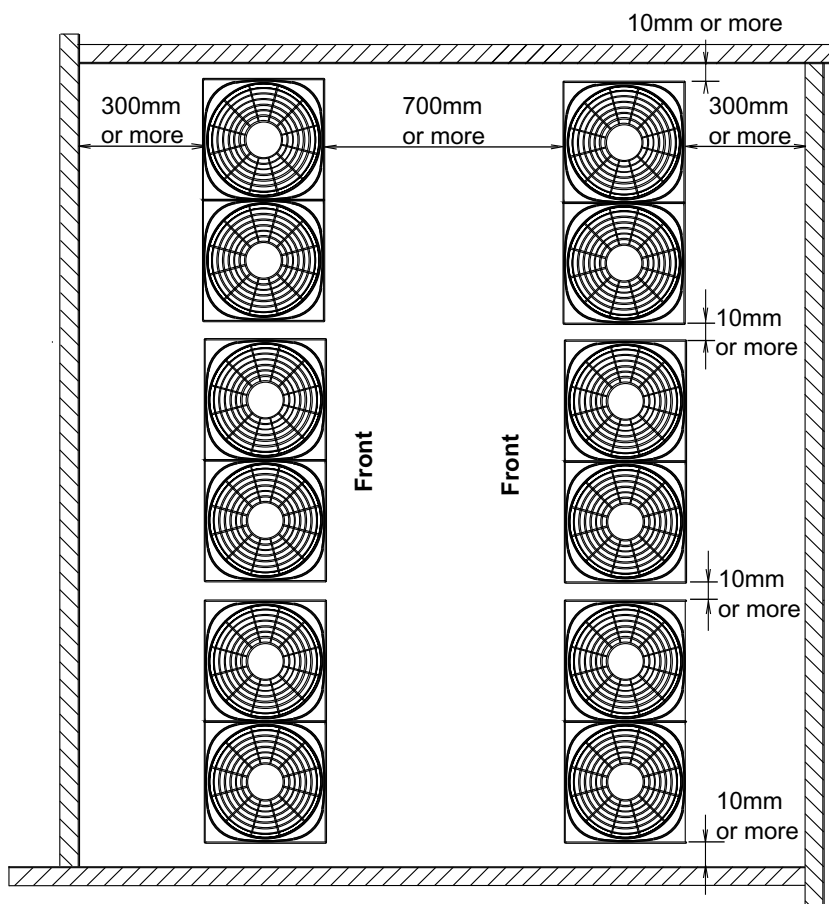
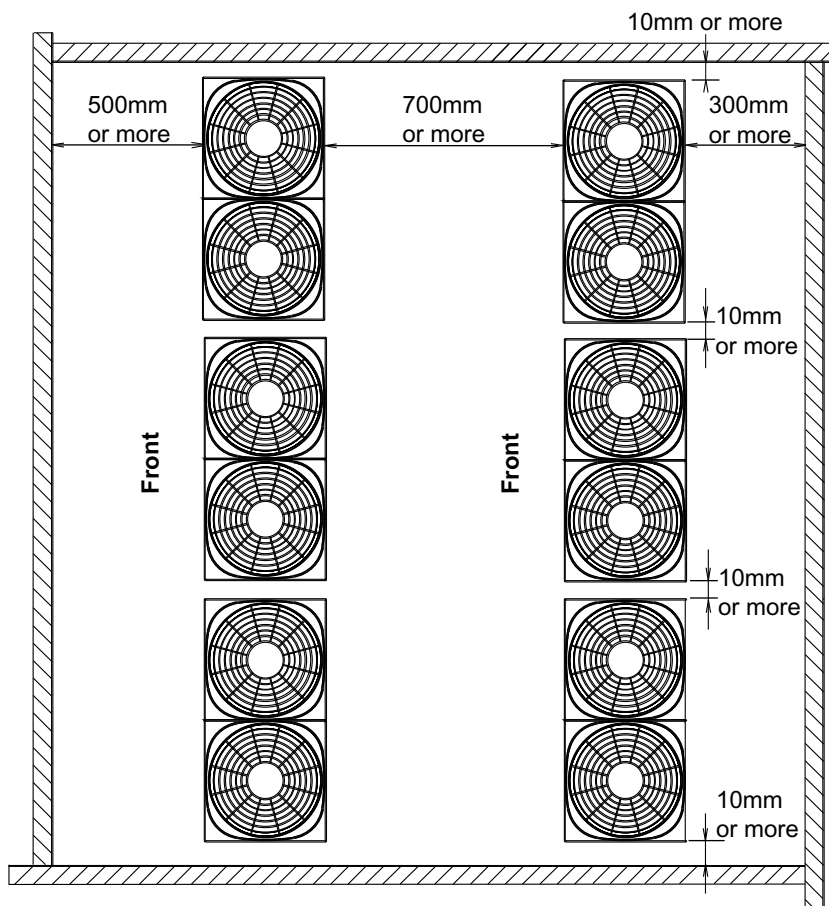
- * There are no height restriction for the side wall.
 - * The height (H) of front and rear wall should be less than 1,200mm.
 - * If the height of wall exceed 1,200mm by h mm, add h mm to the service space width for L1 and L2.
- $H \leq 1,200$: $L1 \geq 500$, $L2 \geq 300$
 $H > 1,200$: $L1 > 500+h$, $L2 > 300+h$

■ FOR CONTINUOUS



- * If outdoor unit is not installed to specifications, capacity may drop because of a short-circuit. As a result, a high pressure error may occur.
- * Since specified values are minimum permissible measurements, install unit after duly considering the measurements required for installation location, piping work and maintenance.

■ FOR CENTRALIZED

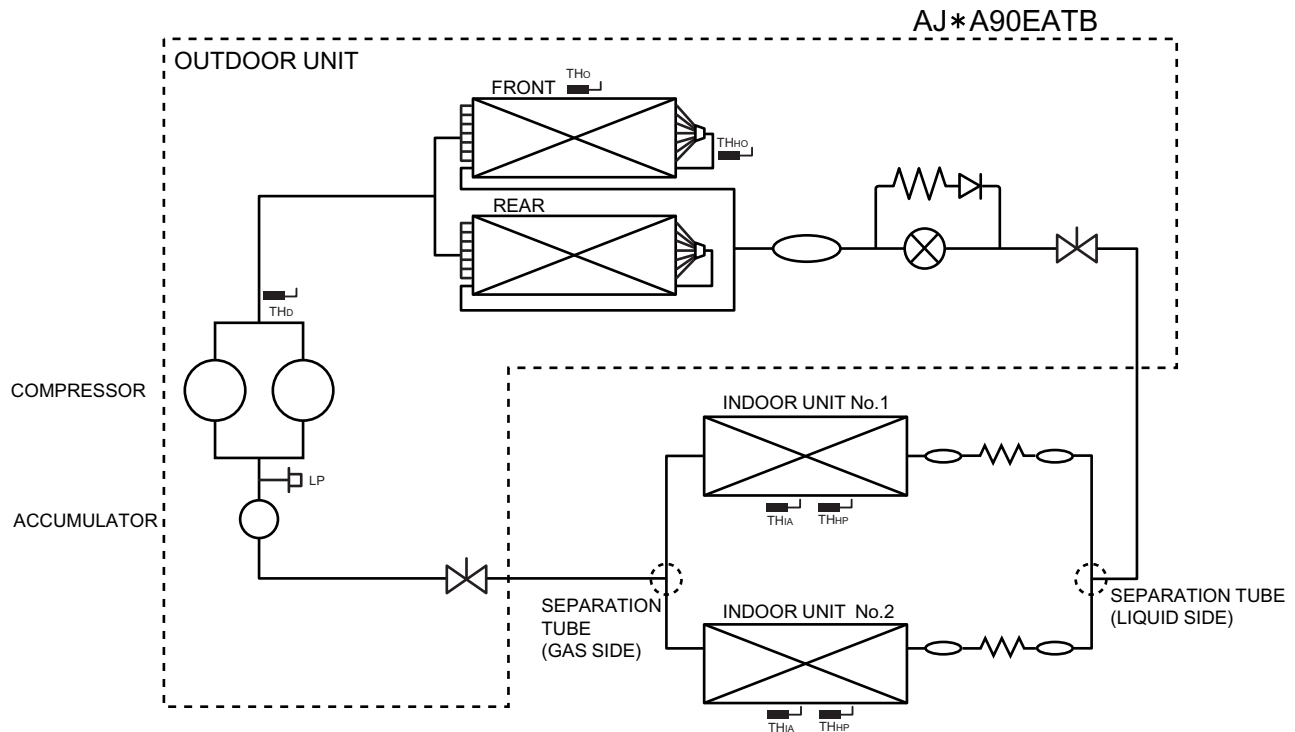


- If outdoor unit is installed beyond allowable values, capacity will drop because of short-circuit. As a result, there is a danger of high pressure.
- Since specified values are minimum permissible measurements, install unit after duly considering the measurements required for installation location and piping work.

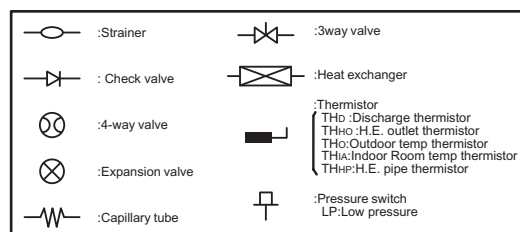
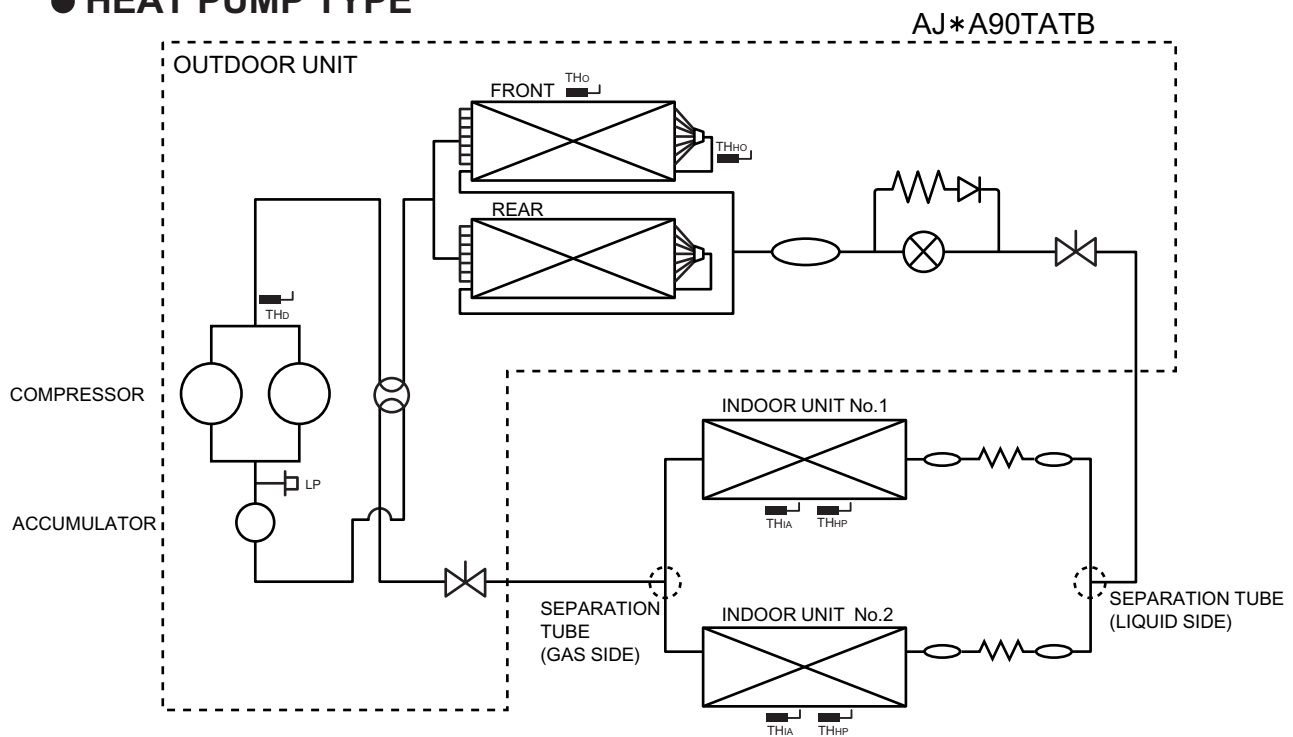
3-6 REFRIGERANT CIRCUIT

■ SIMULTANEOUS OPERATION

● COOLING ONLY TYPE

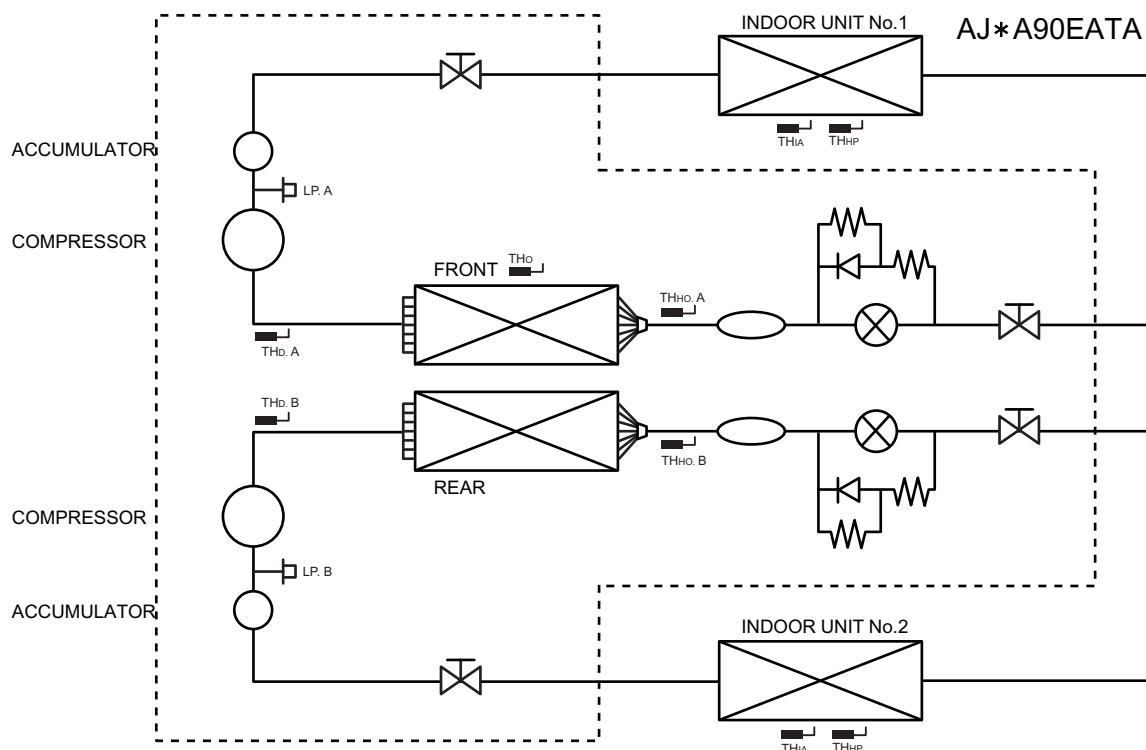


● HEAT PUMP TYPE

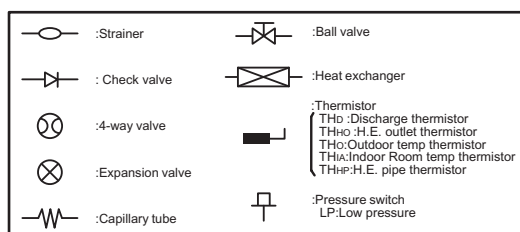
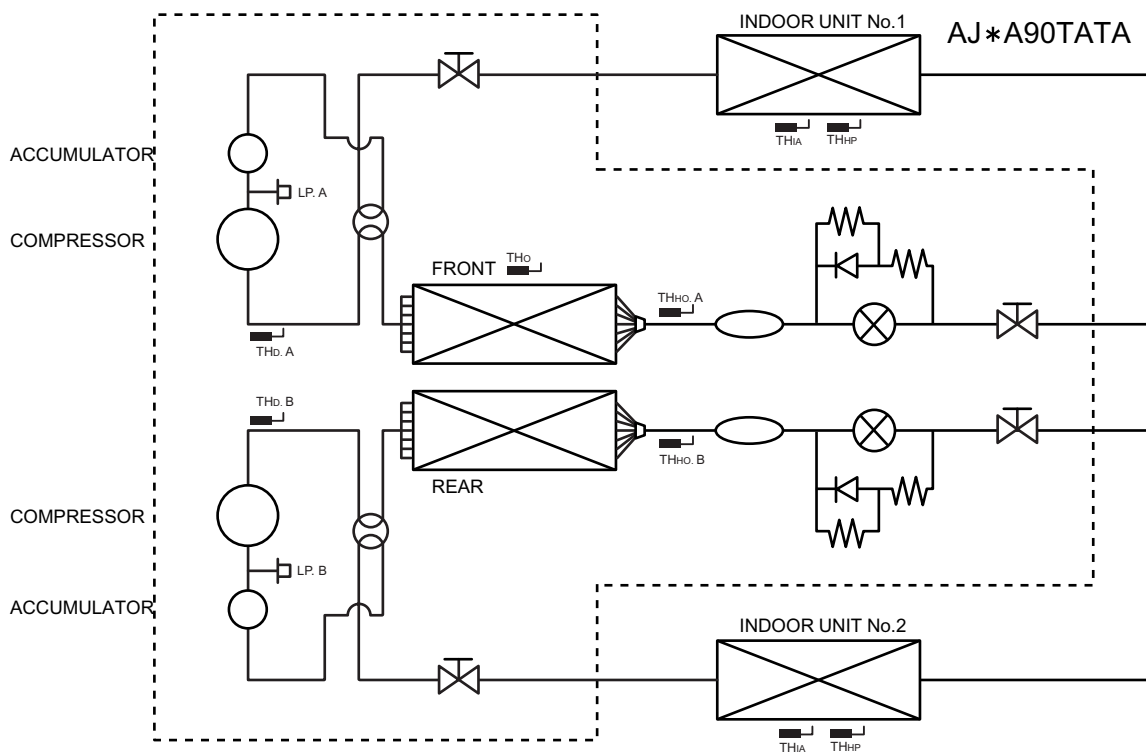


■ INDIVIDUAL OPERATION

● COOLING ONLY TYPE



● HEAT PUMP TYPE

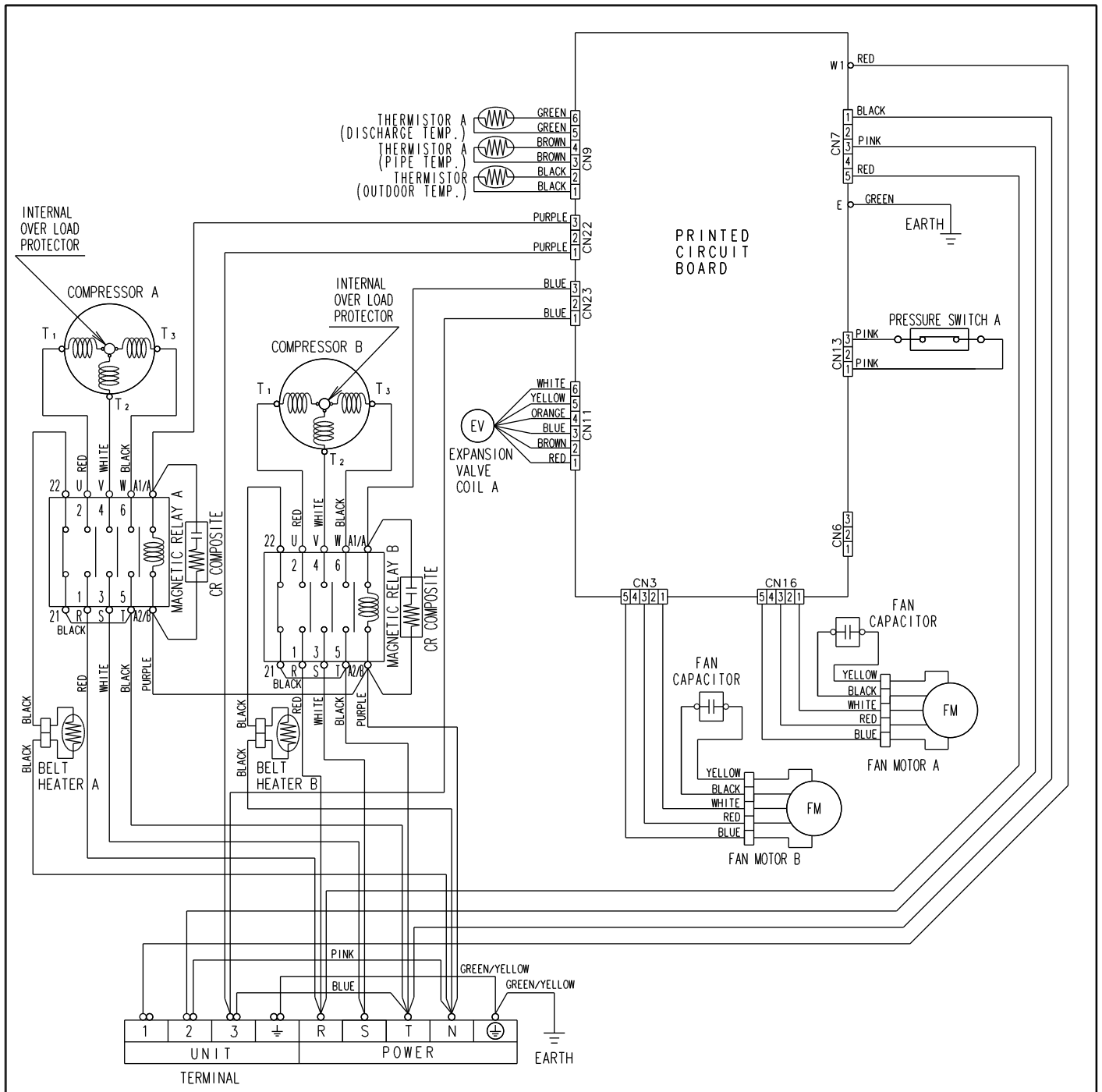


3-7 WIRING DIAGRAM

■ SIMULTANEOUS OPERATION

● COOLING ONLY TYPE

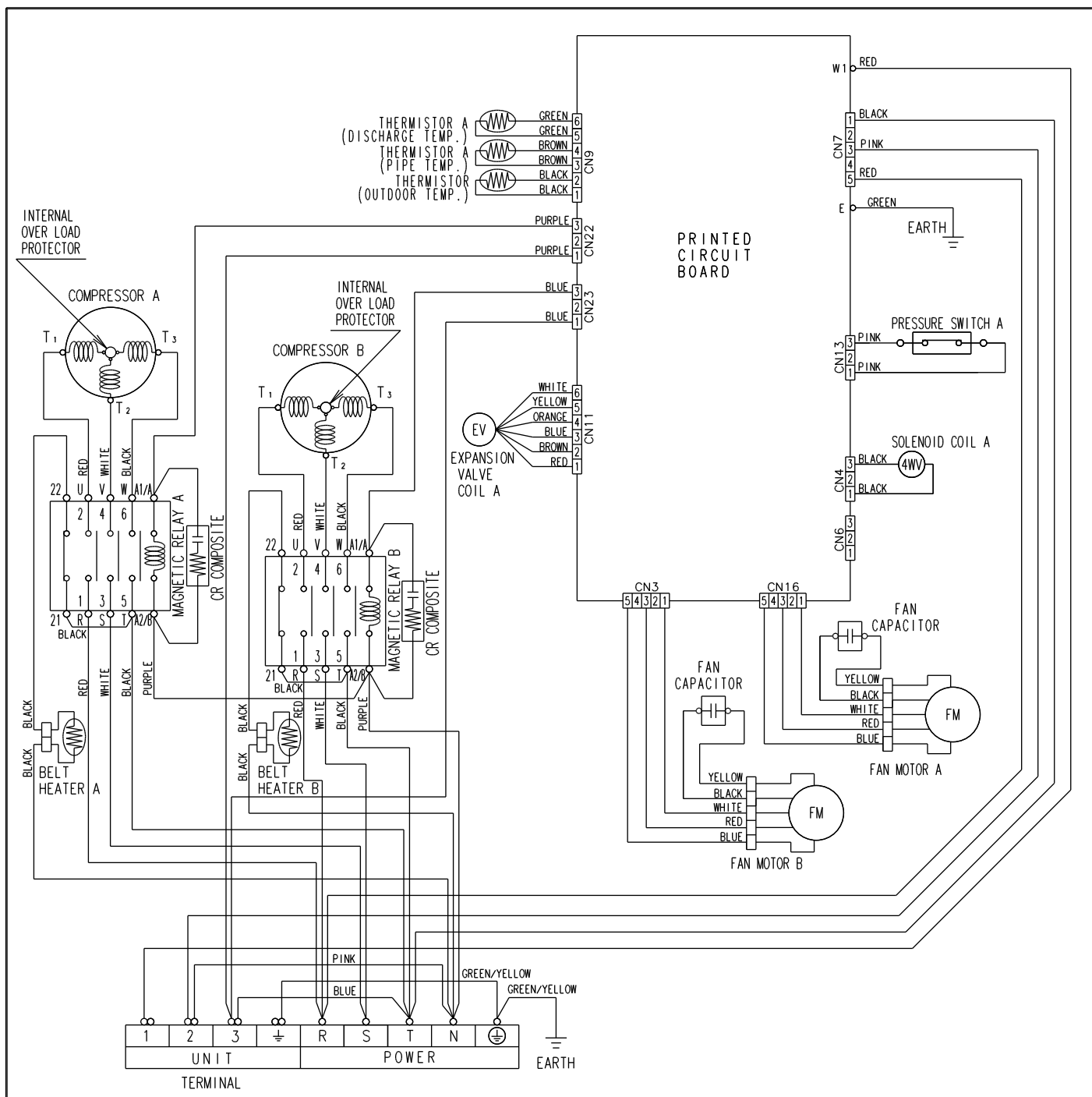
Model : AJ*A90EATB



■ SIMULTANEOUS OPERATION

● HEAT PUMP TYPE

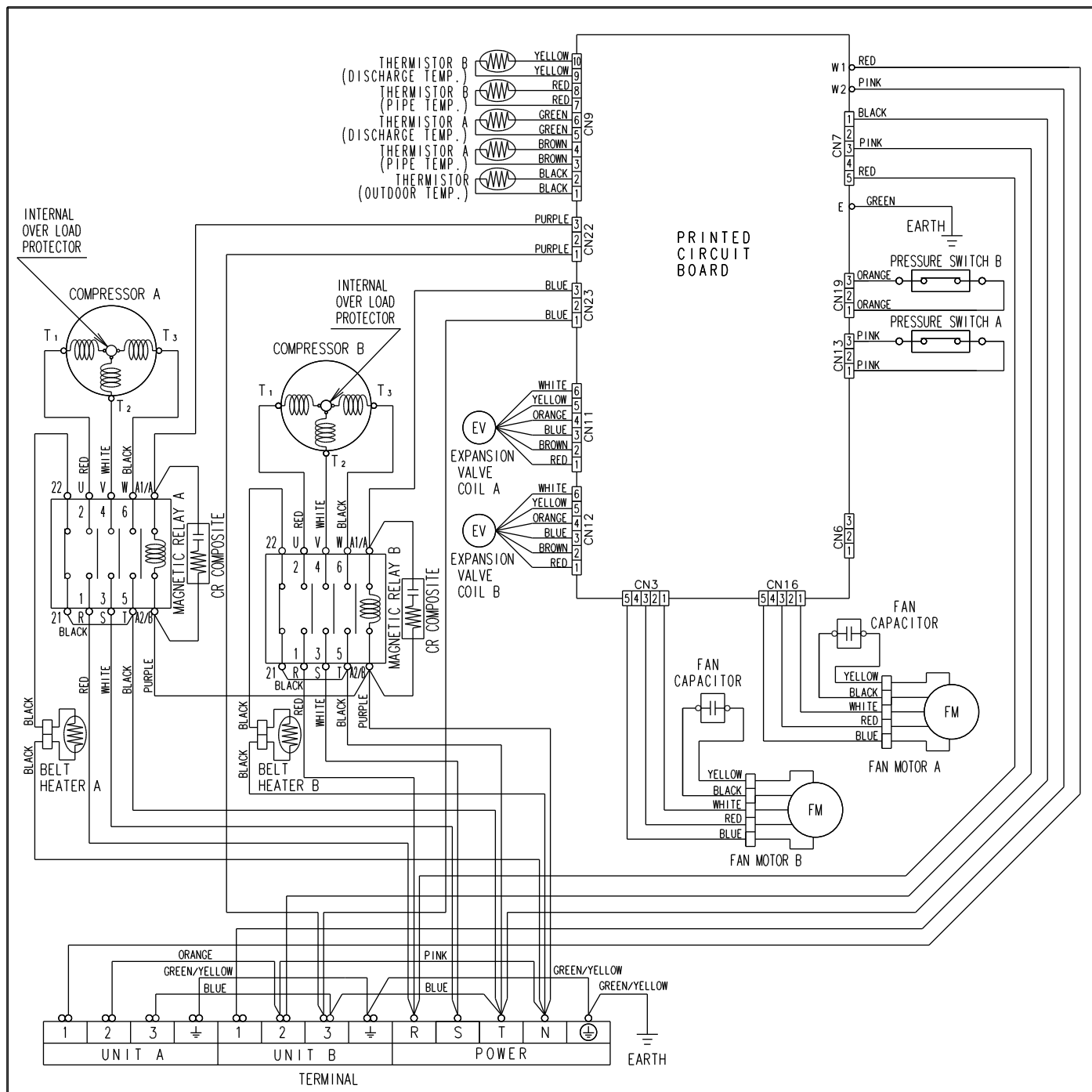
Model : AJ*A90TATB



■ INDIVIDUAL OPERATION

● COOLING ONLY TYPE

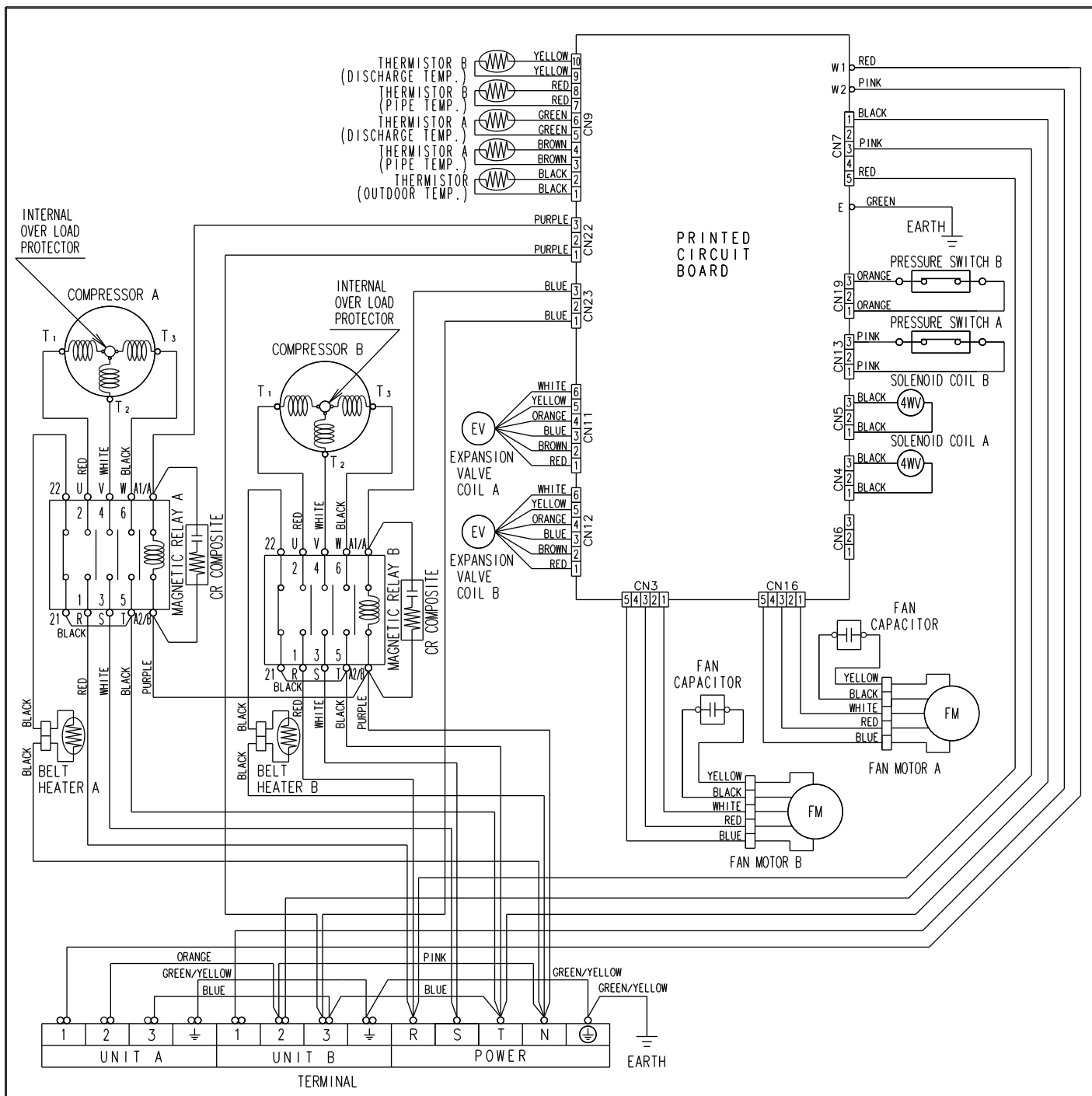
Model : AJ * A90EATA



INDIVIDUAL OPERATION

HEAT PUMP TYPE

Model : AJ*A90TATA



3-8 OPERATION RANGE

Mode	Temperature Range	
	Indoor Unit	Outdoor Unit
COOL (DRY)	18 ~ 32 °C	0 ~ 52 °C
HEAT	30 °C or less	-10 ~ 21 °C

3-9 SOUND LEVEL

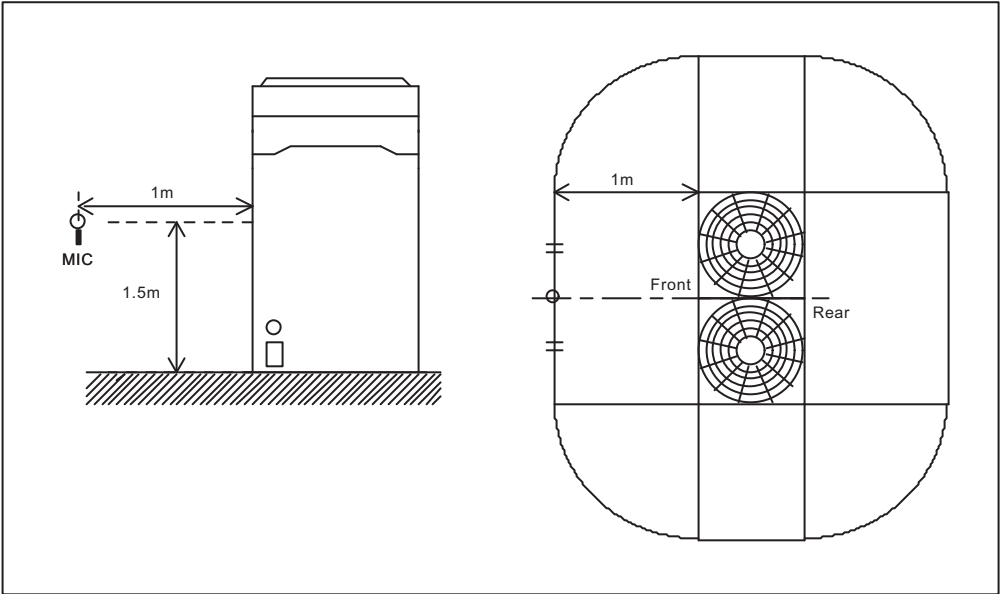
OVERALL

MODEL	VOLTAGE	SOUND LEVEL
AJ*A90	415V	57 dB (A)

OUTDOOR
UNITS

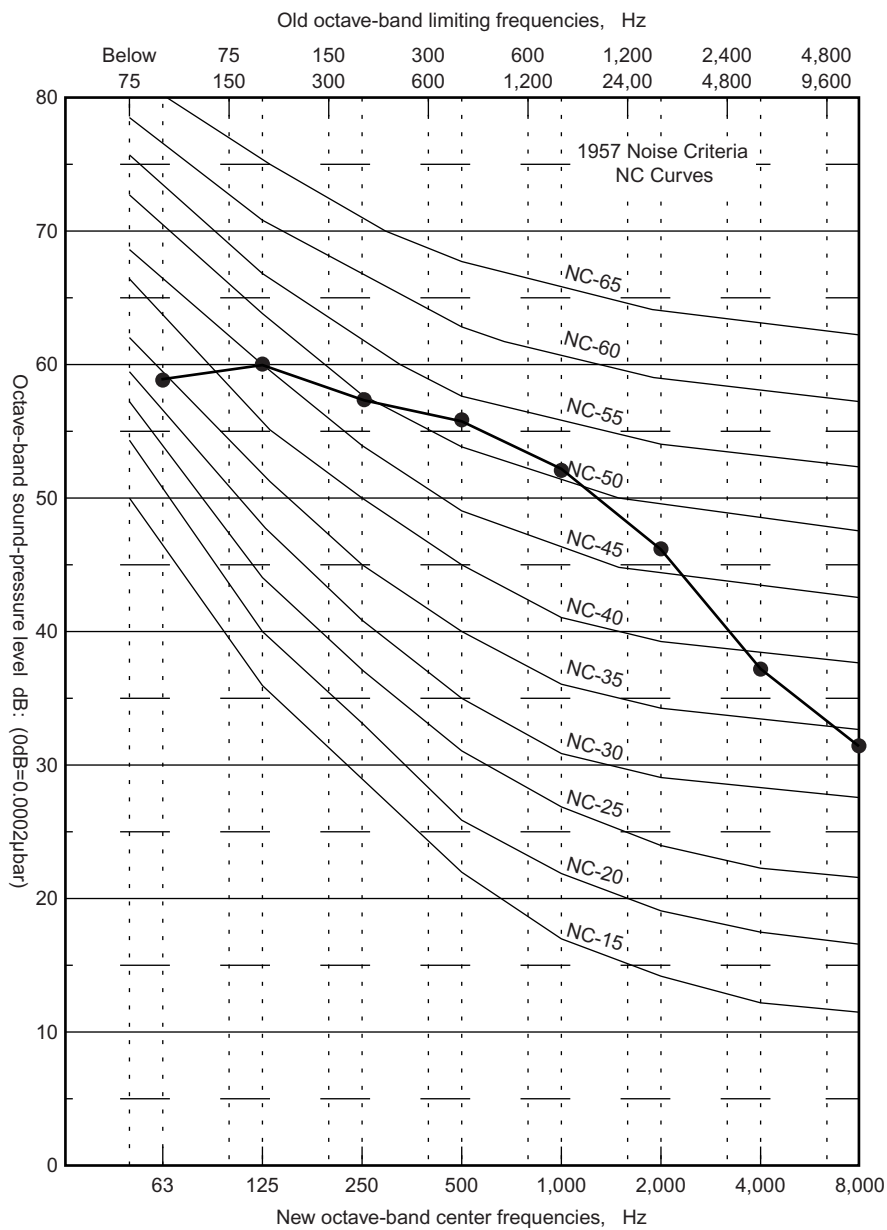
OUTDOOR
UNITS

SOUND LEVEL CHECK POINT



■ OCTAVE-BAND LEVEL

● MODEL : AJ* A90



3-10 ELECTRIC CHARACTERISTICS

MODEL NAME				AJ *A90EATB / AJ *A90TATB	AJ *A90EATA / AJ *A90TATA
POWER SUPPLY	Phase			3N~	
	FREQUENCY		Hz	50	
	VOLTAGE	RATED	V	380 - 415	
		min / MAX		min.342 / MAX.456	
RATED LOAD CURRENT		RLC	A	9.4	9.4
MAX. LOAD CURRENT		MLC		30	28
MAX. LOAD INPUT		MLI	kW	14.8	14.7
MAX. FUSE AMP.		FS	A	40	
STARTING CURRENT		SC		63	63
COMP	Rated Load Amp.	RLA	A	20	10/10
RESSOR	MOTOR OUTPUT	MO	kW	6.4	3.2/3.2

- RLC is based on following standard condition.

Indoor : 27°C DB/19°C WB

Outdoor : 35°C DB

- MLC is based on the value of using maximum operation range.
- To select electrical equipment and wire size, calculate following method.
- To select electrical circuit breaker, refer to the value of FS.

$$FS \geq RLC \times S^{*EX}) \quad *S : \text{Safety Factor} \approx 2.25$$

- * Caution Safety Factor is depend on the wiring regulation of each regions.

3-11 SAFETY DEVICES SETTING

MODEL NAME		AJ *A90EATB / AJ *A90TATB AJ *A90EATA / AJ *A90TATA
PCB FUSE		250V 6.3A
COMPRESSOR	INTERNAL PROTECTOR	135 °C ON 50A 61 °C OFF in 3-10sec
	RELIEF VALVE	Pd-Ps 2.9 ± 0.18MPa
FAN MOTOR THERMAL PROTECTOR		130 °C ± 5 °C OFF 83 °C ON
REMARKS		REVERSE PHASE BLOCK

OUTDOOR
UNITS

OUTDOOR
UNITS

4 . INDOOR UNITS

4-1 MODEL LINE UP

■ LINE UP

■ SIMULTANEOUS OPERATION

5 types, 14 models ranging from 5.30kW to 12.7kW

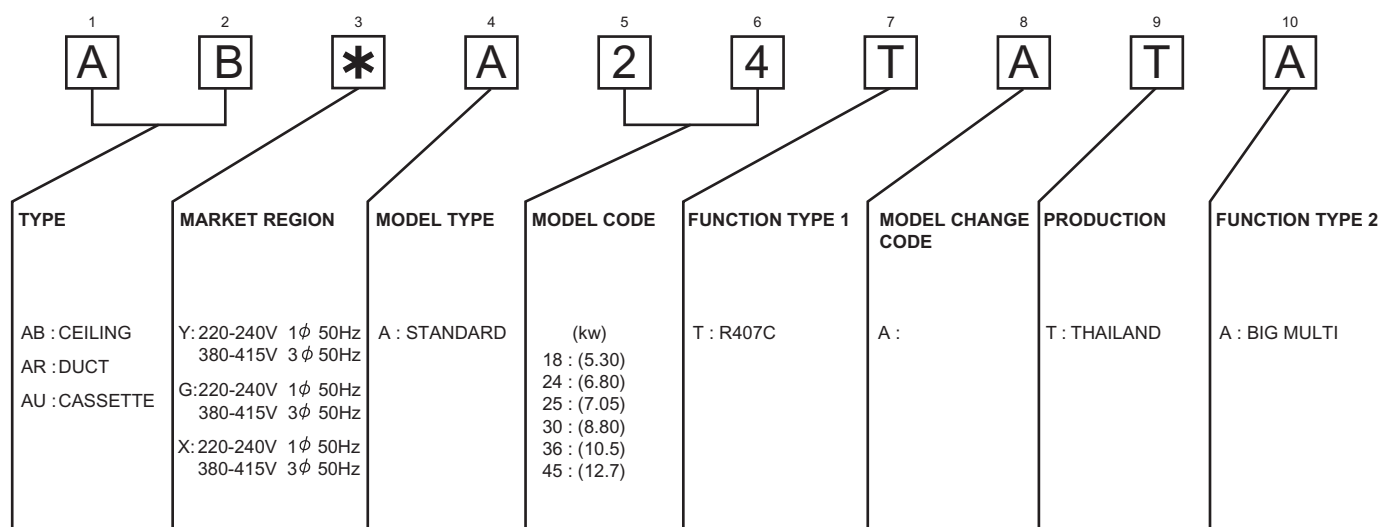
Capacity (kW)	Type Model code	Duct (Standard Static Pressure)	Cassette (compact)	Cassette	Universal Floor/Ceiling	Ceiling
12.7	45	●		●		●
10.5	36	●		●		●
8.80	30	●		●		●
7.05	25	●		●		
6.80	24				●	
5.30	18		●		●	

■ INDIVIDUAL OPERATION

5 types, 11 models ranging from 5.30kW to 12.7kW

Capacity (kW)	Type Model code	Duct (Standard Static Pressure)	Cassette (compact)	Cassette	Universal Floor/Ceiling	Ceiling
12.7	45	●		●		●
10.5	36					
8.80	30	●		●		●
7.05	25	●		●		
6.80	24				●	
5.30	18		●		●	

■ MODEL DESIGNATION



4-2 FEATURE

4-2-1 STANDARD STATIC PRESSURE DUCT TYPE

■ MODELS : AR25, AR30, AR36, AR45

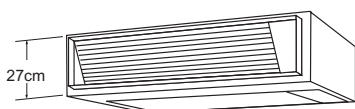
Installed behind the ceiling (or with a double ceiling for existing rooms) this design offers space savings and low noise.

One indoor unit can condition the air of multiple rooms. With a beautiful finish, the outlet grille does not stick out into the room.

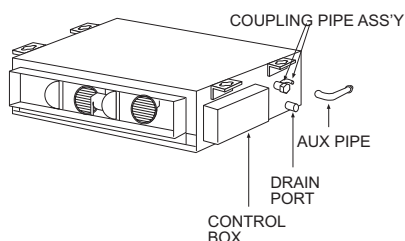


■ FEATURES

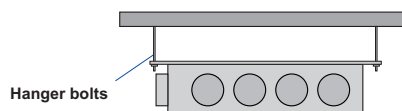
- Ultra thin models for very low ceilings
- Flexible installation



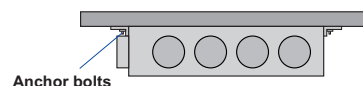
- Piping can be laid in almost any direction.



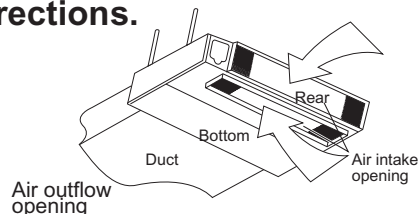
Suspended installation



Direct installation

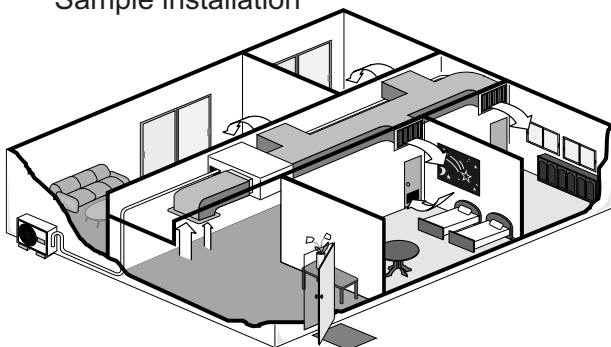


- Fresh air can be taken in from two directions.



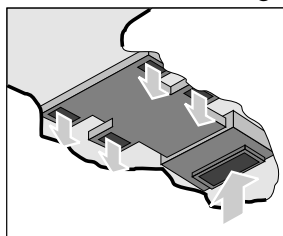
- Sample installation / Installation style

Sample installation

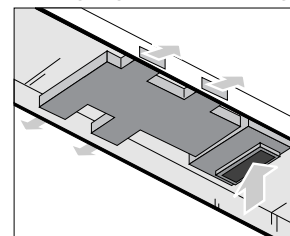


Installation styles

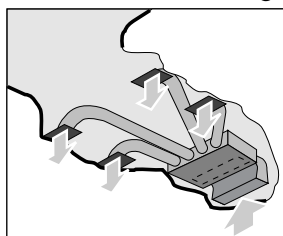
Embedded in Ceiling



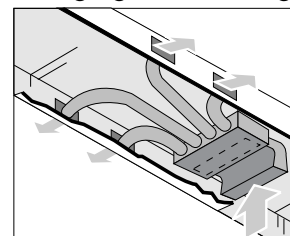
Hanging from Ceiling



Embedded in Ceiling



Hanging from Ceiling



- Others

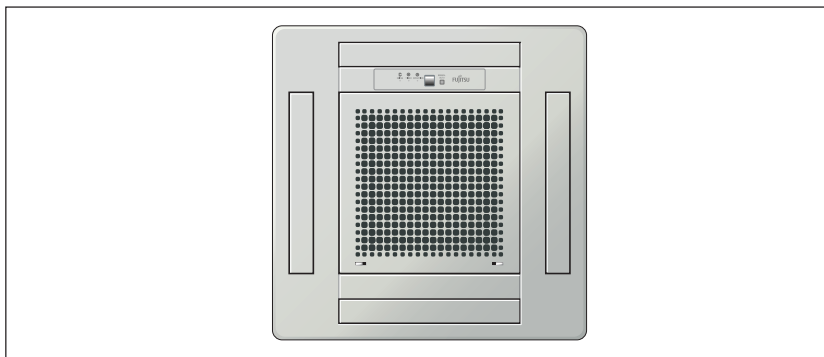
Auto Restart

- Option parts

* Flange (square)	UTD-SF045T
* Flange (round)	UTD-RF204
* Flexible duct	UTD-RD202
* Long life filter	UTD-LF270

4-2-2 COMPACT CASSETTE TYPE

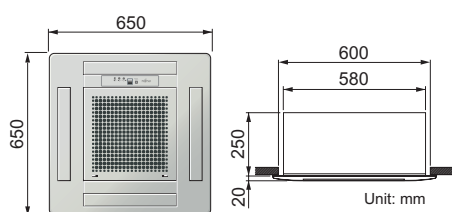
■MODEL : AU18



■FEATURES

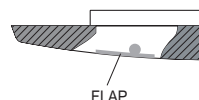
• Compact

Fit to ceiling tiles (600mm x 600mm)

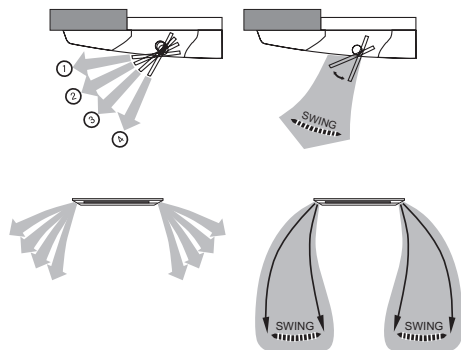


Dimensions (12,000 to 14,000 and 18,000 BTU)

• Flat & simple design



• Auto air flow direction & auto swing

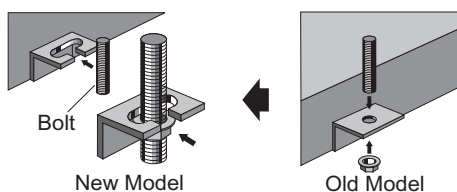
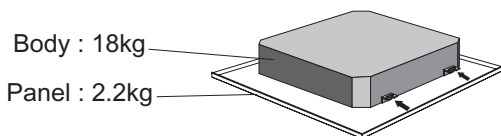


• 4-way air flow system

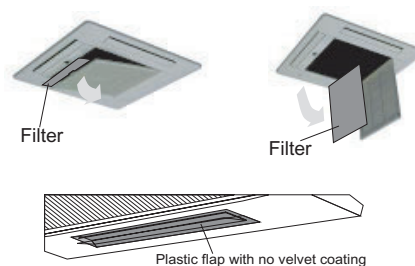
You can select 2-way, 3-way or 4-way air flow to suit your needs.



• Light weight & easy installation



• Easy maintenance



4-2-3 CASSETTE TYPE

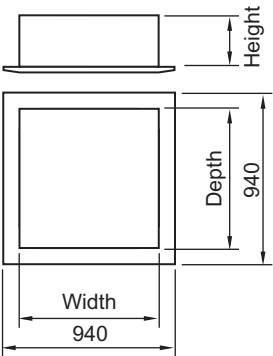
MODELS : AU25,AU30, AU36,AU45



FEATURES

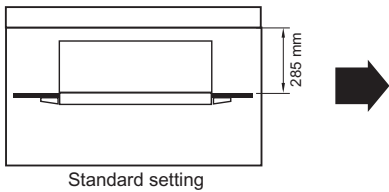
Flexible installation

Small and compact body allows space saving installation. New mechanism allows the cassette body to move 35mm downward and contributes to keeping the ceiling surface clean.

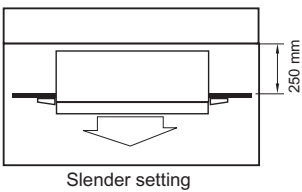


Setting space

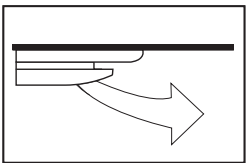
Model	AU25, AU30, AU36, AU45
Height	250 or 285
Width	830
Depth	830



Standard setting



Slender setting



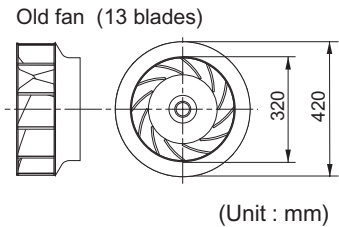
Improved noise level and air distribution

Comparison of noise level (dB)

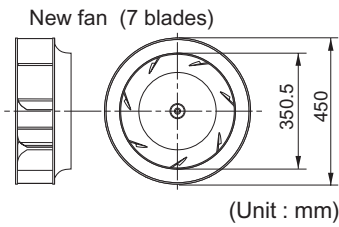
Noise level is lowered dramatically.

- * Improved turbo fan shape (aerodynamic design)
- * Expanded air distribution
- * Low internal resistance
- * Molded fan motor

Improvement of fan blade



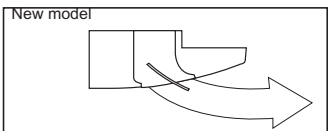
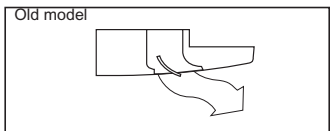
(Unit : mm)



(Unit : mm)

Wide air flow

Larger air flap distributes the outlet air flow a longer distance in the horizontal direction.



4-2-4 UNIVERSAL FLOOR / CEILING TYPE

■ MODELS : AB18, AB24

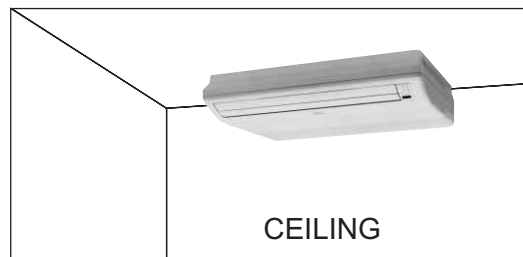
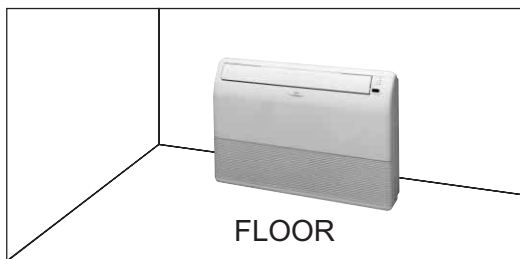
■ FEATURES

● Compact design

Symmetrical thin and compact design
Flat and round form



● Flexible installation



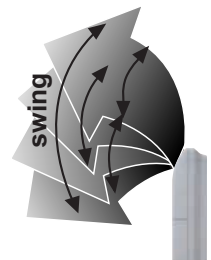
● Double auto swing

Combination of up/down and right/left air direction swing allows three-dimensional air direction control.

Since up/down air direction flaps operate automatically, according to the operating mode of the unit, it is possible to set the air direction based on the operating mode.



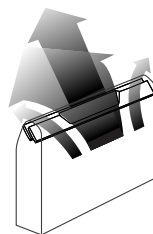
UP and DOWN



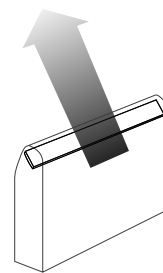
Swing Steps

● Super vane

The double-flap "Super Vane" with newly developed special configuration boosts the air flow, sending cool air quickly to every corner of the room.



New model



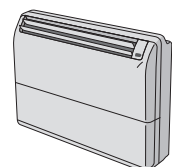
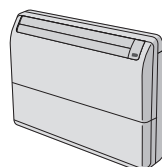
Old model

● Others

- *Auto Restart
- *Detachable and Washable Open Panel
- *Auto Shut Flaps

Non-operation mode

Operation mode



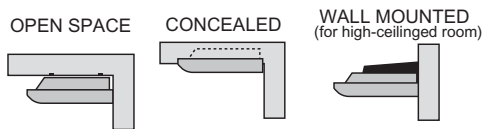
4-2-5 LARGE CEILING TYPE

■ MODELS : AB30, AB36, AB45

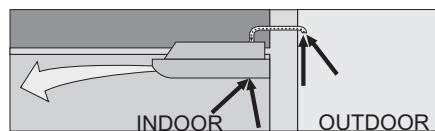


■ FEATURES

● Installation



● Fresh-air intake

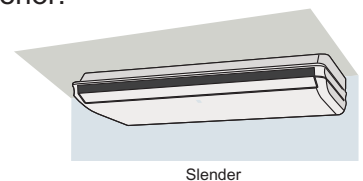


● Wide air flow



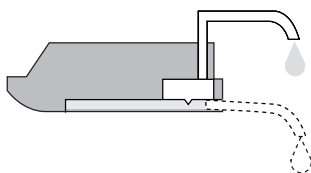
● Slender shape

A slender shape with curves harmonizes perfectly with the room interior.



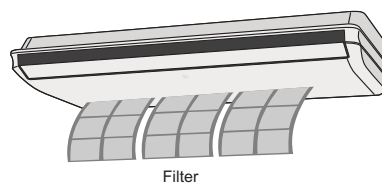
● Drain lift-up mechanism

Optional drain lift-up mechanism allows more flexible installation.

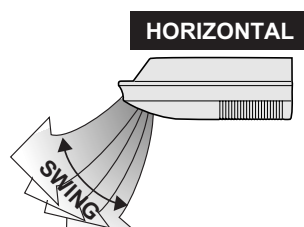
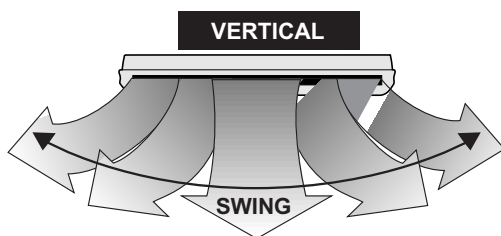


● Long-life filter

High efficiency long-life filter that extends the cleaning cycle up to 2 times that of the current model is standard.



● Double auto swing



● Others

- * Auto Restart
- * Detachable and Washable Open Panel

● Option parts

Drain water rizer kit UTR-DPB241

4-3 SPECIFICATIONS

4-3-1 STANDARD STATIC PRESSURE DUCT TYPE

Model			AR25	AR30	AR36	AR45
Power Requirement		V	220 – 240			
Capacity	Cooling	kW	6.95 – 7.05	8.6 – 8.8	10.3 – 10.5	12.4 – 12.7
		BTU/h	23,700 – 24,100	29,400 – 30,000	35,200 – 36,000	42,500 – 43,500
	Heating	kW	7.60 – 7.85	8.8 – 9.1	10.5 – 10.7	13,4 – 13,7
		BTU/h	25,900 – 26,800	30,000 – 31,000	36,000 – 36,500	46,000 – 47,500
Moisture Removal		ℓ /hr	2.5	3.0	4.0	5.0
Air Circulation	High	m ³ /h	1,600	1,650	2,000	2,200
	Med		1,450	1,550	1,800	2,000
	Low		1,280	1,350	1,600	1,800
Fan Speed	High	r.p.m.	890	1,240	1,280	1,320
	Med		820	1,140	1,200	1,270
	Low		745	1,040	1,130	1,200
Fan Motor Output		W	70	275		
Noise (Sound Pressure)	High	dB(A)	44	47	47	49
	Med		42	45	45	47
	Low		40	43	43	45
Fan Type x Q'ty			Sirocco x 2			
Heat Exchanger			Plate fin coil			
Operation Control			LCD remote control			
Dimensions (H x W x D)	Net	mm	270 x 1,210 x 700			
	Gross	mm	330 x 1,300 x 790			
Weight	Net	kg	43	43	45	45
	Gross	kg	53	53	55	55
Pipe Size	Liquid	mm	ϕ 9.52			
	Gas	mm	ϕ 15.88		ϕ 19.05	
Pipe Connection Method			Flare			
Drain Pipe Size		mm	ϕ 38.1			
Operation	Cool/Heat	°C	18 – 32 / 16 – 30			

4-3-2 COMPACT CASSETTE TYPE

4-3-3 CASSETTE TYPE

Model			AU18	AU25	AU30	AU36	AU45
Power Requirement		V	220 – 240				
Capacity	Cooling	kW	4.85 – 5.00	6.95 – 7.05	8.60 – 8.80	10.3 – 10.5	12.4 – 12.7
		BTU/h	19,000 – 19,900	23,700 – 24,100	29,400 – 30,000	35,200 – 35,800	42,300 – 43,400
	Heating	kW	5.30 – 5.45	7.60 – 7.85	8.80 – 9.10	10.5 – 10.7	13.4 – 13.7
		BTU/h	21,000 – 21,600	25,900 – 26,800	30,000 – 31,100	35,800 – 36,500	45,800 – 46,800
Moisture Removal		ℓ/hr	2.1	2.5	3.0	4.0	5.0
Air Circulation	High	m³/h	650	1,170	1,270	1,500	1,650
	Med		550	1,050	1,100	1,300	1,450
	Low		490	820	950	1,100	1,200
Fan Speed	High	r.p.m.	820	460	500	580	620
	Med		740	390	430	500	550
	Low		620	320	360	420	490
Fan Motor Output		W	14	90	90	90	90
Noise (Sound Pressure)	High	dB(A)	44	43	45	48	49
	Med		41	38	41	44	47
	Low		37	34	36	41	43
Fan Type x Q'ty			Turbo				
Heat Exchanger			Plate fin coil				
Operation Control			LCD remote control				
Dimensions (H x W x D)	Net	mm	235x580x580+70	296 x 830 x 830			
	Gross	mm	280x710x750	455 x 1,060 x 1,025			
Weight	Net	kg	18	38	38	40	40
	Gross	kg	23	60	60	60	60
Pipe Size	Liquid	mm	ϕ 6.35	ϕ 9.52			
	Gas	mm	ϕ 12.7	ϕ 15.88		ϕ 19.05	
Pipe Connection Method			Flare				
Drain Pipe Size		mm	ϕ 32				
Operation	Cool/Heat	°C	18 – 32 / 16 – 30				

INDOOR
UNIT

INDOOR
UNIT

4-3-4 UNIVERSAL FLOOR / CEILING TYPE

4-3-5 LARGE CEILING TYPE

Model			AB18	AB24	AB30	AB36	AB45
Power Requirement		V	220—240				
Capacity	Cooling	kW	5.20—5.30	6.50—6.60	8.6—8.8	10.3—10.5	12.4—12.7
		BTU/h	17,800—18,100	22,200—22,500	29,400—30,000	35,200—36,000	42,500—43,500
	Heating	kW	5.50—5.60	7.60—7.70	8.8—9.1	10.5—10.7	13.4—13.7
		BTU/h	18,800—19,100	25,900—26,300	30,000—31,000	36,000—36,500	46,000—47,000
Moisture Removal		ℓ/hr	2.2	3.4	3.5	4.0	5.0
Air Circulation	High	m ³ /h	800	900	1,270	1,660	1,850
	Med		680	780	1,120	1,500	1,660
	Low		560	660	860	1,270	1,430
Fan Speed	High	r.p.m.	1,030	1,180	850	1,000	1,100
	Med		890	1,040	750	900	1,000
	Low		770	900	600	750	850
Fan Motor Output		W	30	40	160	160	160
Noise (Sound Pressure)	High	dB(A)	47	49	41	47	50
	Med		42.5	45	38	44	48
	Low		38	41	34.5	39	44
Fan Type x Q'ty			Sirocco x 2		Sirocco x 4		
Heat Exchanger			Plate fin coil				
Operation Control			LCD remote control				
Dimensions (H x W x D)	Net	mm	199 x 990 x 655		240 x 1,660 x 700		
	Gross	mm	320 x 1,150 x 790		318 x 1,800 x 790		
Weight	Net	kg	28	30	48	48	48
	Gross	kg	37	39	61	61	61
Pipe Size	Liquid	mm	ϕ 9.52				
	Gas	mm	ϕ15.88			ϕ19.05	
Pipe Connection Method			Flare				
Drain Pipe Size		mm	ϕ 26		ϕ 24		
Operation	Cool/Heat	°C	18—32 / 16—30				

INDOOR
UNIT

INDOOR
UNIT

4-4 ELECTRIC CHARACTERISTICS

■ UNIVERSAL FLOOR/CEILING TYPE

Model Name		Voltage (V)	Frequency (Hz)	Input (W)	Current (A)	Max Crrent (A) (MLC)
AB	18	220-240	50	88	0.38	0.45
	24			88	0.38	0.45

■ LARGE CEILING TYPE

Model Name		Voltage (V)	Frequency (Hz)	Input (W)	Current (A)	Max Crrent (A) (MLC)
AB	30	220-240	50	124	1.14	1.36
	36			144	1.16	1.39
	45			160	1.17	1.40

■ STANDARD STATIC PRESSURE DUCT TYPE

Model Name		Voltage (V)	Frequency (Hz)	Input (W)	Current (A)	Max Crrent (A) (MLC)
AR	25	220-240	50	155	0.68	0.84
	30			240	1.06	1.58
	36			265	1.16	1.58
	45			315	1.44	1.84

■ COMPACT CASSETTE TYPE

Model Name		Voltage (V)	Frequency (Hz)	Input (W)	Current (A)	Max Crrent (A) (MLC)
AU	18	220-240	50	50	0.22	0.26

■ CASSETTE TYPE

Model Name		Voltage (V)	Frequency (Hz)	Input (W)	Current (A)	Max Current (A) (MLC)
AU	25	220-240	50	124	0.64	0.77
	30			140	0.67	0.80
	36			175	0.92	1.10
	45			190	0.94	1.12

FUSE AMP. Is calculated by following method.

$$\text{FUSE AMP.} \cong (\text{MLC of Indoor unit A} + \text{MLC of Indoor unit B} + \dots) \times S$$

S : Safety Factor

According to country regulation

EX) In case of 1system: AB18×1, AR30×1, AU14×1, AU25×1, AW14×2

$$\text{FUSE AMP.} = (0.45 + 1.58 + 0.27 + 0.77 + 0.12 \times 2) \times 2.25 = 7.45$$

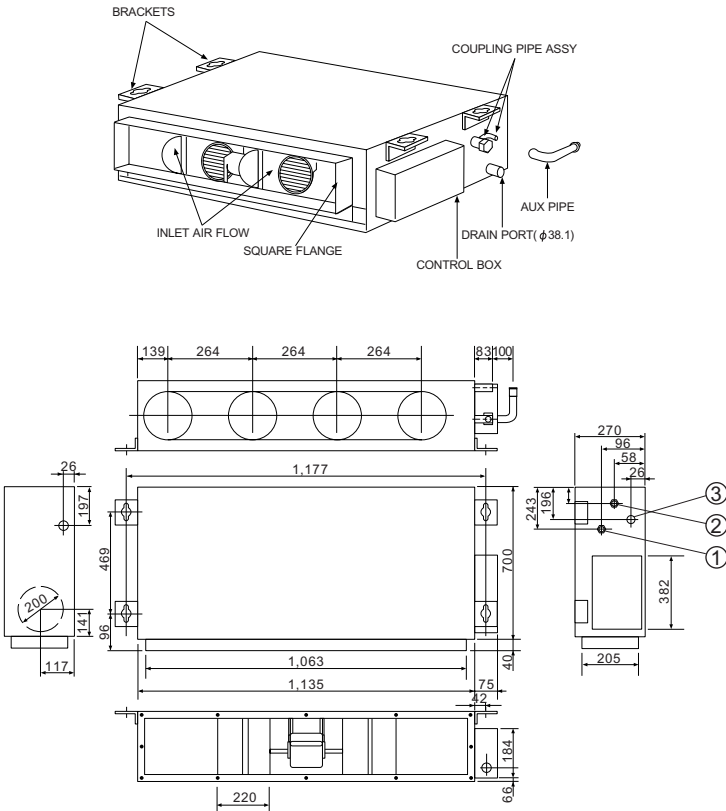
Use 7.45 or more FUSE AMP. capacity

4-5 DIMENSIONS

4-5-1 STANDARD STATIC PRESSURE DUCT TYPE

MODELS: AR25, AR30, AR36, AR45

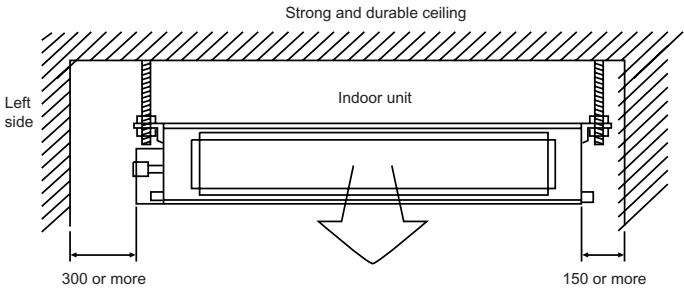
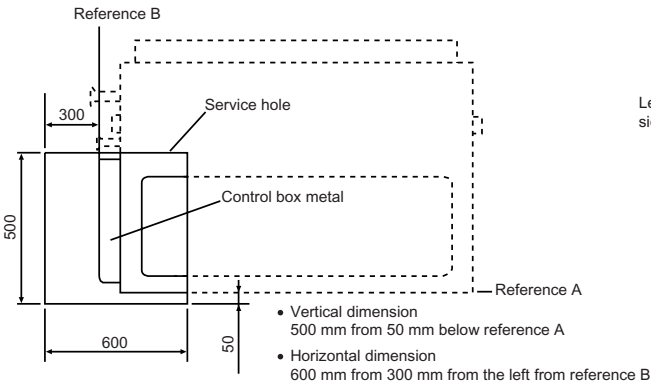
(Unit : mm)



- ① Refrigerant piping flare connection (Gas)
- ② Refrigerant piping flare connection (Liquid)
- ③ Drain piping connection (Drain pipe : I.D.φ36 O.D.φ38)

SERVICE HOLE DIMENSIONS

Open a service hole with the dimensions shown below.



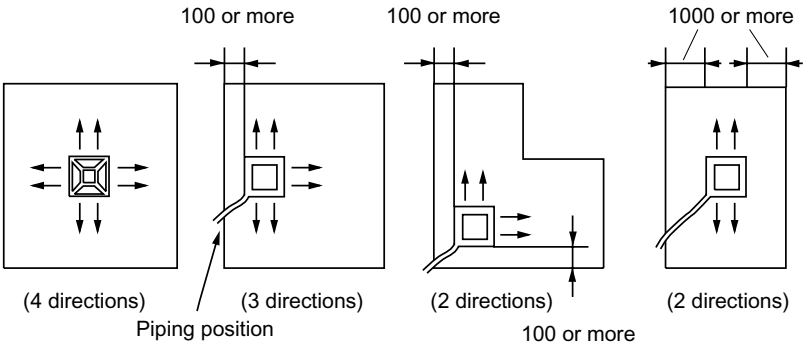
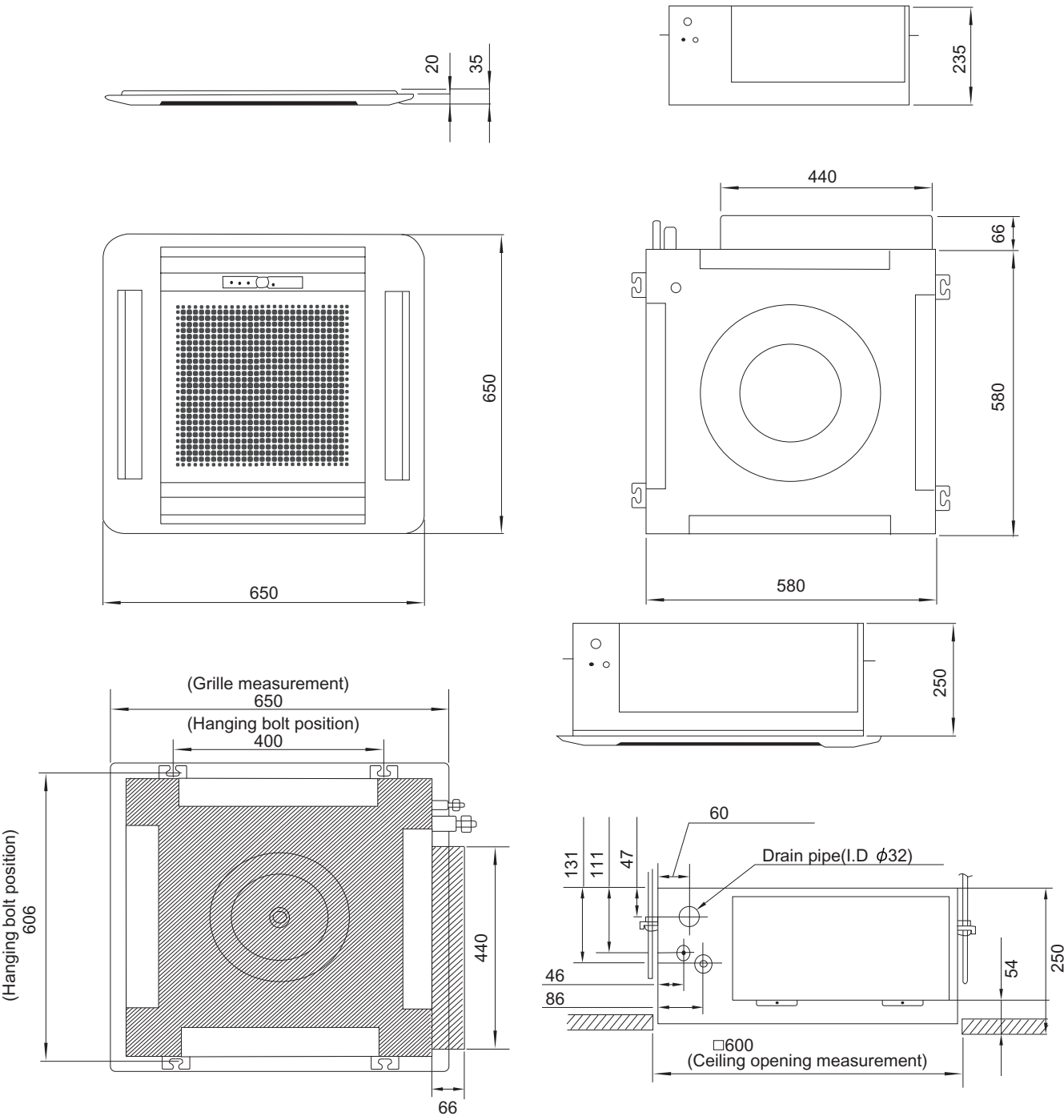
4-5-2 COMPACT CASSETTE TYPE

(Unit : mm)

■ MODEL : AU18

INDOOR
UNIT

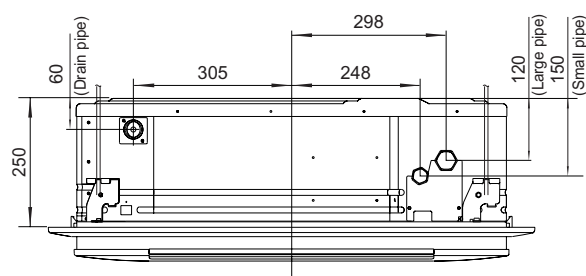
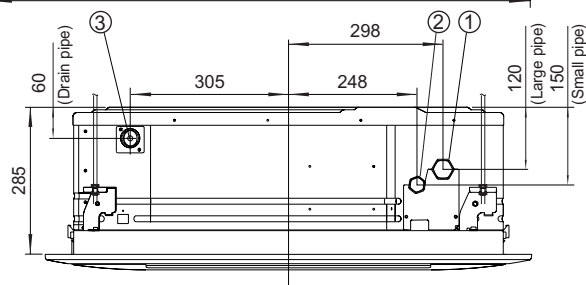
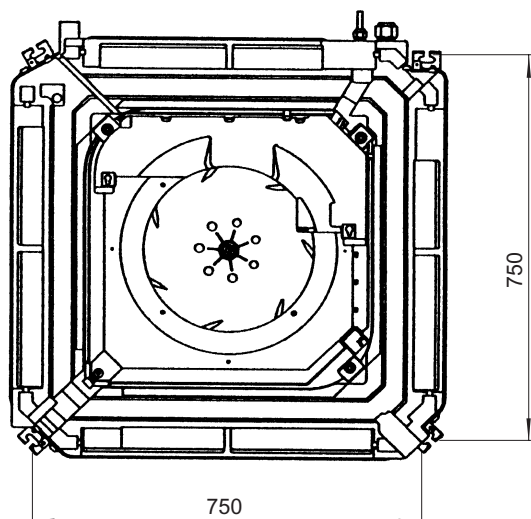
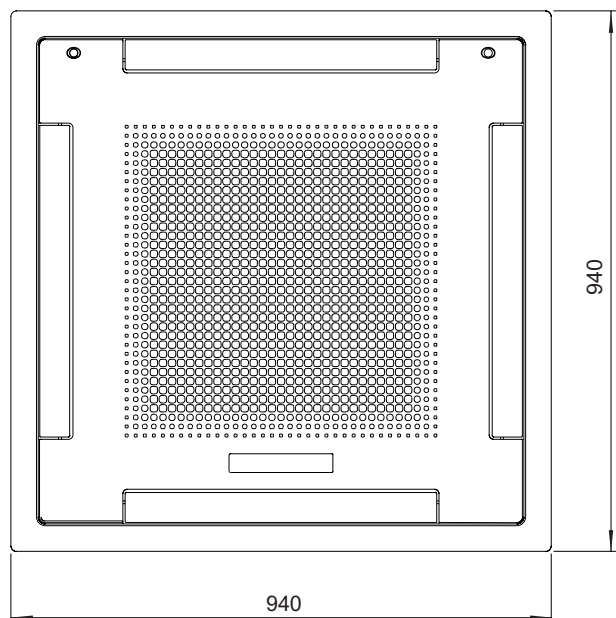
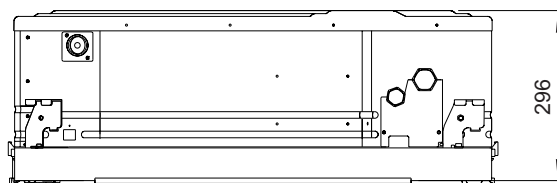
INDOOR
UNIT



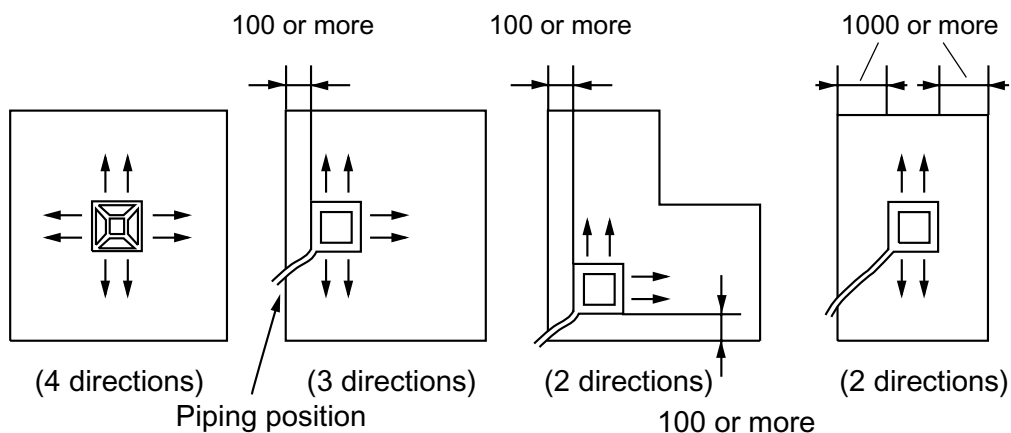
4-5-3 CASSETTE TYPE

■ MODELS : AU25,AU30,AU36, AU45

(Unit : mm)



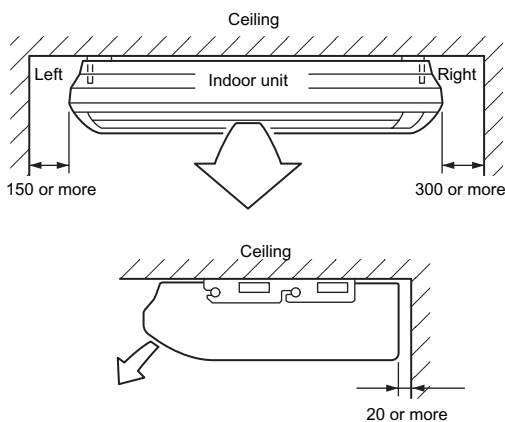
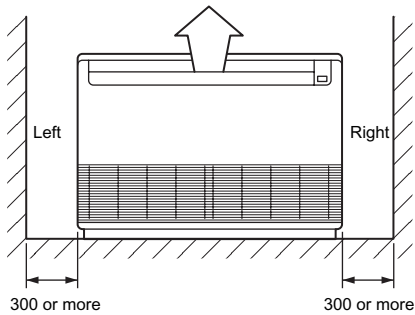
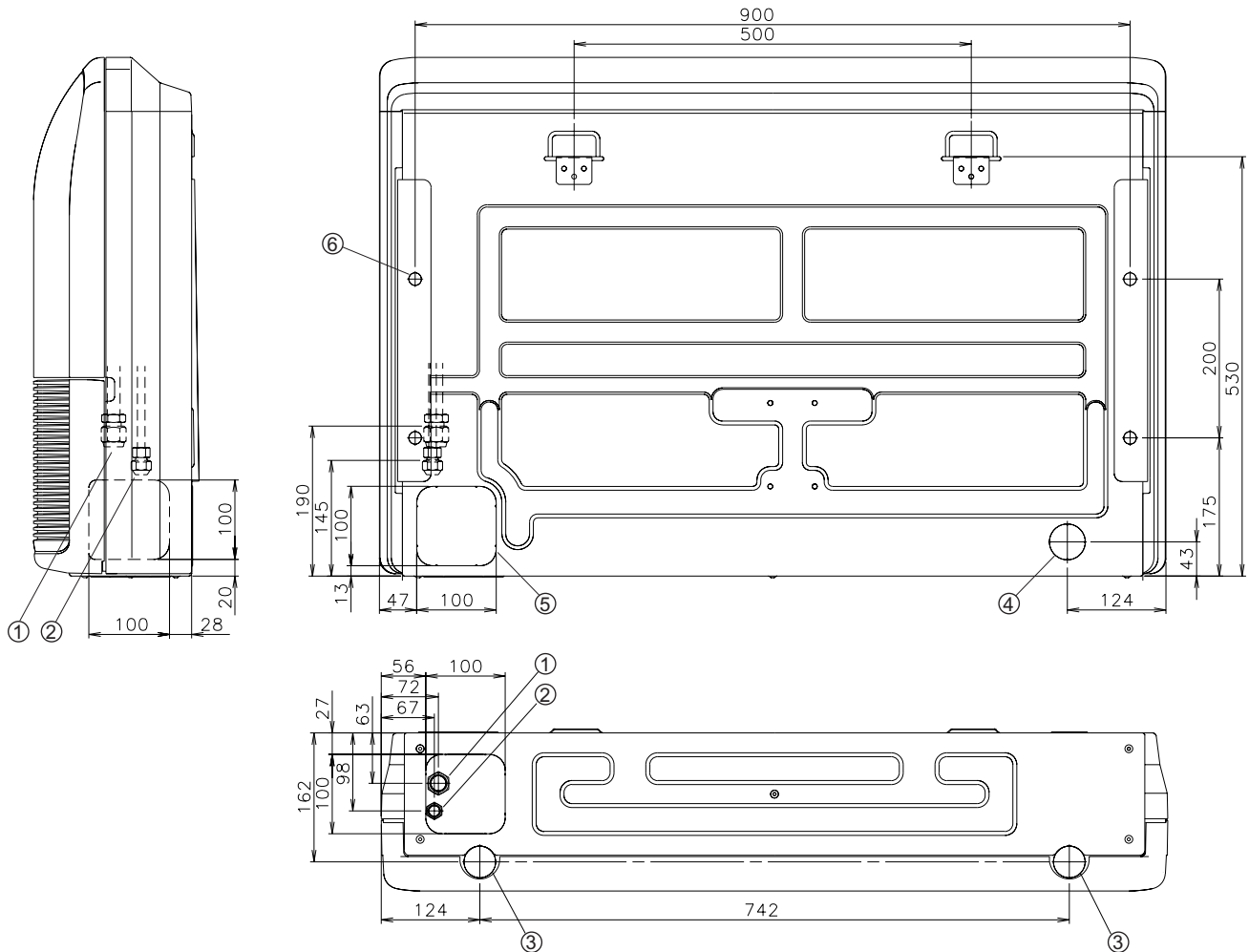
- ① Refrigerant piping flare connection (Gas)
- ② Refrigerant piping flare connection (Liquid)
- ③ Drain piping connection (Drain pipe : I.D. ϕ 32 O.D. ϕ 37)



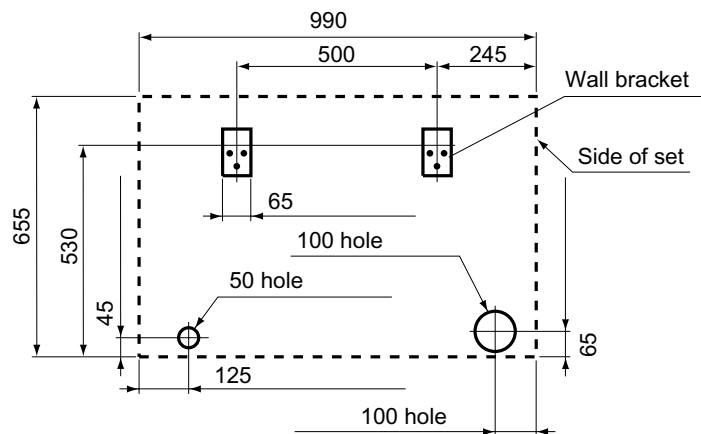
4-5-4 UNIVERSAL FLOOR / CEILING TYPE

■ MODELS : AB18, AB24

(Unit : mm)



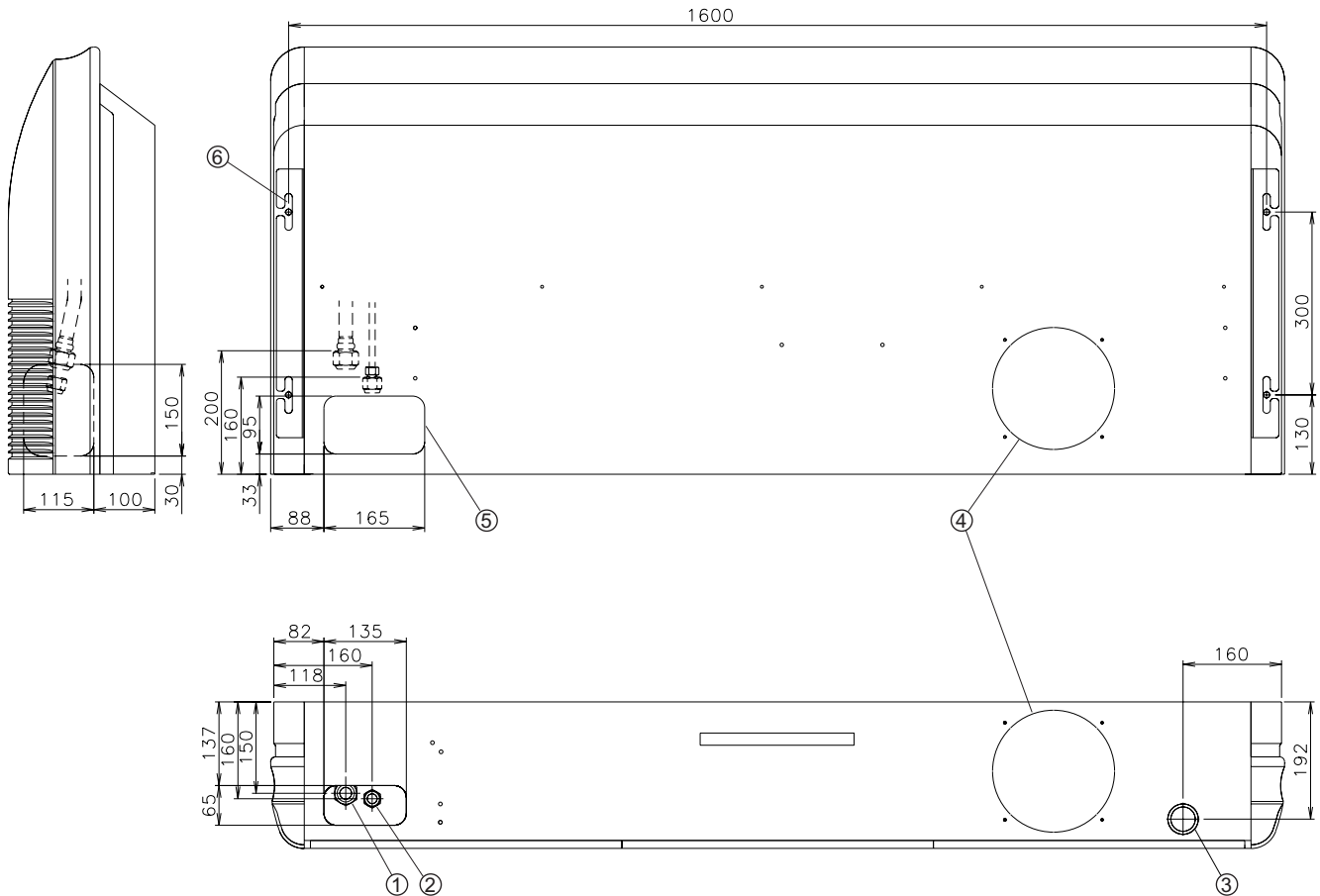
- ① Refrigerant piping flare connection (Gas)
- ② Refrigerant piping flare connection (Liquid)
- ③ Drain piping connection (Drain pipe : I.D. ϕ 25 O.D ϕ 29 L 700)
- ④ Knock out hole for drain piping
- ⑤ Knock out hole for refrigerant piping
- ⑥ Hole for lifting bolt (Use M10 screw bolt)



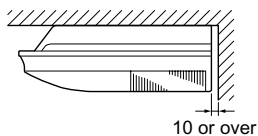
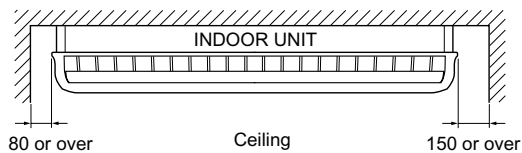
4-5-5 LARGE CEILING TYPE

MODELS : AB30, AB36, AB45

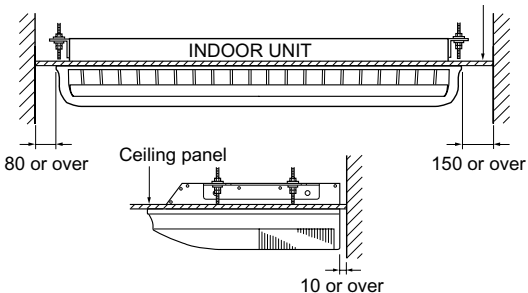
(Unit : mm)



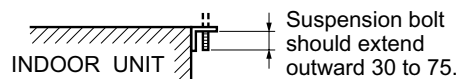
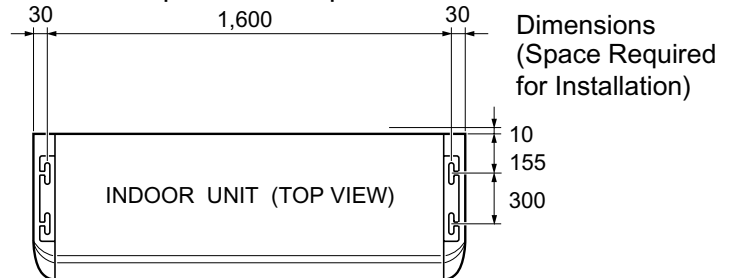
Ceiling



Ceiling panel



Suspension bolt pitch



- ① Refrigerant piping flare connection (Gas)
- ② Refrigerant piping flare connection (Liquid)
- ③ Drain piping connection (Drain pipe : I.D. $\phi 22$ O.D. $\phi 25.6$)
- ④ Knock out hole for fresh air
- ⑤ Knock out hole for refrigerant piping
- ⑥ Hole for lifting bolt (Use M10 screw bolt)

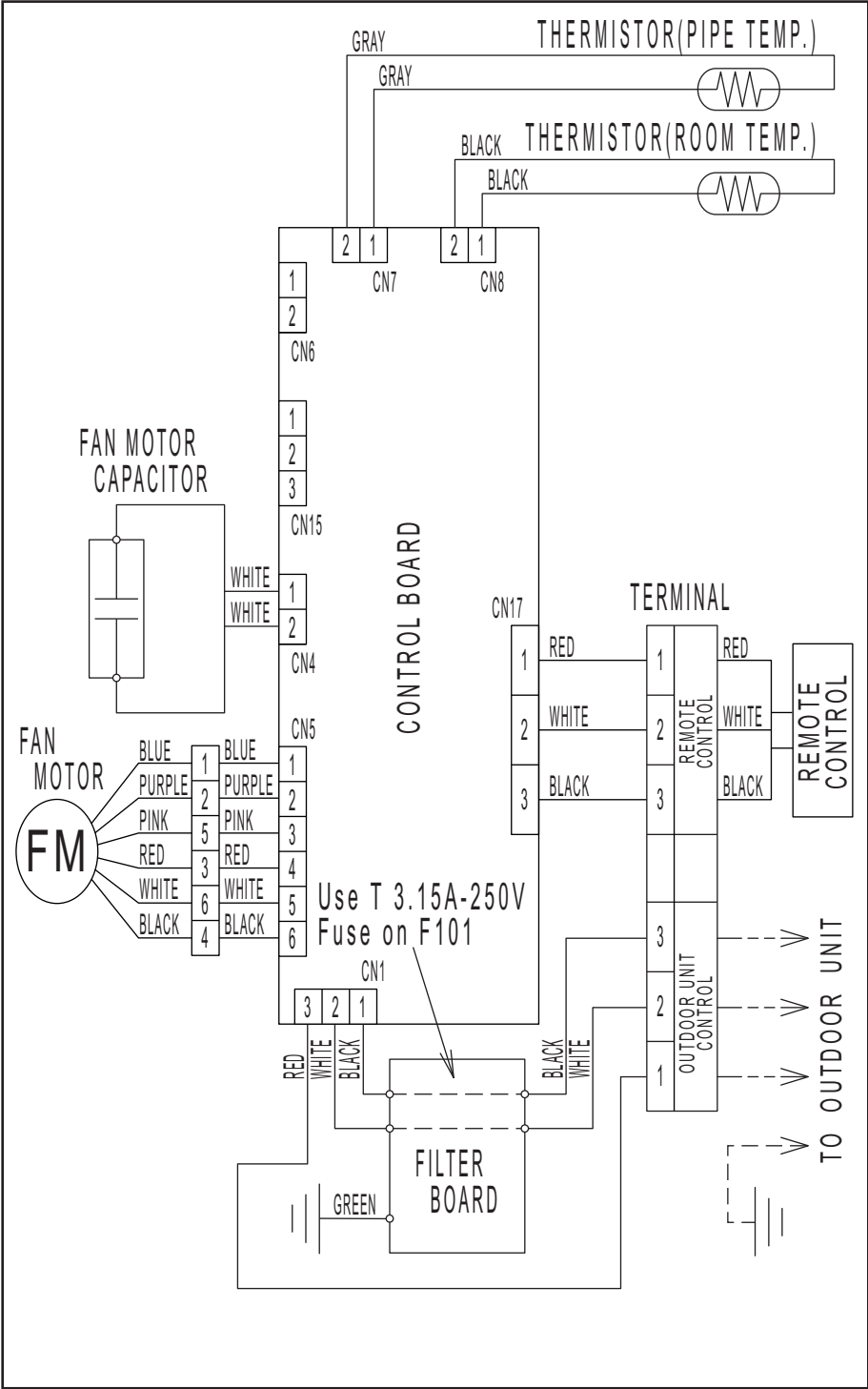
INDOOR UNIT

INDOOR UNIT

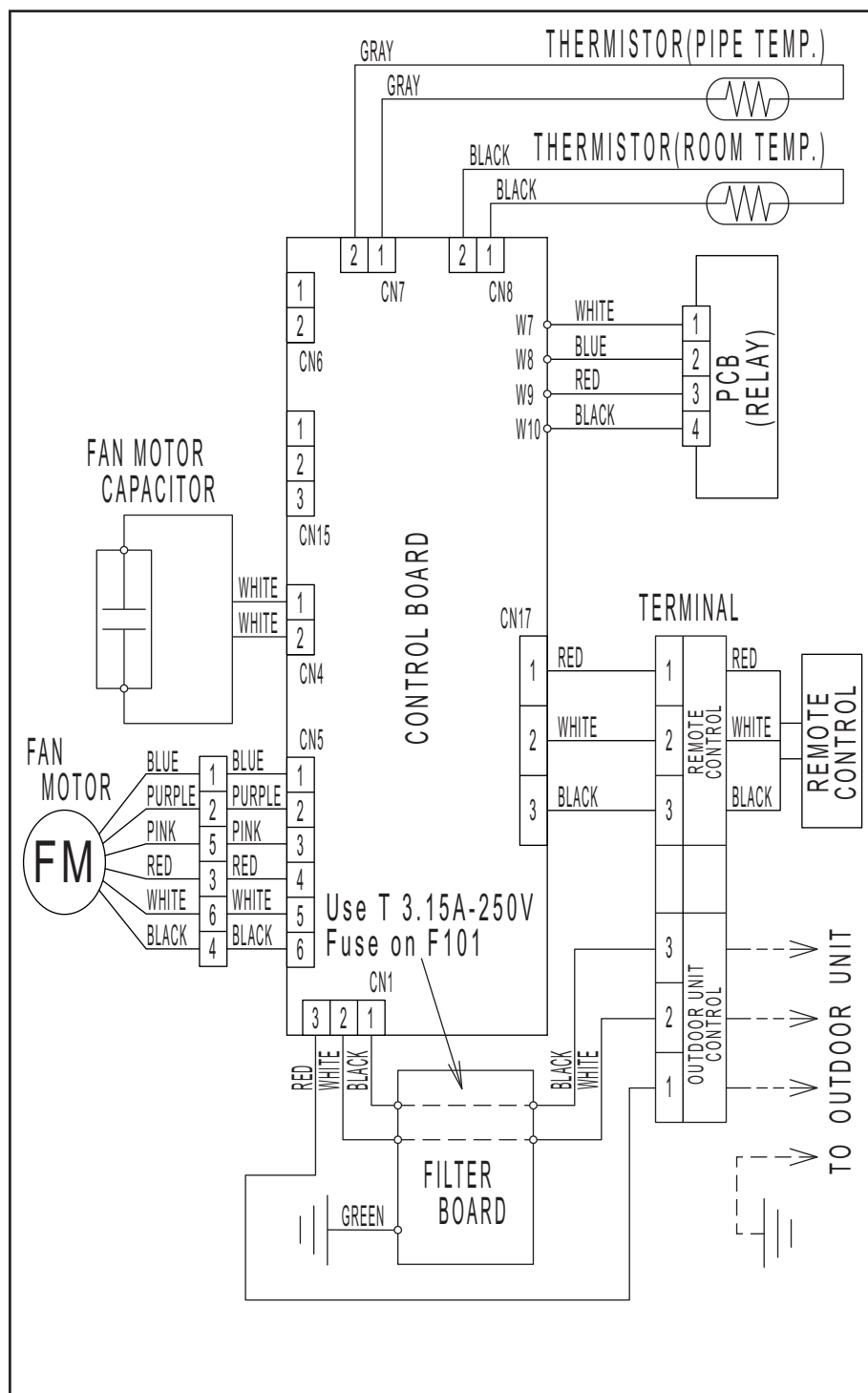
4-6 WIRING DIAGRAMS

4-6-1 STANDARD STATIC PRESSURE DUCT TYPE

■ MODEL : AR25

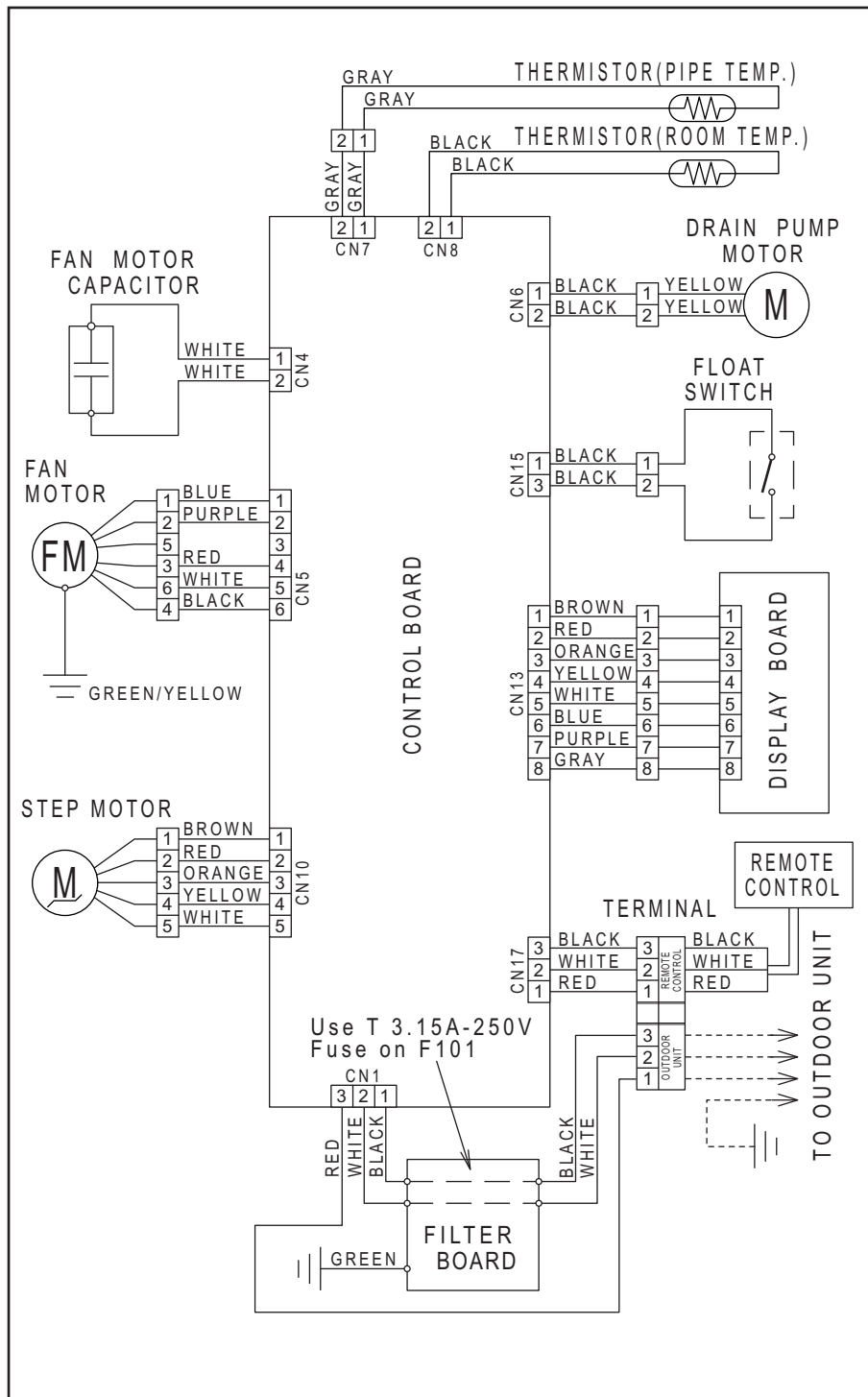


■ MODEL : AR30,AR36,AR45



4-6-2 COMPACT CASSETTE TYPE

■ MODEL : AU18

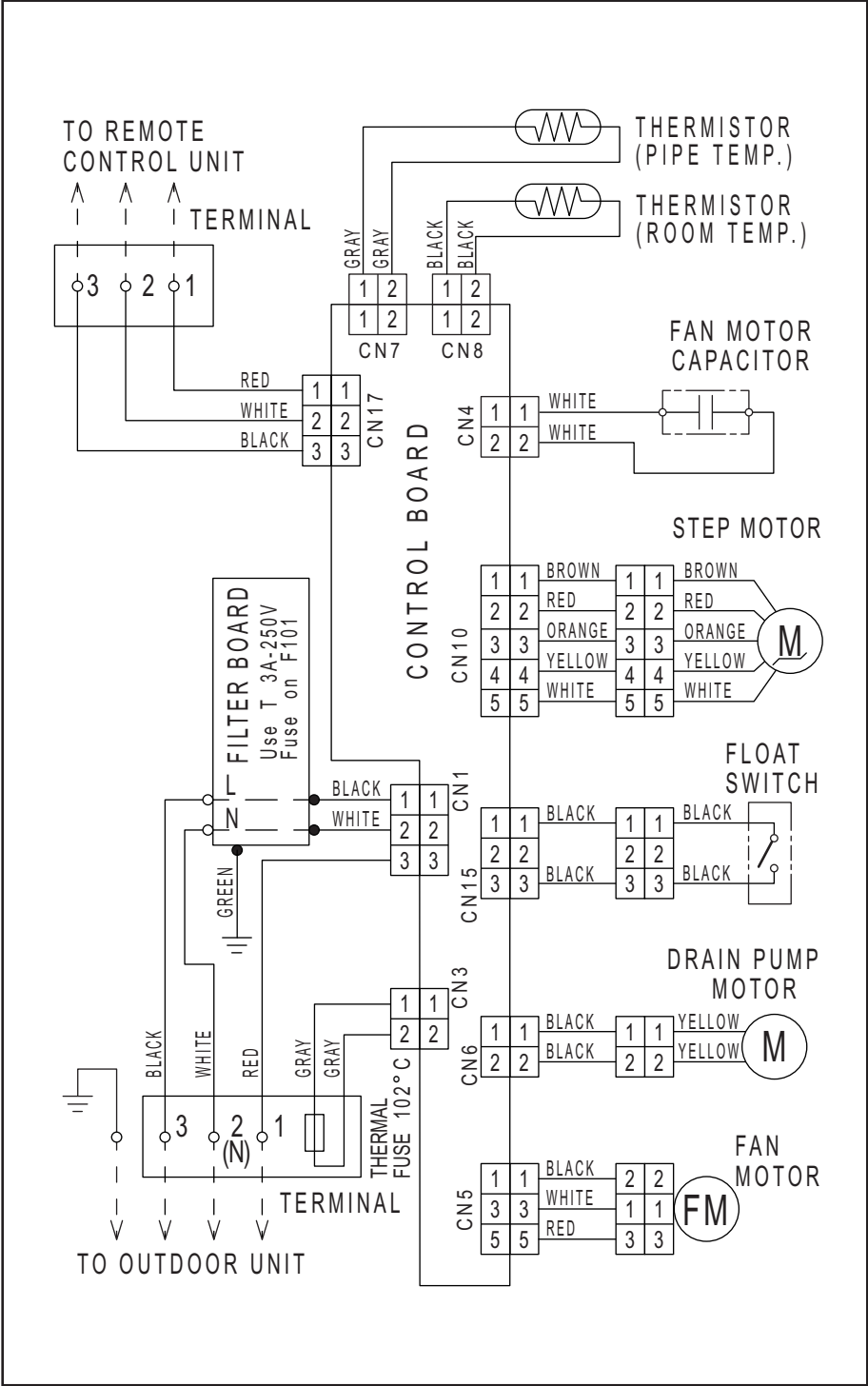


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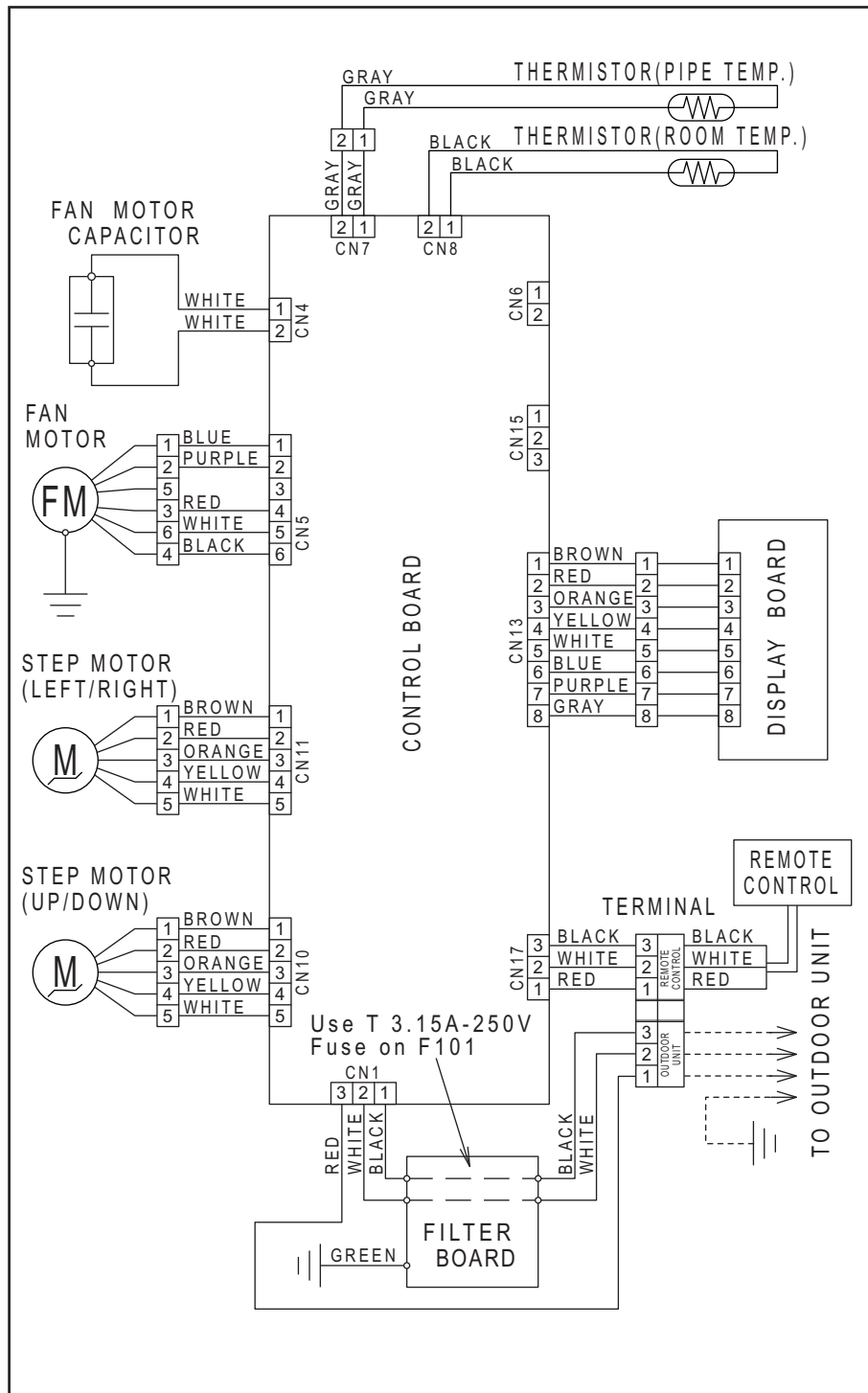
4-6-3 CASSETTE TYPE

■ MODEL : AU25,AU30,AU36,AU45



4-6-4 UNIVERSAL FLOOR / CEILING TYPE

■ MODEL : AB18,AB24

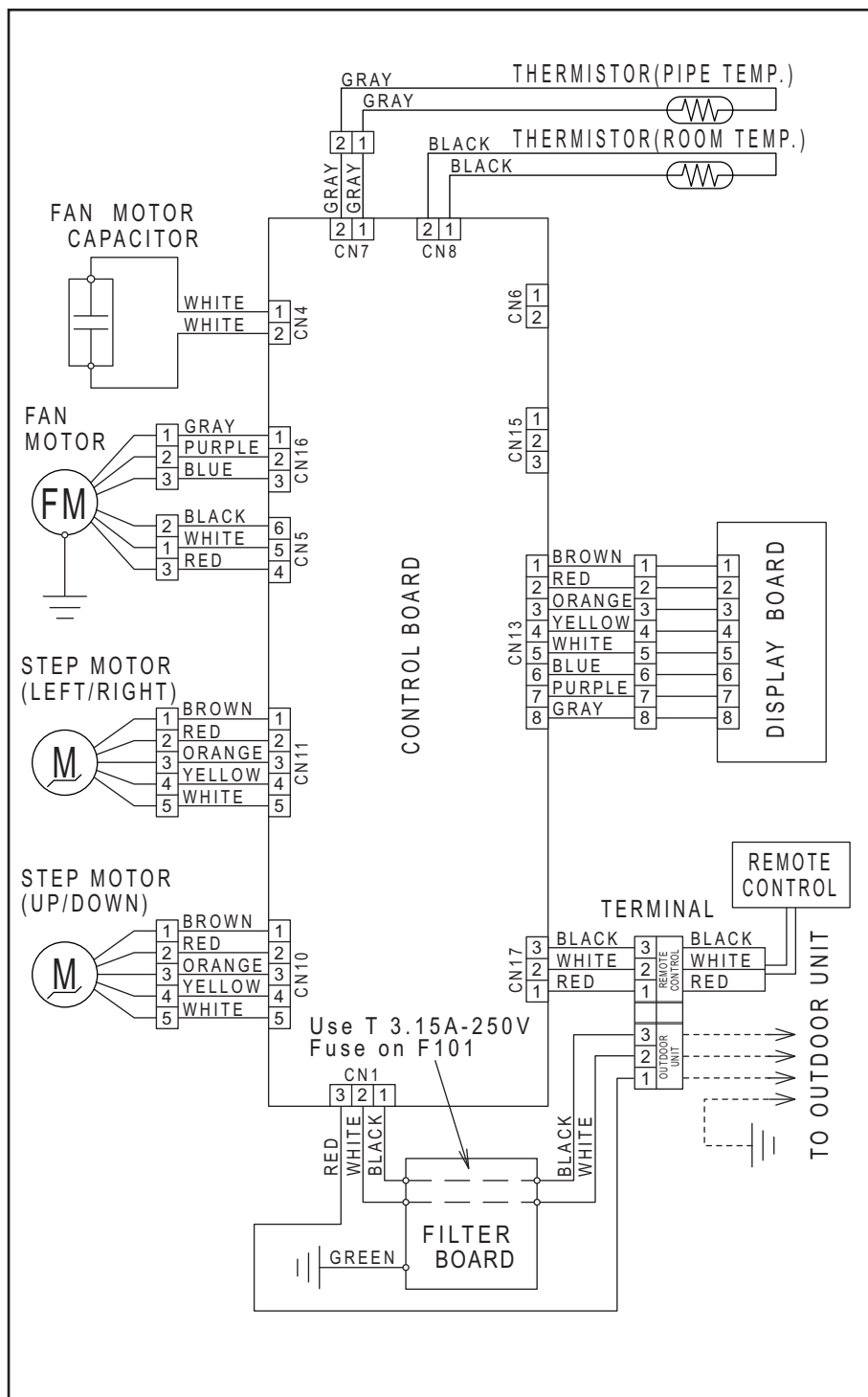


INDOOR
UNIT

INDOOR
UNIT

4-6-5 LARGE CEILING TYPE

■ MODEL : AB30,AB36,AB45

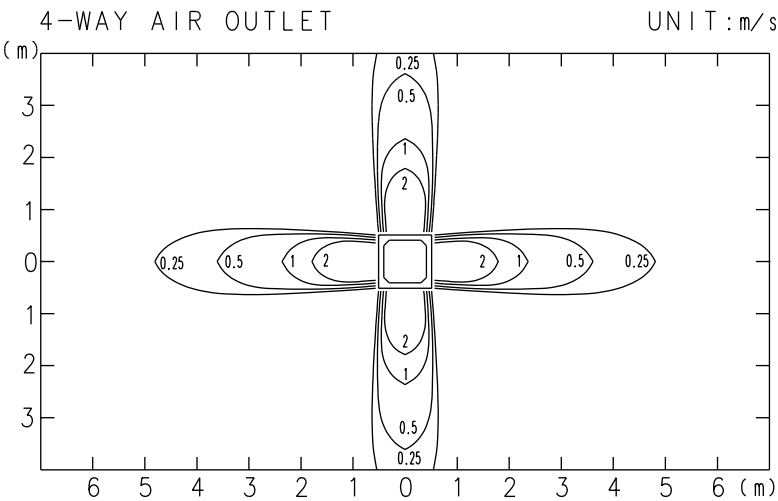


INDOOR UNIT

4-7 AIR VELOCITY DISTRIBUTION

4-7-1 COMPACT CASSETTE TYPE

■ MODEL : AU18



Note:
Condition
Fan speed:High
Operation mode:FAN
Voltage:240V

Fig
TOP VIEW
HORIZONTAL LOUVER
:Upward

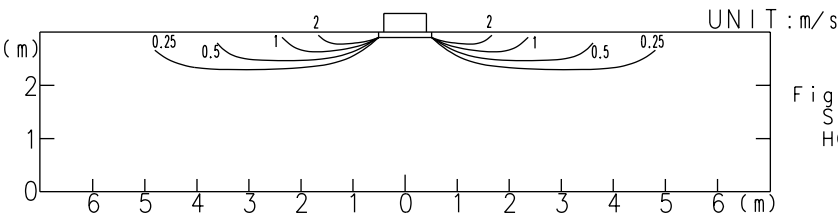


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

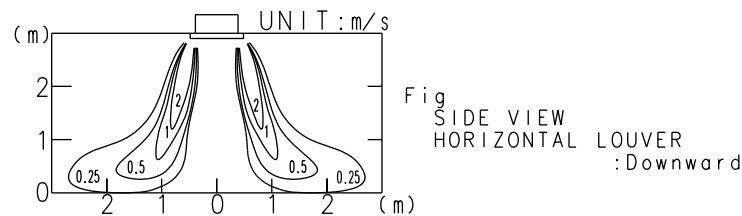
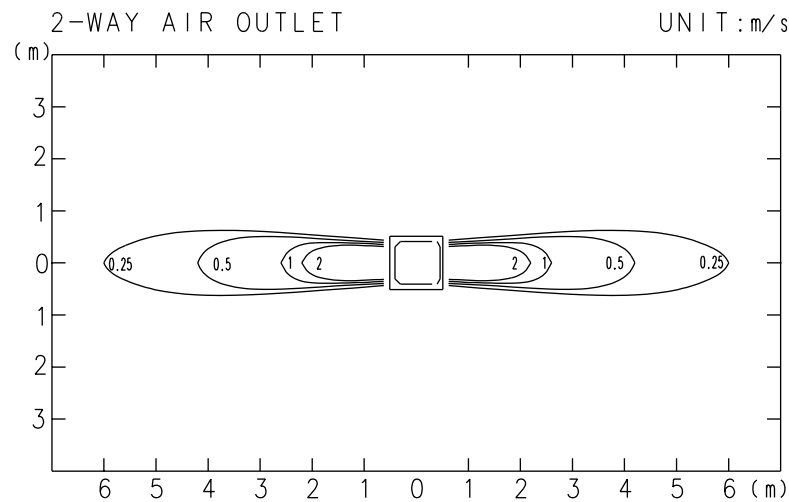
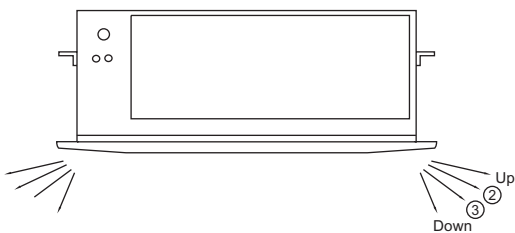


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Downward

AIR DISCHARGE ANGLE



Note:
Condition
Fan speed:Low
Operation mode:FAN
Voltage:240V

Fig
TOP VIEW
HORIZONTAL LOUVER
:Upward

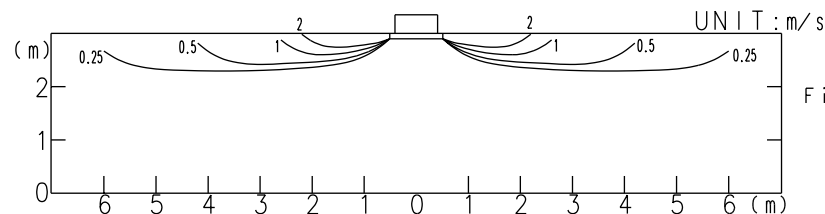
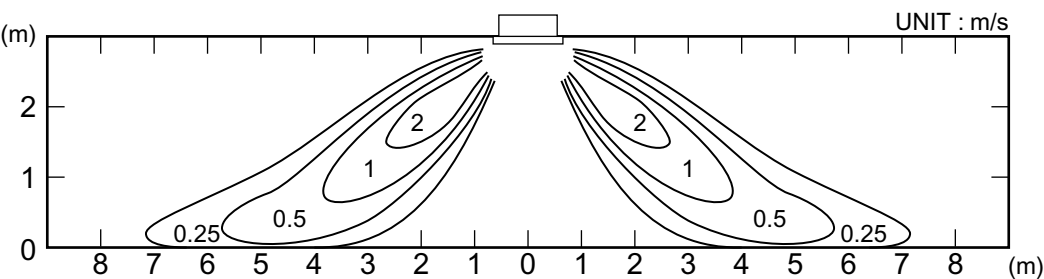
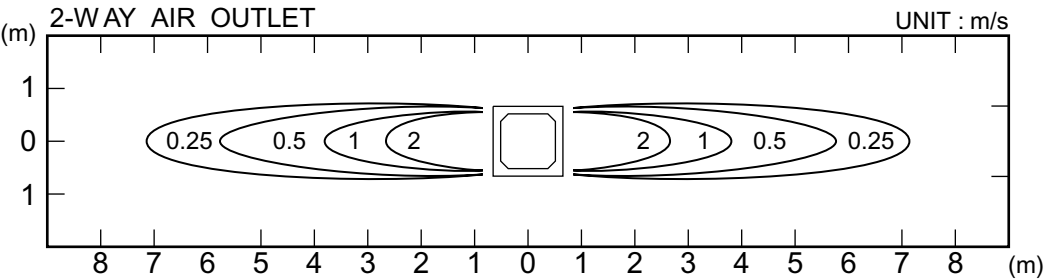
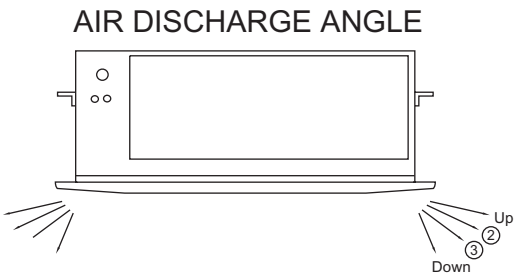
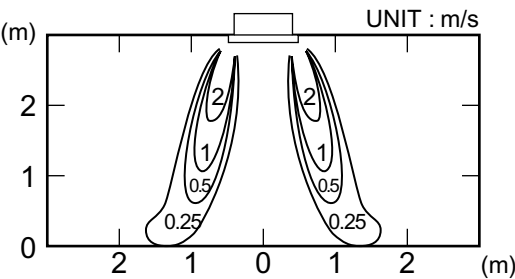
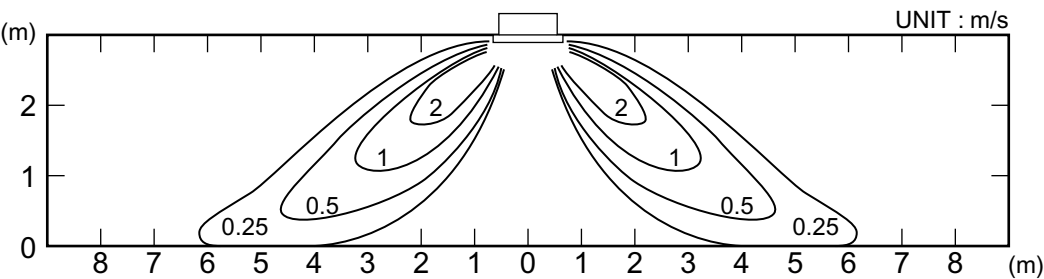
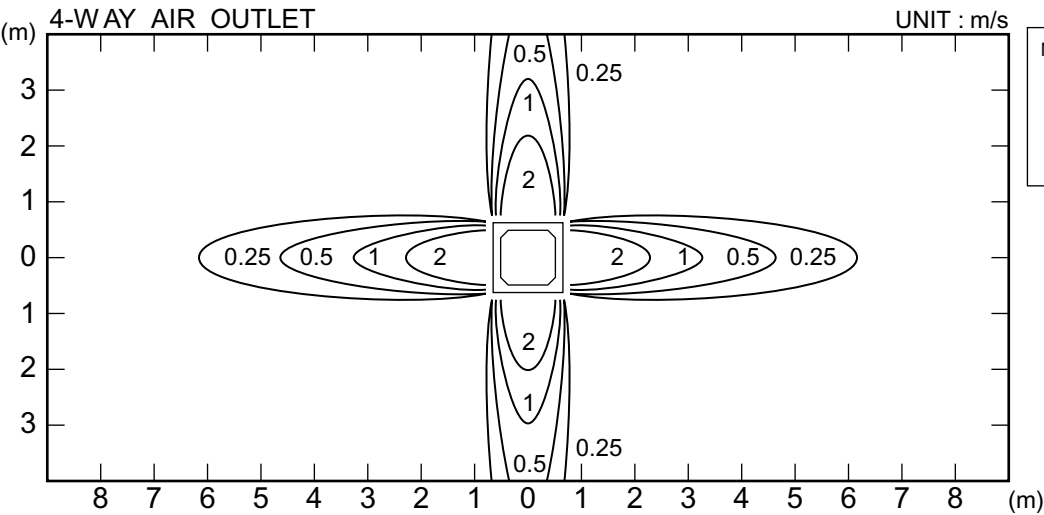


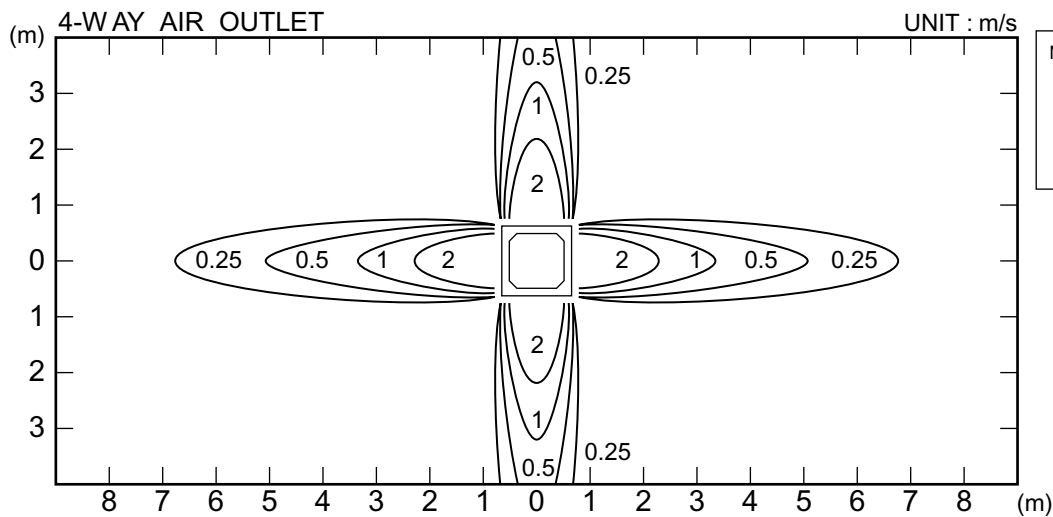
Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

4-7-2 CASSETTE TYPE

MODEL : AU25

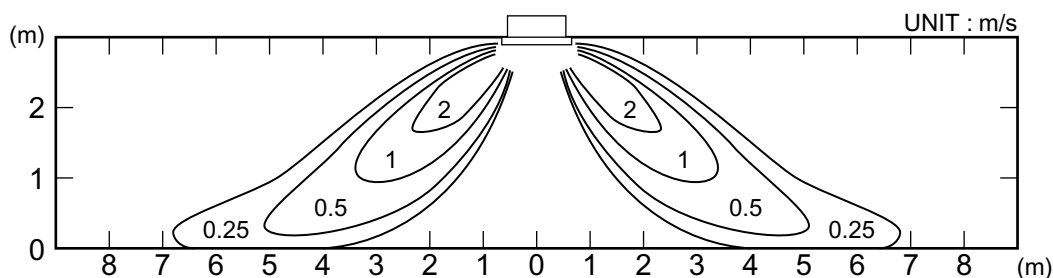


■ MODEL : AU30

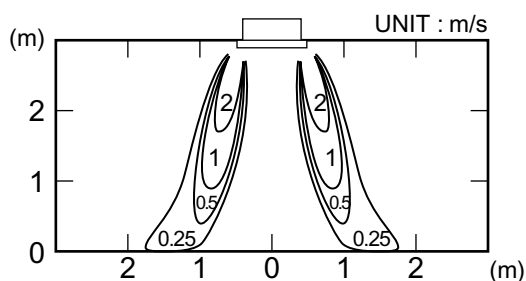


Note :
Condition
Fan speed : High
Operation mode : FAN
Voltage : 240V

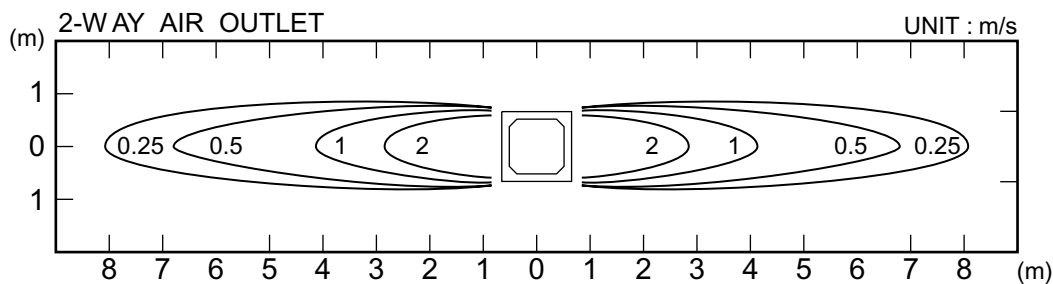
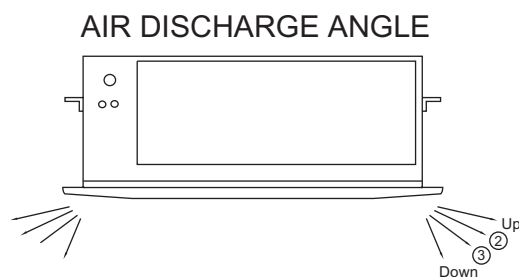
TOP VIEW
AIR FLOW DIRECTION
: Upward



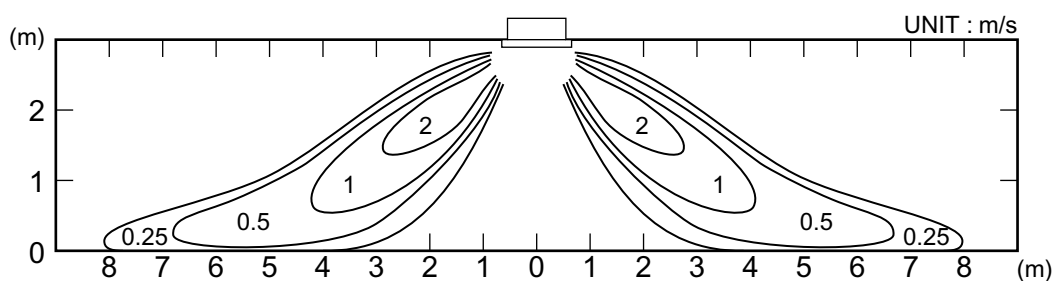
SIDE VIEW
AIR FLOW DIRECTION
: Upward



SIDE VIEW
HORIZONTAL LOUVER
: Downward

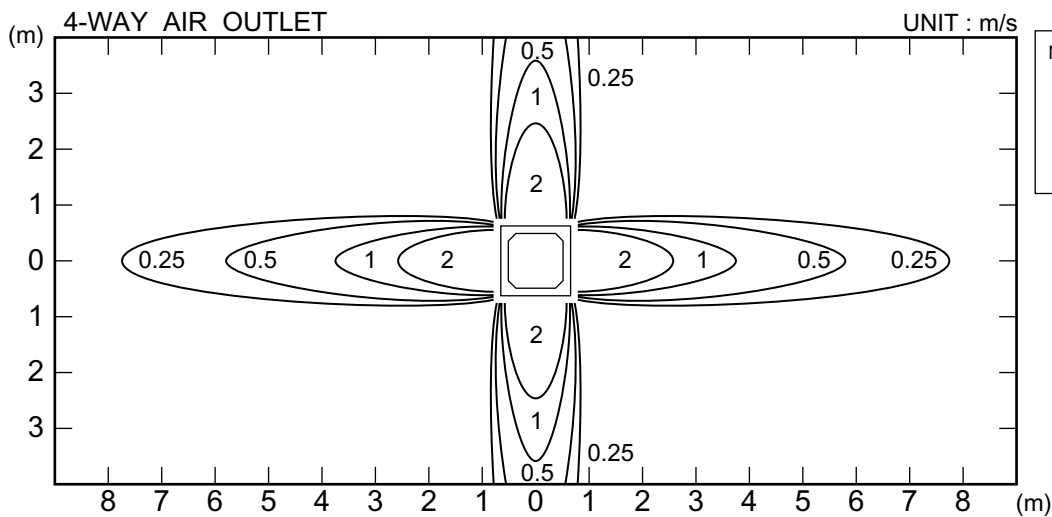


TOP VIEW
AIR FLOW DIRECTION
: Upward



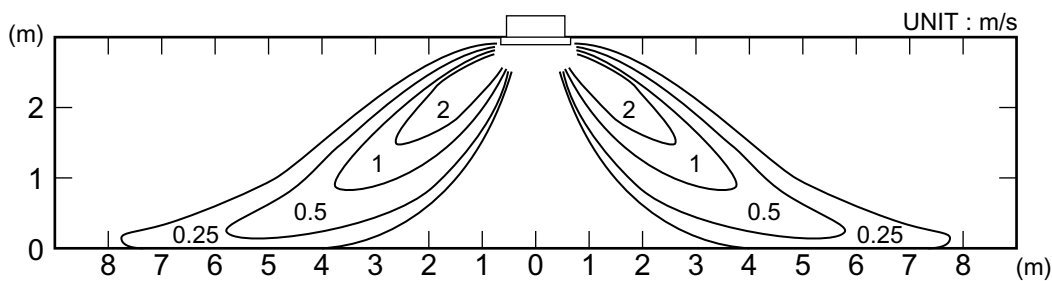
SIDE VIEW
AIR FLOW DIRECTION
: Upward

■ MODEL : AU36

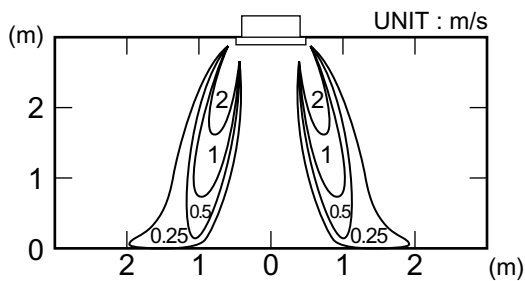


Note :
Condition
Fan speed : High
Operation mode : FAN
Voltage : 240V

TOP VIEW
AIR FLOW DIRECTION
: Upward

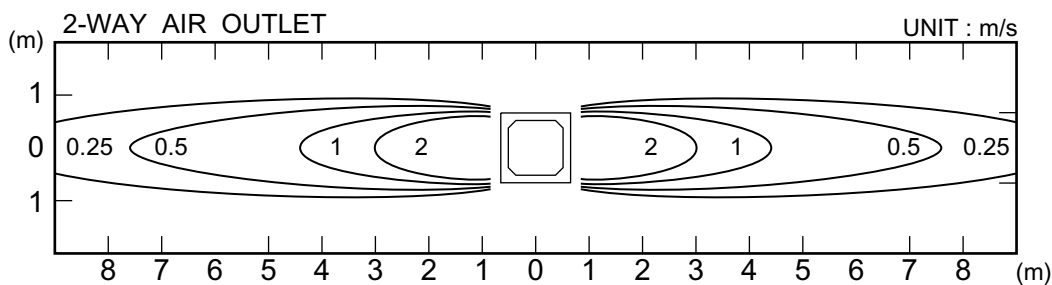
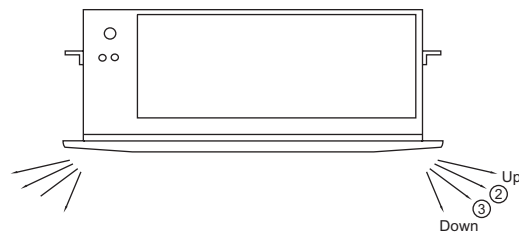


SIDE VIEW
AIR FLOW DIRECTION
: Upward

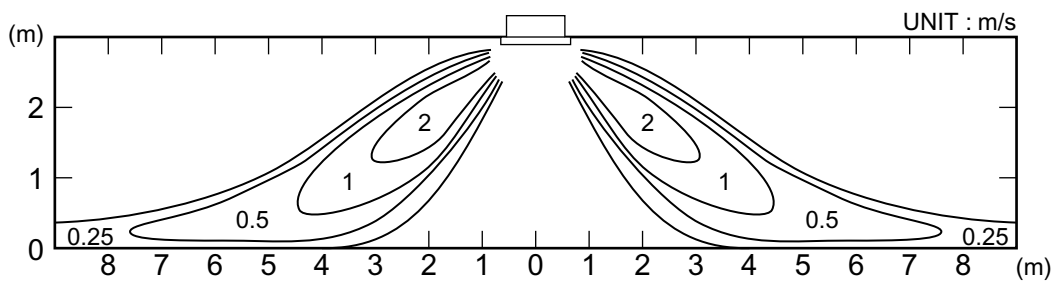


SIDE VIEW
AIR FLOW DIRECTION
: Downward

AIR DISCHARGE ANGLE

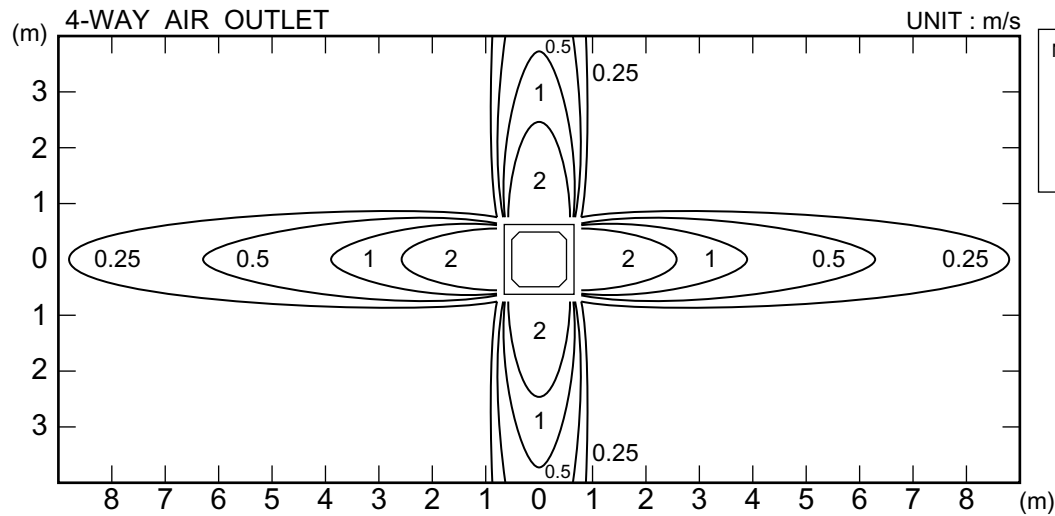


TOP VIEW
AIR FLOW DIRECTION
: Upward



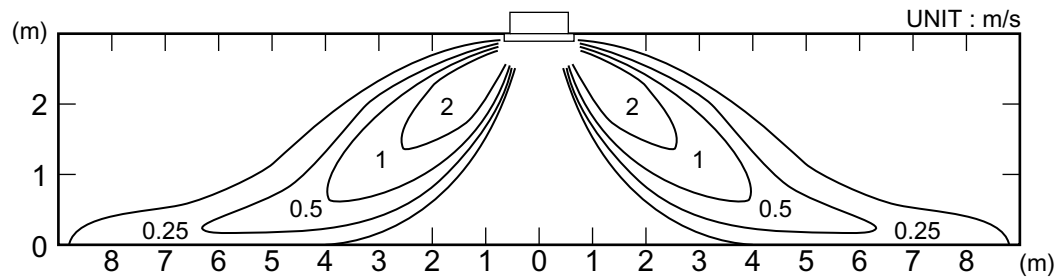
SIDE VIEW
AIR FLOW DIRECTION
: Upward

■ **MODEL : AU45**

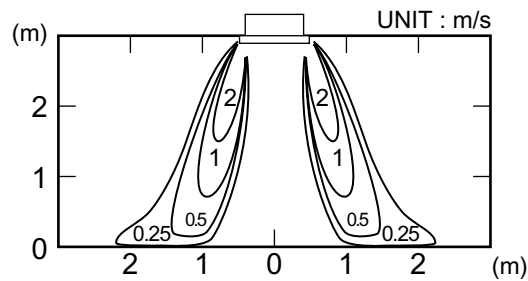


Note :
Condition
Fan speed : High
Operation mode : FAN
Voltage : 240V

TOP VIEW
AIR FLOW DIRECTION
: Upward

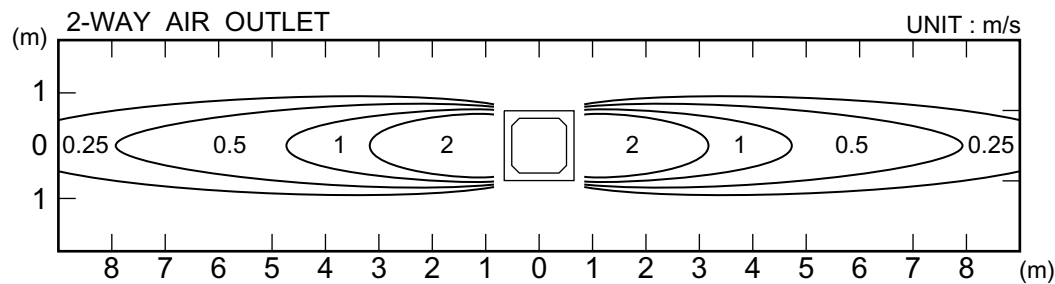
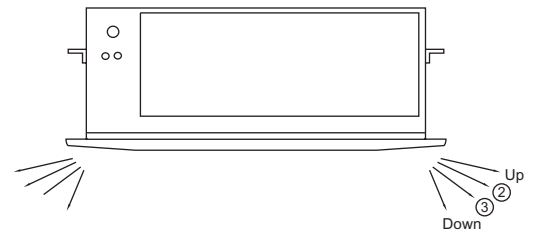


SIDE VIEW
AIR FLOW DIRECTION
: Upward

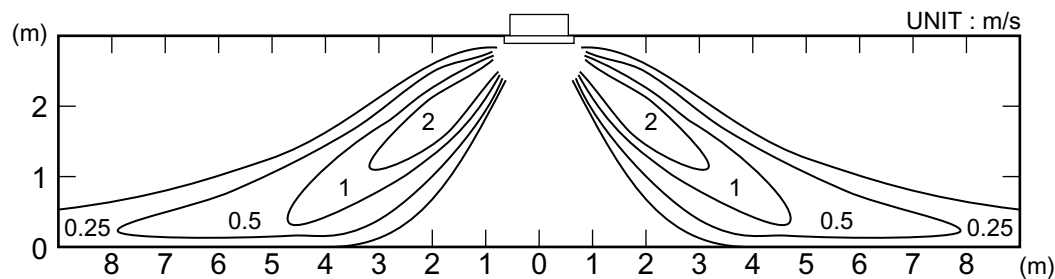


SIDE VIEW
AIR FLOW DIRECTION
: Downward

AIR DISCHARGE ANGLE



TOP VIEW
AIR FLOW DIRECTION
: Upward

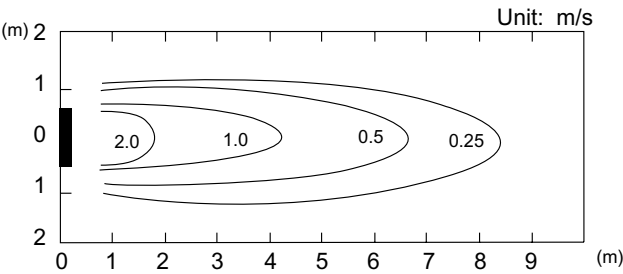


SIDE VIEW
AIR FLOW DIRECTION
: Upward

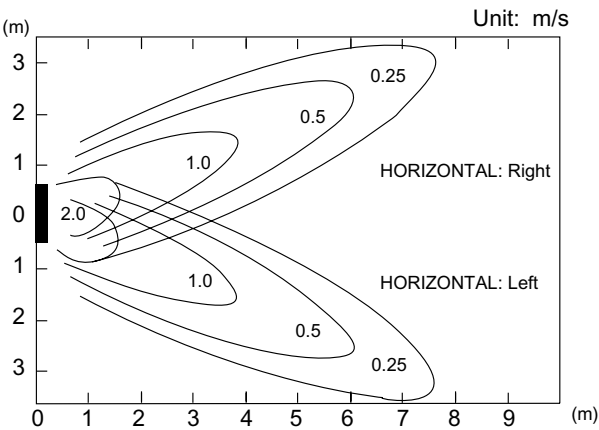
4-7-3 UNIVERSAL FLOOR / CEILING TYPE

■ MODEL : AB18 (FLOOR CONSOLE)

TOP VIEW
VERTICAL : Forward
HORIZONTAL : Center

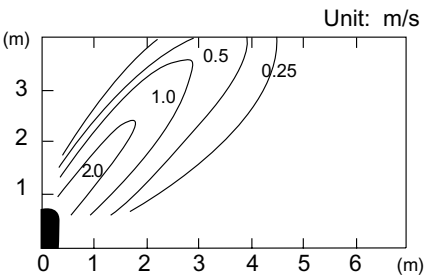
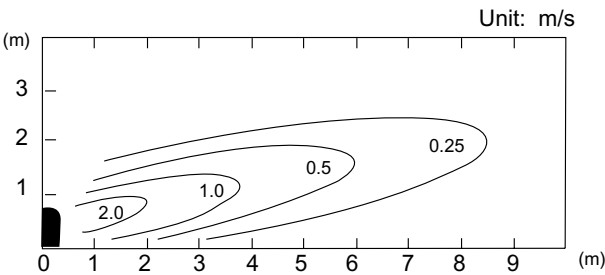


TOP VIEW
VERTICAL : Forward
HORIZONTAL : Right & Left

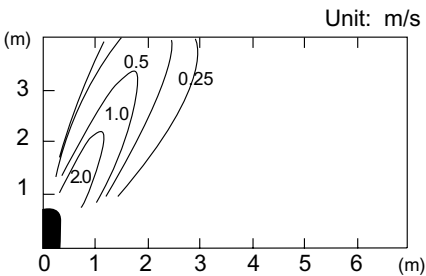


Condition
Fan speed : High
Operation mode : Fan
Voltage : 240V

SIDE VIEW
VERTICAL : Forward
HORIZONTAL : Center



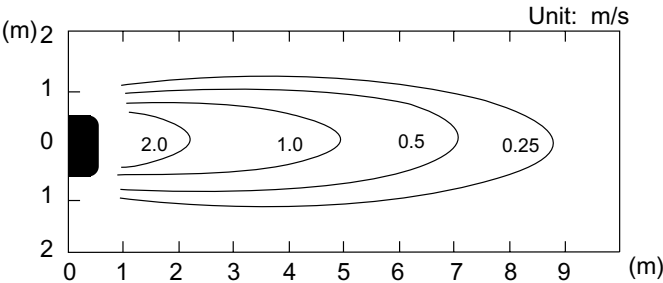
SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center



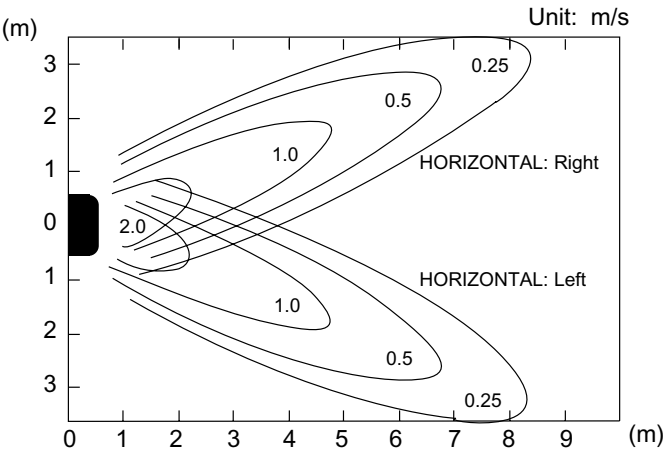
SIDE VIEW
VERTICAL : Up
HORIZONTAL : Center

■ MODEL : AB18 (UNDER CEILING)

TOP VIEW
VERTICAL : Up
HORIZONTAL : Center

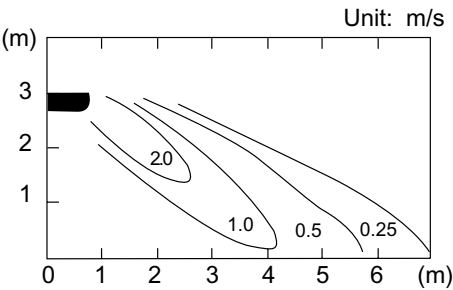
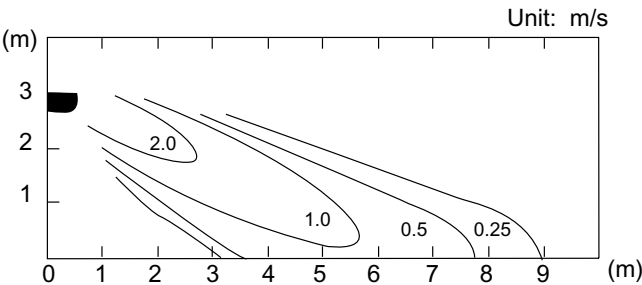


TOP VIEW
VERTICAL : Up
HORIZONTAL : Right & Left

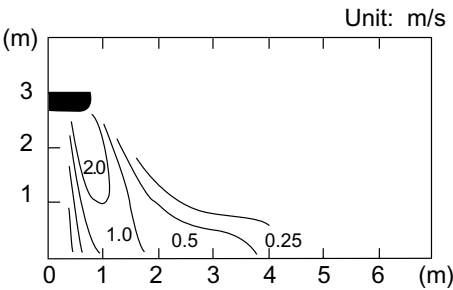


Condition
Fan speed : High
Operation mode : Fan
Voltage : 240V

SIDE VIEW
VERTICAL : Forward
HORIZONTAL : Center



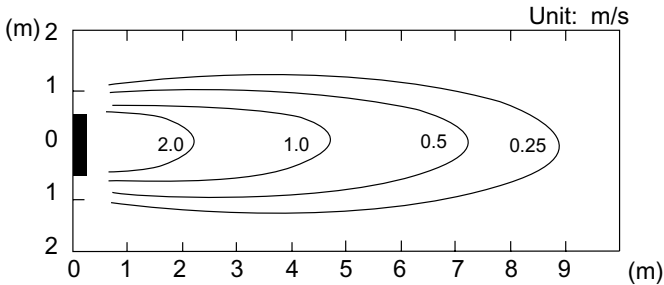
SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center



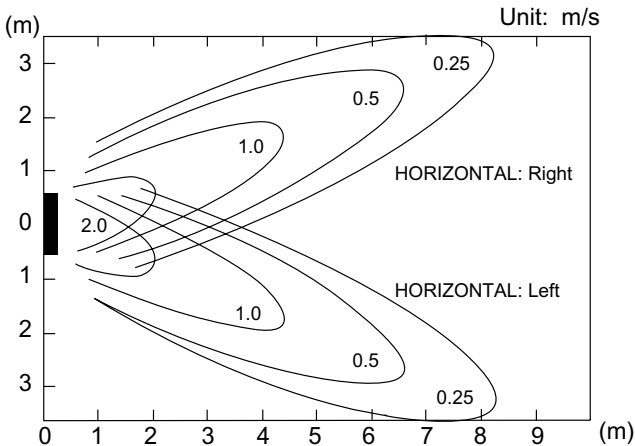
SIDE VIEW
VERTICAL : Down
HORIZONTAL : Center

■ MODEL : AB24 (FLOOR CONSOLE)

TOP VIEW
VERTICAL : Forward
HORIZONTAL : Center

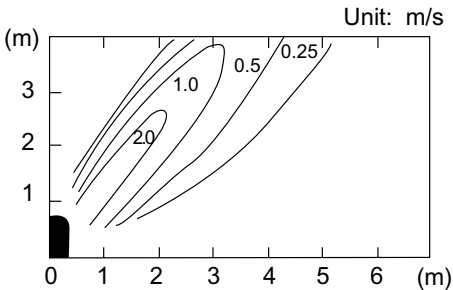
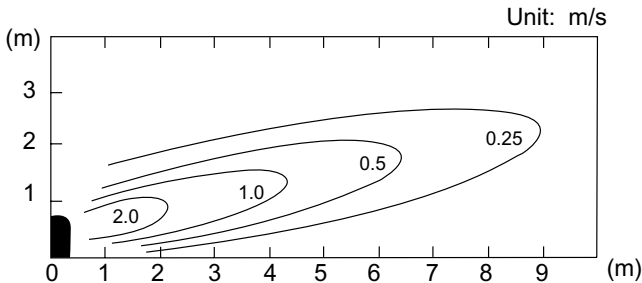


TOP VIEW
VERTICAL : Forward
HORIZONTAL : Right & Left

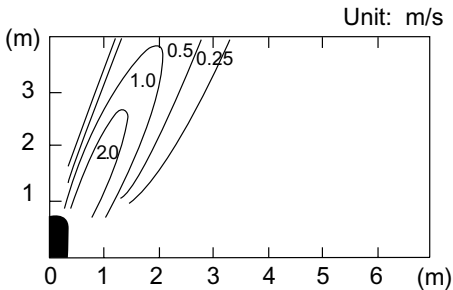


Condition
Fan speed : High
Operation mode : Fan
Voltage : 240V (50Hz)
220V (60Hz)

SIDE VIEW
VERTICAL : Forward
HORIZONTAL : Center



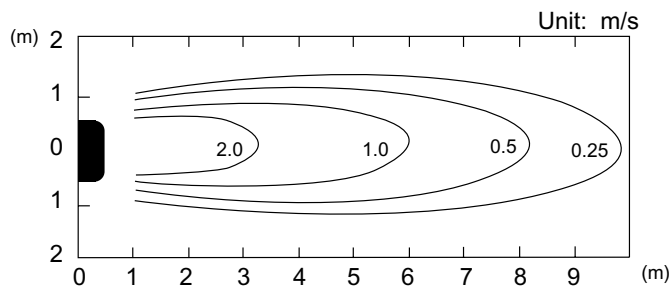
SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center



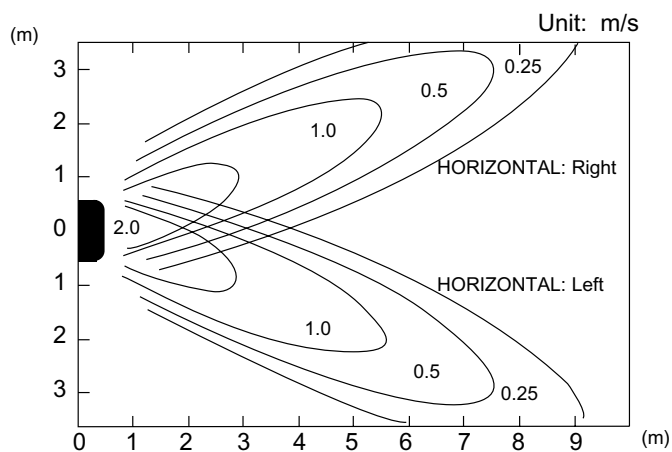
SIDE VIEW
VERTICAL : Up
HORIZONTAL : Center

■ MODEL : AB24 (UNDER CEILING)

TOP VIEW
VERTICAL : Up
HORIZONTAL : Center

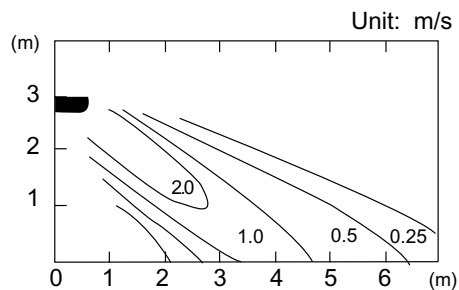
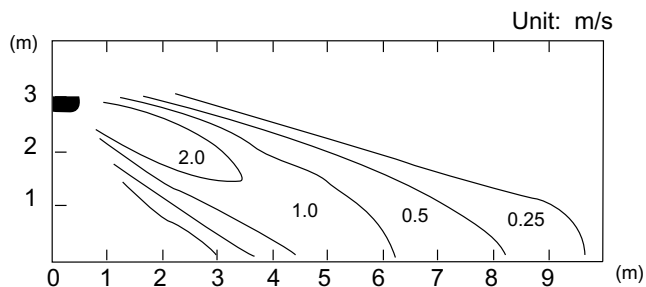


TOP VIEW
VERTICAL : Up
HORIZONTAL : Right & Left

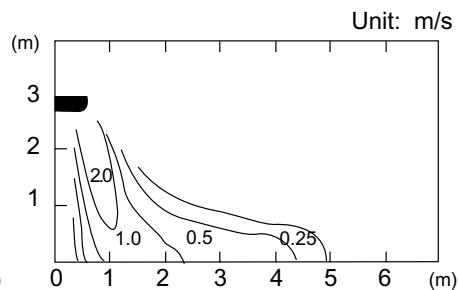


Condition
Fan speed : High
Operation mode : Fan
Voltage : 240V (50Hz)
220V (60Hz)

SIDE VIEW
VERTICAL : Up
HORIZONTAL : Center



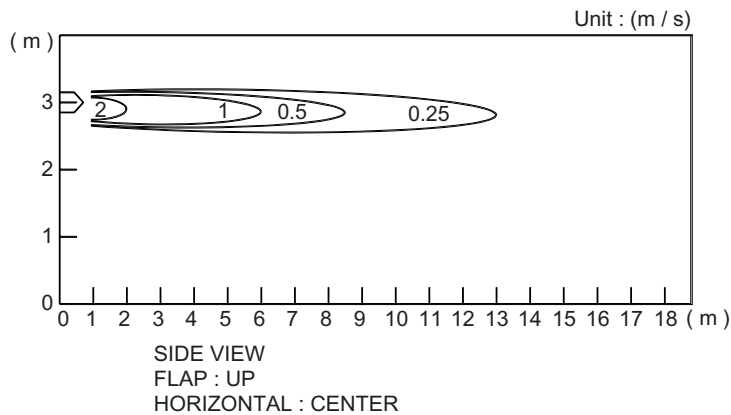
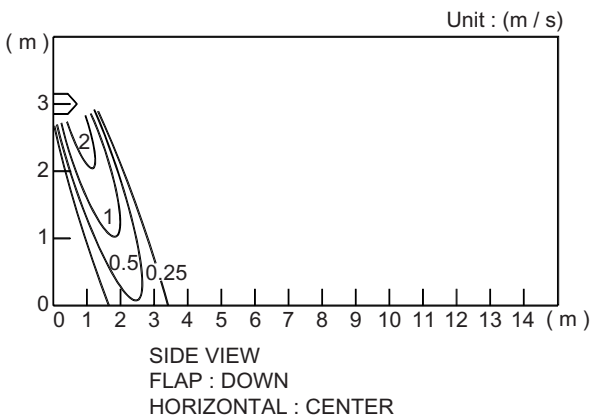
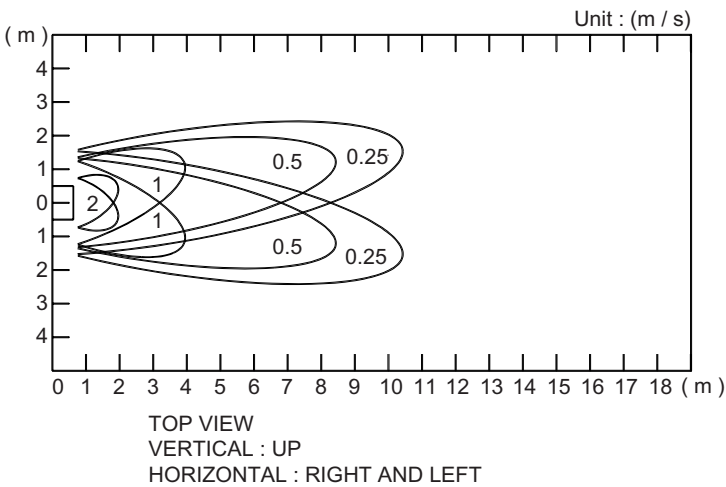
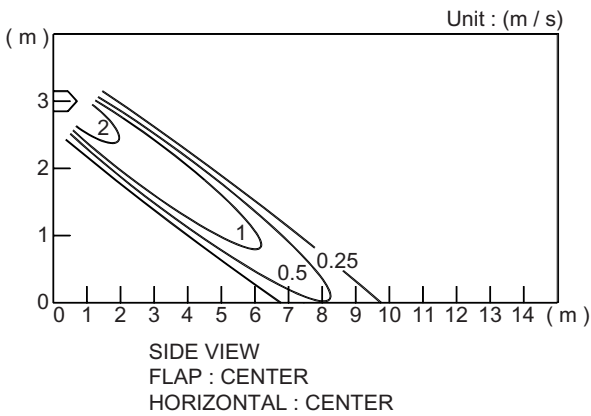
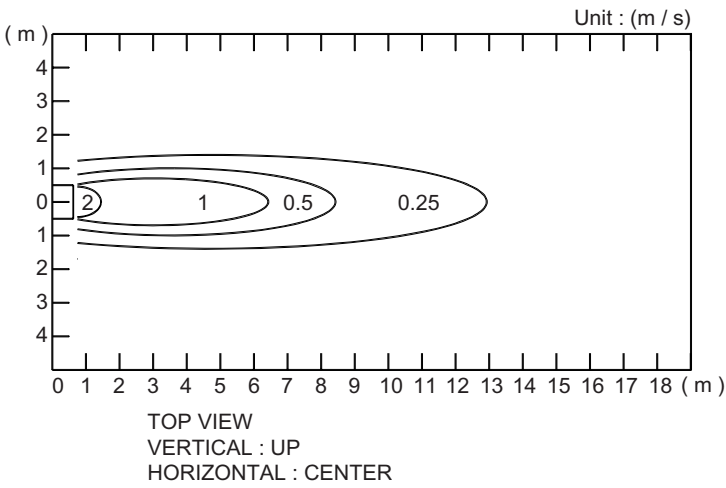
SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center



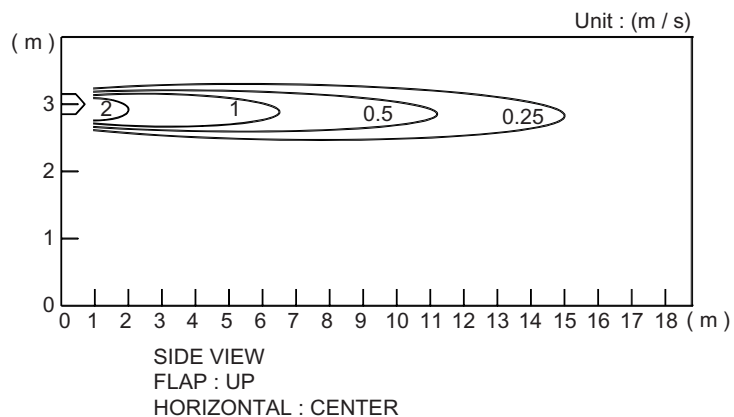
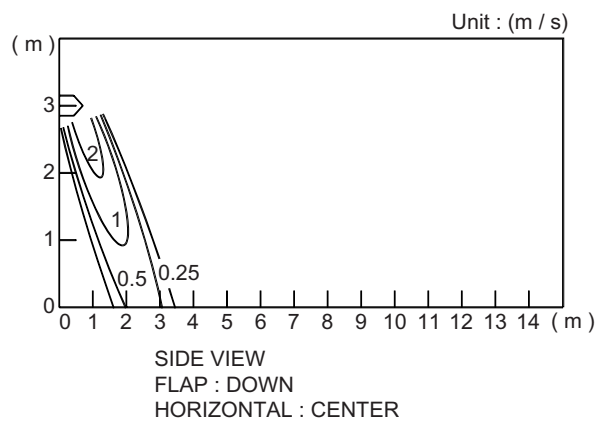
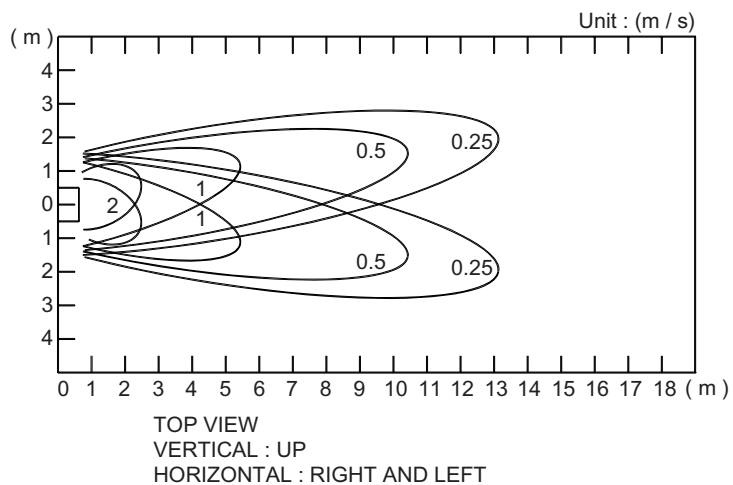
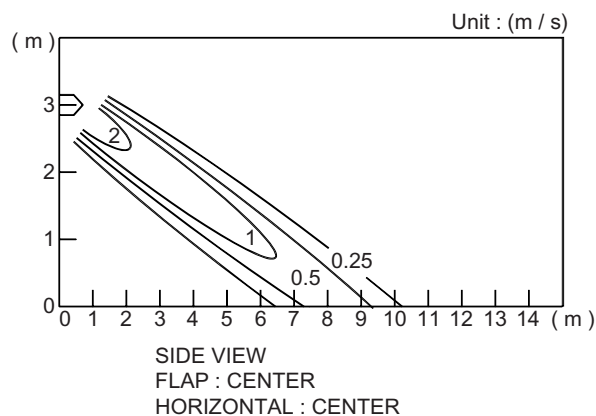
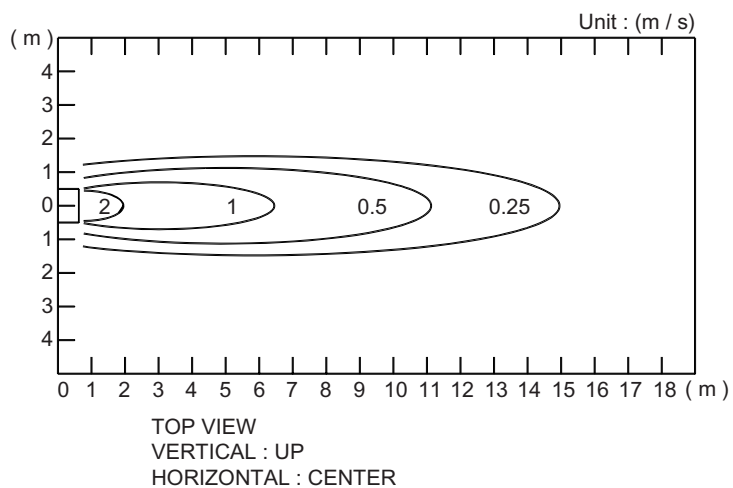
SIDE VIEW
VERTICAL : Down
HORIZONTAL : Center

4-7-4 LARGE CEILING TYPE

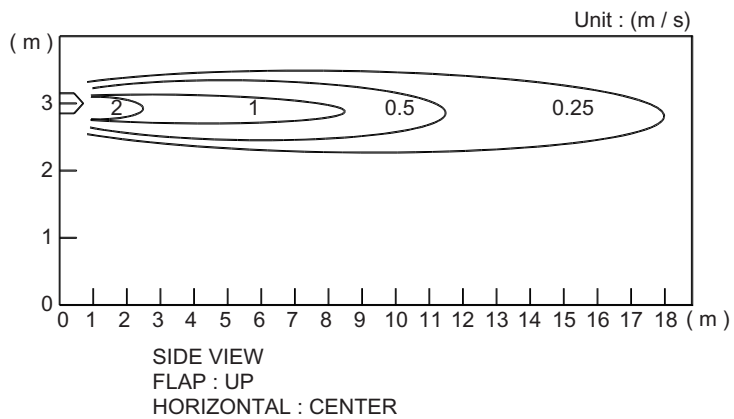
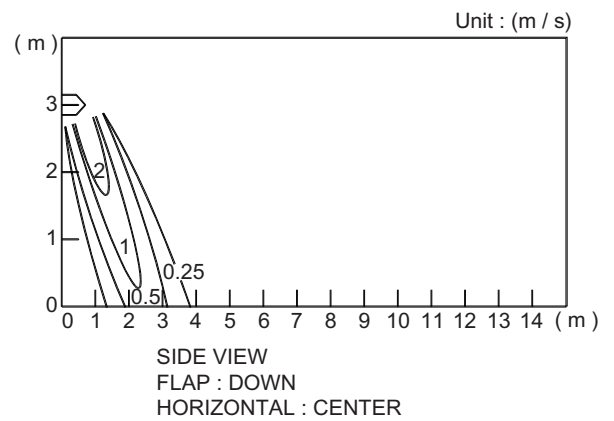
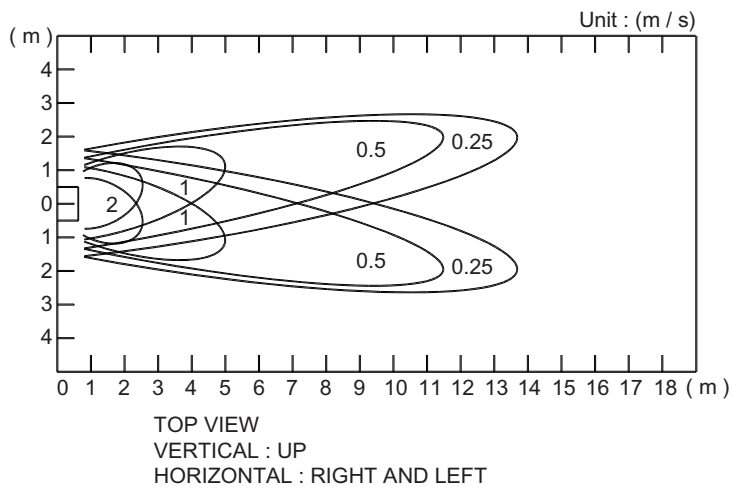
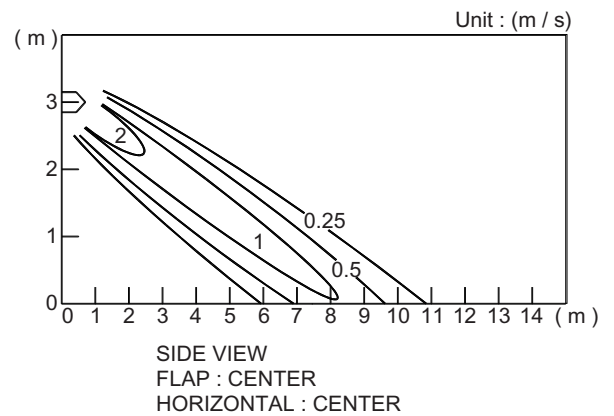
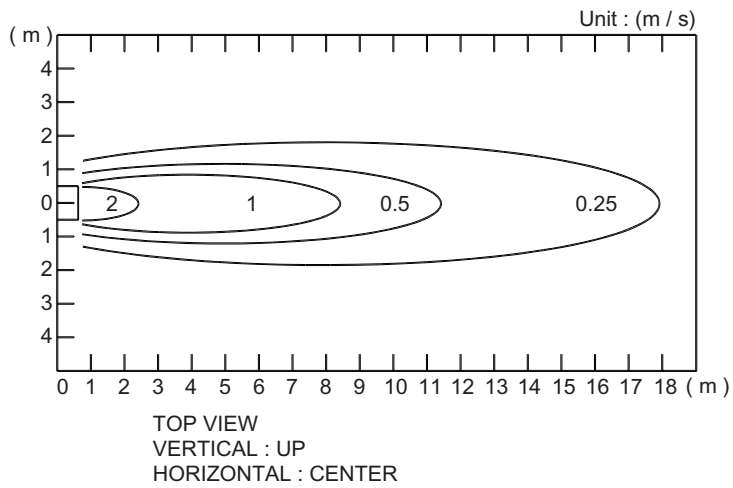
■MODEL : AB30



■ MODEL : AB36



■MODEL : AB45

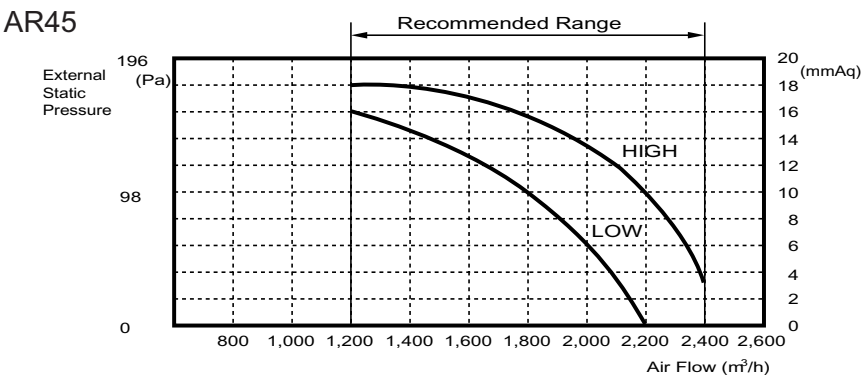
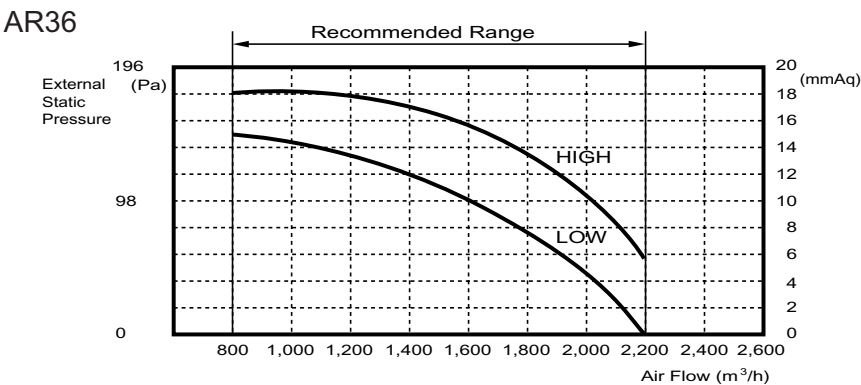
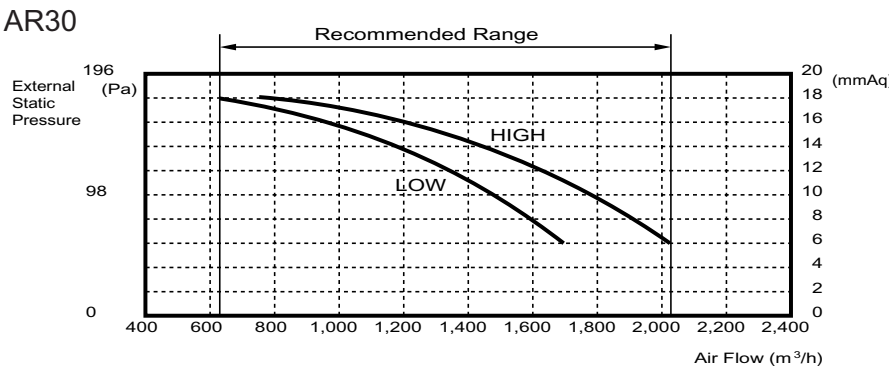
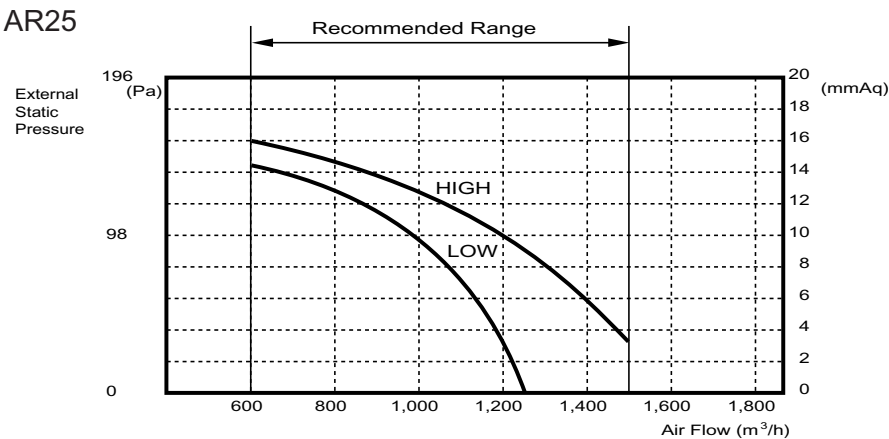


4-8 FAN PERFORMANCE AND AIR FLOW

4-8-1 STANDARD STATIC PRESSURE DUCT TYPE

■FAN CURVE

■MODELS : AR25, AR30, AR36, AR45

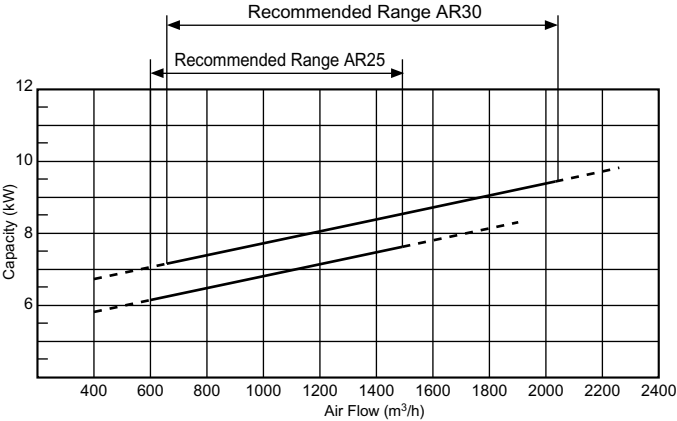


CAPACITY BY AIR FLOW

MODELS : AR25, AR30

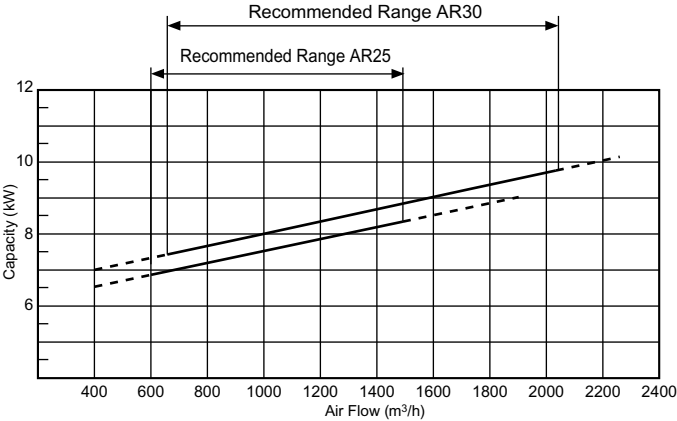
Cooling

(Condition : Inlet Air Temp. 27°C, Outdoor Temp. 35°C.)



Heating

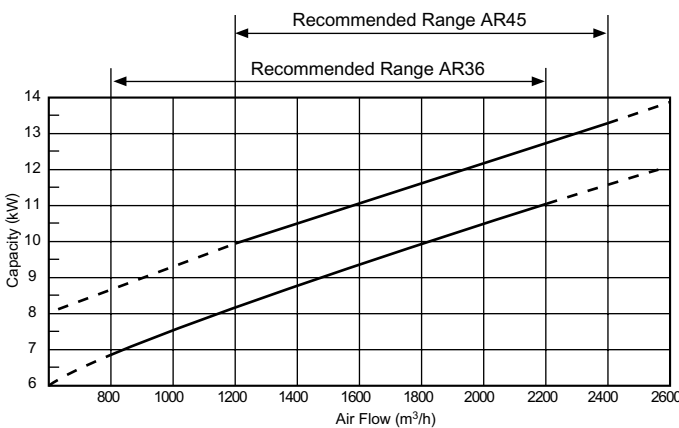
(Condition : Inlet Air Temp. 20°C, Outdoor Temp. 7°C.)



MODELS : AR36, AR45

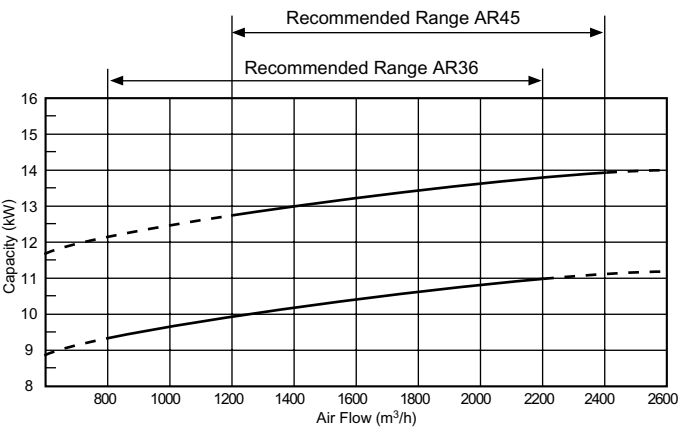
Cooling

(Condition : Inlet Air Temp. 27°C, Outdoor Temp. 35°C.)



Heating

(Condition : Inlet Air Temp. 20°C, Outdoor Temp. 7°C.)

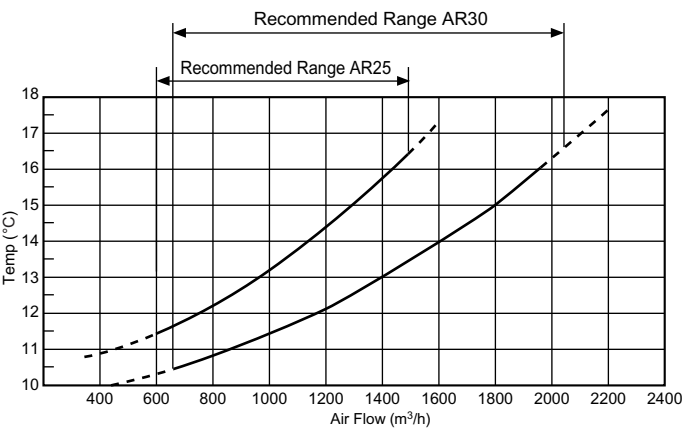


■ OUTLET AIR TEMPERATURE

■ MODELS : AR25, AR30

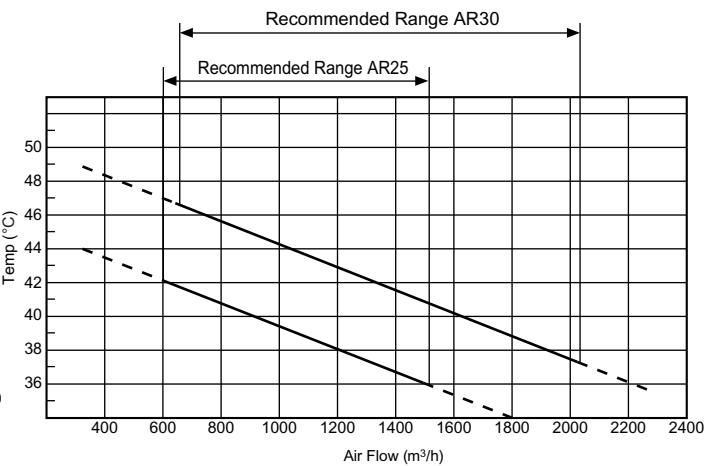
● Cooling

(Condition : Inlet Air Temp. 27°C, Outdoor Temp. 35°C.)



● Heating

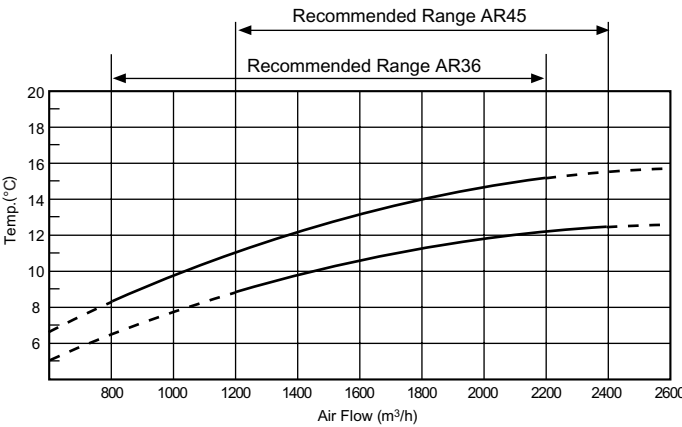
(Condition : Inlet Air Temp. 20°C, Outdoor Temp. 7°C.)



■ MODELS : AR36, AR45

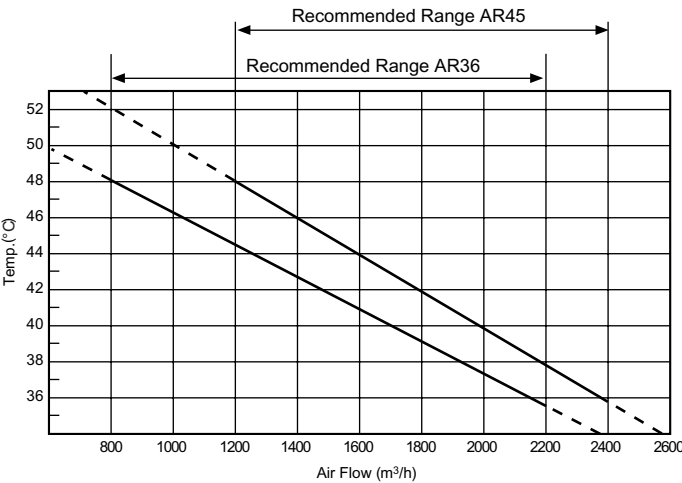
● Cooling

(Condition : Inlet Air Temp. 27°C, Outdoor Temp. 35°C.)



● Heating

(Condition : Inlet Air Temp. 20°C, Outdoor Temp. 7°C.)

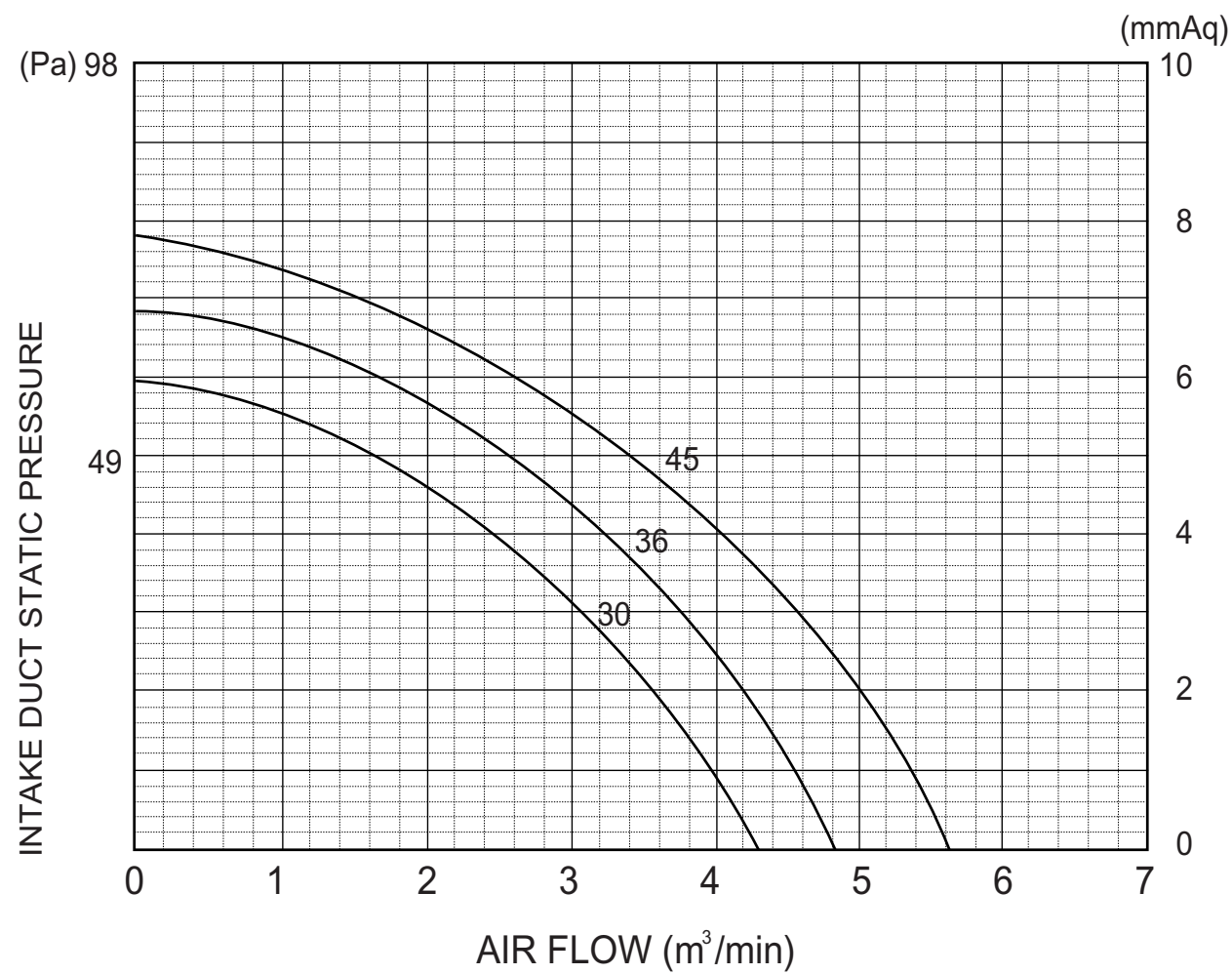


4-9 FRESH AIR

4-9-1 LARGE CEILING TYPE

■ MODELS : AB30,AB36,AB45

■ FRESH AIR CHARACTERISTIC

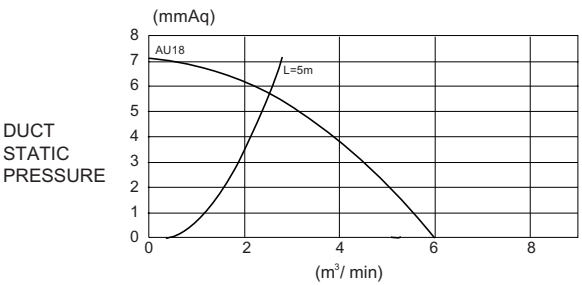
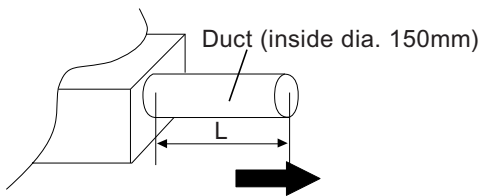


4-9-2 COMPACT CASSETTE TYPE

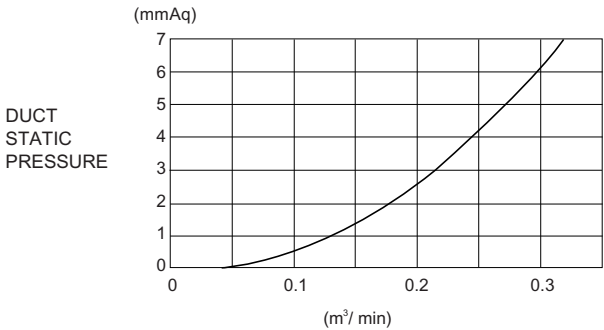
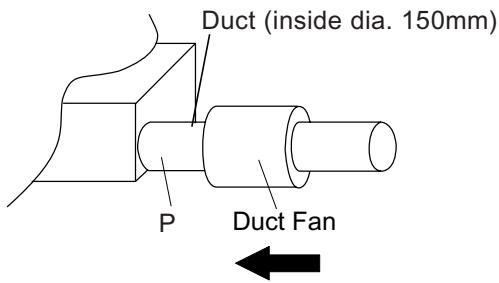
■MODELS : AU18

DUCT CONNECTION

OUTLET AIR



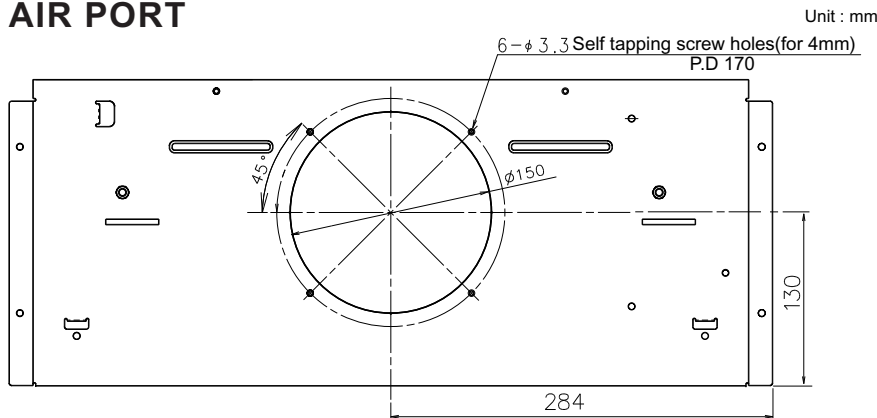
FRESH AIR



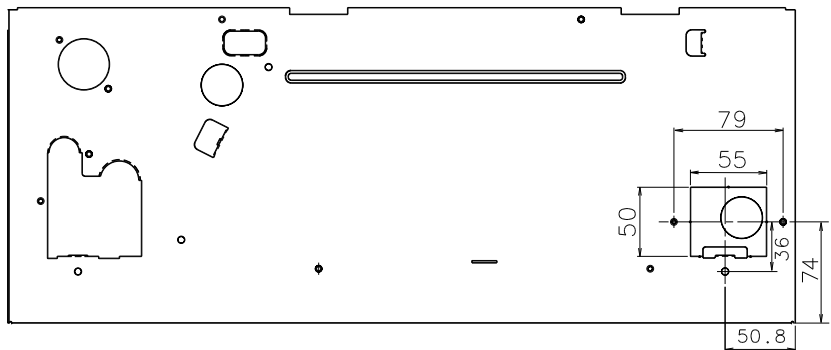
Static pressure required to take in fresh air

DIMENSION

OUTLET AIR PORT



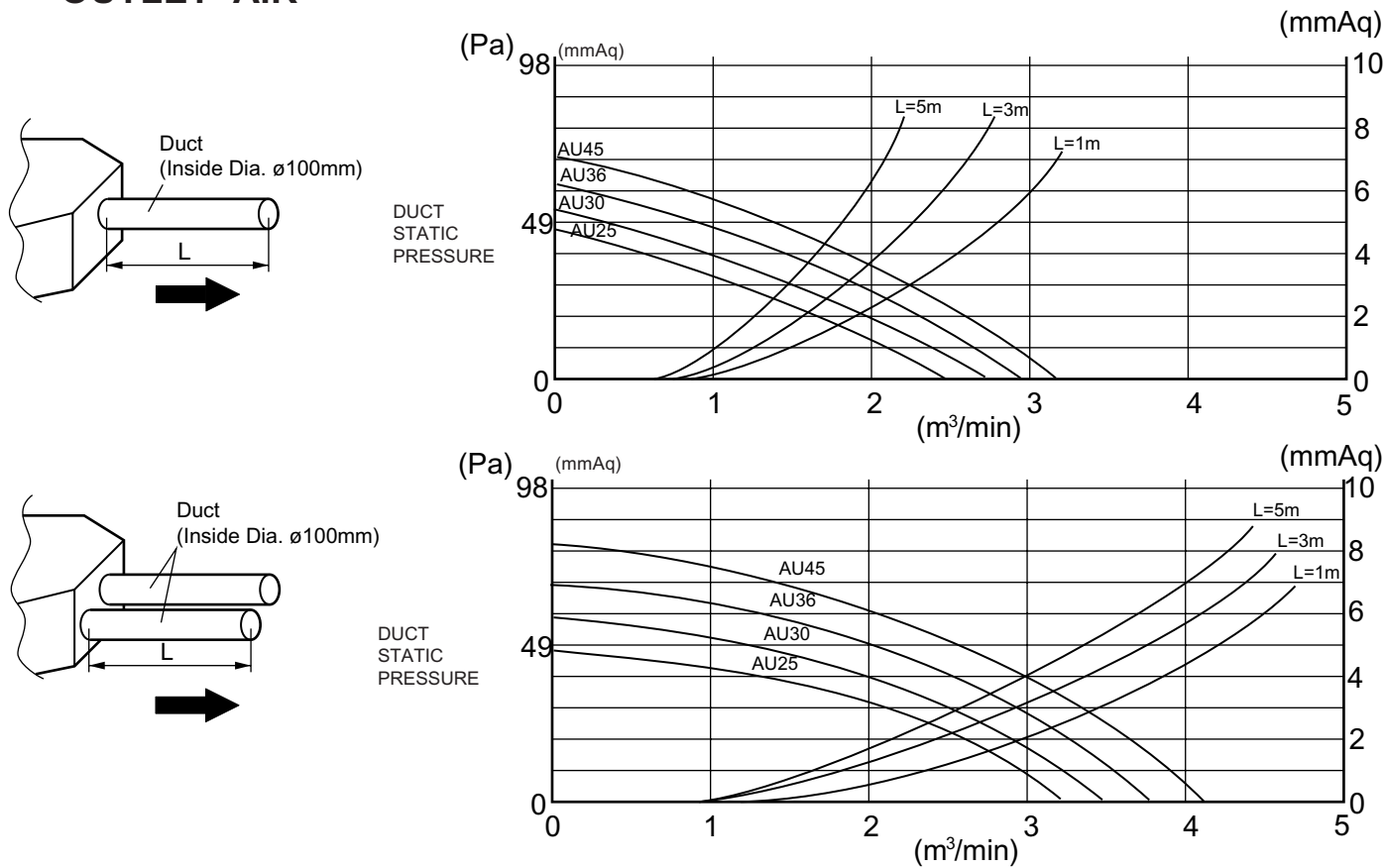
FRESH AIR PORT



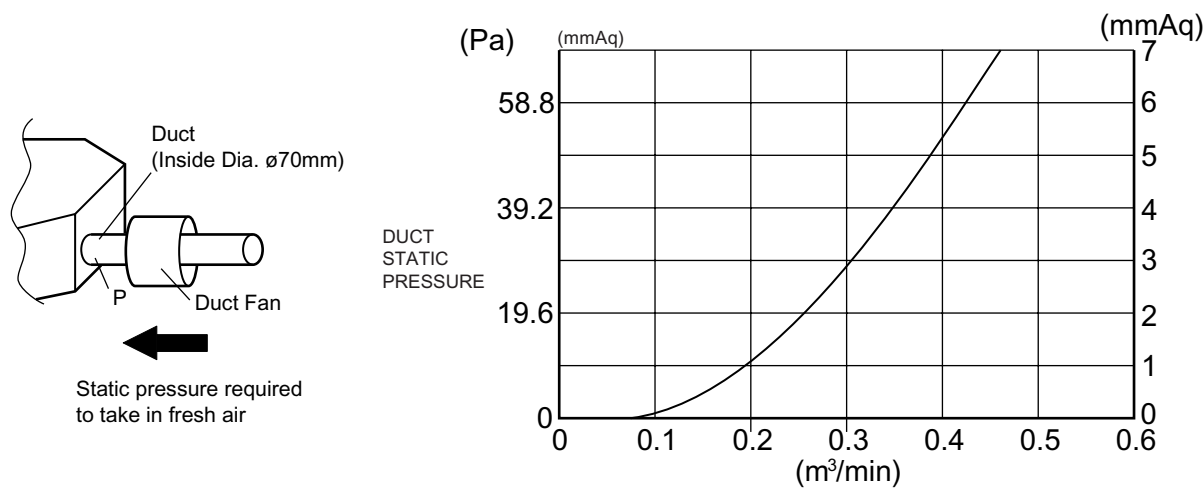
4-9-3 CASSETTE TYPE

■MODELS : AU25,AU30,AU36,AU45

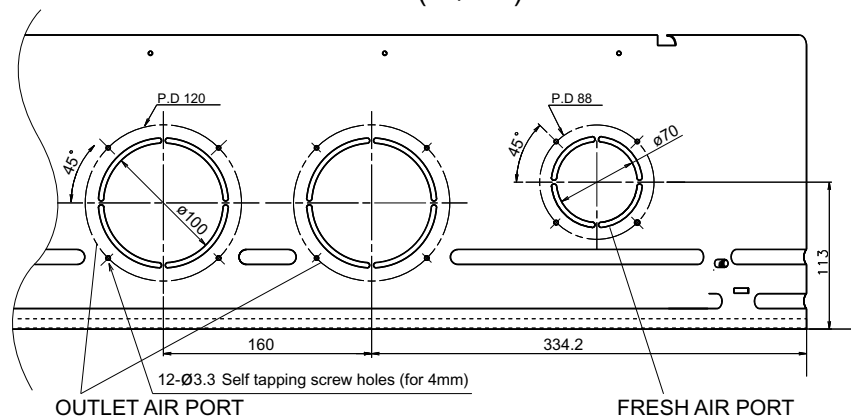
OUTLET AIR



FRESH AIR



DIMENSION

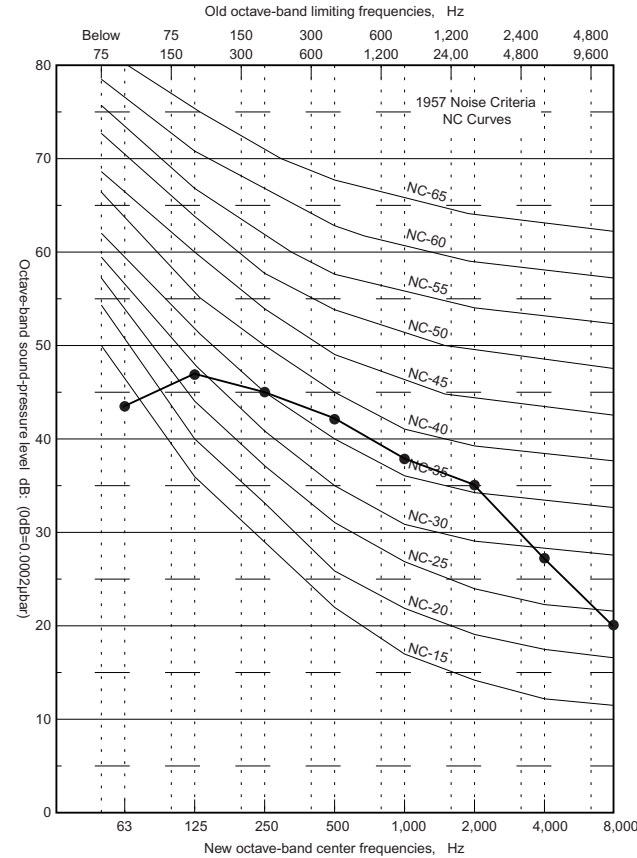


4-10 NOISE LEVEL CURVE

4-10-1 STANDARD STATIC PRESSURE DUCT TYPE

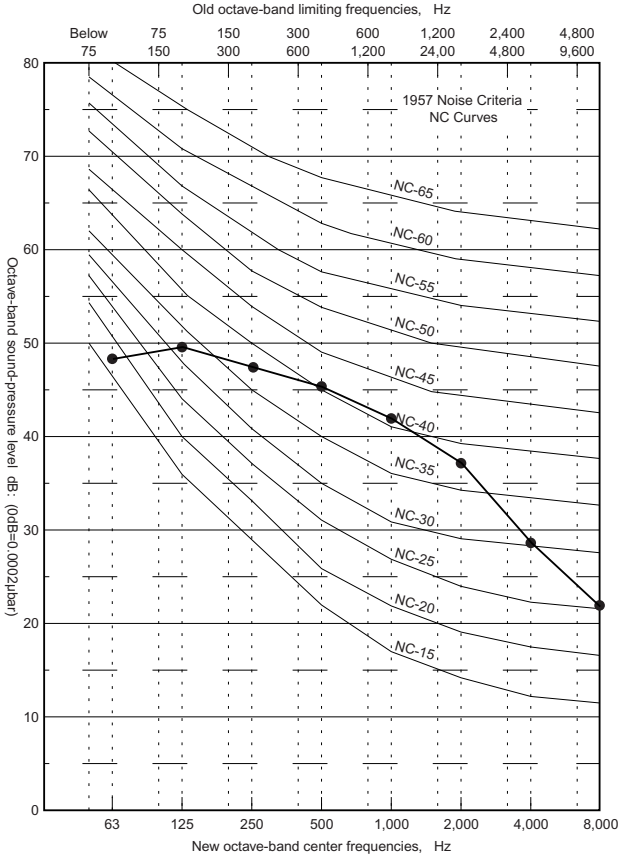
MODEL : AR25

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 100Pa



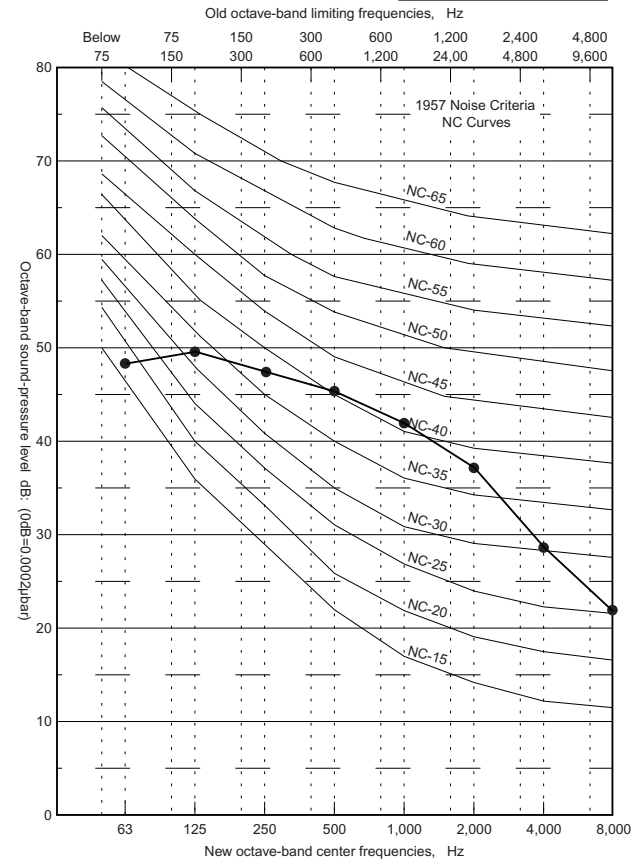
MODEL : AR30

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 120Pa



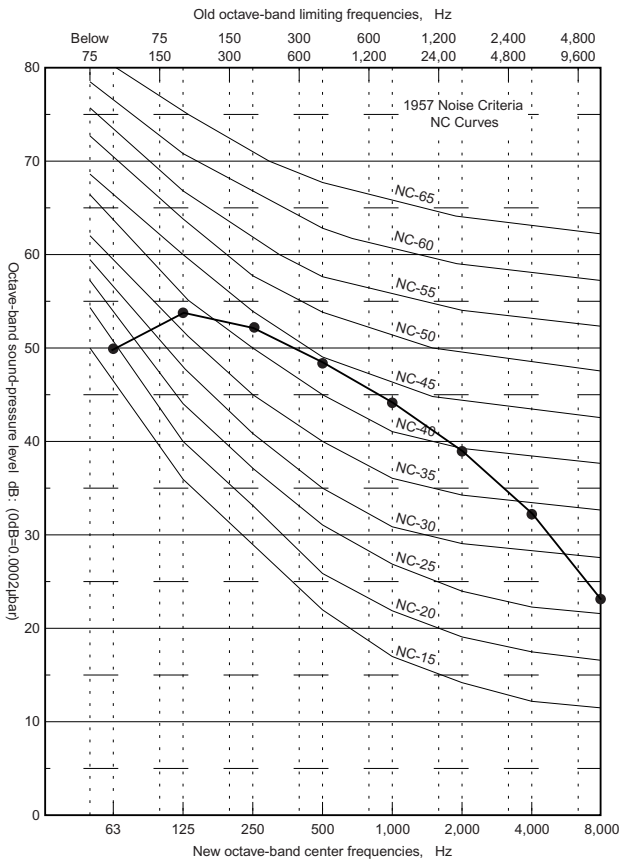
MODEL : AR36

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 100Pa



MODEL : AR45

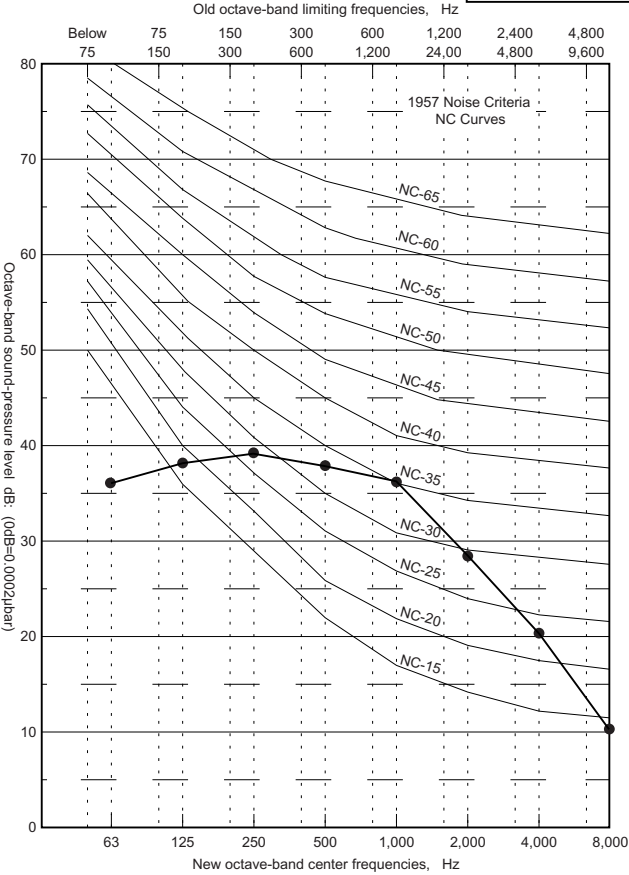
Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 100Pa



4-10-2 COMPACT CASSETTE TYPE

■ MODEL : AU18

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



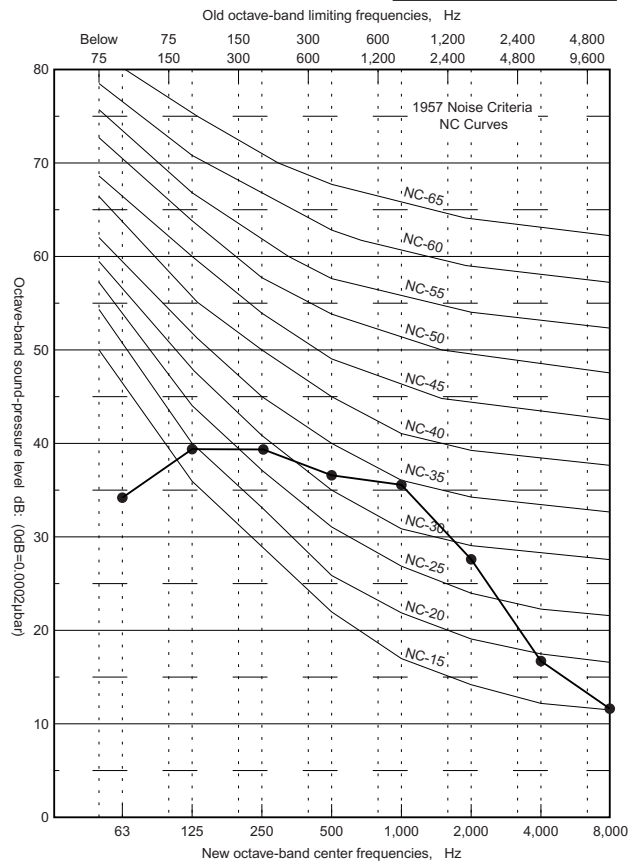
INDOOR
UNIT

INDOOR
UNIT

4-10-3 CASSETTE TYPE

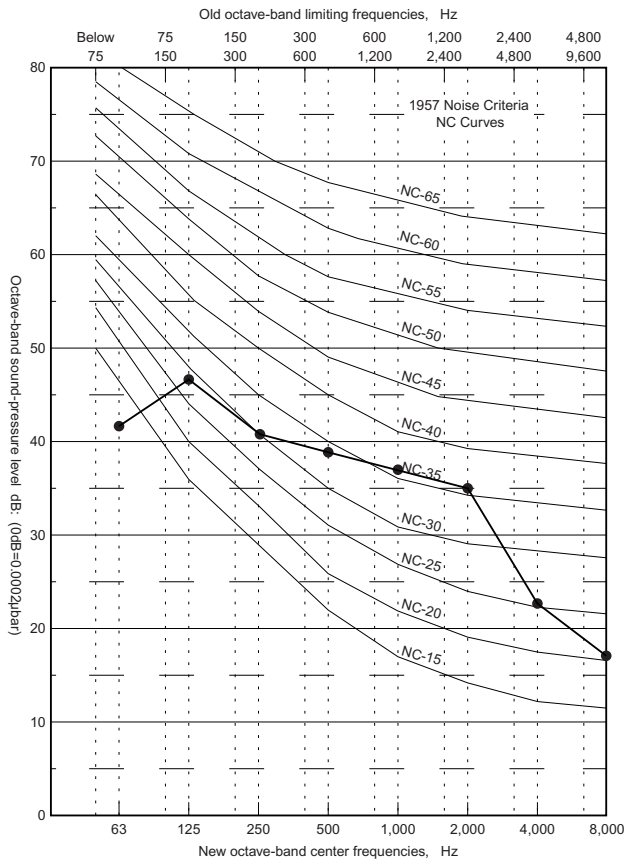
MODEL : AU25

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



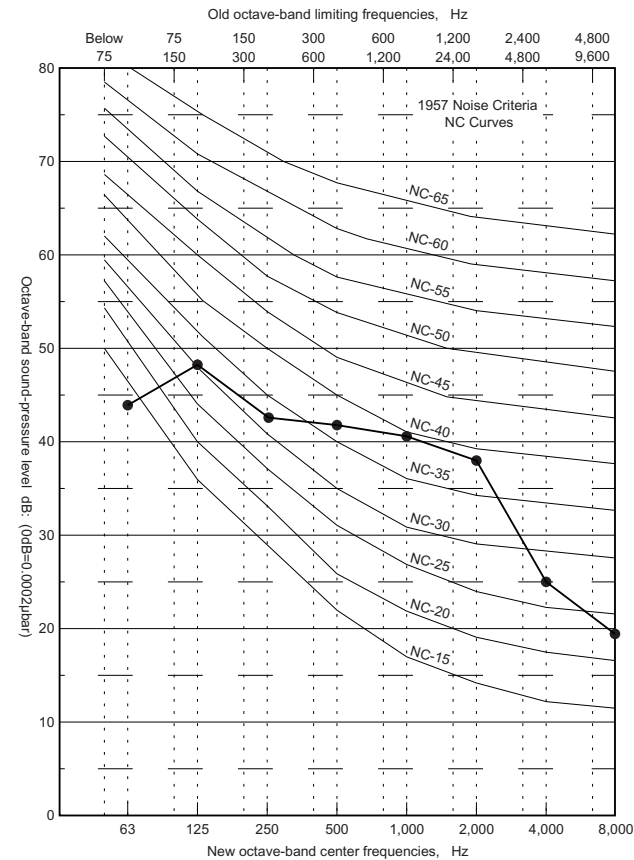
MODEL : AU30

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



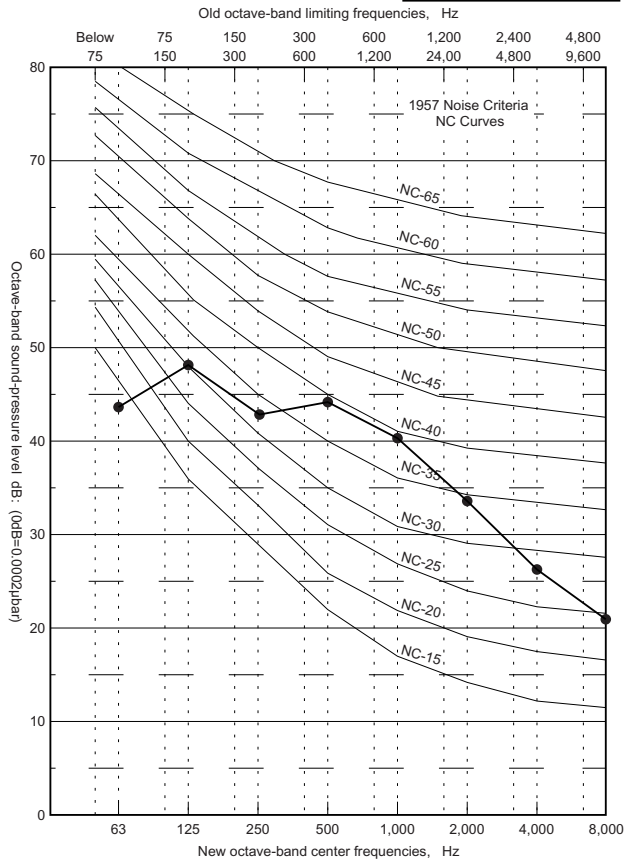
MODEL : AU36

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



MODEL : AU45

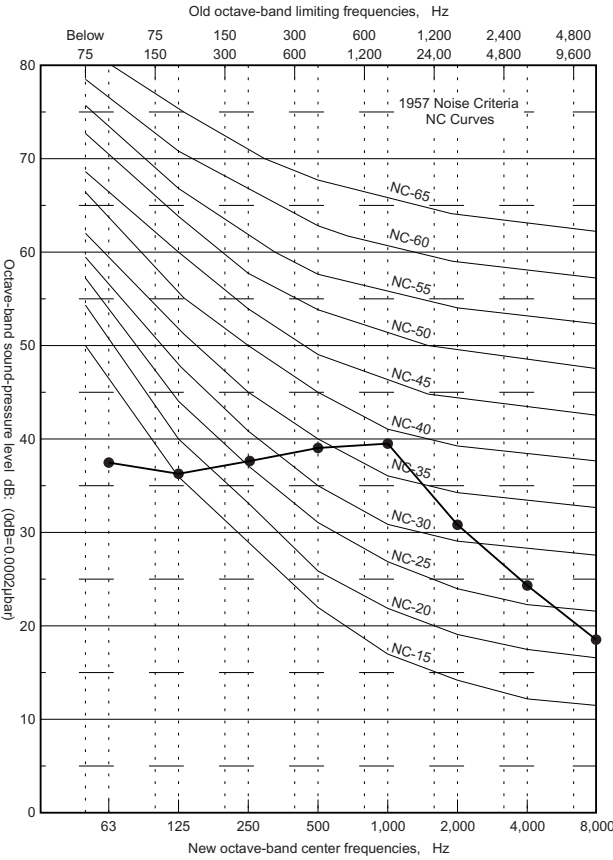
Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



4-10-4 UNIVERSAL FLOOR / CEILING TYPE

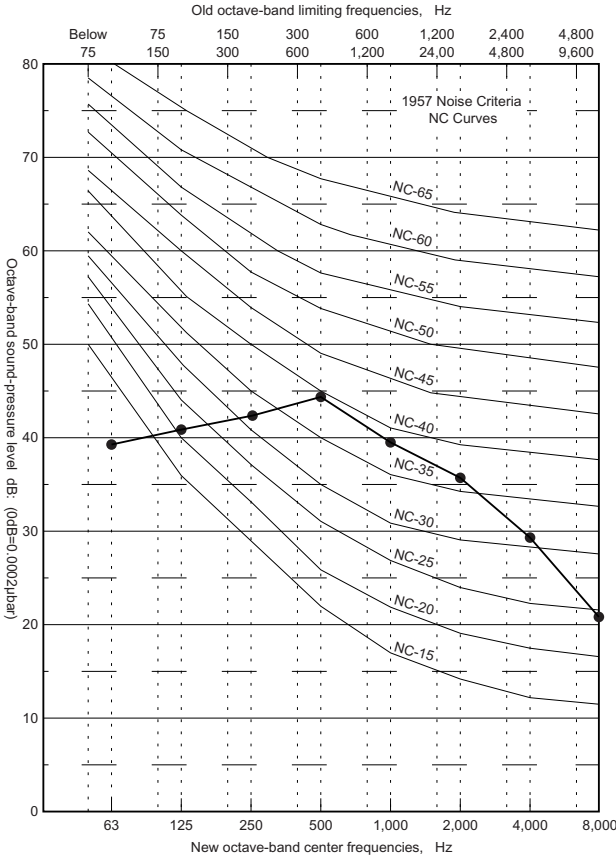
MODEL : AB18

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



MODEL : AB24

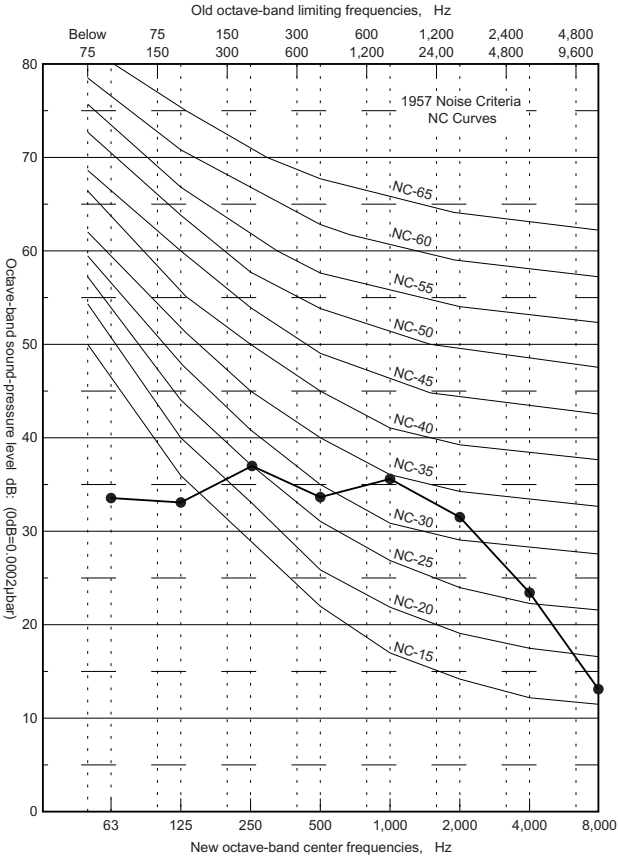
Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



4-10-5 LARGE CEILING TYPE

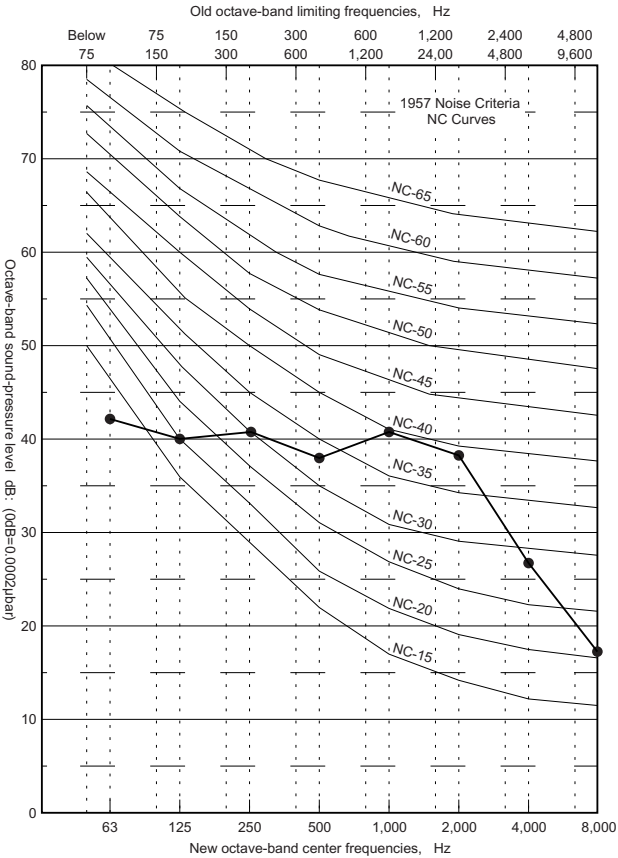
MODEL : AB30

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



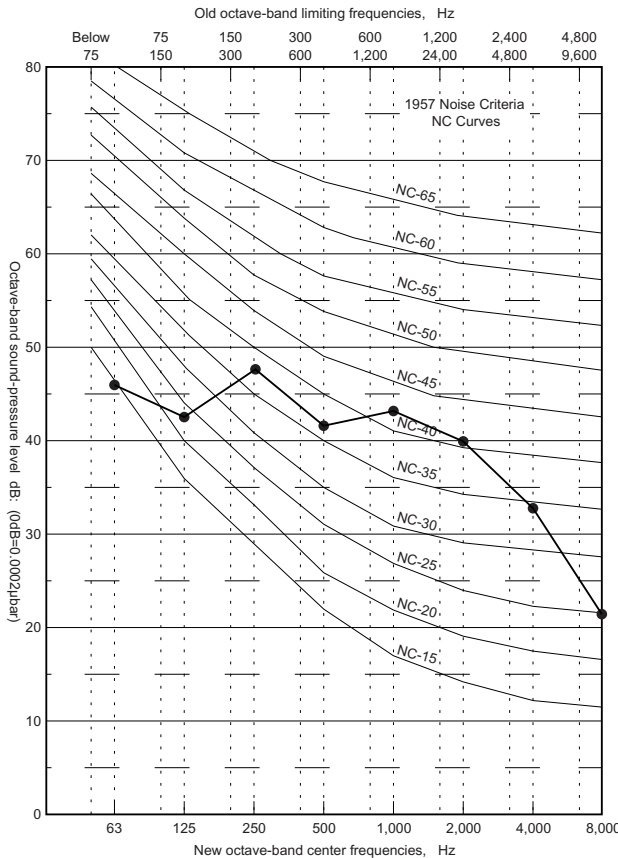
MODEL : AB36

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



MODEL : AB45

Condition
Fan speed : High
Operation mode: FAN
Voltage : 240V
Static pressure : 0 Pa



4-11 SAFETY DEVICE

MODEL NAME		P.C.B FUSE	FAN MOTOR THERMAL PROTECTOR	TERMINAL THERMAL FUSE	FLOAT SWITCH
UNIVERSAL FLOOR / CEILING TYPE	AB18	250V 3.15A	135°C±5°C OFF	-	-
	AB24				
LARGE CEILING TYPE	AB30	250V 3.15A	120°C±5°C OFF	-	△
	AB36				
	AB45				
STANDARD STATIC PRESSURE DUCT TYPE	AR25	250V 3.15A	135°C±5°C OFF	-	-
	AR30				
	AR36				
	AR45				
COMPACT CASSETTE TYPE	AU18	250V 3.15A	135°C±5°C OFF	102°C OFF	○
CASSETTE TYPE	AU25	250V 3.15A	130°C±5°C OFF	102°C OFF	○
	AU30				
	AU36				
	AU45				

○ *1

*1 Including the drain pump kit (option parts)

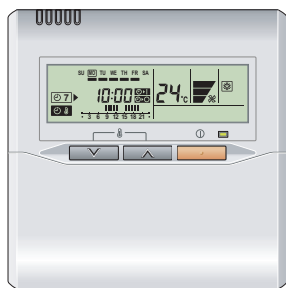
5 . CONTROL SYSTEM

5-1 CONTROLLER UNIT

5-1-1 WIRED REMOTE CONTROLLER

Model : UTB - *UB (Market region Y or G)

■ FEATURES



- * Various timer setup (ON / OFF / WEEKLY) are possible.
- * Equipped with weekly timer as standard function.
(2 times Start / Stop per day for a week)
- * When setting up a timer, operation mode and a temperature setup can be changed.
- * When a failure occurs, the error code is displayed. (Maximum of 16)
- * Error indication. (A maximum of 16 error histories are memorizable.)
- * Energy saving operation are possible.
- * Easy installation with a slim shape with no boldge in the back.
- * The room temperature can be controlled by being detected the temperature accurately with built-in thermo sensor.

● High performance and compact size

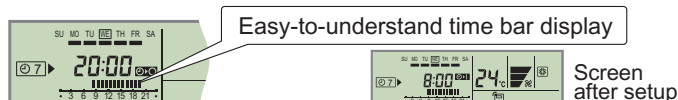
Three functions are combined in



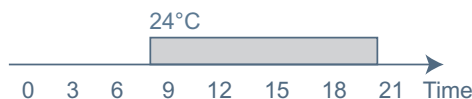
● Built-in timers

Weekly timer

Possible to set ON/OFF time to operate twice each day of the week.



Setup screen example
(Set to Wednesday: 8:00 to 20:00.)

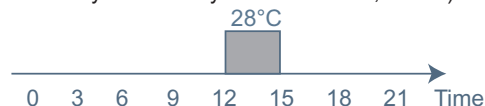


Setback timer

Possible to set temperature for two time spans and for each day of the week.

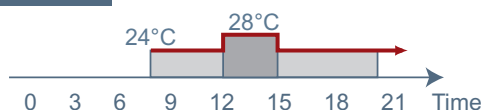


Setup screen example
(Set from Sunday to Saturday: 12:00 to 15:00, 28 °C.)

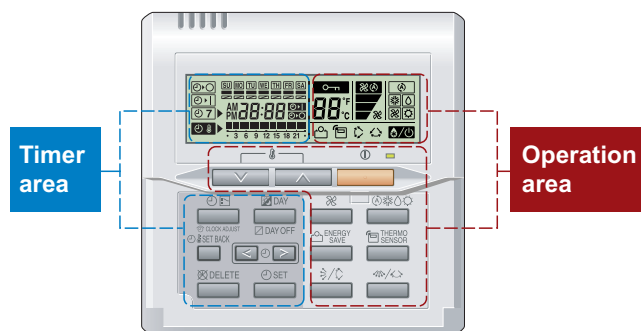


At "Weekly timer" + "Set back timer" setup

24°C → 28°C → 24°C



● Easy-to-understand operation

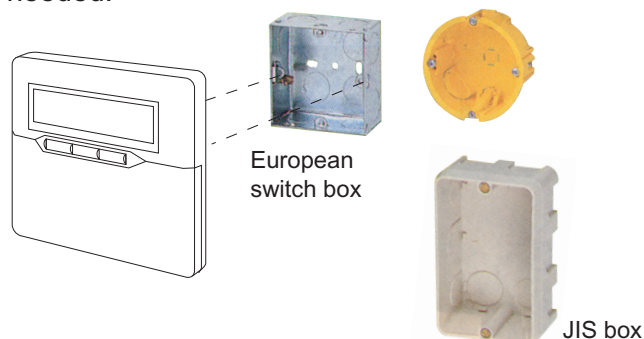


[Variable timer control]

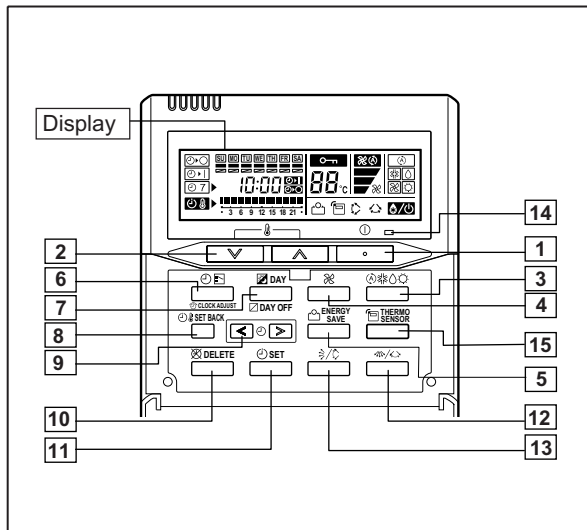
The operation/display sections are zoned according to time and operation, enabling variable programming to match application.

● Simple installation

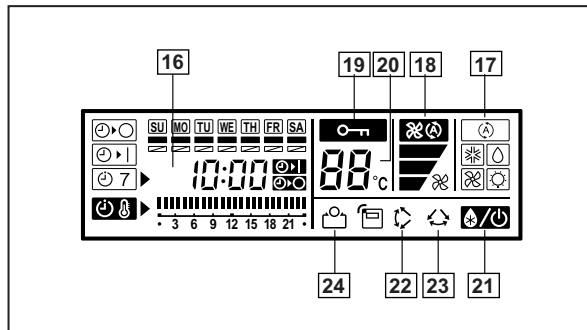
Components are compatible with standard switch boxes. Flat back construction allows equipment to be installed wherever it is needed.



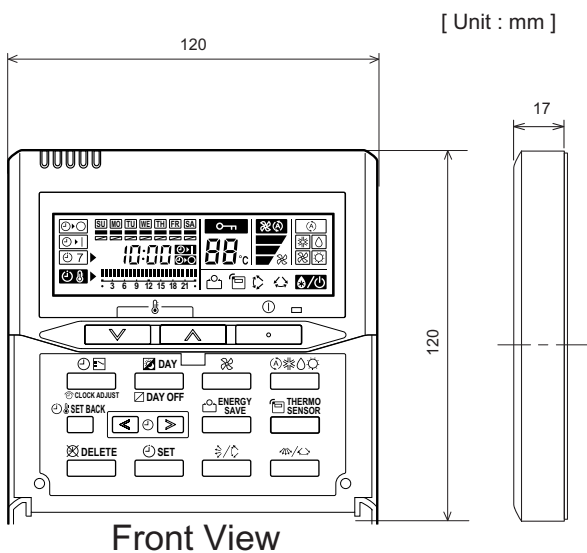
FUNCTIONS



Display panel



DIMENSION



SPECIFICATION

MODEL NAME	UTB - * UB
SIZE (H x W x D mm)	120 x 120 x 17
WEIGHT g	160
ACCESSORY	10m cable

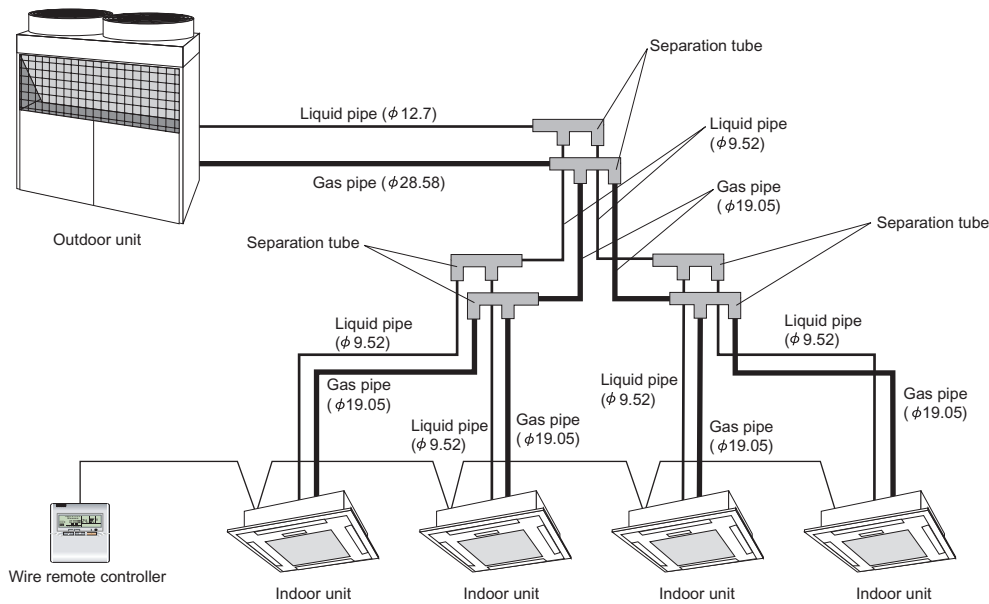
- 1 **START/STOP button**
Pressed to start and stop operation.
- 2 **Set Temperature button**
Selects the setting temperature.
- 3 **Master control button**
Selects the operating mode(AUTO, HEAT, FAN, COOL, DRY).
- 4 **Fan control button**
Selects the fan speed (AUTO, LOW, MED, HIGH).
- 5 **Energy save button**
Turns the energy efficient mode on and off.
- 6 **Timer mode (CLOCK ADJUST) button**
Selects the timer mode (OFF TIMER, ON TIMER, WEEKLY TIMER)
Set the current time.
- 7 **Day (DAY OFF) button**
Temporarily cancels of one day timer.
- 8 **Set back button**
pressed select the set back timer.
- 9 **Set time button**
Pessed to select the set back timer.
- 10 **Delete button**
The schedule of a weekly timer is deleted.
- 11 **Set button**
Sets the date, hour, minute and on-off time.
- 12 **Horizontal air flow direction and swing button**
Push for two seconds to change the swing mode.
- 13 **Vertical air flow direction and swing button**
Push for two seconds to change the swing mode
- 14 **Operation lamp**
Lights during operation and when the timer is on.
- 15 **Thermo sensor button**
- 16 **Timer and clock display**
- 17 **Operation mode display**
- 18 **Fan speed display**
- 19 **Central control display**
- 20 **Temperature display**
- 21 **Stand by display**
Indicates during the oil recovery and defrosting operation.
- 22 **Vertical swing display**
- 23 **Horizontal swing display**
- 24 **Energy save display**

6 . INSTALLATION

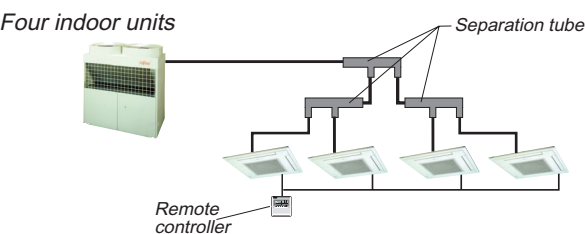
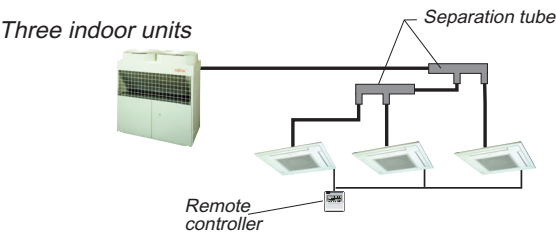
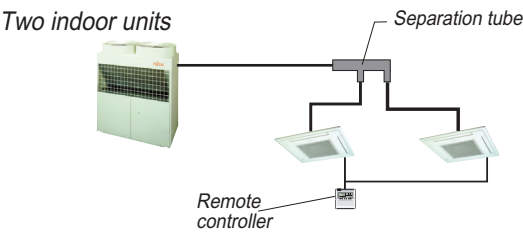
6-1 PIPING DESIGN

6-1-1 PIPING METHOD

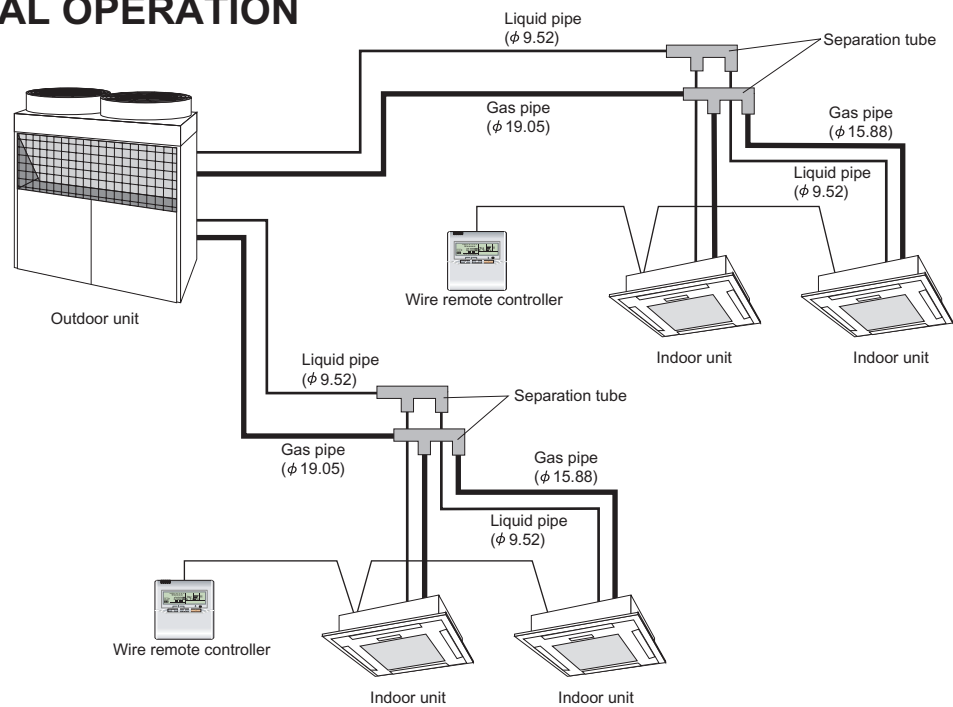
■ SIMULTANEOUS OPERATION



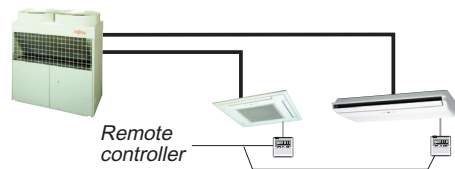
Piping pattern variations



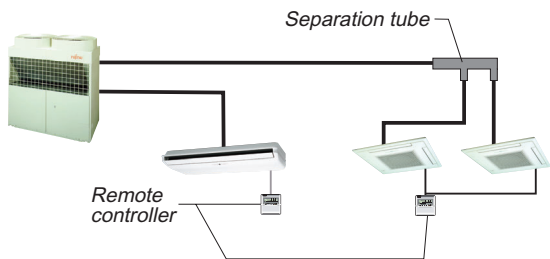
■ INDIVIDUAL OPERATION



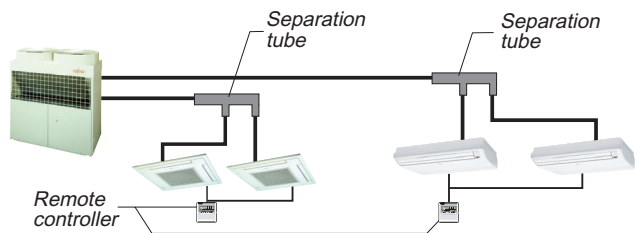
One + One



One + Two



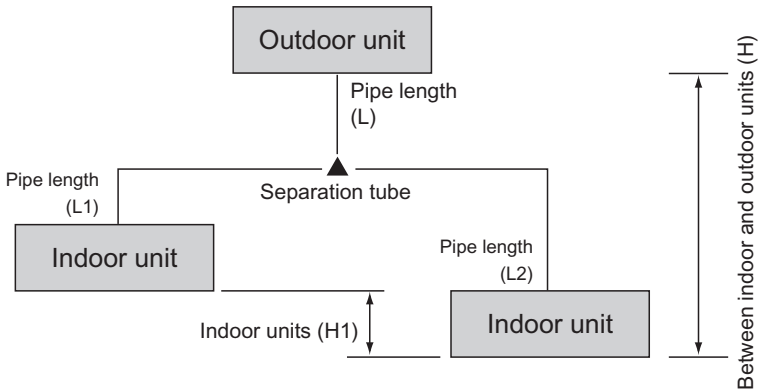
Two + Two



6-1-2 PIPING LIMITATION

■ SIMULTANEOUS OPERATION

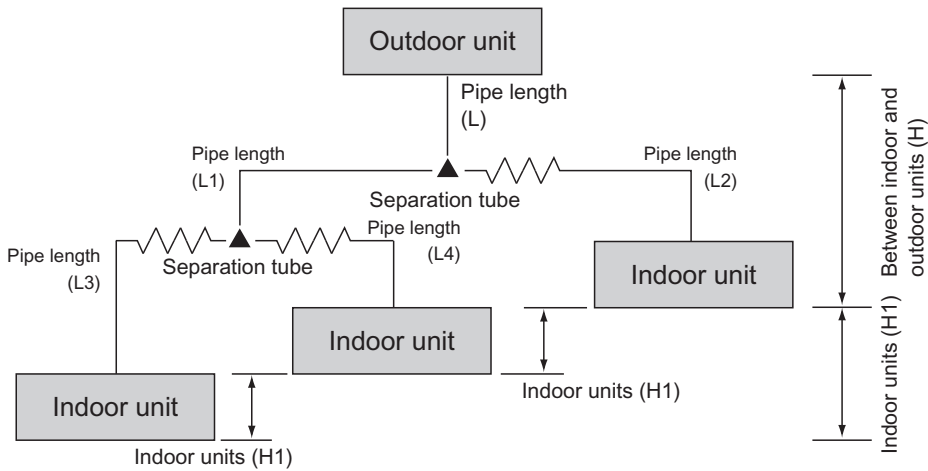
(1) Two Connection



(units : m)

Total length $L+L1+L2$	-
Maximum allowable length $L+L1, L+L2$	50
Length after branch $L1, L2$	10
Difference length after branch $L1 - L2$	5
Between indoor and outdoor units (H)	30
Indoor units (H1)	0.5

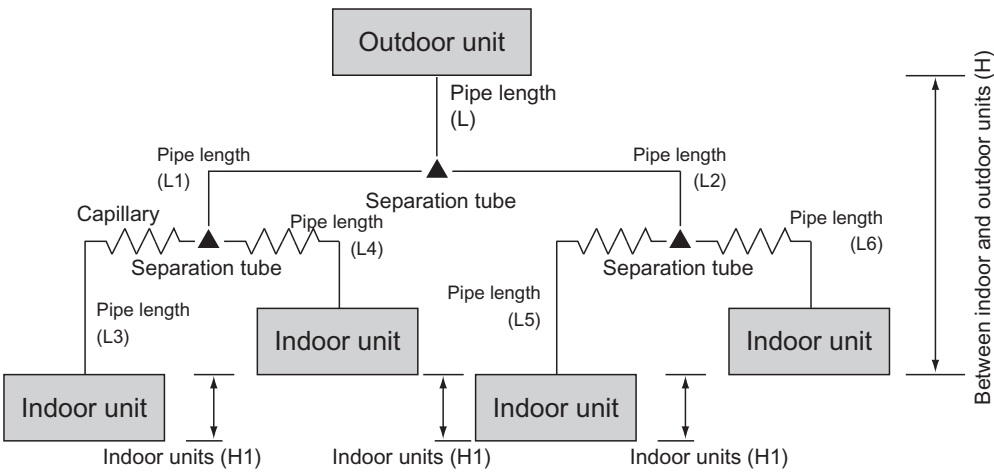
(2) Three Connection



(units : m)

Total length $L+L1+L2+L3+L4$	-
Maximum allowable length $L+L1+L3, L+L1+L4, L+L2$	50
Maximum length after branch $L1+L3, L1+L4, L2$	10
After the branch $(L1+L3) - L2, (L1+L4) - L2$	5
After the branch $(L3-L4)$	5
Indoor and Outdoor units (H)	30
Indoor units (H1)	0.5

(3) Four Connection

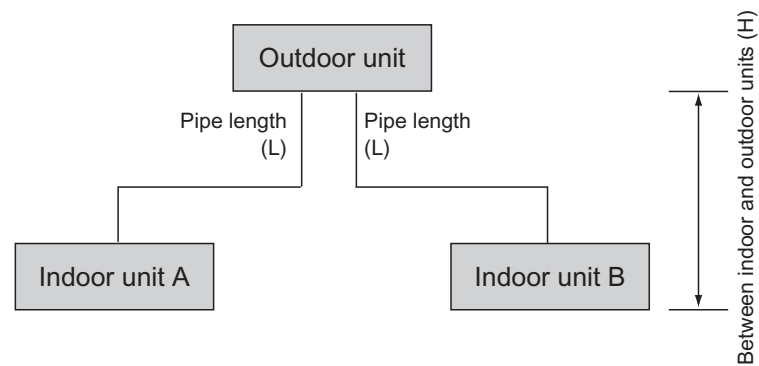


(units : m)

Total length $L+L1+L2+L3+L4+L5+L6$	-
Maximum allowable length $L+L1+L3, L+L1+L4, L+L2+L5, L+L2+L6$	50
Maximum length after branch $L1+L3, L1+L4, L2+L5, L2+L6$	10
After the branch $(L1+L3) - (L2+L5), (L1+L4) - (L2+L5), (L1+L3) - (L2+L6), (L1+L4) - (L2+L6)$	5
After the branch $(L3-L4), (L5-L6)$	5
Between indoor and outdoor units (H)	30
Indoor units (H1)	0.5

■ INDIVIDUAL OPERATION

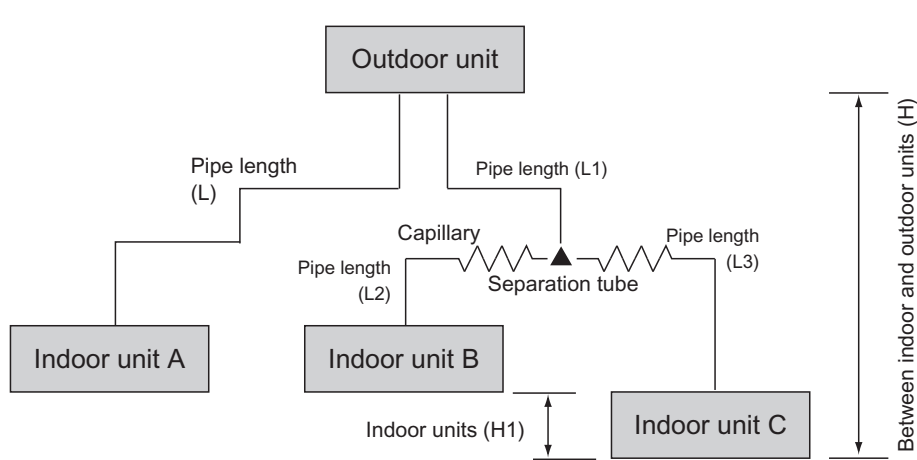
(1) One + One Connection



(units : m)

Maximum length L	50
Between indoor and outdoor units H	30

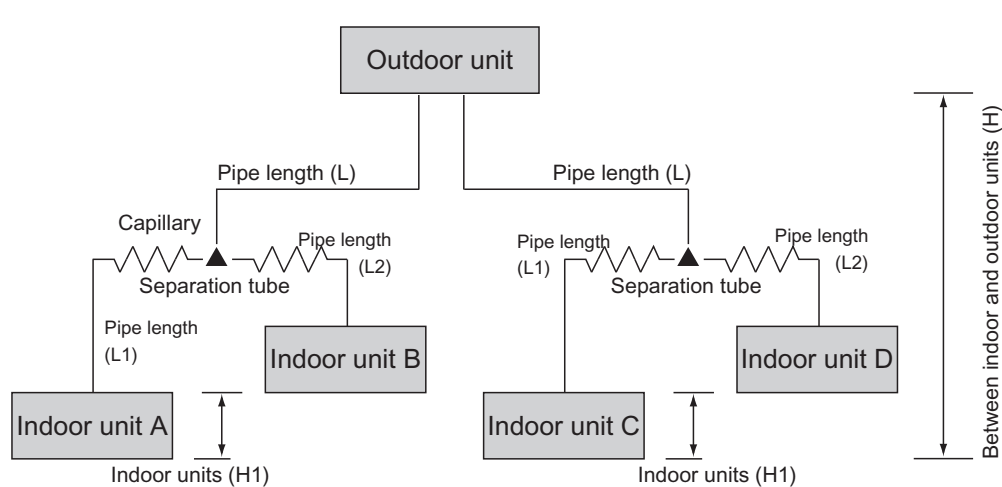
(2) Two + One Connection



(units : m)

Total length $L+L1+L2+L3$	-
Maximum allowable length $L, L1+L2, L1+L3$	50
Length after branch $L2, L3$	10
Difference length after branch $L2 - L3$	5
Between indoor and outdoor units H	30
Between indoor units $H1$	0.5

(3) Two + Two Connection



(units : m)

Total length $L+L1+L2$	-
Maximum allowable length $L+L1, L+L2$	50
Length after branch $L1, L2$	10
Difference length after branch $L1 - L2$	5
Between indoor and outdoor units H	30
Between indoor units $H1$	0.5

6-1-3 PIPE SIZE

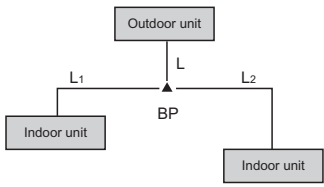
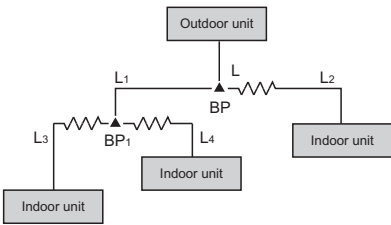
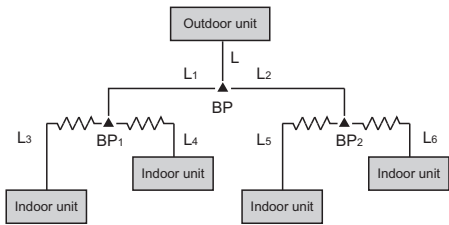
REFRIGERANT PIPING MATERIAL AND WALL THICKNESS

It is necessary to use seamless copper tubes for refrigerant used.
Thickness of tubes are shown in table below. The design pressure is 3.0 MPa.

Nominal diameter (in)	1/4"	3/8"	1/2"	5/8"	3/4"	1 1/8"
Outside diameter (mm)	6.35	9.52	12.70	15.88	19.05	28.58
Material	JIS H3300 C1220T-O or equivalent ¹⁾					JIS H3300 C1220T-H or 1/2H or equivalent ²⁾
Wall thickness (mm)	0.8	0.8	0.8	1.0	1.0	1.0

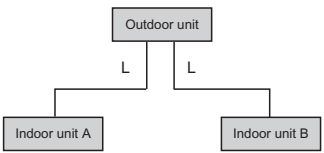
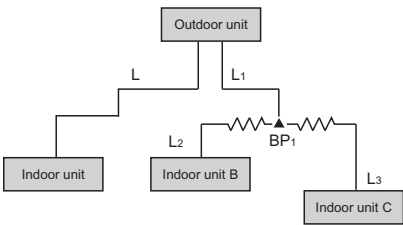
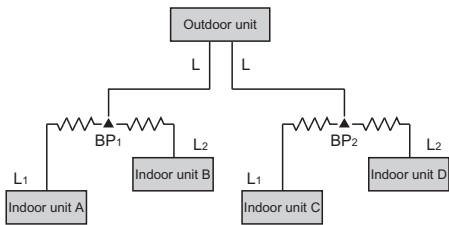
- 1) Allowable tensile stress ≥ 33 (N/mm²)
2) Allowable tensile stress ≥ 61 (N/mm²)

Simultaneous

Two	Three	Four																																	
																																			
<table><tr><th></th><th>Liquid Pipe</th><th>Gas Pipe</th></tr><tr><td>L</td><td>Ø12.7</td><td>Ø28.58</td></tr><tr><td>L1, L2</td><td>Ø9.52</td><td>Ø19.05</td></tr></table> BP: Accessorry		Liquid Pipe	Gas Pipe	L	Ø12.7	Ø28.58	L1, L2	Ø9.52	Ø19.05	<table><tr><th></th><th>Liquid Pipe</th><th>Gas Pipe</th></tr><tr><td>L</td><td>Ø12.7</td><td>Ø28.58</td></tr><tr><td>L1, L2</td><td>Ø9.52</td><td>Ø19.05</td></tr><tr><td>L3, L4</td><td>Ø9.52</td><td>Ø15.88</td></tr></table> BP Accessorry BP1 Optional Parts UTR-BP901		Liquid Pipe	Gas Pipe	L	Ø12.7	Ø28.58	L1, L2	Ø9.52	Ø19.05	L3, L4	Ø9.52	Ø15.88	<table><tr><th></th><th>Liquid Pipe</th><th>Gas Pipe</th></tr><tr><td>L</td><td>Ø12.7</td><td>Ø28.58</td></tr><tr><td>L1, L2</td><td>Ø9.52</td><td>Ø19.05</td></tr><tr><td>L3, L4 L5, L6</td><td>Ø9.52</td><td>Ø15.88</td></tr></table> BP Accessorry BP1 Optional Parts BP2 UTR-BP901		Liquid Pipe	Gas Pipe	L	Ø12.7	Ø28.58	L1, L2	Ø9.52	Ø19.05	L3, L4 L5, L6	Ø9.52	Ø15.88
	Liquid Pipe	Gas Pipe																																	
L	Ø12.7	Ø28.58																																	
L1, L2	Ø9.52	Ø19.05																																	
	Liquid Pipe	Gas Pipe																																	
L	Ø12.7	Ø28.58																																	
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L3, L4	Ø9.52	Ø15.88																																	
	Liquid Pipe	Gas Pipe																																	
L	Ø12.7	Ø28.58																																	
L1, L2	Ø9.52	Ø19.05																																	
L3, L4 L5, L6	Ø9.52	Ø15.88																																	

※ For AU18, liquid pipe size is Ø6.35 and gas pipe size is Ø12.7.

Individual

One + One	One + Two	Two + Two																								
																										
<table><tr><th></th><th>Liquid Pipe</th><th>Gas Pipe</th></tr><tr><td>L</td><td>Ø9.52</td><td>Ø19.05</td></tr></table>		Liquid Pipe	Gas Pipe	L	Ø9.52	Ø19.05	<table><tr><th></th><th>Liquid Pipe</th><th>Gas Pipe</th></tr><tr><td>L, L1</td><td>Ø9.52</td><td>Ø19.05</td></tr><tr><td>L2, L3</td><td>Ø9.52</td><td>Ø15.88</td></tr></table> BP1 Optional Parts UTR-BP901		Liquid Pipe	Gas Pipe	L, L1	Ø9.52	Ø19.05	L2, L3	Ø9.52	Ø15.88	<table><tr><th></th><th>Liquid Pipe</th><th>Gas Pipe</th></tr><tr><td>L</td><td>Ø9.52</td><td>Ø19.05</td></tr><tr><td>L1, L2</td><td>Ø9.52</td><td>Ø15.88</td></tr></table> BP1 Optional Parts BP2 UTR-BP901		Liquid Pipe	Gas Pipe	L	Ø9.52	Ø19.05	L1, L2	Ø9.52	Ø15.88
	Liquid Pipe	Gas Pipe																								
L	Ø9.52	Ø19.05																								
	Liquid Pipe	Gas Pipe																								
L, L1	Ø9.52	Ø19.05																								
L2, L3	Ø9.52	Ø15.88																								
	Liquid Pipe	Gas Pipe																								
L	Ø9.52	Ø19.05																								
L1, L2	Ø9.52	Ø15.88																								

※ For AU18, liquid pipe size is Ø6.35 and gas pipe size is Ø12.7.

- For "Three", "Four", "One + Two", and "Two + Two", branch pipe (optional) is necessary.
Connect the capillary tube provided with the indoor unit to the liquid branch pipe except in the case of model 45.

6-1-4. SELECTION OF PIPE HEAT INSULATING MATERIAL

1. Always insulate the refrigerant pipe to prevent condensation and water droplets by the refrigerant pipe.
2. Decide the thickness of the heat insulating material by referring to the recommended minimum thickness in Table 1.
(For installation condition $T=32\text{ }^{\circ}\text{C}(\text{DB})$, humidity $\leq 70\%$, humidity $\leq 75\%$, humidity $\leq 80\%$, humidity $\leq 85\%$)
3. When the outdoor unit is installed at a higher position than the indoor unit, fill the connecting part gap with putty, etc. to prevent the dew condensation water of the valve of the outdoor unit from flowing to the indoors from the gap between the pipe and the heat insulating material.
4. Liquid pipe and gas pipe should be completely insulated with same specification and sealed.
5. In case not to insulate and not to seal refrigerant pipe completely, it will become the cause of water leak.

Table 1 Size of refrigerant pipe and recommended minimum thickness of heat insulating material
(In case a heat insulating material which thermal conductivity is equal to or less than $0.040\text{ W}/(\text{m}\cdot\text{k})$ is used.)

		Recommended minimum thickness for heat insulating material (mm)			
Relative humidity		$\leq 70\%$	$\leq 75\%$	$\leq 80\%$	$\leq 85\%$
Refrigerant pipe	6.35 (1/4")	8	10	13	17
	9.52 (3/8")	9	11	14	18
	12.70 (1/2")	10	12	15	19
Outside diameter mm(in)	15.88 (5/8")	10	12	16	20
	19.05 (3/4")	10	13	16	21
	28.58 (1 1/8")	11	14	18	23

- ※ When an ambient temperature and relative humidity exceed $32\text{ }^{\circ}\text{C}(\text{DB})$ and $\geq 85\%$, respectively please strengthen heat insulation of refrigerant pipe. When not strengthening heat insulation of refrigerant pipe, the surface of the heat insulation may be dewed.
- ※ Since gas pipe becomes high temperature at heating operation, for heatpump type, please select the heat insulating material which heat-resistant temperature is $120\text{ }^{\circ}\text{C}$ or more.

6-1-5 ADDITIONAL CHARGE

- Up to a pipe length of 30m, charging with additional refrigerant is not necessary.
- If the pipe length exceeds 30m, charging with refrigerant is necessary.
- Charge with additional refrigerant in the amounts shown in the table below.

Total pipe length	30 m	40 m	50 m	g / m	Initial Enclosed
Simultaneous operation	None	1000	2000	100	6000
Individual operation	None	400	800	40	3100 + 3100

6-2 WIRING DESIGN

6-2-1 WIRING SPECIFICATION

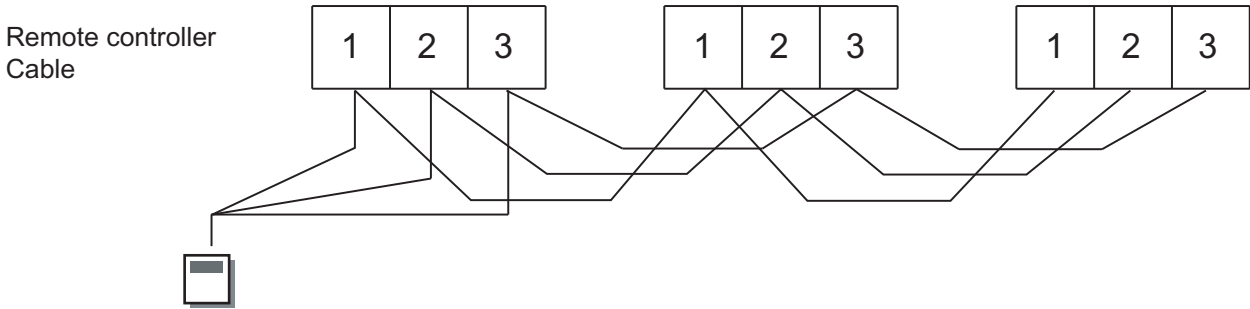
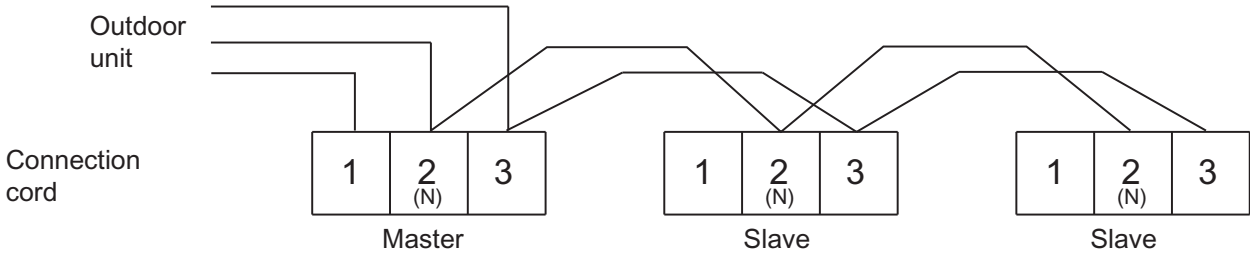
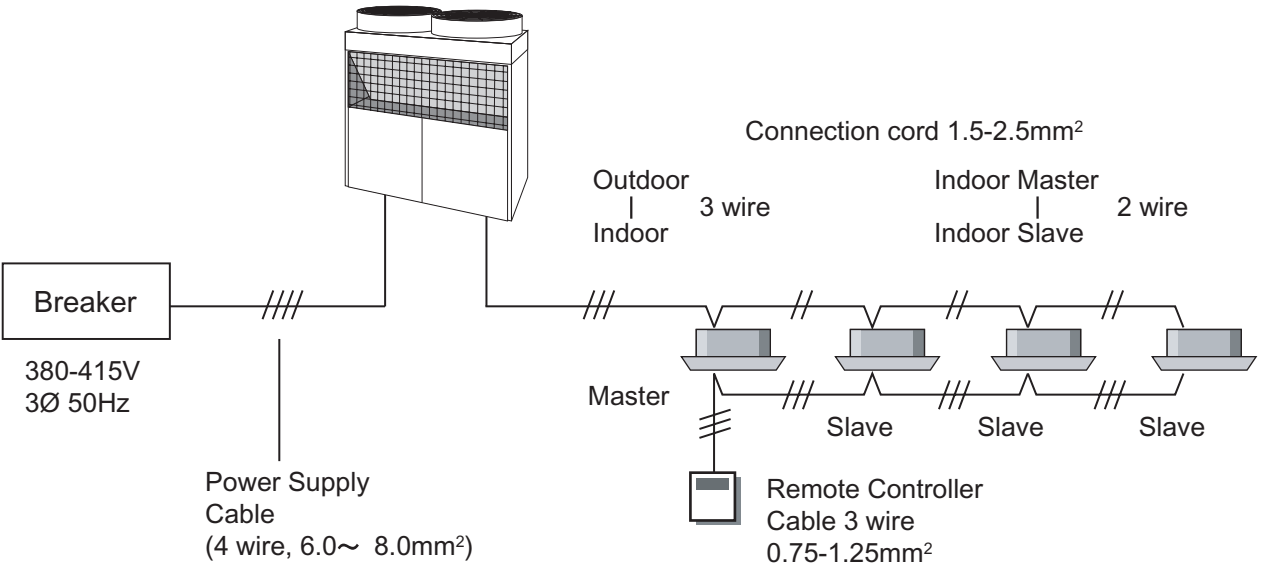
Use		Size		Wire type	Remark	
Power supply cable (mm ²)	Outdoor unit	Maximum	8.0	H07RN-F or equivalent	3-phase, 50Hz 380-415V 4 wire + Ground	※ 1
		Minimum	6.0			
Connection cord (mm ²)	Indoor unit	Maximum	2.5	H07RN-F or equivalent	Power supply & signal 3 wire + Ground	※ 2
		Minimum	1.5			
Remote controller cable (Wired, Simple) (mm ²)		Maximum	1.25	Sheathed vinyl cord cable	Polar 3-core	※ 3
		Minimum	0.75			
Circuit breaker (A)			40			※ 4

NOTE: Install in accordance with local rules and regulations.

- ※1 Always ground the unit
- ※2 Install the disconnection device with a contact gap of at least 3mm near by the units. (Both Indoor unit and Outdoor unit.)
- ※3 10m cable attached. (excluded some models)
Use the shielded cable in accordance with the standards of the country.
- ※4 The capacity of the circuit breaker for leak current should be 30 mA or more.

6-2-2 POWER SUPPLY & CONNECTION CORD WIRING

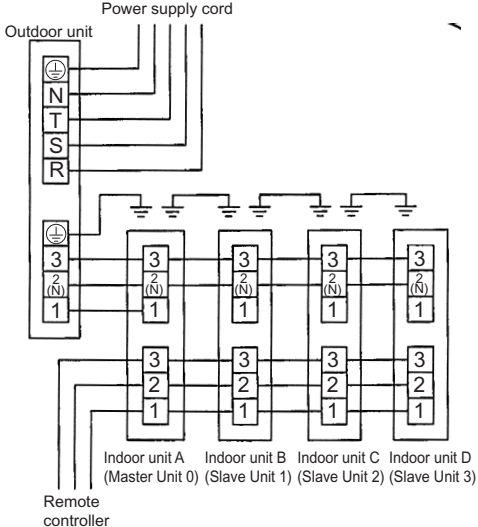
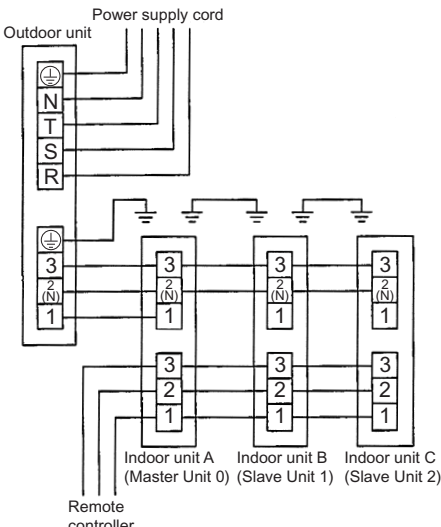
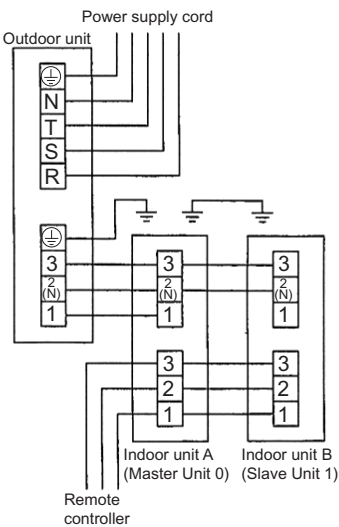
■ SIMULTANEOUS OPERATION



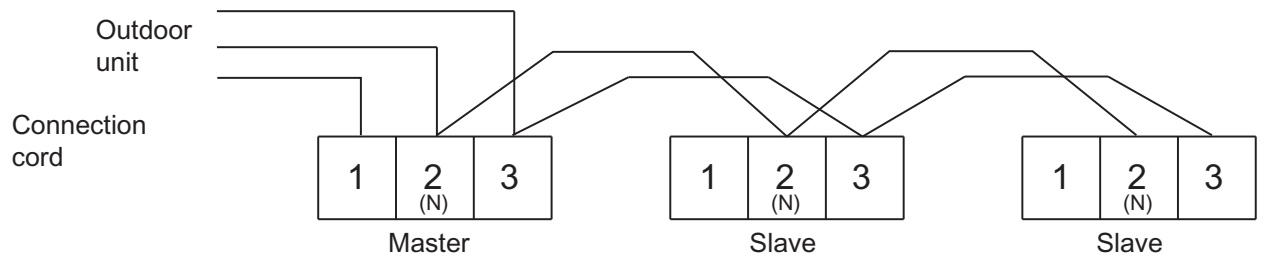
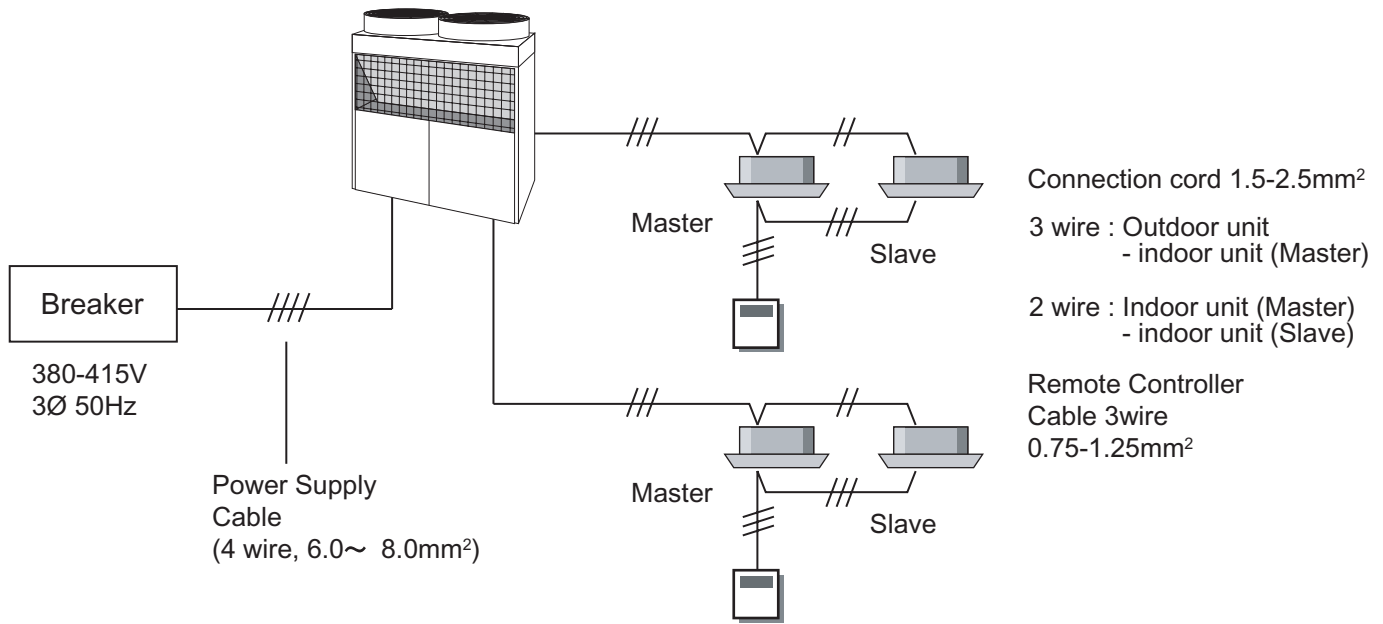
• Two

• Three

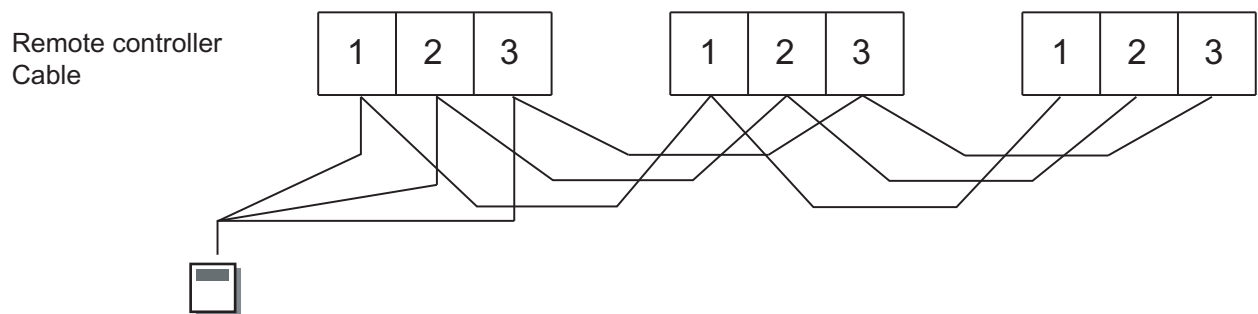
• Four



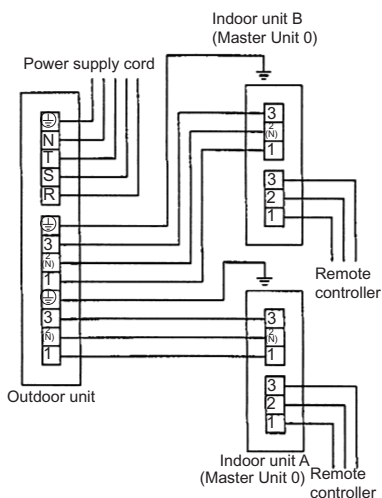
■ INDIVIDUAL OPERATION



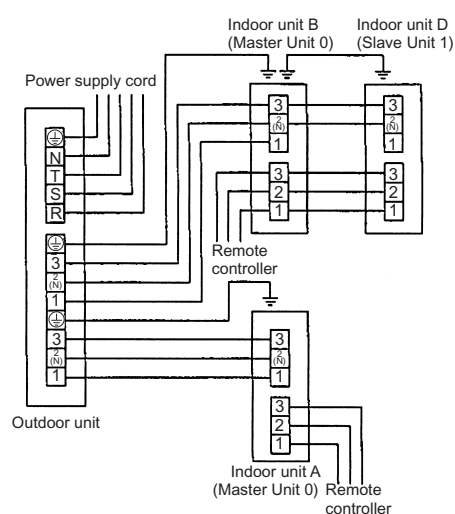
- Connection cord "1" is not necessary to connect master indoor unit to slave indoor unit.
- Outdoor unit to master indoor unit should be connected 3 wire.



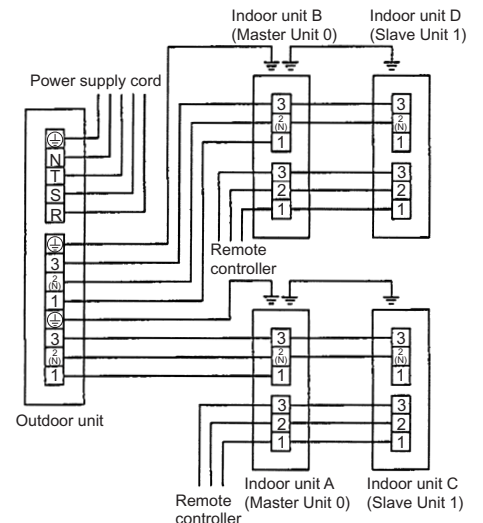
▪ One + One



▪ One + Two



▪ Two + Two

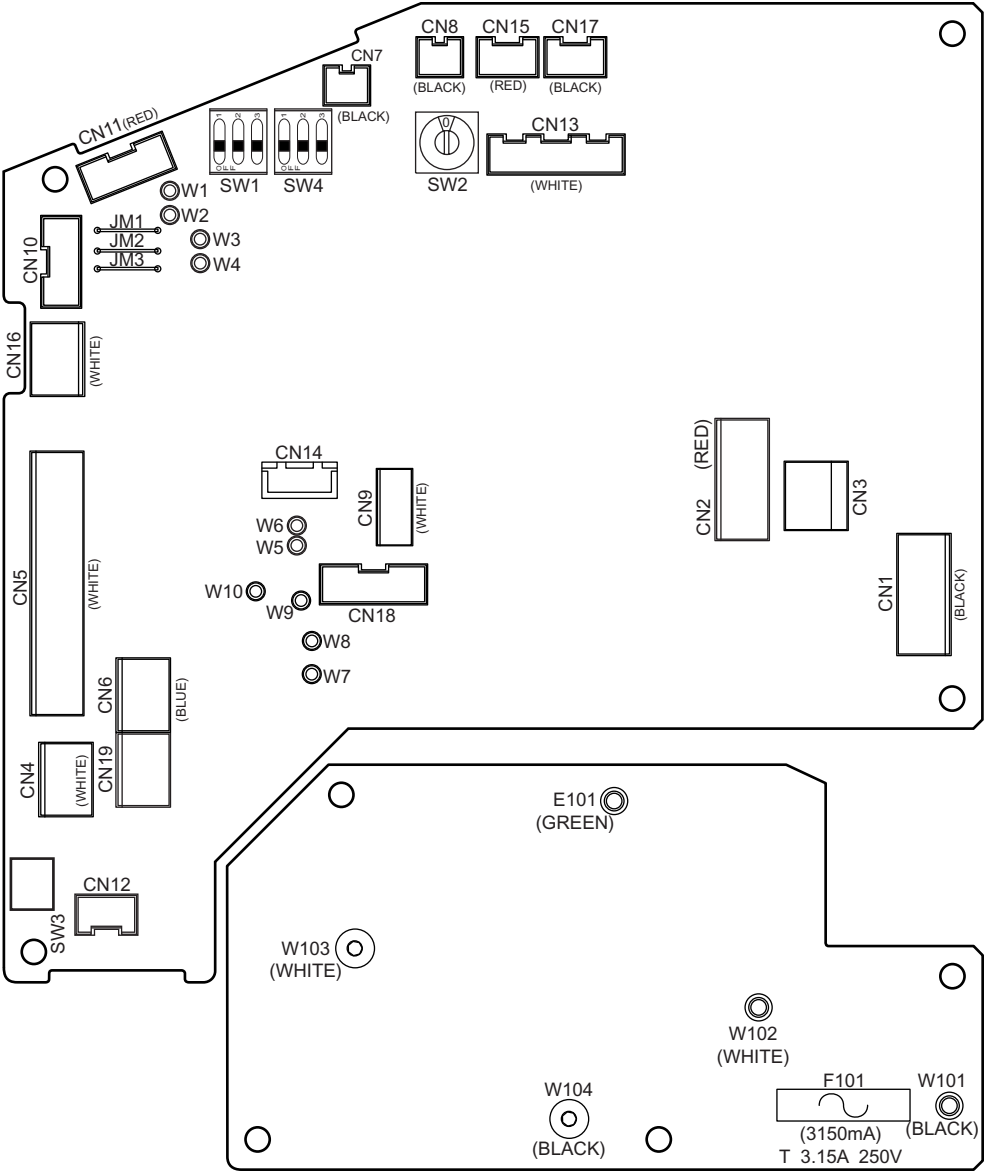


6-3. FUNCTION SETTING

6-3-1. PCB LAYOUTS

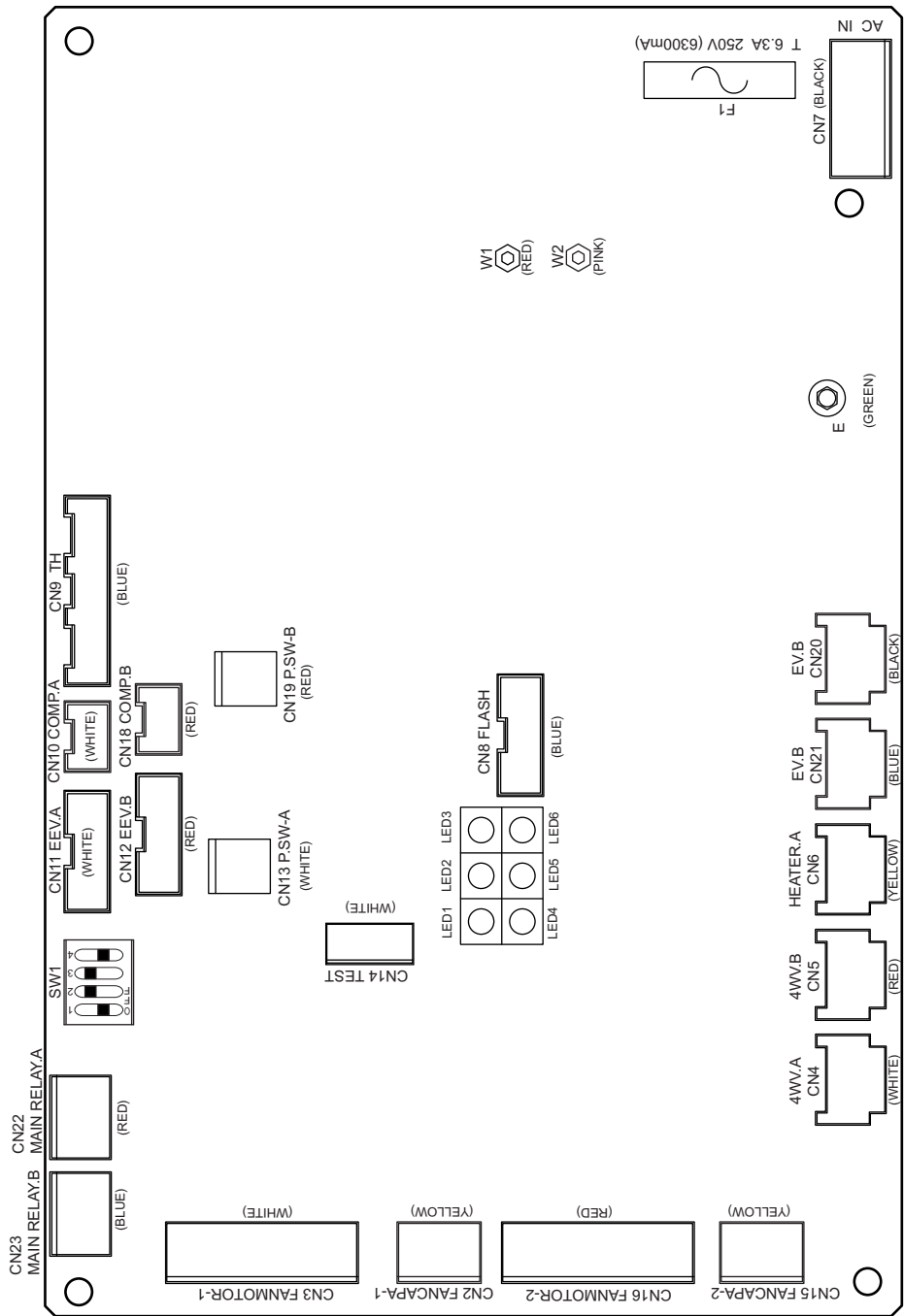
INDOOR UNIT

Indoor unit			
DIP SW	SW 1	1	Ceiling height setting
		2	Room temp correct coefficient of heating 1
		3	Room temp correct coefficient of heating 2
	SW 4	1	Auto restart validity / invalidity
		2	Indoor unit fan speed switch 1
		3	Indoor unit fan speed switch 2
Rotary SW	SW 2		Select No. of indoor unit
Jumper wire	JM 1		Forbidden
	JM 2		Room temp correct coefficient of cooling
	JM 3		De-icing prevent temp



OUTDOOR UNIT

Outdoor unit			
DIP SW	SW 1	1	Forced defrost
		2	Defrost temperature selected
		3	Pump down
		4	Outdoor fan-low sound



INSTALLATION

INSTALLATION

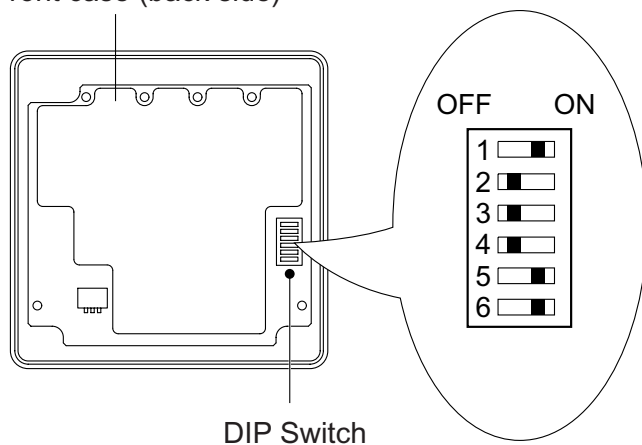
REMOTE CONTROLLER

Remote controller		
DIP SW	1	Dual remote controller setting
	2	
	3	Group control setting
	4	Model setting
	5	Auto changeover setting
	6	Memory backup setting

■ SWITCH POSITION

● Wired remote controller

Front case (back side)



DIP Switch

6-3-2. FUNCTION AND SETTING OF EACH SWITCH

INDOOR UNIT

■ DIP SWITCH SETTING

1. SW1 setting

1-1 Ceiling height setting

CEILING HEIGHT SETTING (CASSETTE TYPE) (◆ ■ □ ▫ Factory setting)

SW1-1	Ceiling height mode
OFF	Standard
ON	High ceiling

This function is validity only large cassette type

1-2 Room temperature correct coefficient of heating

Decide the heating temperature correct coefficient value for room temperature thermistor.
The overall temperature increases when a larger coefficient value is used.

HEATING TEMPERATURE CORRECTION (◆ ■ □ ▫ Factory setting)

SW1-2	SW1-3	Coefficient value
OFF	OFF	+ 2 deg
ON	OFF	- 2 deg
OFF	ON	0 deg
ON	ON	+ 4 deg

2. SW4 setting

2-1 Auto restart validity / invalidity

Control the auto restart function by turning this switch ON/OFF.

AUTO RESTART SETTING (◆ ■ □ ▫ Factory setting)

SW4-1	Auto restart
OFF	Invalidity
ON	Validity

★ Please set it in the same way when remote control is a group control.

2-2 Indoor unit fan speed switch

This switch can select fan speed corresponding to each model.

Large ceiling type

	AB30	AB36	AB45
SW4-2	OFF	ON	OFF
SW4-3	OFF	OFF	ON

Large cassette type

	AU25	AU30	AU36	AU45
SW4-2	ON	OFF	ON	OFF
SW4-3	ON	ON	OFF	OFF

■ JUMPER WIRE SETTING

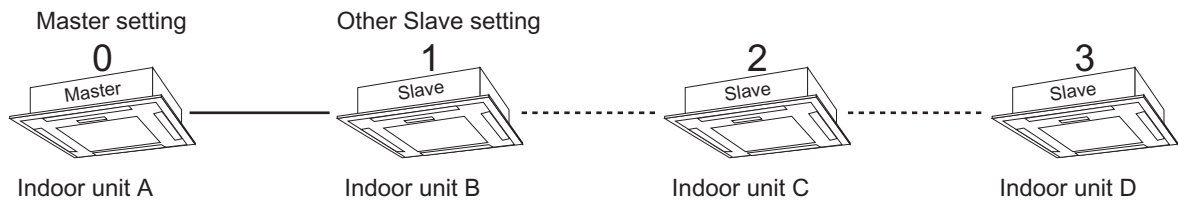
(◆ . . . Factory setting)

JP	Function	Connect	Disconnect
JM1	Forbidden	◆ Type with sensor	—
JM2	Room temperature correct coefficient of cooling	◆ 0°C	+2°C
JM3	indoor heat exchange icing, the de-icing operation temperature.	◆ Set-up 2°C - Reset 6°C	Set-up 4°C - Reset 8°C

■ ROTARY SW SETTING

SW2 Setting

- Sets the unit number of the indoor unit to MASTER or SLAVE.



OUTDOOR UNIT

■ DIP SWITCH SETTING

SW1 setting

1. Forced defrost

This function first melts the outdoor heat exchange ice and inspects the pressure and temperature when servicing and maintaining the outdoor unit at heating operation.

(◆ . . . Factory setting)

SW1-1	Forced defrost
OFF	—
ON	Defrost start

2. Defrost temperature selected

The Defrost start operation temperature can be changed according to the outside air temperature region environment.

(◆ . . . Factory setting)

SW1-2	Defrost temperature selected
OFF	-10°C
ON	-7°C

3. Pump down (pressure SW mode)

This function disables the pressure switch when operation is stopped by low pressure switch and pump down is not longer possible.

(◆ . . . Factory setting)

SW1-3	Pump down
OFF	Operate
ON	Release

4. Outdoor fan-low sound

Set the outdoor fan noise value [2dB (A)] to the low-noise mode. (See page 03-01 "OUTDOOR FAN SPEED CONTROL FUNCTION OPERATION".)

(◆ . . . Factory setting)

SW1-4	Outdoor fan-low sound
OFF	Standard
ON	Fan-low sound

REMOTE CONTROLLER

■ DIP SWITCH SETTING

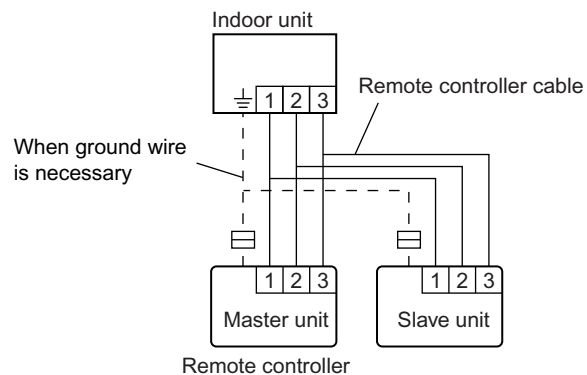
SW1 setting

1-1 Dual remote controller setting

Set the remote controller DIP switch No.1 and 2 according to the following table.

(◆ . . . Factory setting)

Number of remote controller	Master unit		Slave unit	
	SW1-1	SW1-2	SW1-1	SW1-2
1 (Normal)	ON	OFF	—	—
2 (Dual)	OFF	OFF	ON	ON



1-2 Group control setting

Number of indoor unit connection (One/Multiple)
This is switched according to the number of connected indoor units.

(◆ . . . Factory setting)

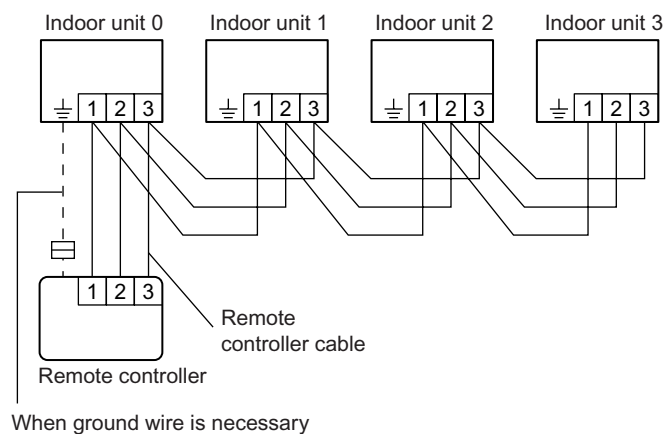
SW1-3	Number of indoor unit
OFF	One unit connection
ON	Multiple unit connection

1-3 Model setting

The system type of the outdoor unit can be selected by setting up DIP switch No.4 as follows.

(◆ . . . Factory setting)

SW1-4	Model
OFF	Heat Pump model or Heat Recovery model
ON	Cooling only model



1-4 Auto changeover setting

Selecting auto changeover validity / invalidity.

(◆ ■ ■ ■ Factory setting)

◆	SW1-5	Auto changeover
	OFF	Invalidity
	ON	Validity

1-5 Memory backup setting

Set to ON to use batteries for the memory backup.

If batteries are not used, all of the settings stored in memory will be deleted if there is a power failure.

(◆ ■ ■ ■ Factory setting)

◆	SW1-6	Memory backup
	OFF	Invalidity
	ON	Validity

6-4 REFRIGERANT LEAKAGE CAUTION

The installer and system specialist shall secure safety against leakage according to local regulations or standards. The following standards may be applicable if local regulations are not available.

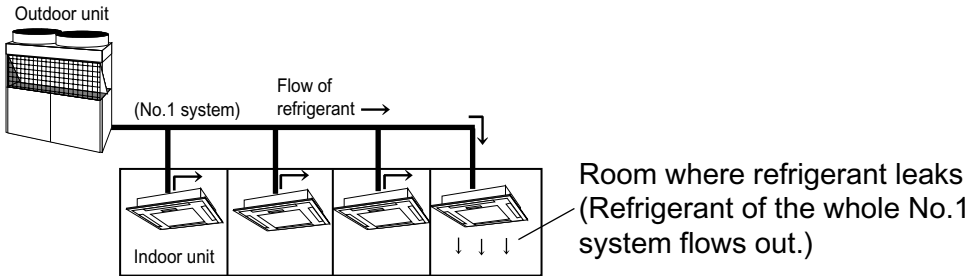
6-4-1 INTRODUCTION

Almost all our VRF type air conditioners use R22 or R407C as refrigerant. Though R22 and R407C are harmless and incombustible in themselves, the room in which the air conditioner is installed should be large enough that the refrigerant gas will not exceed the concentration limit even if the refrigerant gas leaks.

•Concentration limit

Concentration limit is the limit of Freon gas concentration where immediate measures can be taken without hurting the human body when refrigerant leaks in to the air. The concentration limit shall be described in units of Kg/m³ (Freon gas weight in /m³air) to facilitate calculation.

Concentration limit : 0.3kg/m³ (R22),0.31kg/m³ (R407C) (ISO5149,prEN378-1)



6-4-2 CHECKING CONCENTRATION LIMIT

Check concentration limit following steps ① ~ ② , and take appropriate measures depending on the situation.

- ① Calculate amount of all replenished refrigerant (kg) per refrigerant system.

Amount of replenished refrigerant per refrigerant system

Amount of replenished refrigerant at factory shipment

+

Amount of additional replenished refrigerant

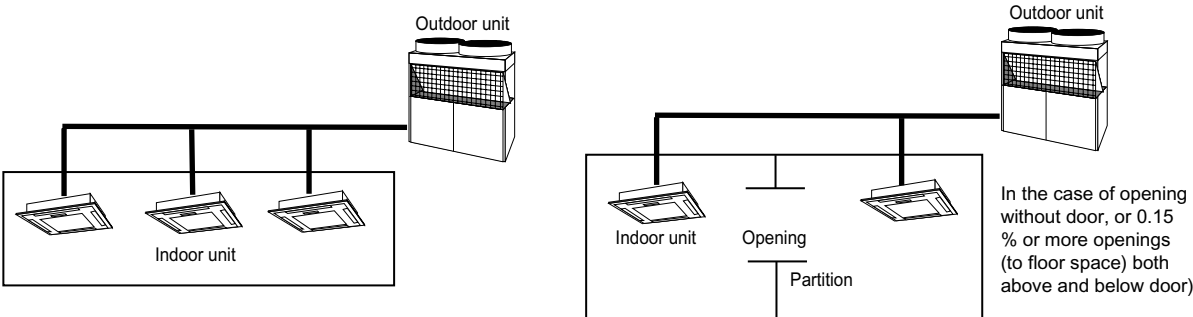
Amount of additionally replenished refrigerant depending on piping length , piping diameter and indoorunit model at customer.

=

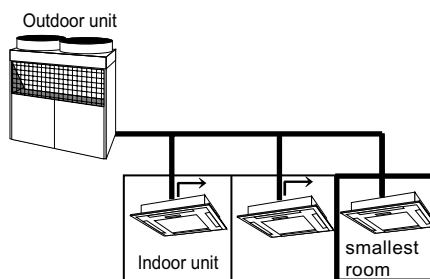
Total amount of replenished refrigerant in refrigerant facility (kg)

Note : When one refrigerant facility is divided into 2 or more refrigerant systems and each system is Independent, total amount of replenished refrigerant of each system shall be adopted.

- ② Calculate minimum room capacity.
Calculate room capacity by regarding portion as one room or the smallest room.
- (a) Without partition



- (b) With partition and without opening which serve as passage of air to adjoining room.



- ③ Calculate refrigerant concentration from the results of ① and ②

Total amount of replenished refrigerant
in refrigerant facility(kg)

Capacity of smallest room where
Indoor unit is installed(m^3)

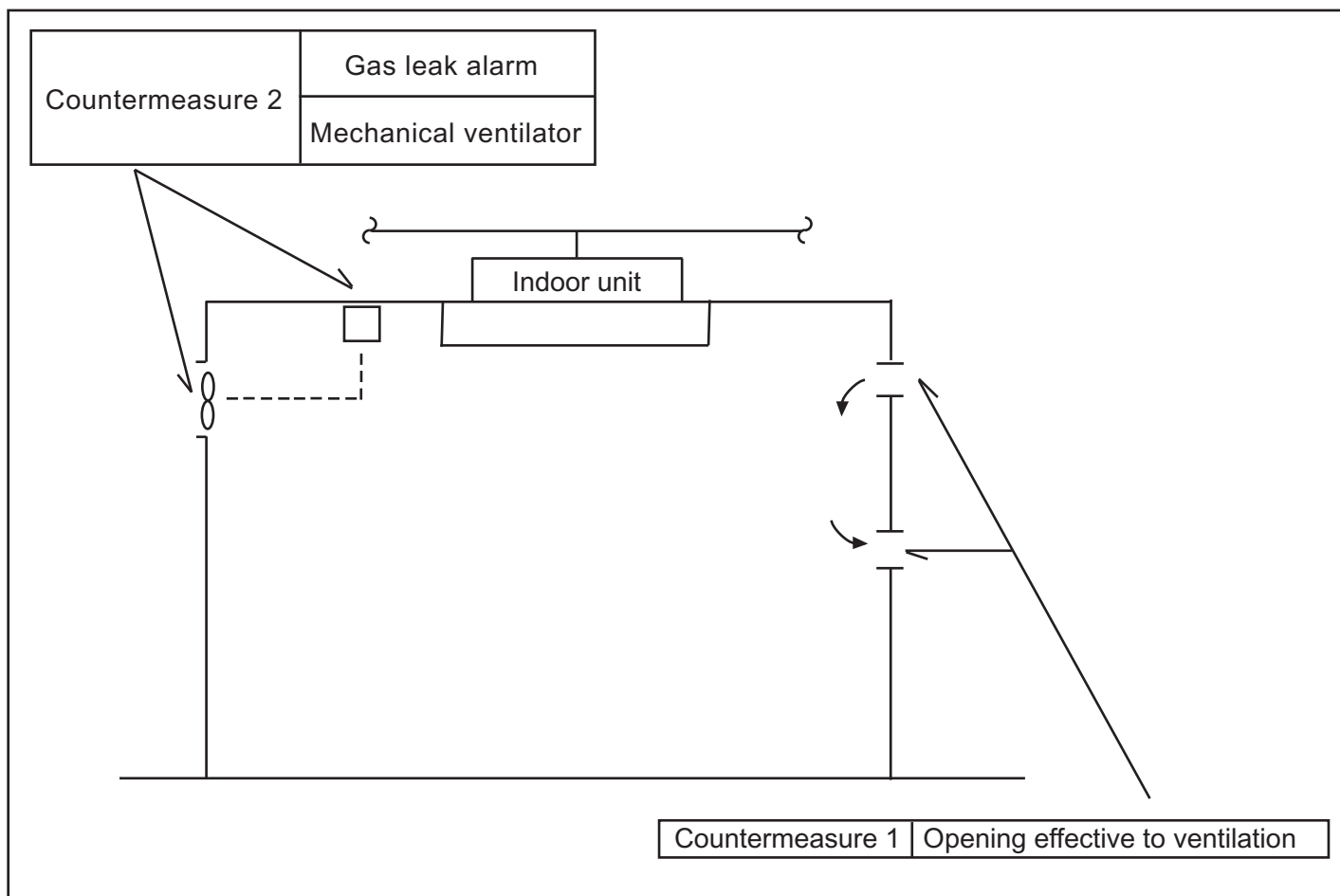
=Refrigerant concentration(kg/m^3)
(R22 or R407C)

When the result of calculation exceeds the limiting concentration, perform the same calculations by shifting to the second smallest, and the third smallest rooms until the final result is below the limiting concentration.

When concentration limit is exceeded

When the concentration limit is exceeded, change the original plan or take one of the countermeasures shown below.

- Countermeasure 1
Provide opening for ventilation.
Provide 0.15% or more opening to floor space both above and below or provide opening without door.
- Countermeasure 2
Provide gas leak alarm linked with mechanical ventilator.



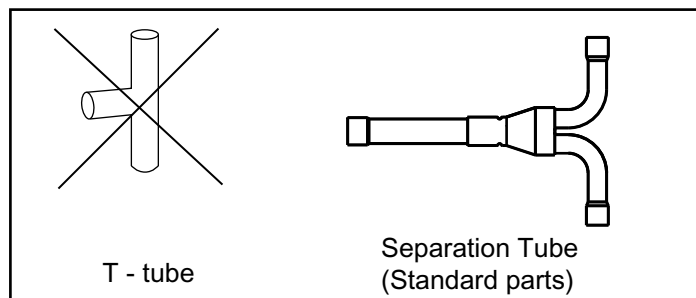
Pay special attention to the place, such as a basement, etc. When refrigerant can accumulate, since refrigerant is heavier than air.

6-5 INSTALLATION MANUAL

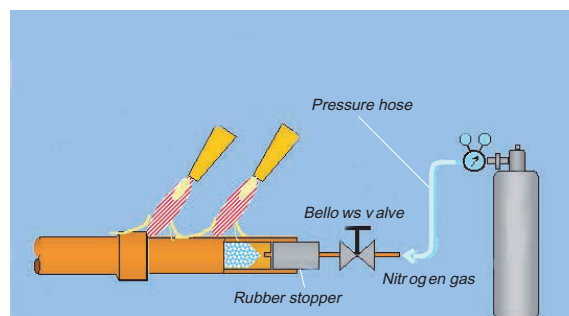
6-5-1. PIPING CONNECTION

■ CAUTION

- * Use the designated size (Diameter & thickness) of refrigerant pipes
- * Those pipes purchased locally may contain dust inside.
Please blow out the dust by dried inert gas when using
- * Be careful to avoid the dust or water falling into the pipe when performing piping process and piping installation.
- * When processing the pipe, make the number of bending portion as few as possible, and the bending radius as large as possible.
- * To process the branch, do not use T-shaped pipe, which causes a uneven refrigerant flow. Use the optionally available standard branch kit.



- * If the diameter of the required pipe is different from the branch unit, either cut it out or use the reducer.
- * Keep the permissible length of every piping limitation to prevent a defect or cooling/heating failure.
- * When replacing the unit, never use piping which has been used for previous installations. Only use the new piping.
- * While welding the pipes, be sure to blow dry nitrogen gas through them.



- * Make sure to insulate the refrigeration pipes separately with ample thickness of heat-resistant polyethylene form etc. For the connecting portion, apply the enough insulation to avoid any gap.

■ CAUTION

* Welding

While welding the pipe, be sure to blow dry nitrogen gas through the pipes.
If not used, it will be caused to damage for compressor and clog the strainer and Electronic Expansion Valve.

Example) Inside state of welding pipe section

Nitrogen Gas used



Nitrogen Gas used but not sufficient
(Oxygen gas still inside the pipe)



Nitrogen Gas does not used



6-5-2. INSTALLATION MANUAL

■ OUTDOOR UNIT

[APPLICABLE MODEL NAME]

- SIMULTANEOUS OPERATION TYPE :AJ*A90TATB , AJ*A90EATB
- INDIVIDUAL OPERATION TYPE :AJ*A90TATA , AJ*A90EATA

■ INDOOR UNIT

[APPLICABLE MODEL NAME]

- STANDARD STATIC PRESSURE DUCT TYPE : ARXA25TATA , ARXA30TATA , ARXA36TATA , ARXA45TATA
- COMPACT CASSETTE TYPE : AUXA18TATA
- CASSETTE TYPE : AU*A25TATA , AU*A30TATA , AU*A36TATA , AU*A45TATA
- UNIVERSAL FLOOR/CEILING TYPE : AB*A18TATA , AB*A24TATA
- LARGE CEILING TYPE : AB*A30TATA , AB*A36TATA , AB*A45TATA

■ CONTROLLER

- WIRED REMOTE CONTROLLER : UTB—*UB

■ OTHERS

- DRAIN PUMP : UTR—DPB241

7 . OPTIONAL PARTS

7-1 MODEL OF SEPARATION TUBE

■ Standard Accessory Parts for Simultaneous Operation
Accessory of outdoor unit

Gas pipe	
Liquid pipe	

Insulation for Gas	Insulation for Liquid

Binder	
Q'ty 6	

OPTIONAL
PARTS

OPTIONAL
PARTS

■ UTR - BP901 Separation Tube

Gas pipe	Technical drawing of the Gas pipe. The side view shows a horizontal inlet with diameter $\phi 19.05$ and a length of 50. It then splits into two vertical outlets, each with diameter $\phi 15.88$ and a height of 158. The top view shows a Y-junction with a total width of 100.5 and a central width of 201.
Liquid pipe	Technical drawing of the Liquid pipe. The side view shows a horizontal inlet with diameter $\phi 12.70$ and a length of 62. It then splits into two vertical outlets, each with diameter $\phi 9.52$ and a height of 129. The top view shows a Y-junction with a total width of 48.5 and a central width of 97.

Joint pipe		
$\phi 9.52 \leftarrow \phi 12.70$	$\phi 19.05 \leftarrow \phi 15.88$	$\phi 15.88 \leftarrow \phi 19.05$

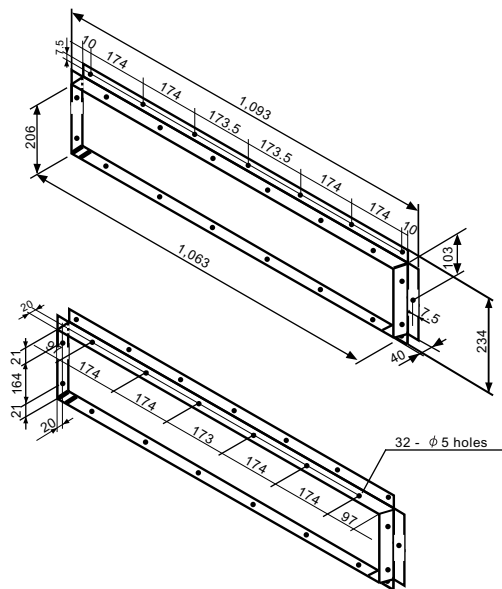
Insulation for Gas	Insulation for Liquid

Binder Q'ty 6	
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7-2 OTHERS

■ FLANGE (square)

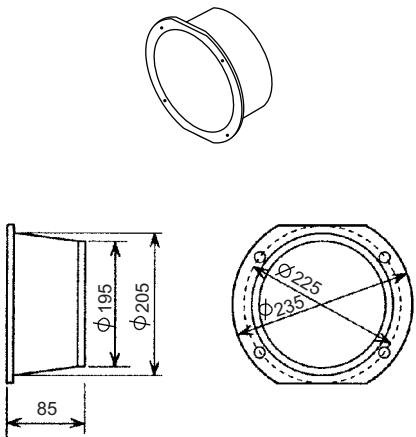
Model : UTD-SF045T



■ FLANGE (round)

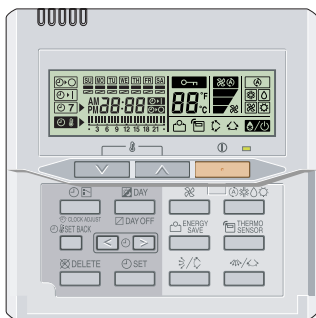
Model : UTD-RF204

(Unit : mm)



■ WIRED REMOTE CONTROLLER

- UTB-YUB
- UTB-GUB



- * On/Off weekly timer
- * Double auto swing louver
- * Thermo sensor

■ FLEXIBLE DUCT

Model : UTD-RD202

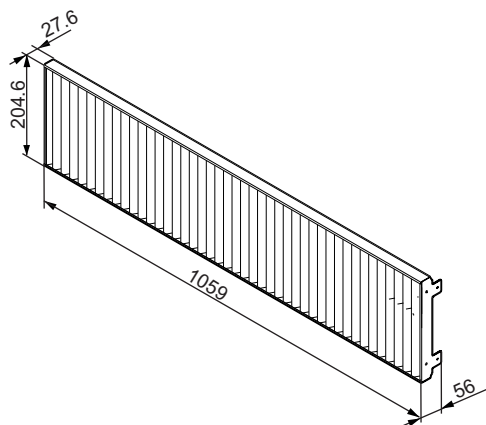
ø200 mm L 2 m



■ LONG-LIFE FILTER

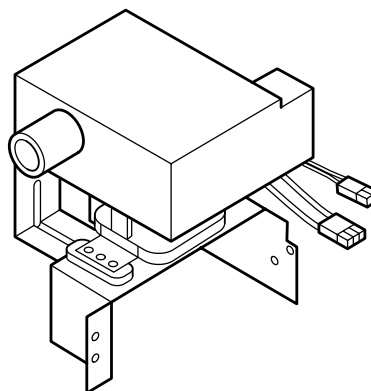
Model : UTD-LF270

(Unit : mm)



■ DRAIN WATER RISER KIT

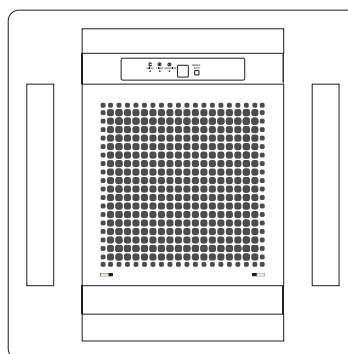
Model : UTR-DPB241



■ GRILLE KIT

Model : UTG-UDYD-W
UTG-UDGD-W

For compact cassette type



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