Refrigerant R407C

AIRSTAGE™ S SERIES

Variable Refrigerant Flow System

Multi Air Conditioning System for Buildings

HEAT PUMP & COOLING ONLY TYPE

DESIGN & TECHNICAL DATA

FUJITSU GENERAL LIMITED

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Refrigerant R407C

AIRSTAGE™

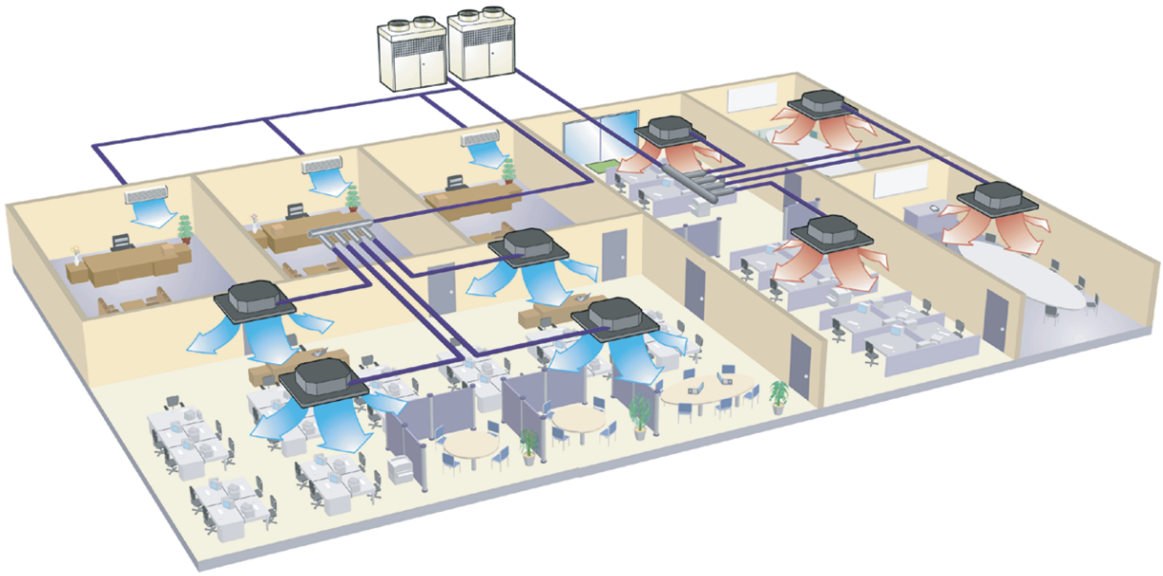
S SERIES

1. GENERAL INFORMATION

GENERAL INFORMATION

1-1 FEATURES OF SYSTEM

Combining multiple constant speed compressors, Fujitsu General VRF system creates High COP. This enables to provide the superior energy saving and the top class quiet operation.
Fujitsu General VRF system offers the individual air conditioning system, that allows a design to provide a higher installation freedom.



■ FEATURE

(1) Long piping for high rise building

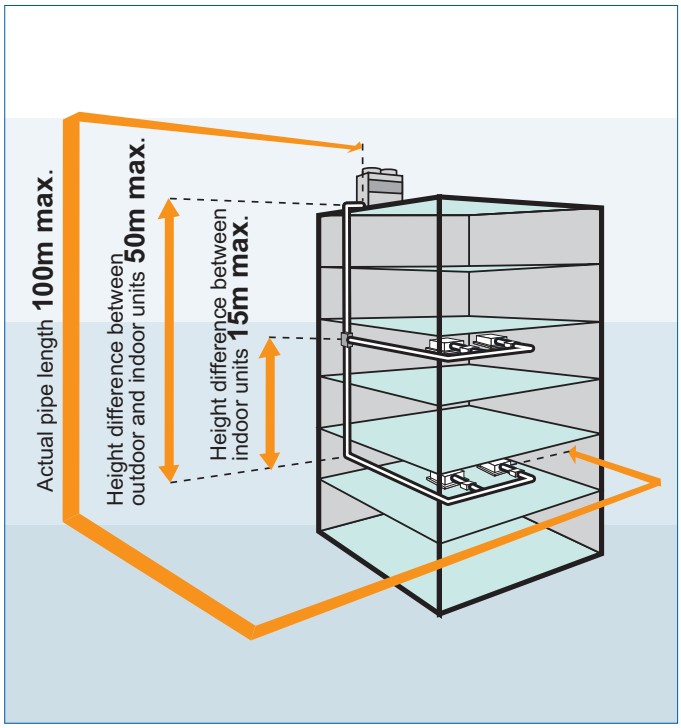
Hight difference between outdoor unit and indoor units : 50m max.

(For the outdoor unit stated below : 40m max.)

Actual pipe length : 100m max.

Equivalent pipe length : 120m max

Total pipe length : 200m max.



GENERAL INFORMATION

(2) High energy efficiency system

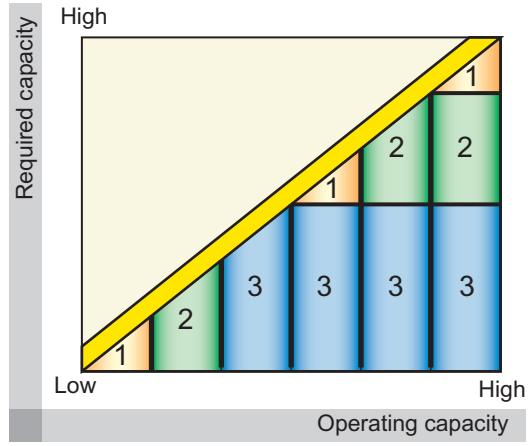
• New operating system

This newly developed operating system controls the refrigerant flow rate inside the refrigerant circuit by adopting two control technology, namely, compressor capacity control technology and power balance control technology. Therefore, it can be operated at an optimum refrigerant flow rate and high efficiency.

Cooling COP	3.1
Heating COP	3.7

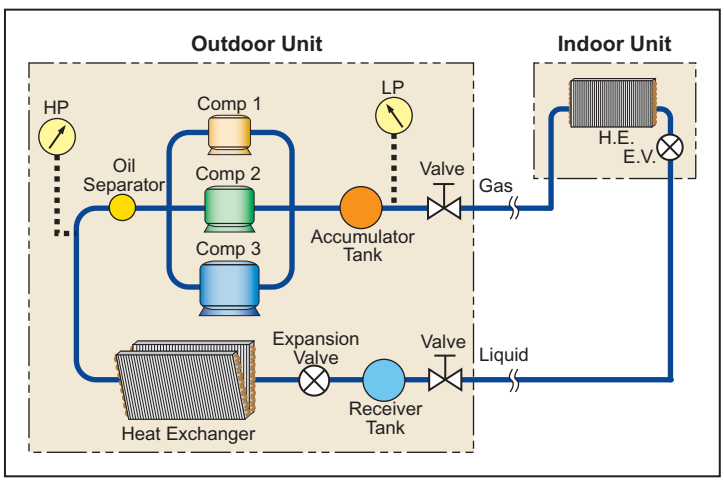
• Compressor capacity control

Compressor capacity control is realized by using various combinations of three compressors with different capacity. This control method can not only provide a wide range of refrigerant flow rate that is suitable for indoor units but also is more efficient than inverter system.
Moreover, the refrigerant flow rate of each compressor step can be adjusted because the density of the gas that is sucked into compressor is also controlled.

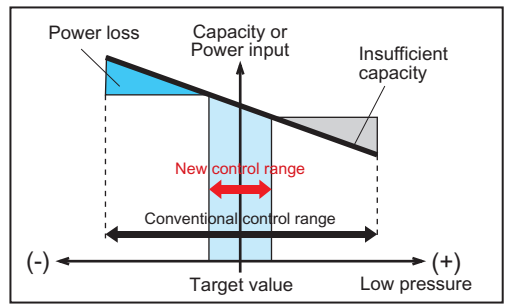


• Power balance control

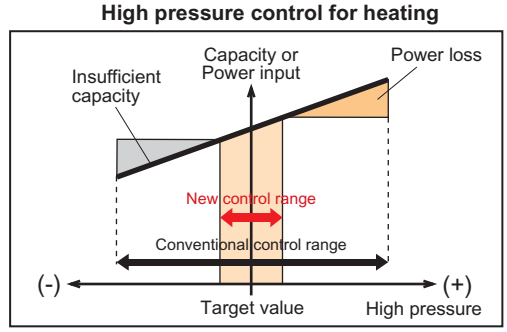
Power balance control technology realizes highly efficient operation by detecting low pressure (evaporating temperature) during cooling operation and high pressure (condensing temperature) during heating operation and precisely controls the optimum refrigerant condition and refrigerant flow rate (capacity). This eliminates a waste of capacity by excessive refrigerant flow rate and insufficient capacity due to insufficient refrigerant flow rate.



Low pressure control for cooling



High pressure control for heating

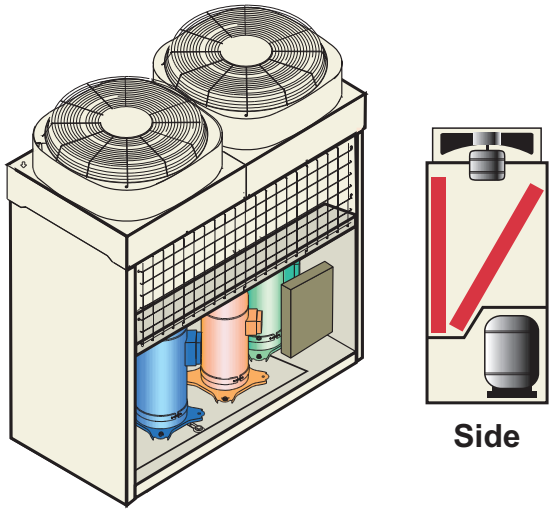


GENERAL INFORMATION

• High COP technology

✳ 3 compressor system adopting high efficiency scroll compressors without causing power supply conversion loss (3-10%) like an inverter system.

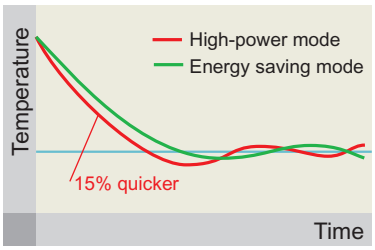
✳ New refrigerant flow control system enabling to supply refrigerant to compressor in an optimum saturated vapor condition (quality=1) for operating the system always with the maximum efficiency.



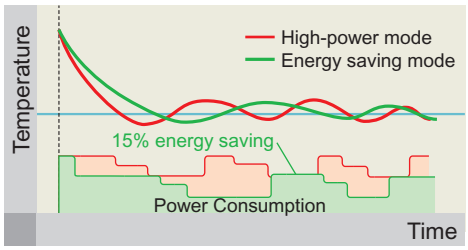
• High Power and Energy Saving

High-power mode, Energy saving mode can be set according to the needs of the customer. This setting makes it possible to vary the outflow air temperature within a range of about 2 degrees. In comparison with high-power mode, 15% energy saving can be realized by using energy saving mode. On the other hand, in comparison with energy saving mode, the capacity increases about 15% if high-power mode

15% Energy saving



By setting high-power mode, the room temperature reaches set temperature quicker than energy saving mode. (About 15% quicker)



An energy saving of 15% is realized because the temperature can be corrected slowly by energy saving mode.

(3) Super quiet

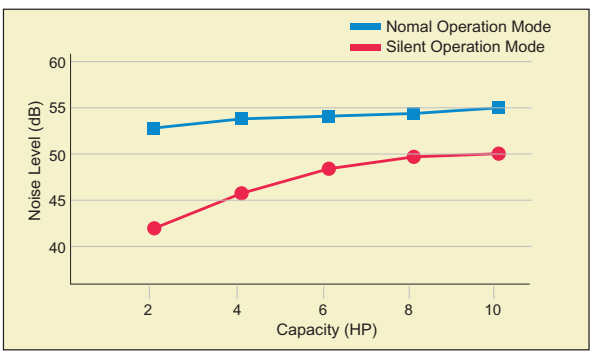
• Low operation sound level

✳ A jarring noise was considerably reduced by adopting new Bellmouse and fan.

✳ Noise can be reduced by 5dB (A) compared with normal operation by reducing the operating speed of fan as the outdoor temperature lowers. (DIP-SWITCH setting nesessary) Furthermore, the noise can be reduced in the low capacity range.

Normal operation mode : 55dB(A) (380V)

Silent operation mode : 50dB(A) (380V)



GENERAL INFORMATION

(4) Flexibility of layout

• Maximum 16 indoor units could be connected (2.2kW)

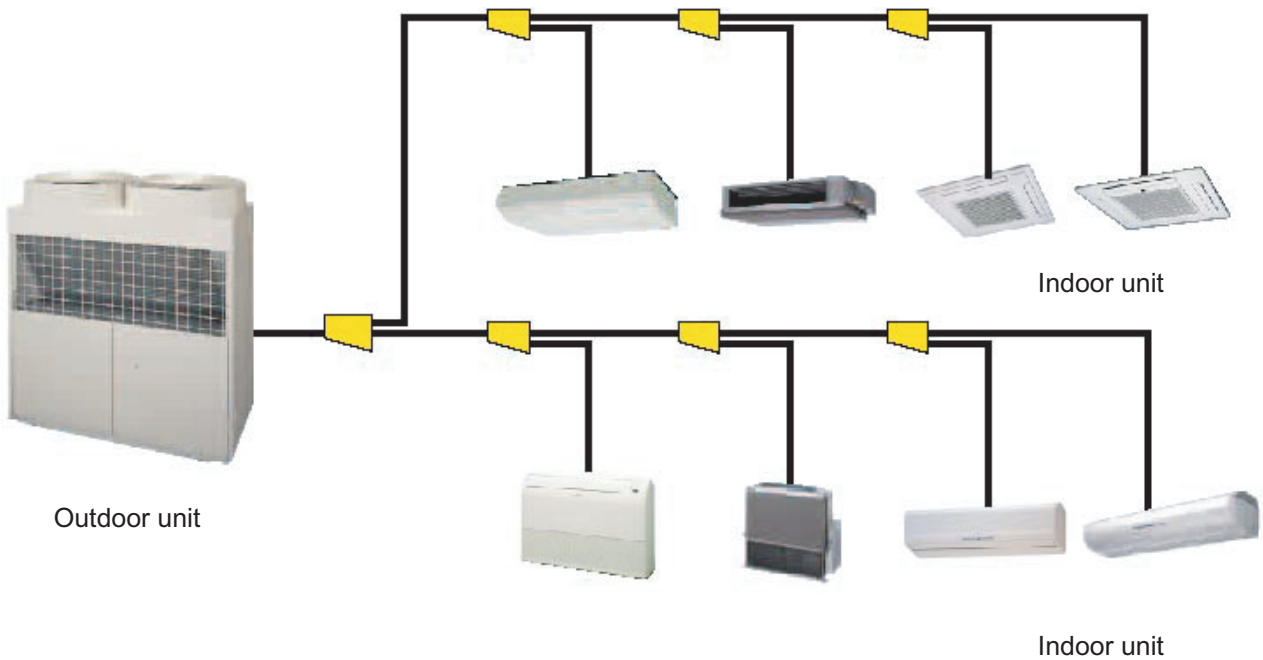
One outdoor unit can control individually up to 16 indoor units of different type and capacity.

outdoor unit	maximum number of connectable indoor unit	capacity ratio of outdoor unit
AO 90	16	50 to 130%
AO 72	13	

• Various connectable indoor unit

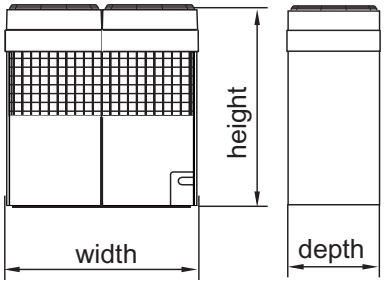
Various combinations of indoor unit type and capacity 11 types 49 models ranging from 2.2kW to 17.0kW.

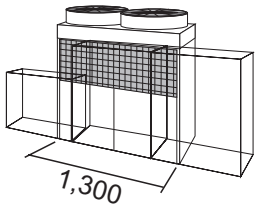
Capacity \ Type		Compact Cassette	Cassette	Compact Duct	Low Static Pressure Duct	Duct	High Static Pressure Duct	Floor/Ceiling	Ceiling	Compact Wall mounted (comfort model)	Wall mounted	Ceiling wall
(kW)	Model code											
2.20	7	●		●						●		●
2.80	9	●		●						●		●
3.60	12	●		●				●		●		●
4.05	14	●		●				●		●		●
5.30	18	●		●				●			●	●
5.70	20		●									
6.80	24							●			●	●
7.05	25		●		●	●						
8.80	30		●		●	●			●		●	●
10.5	36		●		●	●	●		●			
12.7	45		●		●	●	●		●			
14.1	54		●						●			
17.0	60						●					



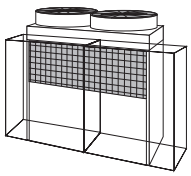
GENERAL INFORMATION

• Space saving

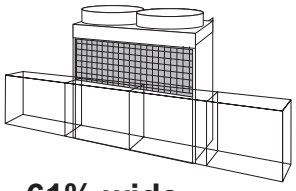




-52% wide
(5.2kW + 11.2kW x2)



-31% wide
(14.0kW x2)



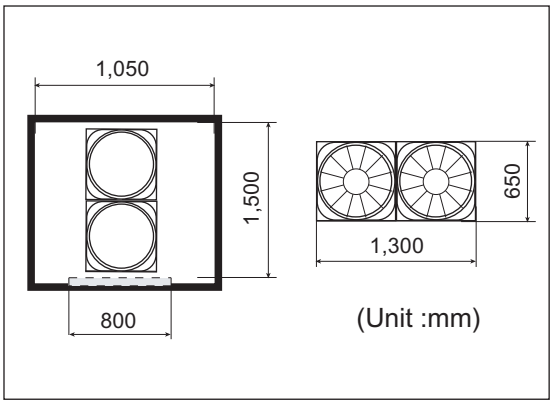
-61% wide
(7.0kW x4)

• Dimensions

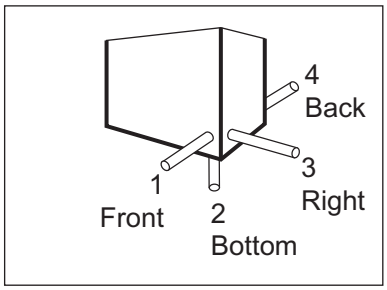
height 1,380mm
width 1,300mm
depth 650mm

• Easy Installation

Outdoor unit goes into elevator.

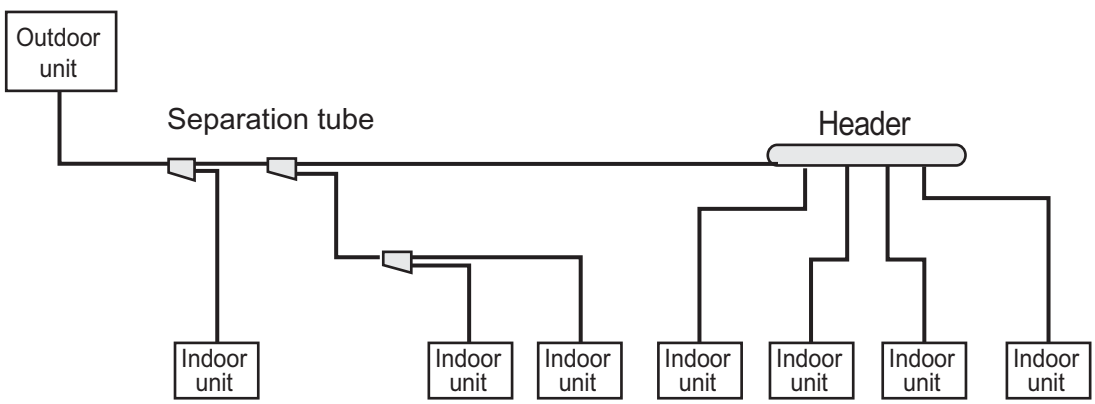


Four-direction pipe allows a variety of installation, configurations.
Easy installation and pipe direction setting.



• Flexible piping

Selectable variation by using separation tube and header.

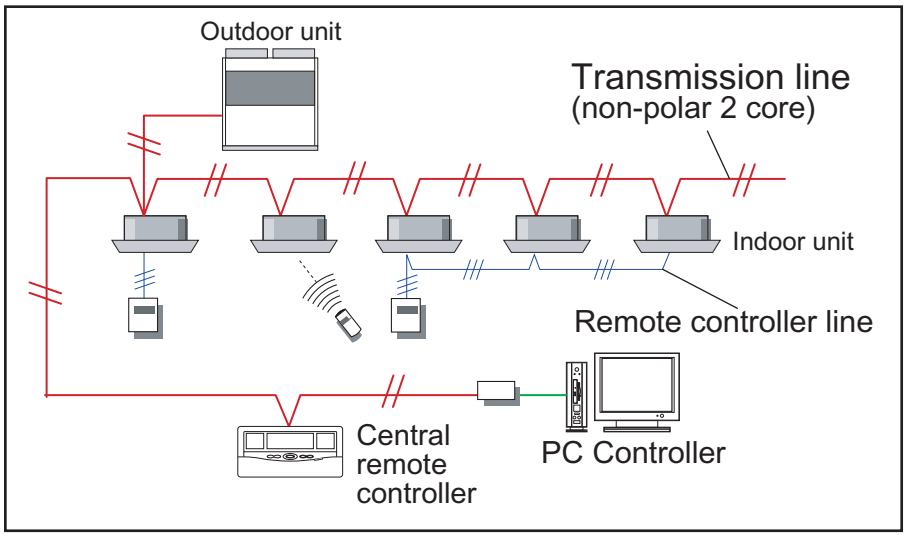


GENERAL INFORMATION

(5) Flexibility of control system

• Flexible Design System

A flexible system can be designed as outdoor units, indoor units and controllers can be connected anywhere within the transmission line wiring connection.

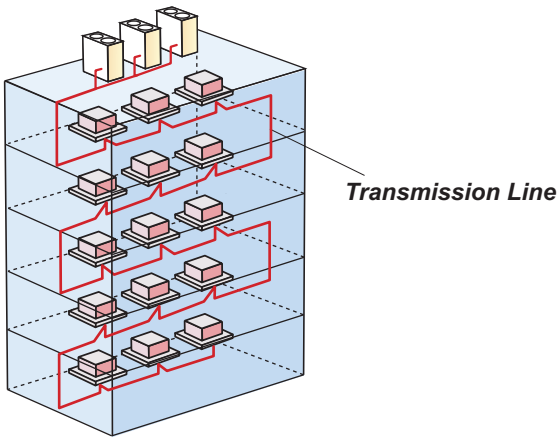


Maximum connectable number per onetransmission line

Refrigerant system	100
Indoor units	400
Outdoor units	100

• Easy wiring

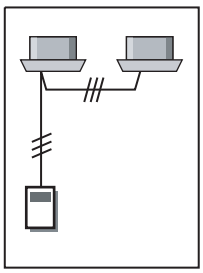
Non-polar 2-core transmission line prevents erroneous wiring.



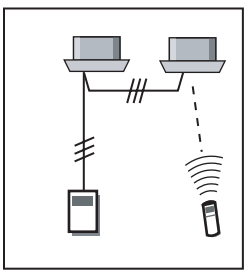
• Various control system

By combining each remote controllers of central control and individual control, it provides wide variety of controls that fit to each customer's used.

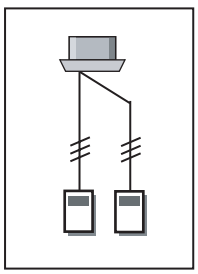
Wired / Simple / Wireless remote controllers can be simultaneously used with the same indoor unit, as the remote controller signal receiver is built into the indoor unit body.



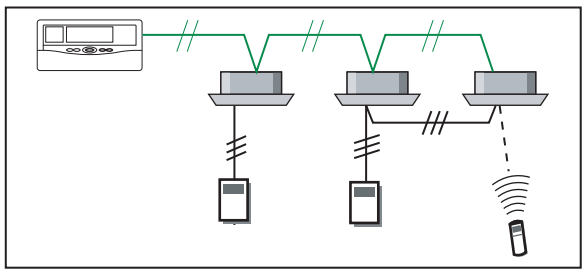
Wired or Simple Remote Controller



Wired or Wireless Remote Controller



2 remote controllers (joint use)



Central control and individual control

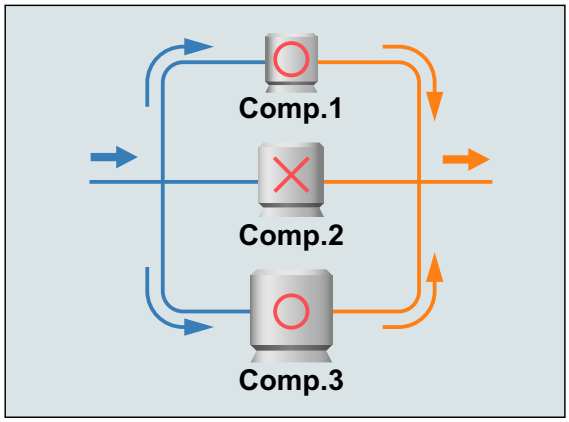
GENERAL INFORMATION

(6) High reliability

- **Recovery operation**

∗Outdoor unit

Even if one or two compressors should fail, the remaining compressor(s) perform the recovery operation automatically while generating an alarm and, thus, the system continues to operate without any interruption.



∗Indoor unit

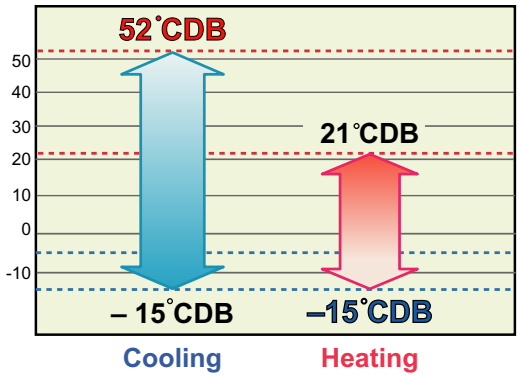
Each indoor unit on the transmission line acts as an independent transmission processor, therefore, even if one unit fails, the remaining system is not affected.

- **Oil recovery operation**

Oil recovery operation is performed automatically after fixed operation time to return the oil that has accumulated inside the refrigerant circuit and indoor unit.

(7) Wide operating range

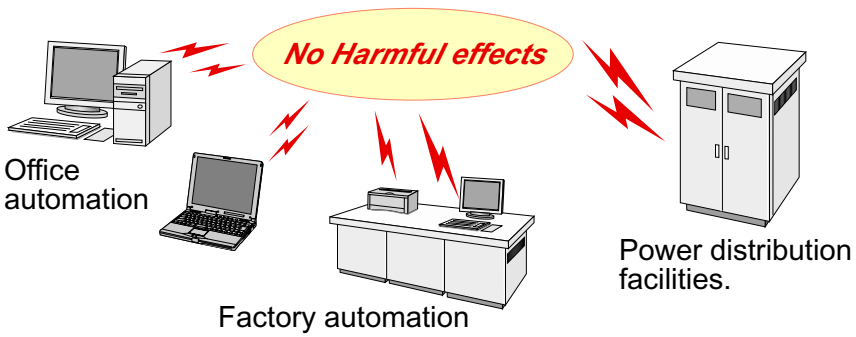
Outdoor unit operates over an outdoor temperature range of 52°C to –15°C for cooling and 21°C to –15°C for heating.



(8) Environmentally Friendly

- **Harmonic-less**

Our VRF system don't use inverter to control the refrigerant flow rate, thus hardly does harmonic current emit. Because the system has no harmful effects on office automation equipment, factory automation equipment and power distribution facilities, it can be used anywhere, such as in hospital where the harmonic current emissions are restricted.



- **Alternative refrigerant**

To protect the earth's environment, alternative refrigerant R407C is used.

GENERAL INFORMATION

1-2. MODEL LINE UP

■ OUTDOOR UNIT

TYPE	CAPACITY	MODEL	Maximum Connectable Indoor unit
AIRSTAGE™ Heat pump type	28.0 kW(10HP)	AO✱90TPCMF	16
	22.4 kW(8HP)	AO✱72TPCMF	13
AIRSTAGE™ Cooling only type	28.0 kW(10HP)	AO✱90EPCMF	16
	22.4 kW(8HP)	AO✱72EPCMF	13

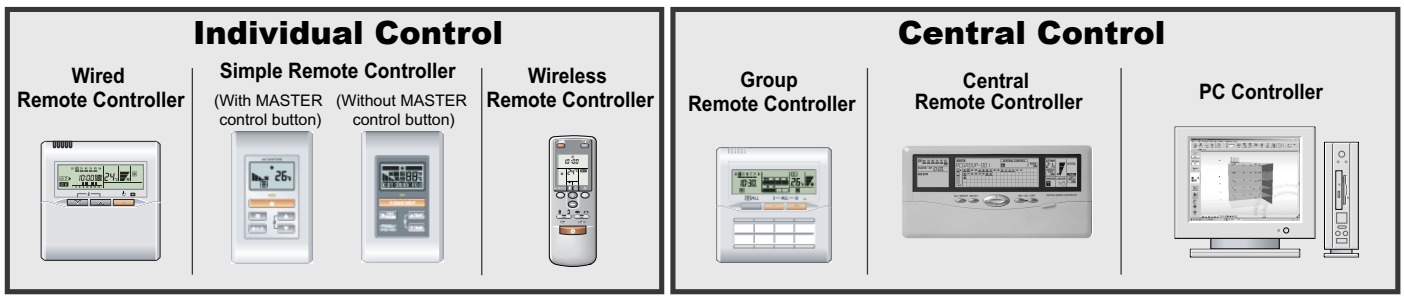
Refrigerant : R407C

- **Heat pump type**
  AO90T
  AO72T

- **Cooling only type**
  AO90E
  AO72E

■ CONTROLLER

TYPE	MODEL	Maximum Connectable Indoor unit
Wired Remote Controller	UTB-YUB,UTB-GUB,UTB-TUB	16
Simple Remote Controller	UTB-YPB,UTB-GPB,UTB-TPB UTB-YRA,UTB-GRA,UTB-TRA	16
Wireless Remote Controller	UTB-YVB,UTB-GVB	—
Group Remote Controller	UTB-YDB,UTB-GDB	32
Central Remote Controller	UTB-YCA,UTB-GCA	400
PC Controller	UTR-YOTB	400



GENERAL INFORMATION

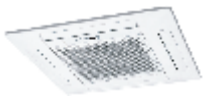
INDOOR UNIT

11 types, 49 models ranging from 2.2kW to 17.0kW

Capacity (kW)	Model code	Compact Cassette	Cassette	Compact Duct	Low Static Pressure Duct	Duct	High Static Pressure Duct	Floor/Ceiling	Ceiling	Compact Wall mounted (comfort model)	Wall mounted	Ceiling wall
2.20	7	●		●						●		●
2.80	9	●		●						●		●
3.60	12	●		●				●		●		●
4.05	14	●		●				●		●		●
5.30	18	●		●				●			●	●
5.70	20		●									
6.80	24							●			●	●
7.05	25		●		●	●						
8.80	30		●		●	●			●		●	●
10.5	36		●		●	●	●		●			
12.7	45		●		●	●	●		●			
14.1	54		●						●			
17.0	60						●					

Compact Cassette

AUXB07LATF
AUXB09LATF
AUXB12LATF
AUXB14LATF
AUXB18LATF

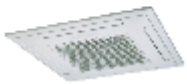


Cassette

Slim Type

AU✱A20LATF
AU✱A25LATF
AU✱A30LATF

AU✱A36LATF
AU✱A45LATF
AU✱A54LATF



Compact Duct

ARXB07LALF
ARXB09LALF

ARXB12LALF
ARXB14LALF
ARXB18LALF

Low Static Pressure Duct

ARXB25LATF
ARXB30LATF
ARXB36LATF
ARXB45LATF

Duct

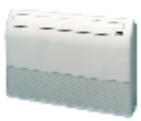
ARXA25LATF
ARXA30LATF
ARXA36LATF
ARXA45LATF

High Static Pressure Duct

ARXC36LATF
ARXC45LATF
ARXC60LATF

Floor / Ceiling

AB✱A12LATF
AB✱A14LATF
AB✱A18LATF
AB✱A24LATF



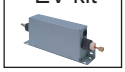
Ceiling

AB✱A30LATF
AB✱A36LATF
AB✱A45LATF
AB✱A54LATF

Compact Wall Mounted (Comfort model)

AS✱E07LACF
AS✱E09LACF
AS✱E12LACF
AS✱E14LACF

EV kit



Wall Mounted

AS✱A18LATF
AS✱A24LATF
AS✱A30LATF

Ceiling Wall

AW✱A07LATF
AW✱A09LATF
AW✱A12LATF
AW✱A14LATF
AW✱A18LATF
AW✱A24LATF
AW✱A30LATF

GENERAL INFORMATION

■ SEPARATION TUBE

Type	Model	Total model code of connectable indoor unit
Heat pump Cooling only	UTR-BP54TA	Less than 60
	UTR-BP90TA	More than 61

■ HEADER

Type	Model	Connectable indoor units
Heat pump Cooling only	UTR-HD906A	3 ～ 6
	UTR-HD908A	7 ～ 8

■ ADAPTOR / CONVERTOR

Type	Model	Features
Network convertor	UTR-YRDA	• The equipment for controlling operation of split type/big multi type air conditioners from transmission line of VRF system. • Control up to 4 group remote controller(8 remote controller groups) is possible with one group remote controller.
Network convertor for LONWORKS®	UTR-YLLA	The equipment for connecting our original LONWORKS® to the system built by LONWORKS® ,to manage mutually between medium and small-sized BMS and VRF system.
BACnet ® gateway	UTR-YLBA	The central control of maximum 1600 indoor units can be realized by connecting the VRF system to the BACnet®, a global standard of the open network.
Signal Amplifier	UTR-YRPC	• When the total length of Transmission Line exceeds 500m, or the number of units exceeds 64 units, Signal Amplifier will be necessary to use. • The equipment for extend the transmission line up to Max 2000m.
Transmission adaptor	UTR-YTMA	The equipment for enabling control by other equipment with RS-232C cable.
External switch controller	UTR-YESA	The function which enables various kinds of operations by the point-of-contact input.

*LONWORKS® is a resistered mark of Echelon Corporation.

*BACnet® is a registered trademark of the American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE).

GENERAL INFORMATION

■ OTHERS

Models	Model	Note
Flange (square)	UTD-SF045T	For Low Static Pressure Duct / Duct type 205 x 1,063, L=40(mm)
Flange (round)	UTD-RF204	For Low Static Pressure Duct / Duct type Ø195 (Ø205),L=85(mm)
Long-life Filter	UTD-LF25NA	For Low Static Pressure Duct / Duct type
Long-life Filter	UTD-LF60KA	For High Static Pressure Duct type
IR receiver unit	UTB-YWA UTB-TWA	For All Duct type
Remote Sensor Unit	UTD-RS100	
Drain Water Riser Kit	UTR-DPB24T	For ceiling type (AB30 - AB54)
Grille Kit	UTG-UDYD-W UTG-UDGD-W	For Compact Cassette type
EV Kit	UTR-EV09XA UTR-EV14XA	For Compact Wall Mounted type (Comfort model)

Refrigerant R407C

AIRSTAGE™

S SERIES

2. CONTROL SYSTEM

2-1. CONTROL SYSTEM

2-1-1. LINE UP OF CONTROLLERS

Features of control system

Installation Work Saving

Simplified wiring and reduced installation cost by the use of non-polar 2-core transmission line.

Control System Configuration Expansion

Optimum system configuration by various controller combinations, allowing for various applications and future expansion.

Easy Operation

Advanced control functions can be set up with the easy-to-use setting operation.

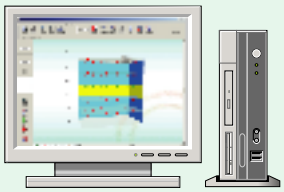
Free System Configuration

Up to 400 indoor units are connectable in one system. System is adaptable to various applications, from small to large buildings.

Air Conditioning Central Control

PC Controller and Central Remote Controller specially designed for centralized control.

PC Controller



UTR-YOTB [Software]

✳High performance and optimum control system for various building applications

A high degree of building air conditioning management is possible including electricity charge calculation and numerous data management functions as well as standard equipment monitoring and control.

Central Remote Controller

UTB-YCA / UTB-GCA

✳Functionality in a compact housing with built-in weekly timer

It allows operation and monitoring to be achieved from the central control room, at each floor, by each tenant, or in the plant room.

Group Remote Controller

UTB-YDB / UTB-GDB

✳ Group control of indoor units with simple operation

Network convertor (UTR-YRDA) is required to connect group remote controllers to a VRF system.

Air Conditioning Individual Control

A range of Remote Controllers suitable for a wide range of individual control situations, using various built-in timers

Wired Remote Controller

UTB-YUB / UTB-GUB / UTB-TUB

✳The room temperature can be controlled by being detected the temperature accurately with built-in thermo sensor.

Wireless Remote Controller

UTB-YVB / UTB-GVB

✳ Simple and sophisticated operations with a choice of 4 daily timers

Simple Remote Controller
(With MASTER CONTROL)

UTB-YPB / UTB-GPB / UTB-TPB

✳ Compact remote controller concentrates on the basic functions such as On/Off, Fan Control, Temperature Setting and Operation Mode.

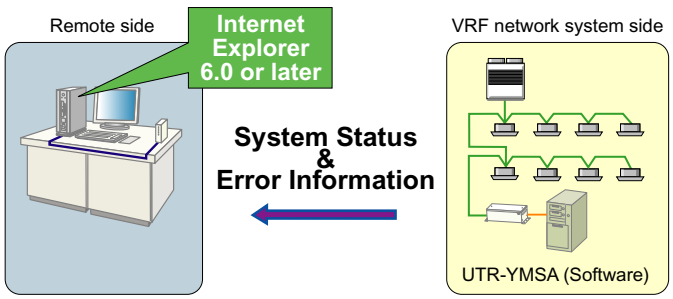
Simple Remote Controller
(Without MASTER CONTROL)

UTB-YRA / UTB-GRA / UTB-TRA

✳ Compact remote controller concentrates on the basic functions such as On/Off, Fan Control and Temperature Setting.

Web Monitoring Tool

Trouble-shooting is performed by monitoring each air conditioning unit remotely during periodical system checks.

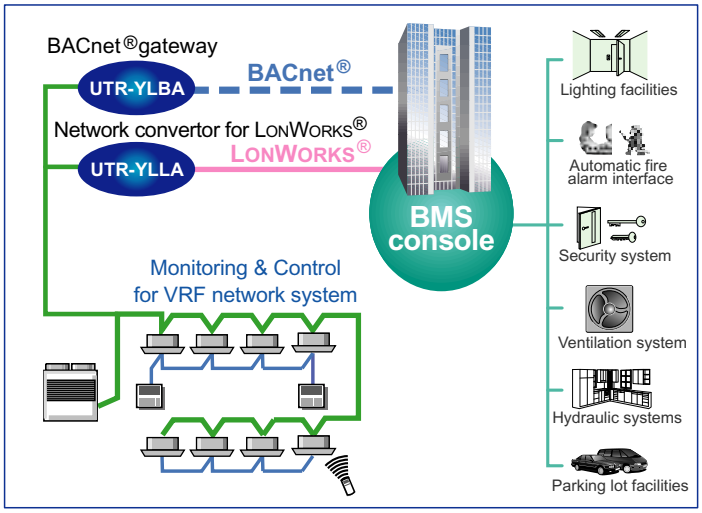


Error notification can be automatically transmitted to several locations using the internet*.
Requires either a dedicated internet connection* or public telephone line.

*Unchanging global IP address is required.

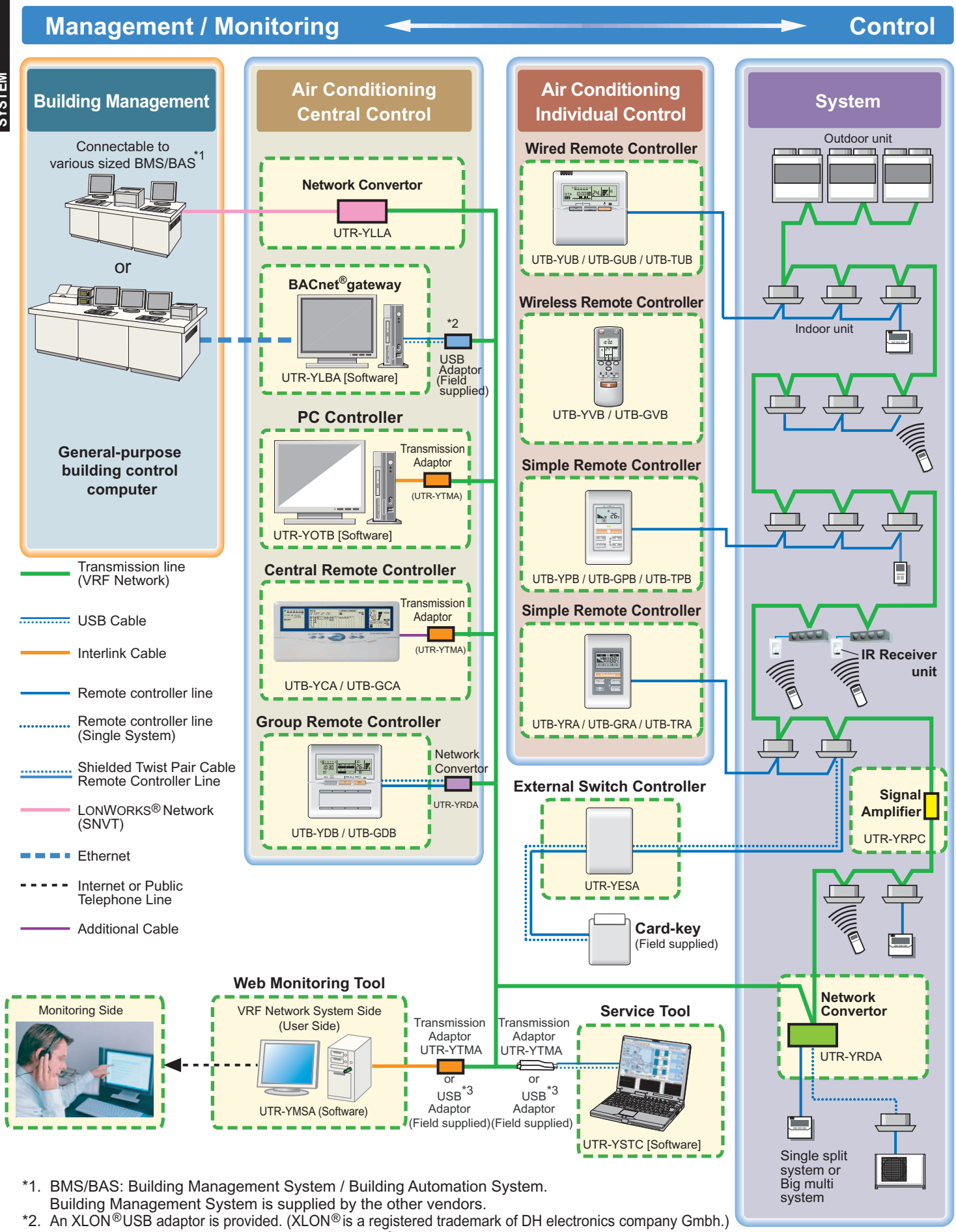
Building Management System (BMS)

The VRF network system can be controlled by Building Management System through Network convertor for LONWORKS® or BACnet® Gateway.



2-1-2. CONTROL SYSTEM DESIGN

Advanced Integrated Control System with BMS



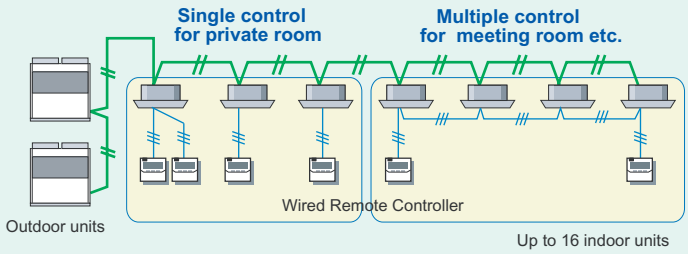
*1. BMS/BAS: Building Management System / Building Automation System.
Building Management System is supplied by the other vendors.
*2. An XLON®USB adaptor is provided. (XLON® is a registered trademark of DH electronics company Gmbh.)
*3. U10 USB Network Interface - TP/FT-10 (Echelon® corporation)

2-1-3. SYSTEM CONFIGURATION EXAMPLES

■ INDIVIDUAL CONTROL

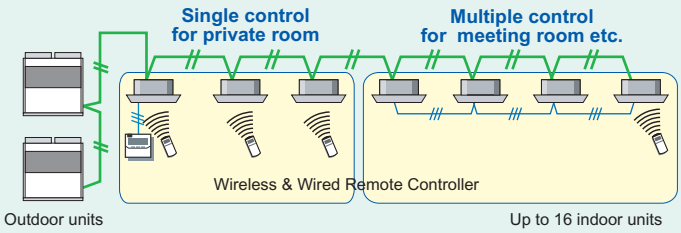
Wired Remote Controller

- ✳ Up to 16 indoor units can be controlled with one wired remote controller.
- ✳ Wired, simple, and wireless remote controllers can be used jointly.
- ✳ Two remote controllers can be connected with a single indoor unit.



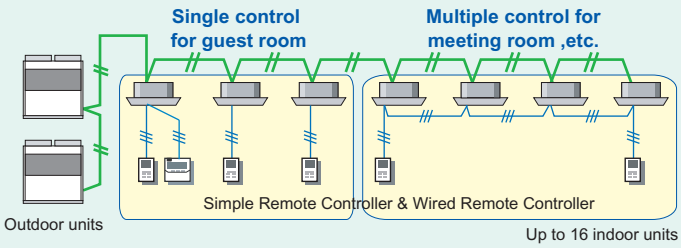
Wireless Remote Controller

- ✳ Up to 16 indoor units can be controlled with one wireless remote controller.
- ✳ Wired, simple, and wireless remote controllers can be used jointly.



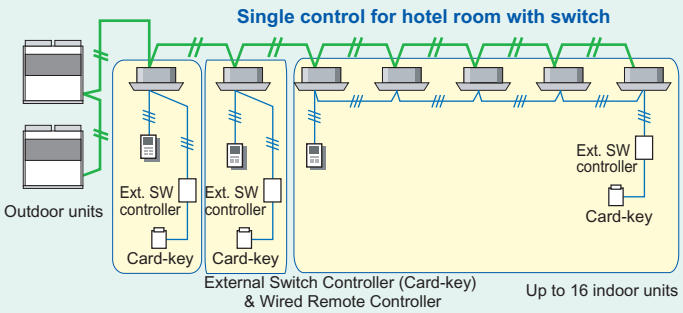
Simple Remote Controller

- ✳ Up to 16 indoor units can be controlled with one simple remote controller.
- ✳ Enables easy control of basic functions by the hotel or office guest.
- ✳ Two remote controller can be connected with a single indoor unit.



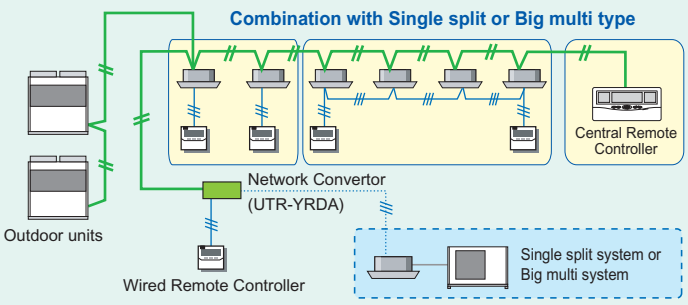
External Switch Controller

- ✳ Up to 16 indoor units can be controlled with one external switch controller.
- ✳ In combination with a field supplied card-key switch or other sensor, External switch controller allows control of basic functions by the hotel or office guest.



Single Split or Big Mult System Connectability

- ✳ Single spilit system or Big multi system can be connected to the VRF network system and can be controlled from central remote controller or PC controller.

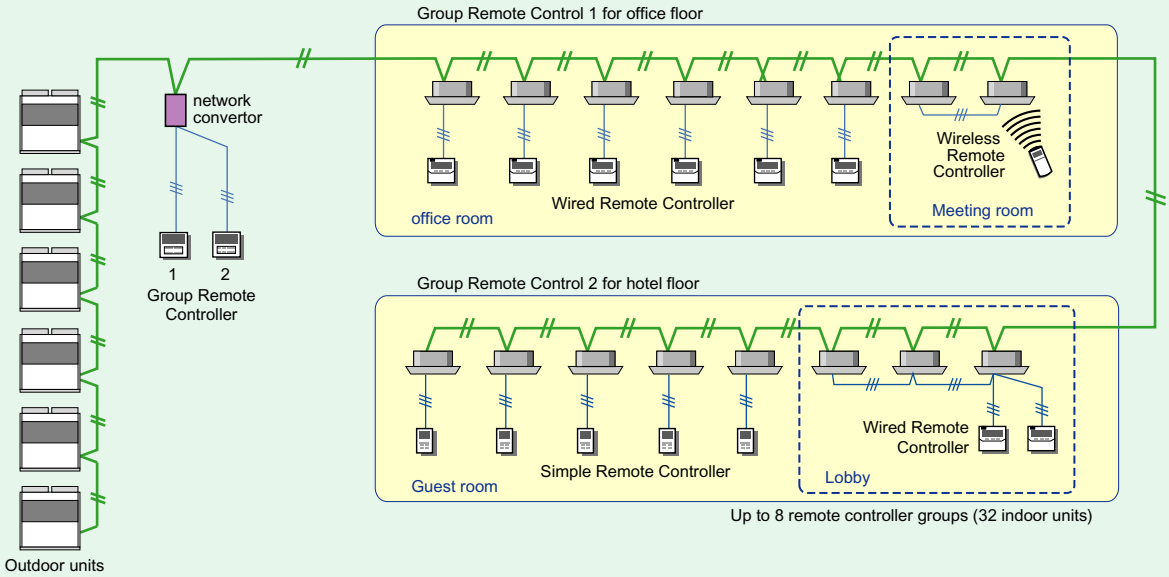


■ CENTRAL CONTROL

Group Remote Controller

✱ Up to 8 remote controller groups (32 indoor units) can be controlled with one group remote controller.
✱ Up to a total of 16 network convertors and central remote controllers can be connected to a single VRF network system.
✱ Up to 4 groups remote controllers can be connected to a single network convertor (UTR-YRDA).
✱ 2 refrigerant systems with one network convertor (UTR-YRDA) is allowed.

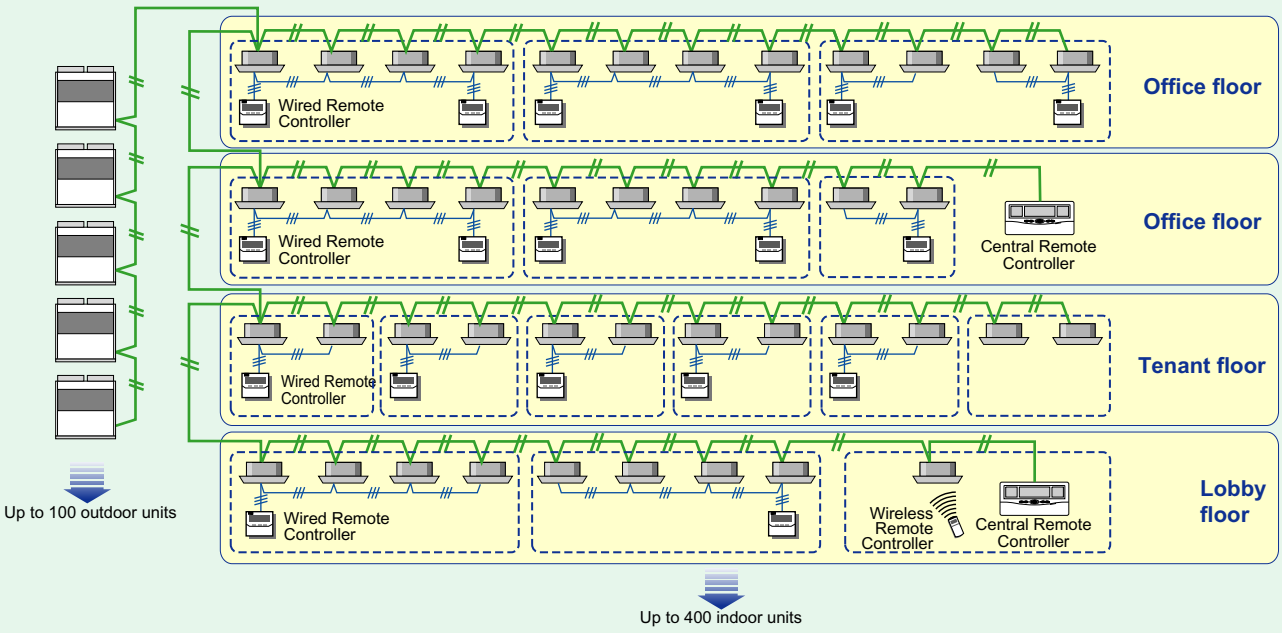
Office & Hotel building (Small class)



Central Remote Controller

✱ Up to 400 indoor units / 64 groups can be controlled with one central remote controller.
✱ Up to a total of 16 network convertors and central remote controllers can be connected to a single VRF network system.
✱ Simple system configuration available using built-in weekly / daily timer.

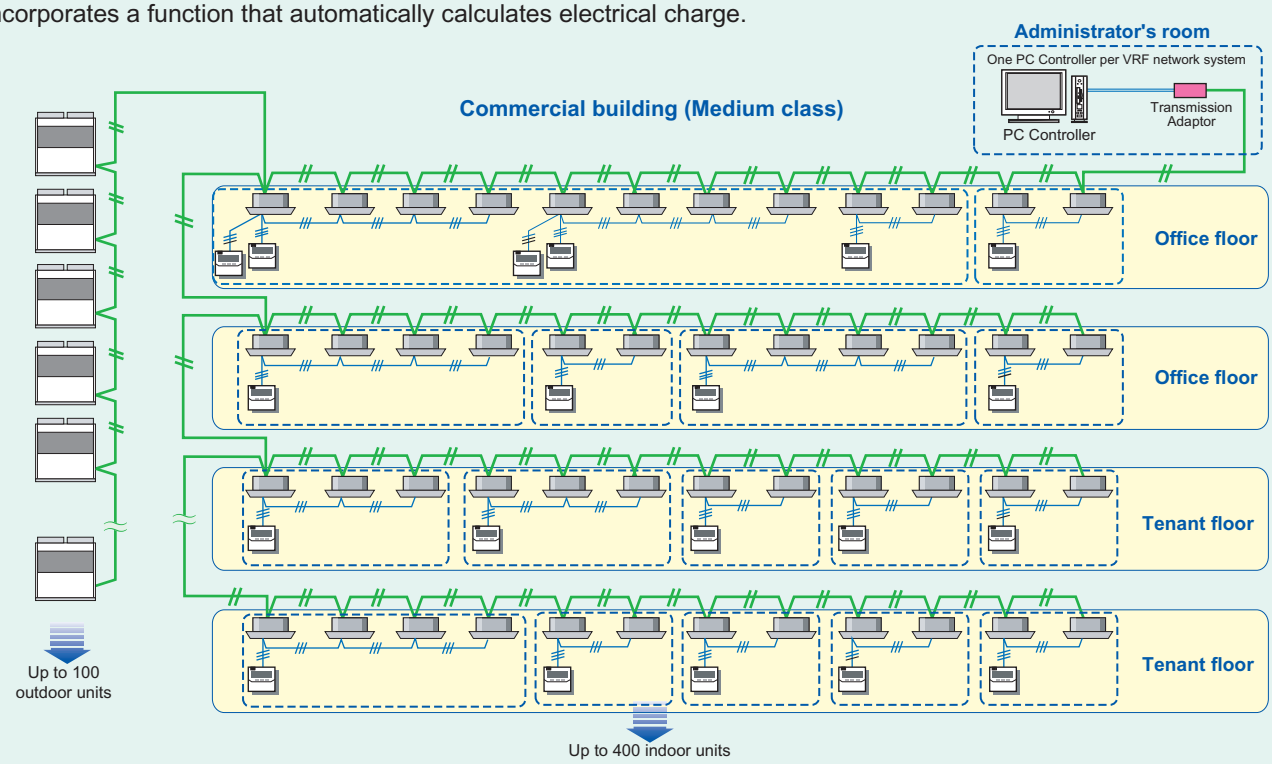
Commercial building (Small class)



CONTROL SYSTEM

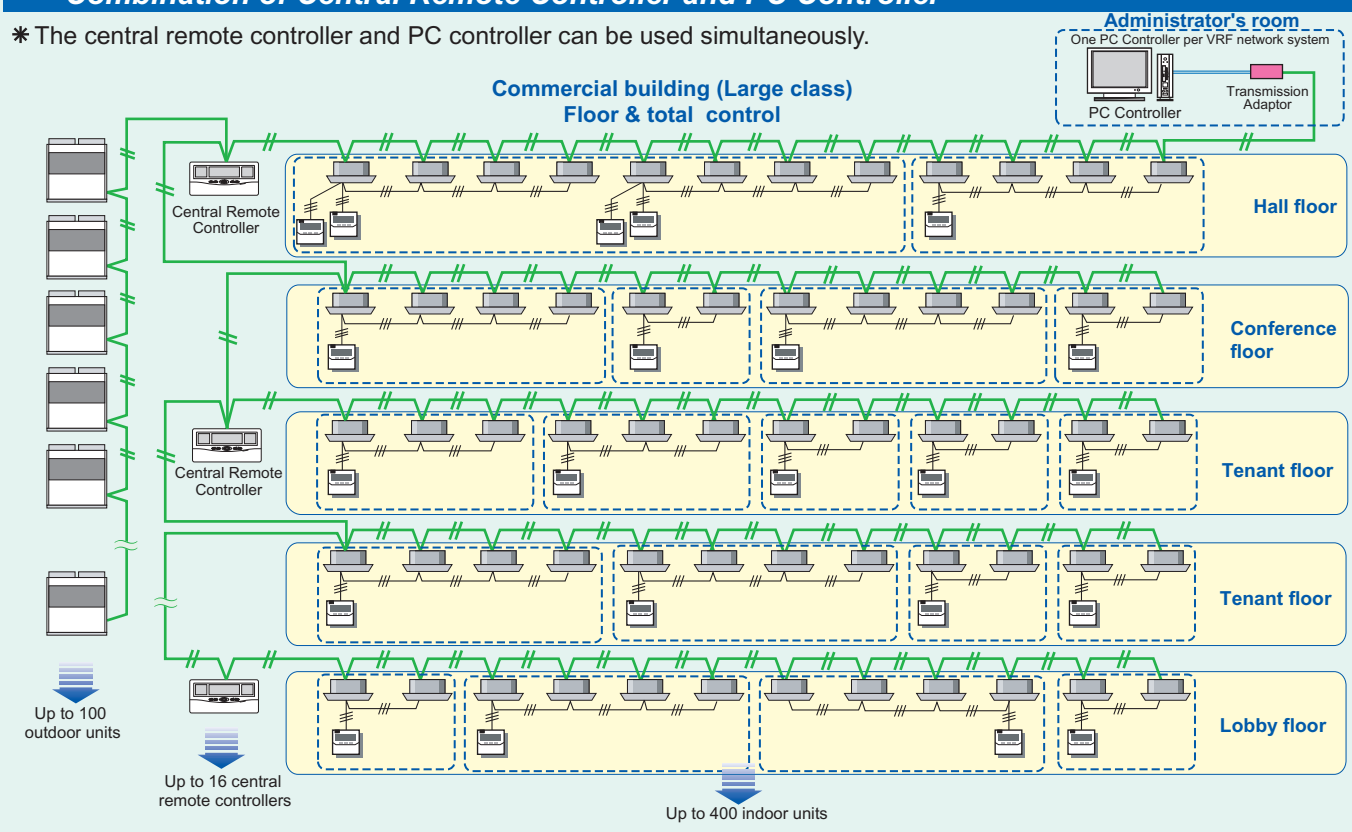
PC Controller

✱UP to 400 indoor units / 400 groups can be controlled with one PC controller.
✱Incorporates a function that automatically calculates electrical charge.



Combination of Central Remote Controller and PC Controller

✱The central remote controller and PC controller can be used simultaneously.



CONTROL SYSTEM

■ INDOOR UNIT TYPE AND THE APPLICABLE INDIVIDUAL CONTROL METHOD

Individual Remote Controller / Indoor Unit Type	Wired Remote Controller	Simple Remote Controller	Wireless Remote Controller	External Switch Controller
	UTB - ✱UB	UTB - ✱PB UTB - ✱RA	UTB - ✱VB	UTR - YESA
Compact Cassette	○	○	○	○
Cassette	○	○	○	○
Compact Duct	○	○	△ ✱1)	○
Low Static Pressure Duct	○	○	△ ✱1)	○
Duct	○	○	△ ✱1)	○
High Static Pressure Duct	○	○	△ ✱1)	○
Floor / Ceiling	○	○	○	○
Ceiling	○	○	○	○
Compact Wall Mounted (Comfort Model)	○	○	○	○
Wall Mounted	○	○	○	○
Ceiling Wall	○	○	○	○

✱ 1) IR Receiver Unit (Optional parts) is necessary.

■ CONVERTORS (ADAPTORS) AND THE RELATED EQUIPMENTS (SYSTEMS)

		Within VRF Network System					VRF Network System ←→ Other System	
		PC Controller	Central Remote Controller	Group Remote Controller	Web Monitoring Tool	Service Tool	BMS / BAS	Single Split System Big Multi System
		UTR - YOTB (Software)	UTB - ✱CA	UTB - ✱DB	UTR - YMSA (Software)	UTR - YSTC (Software)	-	-
BACnet® Gateway	UTR - YLBA (Software)	-	-	-	-	-	○ ✱2)	-
Network Convertor for LonWorks®	UTR - YLLA	-	-	-	-	-	○	-
Network Convertor	UTR - YRDA	-	-	○	-	-	-	○
Transmission Adaptor	UTR - YTMA	○ (Accerssory)	○ (Accerssory)	-	○ ✱3)	○ ✱3)	-	-

✱ 2) An XLON® USB adaptor (product of DH Electronics, field supplied) is necessary.

✱ 3) Instead of Transmission Adaptor (UTR - YTMA), an U10 USB Network Interface TP/FT-10 (product of Echelon®corporation, field supplied) can also be used.

2-1-4. FEATURES OF CONTROL SYSTEM

CONTROL SYSTEM

- Wiring work can be reduced since all equipment making up the system is wired with only one transmission line (non-polar 2-conductor).
- Since each equipment on the transmission line is independently processed, a system failure at one indoor unit does not affect other equipment.
- Total wiring length (total length of transmission line) can be extended up to 2000m (with signal amplifier unit).
- Maximum 400 indoor units can be connected.
- Maintenance work efficiency is improved, because Service tool can be connected to anywhere on the transmission line.
- Indoor units can be controlled by Wired, Simple, Wireless, Group, Central remote controller and PC controller.
- When a failure occurs, the error code is displayed and details can be confirmed at the Wired remote controller,Simple remote controller, Group remote controller, Central remote controller, or PC controller.
- By adopting an interface for FUJITSU GENERAL's single split type models (excluding some models) or multi air conditioner for building models, the central control will be available from the Group remote controller or Central remote controller or PC controller.
- Simple remote controller that allows an easy operation is available for the installation such as a hotel guest room.
- These components can be freely combined to get the maximum control depending on the usage of the building

NOTE

- In case of "Heat Pump" type, the refrigerant system operates "Cooling" or "Heating" operation.

  Operation mode of each indoor unit within system will be same operation mode either "Cooling" or "Heating".

  (The first command of operation mode has prioritized.)

Note:

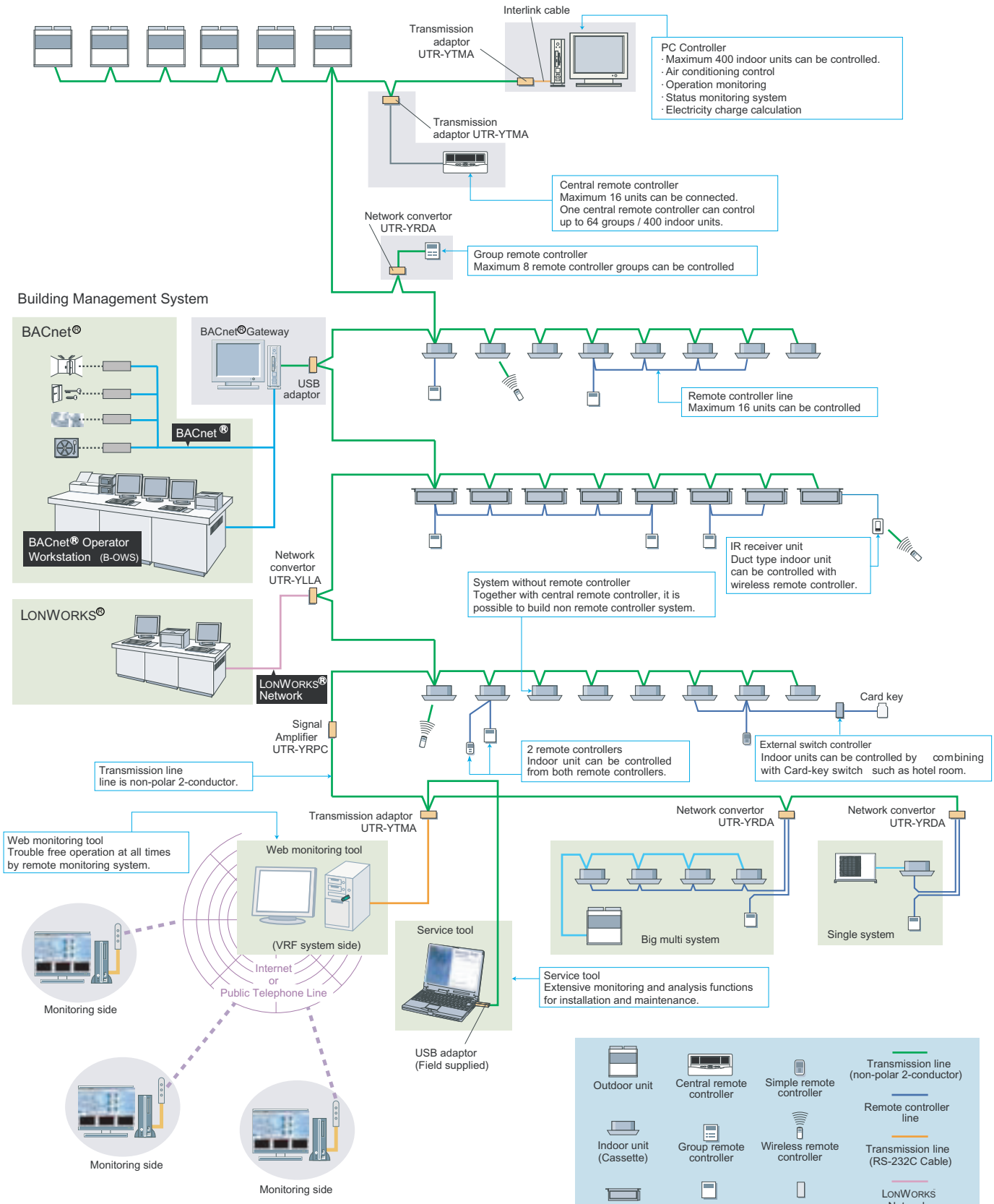
Indoor unit might not be well responsed with controller signal for switching operation mode "Cool"◄►"Heat" during system operating(other one or some indoor units operating).

In this case, Please once stop the operation for all connected units in refrigerant system. After a little while (Approx 10 min.) set again the operation mode.

2-1-5. WIRING SYSTEM

- Wiring construction of the control system is made of power source wiring, transmission wiring and remote controller wiring.
- Total wiring length (total length of transmission line) can be extended up to 2000m (by using signal amplifiers).

Connectable outdoor units	Connectable indoor units	Transmission line length
100 max.	400 max.	2000m max.



Combination of individual remote controller

Wired, wireless and simple remote controllers can be used jointly.

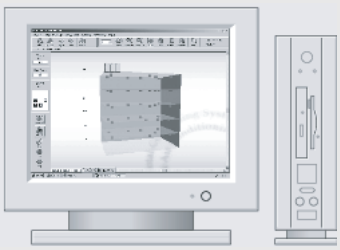
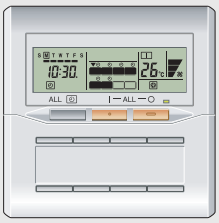
CONTROL SYSTEM

2-2. CONTROL UNITS

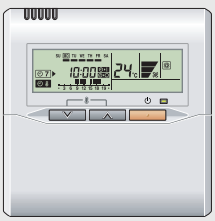
The following types of controllers are available with the FUJITSU GENERAL LIMITED VRF System :

- **PC Controller**
- **Central Remote Controller**
- **Group Remote Controller**
- **Wired Remote Controller**
- **Simple Remote Controller**
  (With MASTER control)
  (Without MASTER control)
- **Wireless Remote Controller**
- **IR Receiver Unit**

Central Control

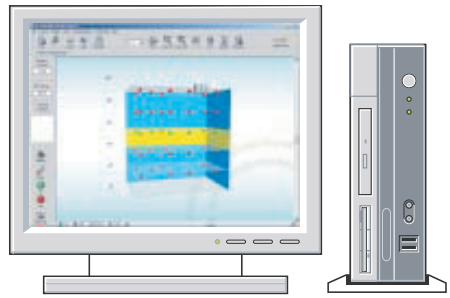
PC Controller	Central Remote Controller	Group Remote Controller
		

Individual Control

Wired Remote Controller	Simple Remote Controller (With MASTER control) (Without MASTER control)	Wireless Remote Controller	IR Receiver Unit
			

2-2-1. PC CONTROLLER Software

MODEL : UTR-YOTB



■ FEATURES

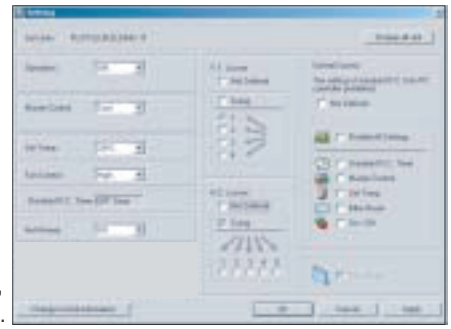
- Up to 400 indoor units / 400 remote controller groups / 400 groups can be connected into one system for large scale buildings or hotels.
- Provides powerful functions for building air conditioning management, including electricity charge calculation and numerous data management functions, as well as standard equipment monitoring and control.

(1) Central building monitoring and control

- Detailed settings can be programmed for each whole building/group/remote controller group or individual indoor units.
- The PC and central remote controller can be used together to permit system control from two or more locations, if required.

(2) Central control

Any of 6 functions of the individual remote controller can be locked to permit access from the PC controller: all functions, timer mode, operating mode, temperature setting, filter reset, on/off. Or the system can be set to allow control from the PC Controller only.



Operation Control

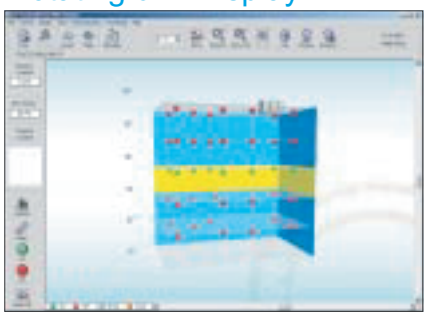
(3) Auto mode (Priority-mode changer)

Auto mode function automatically switches between cooling and heating modes based on the temperatures set and the room temperature detected by the master indoor unit.
Other operating indoor units can be operated in the same operating mode as master unit.

(4) User-friendly operation

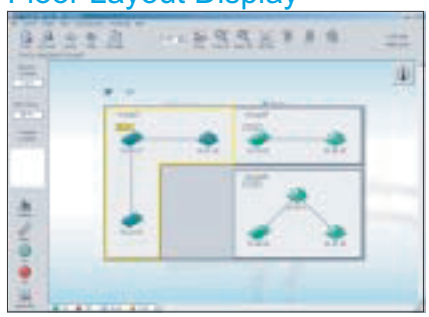
- Runs under Windows® 2000 and Windows® XP Professional / Home so is as easy to use as a standard PC.
- Operational status can be color-coded for instant recognition: On/green, Off/red, test/orange, error/flashing.
- Operational status can be displayed according to user's preference.

Rotating 3-D Display



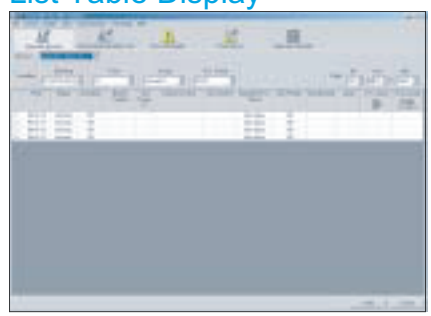
When monitoring and controlling the operations by whole building.

Floor Layout Display



When monitoring and controlling the operations by each floor or group.

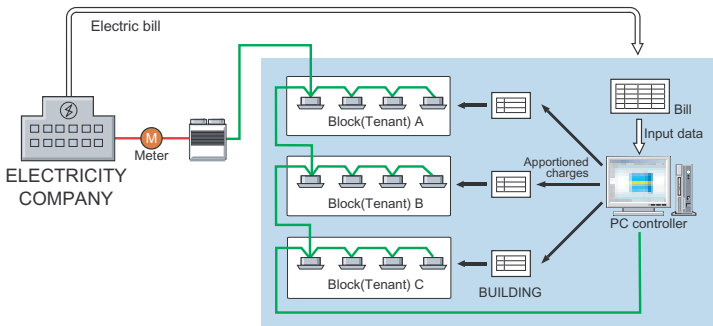
List Table Display



When monitoring and controlling each unit in detail.

(5) Electricity charge calculation

- Total electrical charges, billed for multiple indoor connected to the charge meter for air conditioning, is apportioned according to the accumulated operating time and indoor unit capacity.
- Allows accounting for special rates (e.g., for night or weekend use).
- Calculations can be printed as final bills.



Note: This electrical power apportioning calculation is not official.
When issued to the user as a bill, it must be explained to the user in advance.

CONTROL SYSTEM

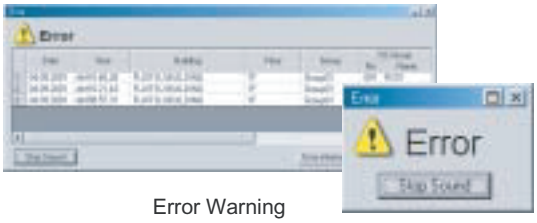
(6) Schedule control

- Annual schedules can be set for each remote controller group.
- Start/stop, operating mode, remote controller prohibition, and temperature settings can be recorded up to 72 times per day at 10 minute intervals for up to 6 configurations for each remote controller group.
- Settings can be made for periods straddling midnight.
- Allows programming of special settings for holidays, including public holidays, for a complete year.
- Standard 6 functions are available by schedule control.

Schedule Control

(7) Error display

Audible alarms are accompanied by explanatory text. Up to 100 alarms can be recorded for each piece of equipment, this is particularly useful during maintenance.



Error Warning

(8) Operating record

The operating status of indoor units and accumulated operating time of outdoor units can be logged and a daily or monthly report produced.

Operation Record

(9) Pattern setting

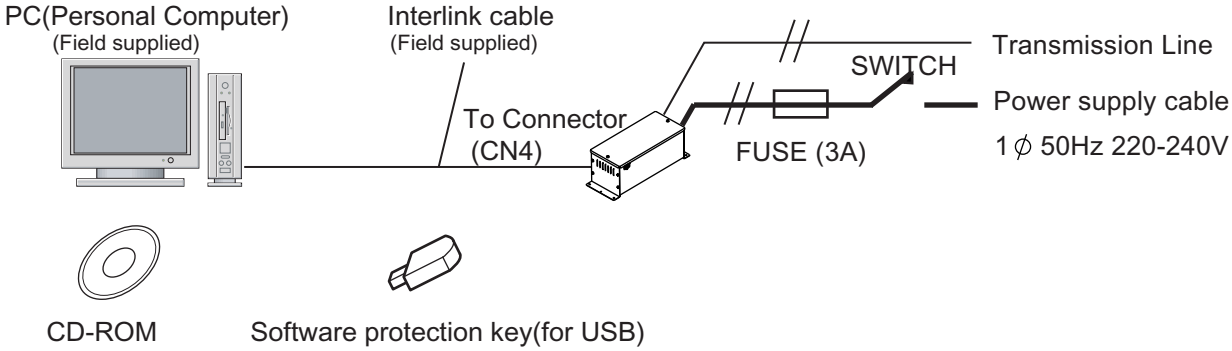
Recognizes patterns of use, including ON/OFF, operating mode, and set temperature.
An arbitrarily pattern operation can be done with just one button clicking.

■ SPECIFICATIONS

● Transmission adaptor

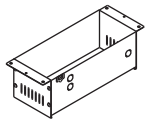
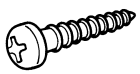
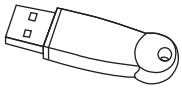
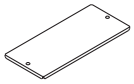
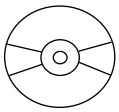
Power supply	50-60Hz 220-240V
Power consumption	2.9W
Fuse capacity	3A
Size (H x W x D) (mm)	100 x 288 x 107
Weight (g)	1300

■ SYSTEM DIAGRAM



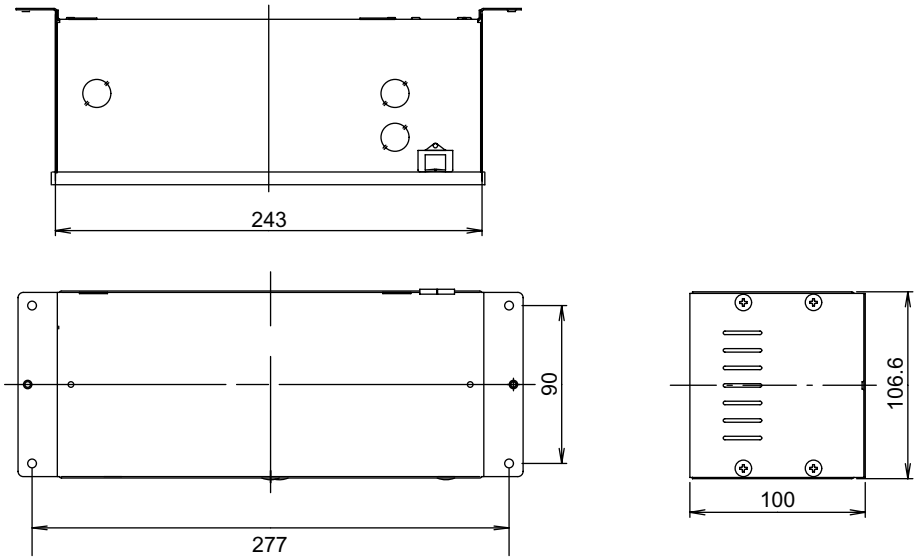
CONTROL SYSTEM

■ PACKING LIST

Name and shape	Q'ty	Application
Transmission adaptor 	1	The equipment for transmitting data between PC controller and Indoor/Outdoor units.
Wood screw (ϕ4 x 20) 	4	For mounting the transmission adaptor.
Binder (push mount)	4	For mounting the power supply cord and transmission cord.
Software protection key 	1	This is to prevent unauthorized use of the software.
Bushing (small)	3	For ϕ16 knockout holes. Use for the knockout holes.
Cover 	1	Transmission adaptor cover.
Tapping screw (ϕ4 x 6)	2	For mounting the transmission adaptor cover.
CD 	1	Includes the software for the PC controller.

※ Personal computer and Interlink cable must be procured at the site.

■ DIMENSIONS



■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable (mm^2)	Maximum	1.25	H07RN-F or equivalent	Single phase 50Hz 220-240V * 2 wire+Ground
	Minimum	0.5		
Transmission cable (mm^2)	0.33		Shielded Level 4 (22AWG)	Non-polar,Twisted pair, Solid core
Fuse capacity (A)	3		——	——
Interlink cable	——		RS 232C Interlink cable D-sub 9 pin	See page (05-14) for details.

※ Always ground the unit.

CONTROL SYSTEM

● Personal computer specifications

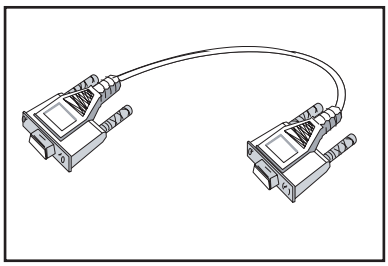
The following equipment is required for using PC controller AT compatible machine that runs on Microsoft® Windows®

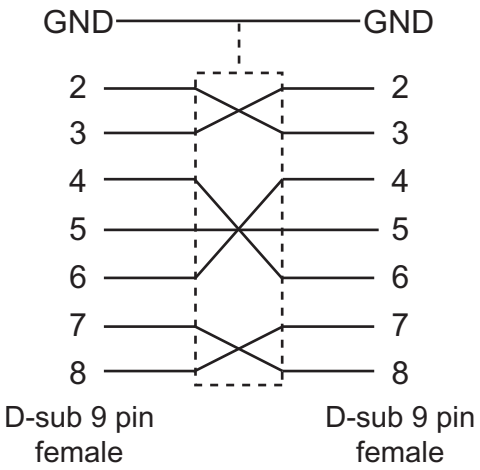
	PC (Personal Computer) CONTROLLER [UTR - YOTB]
CPU	Intel® Pentium® / Celeron®, AMD Athlon™ /Duron™ 1GHz or higher
Hard Drive	4GB or more of free space is required
Memory	256MB or more
Display	1024 X 768 dots or more, High color (16bit) or more Requires that the internal graphics accelerator be compatible with Microsoft DirectX 7.0 or later
Interface	Requires Serial port and USB port
Operating System	Microsoft® Windows® 2000 Professional (English language version) Service Pack 3 or later Microsoft® Windows® XP Professional / Home (English language version) Service Pack 1 or later (Microsoft® Windows® Vista® cannot be used for this product)
Required Software	Adobe® Acrobat® reader 4.0 or later
Accelerator	Requires that the internal graphics accelerator be compatible with Microsoft® DirectX® 7.0 or later

●Interlink cable

(Serial D-sub 9 pin)

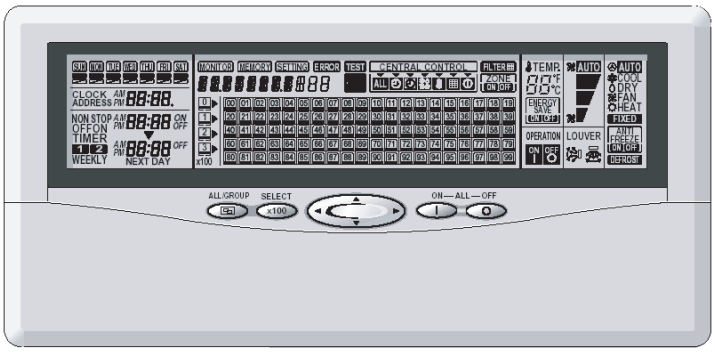
Name and shapes	Quantity	Parts No.
InterLink cable	1	KRS-L09-4K





2-2-2. CENTRAL REMOTE CONTROLLER

Model : UTB - ✱ CA (Market region Y or G)



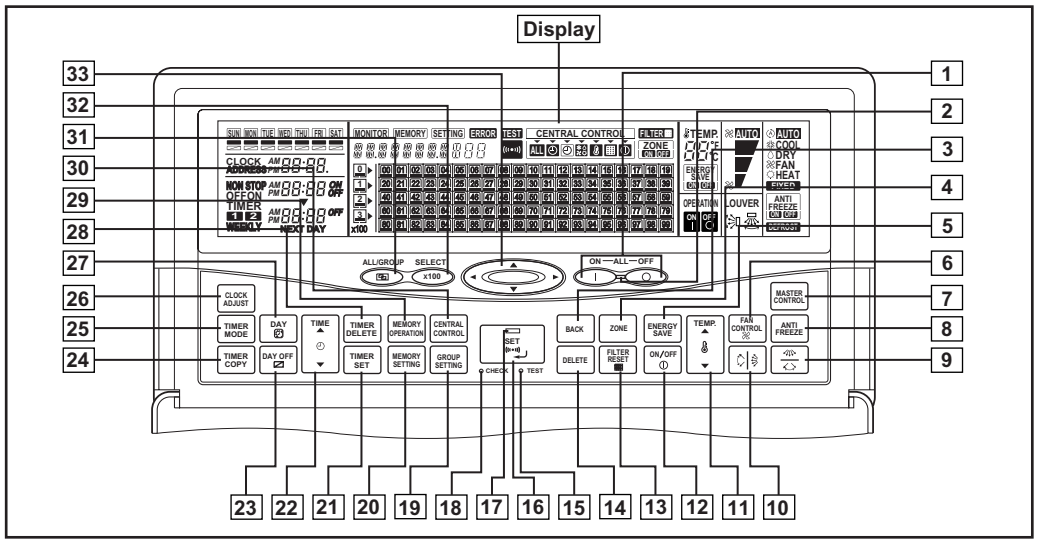
■ FEATURES

- ✳ One remote controller can control up to 400 indoor units / 64 groups.
- ✳ Up to 16 central remote controllers can be connected in one VRF network system.
- ✳ Central remote controller can control the system by all / group / individual.
- ✳ The selectable functions (all functions, timer mode, operating mode, temperature setting, filter reset, and On / Off) of the standard controller can be locked by central remote controller.
- ✳ Weekly timer is equipped as standard function. (2 times On / Off per day for one week).
- ✳ Setting contents of central remote controller are all memorized, so that each indoor unit can be operated under the memorized conditions even if the operating conditions are changed later on.
- ✳ Error code is displayed when an error occurs.
  The history of failures can also be displayed, which is convenient for maintenance.

Examples of errors:

1. Microcomputer communication error
2. Heat exchanger thermistor error
3. Outdoor unit thermistor error
4. Discharge temperature error
5. Compressor error
6. Model information error
7. Indoor unit fan error
8. Room temperature thermistor error
9. Power supply frequency abnormal
10. Reverse phase blocker error
11. Pressure error
12. Pressure sensor error

■ FUNCTIONS

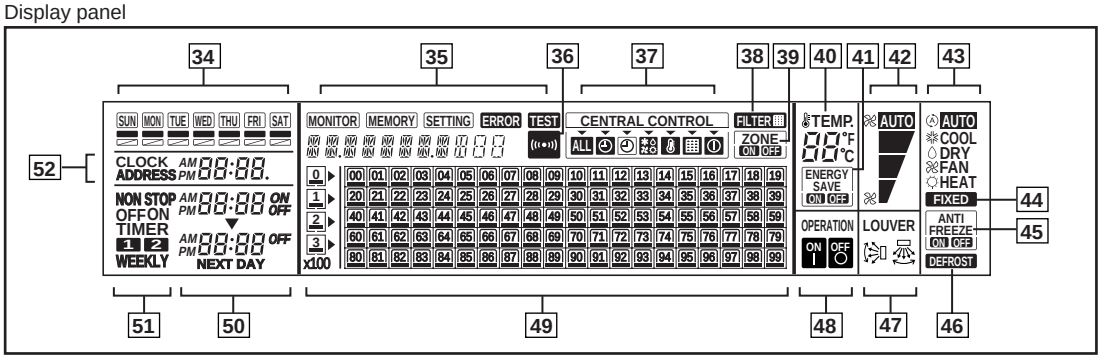


CONTROL SYSTEM

1	All ON/OFF button	
2	All ON/OFF LED	
3	Back button	
4	Zone button	
5	Energy save button	Starts energy save operation.
6	Fan control button	
7	Master control button ※1 ※2	
8	Anti freeze button	
9	Horizontal Air flow direction and swing button	
10	Vertical air flow direction and swing button	
11	Temp button	Indoor temperature setting.
12	ON/OFF button	ON/OFF setting.
13	Filter reset button	
14	Delete button	Deletion of setting.
15	Test button	

16	Set button	Transmits of all changed setting details.
17	Set LED	Blinks when transmission is necessary.
18	Check button	Confirmation of address display and error code.
19	Group setting button	Setting of group of a remote controller group connected to the central remote controller.
20	Memory setting button	Memorizes the entire setting contents.
21	Timer set button	Sets date, hour, minute and on-off time.
22	Time button	On-off time setting.
23	Day off button	Temporary cancellation of one day timer.
24	Timer copy button	Copies the timer condition (the day before).
25	Timer mode button	Changes the timer mode (NON STOP, OFF, ON1, ON2, WEEKLY).
26	Clock adjust button	
27	Day button	
28	Timer delete button	
29	Memory operation button	Operates the memorized condition.
30	Central button	Inhibits some operations of the individual remote controller.
31	All/Group button	Changes the control unit (ALL→GROUP→R.C.GROUP).
32	Select ×100 button	Remote controller group indication by hundreds.
33	Select button	Changes remote controller group or group number.

Display panel



34	Day of week display	40	Temperature display	45	Anti freeze display	51	Timer mode display
35	Status display	41	Energy save display	46	Defrost display	52	Clock and address display
36	Transmit indicator display	42	Fan control display	47	Air flow direction display		
37	Central control display	43	Master control display	48	ON/OFF display		
38	Filter reset display	44	Fixed cooling or heating operation display	49	Group control display		
39	Zone display			50	ON/OFF time display		

NOTE

※1 : "AUTO Ⓐ" and "FAN ※" cannot be selected for "HEAT PUMP TYPE"

※2 : "HEAT ☼" cannot be selected for "COOLING ONLY TYPE"

CONTROL SYSTEM

■ SPECIFICATIONS

	Control panel	Transmission adaptor
Power supply	50-60Hz 220-240V	
Power consumption	4.8 W	
Size (H x W x D mm)	143 x 296 x 22	107 x 288 x 100
Weight (g)	550	1300

■ PACKING LIST

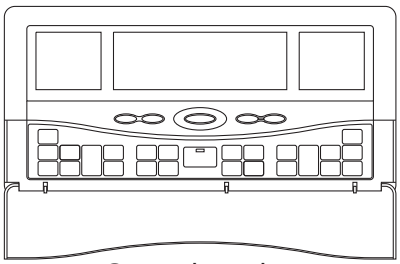
Parts Name	Q'ty	Application
Control Panel	1	
Transmission Adaptor	1	
Connection Cord (L=215mm)	1	For connecting the control panel and transmission adaptor.
Binder (Push Mount)	4	For mounting the power supply cord and transmission cord.
Binder (Small)	2	For mounting the connection cord.
Tapping Screw (M4 x10mm)	2	For mounting the control panel.

Parts Name	Q'ty	Application
Tapping Screw (M4 x 6mm)	2	
Wood Screw (M4 x 20mm)	6	For mounting the transmission adaptor.
Bushing (ϕ16mm)	3	Use for the knockout.
Bushing (ϕ20mm)	1	Use for the knockout.
Cover	1	
Tooth Washer	2	

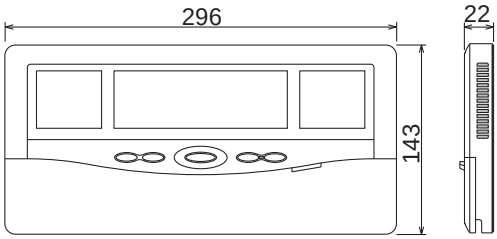
■ DIMENSIONS

● Control panel

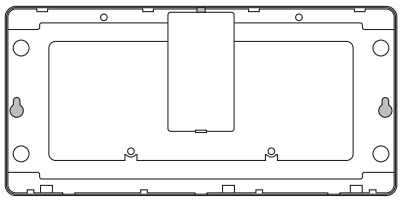
(Unit : mm)



Control section

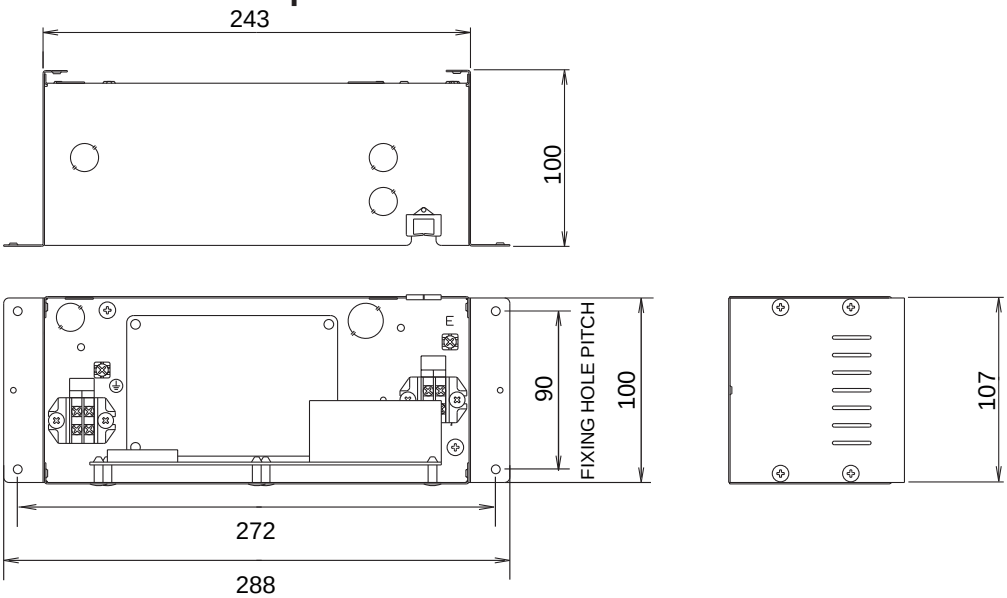


Front View



Rear View

● Transmission adaptor

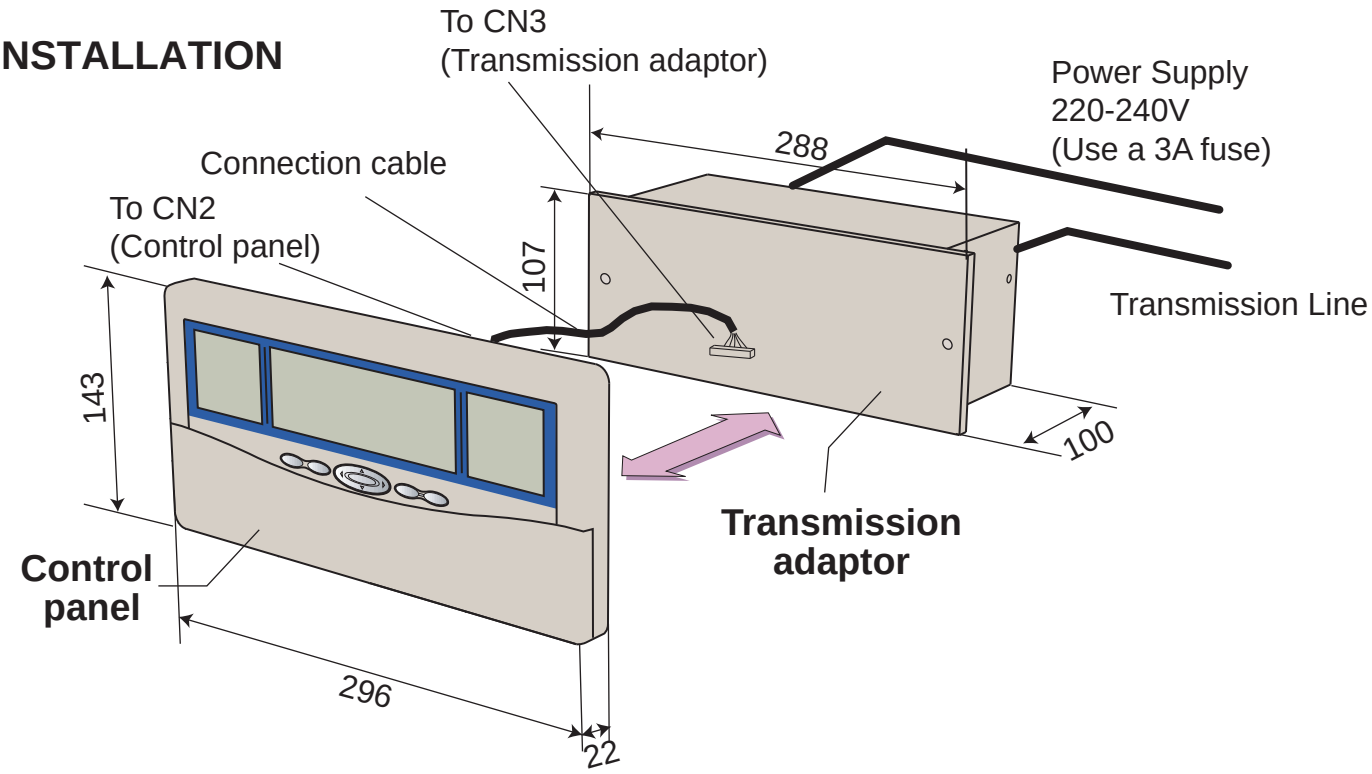


■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable (mm^2)	Maximum	1.25	H07RN-F or equivalent	Single phase 50Hz 220-240V * 2 wire+Ground
	Minimum	0.5		
Transmission cable (mm^2)	0.33		Shielded Level 4 (22AWG)	Non-polar, Twisted pair, Solid core
Fuse capacity (A)	3			

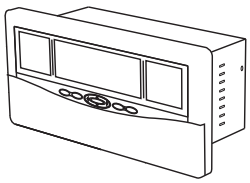
*Always ground the unit.

■ INSTALLATION



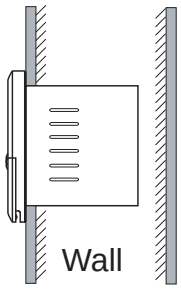
There are 2 ways of set up.

One body set up

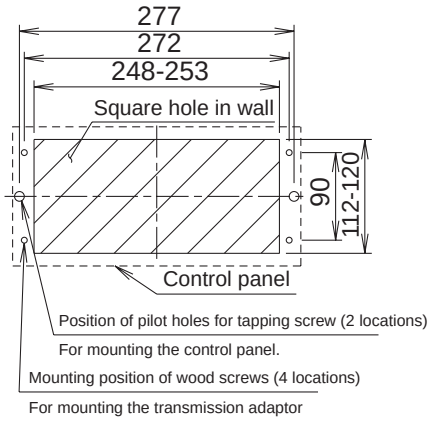


Control panel and transmission adaptor together

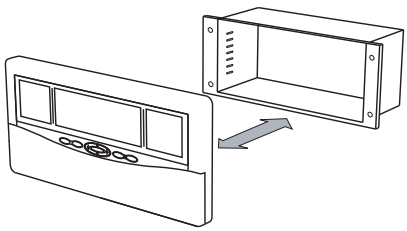
Setting Example



Make a hole in Wall



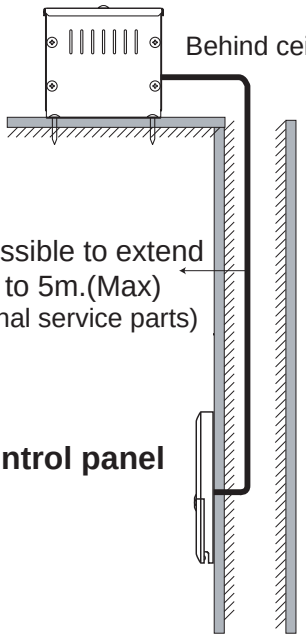
Separated set up



Control panel and transmission adaptor separately

Setting Example

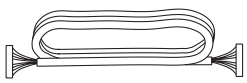
Transmission adaptor



OPTIONAL SERVICE PARTS

5-meters extension cord (service parts) is required when installing the control panel transmission adaptor separately

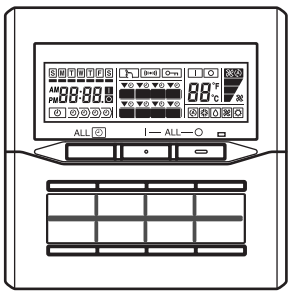
Please use the part number shown below to order the extension cord from your sales representative

Name and shape	Q'ty	Parts NO
5-meter extension cord 	1	9704270016

2-2-3. GROUP REMOTE CONTROLLER

Model : UTB -✱DB (Market region Y or G or T)

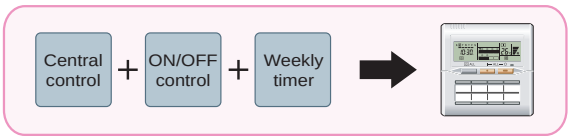
■ FEATURES



- ✳ Control and monitoring of up to 8 remote controller groups (Max32 indoor units) is possible with one group remote controller.
- ✳ The optional network convertor (Model name: UTR-YRDA) allows up to 4 Group Remote Controllers to be incorporated within the control layout. This flexibility is ideal for a number of different building sizes, types and applications.
- ✳ Up to 64 group remote controllers (with 16 network convertors UTR-YRDA) can be connected in one VRF network system.
- ✳ ON / OFF, operation mode, set temperature, timer control and airflow can be controlled / monitored centrally or individually.
- ✳ Easy installation with a slim shape with no bulge in the back.
- ✳ One-touch ON/OFF operation of each indoor unit is possible. All the indoor units can also be easily operated by pressing an ALL ON, ALL OFF, or ALL TIMER ON/OFF button.

●High performance and compact size

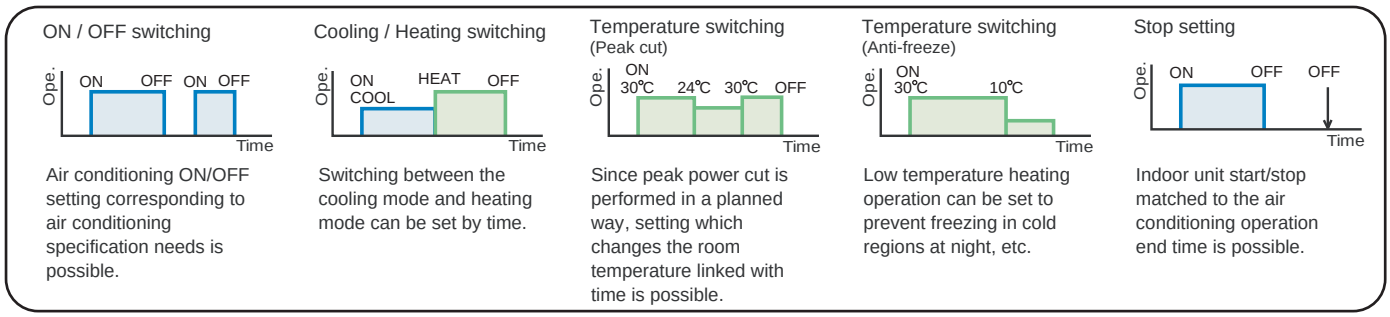
ON / OFF, operating mode, set temperature and air flow can be controlled / monitored centrally or individually.



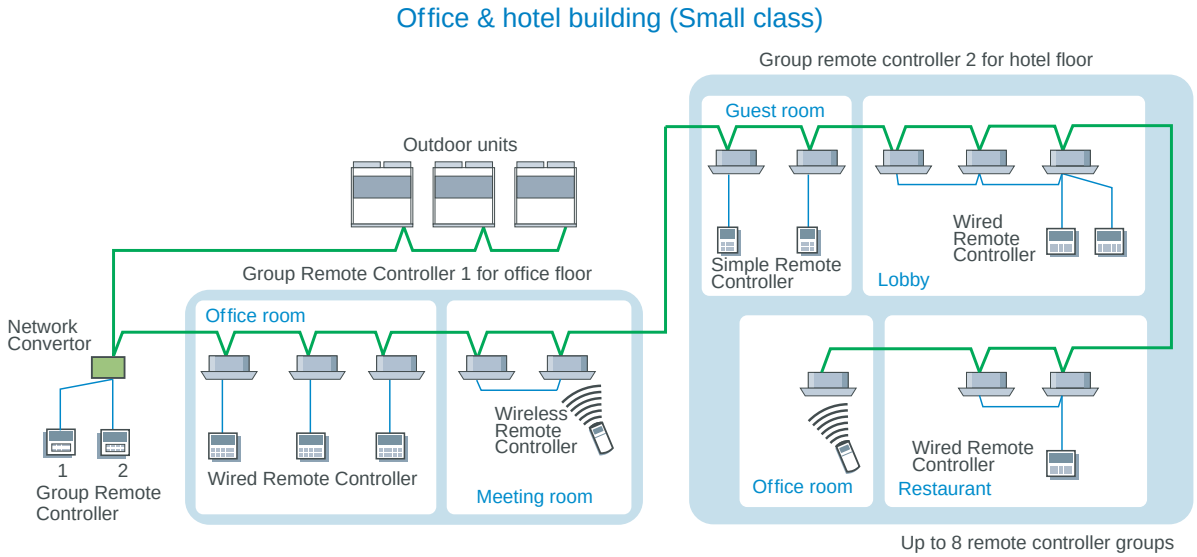
●Built-in weekly timers

The WEEKLY TIMER is provided as a standard function.

1. The timer can be set up for up to 4 times/day. (On/Off, operating mode, set temperature)
2. Allows separate settings for each day of the week.



●Control up to 8 remote controller groups



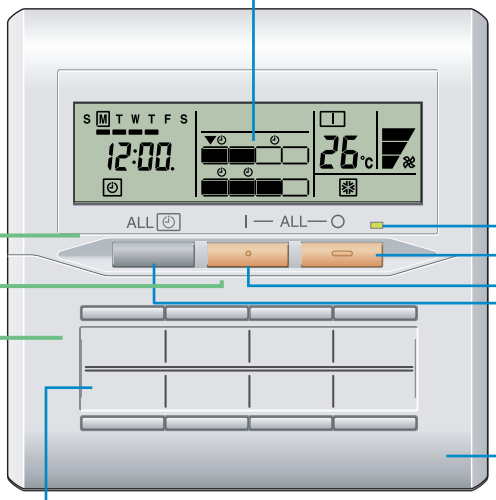
■FUNCTIONS

1 Timer setting at all the connected indoor units is possible by centralized timer on the front panel.

2 All the connected indoor units can be turned on / off simultaneously by centralized ON/OFF button on the front of the cover.

3 The indoor unit can be quickly turned on and off by ON / OFF button of each indoor unit on the front of the door.

With cover closed



Indoor Unit Operation Indicators
This shows the operating status and timer operation status for each of the indoor units.
■ : On ▭ : Off
◴ : Timer operation ▼ : Selection

Operation Lamp
This is on if any of the indoor units is operating.This flashes if any of the indoor units has malfunction(s).

ALL OFF Button
Press the ALL OFF button to turn off all of the indoor units.

ALL ON Button
Press the ALL ON button to turn on all of the indoor units.

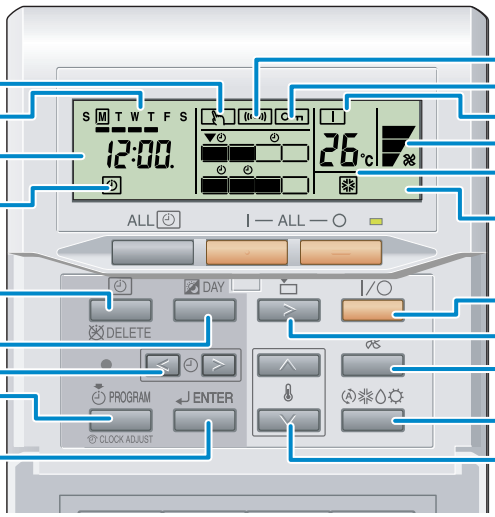
ALL TIMER Button
Press the ALL TIMER button to turn the timer operation on or off for all indoor units.

Start / Stop Button
Press the ON / OFF button to turn the corresponding indoor unit on or off.

Indoor Unit Name Labels
Write the names of the indoor units on the included labels and attach them.

Timer and Clock Display and setting

With cover open



Setting Display
Day Display
Timer and Clock Display
Timer Mode Display
Timer Mode (DELETE) Button
DAY Button
Set Time Button
PROGRAM (CLOCK ADJUST) Button
ENTER Button

Displaying the Status and Contr olling indoor units

Transmission Display
Operation Lock Display
ON / OFF Display
Fan Speed Display
Set Temperature Display
Operation Mode Display
Start / Stop Button
Select Button
Fan Control Button
※1 ※2
Master Control Button
Set Temperature Button

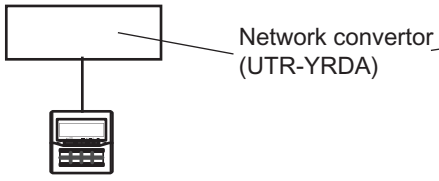
NOTE
※1 : "AUTO Ⓐ" and "FAN ※" cannot be selected for "HEAT PUMP TYPE"
※2 : "HEAT ☼" cannot be selected for "COOLING ONLY TYPE"

■SPECIFICATIONS

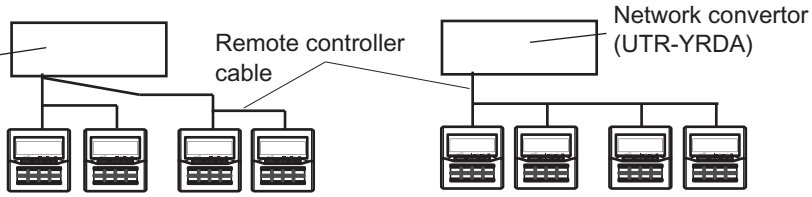
Model name	UTB -✱DB
Size [H x W x D (mm)]	120 x 120 x 17
Weight (g)	200

■SYSTEM DIAGRAM

● **When connecting one group remote controller**



● **When multiple group remote controllers are connected**



✻ Total remote controller cable length : Max. 100m.

✻ Connectable group remote controller : Max. 4units / convertor.

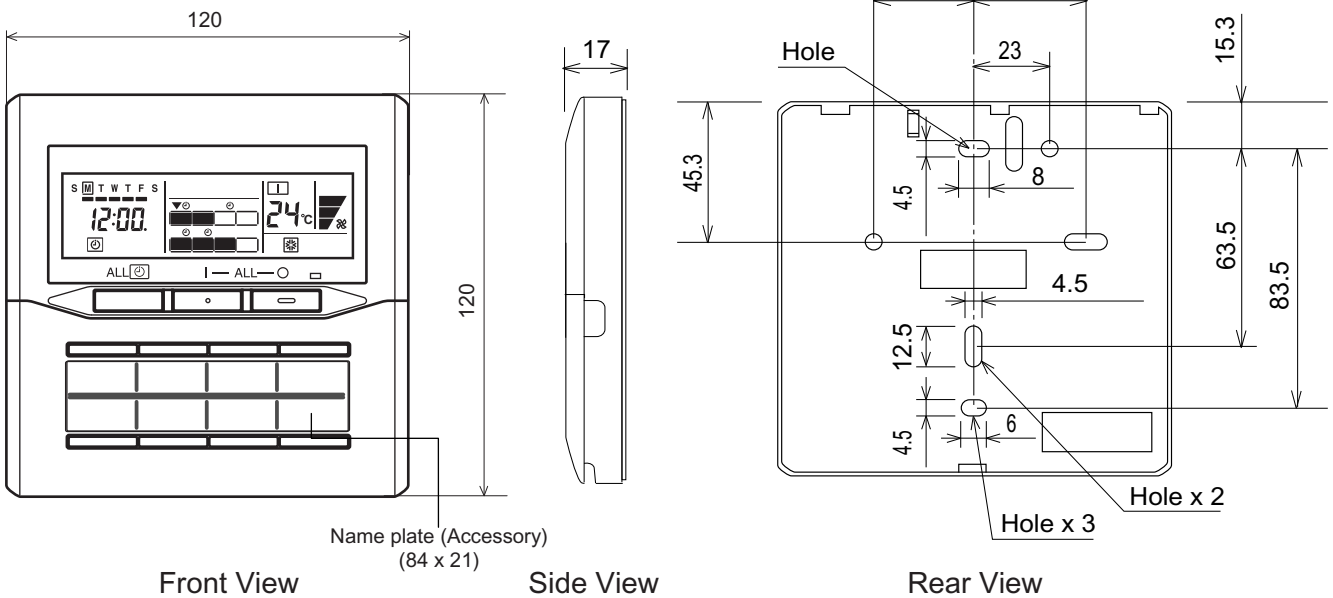
✻ Use of a terminal box is recommended when a junction is made in the wiring.

■PACKING LIST

Name	Quantity	Application
Group remote controller	1	
Label	4	Use this for writing the names of the indoor units that have been registered.
Tapping screw(M4x16mm)	2	For installing the remote controller
Binder	1	For remote controller and remote controller cable binding

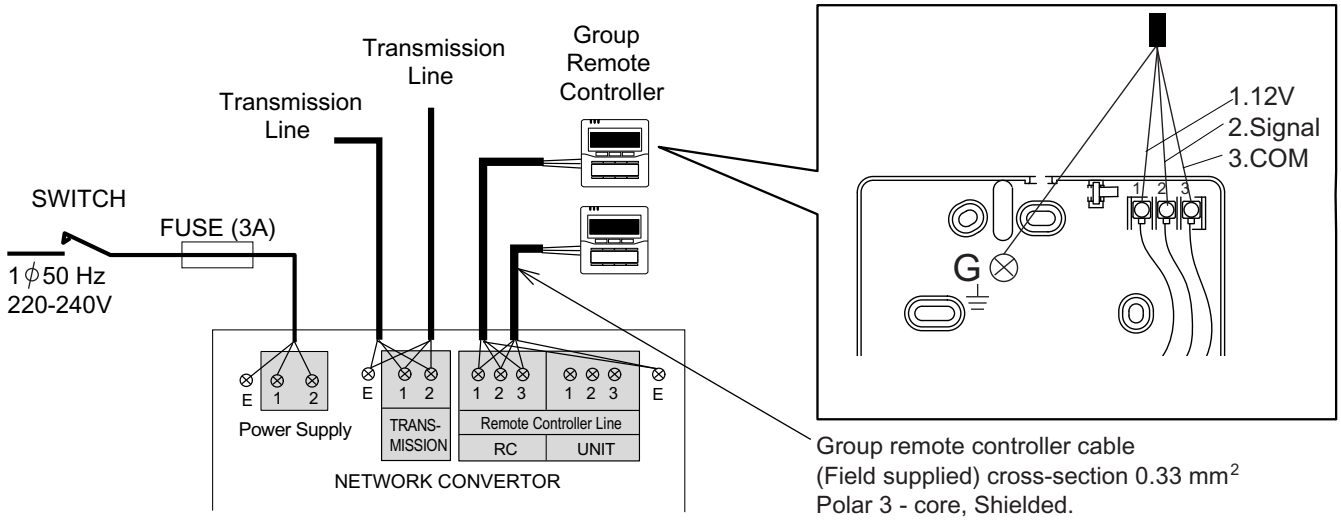
■ DIMENSIONS

[Unit : mm]



Front View Side View Rear View

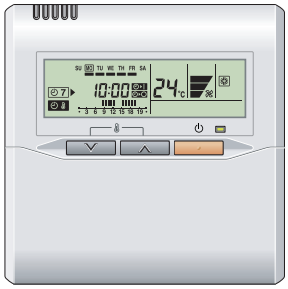
■ELECTRICAL WIRING



2-2-4. WIRED REMOTE CONTROLLER

Model : UTB - ✱UB (Market region Y or G or T.)

■ 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, start / stop and a temperature setup can be changed.
- ✳ When a failure occurs,the error code is displayed.
- ✳ Error history.(Last 16 error codes can be accessed.)
- ✳ Up to 16 indoor units can be simultaneously controlled.
- ✳ The room temperature can be controlled by being detective the temperature accurately with Built-in thermo sensor.

● Powerful features and compact size

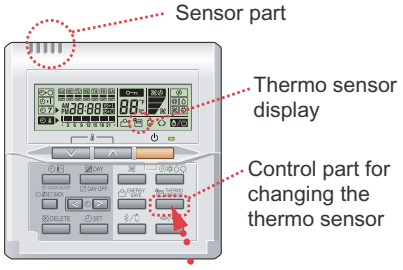
Thermo sensor + Weekly timer + Setback timer = Wired remote controller

● Accurate and comfortable

Indoor temperature can be detected accurately by the inclusion of a thermo sensor in the body of the wired controller.

Our system can correspond to various scenes.

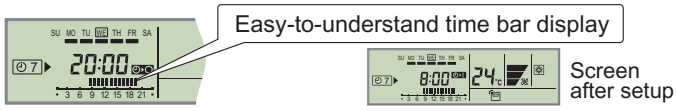
This new wired remote controller and the optional remote sensor allows flexibility in sensor location, suitable for all requirements.



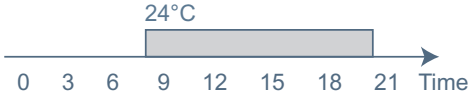
● Built-in timers

Weekly timer

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



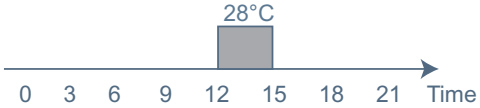
Setup screen example
(Set to Wednesday: 8:00 to 20:00.)



Setback timer

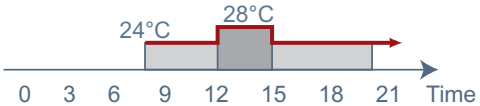
Possible to set temperature for two time spans and for each day of the week.

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

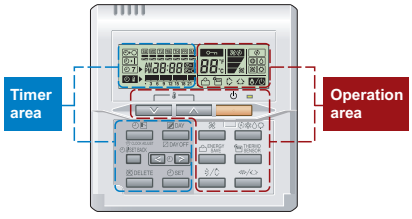


At "Weekly timer" + "Set back timer" setup

24°C→28°C →24°C



● Easy-to-understand operation

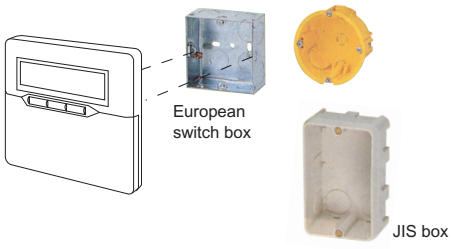


[Variable timer control]

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

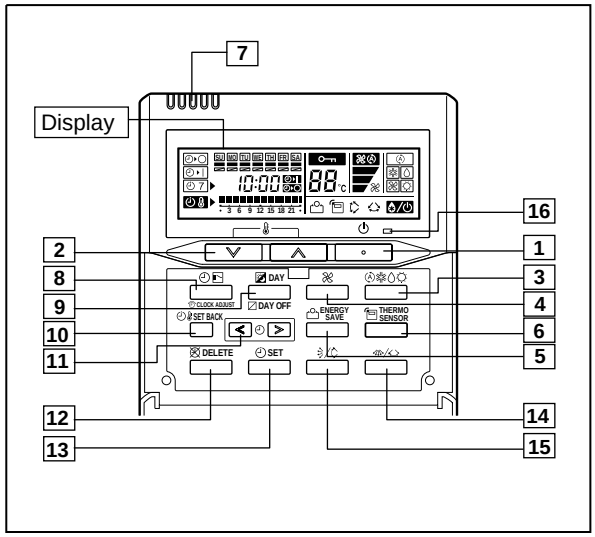
● Simple installation

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

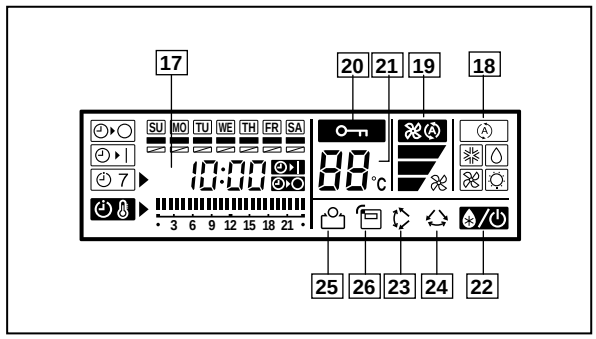


CONTROL SYSTEM

■ FUNCTIONS



Display panel



1 START/STOP button
Pressed to start and stop operation.

2 Set Temperature button
Selects the setting temperature.(18-30℃[COOL], 10-30℃[HEAT])

3 Master control button
Selects the operating mode (AUTO Ⓐ※1, COOL❋, DRY◊, FAN※※1, HEAT☼※2).

4 Fan control button
Selects the fan speed (AUTO※, LOW※, MED※, HIGH※).

5 Energy save button

6 Thermo sensor button
Selects whether the room temperature is detected at the indoor unit (remote sensor) or the remote controller.

7 Built-in thermo sensor
Detect room temperature.

8 Timer mode (CLOCK ADJUST) button
Selects the timer mode (OFF TIMER, ON TIMER, WEEKLY TIMER)
Set the current time.

9 Day (DAY OFF) button
Temporarily cancels of one day timer.

10 Set back button
Pressed select the set back timer.

11 Set time button
Pressed to select the set back timer.

12 Delete button
The schedule of a weekly timer is deleted.

13 Set button
Sets the date, hour, minute and on-off time.

14 Horizontal air flow direction and swing button
Push for two seconds to change the swing mode.

15 Vertical air flow direction and swing button
Push for two seconds to change the swing mode

16 Operation lamp
Lights during operation and when the timer is on.

17 Timer and clock display

18 Operation mode display

19 Fan speed display

20 Operation lock display

21 Temperature display
Displayed temperature is set temperature.

22 Defrost display
Indicates during the oil recovery and defrosting operation.

23 Vertical swing display

24 Horizontal swing display

25 Energy save display

26 Thermo sensor display

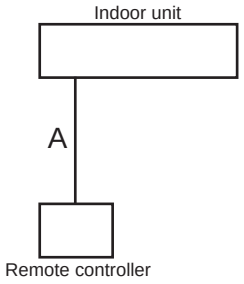
■SPECIFICATIONS

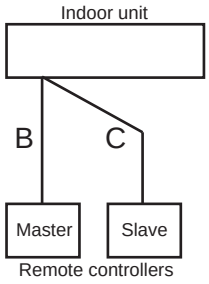
Model name	UTB - ✱ UB
Size [H x W x D (mm)]	120 x 120 x 17
Weight (g)	160

NOTE
※1 : "AUTO Ⓐ" and "FAN※" cannot be selected for "HEAT PUMP TYPE"
※2 : "HEAT☼" cannot be selected for "COOLING ONLY TYPE"

■ SYSTEM DIAGRAM

● 1 remote controller ● 2 remote controllers





A , B , C : Remote controller cable. Refer to 5-2-1 for detail specifications.
A ≦ 500m ; B+C ≦ 500m

CONTROL SYSTEM

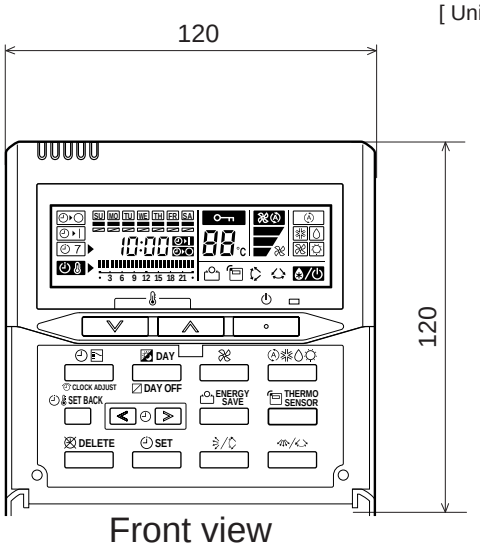
■ PACKING LIST

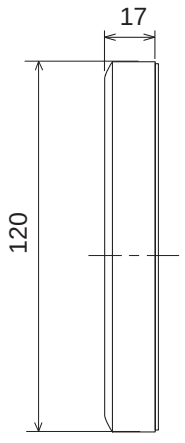
Name	Quantity	Application
Wired remote controller	1	
Remote controller cable ✱1)	10m	For connecting the remote controller (Exclude some models)
Tapping screw (M4 x 16mm)	2	For installing the remote controller
Binder	1	For remote controller and remote controller cable binding

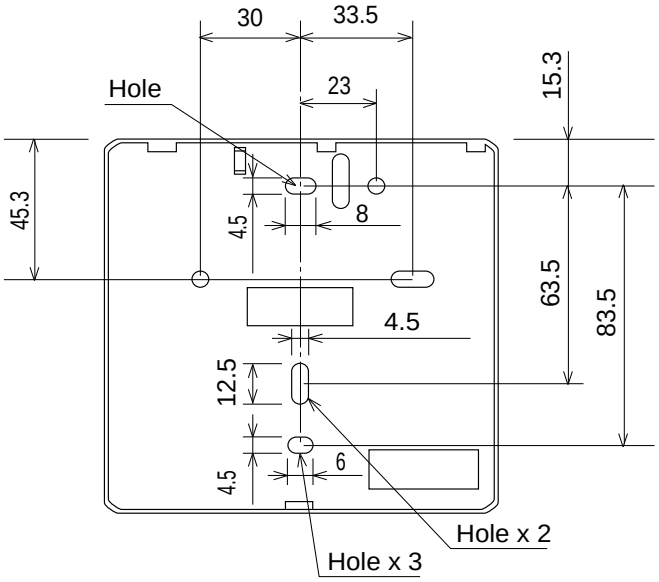
✱1) If necessary , use shielded cable (Field supplied) in accordance with the standard of the country.

■ DIMENSIONS

[Unit : mm]

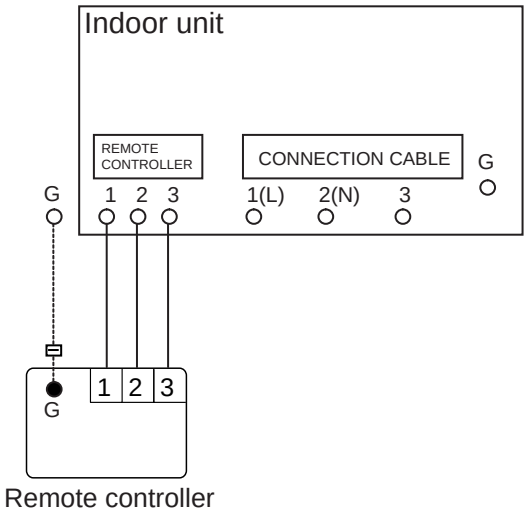




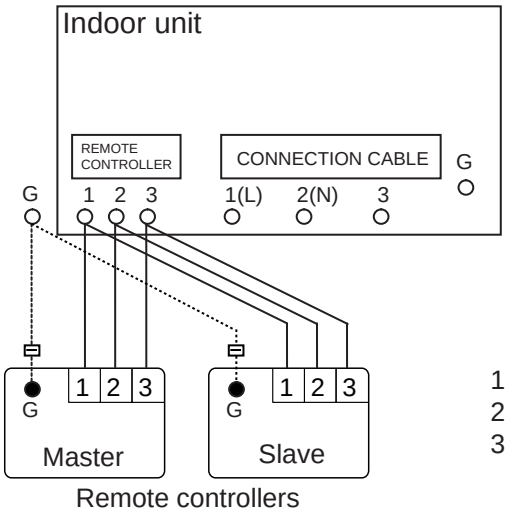


■ ELECTRICAL WIRING

● 1 remote controller



● 2 remote controllers



1 (RED) : 12V
2 (WHITE) : Signal
3 (BLACK) : COM

2-2-5. SIMPLE REMOTE CONTROLLER (With MASTER CONTROL)

Model : UTB -✱PB (Market region Y or G or T)

■ FEATURES

- ✱ Easy operation.
- ✱ Built-in back ground light function.
- ✱ Easy installation with a slim shape with no bulge in the back.
- ✱ Error history.(Last 16 error codes can be accessed.)
- ✱ Up to 16 indoor units can be simultaneously controlled.
- ✱ Can be installed onto SW-BOX. (applies to European and other country's standard)

● User-friendly operation

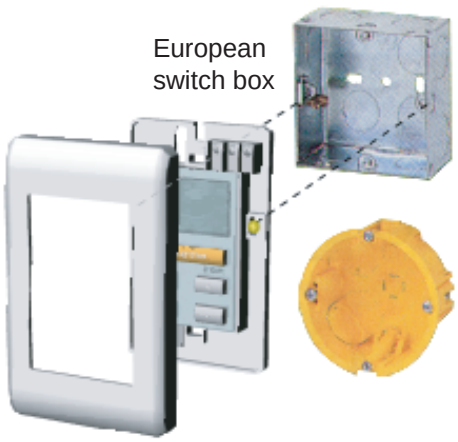
- ✱ Provides access to basic operations, such as Start / Stop, Fan control, master control switching, and temperature setting.
- ✱ A large Start / Stop button is provided in the centre of the remote controller unit for easy operation.
- ✱ Following an error display, diagnostics can be carried out on the controller.

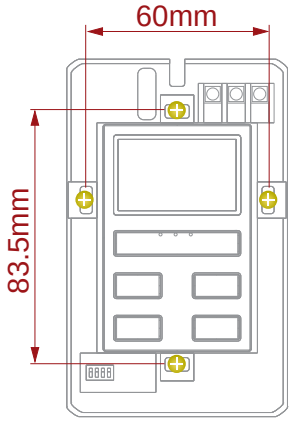
● Back ground light

- ✱ Backlight enables easy operation in a darkened room.
- ✱ Backlight activates during all button operations, and lasts 10 seconds in operating mode and 5 seconds in stop mode after a button is pressed.

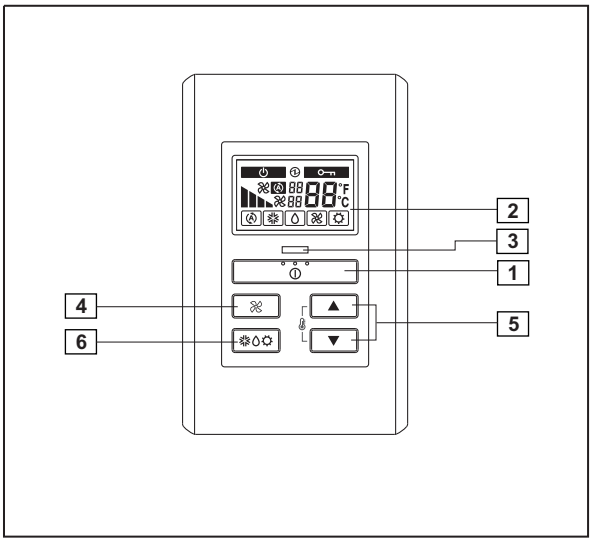
● Simple installation

- ✱ Can be mounted on the European mounting Box (installation dimension: 60mm) or the JIS Built-in Box (installation dimension: 83.5mm).





■ FUNCTIONS



1 START/STOP button
Pressed to start and stop operation

2 Display background light
Lights during operation.

3 Operation lamp
Lights during operation.

4 Fan control button
Selects the fan speed (AUTO※, HIGH, MED, LOW).

5 Set temperature button
Selects the setting temperature.(18-30℃[COOL], 16-30℃[HEAT])

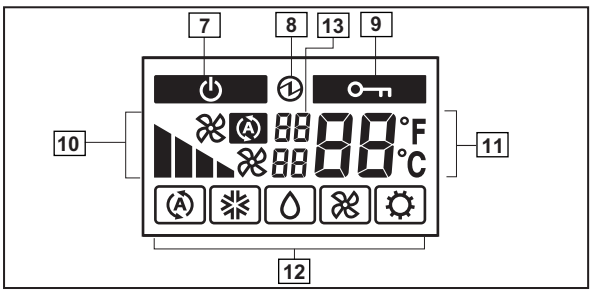
6 Master control button
Selects the operating mode (AUTO ※1, COOL, DRY ,
FAN※1, HEAT※2).

7 Standby display
Indicates during the oil recovery and defrosting operation.

8 Power source display
Indicates the main power ON.

9 Central control display
Indicates when function is locked from central remote controller or PC controller.

Display panel



10 Fan speed display

11 Set temperature
Indicates Error history number.✱4)
Indicates Indoor unit address.✱5)

12 Operation mode display

13 (Upper) Indicates the error code✱3)✱4) / the refrigerant system address. ✱5)
(Lower) Indicates the remote controller address.✱3)✱4)✱5)

✱3)during self Diagnosis mode.
✱4)during Error code history display mode.
✱5)during address display mode.

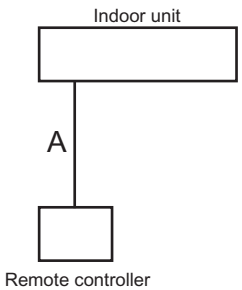
NOTE
※ 1 : "AUTO" and "FAN※" cannot be selected for "HEAT PUMP TYPE"
※ 2 : "HEAT" cannot be selected for "COOLING ONLY TYPE"

■ SPECIFICATIONS

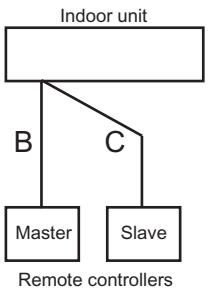
Model name	UTB - ✱PB
Size [H x W x D (mm)]	120 x 75 x 14
Weight (g)	90

■ SYSTEM DIAGRAM

● 1 remote controller



● 2 remote controllers



A , B , C : Remote controller cable. Refer to 6-4-4 for detail specifications.
A ≦ 500m ; B+C ≦ 500m

CONTROL SYSTEM

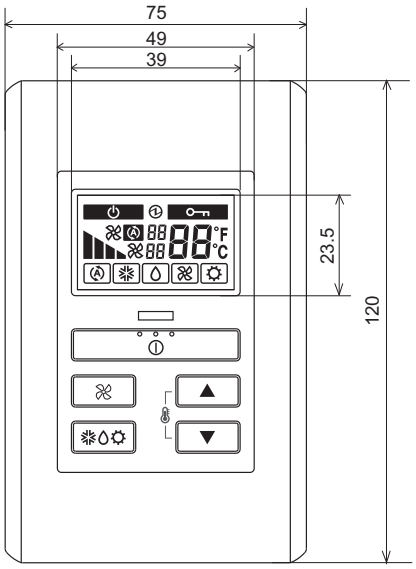
■ PACKING LIST

Name	Quantity	Application
Simple remote controller	1	
Remote controller cable ✱6)	10m	For connecting the remote controller (Exclude some models)
Tapping screw(M4x16mm)	2	For installing the remote controller
Binder	1	For remote controller and remote controller cable binding

✱6) If necessary , use shielded cable (Field supply) in accordance with the standard of the country.

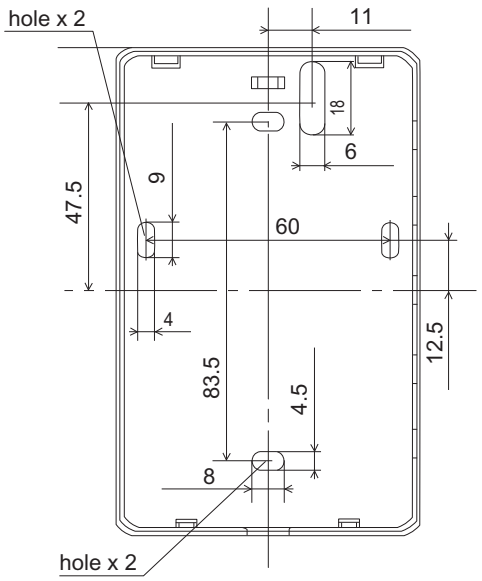
■ DIMENSIONS

[Unit : mm]



Front View

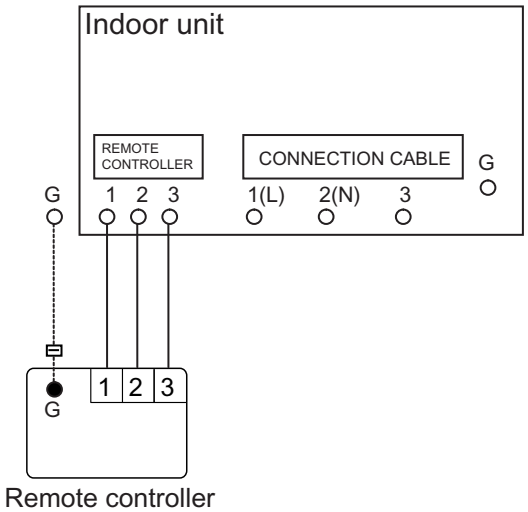
Side View



Rear View

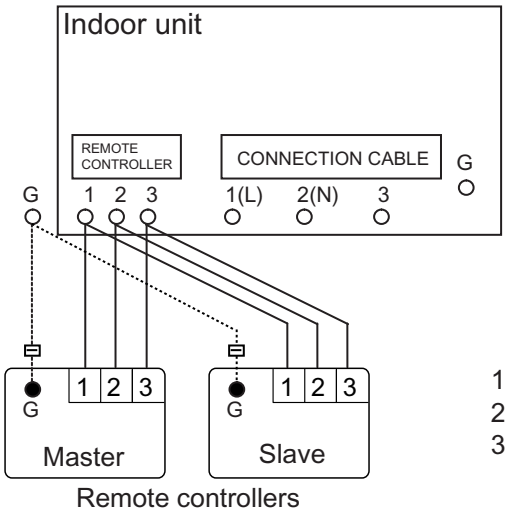
■ ELECTRICAL WIRING

● 1 remote controller



Remote controller

● 2 remote controllers



Remote controllers

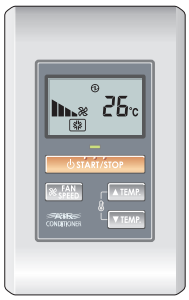
1 (RED) : 12V
2 (WHITE) : Signal
3 (BLACK) : COM

2-2-6. SIMPLE REMOTE CONTROLLER (Without MASTER CONTROL)

Model : UTB -✱RA (Market region Y or G or T)

A part of function is limited. It is recommended to use it together with other type controller.

■ FEATURES



- ✱ Easy operation.
- ✱ Built-in Back Light function.
- ✱ Easy installation with a slim shape with no bulge in the back.
- ✱ Error history.(Last 16 error codes can be accessed.)
- ✱ Up to 16 indoor units can be simultaneously controlled.
- ✱ Can be installed onto SW-BOX. (applies to European and other country's standard)
- ✱ Concentrates on the basic operations such as On/Off, Fan Control, and Temperature Setting.

● User-friendly operation

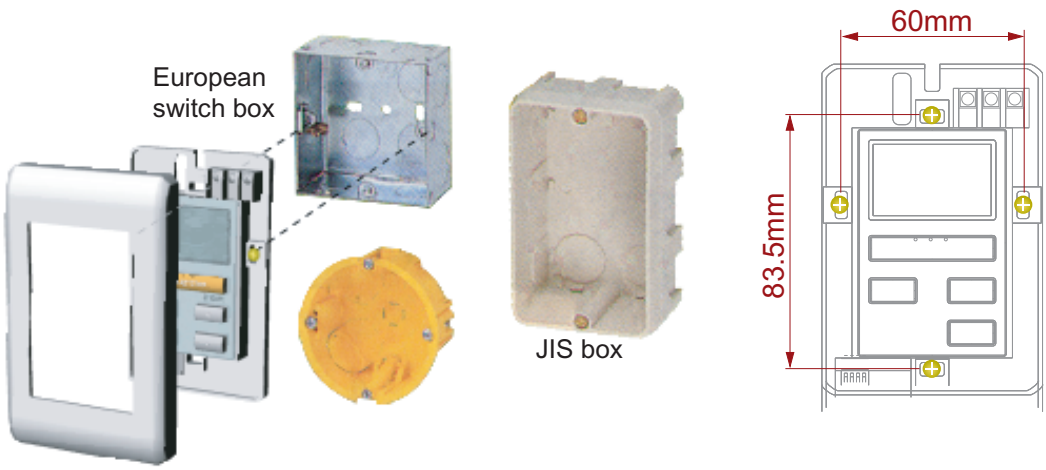
- ✱ Provides access to basic operations, such as Start / Stop, Fan Control, and Temperature Setting.
- ✱ A large Start / Stop button is provided in the centre of the remote controller unit for easy operation.
- ✱ Following an error display, diagnostics can be carried out on the controller.

● Back ground light

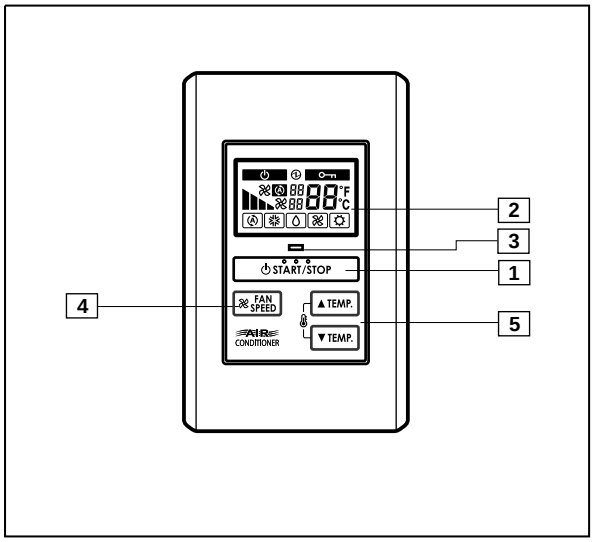
- ✱ Backlight enables easy operation in a darkened room.
- ✱ Backlight activates during all button operations, and lasts 10 seconds in operating mode and 5 seconds in stop mode after a button is pressed.

● Simple installation

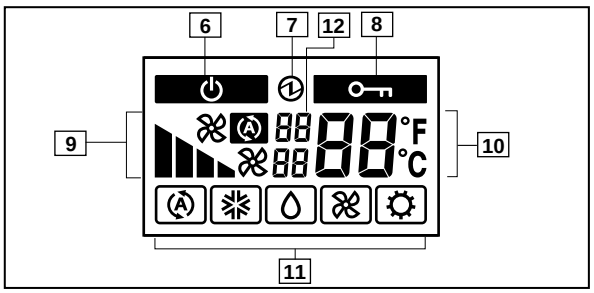
- ✱ Can be mounted on the European mounting Box (installation dimension: 60mm) or the JIS Built-in Box (installation dimension: 83.5mm).



■FUNCTIONS



Display panel



1 START/STOP button
Pressed to start and stop operation

2 Display background light
Lights during operation.

3 Operation lamp
Lights during operation.

4 Fan control button
Selects the fan speed (AUTO, HIGH, MED, LOW).

5 Set temperature button
Selects the setting temperature.(18-30°C[COOL], 16-30°C[HEAT])

6 Standby display
Indicates during the oil recovery and defrosting operation.

7 Power source display
Indicates the main power ON.

8 Central control display
Indicates when function is locked from central remote controller or PC controller.

9 Fan speed display

10 Set temperature
Indicates Error history number.✱2)
Indicates Indoor unit address. ✱3)

11 Operation mode display

12 (Upper) Indicates the error code✱1)✱2) / the refrigerant system address.✱3)
(Lower) Indicates the remote controller address. ✱1)✱2)✱3)

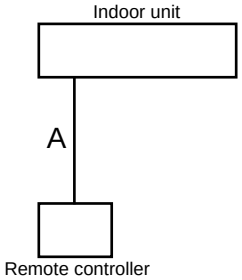
✱1) during self Diagnosis mode.
✱2) during Error code history display mode.
✱3) during address display mode.

■SPECIFICATIONS

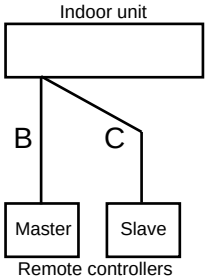
Model name	UTB - ✱ RA
Size [H x W x D (mm)]	120 x 75 x 14
Weight (g)	90

■ SYSTEM DIAGRAM

● 1 remote controller



● 2 remote controllers



A , B , C : Remote controller cable. Refer to 5-2-1 for detail specifications.
A ≦ 500m ; B+C ≦ 500m

■ PACKING LIST

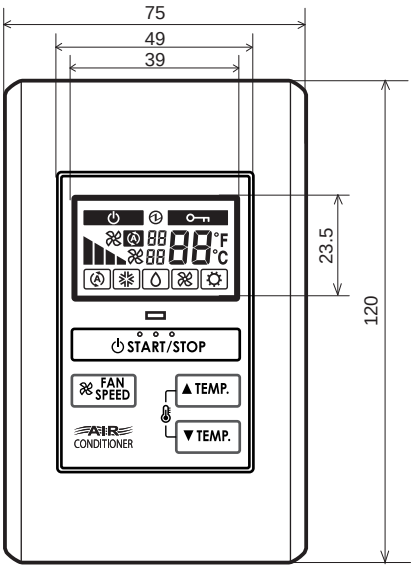
Name	Quantity	Application
Simple remote controller	1	
Remote controller cable ✱4)	10m	For connecting the remote controller (Exclude some models)
Tapping screw(M4x16mm)	2	For installing the remote controller
Binder	1	For remote controller and remote controller cable binding

✱4) If necessary , use shielded cable (Field supply) in accordance with the standard of the country.

CONTROL SYSTEM

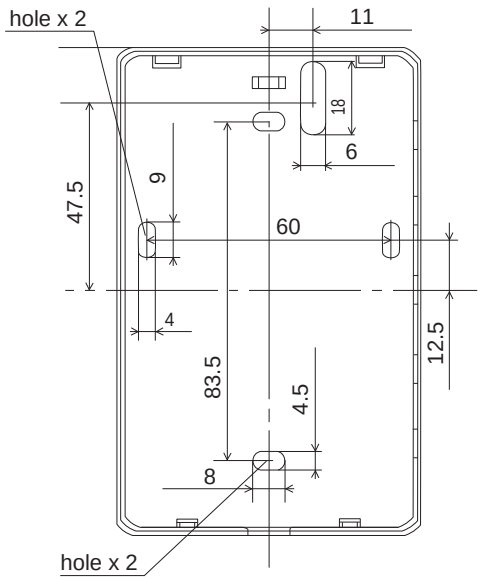
■ DIMENSIONS

[Unit : mm]



Front View

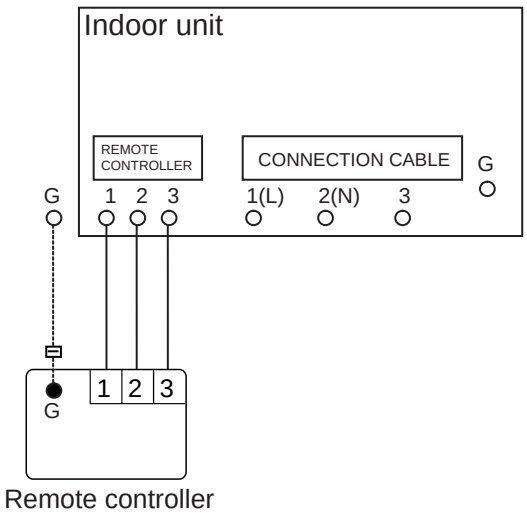
Side View



Rear View

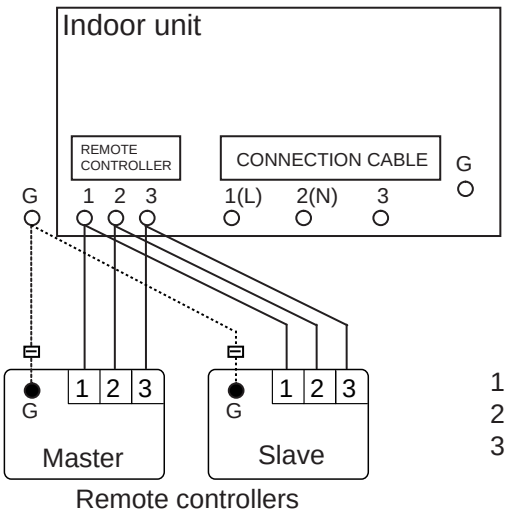
■ ELECTRICAL WIRING

● 1 remote controller



Remote controller

● 2 remote controllers



Remote controllers

1 (RED) : 12V
2 (WHITE) : Signal
3 (BLACK) : COM

2-2-7. WIRELESS REMOTE CONTROLLER

Model : UTB -✱VB (Market region Y or G)

■ FEATURES

- ✳ Four kinds of timer setup (ON / OFF / PROGRAM / SLEEP) are possible.
- ✳ Up to 16 indoor units connected within the remote controller group can be simultaneously controlled.
- ✳ Can be used jointly with wired remote controllers .
- ✳ Easy to change custom code (4 patterns) by button operation.

● Built-in timers

Select from four different timer programs (On / Off / Program / Sleep).

● Program timer

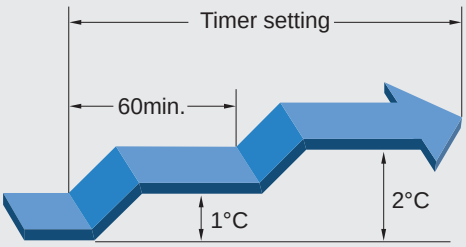
The program timer operates the ON and OFF timer once within a 24 hour period.

● Sleep timer

The sleep timer function automatically corrects the temperature thermostat setting according to the time setting to prevent excessive cooling and heating while sleeping.

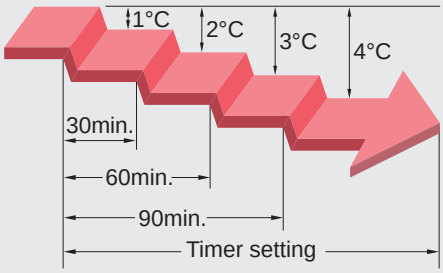
Cooling operation / dry operation

When the sleep timer is set, the set temperature automatically rises 1°C every hour. The set temperature can rise up to a maximum of 2°C.

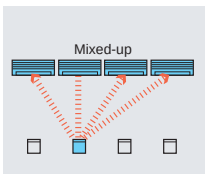


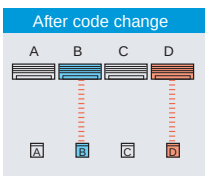
Heating operation

When the sleep timer is set, the set temperature automatically drops 1°C every 30 minutes. The set temperature can drop to a maximum of 4°C.

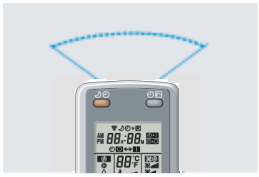


● Easy installation and operation





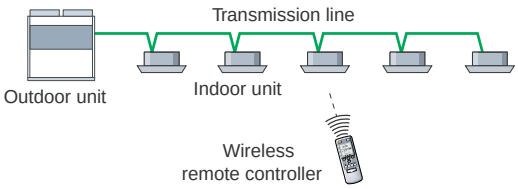
• Code selector switch eliminates unit being wrongly switched.
(Up to 4 codes can be set.)



• Wide and precise transmitting range.

● System addressing

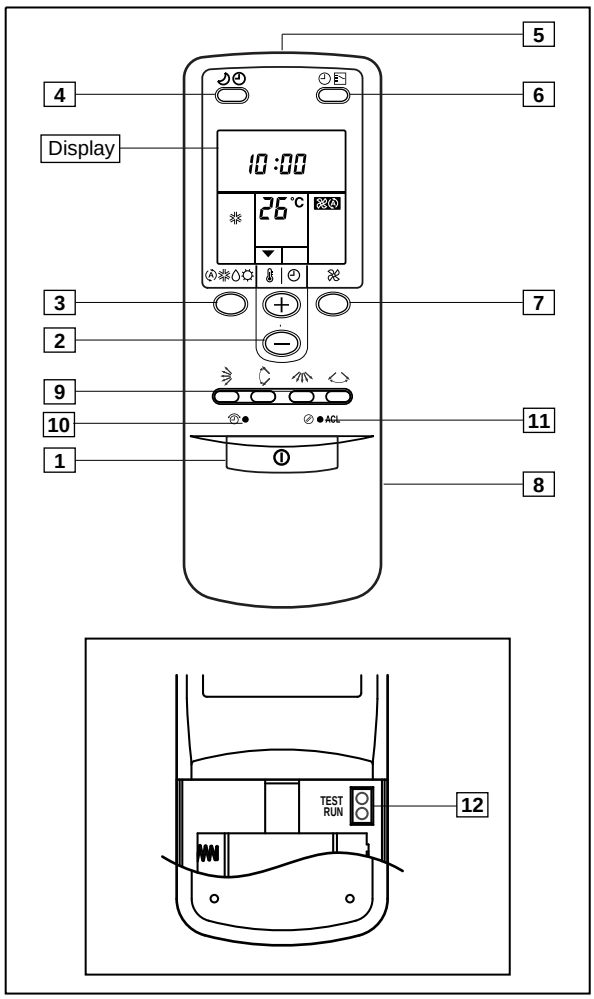
• During installation work, system addressing can be performed using the wireless remote controller, thus eliminating manual switch setting.



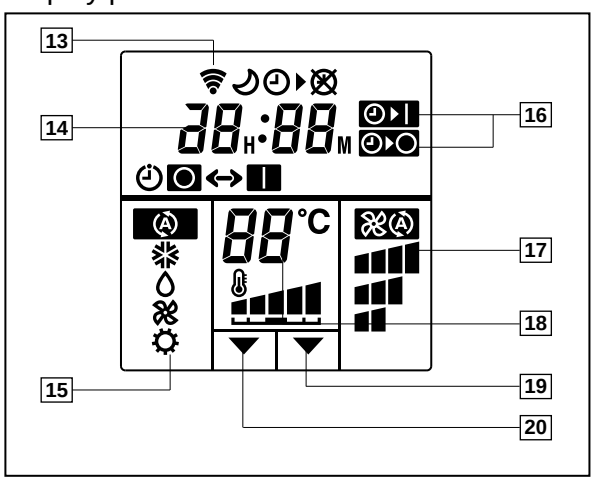
Note : Timer setting from a wireless remote controller becomes invaild, if the indoor unit is connected with a wired or a simple remote controller.

CONTROL SYSTEM

■ FUNCTIONS



Display panel



1 START/STOP button
Pressed to start and stop operation

2 Set temp./Set time buttons/Set remote controller custom code buttons
Sets the indoor temp.(From 18-30℃ [Cool] , 16-30℃ [Heat])
Sets the current time and on-off time
Sets R.C. custom code

3 Master control button/Code change
Selects the operating mode (AUTO Ⓐ※1, COOL❄ , DRY◊ , FAN※ ※1 , HEAT☼ ※2).
Start/end R.C. custom code change. (Max. 4 types)

4 Sleep timer button
Pressed to select sleep timer.

5 Signal transmitter

6 Timer button
Pressed to select the timer mode. (OFF TIMER, ON TIMER, PROGRAM TIMER, TIMER RESET)

7 Fan control button
Selects the fan speed (AUTO※Ⓐ, HIGH ,MED ,LOW).

8 Battery compartment lid

9 Air flow direction button
Used to set the desired air flow direction & swing function.

10 Time adjust button
Sets the current time.

11 ACL button
Used when replacing batteries or change the code.

12 Test run button
Used when testing the air conditioner after installation.

13 Transmit indicator

14 Clock display

15 Master control display

16 Timer mode display

17 Fan speed display

18 Set temperature display

19 Timer set indicator

20 Temperature set indicator

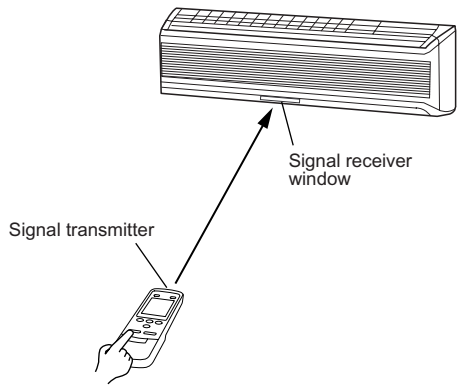
NOTE
※1 : "AUTO Ⓐ" and "FAN※" cannot be selected for "HEAT PUMP TYPE"
※2 : "HEAT☼" cannot be selected for "COOLING ONLY TYPE"

CONTROL SYSTEM

■ SPECIFICATIONS

Model name	UTB - ✱ VB
Size [H x W x D (mm)]	158 x 56 x 20
Weight (g)	70

■ SYSTEM DIAGRAM



✱ Control signal might not be recognized in following cases:
(i) A curtain or a wall, etc. exists between transmitter and receiver.
(ii) There is an instant-start type (inverter type, etc.) fluorescent lamp in the room.

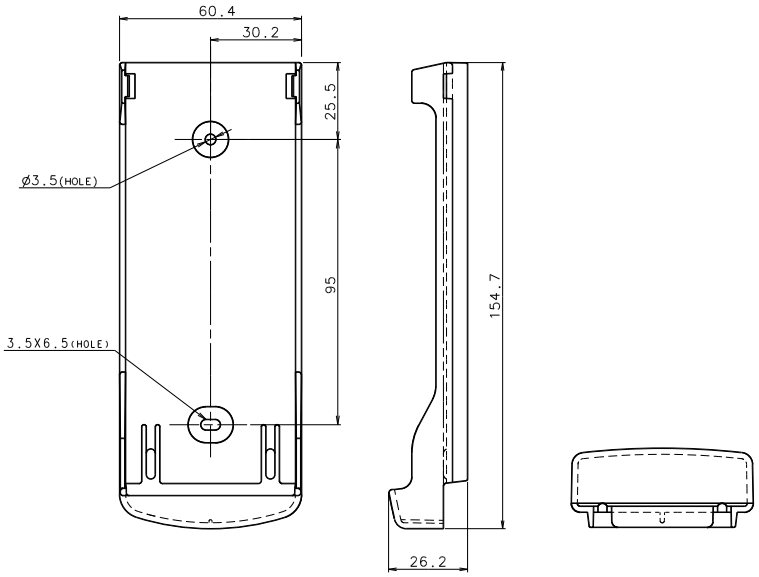
✱ Air conditioner might not work correctly when strong light hits the signal receiver window. Shut off the direct sunlight and also make illuminator far away from the receiver window.

■ PACKING LIST

Name	Quantity	Application
Remote controller	1	Use for air conditioner operation
Remote controller holder	1	Use as remote controller holder
Tapping screw	2	For remote controller holder installation
Battery [1.5V (R03 / LR03 / AAA) x 2]	2	For remote controller

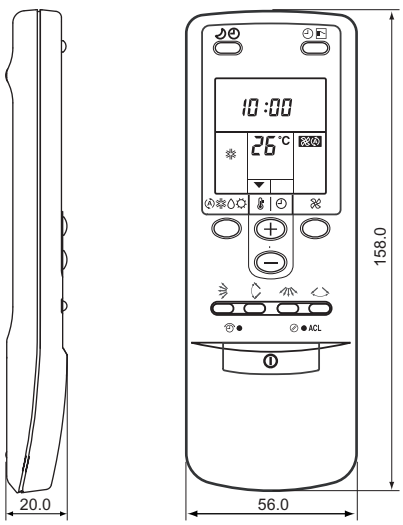
■ DIMENSIONS [Unit : mm]

● Holder



Front view Side view Bottom view

● Controller

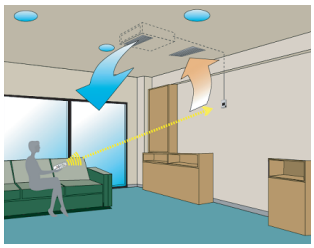


Side view Front view

2-2-8. IR RECEIVER UNIT

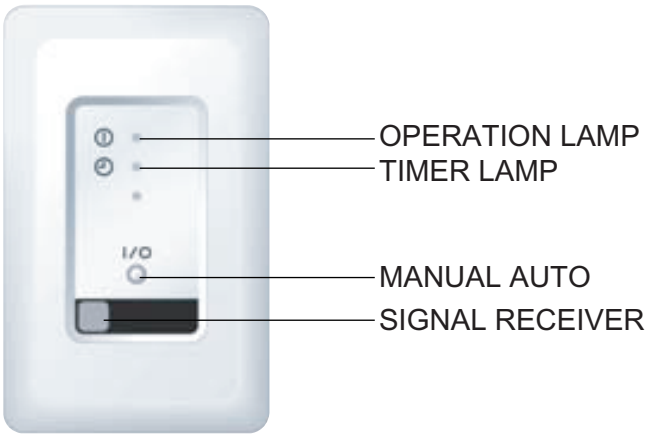
Model : UTB -∗WA (Market region Y or T)

■FEATURES



Duct type indoor unit can be controlled with wireless remote controller if the IR receiver unit is used.

■FUNCTIONS

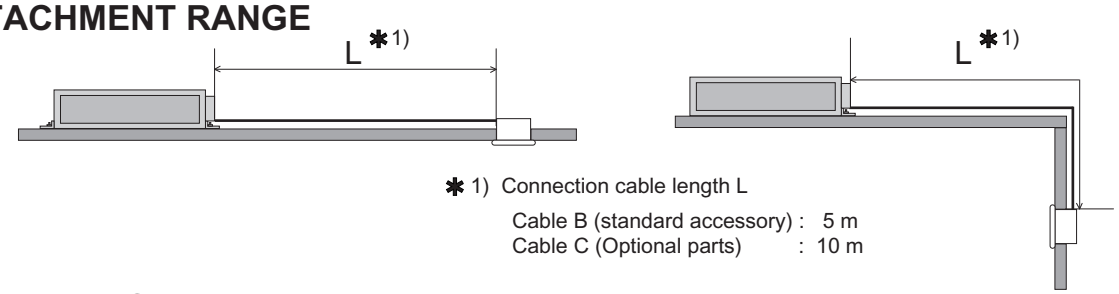


■SPECIFICATIONS

Model name	UTB - ∗ WA
Size [H x W x D (mm)]	145 x 90 x 30
Weight (g)	150

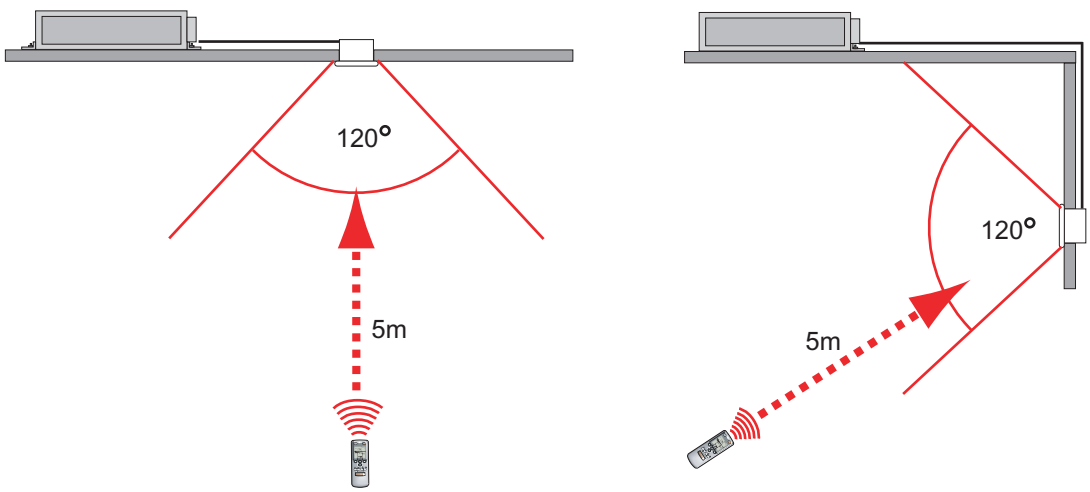
■SYSTEM DIAGRAM

●ATTACHMENT RANGE



✱1) Connection cable length L
Cable B (standard accessory) : 5 m
Cable C (Optional parts) : 10 m

●SIGNAL ANGLE



CONTROL SYSTEM

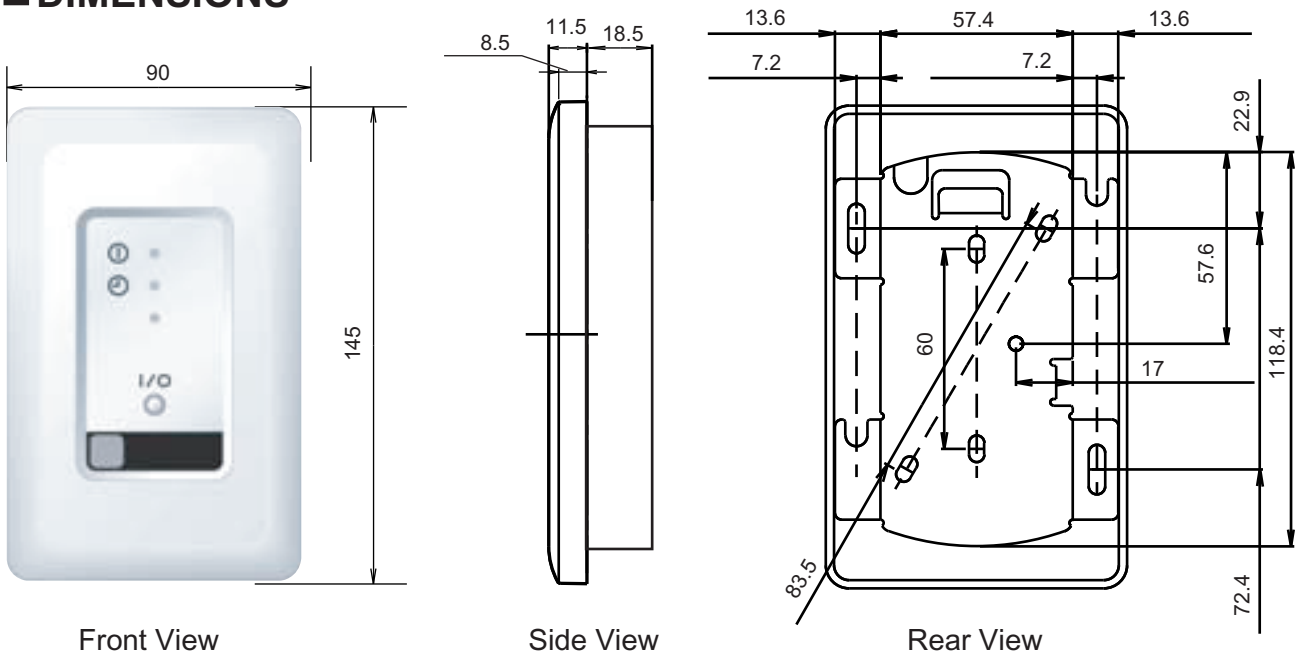
CONTROL SYSTEM

■ PACKING LIST

Name	Quantity
Holder (PCB)	1
PCB assy	1
Bracket (Holder)	1
Holder cover	1
Screw	4
Connection cable B (5m)	1

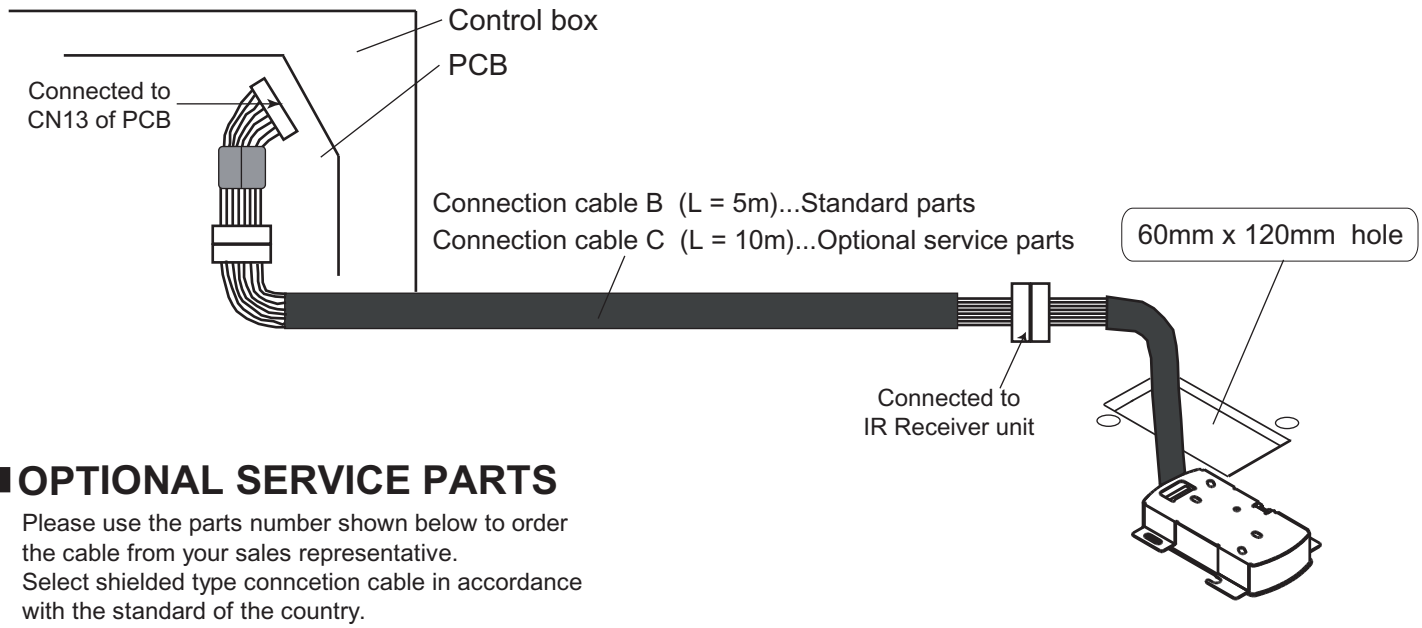
■ DIMENSIONS

[Unit : mm]



Front View　　Side View　　Rear View

■ ELECTRICAL WIRING



■ OPTIONAL SERVICE PARTS

Please use the parts number shown below to order the cable from your sales representative.
Select shielded type conncetion cable in accordance with the standard of the country.

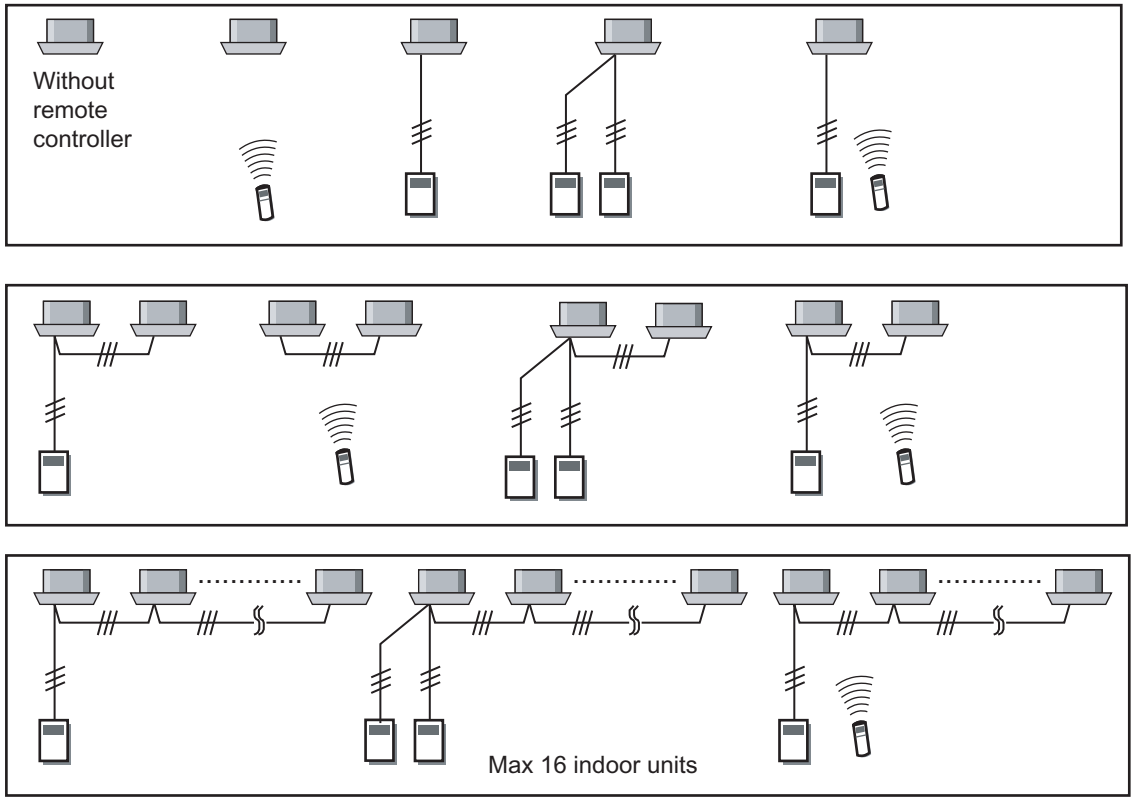
Parts name	Type	Parts No.
Connection cable C	Non-shielded	9378143012
	Shielded	9378143036

2-2-9. GROUP CONTROL METHOD

■ REMOTE CONTROLLER GROUP

✳ Wired, wireless and simple remote controllers can be used jointly in the following combinations.

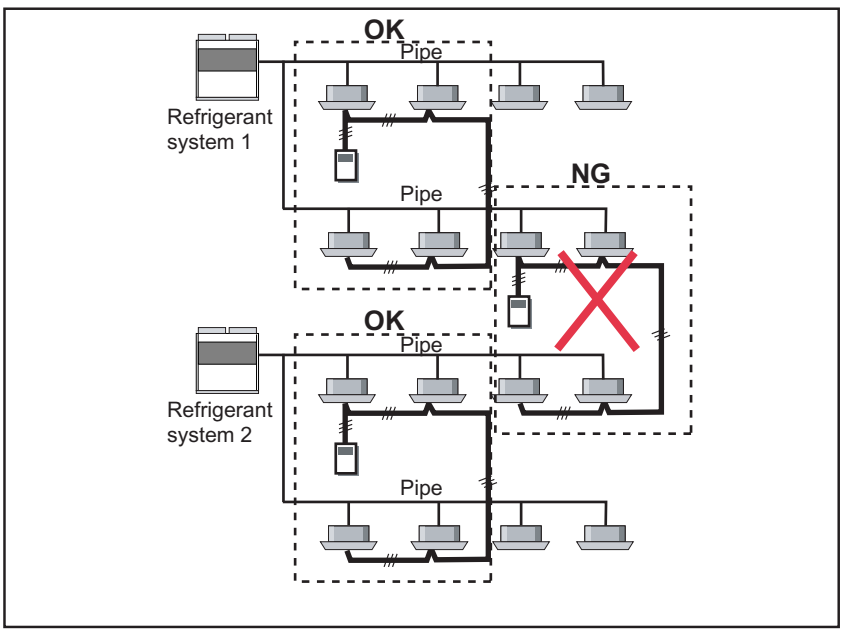
Example of combination for "Remote controller group"



Connectable indoor unit : 1-16
Connectable remote controller : 0 - 2

● Note

1. Indoor units in same remote controller group will be same operation.
2. "Remote controller group" spanning the refrigerant system is not allowed.



3. When using 2 remote controller.

✳ Last command is priority.
(operation mode might be fixed by system operation.)

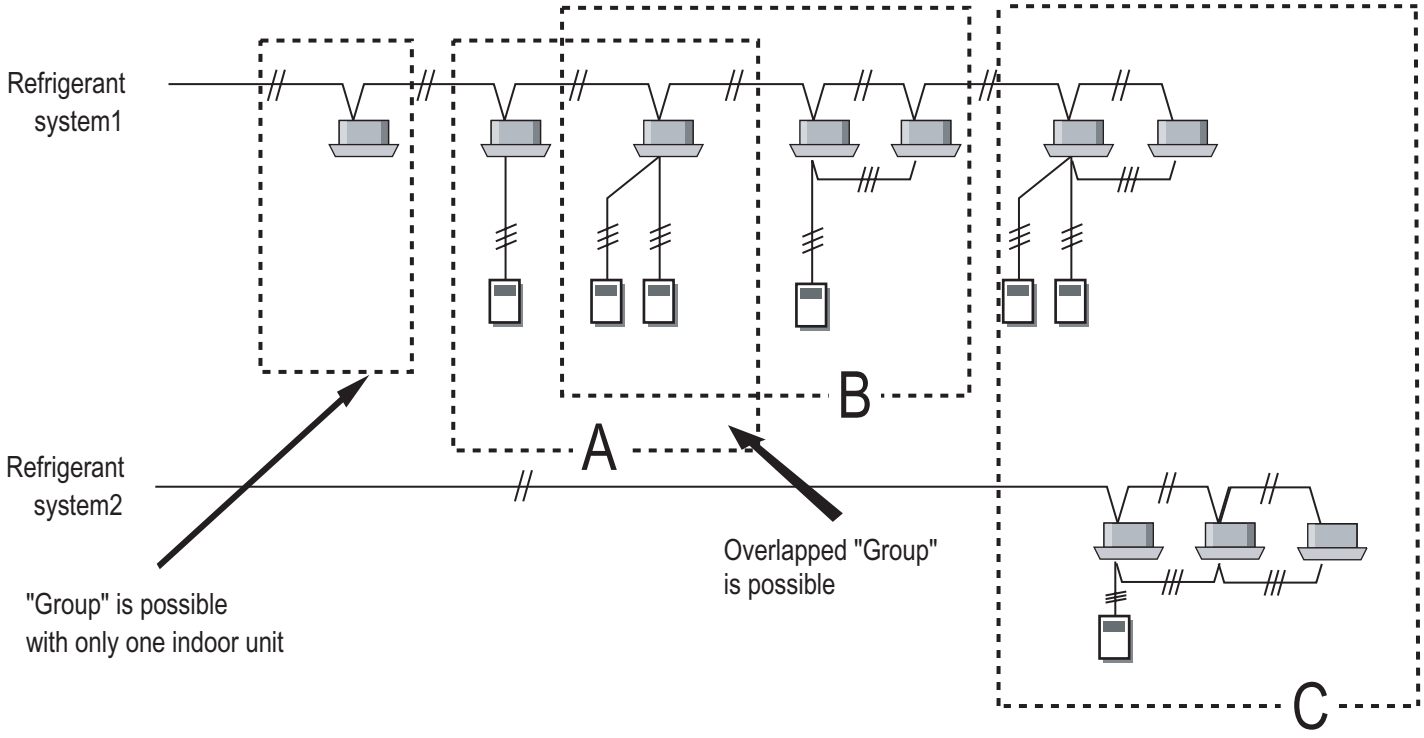
✳ Timer setting function become invalid for slave remote controller or wireless remote controller.

CONTROL SYSTEM

■ GROUP

This function is used when operating a multiple number of remote controller group at one time from the central remote controller or PC controller.

Example of "Group"



* Operation of either A group or B group is possible.
* Simulataneous operation of A group and B group is possible. (Last setting has priority)
* As shown in drawing "C","Group" spanning the refrigerant systems is possible.
* It is very convenient that PC controller can assign the title on each group.

2-2-10. COMPARISON TABLE OF CONTROLLERS

■ LIST OF CONTROLLER FUNCTION

Item		PC controller (software)	Central remote controller	Group remote controller	Wired remote controller	Wireless remote controller	Simple remote controller	Simple*2 remote controller
Model		UTR-YOTB	UTB-YCA UTB-GCA	UTB-YDB UTB-GDB	UTB-YUB UTB-GUB UTB-TUB	UTB-YVB UTB-GVB	UTB-YPB UTB-GPB UTB-TPB	UTB-YRA UTB-GRA UTB-TRA
Max. controllable remote controller groups		400	400	8	1	1	1	1
Max. controllable indoor units		400	400	32	16	16	16	16
Max. controllable groups		400	64	—	—	—	—	—
Air conditioning control function	On / Off	●	●	●	●	●	●	●
	Operating mode setting	●	●	●	●	●	●	—
	Fan speed setting	●	●	●	●	●	●	●
	Room temp. setting	●	●	●	●	●	●	●
	Test operation	●	●	—	●	●	●	—
	Up / down air direction flap setting	●	●	—	●	●	—	—
	Right / left air direction flap setting	●	●	—	●	●	—	—
	Auto restart *1	●	●	●	●	●	●	●
	Group setting	●	●	—	—	—	—	—
	RC prohibition	●	●	—	—	—	—	—
Display	Failure	●	●	●	●	—	●	●
	Defrosting	●	●	—	●	—	●	●
	Current time	●	●	●	●	●	—	—
	Day of week	●	●	●	●	—	—	—
	RC prohibition	●	●	—	●	—	●	●
	Cooling / heating priority	●	●	●	●	—	●	●
	Address display	●	●	●	●	—	●	●
Timer	On / Off timer	●	●	—	●	●	—	—
	Weekly timer	●	●	●	●	—	—	—
	Sleep timer	—	—	—	—	●	—	—
	Program timer	—	—	—	—	●	—	—
	On / Off per day	72	2	2	2	1	—	—
	On / Off per week	504	14	14	14	—	—	—
	Day off	●	●	—	●	—	—	—
	Min. unit of timer setting (Minutes)	10	10	10	30	5		
Control	Status monitoring system	●	—	—	—	—	—	—
	Electricity charge calculation	●	—	—	—	—	—	—
	Error history	●	●	●	●	—	●	●

*1. Auto restart can be set by DIP switch on PCB inside of indoor unit.
*2. This controller is not available "master control" function.

2-3. ADAPTOR / CONVERTOR UNITS

The following types of convertors and adaptors are available with the FUJITSU GENERAL LIMITED'S VRF network system.

CONTROL SYSTEM

- **Network Convertor (UTR-YRDA)**

  ① To be used for connecting single split type system with VRF network system
  (A change of DIP switch setting is necessary)

  ② To be used for connecting group remote controller(s) with VRF network system

- **Network Convertor for LONWORKS® (UTR-YLLA)**

  For connection between VRF system and a LONWORKS® open network for management of small to medium-sized BMS and VRF network system.

- **BACnet® Gateway (UTR-YLBA : Software)**

  The central control of maximum 1600 indoor units can be realized by connecting the VRF network system to the BACnet, a global standard for open networks.

- **Signal Amplifier (UTR-YRPC)**

  When the total length of transmission line exceeds 500m, or the number of units exceeds 64, Signal amplifier will be necessary.

- **Transmission Adaptor (UTR-YTMA)**

  For the air condition of the medium and large size building, the control software can control and monitor the air conditioners together with the ones in the other buildings.

- **External Switch Controller (UTR-YESA)**

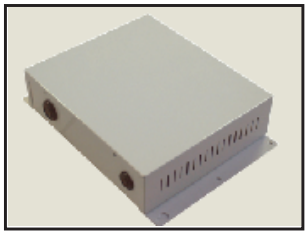
  Air conditioner switching can be controlled by connecting other sensor switches.

2-3-1. NETWORK CONVERTOR

Model : UTR - YRDA

① To be used for connecting single split type system with VRF system
[A change of DIP switch setting is necessary]

■ FEATURES



- ✳ With this network convertor, single split type, big multi type and J series air conditioners can be controlled by central remote controller, PC controller in VRF network system or by wired remote controller that is connected to the Network convertor.
- ✳ ON/OFF, operation mode, temperature setting, fan speed, etc. can be done with these controllers.
- ✳ Up to 16 indoor units can be connected to and controlled with one network convertor.
- ✳ 2 wired remote controllers are possible for one network convertor.
- ✳ Up to 100 network convertors can be connected in one VRF network system. (One Network convertor is regarded as one refrigerant system. The total refrigerant systems in one VRF network system must be within 100.)

■ APPLICABLE MODELS

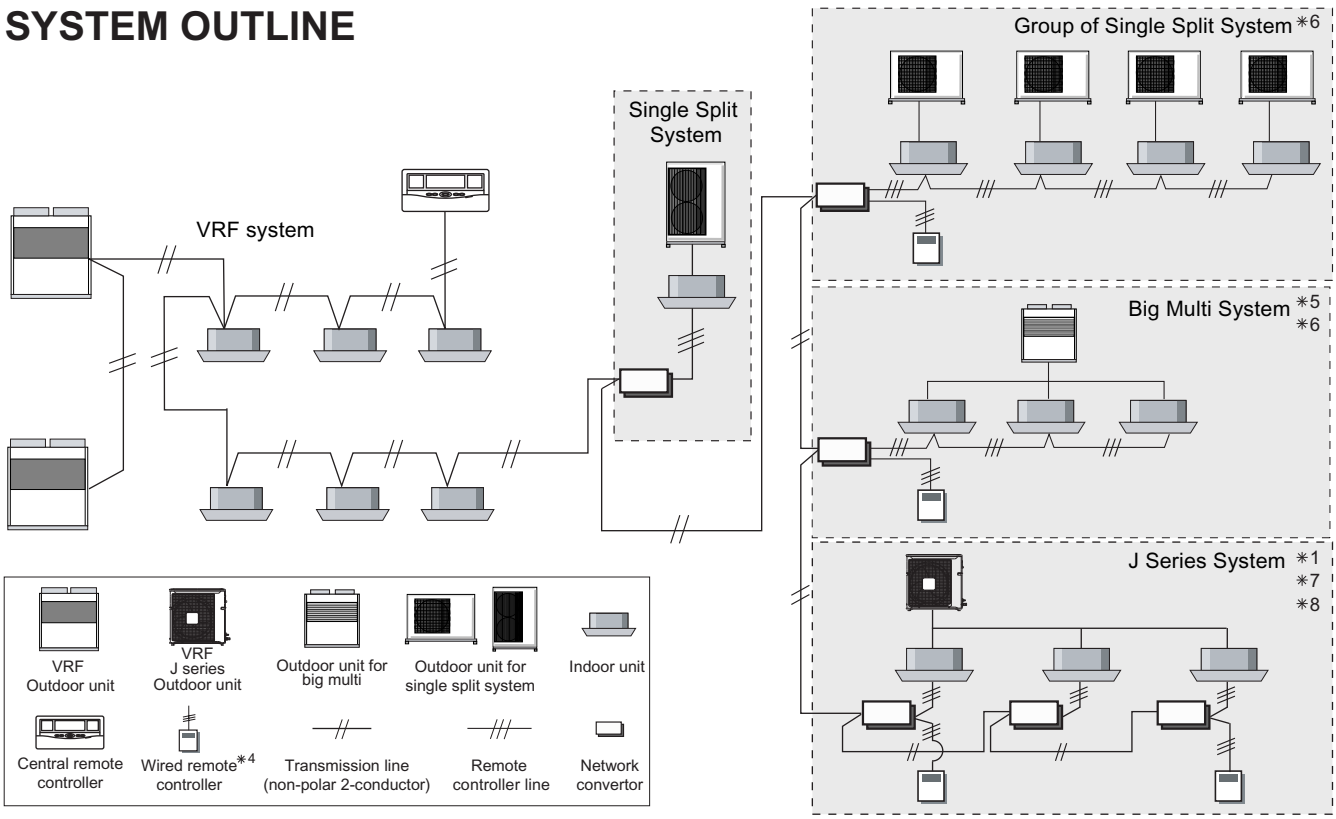
J series		○ ✳1
Big Multi type	Simultanuous model	○
	Individual model	○
Single Split type	Wired RC model ✳2✳3	○
	Wireless RC model	×
Window type		×

✳1 Network convertor is necessary for each indoor unit.

✳2 There is inadaptable model in old type.Contact the authorized sales company for confirmation of these models.

✳3 Indoor units which can be controlled from a network convertor are denoted by 'L' , 'U' or 'F' as the control method (remote controller), except the following models.
AR✱7RLB , AR✱9RLB , AR✱12RLB , AR✱14RLB , AR✱18RLB , AR✱18RLBH , AR✱9ALA , AR✱9ALB , AR✱18ALBH , AR✱7ELA , AR✱9ELA , AR✱12ELA , AR✱14ELA , AR✱18ELA.

■ SYSTEM OUTLINE



✳4 When connecting an indoor unit that has an 'L' control method, connect the remote controller for VRF (UTB - ✱U✱, UTB - ✱R✱ and UTB - ✱P✱) to control from a wired remote controller. Do not connect the wired remote controller included with the indoor unit.

✳5 Connect one big multi system to one network convertor. Don't connect two big multi system, or one big multi system and one single split system to one network convertor.

✳6 All indoor units connected to a network convertor are operating under same status.

✳7 For controlling J series system, same operation mode should be used in same refrigerant system. When indoor unit is set in different operation mode via central control unit, indoor unit might be in stand by mode.

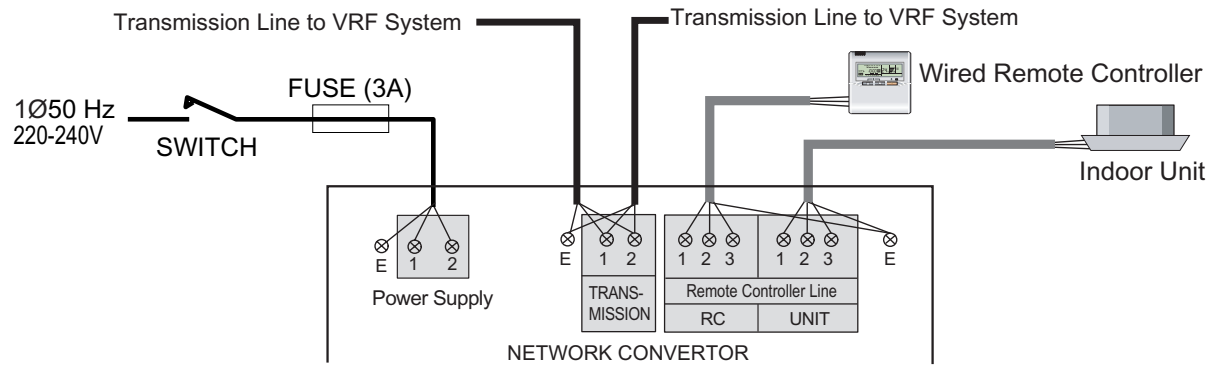
✳8 For using J series heat pump system, "AUTO" and "FAN" mode should not be used.

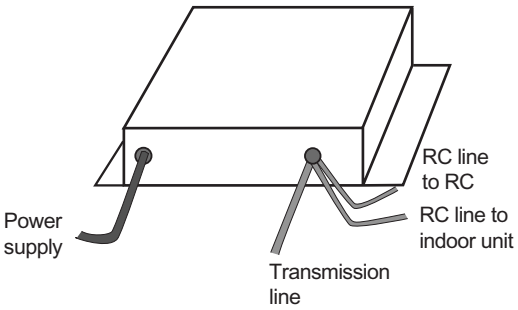
CONTROL SYSTEM

■ FUNCTIONS

- ✳ ON / OFF
- ✳ MASTER CONTROL
- ✳ FAN CONTROL
- ✳ TEMPERATURE CONTROL
- ✳ TIMER SETTING
- ✳ CENTRAL CONTROL (Lock the remote controller functions)

■ ELECTRICAL WIRING





*Do not bind the power cable and remote controller cable to avoid an erroneous operation.

**Use shield cable for transmission line and remote controller line. The shield metal should be grounded.

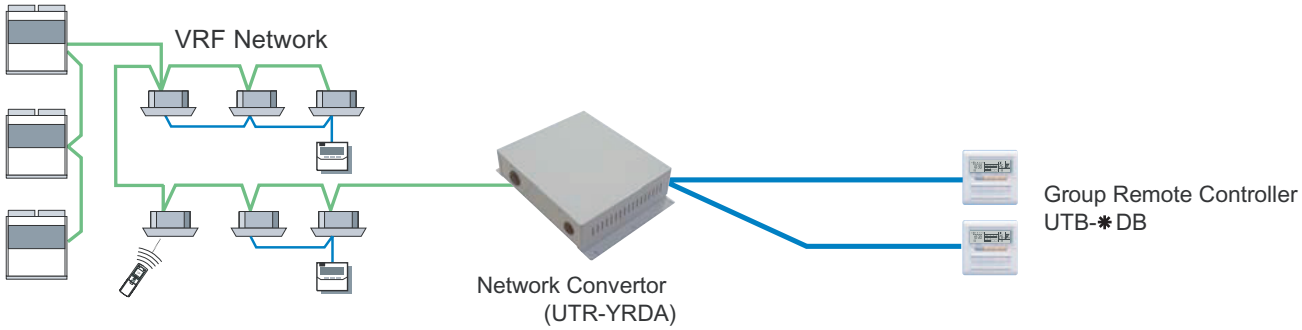
***Use ground wire to ground the network convertor.

② To be used for connecting group remote controller(s) with VRF system

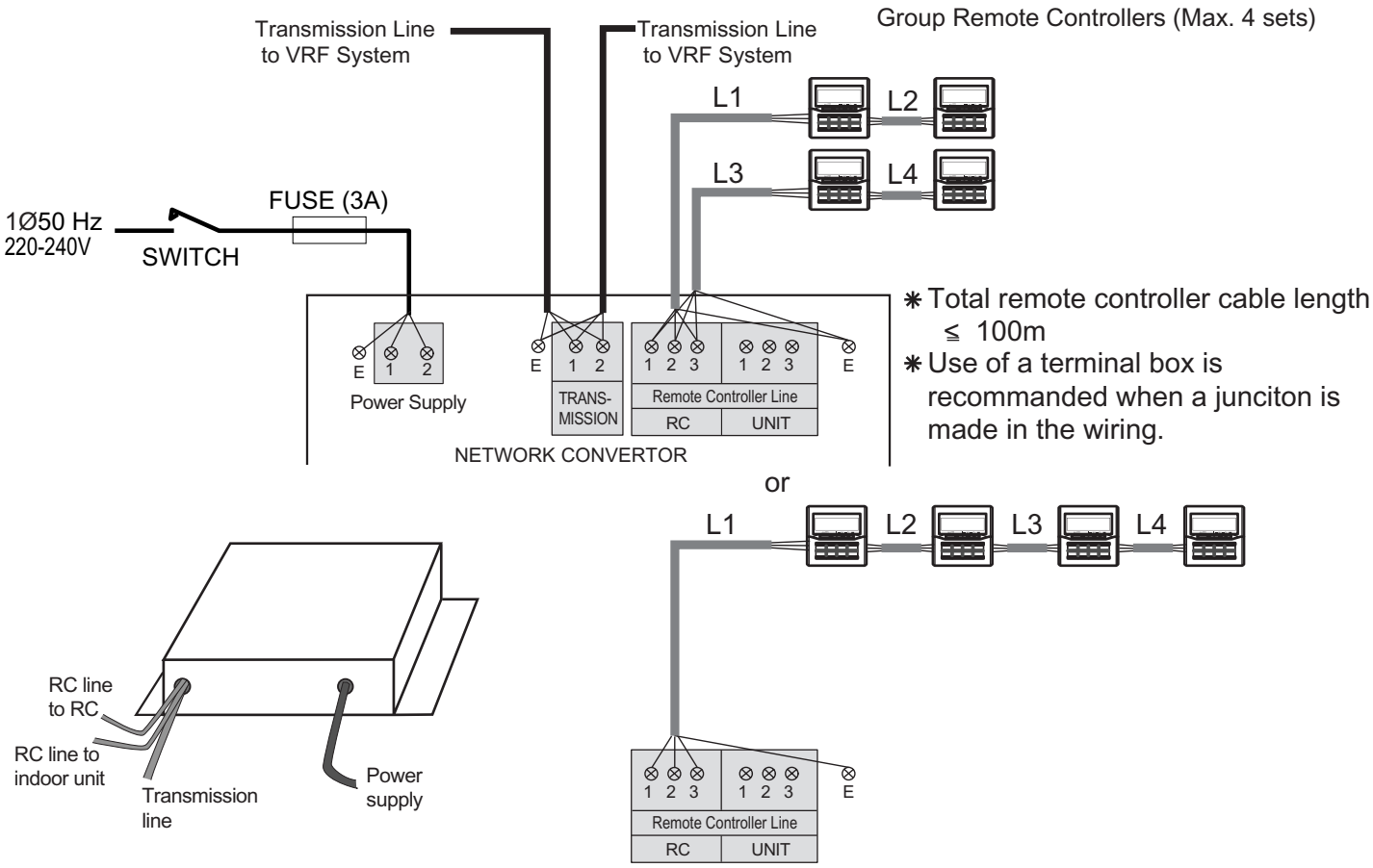
■ FEATURES

- ✳ Up to a total of 16 network convertors and central remote controller can be connected in one VRF network system.
- ✳ Four group remote controllers can be connected to one network convertor.
- ✳ Two refrigerant systems can be covered by one network convertor.

■ SYSTEM OUTLINE



■ ELECTRICAL WIRING



*Do not bind the power cable and remote controller cable to avoid an erroneous operation.

**Use shield cable for transmission line and remote controller line. The shield metal should be grounded.

***Use ground wire to ground the network convertor.

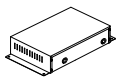
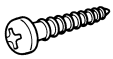
CONTROL SYSTEM

■ SPECIFICATIONS

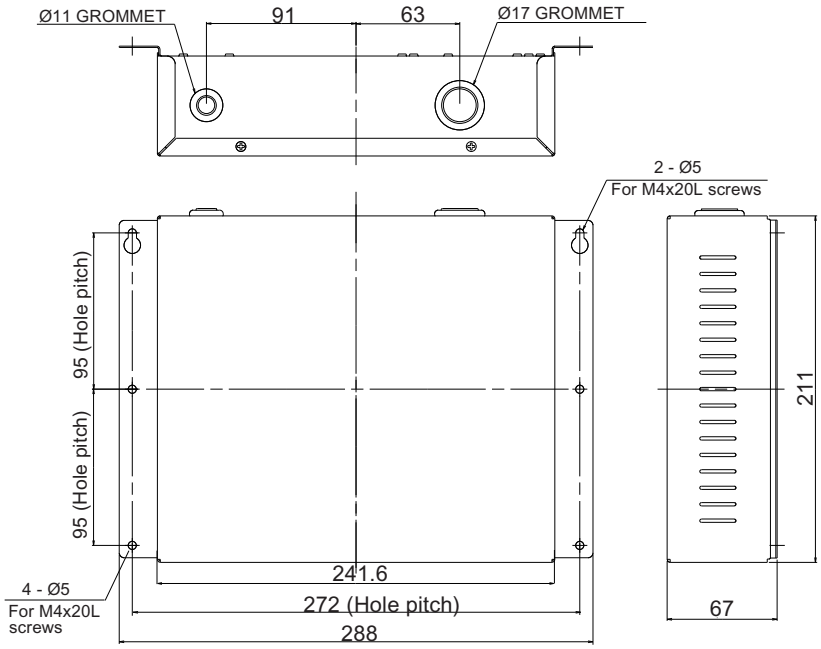
Power supply	50-60Hz 220-240V
Power consumption (W)	6.5
Size (H X W X D) (mm)	67 X 288 X 211
Weight (g)	1500

■ PACKING LIST

The following installation parts are supplied. Use them as required.

Name/Illustration	Qty.	Application
Network convertor 	1	
Binder (Push Mount)	3	For mounting the power supply cord, remote controller cord and transmission cord.
Wood screw (ϕ4 x 20) 	4	For mounting the network convertor.

■ DIMENSIONS



■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable (mm^2)	Maximum	1.25	H07RN-F or equivalent	Single phese wire 50Hz 220-240V * 2 wire + Ground
	Minimum	0.5		
Transmission cable (mm^2)	0.33 (22 AWG)		Shielded Level 4	Non-polar, Twisted pair, Solid core
Remote controller cable (mm^2)	0.33 (22 AWG)		Shielded cable	Polar 3-core
Fuse capacity (A)	3			

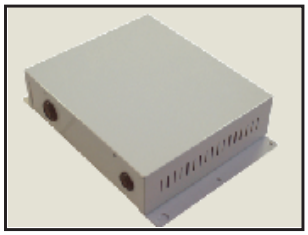
*Always ground the unit.

2-3-2. NETWORK CONVERTOR FOR LONWORKS®

Model : UTR - YLLA

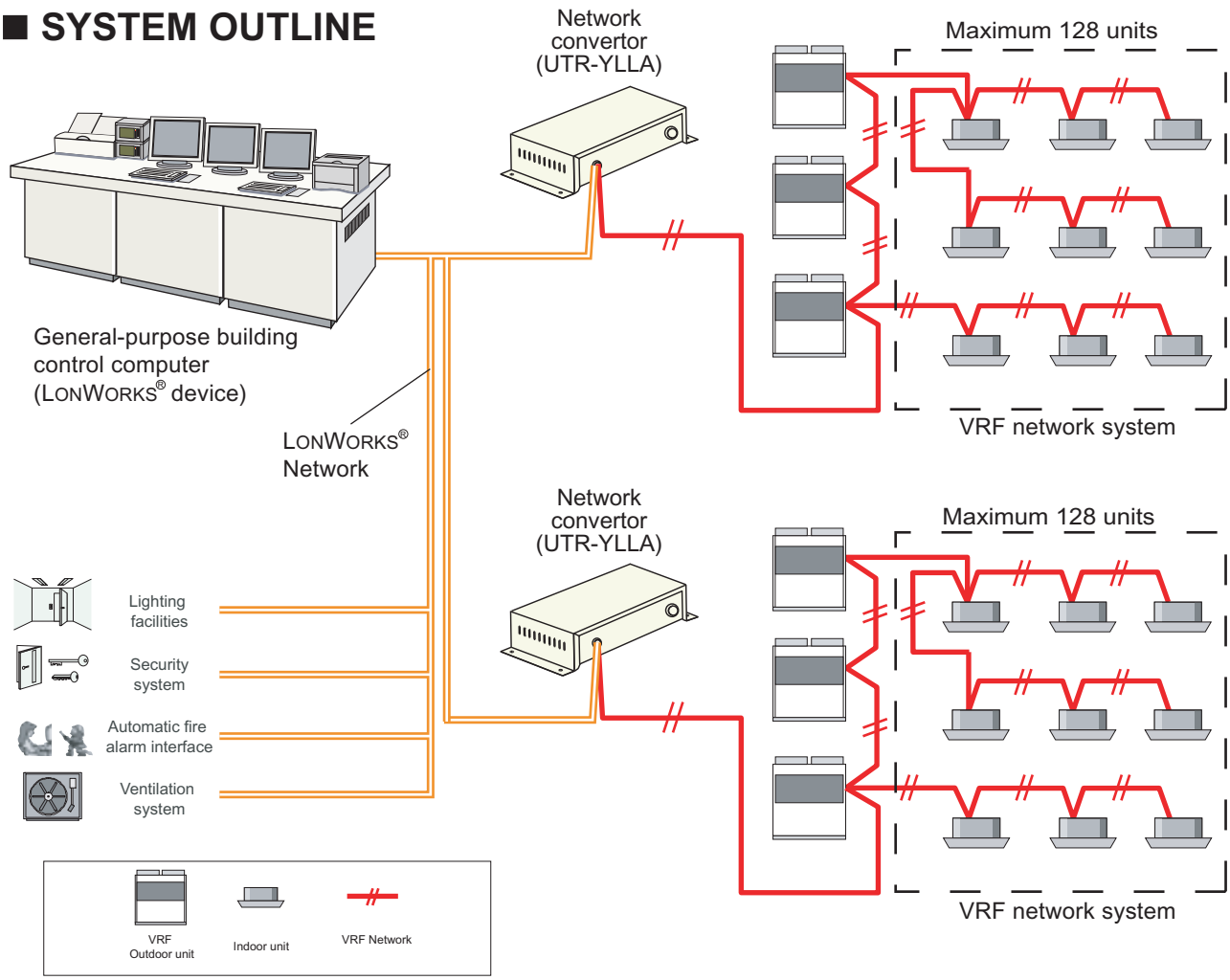
■ FEATURES

The convertor for connecting VRF network to the system built by LONWORKS® open network, for manage of small to medium-sized BMS and VRF network system.



* Up to 128 indoor units can be connected to one Network Convertor.
* By using UTR-YLLA , VRF system can be centrally controlled or monitored from BMS which has LONWORKS® interface.

■ SYSTEM OUTLINE



■ FUNCTIONS (Example)

Control
(LONWORKS® Network → VRF Network)

* Operation (ON / OFF)
* Operation Mode Setting
* Temperature Setting
* Fan Speed Setting
* R.C.prohibition
  (Lock the remote controller functions)

Monitor infomation
(LONWORKS® Network ← VRF Network)

* Operation Condition (ON / OFF)
* Operation Mode
* Set Temperature
* Fan Speed
* Error Display
* Central Control Display
  (Lock the remote controller functions)

CONTROL SYSTEM

■ SPECIFICATIONS

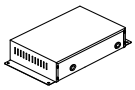
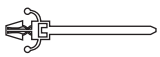
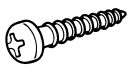
● Main specifications

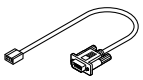
Power supply	50-60Hz 220-240V
Power consumption (W)	4.5
Size (H X W X D) (mm)	67 X 288 X 211
Weight (g)	1500

● Transmission specifications

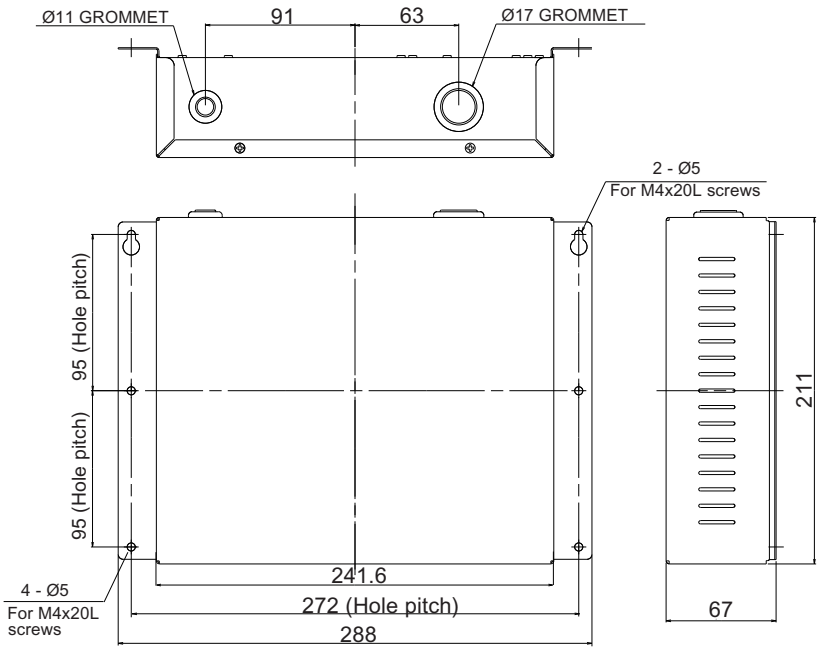
BMS SIDE	
Transmission speed	78kbps
Transceiver	FTT-10A
Transmission way form	Free topology
Termined resistor	None (It attaches at the terminal of a network.)

■ PACKING LIST

Name/Illustration	Qty.	Application
Network convertor 	1	
Binder (Push Mount) 	3	For mounting the power supply cord, and transmission cord.
Wood screw (ϕ4 x20) 	4	For mounting the network convertor.

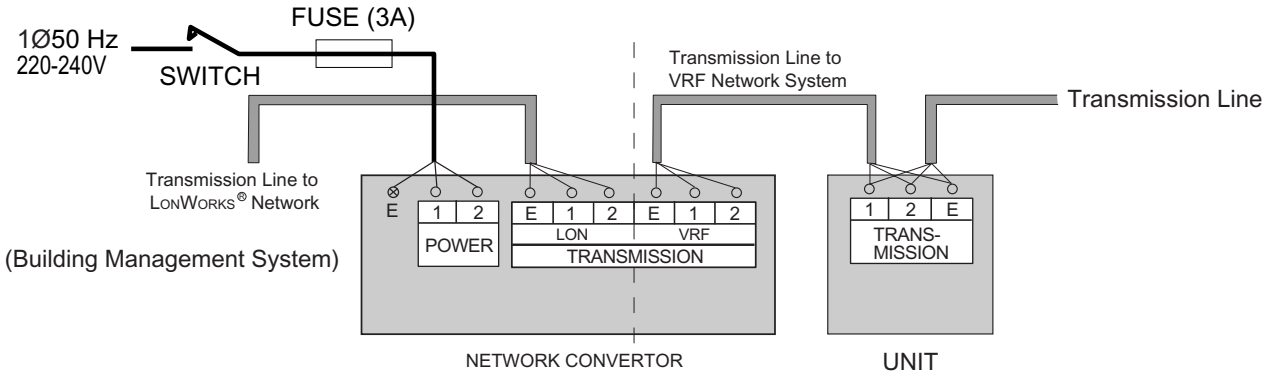
Name/Illustration	Qty.	Application
CD-ROM	1	For initial setting.
Connector cable 	1	For initial setting.

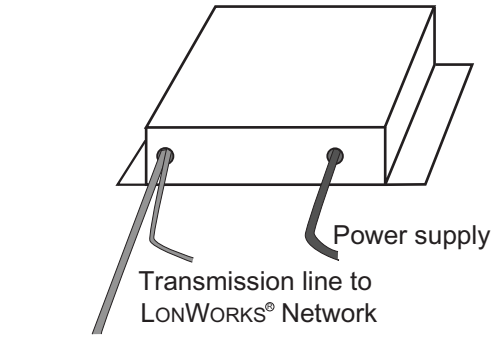
■ DIMENSIONS



CONTROL SYSTEM

■ ELECTRICAL WIRING





*Do not bind the power cable and remote controller cable to avoid an erroneous operation.

**Use shield cable for transmission line. The shield metal should be grounded.

***Use ground wire to ground the network convertor.

■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable (mm^2)	Maximum	1.25	H07RN-F or equivalent	Single phase 50Hz 220-240V * 2 wire + Ground
	Minimum	0.5		
Transmission cable (mm^2)	0.33 (22 AWG)		Shielded Level 4	Non-polar,Twisted pair, Solid core
Fuse capacity (A)	3			

*Always ground the unit.

2-3-3. BACnet® GATEWAY Software

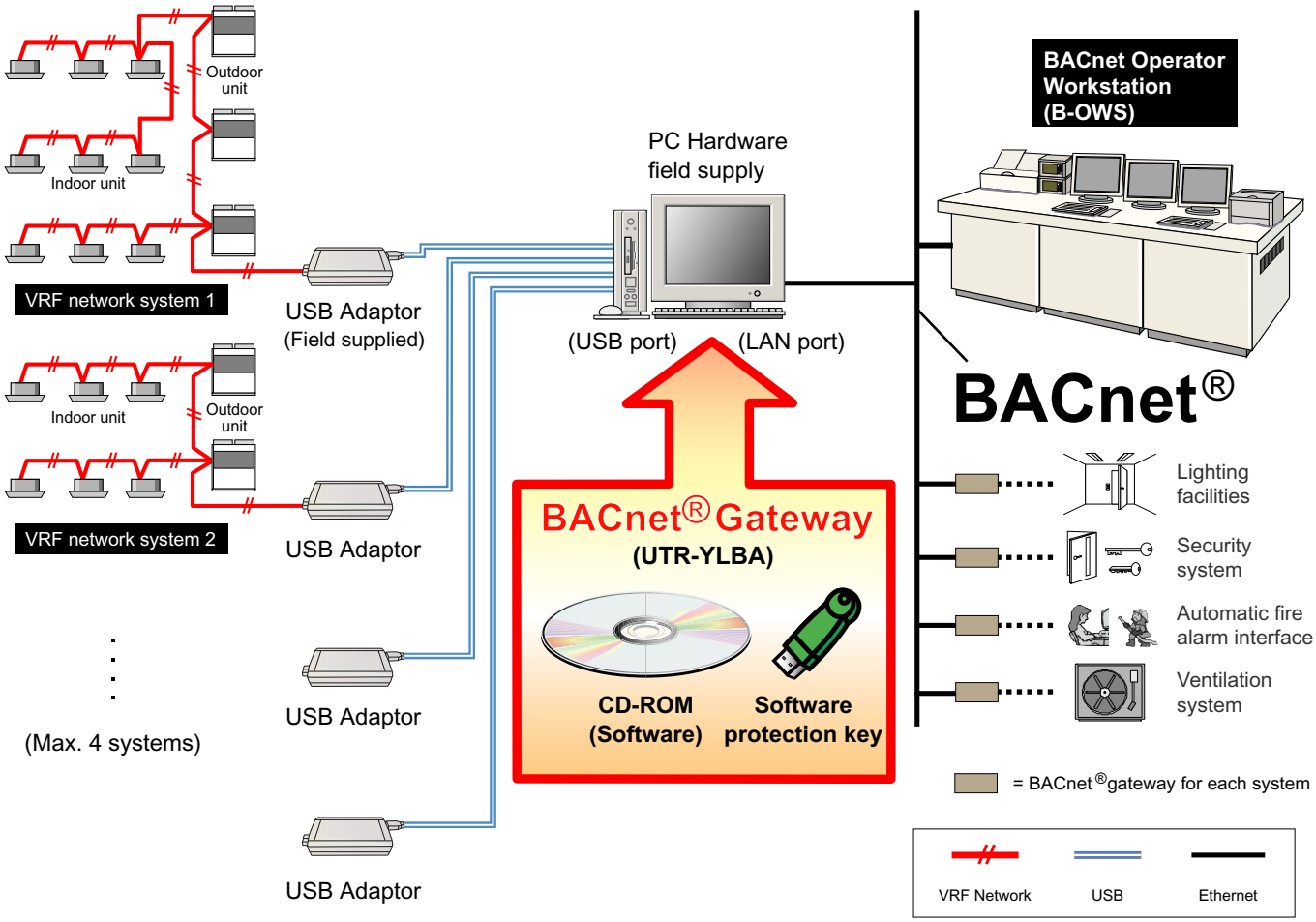
Model : UTR - YLBA

■ FEATURES

The central control of maximum 1600 indoor units can be realized by connecting the VRF network system to the BACnet®, a global standard for open networks.

* ANSI / ASHRAE Standards®135-2001 BACnet® Application Specific Controller (B-ASC) BACnet® / IP over Ethernet
* BACnet® gateway run on Micrsoft® Windows® 2000 Professional / XP Professional.
* It can be connected up to 4 systems (400 indoor units / 100 outdoor units for 1 system) per gateway. It can be corresponded to large-scale buildings and hotels etc.

■ SYSTEM OUTLINE



■ FUNCTIONS (Example)

Control (BMS Network→VRF Network)

* Operation (ON / OFF)
* Operation Mode Setting
* Temperature Setting
* Fan Speed Setting
* R.C. prohibition Setting (Lock the remote controller functions)

Monitor infomation (BMS Network←VRF Network)

* Operation Condition (ON / OFF)
* Operation Mode
* Set Temperature
* Fan Speed
* Error Display
* Central Control Display (Lock the remote controller functions)

■ PACKING LIST

・ CD-ROM	
・ Software Protection key	

※Personal Computer, USB adaptor and Lan cable must be procured at the site.

CONTROL SYSTEM

■ PERSONAL COMPUTER SPECIFICATIONS

	BACnet® Gateway (UTR-YLBA)
CPU	AT compatible machine that runs on Microsoft® Windows® Pentium Ⅲ 400MHz or higher
Memory	256MB or more
Display	1024 X 768 dots or more
Interface	LAN (10BASE-T / 100BASE-TX) USB 1.1 *The power supply of 100mA / 5VDC is necessary for one USB adaptor.
Operating System	Microsoft® Windows® 2000 Professional (English language version) Service Pack 3 or later Microsoft® Windows® XP Professional (English language version) Service Pack 1 or later (Microsoft® Windows® Vista® cannot be used for this product)
Required Hardware	Personal Computer (Field supplied) USB Adaptor (DH electronics XLON® USB USB4-WM-FTT) (Field supplied) * 1 adaptor is necessary for 1 VRF system.
Required Software	Adobe® Acrobat® reader 4.0 or later

■ USB ADAPTOR SPECIFICATIONS

Product Name	XLON® USB
Bus interface	USB conform, in accordance with Universal Serial Bus specification 1.1, 12 Mbit / s.
Network connection FTT-10A	2-conductor Weidmueller connector, type BL3.5 / 2FSNOR (Weidmueller ordering number 160 664)
Power supply (Via the USB)	5VDC, ± 5%, 100mA typical
Temperature	0 to +70°C (Operating) , -45 to +85°C (Non-operating)
Maximum humidity	90% R.H. @ +50°C; Non-condensing
Dimensions	123 mm x 68 mm x 30 mm (length x width x height)
Weight	100 g

Note : XLON® USB is the product of DH Electronics.
For more information, Please contact our sales representative.

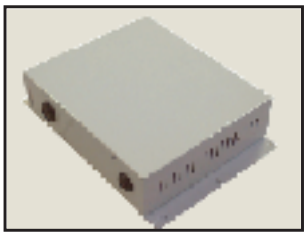
2-3-4. SIGNAL AMPLIFIER

Model : UTR - YRPC

If the total length of transmission line exceeds 500m, or the number of units exceeds 64 units, Signal Amplifier will be necessary to use.

■ FEATURES

To prevent the drop of signal level by taking distance of length or quantity of unit in VRF network with installing signal amplifier, signal level can be recovered.

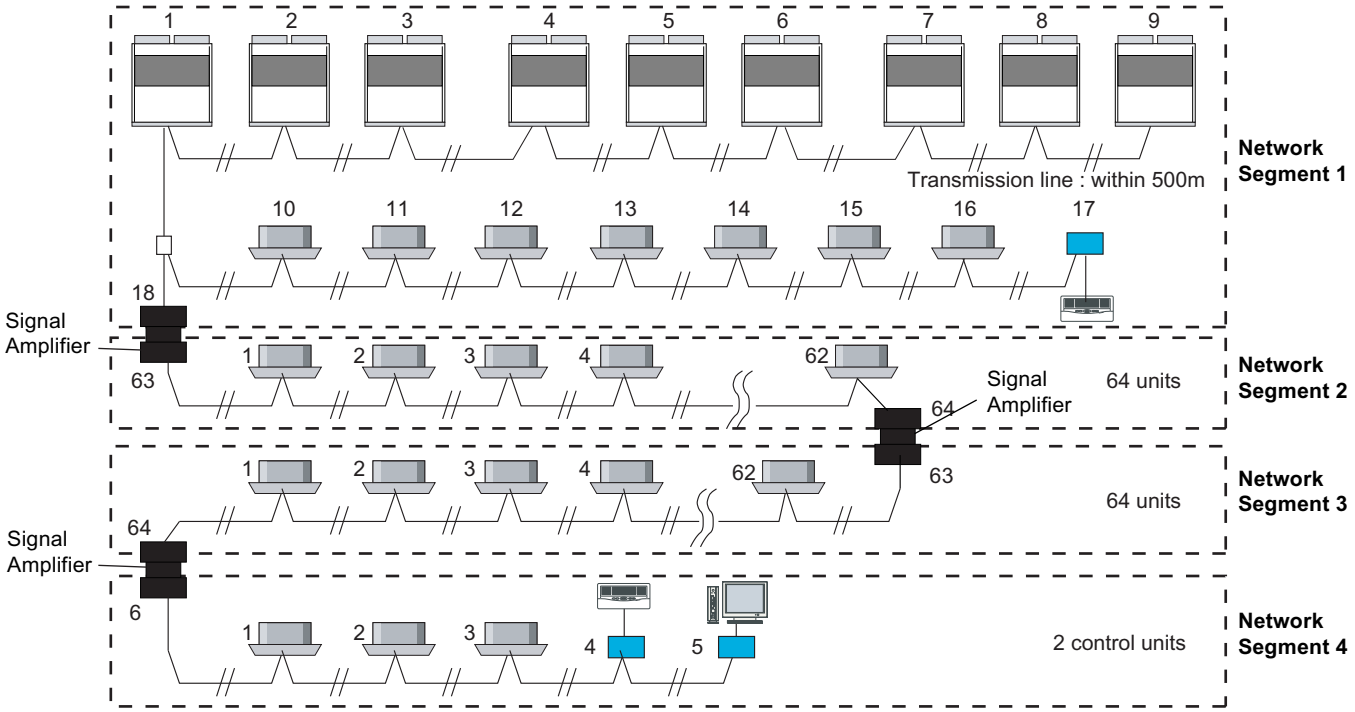


✳ By using this unit, it can connect the following number of each units,

(1) Transmission Line : Max. 2000m
(2) Connectable Units : Max. Indoor Unit : 400 units
Outdoor Unit : 100 units
Central Remote Controller : 16 units
Signal Amplifier : 8 units

* Standard can connect up to 500m of transmission line and 64 units of connecting units.

■ SYSTEM OUTLINE



Each network segment must be within

✳ Total wiring length of transmission line : 500m

✳ A number of units : 64

✳ The number of total control unit [Central remote controller, PC controller and Network convertor (UTR-YLLA)] : Max 2

✳ The number of terminal resistor : 1

Note:

1) 22AWG Level 4 cable with shielded(National Electrical Manufacturers Association (NEMA))
differs from the Category 4 specification proposed by the Electronic Industries Association/ Telecommunication Industry Association (EIA/TIA)

2) Unit means indoor unit, outdoor unit, signal amplifier, central remote controller, PC controller and so on.

CONTROL SYSTEM

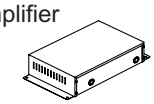
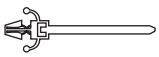
■ SPECIFICATIONS

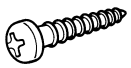
● Main specification

POWER SUPPLY	50-60Hz 220-240V
POWER CONSUMPTION (W)	4.5
SIZE (H X W X D) (mm)	67 X 288 X 211
WEIGHT (g)	1500

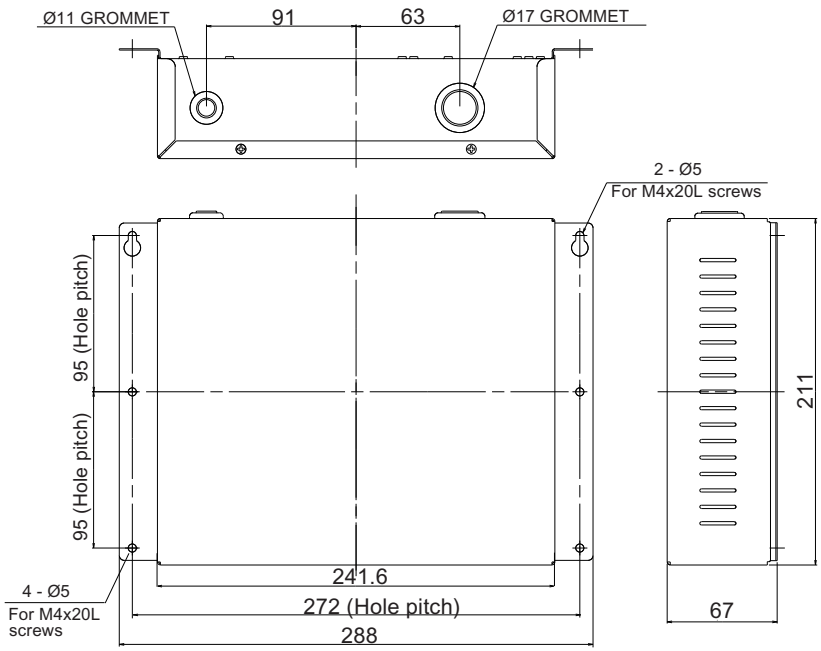
■ PACKING LIST

The following installation parts are supplied. Use them as required.

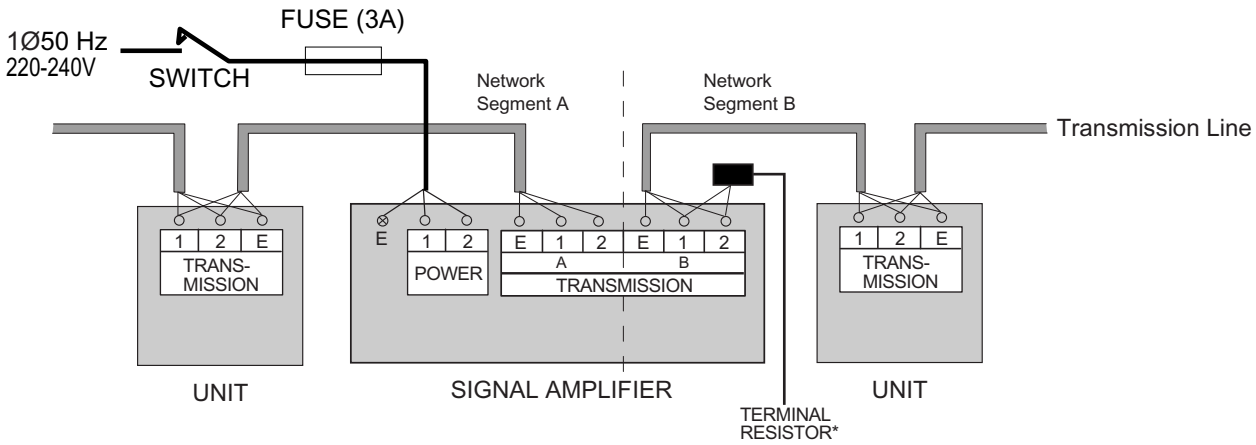
Name/Illustration	Qty.	Application
Signal amplifier 	1	
Binder (Push Mount) 	3	For mounting the power supply cord, and transmission cord.

Name/Illustration	Qty.	Application
Wood screw (ϕ4 x 20) 	4	For mounting the signal amplifier.
Terminal resistor	1	

■ DIMENSIONS



■ ELECTRICAL WIRING



* Make sure to install 1peace of terminal resistor to each network segment.
Terminal resister is provided for each outdoor unit, but please confirm that there is only one terminal resistor in the same network segment.

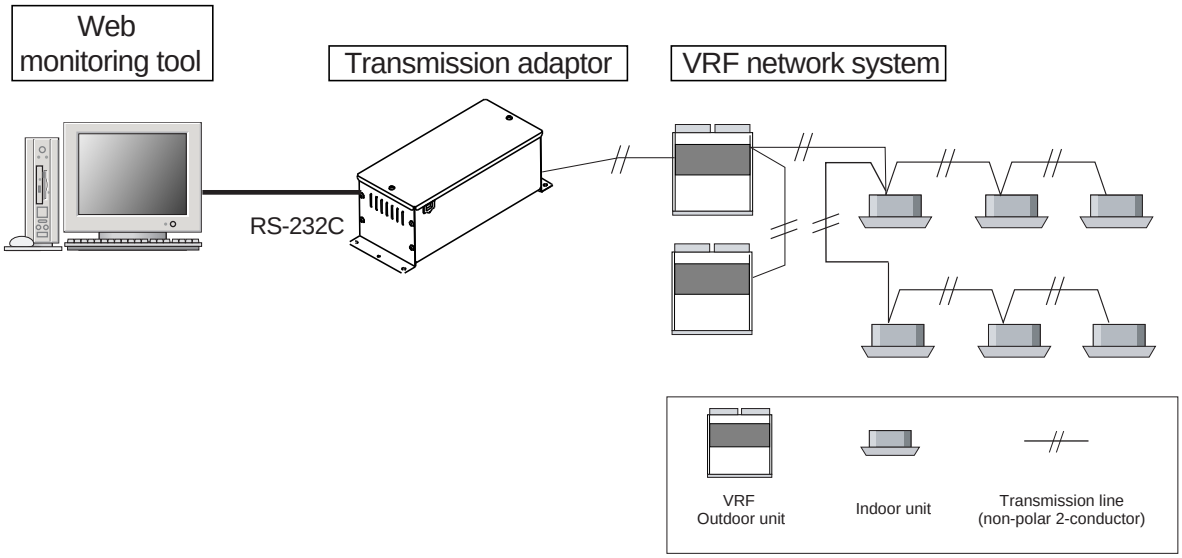
2-3-5. TRANSMISSION ADAPTOR

Model : UTR - YTMA

■ FEATURES

- ✳ For air conditioning of the medium and large size buildings, the control software can control and monitor air conditioners together with the ones in the other buildings.
- ✳ This device enables control by other equipment via an Interlink cable or connection cable.
- ✳ Up to 400 Indoor units / 100 Outdoor units can be connected to one Transmission Adaptor

■ SYSTEM EXAMPLE

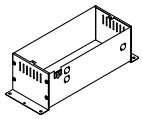
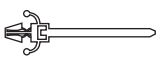
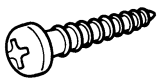


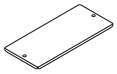
■ SPECIFICATIONS

Power supply	50-60Hz 220-240V
Power consumption	2.9W
Fuse capacity	3A
Size (H x W x D) (mm)	100 x 288 x 107
Weight (g)	1300

■ PACKING LIST

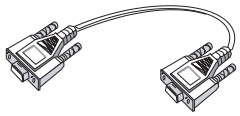
The following installation parts are supplied. Use them as required.

Name and Shape	Q'ty	Application
Transmission adaptor 	1	The equipment for transmitting data between BMS and Indoor/ Outdoor Unit.
Binder (Push Mount) 	2	For mounting the power supply cord and transmission cord.
Wood Screw (ϕ4 x 20) 	4	For mounting the transmission adaptor.

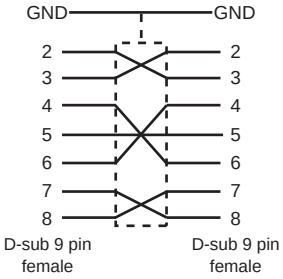
Name and Shape	Q'ty	Application
Bushing	3	For ϕ16 knockout holes. Use for the knockout holes.
Cover 	1	Transmission adaptor cover
Tapping Screw (ϕ4 x 6)	2	For mounting the transmission adaptor cover.
Tooth washer	2	For mounting the transmission adaptor cover.

● Purchased separately

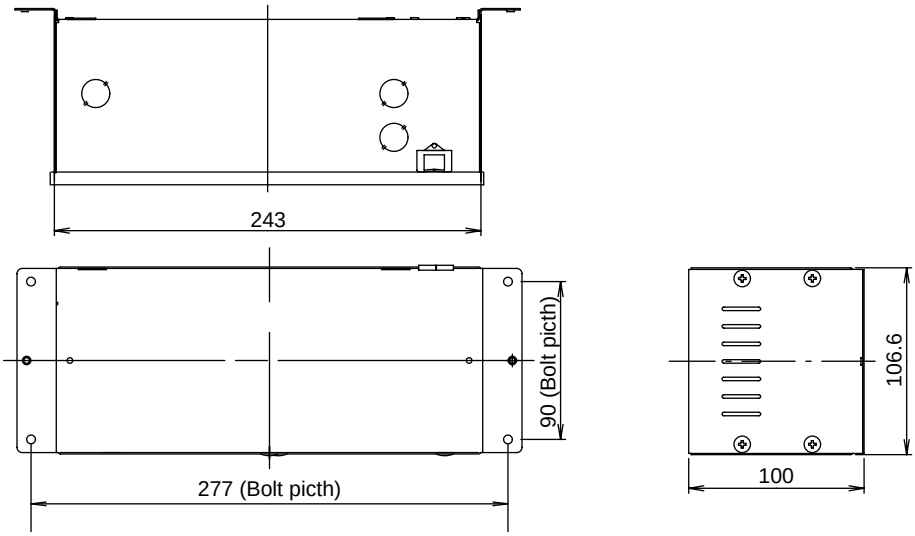
RS-232C 9Pin cable is required when connecting between Building Management System (BMS) and transmission adaptor. Please use the following cable to order from your sales representative.

Parts shape	Q'ty	Application
Interlink cable RS-232C 9Pin  (D-Sub 9Pin female connector-D-Sub 9Pin female connector)	1	For connecting between BMS and transmission adaptor. Refer to the following connection diagram.

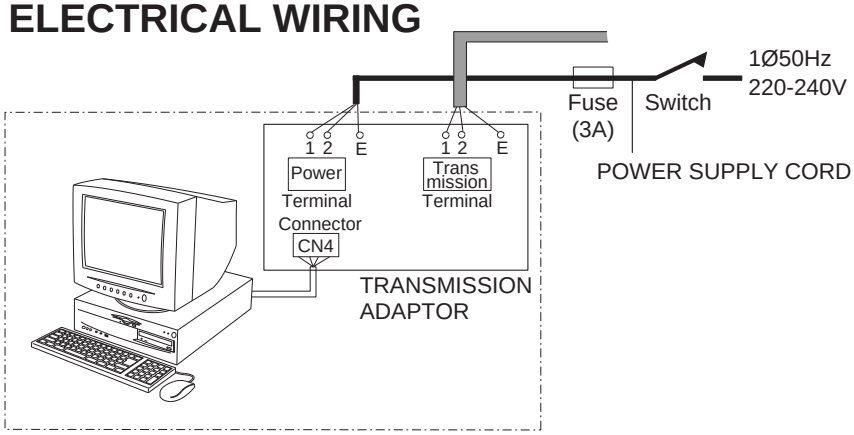
● Connection diagram



■ DIMENSIONS



■ ELECTRICAL WIRING



■ WIRING SPECIFICATIONS

Use	Size		Wire type	Remarks
Power supply cable (mm^2)	Maximum	1.25	H07RN-F or equivalent	Single phase 50Hz 220-240V * 2 wire + Ground
	Minimum	0.5		
Transmission cable (mm^2)	0.33		shielded Level 4 22AWG (0.65mm)	Non-polar,One twisted pair, Solid core diameter 0.65mm
Fuse capacity (A)	3			

*Always ground the unit.

2-3-6. EXTERNAL SWITCH CONTROLLER

Model : UTR - YESA

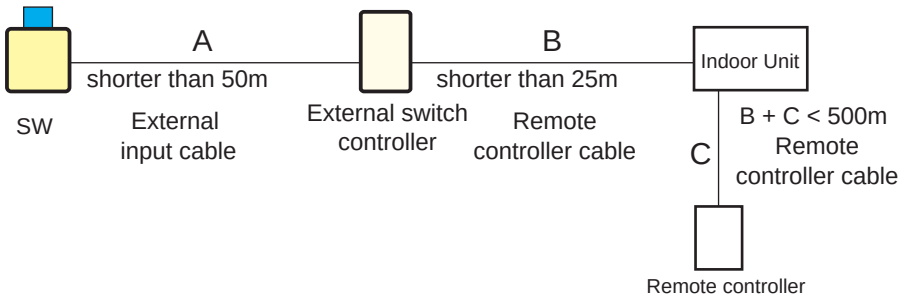
■ FEATURES

- Air conditioner switching can be controlled by connecting other sensor switches.
- ON/OFF, Temperature, Fan speed and Operating mode can be switched by a combination with Card-key switch equipped in facilities such as hotel room.

※ Card-key or other sensor switches are available as a field supplied parts.

CONTROL SYSTEM

■ SYSTEM DIAGRAM



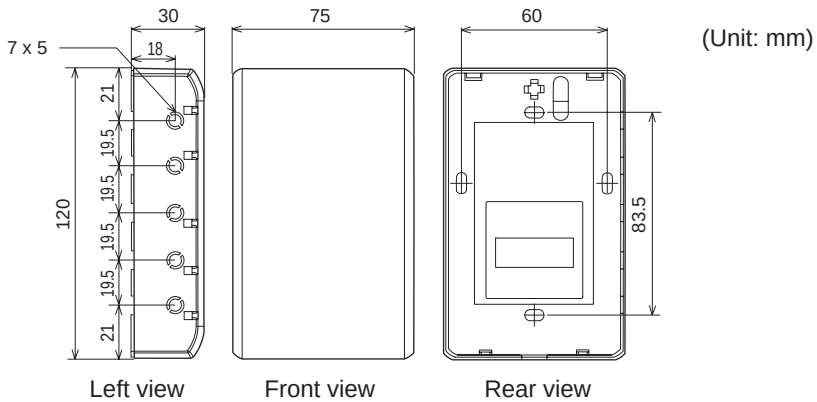
■ SPECIFICATIONS

Power supply	DC 12V
Size (H x W x D) (mm)	120 x 75 x 30
Weight (g)	90

■ PACKING LIST

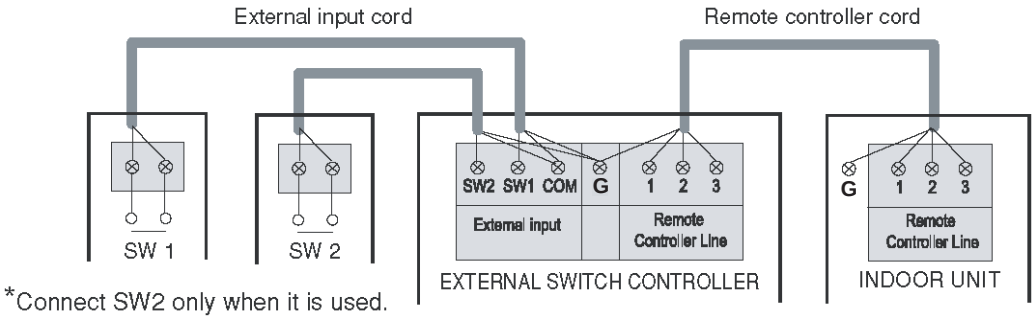
Name	Quantity	Application
External switch controller	1	
Tapping screw(M4x16mm)	2	For installing the external switch controller
Binder	5	For external switch controller and cable binding

■ DIMENSIONS



(Unit: mm)

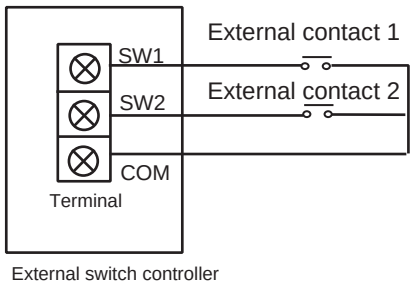
■ ELECTRICAL WIRING



*Connect SW2 only when it is used.

Connection to external contacts

Non voltage

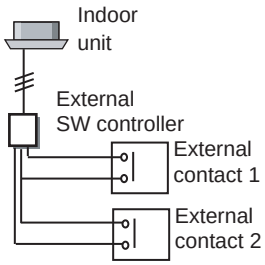
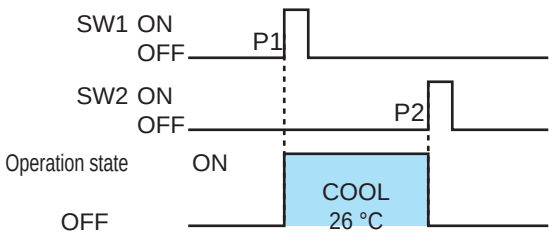


Open circuit voltage : 12 (V) ± 2 (V).
Short circuit current : ≦ 2 (mA).
Short circuit detection resistance (R_{ON}) : ≦ 1 (kilo-ohm).
Open circuit detection resistance (R_{OFF}) : ≧ 50 (kilo-ohm).

■ WIRING SPECIFICATIONS

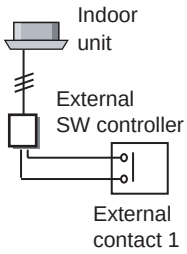
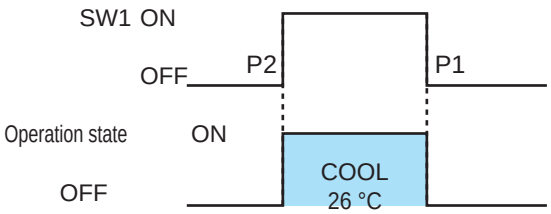
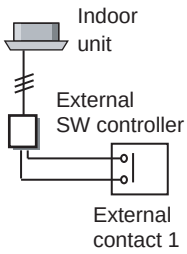
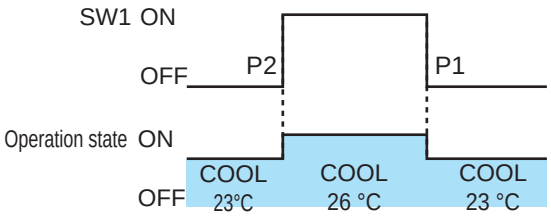
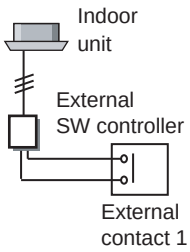
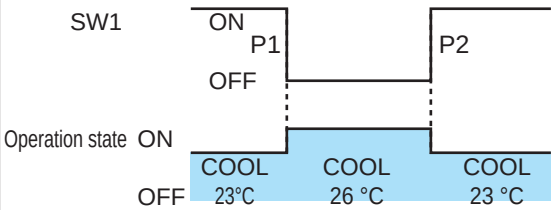
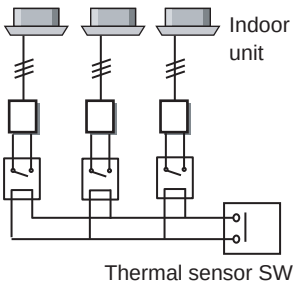
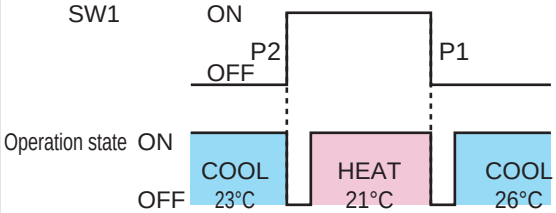
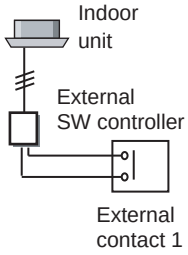
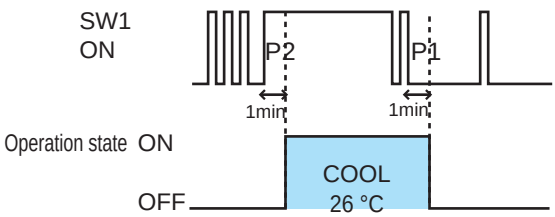
Use	Size	Wire type	Remarks
Remote controller cable (mm^2)	0.33 (22AWG)	Shielded	Polar 3 core Twisted pair
External input cable (mm^2)	0.33 (22AWG)	Shielded	Polar 2 core Twisted pair

■ EXAMPLE

Application	Setting	Wiring	Operation example
When controlling the individual operation states with two external contact	MODE0 P1: Arbitrary operation state Contact OFF⇒ ON P2: Arbitrary operation state Contact OFF ⇒ ON Others setting are arbitrary.		P1 : ON, COOL, 26°C P2 : OFF 

CONTROL SYSTEM

■ EXAMPLE

Application	Setting	Wiring	Operation example
When controlling operation by ON or OFF of an external contact switch	MODE1 P1 : Arbitrary operation state P2 : Arbitrary operation state Others setting are arbitrary.		P1 : OFF P2 : ON, COOL, 26°C 
When operating in the state set when an external contact switch was set to ON and returning to the original operation state when the switch was set to OFF	MODE1 or 0 P1 : SETBACK P2 : Arbitrary operation state Others setting are arbitrary.		MODE1, P1 : SETBACK P2 : ON, COOL, 26°C 
When operated in the state when an external contact switch was set to OFF and returned to original operation state	MODE1 or 0 P1 : Arbitrary operation state P2 : SETBACK Others setting are arbitrary.		MODE1, P1 : ON, COOL, 26°C P2 : When SETBACK 
When a temperature sensor switch is connected and cooling and heating switching is performed.	MODE2 P1 : ON, COOL or HEAT P2 : ON, COOL or HEAT Operation conditions :Unit operationg only Others setting are arbitrary.	 An external switch controller is connected to all the indoor units of the same refrigerant system and cooling and heating are switched by one temperature sensor.	P1 : ON, COOL, 26°C P2 : ON,HEAT, 21°C 
When preventing chattering noise within 1 minute of the external contact switch.	MODE1 Delay-time setting :Delay P1 : Arbitrary operation state P2 : Arbitrary operation state Others setting are arbitrary.		P1 : OFF P2 : ON, COOL, 26 °C 

2-4. SERVICE & WEB MONITORING TOOL Software

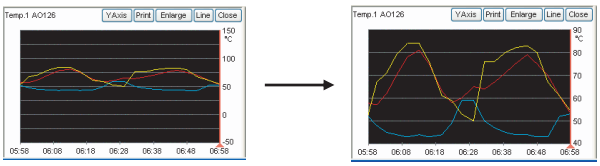
2-4-1. SERVICE TOOL

Model : UTR-YSTC

Extensive monitoring and analysis functions for installation and maintenance.
Operation status and error history can be grasped promptly and adequately.

■ FEATURES

- Adopting to USB type network interface to convert VRF network, it realizes highly portability and simple connection.
- Storage of data on system operating status on a PC allows access even from off site.
- Up to 400 units can be controlled and monitored for large scale building or hotels.
- Operational status can be checked and analyzed to detect even the small abnormalities.
- The operational status and various sensor information of each unit can be monitored real time and can be understood in detail as history information.
- By realizing operation control to each unit from PC, the operational status in various condition and system requirements can be grasped.
- The Y axis of old fixed data graph screens can be specified within an arbitrary range at a setup modification screen.
- This allows verification of even minute changes of each value.

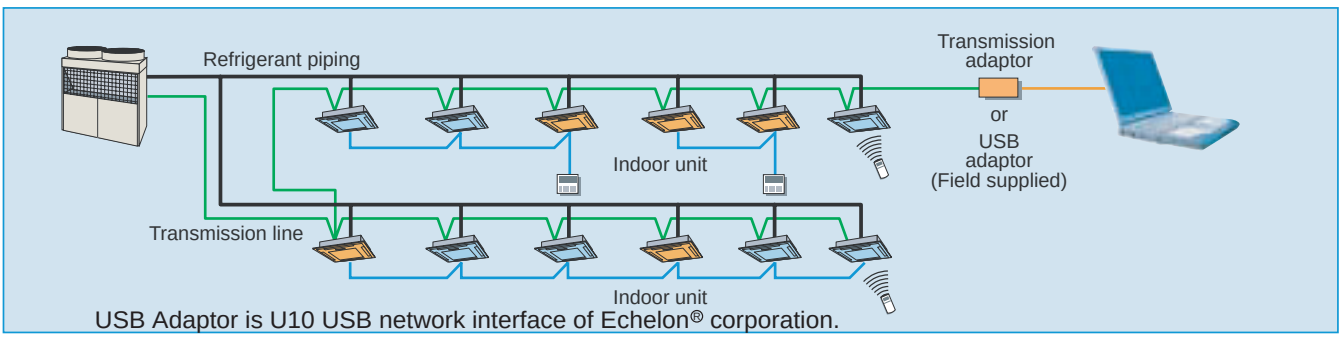


Preserving the operational status record at arbitrarily term evenwhile current data sampling continuously.

● COMMISSIONING TOOL

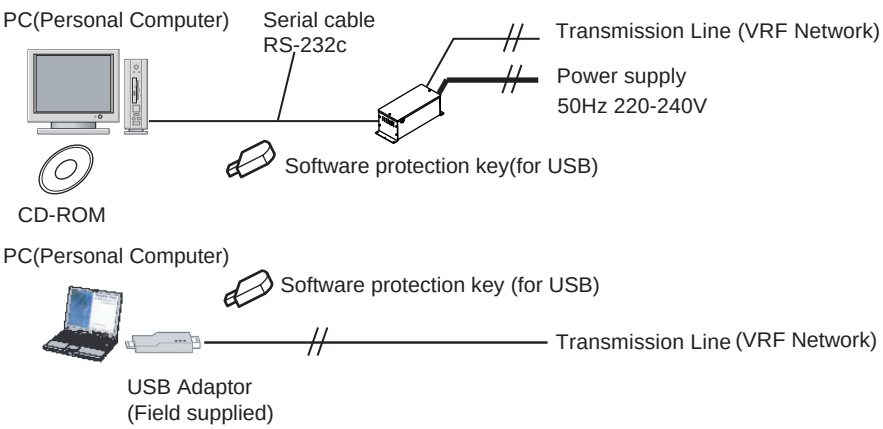
Test run commands can be executed with this tool.
During test running, the outdoor unit / indoor unit sensor data can be saved (commissioning log data).
After the end of test running, this data can be exported in CSV file format.

■ SYSTEM OUTLINE



USB Adaptor is U10 USB network interface of Echelon® corporation.

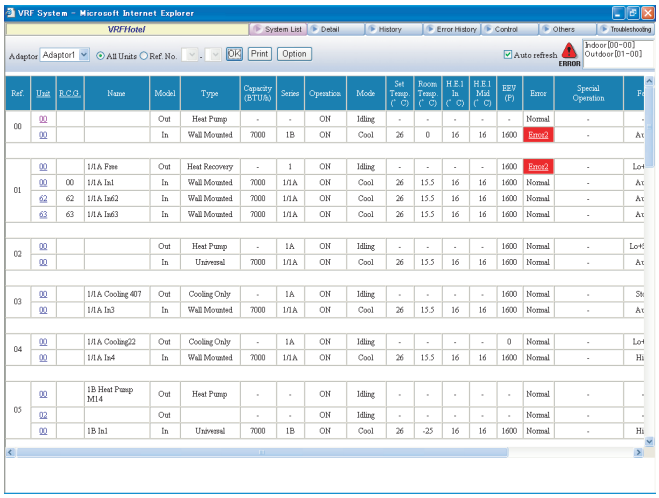
● SYSTEM COMPONENTS



■ MAIN FUNCTIONS

① System List

Displays the overall operational status from a list of the status of each unit.

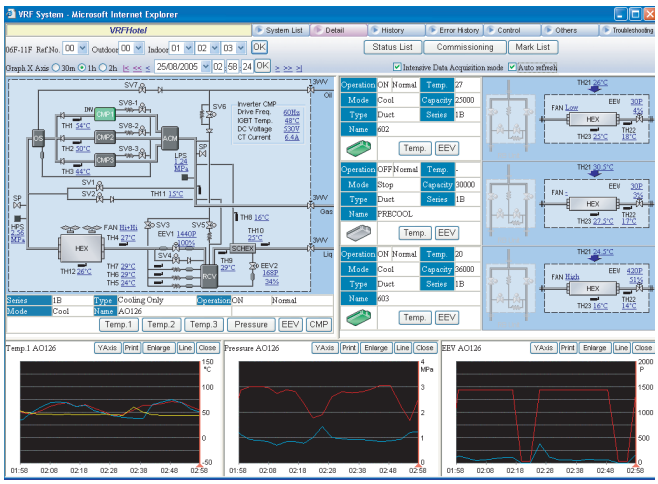


∗Example image

② Equipment Detail (Diagram)

Displays the detail information for sensor values, electrical components etc. for the specified units in schematic.

The information here can be used along with the detail information in list form, to check the operation status of units and make detail analysis on the cause, in case an error occurs.

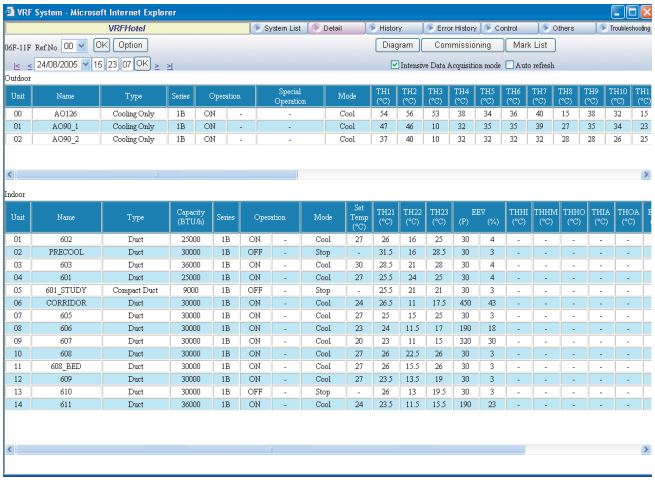


∗Example image

③ Equipment Detail (List)

Displays the detail information for sensor values, electrical components etc. of units in a specified refrigerant system in list form.

The information here can be used along with the detail information in diagram form, to check the operation status of units and make detail analysis on the cause, in case an error occurs.

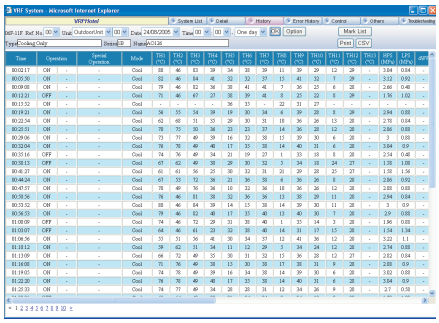


∗Example image

④ Operation History

The indoor units or outdoor unit operation history can be recorded.

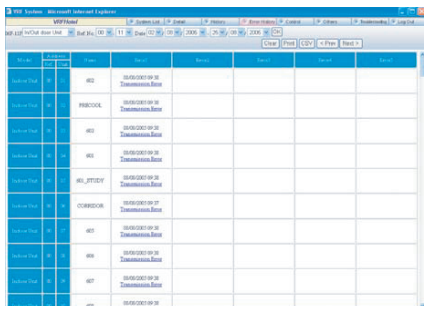
The displayed operation history can be printed out and saved to a CSV file.



∗Example image

⑤ Error History

Displays the error information for each unit. The error information can sequentially be displayed up to 50 items as they occur starting with the latest error.

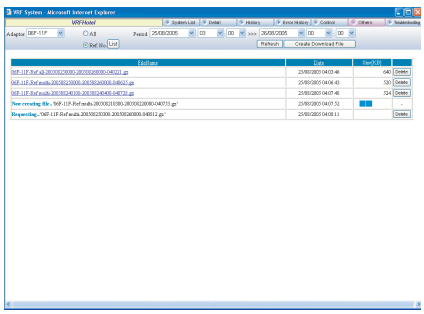


∗Example image

⑥ Remote File Download

Operation and error history data can be downloaded.

Only the required data may be downloaded specifying the refrigerant system, unit and time range.



∗Example image

CONTROL SYSTEM

■ PACKING LIST

· CD-ROM	
· Software protection key	

■ PERSONAL COMPUTER SPECIFICATIONS

The following equipment is required for using Service tool AT compatible machine that runs on Microsoft® Windows®.

Personal Computer	Operating System	AT compatible machine that runs Microsoft® Windows® Microsoft® Windows® 2000 Professional (English version / Service pack3 or later) Microsoft® Windows® XP Professional (English version / Service pack1 or later) (Microsoft®Windows® Vista®cannot be used for this product)
	CPU	Intel® Pentium® / Celeron®, AMD Athlon™ / Duron™ 1GHz or higher
	HDD	2.1 GB or more
	Memory	256 MB or more
	Interface	• Serial port (for UTR-YTMA) • USB port(for U10 USB Network Interface, Software protection key)
Software		Internet Explorer 6.0 or later / Adobe® Acrobat® Reader 4.0 or later
Hardware		Interlink cable D-sub 9Pin [Field supplied] / Transmission Adaptor (UTR-YTMA) or U10 USB Network Interface (Echelon Corporation)

■ USB ADAPTOR SPECIFICATIONS

Product name		U10 USB Network Interface TP/FT-10 Channel (Echelon model name 75010)
Network connector		Removable spring clamp clamp and screw terminal connectors included
Operating input current (USB)		50mA (maximum) @ 5VDC
USB compatibility		Certified USB 2.0 compatible. Compatible with USB 1.1 and Hi-speed USB systems, peripherals and cables.
LED indicators		Service (amber), Transmit (Green), Receive (Green)
Temperature		0 to +70°C (Operating), -20 to +85°C (Non-operating)
Humidity	Operating	25 to 90% R.H. @ +50°C; Non-condensing
	Non-operating	95% R.H. @ +70°C; Non-condensing
Dimensions		113.2 mm x 22.4 mm x 18.2 mm (length x width x height)
Weight		30 g

Note : Make sure that USB equipment (USB hub, etc.) which this adaptor is connected to, is not overloaded.
(Total power supplied from PC should not exceed the maximum limit).
For more information, please contact our sales representative.

2-4-2. WEB MONITORING TOOL Software

Model : UTR-YMSA

■ FEATURES

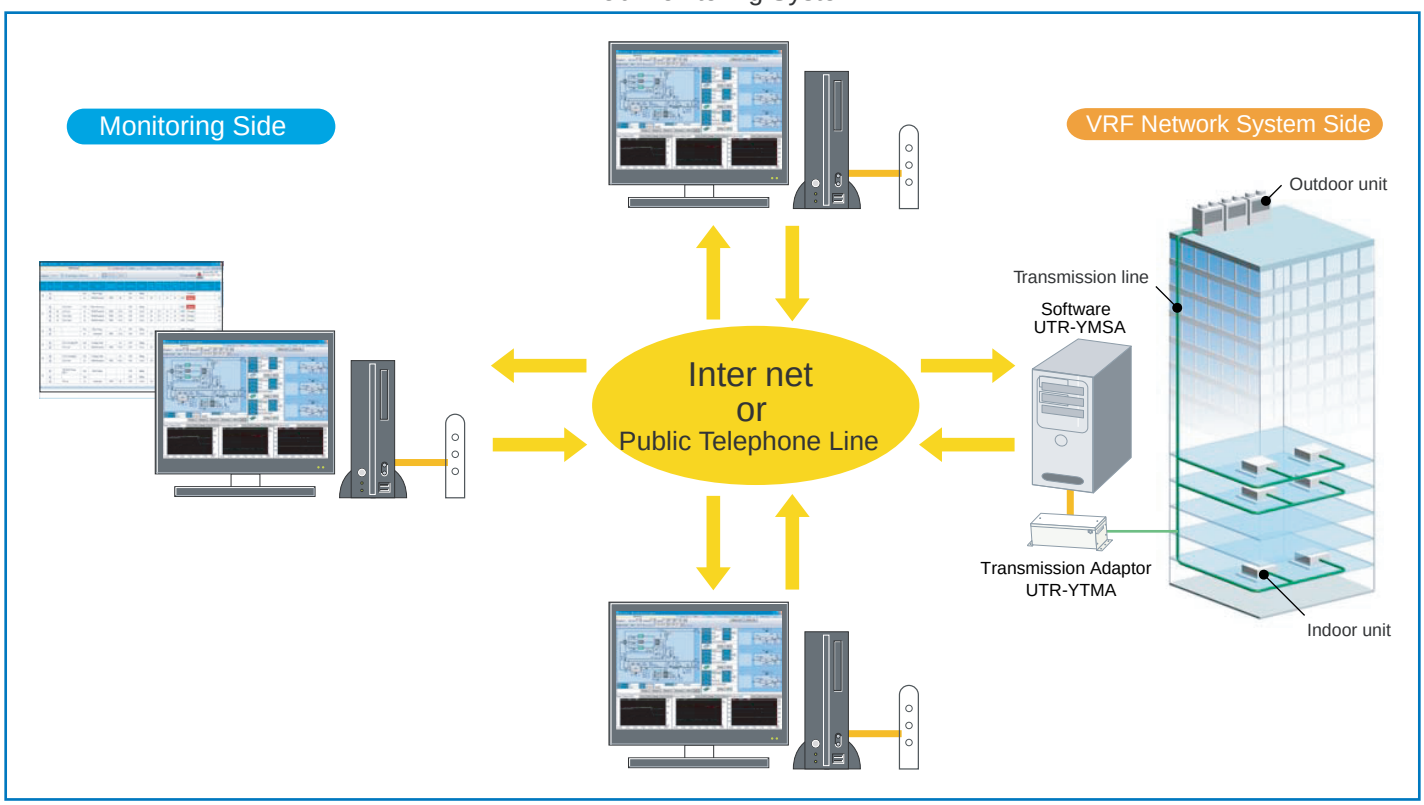
- ✱ Troubleshooting is performed by monitoring each air conditioning unit remotely during periodical system checks.
- ✱ Error notification can be automatically transmitted to several locations using the internet *1).
- ✱ Requires either a dedicated internet connection* or public telephone line.
- ✱ Determination of an error occurrence can be made through error warnings and equipment status information obtained from a remote location.
- ✱ The monitoring data in a remote side can be optionally downloaded. And, this data can be displayed in off-line mode of the service tool.

  Monitoring side computer is not required to install special software, required only general web browser.

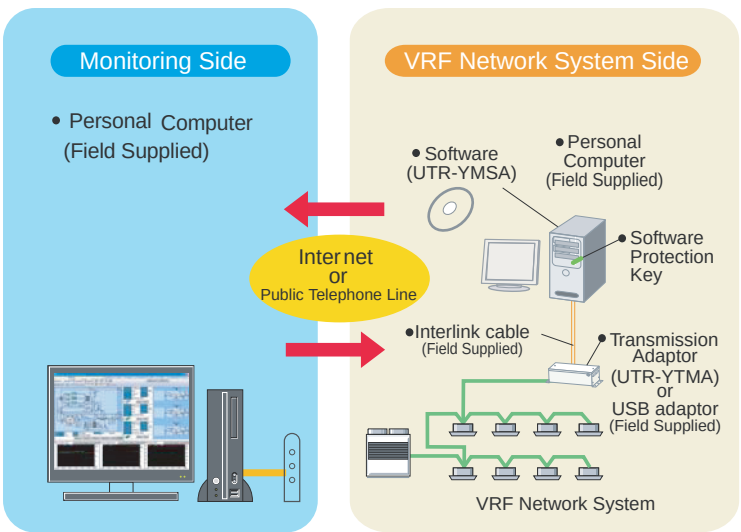
*1) Unchanging global IP address is required.

■ SYSTEM OUTLINE

Web Monitoring System

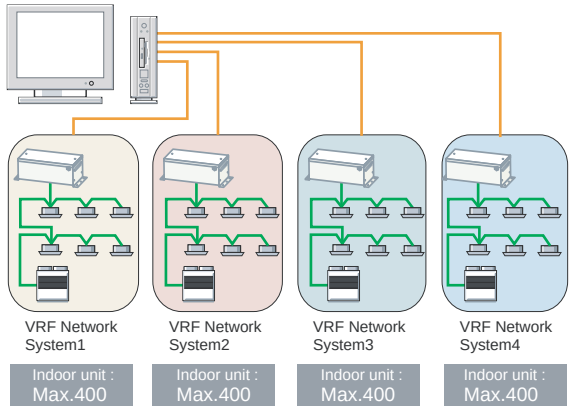


● SYSTEM COMPONENTS



● SUPPORT 4 VRF NETWORK SYSTEMS

PC Transmission adaptors (max. four adaptors per PC) permit control and monitoring of up to 1,600 units.
Suitable for large-scale buildings or hotels.



■ PACKING LIST

· CD-ROM	
· Software protection key	

■ PERSONAL COMPUTER SPECIFICATIONS

The following equipment is required for using Web Monitoring tool AT compatible machine that runs on Microsoft® Windows®.

Personal Computer		AT compatible machine that runs Microsoft® Windows®
	Operating System	Microsoft® Windows® 2000 Professional (English version / Service pack3 or later) Microsoft® Windows® XP Professional (English version / Service pack1 or later) (Microsoft®Windows® Vista®cannot be used for this product)
	CPU	Intel® Pentium® / Celeron®, AMD Athlon™/ Duron™1GHz or higher
	HDD	2.1 GB or more
	Memory	512 MB or more
	Interface	Serial port (for UTR-YTMA Max.4) USB port (for U10 USB Network Interface Max.4 , Software protection key) or U10 USB Network Interface Echelon Corporation)
Software		Internet Explorer 6.0 or later / Adobe® Acrobat® Reader 4.0 or later
Hardware		Interlink cable D-sub 9Pin [Field supplied] Transmission Adaptor (UTR-YTMA) or USB Adaptor is U10 USB Network interface of Echelon ® corporation.

■ USB ADAPTOR SPECIFICATIONS

Please refer specification in 5-4-1 SERVICE TOOL.

■ COMPARISON TABLE

No.	Item	Service Tool UTR-YSTC	Web Monitoring Tool UTR-YMSA	
			VRF Network System Side	Monitoring Side
1	Interchangeability of equipment	●	●	●
2	Indication of equipment list	●	●	●
3	Operation control	●	●	—
4	Indication of unit circuit diagram	●	●	●
5	Commissioning tool	●	●	—
6	Monitoring of equipment information	●	●	●
7	Monitoring of operating condition	●	●	●
8	Monitoring of sensor data	●	●	●
9	Indication of trend graph	●	●	●
10	Storage and CSV output of operating history (sensor data)	●	●	●
11	Printing of trend graph	●	●	●
12	Monitoring and screen display of abnormalities	●	●	●
13	E-mail automatic transmission of abnormalities	—	● ※1	—
14	Setting for user level	—	●	—

※1 It is available only during a connection to the Internet.

Refrigerant R407C

AIRSTAGE™

S SERIES

3. OUTDOOR UNITS

3-1 MODEL LINE UP

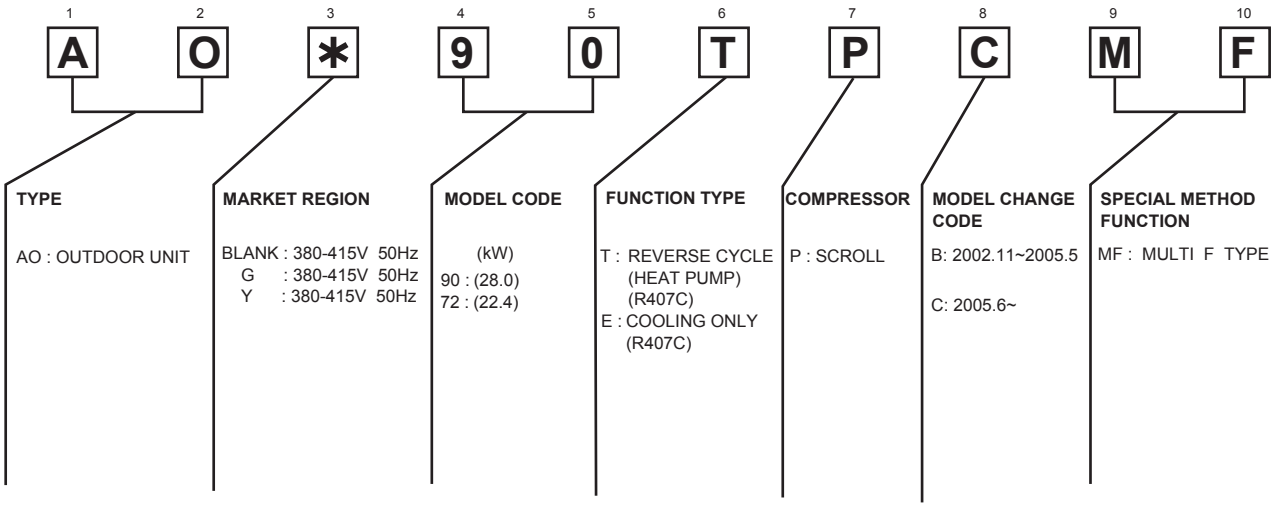
■ LINE UP

TYPE	CAPACITY	MODEL NAME	Maximum Connectable Indoor unit
AIRSTAGE™ Heat pump type	28.0 kW(10HP)	AO✱90TPCMF	16
	22.4 kW(8HP)	AO✱72TPCMF	13
AIRSTAGE™ Cooling only type	28.0 kW(10HP)	AO✱90EPCMF	16
	22.4 kW(8HP)	AO✱72EPCMF	13

OUTDOOR UNITS

■ REFRIGERANT R407C

■ MODEL DESIGNATION

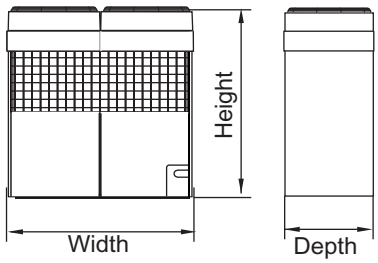


■ CAPACITY RANGE

MODEL	CAPACITY	Total capacity of Indoor unit	Ratio of outdoor unit capacity
AO 90	28.0kW	14.0 ~ 36.4kW	50 ~ 130%
AO 72	22.4kW	11.2 ~ 29.1kW	50 ~ 130%

3-2 FEATURE

■ NEW COMPACT



Dimensions

Height **1,380mm**

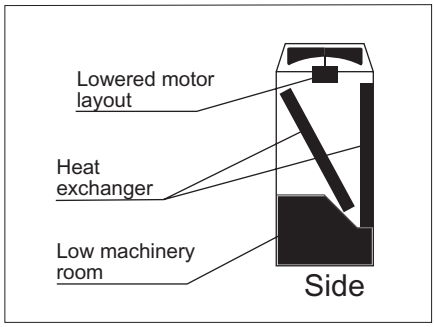
Width **1,300mm**

Depth **650mm**

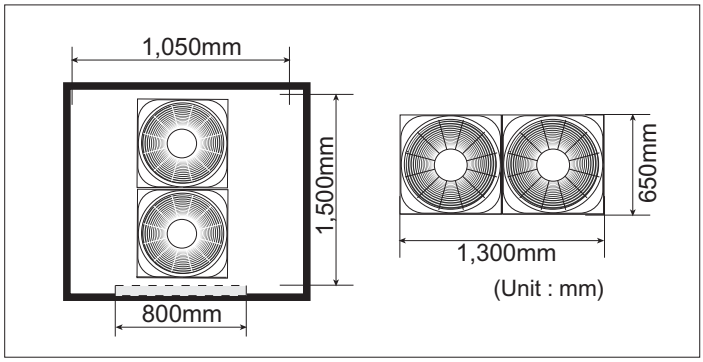
(Unit : mm)

■ COMPACT CONSTRUCTION

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



■ OUTDOOR UNIT GOES INTO ELEVATOR



■ SPACE SAVING

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

Setting size

5.72 (Unit : m^2)

Only a small area is needed for outdoor unit (total capacity 30HP, height of surrounding wall 1.2m)

■ HIGH COP

High COP was realized by adopting high efficiency scroll compressor without power supply conversion loss (3 - 10%) like an inverter system.

Cooling COP	3.1
Heating COP	3.7

■ WIDE OPERATION RANGE

- **Cooling operation -15°C to 52°C**
- **Heating operation -15°C to 21°C**

■ HIGH POWER AND ENERGY SAVING

The setting of Normal mode / High-power mode / Save-energy mode can be made according to the needs of customer.
This setting makes it possible to vary the outflow air temperature within the range of about 2 degrees, by which 15% capacity increase and energy saving operation are realized.

■ LOW NOISE LEVEL

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

Low outdoor unit (10HP) noise level **55dB(A)**
(Silent operation mode 50dB(A))

(unit : dB(A))

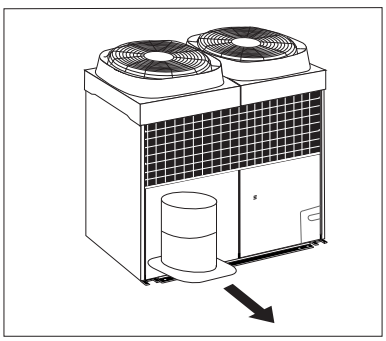
outdoor units	Power requirement	Normal mode	Silent mode
AO 90	380V	***55***	***50***
	415V	***57***	***51***
AO 72	380V	***54***	***48***
	415V	***56***	***49***

■ EASY MAINTENANCE

Indication of operating status on PCB.

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

Easy to replace compressors



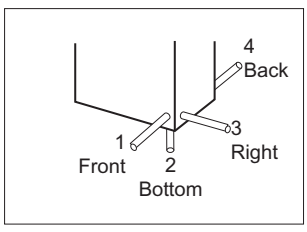
The pump down can be performed from Outdoor unit by the switch on the PCB in outdoor unit.

■ EASY INSTALLATION

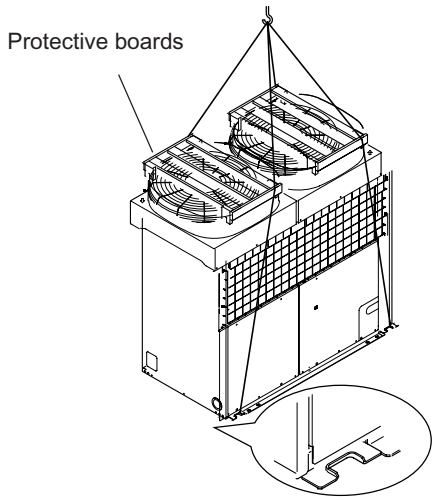
Four-direction piping allows a variety of installation, configurations

Easy installation and pipe direction setting

Four-direction pipe



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



■ OTHERS

∗ **Power requirement** 3-phase 4-wire
∗ **Pipe limitation**

Maximum Length	**100m**
Height Difference	**50m**

3-3. SPECIFICATIONS (HEAT PUMP TYPE)

■ AO90TPCMF , AO72TPCMF

Model				AO90TPC	AO72TPC
Power Requirement			Ø,Hz	3W4,50Hz	3W4,50Hz
			V	380 - 415	380 - 415
Total Capacity	Cooling		kW	28.0	22.4
	Heating			31.5	25.2
Total Input Watts	Cooling		kW	9.03	7.23
	Heating			8.50	7.64
Total Ampacity	Cooling		A	15.2	12.5
	Heating			14.3	13.0
Starting Current			A	81	70
EER	Cooling		W/W	3.10	3.10
COP	Heating			3.71	3.30
Heat Exchanger	Type			Plate Fin Coil	Plate Fin Coil
	Rows x Stages			3 X 30 + 2 X 30	2 X 30 + 2 X 30
	Fin Pitch			1.8	1.8
Air Circulation	High		m^3/h	9800	9800
Fan Type x Qty				Propeller x 2	Propeller x 2
Fan Motor Output			W	150 x 2	150 x 2
Compressor	Model			ZR22K3E-TFD ZR48K3E-TFD ZR72KCE-TFD	ZR22K3E-TFD ZR36K3E-TFD ZR68KCE-TFD
	Type			Hermetically sealed scroll type	Hermetically sealed scroll type
	Motor Output		kW	1.5/3.4/4.9	1.5/2.5/4.8
	Protection			Internal Protector(OCR) High Pressure Relief Valve	Internal Protector(OCR) High Pressure Relief Valve
Dimensions (H x W x D)	Net		mm	1,380 x 1,300 x 650	1,380 x 1,300 x 650
	Gross			1,535 x 1,400 x 770	1,535 x 1,400 x 770
Weights	Net		kg	313	307
	Gross			349	343
Noise Level (Sound Pressure)			dB (A)	57	56
Refrigerant	Type			R407C	R407C
	Charge		kg	10	9
Refrigerant OIL	Type			EMIKARATE RL 32CF	EMIKARATE RL 32CF
	Charge		cc	1120/1360/1774 + 2000	1120/1242/1774 + 2000
Pipe	Size	Liquid	mm	12.70	12.70
		Gas		28.58	28.58
	Max Length		m	100	100
	Max Height			50	50
Operation (Outdoor)		Cooling	°C	-15 to 52	-15 to 52
		Heating		-15 to 21	-15 to 21

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.
Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.
Voltage : 230 [V] ;Pipe length : 7.5[m] ; Height difference (Between outdoor unit and indoor unit) : 0[m]

OUTDOOR UNITS

3-3. SPECIFICATIONS (COOLING ONLY TYPE)

■ AO90EPCMF , AO72EPCMF

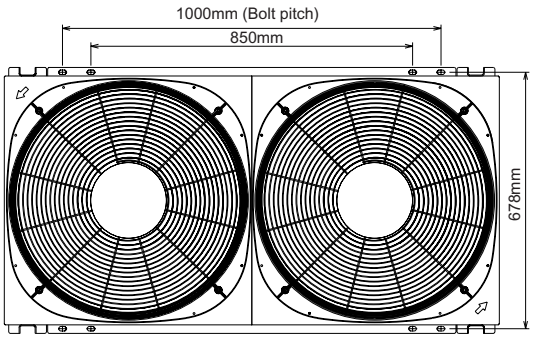
Model				AO90EPC	AO72EPC
Power Requirement			Ø,Hz	3W4,50Hz	3W4,50Hz
			V	380 - 415	380 - 415
Total Capacity	Cooling		kW	28.0	22.4
Total Input Watts	Cooling		kW	9.03	7.23
Total Ampacity	Cooling		A	15.2	12.5
Starting Current			A	81	70
EER	Cooling		W/W	3.10	3.10
Heat Exchanger	Type			Plate Fin Coil	Plate Fin Coil
	Rows x Stages			3 X 30 + 2 X 30	2 X 30 + 2 X 30
	Fin Pitch			1.8	1.8
Air Circulation	High		m^3/h	9800	9800
Fan Type x Qty				Propeller x 2	Propeller x 2
Fan Motor Output			W	150 x 2	150 x 2
Compressor	Model			ZR22K3E-TFD ZR48K3E-TFD ZR72KCE-TFD	ZR22K3E-TFD ZR36K3E-TFD ZR68KCE-TFD
	Type			Hermetically sealed scroll type	Hermetically sealed scroll type
	Motor Output		kW	1.5/3.4/4.9	1.5/2.5/4.8
	Protection			Internal Protector(OCR) High Pressure Relief Valve	Internal Protector(OCR) High Pressure Relief Valve
Dimensions (H x W x D)	Net		mm	1,380 x 1,300 x 650	1,380 x 1,300 x 650
	Gross			1,535 x 1,400 x 770	1,535 x 1,400 x 770
Weights	Net		kg	312	306
	Gross			348	342
Noise Level (Sound Pressure)			dB (A)	57	56
Refrigerant	Type			R407C	R407C
	Charge		kg	10	9
Refrigerant OIL	Type			EMIKARATE RL 32CF	EMIKARATE RL 32CF
	Charge		cc	1120/1360/1774 + 2000	1120/1242/1774 + 2000
Pipe	Size	Liquid	mm	12.70	12.70
		Gas		28.58	28.58
	Max Length		m	100	100
	Max Height			50	50
Operation (Outdoor)		Cooling	°C	-15 to 52	-15 to 52

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.
Voltage : 230 [V] ;Pipe length : 7.5[m] ; Height difference (Between outdoor unit and indoor unit) : 0[m]

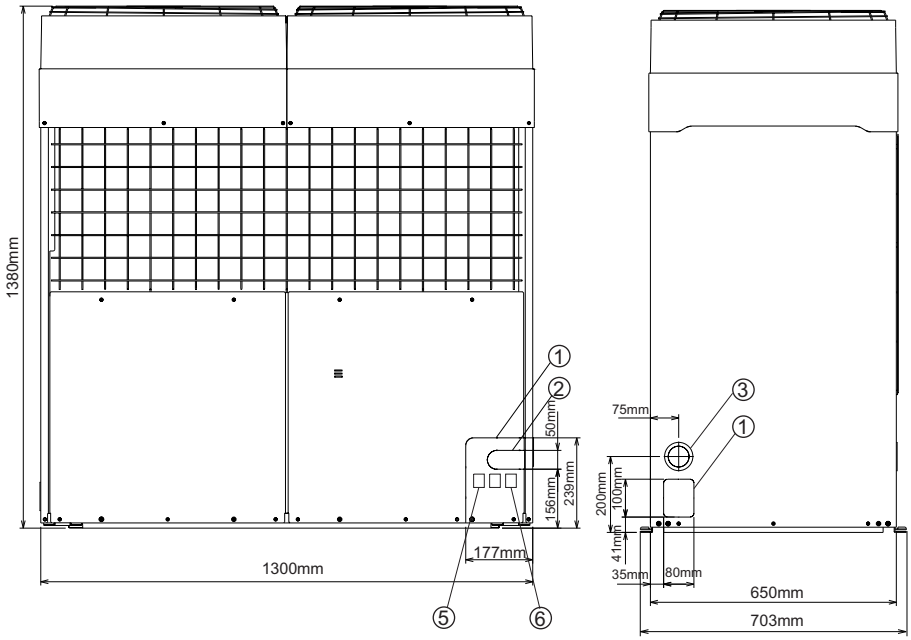
OUTDOOR UNITS

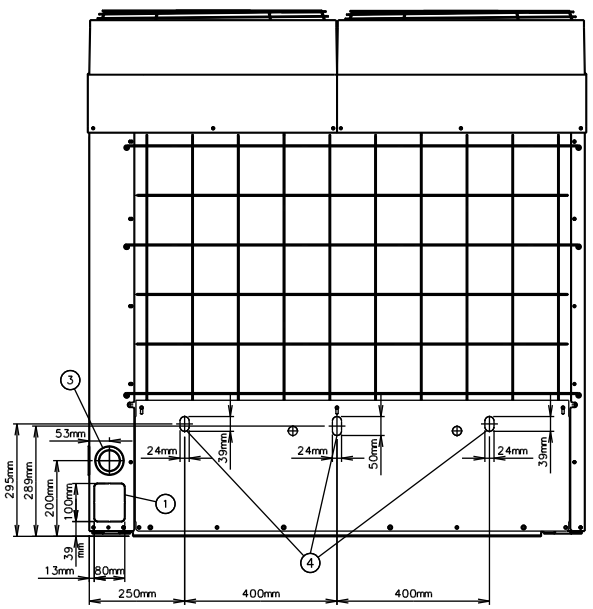
3-4. DIMENSIONS

(Unit : mm)



① Knock out hole for piping
② Knock out hole for wiring
③ Bush for wiring
④ Knock out hole for drain piping
⑤ Liquid pipe valve (flare)
⑥ Suction pipe valve (flange)





OUTDOOR UNITS

3-5. INSTALLATION SPACE

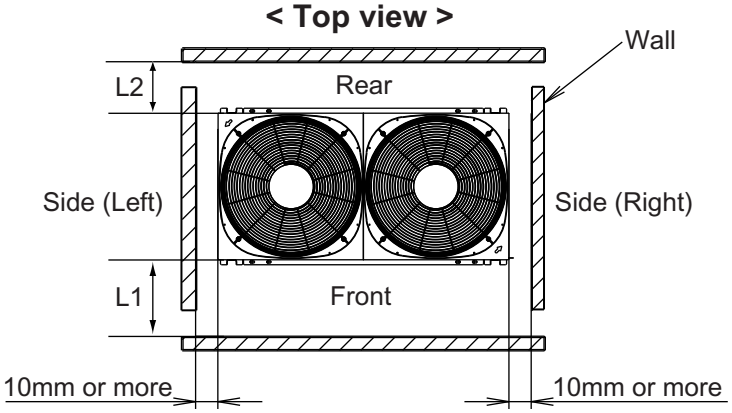
Be careful of the following issues for selecting position of outdoor unit.

- **Install with sufficient space when taking into consideration such as conveyance routes, installation space, walk space and maintenance.**
- **Observe the installation space specifications that are shown in the figures. If installation is not performed according to the specifications, it could cause a short circuit and result in a lack of performance. As a result, outdoor unit might be stopped by high-pressure protection easily.**
- **During installation, take into account the installation space required for the refrigerant piping space.**

OUTDOOR UNITS

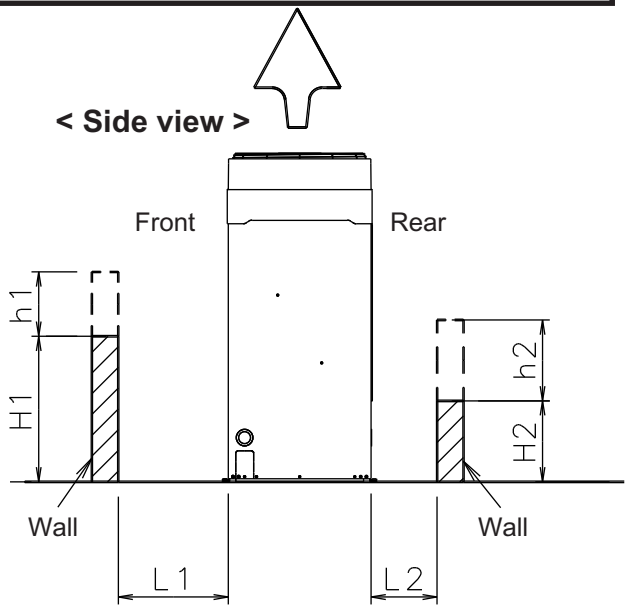
■ SINGLE UNIT INSTALLATION

< Top view >



Minimum space requirement around the outdoor unit.

< Side view >

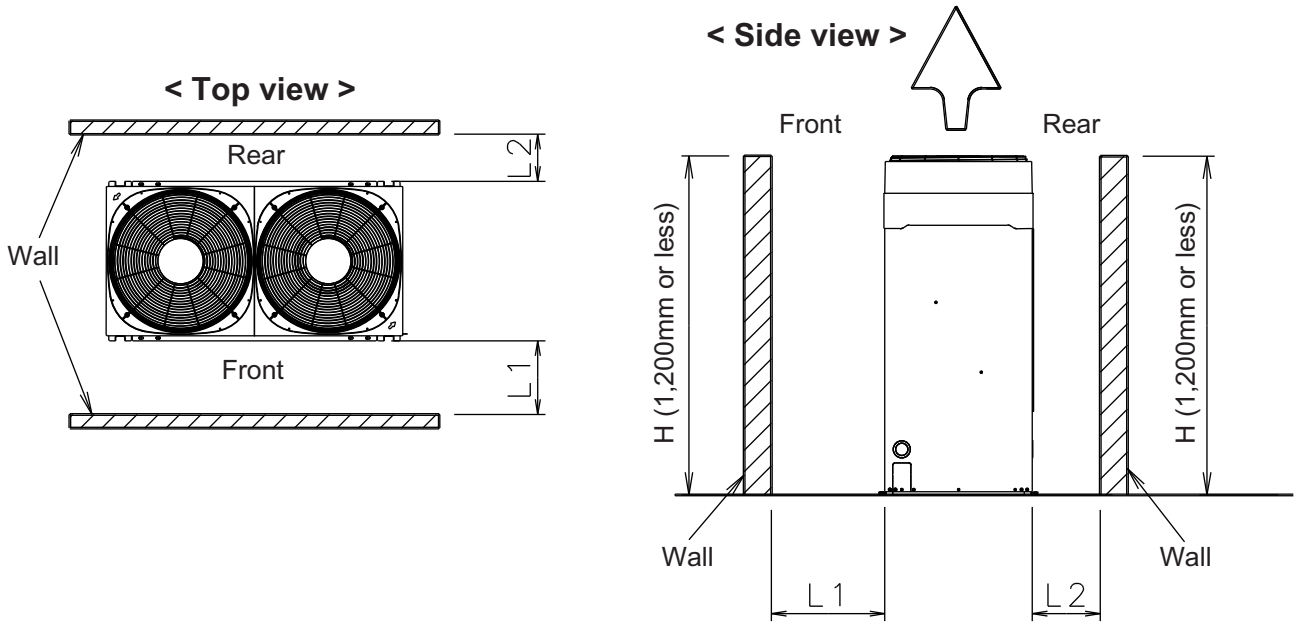


Minimum required space when there are walls, front and rear side.

- If H1 ≦ 600mm, then L1 ≧ 500mm
- If H2 ≦ 300mm, then L2 ≧ 300mm
- If H1 > 600mm, then L1 ≧ (500 + h1) mm
- If H2 > 300mm, then L2 ≧ (300 + h2) mm

● The installation space must be satisfied for each wall (front, rear, sides) are shown below.

- As a rule, there must be no obstructions on the blowing side of the fan. If there are obstructions on the blowing side of the fan, a discharge duct must be used.
- As a rule, the wall height on the front must be H1 (600mm) or less.
- As a rule, the wall height on the rear must be H2 (300mm) or less.
- There is no limit to the wall height on the sides.
- The sides of the unit and the walls must be separated by a distance of 10mm or more.
- If the distance from the sides of the unit to the walls is 150mm or less, the 6 screws on the right side of the unit must be removed before installation.
- If the wall height on the front exceeds H1 = 600mm, the distance h1 (the distance by which it exceeds H1) must be added to the L1 (500mm) service space.
- If the wall height on the rear exceeds H2 = 300mm, the distance h2 (the distance by which it exceeds H2) must be added to the L2 (300mm) service space.

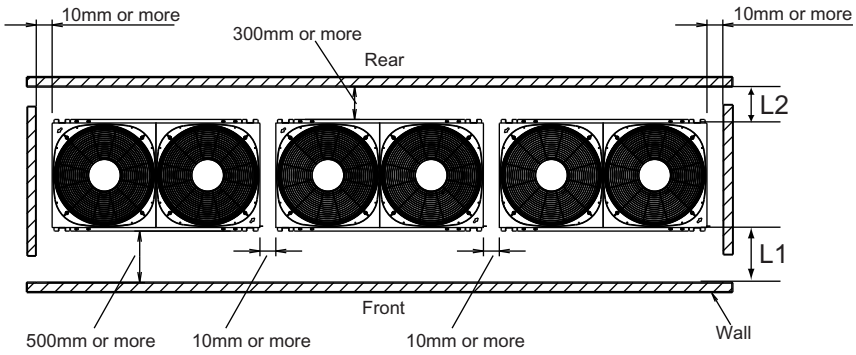


OUTDOOR UNITS

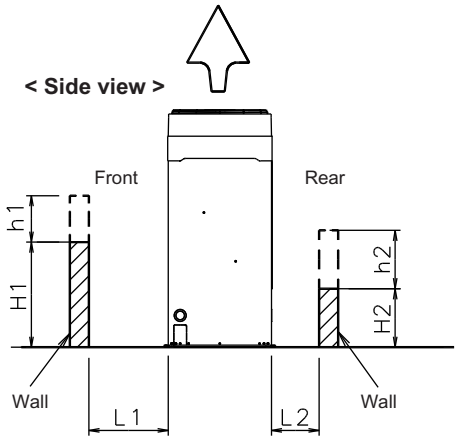
- If unit needs to install at a high front and rear wall height because of a small installation space:
  - ✳ As a rule, there must be no obstructions on the blowing side of the fan.
    If there are obstructions on the blowing side of the fan, a discharge duct must be used.
  - ✳ If space cannot be secured on the front and rear (L1<500mm + h1, L2<300mm+ h2), do not install walls on the sides.
  - ✳ The wall height on the front and rear must be 1,200mm or less.
  - ✳ A service space must be secured of L1 ≧ 500mm and L2 ≧ 300mm.
  - ✳ Construct louvers or other opening in the wall to ensure sufficient ventillation.

- If there is a high wall front or rear side :
  - ✳ Another side of front or rear must be open space.
  - ✳ At least 2 side must be opened.

■ SERIES CONNECTION



Minimum space requirement around the outdoor unit.



Minimum required space when there are walls, front and rear side.

OUTDOOR UNITS

- The installation standards that must be observed for each wall (front, rear, sides) are shown below.

  ✳ As a rule, there must be no obstructions on the blowing side of the fan.
  If there are obstructions on the blowing side of the fan, a discharge duct must be used.

  ✳ As a rule, the wall height on the front must be H1 (600mm) or less.

  ✳ As a rule, the wall height on the rear must be H2 (300mm) or less.

  ✳ There is no limit to the wall height on the sides.

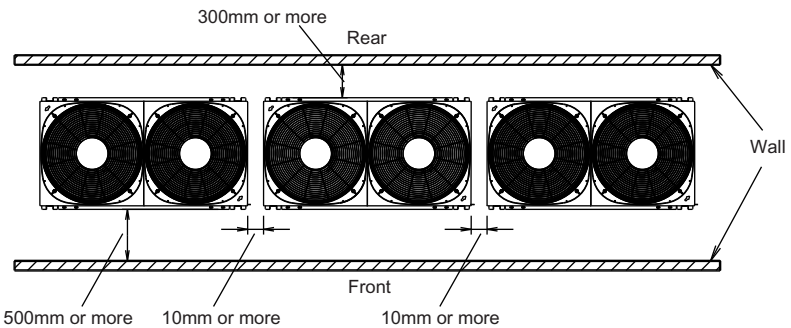
  ✳ The sides of the unit and the walls must be separated by a distance of 10mm or more.

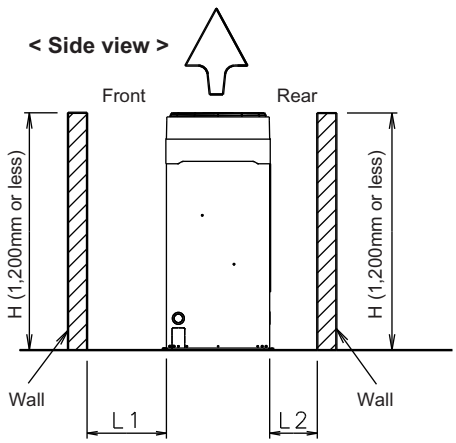
  ✳ If the distance from the sides of the unit to the walls is 150mm or less, the 6 screws on the side (right) of the unit must be removed before installation.

  ✳ If the wall height on the front exceeds H1 = 600mm, the distance h1 (the distance by which it exceeds H1) must be added to the L1 (500mm) service space.

  ✳ If the wall height on the rear exceeds H2 = 300mm, the distance h2 (the distance by which it exceeds H2) must be added to the L2 (300 mm) service space.

✳ If H1 ≦600mm, then L1≧500mm
✳ If H2 ≦300mm, then L2≧300mm
✳ If H1 >600mm, then L1≧(500 + h1) mm
✳ If H2 >300mm, then L2≧(300 + h2) mm





- If unit needs to install at a high front and rear wall height because of a small installation space:

  ✳ As a rule, there must be no obstructions on the blowing side of the fan.
  If there are obstructions on the blowing side of the fan, a discharge duct must be used.

  ✳ If space cannot be secured on the front and rear (L1<500mm + h1, L2<300mm + h2), do not install walls on the sides.

  ✳ The wall height on the front and rear must be 1,200mm or less.
  A service space must be secured of L1 ≧ 500mm and L2 ≧ 300mm.

  ✳ Construct louvers or other opening in the wall to ensure sufficient ventillation.

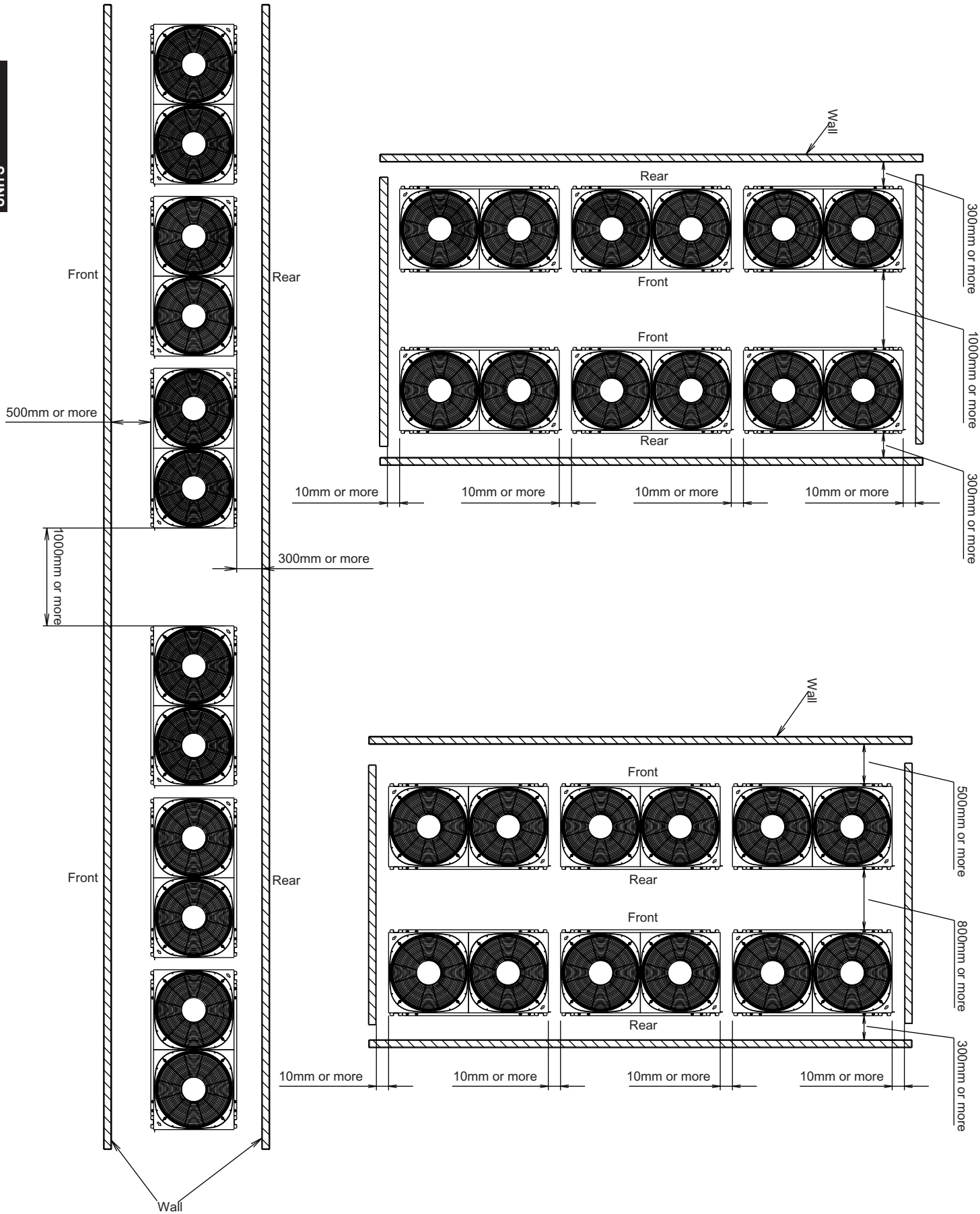
- If there is a high wall front or rear side :

  ✳ Another side of front or rear must be open space.

  ✳ At least 2 side must be opened.

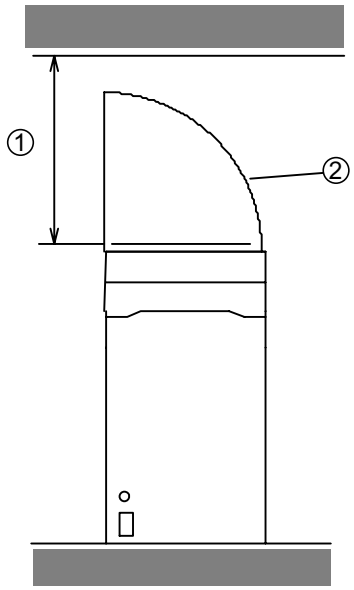
■ SERIES CONNECTION

- ✳ The number of units in an outdoor unit series installation is up to 3 units (each system)
- ✳ If more than 1 system of outdoor units is installed, space (1000mm or more) must be secured between each refrigerant system.
- ✳ Do not install walls on the sides.



OUTDOOR UNITS

■REQUIRED SPACE FOR DISCHARGE OUTLET



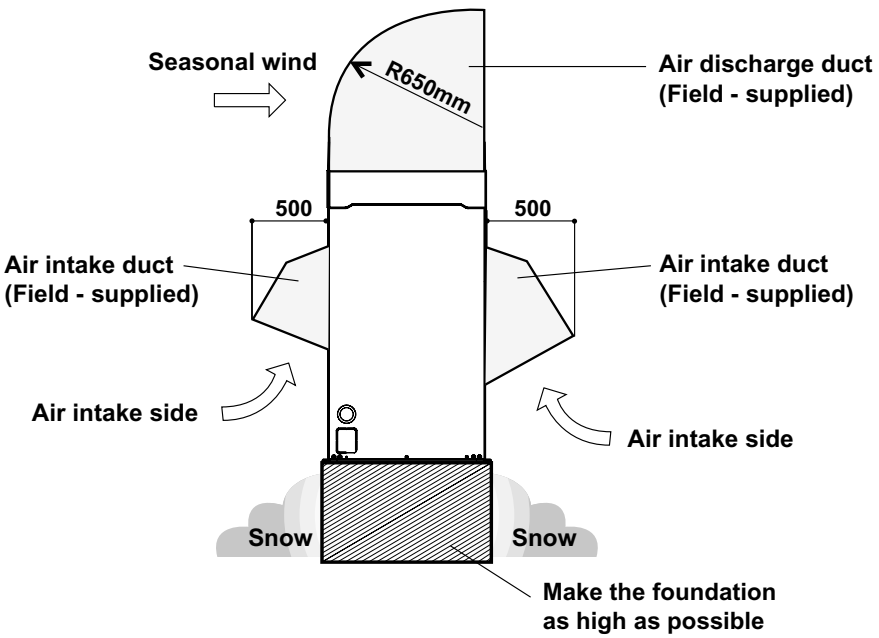
① Minimum space : 700mm
Install a discharge duct when the space is less than 1000mm.

② When a discharge duct is installed, the static pressure has to be less than 3mmAq (30Pa).

✳ When installing the duct, secure sufficient space on both sides (150mm or more).

■ CONSIDERATION FOR SEASONAL WIND AND SNOW

✳ Install inlet and outlet ducts in order to maintain stable operation in cold or snowy regions



■ RECOMMENDED SHAPES OF EACH DUCT

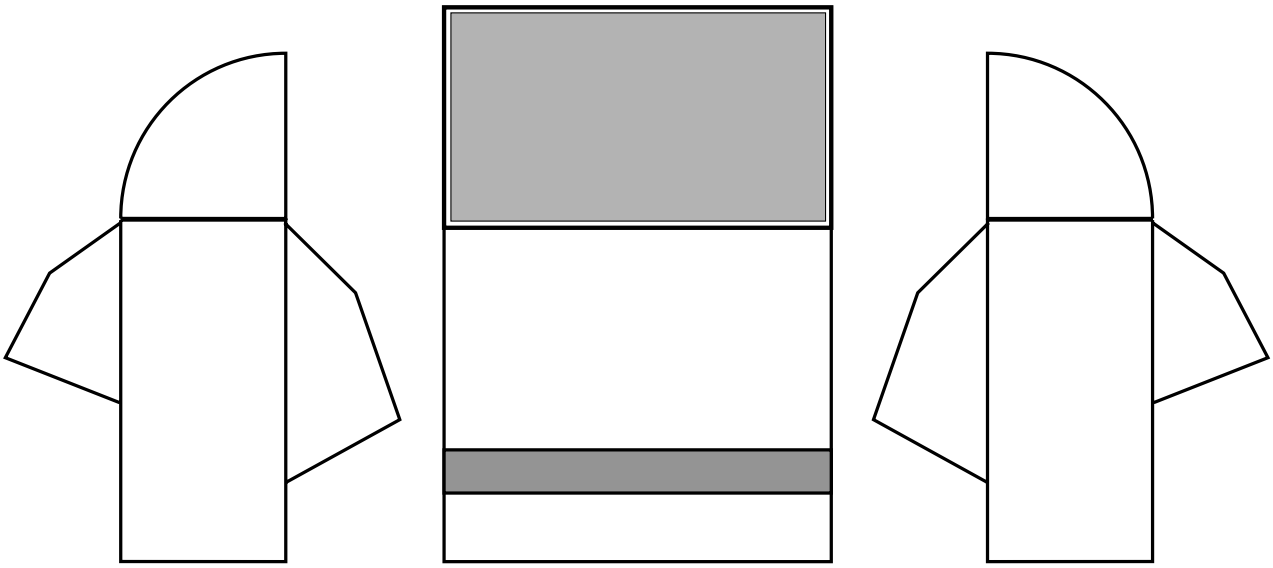


Fig.1 Overall view

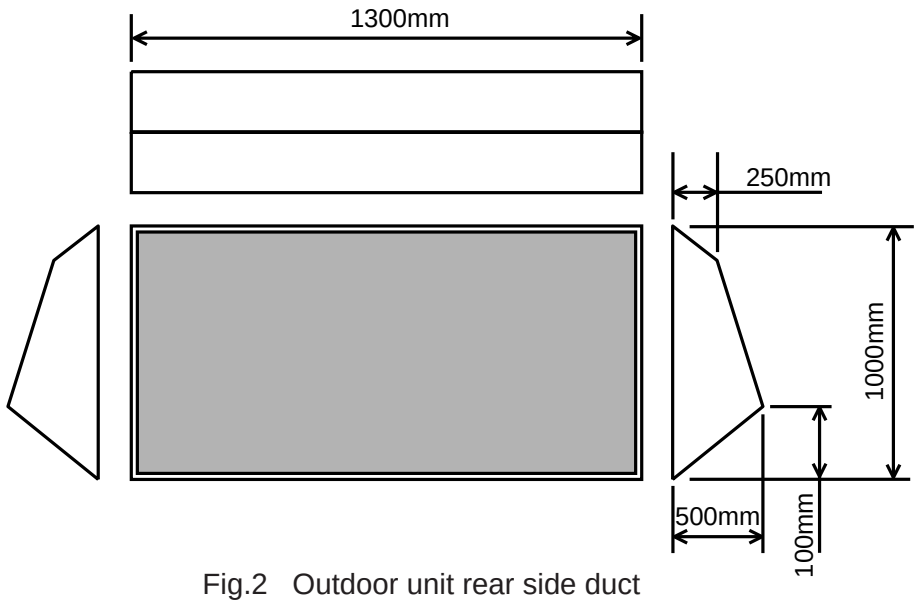


Fig.2 Outdoor unit rear side duct

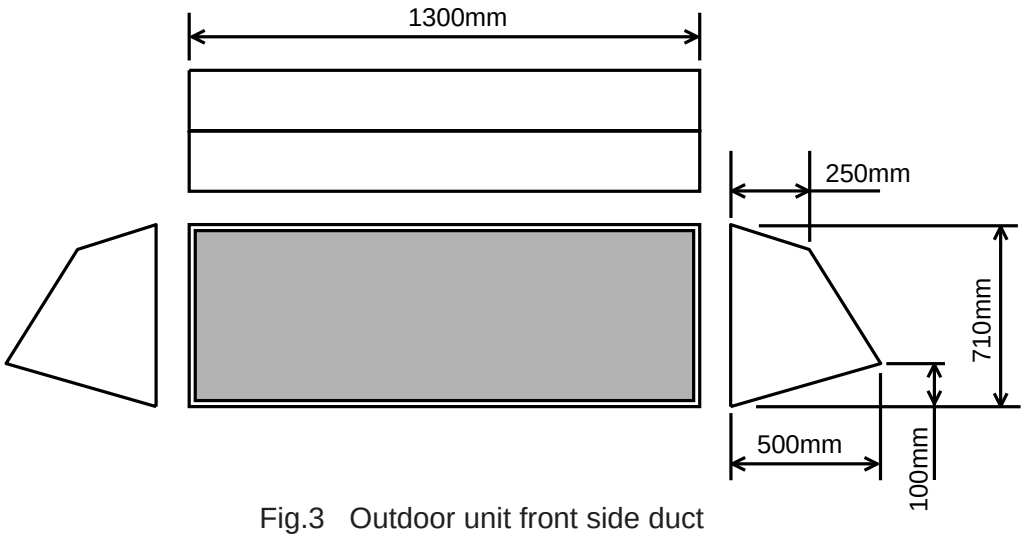
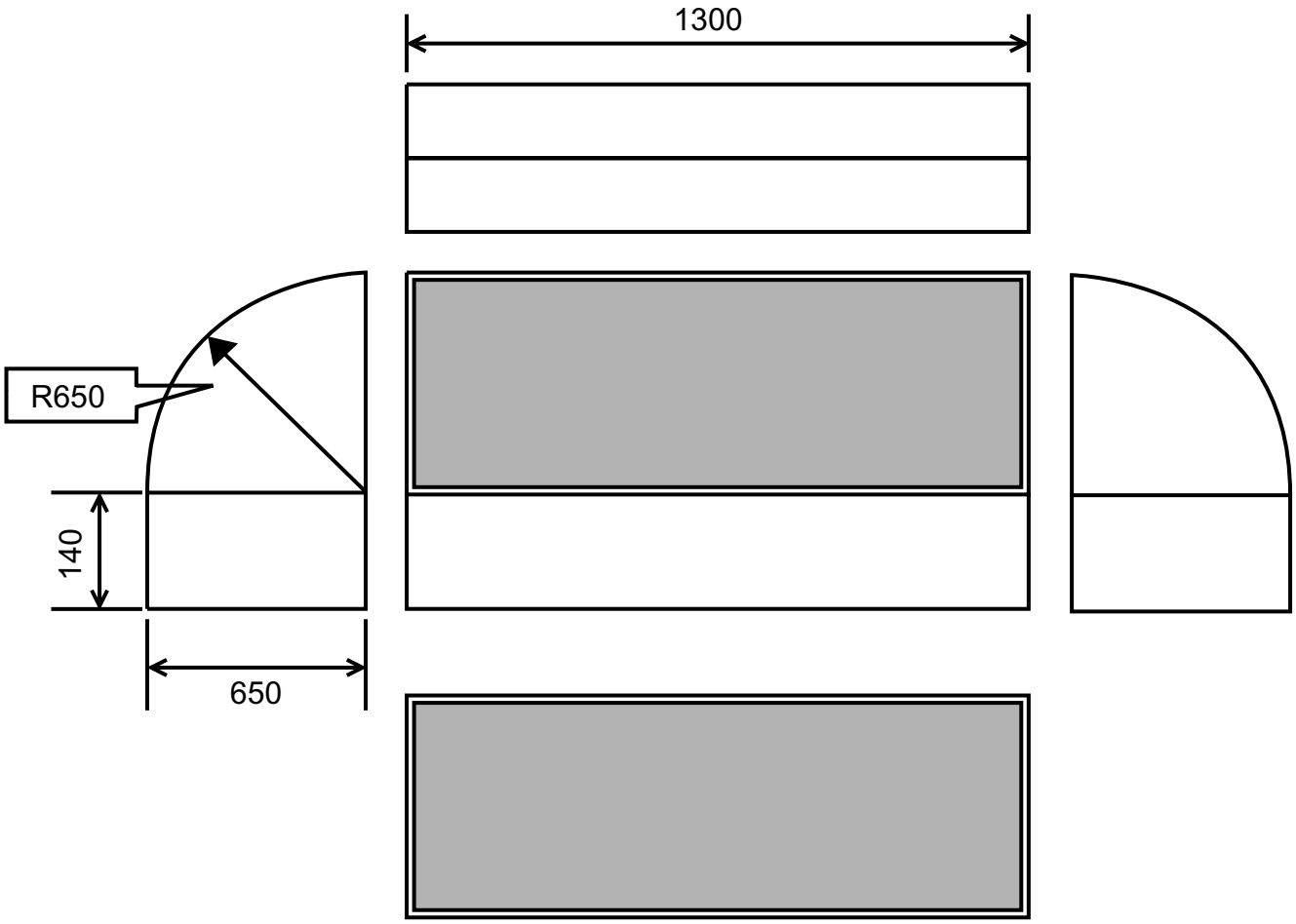


Fig.3 Outdoor unit front side duct

[unit : mm]



OUTDOOR UNITS

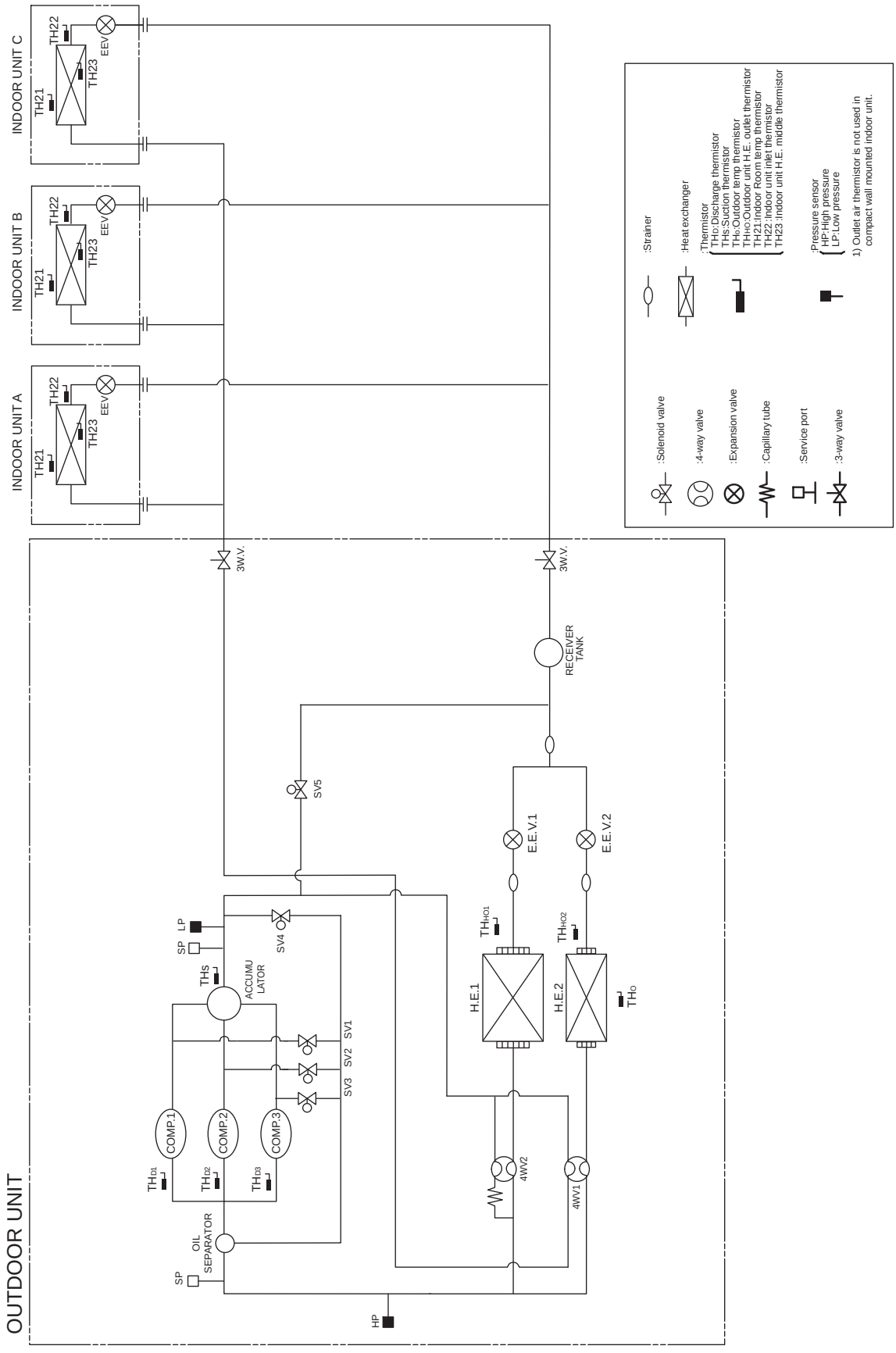
Fig.4 Outdoor unit upper part duct

⚠ CAUTION
1. When installing the duct, secure sufficient space on both sides (150mm or more).
2. When installing the duct, do not expose the bell mouth to excessive force (limit to 20kg or less). If the duct is heavy it could deform the bell mouth.
3. When the leakage of air from the connecting gaps (between the duct and outdoor unit or gallery) is large and the air temperature around outdoor unit increases more than 2 deg, Seal the joining gaps with putty.
4. When the duct is installed, remove two fan covers first.
5. When the duct is installed, the noise may increase.

3-6. REFRIGERANT CIRCUIT

■ HEAT PUMP TYPE

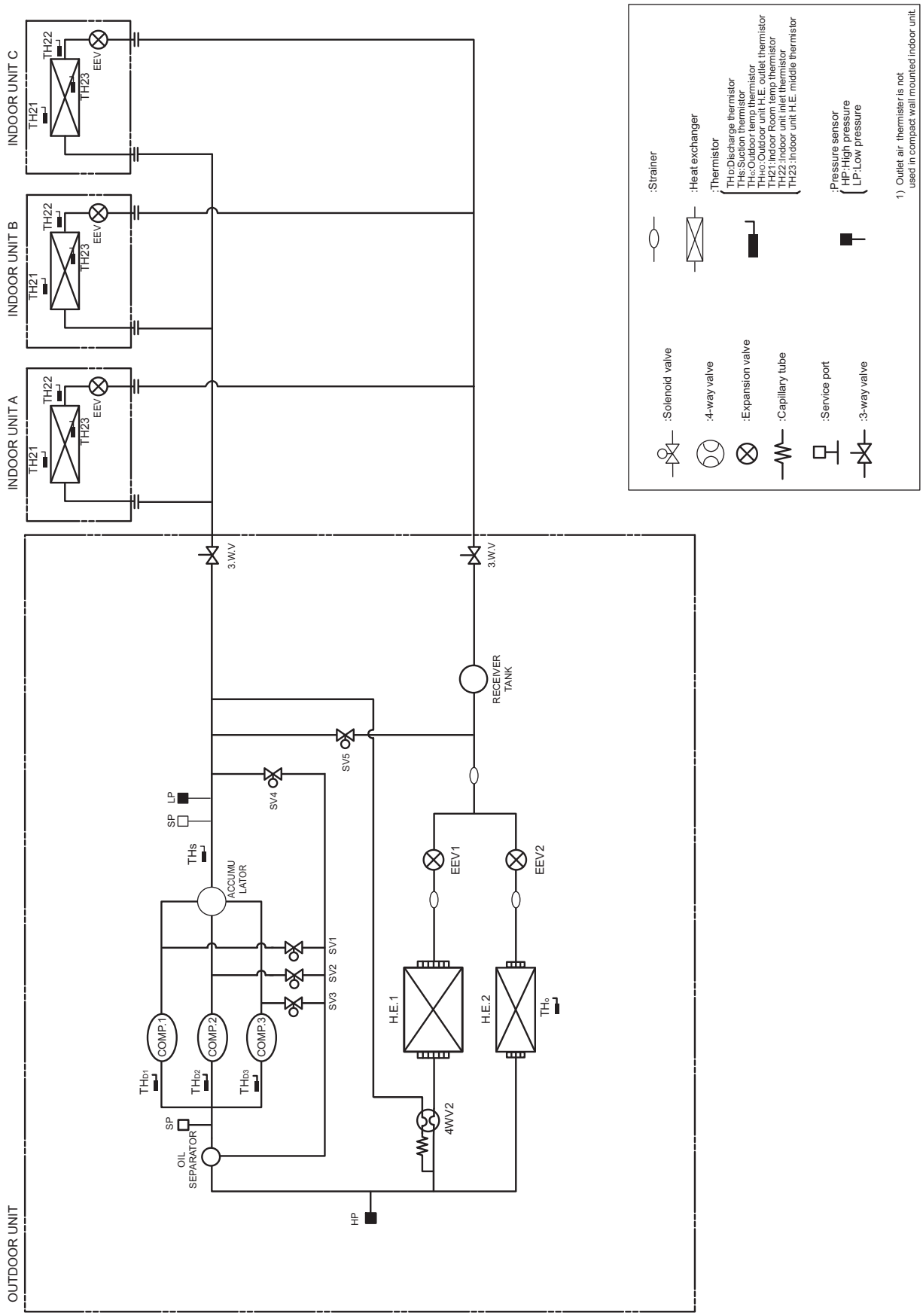
- **MODEL : AO90TPCMF, AO72TPCMF**



OUTDOOR UNITS

■ COOLING ONLY TYPE

• MODEL : AO90EPCMF , AO72EPCMF

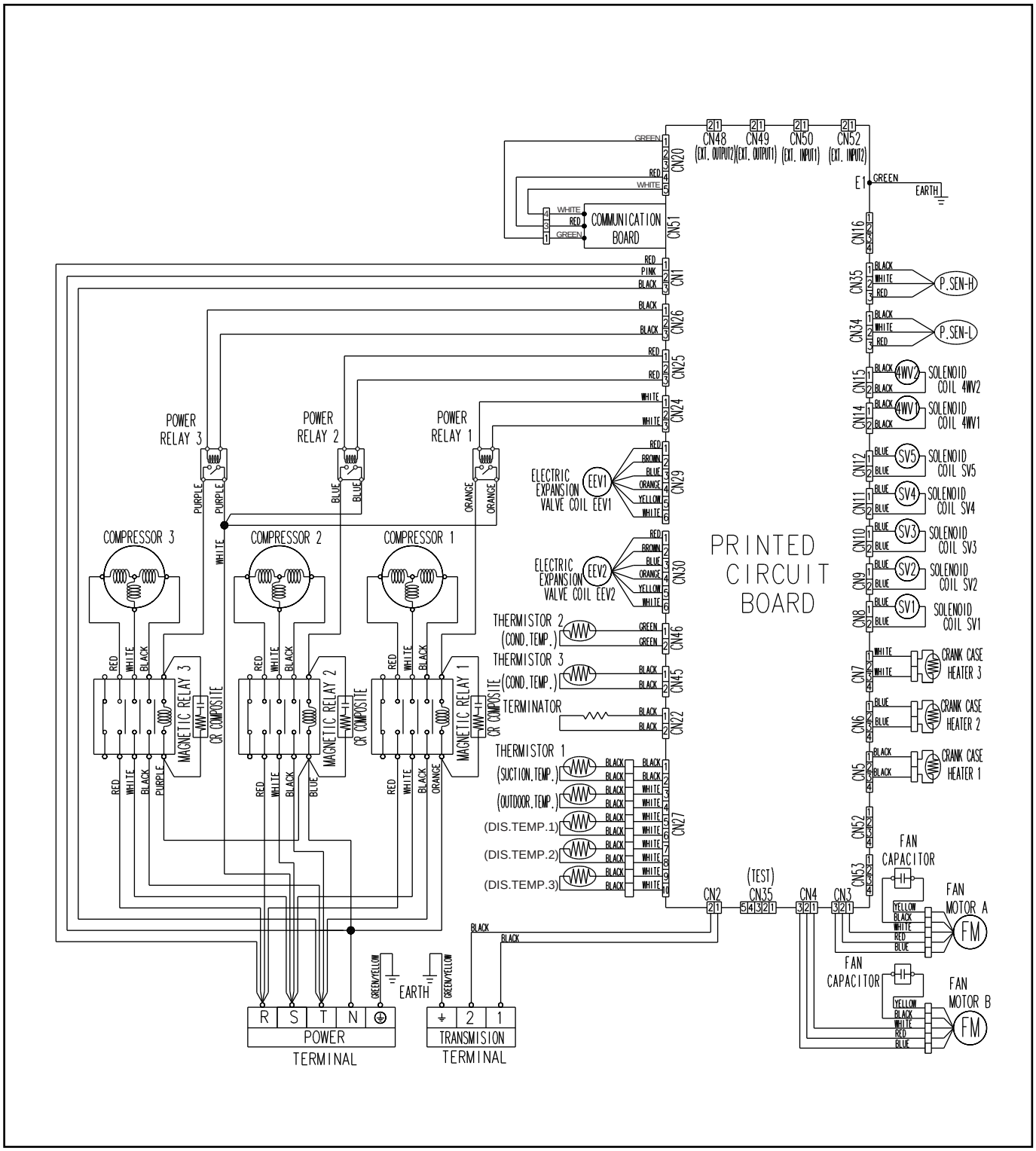


OUTDOOR UNITS

3-7. WIRING DIAGRAM

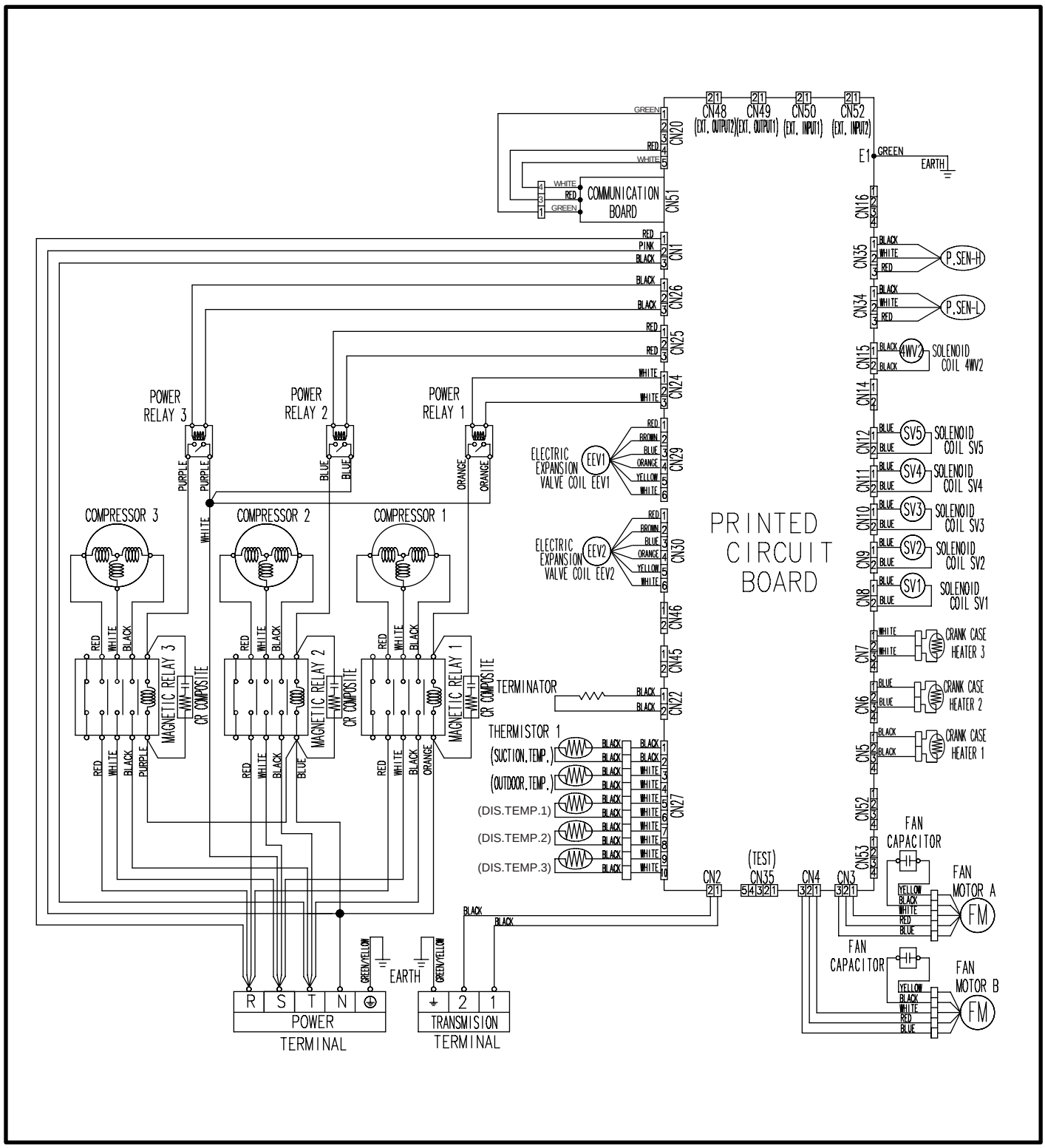
■HEAT PUMP TYPE

- **MODEL : AO90T , AO72T**



■COOLING ONLY TYPE

- **MODEL : AO90E , AO72E**



OUTDOOR UNITS

3-8. CAPACITY TABLE

■ COOLING CAPACITY

- **MODEL : AO90T,AO90E**

Total Capacity Of Indoor Unit	Outdoor Temperature		Indoor Temperature													
			20°CDB/15°CWB		23°CDB/16°CWB		26°CDB/18°CWB		27°CDB/19°CWB		28°CDB/20°CWB		30°CDB/22°CWB		32°CDB/23°CWB	
			68°FDB/59°FWB		73°FDB/61°FWB		79°FDB/64°FWB		81°FDB/66°FWB		82°FDB/68°FWB		86°FDB/72°FWB		90°FDB/73°FWB	
(kW)	(°CDB)	(°FDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
36. 4 (130%)	10	50	27.8	3.71	30.0	3.96	34.3	5.03	36.4	5.30	38.5	5.55	42.4	6.77	43.2	6.85
	15	59	27.8	4.47	30.0	4.75	34.3	5.98	36.4	6.27	38.5	7.35	41.2	7.71	42.0	7.79
	21	70	27.8	5.45	30.0	6.45	34.3	7.19	36.4	8.38	38.2	8.69	39.7	8.84	40.5	8.92
	23	73	27.8	5.79	30.0	6.85	34.3	7.61	36.4	8.86	37.7	9.06	39.2	9.21	40.0	9.29
	25	77	27.8	6.13	30.0	7.26	34.3	8.91	36.4	9.36	37.2	9.44	38.7	9.59	39.5	9.66
	27	81	27.8	7.21	30.0	7.68	34.3	9.41	36.4	9.86	36.7	9.82	38.2	9.96	39.0	10.0
	30	86	27.8	7.85	30.0	8.33	34.3	10.2	35.2	10.3	36.0	10.4	37.5	10.5	38.2	10.6
	33	91	27.8	8.51	30.0	9.00	33.7	10.8	34.5	10.9	35.2	10.9	36.7	11.1	37.4	11.1
	35	95	27.8	8.96	30.0	9.46	33.2	11.2	33.9	11.2	34.7	11.3	36.1	11.4	36.9	11.5
	37	99	27.8	9.42	30.0	10.9	32.7	11.5	33.4	11.6	34.2	11.7	35.6	11.8	36.3	11.9
	40	104	27.8	10.1	30.0	11.7	31.9	12.1	32.6	12.2	33.4	12.2	34.8	12.4	35.5	12.4
	45	113	27.8	12.5	29.3	12.9	30.6	13.0	31.3	13.1	32.0	13.2	33.4	13.3	34.1	13.3
	52	125	26.8	14.1	27.4	14.2	28.7	14.3	29.4	14.4	30.0	14.4	31.3	14.6	32.0	14.6
33. 6 (120%)	10	50	25.7	3.02	27.7	3.69	31.6	4.13	33.6	4.94	35.6	5.20	39.5	6.39	41.5	6.66
	15	59	25.7	4.17	27.7	4.45	31.6	5.58	33.6	5.88	35.6	6.16	39.5	7.51	40.7	7.67
	21	70	25.7	5.11	27.7	5.42	31.6	6.75	33.6	7.08	35.6	8.23	38.6	8.73	39.3	8.80
	23	73	25.7	5.44	27.7	5.76	31.6	7.16	33.6	7.50	36.6	8.70	38.1	9.10	38.8	9.18
	25	77	25.7	5.77	27.7	6.10	31.6	7.58	33.6	7.92	35.6	9.19	37.6	9.48	38.4	9.55
	27	81	25.7	6.12	27.7	6.45	31.6	8.00	33.6	9.26	35.6	9.69	37.1	9.86	37.9	9.93
	30	86	25.7	6.65	27.7	7.81	31.6	8.66	33.6	10.0	34.9	10.3	36.4	10.4	37.1	10.5
	33	91	25.7	7.20	27.7	8.47	31.6	10.3	33.5	10.8	34.2	10.8	35.6	11.0	36.4	11.0
	35	95	25.7	8.40	27.7	8.92	31.6	10.8	33.0	11.2	33.7	11.2	35.1	11.4	35.8	11.4
	37	99	25.7	8.85	27.7	9.38	31.6	11.4	32.5	11.5	33.2	11.6	34.6	11.7	35.3	11.8
	40	104	25.7	9.55	27.7	10.1	31.1	12.0	31.8	12.1	32.5	12.2	33.8	12.3	34.5	12.3
	45	113	25.7	10.8	27.7	12.4	29.8	13.0	30.5	13.0	31.2	13.1	32.5	13.2	33.2	13.3
	52	125	25.7	13.8	26.8	14.1	28.0	14.3	28.6	14.3	29.3	14.4	30.5	14.5	31.2	14.5
30. 8 (110%)	10	50	23.6	2.84	25.4	2.99	29.0	3.85	30.8	4.04	32.6	4.23	36.2	5.28	38.0	5.49
	15	59	23.6	3.43	25.4	4.13	29.0	4.62	30.8	4.84	32.6	5.74	36.2	6.24	38.0	7.28
	21	70	23.6	4.19	25.4	5.06	29.0	5.60	30.8	6.61	32.6	6.92	36.2	8.36	38.0	8.67
	23	73	23.6	5.05	25.4	5.38	29.0	6.67	30.8	7.01	32.6	7.33	36.2	8.84	37.5	9.05
	25	77	23.6	5.37	25.4	5.72	29.0	7.07	30.8	7.42	32.6	7.75	36.2	9.33	37.1	9.43
	27	81	23.6	5.71	25.4	6.06	29.0	7.48	30.8	7.84	32.6	8.18	35.9	9.74	36.6	9.81
	30	86	23.6	6.22	25.4	6.58	29.0	8.12	30.8	8.49	32.6	9.79	35.2	10.3	35.9	10.4
	33	91	23.6	6.76	25.4	7.13	29.0	8.78	30.8	9.16	32.6	10.6	34.5	10.9	35.2	10.9
	35	95	23.6	7.12	25.4	7.50	29.0	9.23	30.8	10.6	32.6	11.1	34.0	11.2	34.7	11.3
	37	99	23.6	7.50	25.4	8.76	29.0	9.69	30.8	11.2	32.2	11.5	33.5	11.6	34.2	11.7
	40	104	23.6	8.08	25.4	9.46	29.0	11.4	30.8	12.0	31.5	12.1	32.8	12.2	33.5	12.2
	45	113	23.6	10.1	25.4	10.7	29.0	12.9	29.6	12.9	30.2	13.0	31.5	13.1	32.2	13.2
	52	125	23.6	11.9	25.4	13.7	27.2	14.2	27.8	14.2	28.4	14.3	29.7	14.4	30.3	14.5
28. 0 (100%)	10	50	21.4	2.66	23.1	2.80	26.4	3.54	28.0	3.74	29.6	3.92	32.9	4.86	34.6	5.07
	15	59	21.4	3.19	23.1	3.38	26.4	4.28	28.0	4.50	29.6	4.70	32.9	5.79	34.6	6.02
	21	70	21.4	3.92	23.1	4.13	26.4	5.22	28.0	5.46	29.6	6.41	32.9	6.97	34.6	7.22
	23	73	21.4	4.18	23.1	4.39	26.4	5.55	28.0	5.80	29.6	6.81	32.9	7.38	34.6	8.52
	25	77	21.4	4.44	23.1	5.28	26.4	5.88	28.0	6.14	29.6	7.21	32.9	7.80	34.6	9.00
	27	81	21.4	4.70	23.1	5.61	26.4	6.23	28.0	7.28	29.6	7.62	32.9	8.22	34.6	9.49
	30	86	21.4	5.11	23.1	6.12	26.4	6.76	28.0	7.91	29.6	8.26	32.9	9.88	34.6	10.2
	33	91	21.4	6.26	23.1	6.65	26.4	8.16	28.0	8.55	29.6	8.92	32.9	10.7	33.9	10.8
	35	95	21.4	6.61	23.1	7.01	26.4	8.59	28.0	9.00	29.6	9.37	32.8	11.1	33.4	11.2
	37	99	21.4	6.98	23.1	7.38	26.4	9.04	28.0	9.46	29.6	10.8	32.3	11.5	33.0	11.6
	40	104	21.4	7.54	23.1	7.95	26.4	9.74	28.0	10.2	29.6	11.7	31.6	12.1	32.3	12.1
	45	113	21.4	8.53	23.1	9.93	26.4	11.0	28.0	12.6	29.2	12.9	30.4	13.0	31.1	13.1
	52	125	21.4	11.1	23.1	11.7	26.3	14.1	26.9	14.2	27.5	14.2	28.7	14.3	29.3	14.4
25. 2 (90%)	10	50	19.3	2.45	20.8	2.60	23.7	2.85	25.2	2.97	26.7	3.58	29.6	3.92	31.1	4.07
	15	59	19.3	2.91	20.8	3.11	23.7	3.44	25.2	4.12	26.7	4.33	29.6	4.70	31.1	4.86
	21	70	19.3	3.61	20.8	3.83	23.7	4.79	25.2	5.04	26.7	5.27	29.6	6.42	31.1	6.68
	23	73	19.3	3.85	20.8	4.08	23.7	5.10	25.2	5.36	26.7	5.60	29.6	6.81	31.1	7.08
	25	77	19.3	4.10	20.8	4.34	23.7	5.42	25.2	5.69	26.7	5.93	29.6	7.22	31.1	7.49
	27	81	19.3	4.36	20.8	4.60	23.7	5.75	25.2	6.03	26.7	6.28	29.6	7.63	31.1	7.90
	30	86	19.3	4.75	20.8	5.00	23.7	6.26	25.2	6.55	26.7	6.80	29.6	8.26	31.1	8.54
	33	91	19.3	5.16	20.8	5.42	23.7	6.79	25.2	7.08	26.7	8.25	29.6	8.91	31.1	10.2
	35	95	19.3	5.45	20.8	6.45	23.7	7.15	25.2	7.45	26.7	8.69	29.6	9.36	31.1	10.7
	37	99	19.3	5.73	20.8	6.81	23.7	7.52	25.2	8.74	26.7	9.13	29.6	10.9	31.1	11.3
	40	104	19.3	6.93	20.8	7.37	23.7	8.09	25.2	9.43	26.7	9.82	29.6	11.7	31.0	12.0
	45	113	19.3	7.89	20.8	8.34	23.7	10.2	25.2	10.6	26.7	11.0	29.2	12.9	29.8	13.0
	52	125	19.3	9.35	20.8	10.9	23.7	12.0	25.2	13.7	26.5	14.1	27.6	14.2	28.2	14.3

TC : Total Capacity kW

PI : Power Input kW (Comp. + Outdoor fan motor)

The data is based on the following conditions. Pipe length : 7.5 m; Height difference : 0 m.

COOLING CAPACITY

- **MODEL : AO90T,AO90E**

Total Capacity Of Indoor Unit	Outdoor Temperature		Indoor Temperature													
			20°CDB/15°CWB		23°CDB/16°CWB		26°CDB/18°CWB		27°CDB/19°CWB		28°CDB/20°CWB		30°CDB/22°CWB		32°CDB/23°CWB	
			68°FDB/59°FWB		73°FDB/61°FWB		79°FDB/64°FWB		81°FDB/66°FWB		82°FDB/68°FWB		86°FDB/72°FWB		90°FDB/73°FWB	
(kW)	(°CDB)	(°FDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
22. 4 (80%)	10	50	17.1	2.18	18.4	2.28	21.1	2.64	22.4	2.75	23.7	2.85	26.4	3.55	27.7	3.70
	15	59	17.1	2.33	18.4	2.80	21.1	3.15	22.4	3.30	23.7	3.44	26.4	4.29	27.7	4.46
	21	70	17.1	2.86	18.4	3.48	21.1	3.87	22.4	4.04	23.7	4.80	26.4	5.22	27.7	5.41
	23	73	17.1	3.48	18.4	3.72	21.1	4.12	22.4	4.29	23.7	5.11	26.4	5.55	27.7	5.74
	25	77	17.1	3.71	18.4	3.96	21.1	4.38	22.4	4.56	23.7	5.43	26.4	5.88	27.7	6.08
	27	81	17.1	3.96	18.4	4.21	21.1	4.64	22.4	5.50	23.7	5.76	26.4	6.22	27.7	6.42
	30	86	17.1	4.34	18.4	4.60	21.1	5.05	22.4	6.00	23.7	6.27	26.4	6.74	27.7	7.85
	33	91	17.1	4.73	18.4	5.00	21.1	6.20	22.4	6.51	23.7	6.79	26.4	8.19	27.7	8.49
	35	95	17.1	5.00	18.4	5.28	21.1	6.55	22.4	6.86	23.7	7.15	26.4	8.62	27.7	8.93
	37	99	17.1	5.28	18.4	5.56	21.1	6.91	22.4	7.23	23.7	7.51	26.4	9.06	27.7	9.37
	40	104	17.1	5.71	18.4	6.00	21.1	7.46	22.4	7.79	23.7	8.08	26.4	9.74	27.7	10.1
	45	113	17.1	6.46	18.4	7.63	21.1	8.43	22.4	8.76	23.7	10.2	26.4	10.9	27.7	12.5
	52	125	17.1	8.57	18.4	9.07	21.1	11.0	22.4	11.5	23.7	11.9	26.3	14.1	26.3	13.9
19. 6 (70%)	10	50	15.0	2.00	16.1	2.10	18.4	2.27	19.6	2.51	20.8	2.62	23.1	2.80	24.2	2.88
	15	59	15.0	2.12	16.1	2.24	18.4	2.81	19.6	2.97	20.8	3.11	23.1	3.37	24.2	3.48
	21	70	15.0	2.62	16.1	2.75	18.4	3.49	19.6	3.67	20.8	3.83	23.1	4.11	24.2	4.90
	23	73	15.0	2.79	16.1	2.93	18.4	3.73	19.6	3.91	20.8	4.07	23.1	4.36	24.2	5.21
	25	77	15.0	2.97	16.1	3.11	18.4	3.97	19.6	4.16	20.8	4.33	23.1	5.32	24.2	5.53
	27	81	15.0	3.15	16.1	3.30	18.4	4.22	19.6	4.41	20.8	4.59	23.1	5.65	24.2	5.86
	30	86	15.0	3.43	16.1	4.13	18.4	4.60	19.6	4.80	20.8	4.98	23.1	6.14	24.2	6.36
	33	91	15.0	3.72	16.1	4.51	18.4	5.00	19.6	5.21	20.8	5.40	23.1	6.66	24.2	6.88
	35	95	15.0	4.47	16.1	4.78	18.4	5.28	19.6	5.49	20.8	6.49	23.1	7.01	24.2	7.24
	37	99	15.0	4.74	16.1	5.05	18.4	5.56	19.6	5.77	20.8	6.84	23.1	7.37	24.2	7.60
	40	104	15.0	5.15	16.1	5.47	18.4	5.99	19.6	7.07	20.8	7.38	23.1	7.93	24.2	9.18
	45	113	15.0	5.88	16.1	6.20	18.4	7.65	19.6	8.01	20.8	8.33	23.1	9.99	24.2	10.3
	52	125	15.0	6.98	16.1	7.32	18.4	9.07	19.6	9.44	20.8	10.9	23.1	11.7	24.2	12.1
16. 8 (60%)	10	50	12.8	1.78	13.8	1.89	15.8	2.07	16.8	2.15	17.8	2.21	19.8	2.54	20.8	2.63
	15	59	12.8	1.86	13.8	1.99	15.8	2.20	16.8	2.29	17.8	2.38	19.8	3.00	20.8	3.12
	21	70	12.8	2.33	13.8	2.47	15.8	2.71	16.8	2.81	17.8	3.40	19.8	3.69	20.8	3.83
	23	73	12.8	2.49	13.8	2.64	15.8	2.88	16.8	2.99	17.8	3.63	19.8	3.94	20.8	4.07
	25	77	12.8	2.66	13.8	2.81	15.8	3.06	16.8	3.69	17.8	3.87	19.8	4.18	20.8	4.32
	27	81	12.8	2.83	13.8	2.98	15.8	3.25	16.8	3.92	17.8	4.11	19.8	4.44	20.8	4.58
	30	86	12.8	3.09	13.8	3.26	15.8	4.08	16.8	4.29	17.8	4.49	19.8	4.82	20.8	4.97
	33	91	12.8	3.37	13.8	3.54	15.8	4.45	16.8	4.68	17.8	4.88	19.8	5.23	20.8	6.38
	35	95	12.8	3.55	13.8	3.73	15.8	4.71	16.8	4.94	17.8	5.15	19.8	5.50	20.8	6.51
	37	99	12.8	3.75	13.8	3.92	15.8	4.98	16.8	5.21	17.8	5.42	19.8	5.78	20.8	6.86
	40	104	12.8	4.05	13.8	4.23	15.8	5.39	16.8	5.63	17.8	5.84	19.8	7.14	20.8	7.39
	45	113	12.8	4.57	13.8	5.53	15.8	6.11	16.8	6.36	17.8	6.58	19.8	8.07	20.8	8.33
	52	125	12.8	6.23	13.8	6.60	15.8	7.21	16.8	8.49	17.8	8.85	19.8	9.47	20.8	10.9
14. 0 (50%)	10	50	10.7	1.54	11.5	1.62	13.2	1.83	14.0	1.91	14.8	1.99	16.5	2.12	17.3	2.17
	15	59	10.7	1.54	11.5	1.68	13.2	1.92	14.0	2.01	14.8	2.10	16.5	2.26	17.3	2.33
	21	70	10.7	1.96	11.5	2.12	13.2	2.38	14.0	2.49	14.8	2.59	16.5	2.77	17.3	3.34
	23	73	10.7	2.11	11.5	2.27	13.2	2.55	14.0	2.66	14.8	2.76	16.5	2.94	17.3	3.57
	25	77	10.7	2.26	11.5	2.43	13.2	2.71	14.0	2.83	14.8	2.94	16.5	3.12	17.3	3.80
	27	81	10.7	2.42	11.5	2.60	13.2	2.88	14.0	3.00	14.8	3.11	16.5	3.89	17.3	4.04
	30	86	10.7	2.67	11.5	2.85	13.2	3.15	14.0	3.27	14.8	3.39	16.5	4.25	17.3	4.41
	33	91	10.7	2.92	11.5	3.11	13.2	3.42	14.0	3.55	14.8	3.67	16.5	4.62	17.3	4.79
	35	95	10.7	3.10	11.5	3.29	13.2	3.61	14.0	3.74	14.8	3.86	16.5	4.88	17.3	5.05
	37	99	10.7	3.28	11.5	3.47	13.2	3.80	14.0	3.93	14.8	4.75	16.5	5.15	17.3	5.32
	40	104	10.7	3.56	11.5	3.76	13.2	4.09	14.0	4.92	14.8	5.15	16.5	5.56	17.3	5.73
	45	113	10.7	4.06	11.5	4.26	13.2	5.34	14.0	5.61	14.8	5.85	16.5	6.27	17.3	6.45
	52	125	10.7	4.81	11.5	5.02	13.2	6.38	14.0	6.66	14.8	6.91	16.5	8.41	17.3	8.70

TC : Total Capacity kW

PI : Power Input kW (Comp. + Outdoor fan motor)

The data is based on the following conditions. Pipe length : 7.5 m; Height difference : 0 m.

OUTDOOR UNITS

- **MODEL : AO72T,AO72E**

Total Capacity Of Indoor Unit	Outdoor Temperature		Indoor Temperature													
			20°CDB/15°CWB		23°CDB/16°CWB		26°CDB/18°CWB		27°CDB/19°CWB		28°CDB/20°CWB		30°CDB/22°CWB		32°CDB/23°CWB	
			68°FDB/59°FWB		73°FDB/61°FWB		79°FDB/64°FWB		81°FDB/66°FWB		82°FDB/68°FWB		86°FDB/72°FWB		90°FDB/73°FWB	
(kW)	(°CDB)	(°FDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
29. 1 (130%)	10	50	22.3	3.27	24.0	3.50	27.4	4.20	29.1	4.42	30.8	5.28	33.8	5.72	34.4	5.78
	15	59	22.3	3.90	24.0	4.16	27.4	4.95	29.1	5.19	30.8	6.18	33.0	6.50	33.6	6.56
	21	70	22.3	4.71	24.0	5.31	27.4	5.90	29.1	6.98	30.8	7.30	32.0	7.42	32.6	7.48
	23	73	22.3	4.98	24.0	5.62	27.4	6.22	29.1	7.37	30.5	7.61	31.7	7.73	32.3	7.79
	25	77	22.3	5.27	24.0	5.93	27.4	7.38	29.1	7.76	30.1	7.92	31.4	8.03	32.0	8.09
	27	81	22.3	5.55	24.0	6.25	27.4	7.76	29.1	8.15	29.8	8.23	31.0	8.34	31.6	8.39
	30	86	22.3	6.36	24.0	6.75	27.4	8.36	28.7	8.64	29.3	8.69	30.5	8.80	31.2	8.85
	33	91	22.3	6.86	24.0	7.25	27.4	8.97	28.2	9.10	28.8	9.15	30.0	9.25	30.7	9.30
	35	95	22.3	7.20	24.0	7.60	27.3	9.36	27.9	9.41	28.5	9.46	29.7	9.56	30.3	9.60
	37	99	22.3	7.54	24.0	7.95	27.0	9.66	27.6	9.71	28.2	9.76	29.4	9.86	30.0	9.90
	40	104	22.3	8.07	24.0	9.47	26.5	10.1	27.1	10.2	27.7	10.2	28.9	10.3	29.5	10.4
	45	113	22.3	8.98	24.0	10.6	25.7	10.9	26.2	10.9	26.8	11.0	28.0	11.1	28.6	11.1
	52	125	22.3	11.6	23.3	11.9	24.5	11.9	25.1	12.0	25.6	12.0	26.8	12.1	27.4	12.1
26. 9 (120%)	10	50	20.6	2.67	22.1	3.25	25.3	3.66	26.9	4.13	28.5	4.34	31.6	5.41	33.2	5.65
	15	59	20.6	3.62	22.1	3.88	25.3	4.63	26.9	4.88	28.5	5.10	31.6	6.32	32.6	6.46
	21	70	20.6	4.39	22.1	4.68	25.3	5.55	26.9	5.81	28.5	6.85	31.1	7.33	31.7	7.39
	23	73	20.6	4.66	22.1	4.96	25.3	5.86	26.9	6.13	28.5	7.23	30.8	7.64	31.4	7.70
	25	77	20.6	4.94	22.1	5.24	25.3	6.18	26.9	6.46	28.5	7.62	30.4	7.95	31.0	8.01
	27	81	20.6	5.22	22.1	5.53	25.3	6.51	26.9	7.65	28.5	8.01	30.1	8.26	30.7	8.31
	30	86	20.6	5.65	22.1	6.34	25.3	7.00	26.9	8.24	28.5	8.61	29.7	8.72	30.2	8.77
	33	91	20.6	6.09	22.1	6.83	25.3	8.42	26.9	8.84	28.0	9.08	29.2	9.18	29.8	9.23
	35	95	20.6	6.39	22.1	7.17	25.3	8.83	26.9	9.26	27.7	9.39	28.9	9.49	29.4	9.53
	37	99	20.6	6.69	22.1	7.51	25.3	9.25	26.8	9.65	27.4	9.70	28.5	9.79	29.1	9.84
	40	104	20.6	7.60	22.1	8.00	25.3	9.88	26.3	10.1	26.9	10.2	28.0	10.2	28.6	10.3
	45	113	20.6	8.50	22.1	8.90	24.9	10.8	25.5	10.9	26.1	10.9	27.2	11.0	27.8	11.0
	52	125	20.6	9.82	22.1	11.5	23.8	11.9	24.4	11.9	24.9	12.0	26.1	12.0	26.7	12.1
24. 6 (110%)	10	50	18.8	2.52	20.3	2.64	23.2	3.40	24.6	3.58	26.1	4.02	29.0	4.40	30.4	5.22
	15	59	18.8	2.98	20.3	3.58	23.2	4.04	24.6	4.25	26.1	4.76	29.0	5.17	30.4	6.12
	21	70	18.8	3.59	20.3	4.35	23.2	4.86	24.6	5.43	26.1	5.68	29.0	6.97	30.4	7.24
	23	73	18.8	3.80	20.3	4.62	23.2	5.14	24.6	5.74	26.1	6.00	29.0	7.35	30.3	7.60
	25	77	18.8	4.57	20.3	4.89	23.2	5.78	24.6	6.06	26.1	6.32	29.0	7.73	30.0	7.91
	27	81	18.8	4.84	20.3	5.16	23.2	6.09	24.6	6.38	26.1	6.64	29.0	8.13	29.7	8.22
	30	86	18.8	5.25	20.3	5.59	23.2	6.58	24.6	6.87	26.1	8.05	28.7	8.64	29.3	8.69
	33	91	18.8	5.68	20.3	6.03	23.2	7.07	24.6	7.38	26.1	8.65	28.2	9.10	28.8	9.15
	35	95	18.8	5.97	20.3	6.32	23.2	7.41	24.6	7.72	26.1	9.06	27.9	9.41	28.5	9.46
	37	99	18.8	6.27	20.3	6.63	23.2	7.75	24.6	9.07	26.1	9.47	27.6	9.72	28.2	9.76
	40	104	18.8	6.73	20.3	7.53	23.2	8.28	24.6	9.70	26.1	10.1	27.1	10.2	27.7	10.2
	45	113	18.8	7.52	20.3	8.42	23.2	10.3	24.6	10.8	26.1	11.2	26.4	10.9	26.9	11.0
	52	125	18.8	9.25	20.3	9.73	23.1	11.8	23.6	11.9	26.1	12.8	25.2	12.0	25.8	12.0
22. 4 (100%)	10	50	17.1	2.34	18.4	2.48	21.1	3.10	22.4	3.29	23.7	3.47	26.4	4.06	27.7	4.24
	15	59	17.1	2.76	18.4	2.93	21.1	3.72	22.4	3.93	23.7	4.12	26.4	4.80	27.7	4.99
	21	70	17.1	3.35	18.4	3.54	21.1	4.50	22.4	4.73	23.7	4.94	26.4	5.72	27.7	5.92
	23	73	17.1	3.56	18.4	3.75	21.1	4.77	22.4	5.00	23.7	5.58	26.4	6.04	27.7	7.08
	25	77	17.1	3.76	18.4	3.96	21.1	5.05	22.4	5.28	23.7	5.89	26.4	6.36	27.7	7.46
	27	81	17.1	3.98	18.4	4.76	21.1	5.33	22.4	5.57	23.7	6.20	26.4	6.68	27.7	7.85
	30	86	17.1	4.30	18.4	5.17	21.1	5.75	22.4	6.41	23.7	6.69	26.4	8.13	27.7	8.44
	33	91	17.1	4.63	18.4	5.59	21.1	6.19	22.4	6.90	23.7	7.18	26.4	8.72	27.7	9.04
	35	95	17.1	4.85	18.4	5.88	21.1	6.49	22.4	7.23	23.7	7.52	26.4	9.13	27.4	9.37
	37	99	17.1	5.80	18.4	6.17	21.1	7.24	22.4	7.57	23.7	7.86	26.4	9.54	27.1	9.68
	40	104	17.1	6.24	18.4	6.63	21.1	7.76	22.4	8.09	23.7	9.43	26.1	10.1	26.7	10.1
	45	113	17.1	7.02	18.4	7.41	21.1	8.64	22.4	8.98	23.7	10.5	25.4	10.9	25.9	10.9
	52	125	17.1	8.16	18.4	9.12	21.1	11.1	22.4	11.6	23.3	11.9	24.3	11.9	24.9	12.0
20. 2 (90%)	10	50	15.4	2.15	16.6	2.29	19.0	2.52	20.2	2.62	21.3	3.15	23.7	3.47	24.9	3.61
	15	59	15.4	2.52	16.6	2.69	19.0	2.99	20.2	3.12	21.3	3.77	23.7	4.12	24.9	4.28
	21	70	15.4	3.08	16.6	3.27	19.0	3.60	20.2	4.34	21.3	4.55	23.7	4.93	24.9	5.48
	23	73	15.4	3.28	16.6	3.47	19.0	3.81	20.2	4.60	21.3	4.82	23.7	5.58	24.9	5.79
	25	77	15.4	3.47	16.6	3.68	19.0	4.62	20.2	4.87	21.3	5.10	23.7	5.89	24.9	6.11
	27	81	15.4	3.68	16.6	3.89	19.0	4.89	20.2	5.15	21.3	5.38	23.7	6.20	24.9	6.42
	30	86	15.4	3.99	16.6	4.20	19.0	5.31	20.2	5.57	21.3	5.80	23.7	6.69	24.9	6.91
	33	91	15.4	4.31	16.6	4.53	19.0	5.73	20.2	6.00	21.3	6.24	23.7	7.18	24.9	7.41
	35	95	15.4	4.53	16.6	4.75	19.0	6.02	20.2	6.29	21.3	6.98	23.7	7.51	24.9	8.76
	37	99	15.4	4.75	16.6	4.98	19.0	6.31	20.2	6.59	21.3	7.31	23.7	7.85	24.9	9.17
	40	104	15.4	5.09	16.6	6.09	19.0	6.77	20.2	7.51	21.3	7.82	23.7	9.45	24.9	9.79
	45	113	15.4	5.67	16.6	6.86	19.0	7.54	20.2	8.38	21.3	8.70	23.7	10.5	24.8	10.8
	52	125	15.4	7.56	16.6	7.99	19.0	9.30	20.2	9.66	21.3	11.3	23.3	11.9	24.0	11.9

TC : Total Capacity kW
PI : Power Input kW (Comp. + Outdoor fan motor)

The data is based on the following conditions. Pipe length : 7.5 m; Height difference : 0 m.

OUTDOOR UNITS

COOLING CAPACITY

- **MODEL : AO72T,AO72E**

Total Capacity Of Indoor Unit	Outdoor Temperature		Indoor Temperature													
			20°CDB/15°CWB		23°CDB/16°CWB		26°CDB/18°CWB		27°CDB/19°CWB		28°CDB/20°CWB		30°CDB/22°CWB		32°CDB/23°CWB	
			68°FDB/59°FWB		73°FDB/61°FWB		79°FDB/64°FWB		81°FDB/66°FWB		82°FDB/68°FWB		86°FDB/72°FWB		90°FDB/73°FWB	
(kW)	(°CDB)	(°FDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
17.9 (80%)	10	50	13.7	1.94	14.8	2.07	16.9	2.32	17.9	2.43	19.0	2.52	21.1	3.12	22.1	3.27
	15	59	13.7	2.01	14.8	2.42	16.9	2.73	17.9	2.86	19.0	2.98	21.1	3.74	22.1	3.90
	21	70	13.7	2.76	14.8	2.97	16.9	3.31	17.9	3.46	19.0	3.59	21.1	4.51	22.1	4.69
	23	73	13.7	2.95	14.8	3.16	16.9	3.51	17.9	3.66	19.0	3.80	21.1	4.78	22.1	4.96
	25	77	13.7	3.14	14.8	3.35	16.9	3.72	17.9	3.87	19.0	4.64	21.1	5.05	22.1	5.23
	27	81	13.7	3.33	14.8	3.55	16.9	3.92	17.9	4.08	19.0	4.91	21.1	5.33	22.1	5.51
	30	86	13.7	3.63	14.8	3.86	16.9	4.24	17.9	5.07	19.0	5.32	21.1	5.75	22.1	6.36
	33	91	13.7	3.94	14.8	4.17	16.9	4.56	17.9	5.48	19.0	5.74	21.1	6.18	22.1	6.84
	35	95	13.7	4.15	14.8	4.39	16.9	4.78	17.9	5.77	19.0	6.03	21.1	6.48	22.1	7.17
	37	99	13.7	4.36	14.8	4.60	16.9	5.76	17.9	6.05	19.0	6.32	21.1	7.26	22.1	7.50
	40	104	13.7	4.69	14.8	4.94	16.9	6.20	17.9	6.50	19.0	6.76	21.1	7.76	22.1	8.01
	45	113	13.7	5.26	14.8	5.51	16.9	6.95	17.9	7.26	19.0	7.54	21.1	8.63	22.1	8.88
	52	125	13.7	6.10	14.8	7.32	16.9	8.07	17.9	8.95	19.0	9.30	21.1	11.2	22.1	11.6
15.7 (70%)	10	50	12.0	1.79	12.9	1.87	14.8	2.08	15.7	2.20	16.6	2.30	18.4	2.47	19.4	2.55
	15	59	12.0	1.84	12.9	1.93	14.8	2.43	15.7	2.57	16.6	2.70	18.4	2.92	19.4	3.02
	21	70	12.0	2.22	12.9	2.32	14.8	2.98	15.7	3.13	16.6	3.27	18.4	3.52	19.4	4.22
	23	73	12.0	2.35	12.9	2.46	14.8	3.17	15.7	3.33	16.6	3.47	18.4	3.72	19.4	4.47
	25	77	12.0	2.49	12.9	2.97	14.8	3.36	15.7	3.52	16.6	3.67	18.4	3.93	19.4	4.74
	27	81	12.0	2.62	12.9	3.16	14.8	3.56	15.7	3.73	16.6	3.88	18.4	4.81	19.4	5.00
	30	86	12.0	2.83	12.9	3.45	14.8	3.86	15.7	4.03	16.6	4.19	18.4	5.21	19.4	5.41
	33	91	12.0	3.49	12.9	3.75	14.8	4.17	15.7	4.35	16.6	4.51	18.4	5.63	19.4	5.84
	35	95	12.0	3.69	12.9	3.95	14.8	4.38	15.7	4.57	16.6	4.73	18.4	5.91	19.4	6.12
	37	99	12.0	3.90	12.9	4.16	14.8	4.60	15.7	4.78	16.6	4.95	18.4	6.20	19.4	6.41
	40	104	12.0	4.21	12.9	4.48	14.8	4.93	15.7	5.12	16.6	6.14	18.4	6.64	19.4	6.86
	45	113	12.0	4.76	12.9	5.04	14.8	5.50	15.7	6.59	16.6	6.89	18.4	7.40	19.4	8.17
	52	125	12.0	5.58	12.9	5.86	14.8	7.35	15.7	7.69	16.6	7.99	18.4	9.13	19.4	9.41
13.4 (60%)	10	50	10.3	1.60	11.1	1.69	12.6	1.84	13.4	1.90	14.2	2.03	15.8	2.22	16.6	2.30
	15	59	10.3	1.64	11.1	1.74	12.6	1.90	13.4	1.98	14.2	2.36	15.8	2.59	16.6	2.70
	21	70	10.3	2.00	11.1	2.11	12.6	2.29	13.4	2.74	14.2	2.89	15.8	3.16	16.6	3.27
	23	73	10.3	2.12	11.1	2.23	12.6	2.42	13.4	2.93	14.2	3.03	15.8	3.35	16.6	3.47
	25	77	10.3	2.24	11.1	2.36	12.6	2.55	13.4	3.11	14.2	3.27	15.8	3.55	16.6	3.67
	27	81	10.3	2.37	11.1	2.49	12.6	3.12	13.4	3.30	14.2	3.47	15.8	3.75	16.6	3.87
	30	86	10.3	2.57	11.1	2.69	12.6	3.41	13.4	3.59	14.2	3.76	15.8	4.05	16.6	4.18
	33	91	10.3	2.77	11.1	2.89	12.6	3.70	13.4	3.90	14.2	4.07	15.8	4.37	16.6	4.50
	35	95	10.3	2.90	11.1	3.03	12.6	3.90	13.4	4.10	14.2	4.28	15.8	4.58	16.6	4.71
	37	99	10.3	3.04	11.1	3.17	12.6	4.11	13.4	4.31	14.2	4.49	15.8	4.80	16.6	4.93
	40	104	10.3	3.26	11.1	3.39	12.6	4.43	13.4	4.63	14.2	4.81	15.8	5.12	16.6	6.17
	45	113	10.3	3.62	11.1	4.47	12.6	4.97	13.4	5.18	14.2	5.37	15.8	6.67	16.6	6.91
	52	125	10.3	4.95	11.1	5.26	12.6	5.78	13.4	6.00	14.2	6.19	15.8	7.75	16.6	7.99
11.2 (50%)	10	50	8.56	1.43	9.22	1.47	10.5	1.63	11.2	1.70	11.9	1.76	13.2	1.87	13.8	1.91
	15	59	8.56	1.43	9.22	1.49	10.5	1.67	11.2	1.75	11.9	1.82	13.2	1.94	13.8	2.31
	21	70	8.56	1.71	9.22	1.83	10.5	2.03	11.2	2.12	11.9	2.19	13.2	2.72	13.8	2.84
	23	73	8.56	1.82	9.22	1.95	10.5	2.16	11.2	2.24	11.9	2.32	13.2	2.90	13.8	3.03
	25	77	8.56	1.94	9.22	2.07	10.5	2.28	11.2	2.37	11.9	2.45	13.2	3.08	13.8	3.21
	27	81	8.56	2.06	9.22	2.19	10.5	2.41	11.2	2.50	11.9	2.58	13.2	3.27	13.8	3.40
	30	86	8.56	2.24	9.22	2.38	10.5	2.60	11.2	2.70	11.9	2.78	13.2	3.56	13.8	3.70
	33	91	8.56	2.43	9.22	2.57	10.5	2.80	11.2	2.90	11.9	3.53	13.2	3.85	13.8	4.00
	35	95	8.56	2.56	9.22	2.70	10.5	2.94	11.2	3.03	11.9	3.72	13.2	4.05	13.8	4.20
	37	99	8.56	2.69	9.22	2.84	10.5	3.07	11.2	3.17	11.9	3.92	13.2	4.26	13.8	4.41
	40	104	8.56	2.89	9.22	3.04	10.5	3.28	11.2	4.03	11.9	4.23	13.2	4.57	13.8	4.72
	45	113	8.56	3.24	9.22	3.39	10.5	4.32	11.2	4.55	11.9	4.76	13.2	5.12	13.8	5.27
	52	125	8.56	3.76	9.22	3.91	10.5	5.10	11.2	5.34	11.9	5.55	13.2	5.91	13.8	6.07

TC : Total Capacity kW
PI : Power Input kW (Comp. + Outdoor fan motor)

The data is based on the following conditions. Pipe length : 7.5 m; Height difference : 0 m.

OUTDOOR UNITS

■ HEATING CAPACITY

• MODEL : AO90T

OUTDOOR UNITS

Total Capacity Of Indoor Unit	Outdoor Temperature			Indoor Temperature											
				15°CDB 59°FDB		18°CDB 64°FDB		20°CDB 68°FDB		23°CDB 73°FDB		25°CDB 77°FDB		27°CDB 81°FDB	
(kW)	(°CDB)	(°FDB)	RH	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	-15	5		22.3	6.42	21.6	6.87	21.1	7.18	20.3	7.63	19.8	7.93	19.3	8.23
	-10	14		25.3	6.89	24.6	7.34	24.1	7.64	23.3	8.09	22.8	8.40	22.2	8.70
	-5	23		28.8	7.41	28.0	7.86	27.5	8.16	26.7	8.61	26.2	8.91	25.6	9.21
36. 4	0	32		32.8	8.00	32.0	8.44	31.4	8.74	30.5	9.18	30.0	9.48	29.4	9.77
(130%)	5	41	RH85%	37.3	8.65	36.4	9.08	35.8	9.37	34.8	9.81	34.2	10.1	31.4	8.72
	7	45		39.2	8.92	38.2	9.35	37.6	9.64	36.7	10.1	36.0	10.4	31.4	8.49
	10	50		41.7	9.28	40.7	9.71	40.1	9.99	36.9	8.73	34.2	8.53	31.4	8.14
	15	59		46.6	9.96	43.7	9.94	41.0	8.60	36.9	8.24	34.1	7.01	31.4	6.74
	-15	5		22.0	6.62	21.2	7.07	20.7	7.37	20.0	7.81	19.5	8.11	19.0	8.41
	-10	14		24.9	7.12	24.2	7.56	23.7	7.86	22.9	8.31	22.4	8.60	21.9	8.90
	-5	23		28.4	7.67	27.6	8.12	27.1	8.41	26.3	8.86	25.8	9.15	25.2	9.45
33. 6	0	32		32.2	8.29	31.4	8.73	30.9	9.02	30.0	9.45	29.5	9.74	28.9	10.0
(120%)	5	41	RH85%	36.6	8.97	35.7	9.40	35.1	9.68	34.0	10.1	31.5	8.72	29.0	8.43
	7	45		38.4	9.26	37.5	9.68	36.9	9.96	34.0	9.79	31.5	8.50	29.0	8.15
	10	50		40.9	9.63	39.9	10.0	37.8	9.92	34.0	8.48	31.5	8.18	29.0	6.97
	15	59		44.1	10.0	40.3	8.55	37.8	8.36	34.0	6.99	31.5	6.76	29.0	5.58
	-15	5		21.6	6.86	20.9	7.29	20.4	7.58	19.6	8.02	19.1	8.31	18.6	8.60
	-10	14		24.5	7.38	23.8	7.82	23.3	8.11	22.5	8.55	22.0	8.84	21.5	9.13
	-5	23		27.9	7.97	27.1	8.41	26.6	8.70	25.8	9.13	25.3	9.42	24.8	9.71
30. 8	0	32		31.6	8.62	30.8	9.05	30.2	9.33	29.4	9.76	28.9	10.0	26.6	8.71
(110%)	5	41	RH85%	35.8	9.34	34.9	9.76	34.4	10.0	31.2	8.67	28.9	8.42	26.6	7.15
	7	45		37.6	9.64	36.7	10.1	34.7	9.90	31.2	8.47	28.9	8.16	26.6	6.96
	10	50		40.0	10.0	37.0	8.69	34.7	8.54	31.2	7.14	28.9	6.96	26.6	6.68
	15	59		40.4	8.56	37.0	8.30	34.7	7.02	31.2	6.74	28.9	5.55	26.6	5.38
	-15	5		21.2	7.12	20.4	7.55	19.9	7.84	19.2	8.26	18.7	8.55	18.2	8.84
	-10	14		24.0	7.68	23.3	8.11	22.8	8.40	22.0	8.83	21.5	9.11	21.0	9.40
	-5	23		27.2	8.31	26.5	8.74	26.0	9.02	25.2	9.45	24.7	9.73	24.2	9.99
28. 0	0	32		30.9	9.00	30.1	9.42	29.5	9.70	28.4	9.98	26.3	8.65	24.2	8.37
(100%)	5	41	RH85%	34.9	9.76	33.6	10.0	31.5	8.67	28.4	8.36	26.3	7.10	24.2	6.87
	7	45		36.6	10.1	33.6	8.65	31.5	8.50	28.4	7.11	26.3	6.92	24.2	6.64
	10	50		36.8	8.65	33.6	8.46	31.5	8.24	28.4	6.90	26.3	6.66	24.2	5.51
	15	59		36.8	8.32	33.6	6.95	31.5	6.79	28.4	5.50	26.3	5.35	24.2	5.13
	-15	5		20.6	7.43	19.9	7.85	19.4	8.13	18.7	8.55	18.3	8.83	17.8	9.10
	-10	14		23.4	8.04	22.7	8.45	22.2	8.73	21.5	9.15	21.0	9.43	20.5	9.71
	-5	23		26.5	8.71	25.8	9.12	25.3	9.40	24.6	9.81	23.6	9.90	21.7	8.60
25. 2	0	32		30.0	9.45	29.3	9.85	28.4	9.99	25.5	8.55	23.6	8.29	21.7	7.06
(90%)	5	41	RH85%	33.1	9.99	30.2	8.56	28.4	8.38	25.5	7.02	23.6	6.81	21.7	6.50
	7	45		33.1	8.60	30.2	8.39	28.4	7.08	25.5	6.84	23.6	6.59	21.7	5.47
	10	50		33.1	8.43	30.2	7.04	28.4	6.91	25.5	6.59	23.6	5.45	21.7	5.26
	15	59		33.1	6.92	30.2	6.70	28.4	5.47	25.5	5.28	23.6	5.08	21.7	4.00
	-15	5		20.0	7.80	19.3	8.21	18.8	8.48	18.2	8.88	17.7	9.15	17.2	9.42
	-10	14		22.7	8.45	22.0	8.86	21.5	9.13	20.8	9.53	20.3	9.80	19.3	9.78
	-5	23		25.7	9.18	25.0	9.58	24.5	9.85	22.7	9.75	21.0	8.47	19.3	8.16
22. 4	0	32		29.0	9.96	26.9	9.82	25.2	8.51	22.7	8.16	21.0	6.95	19.3	6.70
(80%)	5	41	RH85%	29.4	8.49	26.9	8.23	25.2	6.97	22.7	6.69	21.0	5.52	19.3	5.35
	7	45		29.4	8.33	26.9	6.97	25.2	6.82	22.7	5.52	21.0	5.38	19.3	5.18
	10	50		29.4	6.97	26.9	6.78	25.2	6.59	22.7	5.36	21.0	5.18	19.3	4.93
	15	59		29.4	5.48	26.9	5.38	25.2	5.26	22.7	4.99	21.0	3.94	19.3	3.83
	-15	5		19.2	8.24	18.6	8.63	18.1	8.89	17.5	9.28	17.0	9.54	16.6	9.80
	-10	14		21.8	8.95	21.1	9.34	20.7	9.60	19.8	9.90	18.4	8.59	16.9	8.33
	-5	23		24.7	9.74	23.5	9.92	21.1	8.58	19.8	8.29	18.4	7.04	16.9	6.83
19. 6	0	32		25.7	8.54	23.5	8.33	22.1	7.04	19.8	6.80	18.4	6.55	16.9	5.44
(70%)	5	41	RH85%	25.7	6.99	23.5	6.82	22.1	6.64	19.8	5.40	18.4	5.23	16.9	5.00
	7	45		25.7	6.88	23.5	6.66	22.1	5.45	19.8	5.26	18.4	5.06	16.9	3.99
	10	50		25.7	6.70	23.5	5.41	22.1	5.30	19.8	5.05	18.4	3.97	16.9	3.87
	15	59		25.7	5.31	23.5	5.13	22.1	4.96	19.8	3.85	18.4	3.74	16.9	3.59
	-15	5		18.3	8.78	17.7	9.15	17.3	9.40	16.6	9.77	15.8	9.72	14.5	8.44
	-10	14		20.8	9.56	20.1	9.94	18.9	9.75	17.0	8.36	15.8	8.09	14.5	6.90
	-5	23		22.1	8.54	20.2	8.36	18.9	8.16	17.0	6.84	15.8	6.62	14.5	5.48
16. 8	0	32		22.1	6.99	20.2	6.85	18.9	6.69	17.0	5.43	15.8	5.28	14.5	5.06
(60%)	5	41	RH85%	22.1	6.69	20.2	5.40	18.9	5.30	17.0	5.06	15.8	3.96	14.5	3.87
	7	45		22.1	5.41	20.2	5.30	18.9	5.17	17.0	3.95	15.8	3.88	14.5	3.76
	10	50		22.1	5.31	20.2	5.13	18.9	4.96	17.0	3.85	15.8	3.75	14.5	3.60
	15	59		22.1	5.02	20.2	3.84	18.9	3.77	17.0	3.62	15.8	3.46	14.5	3.25
	-15	5		17.2	9.46	16.6	9.81	15.8	9.76	14.2	8.36	13.1	8.13	12.1	6.91
	-10	14		18.4	8.50	16.8	8.33	15.8	8.15	14.2	6.83	13.1	6.62	12.1	5.47
	-5	23		18.4	6.96	16.8	6.82	15.8	6.66	14.2	5.41	13.1	5.26	12.1	5.06
14. 0	0	32		18.4	6.67	16.8	5.38	15.8	5.28	14.2	5.04	13.1	3.95	12.1	3.86
(50%)	5	41	RH85%	18.4	5.26	16.8	5.08	15.8	3.91	14.2	3.82	13.1	3.71	12.1	3.55
	7	45		18.4	5.14	16.8	3.89	15.8	3.84	14.2	3.72	13.1	3.59	12.1	3.41
	10	50		18.4	3.87	16.8	3.81	15.8	3.74	14.2	3.58	13.1	3.41	12.1	3.19
	15	59		18.4	3.73	16.8	3.61	15.8	3.50	14.2	3.25	13.1	2.37	12.1	2.33

TC : Total Capacity kW

PI : Power Input kW (Comp. + Outdoor fan motor)

The data is based on the following conditions. Pipe length : 7.5 m; Height difference : 0 m.

HEATING CAPACITY

- **MODEL : AO72T**

Total Capacity Of Indoor Unit	Outdoor Temperature			Indoor Temperature											
				15°CDB 59°FDB		18°CDB 64°FDB		20°CDB 68°FDB		23°CDB 73°FDB		25°CDB 77°FDB		27°CDB 81°FDB	
(kW)	(°CDB)	(°FDB)	RH	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	-15	5		18.2	5.44	17.5	5.83	17.1	6.10	16.4	6.50	15.9	6.76	15.5	7.03
	-10	14		20.8	5.93	20.1	6.32	19.7	6.59	19.1	6.98	18.6	7.25	18.2	7.51
	-5	23		23.6	6.43	23.0	6.82	22.6	7.08	21.9	7.48	21.5	7.74	21.1	8.00
29. 1	0	32		26.8	6.95	26.1	7.33	25.7	7.59	25.1	7.98	24.6	8.23	24.2	8.49
(130%)	5	41	RH85%	30.3	7.50	29.7	7.87	29.3	8.13	28.6	8.50	27.3	8.48	25.1	7.20
	7	45		31.9	7.72	31.2	8.10	30.8	8.35	29.5	8.53	27.3	7.24	25.1	6.99
	10	50		33.9	8.02	33.3	8.39	32.8	8.61	29.5	7.20	27.3	6.98	25.1	6.26
	15	59		38.0	8.57	34.9	8.32	32.8	7.05	29.5	6.25	27.3	6.03	25.1	5.71
	-15	5		17.9	5.62	17.2	6.01	16.8	6.27	16.1	6.66	15.7	6.92	15.2	7.18
	-10	14		20.4	6.13	19.8	6.52	19.4	6.78	18.7	7.17	18.3	7.43	17.9	7.69
	-5	23		23.3	6.66	22.6	7.05	22.2	7.30	21.6	7.69	21.2	7.95	20.7	8.20
26. 9	0	32		26.3	7.21	25.7	7.59	25.3	7.84	24.7	8.22	24.2	8.47	23.2	8.48
(120%)	5	41	RH85%	29.8	7.78	29.2	8.16	28.8	8.40	27.2	8.48	25.2	7.20	23.2	6.94
	7	45		31.3	8.02	30.7	8.39	30.2	8.62	27.2	7.21	25.2	7.00	23.2	6.27
	10	50		33.4	8.33	32.3	8.57	30.2	8.33	27.2	6.98	25.2	6.26	23.2	6.00
	15	59		35.3	8.38	32.3	7.01	30.2	6.83	27.2	6.03	25.2	5.75	23.2	4.72
	-15	5		17.5	5.82	16.9	6.21	16.4	6.46	15.8	6.85	15.4	7.10	14.9	7.36
	-10	14		20.1	6.37	19.4	6.75	19.0	7.01	18.4	7.39	18.0	7.64	17.6	7.90
	-5	23		22.8	6.93	22.2	7.31	21.8	7.56	21.2	7.94	20.8	8.19	20.4	8.44
24. 6	0	32		25.9	7.50	25.2	7.87	24.8	8.12	24.2	8.49	23.1	8.50	21.3	7.20
(110%)	5	41	RH85%	29.3	8.11	28.7	8.47	27.7	8.55	24.9	7.16	23.1	6.94	21.3	6.22
	7	45		30.8	8.36	29.6	8.56	27.7	8.32	24.9	6.97	23.1	6.26	21.3	6.00
	10	50		32.3	8.58	29.6	7.16	27.7	7.03	24.9	6.23	23.1	6.00	21.3	4.86
	15	59		32.3	7.01	29.6	6.24	27.7	6.09	24.9	5.74	23.1	4.70	21.3	4.52
	-15	5		17.1	6.06	16.5	6.43	16.1	6.69	15.4	7.06	15.0	7.31	14.6	7.56
	-10	14		19.6	6.64	19.0	7.01	18.6	7.26	18.0	7.64	17.6	7.89	17.2	8.14
	-5	23		22.3	7.23	21.7	7.60	21.3	7.85	20.7	8.22	20.3	8.47	19.3	8.44
22. 4	0	32		25.3	7.84	24.7	8.21	24.3	8.45	22.7	8.42	21.0	7.16	19.3	6.90
(100%)	5	41	RH85%	28.6	8.49	26.9	8.47	25.2	7.16	22.7	6.88	21.0	6.18	19.3	5.91
	7	45		29.4	8.55	26.9	7.14	25.2	7.00	22.7	6.21	21.0	5.98	19.3	4.85
	10	50		29.4	7.13	26.9	6.95	25.2	6.25	22.7	5.96	21.0	4.82	19.3	4.67
	15	59		29.4	6.22	26.9	6.02	25.2	5.81	22.7	4.65	21.0	4.49	19.3	4.27
	-15	5		16.7	6.34	16.0	6.70	15.6	6.94	15.0	7.31	14.6	7.55	14.2	7.80
	-10	14		19.1	6.95	18.5	7.32	18.1	7.56	17.5	7.93	17.1	8.17	16.7	8.41
	-5	23		21.8	7.59	21.2	7.95	20.8	8.19	20.2	8.55	18.9	8.38	17.4	7.12
20. 2	0	32		24.6	8.24	24.0	8.59	22.7	8.45	20.4	7.07	18.9	6.84	17.4	6.13
(90%)	5	41	RH85%	26.5	8.44	24.2	7.06	22.7	6.90	20.4	6.11	18.9	5.86	17.4	4.78
	7	45		26.5	7.09	24.2	6.90	22.7	6.20	20.4	5.90	18.9	4.79	17.4	4.64
	10	50		26.5	6.92	24.2	6.15	22.7	5.98	20.4	4.75	18.9	4.62	17.4	4.43
	15	59		26.5	6.00	24.2	4.72	22.7	4.64	20.4	4.43	18.9	4.23	17.4	3.95
	-15	5		16.1	6.66	15.5	7.01	15.1	7.25	14.5	7.60	14.1	7.84	13.8	8.07
	-10	14		18.5	7.33	17.9	7.68	17.5	7.91	17.0	8.27	16.6	8.50	15.5	8.32
	-5	23		21.1	8.01	20.5	8.35	20.1	8.59	18.1	7.19	16.8	7.01	15.5	6.29
17. 9	0	32		23.5	8.58	21.5	7.15	20.2	7.03	18.1	6.25	16.8	6.04	15.5	5.74
(80%)	5	41	RH85%	23.5	7.00	21.5	6.23	20.2	6.09	18.1	4.81	16.8	4.70	15.5	4.53
	7	45		23.5	6.26	21.5	6.08	20.2	5.90	18.1	4.70	16.8	4.56	15.5	4.35
	10	50		23.5	6.10	21.5	5.85	20.2	4.71	18.1	4.54	16.8	4.35	15.5	4.10
	15	59		23.5	4.66	21.5	4.54	20.2	4.42	18.1	4.13	16.8	3.19	15.5	3.11
	-15	5		15.5	7.05	14.9	7.39	14.5	7.61	14.0	7.95	13.6	8.18	13.2	8.40
	-10	14		17.8	7.77	17.2	8.11	16.8	8.33	15.9	8.44	14.7	7.14	13.5	6.94
	-5	23		20.2	8.51	18.8	8.43	17.6	7.11	15.9	6.86	14.7	6.16	13.5	5.91
15. 7	0	32		20.6	7.06	18.8	6.87	17.6	6.18	15.9	5.89	14.7	4.77	13.5	4.62
(70%)	5	41	RH85%	20.6	6.15	18.8	5.92	17.6	4.74	15.9	4.59	14.7	4.42	13.5	4.18
	7	45		20.6	6.00	18.8	4.72	17.6	4.64	15.9	4.44	14.7	4.24	13.5	3.25
	10	50		20.6	4.70	18.8	4.60	17.6	4.48	15.9	4.22	14.7	3.22	13.5	3.15
	15	59		20.6	4.47	18.8	4.28	17.6	4.10	15.9	3.11	14.7	3.03	13.5	2.91
	-15	5		14.7	7.52	14.1	7.84	13.8	8.05	13.2	8.37	12.6	8.39	11.6	7.09
	-10	14		16.9	8.31	16.1	8.51	15.1	8.33	13.6	6.95	12.6	6.24	11.6	6.04
	-5	23		17.6	7.08	16.1	6.92	15.1	6.22	13.6	5.97	12.6	4.80	11.6	4.67
13. 4	0	32		17.6	6.18	16.1	5.98	15.1	4.76	13.6	4.63	12.6	4.48	11.6	4.26
(60%)	5	41	RH85%	17.6	4.70	16.1	4.61	15.1	4.50	13.6	4.24	12.6	3.22	11.6	3.16
	7	45		17.6	4.62	16.1	4.49	15.1	4.35	13.6	4.05	12.6	3.16	11.6	3.07
	10	50		17.6	4.50	16.1	4.31	15.1	4.13	13.6	3.13	12.6	3.05	11.6	2.94
	15	59		17.6	4.16	16.1	3.09	15.1	3.04	13.6	2.92	12.6	3.80	11.6	2.63
	-15	5		13.7	8.10	13.2	8.40	12.6	8.42	11.3	7.01	10.5	6.85	9.66	6.14
	-10	14		14.7	7.06	13.4	6.93	12.6	6.22	11.3	6.01	10.5	5.78	9.66	4.68
	-5	23		14.7	6.17	13.4	5.98	12.6	4.74	11.3	4.62	10.5	4.48	9.66	4.27
11. 2	0	32		14.7	4.69	13.4	4.60	12.6	4.49	11.3	4.25	10.5	3.22	9.66	3.15
(50%)	5	41	RH85%	14.7	4.47	13.4	4.27	12.6	3.17	11.3	3.10	10.5	3.02	9.66	2.91
	7	45		14.7	4.34	13.4	3.14	12.6	3.11	11.3	3.02	10.5	2.93	9.66	2.79
	10	50		14.7	3.11	13.4	3.08	12.6	3.03	11.3	2.90	10.5	2.78	9.66	2.61
	15	59		14.7	2.99	13.4	2.91	12.6	2.82	11.3	2.62	10.5	2.23	9.66	2.15

TC : Total Capacity kW

PI : Power Input kW (Comp. + Outdoor fan motor)

The data is based on the following conditions. Pipe length : 7.5 m; Height difference : 0 m.

3-9. SELECTION PROCEDURE

■ CHARACTERISTICS OF CAPACITY (COOLING CAPACITY)

Example) In case of AU12 x 6 units and AR14 x 3units.
Design Condition : Indoor 28℃ DB, 20℃ WB. Outdoor 40℃ DB.

• Select the indoor unit

① Select the indoor unit

Refer to 4-8.CAPACITY TABLE(COOLING) of INDOOR UNIT
Enter the given designed indoor and outdoor air temperature.
Please find the indoor unit capacity **TC**.

MODEL	AU12	AR14	
Rated CAPACITY	3.60	4.00	··· ①-a
TC	3.81	4.24	··· ①-b

based on table1∼4.

Select the unit by using TC ①-b to make nearest to and larger than the load of each room.

Table.1 Capacity of indoor unit (AB)

	AB12	AB14	AB18	AB24	AB30	AB36	AB45	AB54
Cooling capacity(kW)	3.60	4.05	5.30	6.60	8.80	10.5	12.7	14.1
Heating capacity(kW)	4.10	5.00	5.60	7.70	9.10	12.7	13.7	15.8

Table.2 Capacity of indoor unit (AR)

	AR7	AR9	AR12	AR14	AR18	AR25	AR30	AR36
Cooling capacity(kW)	2.20	2.80	3.60	4.00	5.30	7.00	8.80	10.5
Heating capacity(kW)	2.50	3.20	4.10	4.80	5.60	7.70	9.50	12.7

	AR45	AR36H	AR45H	AR60H
Cooling capacity(kW)	12.7	10.5	12.7	17.0
Heating capacity(kW)	14.3	12.7	14.3	18.2

Table.3 Capacity of indoor unit (AU)

	AU7	AU9	AU12	AU14	AU18	AU20	AU25	AU30	AU36	AU45	AU54
Cooling capacity(kW)	2.20	2.80	3.60	4.00	5.00	5.70	7.05	8.80	10.5	12.7	14.1
Heating capacity(kW)	2.50	3.20	4.10	4.50	5.45	5.80	7.85	9.10	12.7	13.7	15.8

Table.4 Capacity of indoor unit (AS)

	AS7	AS9	AS12	AS14	AS18	AS24	AS30
Cooling capacity(kW)	2.20	2.80	3.60	4.00	5.40	6.90	8.00
Heating capacity(kW)	2.50	3.20	4.10	4.80	5.60	7.80	8.80

Table.5 Capacity of indoor unit (AW)

	AW7	AW9	AW12	AW14	AW18	AW24	AW30
Cooling capacity(kW)	2.20	2.80	3.60	4.30	5.40	6.90	8.00
Heating capacity(kW)	2.50	3.20	4.10	4.90	5.60	7.80	8.80

• Calculate the capacity of the system

② Calculate cooling capacity of the system based on table1～5.

Total capacity of indoor unit (COOLING) = {3.6(kW)x6(units)}+{4.0(kW)x3(units)} = 33.6(kW)··· ②

③ Calculate the cooling capacity of OUTDOOR UNIT

Refer to CAPACITY TABLE of OUTDOOR UNIT

Enter the total capacity of indoor unit (②) and given designed indoor and outdoor air temperature.

Please find the outdoor unit capacity **TC**.

Outdoor unit capacity = 32.5 (kW)··· ③

OUTDOOR UNITS

• Calculate the actual capacity for individual indoor unit

Calculate according to the following formulas.

④ Calculate the individual indoor unit actual capacity of system.

Actual capacity = Cooling Capacity ③ x (Indoor unit capacity ①-a / Total capacity ②) x Ratio

Capacity of AU12 = 32.5 x (3.60 / 33.6) = 3.48(kW)

Capacity of AR14 = 32.5 x (4.00 / 33.6) = 3.87(kW)

Ratio : Ratio of capacity based on Piping Length / 100

(Reference the capacity ratio of REFRIGERANT PIPING LENGTH COMPENSATION CURVE)

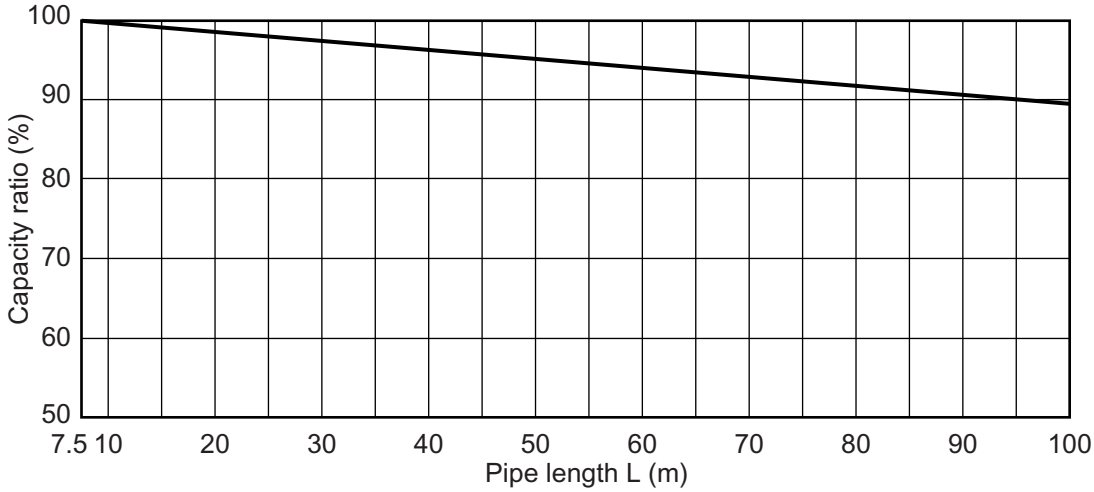
If the actual capacity is less than load of room,select the unit again as exceed to load.

Note : Select the optimum size units and make sure not to select oversized units.

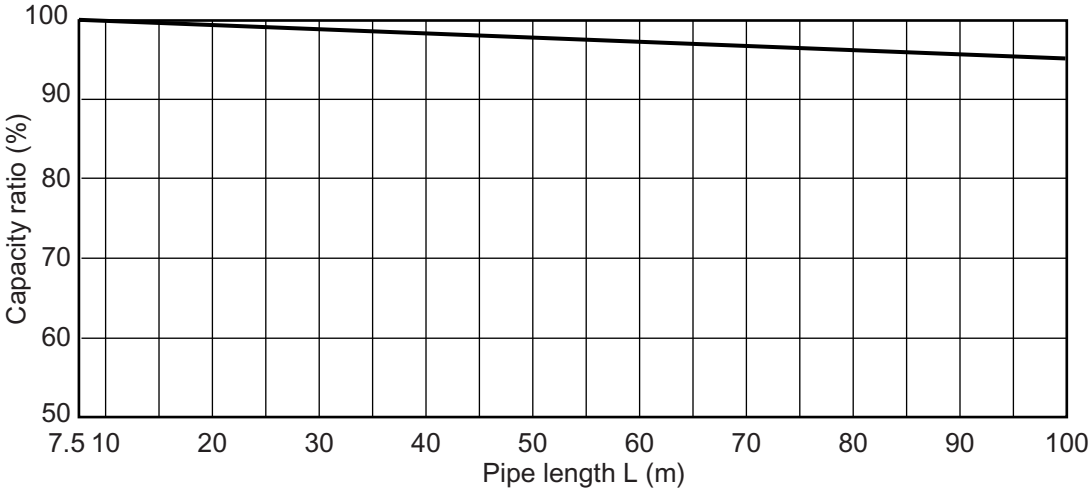
3-10. REFRIGERANT PIPING LENGTH COMPENSATION CURVE

OUTDOOR UNITS

• CAPACITY RATIO OF COOLING OPERATION



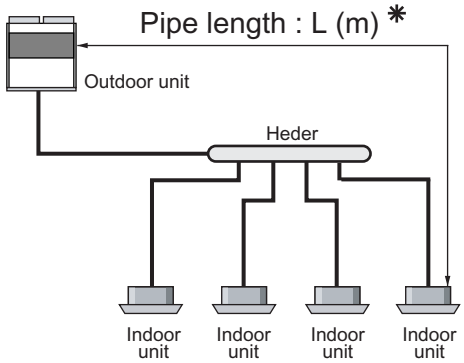
• CAPACITY RATIO OF HEATING OPERATION



These datas are under the rated standard condition.

• CAUTION

Depending on the pipe length, the set-up of the pipe length switch (on the outdoor unit PCB) is required. If it was set up incorrectly, it leads to the trouble such as insufficient capacity or abnormal pressure.



Recommended Range of L (m)	SWITCH setting
L≦40	S
40 < L ≦ 60	Standard
60 < L ≦ 80	M
80 < L ≦ 100	L

◆ Factory setting

For setting up the switch,refer to FUNCTION SETTING in 5-4.

✱ Pipe length means the length between outdoor unit and the farthest indoor unit.

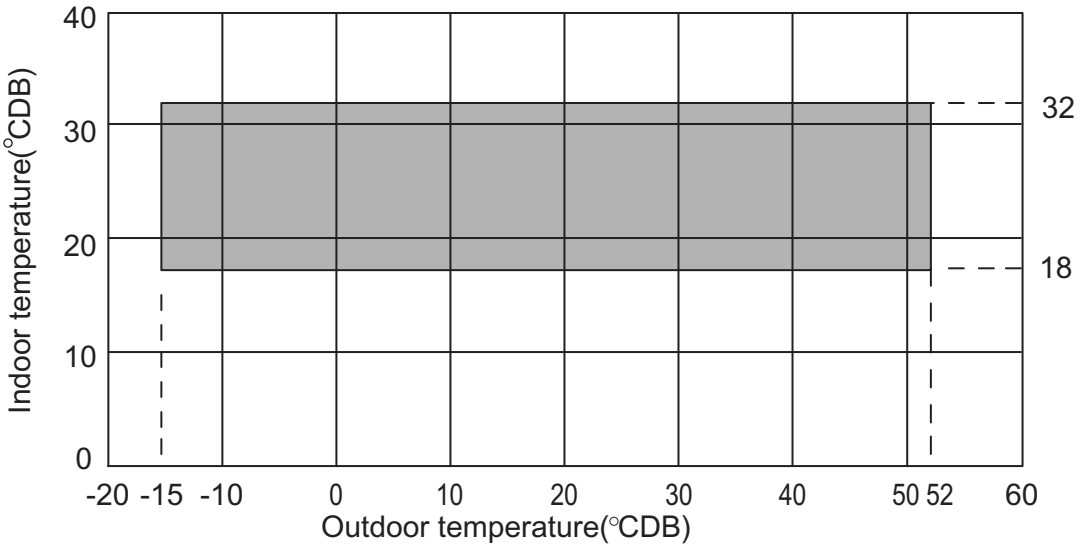
NOTE:

Outdoor unit is controling pressure to keep constantly , so that outdoor unit compressor step will be carried for some part.

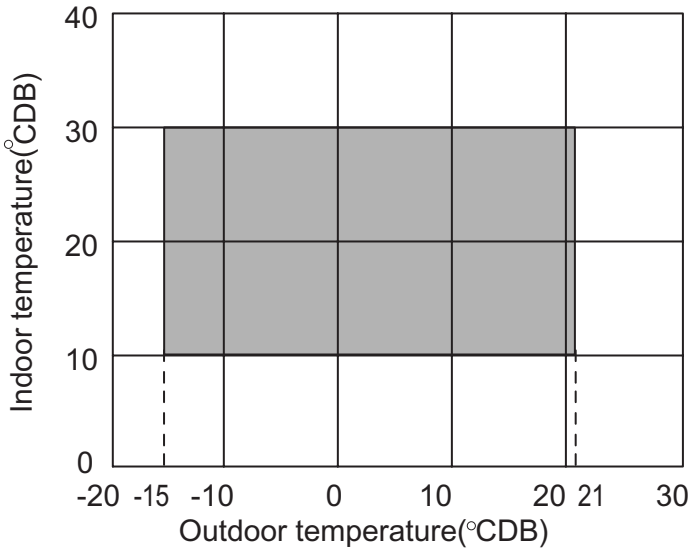
3-11. OPERATION RANGE

■ AO90 , AO72

- **Cooling**



- **Heating**



OUTDOOR UNITS

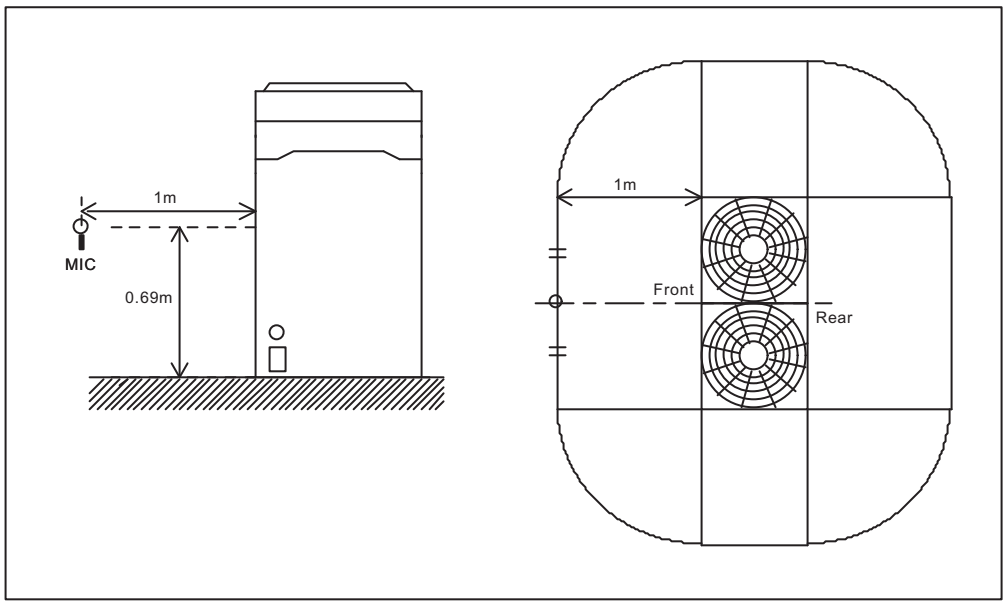
3-12. SOUND LEVEL

■ OVERALL

MODEL	VOLTAGE	SOUND LEVEL
AO 90	380V	**55 dB (A)**
	415V	**57 dB (A)**
AO 72	380V	**54 dB (A)**
	415V	**56 dB (A)**

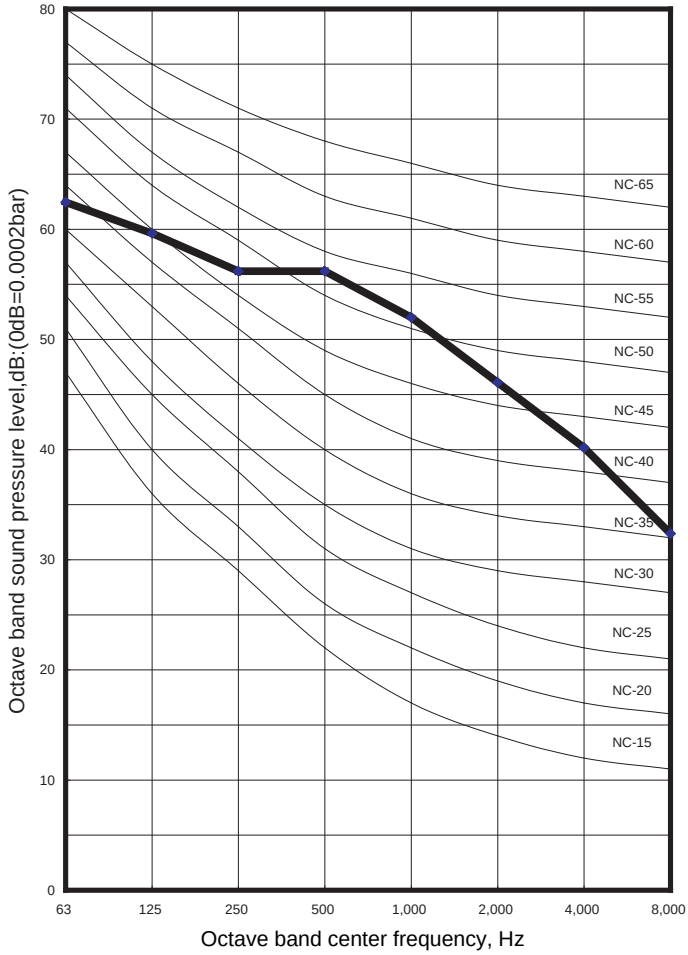
OUTDOOR UNITS

■ SOUND LEVEL CHECK POINT

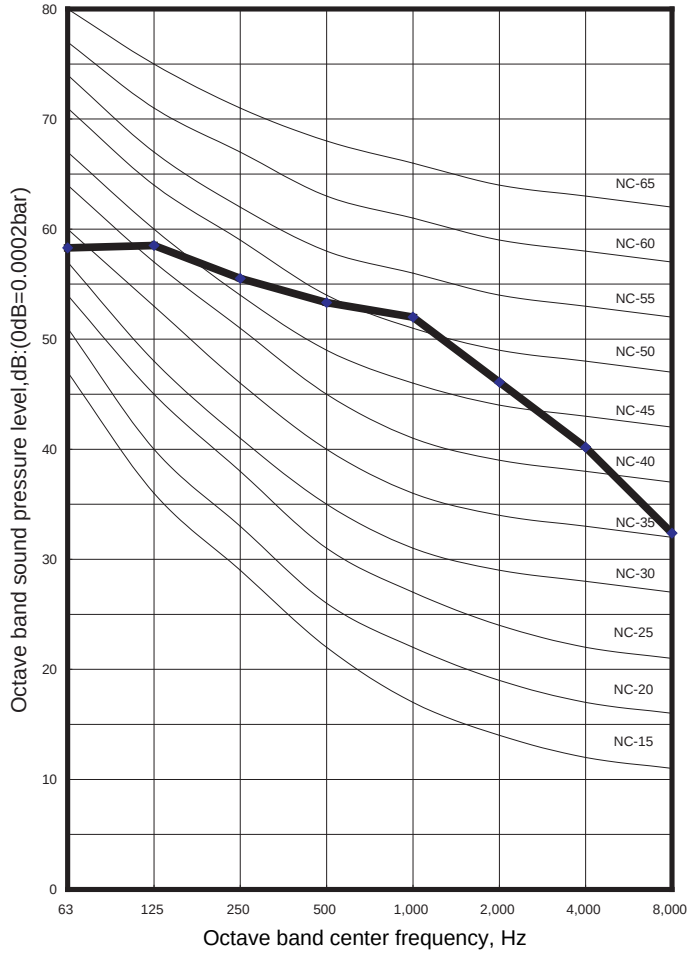


■ OCTAVE-BAND LEVEL

● MODEL : AO90



● MODEL : AO72



OUTDOOR UNITS

3-13. ELECTRIC CHARACTERISTICS

MODEL NAME				AO90TPC / AO90EPC	AO72TPC / AO72EPC
POWER SUPPLY	ϕ W			3 ϕ 4W	
	FREQUENCY		Hz	50	
	VOLTAGE	RATED	V	380 - 415	
		min / MAX		min.342 / MAX.456	
RATED LOAD CURRENT		RLC	A	15.2	12.5
MAX. LOAD CURRENT		MLC		30	28
MAX. LOAD INPUT		MLI	kW	14.8	14.7
MAX. FUSE AMP.		FS	A	40	
STARTING CURRENT		SC		81	70
COMP RESSOR	Rated Load Amp.	RLA	A	3.9/7.85/10	3.9/5.7/10
	MOTOR OUTPUT	MO	kW	1.52/3.39/4.93	1.52/2.51/4.81

OUTDOOR UNITS

- RLC is based on follwing standard condition.
  Indoor : 27℃ DB/19℃ WB
  Outdoor : 35℃ DB
- MLC is based on the value of using maximum operation range.
- To select electrical equipment and wire size, caluculate follwing method.
- To select electrical circuit breaker, refer to the value of FS.

  $FS \geqq RLC \times S^{*}$ EX) *S : Safety Factor ≒ 2.25

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

3-14. SAFETY DEVICES SETTING

MODEL NAME			AO90TPC / AO90EPC	AO72TPC / AO72EPC
PCB FUSE			250V 6.3A	
COMPRESSOR	INTERNAL PROTECTOR	COMP.1	130℃ ON 21A 61℃ OFF in 3-10sec	130℃ ON 21A 61℃ OFF in 3-10sec
		COMP.2	105℃ ON 24A 61℃ OFF in 3-10sec	105℃ ON 24A 61℃ OFF in 3-10sec
		COMP.3	120℃ ON 60A 61℃ OFF in 3-10sec	145℃ ON 48A 61℃ OFF in 3-10sec
	RELIEF VALVE		Pd-Ps 2.99MPa	
HIGH PRESSURE PROTECTION			3.3MPa OFF	
FAN MOTOR THERMAL PROTECTOR			130℃ ± 5℃ OFF 83℃ ON	
REMARKS			REVERSE PHASE BLOCK	

Refrigerant R407C

AIRSTAGE™

S SERIES

4. INDOOR UNITS

4-1. MODEL LINE UP

■ LINE UP

Various combinations of types and capacity 11 types 49 models, ranging from 2.20kW to 17.0kW.

Capacity \ Type		Compact Cassette	Cassette	Compact Duct	Low Static Pressure Duct	Duct	High Static Pressure Duct
* kW	Model code						
2.20	7	●		●			
2.80	9	●		●			
3.60	12	●		●			
4.05	14	●		●			
5.30	18	●		●			
5.70	20		● Slim Type				
6.80	24						
7.05	25		● Slim Type		●	●	
8.80	30		● Slim Type		●	●	
10.5	36		●		●	●	●
12.7	45		●		●	●	●
14.1	54		●				
17.0	60						●

Capacity \ Type		Floor / Ceiling	Ceiling	Compact Wall Mounted (Comfort model)	Wall Mounted	Ceiling Wall
* kW	Model code					
2.20	7			●		●
2.80	9			●		●
3.60	12	●		●		●
4.05	14	●		●		●
5.30	18	●			●	●
5.70	20					
6.80	24	●			●	●
7.05	25					
8.80	30		●		●	●
10.5	36		●			
12.7	45		●			
14.1	54		●			
17.0	60					

* The kW shown in the table are reference values, so refer to the rated values in the 4-3 SPECIFICATIONS for details.

INDOOR UNIT

■ APPLICABLE OUTDOOR UNIT

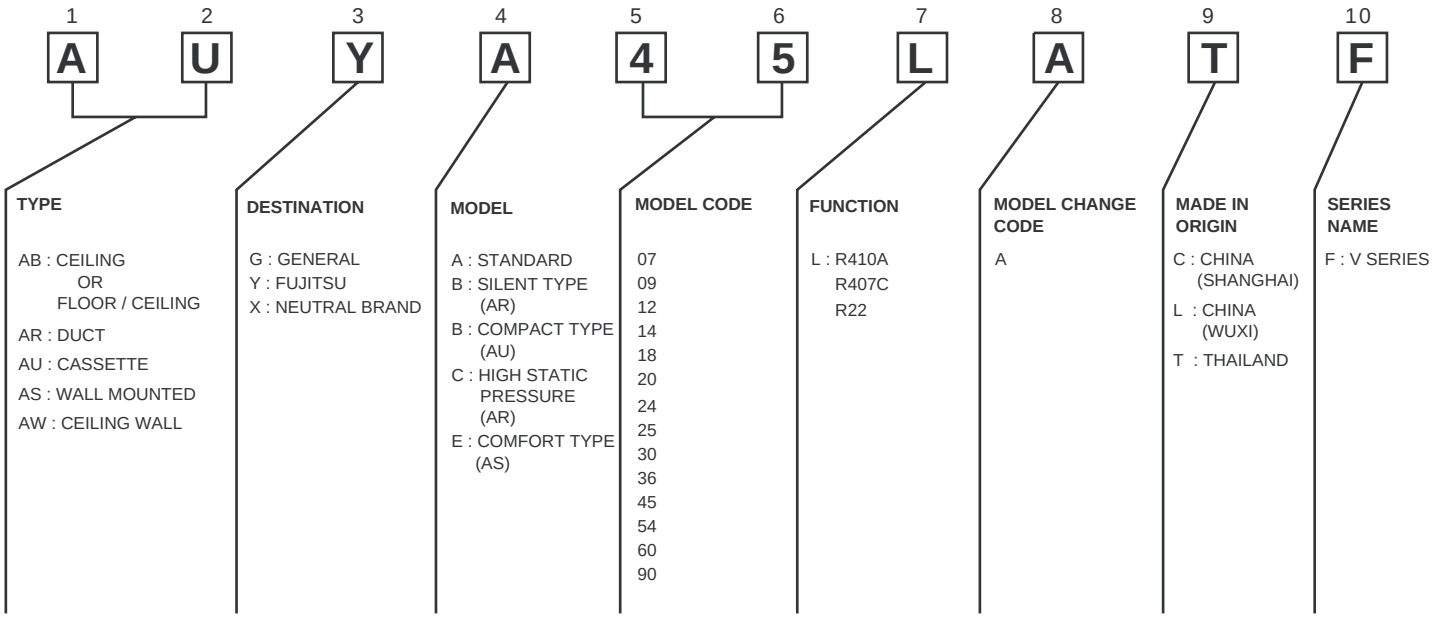
Series	Refrierant type	Type	Model
S ✱2)	R22	Cooling only	AO✱90APCMF, AO✱72APCMF
		Heat Pump	AO✱90RPCMF, AO✱72RPCMF
	R407C	Cooling only	AO✱90EPCMF, AO✱72EPCMF
		Heat Pump	AO✱90TPCMF, AO✱72TPCMF
		Heat recovery	AO✱90MPBMF ✱1)
V	R410A	Heat Pump Master	AJ✱A72LATF
			AJ✱A90LATF
			AJ✱126LATF
		Heat Pump Slave	AJ✱A72UATF
			AJ✱A90UATF
			AJ✱126UATF

✱1) Compact Wall Mounted type can't be operated in the Heat recovery type system.

✱2) High Static Pressure Duct type ARXC90 can't be connected to the S series outdoor unit.

INDOOR UNIT

■ MODEL DESIGNATION



4-2. FEATURES

4-2-1. COMPACT CASSETTE TYPE

■ MODELS : AUXB07, AUXB09, AUXB12, AUXB14, AUXB18

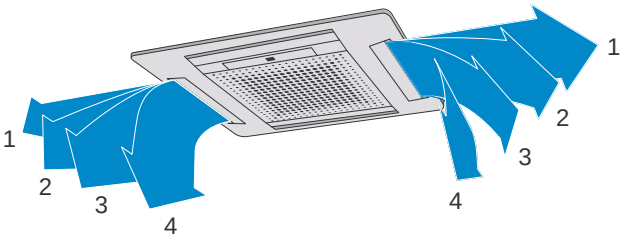
Compact size panel design that fits standard ceiling panel (600 x 600mm).

■ FEATURES

● Comfortable airflow

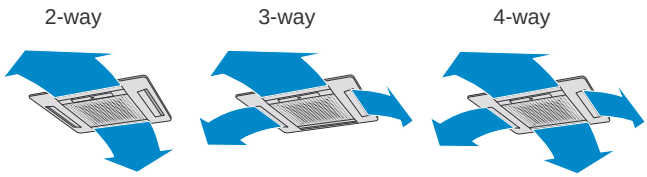
4-step swing

Auto airflow direction and auto swing



2 - 4 way airflow system

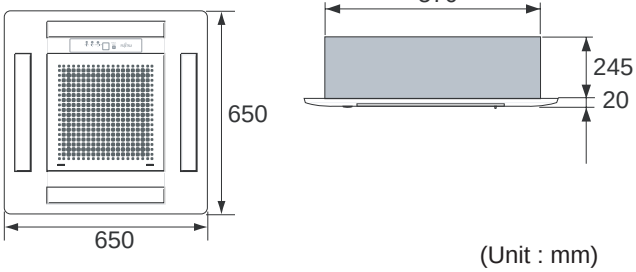
Select 2-way, 3-way or 4-way airflow to suit your needs.



● Compact size

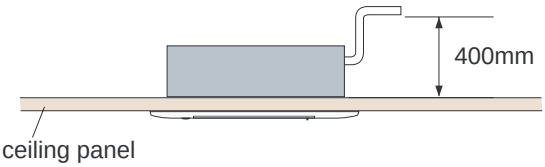
Compact grille that fits standard ceiling panel (600mm x 600mm)

Punch Hole Grille



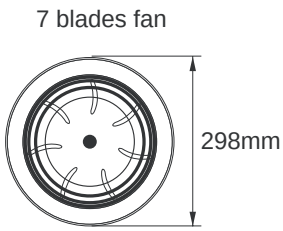
(Unit : mm)

● Condensate pump lift to 400mm



● Low noise

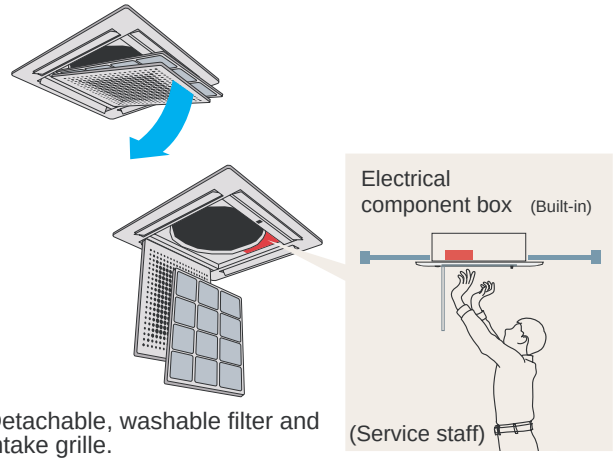
Large airflow and reduced noise output achieved by the use of a large diameter variable pitch turbo fan.



● Easy maintenance

By placing the electrical component box inside the unit easy maintenance is assured.

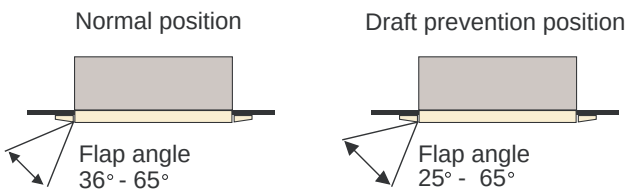
Wide opening for easy maintenance.



Detachable, washable filter and intake grille.

● Draft prevention

Movement of the flap angle can be changed via a simple switch during installation, thereby preventing uncomfortable drafts.



INDOOR UNIT

4-2-2. CASSETTE TYPE

■MODELS : AU∗A20, AU∗A25, AU∗A30, AU∗A36, AU∗A45, AU∗A54

Unit fascia can be adjusted up to 35mm to enable installation in a narrow ceiling.

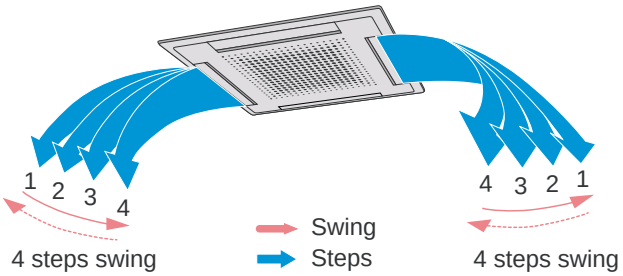
Detachable grille makes filter maintenance easy.

■FEATURES

● Comfortable airflow

4 step swing

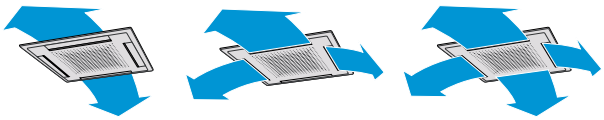
Auto airflow direction and auto swing



2 - 4 way airflow system

Select 2-way ,3-way or 4-way airflow to suit your needs.

2-way 3-way 4-way

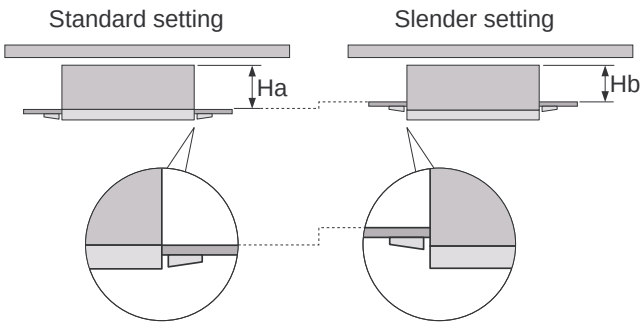


Wide airflow

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

● Flexible installation

Compact body ensures space saving installation.
A slender fit option is available where ceiling void space is limited.



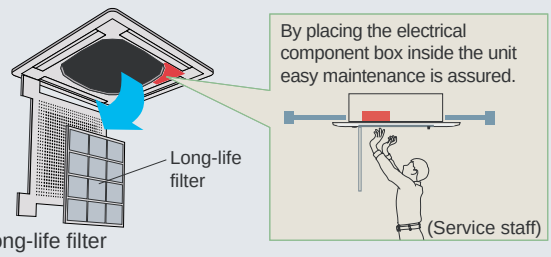
	Standard setting	Slender setting
	Ha	Hb
AU20 / AU25 / AU30	235	200
AU36 / AU45 / AU54	285	250

(Unit : mm)

● Easy maintenance

The control box is easily accessible for maintenance work.
Wide opening for easy access.

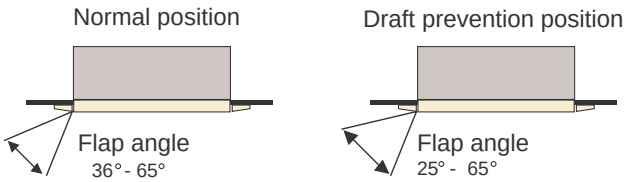
Detachable,washable filter and intake grille.
Wide opening and long-life filter.



Long-life filter
High efficiency, long-life filter extends the cleaning cycle.

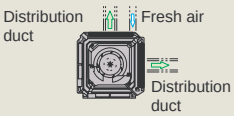
● Draft prevention

Movement of the flap angle can be changed via a simple switch during installation, thereby preventing uncomfortable drafts.

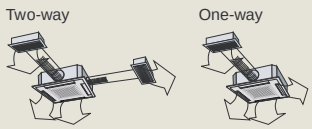


● Duct connection hole opening

Fresh air can be introduced through this opening.



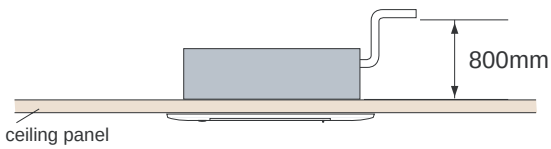
Conditioned air can be distributed by means of a distribution duct.



● Improved noise level and air distribution

Noise output has been dramatically lowered.
· Improved turbo fan shape (aerodynamic design)
· Expanded air distribution
· Low internal resistance · Moulded fan motor

● Condensate pump lift to 800mm

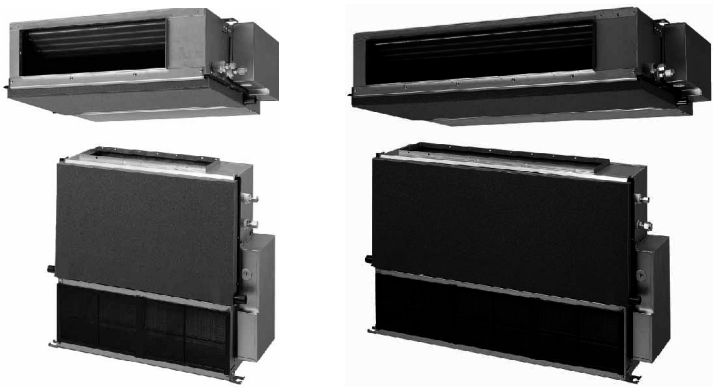


INDOOR UNIT

4-2-3. COMPACT DUCT TYPE

■MODELS : ARXB07, ARXB09, ARXB12, ARXB14, ARXB18

Small and compact indoor unit suitable for many applications.

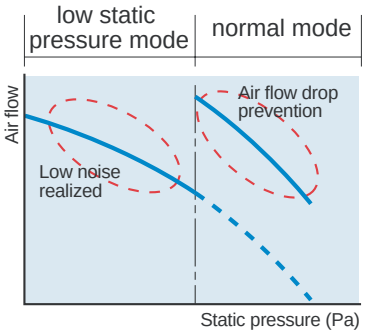


■FEATURES

● Low noise level

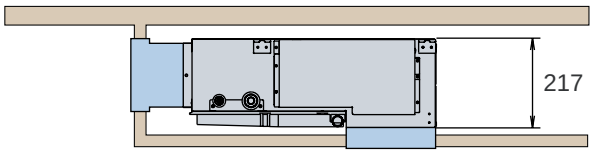
A low noise level has been achieved for each capacity.

Model		7	9	12	14	18
Static pr essure (Normal/Max.)	Pa	0 / 50				
Noise level (Low speed)	dB(A)	24	27	25	26	30



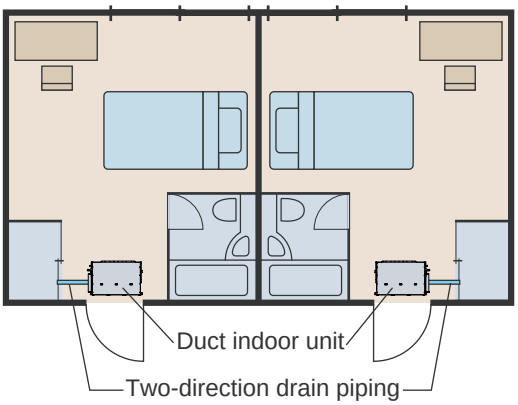
● Compact design

Ultra-slim duct air conditioner for easy installation.



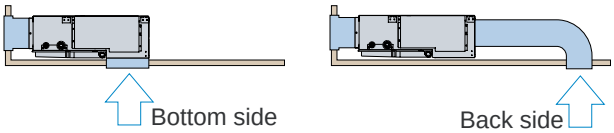
Slim size (217mm) allows installation even where the space behind the ceiling is narrow.

● Two-direction drain piping

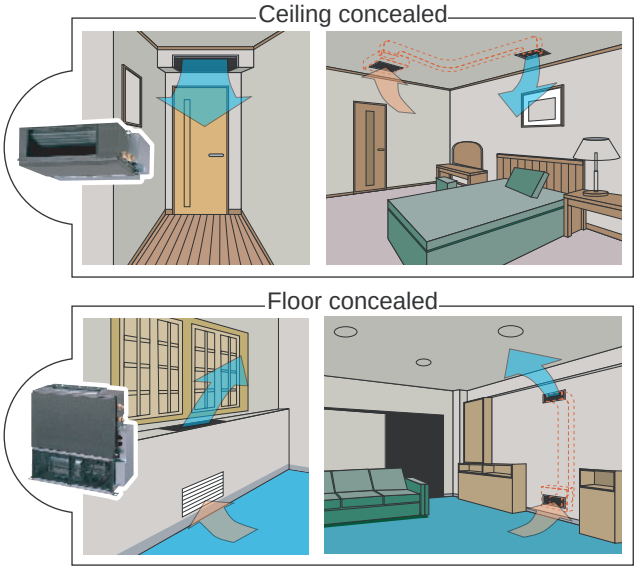


● Air-intake

Air intake direction can be selected to match the installation site.

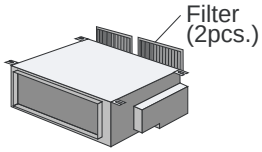


● Flexible installation

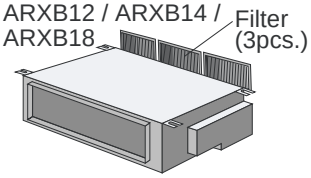


● Filter (Accessory)

ARXB07 / ARXB09



ARXB12 / ARXB14 / ARXB18



● Optional parts

Remote sensor unit	UTD-RS100
IR receiver unit	UTB-∗WA

INDOOR UNIT

4-2-4. LOW STATIC PRESSURE DUCT TYPE

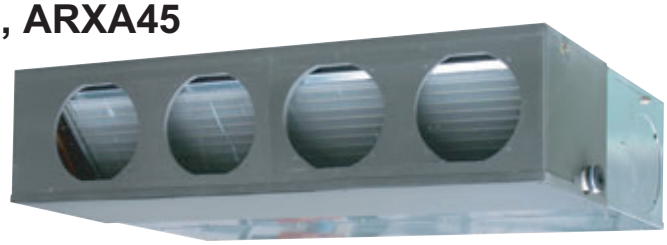
■MODELS : ARXB25, ARXB30, ARXB36, ARXB45

Indoor units suitable for quiet rooms such as a hotel or a bedroom.

4-2-5. DUCT TYPE

■MODELS : ARXA25, ARXA30, ARXA36, ARXA45

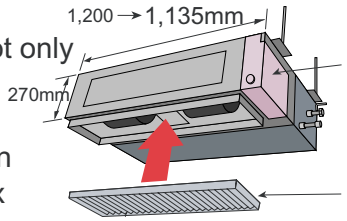
Slim compact design allows for easy installation in narrow ceiling spaces up to 270mm.



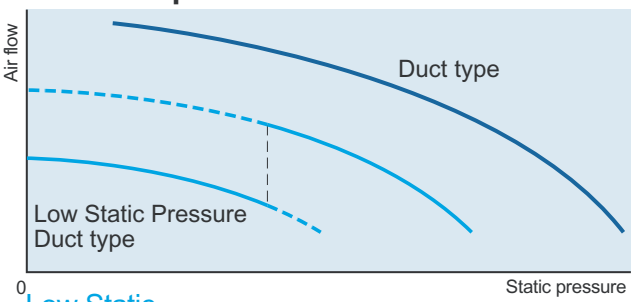
■FEATURES

● Slim & Compact design

In the case of bottom suction type, not only does the design allow for installation in narrow ceiling space up to 270mm, further space requirements have been guaranteed by placing the control box inside the chassis.



● Line-up of low-noise and high-power models, compatible with a wide range of static pressure



Low Static Pressure Duct type

Optimum model for hotels or bedrooms

An ultra low-noise model that achieves a quiet interior.

Perfect for hotels or bedrooms with limited air duct installation space.

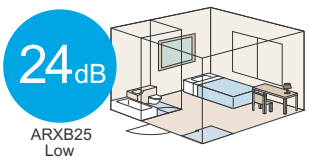
Two different levels can be selected according to the static pressure range.

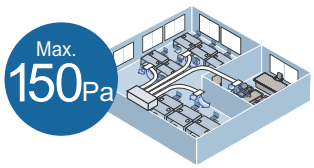
Duct type

Powerful model with a flexible design

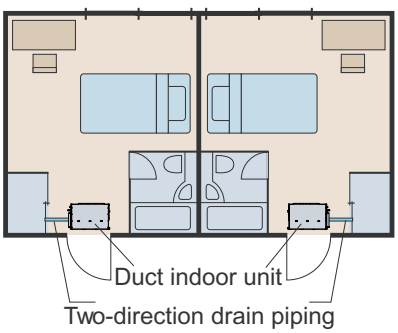
With a powerful motor appropriate for a wide range of static pressure.

Flexible air duct installation is possible in a large space such as an office.



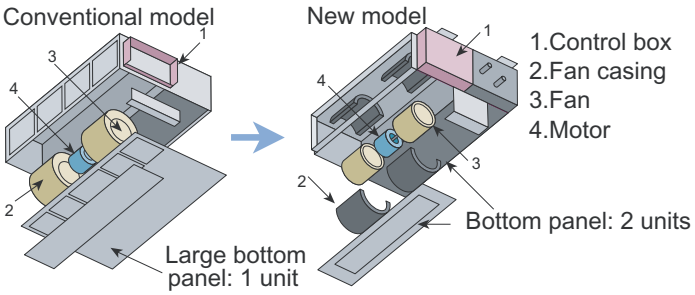


● Two-direction drain piping



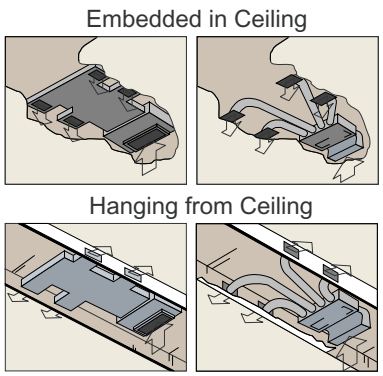
● Easy maintenance

See below for the case of rear suction type



Structural improvement is attained by making the bottom panel two pieces, front and rear, and the internal fan casing is also made dismountable in two pieces, namely, upper and lower ones.
The motor and fan maintenance and dismounting can be made easily by removing the rear panel and lower part of the casing with the main chassis installed.

● Installation styles



● Optional parts

Remote sensor unit	UTD-RS100
Long life filter	UTD-LF25NA
Flange (Square)	UTD-SF045T
Flange (Round)	UTD-RF204
IR receiver unit	UTB-∗WA

INDOOR UNIT

4-2-6. HIGH STATIC PRESSURE DUCT TYPE

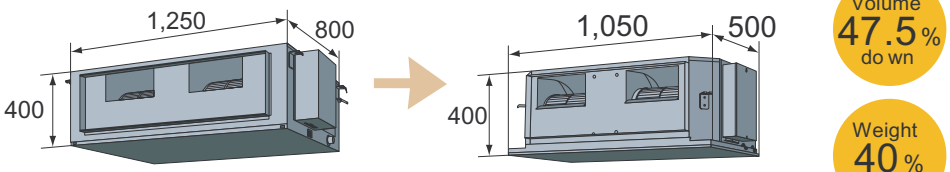
■MODELS : ARXC36, ARXC45, ARXC60

These indoor units allow for high airflow quantities.

■FEATURES

● Easy installation (Compact size & Lightweight)

By downsizing basic chassis and reducing materials weight, compact size and lightweight are realized.

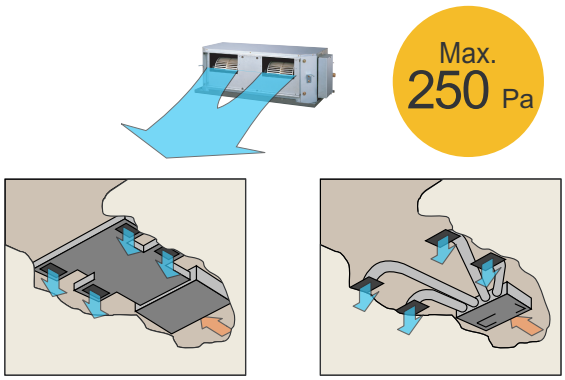


Conventional model : 75kg

New model : 45kg (ARXC36LATF)

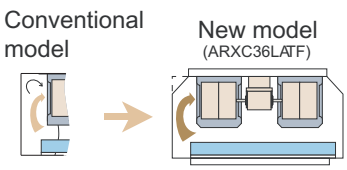
(unit: mm)

● Design also corresponding to high static pressure.

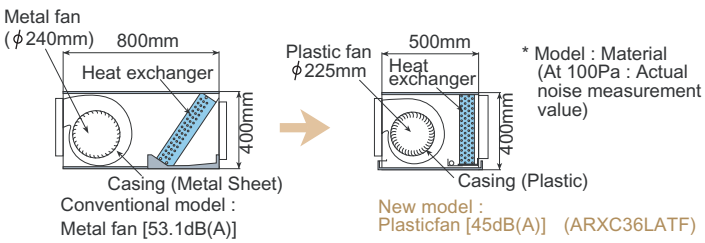


● Low noise

Turbulent airflow is reduced by cutting off the corners of conventional indoor unit front panel and fan case.



Low noise is realized by adopting plastic case, plastic fan.



● Optional parts

Long-life filter UTD-LF60KA (For ARXC36 / 45 / 60)

IR receiver unit UTB-∗WA

INDOOR UNIT

4-2-7. FLOOR / CEILING TYPE

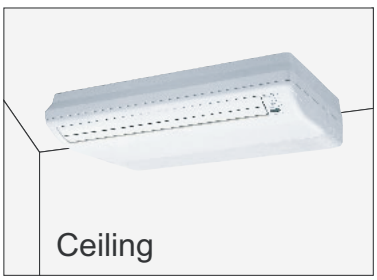
■MODELS : AB∗A12, AB∗A14, AB∗A18, AB∗A24

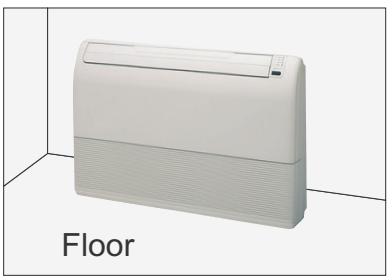
The slim and lightweight design allows the unit to be suspended from the ceiling or installed on the floor. This type suits many room designs.

INDOOR UNIT

■FEATURES

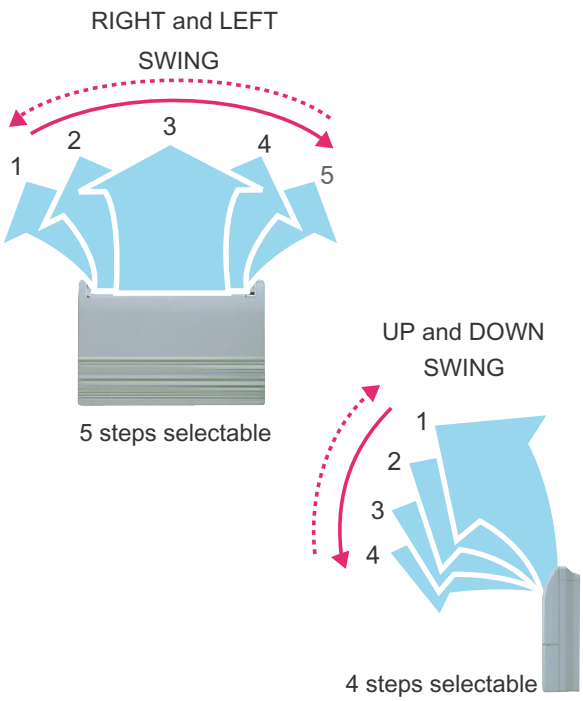
● Flexible installation





● Double auto swing

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



● Super vane

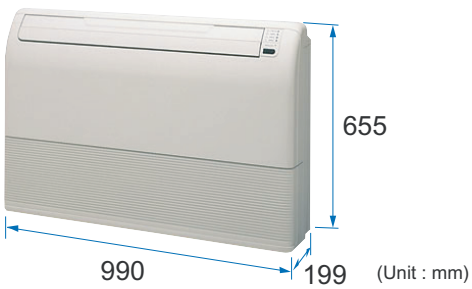
Double-flap "Super Vane" with newly developed special configuration boosts airflow sending cool air quickly to every corner of the room.

● Auto-closing louvre

This function is common to all indoor unit types except the duct type.

● Compact design

Symmetrical, slim and compact design.



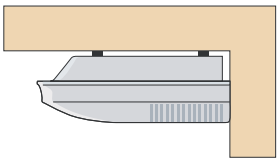
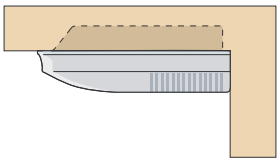
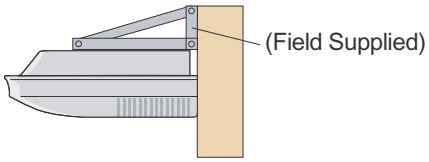
4-2-8. CEILING TYPE

■MODELS : AB∗A30, AB∗A36, AB∗A45, AB∗A54

Easily concealed in any installation.

■FEATURES

● Installation

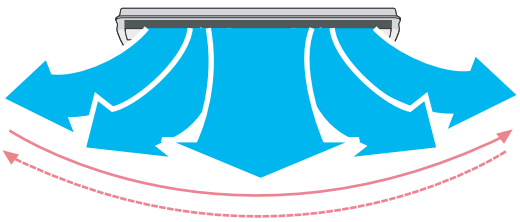
Open	Concealed	Wall mounted
		
General installation pattern which suspends the indoor unit from the ceiling.	Installation pattern with part of the indoor unit embedded in the ceiling and fitted to the ceiling.	Pattern which fixes the indoor unit to a wall when it cannot be suspended because space behind the ceiling is narrow and the strength is insufficient.

INDOOR UNIT

● Double auto swing and wide airflow

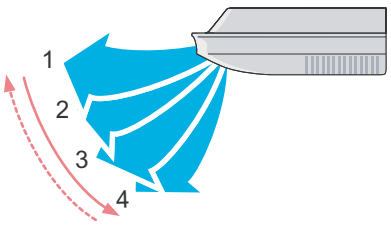
Auto airflow direction and auto swing.

Right and left



5 steps selectable

Up and down

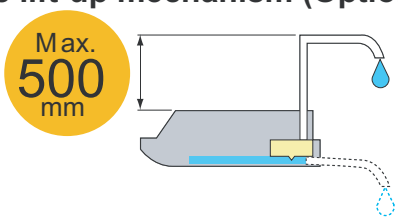


4 steps selectable

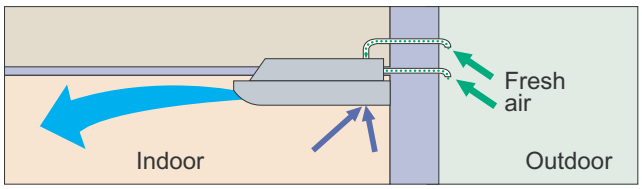
● Slim & Compact design

● Condensate lift-up mechanism (Option)

Optional drain lift-up mechanism allows flexible installation.

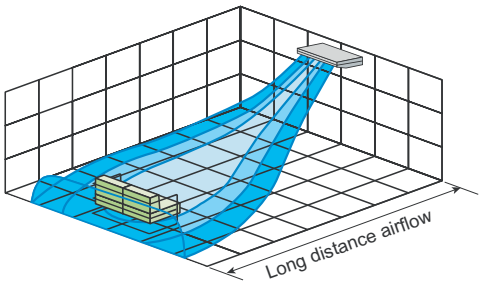


● Fresh air intake



● Long airflow

Long airflow ensures comfort to every corner of a large room.



● Long-life filter

High efficiency long-life filter doubles the life of the filter compared to standard filters.

● Optional parts

Drain water riser kit UTR-DPB24T

4-2-9. COMPACT WALL MOUNTED TYPE (Comfort model)

■MODELS : AS∗E07, AS∗E09, AS∗E12, AS∗E14

This type of indoor unit is best suited to a room where a low noise level is required.

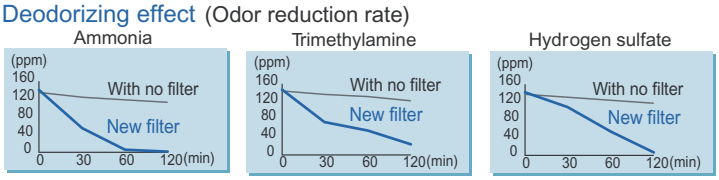
With this model, connection of EV kit is necessary.

■FEATURES

● Filter features

High quality air conditioning by incorporation of high performance filter.

Deodorizing effect (Odor reduction rate)



Testing organization : Environmental Sanitary Inspection Center Test method : Deodorization Test

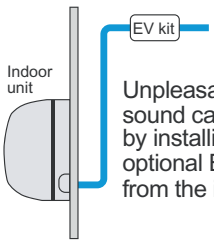
Apple-catechin filter
Fine dust, invisible mold spores, and harmful microorganisms are absorbed onto the filter by static electricity, and further growth is inhibited and deactivated by the polyphenol ingredient extracted from apples.

Long-life* Ion deodorization filter
The filter deodorizes by powerfully decomposing absorbed odors using the oxidizing and reducing effects of ions generated by the ultra-fine-particle ceramic.

* The filter can be used for approximately 3 years if it is washed under water to restore its surface action when it is dirty.

● Low noise

26 dB (AS7)



Unpleasant refrigerant sound can be reduced by installing the optional EV kit away from the indoor unit.

● Compact size

Powerful output in spite of small size

Though the indoor unit is compact, it features a large, high pressure cross fan (90mm diameter) in a centre mounted configuration and a Lambda type heat exchanger to provide plenty of power.

Width 790 mm

● Symmetrical design

Symmetrical, clean design that suits all interiors.

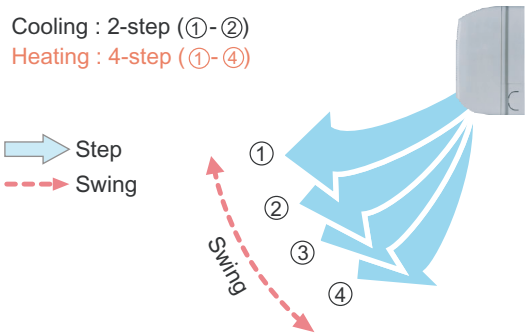
● New Style High Power DC fan motor

- High power
- Wide rotatition range
- High efficiency
- Compact size

● Auto swing louvre

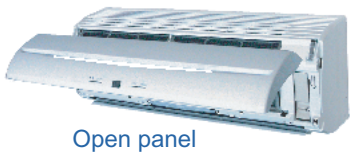
The Auto Swing Louvre function ensures that the air direction corresponds to the mode selected.

Cooling : 2-step (①-②)
Heating : 4-step (①-④)



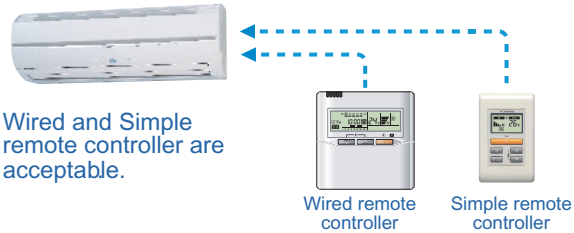
● Easy maintenance

Easy maintenance has been realized as the front panel can removed for easy access.



Open panel

● Wired-control acceptable



Wired and Simple remote controller are acceptable.

Wired remote controller

Simple remote controller

INDOOR UNIT

INDOOR UNIT

4-2-10. WALL MOUNTED TYPE

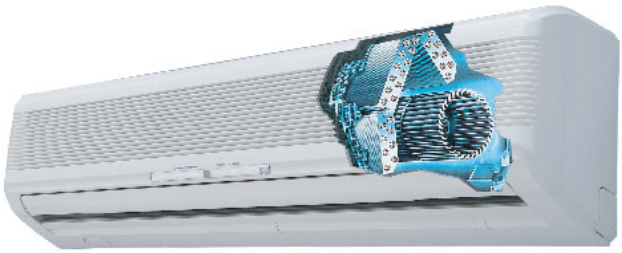
■MODELS : AS∗A18, AS∗A24, AS∗A30

Double auto swing louver provides pleasant air flow to every corner of the room.

■FEATURES

●Powerful output in spite of small size

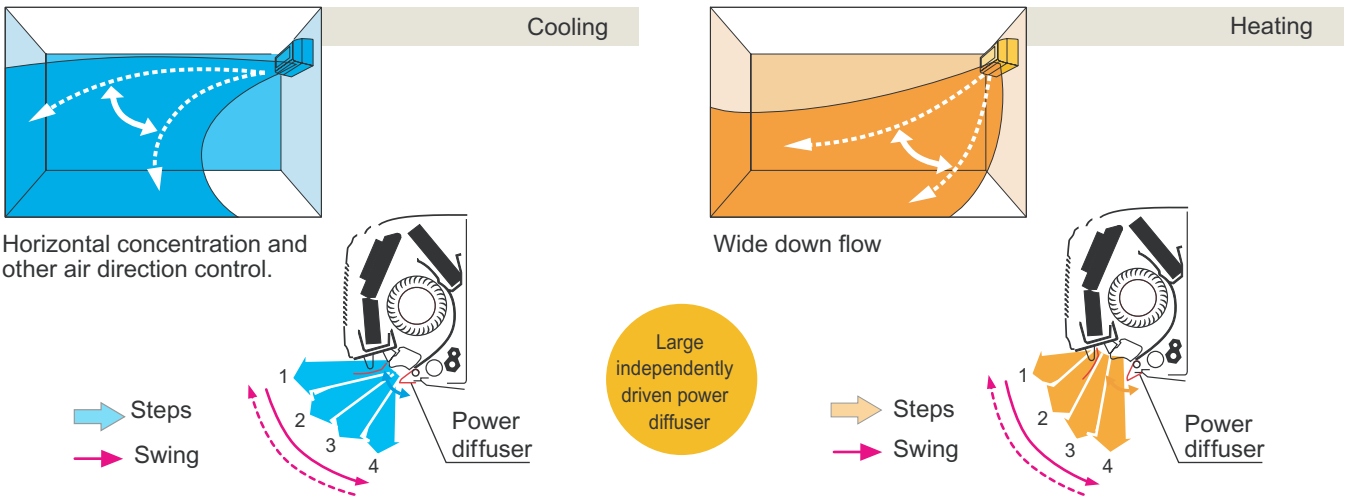
Though the indoor unit is compact, it features a large, high pressure cross fan (107mm diameter) in a center mounted configuration and a lambda type heat exchanger to provide plenty of power.
The extra long diffuser provides a wide outflow opening for air.
This ensures a large air outflow volume over a wide area to cool or heat all areas of the room.



INDOOR UNIT

●Multi air flow

Large independently driven power diffuser used.

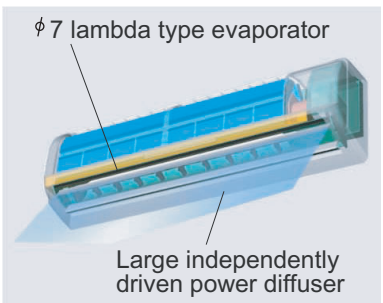


●Low noise

High efficiency fan construction
➡φ7mm Lambda type evaporator improves the airflow path.

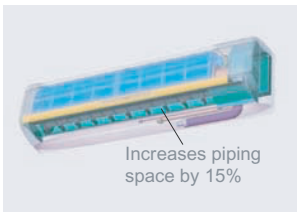
Large independently driven power diffuser.

Low noise 33 dB (AS18)



● Easier installation

Expanded work space at bottom of casing increases piping space by 15%.



● Others

· Double auto swing
· 2-way draining route

4-2-11. CEILING WALL TYPE

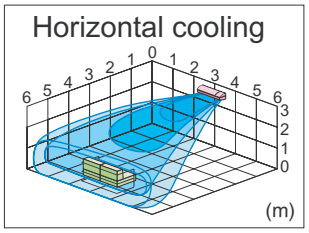
■MODELS : AW∗A07, AW∗A09, AW∗A12, AW∗A14 AW∗A18, AW∗A24, AW∗A30

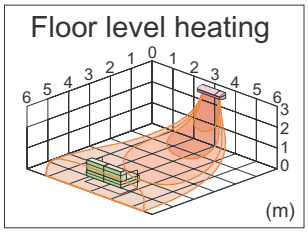
Attractive unit to which can be installed 40mm from the ceiling.

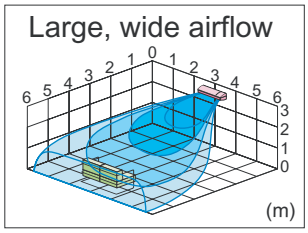
■FEATURES

●Larger, wider airflow

Introduction of the top air intake reduces the curvature of the air flow path thereby achieving lower air resistance, lower noise and larger air volume.

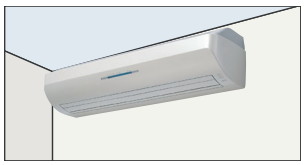


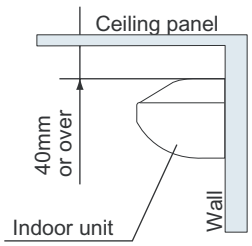




●Interior emphasized simple form

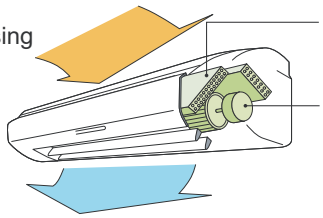
Optimum design for rooms in which you want to enjoy the interior design. This is our unique design which allows installation at a high position (on the wall near the ceiling).





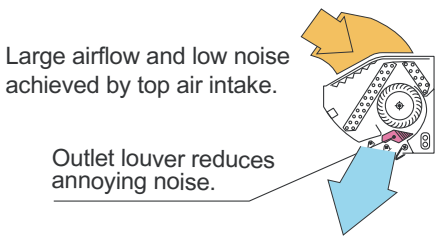
●High efficiency

High output and high efficiency are achieved by using a DC motor.



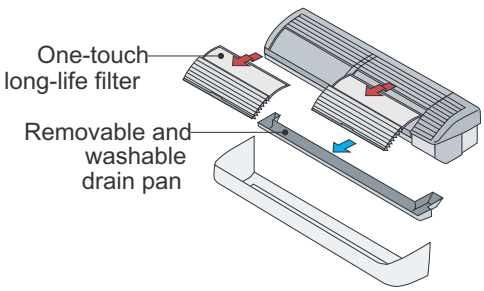
●Low noise

Suppressing the turbulence by providing vertical grooves on the quiet louver and the right / left louvre reduces annoying noise.



●Easy maintenance

Drain pan can be easily removed for thorough washing without removing the unit from the wall.



●Long-life filter

·Long-life filter can be removed with one touch.
·Long-life filter extends the cleaning cycle by a factor of three.

●Others

· Double auto swing (Right and left, up and down)
· 2-way draining route

INDOOR UNIT

4-3. SPECIFICATIONS

4-3-1. COMPACT CASSETTE TYPE

Model name				AUXB07LATF	AUXB09LATF	AUXB12LATF	AUXB14LATF	AUXB18LATF
Power source				230V ~ , 50Hz				
Available voltage range				198 to 264 V				
Capacity	Cooling		kW	2.20	2.80	3.60	4.00	5.00
	Heating			2.50	3.20	4.10	4.50	5.45
Input power			W	28	28	52	52	50
Current			A	0.13	0.13	0.23	0.23	0.22
Fan	Airflow rate	High	m^3/h	530	530	580	580	640
		Med		480	480	520	520	540
		Low		410	410	460	460	470
	Type x Number			Turbo × 1				
	Motor output		W	9	9	10	10	15
Sound pressure level	High		dB(A)	38	38	41	41	44
	Med			35	35	37	37	38
	Low			31	31	34	34	35
Heat exchanger	Dimensions (H x W x D)		mm	308 × 700 × 38.1				
	Fin pitch			1.40				
	Rows x Stages			2 × 8				
	Pipe type			Copper				
	Fin	Type		Aluminium				
		Surface treatment		Hydrophilic coating				
Air filter	Type			Anti-mold				
	Net material			PP honeycomb				
Enclosure	Material			Metal				
	Colour			—				
Dimensions (H x W x D)	Net		mm	230 × 570 × 570				
	Gross			310 × 710 × 750				
Weight	Net		kg	18				
	Gross			23				
Connection pipe diameter	Liquid (Flare)		mm	ϕ6.35				ϕ6.35 (ϕ9.52)∗1
	Gas (Flare)			ϕ9.52 (ϕ12.70) ∗1		ϕ12.70		ϕ15.88
Grille (Option)	Model name			UTG-UDYD-W(FUJITSU brand); UTG-UDGD-W(GENERAL brand)				
	Colour			White (5Y 9/0.5NN)				
	Dimensions (H x W x D)	Net	mm	35 × 650 × 650				
		Gross		70 × 720 × 720				
	Weight	Net	kg	2.2				
		Gross		4.3				

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory) for connection pipe.

INDOOR UNIT

4-3-2. CASSETTE TYPE

Model name				AU*A20LATF	AU*A25LATF	AU*A30LATF
Power source				230V～, 50Hz		
Available voltage range				198 to 264 V		
Capacity	Cooling		kW	5.70	7.05	8.80
	Heating			5.80	7.85	9.10
Input power			W	104	124	140
Current			A	0.60	0.64	0.67
Fan	Airflow rate	High	m^3 / h	1,000	1,100	1,250
		Med		840	940	1,050
		Low		700	780	840
	Type x Number			Turbo × 1		
	Motor output		W	40		
Sound pressure level	High		dB(A)	41	43	46
	Med			37	40	43
	Low			33	35	37
Heat exchanger	Dimensions (H x W x D)		mm	(210 × 970 × 26.6) x 2		
	Fin pitch			1.30		
	Rows x Stages			2 × 10		
	Pipe type			Copper		
	Fin	Type		Aluminium		
		Surface treatment		Hydrophilic coating		
Air filter	Type			Anti-mold		
	Net material			PP honeycomb		
Enclosure	Material			Plastic		
	Colour			White (5Y 9/0.5NN)		
Dimensions (H x W x D)	Net	Main body	mm	246 × 830 × 830		
		With panel		265 × 940 × 940		
	Gross			385 × 1,045 × 1,015		
Weight	Net		kg	34		
	Gross			45		
Connection pipe diameter	Liquid (Flare)		mm	ϕ6.35 (ϕ9.52) ∗1		ϕ9.52
	Gas (Flare)			ϕ15.88		

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory) for connection pipe.

INDOOR UNIT

4-3-2. CASSETTE TYPE

Model name				AU*A36LATF	AU*A45LATF	AU*A54LATF
Power source				230V～, 50Hz		
Available voltage range				198 to 264 V		
Capacity	Cooling		kW	10.5	12.7	14.1
	Heating			12.7	13.7	15.8
Input power			W	175	190	219
Current			A	0.92	0.94	0.95
Fan	Airflow rate	High	m^3 / h	1,500	1,550	1,700
		Med		1,300	1,350	1,420
		Low		1,100	1,100	1,200
	Type x Number			Turbo × 1		
	Motor output		W	100		
Sound pressure level	High		dB(A)	47	48.5	51.5
	Med			42.5	46	47.5
	Low			38	41	43.5
Heat exchanger	Dimensions (H x W x D)		mm	(252 × 970 × 26.6) x 2	(252 × 970 × 39.9) x 2	
	Fin pitch			1.30	1.40	
	Rows x Stages			2 × 12	3 × 12	3 × 12
	Pipe type			Copper		
	Fin	Type		Aluminium		
		Surface treatment		Hydrophilic coating		
Air filter	Type			Anti-mold		
	Net material			PP honeycomb		
Enclosure	Material			Plastic		
	Colour			White (5Y 9/0.5NN)		
Dimensions (H x W x D)	Net	Main body	mm	296 × 830 × 830		
		With panel		315 × 940 × 940		
	Gross			435 × 1,045 × 1,015		
Weight	Net		kg	40		
	Gross			53		
Connection pipe diameter	Liquid (Flare)		mm	ϕ 9.52		
	Gas (Flare)			ϕ19.05		

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

INDOOR UNIT

4-3-3. COMPACT DUCT TYPE

Model name				ARXB07LALF	ARXB09LALF	ARXB12LALF	ARXB14LALF	ARXB18LALF
Power source				230V～, 50Hz				
Available voltage range				198 to 264 V				
Capacity	Cooling		kW	2.20	2.80	3.60	4.00	5.30
	Heating			2.50	3.20	4.10	4.80	5.60
Input power			W	31.2	32.6	55.0	63.0	103
Current			A	0.14	0.16	0.25	0.29	0.45
Static pressure range			Pa	0 to 50	0 to 50	0 to 50	0 to 50	0 to 50
Fan	Airflow rate	High	m^3 / h	330	370	560	610	950
		Med		300	340	500	550	790
		Low		270	310	420	470	620
	Type x Number			Sirocco × 1		Sirocco × 2		
	Motor output		W	7.5	10.8	19	23	52
Sound pressure level	High		dB(A)	29	31	30	31	40
	Med			27	29	28	29	35
	Low			24	27	25	26	30
Heat exchanger	Dimensions (H x W x D)		mm	294 × 410 × 26.6		294 × 700 × 26.6		
	Fin pitch			1.30				
	Rows x Stages			2 × 14				
	Pipe type			Copper				
	Fin	Type		Aluminium				
		Surface treatment		PP monofilament net				
Air filter	Type			Anti-mold				
	Net material			PP honeycomb				
Enclosure	Material			Metal				
	Colour			—				
Dimensions (H x W x D)	Net		mm	217 × 663 × 595		217 × 953 × 595		
	Gross			324 × 785 × 686		324 × 1,075 × 686		
Weight	Net		kg	18		25		
	Gross			22		29		
Connection pipe diameter	Liquid (Flare)		mm	ϕ 6.35				ϕ6.35 (ϕ9.52)∗1
	Gas (Flare)			ϕ9.52 (ϕ12.70) ∗1		ϕ12.70		ϕ15.88

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Standard static pressure : 0 Pa.

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory) for connection pipe.

INDOOR UNIT

4-3-4. LOW STATIC PRESSURE DUCT TYPE

Model name				ARXB25LATF	ARXB30LATF	ARXB36LATF	ARXB45LATF
Power source				230V ~ , 50Hz			
Available voltage range				198 to 264 V			
Capacity	Cooling		kW	7.00	8.80	10.5	12.7
	Heating			7.70	9.50	12.7	14.3
Input power			W	155	171	216	246
Current			A	0.70	0.75	0.92	1.12
Static pressure range			Pa	0 to 80	0 to 80	0 to 80	0 to 80
Fan	Airflow rate	High	m^3 / h	1,090	1,200	1,440	1,580
		Med		970	1,090	1,270	1,450
		Low		870	970	1,160	1,320
	Type x Number			Sirocco ×2			
	Motor output		W	46.9	62.8	74	131
Sound pressure level	High		dB(A)	29	31	35	37
	Med			26	28	32	35
	Low			24	26	30	33
Heat exchanger	Dimensions (H x W x D)		mm	294 × 1,000 × 39.9			294 × 1,000 × 53.2
	Fin pitch			1.40			
	Rows x Stages			3 × 14			4 × 14
	Pipe type			Copper			
	Fin	Type		Aluminium			
		Surface treatment		Hydrophilic coating			
Air filter (Option)	Model name			UTD-LF25NA			
	Type			Fungicide type			
	Net material			PP honeycomb			
Enclosure	Material			Metal			
	Colour			—			
Dimensions (H x W x D)	Net		mm	270 × 1,135 × 700			
	Gross			300 × 1,300 × 790			
Weight	Net		kg	43			45
	Gross			50			52
Connection pipe diameter	Liquid (Flare)		mm	ϕ6.35 (ϕ9.52) ∗1	ϕ 9.52		
	Gas (Flare)			ϕ15.88		ϕ19.05	

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Standard static pressure : 0 Pa

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory) for connection pipe.

INDOOR UNIT

4-3-5. DUCT TYPE

Model name				ARXA25LATF	ARXA30LATF	ARXA36LATF	ARXA45LATF
Power source				230V ~ , 50Hz			
Available voltage range				198 to 264 V			
Capacity	Cooling		kW	7.00	8.80	10.5	12.7
	Heating			7.70	9.50	12.7	14.3
Input power			W	161	172	220	312
Current			A	0.70	0.75	0.92	1.49
Static pressure range			Pa	30 to 150	30 to 150	30 to 150	30 to 150
Fan	Airflow rate	High	m^3 / h	1,100	1,400	1,750	1,800
		Med		1,000	1,300	1,650	1,600
		Low		900	1,200	1,550	1,500
	Type x Number			Sirocco × 2			
	Motor output		W	70		275	
Sound pressure level	High		dB(A)	38	40	43	44
	Med			36	38	41	42
	Low			34	36	39	40
Heat exchanger	Dimensions (H x W x D)		mm	294 × 1,000 × 39.9			294 × 1,000 × 53.2
	Fin pitch			1.40			
	Rows x Stages			3 × 14			4 × 14
	Pipe type			Copper			
	Fin	Type		Aluminium			
		Surface treatment		Hydrophilic coating			
Air filter (Option)	Model name			UTD-LF25NA			
	Type			Fungicide type			
	Net material			PP honeycomb			
Enclosure	Material			Metal			
	Colour			—			
Dimensions (H x W x D)	Net		mm	270 × 1,135 × 700			
	Gross			300 × 1,300× 790			
Weight	Net		kg	43			45
	Gross			50			52
Connection pipe diameter	Liquid (Flare)		mm	ϕ6.35 (ϕ9.52) ∗1	ϕ 9.52		
	Gas (Flare)			ϕ15.88		ϕ 19.05	

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Standard static pressure : 100 Pa.

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory) for connection pipe.

INDOOR UNIT

4-3-6. HIGH STATIC PRESSURE DUCT TYPE

Model name				ARXC36LATF	ARXC45LATF	ARXC60LATF
Power source				230 V ~ , 50Hz		
Available voltage range				198 to 264 V		
Capacity	Cooling		kW	10.5	12.7	17.0
	Heating			12.7	14.3	18.2
Input power			W	405	427	427
Current			A	1.76	1.85	1.85
Static pressure range			Pa	100 to 200	100 to 250	100 to 250
Fan	Airflow rate	High	m^3 / h	2,500	3,500	3,500
		Med		1,950	3,000	3,000
		Low		1,450	2,460	2,460
	Type x Number			Sirocco × 2		
	Motor output		W	240	540	
Sound pressure level	High		dB(A)	45	49	49
	Med			38	45	45
	Low			32	42	42
Heat exchanger	Dimensions (H x W x D)		mm	336 × 890 × 53.2		
	Fin pitch			1.30		1.45
	Rows x Stages			4 × 16		
	Pipe type			Copper		
	Fin	Type		Aluminium		
		Surface treatment		Hydrophilic coating		
Air filter (Option)	Model name			UTD-LF60KA		
	Type			Fungicide type		
	Net material			PP honeycomb		
Enclosure	Material			Metal		
	Colour			—		
Dimensions (H x W x D)	Net		mm	400 × 1,050 × 500		
	Gross			460 × 1,230 × 640		
Weight	Net		kg	45		50
	Gross			50		55
Connection pipe diameter	Liquid		mm	ϕ 9.52(Flare)		
	Gas			ϕ19.05 (Flare)		

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Standard static pressure : 100 Pa.

INDOOR UNIT

4-3-7. FLOOR / CEILING TYPE

Model name				AB*A12LATF	AB*A14LATF	AB*A18LATF	AB*A24LATF
Power source				230V～, 50Hz			
Available voltage range				198 to 264 V			
Capacity	Cooling		kW	3.60	4.05	5.30	6.60
	Heating			4.10	5.00	5.60	7.70
Input power			W	57	57	88	88
Current			A	0.25	0.25	0.38	0.38
Fan	Airflow rate	High	m^3 / h	640	640	780	880
		Med		560	560	650	740
		Low		480	480	550	630
	Type x Number			Sirocco × 2			
	Motor output		W	16		30	40
Sound pressure level	High		dB(A)	40	40	46	48
	Med			37	37	41.5	44
	Low			34	34	37	40
Heat exchanger	Dimensions (H x W x D)		mm	252 × 800 × 26.6		252 × 800 × 39.9	
	Fin pitch			1.45			
	Rows x Stages			2 × 12		3 × 12	
	Pipe type			Copper			
	Fin	Type		Aluminium			
		Surface treatment		Hydrophilic coating			
Air filter	Type			Anti-mold			
	Net material			PP monofilament net			
Enclosure	Material			Plastic			
	Colour			White (5Y 9/0.5NN)			
Dimensions (H x W x D)	Net		mm	199 × 990 × 655			
	Gross			320 × 1,150 × 790			
Weight	Net		kg	28			
	Gross			37			
Connection pipe diameter	Liquid (Flare)		mm	ϕ6.35		ϕ6.35 (ϕ9.52)∗1	
	Gas (Flare)			ϕ12.70		ϕ15.88	

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory) for connection pipe.

INDOOR UNIT

4-3-8. CEILING TYPE

Model name				AB*A30LATF	AB*A36LATF	AB*A45LATF	AB*A54LATF
Power source				230V ~ , 50Hz			
Available voltage range				198 to 264 V			
Capacity	Cooling		kW	8.80	10.5	12.7	14.1
	Heating			9.10	12.7	13.7	15.8
Input power			W	124	144	160	180
Current			A	1.14	1.16	1.17	1.17
Fan	Airflow rate	High	m^3 / h	1,450	1,660	1,850	2,200
		Med		1,280	1,500	1,660	2,000
		Low		980	1,270	1,430	1,800
	Type x Number			Sirocco × 4			
	Motor output		W	160			
Sound pressure level	High		dB(A)	42	45	48	52
	Med			39	42	46	50
	Low			35	37	41	46
Heat exchanger	Dimensions (H x W x D)		mm	252 × 1,350 × 26.6	252 × 1,350 × 39.9		
	Fin pitch			1.30	1.45		
	Rows x Stages			2 × 12	3 × 12		
	Pipe type			Copper			
	Fin	Type		Aluminium			
		Surface treatment		Hydrophilic coating			
Air filter	Type			Anti-mold			
	Net material			PP monofilament net			
Enclosure	Material			Plastic			
	Colour			White (5Y 9/0.5NN)			
Dimensions (H x W x D)	Net		mm	240 × 1,660 × 700			
	Gross			318 × 1,800 × 790			
Weight	Net		kg	48			
	Gross			61			
Connection pipe diameter	Liquid (Flare)		mm	ϕ 9.52			
	Gas (Flare)			ϕ15.88	ϕ19.05		

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

INDOOR UNIT

4-3-9. COMPACT WALL MOUNTED TYPE (Comfort model)

Model name				AS*E07LACF	AS*E09LACF	AS*E12LACF	AS*E14LACF
Power source				230V～, 50Hz			
Available voltage range				198 to 264 V			
Capacity	Cooling		kW	2.20	2.80	3.60	4.00
	Heating			2.50	3.20	4.10	4.80
Input power			W	13	13	17	19
Current			A	0.15	0.15	0.18	0.20
Fan	Airflow rate	High	m^3 / h	490	490	560	600
		Med		450	450	480	490
		Low		370	370	420	420
	Type x Number			Cross flow × 1			
	Motor output		W	42			
Sound pressure level	High		dB(A)	34	34	38	39
	Med			32	32	34	35
	Low			26	26	30	30
Heat exchanger	Dimensions (H x W x D)		mm	336 × 635 × 26.6			
	Fin pitch			1.20			
	Rows x Stages			2 × 16			
	Pipe type			Copper			
	Fin	Type		Aluminium			
		Surface treatment		Hydrophilic coating			
Air filter	Type			Antibacterial and Mold proofing, Ion deodorization			
	Net material			PP honeycomb			
Enclosure	Material			Plastic			
	Colour			White (N9)			
Dimensions (H x W x D)	Net		mm	275 × 790 × 215			
	Gross			290 × 835 × 345			
Weight	Net		kg	9			
	Gross			12			
Connection pipe diameter	Liquid (Flare)		mm	ϕ 6.35			
	Gas (Flare)			ϕ 9.52 (ϕ12.70) ∗1		ϕ 12.70	
EV Kit (Option)				UTR - EV09XA		UTR - EV14XA	

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory) for connection pipe.

INDOOR UNIT

4-3-10. WALL MOUNTED TYPE

Model name				AS*A18LATF	AS*A24LATF	AS*A30LATF
Power source				230V～, 50Hz		
Available voltage range				198 to 264 V		
Capacity	Cooling		kW	5.40	6.90	8.00
	Heating			5.60	7.80	8.80
Input power			W	38	50	60
Current			A	0.18	0.24	0.28
Fan	Airflow rate	High	m^3/h	800	970	1040
		Med		650	870	910
		Low		550	750	730
	Type x Number			Cross flow × 1		
	Motor output		W	38	38	38
Sound pressure level	High		dB(A)	41	45	47.5
	Med			36.5	41	44
	Low			33	37	39.5
Heat exchanger	Dimensions (H x W x D)		mm	336 × 855 × 26.6		336 × 855 × 26.6 84 × 855 × 13.3
	Fin pitch			1.20		1.20 1.40
	Rows x Stages			2 × 16		
	Pipe type			Copper		
	Fin	Type		Aluminium		
		Surface treatment		Hydrophilic coating		
Air filter	Type			Deodorization / Anti-mold		
	Net material			PP monofilament net		
Enclosure	Material			Plastic		
	Colour			White (N9)		
Dimensions (H x W x D)	Net		mm	320 × 1,120 × 220		
	Gross			348 × 1,240 × 427		
Weight	Net		kg	16		
	Gross			22		
Connection pipe diameter	Liquid (Flare)		mm	ϕ6.35 (ϕ9.52)∗1		ϕ9.52
	Gas (Flare)			ϕ15.88		

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory) for connection pipe.

INDOOR UNIT

4-3-11. CEILING WALL TYPE

Model name				AW*A07LATF	AW*A09LATF	AW*A12LATF	AW*A14LATF	AW*A18LATF	AW*A24LATF	AW*A30LATF
Power source				230V ~ , 50Hz						
Available voltage range				198 to 264 V						
Capacity	Cooling		kW	2.20	2.80	3.60	4.30	5.40	6.90	8.00
	Heating			2.50	3.20	4.10	4.90	5.60	7.80	8.80
Input power			W	16	19	20	21	30	40	50
Current			A	0.08	0.09	0.10	0.10	0.14	0.19	0.24
Fan	Airflow rate	High	m^3 / h	380	480	600	650	760	900	950
		Med		330	420	520	570	660	780	870
		Low		290	390	470	490	560	650	780
	Type x Number			Cross flow ×1						
	Motor output		W	32						
Sound pressure level	High		dB(A)	34	35	35	37	40	44	47
	Med			32	32	33	35	37	41	45
	Low			30	30	31	32	34	37	42
Heat exchanger	Dimensions (H x W x D)		mm	315 × 905 × 26.6						315 × 905 × 26.6 315 × 905 × 13.3
	Fin pitch			1.20						1.20 1.40
	Rows x Stages			2 × 15						2 × 15 1 × 4
	Pipe type			Copper						
	Fin	Type		Aluminium						
		Surface treatment		Hydrophilic coating						
Air filter	Type			Anti-mold						
	Net material			PP monofilament net						
Enclosure	Material			Plastic						
	Colour			White + GRAY (10BG 9/0.5NN+5B 7.5/0.5NN)						
Dimensions (H x W x D)	Net		mm	270 × 1,150 × 285						
	Gross			400 × 1,260 × 380						
Weight	Net		kg	16						
	Gross			20						
Connection pipe diameter	Liquid (Flare)		mm	ϕ 6.35				ϕ6.35 (ϕ9.52)∗1		ϕ 9.52
	Gas (Flare)			ϕ9.52 (ϕ12.70) ∗1		ϕ12.70		ϕ15.88		

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory) for connection pipe.

INDOOR UNIT

4-4. ELECTRIC CHARACTERISTICS

Indoor Unit		Power Supply				Indoor Fan Motor	
Type	Model	Voltage (V)	Frequency (Hz)	MCA (A)	MFA (A)	Input Power (kW)	Full Load Amp (A)
Compact Cassette	AUXB07LATF	230 ~	50	0.15	Note	0.028	0.13
	AUXB09LATF			0.15		0.028	0.13
	AUXB12LATF			0.27		0.052	0.23
	AUXB14LATF			0.27		0.052	0.23
	AUXB18LATF			0.26		0.050	0.22
Cassette (Slim Type)	AU*A20LATF	230 ~	50	0.72	Note	0.104	0.60
	AU*A25LATF			0.77		0.124	0.64
	AU*A30LATF			0.80		0.140	0.67
Cassette	AU*A36LATF	230 ~	50	1.10	Note	0.175	0.92
	AU*A45LATF			1.12		0.190	0.94
	AU*A54LATF			1.14		0.219	0.95
Compact Duct	ARXB07LALF	230 ~	50	0.17	Note	0.0312	0.14
	ARXB09LALF			0.19		0.0326	0.16
	ARXB12LALF			0.30		0.055	0.25
	ARXB14LALF			0.35		0.063	0.29
	ARXB18LALF			0.54		0.103	0.45
Low Static Pressure Duct	ARXB25LATF	230 ~	50	0.84	Note	0.155	0.70
	ARXB30LATF			0.90		0.171	0.75
	ARXB36LATF			1.10		0.216	0.92
	ARXB45LATF			1.34		0.246	1.12
Duct	ARXA25LATF	230 ~	50	0.84	Note	0.161	0.70
	ARXA30LATF			0.90		0.172	0.75
	ARXA36LATF			1.10		0.220	0.92
	ARXA45LATF			1.79		0.312	1.49
High Static Pressure Duct	ARXC36LATF	230 ~	50	2.11	Note	0.405	1.76
	ARXC45LATF			2.22		0.427	1.85
	ARXC60LATF			2.22		0.427	1.85
Floor / Ceiling	AB*A12LATF	230 ~	50	0.30	Note	0.057	0.25
	AB*A14LATF			0.30		0.057	0.25
	AB*A18LATF			0.45		0.088	0.38
	AB*A24LATF			0.45		0.088	0.38
Ceiling	AB*A30LATF	230 ~	50	1.36	Note	0.124	1.14
	AB*A36LATF			1.39		0.144	1.16
	AB*A45LATF			1.40		0.160	1.17
	AB*A54LATF			1.40		0.180	1.17
Compact Wall Mounted (Comfort Model)	AS*E07LACF	230 ~	50	0.18	Note	0.013	0.15
	AS*E09LACF			0.18		0.013	0.15
	AS*E12LACF			0.22		0.017	0.18
	AS*E14LACF			0.24		0.019	0.20
Wall Mounted	AS*A18LATF	230 ~	50	0.22	Note	0.038	0.18
	AS*A24LATF			0.29		0.050	0.24
	AS*A30LATF			0.34		0.060	0.28
Ceiling Wall	AW*A07LATF	230 ~	50	0.10	Note	0.016	0.08
	AW*A09LATF			0.11		0.019	0.09
	AW*A12LATF			0.12		0.020	0.10
	AW*A14LATF			0.12		0.021	0.10
	AW*A18LATF			0.17		0.030	0.14
	AW*A24LATF			0.23		0.040	0.19
	AW*A30LATF			0.29		0.050	0.24

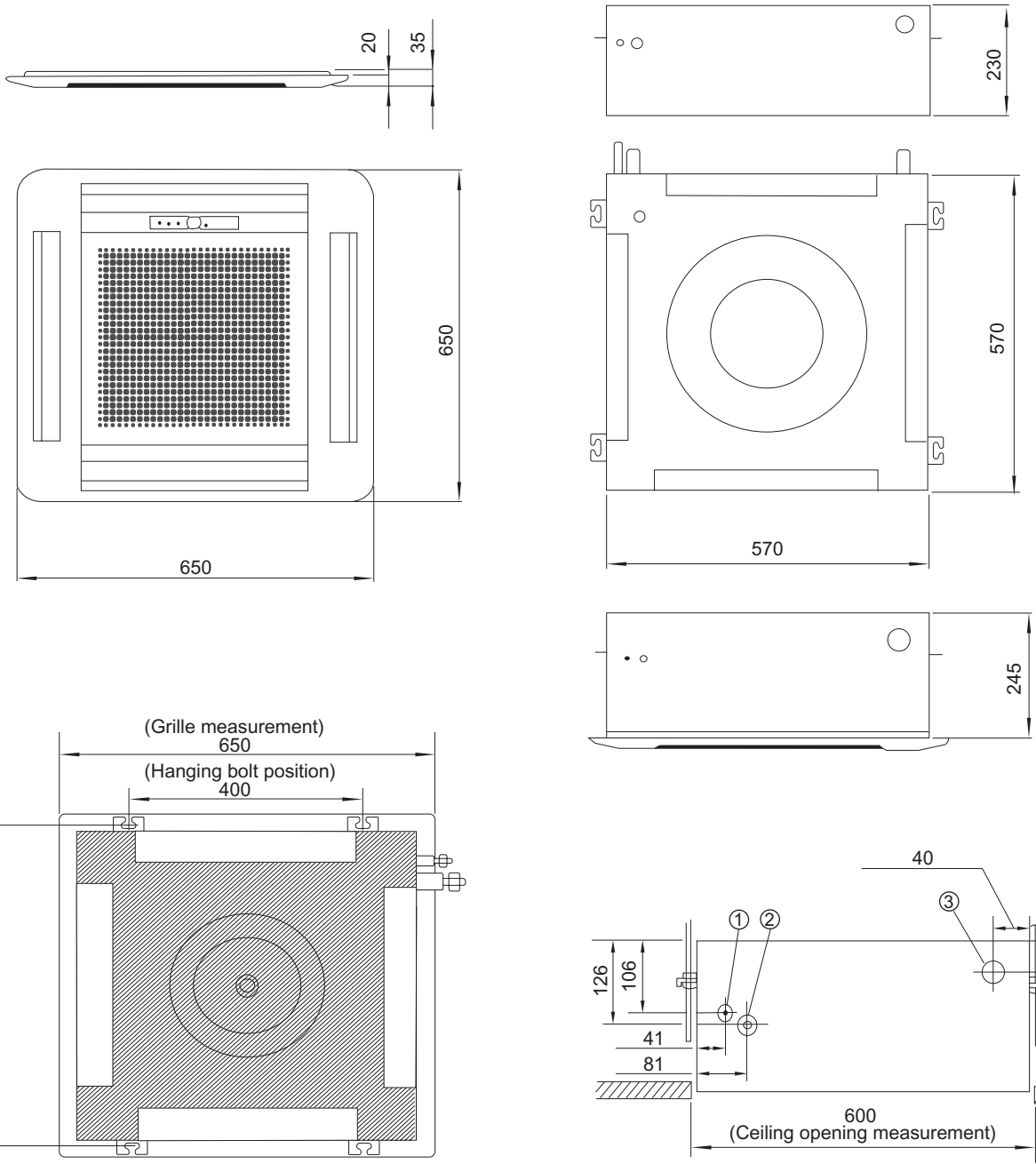
MCA : Min Circuit Amp = Max Operating Current (Full Load).

MFA : Main Fuse (Circuit breaker) Current; MFA $\leqq$ 2.25 x ΣMCA and MFA $\leqq$ 20 (A);
Select circuit sub breaker for indoor units by value MFA.

INDOOR UNIT

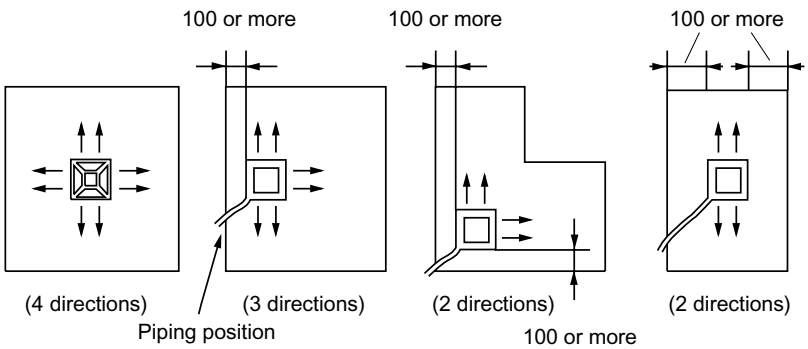
4-5. DIMENSIONS
4-5-1. COMPACT CASSETTE TYPE
■ MODELS : AUXB07, AUXB09, AUXB12, AUXB14, AUXB18

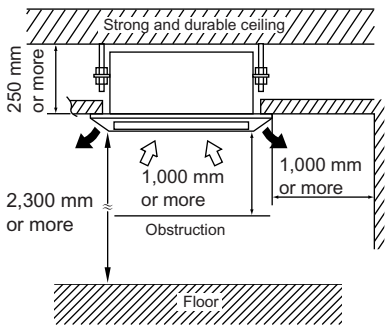
(Unit : mm)



			AUXB07, AUXB09	AUXB12, AUXB14	AUXB18
①	Refrgerant pipe flare connection	Liquid	Ø 6.35mm		Ø6.35(Ø9.52)mm ∗1
②		Gas	Ø9.52(Ø12.70)mm∗1	Ø 12.70mm	Ø 15.88mm
③	Drain pipe connection	Drain pipe	I.D. 32mm ; O.D. 37mm		

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory).

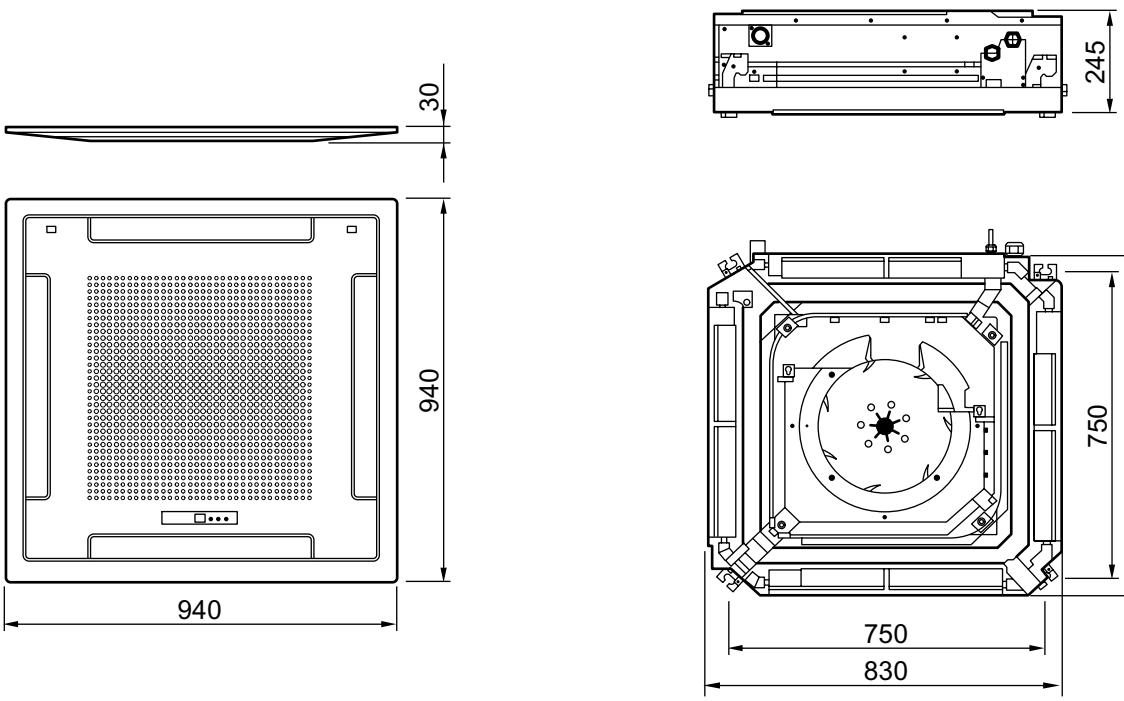


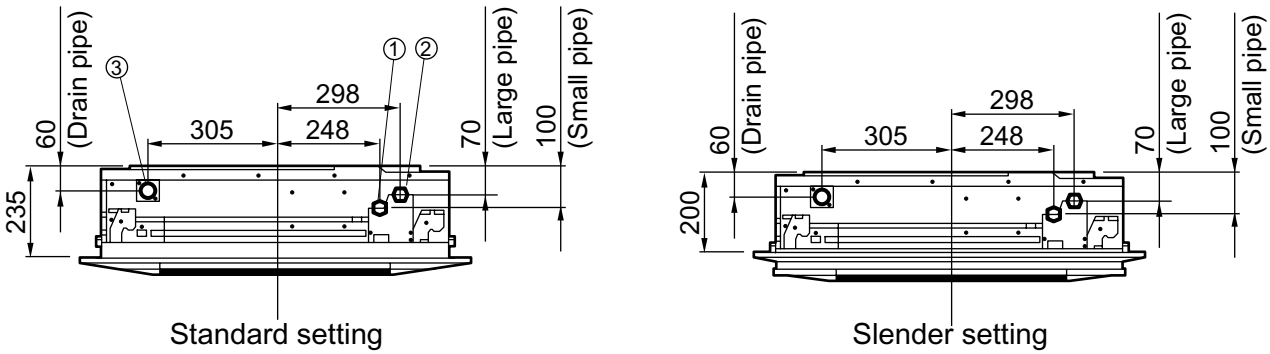


4-5-2. CASSETTE TYPE

■ MODELS : AU∗A20, AU∗A25, AU∗A30

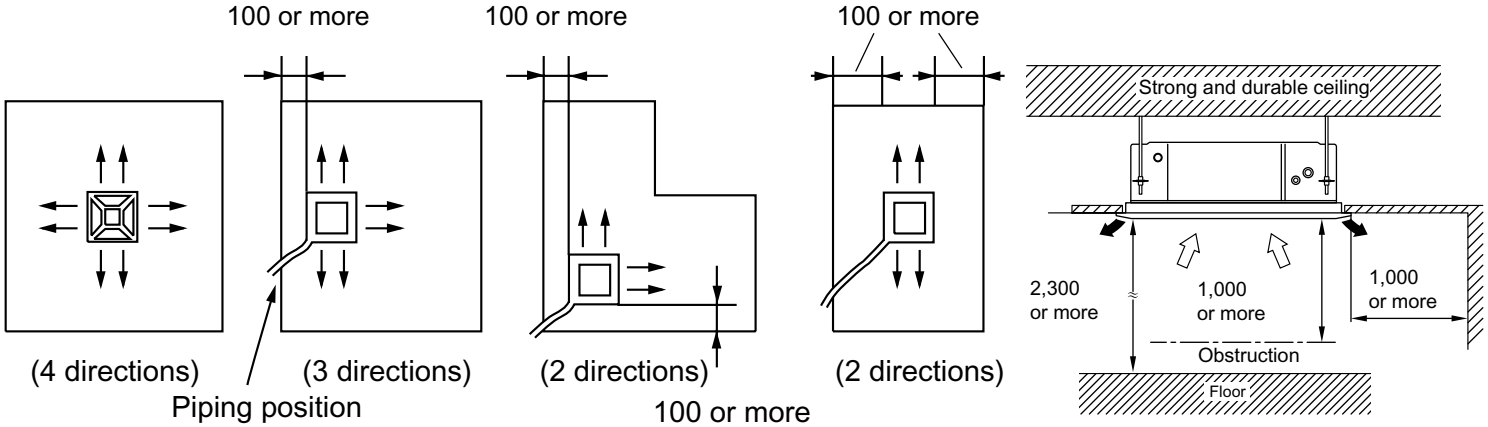
(Unit : mm)





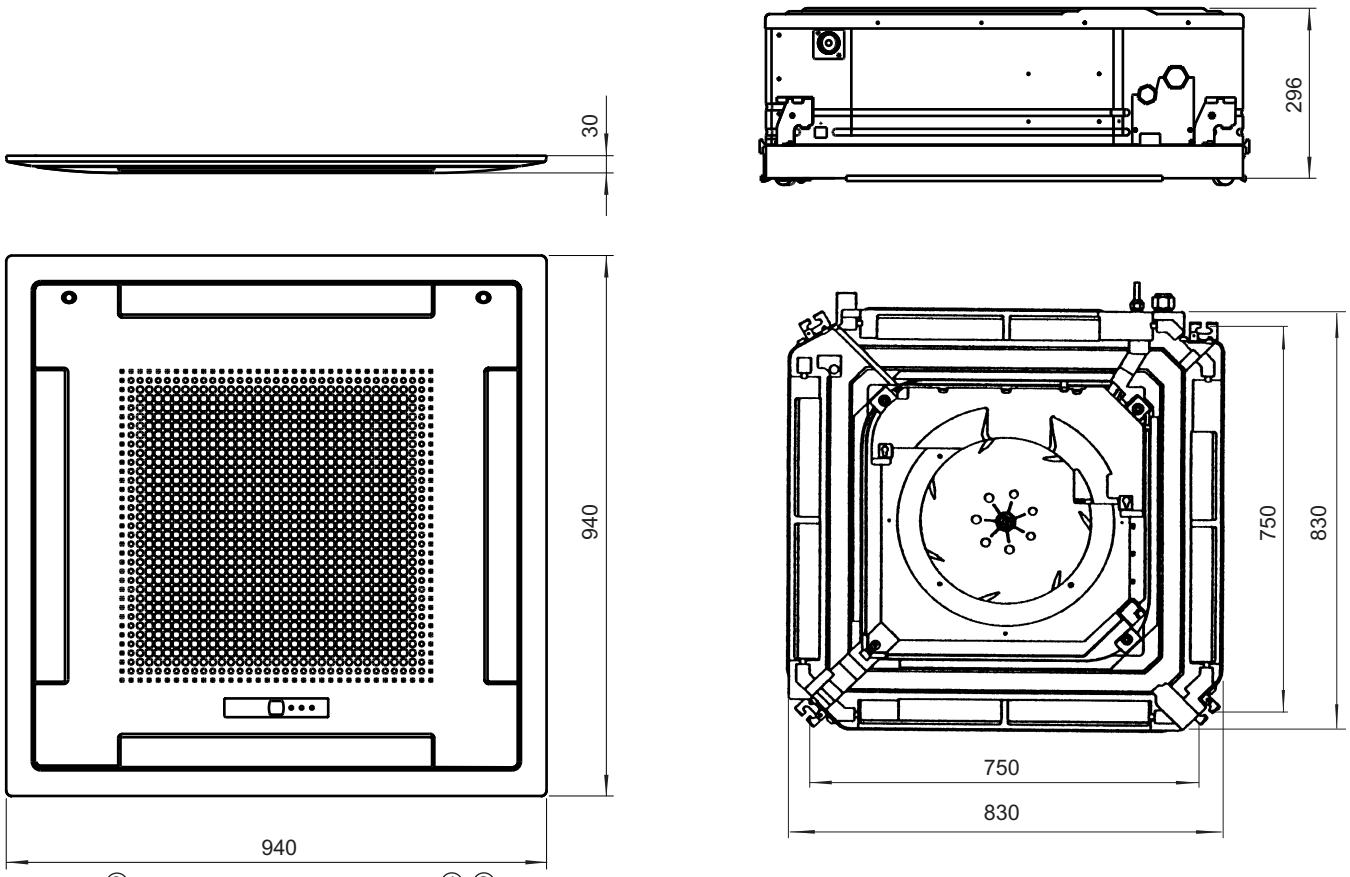
			AU∗A20, AU∗A25	AU∗A30
①	Refrgerant pipe flare connection	Liquid	Ø6.35(Ø9.52)mm ∗1	Ø 9.52mm
②		Gas	Ø 15.88mm	
③	Drain pipe connection	Drain pipe	I.D. 32mm ; O.D. 37mm	

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory).

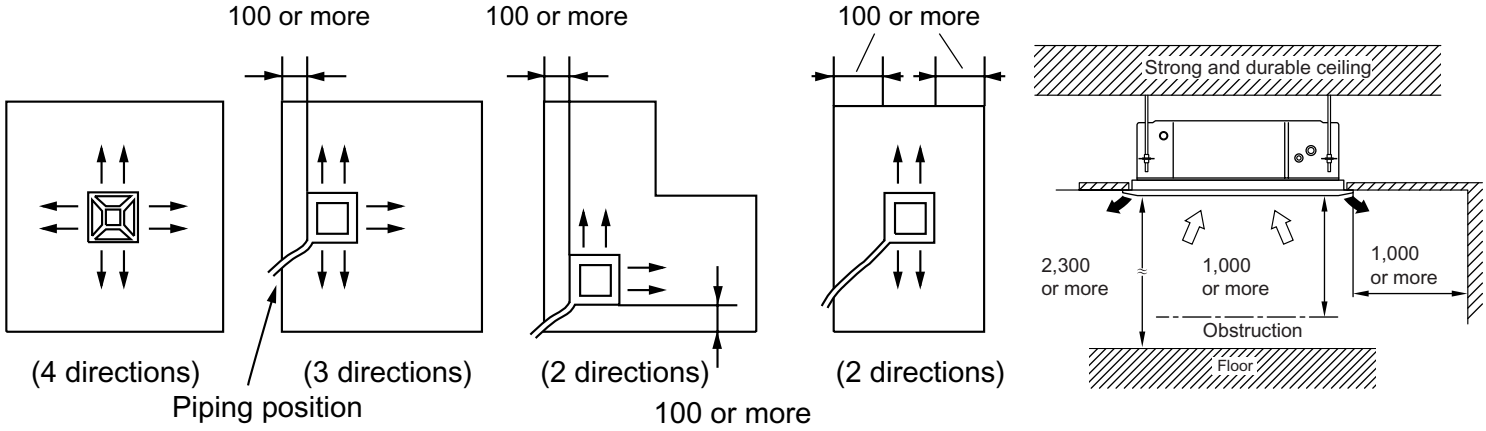


■ MODELS : AU∗A36, AU∗A45, AU∗A54

(Unit : mm)



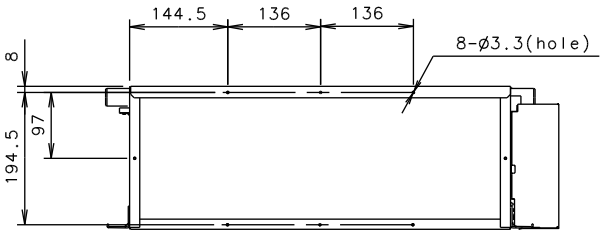
			AU∗A36, AU∗A45, AU∗A54
①	Refrgerant pipe flare connection	Liquid	Ø 9.52mm
②		Gas	Ø 19.05mm
③	Drain pipe connection	Drain pipe	I.D. 32mm ; O.D. 37mm



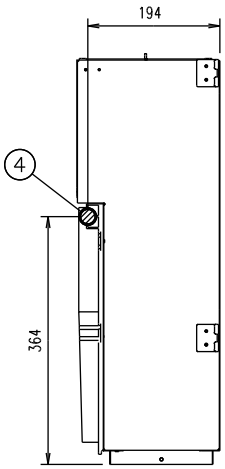
4-5-3. COMPACT DUCT TYPE

■ MODELS : ARXB07, ARXB09

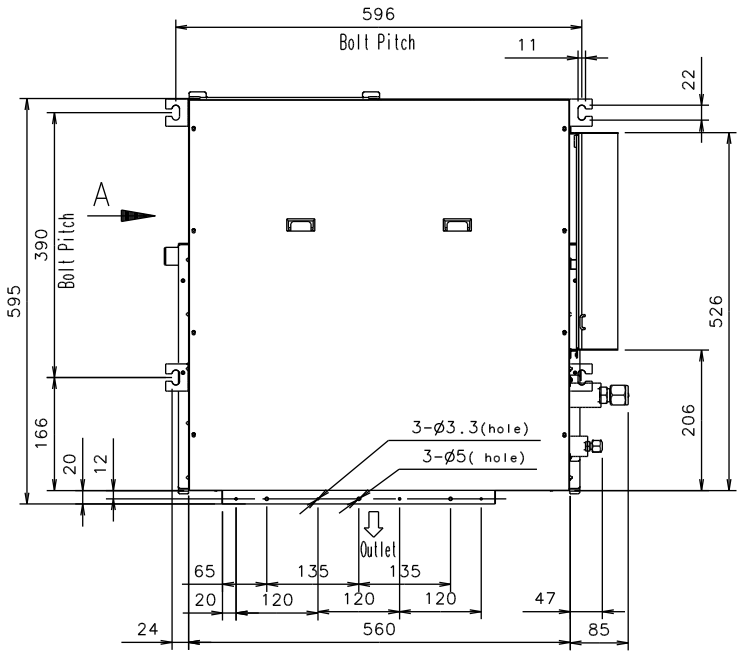
(Unit : mm)



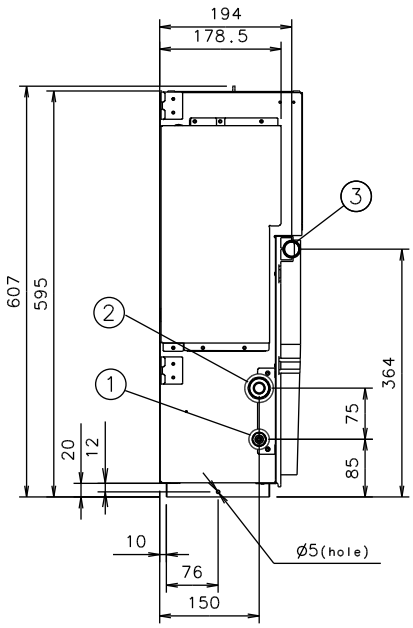
Rear view



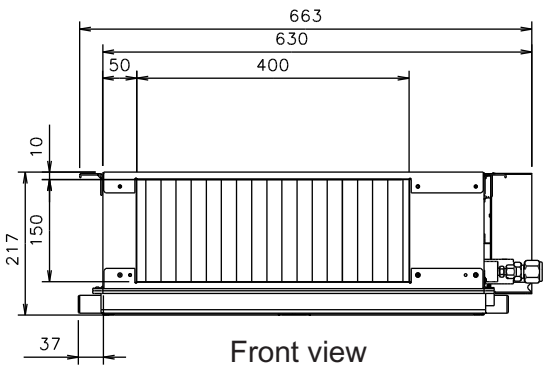
View A



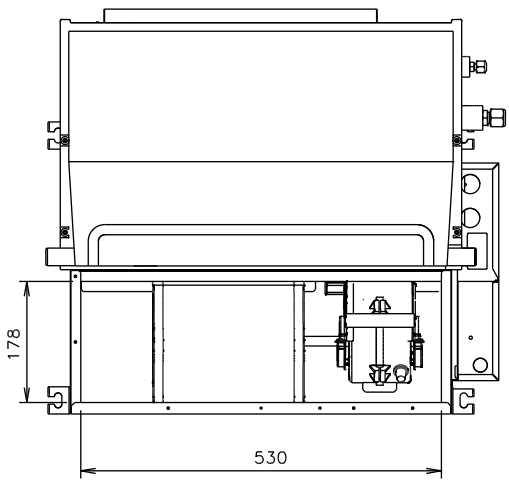
Top view



Side view



Front view

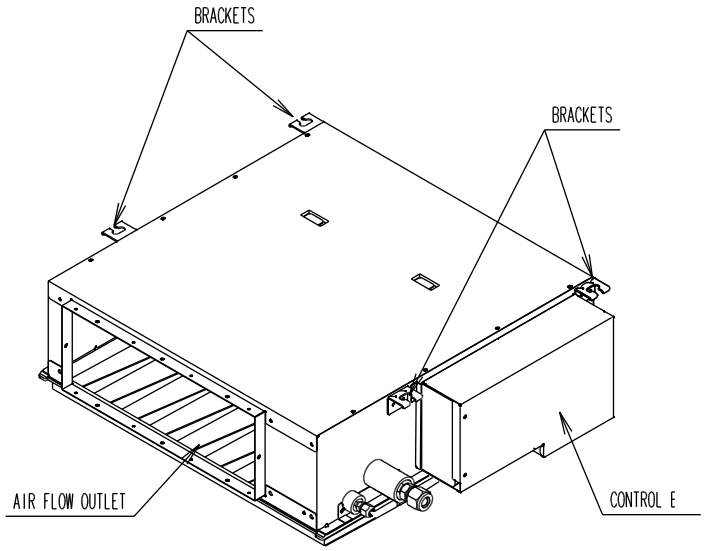


Bottom view

			ARXB07, ARXB09
①	Refrgerant pipe flare connection	Liquid	Ø 6.35mm
②		Gas	Ø9.52(Ø12.70)mm ∗1
③ ④	Drain pipe connection	Drain pipe	I.D. 21.5mm ; O.D. 26mm

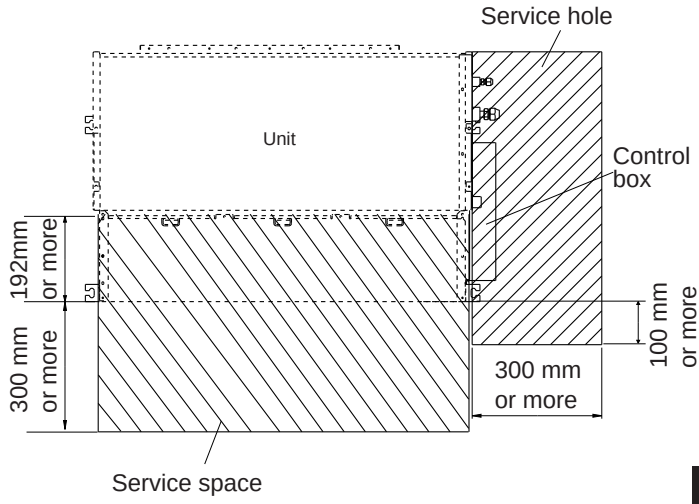
∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory).

■ BIRD'S-EYE VIEW



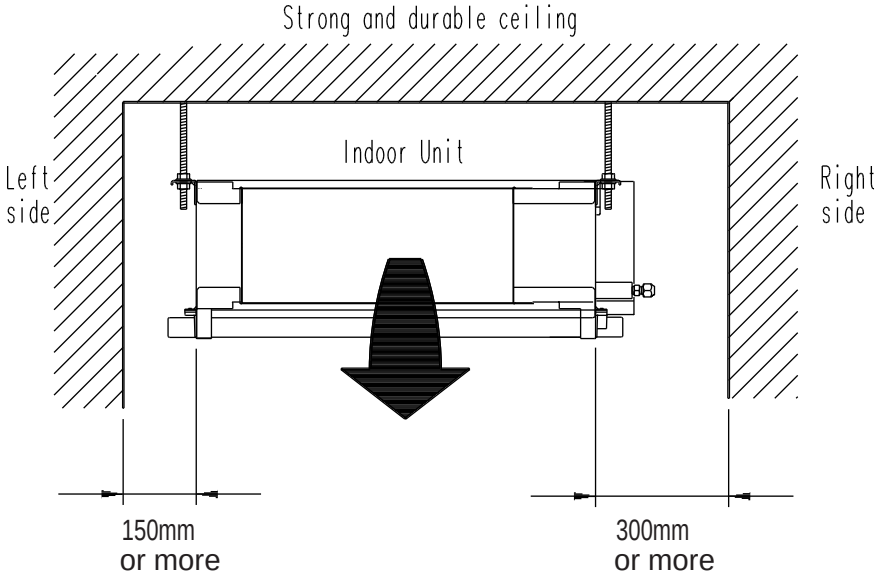
■ MAINTENANCE HOLE

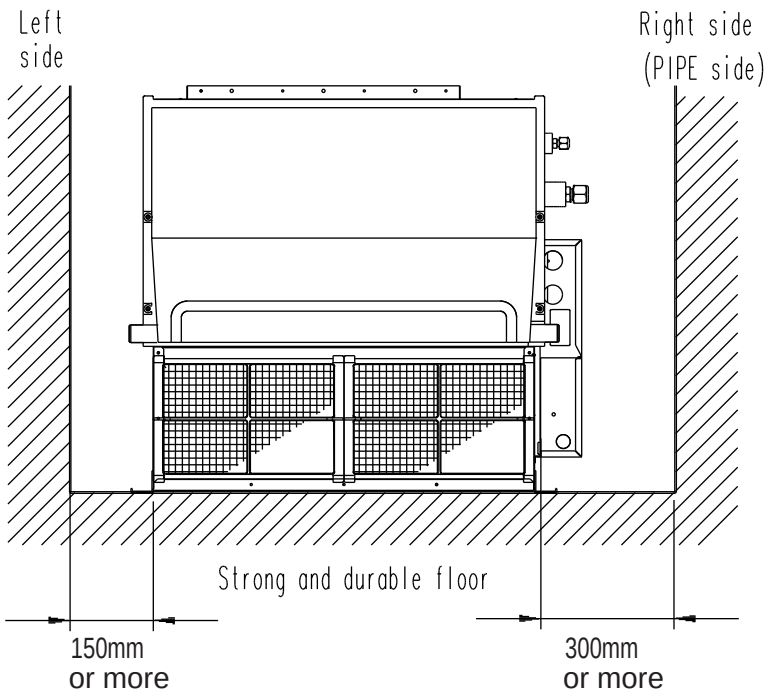
Provide a service hole for inspection purposes as shown below.
Do not place any wiring or illumination in the service space,
as they will impede service.

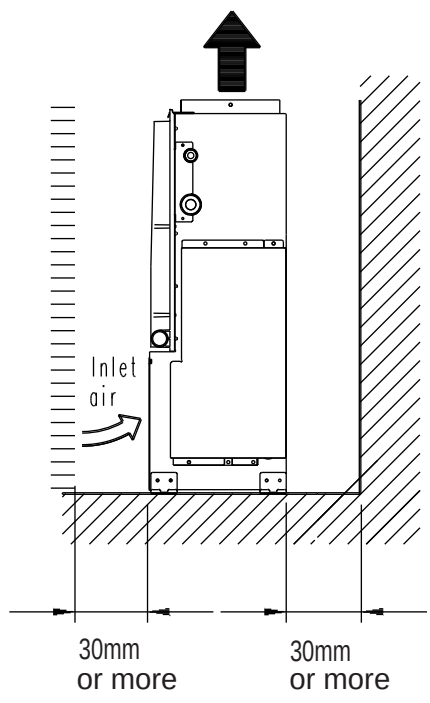


INDOOR UNIT

■ MOUNTING POSITION

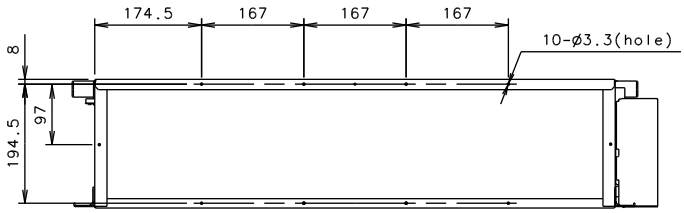




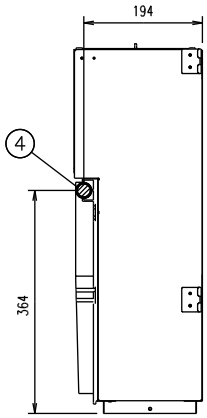


■ MODELS : ARXB12, ARXB14, ARXB18

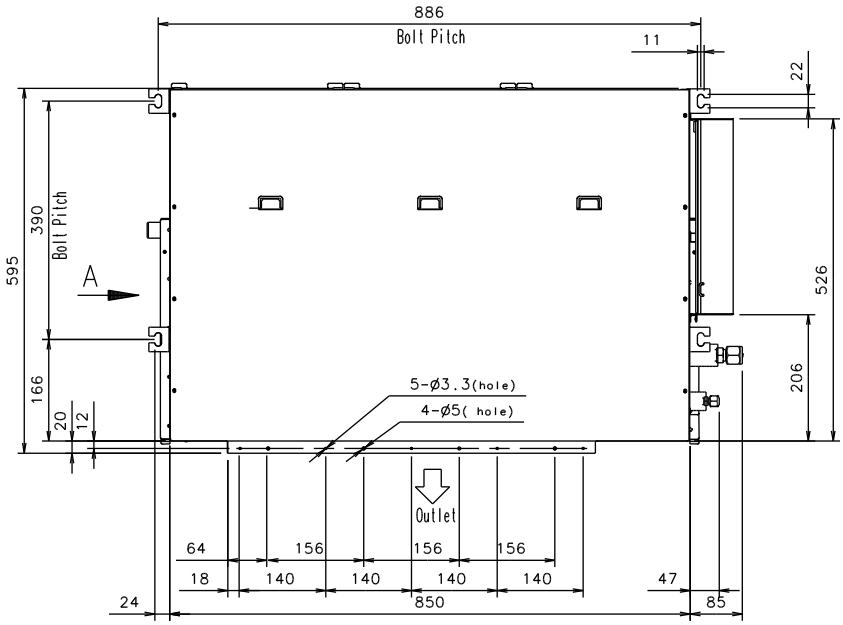
(Unit : mm)



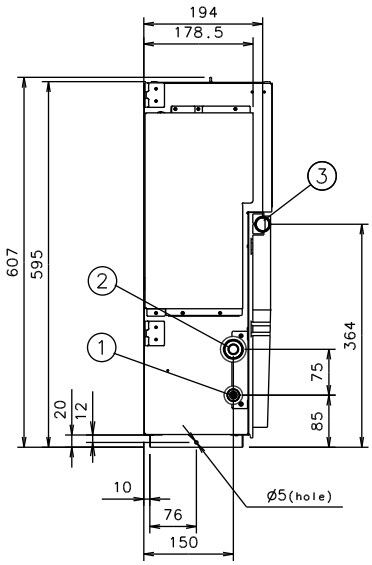
Rear view



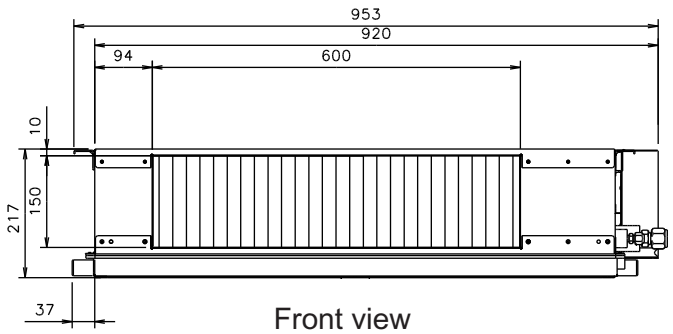
View A



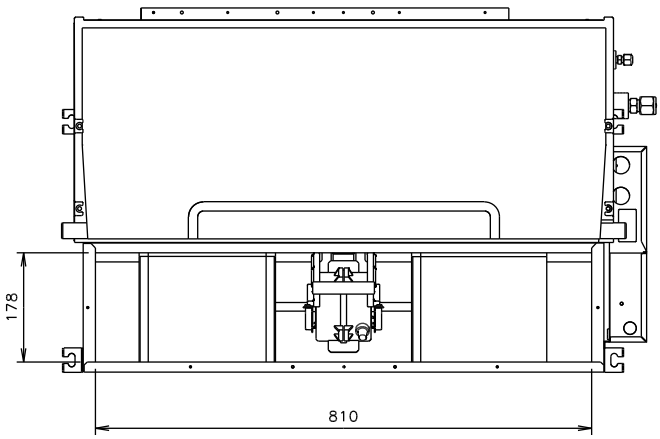
Top view



Side view



Front view

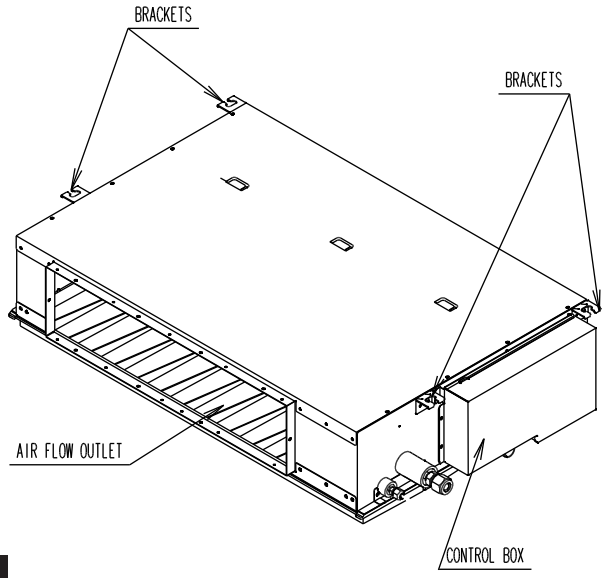


Bottom view

			ARXB12, ARXB14	ARXB18
①	Refrgerant pipe flare connection	Liquid	Ø 6.35mm	Ø6.35(Ø9.52)mm ∗1
②		Gas	Ø 12.70mm	Ø 15.88mm
③ ④	Drain pipe connection	Drain pipe	I.D. 21.5mm ; O.D. 26mm	

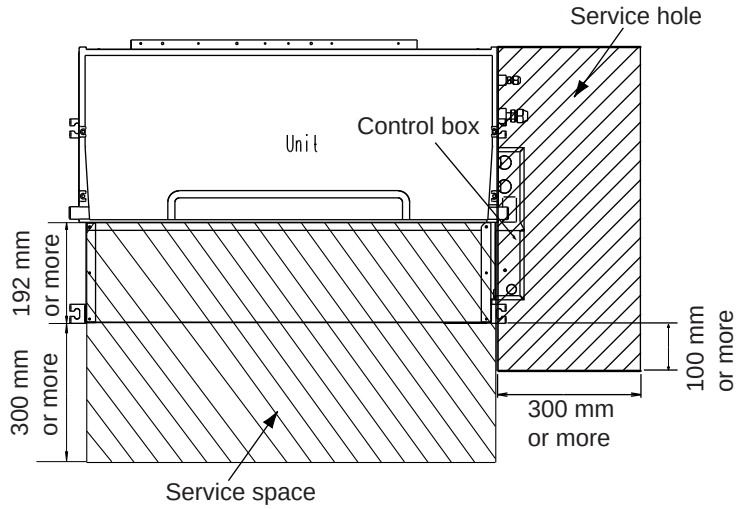
∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory).

■ BIRD'S-EYE VIEW

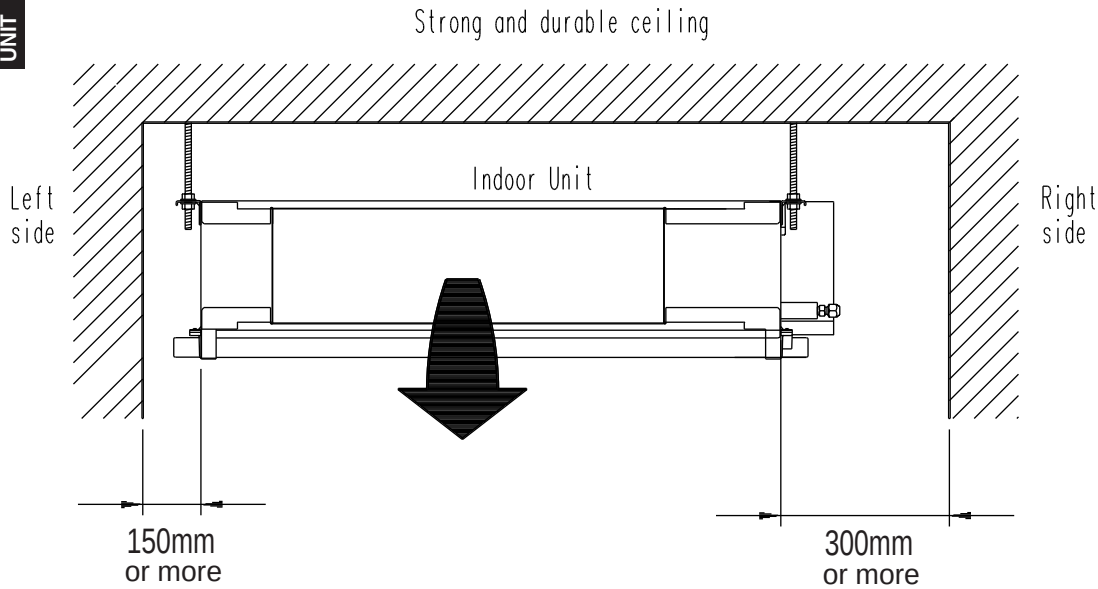


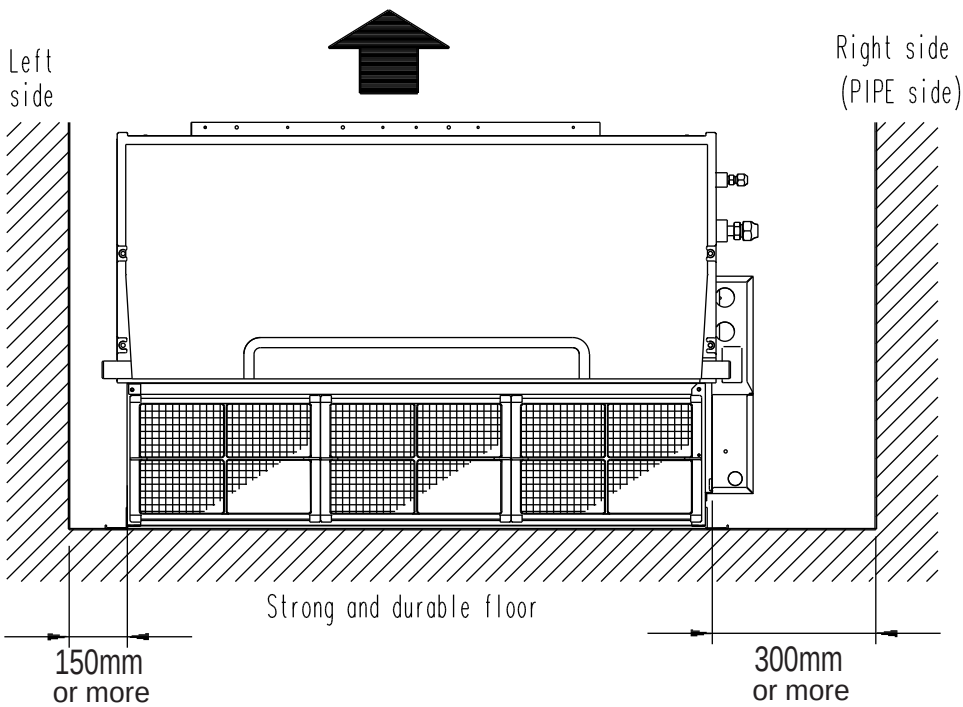
■ MAINTENANCE HOLE

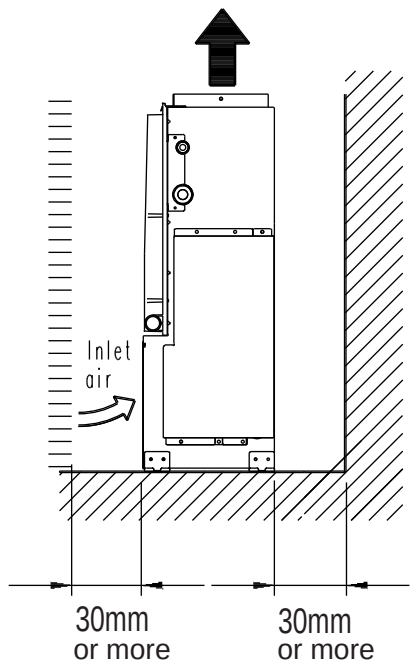
Provide a service hole for inspection purposes as shown below.
Do not place any wiring or illumination in the service space,
as they will impede service.



■ MOUNTING POSITION







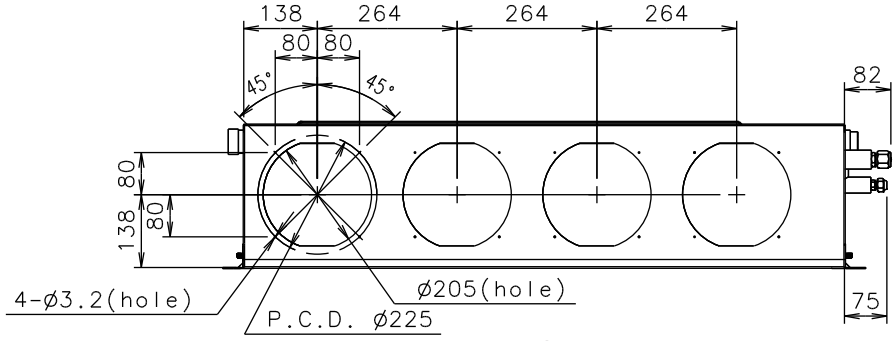
4-5-4. LOW STATIC PRESSURE DUCT TYPE

■ MODELS: ARXB25, ARXB30, ARXB36, ARXB45

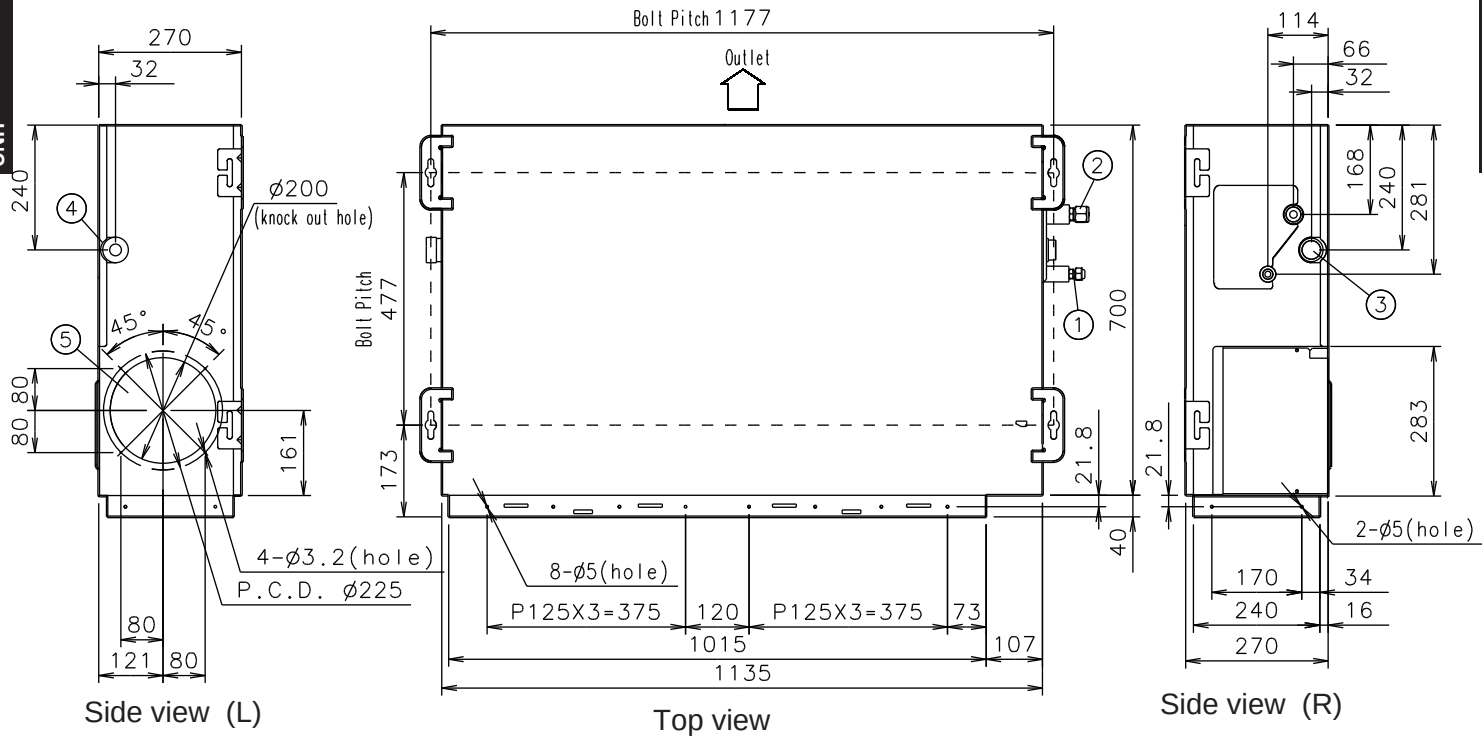
4-5-5. DUCT TYPE

■ MODELS: ARXA25, ARXA30, ARXA36, ARXA45

[Unit : mm]



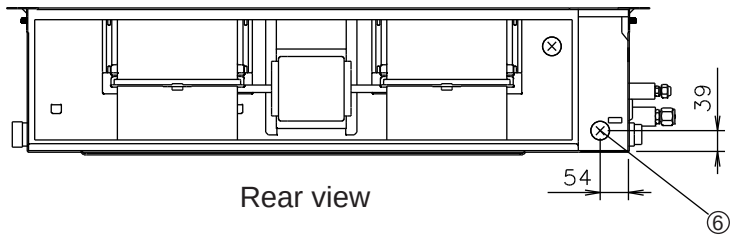
Front view



Side view (L)

Top view

Side view (R)



Rear view

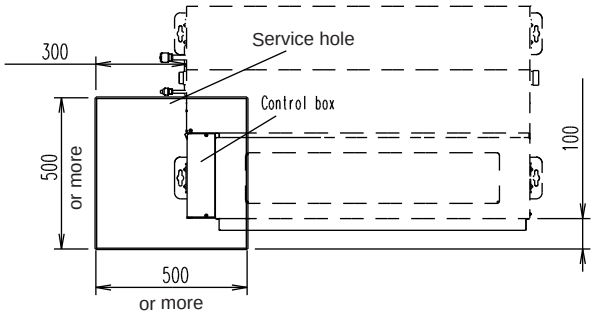
			ARXB25 ARXA25	ARXB30 ARXA30	ARXB36, ARXB45 ARXA36, ARXA45
①	Refrgerant pipe flare connection	Liquid	Ø6.35(Ø9.52)mm ∗1	Ø 9.52mm	Ø 9.52mm
②		Gas	Ø 15.88mm		Ø 19.05mm
③	Drain pipe connection	Drain pipe	I.D. 36mm ; O.D. 38mm		
④		Drain cap			
⑤	Knock out hole (fresh air)	-	200mm		
⑥	Hole for power cable	-	23mm		

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory).

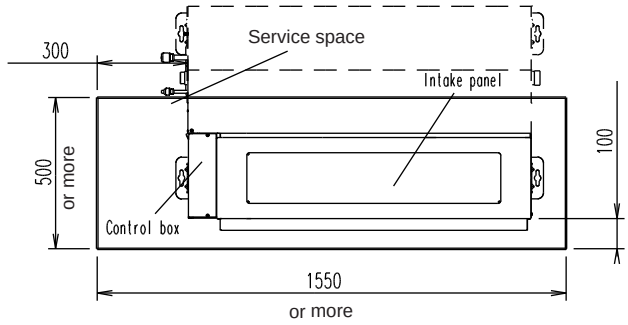
■ MAINTENANCE HOLE

[Unit : mm]

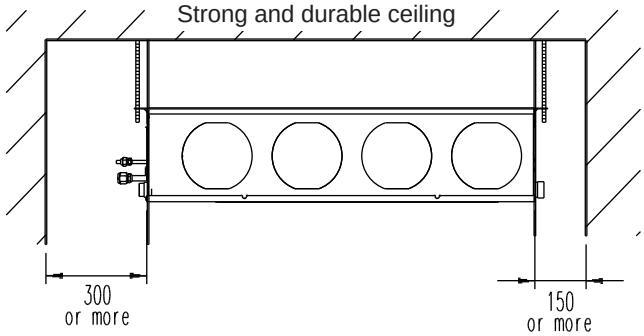
It shall be possible to install and remove the control box.



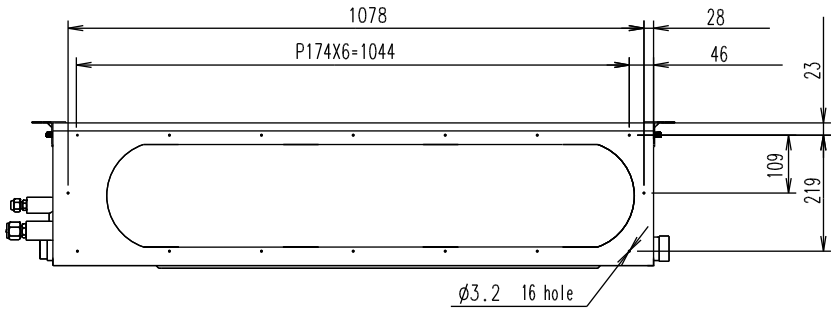
It shall be possible to install and remove the control box,fan units and filter.



■ MOUNTING POSITION



■ WHEN USING A SQUARE DUCT

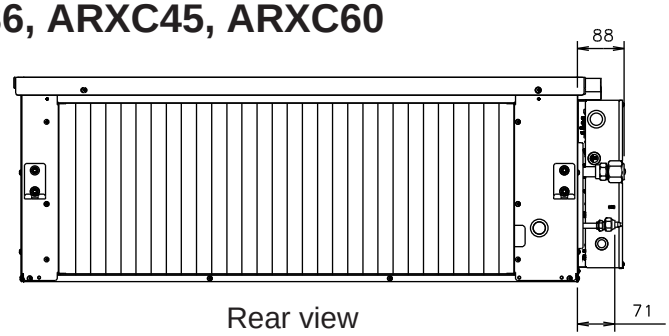


INDOOR UNIT

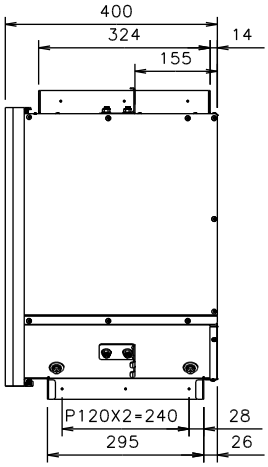
4-5-6. HIGH STATIC PRESSURE DUCT TYPE

■ MODELS: ARXC36, ARXC45, ARXC60

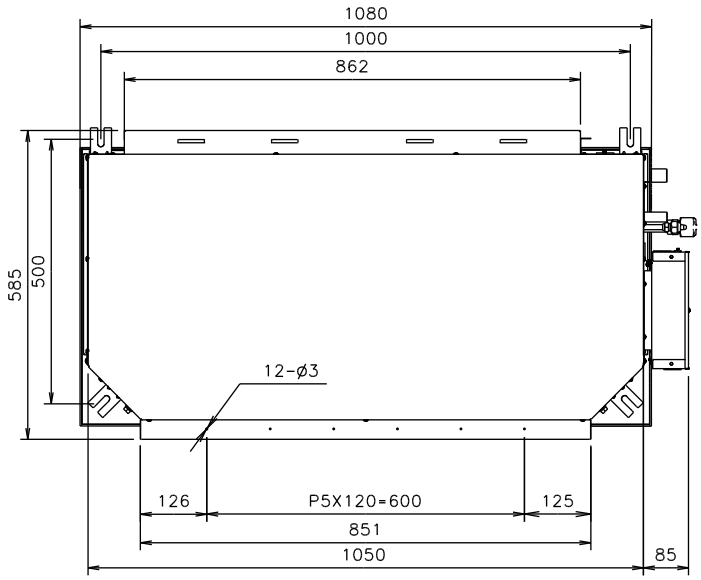
[Unit : mm]



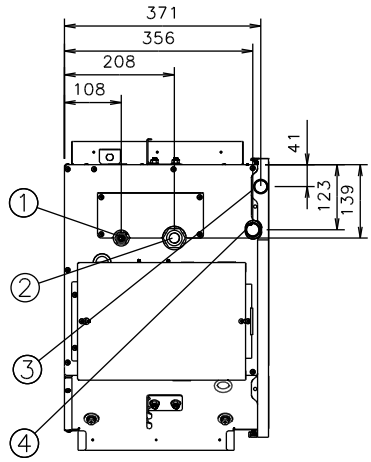
Rear view



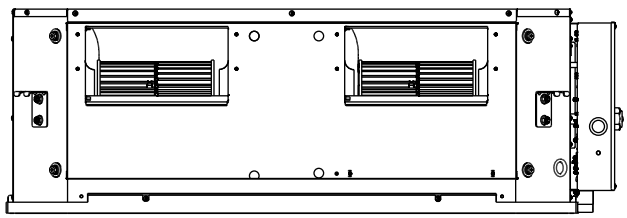
Side view (L)



Top view



Side view (R)

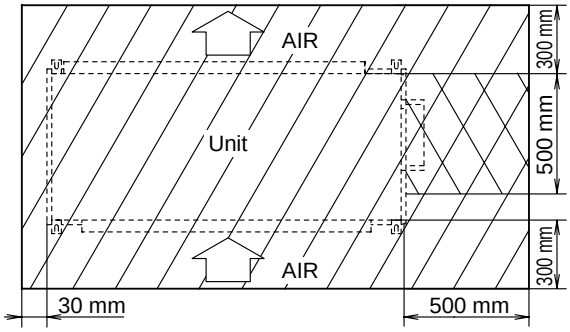


Front view

			ARXC36, ARXC45, ARXC60
①	Refrgerant pipe flare connection	Liquid	Ø 9.52mm
②		Gas	Ø 19.05mm
③ ④	Drain pipe connection	Drain pipe	I.D. 23.4mm ; O.D. 25.4mm

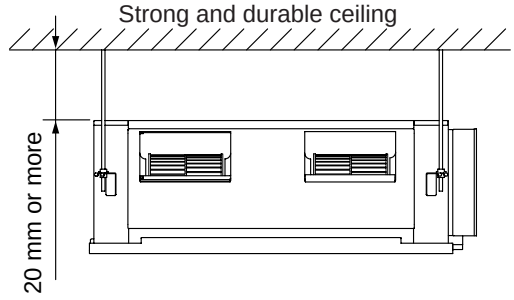
■ MAINTENANCE HOLE

Provide a service hole for inspection purposes as shown below.
Do not place any wiring or illumination in the service space,
as they will impede service.



XXXXX : Service hole ZZZZZ : Service space

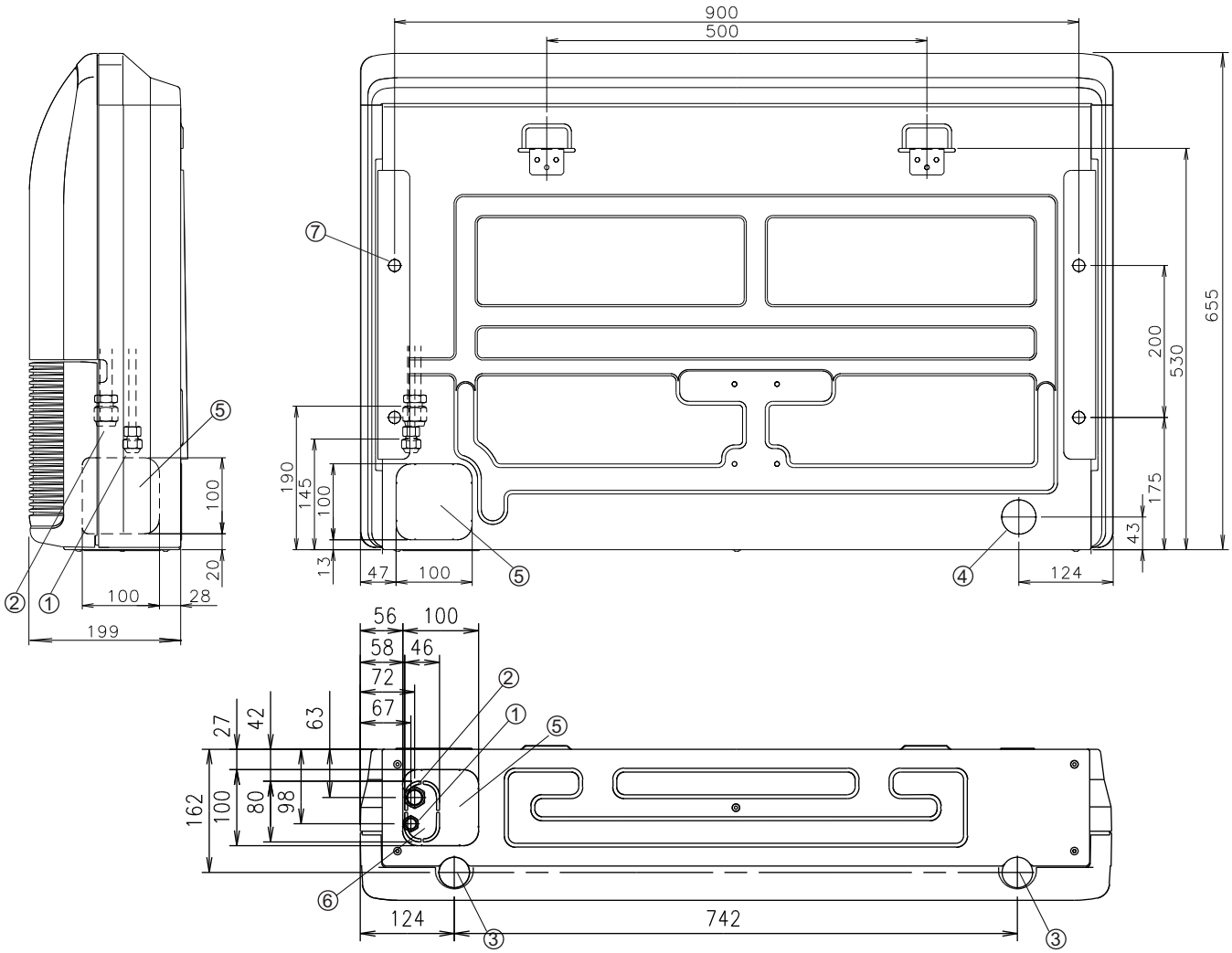
■ MOUNTING POSITION



4-5-7. FLOOR / CELING TYPE

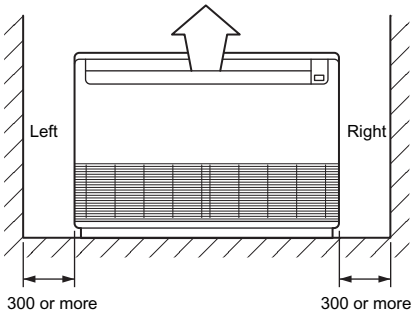
■ MODELS : AB∗A12, AB∗A14, AB∗A18, AB∗A24

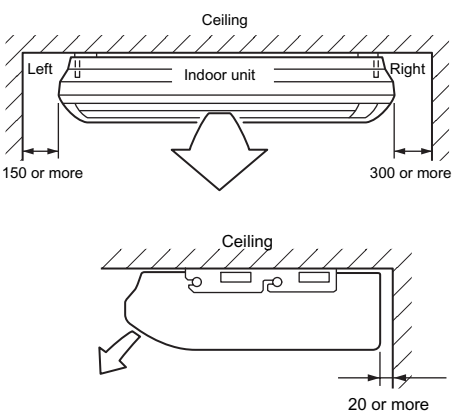
(Unit : mm)

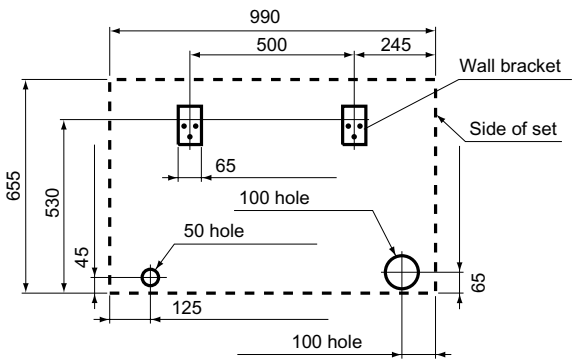


			AB∗A12, AB∗A14	AB∗A18, AB∗A24
①	Refrgerant pipe flare connection	Liquid	Ø 6.35mm	Ø6.35(Ø9.52)mm ∗1
②		Gas	Ø 12.70mm	Ø 15.88mm
③	Drain pipe connection	Drain pipe	I.D. 22mm ; O.D. 25.6mm	
		Drain hose	I.D. 25mm ; O.D. 29mm ; L=700mm	
④	Knock out hole	Drain pipe	Ø 45mm	
⑤ ⑥		Refrigerant pipe	-	
⑦	Hole for lifting bolt	-	Use M10 screw bolt	

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory).



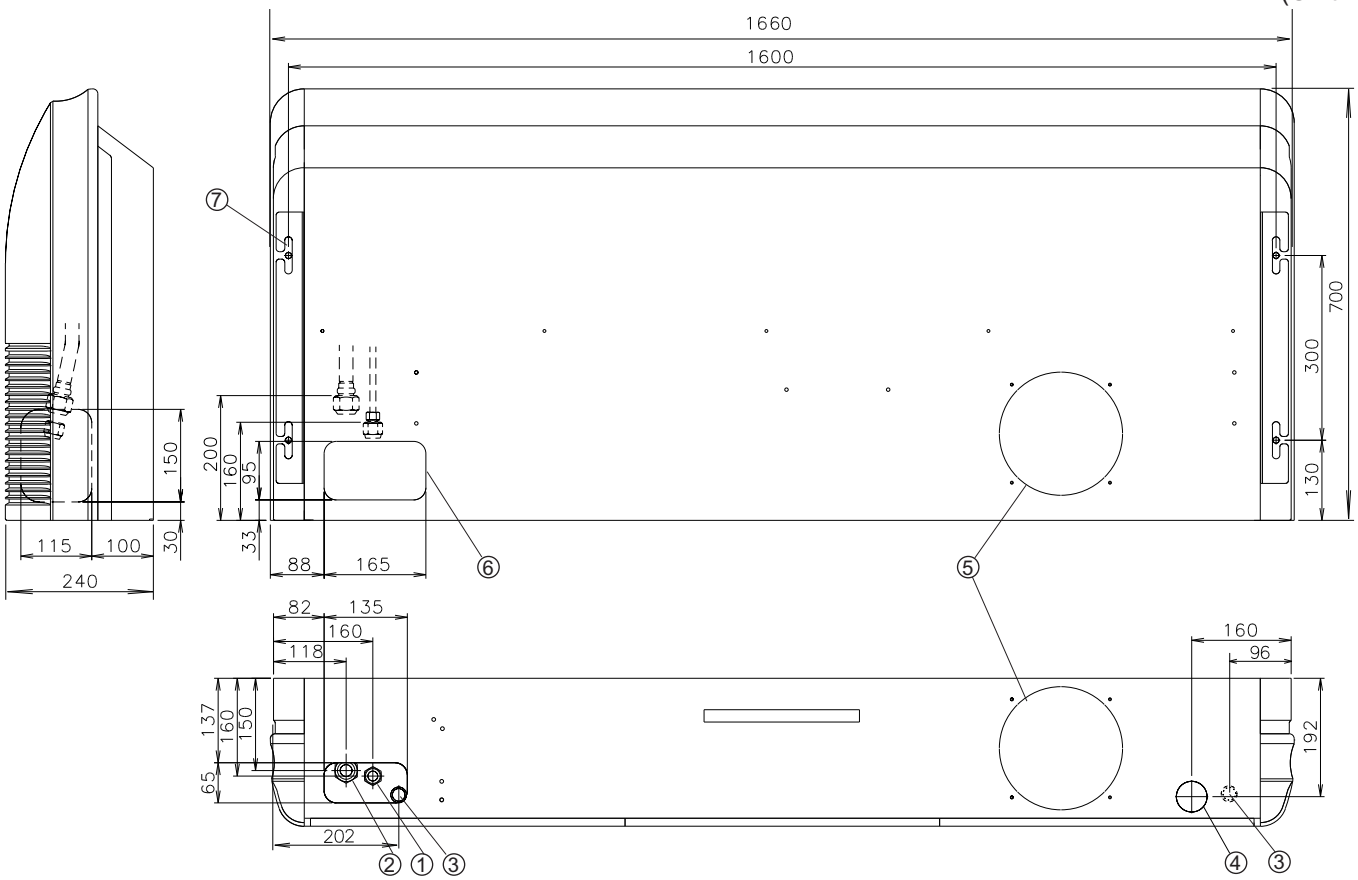




4-5-8. CEILING TYPE

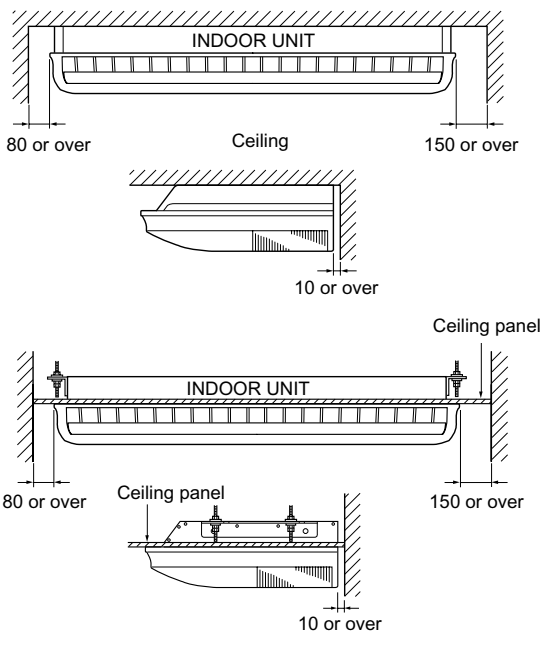
■ MODELS : AB∗A30, AB∗A36, AB∗A45, AB∗A54

(Unit : mm)

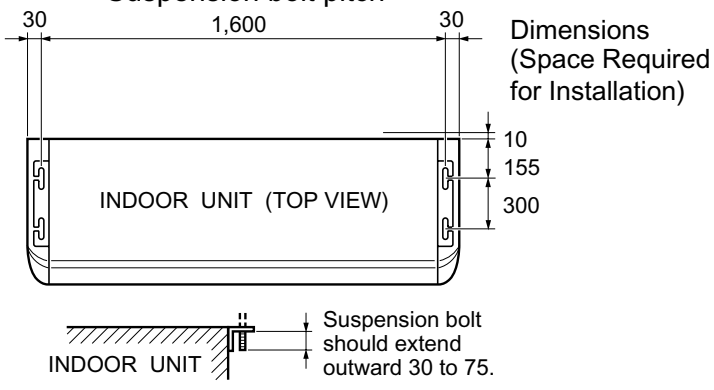


			AB∗A30	AB∗A36, AB∗A45, AB∗A54
①	Refrgerant pipe flare connection	Liquid	Ø 9.52mm	
②		Gas	Ø 15.88mm	Ø 19.05mm
③	Drain pipe connection	Drain pipe	I.D. 22mm ; O.D. 25.6mm	
④	Knock out hole	Drain	Ø 50mm	
⑤		Fresh air	Ø 200mm	
⑥		Refrigerant pipe	-	
⑦	Hole for lifting bolt	-	Use M10 screw bolt	

Ceiling



Suspension bolt pitch

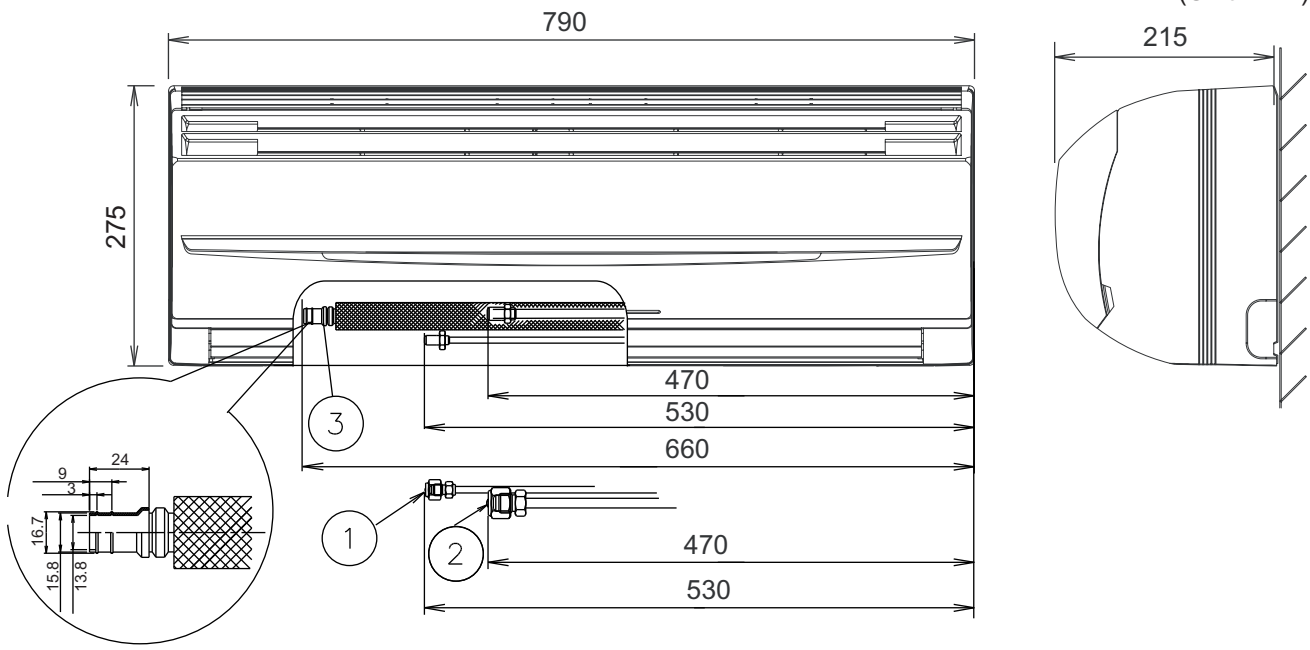


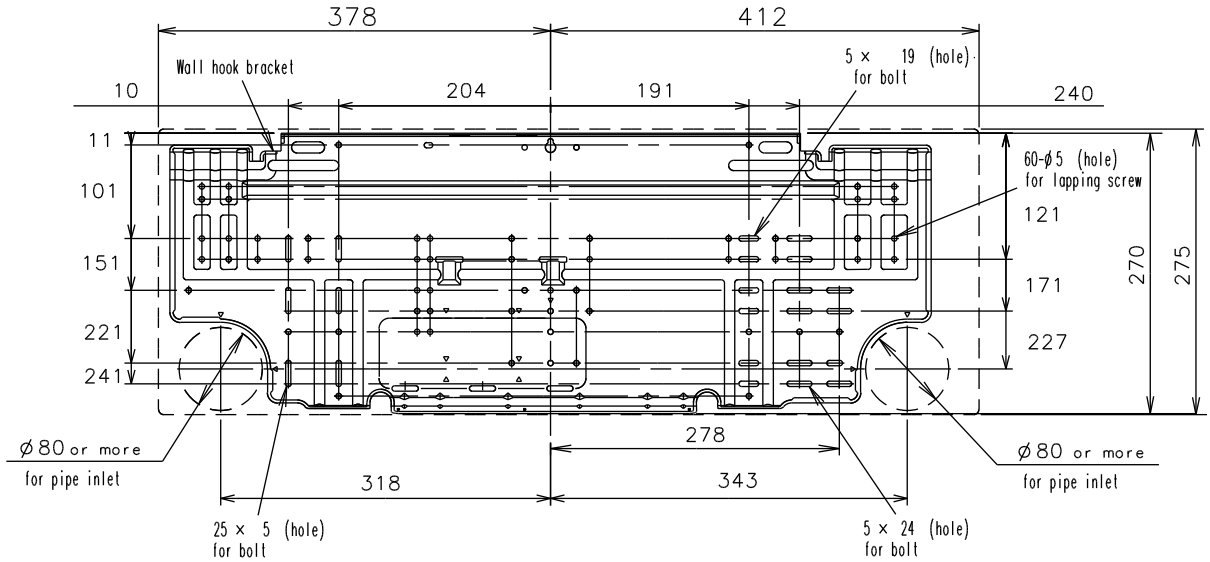
Dimensions (Space Required for Installation)

4-5-9. COMPACT WALL MOUNTED TYPE (Comfort model)

■ MODELS : AS∗E07, AS∗E09, AS∗E12, AS∗E14

(Unit : mm)

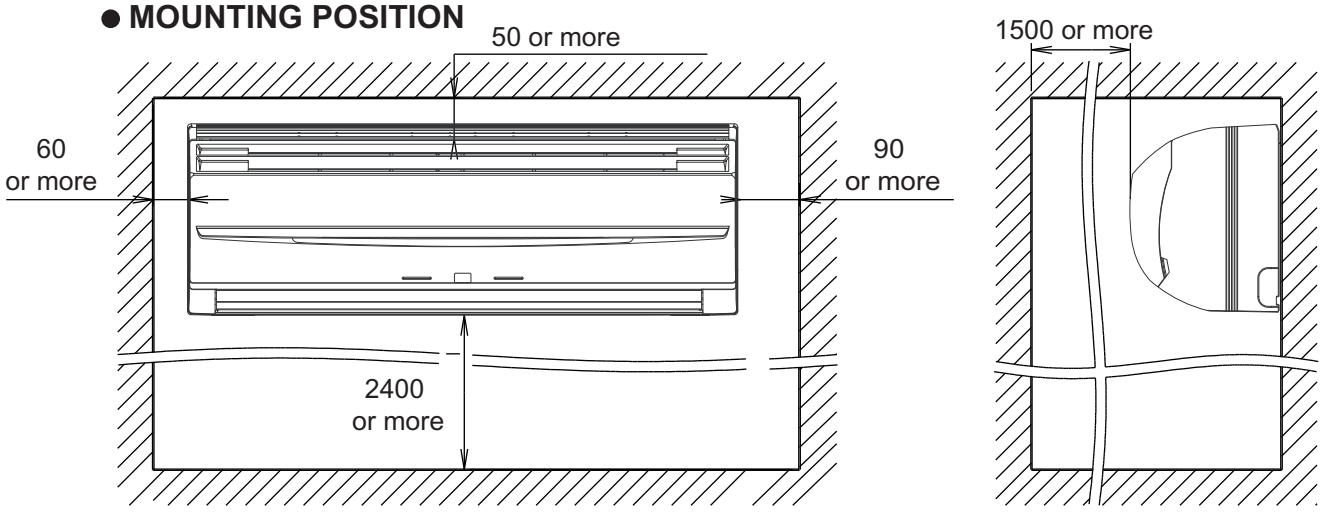




			AS∗E07, AS∗E09	AS∗E12, AS∗E14
①	Refrigerant pipe flare connection	Liquid	Ø 6.35mm	
②		Gas	Ø9.52(Ø12.70)mm ∗1	Ø 12.70mm
③	Drain pipe connection	Drain pipe	Drain hose : L= 600mm ; I.D. 13.8mm ; O.D. 15.8 - 16.7mm	

∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory).

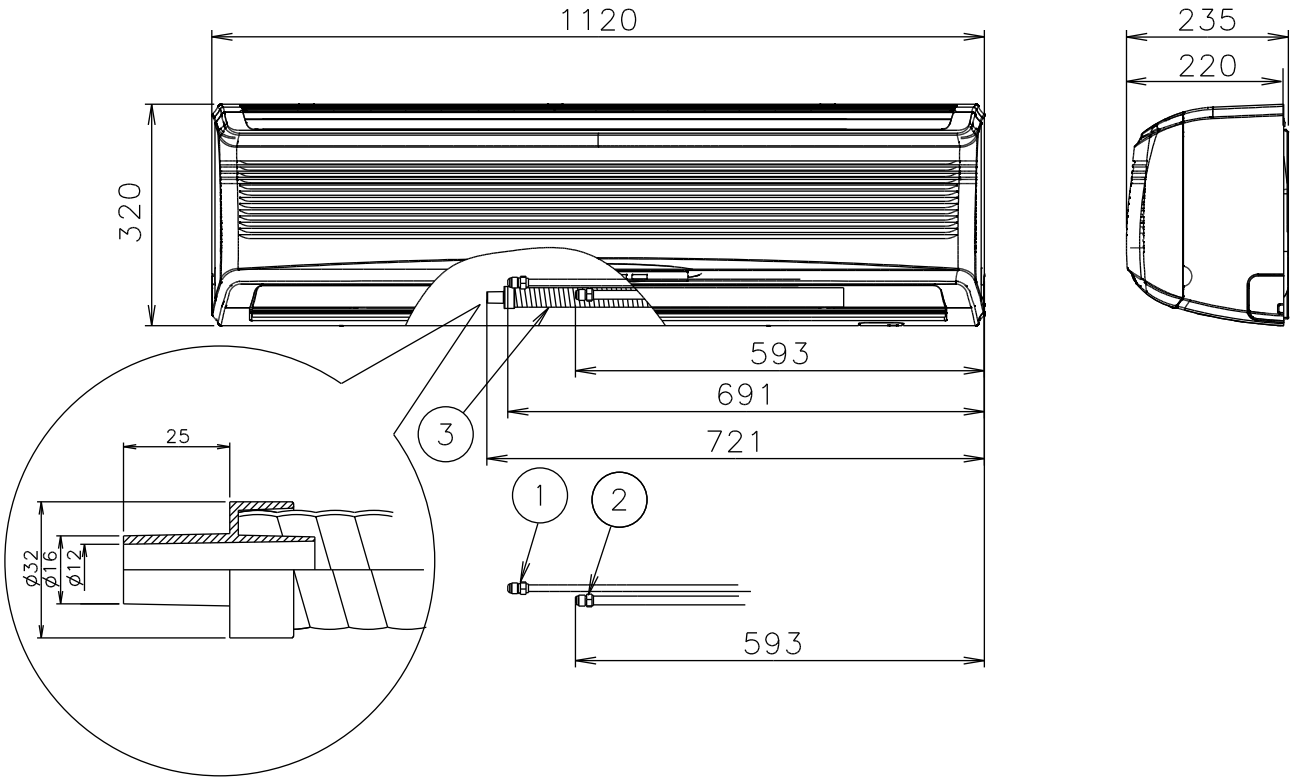
● MOUNTING POSITION

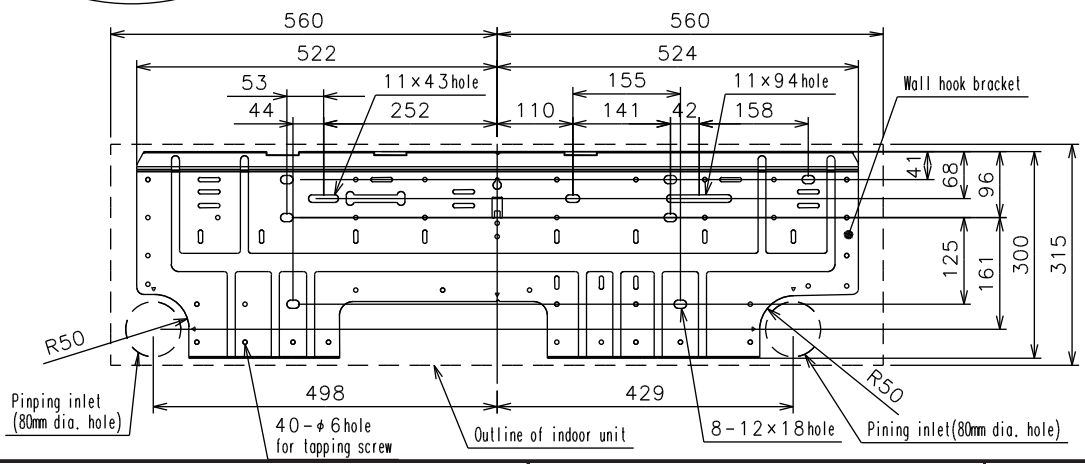


4-5-10. WALL MOUNTED TYPE

■MODELS : AS∗A18, AS∗A24, AS∗A30

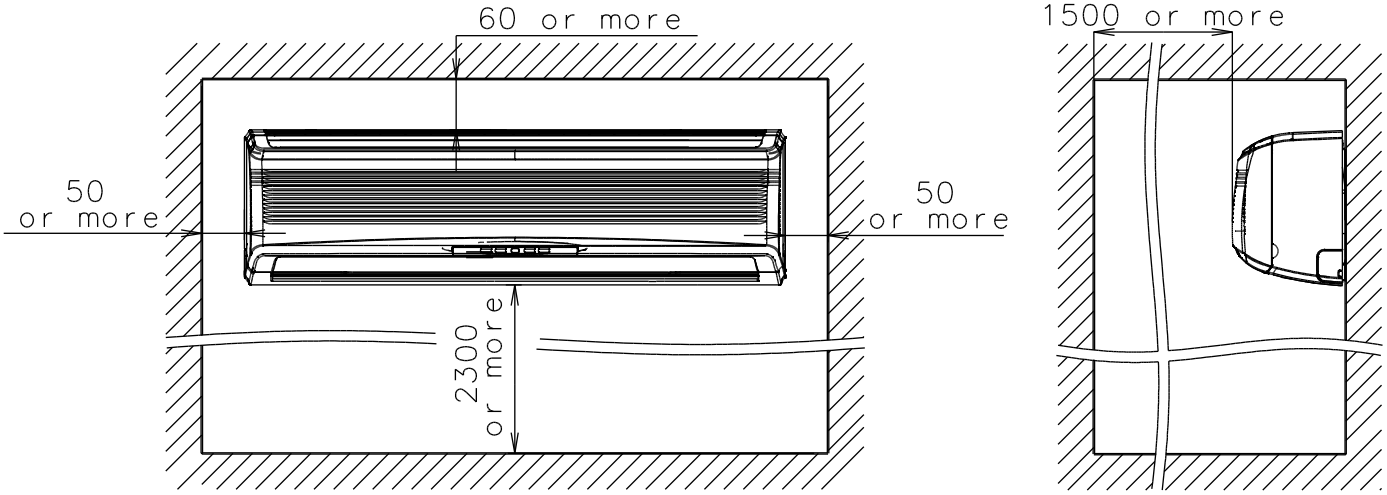
(Unit : mm)





			AS∗A18, AS∗A24	AS∗A30
①	Refrgerant pipe flare connection	Liquid	Ø6.35(Ø9.52)mm ∗1	Ø 9.52mm
②		Gas	Ø 15.88mm	
③	Drain pipe connection	Drain pipe	I.D. 12mm ; O.D. 16mm L=670mm	

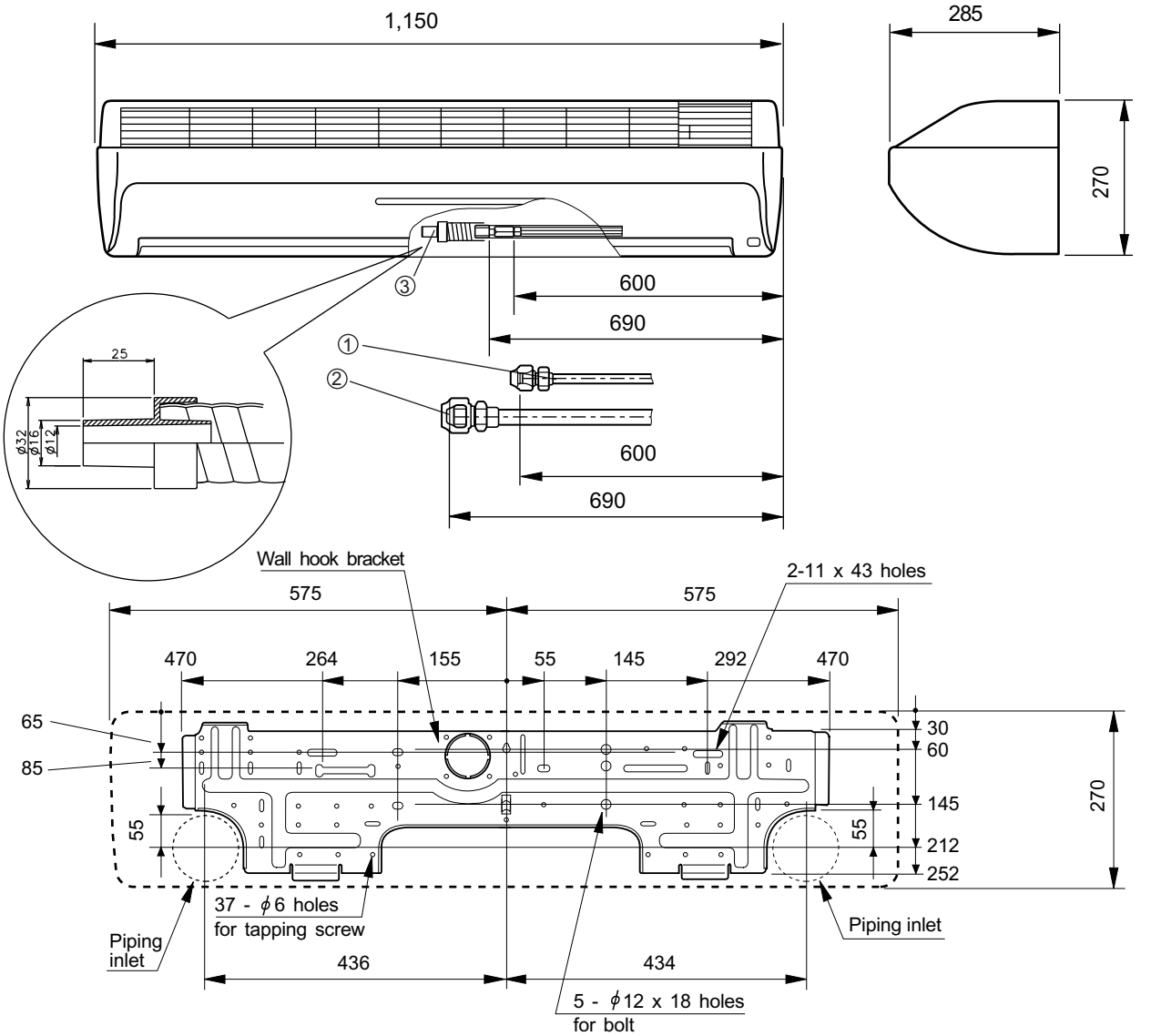
∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory).



4-5-11. CEILING WALL TYPE

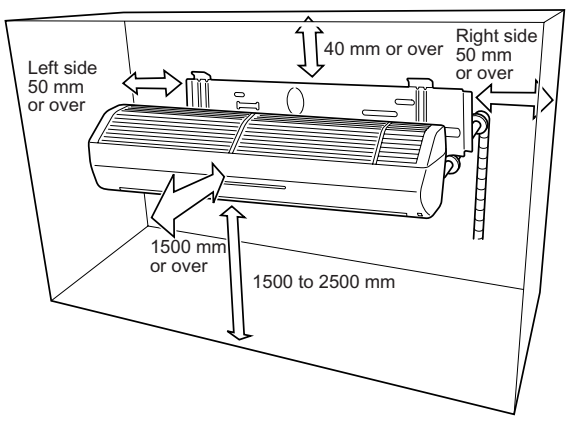
■MODELS : AW∗A07, AW∗A09, AW∗A12, AW∗A14 AW∗A18, AW∗A24, AW∗A30

(Unit : mm)



			AW∗A07 AW∗A09	AW∗A12 AW∗A14	AW∗A18 AW∗A24	AW∗A30
①	Refrgerant pipe flare connection	Liquid	Ø 6.35mm		Ø6.35 ∗1 (Ø9.52)mm	Ø 9.52mm
②		Gas	Ø9.52 ∗1 (Ø12.70)mm	Ø 12.70mm	Ø 15.88mm	
③	Drain pipe connection	Drain pipe	I.D. 12mm ; O.D. 16mm L=670mm			

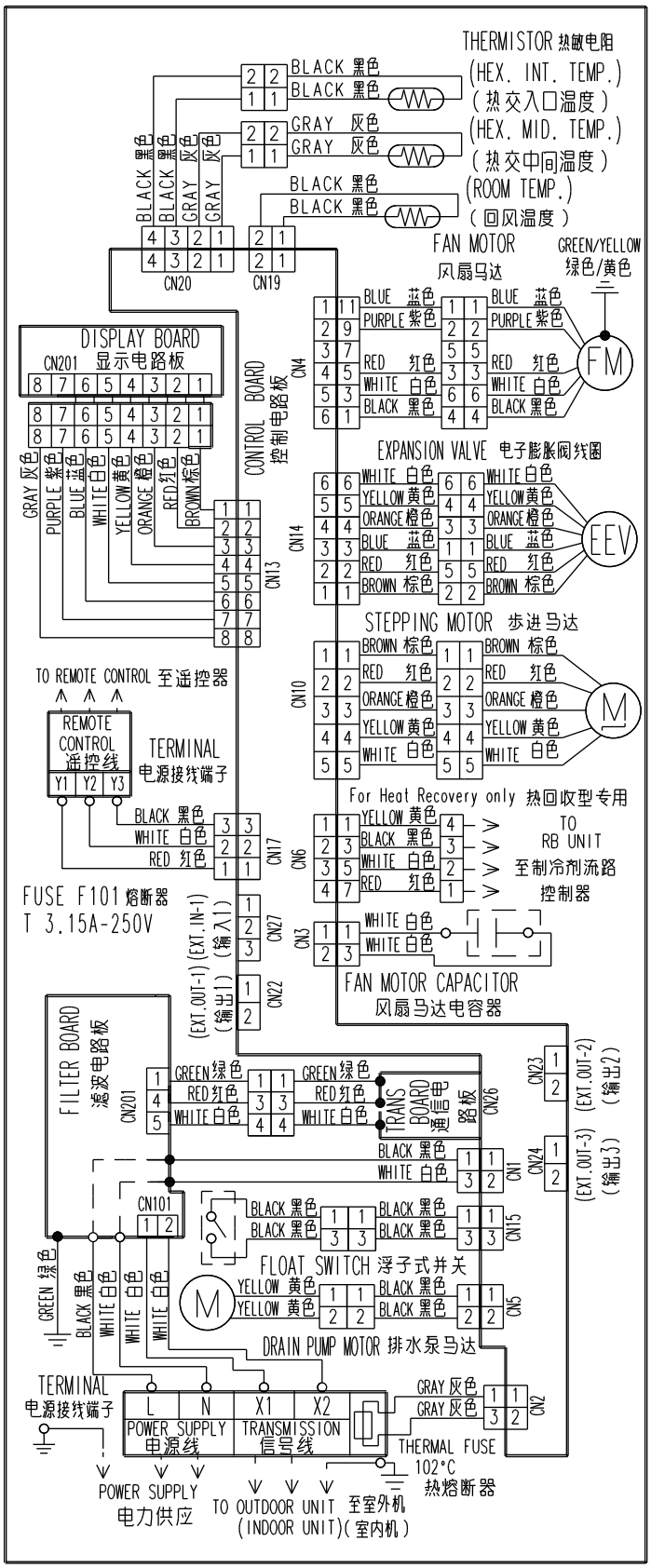
∗1 : Value in ( ) is the unit side flare size dimmension.
Connect by the adaptor (Accessory).



4-6. WIRING DIAGRAMS

4-6-1. COMPACT CASSETTE TYPE

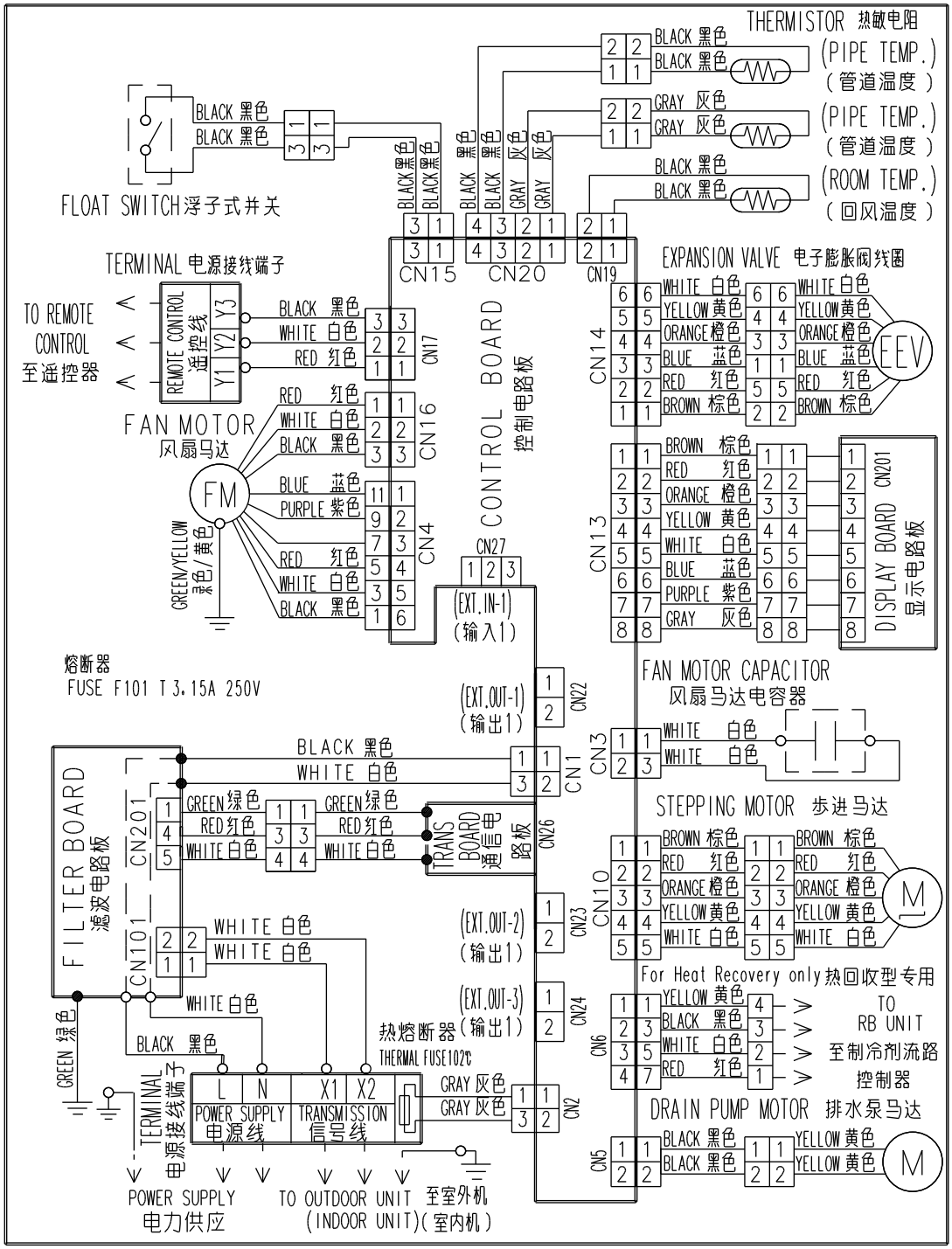
■ MODELS : AUXB07, AUXB09, AUXB12, AUXB14, AUXB18



INDOOR UNIT

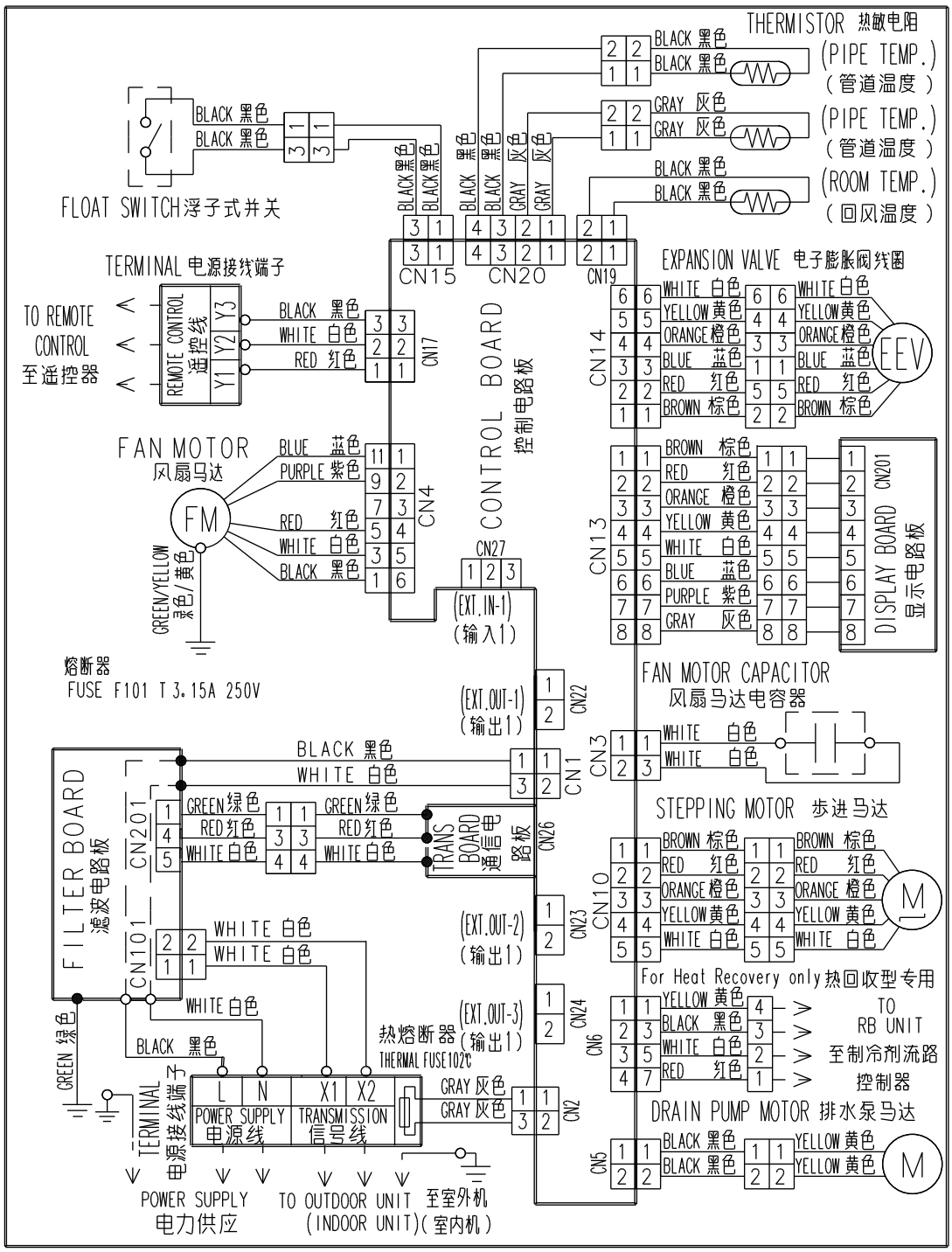
4-6-2. CASSETTE TYPE

■MODELS : AU∗A20, AU∗A25, AU∗A30



INDOOR UNIT

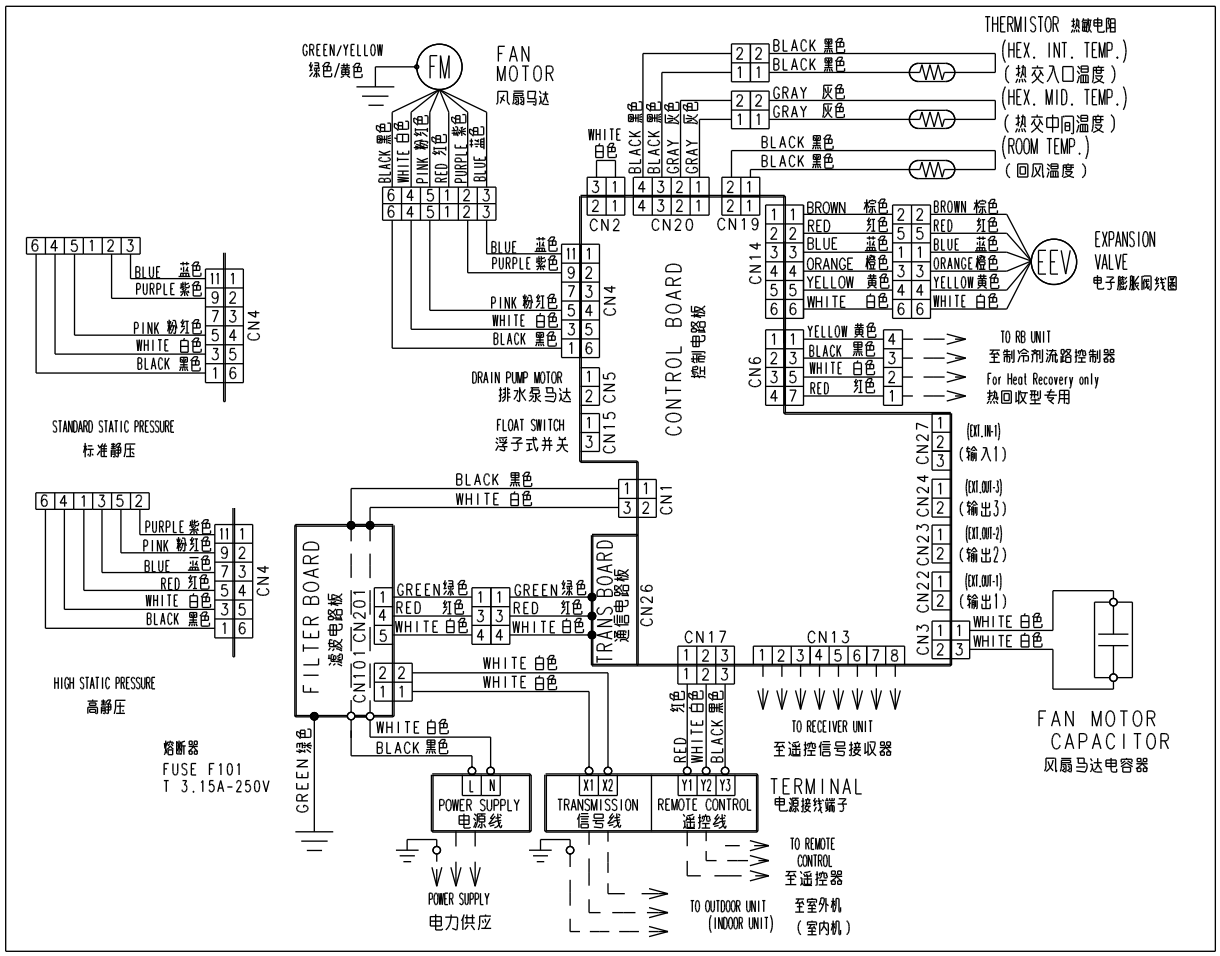
■MODELS : AU*A36, AU*A45, AU*A54



INDOOR UNIT

4-6-3. COMPACT DUCT TYPE

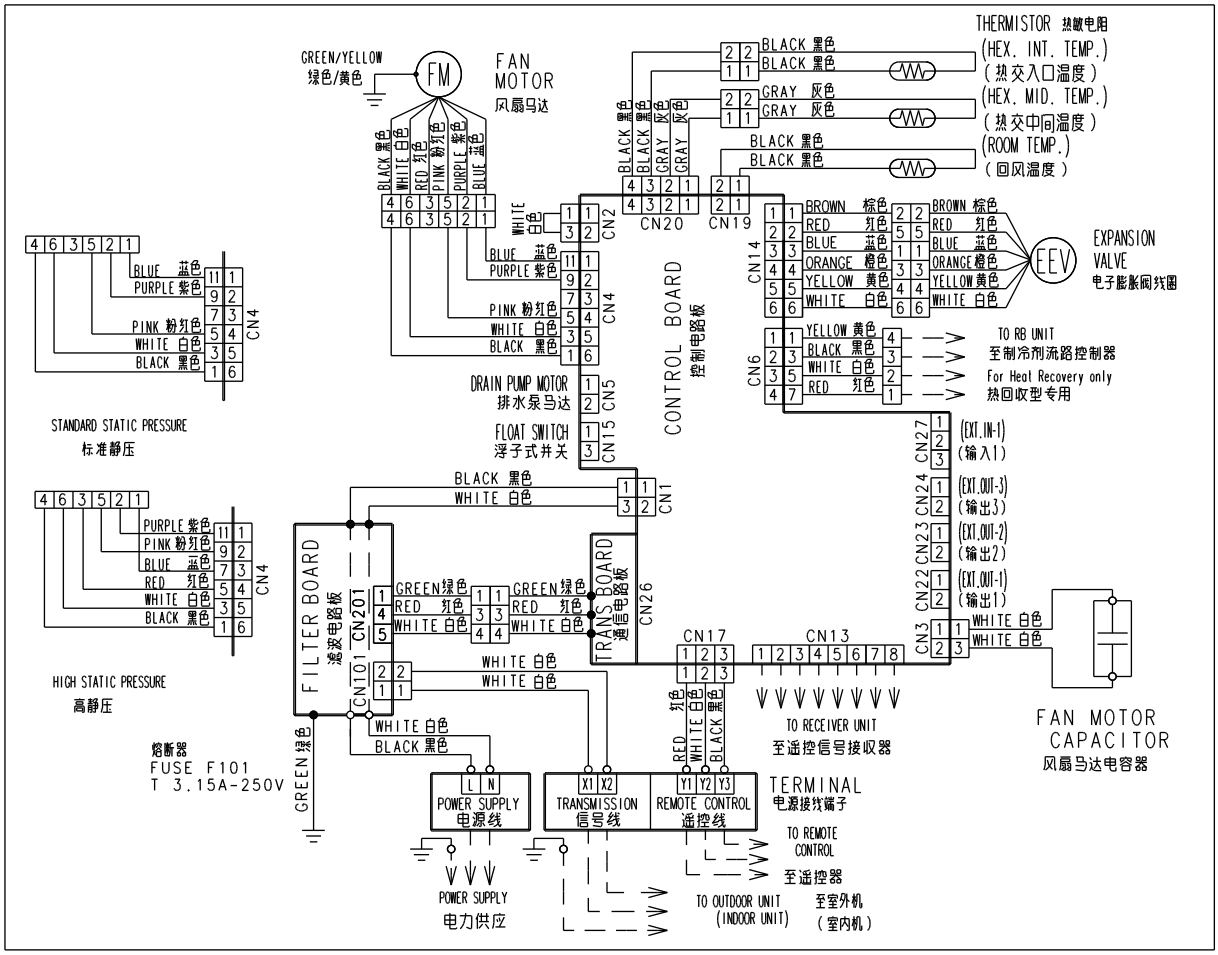
■MODELS : ARXB07, ARXB09, ARXB12, ARXB14, ARXB18



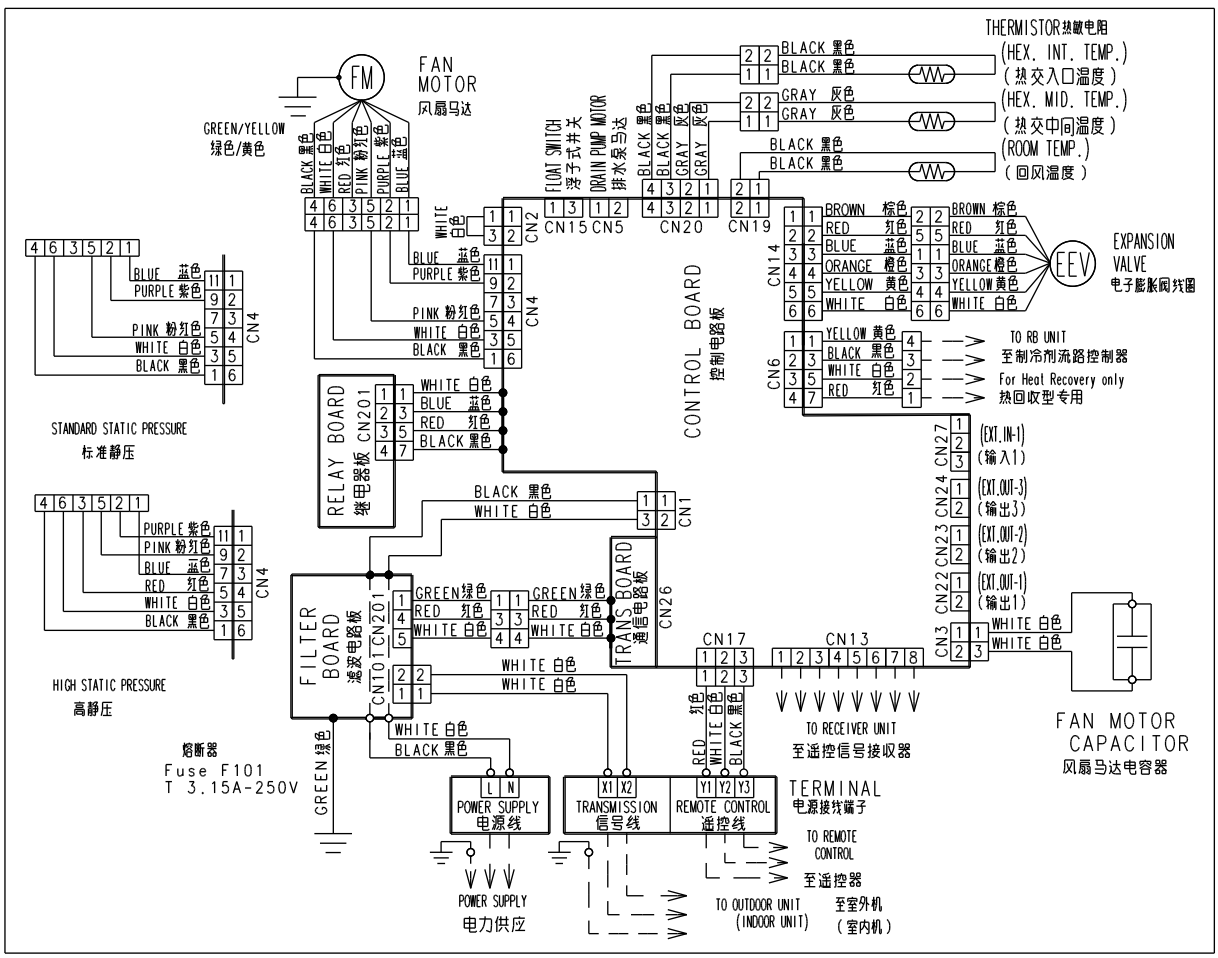
INDOOR UNIT

4-6-4. LOW STATIC PRESSURE DUCT TYPE

■MODEL : ARXB25



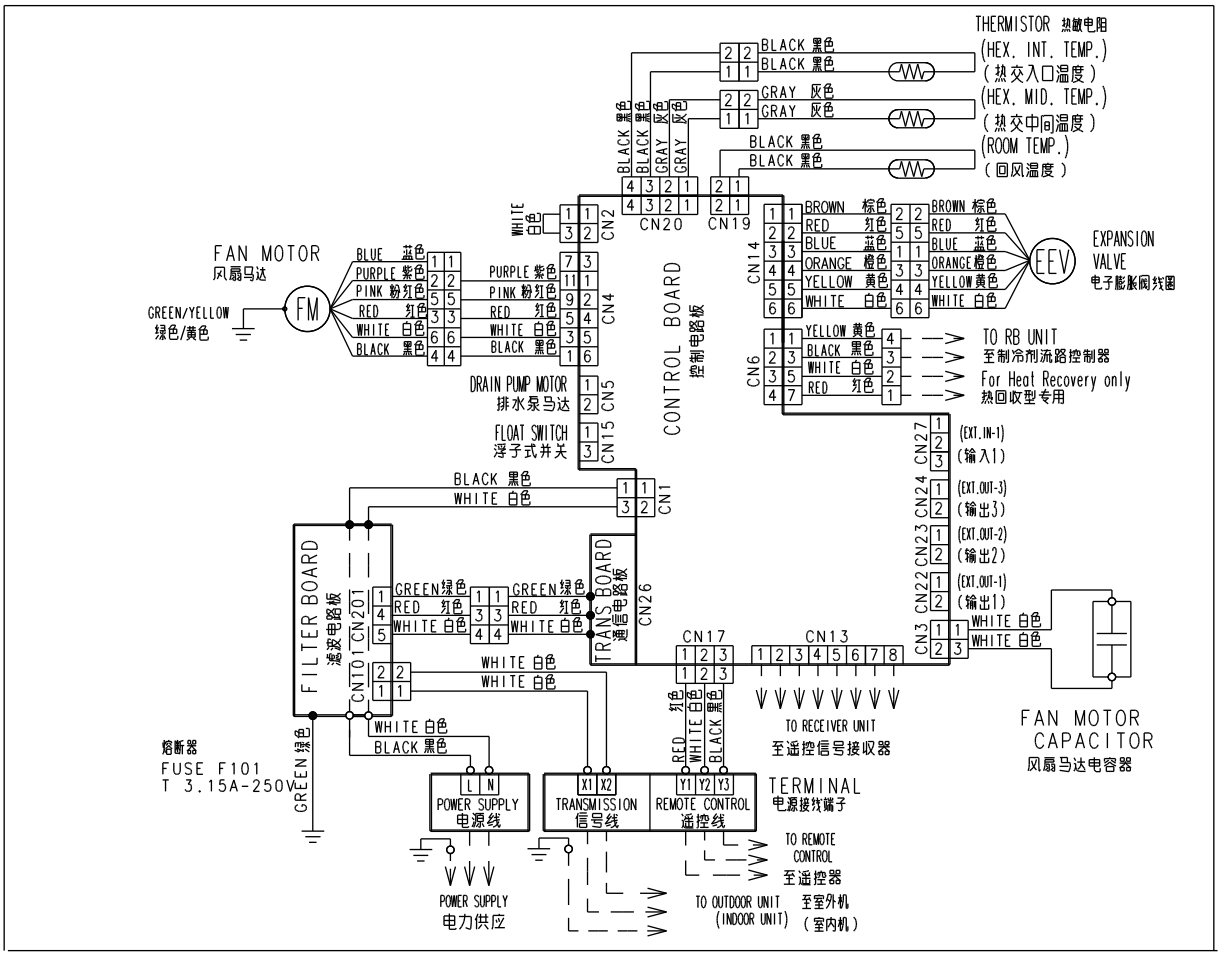
■MODELS : ARXB30, ARXB36, ARXB45



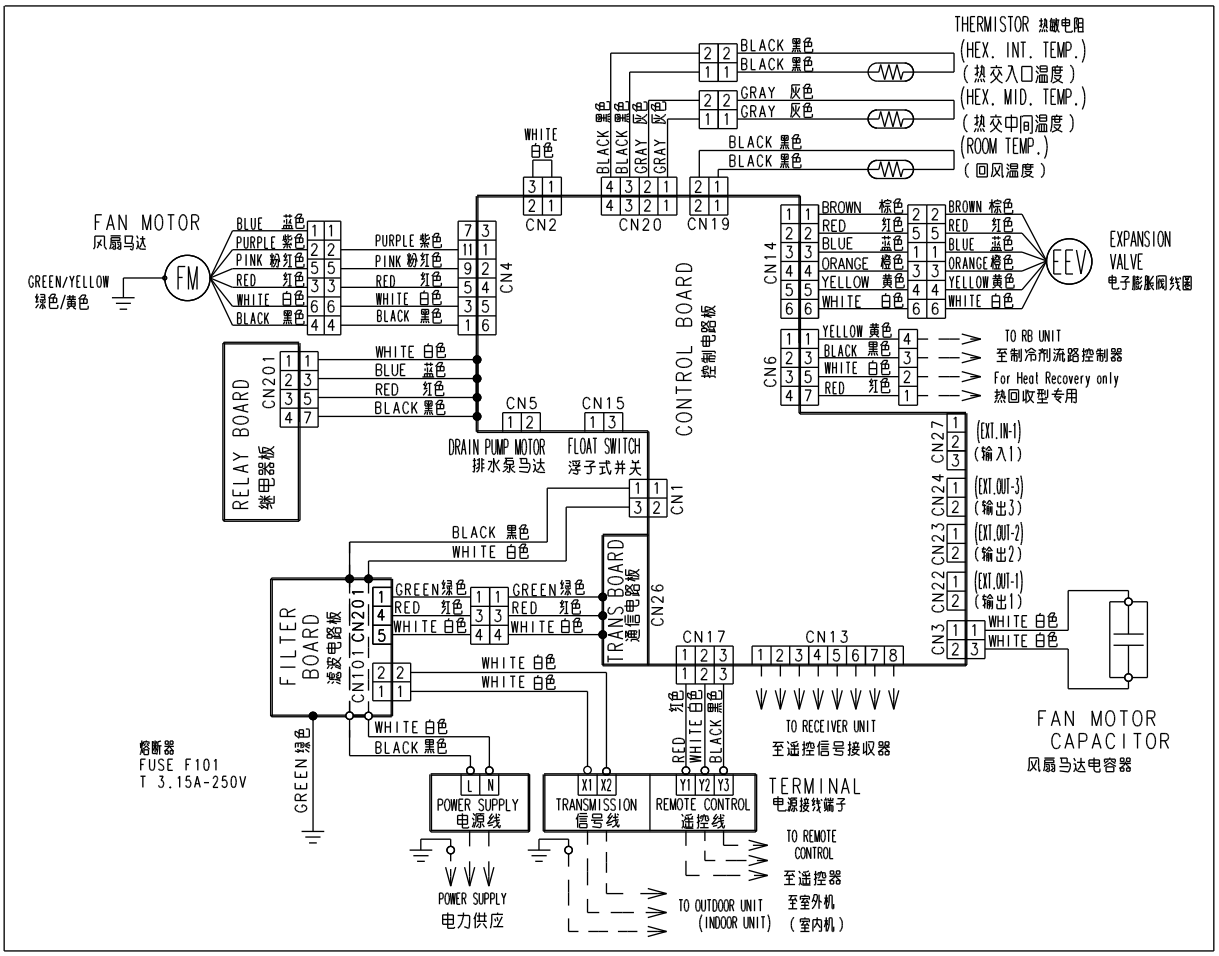
INDOOR UNIT

4-6-5. DUCT TYPE

■ MODEL : ARXA25



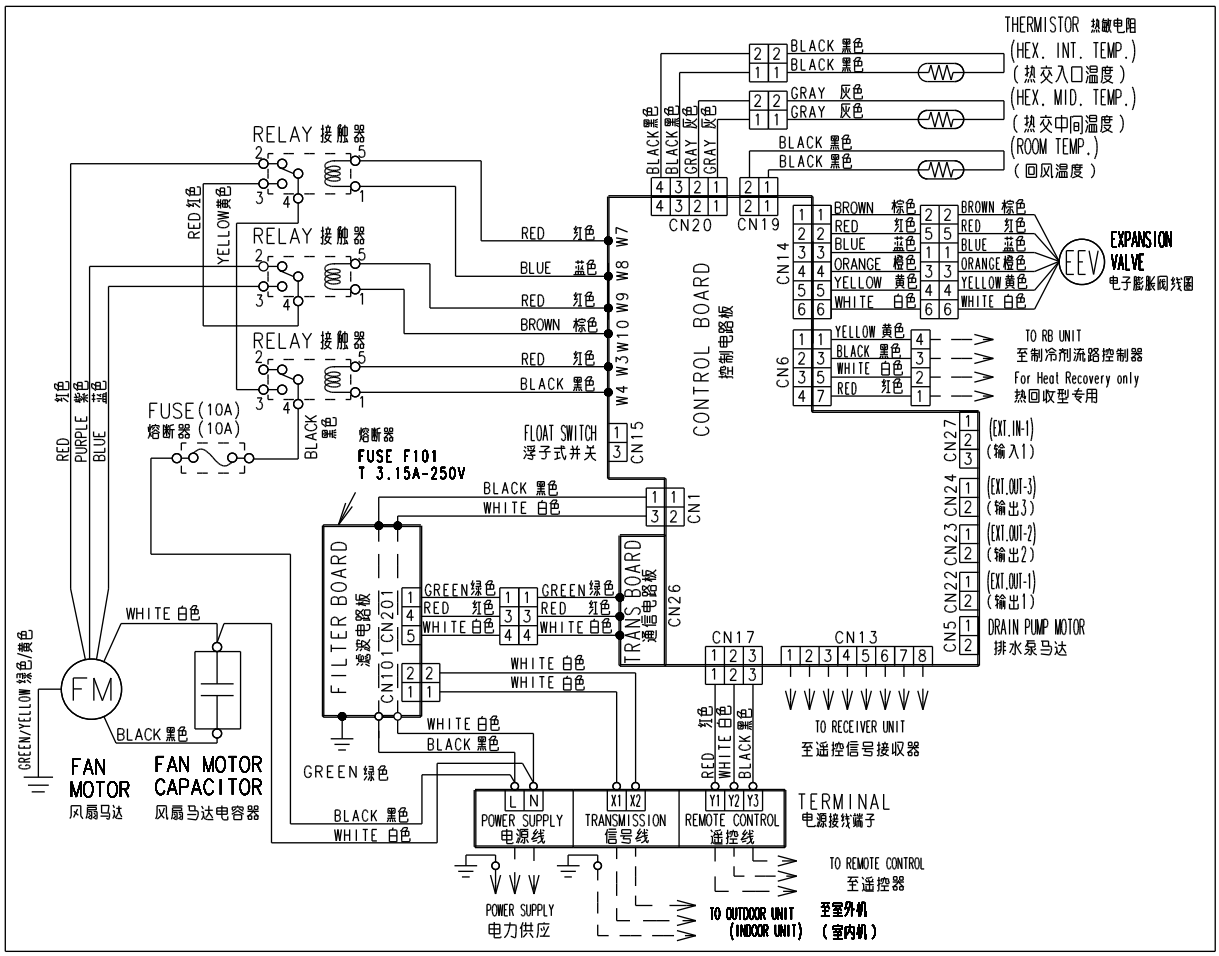
■ MODELS : ARXA30, ARXA36, ARXA45



INDOOR UNIT

4-6-6. HIGH STATIC PRESSURE DUCT TYPE

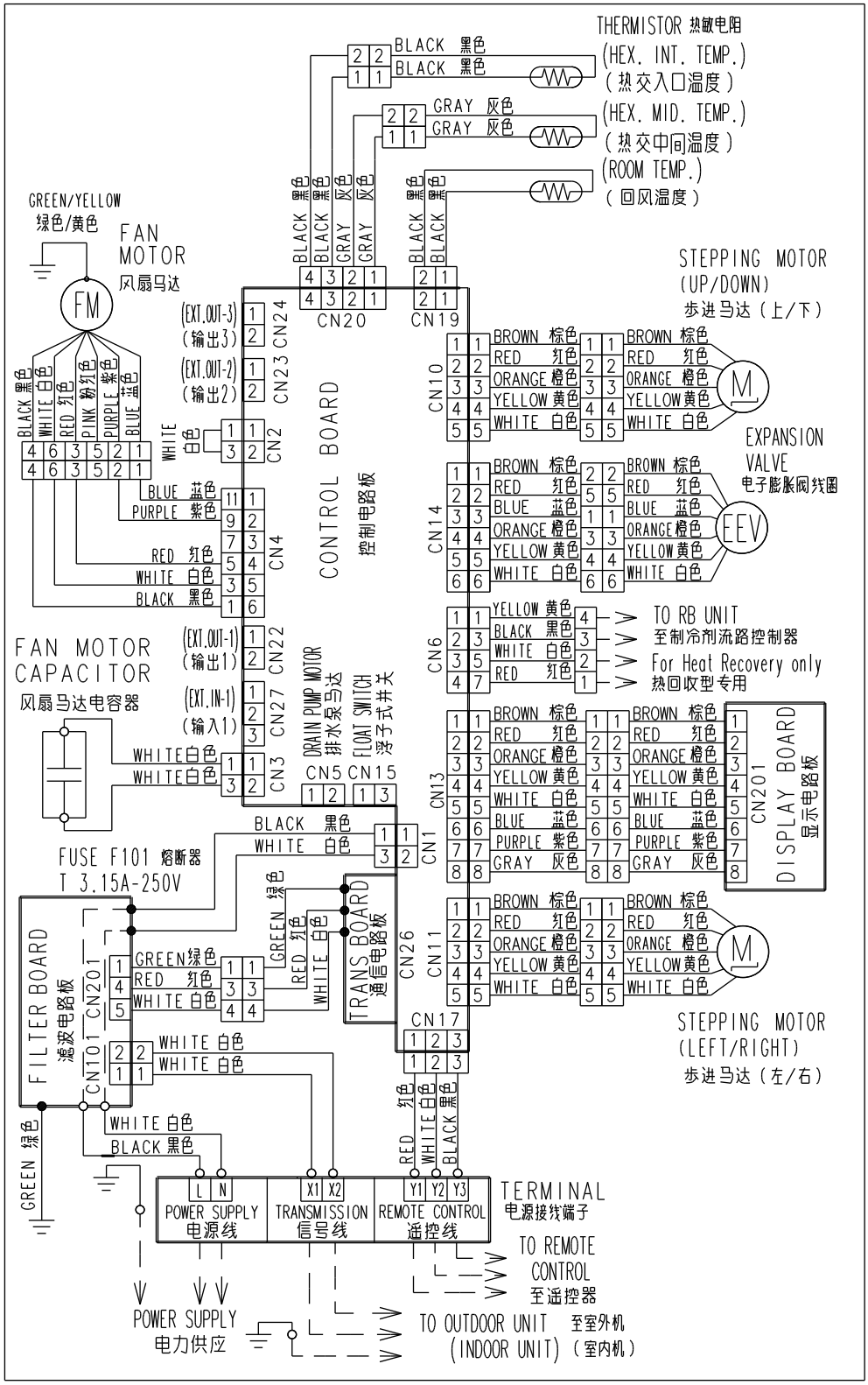
■MODELS : ARXC36, ARXC45, ARXC60



INDOOR UNIT

4-6-7. FLOOR / CEILING TYPE

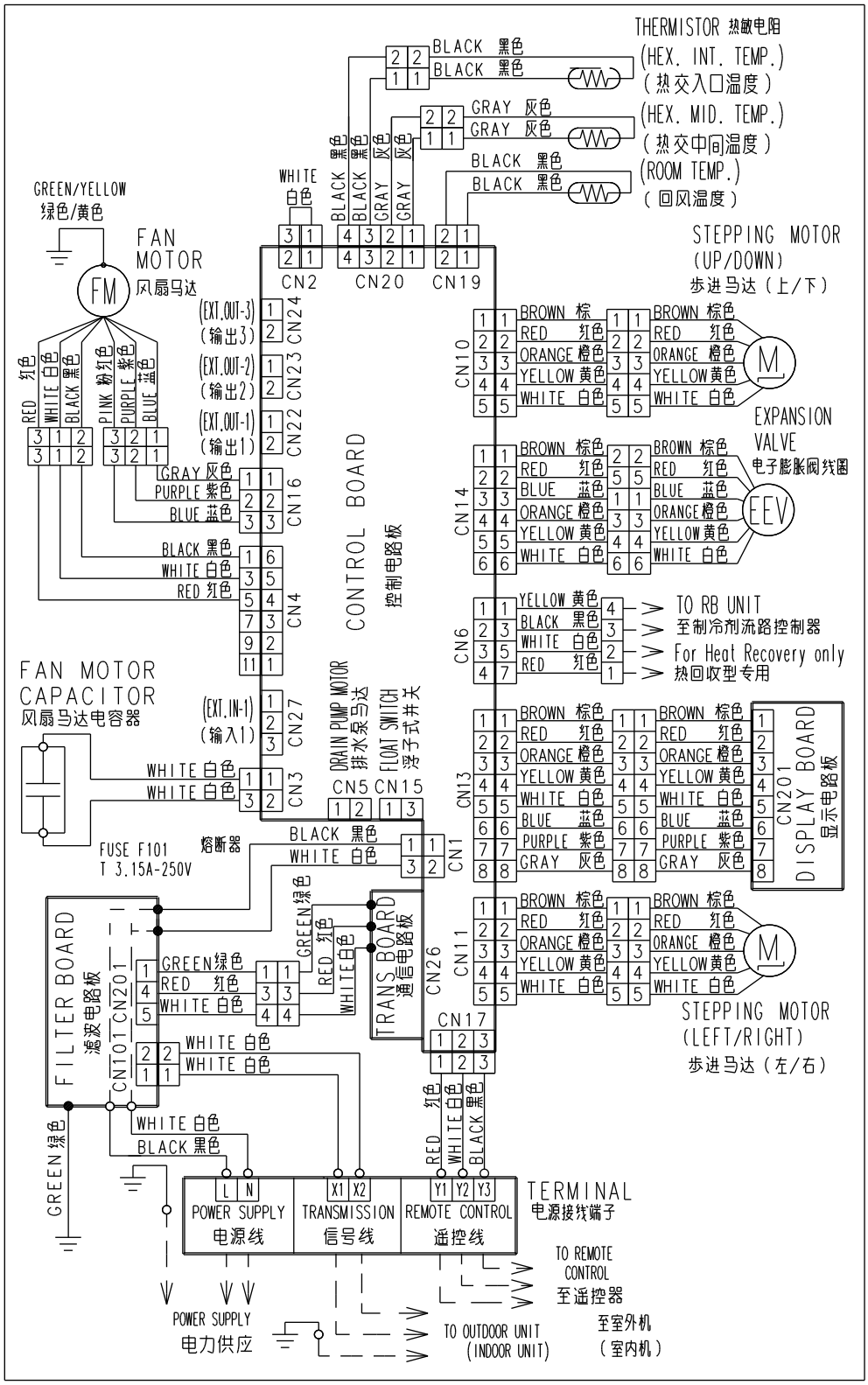
■MODELS : AB∗A12, AB∗A14, AB∗A18, AB∗A24



INDOOR UNIT

4-6-8. CEILING TYPE

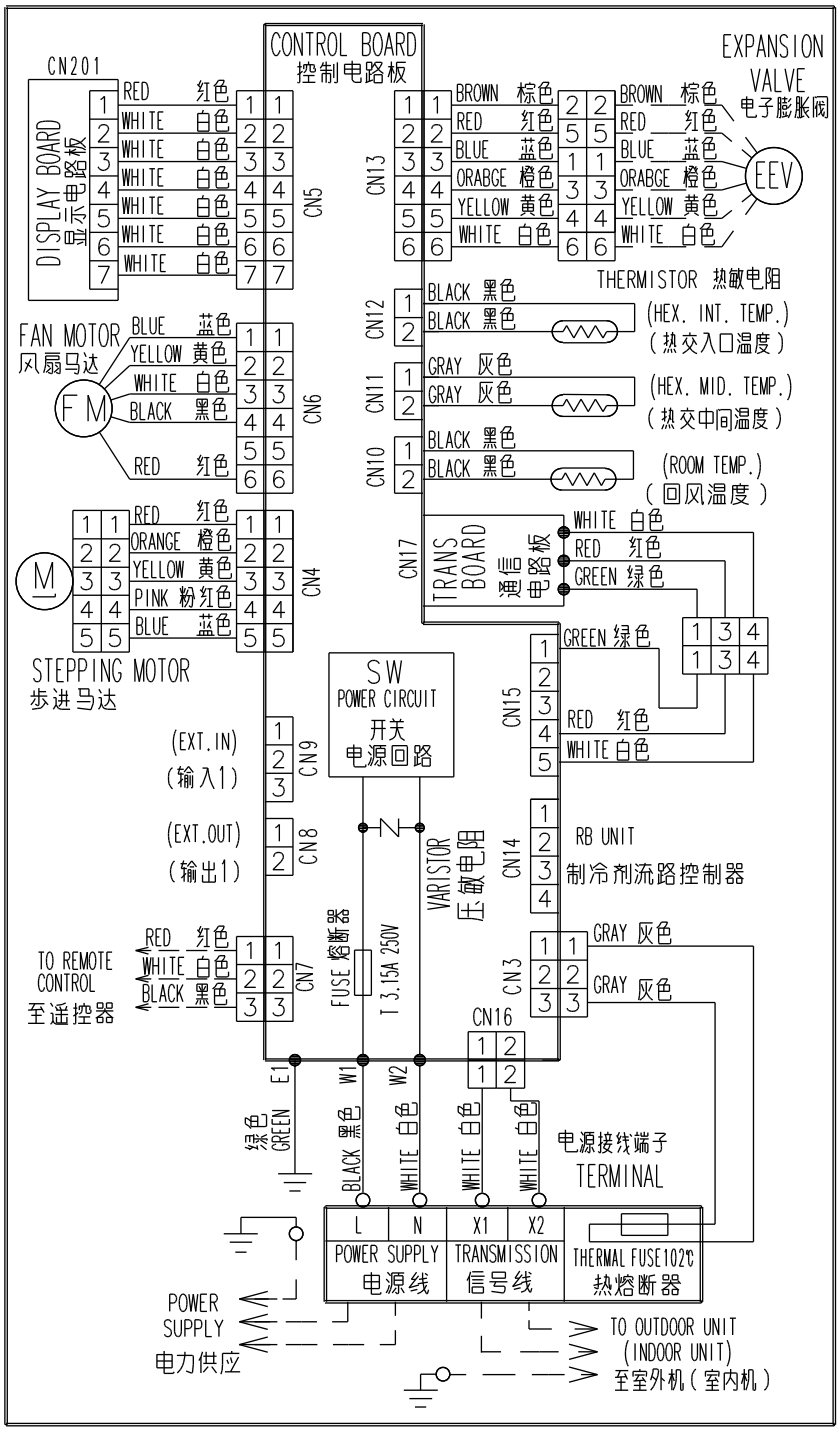
■MODELS : AB∗A30, AB∗A36, AB∗A45, AB∗A54



INDOOR UNIT

4-6-9. COMPACT WALL MOUNTED TYPE (Comfort model)

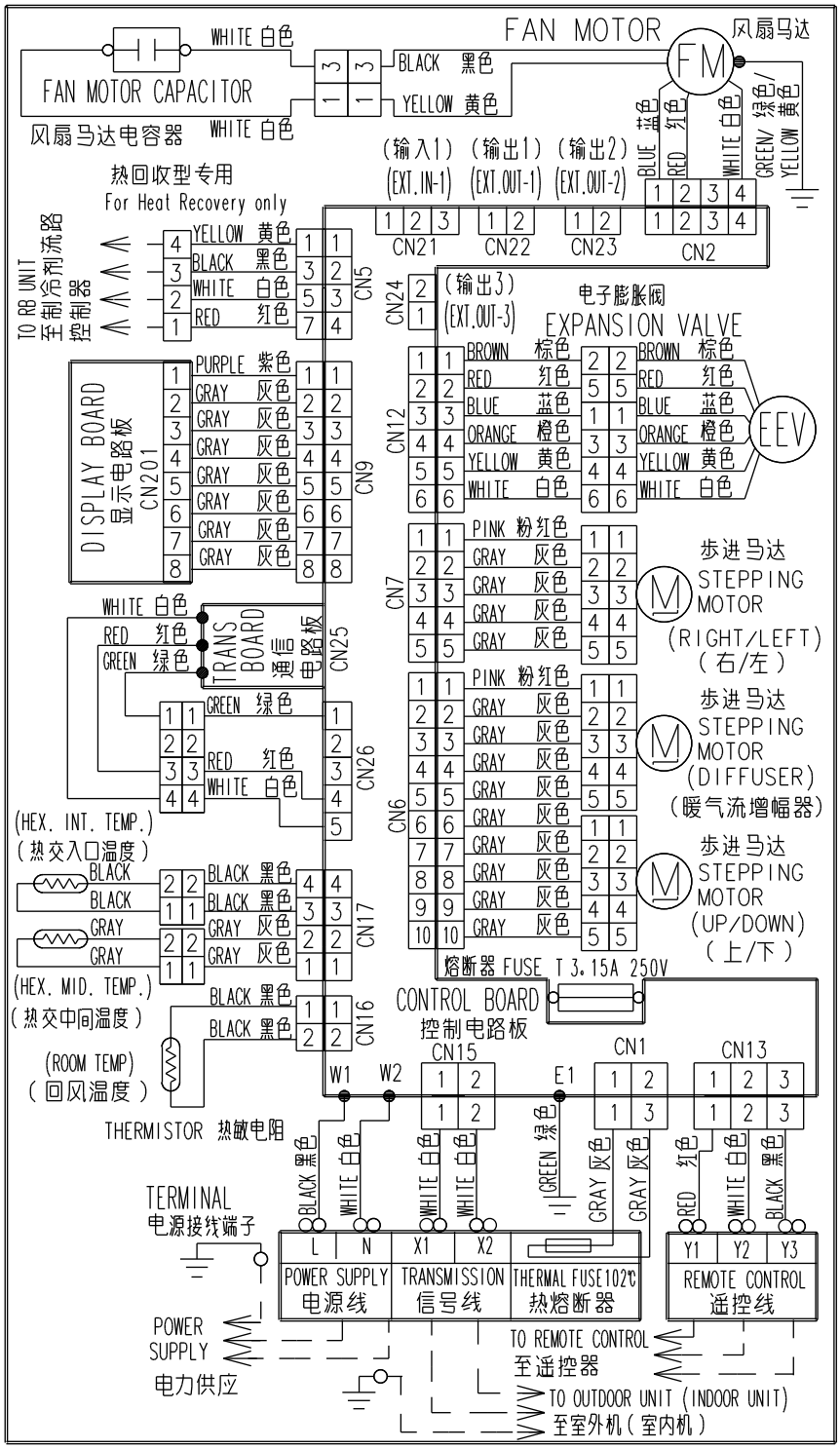
■MODELS : AS∗E07, AS∗E09, AS∗E12, AS∗E14



INDOOR UNIT

4-6-10. WALL MOUNTED TYPE

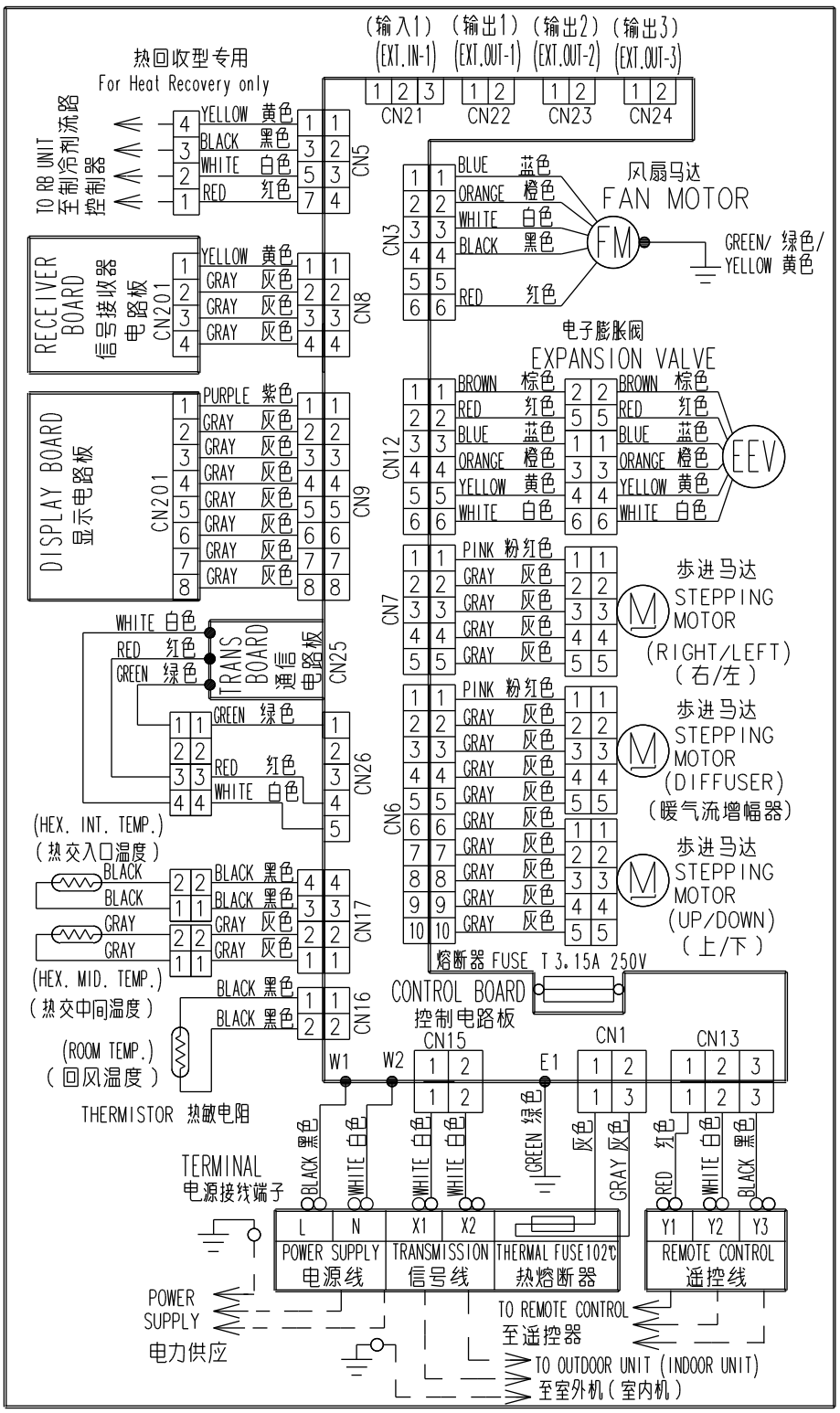
■MODELS : AS∗A18, AS∗A24, AS∗A30



INDOOR UNIT

4-6-11. CEILING WALL TYPE

■MODELS : AW∗A07, AW∗A09, AW∗A12, AW∗A14
AW∗A18, AW∗A24, AW∗A30



INDOOR UNIT

4-7. CAPACITY TABLE COOLING (INDOOR UNIT)

4-7-1. COMPACT CASSETTE TYPE (1/2)

■ MODEL : AUXB07

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.59	1.81	2.72	1.94
15	59	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.59	1.81	2.72	1.94
21	70	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.59	1.81	2.72	1.94
23	73	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.59	1.81	2.72	1.94
25	77	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.59	1.81	2.72	1.94
27	81	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.59	1.81	2.72	1.94
30	86	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.59	1.81	2.72	1.94
33	91	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.59	1.81	2.66	1.92
35	95	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.58	1.81	2.62	1.90
37	99	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.54	1.79	2.59	1.89
40	104	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.33	1.79	2.48	1.77	2.54	1.88
45	113	1.68	1.31	1.82	1.59	2.07	1.76	2.20	1.77	2.29	1.78	2.39	1.74	2.44	1.84
52	125	1.68	1.31	1.82	1.59	2.07	1.76	2.11	1.74	2.16	1.72	2.26	1.69	2.30	1.79

■ MODEL : AUXB09

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.29	2.08	3.46	2.21
15	59	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.29	2.08	3.46	2.21
21	70	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.29	2.08	3.46	2.21
23	73	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.29	2.08	3.46	2.21
25	77	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.29	2.08	3.46	2.21
27	81	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.29	2.08	3.46	2.21
30	86	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.29	2.08	3.46	2.21
33	91	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.29	2.08	3.39	2.18
35	95	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.28	2.07	3.34	2.16
37	99	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.23	2.05	3.30	2.15
40	104	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.96	2.04	3.16	2.03	3.23	2.12
45	113	2.14	1.52	2.31	1.81	2.64	2.00	2.80	2.02	2.92	2.03	3.04	1.98	3.11	2.08
52	125	2.14	1.52	2.31	1.81	2.63	1.99	2.69	1.98	2.75	1.96	2.87	1.91	2.93	2.01

■ MODEL : AUXB12

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.23	2.70	4.45	2.88
15	59	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.23	2.70	4.45	2.88
21	70	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.23	2.70	4.45	2.88
23	73	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.23	2.70	4.45	2.88
25	77	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.23	2.70	4.45	2.88
27	81	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.23	2.70	4.45	2.88
30	86	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.23	2.70	4.45	2.88
33	91	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.23	2.70	4.36	2.84
35	95	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.22	2.70	4.29	2.82
37	99	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.15	2.67	4.24	2.80
40	104	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.81	2.66	4.06	2.64	4.15	2.77
45	113	2.75	1.98	2.97	2.36	3.39	2.61	3.60	2.64	3.75	2.64	3.91	2.58	4.00	2.71
52	125	2.75	1.98	2.97	2.36	3.38	2.60	3.46	2.58	3.54	2.55	3.69	2.50	3.77	2.63

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-1. COMPACT CASSETTE TYPE (2/2)

■ MODEL : AUXB14

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.70	2.89	4.94	3.07
15	59	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.70	2.89	4.94	3.07
21	70	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.70	2.89	4.94	3.07
23	73	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.70	2.89	4.94	3.07
25	77	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.70	2.89	4.94	3.07
27	81	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.70	2.89	4.94	3.07
30	86	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.70	2.89	4.94	3.07
33	91	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.70	2.89	4.84	3.03
35	95	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.68	2.88	4.77	3.00
37	99	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.62	2.85	4.72	2.98
40	104	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.23	2.84	4.52	2.81	4.62	2.94
45	113	3.06	2.12	3.30	2.51	3.77	2.77	4.00	2.81	4.17	2.81	4.34	2.75	4.44	2.87
52	125	3.06	2.12	3.30	2.51	3.76	2.77	3.84	2.74	3.93	2.71	4.10	2.65	4.18	2.78

■ MODEL : AUXB18

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.88	3.56	6.18	3.78
15	59	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.88	3.56	6.18	3.78
21	70	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.88	3.56	6.18	3.78
23	73	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.88	3.56	6.18	3.78
25	77	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.88	3.56	6.18	3.78
27	81	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.88	3.56	6.18	3.78
30	86	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.88	3.56	6.18	3.78
33	91	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.88	3.56	6.06	3.73
35	95	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.86	3.56	5.97	3.70
37	99	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.77	3.52	5.90	3.67
40	104	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.29	3.50	5.65	3.47	5.77	3.62
45	113	3.82	2.62	4.13	3.10	4.72	3.42	5.00	3.46	5.22	3.47	5.43	3.39	5.56	3.54
52	125	3.82	2.62	4.13	3.10	4.70	3.41	4.81	3.38	4.91	3.34	5.13	3.27	5.23	3.42

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-2. CASSETTE TYPE (1/2)

■ MODEL : AU∗A20

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.70	4.43	7.05	4.73
15	59	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.70	4.43	7.05	4.73
21	70	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.70	4.43	7.05	4.73
23	73	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.70	4.43	7.05	4.73
25	77	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.70	4.43	7.05	4.73
27	81	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.70	4.43	7.05	4.73
30	86	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.70	4.43	7.05	4.73
33	91	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.70	4.43	6.90	4.68
35	95	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.67	4.42	6.80	4.64
37	99	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.58	4.38	6.72	4.61
40	104	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	6.02	4.37	6.44	4.33	6.58	4.56
45	113	4.35	3.23	4.70	3.88	5.38	4.29	5.70	4.33	5.95	4.34	6.19	4.24	6.33	4.47
52	125	4.35	3.23	4.70	3.88	5.35	4.28	5.48	4.24	5.60	4.20	5.84	4.11	5.96	4.34

■ MODEL : AU∗A25

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.28	5.34	8.71	5.69
15	59	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.28	5.34	8.71	5.69
21	70	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.28	5.34	8.71	5.69
23	73	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.28	5.34	8.71	5.69
25	77	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.28	5.34	8.71	5.69
27	81	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.28	5.34	8.71	5.69
30	86	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.28	5.34	8.71	5.69
33	91	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.28	5.34	8.54	5.63
35	95	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.26	5.33	8.41	5.58
37	99	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	8.14	5.28	8.31	5.54
40	104	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.45	5.26	7.96	5.22	8.14	5.48
45	113	5.39	3.91	5.82	4.68	6.65	5.16	7.05	5.22	7.35	5.22	7.66	5.10	7.83	5.37
52	125	5.39	3.91	5.82	4.68	6.62	5.15	6.78	5.10	6.92	5.05	7.23	4.94	7.37	5.21

■ MODEL : AU∗A30

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.3	6.43	10.9	6.84
15	59	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.3	6.43	10.9	6.84
21	70	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.3	6.43	10.9	6.84
23	73	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.3	6.43	10.9	6.84
25	77	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.3	6.43	10.9	6.84
27	81	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.3	6.43	10.9	6.84
30	86	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.3	6.43	10.9	6.84
33	91	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.3	6.43	10.7	6.75
35	95	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.3	6.42	10.5	6.69
37	99	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	10.2	6.36	10.4	6.65
40	104	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.30	6.33	9.94	6.27	10.2	6.56
45	113	6.72	4.72	7.26	5.61	8.30	6.19	8.80	6.26	9.18	6.27	9.56	6.12	9.78	6.42
52	125	6.72	4.72	7.26	5.61	8.26	6.17	8.46	6.11	8.64	6.05	9.02	5.92	9.20	6.21

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-2. CASSETTE TYPE (2/2)

■ MODEL : AU∗A36

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.3	7.69	13.0	8.18
15	59	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.3	7.69	13.0	8.18
21	70	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.3	7.69	13.0	8.18
23	73	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.3	7.69	13.0	8.18
25	77	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.3	7.69	13.0	8.18
27	81	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.3	7.69	13.0	8.18
30	86	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.3	7.69	13.0	8.18
33	91	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.3	7.69	12.7	8.08
35	95	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.3	7.67	12.5	8.00
37	99	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	12.1	7.60	12.4	7.95
40	104	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.1	7.56	11.9	7.50	12.1	7.85
45	113	8.02	5.65	8.66	6.71	9.90	7.40	10.5	7.49	11.0	7.50	11.4	7.32	11.7	7.68
52	125	8.02	5.65	8.66	6.71	9.86	7.38	10.1	7.31	10.3	7.24	10.8	7.08	11.0	7.43

■ MODEL : AU∗A45

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.9	8.84	15.7	9.36
15	59	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.9	8.84	15.7	9.36
21	70	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.9	8.84	15.7	9.36
23	73	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.9	8.84	15.7	9.36
25	77	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.9	8.84	15.7	9.36
27	81	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.9	8.84	15.7	9.36
30	86	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.9	8.84	15.7	9.36
33	91	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.9	8.84	15.4	9.23
35	95	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.9	8.82	15.2	9.14
37	99	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.7	8.73	15.0	9.07
40	104	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.4	8.66	14.3	8.59	14.7	8.94
45	113	9.70	6.52	10.5	7.66	12.0	8.44	12.7	8.56	13.2	8.58	13.8	8.37	14.1	8.72
52	125	9.70	6.52	10.5	7.66	11.9	8.42	12.2	8.34	12.5	8.24	13.0	8.05	13.3	8.40

■ MODEL : AU∗A54

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.6	9.78	17.4	10.4
15	59	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.6	9.78	17.4	10.4
21	70	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.6	9.78	17.4	10.4
23	73	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.6	9.78	17.4	10.4
25	77	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.6	9.78	17.4	10.4
27	81	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.6	9.78	17.4	10.4
30	86	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.6	9.78	17.4	10.4
33	91	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.6	9.78	17.1	10.2
35	95	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.5	9.76	16.8	10.1
37	99	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	16.3	9.65	16.6	10.0
40	104	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.9	9.58	15.9	9.51	16.3	9.88
45	113	10.8	7.21	11.6	8.47	13.3	9.33	14.1	9.47	14.7	9.50	15.3	9.25	15.7	9.64
52	125	10.8	7.21	11.6	8.47	13.2	9.31	13.6	9.22	13.8	9.11	14.5	8.90	14.7	9.28

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-3. COMPACT DUCT TYPE (1/2)

■ MODEL : ARXB07

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.59	1.54	2.72	1.64
15	59	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.59	1.54	2.72	1.64
21	70	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.59	1.54	2.72	1.64
23	73	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.59	1.54	2.72	1.64
25	77	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.59	1.54	2.72	1.64
27	81	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.59	1.54	2.72	1.64
30	86	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.59	1.54	2.72	1.64
33	91	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.59	1.54	2.66	1.61
35	95	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.58	1.54	2.62	1.60
37	99	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.54	1.52	2.59	1.59
40	104	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.33	1.51	2.48	1.50	2.54	1.56
45	113	1.68	1.14	1.82	1.34	2.07	1.48	2.20	1.50	2.29	1.50	2.39	1.46	2.44	1.53
52	125	1.68	1.14	1.82	1.34	2.07	1.47	2.11	1.46	2.16	1.44	2.26	1.41	2.30	1.47

■ MODEL : ARXB09

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.29	1.93	3.46	2.04
15	59	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.29	1.93	3.46	2.04
21	70	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.29	1.93	3.46	2.04
23	73	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.29	1.93	3.46	2.04
25	77	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.29	1.93	3.46	2.04
27	81	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.29	1.93	3.46	2.04
30	86	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.29	1.93	3.46	2.04
33	91	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.29	1.93	3.39	2.01
35	95	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.28	1.93	3.34	1.99
37	99	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.23	1.91	3.30	1.98
40	104	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.96	1.89	3.16	1.88	3.23	1.95
45	113	2.14	1.42	2.31	1.67	2.64	1.84	2.80	1.87	2.92	1.87	3.04	1.82	3.11	1.90
52	125	2.14	1.42	2.31	1.67	2.63	1.83	2.69	1.82	2.75	1.80	2.87	1.75	2.93	1.83

■ MODEL : ARXB12

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.23	2.66	4.45	2.84
15	59	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.23	2.66	4.45	2.84
21	70	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.23	2.66	4.45	2.84
23	73	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.23	2.66	4.45	2.84
25	77	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.23	2.66	4.45	2.84
27	81	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.23	2.66	4.45	2.84
30	86	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.23	2.66	4.45	2.84
33	91	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.23	2.66	4.36	2.80
35	95	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.22	2.66	4.29	2.78
37	99	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.15	2.63	4.24	2.76
40	104	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.81	2.62	4.06	2.60	4.15	2.72
45	113	2.75	1.96	2.97	2.33	3.39	2.57	3.60	2.60	3.75	2.60	3.91	2.54	4.00	2.67
52	125	2.75	1.96	2.97	2.33	3.38	2.56	3.46	2.54	3.54	2.51	3.69	2.46	3.77	2.58

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-3. COMPACT DUCT TYPE (2/2)

■ MODEL : ARXB14

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.70	2.94	4.94	3.13
15	59	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.70	2.94	4.94	3.13
21	70	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.70	2.94	4.94	3.13
23	73	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.70	2.94	4.94	3.13
25	77	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.70	2.94	4.94	3.13
27	81	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.70	2.94	4.94	3.13
30	86	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.70	2.94	4.94	3.13
33	91	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.70	2.94	4.84	3.09
35	95	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.68	2.93	4.77	3.06
37	99	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.62	2.91	4.72	3.04
40	104	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.23	2.89	4.52	2.87	4.62	3.00
45	113	3.06	2.16	3.30	2.57	3.77	2.83	4.00	2.86	4.17	2.87	4.34	2.80	4.44	2.94
52	125	3.06	2.16	3.30	2.57	3.76	2.82	3.84	2.80	3.93	2.77	4.10	2.71	4.18	2.84

■ MODEL : ARXB18

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.23	4.16	6.55	4.44
15	59	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.23	4.16	6.55	4.44
21	70	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.23	4.16	6.55	4.44
23	73	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.23	4.16	6.55	4.44
25	77	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.23	4.16	6.55	4.44
27	81	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.23	4.16	6.55	4.44
30	86	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.23	4.16	6.55	4.44
33	91	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.23	4.16	6.42	4.39
35	95	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.21	4.15	6.32	4.36
37	99	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	6.12	4.12	6.25	4.33
40	104	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.60	4.10	5.98	4.07	6.12	4.28
45	113	4.05	3.03	4.37	3.65	5.00	4.03	5.30	4.07	5.53	4.07	5.76	3.98	5.89	4.20
52	125	4.05	3.03	4.37	3.65	4.98	4.02	5.09	3.98	5.20	3.95	5.43	3.87	5.54	4.08

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-4. LOW STATIC PRESSURE DUCT TYPE

■ MODEL : ARXB25

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.23	5.30	8.65	5.65
15	59	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.23	5.30	8.65	5.65
21	70	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.23	5.30	8.65	5.65
23	73	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.23	5.30	8.65	5.65
25	77	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.23	5.30	8.65	5.65
27	81	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.23	5.30	8.65	5.65
30	86	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.23	5.30	8.65	5.65
33	91	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.23	5.30	8.48	5.58
35	95	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.20	5.29	8.35	5.54
37	99	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	8.08	5.24	8.25	5.50
40	104	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.40	5.22	7.90	5.18	8.08	5.44
45	113	5.35	3.88	5.78	4.64	6.60	5.12	7.00	5.17	7.30	5.18	7.60	5.06	7.78	5.33
52	125	5.35	3.88	5.78	4.64	6.57	5.11	6.73	5.06	6.87	5.01	7.18	4.90	7.32	5.17

■ MODEL : ARXB30

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.3	6.34	10.9	6.73
15	59	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.3	6.34	10.9	6.73
21	70	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.3	6.34	10.9	6.73
23	73	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.3	6.34	10.9	6.73
25	77	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.3	6.34	10.9	6.73
27	81	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.3	6.34	10.9	6.73
30	86	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.3	6.34	10.9	6.73
33	91	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.3	6.34	10.7	6.65
35	95	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.3	6.33	10.5	6.59
37	99	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	10.2	6.26	10.4	6.54
40	104	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.30	6.23	9.94	6.18	10.2	6.45
45	113	6.72	4.66	7.26	5.52	8.30	6.09	8.80	6.17	9.18	6.18	9.56	6.03	9.78	6.31
52	125	6.72	4.66	7.26	5.52	8.26	6.07	8.46	6.02	8.64	5.95	9.02	5.82	9.20	6.10

■ MODEL : ARXB36

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.3	7.58	13.0	8.05
15	59	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.3	7.58	13.0	8.05
21	70	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.3	7.58	13.0	8.05
23	73	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.3	7.58	13.0	8.05
25	77	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.3	7.58	13.0	8.05
27	81	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.3	7.58	13.0	8.05
30	86	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.3	7.58	13.0	8.05
33	91	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.3	7.58	12.7	7.95
35	95	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.3	7.56	12.5	7.88
37	99	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	12.1	7.49	12.4	7.82
40	104	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.1	7.45	11.9	7.39	12.1	7.72
45	113	8.02	5.57	8.66	6.60	9.90	7.28	10.5	7.37	11.0	7.39	11.4	7.21	11.7	7.55
52	125	8.02	5.57	8.66	6.60	9.86	7.26	10.1	7.19	10.3	7.12	10.8	6.96	11.0	7.29

■ MODEL : ARXB45

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.9	9.00	15.7	9.55
15	59	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.9	9.00	15.7	9.55
21	70	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.9	9.00	15.7	9.55
23	73	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.9	9.00	15.7	9.55
25	77	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.9	9.00	15.7	9.55
27	81	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.9	9.00	15.7	9.55
30	86	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.9	9.00	15.7	9.55
33	91	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.9	9.00	15.4	9.42
35	95	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.9	8.98	15.2	9.33
37	99	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.7	8.89	15.0	9.26
40	104	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.4	8.84	14.3	8.76	14.7	9.14
45	113	9.70	6.63	10.5	7.83	12.0	8.63	12.7	8.74	13.2	8.76	13.8	8.54	14.1	8.93
52	125	9.70	6.63	10.5	7.83	11.9	8.60	12.2	8.52	12.5	8.43	13.0	8.24	13.3	8.62

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-5. DUCT TYPE

■ MODEL : ARXA25

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.23	5.27	8.65	5.62
15	59	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.23	5.27	8.65	5.62
21	70	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.23	5.27	8.65	5.62
23	73	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.23	5.27	8.65	5.62
25	77	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.23	5.27	8.65	5.62
27	81	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.23	5.27	8.65	5.62
30	86	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.23	5.27	8.65	5.62
33	91	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.23	5.27	8.48	5.55
35	95	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.20	5.26	8.35	5.50
37	99	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	8.08	5.21	8.25	5.47
40	104	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.40	5.19	7.90	5.15	8.08	5.40
45	113	5.35	3.86	5.78	4.61	6.60	5.09	7.00	5.14	7.30	5.15	7.60	5.03	7.78	5.29
52	125	5.35	3.86	5.78	4.61	6.57	5.08	6.73	5.03	6.87	4.98	7.18	4.87	7.32	5.13

■ MODEL : ARXA30

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.3	6.66	10.9	7.10
15	59	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.3	6.66	10.9	7.10
21	70	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.3	6.66	10.9	7.10
23	73	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.3	6.66	10.9	7.10
25	77	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.3	6.66	10.9	7.10
27	81	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.3	6.66	10.9	7.10
30	86	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.3	6.66	10.9	7.10
33	91	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.3	6.66	10.7	7.02
35	95	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.3	6.65	10.5	6.96
37	99	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	10.2	6.59	10.4	6.91
40	104	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.30	6.56	9.94	6.50	10.2	6.83
45	113	6.72	4.88	7.26	5.83	8.30	6.43	8.80	6.50	9.18	6.51	9.56	6.36	9.78	6.69
52	125	6.72	4.88	7.26	5.83	8.26	6.42	8.46	6.36	8.64	6.29	9.02	6.16	9.20	6.49

■ MODEL : ARXA36

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.3	8.10	13.0	8.64
15	59	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.3	8.10	13.0	8.64
21	70	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.3	8.10	13.0	8.64
23	73	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.3	8.10	13.0	8.64
25	77	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.3	8.10	13.0	8.64
27	81	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.3	8.10	13.0	8.64
30	86	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.3	8.10	13.0	8.64
33	91	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.3	8.10	12.7	8.55
35	95	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.3	8.08	12.5	8.48
37	99	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	12.1	8.02	12.4	8.43
40	104	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.1	7.99	11.9	7.92	12.1	8.33
45	113	8.02	5.92	8.66	7.10	9.90	7.84	10.5	7.92	11.0	7.93	11.4	7.75	11.7	8.17
52	125	8.02	5.92	8.66	7.10	9.86	7.82	10.1	7.75	10.3	7.67	10.8	7.52	11.0	7.93

■ MODEL : ARXA45

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.9	9.35	15.7	9.94
15	59	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.9	9.35	15.7	9.94
21	70	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.9	9.35	15.7	9.94
23	73	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.9	9.35	15.7	9.94
25	77	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.9	9.35	15.7	9.94
27	81	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.9	9.35	15.7	9.94
30	86	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.9	9.35	15.7	9.94
33	91	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.9	9.35	15.4	9.82
35	95	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.9	9.33	15.2	9.74
37	99	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.7	9.24	15.0	9.67
40	104	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.4	9.20	14.3	9.12	14.7	9.55
45	113	9.70	6.86	10.5	8.16	12.0	9.00	12.7	9.11	13.2	9.12	13.8	8.91	14.1	9.35
52	125	9.70	6.86	10.5	8.16	11.9	8.98	12.2	8.90	12.5	8.80	13.0	8.61	13.3	9.05

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

4-7-6. HIGH STATIC PRESSURE DUCT TYPE

■ MODEL : ARXC36

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.3	8.47	13.0	9.06
15	59	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.3	8.47	13.0	9.06
21	70	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.3	8.47	13.0	9.06
23	73	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.3	8.47	13.0	9.06
25	77	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.3	8.47	13.0	9.06
27	81	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.3	8.47	13.0	9.06
30	86	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.3	8.47	13.0	9.06
33	91	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.3	8.47	12.7	8.97
35	95	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.3	8.46	12.5	8.90
37	99	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	12.1	8.39	12.4	8.85
40	104	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.1	8.37	11.9	8.30	12.1	8.76
45	113	8.02	6.16	8.66	7.44	9.90	8.22	10.5	8.30	11.0	8.31	11.4	8.13	11.7	8.60
52	125	8.02	6.16	8.66	7.44	9.86	8.21	10.1	8.14	10.3	8.06	10.8	7.90	11.0	8.37

■ MODEL : ARXC45

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.9	11.0	15.7	11.8
15	59	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.9	11.0	15.7	11.8
21	70	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.9	11.0	15.7	11.8
23	73	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.9	11.0	15.7	11.8
25	77	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.9	11.0	15.7	11.8
27	81	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.9	11.0	15.7	11.8
30	86	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.9	11.0	15.7	11.8
33	91	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.9	11.0	15.4	11.7
35	95	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.9	11.0	15.2	11.6
37	99	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.7	10.9	15.0	11.6
40	104	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.4	10.9	14.3	10.8	14.7	11.5
45	113	9.70	7.95	10.5	9.71	12.0	10.7	12.7	10.8	13.2	10.8	13.8	10.6	14.1	11.3
52	125	9.70	7.95	10.5	9.71	11.9	10.7	12.2	10.6	12.5	10.5	13.0	10.4	13.3	11.0

■ MODEL : ARXC60

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	20.0	14.1	21.0	15.2
15	59	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	20.0	14.1	21.0	15.2
21	70	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	20.0	14.1	21.0	15.2
23	73	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	20.0	14.1	21.0	15.2
25	77	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	20.0	14.1	21.0	15.2
27	81	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	20.0	14.1	21.0	15.2
30	86	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	20.0	14.1	21.0	15.2
33	91	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	20.0	14.1	20.6	15.0
35	95	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	19.9	14.1	20.3	14.9
37	99	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	19.6	14.0	20.0	14.8
40	104	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	18.0	14.0	19.2	13.9	19.6	14.7
45	113	13.0	10.3	14.0	12.5	16.0	13.8	17.0	13.9	17.7	13.9	18.5	13.6	18.9	14.4
52	125	13.0	10.3	14.0	12.5	16.0	13.7	16.3	13.6	16.7	13.5	17.4	13.2	17.8	14.1

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-7. FLOOR / CEILING TYPE

■ MODEL : AB∗A12

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.23	2.89	4.45	3.09
15	59	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.23	2.89	4.45	3.09
21	70	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.23	2.89	4.45	3.09
23	73	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.23	2.89	4.45	3.09
25	77	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.23	2.89	4.45	3.09
27	81	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.23	2.89	4.45	3.09
30	86	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.23	2.89	4.45	3.09
33	91	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.23	2.89	4.36	3.05
35	95	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.22	2.88	4.29	3.03
37	99	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.15	2.86	4.24	3.01
40	104	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.81	2.85	4.06	2.83	4.15	2.98
45	113	2.75	2.10	2.97	2.54	3.39	2.80	3.60	2.83	3.75	2.83	3.91	2.77	4.00	2.93
52	125	2.75	2.10	2.97	2.54	3.38	2.80	3.46	2.77	3.54	2.75	3.69	2.69	3.77	2.85

■ MODEL : AB∗A14

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.76	3.08	5.01	3.29
15	59	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.76	3.08	5.01	3.29
21	70	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.76	3.08	5.01	3.29
23	73	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.76	3.08	5.01	3.29
25	77	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.76	3.08	5.01	3.29
27	81	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.76	3.08	5.01	3.29
30	86	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.76	3.08	5.01	3.29
33	91	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.76	3.08	4.90	3.25
35	95	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.74	3.08	4.83	3.22
37	99	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.67	3.05	4.77	3.20
40	104	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.28	3.04	4.57	3.01	4.67	3.17
45	113	3.09	2.26	3.34	2.70	3.82	2.98	4.05	3.01	4.22	3.02	4.40	2.95	4.50	3.10
52	125	3.09	2.26	3.34	2.70	3.80	2.97	3.89	2.95	3.98	2.92	4.15	2.86	4.24	3.01

■ MODEL : AB∗A18

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.23	3.92	6.55	4.18
15	59	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.23	3.92	6.55	4.18
21	70	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.23	3.92	6.55	4.18
23	73	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.23	3.92	6.55	4.18
25	77	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.23	3.92	6.55	4.18
27	81	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.23	3.92	6.55	4.18
30	86	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.23	3.92	6.55	4.18
33	91	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.23	3.92	6.42	4.13
35	95	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.21	3.92	6.32	4.09
37	99	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	6.12	3.88	6.25	4.06
40	104	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.60	3.86	5.98	3.83	6.12	4.01
45	113	4.05	2.88	4.37	3.43	5.00	3.78	5.30	3.83	5.53	3.83	5.76	3.74	5.89	3.93
52	125	4.05	2.88	4.37	3.43	4.98	3.77	5.09	3.74	5.20	3.70	5.43	3.62	5.54	3.80

■ MODEL : AB∗A24

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.76	4.72	8.16	5.01
15	59	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.76	4.72	8.16	5.01
21	70	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.76	4.72	8.16	5.01
23	73	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.76	4.72	8.16	5.01
25	77	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.76	4.72	8.16	5.01
27	81	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.76	4.72	8.16	5.01
30	86	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.76	4.72	8.16	5.01
33	91	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.76	4.72	7.99	4.94
35	95	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.73	4.71	7.87	4.90
37	99	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.62	4.66	7.78	4.86
40	104	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.98	4.64	7.45	4.60	7.62	4.80
45	113	5.04	3.47	5.45	4.11	6.22	4.53	6.60	4.59	6.88	4.60	7.17	4.48	7.33	4.69
52	125	5.04	3.47	5.45	4.11	6.20	4.52	6.34	4.47	6.48	4.42	6.77	4.33	6.90	4.53

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

4-7-8. CEILING TYPE

■ MODEL : AB∗A30

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.3	6.82	10.9	7.28
15	59	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.3	6.82	10.9	7.28
21	70	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.3	6.82	10.9	7.28
23	73	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.3	6.82	10.9	7.28
25	77	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.3	6.82	10.9	7.28
27	81	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.3	6.82	10.9	7.28
30	86	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.3	6.82	10.9	7.28
33	91	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.3	6.82	10.7	7.20
35	95	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.3	6.81	10.5	7.14
37	99	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	10.2	6.75	10.4	7.10
40	104	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.30	6.73	9.94	6.67	10.2	7.02
45	113	6.72	4.98	7.26	5.98	8.30	6.60	8.80	6.67	9.18	6.68	9.56	6.53	9.78	6.88
52	125	6.72	4.98	7.26	5.98	8.26	6.59	8.46	6.53	8.64	6.46	9.02	6.33	9.20	6.68

■ MODEL : AB∗A36

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.3	8.00	13.0	8.53
15	59	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.3	8.00	13.0	8.53
21	70	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.3	8.00	13.0	8.53
23	73	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.3	8.00	13.0	8.53
25	77	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.3	8.00	13.0	8.53
27	81	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.3	8.00	13.0	8.53
30	86	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.3	8.00	13.0	8.53
33	91	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.3	8.00	12.7	8.43
35	95	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.3	7.98	12.5	8.36
37	99	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	12.1	7.91	12.4	8.31
40	104	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.1	7.88	11.9	7.81	12.1	8.21
45	113	8.02	5.85	8.66	7.00	9.90	7.73	10.5	7.81	11.0	7.82	11.4	7.64	11.7	8.05
52	125	8.02	5.85	8.66	7.00	9.86	7.71	10.1	7.64	10.3	7.57	10.8	7.41	11.0	7.81

■ MODEL : AB∗A45

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.9	9.37	15.7	9.97
15	59	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.9	9.37	15.7	9.97
21	70	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.9	9.37	15.7	9.97
23	73	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.9	9.37	15.7	9.97
25	77	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.9	9.37	15.7	9.97
27	81	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.9	9.37	15.7	9.97
30	86	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.9	9.37	15.7	9.97
33	91	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.9	9.37	15.4	9.85
35	95	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.9	9.35	15.2	9.76
37	99	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.7	9.26	15.0	9.69
40	104	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.4	9.22	14.3	9.14	14.7	9.57
45	113	9.70	6.88	10.5	8.18	12.0	9.02	12.7	9.13	13.2	9.14	13.8	8.93	14.1	9.37
52	125	9.70	6.88	10.5	8.18	11.9	9.00	12.2	8.92	12.5	8.83	13.0	8.63	13.3	9.07

■ MODEL : AB∗A54

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.6	10.7	17.4	11.4
15	59	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.6	10.7	17.4	11.4
21	70	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.6	10.7	17.4	11.4
23	73	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.6	10.7	17.4	11.4
25	77	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.6	10.7	17.4	11.4
27	81	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.6	10.7	17.4	11.4
30	86	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.6	10.7	17.4	11.4
33	91	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.6	10.7	17.1	11.3
35	95	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.5	10.7	16.8	11.2
37	99	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	16.3	10.6	16.6	11.1
40	104	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.9	10.5	15.9	10.4	16.3	11.0
45	113	10.8	7.82	11.6	9.35	13.3	10.3	14.1	10.4	14.7	10.4	15.3	10.2	15.7	10.7
52	125	10.8	7.82	11.6	9.35	13.2	10.3	13.6	10.2	13.8	10.1	14.5	9.89	14.7	10.4

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

4-7-9. COMPACT WALL MOUNTED TYPE (Comfort model)

■ MODEL : AS∗E07

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.59	1.86	2.72	1.99
15	59	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.59	1.86	2.72	1.99
21	70	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.59	1.86	2.72	1.99
23	73	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.59	1.86	2.72	1.99
25	77	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.59	1.86	2.72	1.99
27	81	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.59	1.86	2.72	1.99
30	86	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.59	1.86	2.72	1.99
33	91	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.59	1.86	2.66	1.97
35	95	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.58	1.86	2.62	1.96
37	99	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.54	1.84	2.59	1.95
40	104	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.33	1.84	2.48	1.82	2.54	1.93
45	113	1.68	1.35	1.82	1.64	2.07	1.81	2.20	1.83	2.29	1.83	2.39	1.79	2.44	1.90
52	125	1.68	1.35	1.82	1.64	2.07	1.81	2.11	1.79	2.16	1.78	2.26	1.74	2.30	1.85

■ MODEL : AS∗E09

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.29	2.23	3.46	2.38
15	59	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.29	2.23	3.46	2.38
21	70	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.29	2.23	3.46	2.38
23	73	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.29	2.23	3.46	2.38
25	77	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.29	2.23	3.46	2.38
27	81	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.29	2.23	3.46	2.38
30	86	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.29	2.23	3.46	2.38
33	91	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.29	2.23	3.39	2.36
35	95	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.28	2.22	3.34	2.34
37	99	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.23	2.21	3.30	2.33
40	104	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.96	2.20	3.16	2.18	3.23	2.30
45	113	2.14	1.62	2.31	1.96	2.64	2.16	2.80	2.18	2.92	2.18	3.04	2.14	3.11	2.26
52	125	2.14	1.62	2.31	1.96	2.63	2.16	2.69	2.14	2.75	2.12	2.87	2.08	2.93	2.20

■ MODEL : AS∗E12

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.23	2.78	4.45	2.97
15	59	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.23	2.78	4.45	2.97
21	70	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.23	2.78	4.45	2.97
23	73	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.23	2.78	4.45	2.97
25	77	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.23	2.78	4.45	2.97
27	81	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.23	2.78	4.45	2.97
30	86	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.23	2.78	4.45	2.97
33	91	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.23	2.78	4.36	2.94
35	95	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.22	2.78	4.29	2.92
37	99	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.15	2.76	4.24	2.90
40	104	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.81	2.75	4.06	2.72	4.15	2.87
45	113	2.75	2.03	2.97	2.44	3.39	2.70	3.60	2.72	3.75	2.73	3.91	2.67	4.00	2.81
52	125	2.75	2.03	2.97	2.44	3.38	2.69	3.46	2.67	3.54	2.64	3.69	2.59	3.77	2.73

■ MODEL : AS∗E14

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.70	3.05	4.94	3.25
15	59	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.70	3.05	4.94	3.25
21	70	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.70	3.05	4.94	3.25
23	73	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.70	3.05	4.94	3.25
25	77	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.70	3.05	4.94	3.25
27	81	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.70	3.05	4.94	3.25
30	86	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.70	3.05	4.94	3.25
33	91	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.70	3.05	4.84	3.21
35	95	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.68	3.04	4.77	3.19
37	99	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.62	3.02	4.72	3.17
40	104	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.23	3.00	4.52	2.98	4.62	3.13
45	113	3.06	2.23	3.30	2.67	3.77	2.95	4.00	2.98	4.17	2.98	4.34	2.91	4.44	3.07
52	125	3.06	2.23	3.30	2.67	3.76	2.94	3.84	2.91	3.93	2.88	4.10	2.82	4.18	2.98

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-10. WALL MOUNTED TYPE

■ MODEL : AS∗A18

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.35	4.09	6.67	4.36
15	59	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.35	4.09	6.67	4.36
21	70	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.35	4.09	6.67	4.36
23	73	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.35	4.09	6.67	4.36
25	77	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.35	4.09	6.67	4.36
27	81	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.35	4.09	6.67	4.36
30	86	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.35	4.09	6.67	4.36
33	91	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.35	4.09	6.54	4.31
35	95	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.32	4.08	6.44	4.28
37	99	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.23	4.05	6.37	4.25
40	104	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.71	4.03	6.10	4.00	6.23	4.20
45	113	4.13	3.00	4.46	3.58	5.09	3.95	5.40	4.00	5.63	4.00	5.86	3.91	6.00	4.12
52	125	4.13	3.00	4.46	3.58	5.07	3.95	5.19	3.91	5.30	3.87	5.54	3.79	5.65	3.99

■ MODEL : AS∗A24

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	8.11	5.12	8.53	5.45
15	59	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	8.11	5.12	8.53	5.45
21	70	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	8.11	5.12	8.53	5.45
23	73	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	8.11	5.12	8.53	5.45
25	77	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	8.11	5.12	8.53	5.45
27	81	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	8.11	5.12	8.53	5.45
30	86	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	8.11	5.12	8.53	5.45
33	91	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	8.11	5.12	8.36	5.39
35	95	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	8.08	5.11	8.23	5.34
37	99	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	7.96	5.07	8.14	5.31
40	104	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.29	5.04	7.79	5.00	7.96	5.24
45	113	5.27	3.76	5.69	4.48	6.51	4.94	6.90	5.00	7.20	5.00	7.49	4.89	7.67	5.13
52	125	5.27	3.76	5.69	4.48	6.48	4.93	6.63	4.88	6.78	4.83	7.07	4.73	7.22	4.97

■ MODEL : AS∗A30

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.40	5.77	9.89	6.13
15	59	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.40	5.77	9.89	6.13
21	70	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.40	5.77	9.89	6.13
23	73	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.40	5.77	9.89	6.13
25	77	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.40	5.77	9.89	6.13
27	81	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.40	5.77	9.89	6.13
30	86	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.40	5.77	9.89	6.13
33	91	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.40	5.77	9.69	6.06
35	95	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.37	5.76	9.54	6.00
37	99	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.23	5.71	9.43	5.96
40	104	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.46	5.67	9.03	5.63	9.23	5.88
45	113	6.11	4.25	6.60	5.03	7.54	5.55	8.00	5.62	8.34	5.63	8.69	5.49	8.89	5.75
52	125	6.11	4.25	6.60	5.03	7.51	5.53	7.69	5.48	7.86	5.42	8.20	5.30	8.37	5.56

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-7-11. CEILING WALL TYPE (1/2)

■ MODEL : AW∗A07

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.59	1.74	2.72	1.86
15	59	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.59	1.74	2.72	1.86
21	70	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.59	1.74	2.72	1.86
23	73	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.59	1.74	2.72	1.86
25	77	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.59	1.74	2.72	1.86
27	81	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.59	1.74	2.72	1.86
30	86	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.59	1.74	2.72	1.86
33	91	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.59	1.74	2.66	1.84
35	95	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.58	1.74	2.62	1.83
37	99	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.54	1.72	2.59	1.82
40	104	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.33	1.72	2.48	1.70	2.54	1.80
45	113	1.68	1.27	1.82	1.53	2.07	1.69	2.20	1.70	2.29	1.71	2.39	1.67	2.44	1.76
52	125	1.68	1.27	1.82	1.53	2.07	1.68	2.11	1.67	2.16	1.65	2.26	1.62	2.30	1.71

■ MODEL : AW∗A09

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.29	2.21	3.46	2.36
15	59	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.29	2.21	3.46	2.36
21	70	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.29	2.21	3.46	2.36
23	73	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.29	2.21	3.46	2.36
25	77	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.29	2.21	3.46	2.36
27	81	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.29	2.21	3.46	2.36
30	86	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.29	2.21	3.46	2.36
33	91	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.29	2.21	3.39	2.33
35	95	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.28	2.20	3.34	2.32
37	99	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.23	2.19	3.30	2.30
40	104	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.96	2.18	3.16	2.16	3.23	2.28
45	113	2.14	1.61	2.31	1.94	2.64	2.14	2.80	2.16	2.92	2.16	3.04	2.12	3.11	2.23
52	125	2.14	1.61	2.31	1.94	2.63	2.14	2.69	2.12	2.75	2.10	2.87	2.05	2.93	2.17

■ MODEL : AW∗A12

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.23	2.80	4.45	2.99
15	59	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.23	2.80	4.45	2.99
21	70	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.23	2.80	4.45	2.99
23	73	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.23	2.80	4.45	2.99
25	77	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.23	2.80	4.45	2.99
27	81	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.23	2.80	4.45	2.99
30	86	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.23	2.80	4.45	2.99
33	91	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.23	2.80	4.36	2.96
35	95	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.22	2.80	4.29	2.94
37	99	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.15	2.78	4.24	2.92
40	104	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.81	2.77	4.06	2.74	4.15	2.89
45	113	2.75	2.05	2.97	2.46	3.39	2.72	3.60	2.74	3.75	2.75	3.91	2.68	4.00	2.83
52	125	2.75	2.05	2.97	2.46	3.38	2.71	3.46	2.69	3.54	2.66	3.69	2.61	3.77	2.75

■ MODEL : AW∗A14

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	5.05	3.26	5.31	3.47
15	59	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	5.05	3.26	5.31	3.47
21	70	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	5.05	3.26	5.31	3.47
23	73	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	5.05	3.26	5.31	3.47
25	77	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	5.05	3.26	5.31	3.47
27	81	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	5.05	3.26	5.31	3.47
30	86	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	5.05	3.26	5.31	3.47
33	91	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	5.05	3.26	5.21	3.43
35	95	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	5.04	3.25	5.13	3.40
37	99	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	4.96	3.22	5.07	3.38
40	104	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.55	3.21	4.85	3.18	4.96	3.34
45	113	3.29	2.39	3.55	2.85	4.05	3.15	4.30	3.18	4.48	3.19	4.67	3.11	4.78	3.28
52	125	3.29	2.39	3.55	2.85	4.04	3.14	4.13	3.11	4.22	3.08	4.41	3.02	4.50	3.18

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

4-7-11. CEILING WALL TYPE (2/2)

■ MODEL : AW∗A18

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.35	4.01	6.67	4.27
15	59	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.35	4.01	6.67	4.27
21	70	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.35	4.01	6.67	4.27
23	73	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.35	4.01	6.67	4.27
25	77	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.35	4.01	6.67	4.27
27	81	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.35	4.01	6.67	4.27
30	86	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.35	4.01	6.67	4.27
33	91	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.35	4.01	6.54	4.22
35	95	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.32	4.00	6.44	4.18
37	99	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.23	3.97	6.37	4.15
40	104	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.71	3.95	6.10	3.91	6.23	4.10
45	113	4.13	2.94	4.46	3.51	5.09	3.87	5.40	3.91	5.63	3.92	5.86	3.83	6.00	4.02
52	125	4.13	2.94	4.46	3.51	5.07	3.86	5.19	3.82	5.30	3.78	5.54	3.70	5.65	3.89

■ MODEL : AW∗A24

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	8.11	4.99	8.53	5.30
15	59	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	8.11	4.99	8.53	5.30
21	70	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	8.11	4.99	8.53	5.30
23	73	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	8.11	4.99	8.53	5.30
25	77	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	8.11	4.99	8.53	5.30
27	81	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	8.11	4.99	8.53	5.30
30	86	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	8.11	4.99	8.53	5.30
33	91	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	8.11	4.99	8.36	5.23
35	95	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	8.08	4.97	8.23	5.18
37	99	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	7.96	4.93	8.14	5.14
40	104	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.29	4.90	7.79	4.86	7.96	5.08
45	113	5.27	3.67	5.69	4.35	6.51	4.79	6.90	4.85	7.20	4.86	7.49	4.74	7.67	4.97
52	125	5.27	3.67	5.69	4.35	6.48	4.78	6.63	4.73	6.78	4.68	7.07	4.58	7.22	4.80

■ MODEL : AW∗A30

Outdoor temperature		Indoor temperature													
		20°CDB / 15 °CWB		23°CDB / 16 °CWB		26°CDB / 18 °CWB		27°CDB / 19 °CWB		28°CDB / 20 °CWB		30°CDB / 22 °CWB		32°CDB / 23 °CWB	
		68°FDB / 59 °FWB		73°FDB / 61 °FWB		79°FDB / 64 °FWB		81°FDB / 66 °FWB		82°FDB / 68 °FWB		86°FDB / 72 °FWB		90°FDB / 73 °FWB	
(°CDB)	(°FDB)	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
10	50	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.40	5.61	9.89	5.95
15	59	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.40	5.61	9.89	5.95
21	70	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.40	5.61	9.89	5.95
23	73	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.40	5.61	9.89	5.95
25	77	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.40	5.61	9.89	5.95
27	81	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.40	5.61	9.89	5.95
30	86	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.40	5.61	9.89	5.95
33	91	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.40	5.61	9.69	5.86
35	95	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.37	5.59	9.54	5.81
37	99	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.23	5.54	9.43	5.76
40	104	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.46	5.50	9.03	5.46	9.23	5.68
45	113	6.11	4.14	6.60	4.87	7.54	5.36	8.00	5.44	8.34	5.45	8.69	5.31	8.89	5.55
52	125	6.11	4.14	6.60	4.87	7.51	5.35	7.69	5.30	7.86	5.24	8.20	5.12	8.37	5.35

TC : Total Capacity kW.

SHC : Sensible Heat Capacity kW.

INDOOR UNIT

4-8. CAPACITY TABLE HEATING (INDOOR UNIT)
4-8-1. COMPACT CASSETTE TYPE (1/2)

■ MODEL : AUXB07

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		1.68	1.62	1.58	1.53	1.49	1.45
-10	14		1.91	1.85	1.81	1.75	1.71	1.67
-5	23		2.16	2.10	2.06	2.00	1.96	1.92
0	32		2.45	2.39	2.34	2.26	2.09	1.92
5	41	RH85%	2.77	2.67	2.50	2.26	2.09	1.92
7	45		2.91	2.67	2.50	2.26	2.09	1.92
10	50		2.92	2.67	2.50	2.26	2.09	1.92
15	59		2.92	2.67	2.50	2.26	2.09	1.92

■ MODEL : AUXB09

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		2.15	2.07	2.02	1.95	1.90	1.85
-10	14		2.44	2.37	2.32	2.23	2.19	2.13
-5	23		2.76	2.69	2.64	2.56	2.51	2.46
0	32		3.14	3.06	3.00	2.89	2.67	2.46
5	41	RH85%	3.55	3.41	3.20	2.89	2.67	2.46
7	45		3.72	3.41	3.20	2.89	2.67	2.46
10	50		3.74	3.41	3.20	2.89	2.67	2.46
15	59		3.74	3.41	3.20	2.89	2.67	2.46

■ MODEL : AUXB12

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		2.76	2.66	2.59	2.50	2.44	2.37
-10	14		3.12	3.03	2.97	2.86	2.80	2.73
-5	23		3.54	3.45	3.38	3.28	3.21	3.15
0	32		4.02	3.92	3.84	3.70	3.42	3.15
5	41	RH85%	4.54	4.37	4.10	3.70	3.42	3.15
7	45		4.76	4.37	4.10	3.70	3.42	3.15
10	50		4.79	4.37	4.10	3.70	3.42	3.15
15	59		4.79	4.37	4.10	3.70	3.42	3.15

TC : Total Capacity kW.

INDOOR UNIT

4-8-1. COMPACT CASSETTE TYPE (2/2)

■ MODEL : AUXB14

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.03	2.92	2.84	2.75	2.67	2.60
-10	14		3.43	3.33	3.26	3.14	3.07	3.00
-5	23		3.88	3.78	3.71	3.60	3.53	3.46
0	32		4.41	4.30	4.22	4.06	3.76	3.46
5	41	RH85%	4.99	4.80	4.50	4.06	3.76	3.46
7	45		5.23	4.80	4.50	4.06	3.76	3.46
10	50		5.26	4.80	4.50	4.06	3.76	3.46
15	59		5.26	4.80	4.50	4.06	3.76	3.46

■ MODEL : AUXB18

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.67	3.53	3.44	3.32	3.24	3.15
-10	14		4.15	4.03	3.95	3.80	3.72	3.64
-5	23		4.70	4.58	4.50	4.36	4.27	4.19
0	32		5.35	5.21	5.11	4.92	4.55	4.19
5	41	RH85%	6.04	5.82	5.45	4.92	4.55	4.19
7	45		6.33	5.82	5.45	4.92	4.55	4.19
10	50		6.37	5.82	5.45	4.92	4.55	4.19
15	59		6.37	5.82	5.45	4.92	4.55	4.19

TC : Total Capacity kW.

INDOOR UNIT

4-8-2. CASSETTE TYPE (1/2)

■ MODEL : AU∗A20

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.90	3.76	3.67	3.54	3.45	3.35
-10	14		4.42	4.29	4.20	4.05	3.96	3.87
-5	23		5.01	4.88	4.79	4.64	4.55	4.45
0	32		5.69	5.54	5.43	5.23	4.84	4.45
5	41	RH85%	6.43	6.19	5.80	5.23	4.84	4.45
7	45		6.74	6.19	5.80	5.23	4.84	4.45
10	50		6.77	6.19	5.80	5.23	4.84	4.45
15	59		6.77	6.19	5.80	5.23	4.84	4.45

■ MODEL : AU∗A25

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		5.28	5.09	4.96	4.79	4.66	4.54
-10	14		5.98	5.81	5.68	5.48	5.36	5.24
-5	23		6.77	6.60	6.48	6.28	6.15	6.03
0	32		7.70	7.50	7.36	7.08	6.55	6.03
5	41	RH85%	8.70	8.38	7.85	7.08	6.55	6.03
7	45		9.12	8.38	7.85	7.08	6.55	6.03
10	50		9.17	8.38	7.85	7.08	6.55	6.03
15	59		9.17	8.38	7.85	7.08	6.55	6.03

■ MODEL : AU∗A30

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		6.12	5.90	5.75	5.55	5.41	5.26
-10	14		6.93	6.73	6.59	6.35	6.22	6.07
-5	23		7.85	7.65	7.51	7.28	7.13	6.99
0	32		8.93	8.70	8.53	8.21	7.60	6.99
5	41	RH85%	10.1	9.71	9.10	8.21	7.60	6.99
7	45		10.6	9.71	9.10	8.21	7.60	6.99
10	50		10.6	9.71	9.10	8.21	7.60	6.99
15	59		10.6	9.71	9.10	8.21	7.60	6.99

TC : Total Capacity kW.

INDOOR UNIT

4-8-2. CASSETTE TYPE (2/2)

■ MODEL : AU∗A36

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		8.55	8.23	8.03	7.75	7.54	7.34
-10	14		9.68	9.40	9.19	8.86	8.67	8.47
-5	23		11.0	10.7	10.5	10.2	9.96	9.75
0	32		12.5	12.1	11.9	11.5	10.6	9.75
5	41	RH85%	14.1	13.6	12.7	11.5	10.6	9.75
7	45		14.8	13.6	12.7	11.5	10.6	9.75
10	50		14.8	13.6	12.7	11.5	10.6	9.75
15	59		14.8	13.6	12.7	11.5	10.6	9.75

■ MODEL : AU∗A45

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		9.22	8.88	8.66	8.36	8.14	7.92
-10	14		10.4	10.1	9.92	9.56	9.36	9.14
-5	23		11.8	11.5	11.3	11.0	10.7	10.5
0	32		13.4	13.1	12.8	12.4	11.4	10.5
5	41	RH85%	15.2	14.6	13.7	12.4	11.4	10.5
7	45		15.9	14.6	13.7	12.4	11.4	10.5
10	50		16.0	14.6	13.7	12.4	11.4	10.5
15	59		16.0	14.6	13.7	12.4	11.4	10.5

■ MODEL : AU∗A54

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		10.6	10.2	9.99	9.64	9.39	9.13
-10	14		12.0	11.7	11.4	11.0	10.8	10.5
-5	23		13.6	13.3	13.0	12.6	12.4	12.1
0	32		15.5	15.1	14.8	14.3	13.2	12.1
5	41	RH85%	17.5	16.9	15.8	14.3	13.2	12.1
7	45		18.4	16.9	15.8	14.3	13.2	12.1
10	50		18.5	16.9	15.8	14.3	13.2	12.1
15	59		18.5	16.9	15.8	14.3	13.2	12.1

TC : Total Capacity kW.

INDOOR UNIT

4-8-3. COMPACT DUCT TYPE (1/2)

■ MODEL : ARXB07

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		1.68	1.62	1.58	1.53	1.49	1.45
-10	14		1.91	1.85	1.81	1.75	1.71	1.67
-5	23		2.16	2.10	2.06	2.00	1.96	1.92
0	32		2.45	2.39	2.34	2.26	2.09	1.92
5	41	RH85%	2.77	2.67	2.50	2.26	2.09	1.92
7	45		2.91	2.67	2.50	2.26	2.09	1.92
10	50		2.92	2.67	2.50	2.26	2.09	1.92
15	59		2.92	2.67	2.50	2.26	2.09	1.92

■ MODEL : ARXB09

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		2.15	2.07	2.02	1.95	1.90	1.85
-10	14		2.44	2.37	2.32	2.23	2.19	2.13
-5	23		2.76	2.69	2.64	2.56	2.51	2.46
0	32		3.14	3.06	3.00	2.89	2.67	2.46
5	41	RH85%	3.55	3.41	3.20	2.89	2.67	2.46
7	45		3.72	3.41	3.20	2.89	2.67	2.46
10	50		3.74	3.41	3.20	2.89	2.67	2.46
15	59		3.74	3.41	3.20	2.89	2.67	2.46

■ MODEL : ARXB12

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		2.76	2.66	2.59	2.50	2.44	2.37
-10	14		3.12	3.03	2.97	2.86	2.80	2.73
-5	23		3.54	3.45	3.38	3.28	3.21	3.15
0	32		4.02	3.92	3.84	3.70	3.42	3.15
5	41	RH85%	4.54	4.37	4.10	3.70	3.42	3.15
7	45		4.76	4.37	4.10	3.70	3.42	3.15
10	50		4.79	4.37	4.10	3.70	3.42	3.15
15	59		4.79	4.37	4.10	3.70	3.42	3.15

TC : Total Capacity kW.

INDOOR UNIT

4-8-3. COMPACT DUCT TYPE (2/2)

■ MODEL : ARXB14

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.23	3.11	3.03	2.93	2.85	2.77
-10	14		3.66	3.55	3.48	3.35	3.28	3.20
-5	23		4.14	4.04	3.96	3.84	3.76	3.69
0	32		4.71	4.59	4.50	4.33	4.01	3.69
5	41	RH85%	5.32	5.12	4.80	4.33	4.01	3.69
7	45		5.58	5.12	4.80	4.33	4.01	3.69
10	50		5.61	5.12	4.80	4.33	4.01	3.69
15	59		5.61	5.12	4.80	4.33	4.01	3.69

■ MODEL : ARXB18

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.77	3.63	3.54	3.42	3.33	3.24
-10	14		4.27	4.14	4.05	3.91	3.82	3.74
-5	23		4.83	4.71	4.62	4.48	4.39	4.30
0	32		5.49	5.35	5.25	5.05	4.68	4.30
5	41	RH85%	6.20	5.98	5.60	5.05	4.68	4.30
7	45		6.51	5.98	5.60	5.05	4.68	4.30
10	50		6.54	5.98	5.60	5.05	4.68	4.30
15	59		6.54	5.98	5.60	5.05	4.68	4.30

TC : Total Capacity kW.

INDOOR UNIT

4-8-4. LOW STATIC PRESSURE DUCT TYPE

■ MODEL : ARXB25

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		5.18	4.99	4.87	4.70	4.57	4.45
-10	14		5.87	5.70	5.57	5.37	5.26	5.14
-5	23		6.65	6.48	6.35	6.16	6.04	5.91
0	32		7.55	7.36	7.21	6.95	6.43	5.91
5	41	RH85%	8.53	8.22	7.70	6.95	6.43	5.91
7	45		8.95	8.22	7.70	6.95	6.43	5.91
10	50		8.99	8.22	7.70	6.95	6.43	5.91
15	59		8.99	8.22	7.70	6.95	6.43	5.91

■ MODEL : ARXB30

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		6.39	6.16	6.00	5.80	5.64	5.49
-10	14		7.24	7.03	6.88	6.63	6.49	6.34
-5	23		8.20	7.99	7.84	7.60	7.45	7.30
0	32		9.32	9.08	8.90	8.57	7.93	7.30
5	41	RH85%	10.5	10.1	9.50	8.57	7.93	7.30
7	45		11.0	10.1	9.50	8.57	7.93	7.30
10	50		11.1	10.1	9.50	8.57	7.93	7.30
15	59		11.1	10.1	9.50	8.57	7.93	7.30

■ MODEL : ARXB36

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		8.55	8.23	8.03	7.75	7.54	7.34
-10	14		9.68	9.40	9.19	8.86	8.67	8.47
-5	23		11.0	10.7	10.5	10.2	9.96	9.75
0	32		12.5	12.1	11.9	11.5	10.6	9.75
5	41	RH85%	14.1	13.6	12.7	11.5	10.6	9.75
7	45		14.8	13.6	12.7	11.5	10.6	9.75
10	50		14.8	13.6	12.7	11.5	10.6	9.75
15	59		14.8	13.6	12.7	11.5	10.6	9.75

■ MODEL : ARXB45

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		9.62	9.27	9.04	8.72	8.49	8.27
-10	14		10.9	10.6	10.4	9.98	9.77	9.54
-5	23		12.3	12.0	11.8	11.4	11.2	11.0
0	32		14.0	13.7	13.4	12.9	11.9	11.0
5	41	RH85%	15.8	15.3	14.3	12.9	11.9	11.0
7	45		16.6	15.3	14.3	12.9	11.9	11.0
10	50		16.7	15.3	14.3	12.9	11.9	11.0
15	59		16.7	15.3	14.3	12.9	11.9	11.0

TC : Total Capacity kW.

INDOOR UNIT

4-8-5. DUCT TYPE

■ MODEL : ARXA25

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		5.18	4.99	4.87	4.70	4.57	4.45
-10	14		5.87	5.70	5.57	5.37	5.26	5.14
-5	23		6.65	6.48	6.35	6.16	6.04	5.91
0	32		7.55	7.36	7.21	6.95	6.43	5.91
5	41	RH85%	8.53	8.22	7.70	6.95	6.43	5.91
7	45		8.95	8.22	7.70	6.95	6.43	5.91
10	50		8.99	8.22	7.70	6.95	6.43	5.91
15	59		8.99	8.22	7.70	6.95	6.43	5.91

■ MODEL : ARXA30

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		6.39	6.16	6.00	5.80	5.64	5.49
-10	14		7.24	7.03	6.88	6.63	6.49	6.34
-5	23		8.20	7.99	7.84	7.60	7.45	7.30
0	32		9.32	9.08	8.90	8.57	7.93	7.30
5	41	RH85%	10.5	10.1	9.50	8.57	7.93	7.30
7	45		11.0	10.1	9.50	8.57	7.93	7.30
10	50		11.1	10.1	9.50	8.57	7.93	7.30
15	59		11.1	10.1	9.50	8.57	7.93	7.30

■ MODEL : ARXA36

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		8.55	8.23	8.03	7.75	7.54	7.34
-10	14		9.68	9.40	9.19	8.86	8.67	8.47
-5	23		11.0	10.7	10.5	10.2	9.96	9.75
0	32		12.5	12.1	11.9	11.5	10.6	9.75
5	41	RH85%	14.1	13.6	12.7	11.5	10.6	9.75
7	45		14.8	13.6	12.7	11.5	10.6	9.75
10	50		14.8	13.6	12.7	11.5	10.6	9.75
15	59		14.8	13.6	12.7	11.5	10.6	9.75

■ MODEL : ARXA45

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		9.62	9.27	9.04	8.72	8.49	8.27
-10	14		10.9	10.6	10.4	9.98	9.77	9.54
-5	23		12.3	12.0	11.8	11.4	11.2	11.0
0	32		14.0	13.7	13.4	12.9	11.9	11.0
5	41	RH85%	15.8	15.3	14.3	12.9	11.9	11.0
7	45		16.6	15.3	14.3	12.9	11.9	11.0
10	50		16.7	15.3	14.3	12.9	11.9	11.0
15	59		16.7	15.3	14.3	12.9	11.9	11.0

TC : Total Capacity kW.

INDOOR UNIT

4-8-6. HIGH STATIC PRESSURE DUCT TYPE

■ MODEL : ARXC36

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		8.55	8.23	8.03	7.75	7.54	7.34
-10	14		9.68	9.40	9.19	8.86	8.67	8.47
-5	23		11.0	10.7	10.5	10.2	9.96	9.75
0	32		12.5	12.1	11.9	11.5	10.6	9.75
5	41	RH85%	14.1	13.6	12.7	11.5	10.6	9.75
7	45		14.8	13.6	12.7	11.5	10.6	9.75
10	50		14.8	13.6	12.7	11.5	10.6	9.75
15	59		14.8	13.6	12.7	11.5	10.6	9.75

■ MODEL : ARXC45

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		9.62	9.27	9.04	8.72	8.49	8.27
-10	14		10.9	10.6	10.4	9.98	9.77	9.54
-5	23		12.3	12.0	11.8	11.4	11.2	11.0
0	32		14.0	13.7	13.4	12.9	11.9	11.0
5	41	RH85%	15.8	15.3	14.3	12.9	11.9	11.0
7	45		16.6	15.3	14.3	12.9	11.9	11.0
10	50		16.7	15.3	14.3	12.9	11.9	11.0
15	59		16.7	15.3	14.3	12.9	11.9	11.0

■ MODEL : ARXC60

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		12.2	11.8	11.5	11.1	10.8	10.5
-10	14		13.9	13.5	13.2	12.7	12.4	12.1
-5	23		15.7	15.3	15.0	14.6	14.3	14.0
0	32		17.9	17.4	17.1	16.4	15.2	14.0
5	41	RH85%	20.2	19.4	18.2	16.4	15.2	14.0
7	45		21.1	19.4	18.2	16.4	15.2	14.0
10	50		21.3	19.4	18.2	16.4	15.2	14.0
15	59		21.3	19.4	18.2	16.4	15.2	14.0

TC : Total Capacity kW

INDOOR UNIT

4-8-7. FLOOR / CEILING TYPE

■ MODEL : AB∗A12

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		2.76	2.66	2.59	2.50	2.44	2.37
-10	14		3.12	3.03	2.97	2.86	2.80	2.73
-5	23		3.54	3.45	3.38	3.28	3.21	3.15
0	32		4.02	3.92	3.84	3.70	3.42	3.15
5	41	RH85%	4.54	4.37	4.10	3.70	3.42	3.15
7	45		4.76	4.37	4.10	3.70	3.42	3.15
10	50		4.79	4.37	4.10	3.70	3.42	3.15
15	59		4.79	4.37	4.10	3.70	3.42	3.15

■ MODEL : AB∗A14

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.37	3.24	3.16	3.05	2.97	2.89
-10	14		3.81	3.70	3.62	3.49	3.42	3.34
-5	23		4.32	4.21	4.13	4.00	3.92	3.84
0	32		4.91	4.78	4.69	4.51	4.18	3.84
5	41	RH85%	5.54	5.34	5.00	4.51	4.18	3.84
7	45		5.81	5.34	5.00	4.51	4.18	3.84
10	50		5.84	5.34	5.00	4.51	4.18	3.84
15	59		5.84	5.34	5.00	4.51	4.18	3.84

■ MODEL : AB∗A18

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.77	3.63	3.54	3.42	3.33	3.24
-10	14		4.27	4.14	4.05	3.91	3.82	3.74
-5	23		4.83	4.71	4.62	4.48	4.39	4.30
0	32		5.49	5.35	5.25	5.05	4.68	4.30
5	41	RH85%	6.20	5.98	5.60	5.05	4.68	4.30
7	45		6.51	5.98	5.60	5.05	4.68	4.30
10	50		6.54	5.98	5.60	5.05	4.68	4.30
15	59		6.54	5.98	5.60	5.05	4.68	4.30

■ MODEL : AB∗A24

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		5.18	4.99	4.87	4.70	4.57	4.45
-10	14		5.87	5.70	5.57	5.37	5.26	5.14
-5	23		6.65	6.48	6.35	6.16	6.04	5.91
0	32		7.55	7.36	7.21	6.95	6.43	5.91
5	41	RH85%	8.53	8.22	7.70	6.95	6.43	5.91
7	45		8.95	8.22	7.70	6.95	6.43	5.91
10	50		8.99	8.22	7.70	6.95	6.43	5.91
15	59		8.99	8.22	7.70	6.95	6.43	5.91

TC : Total Capacity kW.

INDOOR UNIT

4-8-8. CEILING TYPE

■ MODEL : AB∗A30

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		6.12	5.90	5.75	5.55	5.41	5.26
-10	14		6.93	6.73	6.59	6.35	6.22	6.07
-5	23		7.85	7.65	7.51	7.28	7.13	6.99
0	32		8.93	8.70	8.53	8.21	7.60	6.99
5	41	RH85%	10.1	9.71	9.10	8.21	7.60	6.99
7	45		10.6	9.71	9.10	8.21	7.60	6.99
10	50		10.6	9.71	9.10	8.21	7.60	6.99
15	59		10.6	9.71	9.10	8.21	7.60	6.99

■ MODEL : AB∗A36

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		8.55	8.23	8.03	7.75	7.54	7.34
-10	14		9.68	9.40	9.19	8.86	8.67	8.47
-5	23		11.0	10.7	10.5	10.2	9.96	9.75
0	32		12.5	12.1	11.9	11.5	10.6	9.75
5	41	RH85%	14.1	13.6	12.7	11.5	10.6	9.75
7	45		14.8	13.6	12.7	11.5	10.6	9.75
10	50		14.8	13.6	12.7	11.5	10.6	9.75
15	59		14.8	13.6	12.7	11.5	10.6	9.75

■ MODEL : AB∗A45

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		9.22	8.88	8.66	8.36	8.14	7.92
-10	14		10.4	10.1	9.92	9.56	9.36	9.14
-5	23		11.8	11.5	11.3	11.0	10.7	10.5
0	32		13.4	13.1	12.8	12.4	11.4	10.5
5	41	RH85%	15.2	14.6	13.7	12.4	11.4	10.5
7	45		15.9	14.6	13.7	12.4	11.4	10.5
10	50		16.0	14.6	13.7	12.4	11.4	10.5
15	59		16.0	14.6	13.7	12.4	11.4	10.5

■ MODEL : AB∗A54

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		10.6	10.2	9.99	9.64	9.39	9.13
-10	14		12.0	11.7	11.4	11.0	10.8	10.5
-5	23		13.6	13.3	13.0	12.6	12.4	12.1
0	32		15.5	15.1	14.8	14.3	13.2	12.1
5	41	RH85%	17.5	16.9	15.8	14.3	13.2	12.1
7	45		18.4	16.9	15.8	14.3	13.2	12.1
10	50		18.5	16.9	15.8	14.3	13.2	12.1
15	59		18.5	16.9	15.8	14.3	13.2	12.1

TC : Total Capacity kW.

INDOOR UNIT

4-8-9. COMPACT WALL MOUNTED TYPE (Comfort model)

■ MODEL : AS∗E07

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		1.68	1.62	1.58	1.53	1.49	1.45
-10	14		1.91	1.85	1.81	1.75	1.71	1.67
-5	23		2.16	2.10	2.06	2.00	1.96	1.92
0	32		2.45	2.39	2.34	2.26	2.09	1.92
5	41	RH85%	2.77	2.67	2.50	2.26	2.09	1.92
7	45		2.91	2.67	2.50	2.26	2.09	1.92
10	50		2.92	2.67	2.50	2.26	2.09	1.92
15	59		2.92	2.67	2.50	2.26	2.09	1.92

■ MODEL : AS∗E09

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		2.15	2.07	2.02	1.95	1.90	1.85
-10	14		2.44	2.37	2.32	2.23	2.19	2.13
-5	23		2.76	2.69	2.64	2.56	2.51	2.46
0	32		3.14	3.06	3.00	2.89	2.67	2.46
5	41	RH85%	3.55	3.41	3.20	2.89	2.67	2.46
7	45		3.72	3.41	3.20	2.89	2.67	2.46
10	50		3.74	3.41	3.20	2.89	2.67	2.46
15	59		3.74	3.41	3.20	2.89	2.67	2.46

■ MODEL : AS∗E12

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		2.76	2.66	2.59	2.50	2.44	2.37
-10	14		3.12	3.03	2.97	2.86	2.80	2.73
-5	23		3.54	3.45	3.38	3.28	3.21	3.15
0	32		4.02	3.92	3.84	3.70	3.42	3.15
5	41	RH85%	4.54	4.37	4.10	3.70	3.42	3.15
7	45		4.76	4.37	4.10	3.70	3.42	3.15
10	50		4.79	4.37	4.10	3.70	3.42	3.15
15	59		4.79	4.37	4.10	3.70	3.42	3.15

■ MODEL : AS∗E14

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.23	3.11	3.03	2.93	2.85	2.77
-10	14		3.66	3.55	3.48	3.35	3.28	3.20
-5	23		4.14	4.04	3.96	3.84	3.76	3.69
0	32		4.71	4.59	4.50	4.33	4.01	3.69
5	41	RH85%	5.32	5.12	4.80	4.33	4.01	3.69
7	45		5.58	5.12	4.80	4.33	4.01	3.69
10	50		5.61	5.12	4.80	4.33	4.01	3.69
15	59		5.61	5.12	4.80	4.33	4.01	3.69

TC : Total Capacity kW.

INDOOR UNIT

4-8-10. WALL MOUNTED TYPE

■ MODEL : AS∗A18

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.77	3.63	3.54	3.42	3.33	3.24
-10	14		4.27	4.14	4.05	3.91	3.82	3.74
-5	23		4.83	4.71	4.62	4.48	4.39	4.30
0	32		5.49	5.35	5.25	5.05	4.68	4.30
5	41	RH85%	6.20	5.98	5.60	5.05	4.68	4.30
7	45		6.51	5.98	5.60	5.05	4.68	4.30
10	50		6.54	5.98	5.60	5.05	4.68	4.30
15	59		6.54	5.98	5.60	5.05	4.68	4.30

■ MODEL : AS∗A24

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		5.25	5.05	4.93	4.76	4.63	4.51
-10	14		5.94	5.77	5.65	5.44	5.33	5.20
-5	23		6.73	6.56	6.44	6.24	6.12	5.99
0	32		7.65	7.46	7.31	7.04	6.51	5.99
5	41	RH85%	8.64	8.32	7.80	7.04	6.51	5.99
7	45		9.06	8.32	7.80	7.04	6.51	5.99
10	50		9.11	8.32	7.80	7.04	6.51	5.99
15	59		9.11	8.32	7.80	7.04	6.51	5.99

■ MODEL : AS∗A30

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		5.92	5.70	5.56	5.37	5.23	5.09
-10	14		6.71	6.51	6.37	6.14	6.01	5.87
-5	23		7.59	7.40	7.26	7.04	6.90	6.76
0	32		8.63	8.41	8.25	7.94	7.35	6.76
5	41	RH85%	9.75	9.39	8.80	7.94	7.35	6.76
7	45		10.2	9.39	8.80	7.94	7.35	6.76
10	50		10.3	9.39	8.80	7.94	7.35	6.76
15	59		10.3	9.39	8.80	7.94	7.35	6.76

TC : Total Capacity kW.

INDOOR UNIT

4-8-11. CEILING WALL TYPE (1/2)

■ MODEL : AW∗A07

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		1.68	1.62	1.58	1.53	1.49	1.45
-10	14		1.91	1.85	1.81	1.75	1.71	1.67
-5	23		2.16	2.10	2.06	2.00	1.96	1.92
0	32		2.45	2.39	2.34	2.26	2.09	1.92
5	41	RH85%	2.77	2.67	2.50	2.26	2.09	1.92
7	45		2.91	2.67	2.50	2.26	2.09	1.92
10	50		2.92	2.67	2.50	2.26	2.09	1.92
15	59		2.92	2.67	2.50	2.26	2.09	1.92

■ MODEL : AW∗A09

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		2.15	2.07	2.02	1.95	1.90	1.85
-10	14		2.44	2.37	2.32	2.23	2.19	2.13
-5	23		2.76	2.69	2.64	2.56	2.51	2.46
0	32		3.14	3.06	3.00	2.89	2.67	2.46
5	41	RH85%	3.55	3.41	3.20	2.89	2.67	2.46
7	45		3.72	3.41	3.20	2.89	2.67	2.46
10	50		3.74	3.41	3.20	2.89	2.67	2.46
15	59		3.74	3.41	3.20	2.89	2.67	2.46

■ MODEL : AW∗A12

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		2.76	2.66	2.59	2.50	2.44	2.37
-10	14		3.12	3.03	2.97	2.86	2.80	2.73
-5	23		3.54	3.45	3.38	3.28	3.21	3.15
0	32		4.02	3.92	3.84	3.70	3.42	3.15
5	41	RH85%	4.54	4.37	4.10	3.70	3.42	3.15
7	45		4.76	4.37	4.10	3.70	3.42	3.15
10	50		4.79	4.37	4.10	3.70	3.42	3.15
15	59		4.79	4.37	4.10	3.70	3.42	3.15

■ MODEL : AW∗A14

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.30	3.18	3.10	2.99	2.91	2.83
-10	14		3.73	3.63	3.55	3.42	3.35	3.27
-5	23		4.23	4.12	4.04	3.92	3.84	3.76
0	32		4.81	4.68	4.59	4.42	4.09	3.76
5	41	RH85%	5.43	5.23	4.90	4.42	4.09	3.76
7	45		5.69	5.23	4.90	4.42	4.09	3.76
10	50		5.72	5.23	4.90	4.42	4.09	3.76
15	59		5.72	5.23	4.90	4.42	4.09	3.76

TC : Total Capacity kW.

INDOOR UNIT

4-8-11. CEILING WALL TYPE (2/2)

■ MODEL : AW∗A18

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		3.77	3.63	3.54	3.42	3.33	3.24
-10	14		4.27	4.14	4.05	3.91	3.82	3.74
-5	23		4.83	4.71	4.62	4.48	4.39	4.30
0	32		5.49	5.35	5.25	5.05	4.68	4.30
5	41	RH85%	6.20	5.98	5.60	5.05	4.68	4.30
7	45		6.51	5.98	5.60	5.05	4.68	4.30
10	50		6.54	5.98	5.60	5.05	4.68	4.30
15	59		6.54	5.98	5.60	5.05	4.68	4.30

■ MODEL : AW∗A24

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		5.25	5.05	4.93	4.76	4.63	4.51
-10	14		5.94	5.77	5.65	5.44	5.33	5.20
-5	23		6.73	6.56	6.44	6.24	6.12	5.99
0	32		7.65	7.46	7.31	7.04	6.51	5.99
5	41	RH85%	8.64	8.32	7.80	7.04	6.51	5.99
7	45		9.06	8.32	7.80	7.04	6.51	5.99
10	50		9.11	8.32	7.80	7.04	6.51	5.99
15	59		9.11	8.32	7.80	7.04	6.51	5.99

■ MODEL : AW∗A30

Outdoor temperature			Indoor temperature					
			15 °CDB	18°CDB	20°CDB	23°CDB	25°CDB	27°CDB
			59 °FDB	64°FDB	68°FDB	73°FDB	77°FDB	81°FDB
(°CDB)	(°FDB)	RH	TC	TC	TC	TC	TC	TC
-15	5		5.92	5.70	5.56	5.37	5.23	5.09
-10	14		6.71	6.51	6.37	6.14	6.01	5.87
-5	23		7.59	7.40	7.26	7.04	6.90	6.76
0	32		8.63	8.41	8.25	7.94	7.35	6.76
5	41	RH85%	9.75	9.39	8.80	7.94	7.35	6.76
7	45		10.2	9.39	8.80	7.94	7.35	6.76
10	50		10.3	9.39	8.80	7.94	7.35	6.76
15	59		10.3	9.39	8.80	7.94	7.35	6.76

TC : Total Capacity kW.

INDOOR UNIT

4-9. AIR VELOCITY DISTRIBUTION

4-9-1. COMPACT CASSETTE TYPE

■MODELS : AUXB07, AUXB09

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

4-WAY AIR OUTLET UNIT : m/s

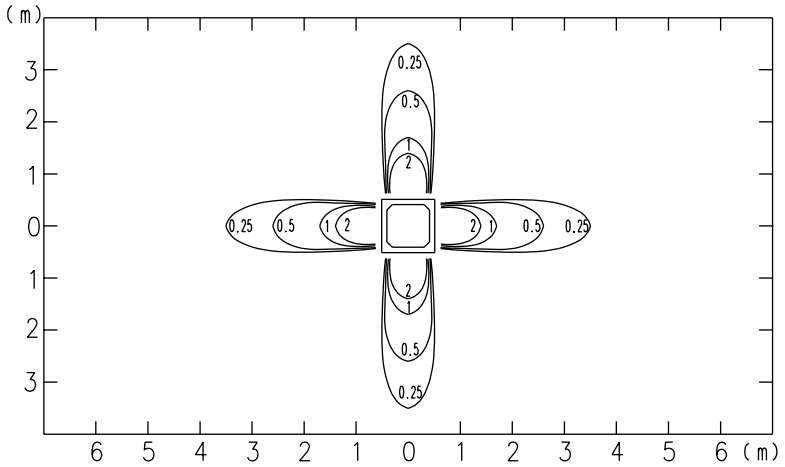


Fig
TOP VIEW
HORIZONTAL LOUVER
:Upward

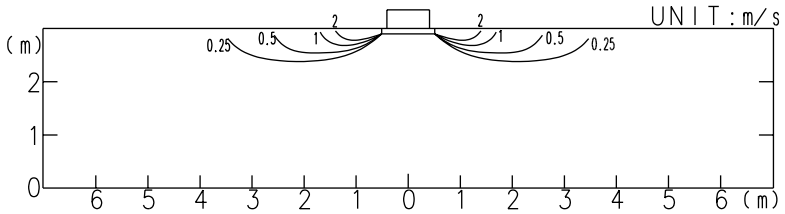


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

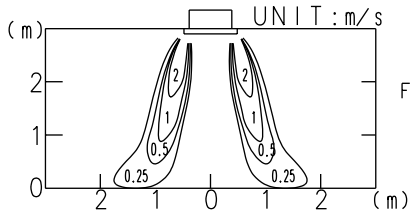


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Downward

2-WAY AIR OUTLET UNIT : m/s

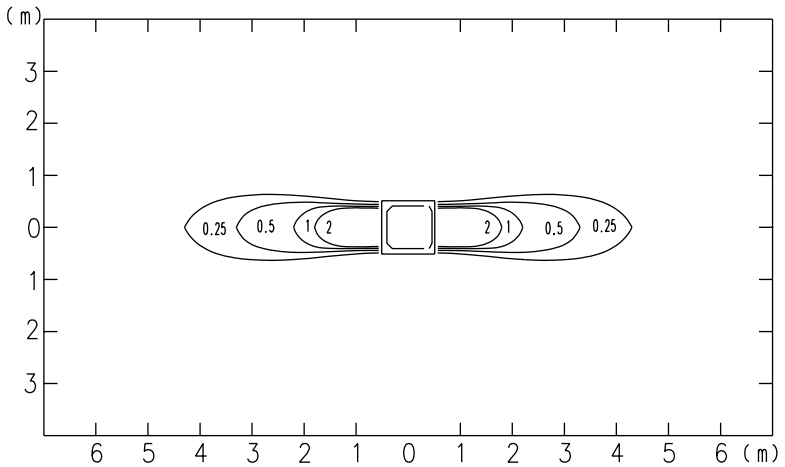


Fig
TOP VIEW
HORIZONTAL LOUVER
:Upward

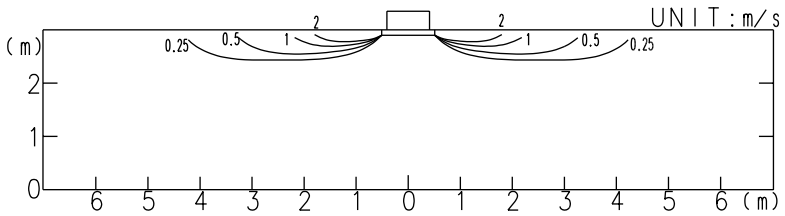


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

INDOOR UNIT

■ MODELS : AUXB12, AUXB14

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

4-WAY AIR OUTLET UNIT : m/s

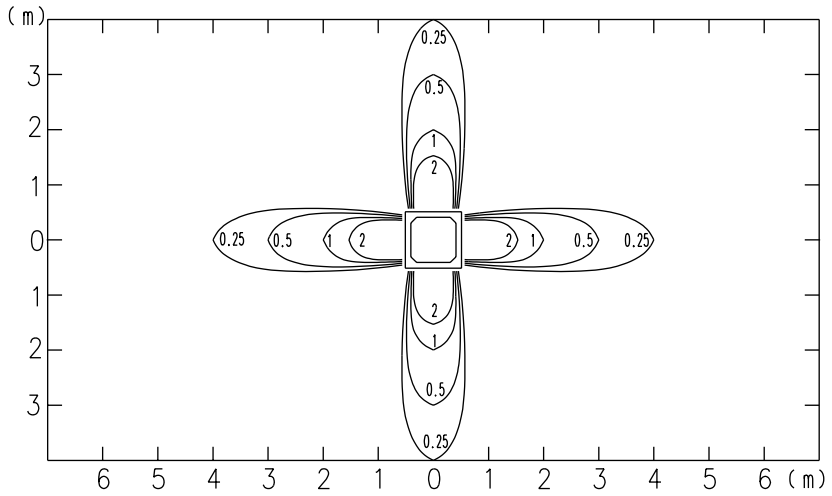


Fig
TOP VIEW
HORIZONTAL LOUVER
:Upward

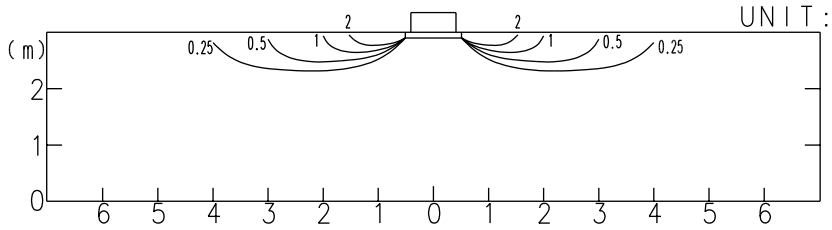


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

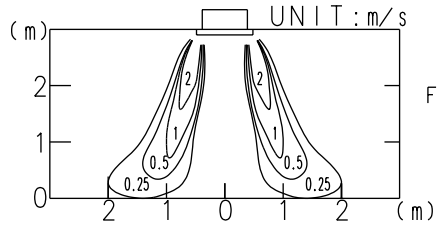
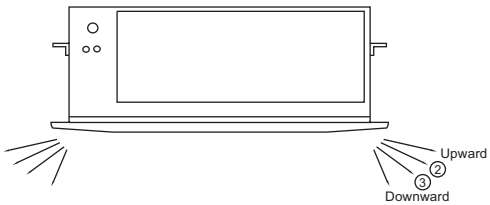


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Downward

AIR DISCHARGE ANGLE



2-WAY AIR OUTLET UNIT : m/s

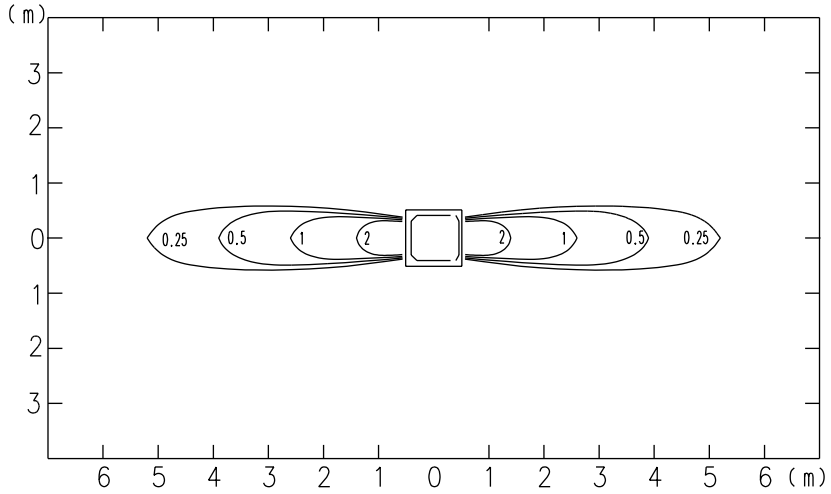


Fig
TOP VIEW
HORIZONTAL LOUVER
:Upward

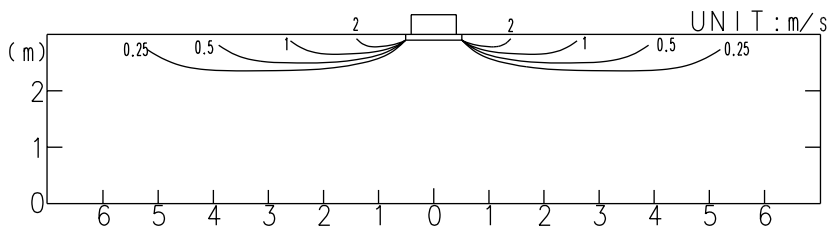


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

INDOOR UNIT

■ MODEL : AUXB18

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

4-WAY AIR OUTLET UNIT:m/s

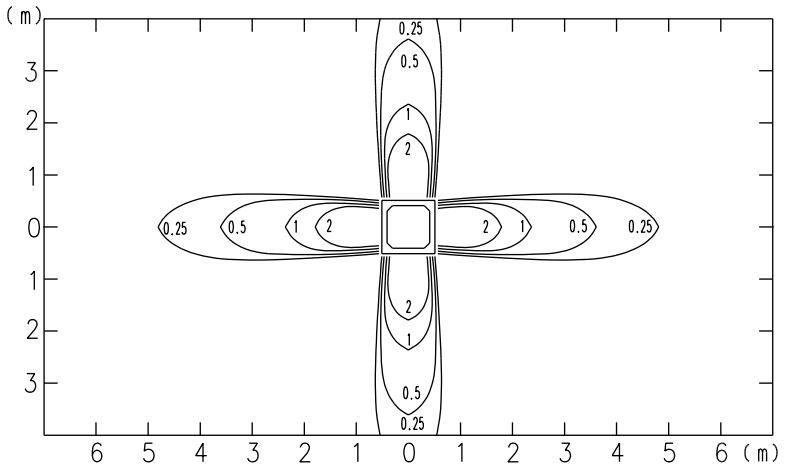


Fig
TOP VIEW
HORIZONTAL LOUVER
:Upward

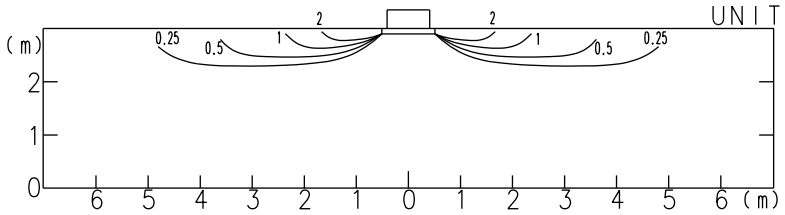


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

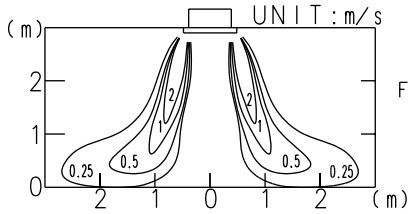
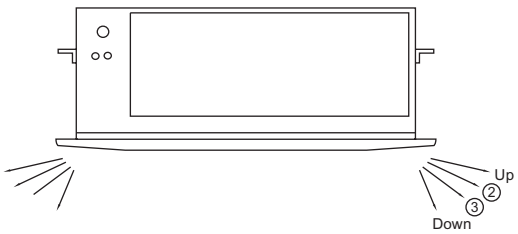


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Downward

AIR DISCHARGE ANGLE



2-WAY AIR OUTLET UNIT:m/s

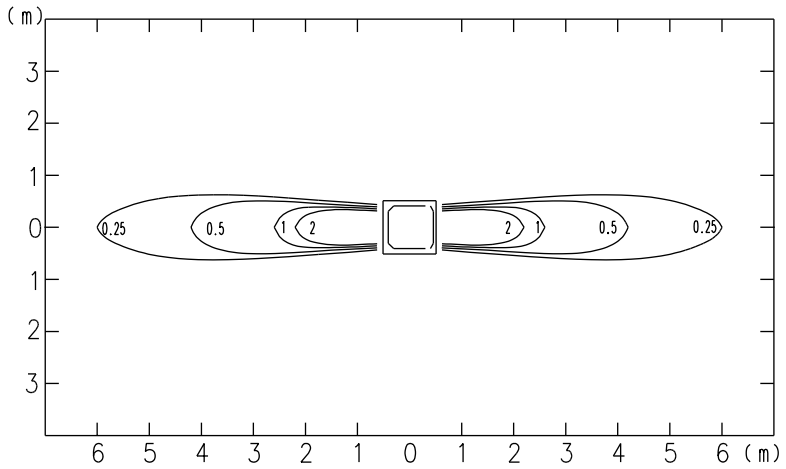


Fig
TOP VIEW
HORIZONTAL LOUVER
:Upward

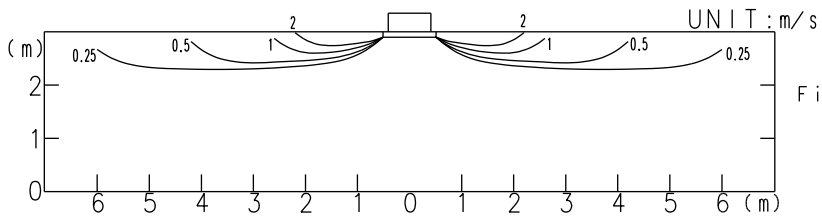


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

INDOOR UNIT

4-9-2. CASSETTE TYPE

■ MODEL : AU∗A20

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

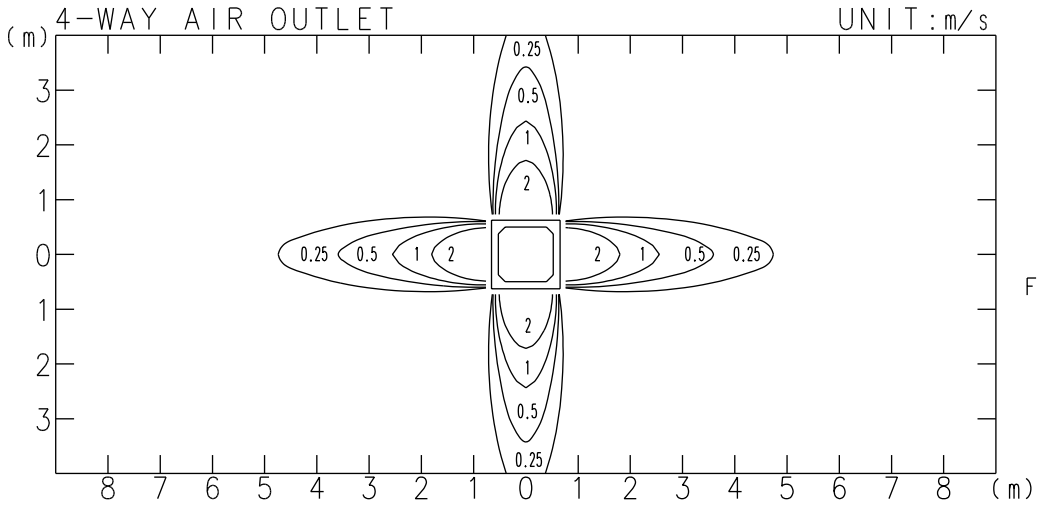


Fig
TOP VIEW
HORIZONTAL LOUVER
:Upward

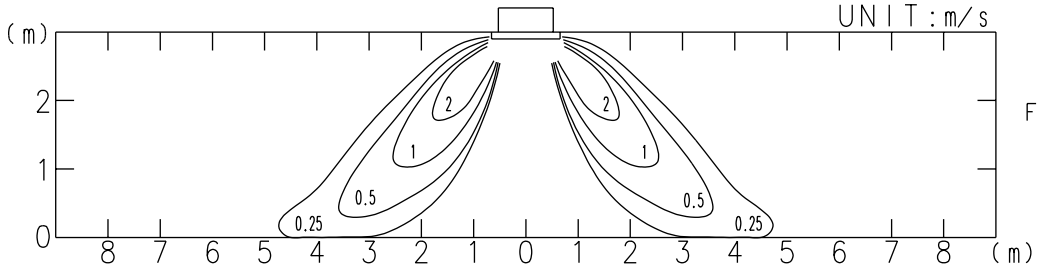


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

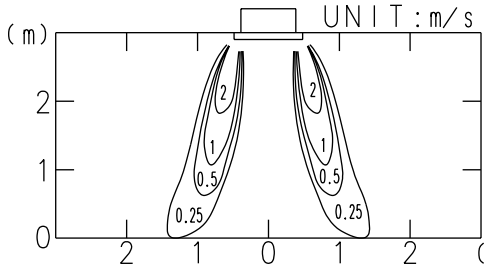


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Downward

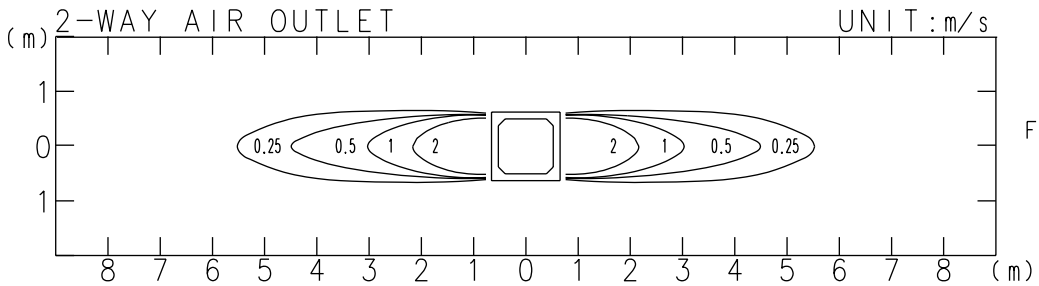


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

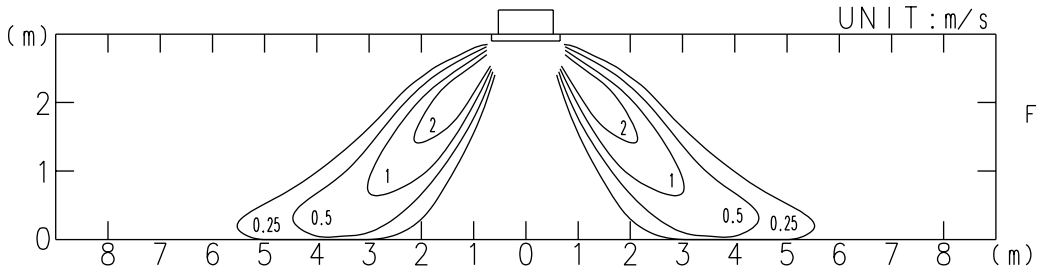
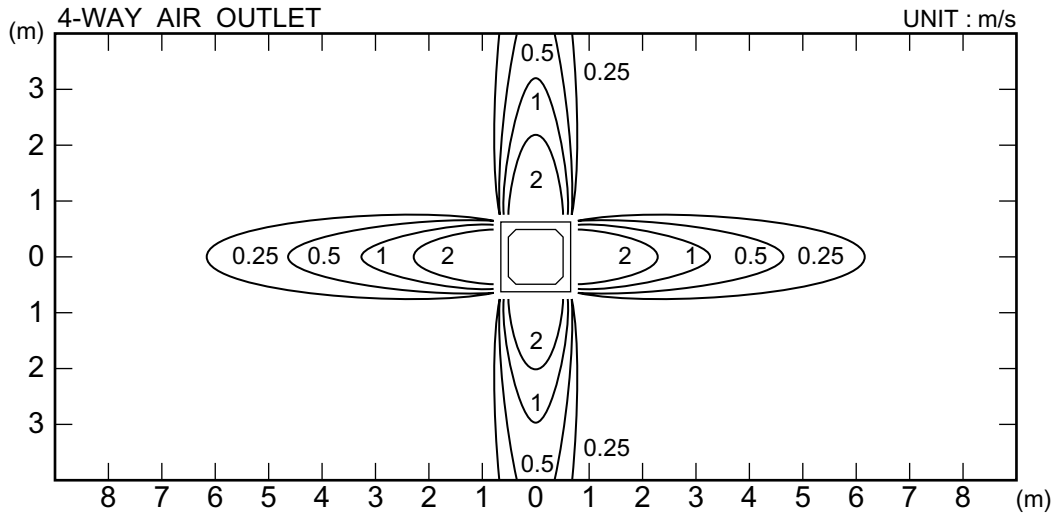


Fig
SIDE VIEW
HORIZONTAL LOUVER
:Upward

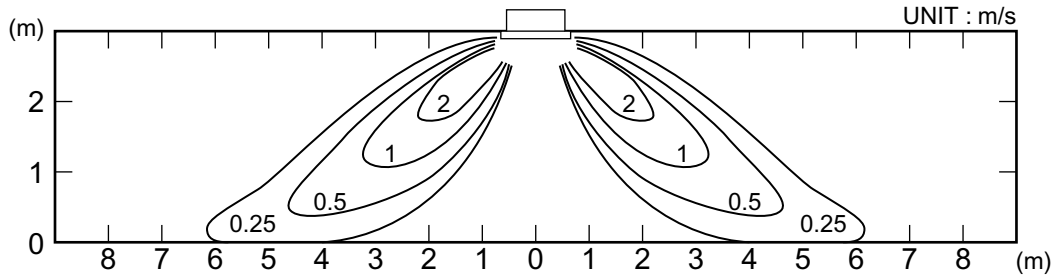
INDOOR UNIT

■ MODEL : AU∗A25

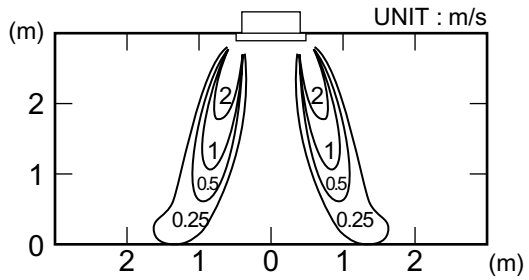
Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V



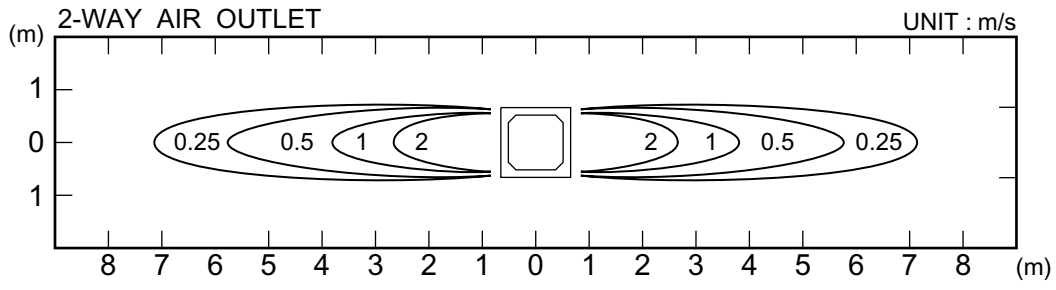
TOP VIEW
AIR FLOW DIRECTION
: Upward



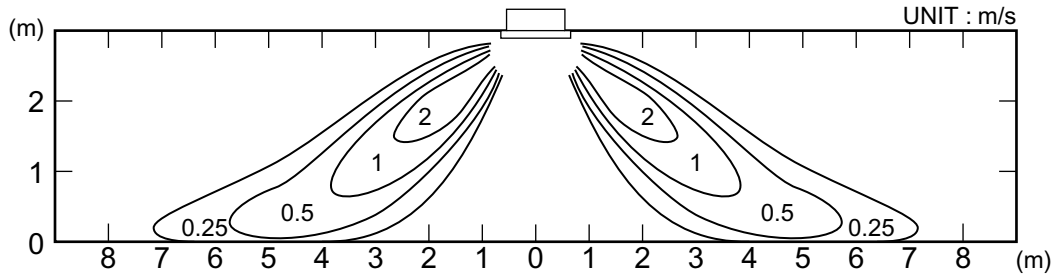
SIDE VIEW
AIR FLOW DIRECTION
: Upward



SIDE VIEW
HORIZONTAL LOUVER
: Downward



TOP VIEW
AIR FLOW DIRECTION
: Upward



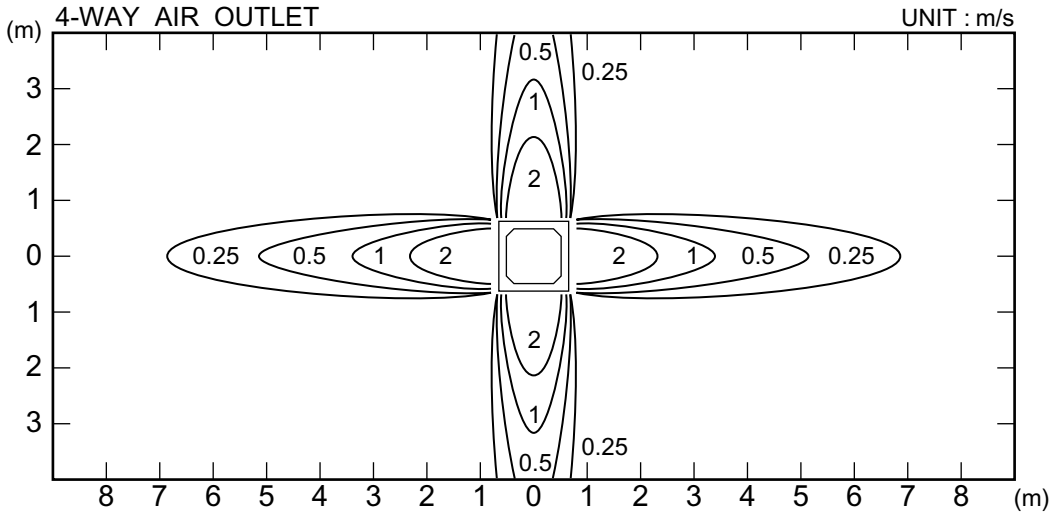
SIDE VIEW
AIR FLOW DIRECTION
: Upward

INDOOR UNIT

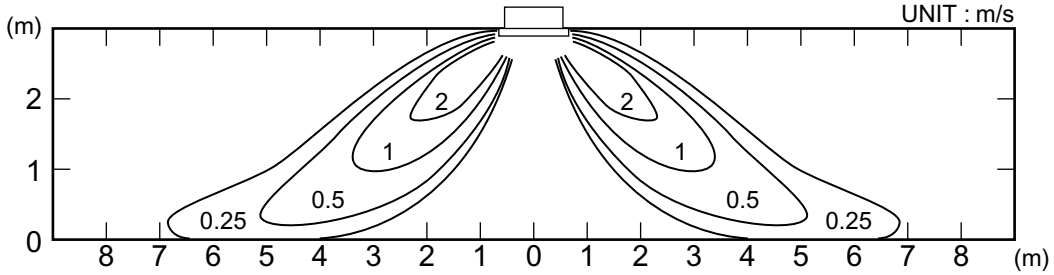
■ MODEL : AU∗A30

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

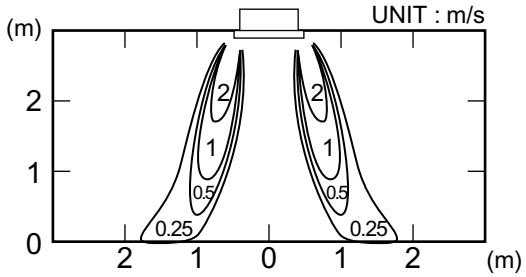
4-WAY AIR OUTLET



TOP VIEW
AIR FLOW DIRECTION
: Upward

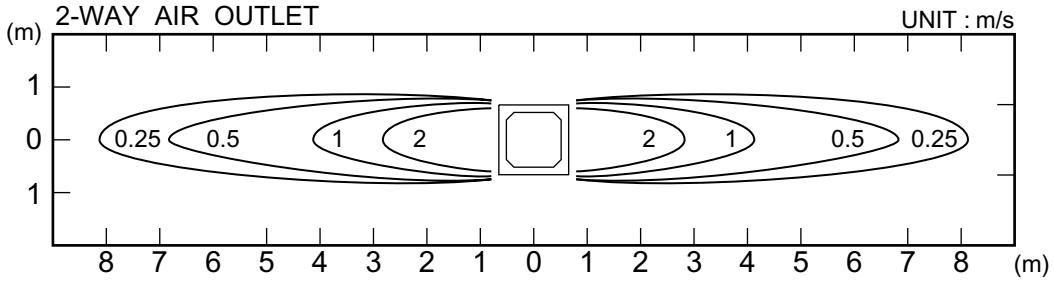


SIDE VIEW
AIR FLOW DIRECTION
: Upward

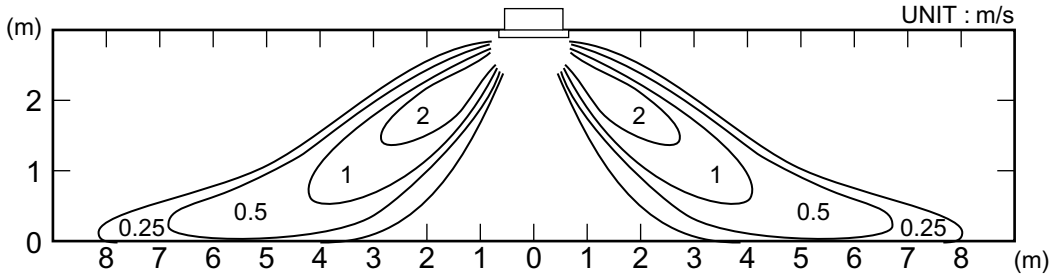


SIDE VIEW
HORIZONTAL LOUVER
: Downward

2-WAY AIR OUTLET



TOP VIEW
AIR FLOW DIRECTION
: Upward



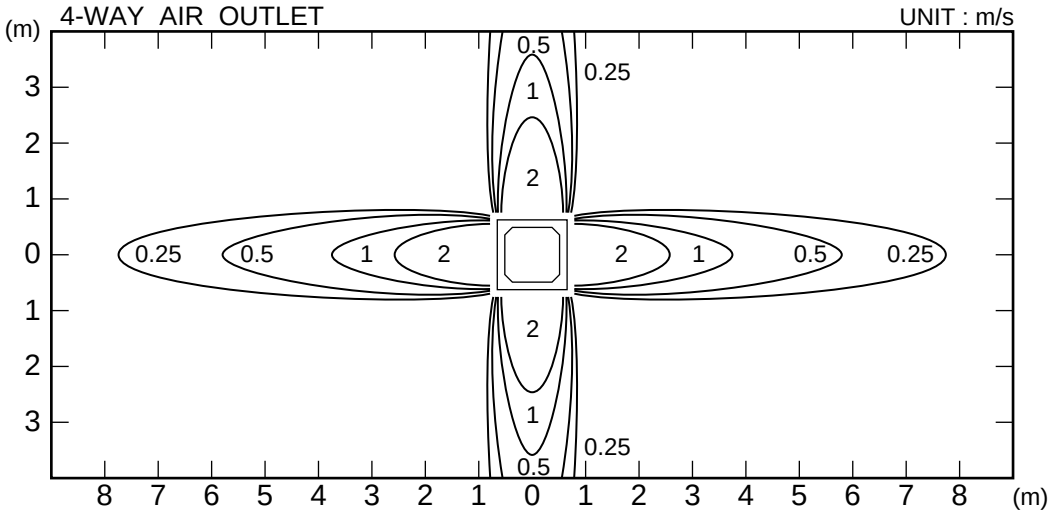
SIDE VIEW
AIR FLOW DIRECTION
: Upward

INDOOR UNIT

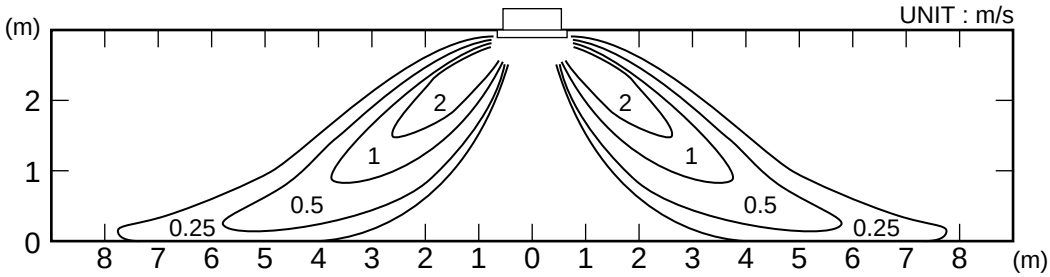
■MODEL : AU∗A36

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

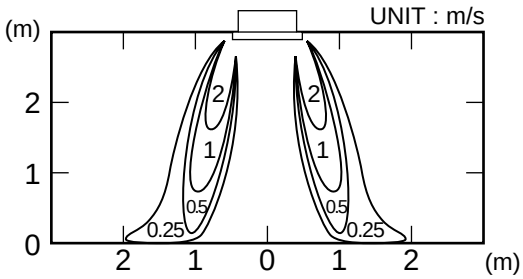
4-WAY AIR OUTLET



TOP VIEW
AIR FLOW DIRECTION
: Upward

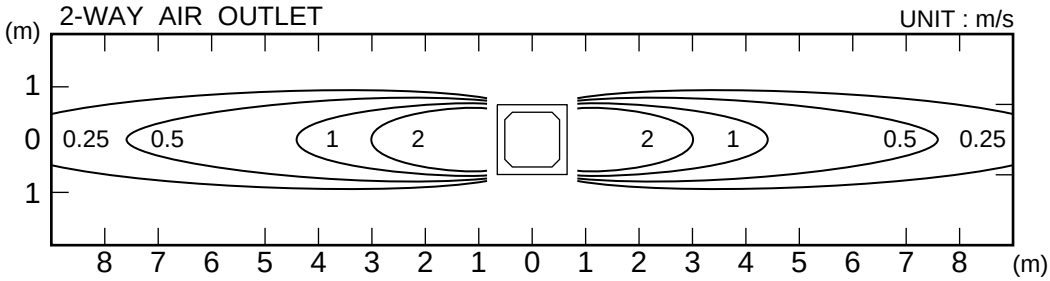


SIDE VIEW
AIR FLOW DIRECTION
: Upward

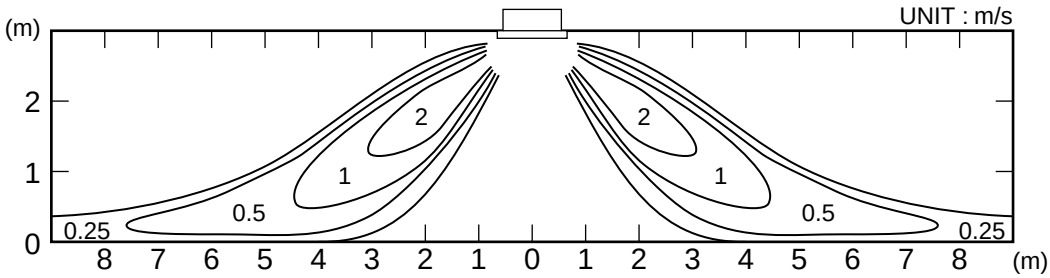


SIDE VIEW
AIR FLOW DIRECTION
: Downward

2-WAY AIR OUTLET



TOP VIEW
AIR FLOW DIRECTION
: Upward



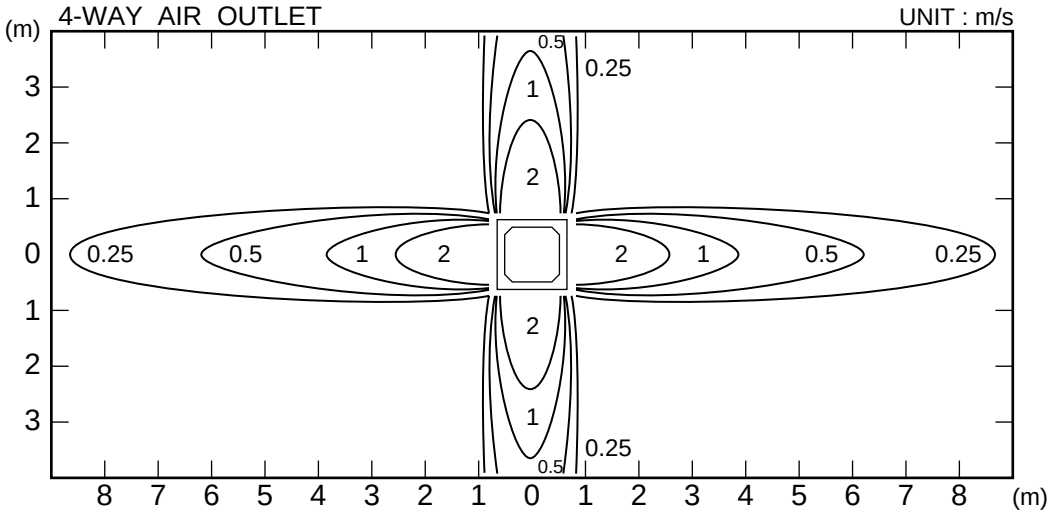
SIDE VIEW
AIR FLOW DIRECTION
: Upward

INDOOR UNIT

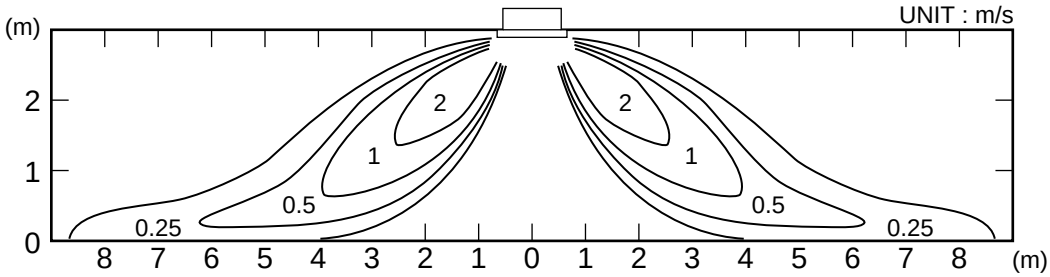
■ MODEL : AU∗A45

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

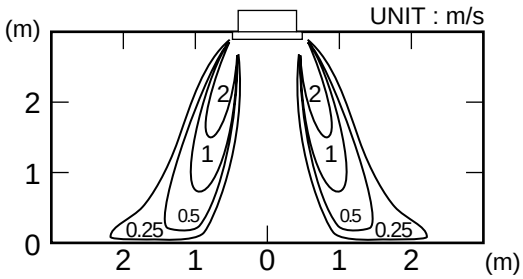
4-WAY AIR OUTLET



TOP VIEW
AIR FLOW DIRECTION
: Upward

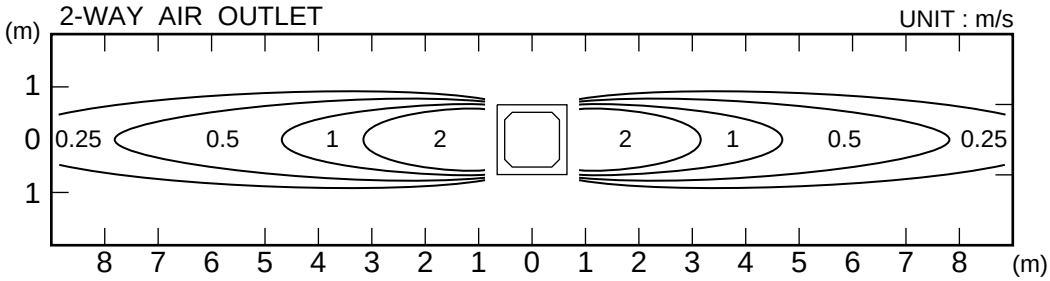


SIDE VIEW
AIR FLOW DIRECTION
: Upward

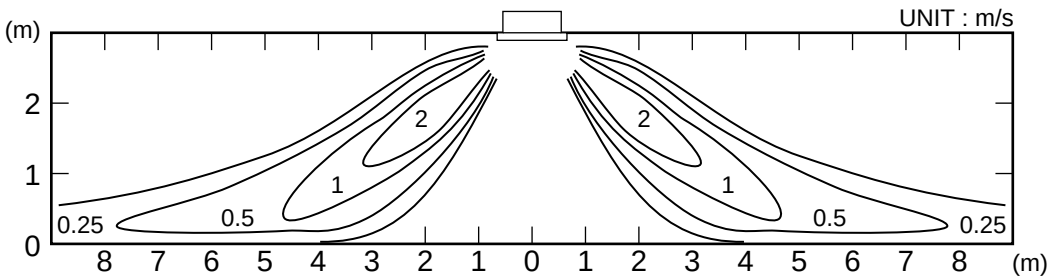


SIDE VIEW
AIR FLOW DIRECTION
: Downward

2-WAY AIR OUTLET



TOP VIEW
AIR FLOW DIRECTION
: Upward



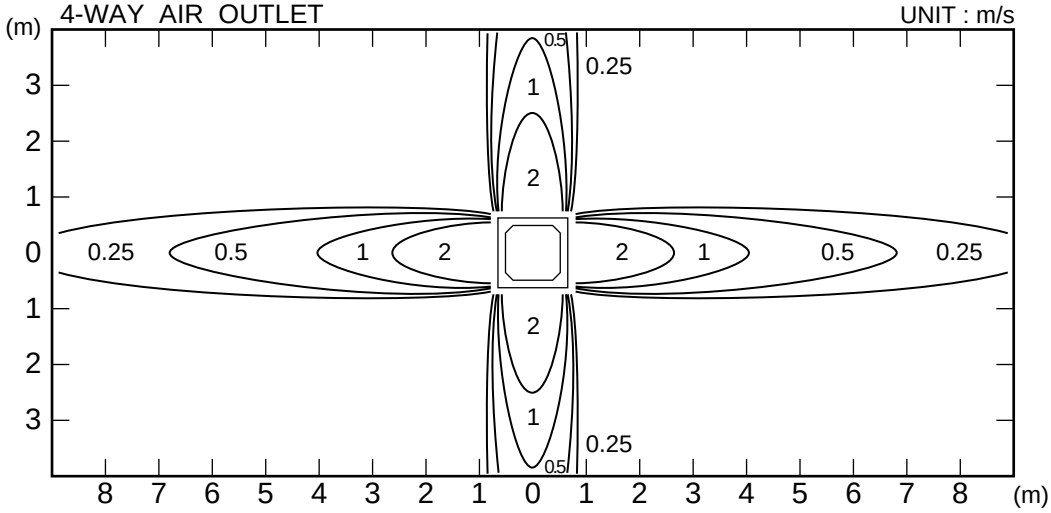
SIDE VIEW
AIR FLOW DIRECTION
: Upward

INDOOR UNIT

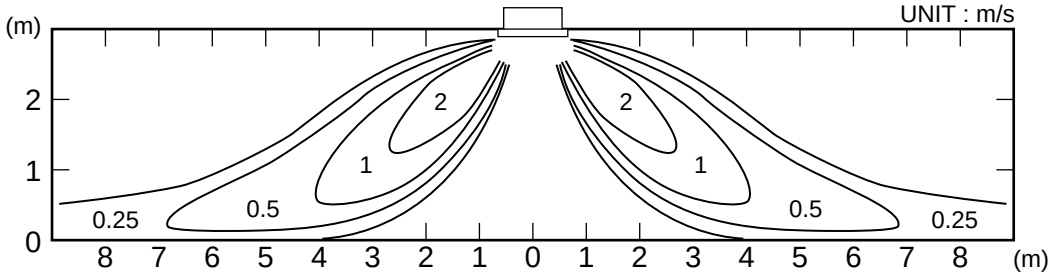
■MODEL : AU∗A54

Conditions
Fan speed : High
Operation mode : Fan
Voltage : 230V

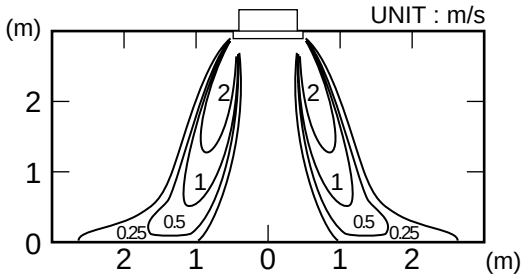
4-WAY AIR OUTLET



TOP VIEW
AIR FLOW DIRECTION
: Upward

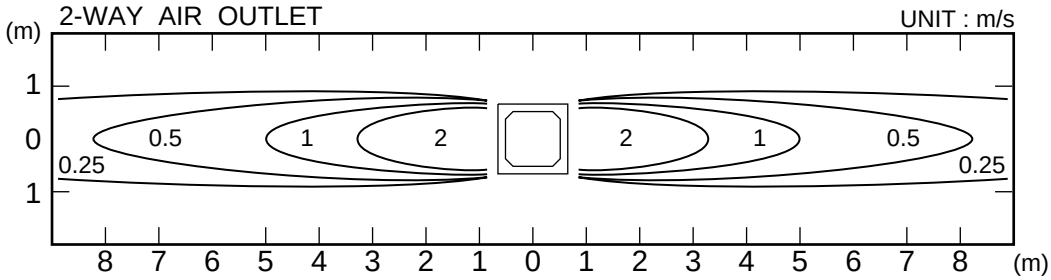


SIDE VIEW
AIR FLOW DIRECTION
: Upward

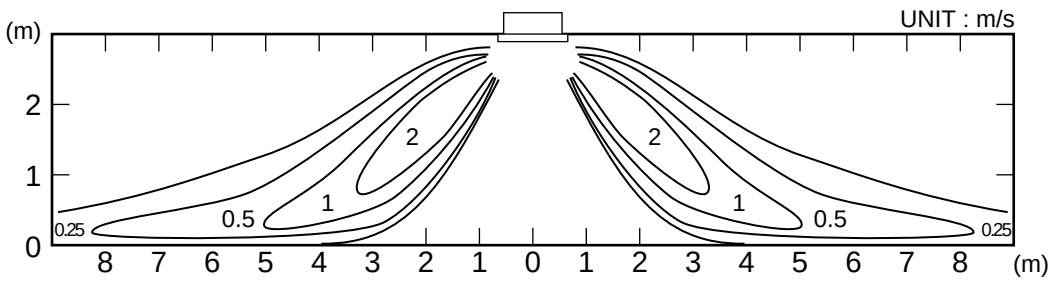


SIDE VIEW
AIR FLOW DIRECTION
: Downward

2-WAY AIR OUTLET



TOP VIEW
AIR FLOW DIRECTION
: Upward



SIDE VIEW
AIR FLOW DIRECTION
: Upward

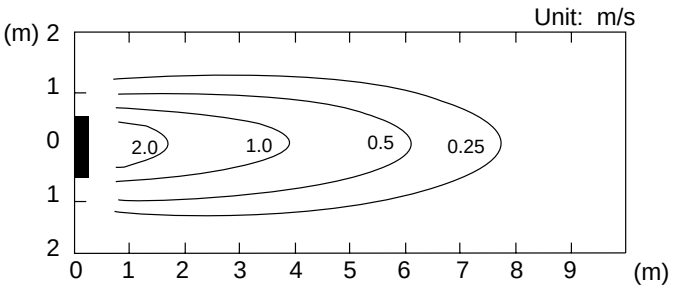
INDOOR UNIT

4-9-3. FLOOR / CEILING TYPE

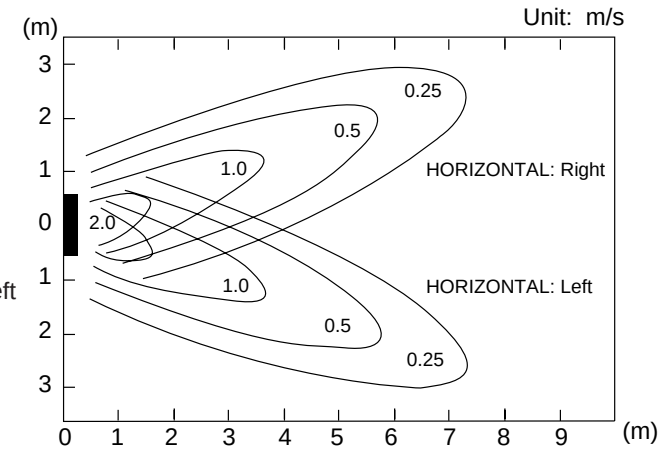
■ MODELS : AB∗A12, AB∗A14 (FLOOR CONSOLE)

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

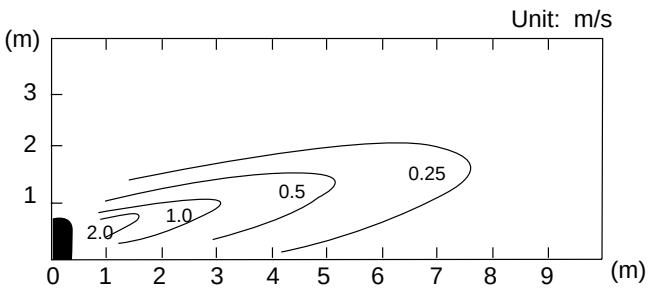
TOP VIEW
VERTICAL : Forward
HORIZONTAL : Center

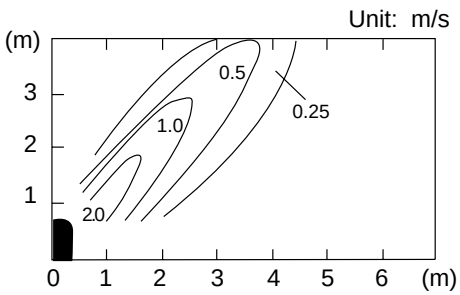


TOP VIEW
VERTICAL : Forward
HORIZONTAL : Right & Left

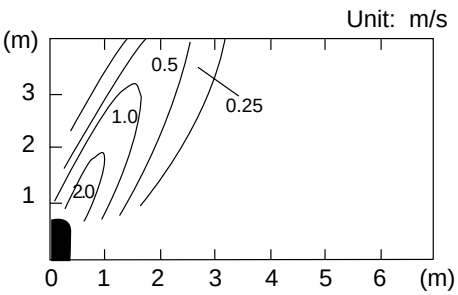


SIDE VIEW
VERTICAL : Forward
HORIZONTAL : Center





SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center

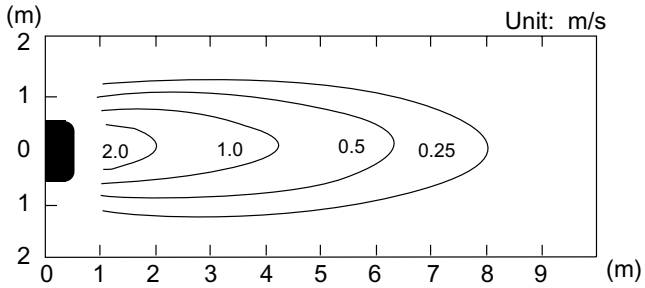


SIDE VIEW
VERTICAL : Upward
HORIZONTAL : Center

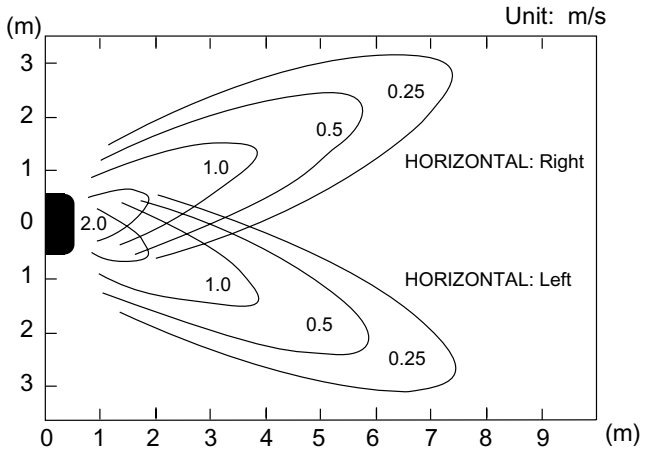
■MODELS : AB∗A12, AB∗A14 (UNDER CEILING)

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

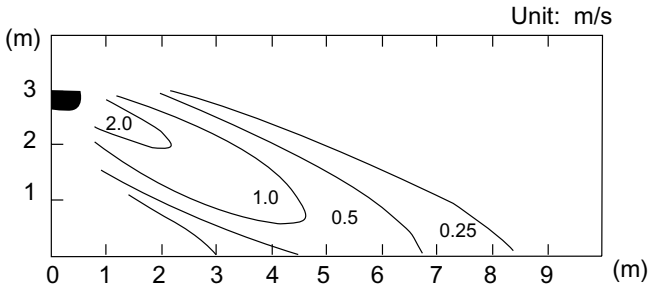
TOP VIEW
VERTICAL : Upward
HORIZONTAL : Center

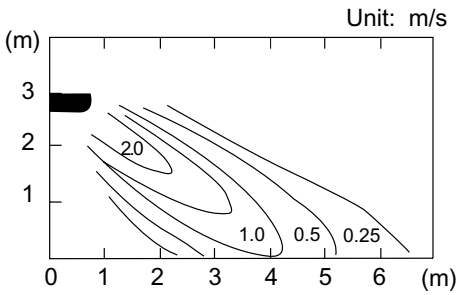


TOP VIEW
VERTICAL : Upward
HORIZONTAL : Right & Left

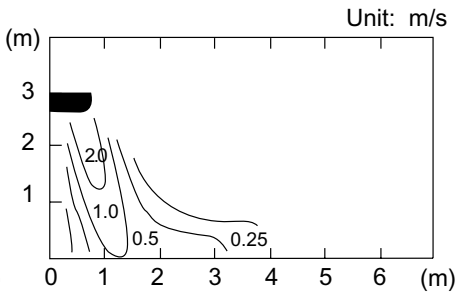


SIDE VIEW
VERTICAL : Upward
HORIZONTAL : Center





SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center



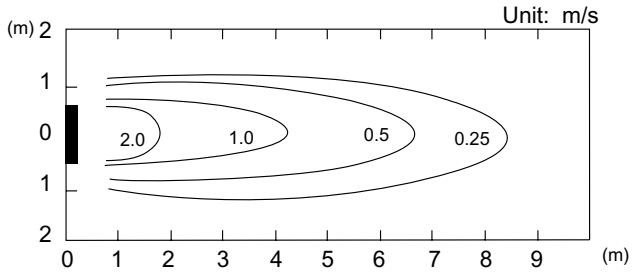
SIDE VIEW
VERTICAL : Downward
HORIZONTAL : Center

INDOOR UNIT

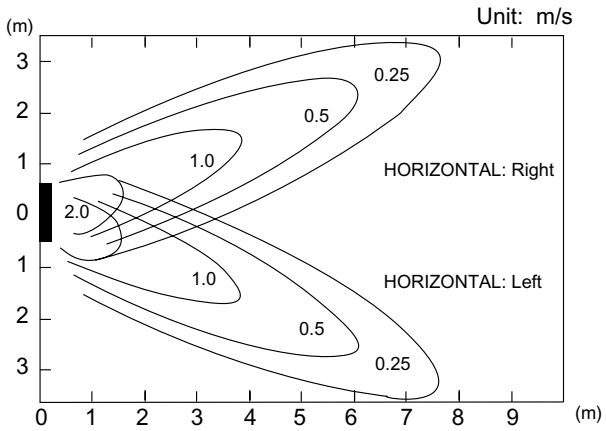
■MODEL : AB∗A18 (FLOOR CONSOLE)

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

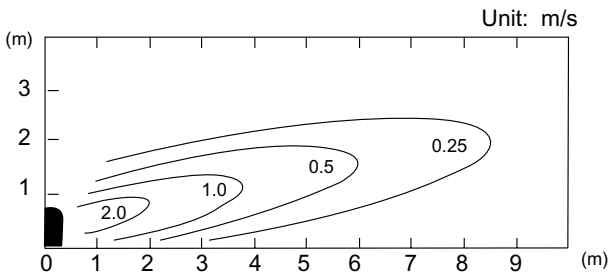
TOP VIEW
VERTICAL : Forward
HORIZONTAL : Center

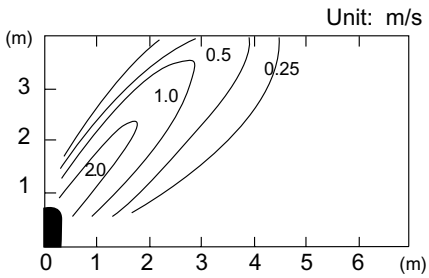


TOP VIEW
VERTICAL : Forward
HORIZONTAL : Right & Left

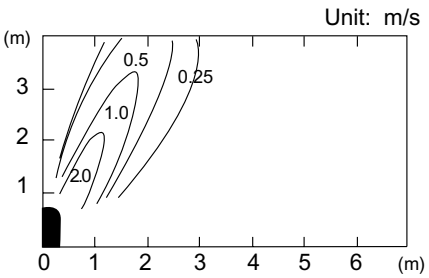


SIDE VIEW
VERTICAL : Forward
HORIZONTAL : Center





SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center



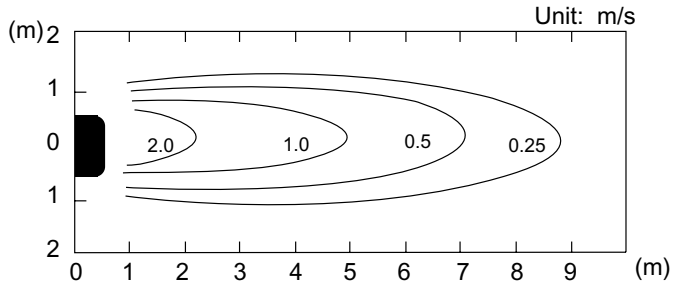
SIDE VIEW
VERTICAL : Up
HORIZONTAL : Center

INDOOR UNIT

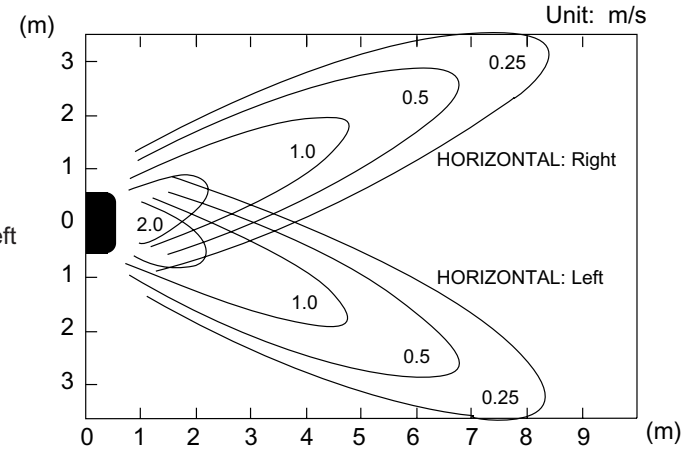
■MODEL : AB∗A18 (UNDER CEILING)

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

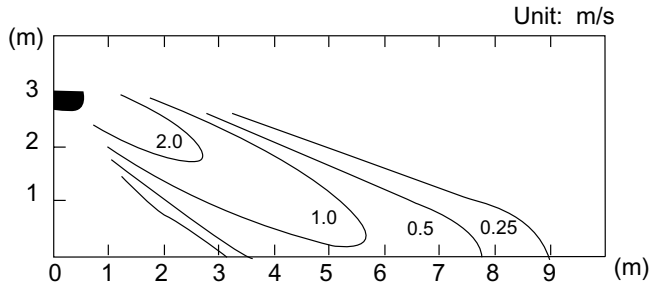
TOP VIEW
VERTICAL : Up
HORIZONTAL : Center

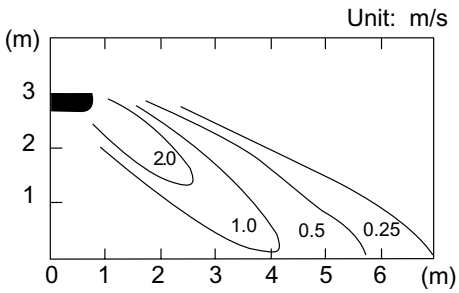


TOP VIEW
VERTICAL : Up
HORIZONTAL : Right & Left

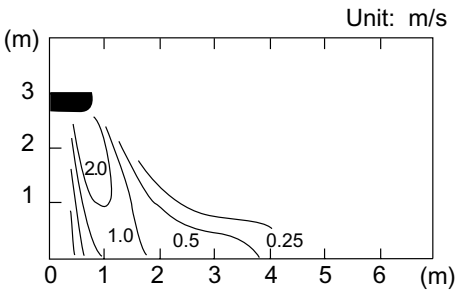


SIDE VIEW
VERTICAL : Forward
HORIZONTAL : Center





SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center



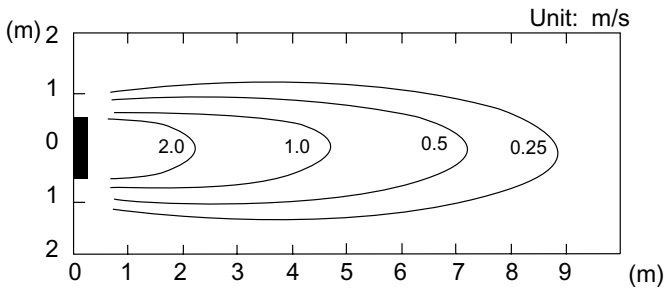
SIDE VIEW
VERTICAL : Down
HORIZONTAL : Center

INDOOR UNIT

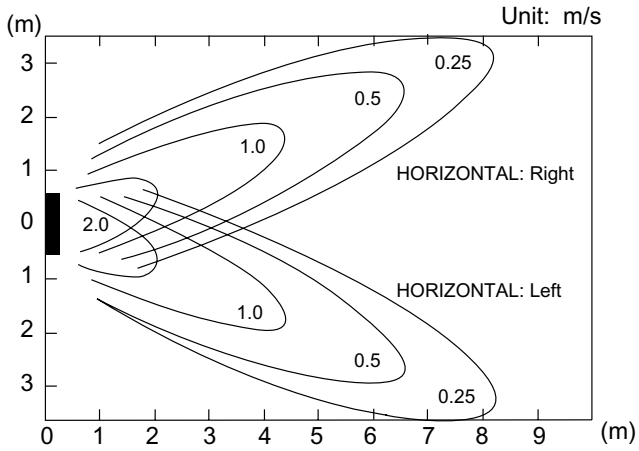
■MODEL : AB∗A24 (FLOOR CONSOLE)

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

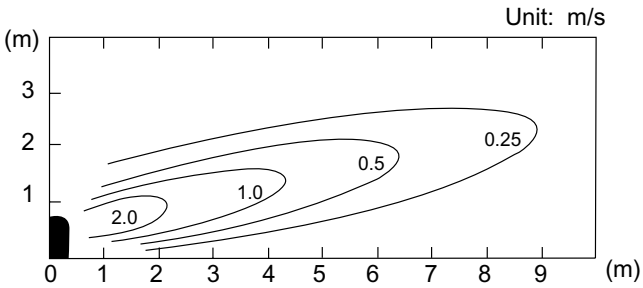
TOP VIEW
VERTICAL : Forward
HORIZONTAL : Center



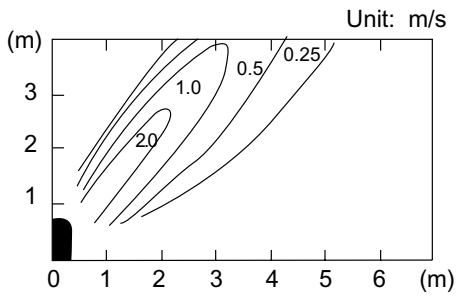
TOP VIEW
VERTICAL : Forward
HORIZONTAL : Right & Left



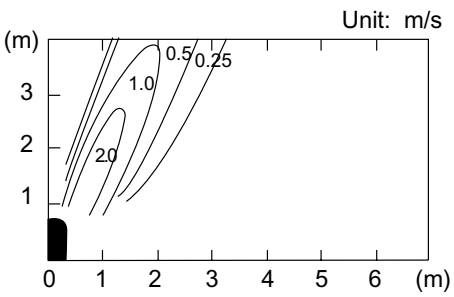
SIDE VIEW
VERTICAL : Forward
HORIZONTAL : Center



SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center



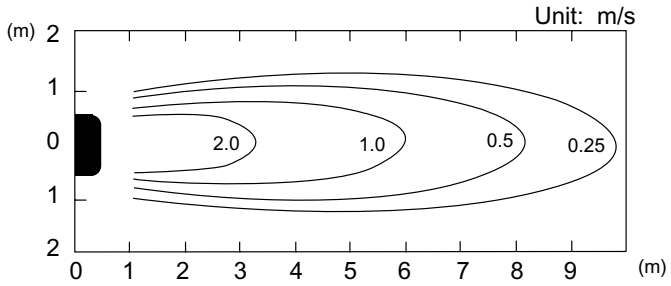
SIDE VIEW
VERTICAL : Up
HORIZONTAL : Center



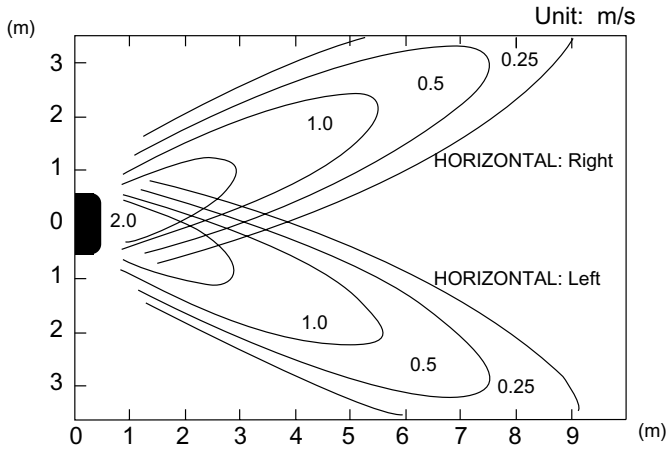
■MODEL : AB∗A24 (UNDER CEILING)

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

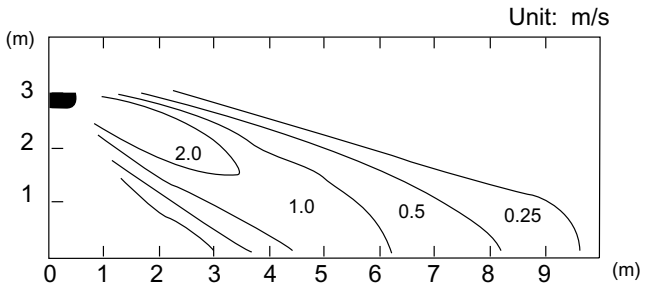
TOP VIEW
VERTICAL : Up
HORIZONTAL : Center

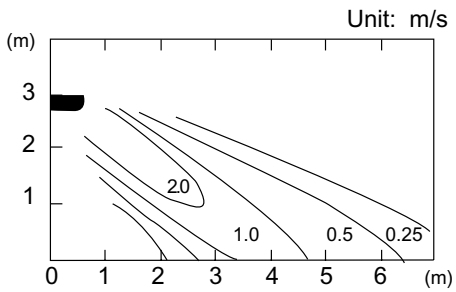


TOP VIEW
VERTICAL : Up
HORIZONTAL : Right & Left

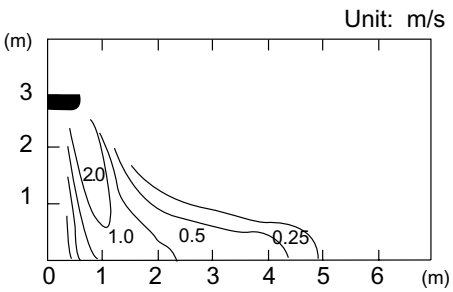


SIDE VIEW
VERTICAL : Up
HORIZONTAL : Center





SIDE VIEW
VERTICAL : Center
HORIZONTAL : Center



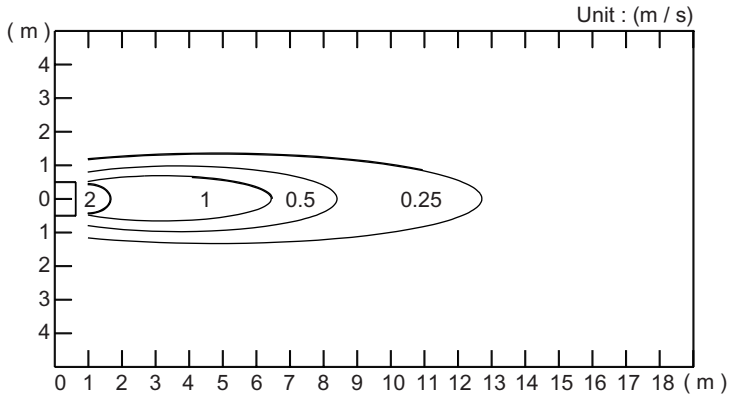
SIDE VIEW
VERTICAL : Down
HORIZONTAL : Center

INDOOR UNIT

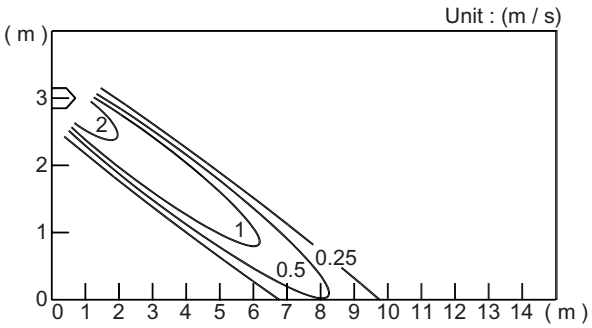
4-9-4. CEILING TYPE

■MODEL : AB∗A30

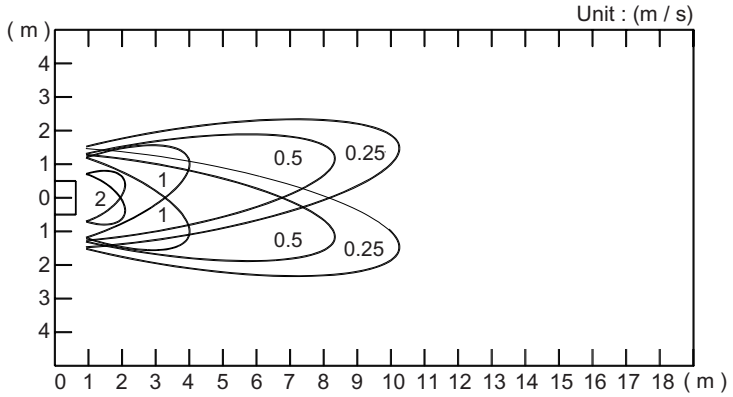
Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V



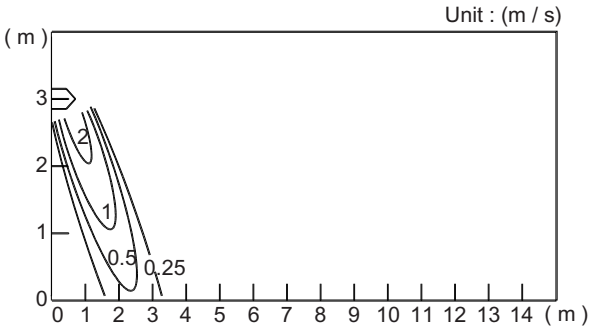
TOP VIEW
VERTICAL : UP
HORIZONTAL : CENTER



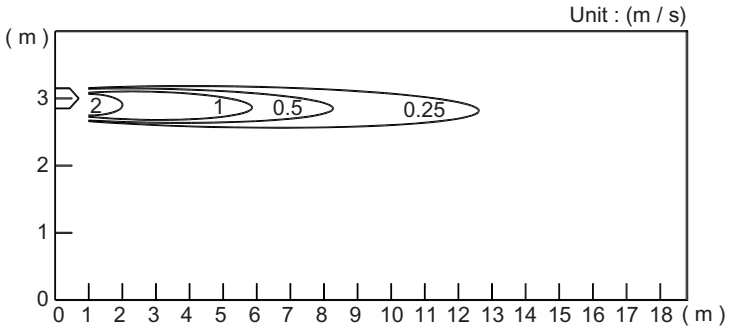
SIDE VIEW
FLAP : CENTER
HORIZONTAL : CENTER



TOP VIEW
VERTICAL : UP
HORIZONTAL : RIGHT AND LEFT



SIDE VIEW
FLAP : DOWN
HORIZONTAL : CENTER



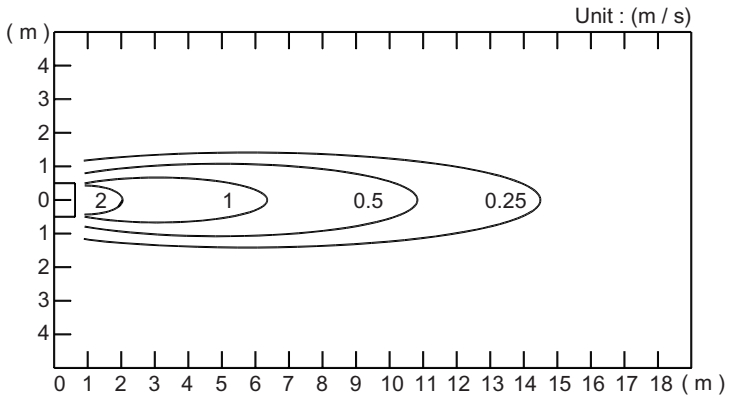
SIDE VIEW
FLAP : UP
HORIZONTAL : CENTER

INDOOR UNIT

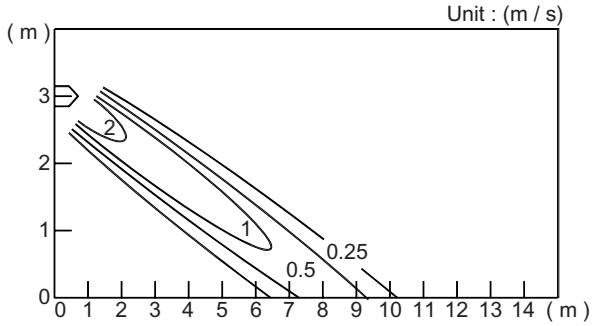
INDOOR UNIT

■MODEL : AB*A36

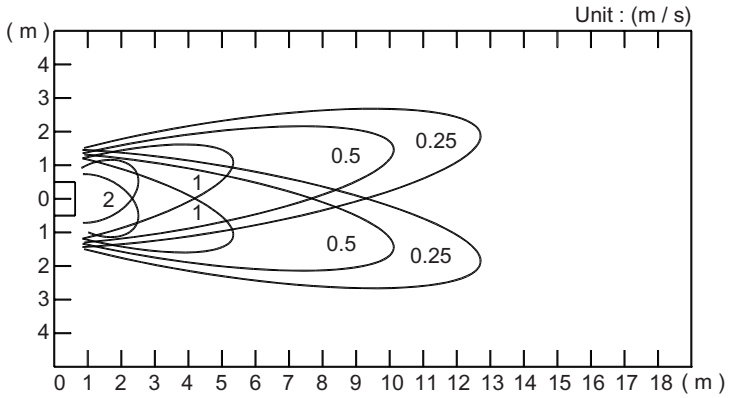
Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V



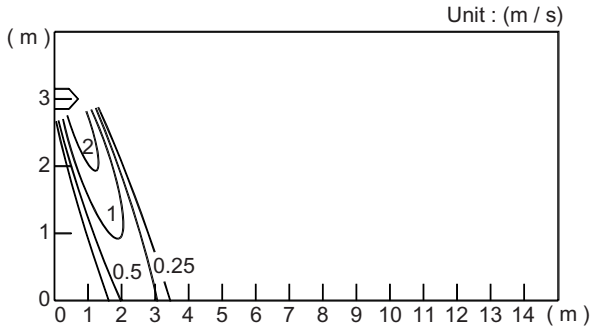
TOP VIEW
VERTICAL : UP
HORIZONTAL : CENTER



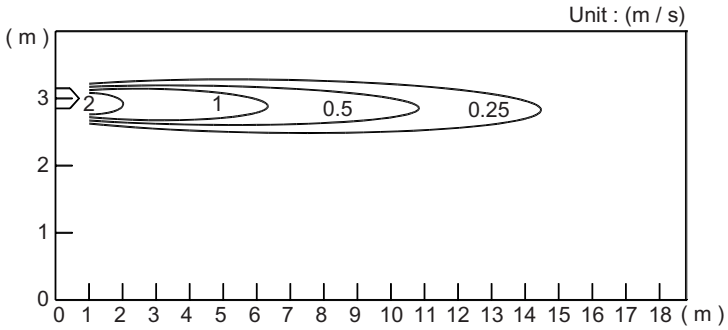
SIDE VIEW
FLAP : CENTER
HORIZONTAL : CENTER



TOP VIEW
VERTICAL : UP
HORIZONTAL : RIGHT AND LEFT



SIDE VIEW
FLAP : DOWN
HORIZONTAL : CENTER



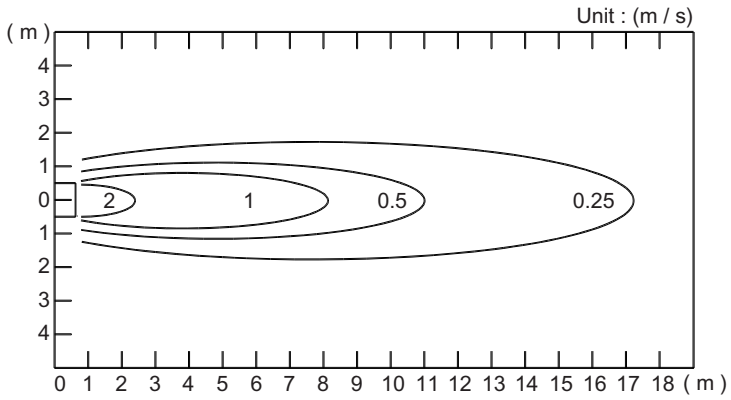
SIDE VIEW
FLAP : UP
HORIZONTAL : CENTER

INDOOR UNIT

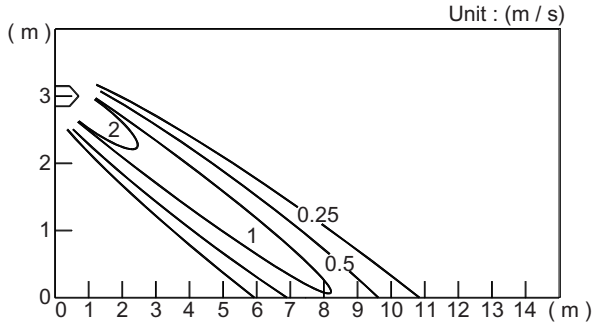
INDOOR UNIT

■MODEL : AB*A45

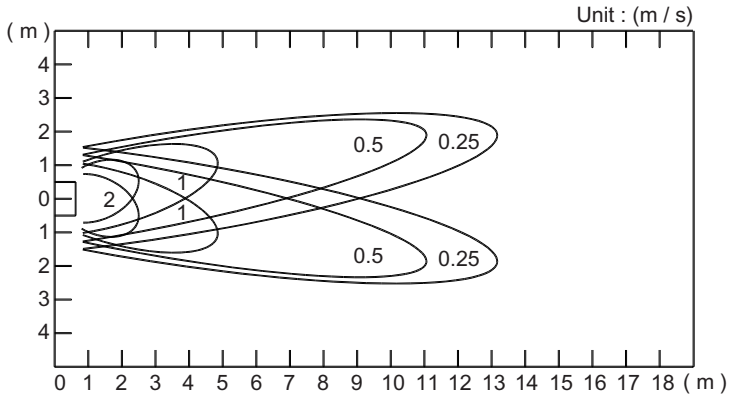
Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V



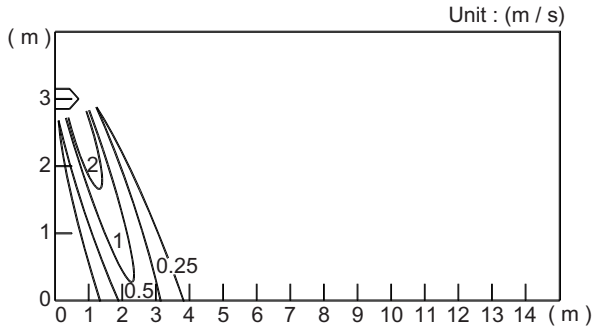
TOP VIEW
VERTICAL : UP
HORIZONTAL : CENTER



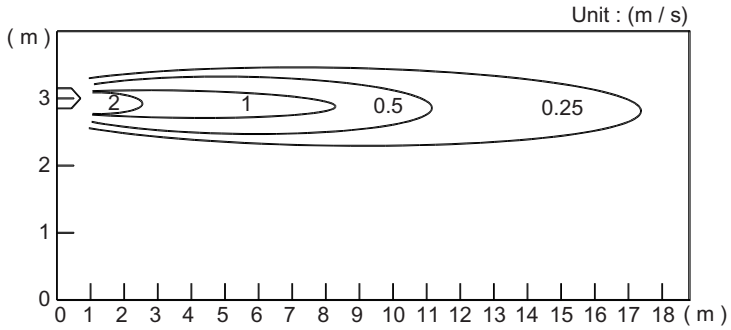
SIDE VIEW
FLAP : CENTER
HORIZONTAL : CENTER



TOP VIEW
VERTICAL : UP
HORIZONTAL : RIGHT AND LEFT



SIDE VIEW
FLAP : DOWN
HORIZONTAL : CENTER

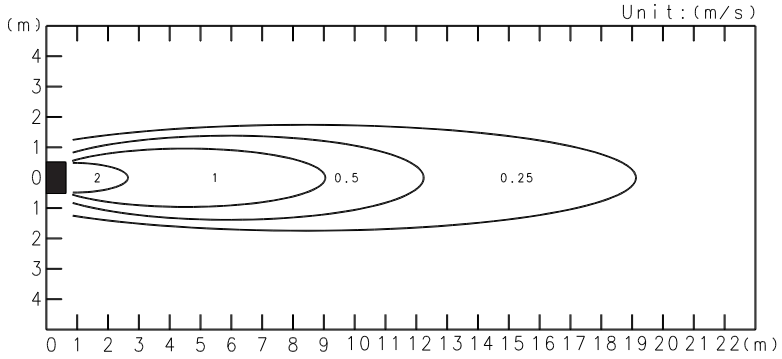


SIDE VIEW
FLAP : UP
HORIZONTAL : CENTER

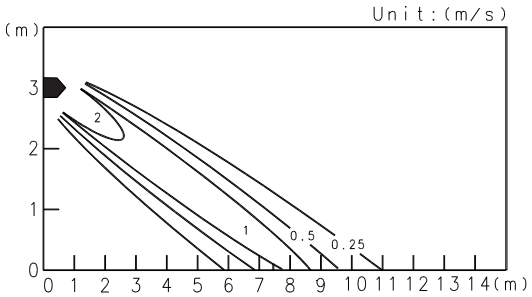
INDOOR UNIT

■MODEL : AB∗A54

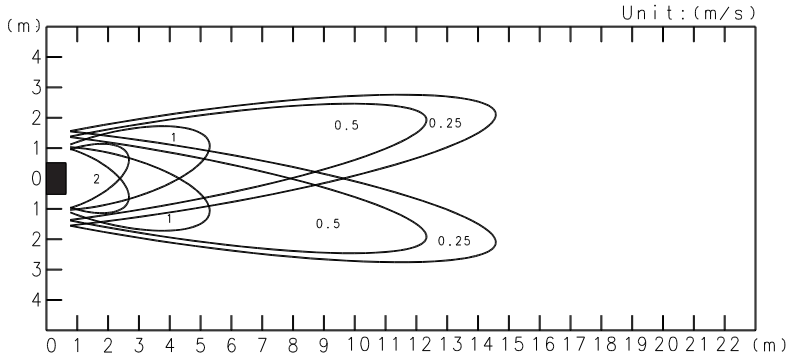
Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V



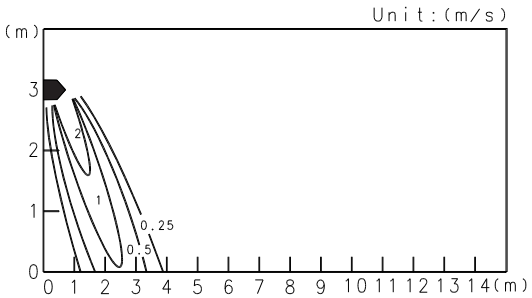
TOP VIEW
VERTICAL : UP
HORIZONTAL : CENTER



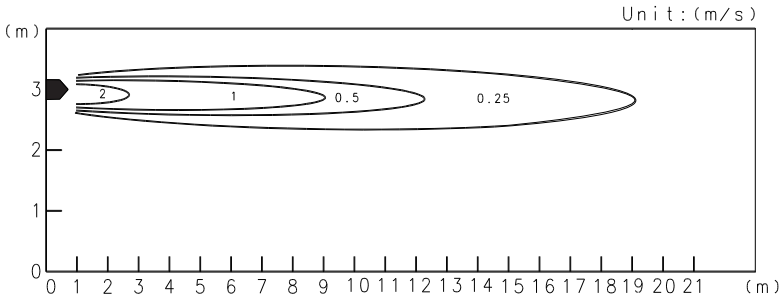
SIDE VIEW
FLAP : CENTER
HORIZONTAL : CENTER



TOP VIEW
VERTICAL : UP
HORIZONTAL : RIGHT AND LEFT



SIDE VIEW
FLAP : DOWN
HORIZONTAL : CENTER

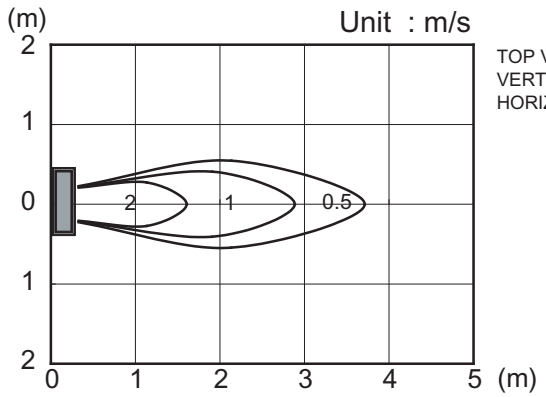


SIDE VIEW
FLAP : UP
HORIZONTAL : CENTER

INDOOR UNIT

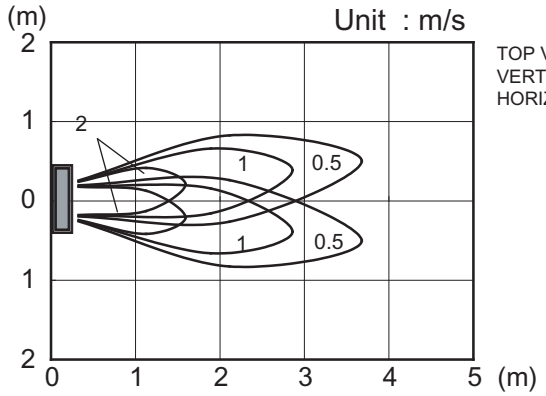
4-9-5. COMPACT WALL MOUNTED TYPE (Comfort model)

■MODELS : AS∗E07, AS∗E09

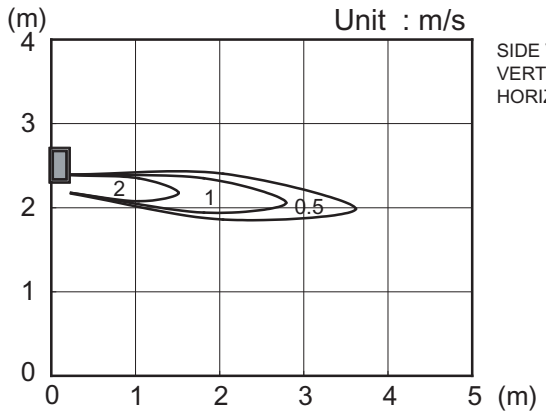


TOP VIEW
VERTICAL FLAP : Horiz.
HORIZONTAL FLAP : Center

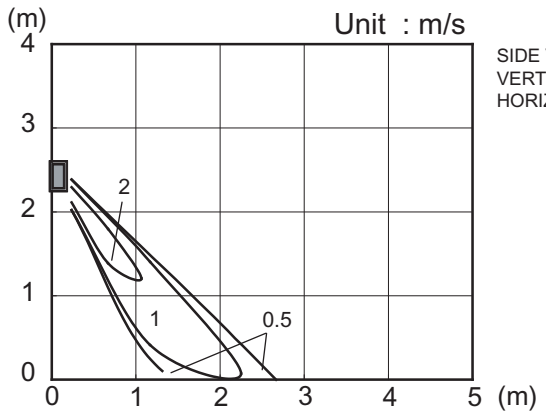
Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V



TOP VIEW
VERTICAL FLAP : Horiz.
HORIZONTAL FLAP : Right & Left



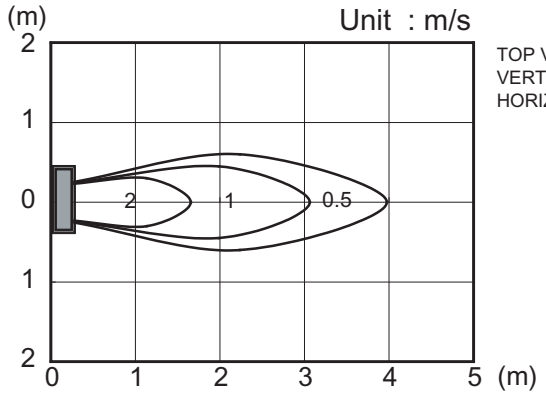
SIDE VIEW
VERTICAL FLAP : Horiz.
HORIZONTAL FLAP : Center



SIDE VIEW
VERTICAL FLAP : Vert.
HORIZONTAL FLAP : Center

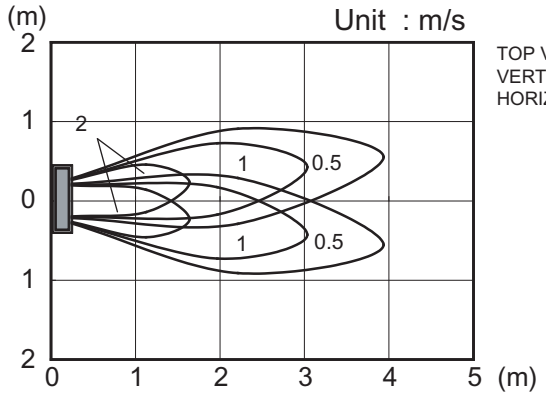
INDOOR UNIT

■MODEL : AS*E12

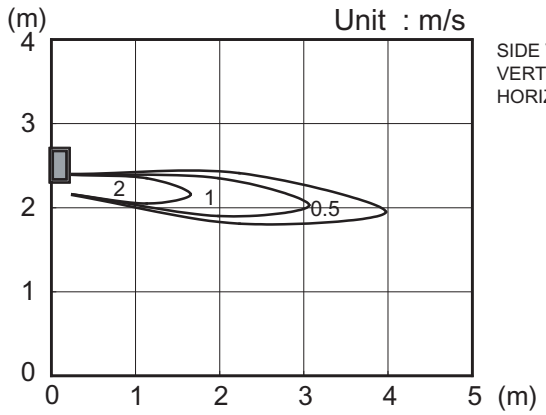


TOP VIEW
VERTICAL FLAP : Horiz.
HORIZONTAL FLAP : Center

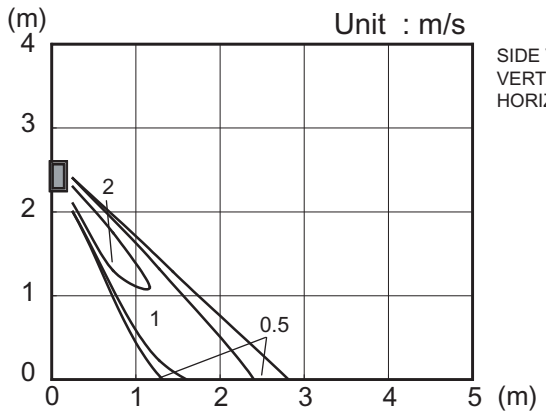
Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V



TOP VIEW
VERTICAL FLAP : Horiz.
HORIZONTAL FLAP : Right & Left



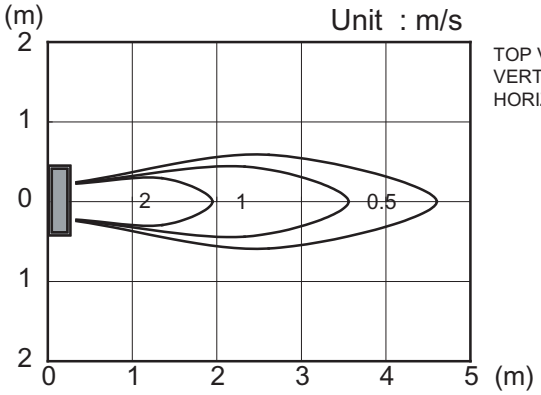
SIDE VIEW
VERTICAL FLAP : Horiz.
HORIZONTAL FLAP : Center



SIDE VIEW
VERTICAL FLAP : Vert.
HORIZONTAL FLAP : Center

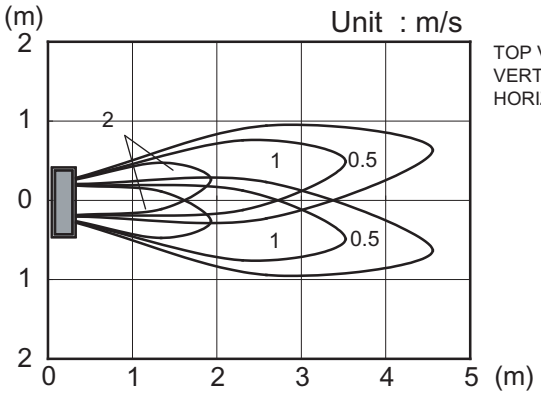
INDOOR UNIT

■MODEL : AS∗E14

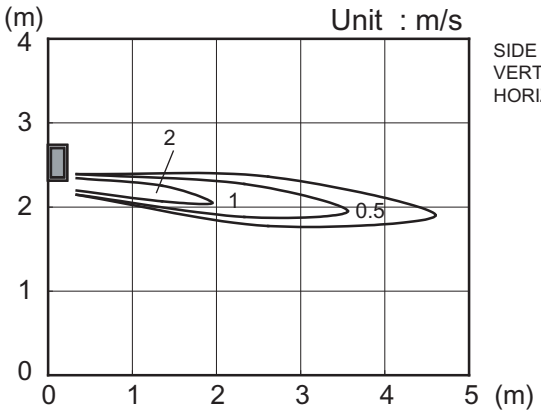


TOP VIEW
VERTICAL FLAP : Horiz.
HORIZONTAL FLAP : Center

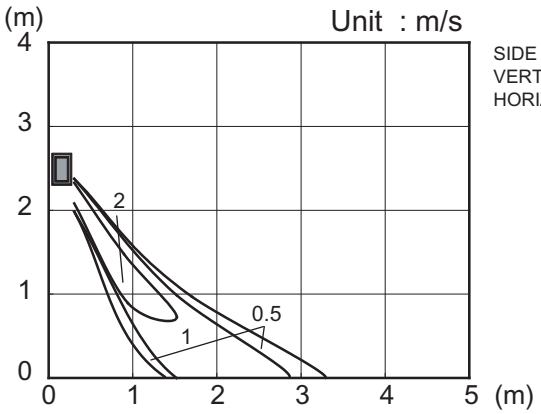
Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V



TOP VIEW
VERTICAL FLAP : Horiz.
HORIZONTAL FLAP : Right & Left



SIDE VIEW
VERTICAL FLAP : Horiz.
HORIZONTAL FLAP : Center



SIDE VIEW
VERTICAL FLAP : Vert.
HORIZONTAL FLAP : Center

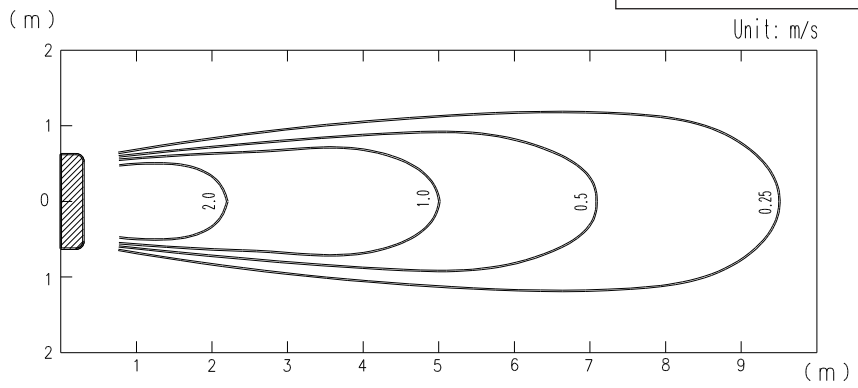
INDOOR UNIT

4-9-6. WALL MOUNTED TYPE

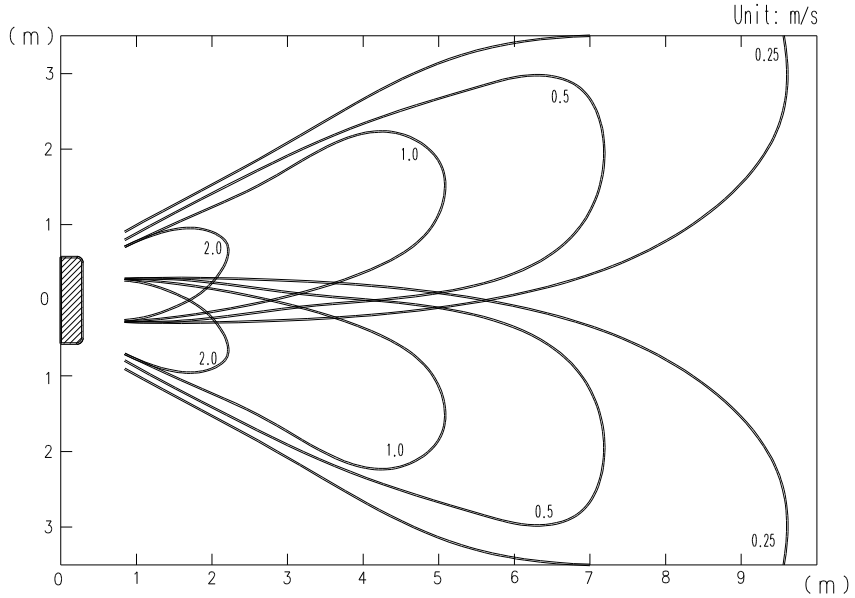
■ MODEL : AS*A18

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

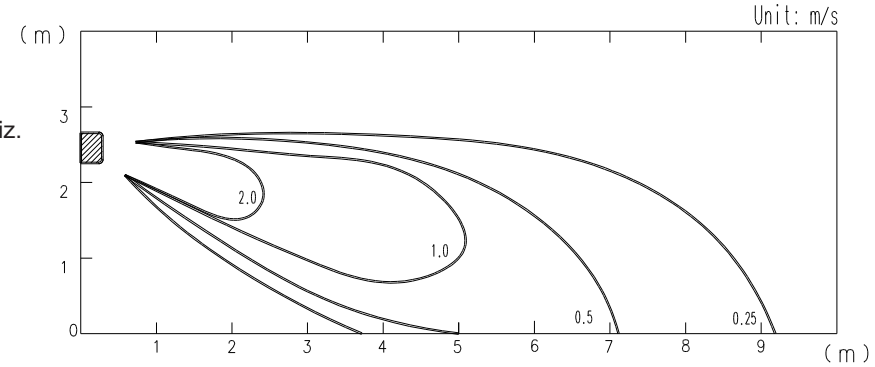
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



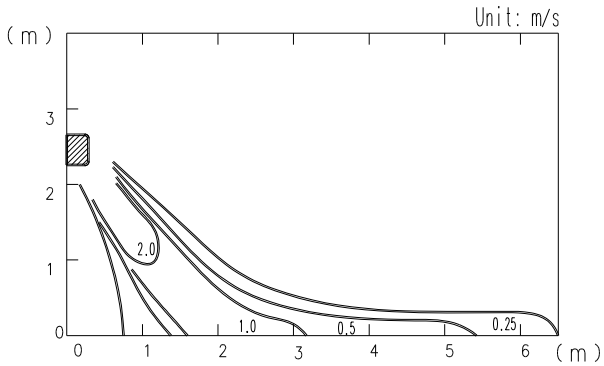
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FRONT CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center

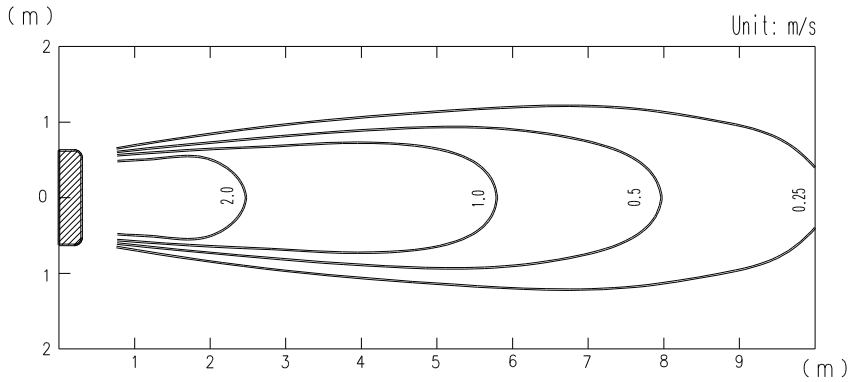


INDOOR UNIT

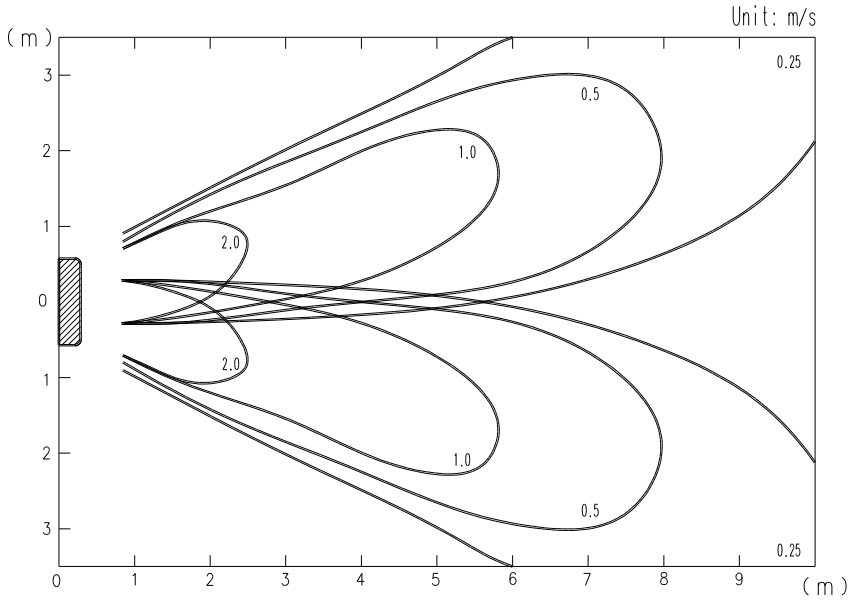
■ MODEL : AS*A24

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

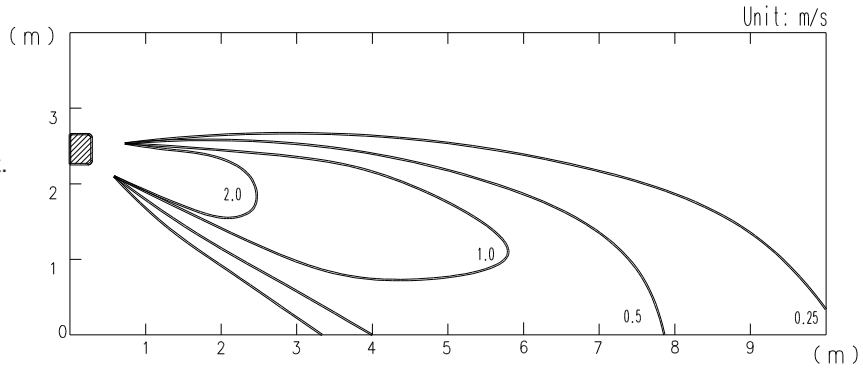
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



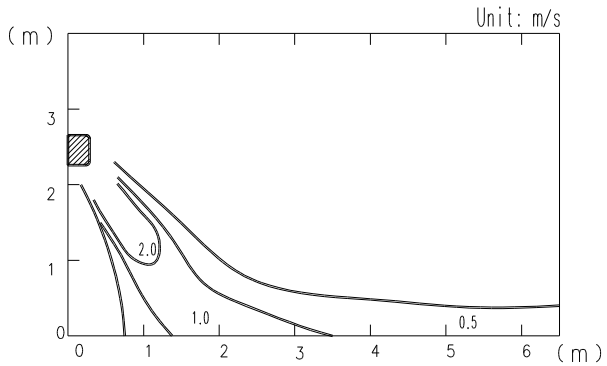
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FRONT CONTROL PANEL : Horiz.
LOUVER : Center



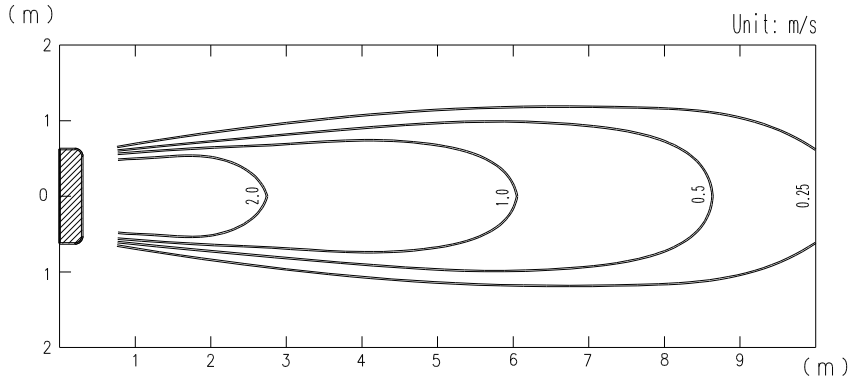
SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center



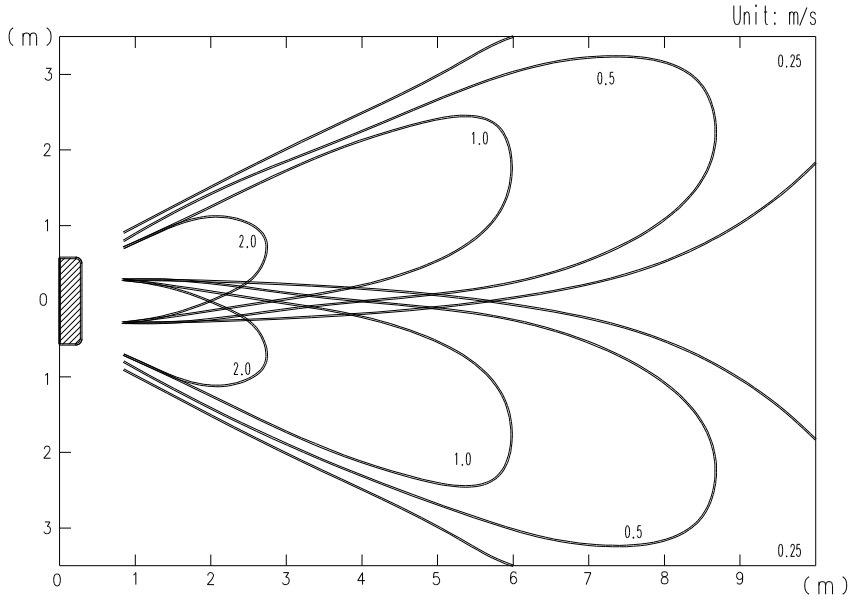
■ MODEL : AS∗A30

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

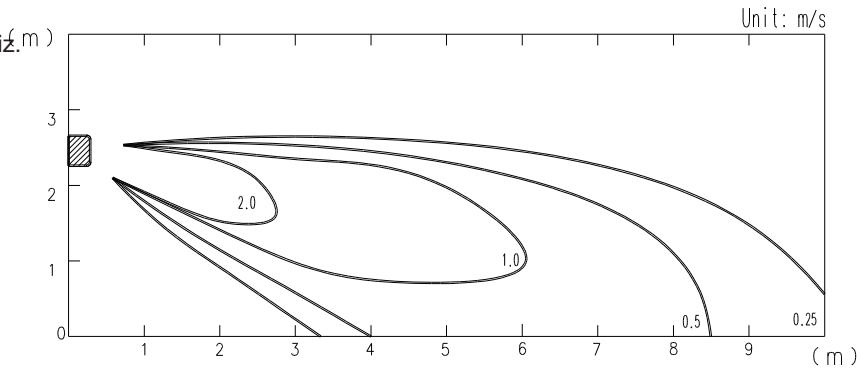
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



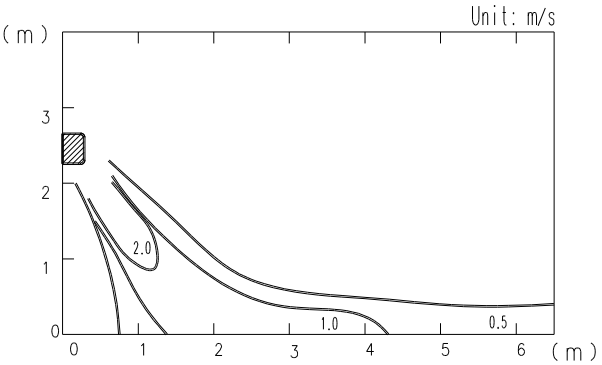
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FRONT CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center



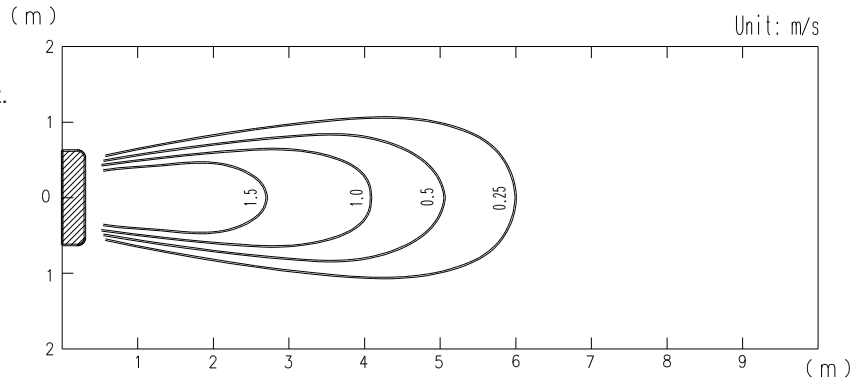
INDOOR UNIT

4-9-7. CEILING WALL TYPE

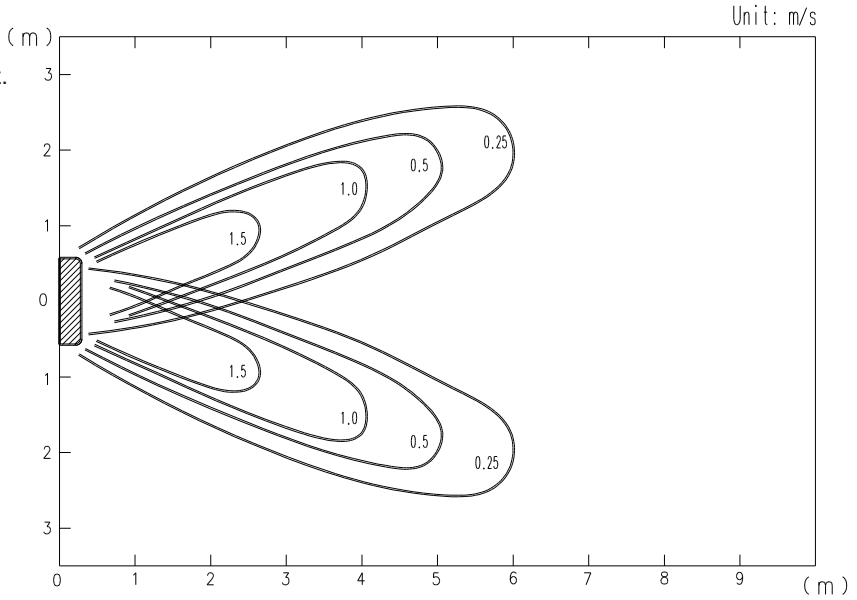
■ MODEL : AW*A07

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

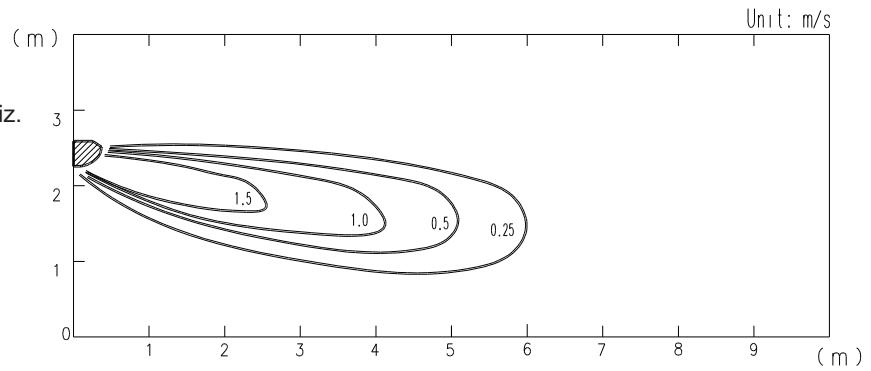
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



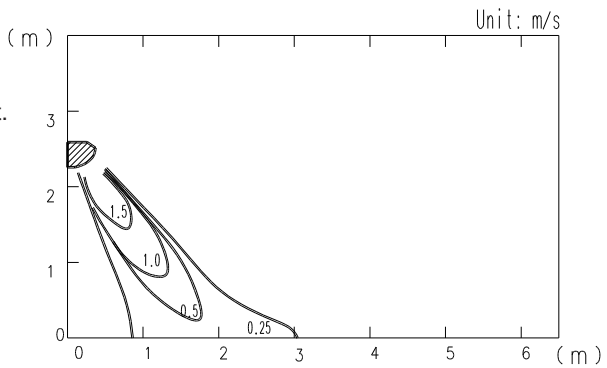
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center

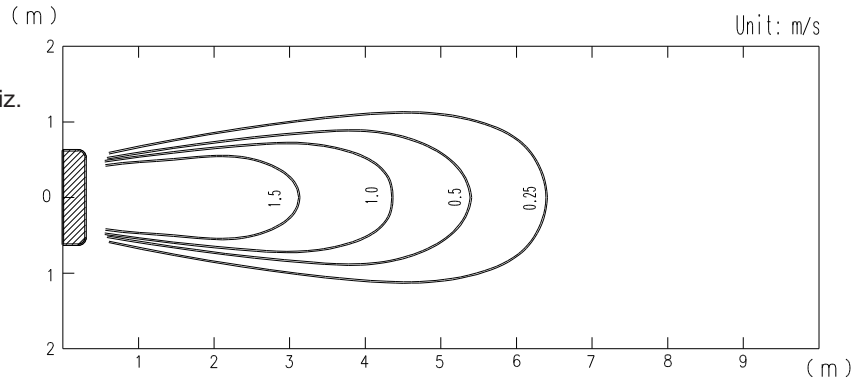


INDOOR UNIT

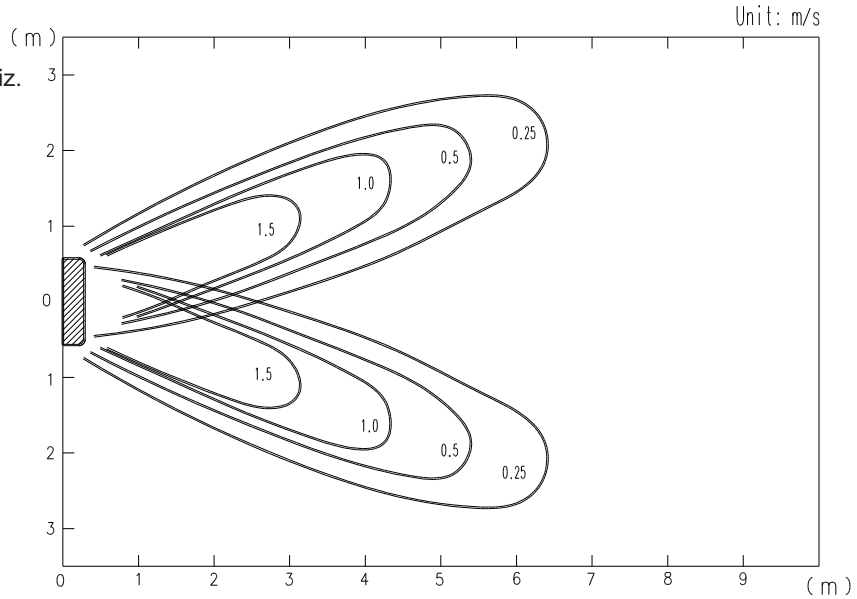
■ MODEL : AW*A09

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

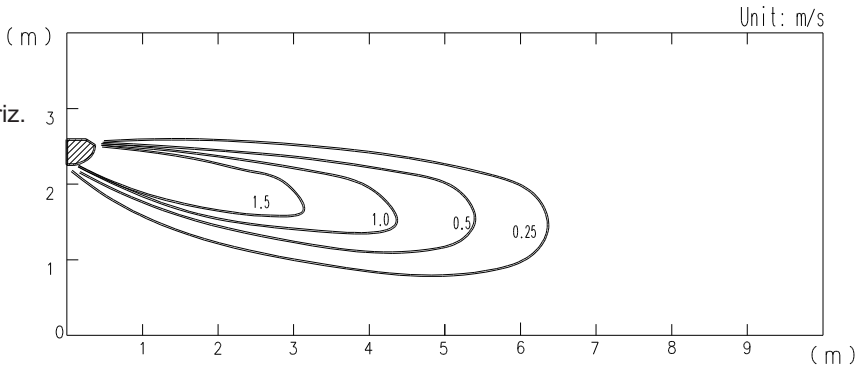
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



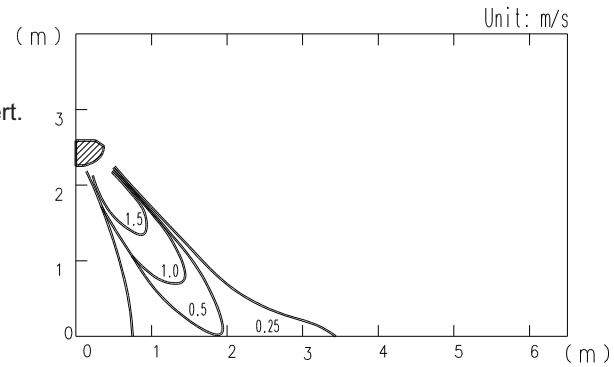
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center

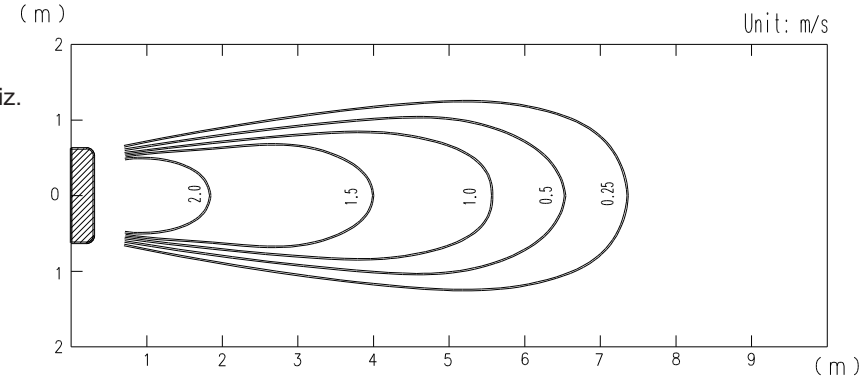


INDOOR UNIT

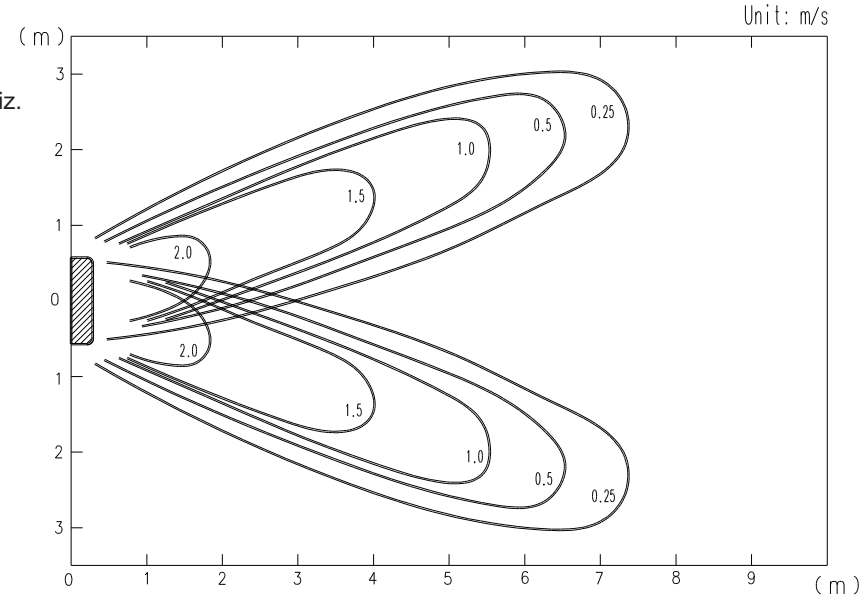
■ MODEL : AW*A12

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

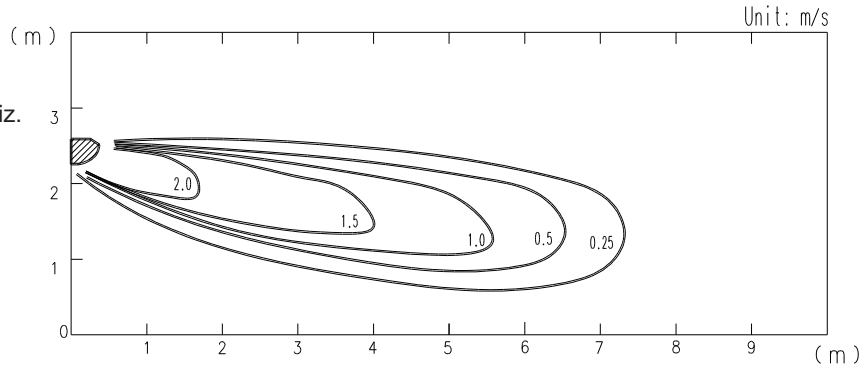
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



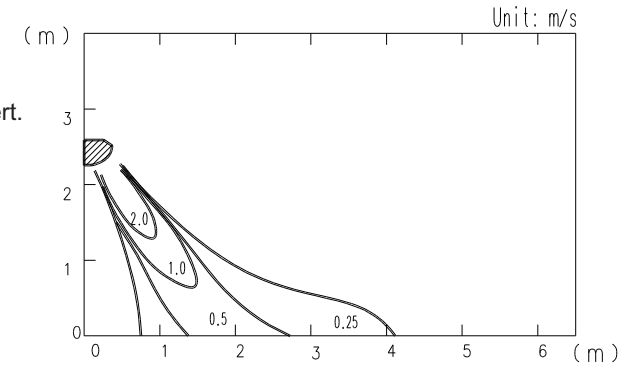
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center

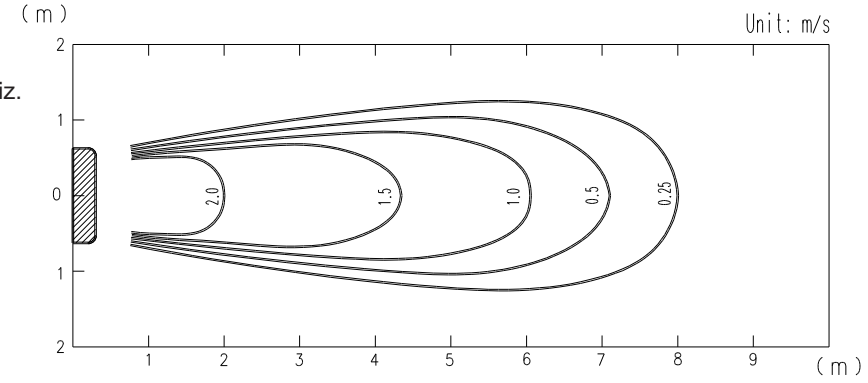


INDOOR UNIT

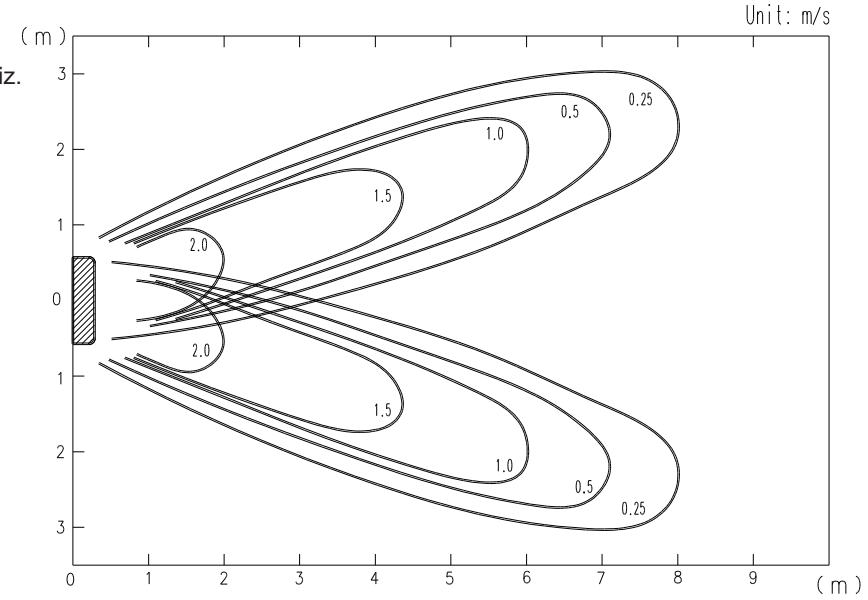
■ MODEL : AW*A14

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

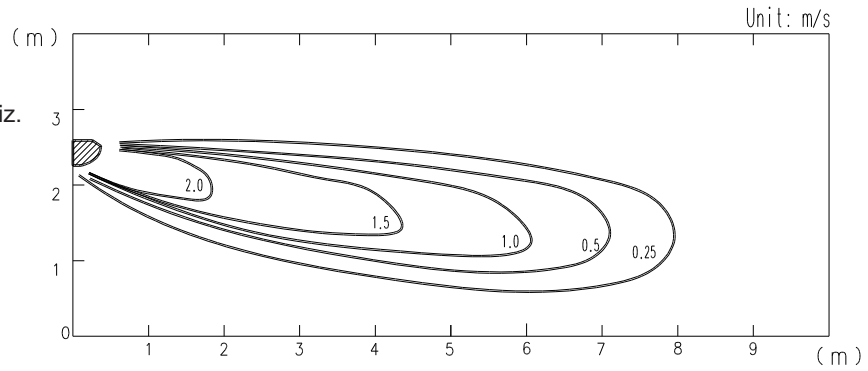
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



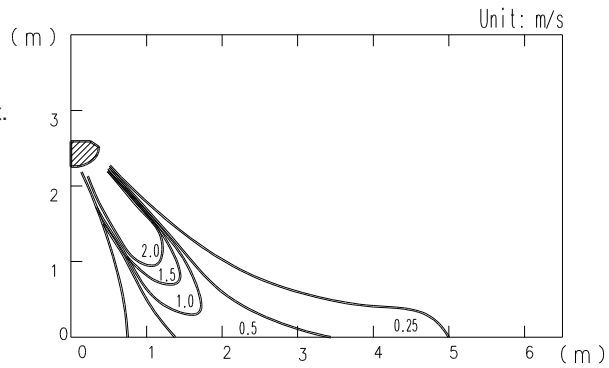
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center

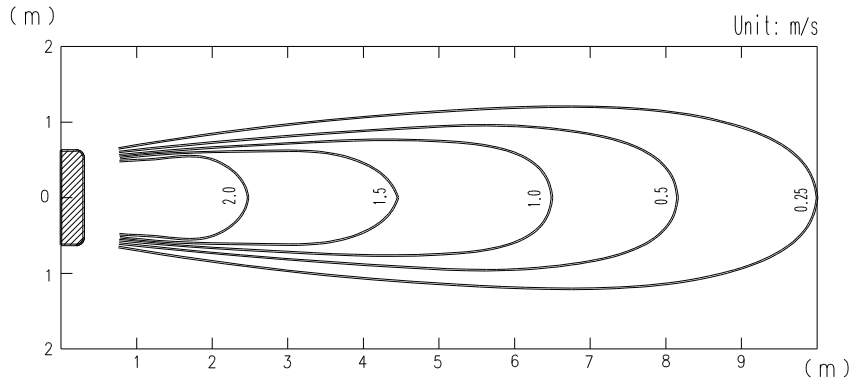


INDOOR UNIT

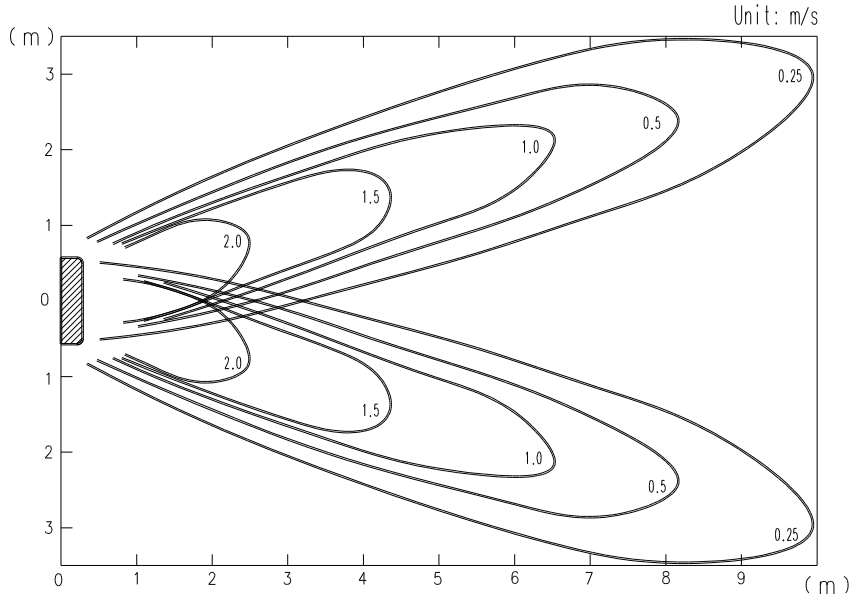
■ MODEL : AW*A18

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

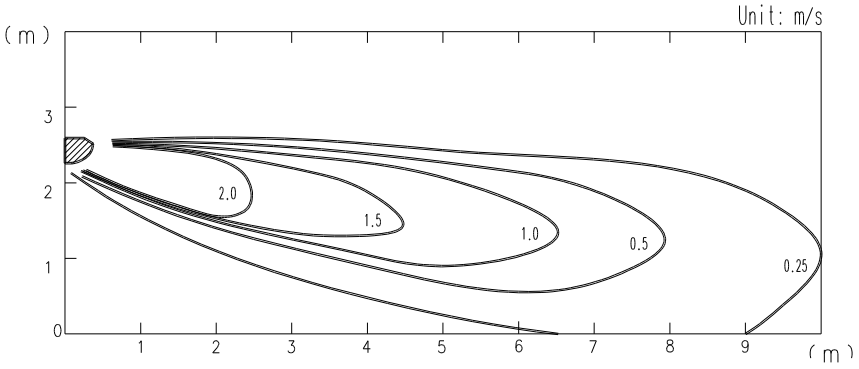
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



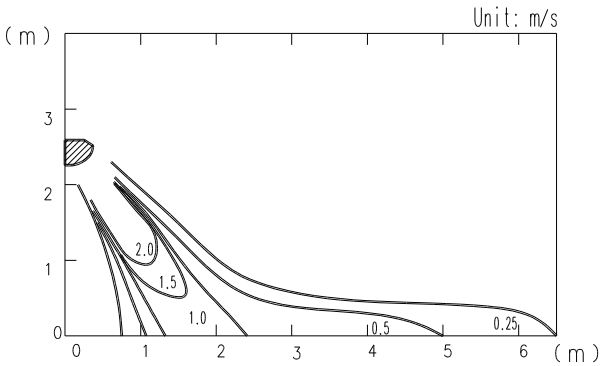
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center

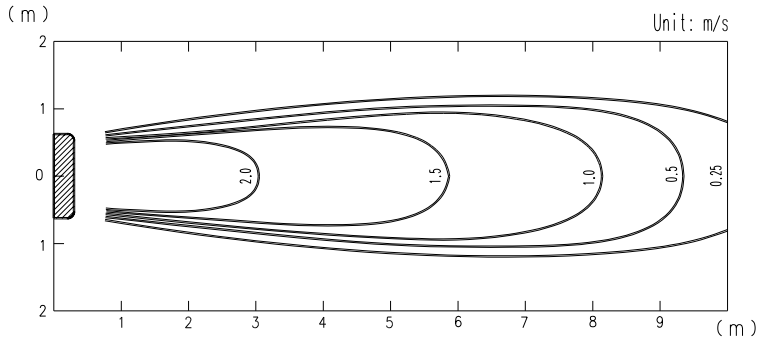


INDOOR UNIT

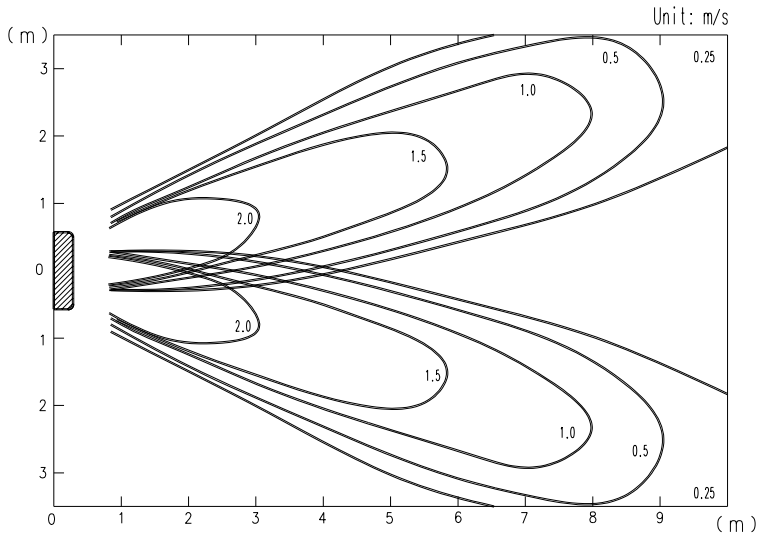
■ MODEL : AW*A24

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

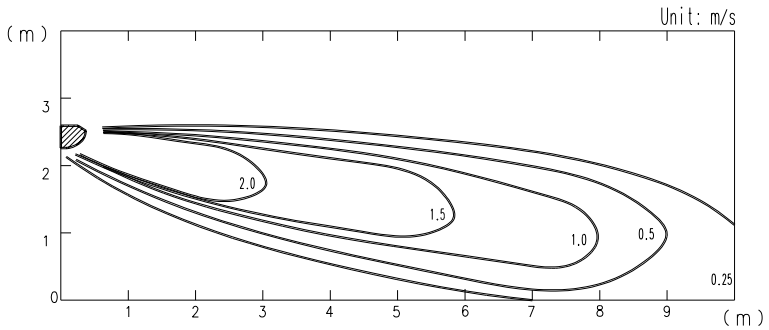
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



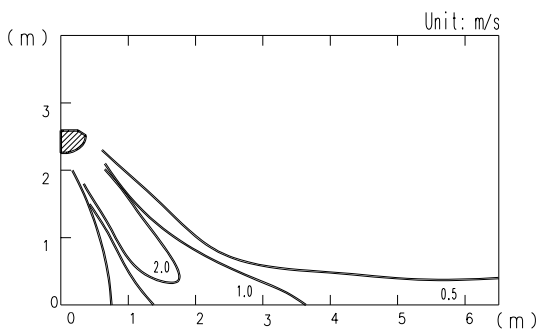
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center

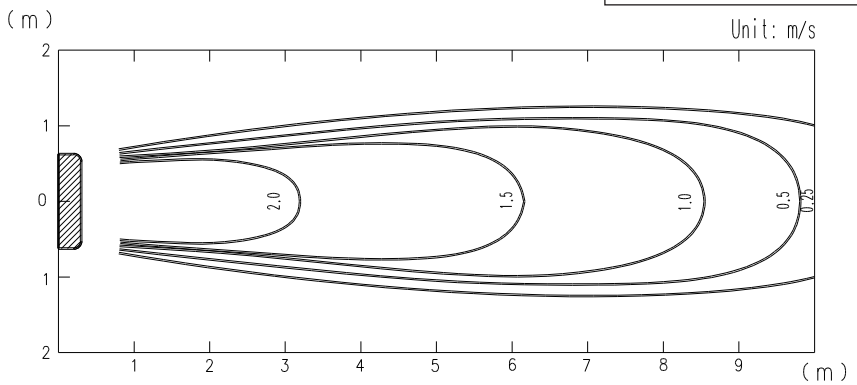


INDOOR UNIT

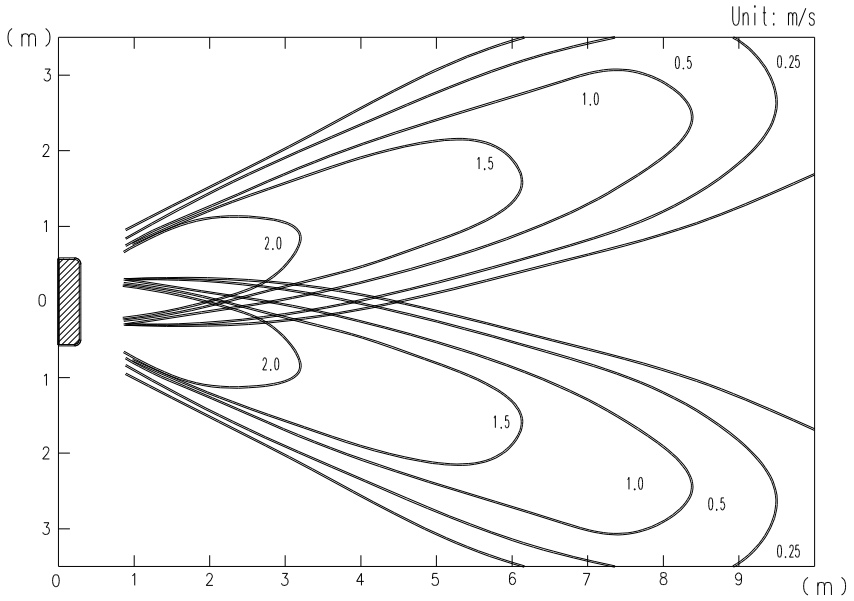
■ MODEL : AW*A30

Condition
Fan speed : High
Operation mode : Fan
Voltage : 230V

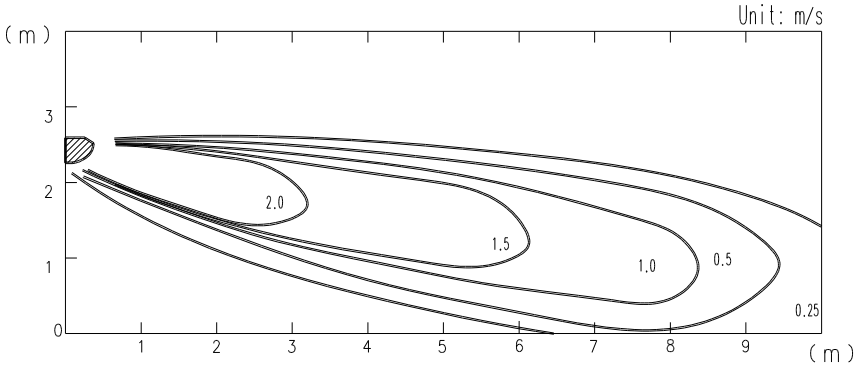
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



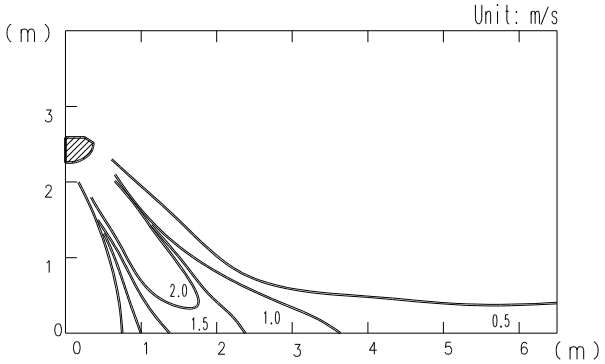
TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center



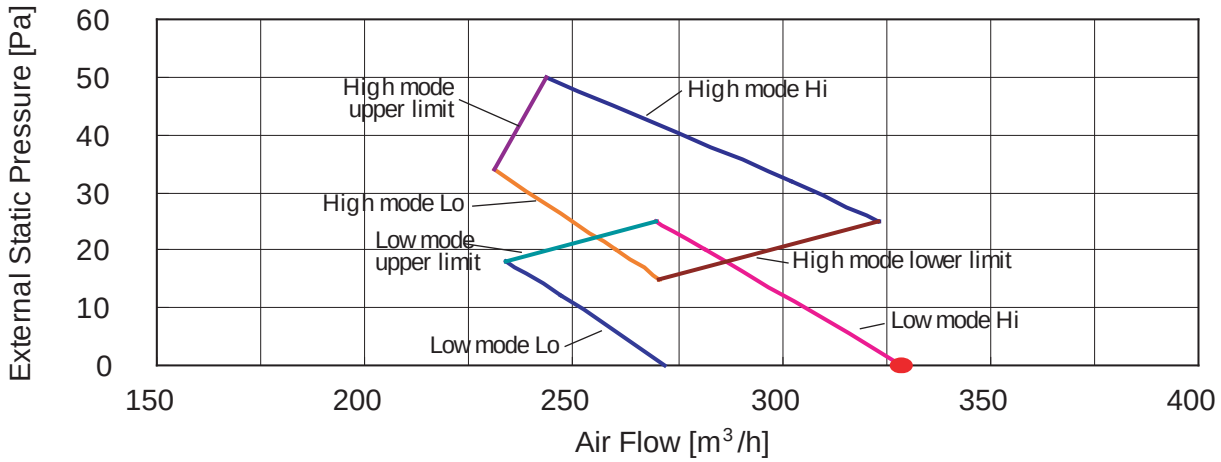
INDOOR UNIT

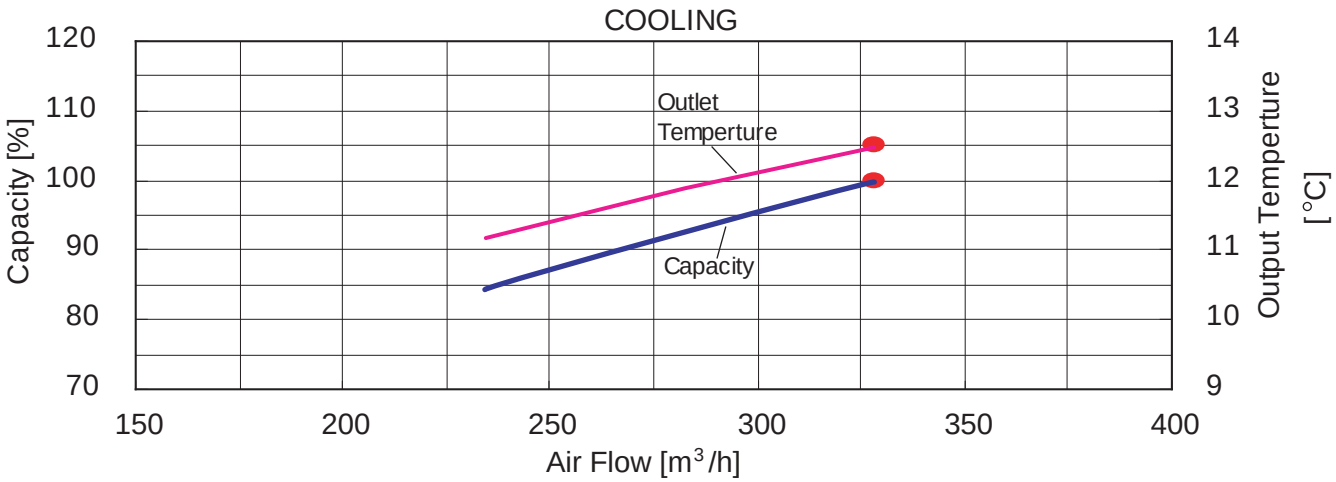
INDOOR UNIT

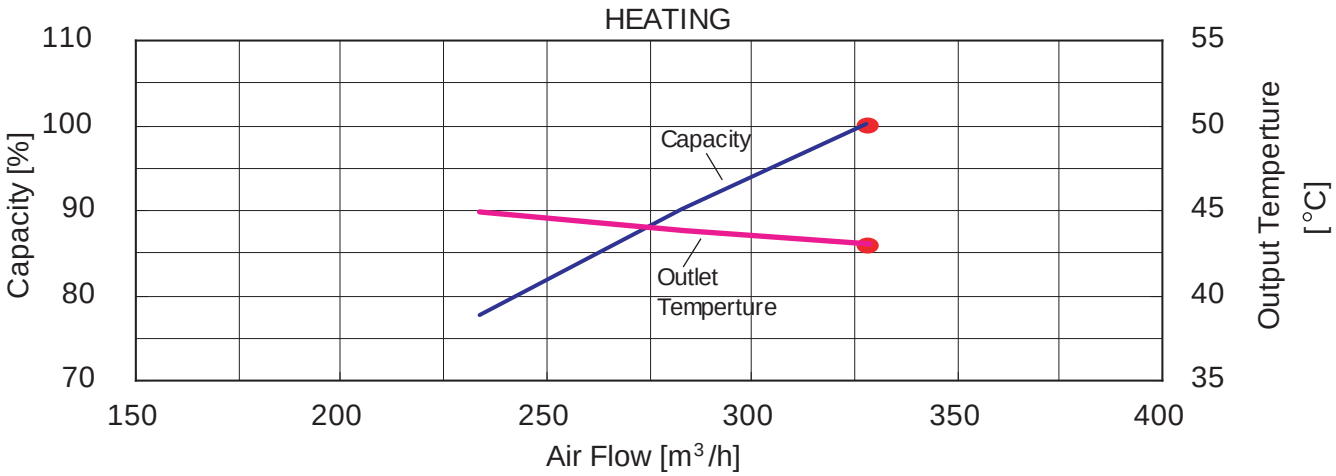
4-10. FAN PERFORMANCE CURVE

4-10-1. COMPACT DUCT TYPE

■MODEL : ARXB07



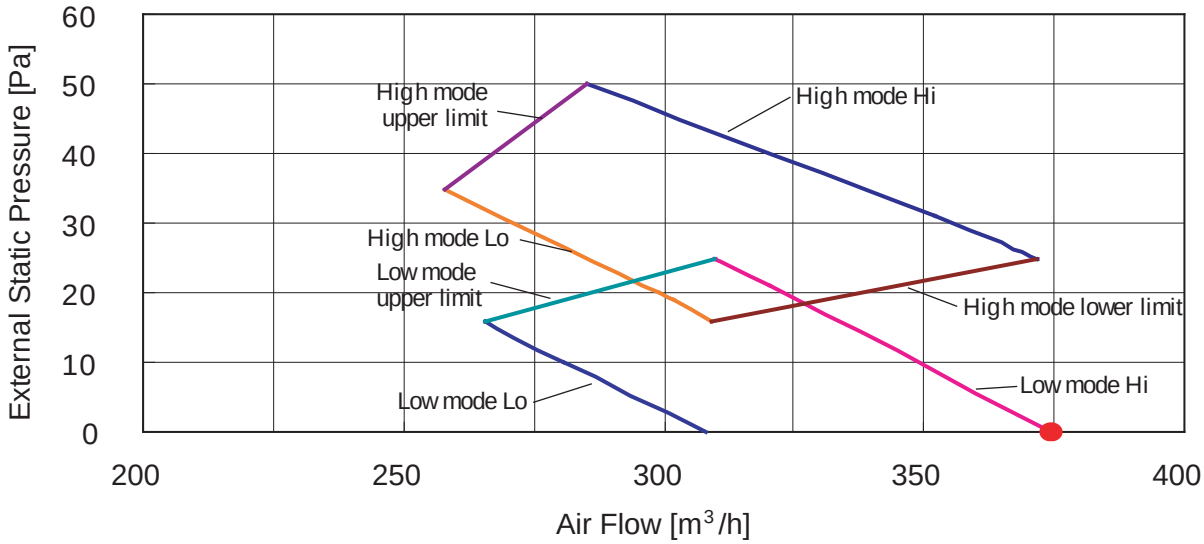


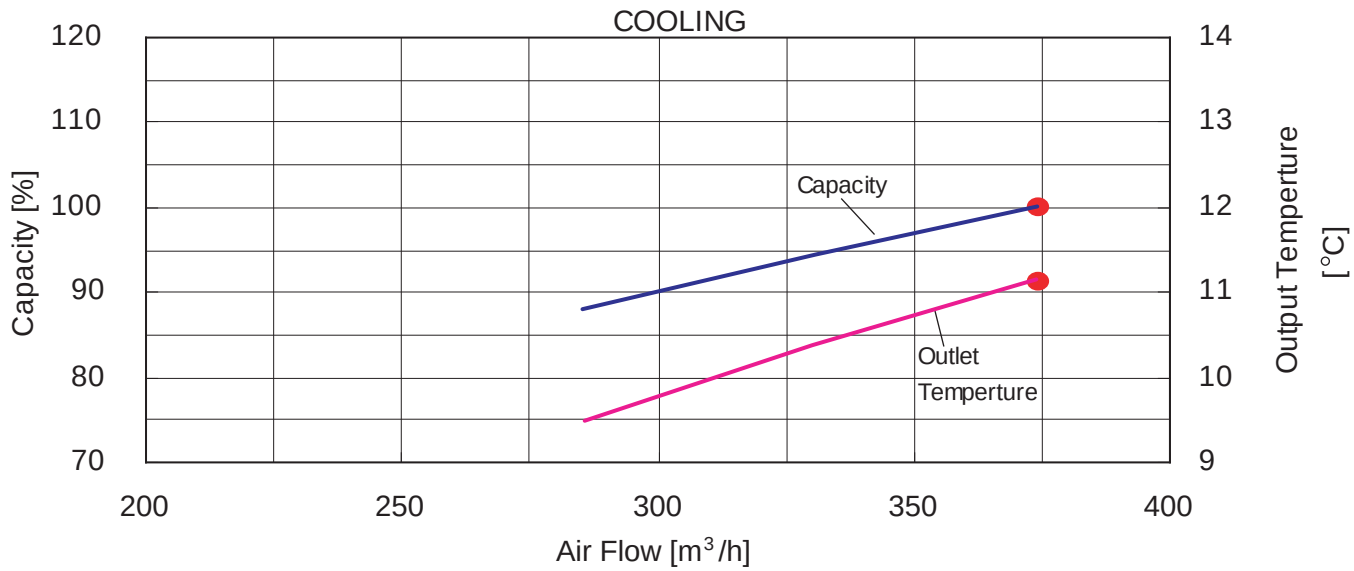


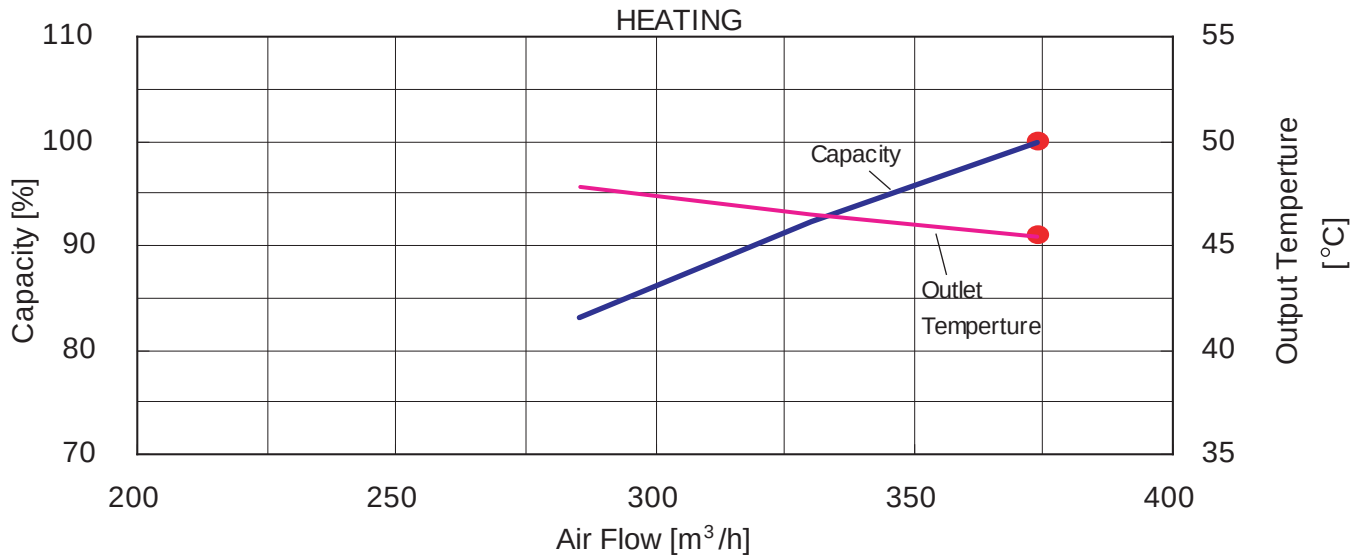
INDOOR UNIT

INDOOR UNIT

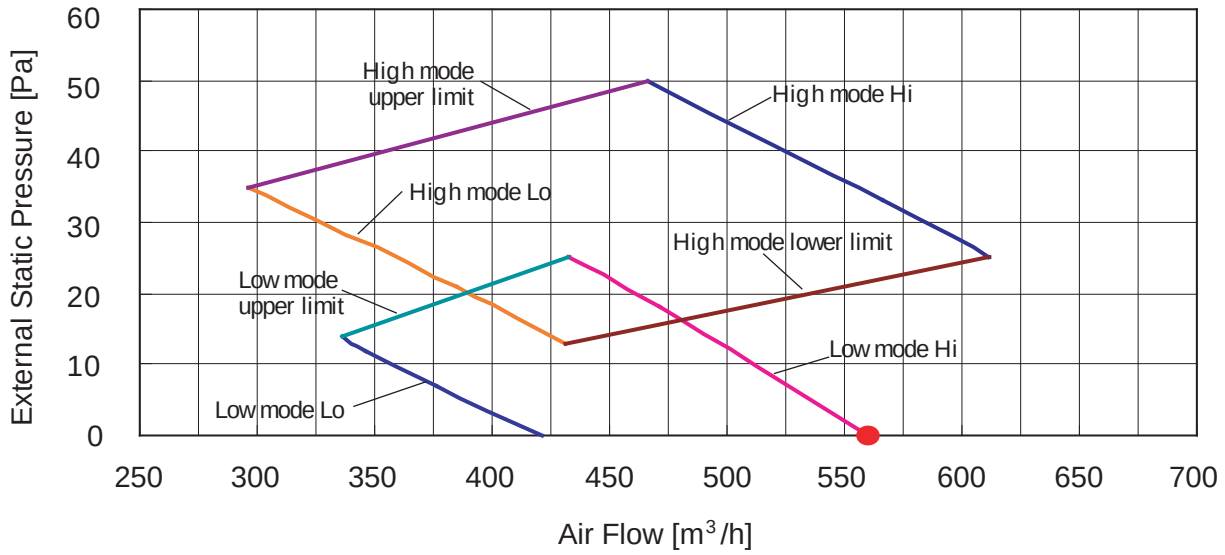
■MODEL : ARXB09

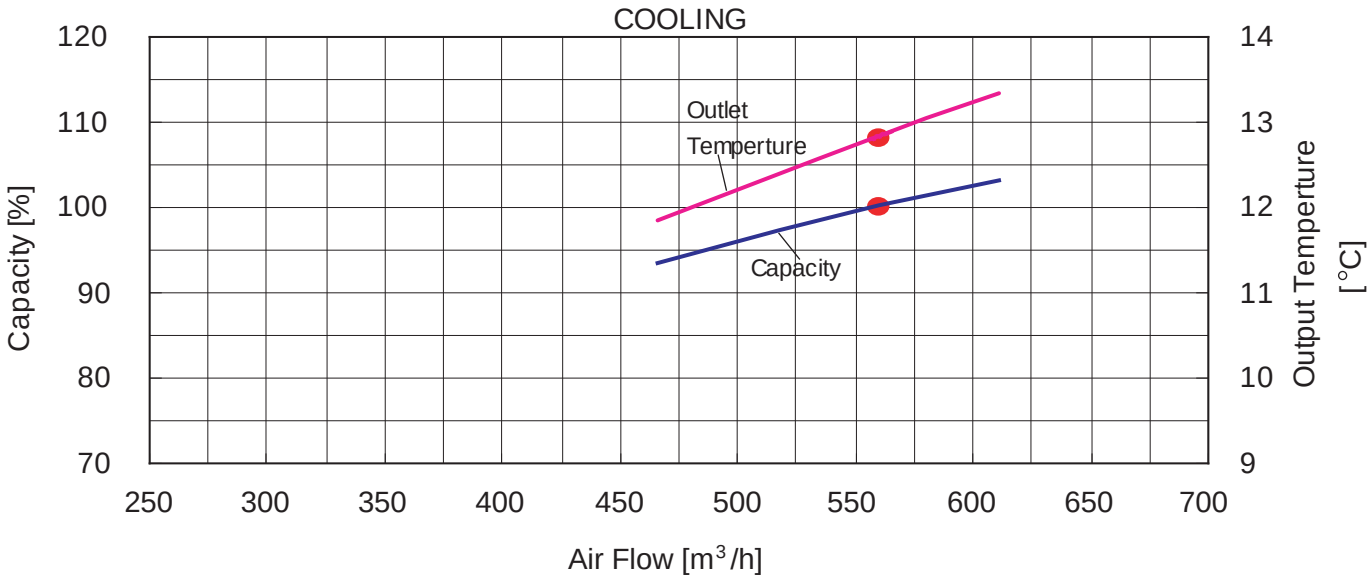


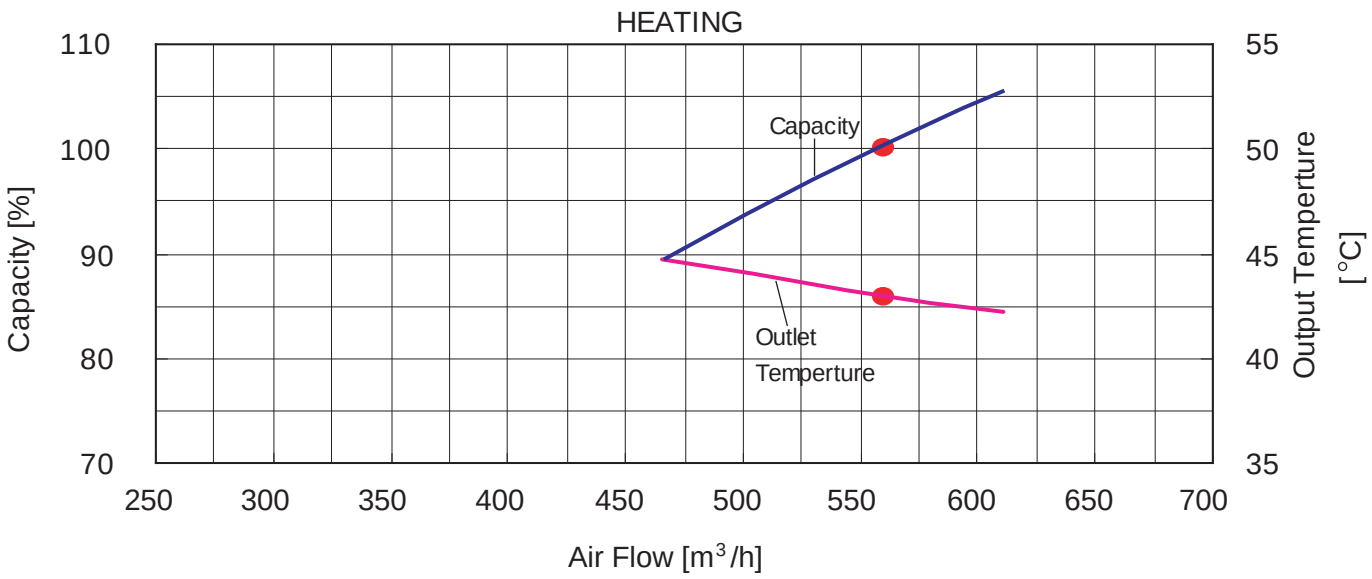




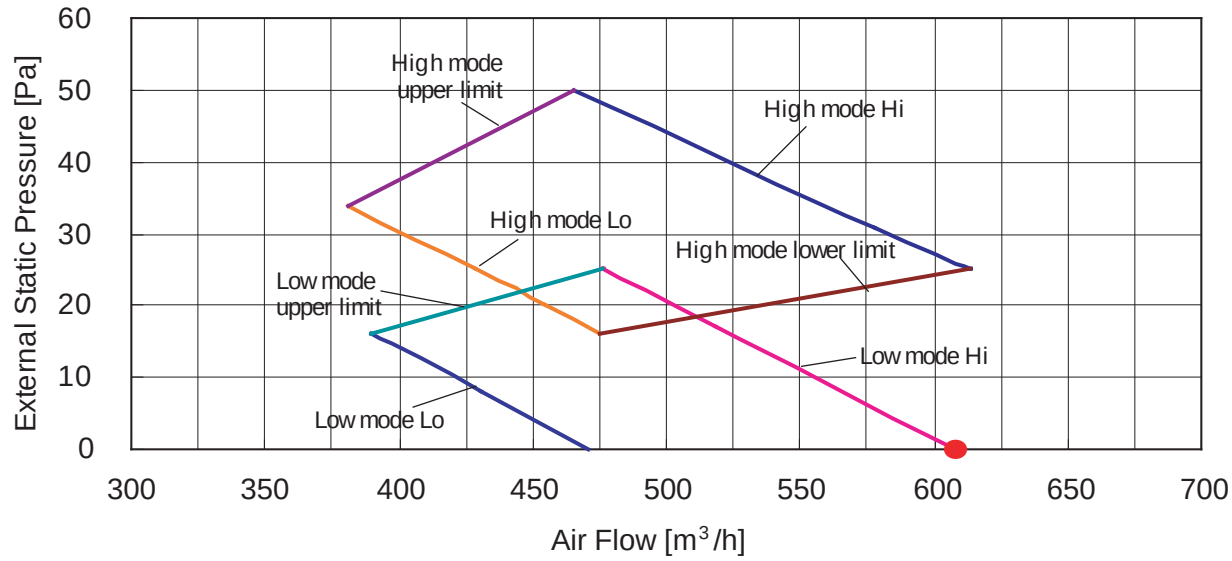
■MODEL : ARXB12

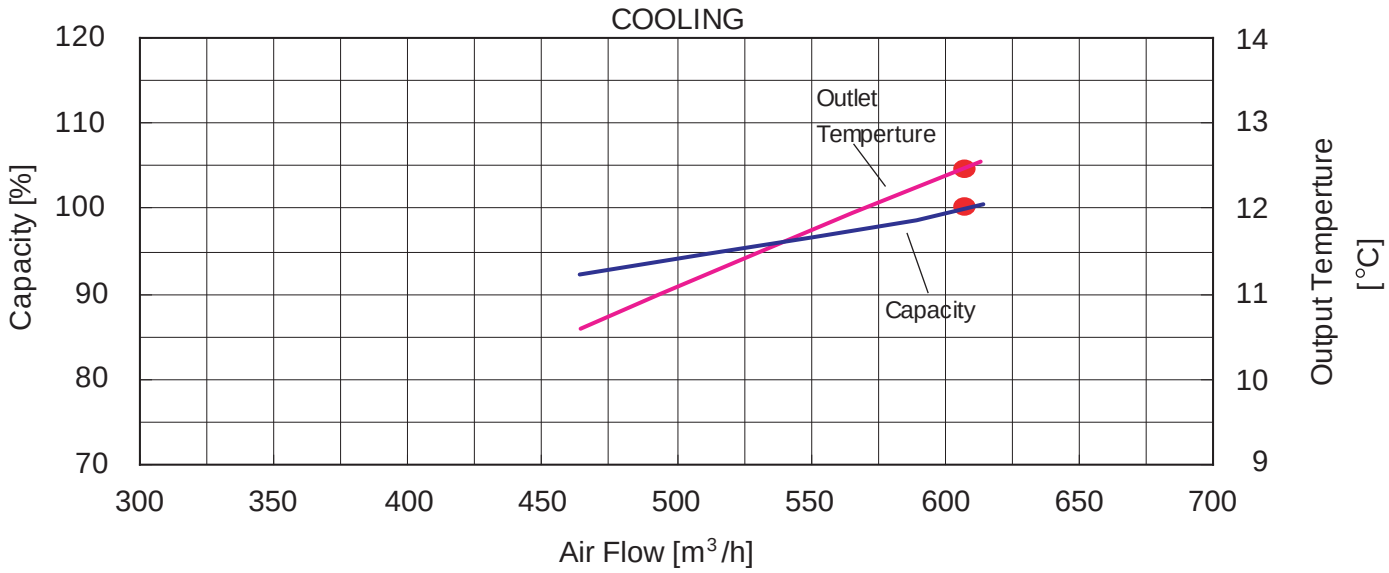


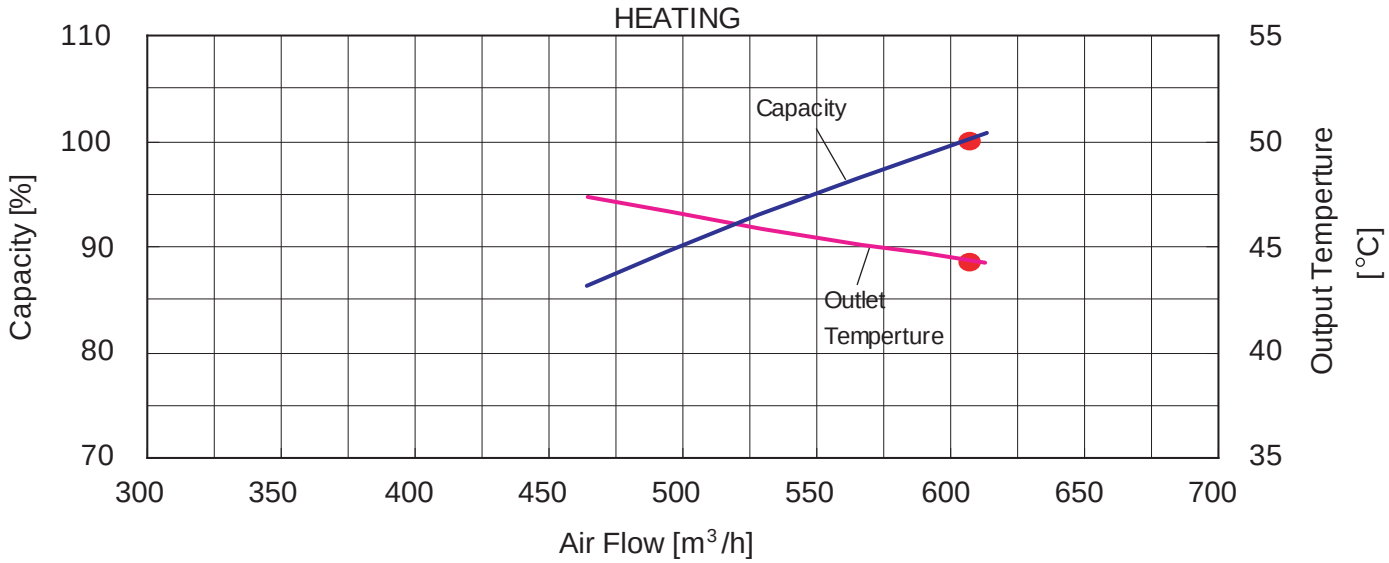




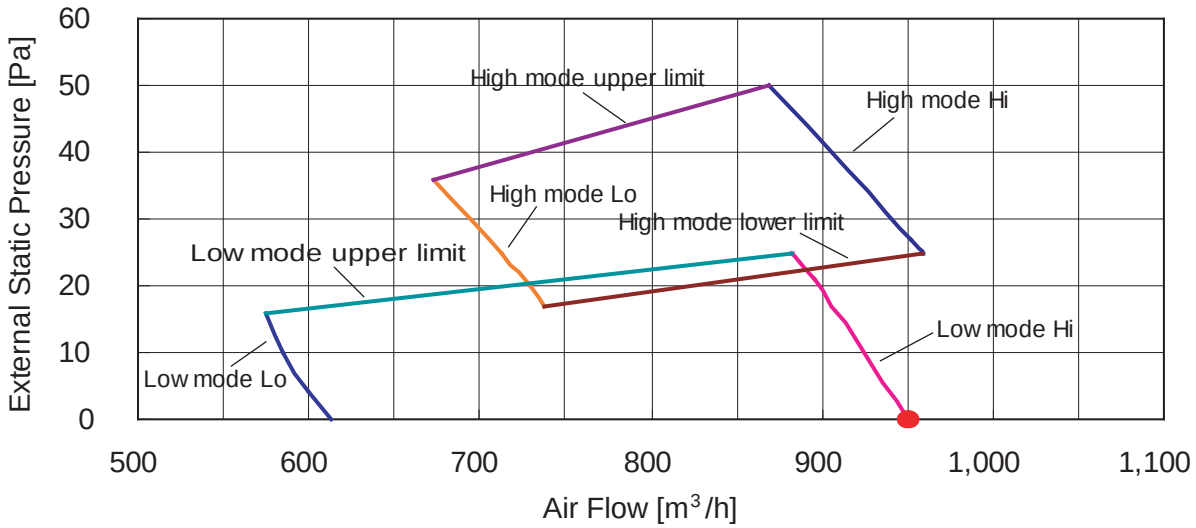
■MODEL : ARXB14

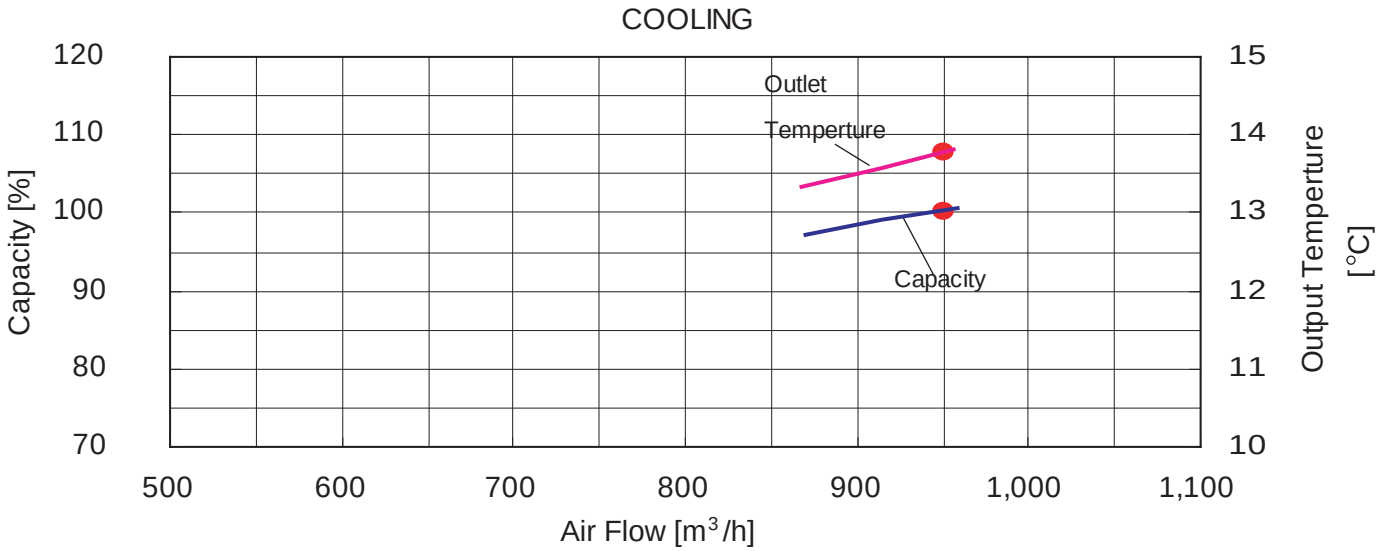


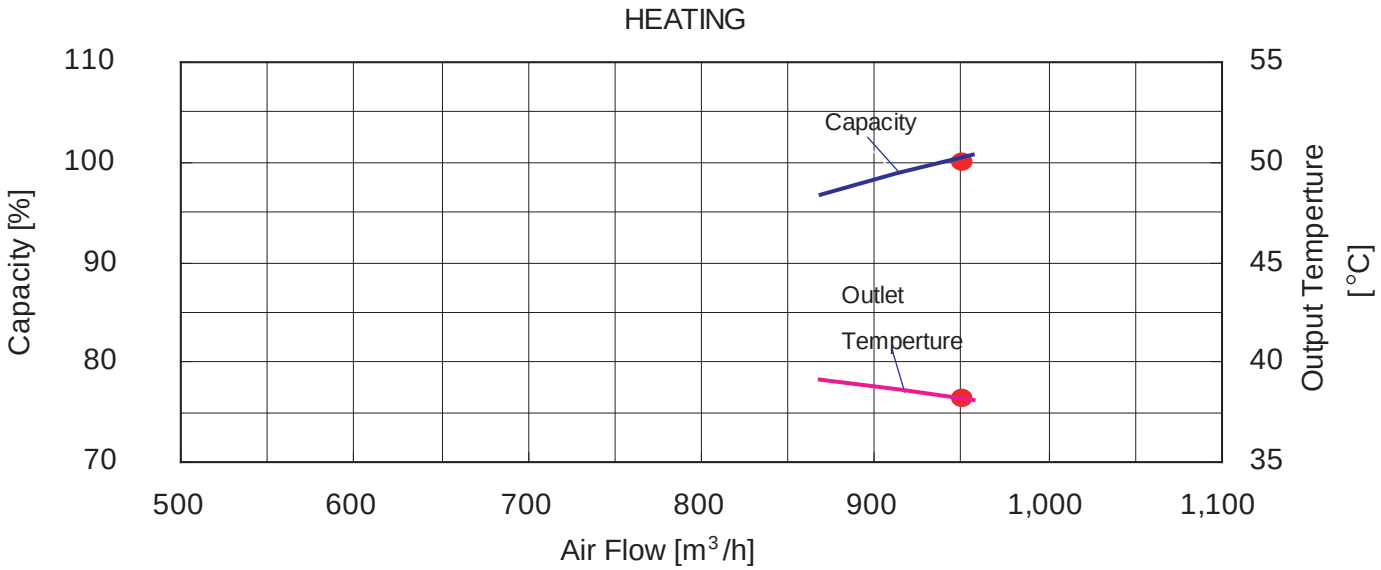




■MODEL : ARXB18

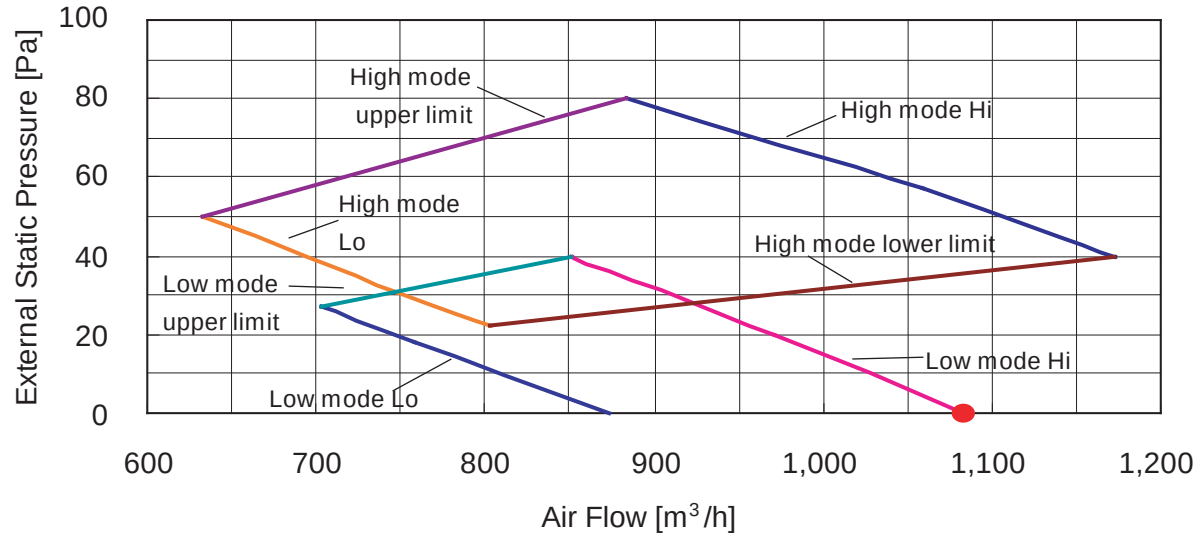


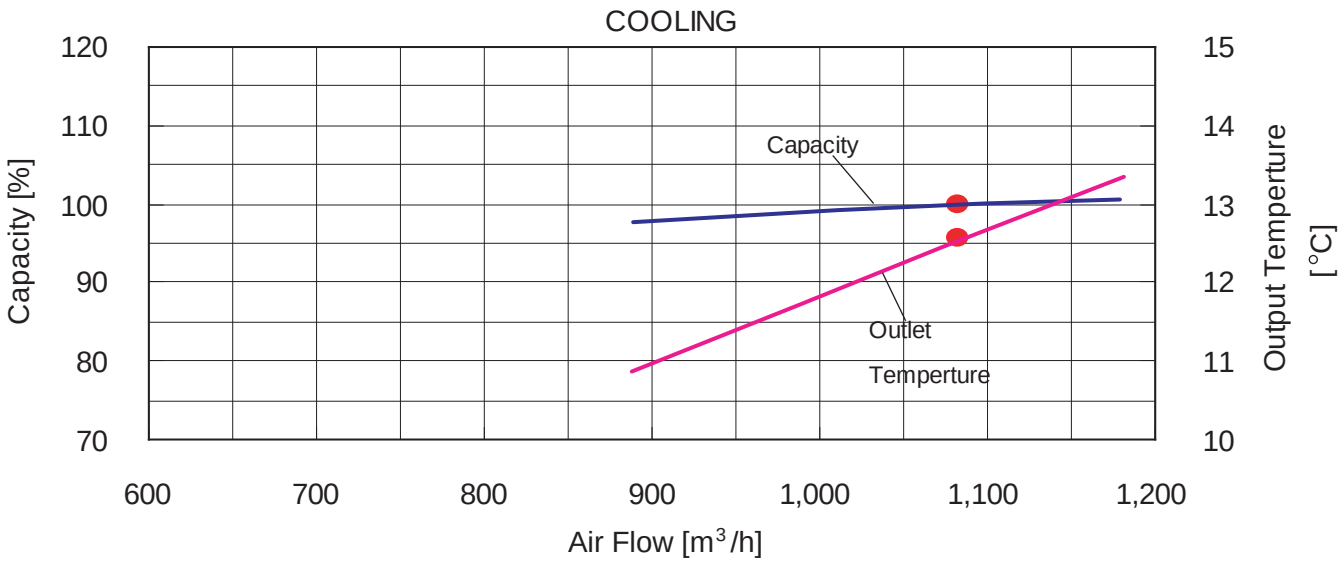


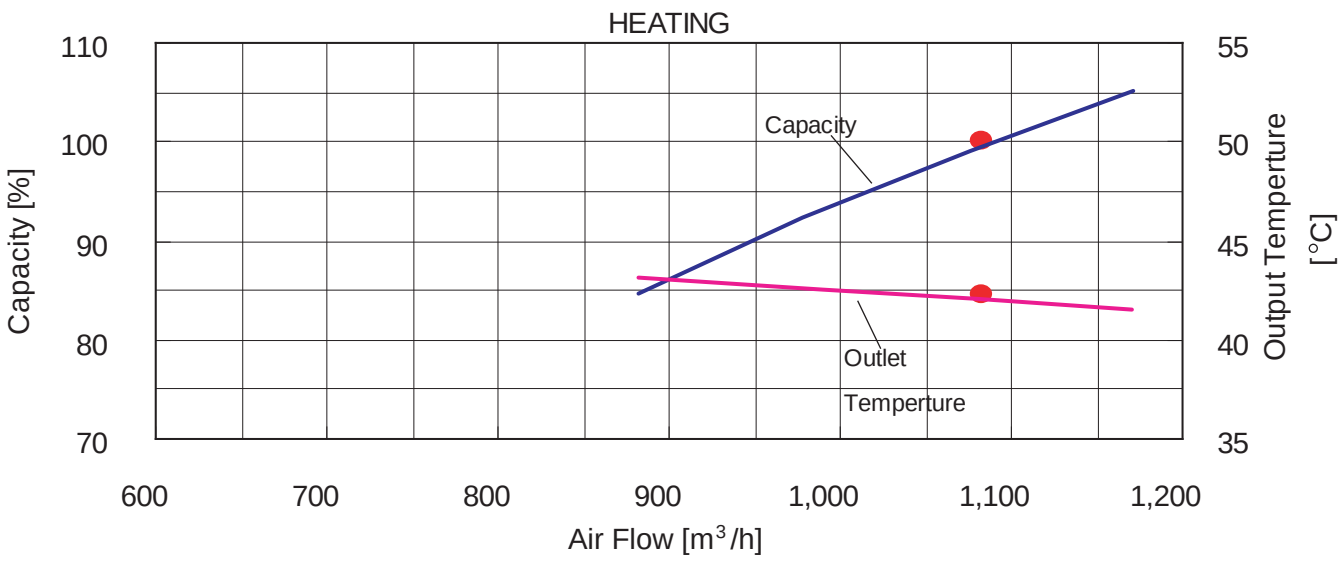


4-10-2. LOW STATIC PRESSURE DUCT TYPE

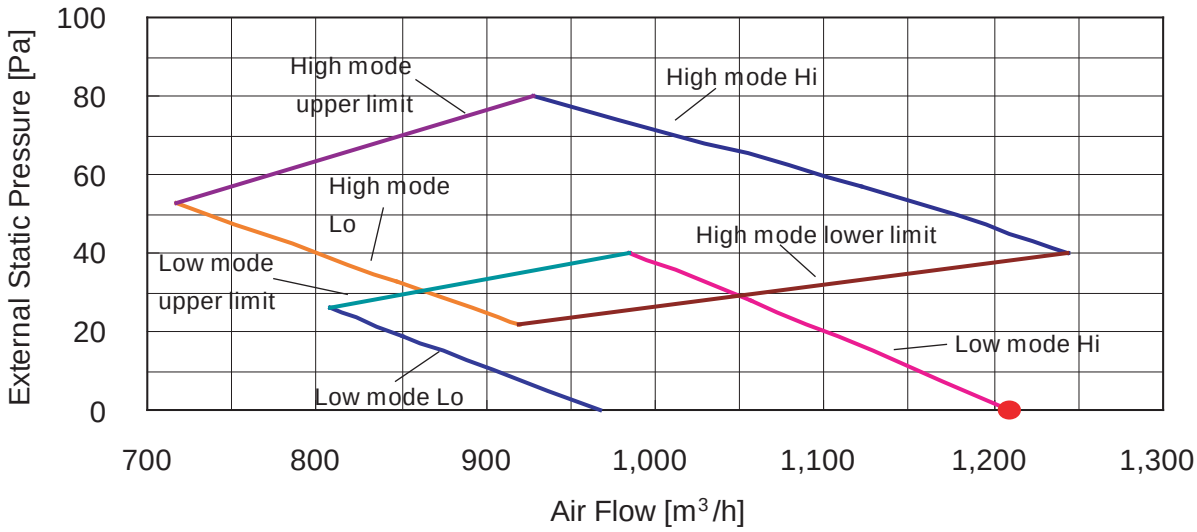
■MODEL : ARXB25

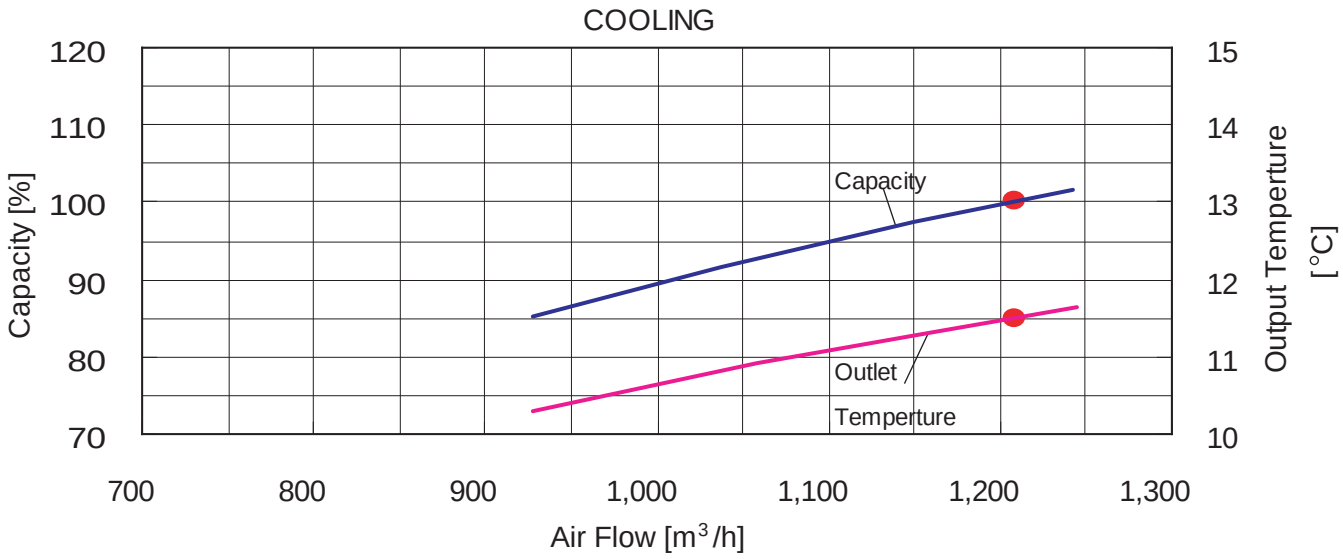


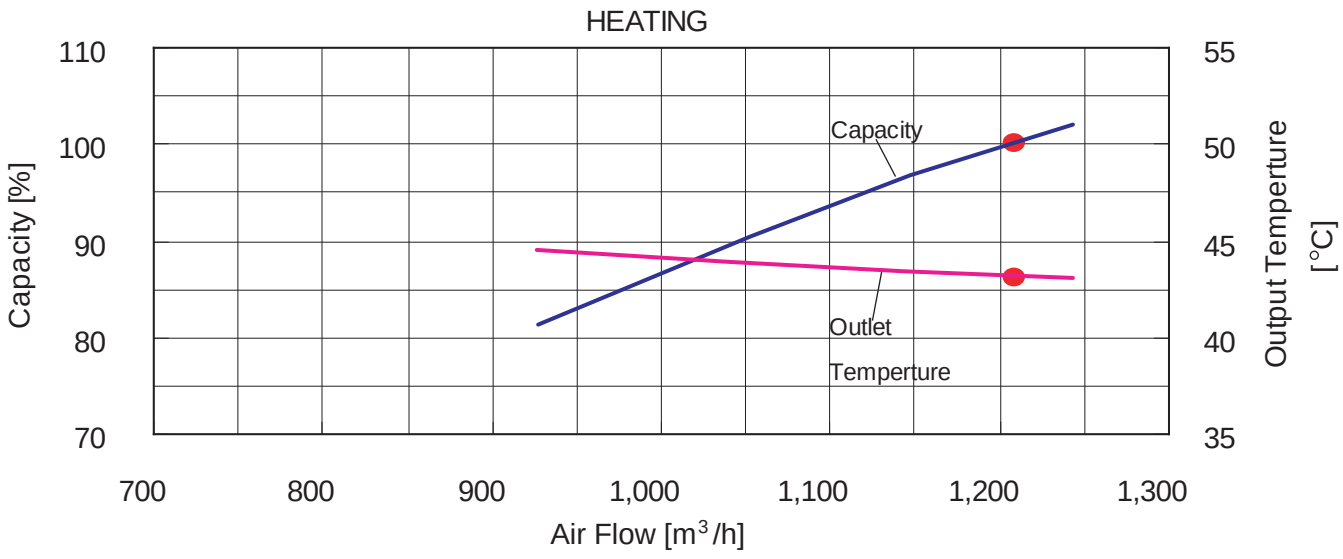




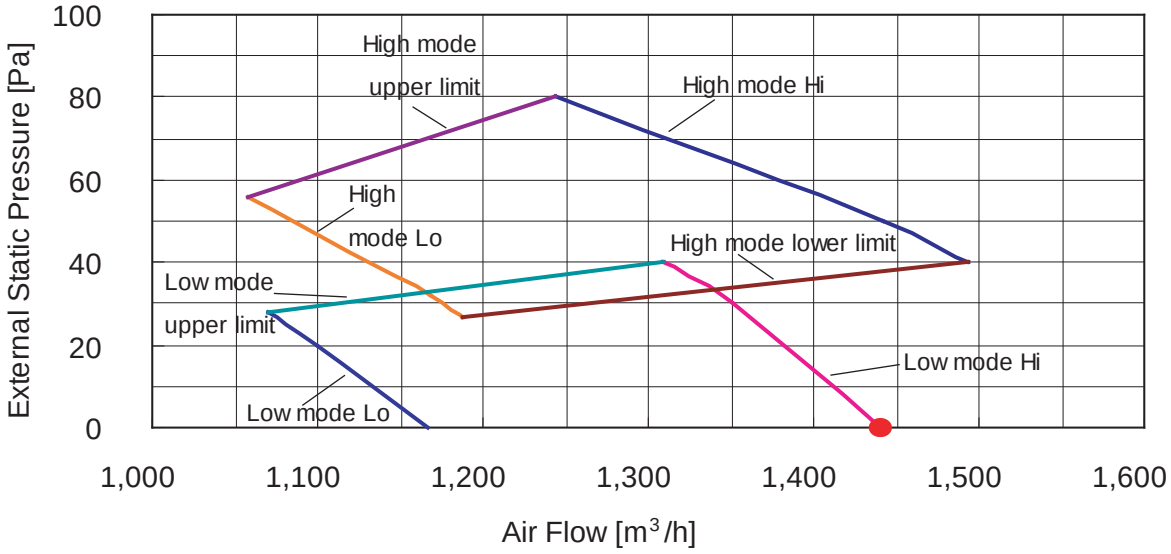
■MODEL : ARXB30

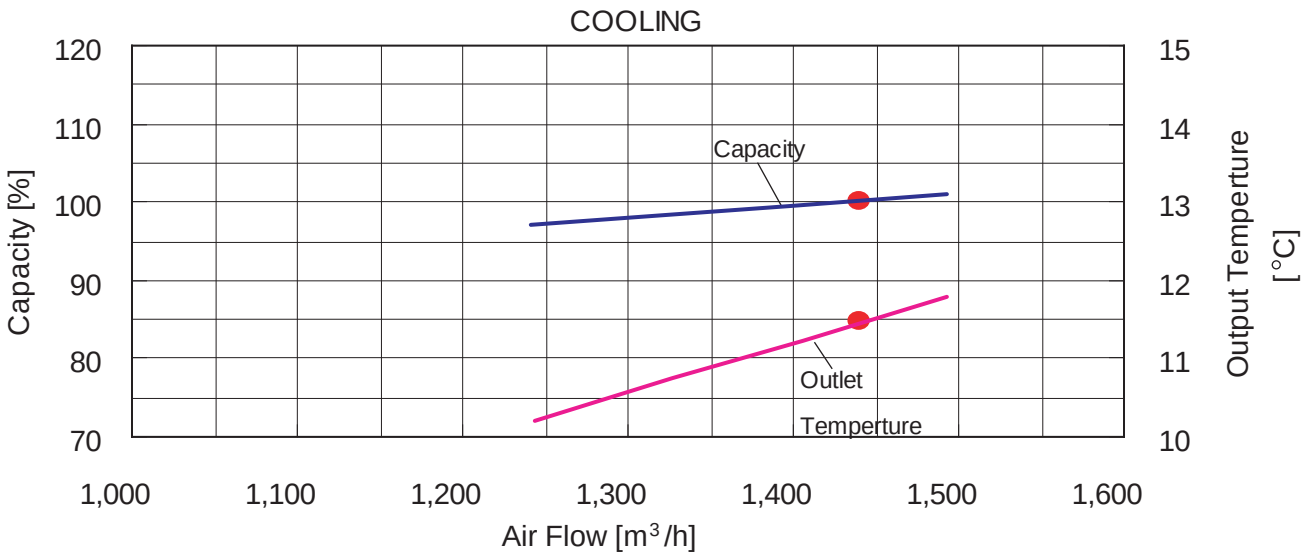


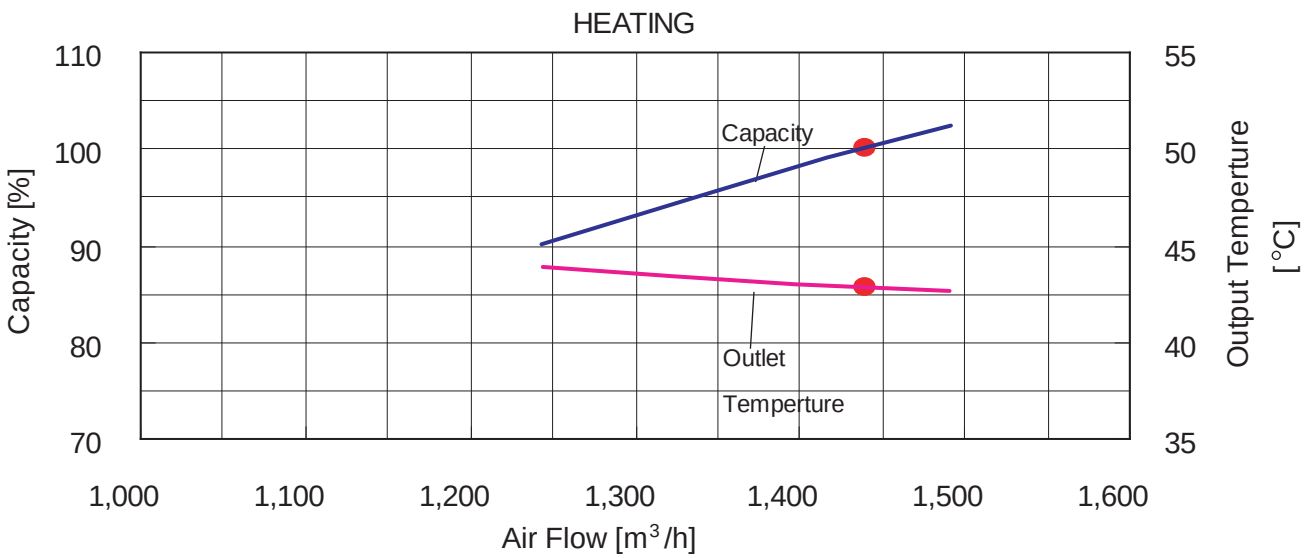




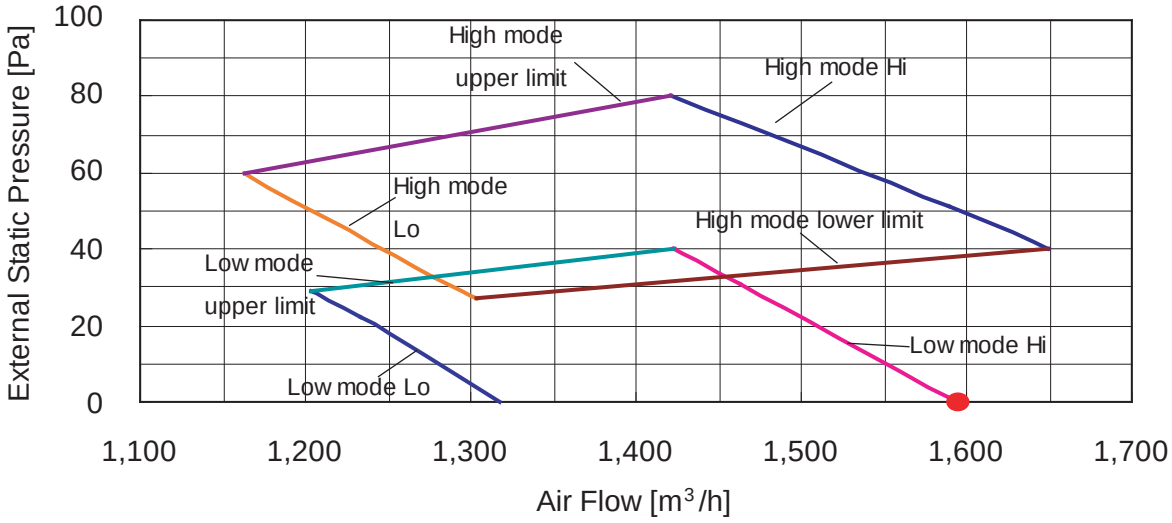
■MODEL : ARXB36



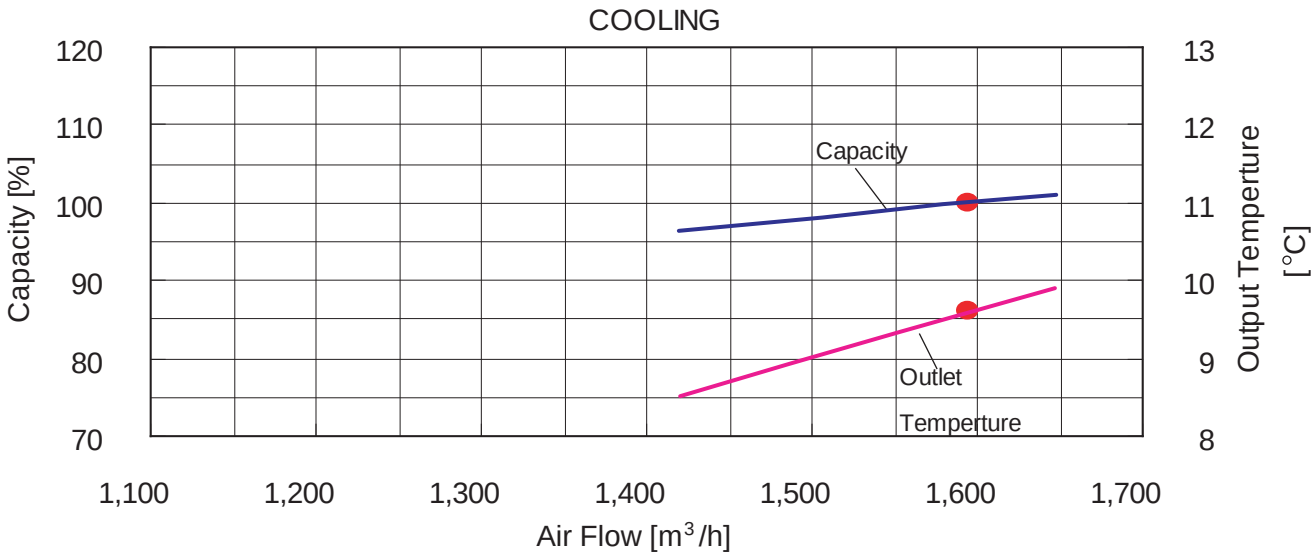


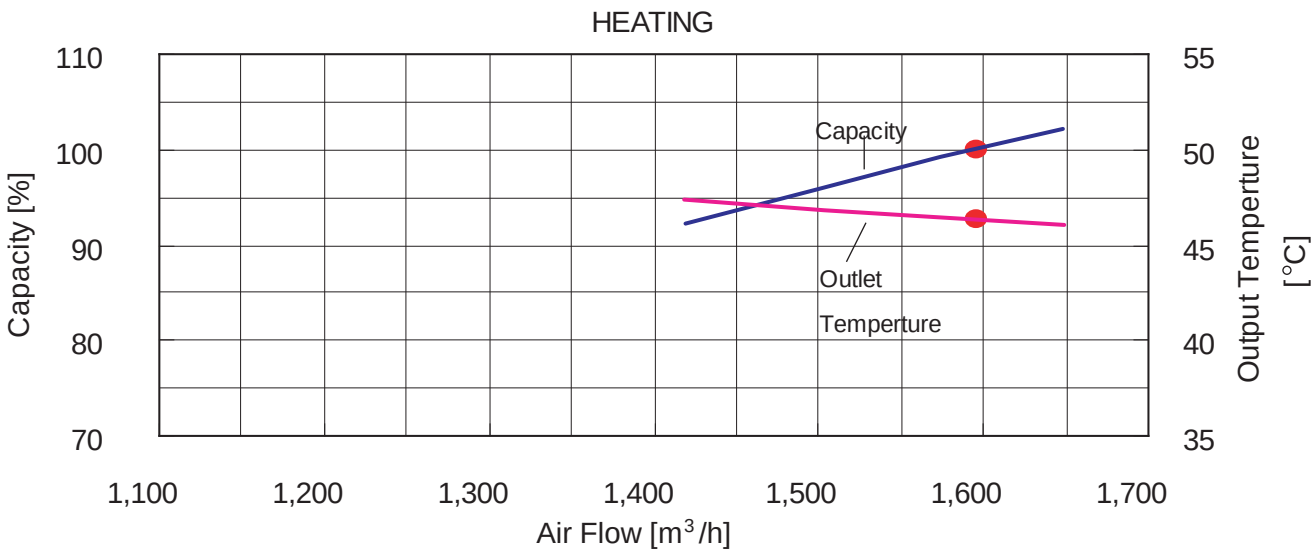


■MODEL : ARXB45



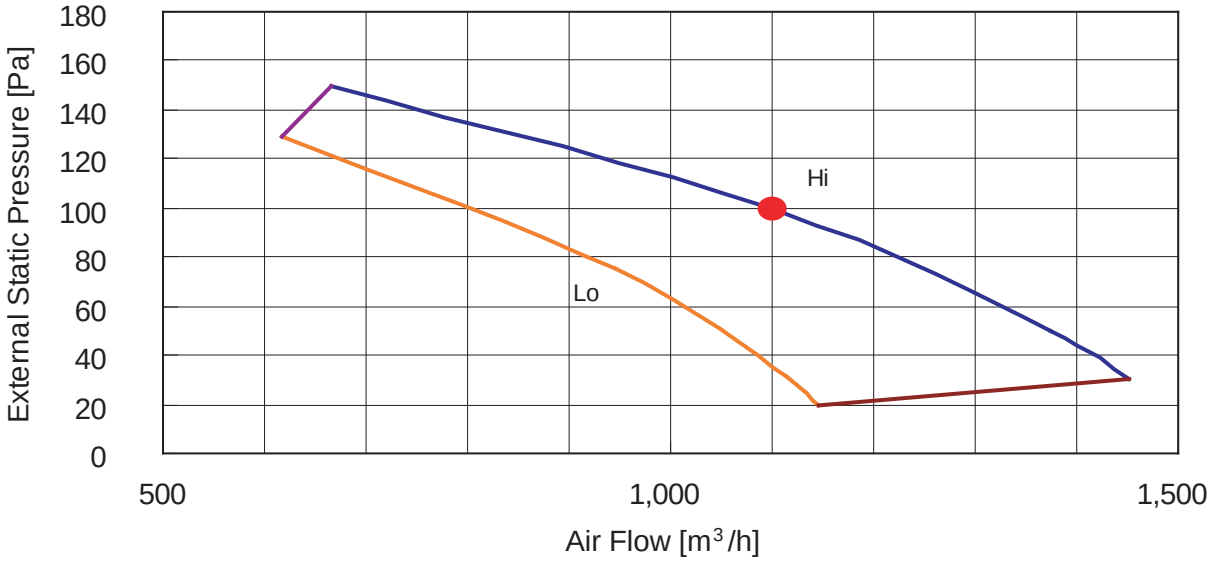
INDOOR UNIT

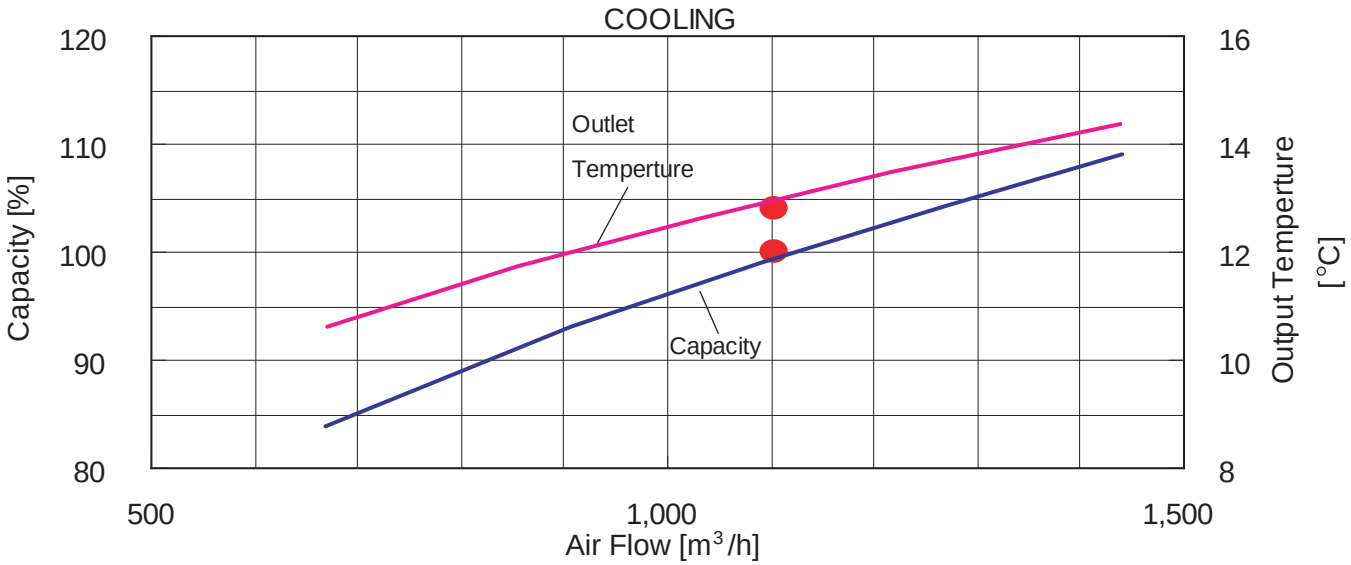


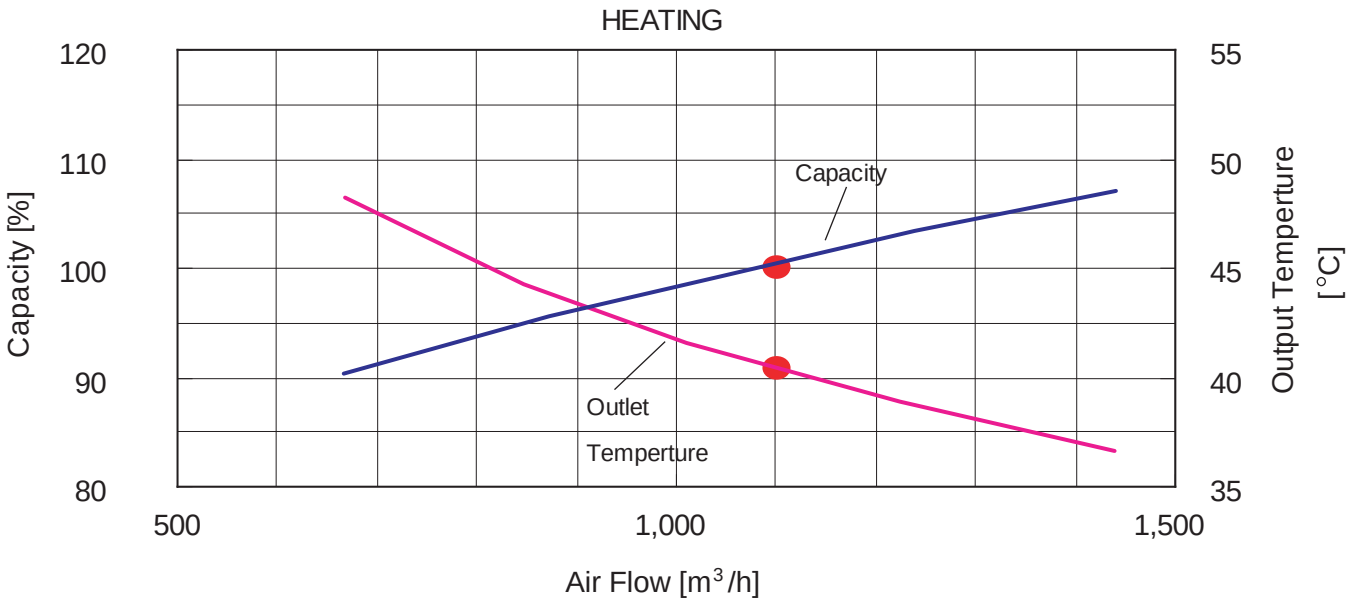


4-10-3. DUCT TYPE

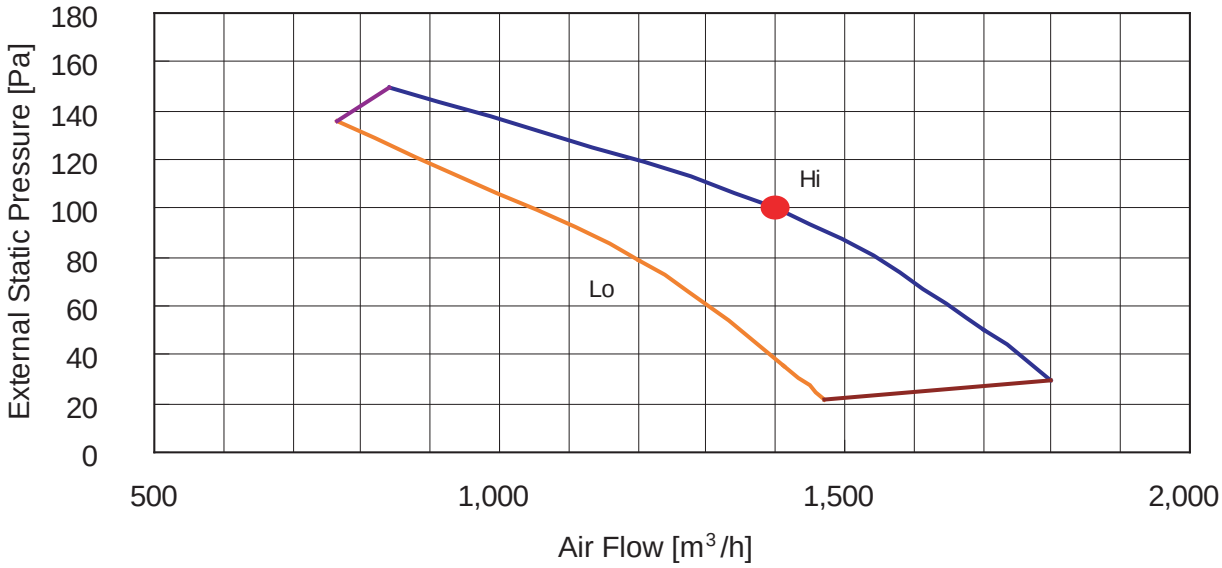
■MODEL : ARXA25

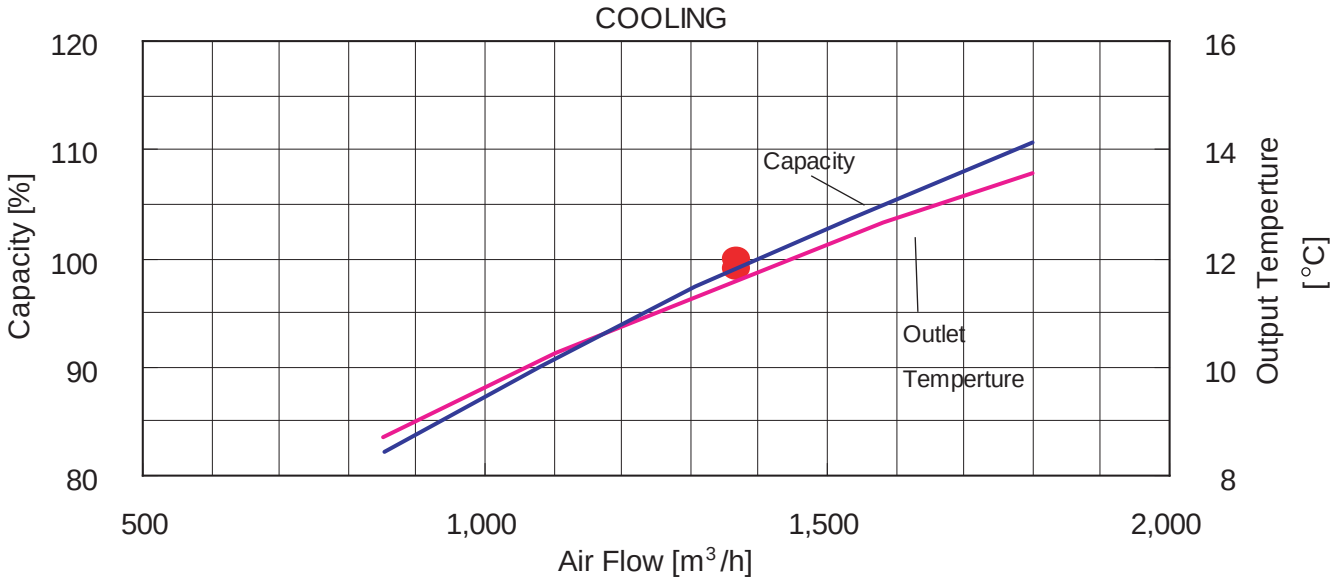


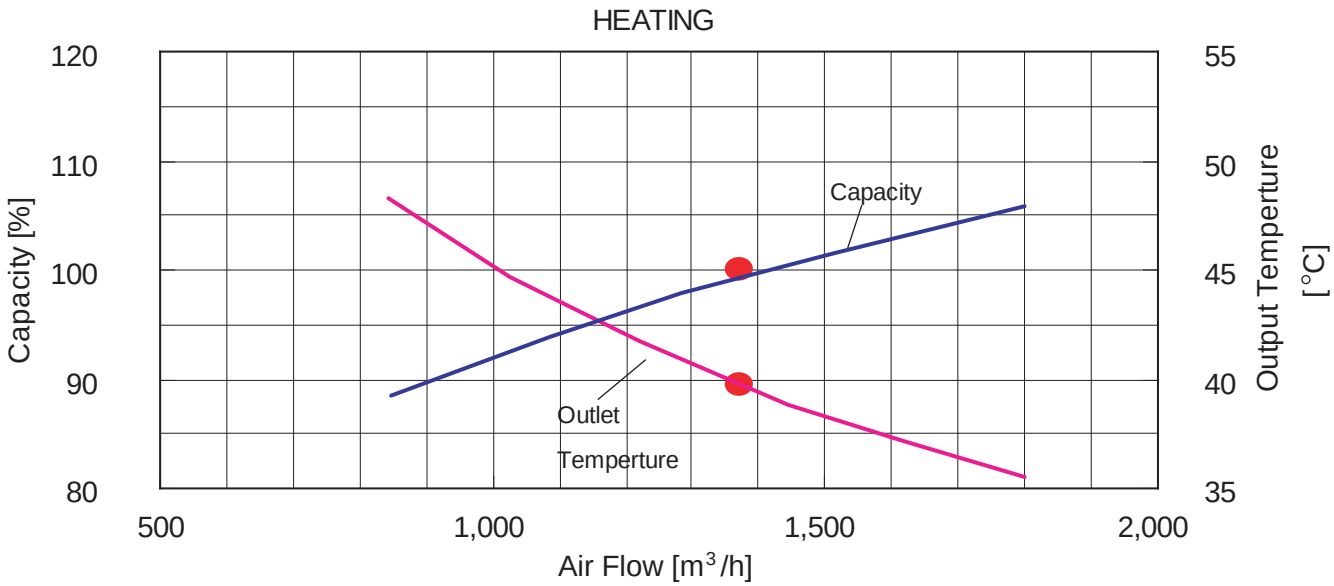




■MODEL : ARXA30

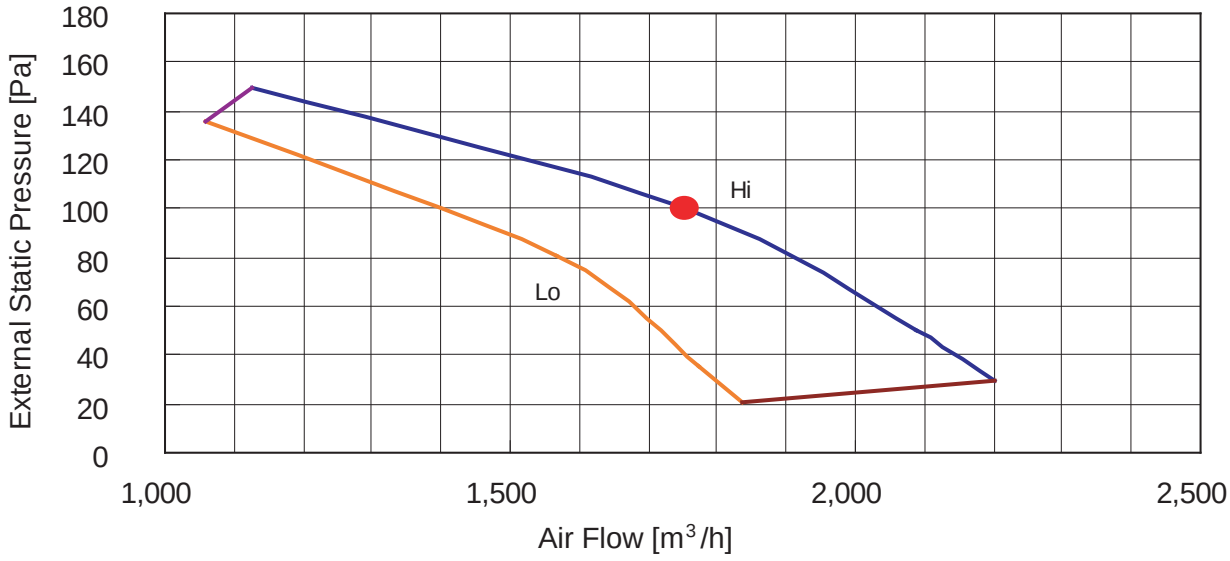


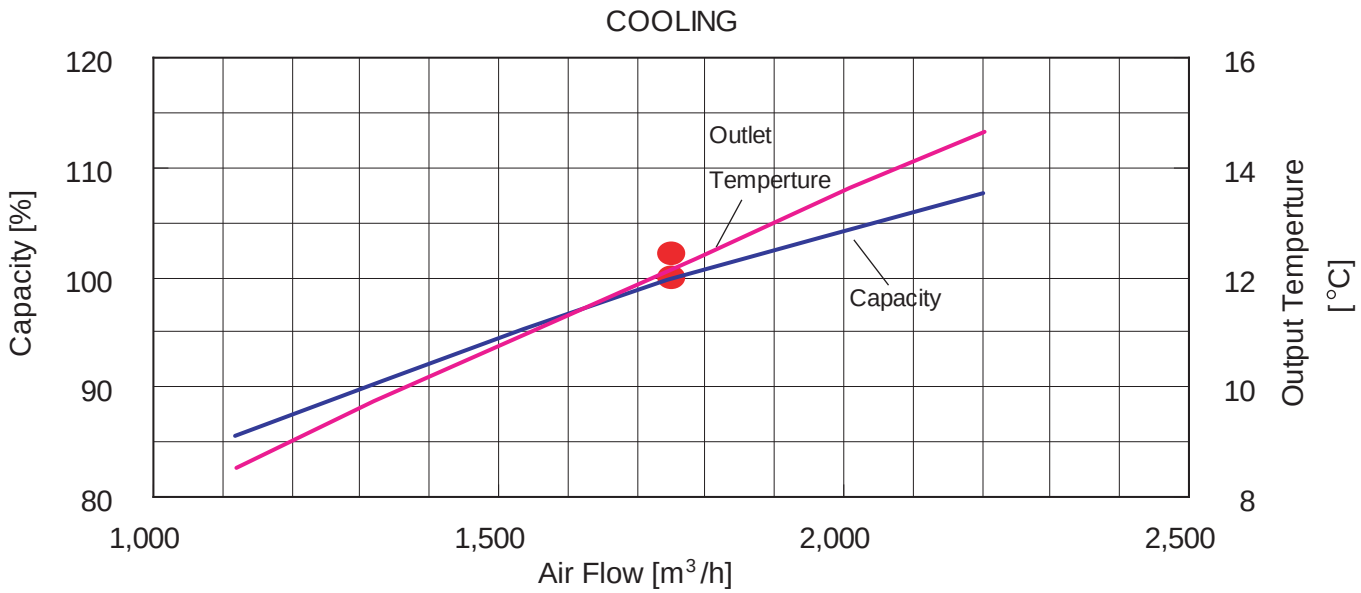


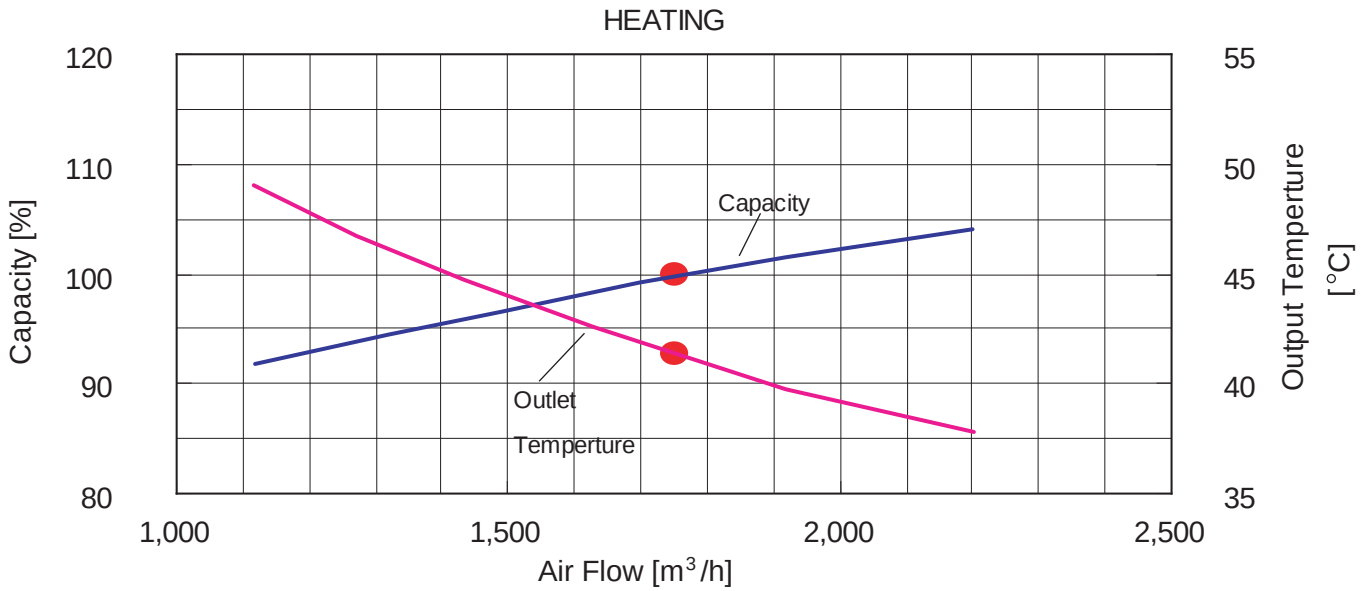


INDOOR UNIT

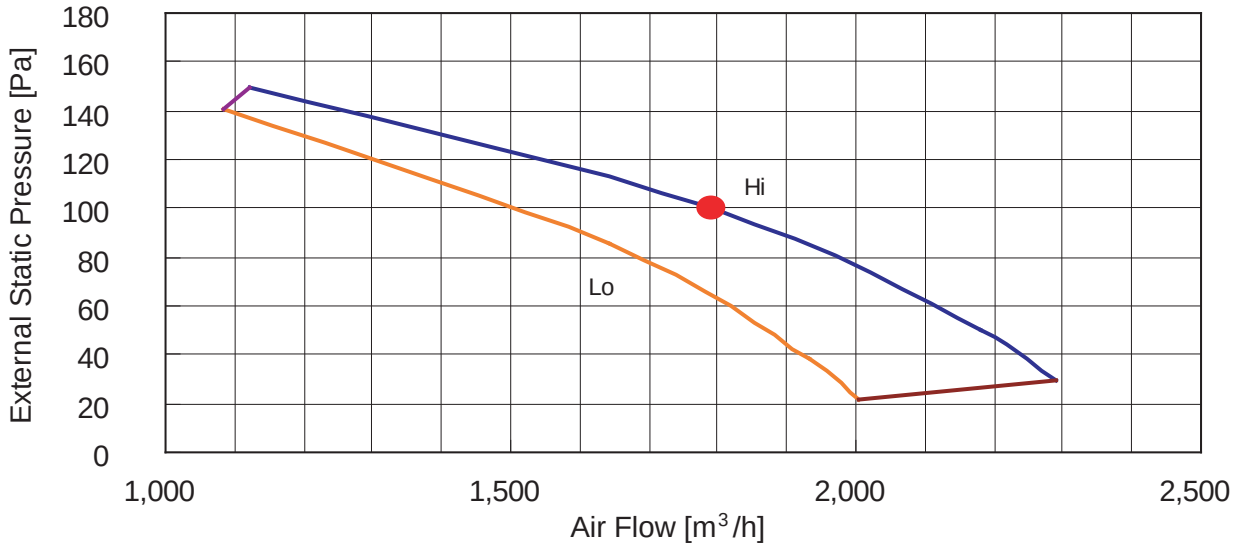
■MODEL : ARXA36



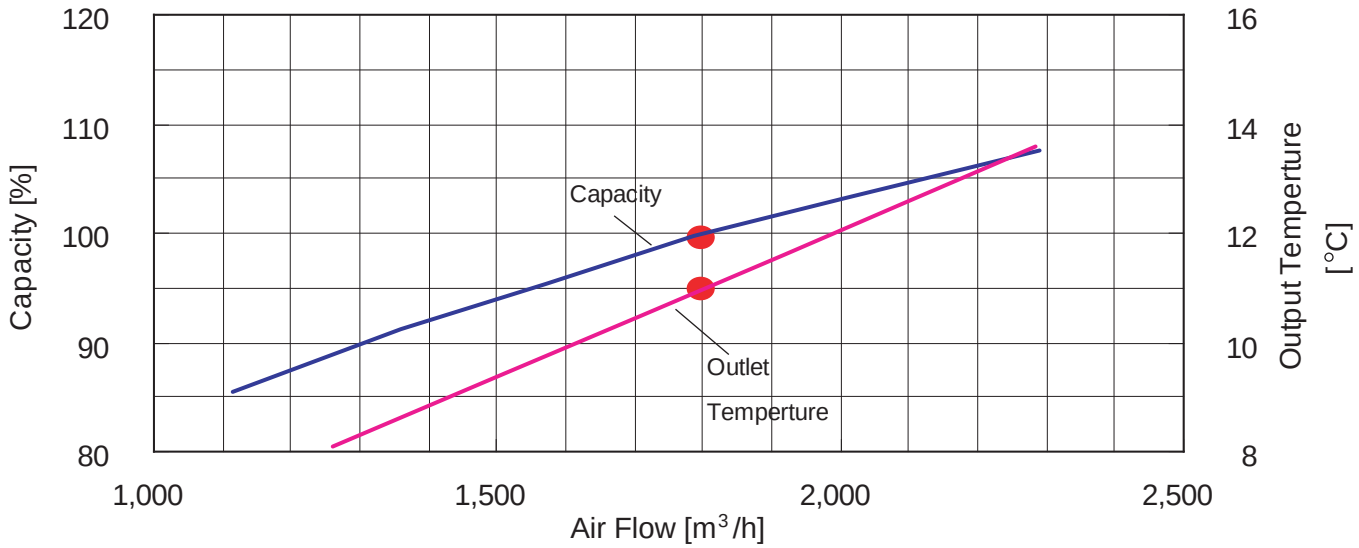




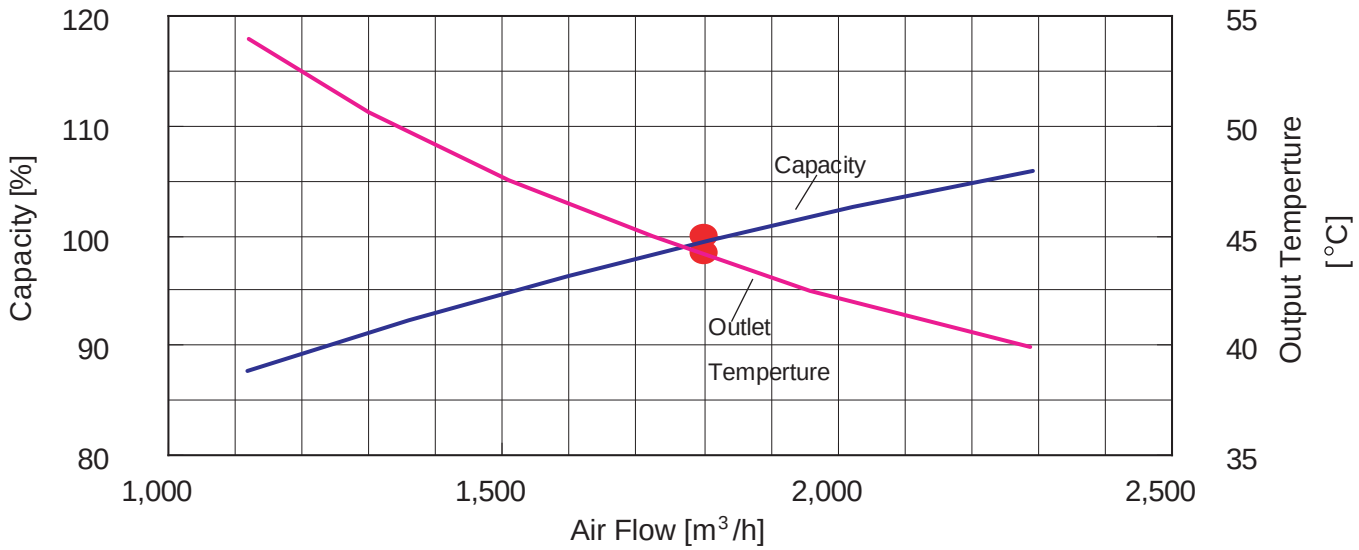
■MODEL : ARXA45



COOLING



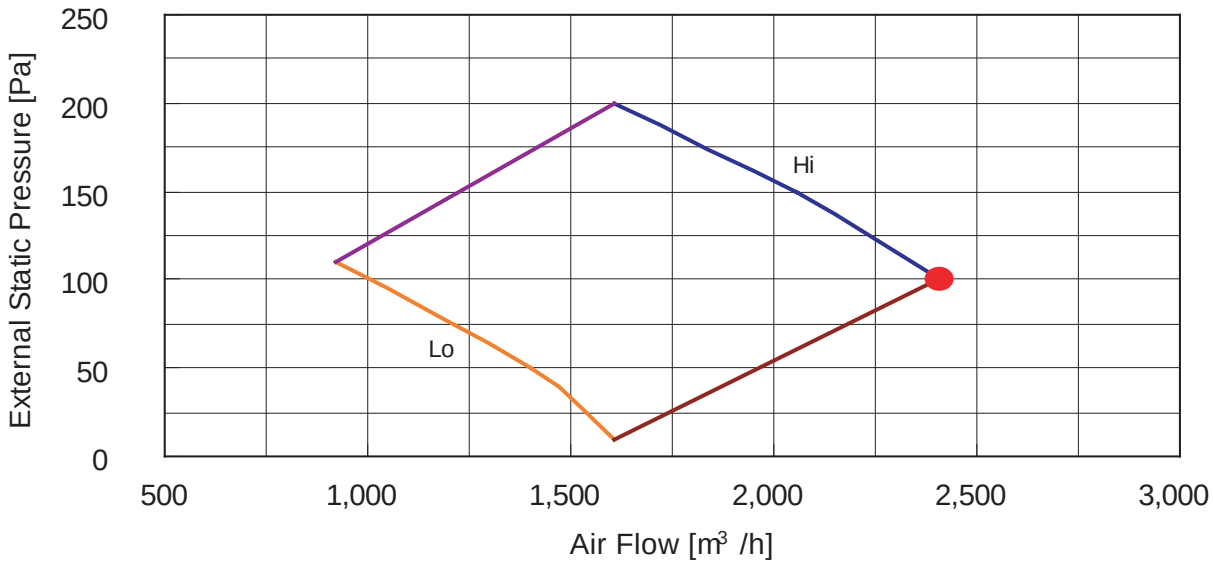
HEATING

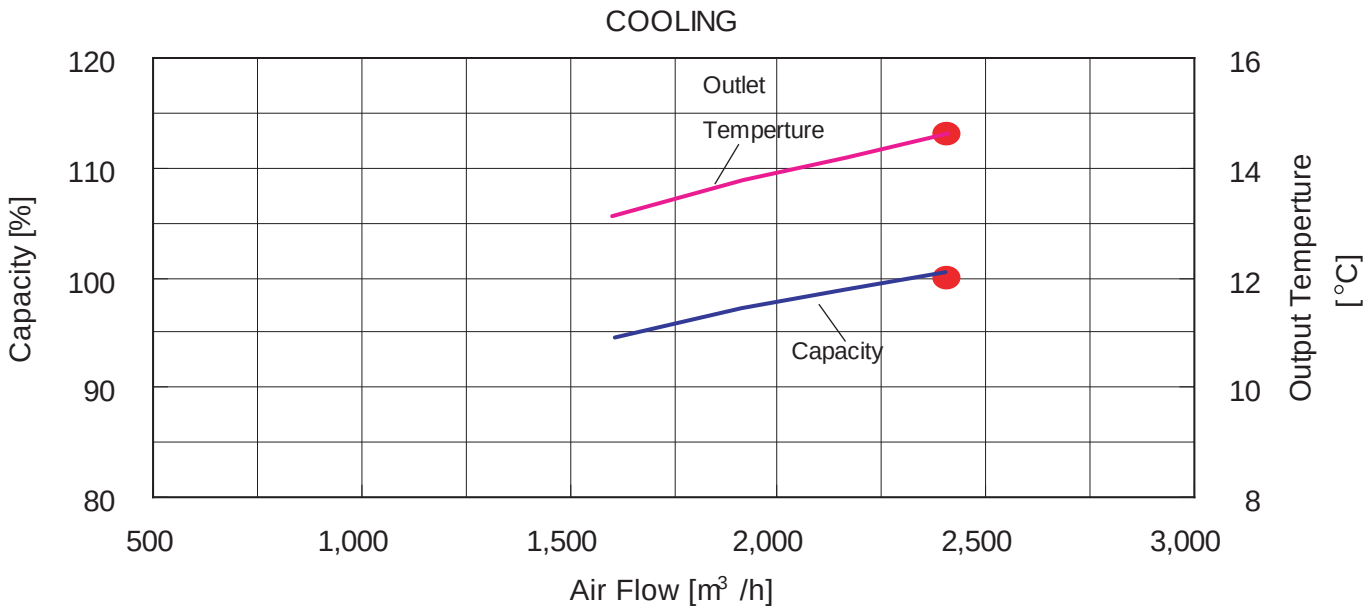


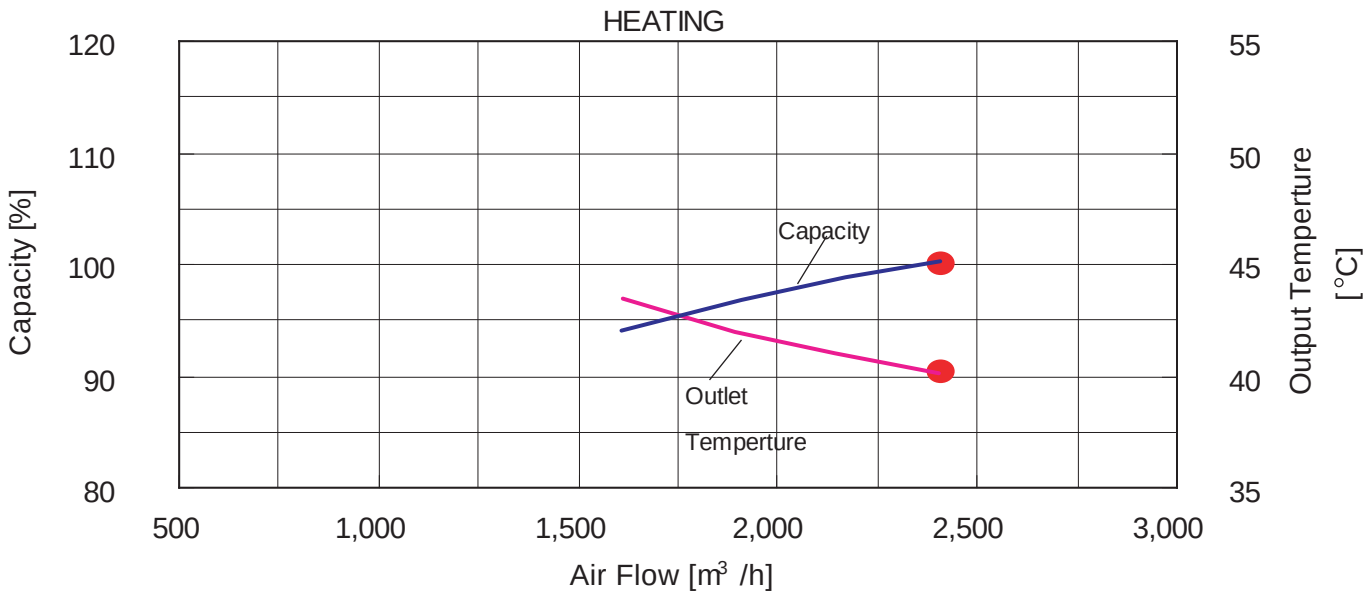
INDOOR UNIT

4-10-4. HIGH STATIC PRESSURE DUCT TYPE

■MODEL : ARXC36



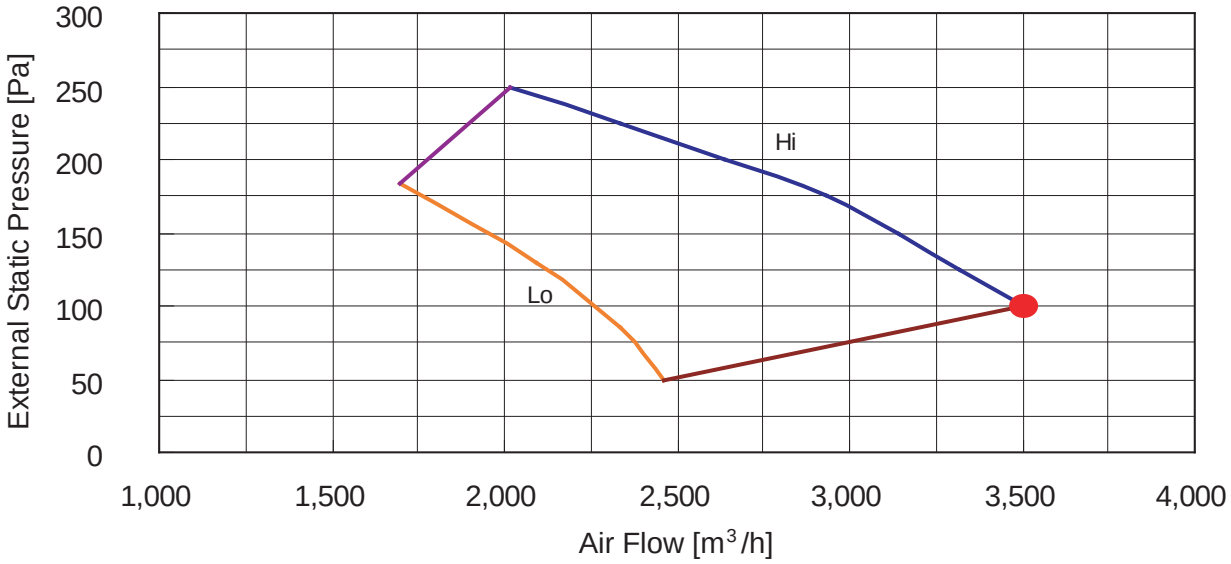




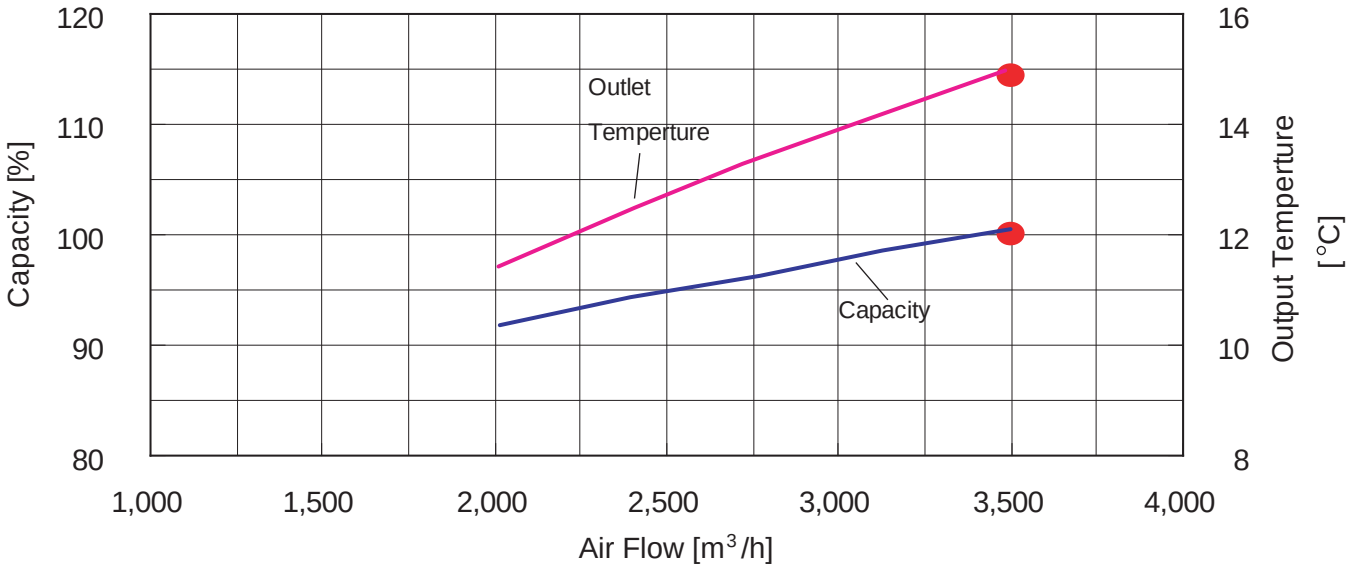
INDOOR UNIT

INDOOR UNIT

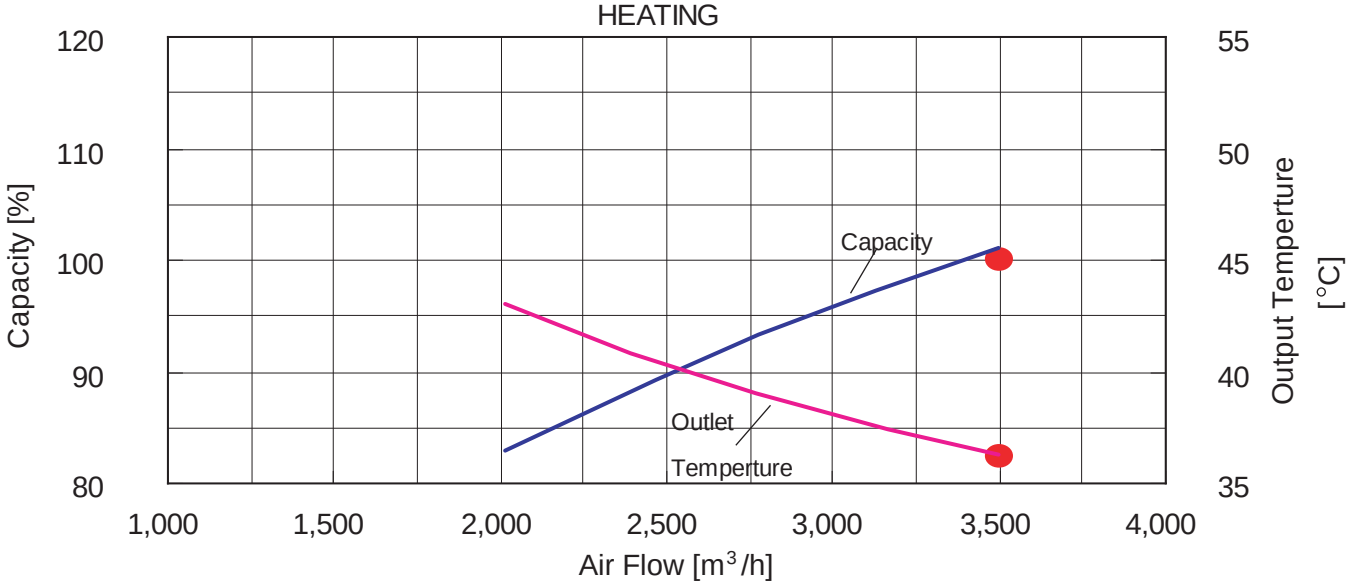
■MODEL : ARXC45



COOLING

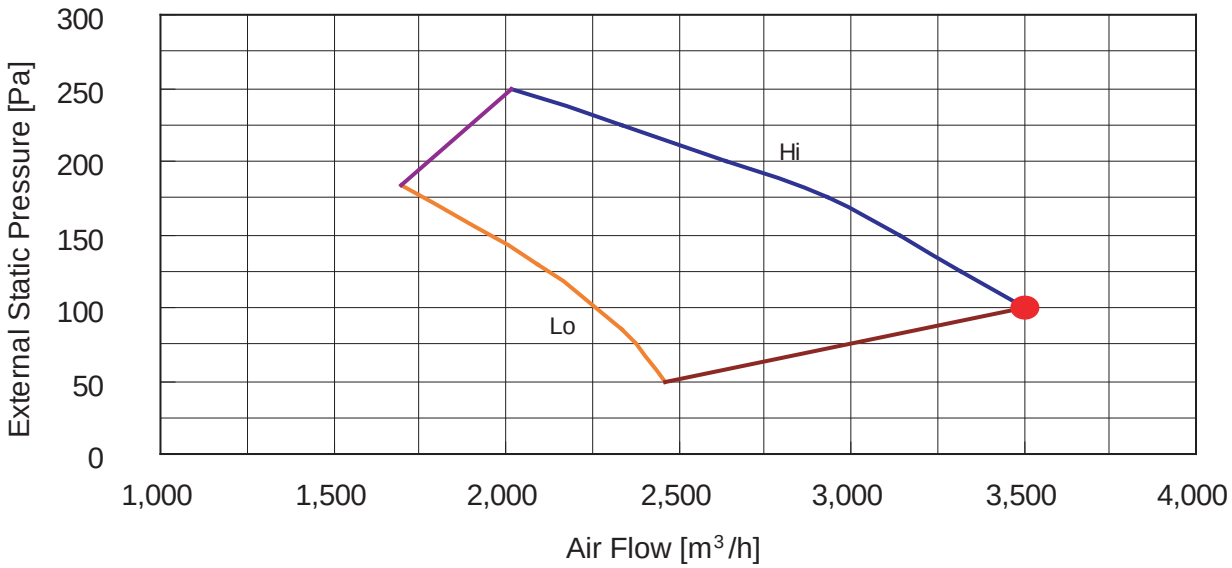


HEATING

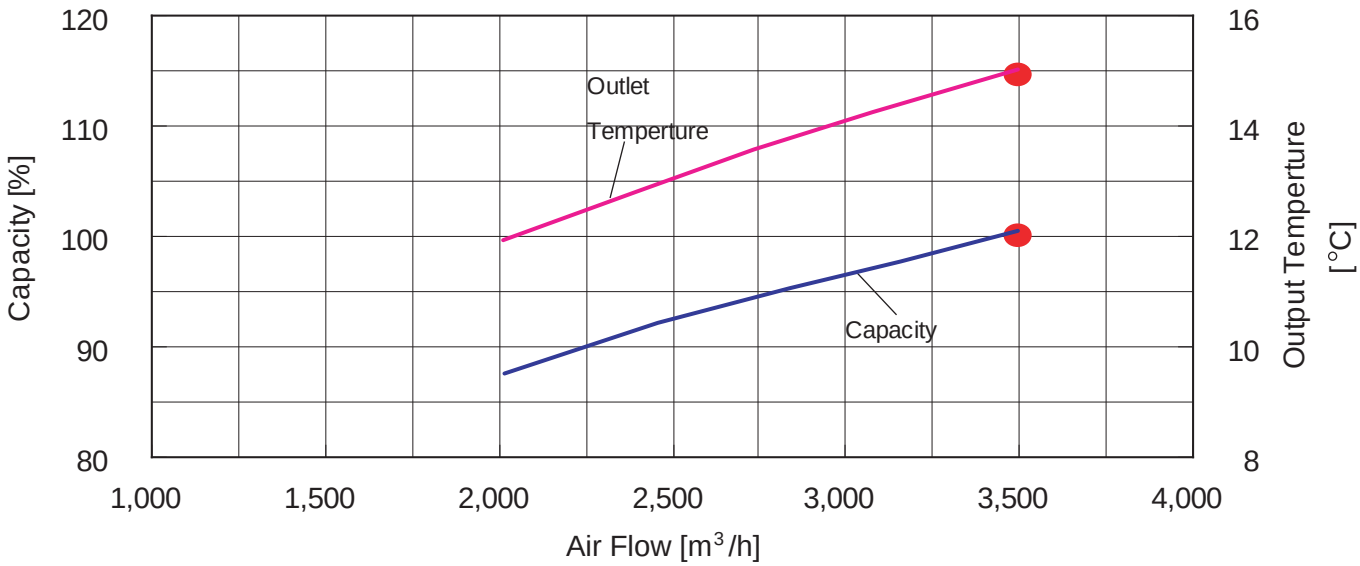


INDOOR UNIT

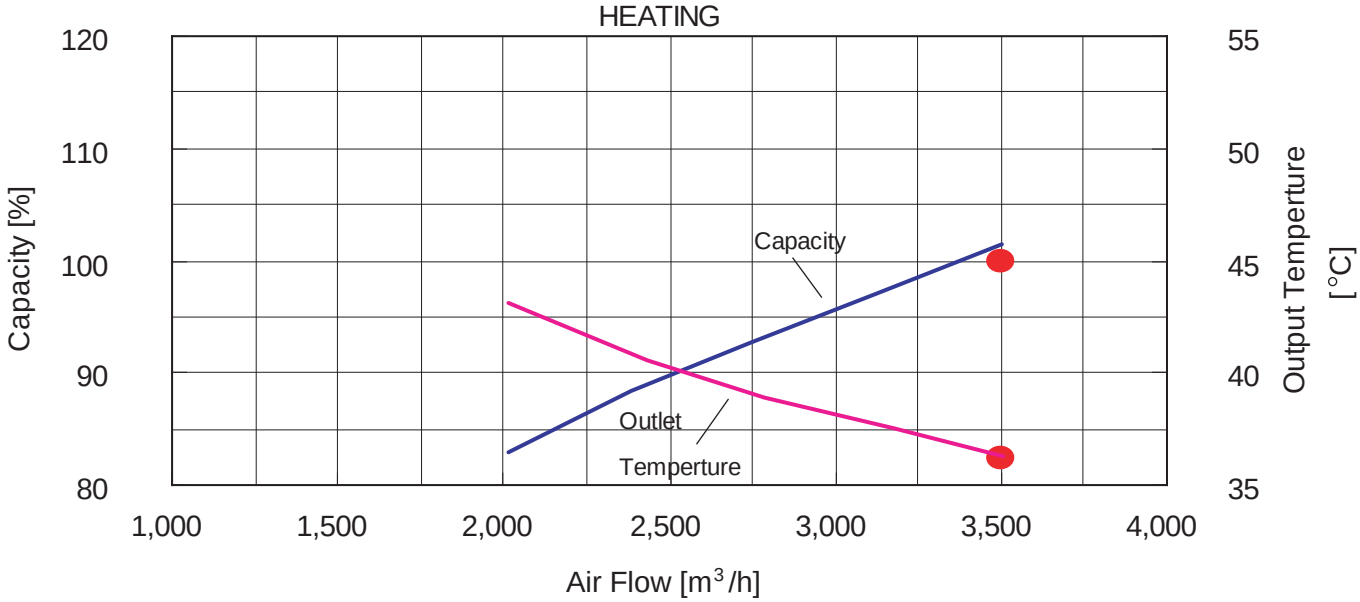
■MODEL : ARXC60



COOLING



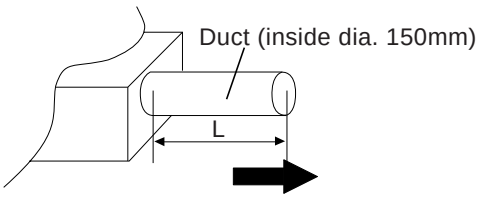
HEATING

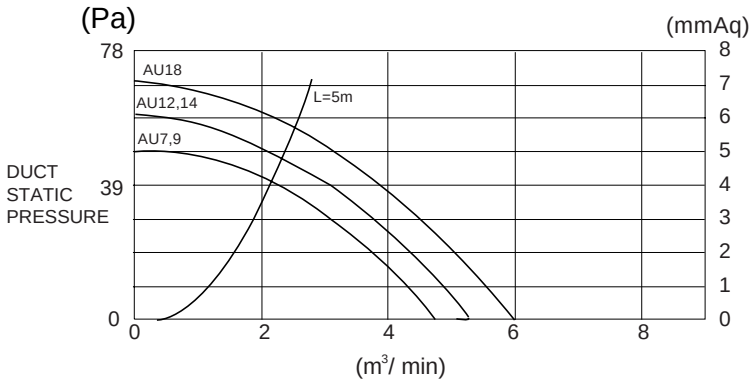


4-10-5. COMPACT CASSETTE TYPE (DUCT CONNECTION)

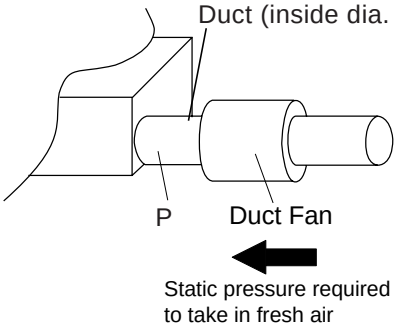
■ MODELS : AUXB07, AUXB09, AUXB12, AUXB14, AUXB18

● OUTLET AIR

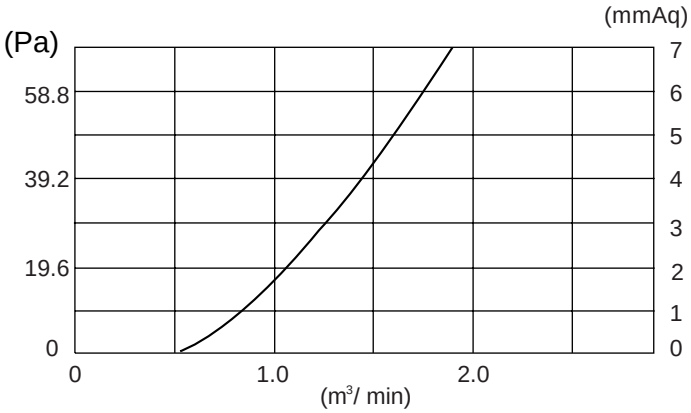




● FRESH AIR



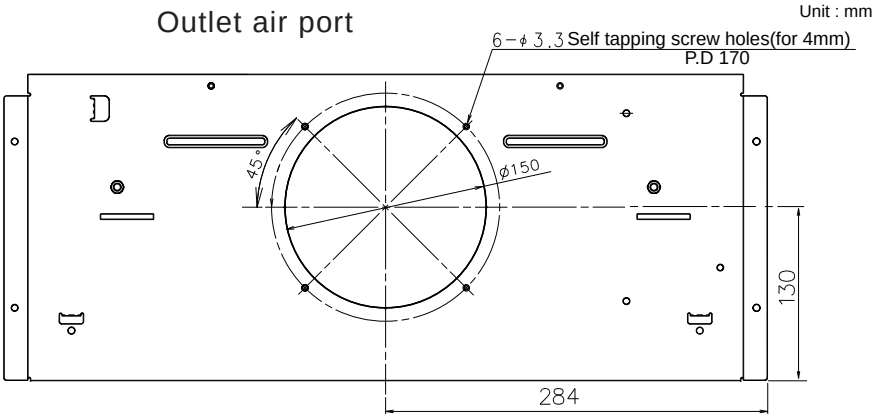
DUCT
STATIC
PRESSURE



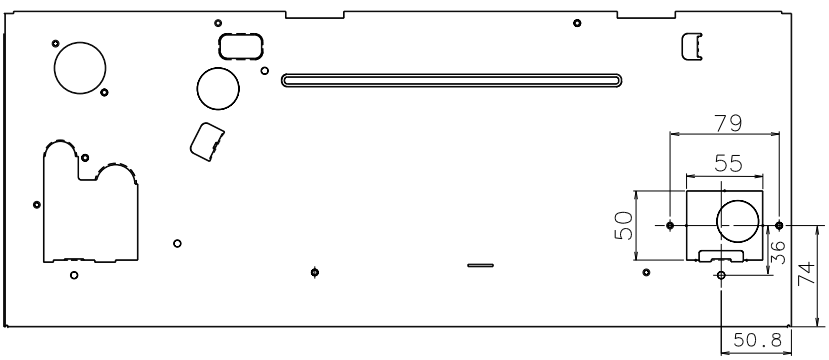
● DIMENSION

Outlet air port

Unit : mm



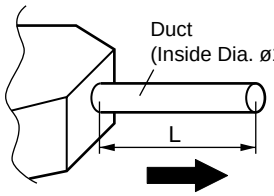
Fresh air port

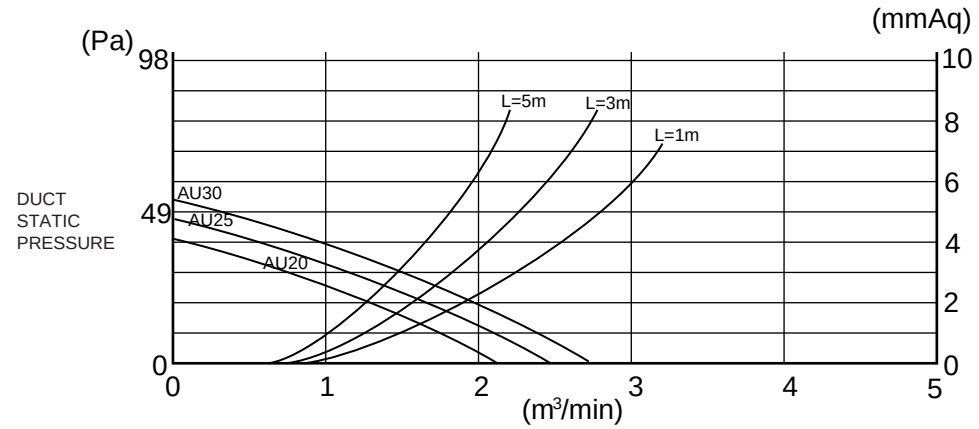


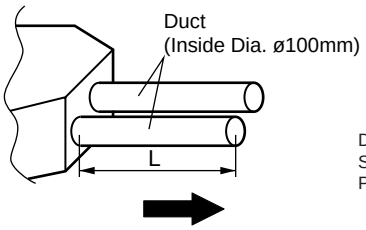
4-10-6. CASSETTE TYPE (DUCT CONNECTION)

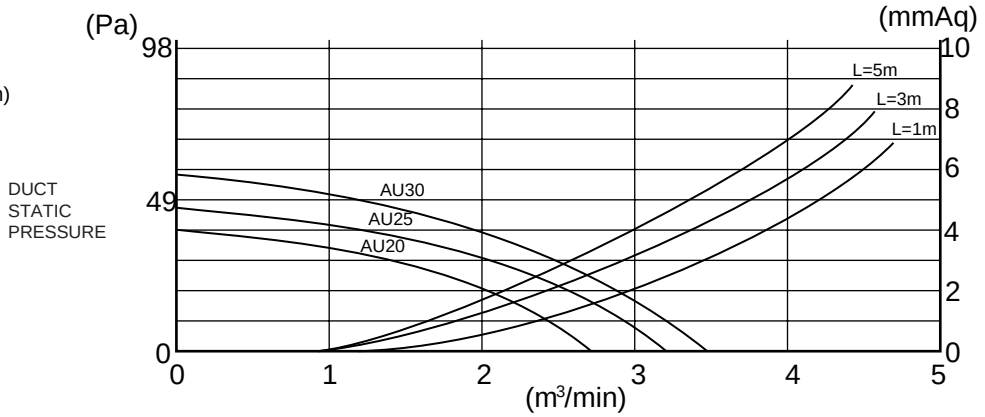
■ MODELS : AU*A20, AU*A25, AU*A30

● OUTLET AIR

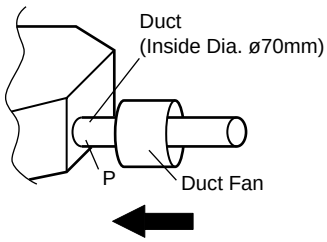




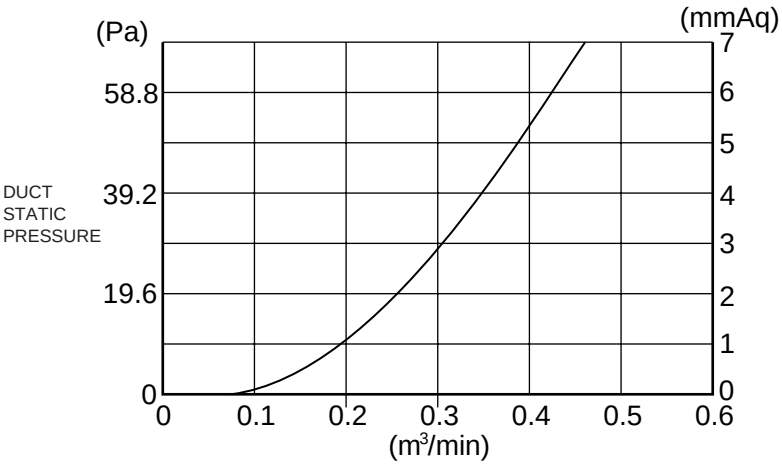




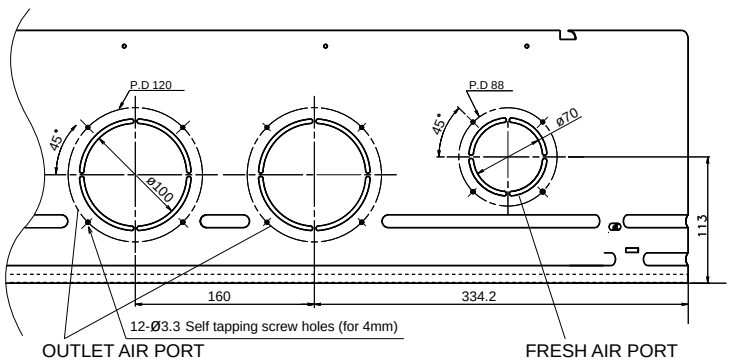
● FRESH AIR



Static pressure required
to take in fresh air



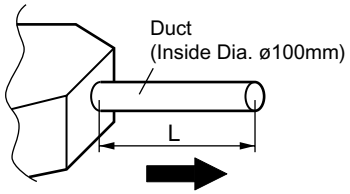
● DIMENSION

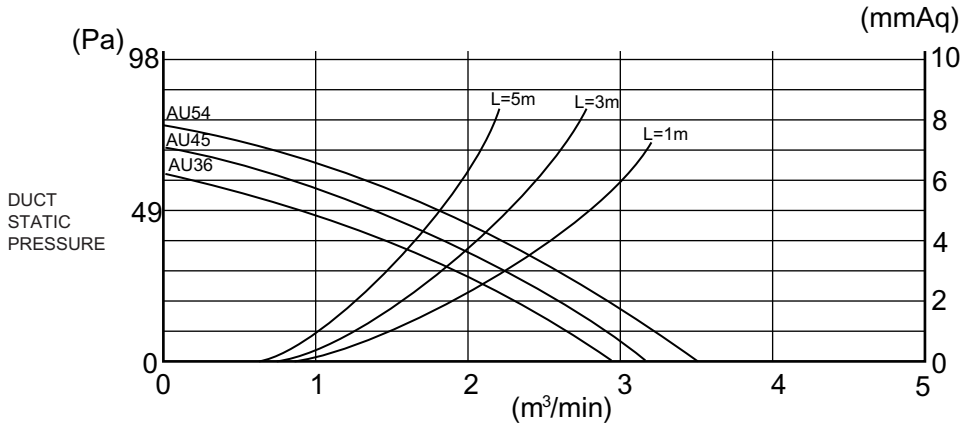


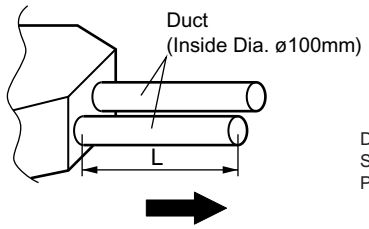
INDOOR UNIT

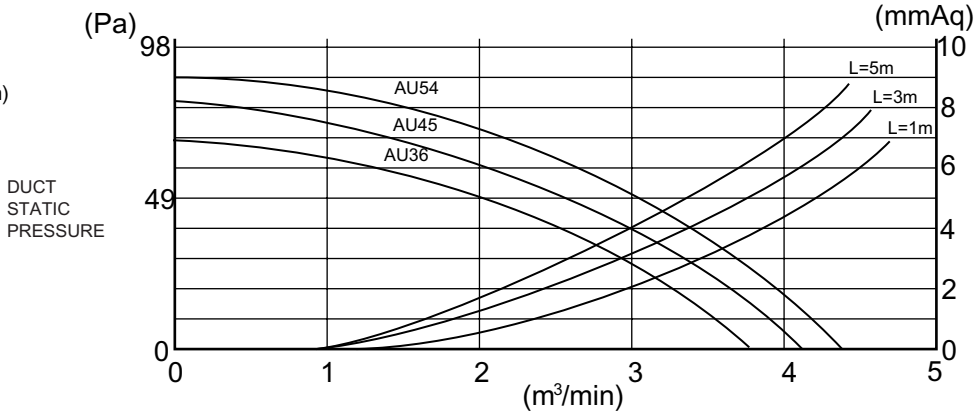
■ MODELS : AU*A36, AU*A45, AU*A54

● OUTLET AIR

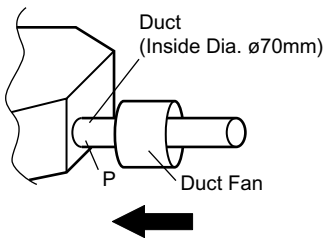




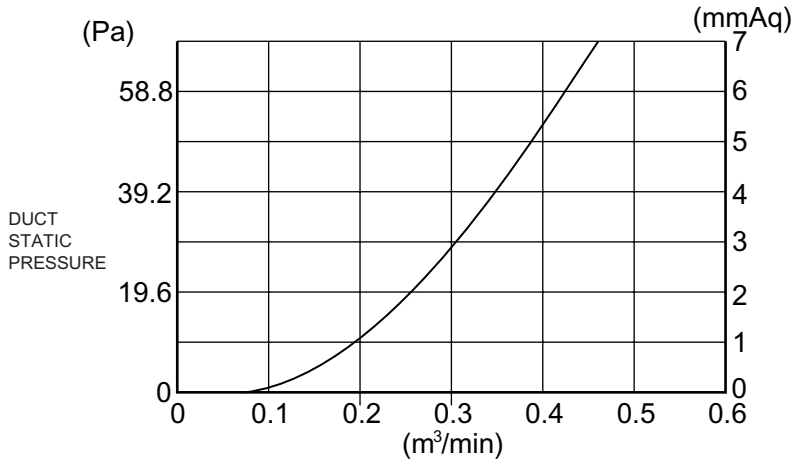




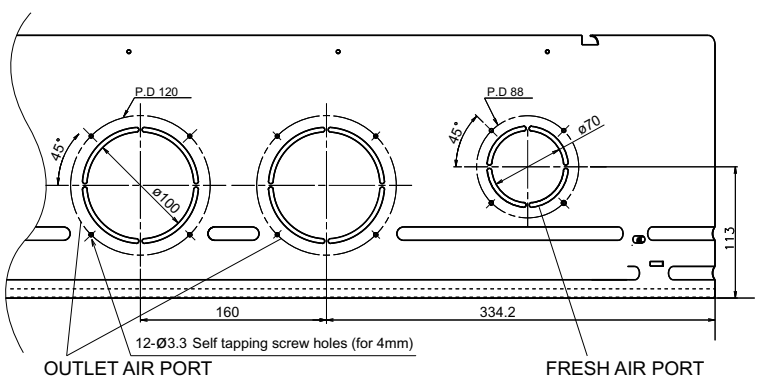
● FRESH AIR



Static pressure required
to take in fresh air



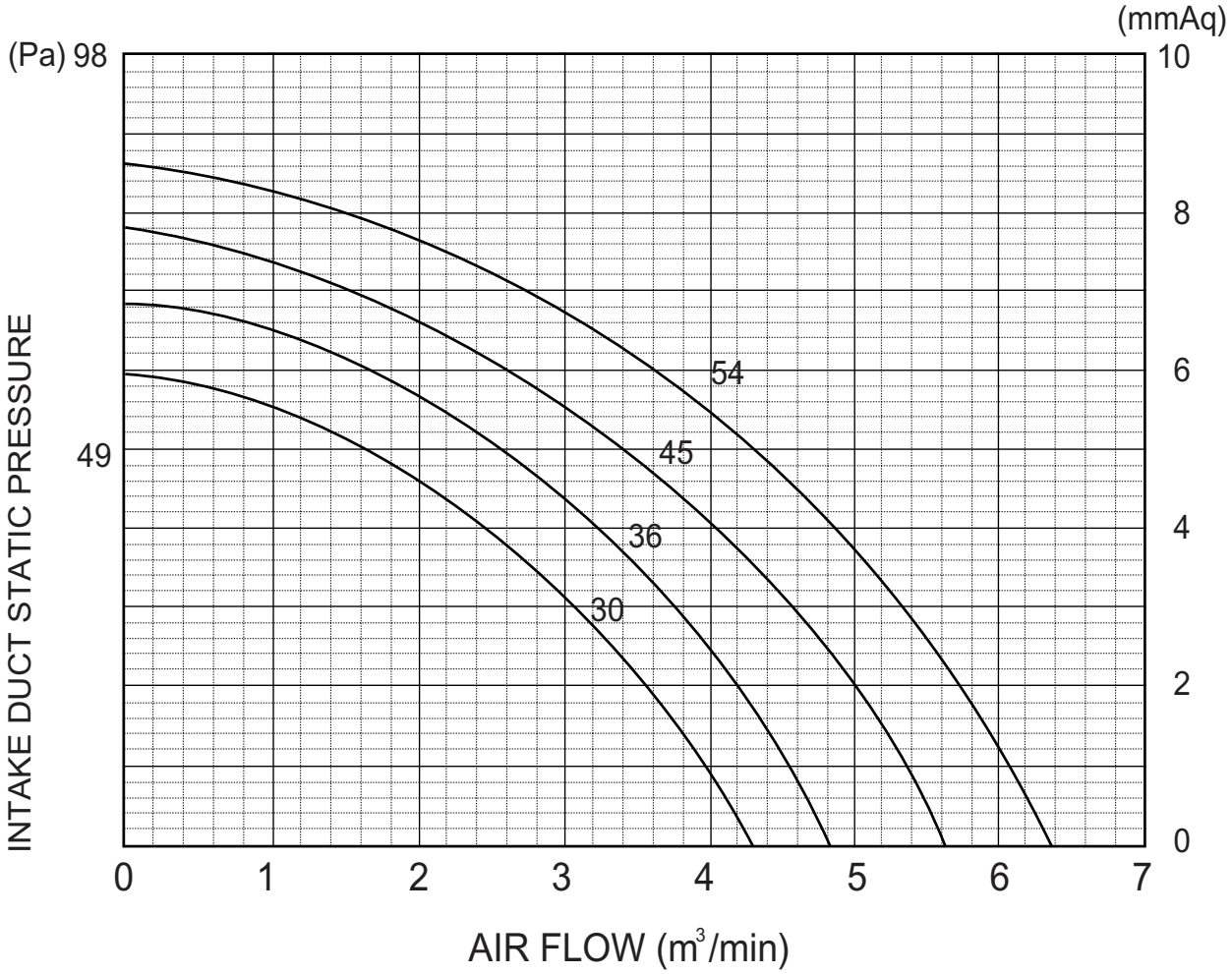
● DIMENSION



4-10-7. CEILING TYPE (FRESH AIR)

■ MODELS : AB*A30, AB*A36, AB*A45, AB*A54

● FRESH AIR CHARACTERISTIC



INDOOR UNIT

4-11. AIR FLOW

TYPE	MODEL		AIRFLOW		
			m^3/h	L/s	CFM
Compact Cassette	AUXB07	High	530	147	312
		Med	480	133	283
		Low	410	114	241
	AUXB09	High	530	147	312
		Med	480	133	283
		Low	410	114	241
	AUXB12	High	580	161	341
		Med	520	144	306
		Low	460	128	271
	AUXB14	High	580	161	341
		Med	520	144	306
		Low	460	128	271
	AUXB18	High	640	178	377
		Med	540	150	318
		Low	470	131	277
Cassette	AU*A20	High	1,000	278	589
		Med	840	233	494
		Low	700	194	412
	AU*A25	High	1,100	306	647
		Med	940	261	553
		Low	780	217	459
	AU*A30	High	1,250	347	736
		Med	1,050	292	618
		Low	840	233	494
	AU*A36	High	1,500	417	883
		Med	1,300	361	765
		Low	1,100	306	647
	AU*A45	High	1,550	431	912
		Med	1,350	375	795
		Low	1,100	306	647
	AU*A54	High	1,700	472	1,001
		Med	1,420	394	836
		Low	1,200	333	706
Compact Duct	ARXB07	High	330	92	194
		Med	300	83	177
		Low	270	75	159
	ARXB09	High	370	103	218
		Med	340	94	200
		Low	310	86	182
	ARXB12	High	560	156	330
		Med	500	139	294
		Low	420	117	247
	ARXB14	High	610	169	359
		Med	550	153	324
		Low	470	131	277
	ARXB18	High	950	264	559
		Med	790	219	465
		Low	620	172	365
Low Static Pressure Duct	ARXB25	High	1,090	303	642
		Med	970	269	571
		Low	870	242	512
	ARXB30	High	1,200	333	706
		Med	1,090	303	642
		Low	970	269	571
	ARXB36	High	1,440	400	848
		Med	1,270	353	747
		Low	1,160	322	683
	ARXB45	High	1,580	439	930
		Med	1,450	403	853
		Low	1,320	367	777
Duct	ARXA25	High	1,100	306	647
		Med	1,000	278	589
		Low	900	250	530
	ARXA30	High	1,400	389	824
		Med	1,300	361	765
		Low	1,200	333	706
	ARXA36	High	1,750	486	1,030
		Med	1,650	458	971
		Low	1,550	431	912
	ARXA45	High	1,800	500	1,059
		Med	1,600	444	942
		Low	1,500	417	883
High Static Pressure Duct	ARXC36	High	2,500	694	1,471
		Med	1,950	542	1,148
		Low	1,450	403	853
	ARXC45	High	3,500	972	2,060
		Med	3,000	833	1,766
		Low	2,460	683	1,448
	ARXC60	High	3,500	972	2,060
		Med	3,000	833	1,766
		Low	2,460	683	1,448

TYPE	MODEL		AIRFLOW		
			m^3/h	L/s	CFM
Floor/ Ceiling	AB*A12	High	640	178	377
		Med	560	156	330
		Low	480	133	283
	AB*A14	High	640	178	377
		Med	560	156	330
		Low	480	133	283
	AB*A18	High	780	217	459
		Med	650	181	383
		Low	550	153	324
	AB*A24	High	880	244	518
		Med	740	206	436
		Low	630	175	371
Ceiling	AB*A30	High	1,450	403	853
		Med	1,280	356	753
		Low	980	272	577
	AB*A36	High	1,660	461	977
		Med	1,500	417	883
		Low	1,270	353	747
	AB*A45	High	1,850	514	1,089
		Med	1,660	461	977
		Low	1,430	397	842
	AB*A54	High	2,200	611	1,295
		Med	2,000	556	1,177
		Low	1,800	500	1,059
Compact Wall Mounted (Comfort model)	AS*E07	High	490	136	288
		Med	450	125	265
		Low	370	103	218
	AS*E09	High	490	136	288
		Med	450	125	265
		Low	370	103	218
	AS*E12	High	560	156	330
		Med	480	133	283
		Low	420	117	247
	AS*E14	High	600	167	353
		Med	490	136	288
		Low	420	117	247
Wall Mounted	AS*A18	High	800	222	471
		Med	650	181	383
		Low	550	153	324
	AS*A24	High	970	269	571
		Med	870	242	512
		Low	750	208	441
	AS*A30	High	1,040	289	612
		Med	910	253	536
		Low	730	203	430
Ceiling Wall	AW*A07	High	380	106	224
		Med	330	92	194
		Low	290	81	171
	AW*A09	High	480	133	283
		Med	420	117	247
		Low	390	108	230
	AW*A12	High	600	167	353
		Med	520	144	306
		Low	470	131	277
	AW*A14	High	650	181	383
		Med	570	158	335
		Low	490	136	288
	AW*A18	High	760	211	447
		Med	660	183	388
		Low	560	156	330
	AW*A24	High	900	250	530
		Med	780	217	459
		Low	650	181	383
	AW*A30	High	950	264	559
		Med	870	242	512
		Low	780	217	459

Conversion Factor

1 m^3/h = 0.2778 L/s = 0.5886 CFM

3.6m^3/h = 1 L/s

1.699m^3/h = 1 CFM

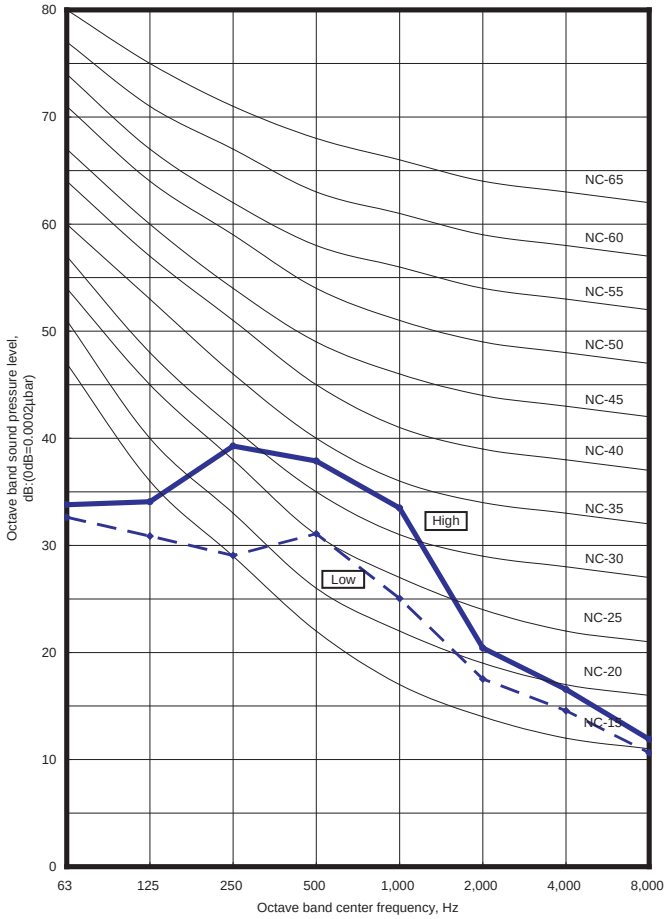
INDOOR UNIT

INDOOR UNIT

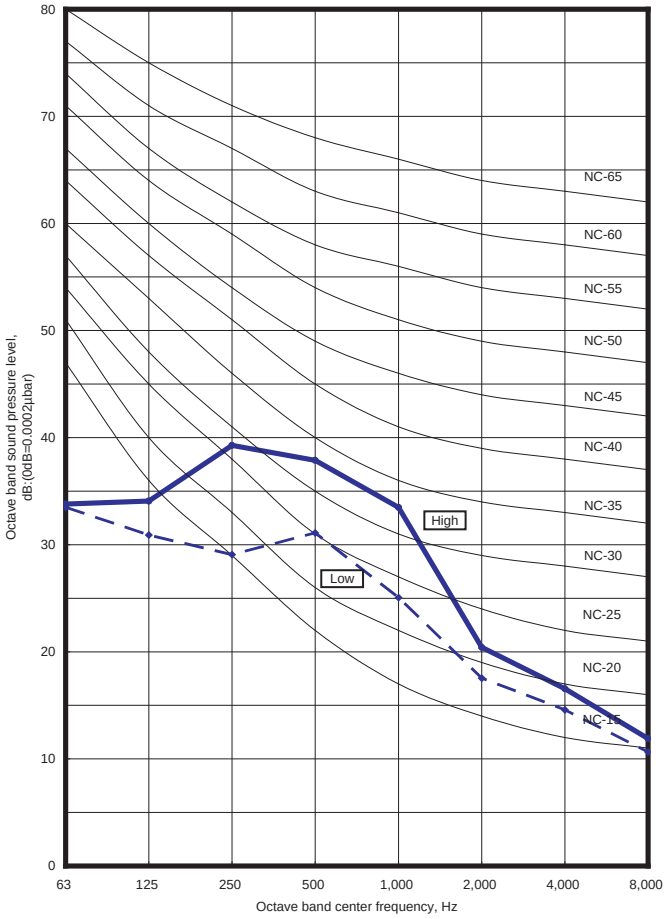
4-12. NOISE LEVEL CURVE

4-12-1. COMPACT CASSETTE TYPE

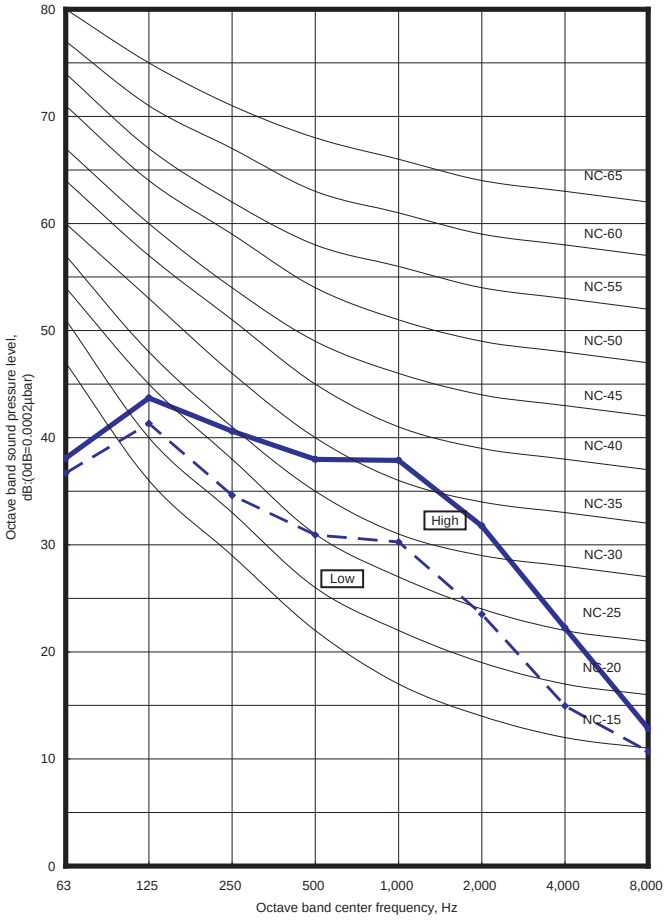
■ MODEL : AUXB07



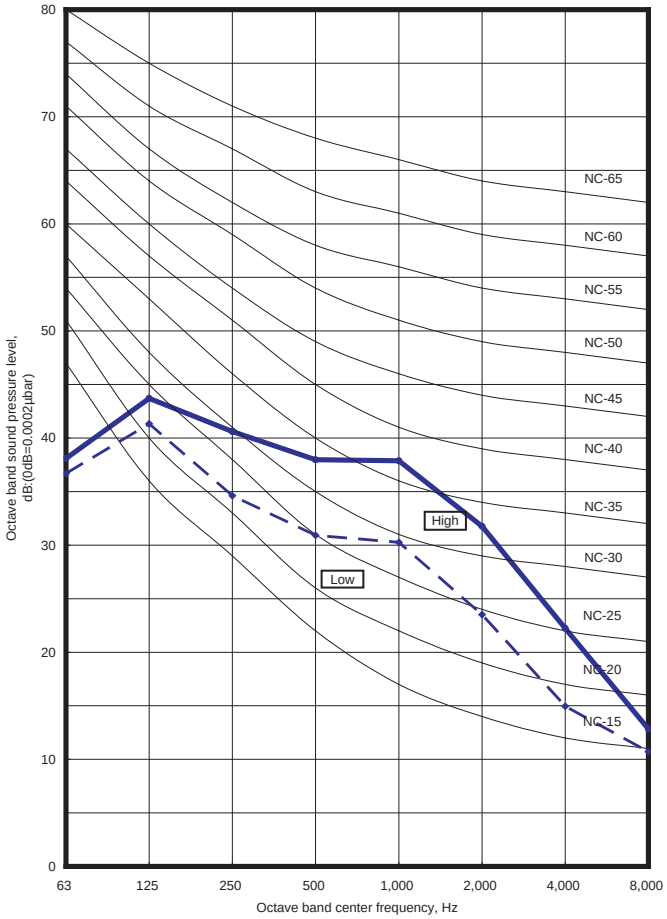
■ MODEL : AUXB09



■ MODEL : AUXB12



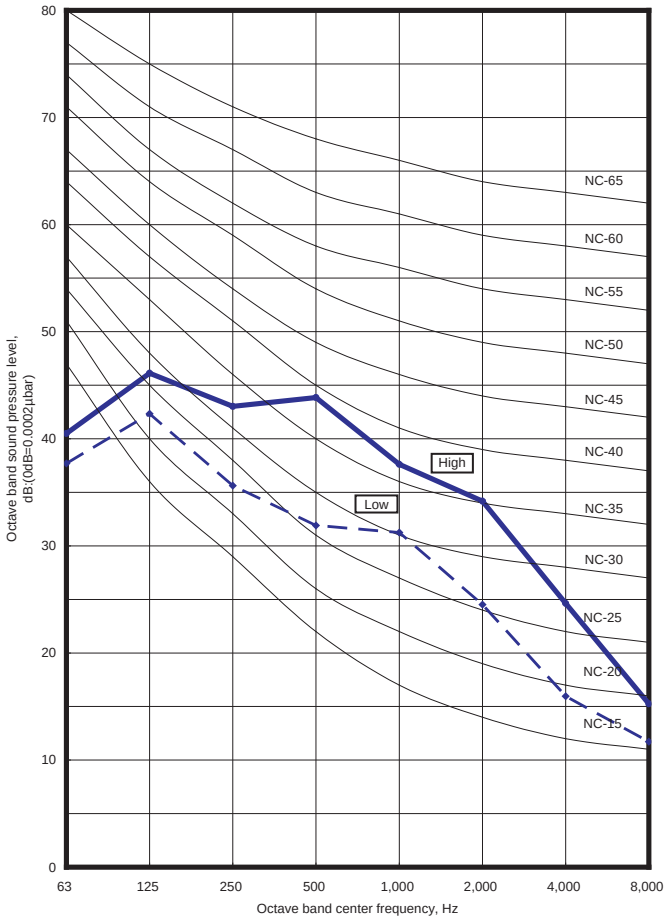
■ MODEL : AUXB14



INDOOR UNIT

INDOOR UNIT

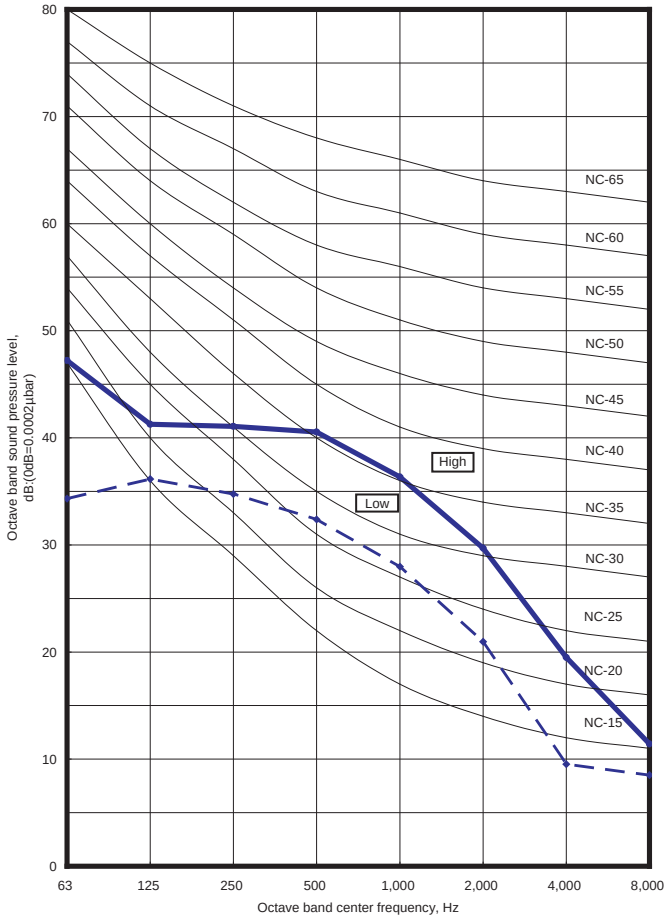
■ MODEL : AUXB18



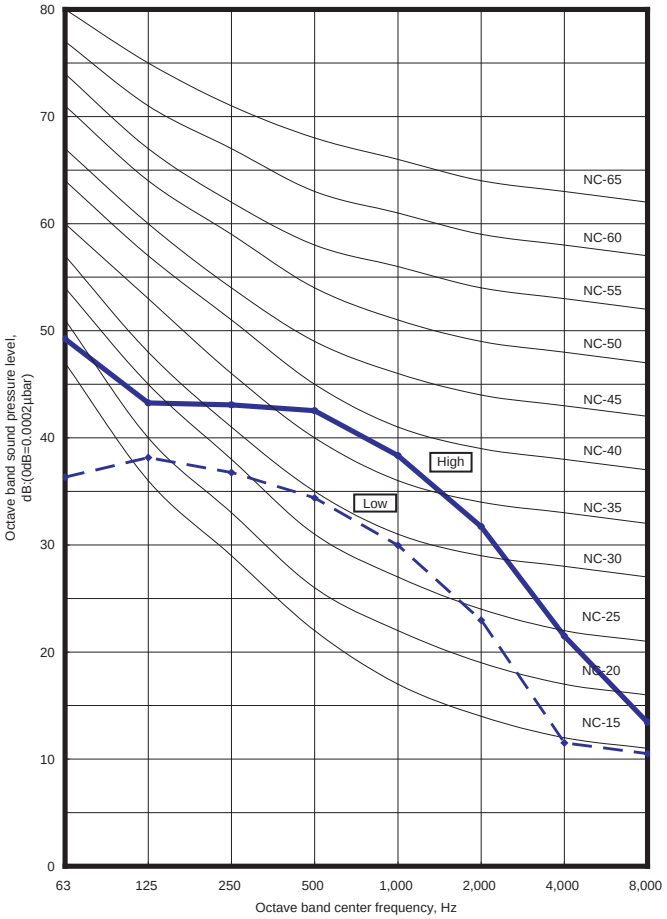
INDOOR UNIT

4-12-2. CASSETTE TYPE

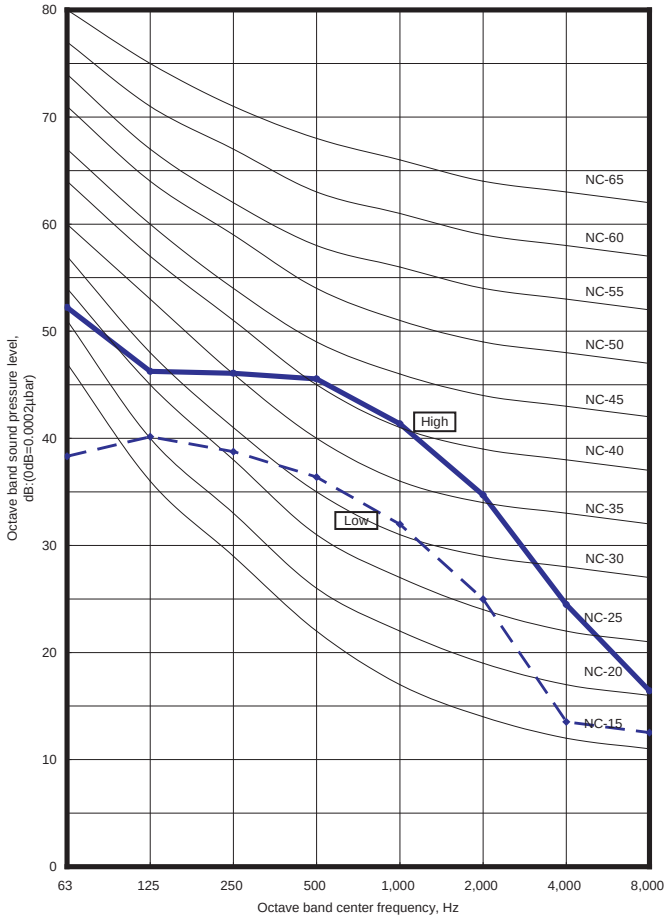
■ MODEL : AU∗A20



■ MODEL : AU∗A25

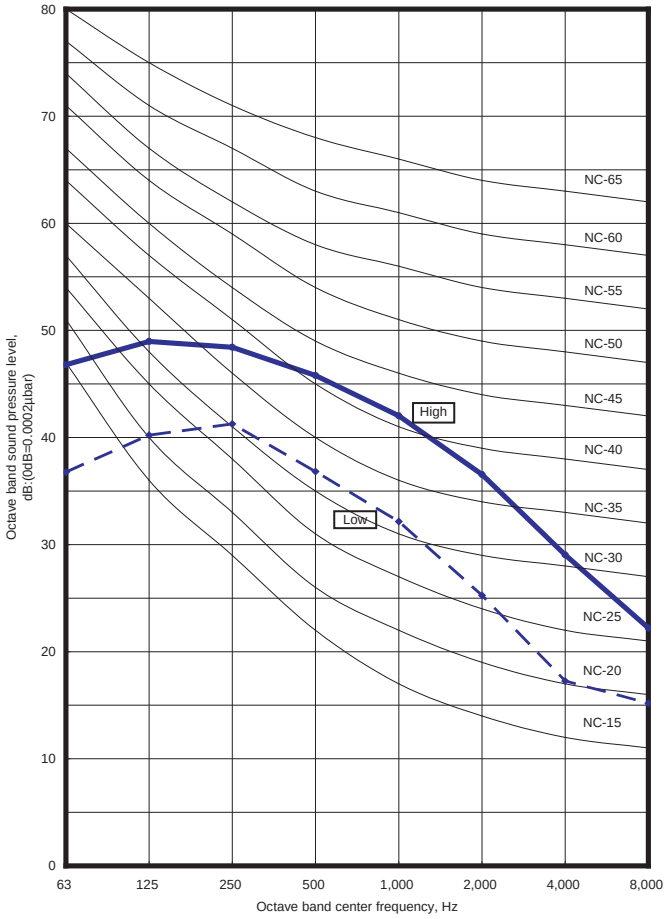


■ MODEL : AU∗A30

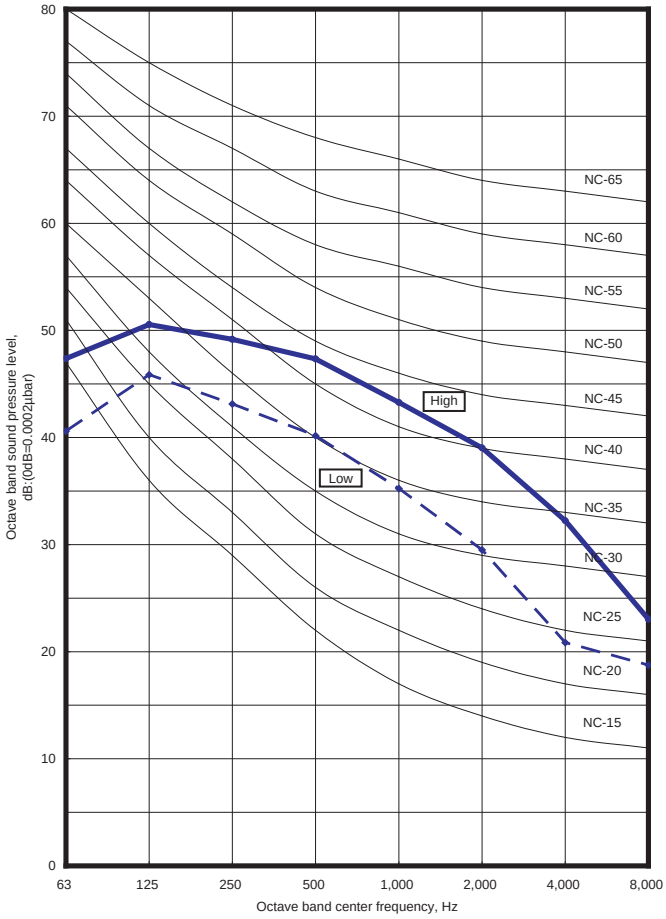


INDOOR UNIT

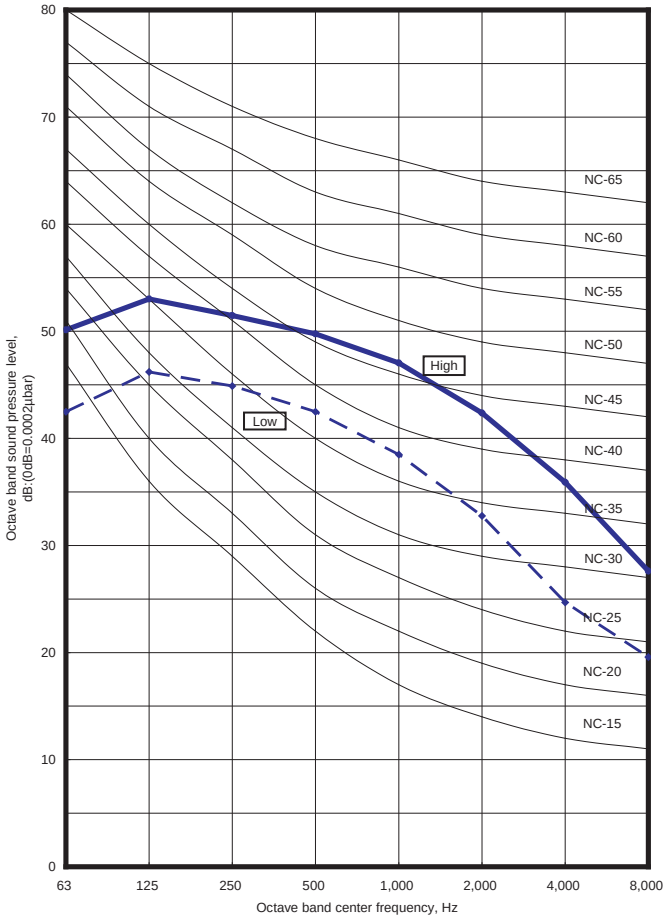
■ MODEL : AU∗A36



■ MODEL : AU∗A45



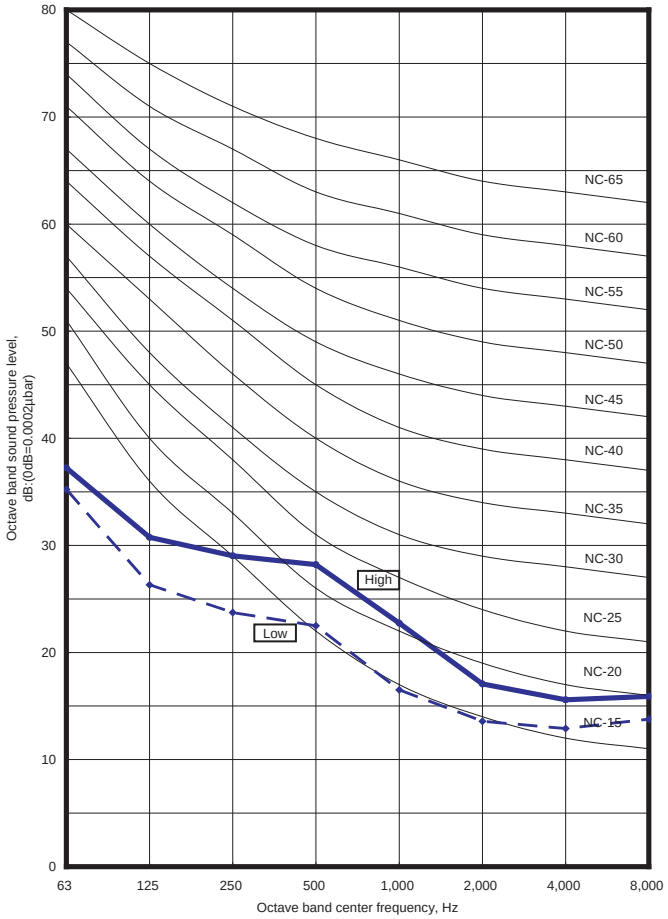
■ MODEL : AU∗A54



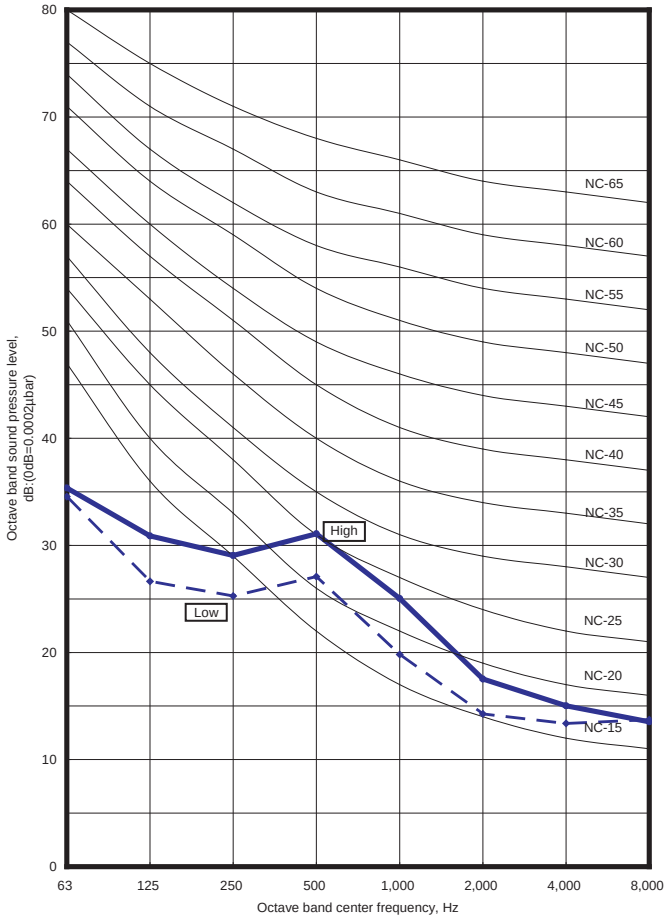
INDOOR UNIT

4-12-3. COMPACT DUCT TYPE

■ MODEL : ARXB07

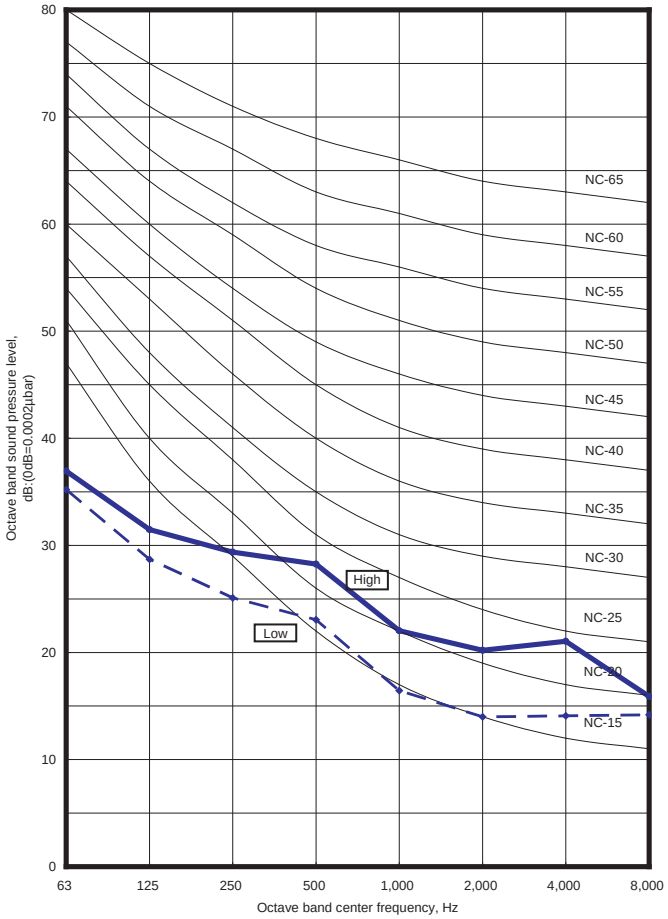


■ MODEL : ARXB09

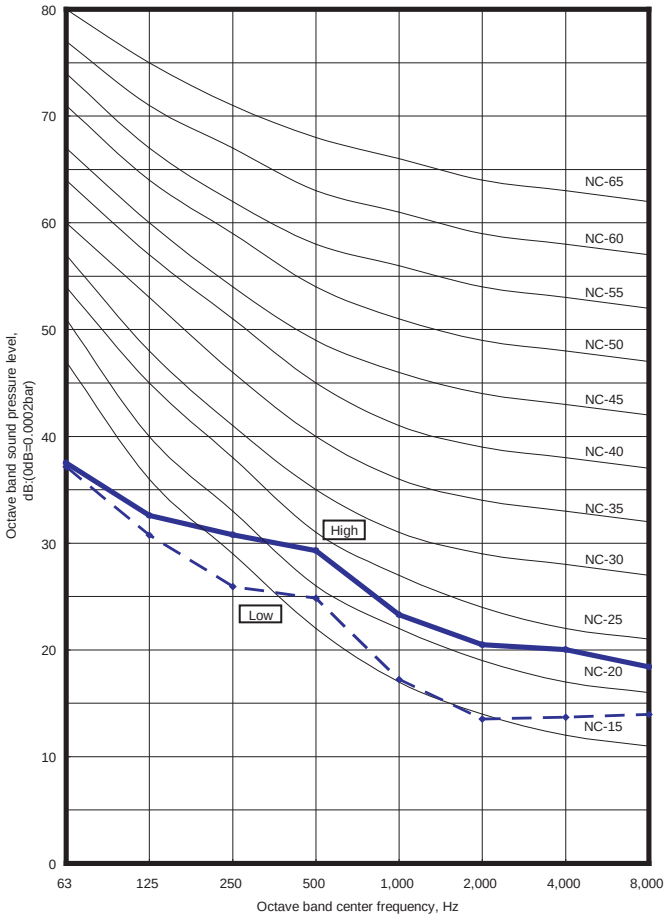


INDOOR UNIT

■ MODEL : ARXB12

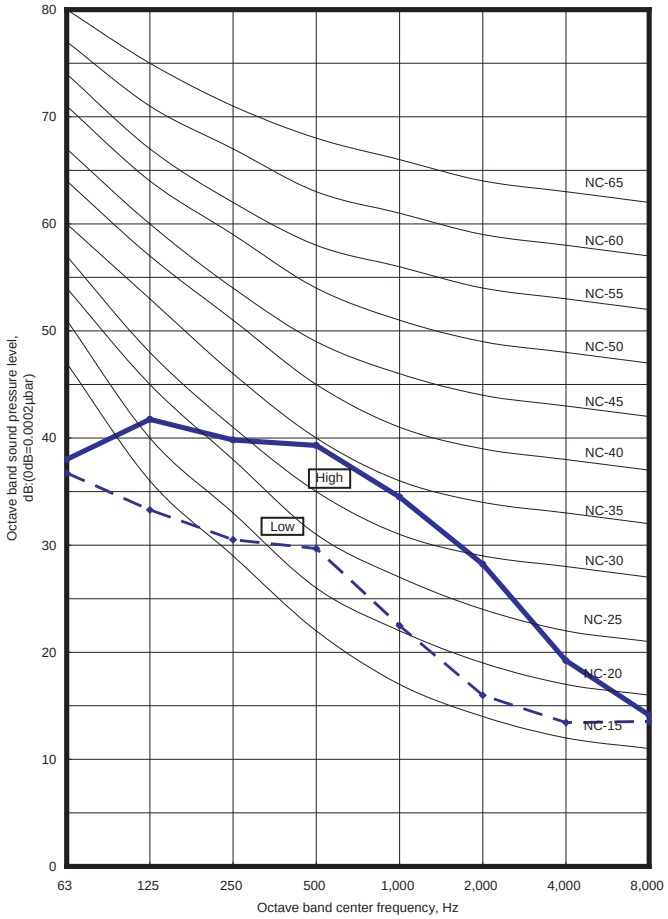


■ MODEL : ARXB14



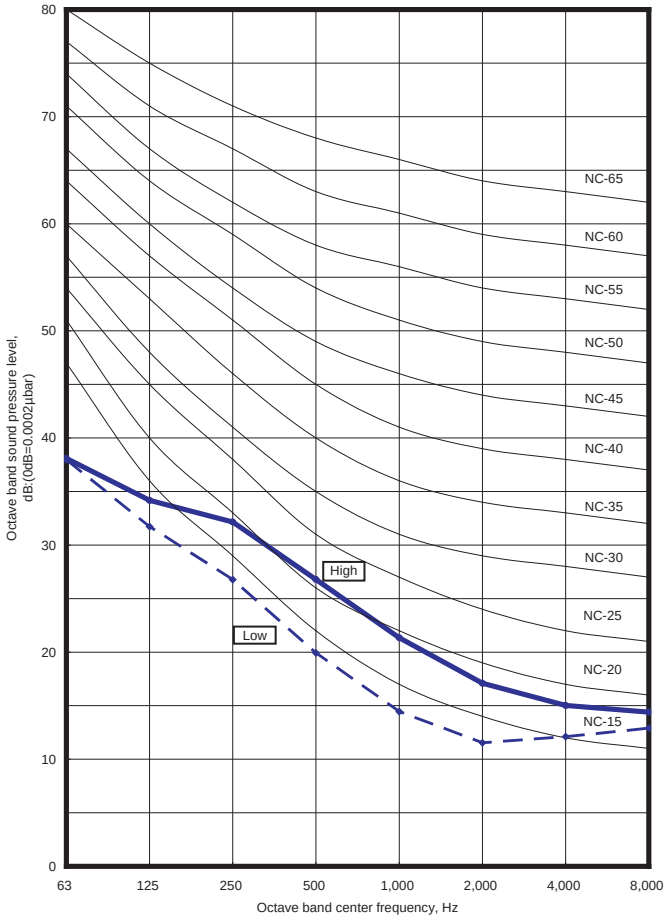
INDOOR UNIT

■ MODEL : ARXB18

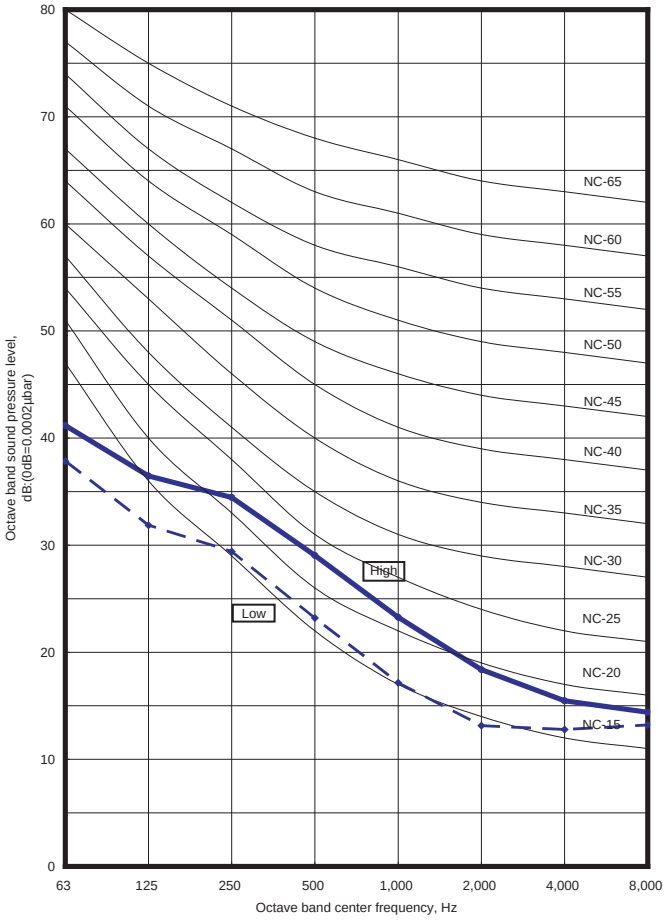


4-12-4. LOW STATIC PRESSURE DUCT TYPE

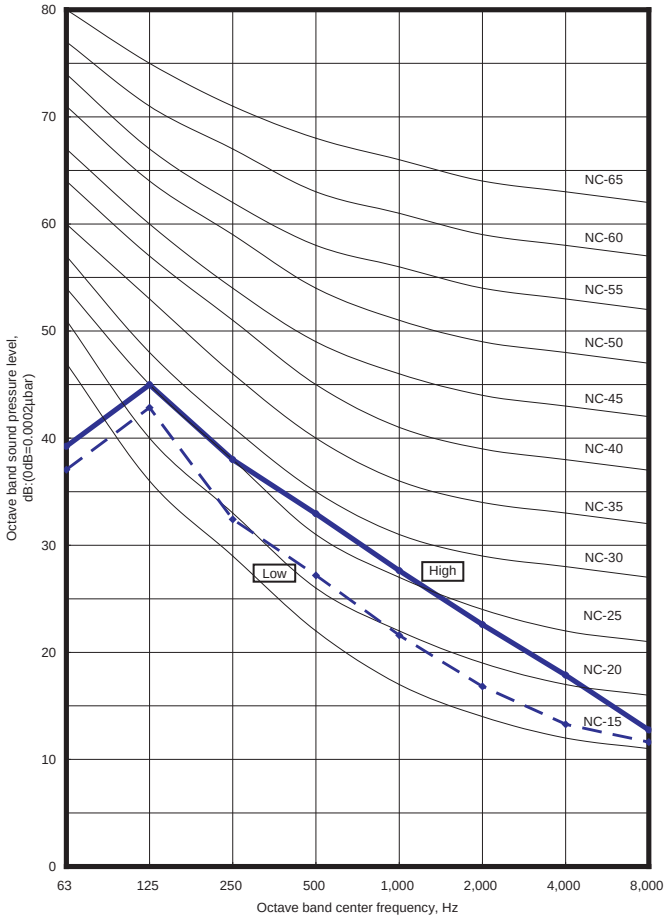
■ MODEL : ARXB25



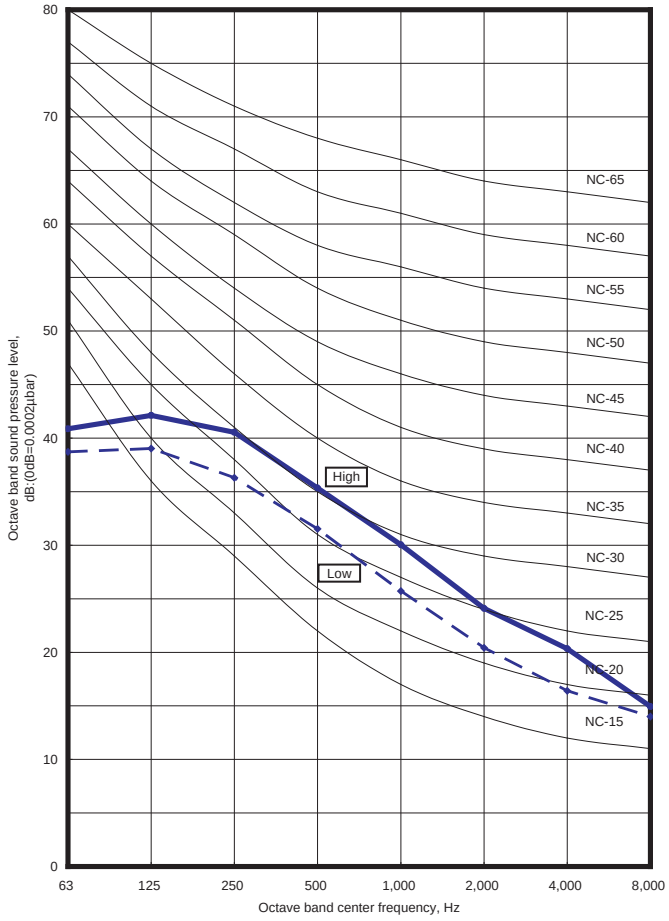
■ MODEL : ARXB30



■ MODEL : ARXB36



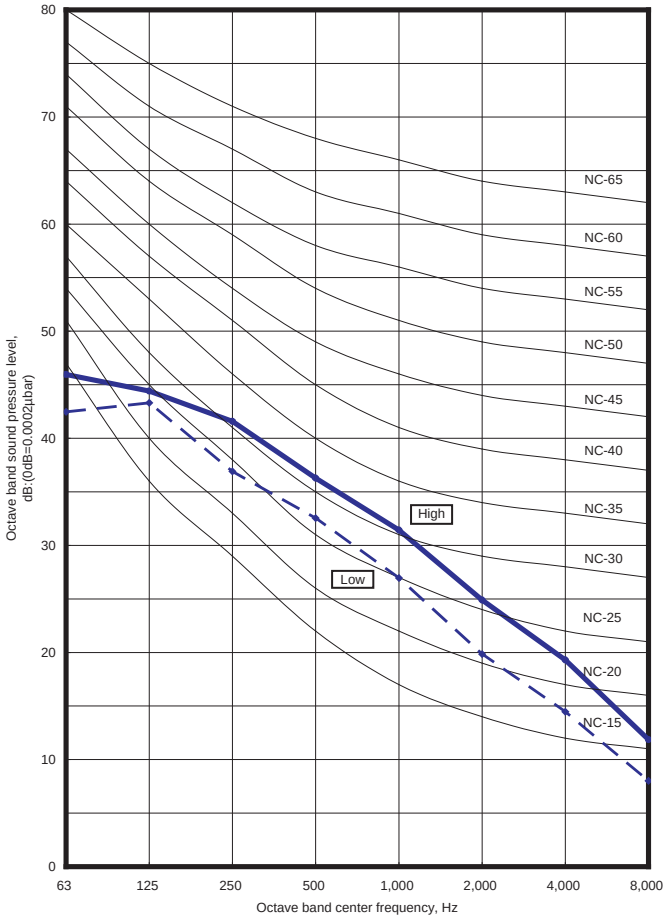
■ MODEL : ARXB45



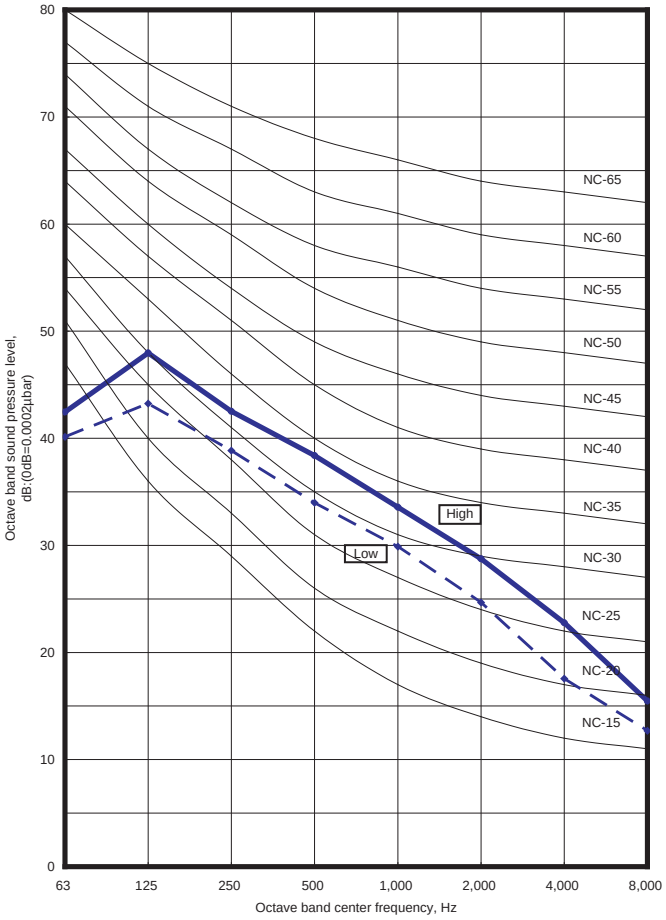
INDOOR UNIT

4-12-5. DUCT TYPE

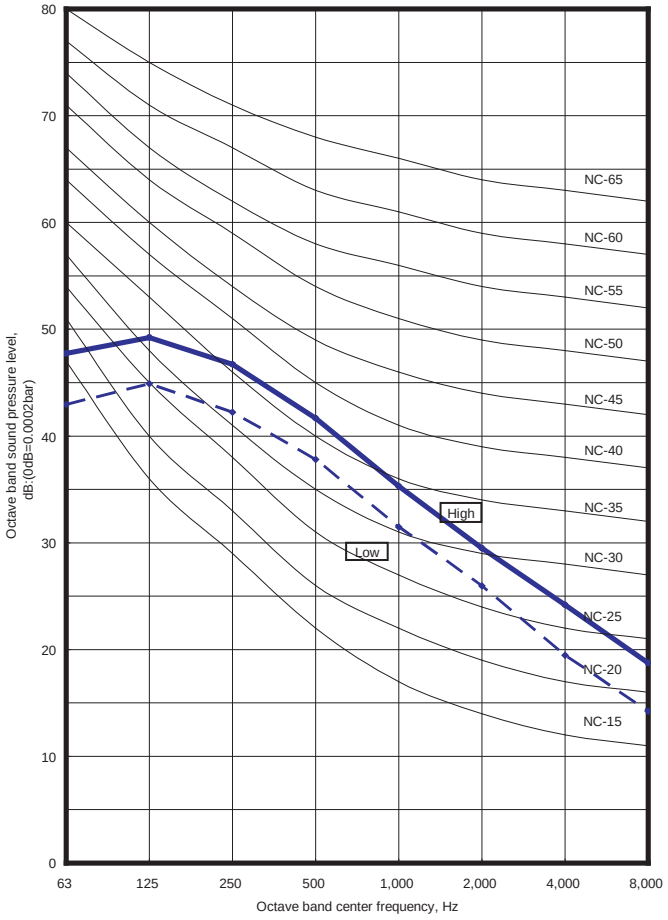
■ MODEL : ARXA25



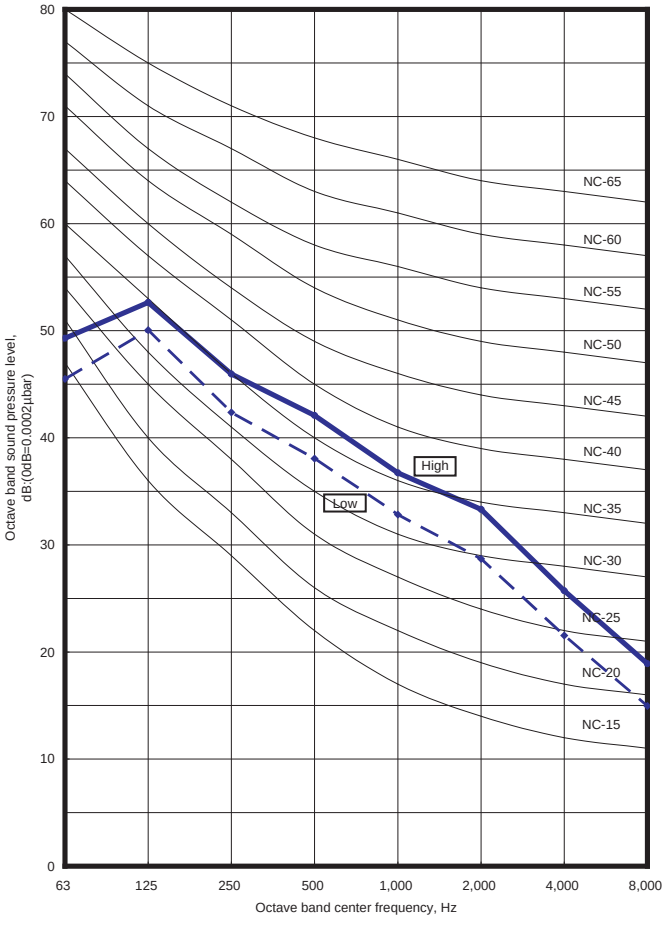
■ MODEL : ARXA30



■ MODEL : ARXA36



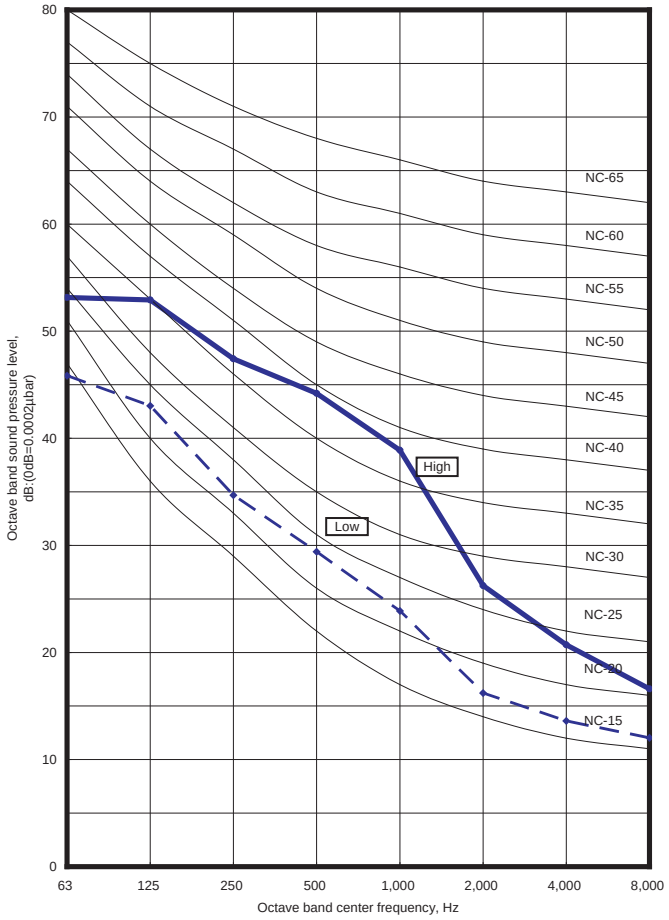
■ MODEL : ARXA45



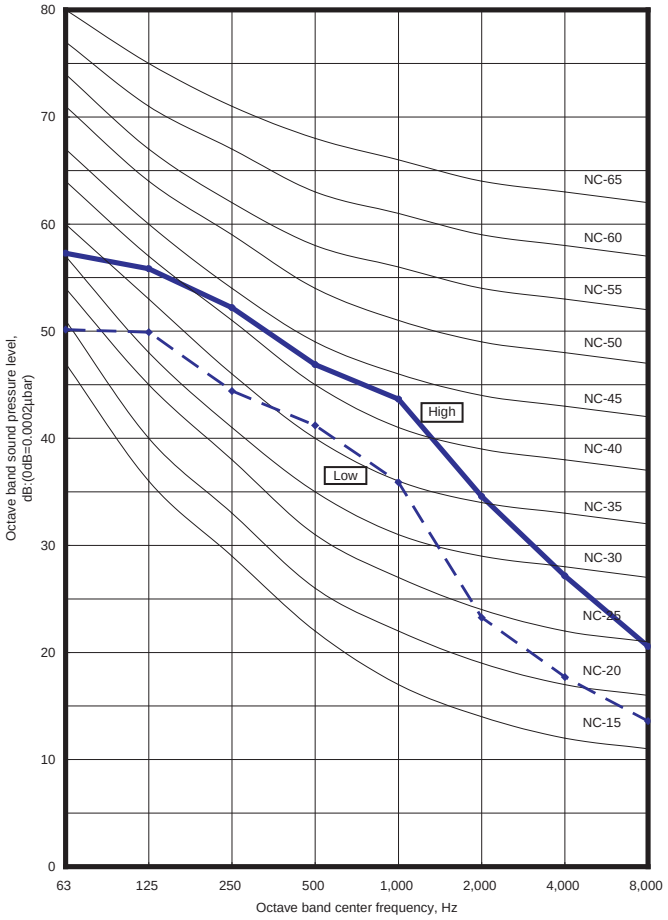
INDOOR UNIT

4-12-6. HIGH STATIC PRESSURE DUCT TYPE

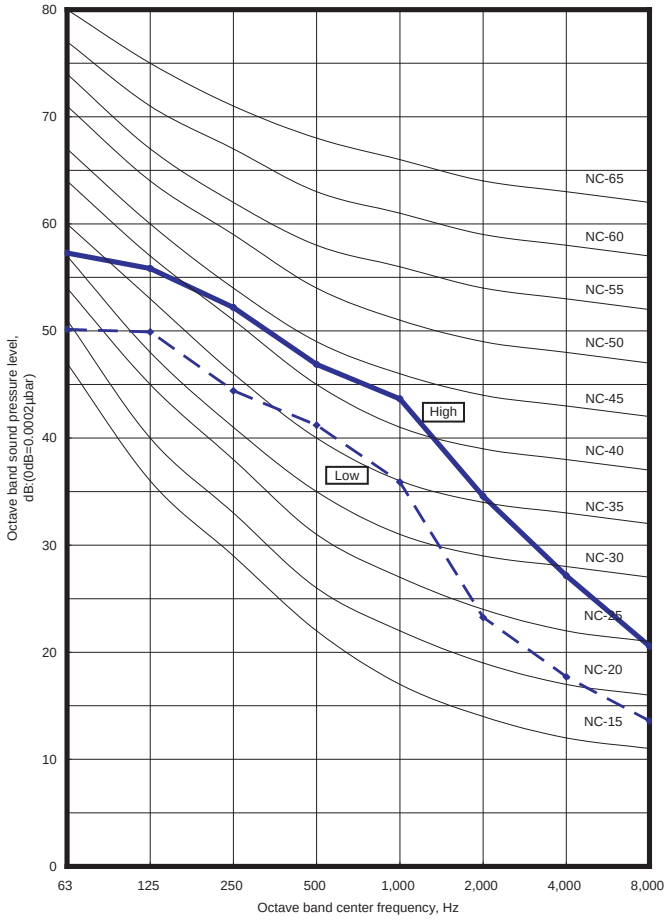
■ MODEL : ARXC36



■ MODEL : ARXC45



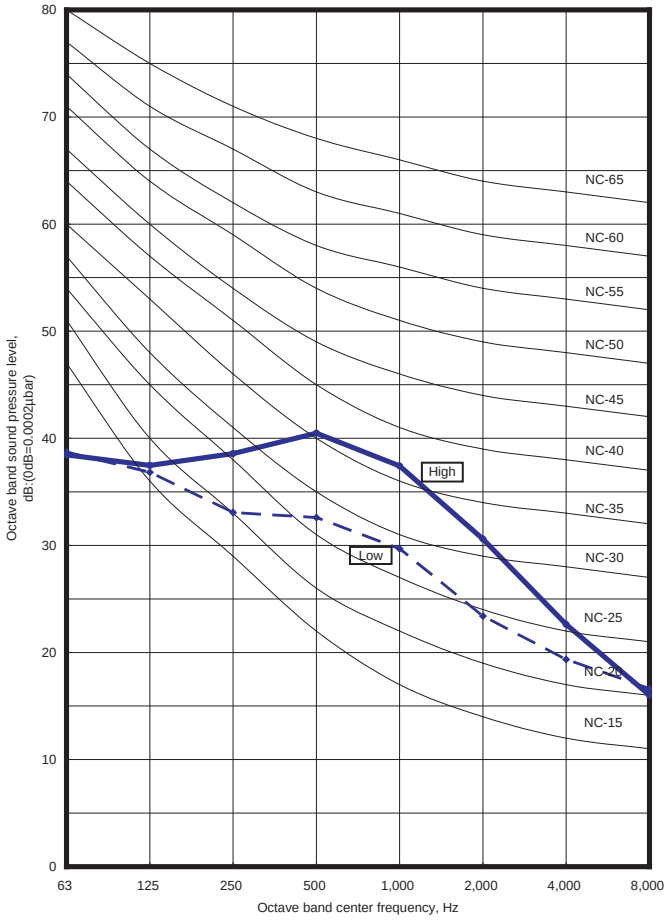
■ MODEL : ARXC60



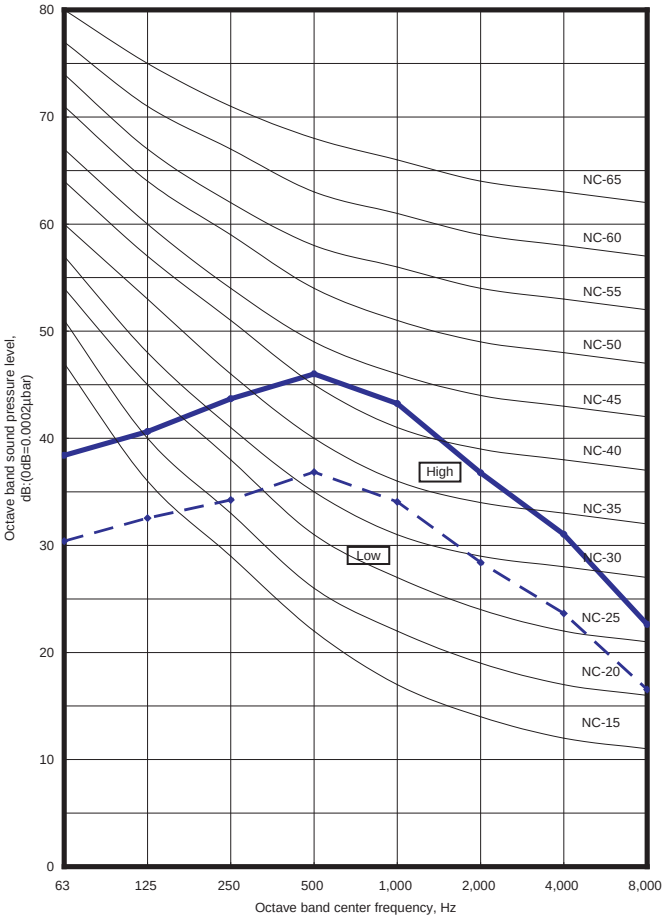
INDOOR UNIT

4-12-7. FLOOR / CEILING TYPE

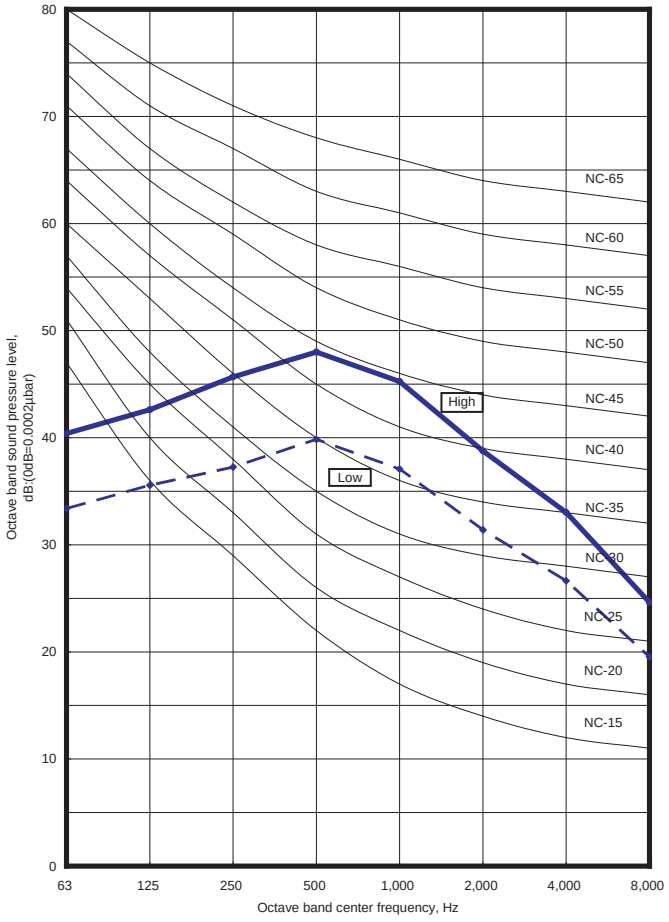
■ MODELS : AB∗A12, AB∗A14



■ MODEL : AB∗A18



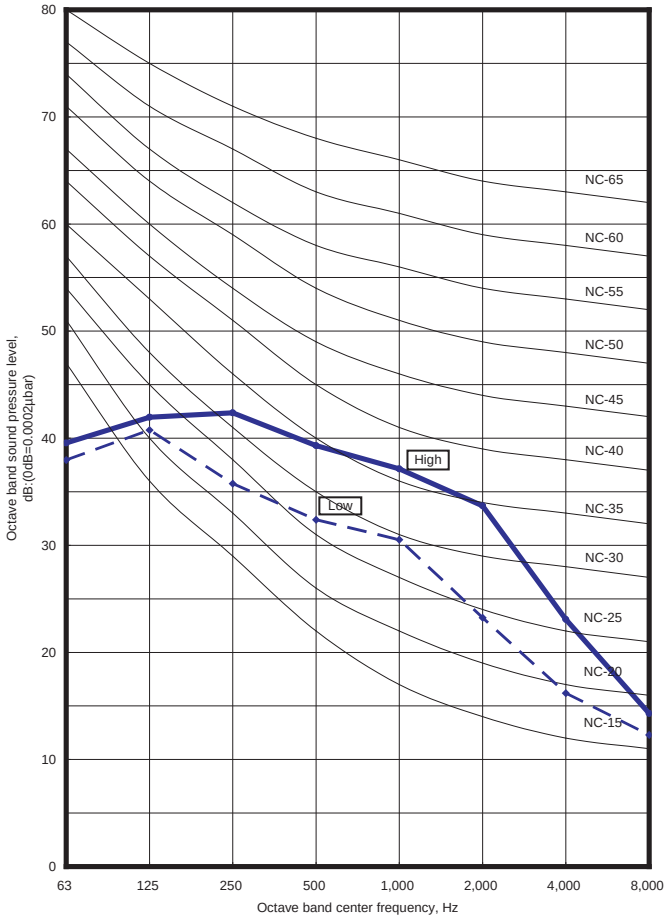
■ MODEL : AB∗A24



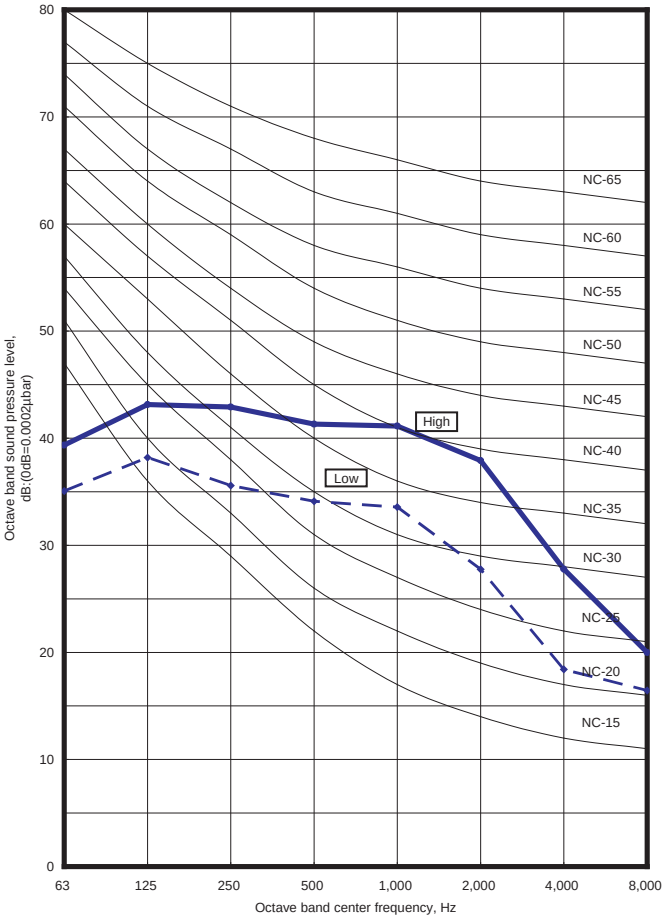
INDOOR UNIT

4-12-8. CEILING TYPE

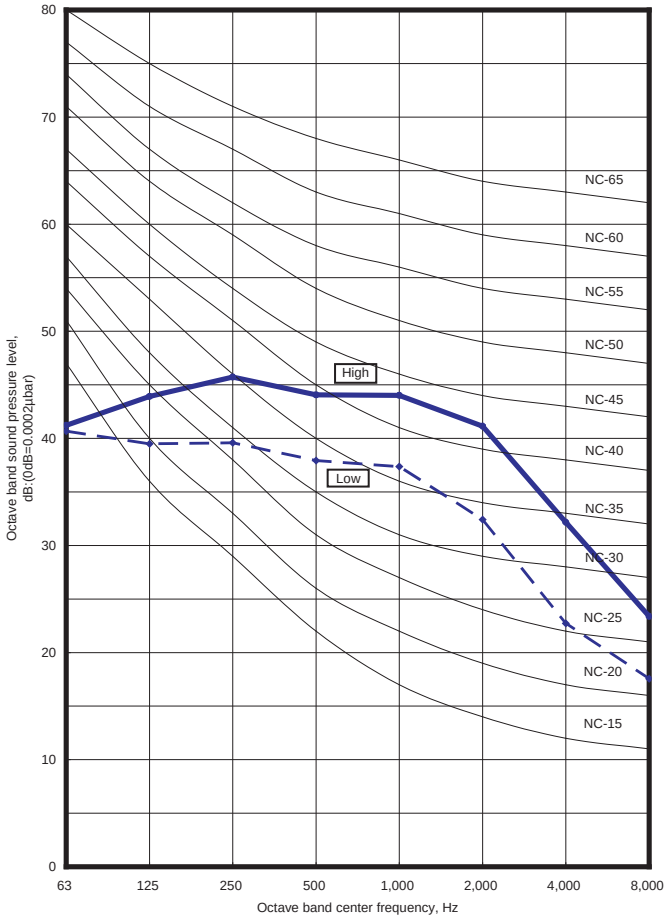
■ MODEL : AB∗A30



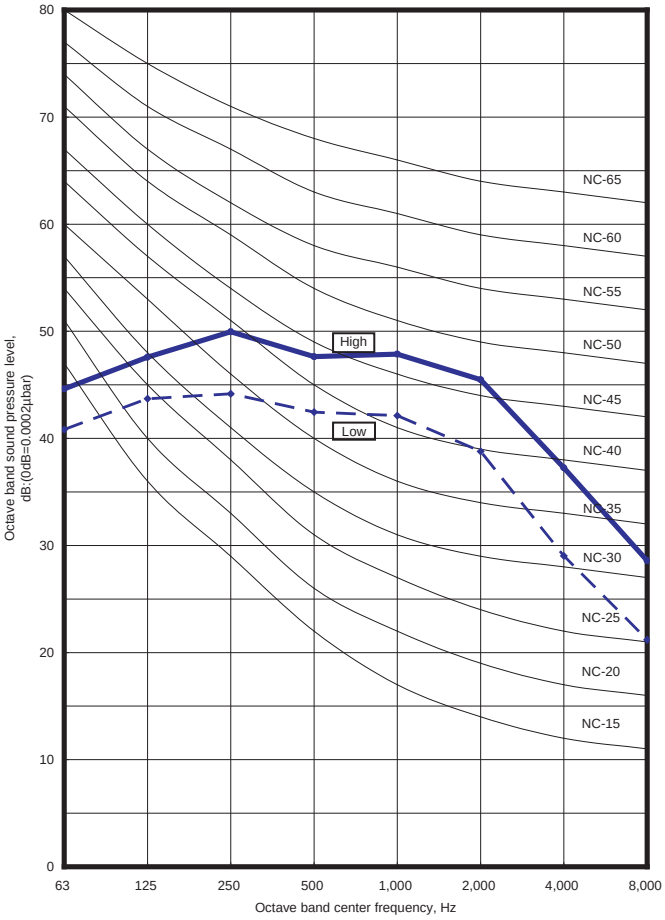
■ MODEL : AB∗A36



■ MODEL : AB∗A45



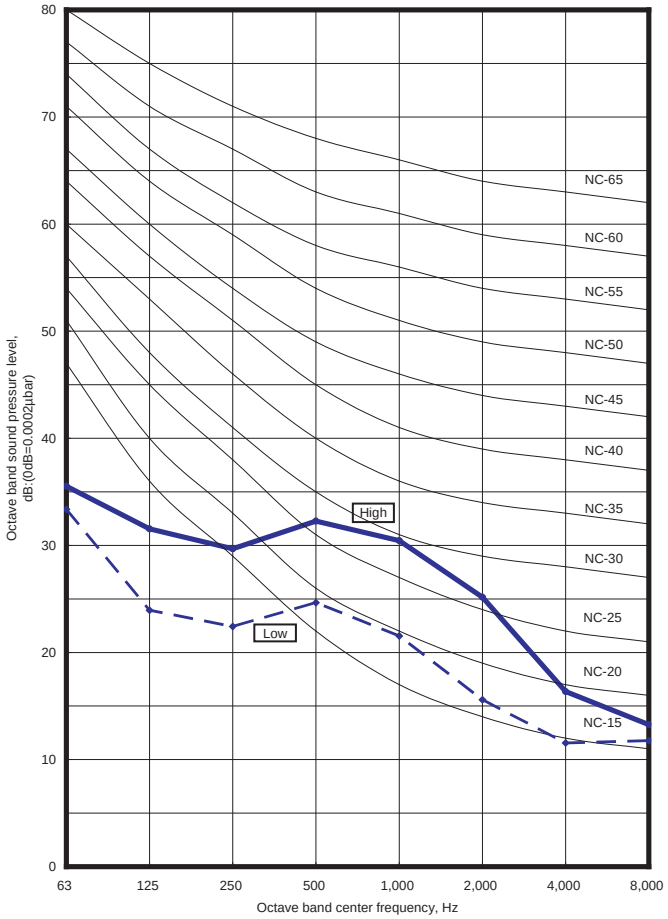
■ MODEL : AB∗A54



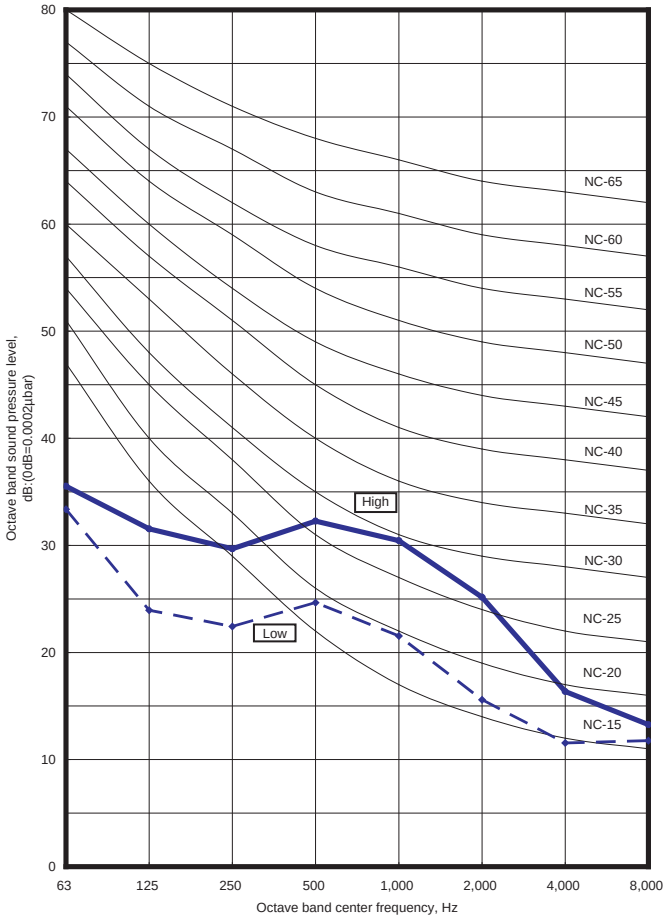
INDOOR UNIT

4-12-9. COMPACT WALL MOUNTED TYPE (Comfort model)

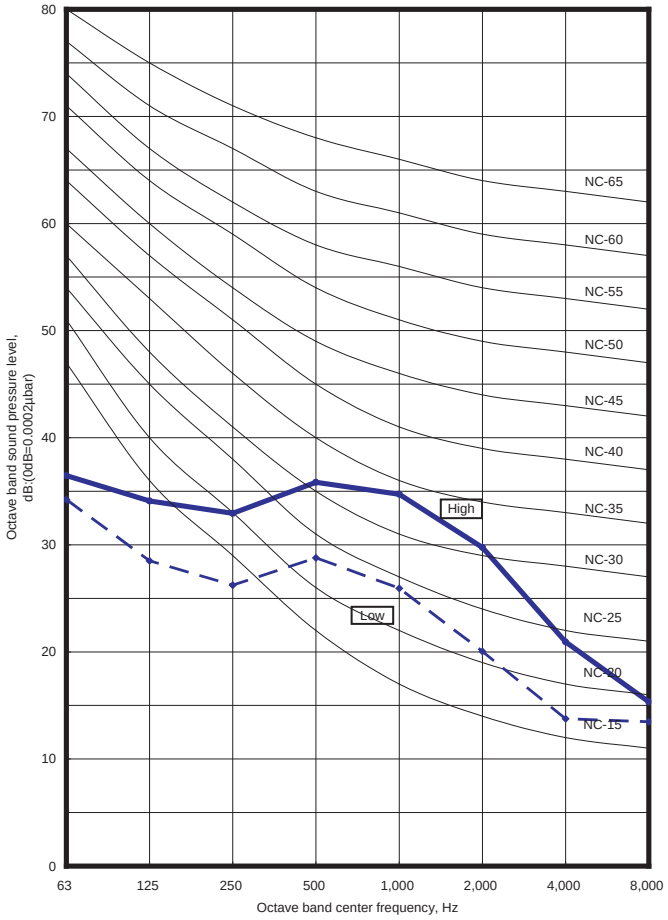
■ MODEL : AS∗E07



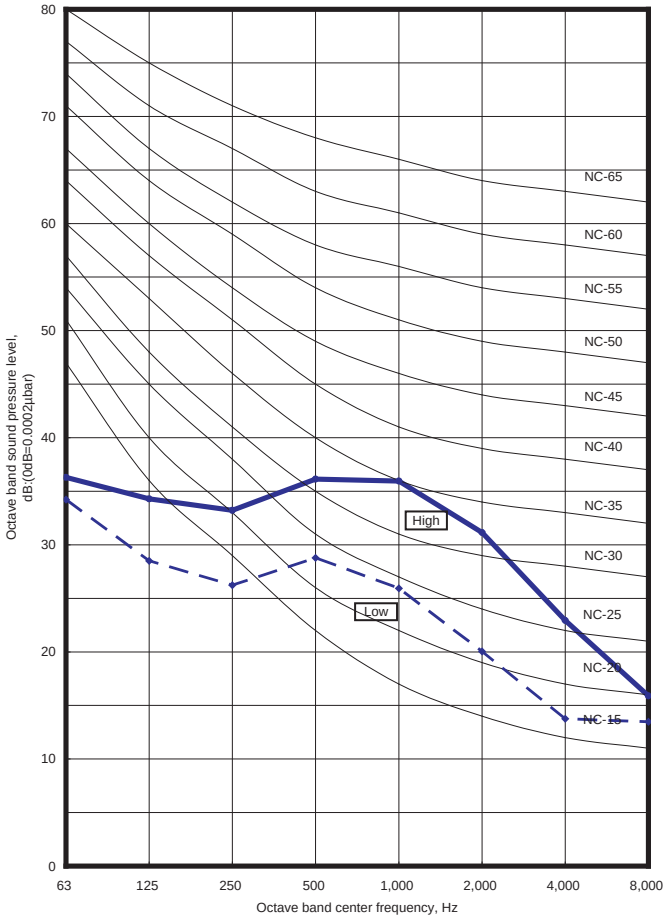
■ MODEL : AS∗E09



■ MODEL : AS∗E12

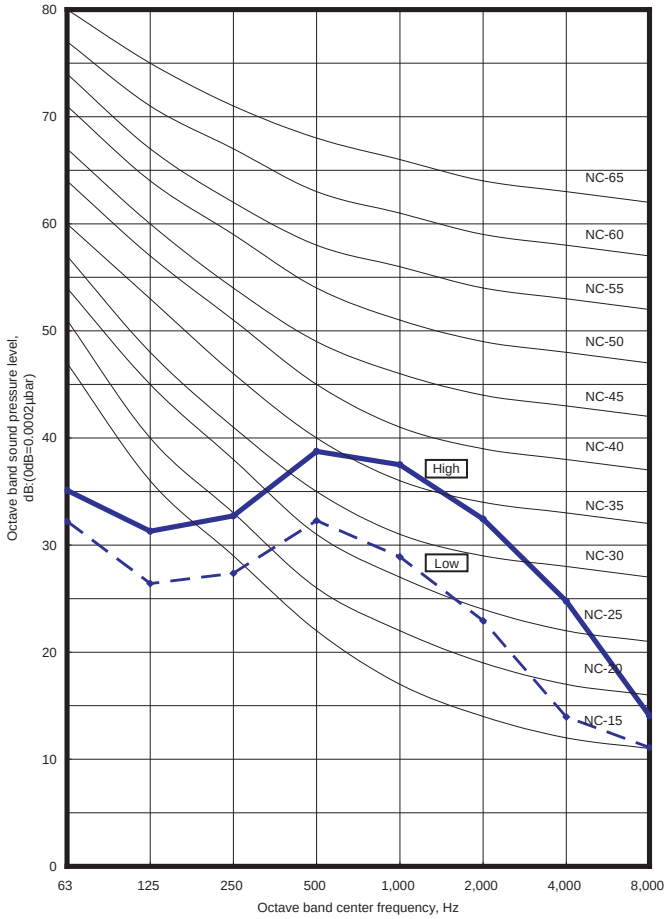


■ MODEL : AS∗E14

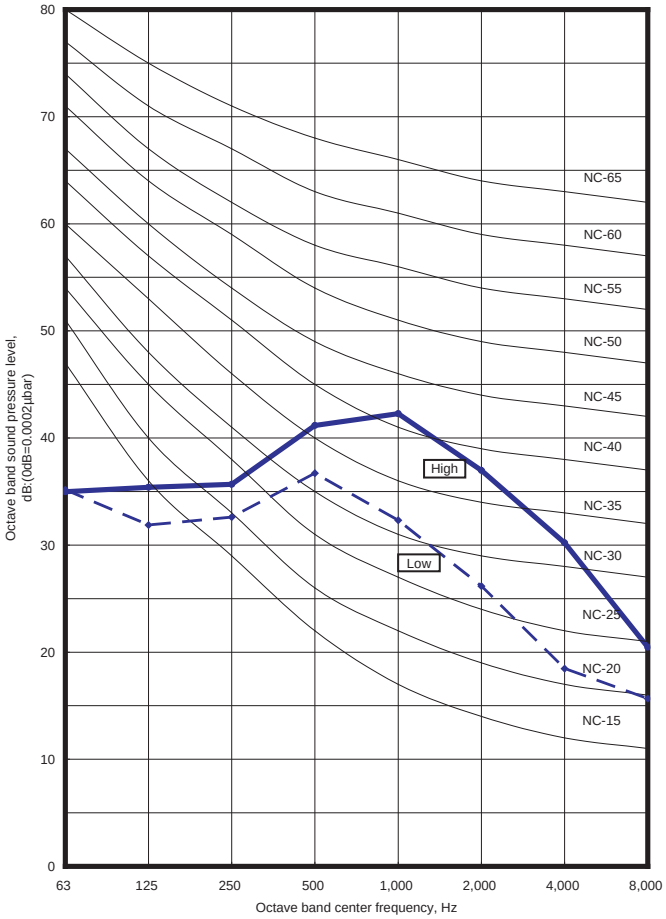


4-12-10. WALL MOUNTED TYPE

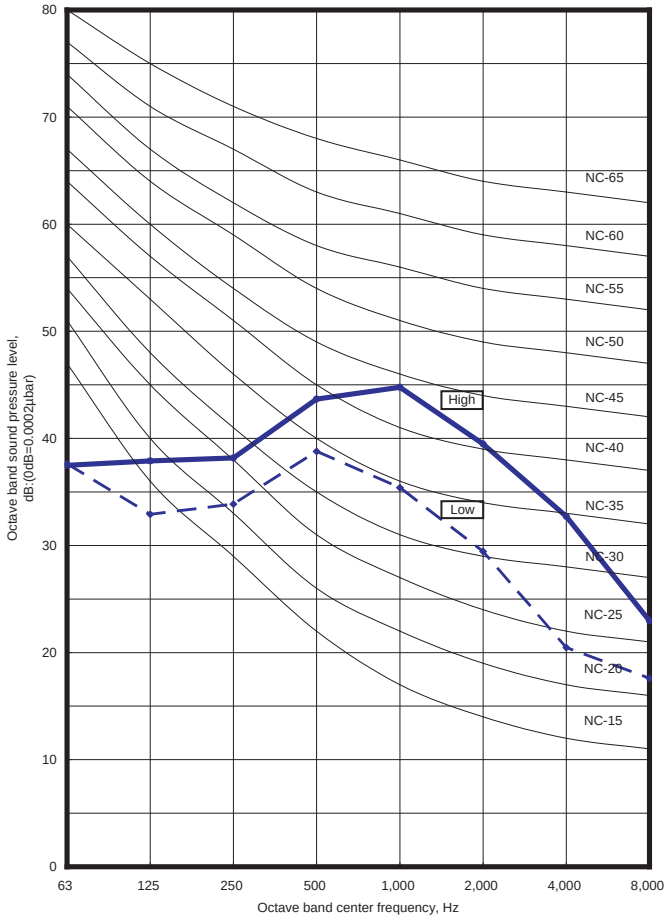
■ MODEL : AS∗A18



■ MODEL : AS∗A24



■ MODEL : AS∗A30

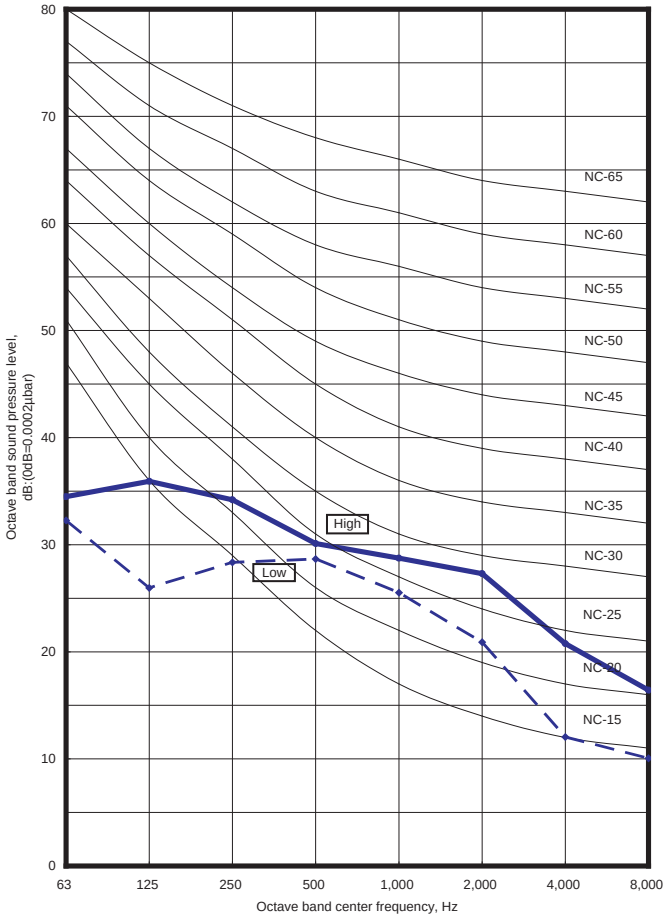


INDOOR UNIT

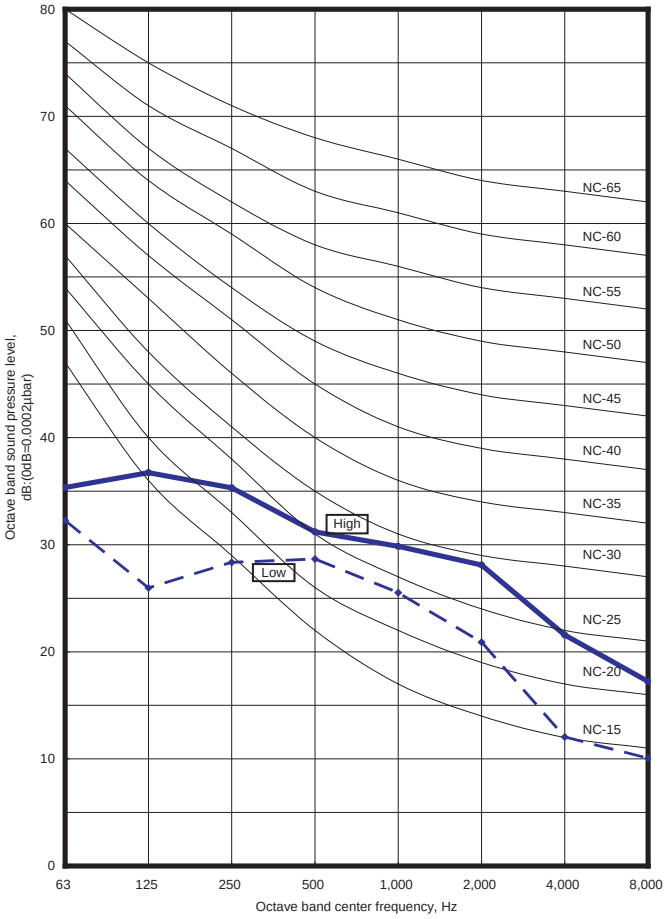
INDOOR UNIT

4-12-11. CEILING WALL TYPE

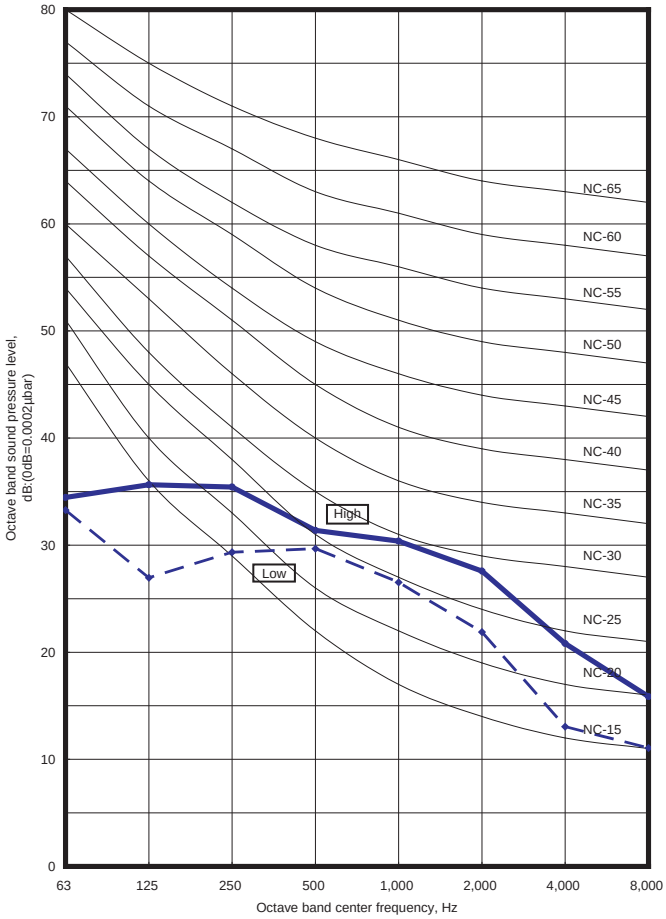
■ MODEL : AW∗A07



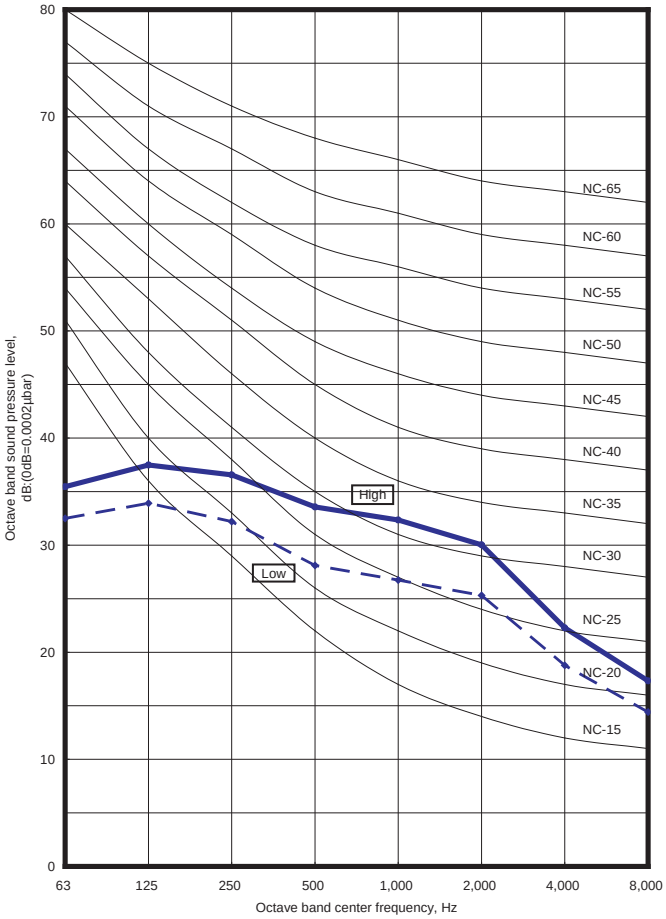
■ MODEL : AW∗A09



■ MODEL : AW∗A12

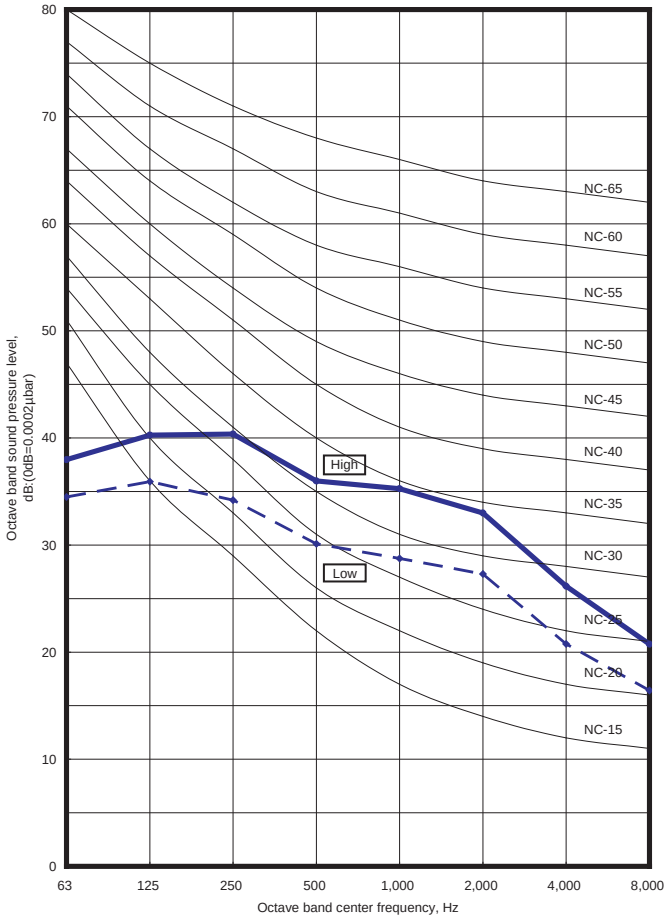


■ MODEL : AW∗A14

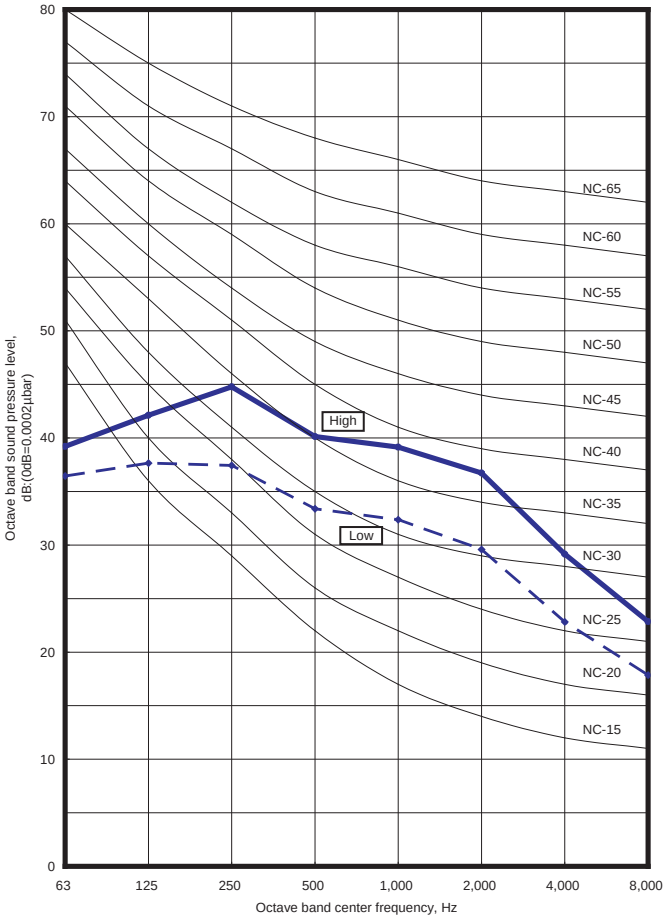


INDOOR UNIT

■ MODEL : AW∗A18

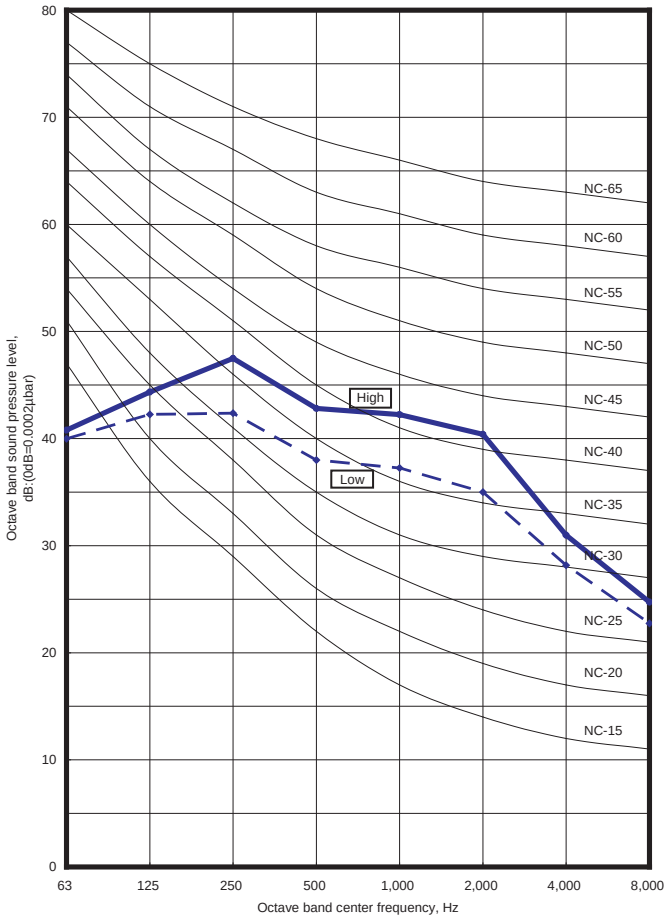


■ MODEL : AW∗A24



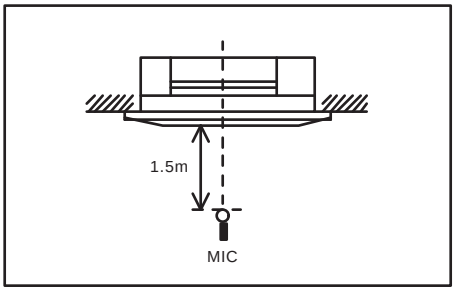
INDOOR UNIT

■ MODEL : AW∗A30

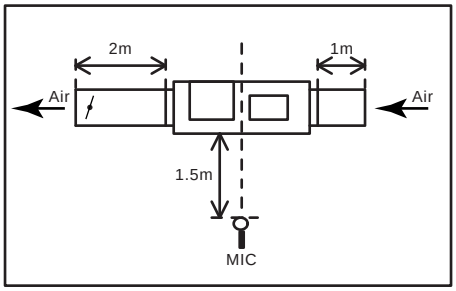


■ SOUND LEVEL CHECK POINT

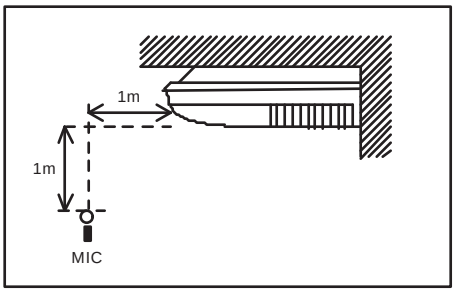
- COMPACT CASSETTE TYPE
- CASSETTE TYPE



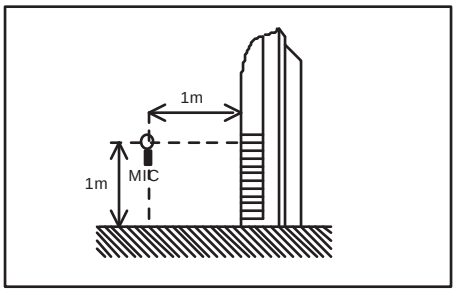
- COMPACT DUCT TYPE
- LOW STATIC PRESSURE DUCT TYPE
- DUCT TYPE
- HIGH STATIC PRESSURE DUCT TYPE



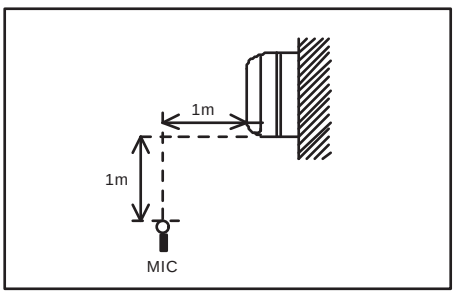
- FLOOR / CEILING TYPE
- CEILING TYPE



- FLOOR / CEILING TYPE



- COMPACT WALL MOUNTED TYPE (Comfort model)
- WALL MOUNTED TYPE
- CEILING WALL TYPE



INDOOR UNIT

4-13. SAFETY DEVICES

Model and type		PCB fuse	Fan motor thermal protector	Terminal thermal fuse	Float switch
Compact Cassette	AUXB07LATF	250V 3.15A	-	102℃ OFF	○
	AUXB09LATF				
	AUXB12LATF		140 ± 5℃		
	AUXB14LATF				
	AUXB18LATF				
Cassette (Slim Type)	AU*A20LATF	250V 3.15A	150 ± 5℃	102℃ OFF	○
	AU*A25LATF				
	AU*A30LATF				
Cassette	AU*A36LATF		130 ± 5℃		
	AU*A45LATF				
	AU*A54LATF				
Compact Duct	ARXB07LALF	250V 3.15A	140 ± 5℃	-	-
	ARXB09LALF				
	ARXB12LALF				
	ARXB14LALF				
	ARXB18LALF				
Low Static Pressure Duct	ARXB25LATF	250V 3.15A	150 ± 5℃	-	-
	ARXB30LATF				
	ARXB36LATF				
	ARXB45LATF				
Duct	ARXA25LATF	250V 3.15A	150 ± 5℃	-	-
	ARXA30LATF				
	ARXA36LATF				
	ARXA45LATF				
High Static Pressure Duct	ARXC36LATF	250V 3.15A 250V 10A *1)	150 ± 5℃	-	-
	ARXC45LATF				
	ARXC60LATF				
Floor / Ceiling	AB*A12LATF	250V 3.15A	150 ± 5℃	-	-
	AB*A14LATF				
	AB*A18LATF				
	AB*A24LATF				
Ceiling	AB*A30LATF	250V 3.15A	120 ± 5℃	-	△ *2)
	AB*A36LATF				
	AB*A45LATF				
	AB*A54LATF				
Compact Wall Mounted (Comfort Model)	AS*E07LACF	250V 3.15A	110 ± 10℃	102℃ OFF	-
	AS*E09LACF				
	AS*E12LACF				
	AS*E14LACF				
Wall Mounted	AS*A18LATF	250V 3.15A	150 ± 5℃	102℃ OFF	-
	AS*A24LATF				
	AS*A30LATF				
Ceiling Wall	AW*A07LATF	250V 3.15A	120 ± 5℃	102℃ OFF	-
	AW*A09LATF				
	AW*A12LATF				
	AW*A14LATF				
	AW*A18LATF				
	AW*A24LATF				
	AW*A30LATF				

*1) Fuse for fan motor.

*2) Including in the Drain Water Riser Kit (Optional parts).

INDOOR UNIT

Refrigerant R407C

AIRSTAGE™

S SERIES

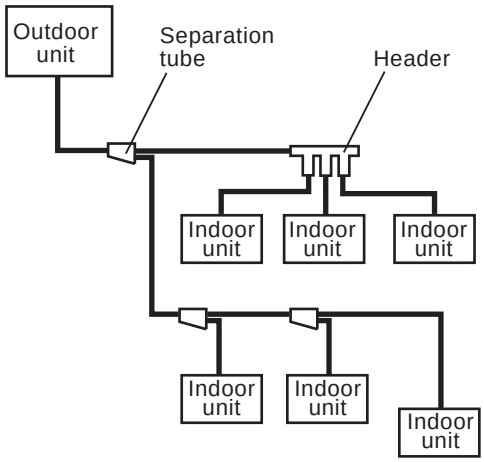
5 . INSTALLATION

5-1 PIPING DESIGN

5-1-1 PIPING METHOD

■ SUMMARY OF PIPING SYSTEM

● Cooling only/Heat pump Selection Type



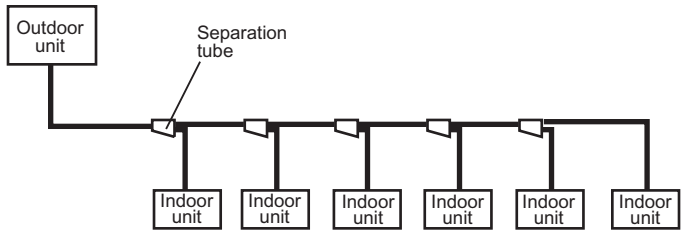
✳ Separation of piping:
Separation tube system and header system

✳ Number of piping:
2 each of outdoor unit - indoor unit

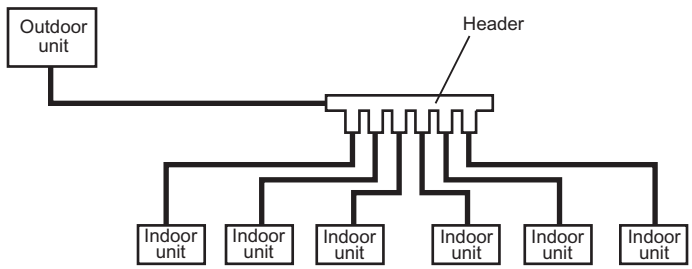
INSTALLATION

■TYPE OF PIPING SYSTEM

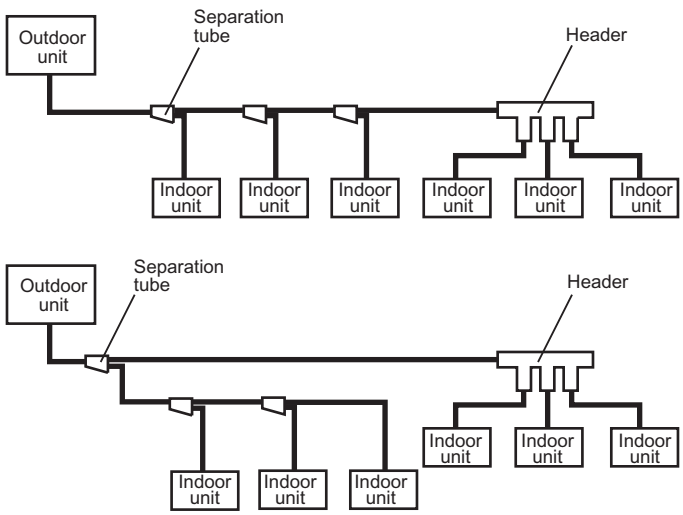
●Line Piping System



●Header Piping System



●Combined (Separation tube/Header) Piping System



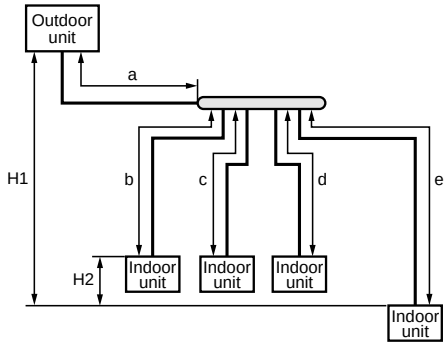
Separation after header separation is not possible

INSTALLATION

5-1-2. LIMITATIONS

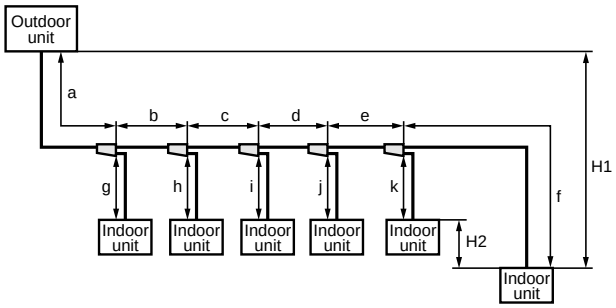
EXAMPLE 1

Branch kit : Header



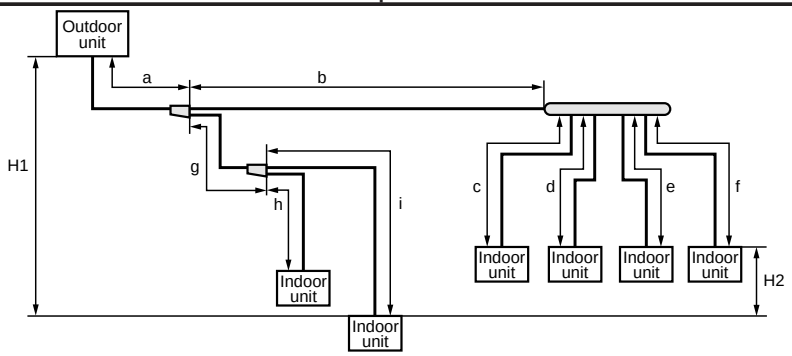
EXAMPLE 2

Branch kit : Separation tube



EXAMPLE 3

Branch kit : Separation tube + Header



CAUTIONS

- Keep the length of straight portion of pipe between two branch kits longer than 0.5m.
- Don't use separation tube in the downstream of header.
- Install separation tube and header in the correct direction specified in installation manual.

Maximum allowable length (actual pipe length)		EXAMPLE 1	EXAMPLE 2	EXAMPLE 3
Between outdoor unit and the farthest indoor unit	100 m	a + b	a + g	a + g + h
		a + c	a + b + h	a + g + i
		a + d	a + b + c + i	a + b + c
		a + e	a + b + c + d + j	a + b + d
		-	a + b + c + d + e + k	a + b + e
		-	a + b + c + d + e + f	a + b + f
Total pipe length	200 m	a + b + c + d + e	a + b + c + d + e + f + g + h + i + j + k	a + b + c + d + e + f + g + h + i
Between outdoor unit and the 1st branch kit	70 m	a		
Between the 1st branch kit and the farthest indoor unit	40 m	b	g	g + h
		c	b + h	g + i
		d	b + c + i	b + c
		e	b + c + d + j	b + d
		-	b + c + d + e + k	b + e
		-	b + c + d + e + f	b + f

Maximum allowable height difference		EXAMPLE 1	EXAMPLE 2	EXAMPLE 3
Between outdoor unit and indoor units	50 m	H1 (If outdoor unit is in the upper side)		
	40 m	H1 (If outdoor unit is in the lower side)		
Between indoor units	15 m	H2		

INSTALLATION

5-1-3. PIPE SIZE

■ COOLING ONLY / HEAT PUMP MODEL

● Pipe size connected to outdoor unit.

(unit : mm)

Model	Gas Pipe size	Liquid Pipe size
AO90	ϕ 28.58	ϕ 12.70
AO72	ϕ 28.58	ϕ 12.70

● Between two adjacent refrigerant branch kits.

(unit : mm)

Total model code of indoor unit	Gas Pipe size	Liquid Pipe size	Separation Kit
Less than 30	ϕ 15.88	ϕ 9.52	UTR-BP54TA
31 or more to 60	ϕ 19.05	ϕ 9.52	
61 or more	ϕ 28.58	ϕ 12.70	UTR-BP90TA

∗ "Total model code of indoor unit" is the total value for the indoor unit model code connected downstream.

● Connection pipe size of indoor unit.

(unit : mm)

Model code of indoor unit	Gas Pipe size	Liquid Pipe size
7, 9	ϕ 9.52	ϕ 6.35
12, 14	ϕ 12.70	ϕ 6.35
18, 20, 24, 25	ϕ 15.88	ϕ 6.35
30	ϕ 15.88	ϕ 9.52
36, 45, 54, 60	ϕ 19.05	ϕ 9.52

∗ A part of V series indoor units are required adaptor for connecting pipes.

■ PIPE DIAMETER, RECOMMENDED MATERIAL AND WALL THICKNESS

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		COPPER JIS H3300 C1220T-O or equivalent					
Wall Thickness	(mm)	0.8	0.8	0.8	1.0	1.0	1.2

Design pressure : 3.2MPa G.
Please select the pipe size in accordance with local rules.

5-1-4. 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 °C(DB),humidity≦70%, humidity≦75%, humidity≦80%, humidity≦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 W/(m·k) is used.)

		Recommended minimum thickness for heat insulating material (mm)			
Relative humidity		≦ 70%	≦ 75%	≦ 80%	≦ 85%
Refrigerant pipe Outside diameter mm(in)	6.35 (1/4")	8	10	13	17
	9.52 (3/8")	9	11	14	18
	12.70 (1/2")	10	12	15	19
	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 °C (DB)and≧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 °C or more.

INSTALLATION

5-1-5. ADDITIONAL CHARGE CALCULATION

• Additional charge for pipe length

Liquid pipe diameter (mm)	Ø12.70	Ø9.52	Ø6.35
Additional amount / Pipe length (kg/m)	0.094	0.048	0.017

The amount of additional charge C (kg)

C =	Total length of Ø12.70mm liquid pipe (m)	x 0.094 kg/m	+	Total length of Ø9.52mm liquid pipe (m)	x 0.048 kg/m	+	Total length of Ø6.35mm liquid pipe (m)	x 0.017 kg/m	+ 4 =	Total (kg)
	m			m			m			
	kg			kg			kg			kg

Round up C to 2 decimal place.

Example : When the liquid pipe length are 20m (Ø12.70mm), 15m (Ø9.52mm), and 20m (Ø6.35mm), respectively.

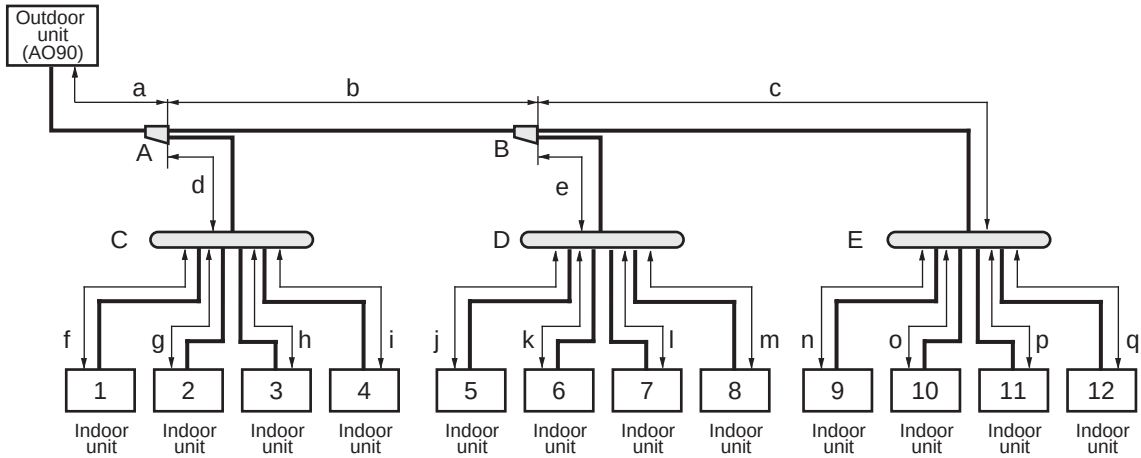
The amount of additional charge :
C = 20(m) x 0.094(kg/m) +15(m) x 0.048(kg/m) + 20(m) x 0.017(kg/m) +4 = 6.94(kg)

INSTALLATION

5-1-6. EXAMPLE OF PIPING DESIGN

■COOLING ONLY / HEAT PUMP MODEL

(1) Refrigerant system ①



- **System configuration**

	1	2	3	4	5	6	7	8	9	10
Example 1	AR9	AR9	AR9	AR9	AR7	AR7	AR7	AR7	AR7	AR7
Capacity(kW)	2.8	2.8	2.8	2.8	2.2	2.2	2.2	2.2	2.2	2.2
Example 2	AR9	AR9	AR9	AR9	AR7	AR7	AR7	AR7	AR7	AR7
Capacity(kW)	2.8	2.8	2.8	2.8	2.2	2.2	2.2	2.2	2.2	2.2

11	12	Total capacity
AR9	AR9	
2.8	2.8	30.0
AR25	AR25	
7.00	7.00	38.4

Total indoor unit capacity (1 refrigerant system)
Example1 : Total capacity = 30.0 ≦ 36.4
Example2 : Total capacity = 38.4 > 36.4 ※Example 2 cannot be selected

- **Selection of pipe size (Example 1)**

(unit : mm)

	a	b	c	d	e	f	g
Gas Pipe	Ø28.58	Ø19.05	Ø19.05	Ø19.05	Ø15.88	Ø9.52	Ø9.52
Liquid Pipe	Ø12.70	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø6.35	Ø6.35
Length [m] (Example)	10	10	15	5	5	10	5

h	i	j	k	l	m	n	o	p	q
Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52
Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35	Ø6.35
5	10	10	5	5	10	10	5	5	10

INSTALLATION

• Pipe length

a+b+c+q=45m ≦ 100m (actual pipe length)
Difference in height between outdoor unit and indoor units maximum 50m.
Difference in height between the highest and the lowest indoor unit maximum 15m.
Form outdoor unit to the first separation tube a=10m ≦ 70m (actual pipe length)
Form the first separation tube to the farthest indoor unit b+c+q=35m≦40m (actual pipe length)
a+b+c+d+e+f+g+h+i+j+k+l+m+n+o+p+q=135m ≦ 200m (total pipe length)

• Selection of separation tube and header

	A	B	C	D	E
Model name	UTR-BP90TA	UTR-BP54TA	UTR-HD906A	UTR-HD906A	UTR-HD906A

• Additional charge for pipe length

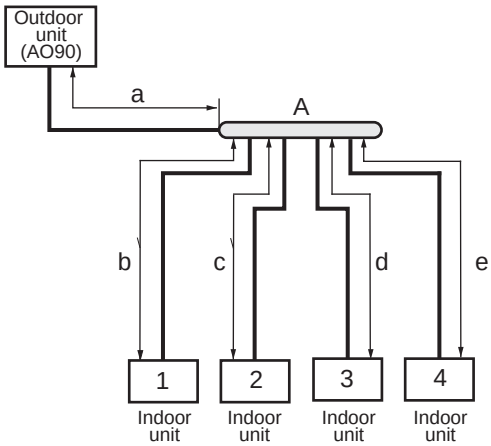
Liquid pipe diameter (mm)	Ø12.70	Ø9.52	Ø6.35
Additional amount / Pipe length (kg/m)	0.094	0.048	0.017
Liquid pipe length (m)	10	35	90

• Additional charge calculation

The amount of additional charge :
(0.094 x 10) + (0.048 x 35) + (0.017 x 90) + 4 = 8.15 (kg)

INSTALLATION

(2) Refrigerant system ②



• System configuration

	1	2	3	4	Total capacity
Example 1	AR18	AR18	AR30	AR36	
Capacity(kW)	5.3	5.3	8.8	10.5	29.9
Example 2	AR30	AR30	AR30	AR45	
Capacity(kW)	8.8	8.8	8.8	12.7	39.1

Total capacity of indoor unit (1 refrigerant system)
Example1 : Total capacity = 29.9 ≦ 36.4
Example2 : Total capacity = 39.1 > 36.4 ※Example 2 cannot selected.

• Selection of pipe size (Example 1)

(unit : mm)

	a	b	c	d	e
Gas Pipe	Ø28.58	Ø15.88	Ø15.88	Ø15.88	Ø19.05
Liquid Pipe	Ø12.70	Ø6.35	Ø6.35	Ø9.52	Ø9.52
Length [m] (Example)	20	12	7	7	12

• Pipe length

a+b=32m ≦ 100m (actual pipe length)
Difference in height between outdoor unit and indoor unit maximum 50m.
Difference in height between the highest and the lowest indoor unit maximum 15m.
Form outdoor unit to the first header tube a=20m≦70m (actual pipe length)
From the first header tube to the farthest indoor unit e=12m≦40m (actual pipe length)
a+b+c+d+e=58 ≦ 200m (total pipe length)

INSTALLATION

• Selection of header

	A
Model name	UTR-HD906A

• Additional charge for pipe length

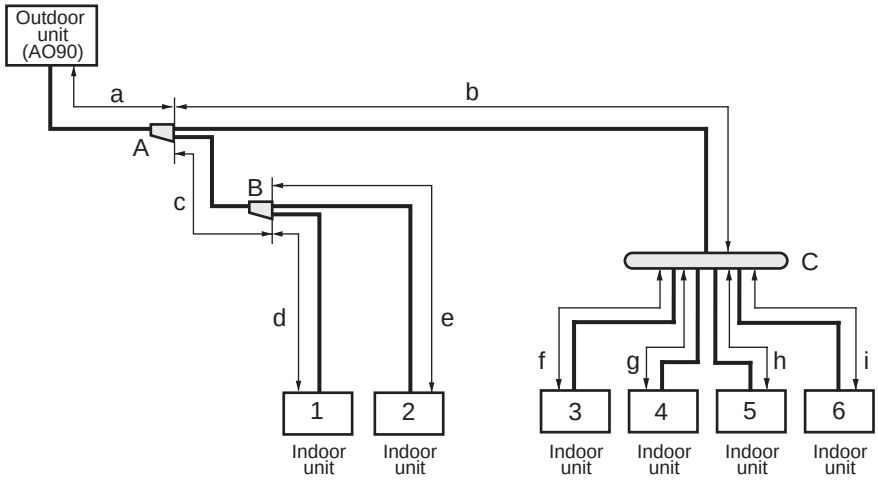
Liquid pipe diameter (mm)	Ø12.70	Ø9.52	Ø6.35
Additional amount / Pipe length (kg/m)	0.094	0.048	0.017
Liquid pipe length (m)	20	19	19

• Additional charge calculation

The amount of additional charge :
(0.094 x 20) + (0.048 x 19) + (0.017 x 19) + 4 = 7.12 (kg)

INSTALLATION

(3) Refrigerant system ③



• System configuration

	1	2	3	4	5	6	Total capacity
Example 1	AW24	AB36	AR9	AR9	AR9	AR9	
Capacity (kW)	6.9	10.5	2.8	2.8	2.8	2.8	28.6
Example 2	AW30	AB54	AR14	AR14	AR14	AR14	
Capacity (kW)	8.0	14.1	4.0	4.0	4.0	4.0	38.1

Total capacity of indoor unit (1 refrigerant system)
Example1 : Total capacity = 28.6 ≦ 36.4
Example2 : Total capacity = 38.1 > 36.4 ※Example 2 cannot selected.

• Selection of pipe size (Example 1)

(unit : mm)

	a	b	c	d	e	f	g
Gas Pipe	Ø28.58	Ø19.05	Ø19.05	Ø15.88	Ø19.05	Ø9.52	Ø9.52
Liquid Pipe	Ø12.70	Ø9.52	Ø9.52	Ø6.35	Ø9.52	Ø6.35	Ø6.35
Length[m](Example)	10	20	5	7	12	10	5

h	i
Ø9.52	Ø9.52
Ø6.35	Ø6.35
5	10

• Pipe length

a+b+i = 40m ≦ 100m (actual pipe length)

Difference in height between outdoor unit and indoor units maximum 50m.
Difference in height between the highest and the lowest indoor unit maximum 15m.
Form outdoor unit to the first separation tube a=10m≦70m (actual pipe length)
From the first separation tube to the farthest indoor unit b+i=30m≦40m (actual pipe length)
a+b+c+d+e+f+g+h+i= 84m≦ 200m (total pipe length)

INSTALLATION

• Selection of separation tube and header

	A	B	C
Model name	UTR-BP90TA	UTR-BP54TA	UTR-HD906A

• Additional charge for pipe length

Liquid pipe diameter (mm)	Ø12.70	Ø9.52	Ø6.35
Additional amount / Pipe length (kg/m)	0.094	0.048	0.017
Liquid pipe length (m)	10	37	37

• Additional charge calculation

The amount of additional charge :
(0.094 x 10) + (0.048 x 37) + (0.017 x 37) + 4 = 7.35 (kg)

INSTALLATION

5-2. WIRING DESIGN

5-2-1. WIRING SPECIFICATION

Use		Size		Wire type	Remarks		
Power supply cable (mm^2)	Outdoor unit	Maximum	8.0	H07RN-F or equivalent	Three phase, 50Hz, 380-415V 4 Wire + Ground		※1
		Minimum	6.0				
	Indoor unit	Maximum	2.5	H07RN-F or equivalent	Single phase, 50Hz, 220-240V 2 Wire + Ground		※2
		Minimum	1.5				
Transmission cable (mm^2)		0.33		Shielded Level 4 22AWG (0.65mm)	Non-polar, Twisted pair, Solid core diameter 0.65mm		※3
Remote controller cable (mm^2)		0.33		Sheathed vinyl cord cable	Polar 3-core	Wired remote controller Simple remote controller	※4
Remote controller cable (mm^2)		0.33		Shield	Polar 3-core	Group remote controller External switch controller	
External input cable (mm^2)		0.33		Shield	Twist pair polar 2-core	External switch controller	

INSTALLATION

NOTE:Install in accordance with local rules and regulations.

※1,2 The ground wire is not included in this cable.
Always ground the unit.

※3 Use the shielded wire specified and always ground it.
[22AWG Level 4 cable with shielded(National Electrical Manufacturers Association (NEMA)
**differs from the Category 4 specification proposed by the Electronic Industries Association/
Telecommunication Industry Association (EIA/TIA)**]

Total wiring length 2000m. However, when wiring length exceeds 500m, a signal amplifier (option) is required.
Do not bundle the transmission cable with other wires. Otherwise, transmit-receive with a transmission line is not only impossible, but a malfunction may occur.

※4 10m cable attached.(excluded some models)
Use the shielded cable in accordance with the standards of the country.
Wiring length of a remote controller group should be within 500m.

	Model	Field fuse	Circuit breaker
Fuse capacity	Outdoor unit	40A ※5	40A 100mA 0.1sec or less
	Indoor unit	20A ※6	20A 40mA 0.1sec or less

※5 per outdoor unit
※6 per refrigerant system.

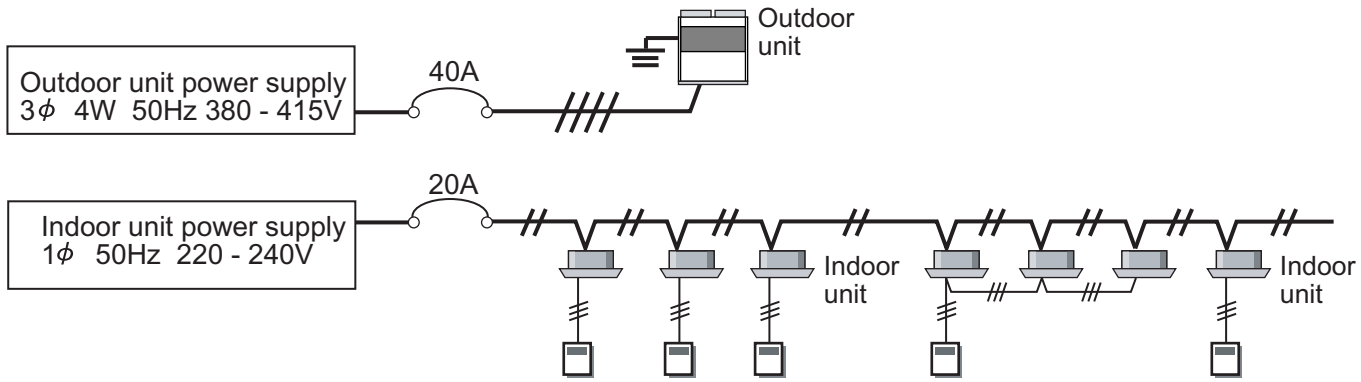
Install the knife switch (contact gap 3mm or more) near the indoor unit for ease of maintenance.(A breaker can be used instead of the knife swicth for the outdoor unit.)

5-2-2. POWER SUPPLY CABLE WIRING

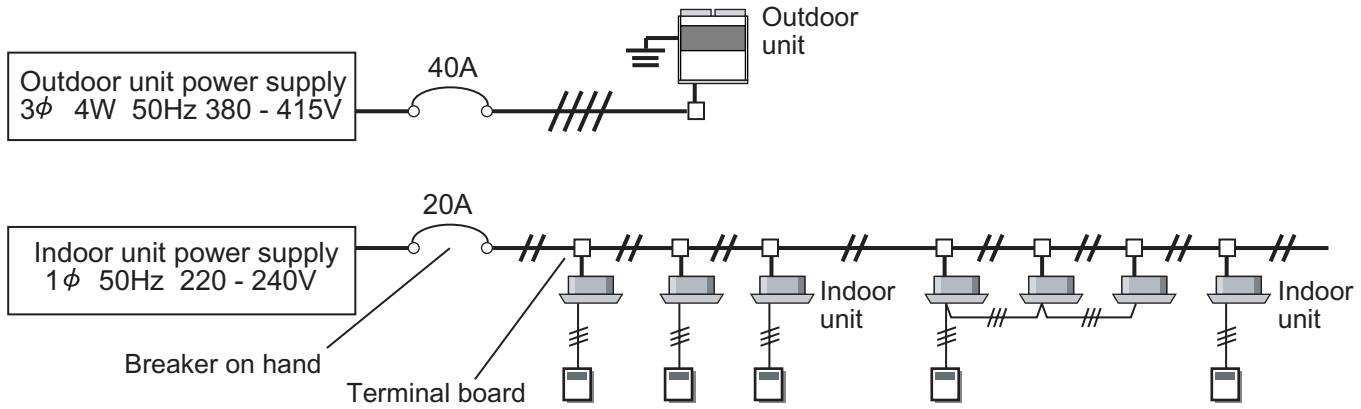
■ POWER SUPPLY CABLE SPECIFICATION

* A separated power supply cable must be provided for the outdoor unit and indoor unit.
  Outdoor unit : 3ϕ 4W 50Hz 380 - 415V
  Indoor unit : 1ϕ 50Hz 220 - 240V
* Use terminal board available on the market, when the number of indoor units connected to outdoor unit increases. (Ex.2)
* Use a circuit breaker of 40A or more for every outdoor unit.
* The indoor unit shall be connected up to one refrigerant system, and a circuit breaker of 20A or more should be used.

Example 1: Power supply cable wiring.



Example 2: Power supply cable wiring. (using terminal board)



CAUTION

1. Above "Wire size" and "Fuse capacity" are minimum value.
2. Regulation of wire size and circuit breaker differs from each locality, please refer in accordance with local rules.
3. Specific wiring requirement should be applied Type 245 IEC 57 or equivalent.
4. To prevent the electrical noise malufunction and hazards from insulation failure, the unit should be connected to ground.
5. A disconnect switch may be required for ease of maintenance in accordance with local regulation for each unit.
   Please check the local rules and regulations.
   Make the wire length between disconnect switch and unit terminal as short as possible.
6. When connecting the indoor unit power supply from part of a 3-phase power source, recommend to take the power from each phase uniformly to prevent unbalance
7. All field wiring and components must be provided by a licensed electrician.
8. Use copper conductors only.

INSTALLATION

5-2-3. TRANSMISSION LINE

■ TRANSMISSION WIRING SPECIFICATIONS

Use	Size	Wire type	Remarks
Transmission cable	0.33mm^2	22AWG LEVEL 4 (NEMA) non-polar 2core, twisted pair solid core diameter 0.65mm	LONWORKS® compatible cable

NOTE

∗ Do not bundle and wire transmission line with other wiring.

■ WIRING RULES

∗ In the following cases, SIGNAL AMPLIFIER is required.

(1) When the total length of the transmission line exceeded 500 m.
AB+BC+BD+DE+EF > 500 m (Fig. 1)

(2) When the total number of units* is over 64.

∗ Transmission line length between each unit*: MAX 400 m.

∗ Total transmission line length: MAX 2000 m
AB+BC+BD+DE+EF+EG+GH < 2000 m (Fig. 2)

∗ When a SIGNAL AMPLIFIER is installed, network is divided into two network segments.
In a network segment (NS), divided by a SIGNAL AMPLIFIER, have to keep the following facts.

(1)Total transmission line length: MAX 500 m
AB+BC+BD < 500 m (Fig. 2)

(2)The total number of units* : MAX 64

(3)The number of terminal resistor : 1

(4)The total number of control units : 2

∗ Arrange so that there is one terminal resistor for each network segment.

∗ Always take a ground from both ends of transmission line.

Fig. 1

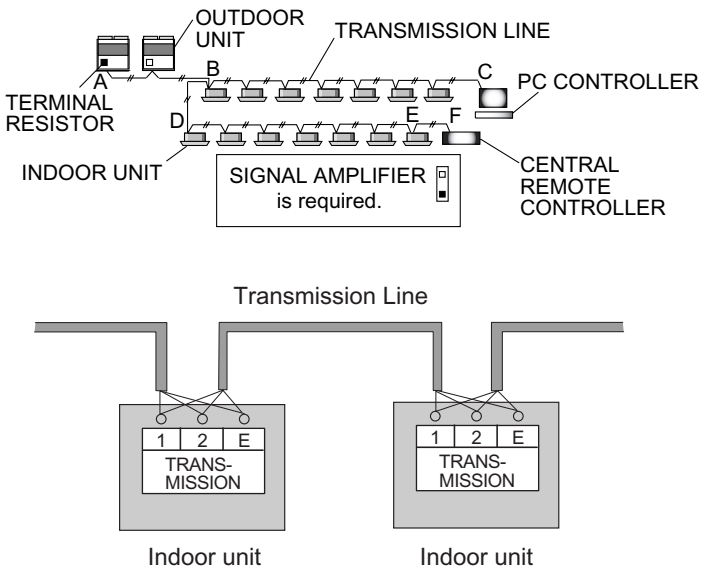
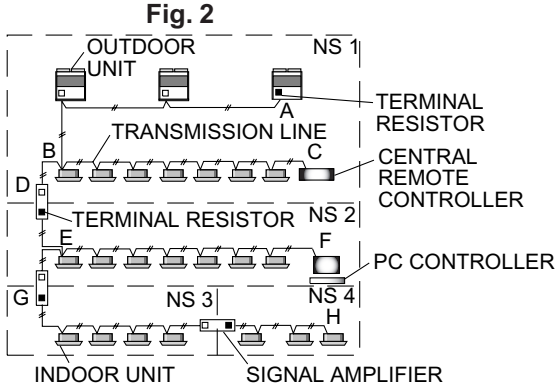


Fig. 2



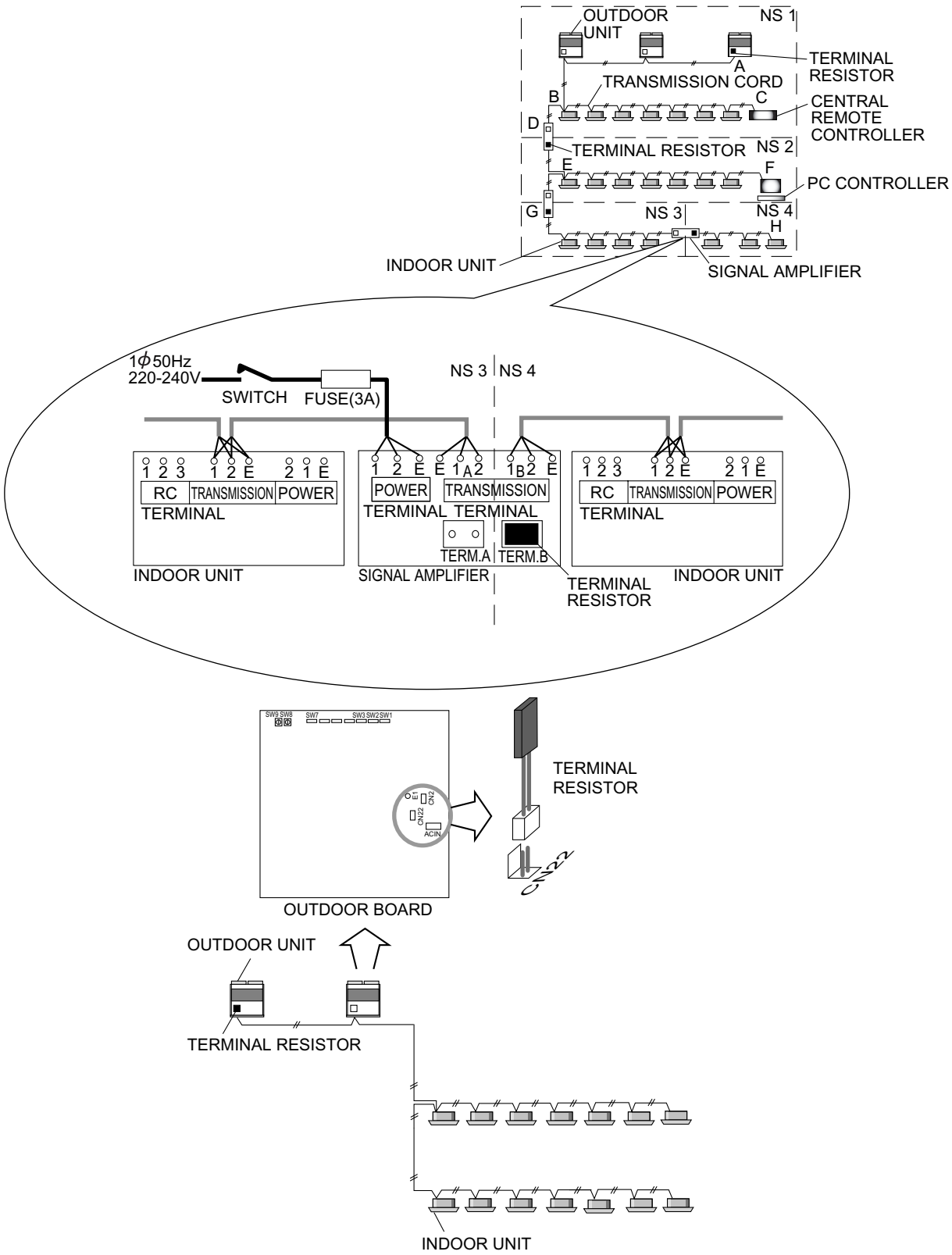
Note : Unit* means indoor unit, outdoor unit, central remote controller (CRC) and PC controller, signal amplifier, single split adaptor, network convertor etc..
Control units means central remote controller and PC controller ant network convertor for LONWORKS.

■CHECK POINT

✳ Arrange so that there is no transmission cord between each network segment except the transmission cord which passed through the signal amplifier.

✳ Arrange so that there is one terminal resistor for each network segment.
If necessary,remove the terminal resistor which connected temporarily to the CN22 terminator of the circuit board for the outdoor unit.

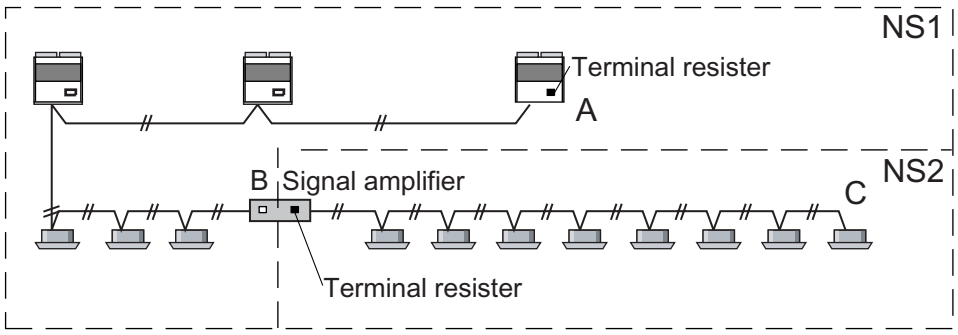
Fig. 3



INSTALLATION

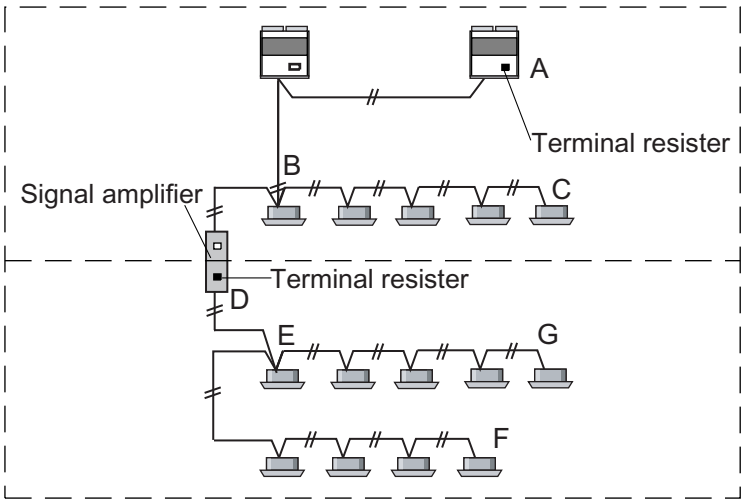
■ EXAMPLE OF INSTALL SIGNAL AMPLIFIER (UTR-YRPC)

Example 1 : In case of series connection



between A and C 800m
NS1 : between A and B 400m≦500m
NS2 : between B and C 400m≦500m

Example 2 : In case of branch connection

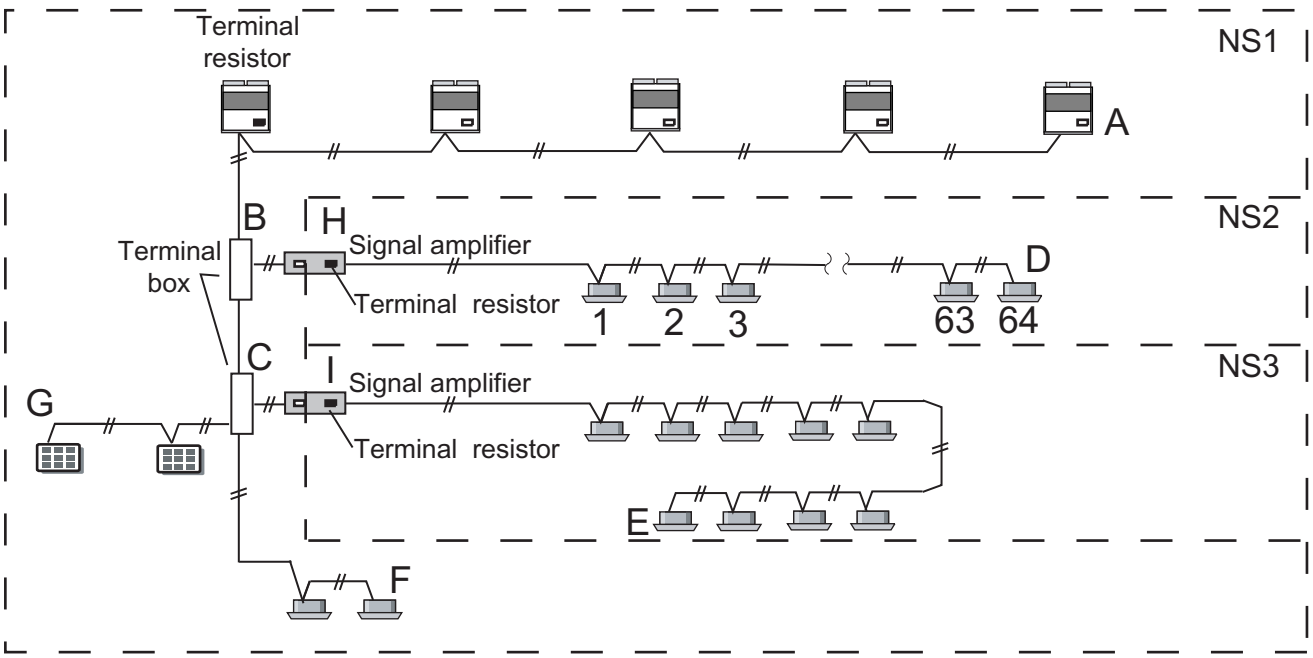


between A and B 100m
between B and C 200m
between B and D 200m
between D and E 200m
between E and F 100m
between E and G 100m
Total wiring length 900m
NS1 : AB+BC+BD≦500m
NS2 : DE+EF+EG≦500m

Note
Install the unit in a place where the total length of the wiring below the signal amplifier is within 500m.

INSTALLATION

Example 3 : Branch connection and in case of over 64 units



between A and B 100m
between B and C 100m
between B and D 200m
between C and E 500m
between C and F 100m
between C and G 100m
between B and H 10m
between C and I 10m

Total wiring length 1100m

Number of indoor unit 64

NS1 : AB+BC+CG+CF+BH+CI ≦ 500m
NS2 : Total equipments between H and D ≦ 64
NS3 : IE ≦500m

INSTALLATION

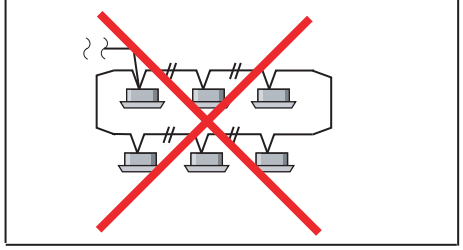
5-2-4. WIRING SEPARATION

■ TRANSMISSION LINE SEPARATION RULES

* The transmission line between indoor unit, outdoor unit and controllers can be connected by one cable.
* Terminal board available on the market or the ones inside the indoor unit or outdoor should be used for transmission line separation.
* Connection of three or more lines may cause poor communication for one terminal. In this case, please use a terminal box.

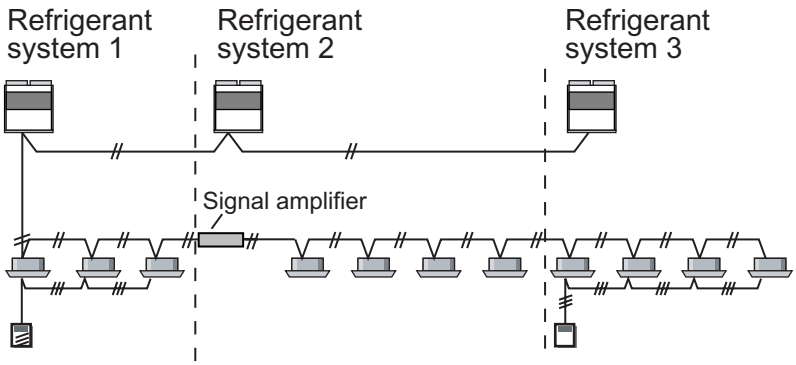
NOTE

· Do not loop.

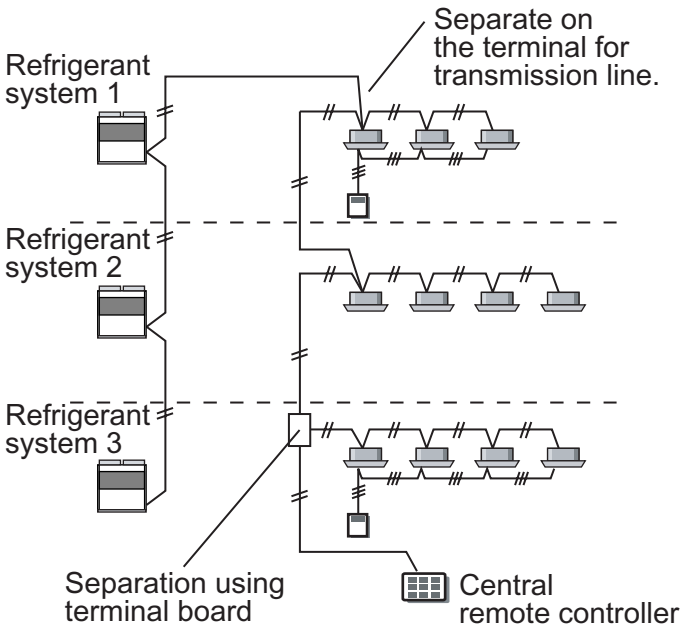


INSTALLATION

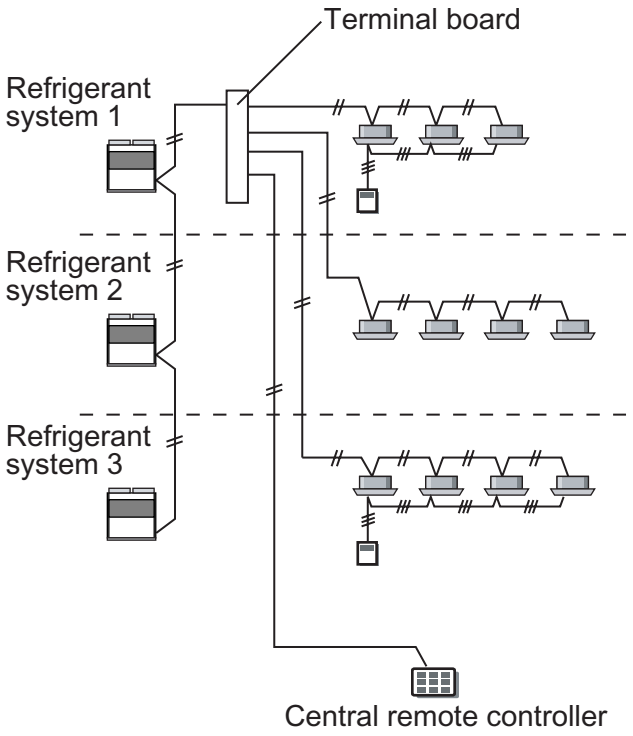
Example 1 : Connecting each outdoor and indoor unit with one connection wiring.



Example 2 : Separating transmission line.

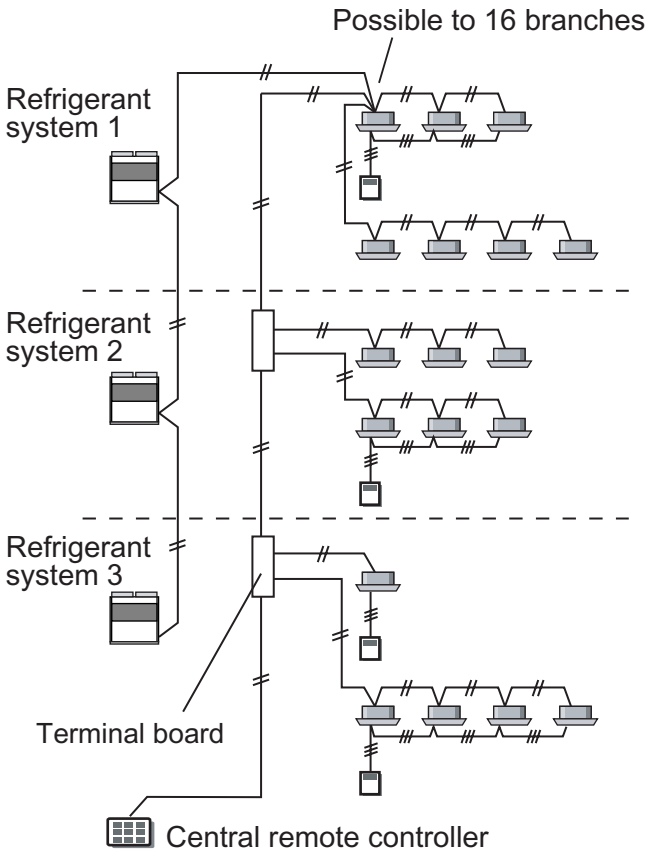


Example 3 : Separation wiring from one terminal board radially.

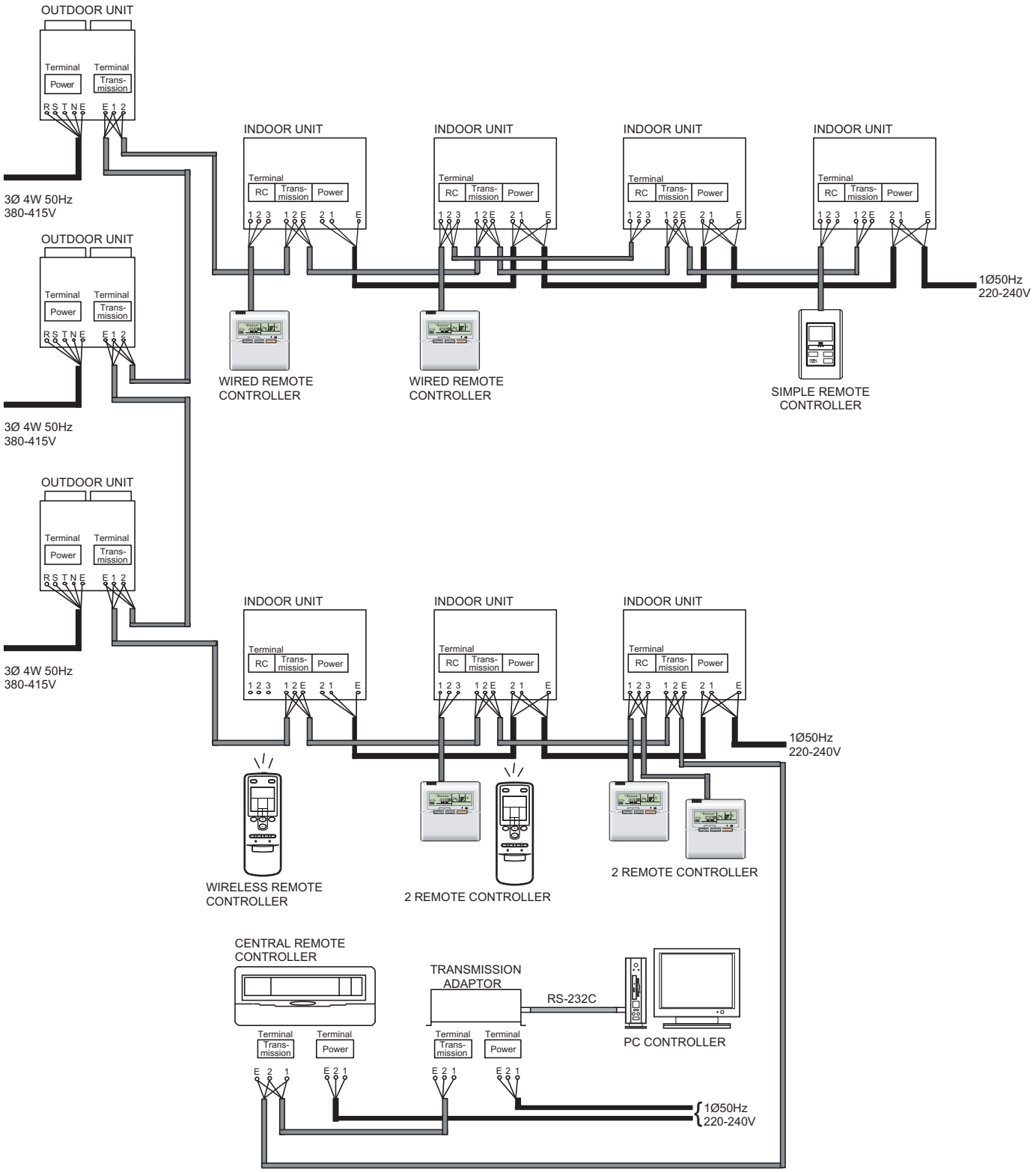


INSTALLATION

Example 4 : Combination of example 2 and 3



5-2-5. WIRING EXAMPLE



INSTALLATION

5-3. SYSTEM SETTING

5-3-1. SYSTEM TYPE SETTING

Set the DIP switch to the corresponding system type as shown in the table.
Do not use a nonexistent switch combination.

Note
✳ Perform the system setting and address setting , before turning on the power.
✳ For the air conditioner to operate satisfactorily, perform the correct setting.

■ OUTDOOR UNIT SETTING

(◆ . . . Factory Setting)

Pipe length setting

⇩

Refrigerant circuit address setting

⇩

Function setting

Set the DIP SW 6-1 & 6-2
Pipe Length S : SW 6-1 OFF, SW 6-2 ON
Standard : SW 6-1 OFF, SW 6-2 OFF ◆
Pipe Length M : SW 6-1 ON , SW 6-2 OFF
Pipe Length L : SW 6-1 ON, SW 6-2 ON

Set the Rotary SW 8 & 9
See the switch detail for "5-3-2 Address setting"

INSTALLATION

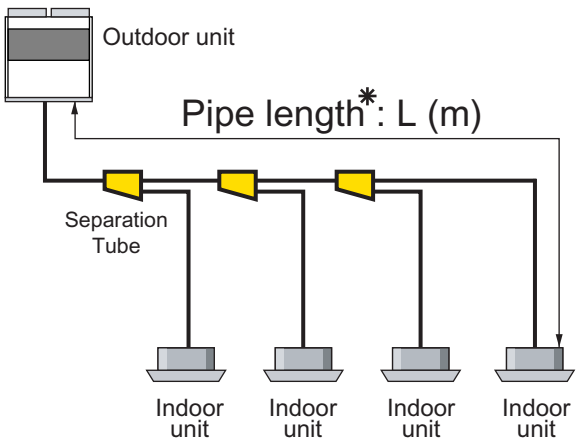
■ PIPE LENGTH SETTING (OUTDOOR UNIT)

Depending on the pipe length, the set-up of the pipe length switch is required.
SW setting can provide the operation to supplement the loss created by the pipe length.

(◆ . . . Factory Setting)

	Pipe length range	Recommended Range of L (m)	SW 6-1	SW 6-2
	S	L≦40	OFF	ON
◆	Standard	40 < L ≦ 60	OFF	OFF
	M	60 < L ≦ 80	ON	OFF
	L	80 < L ≦ 100	ON	ON

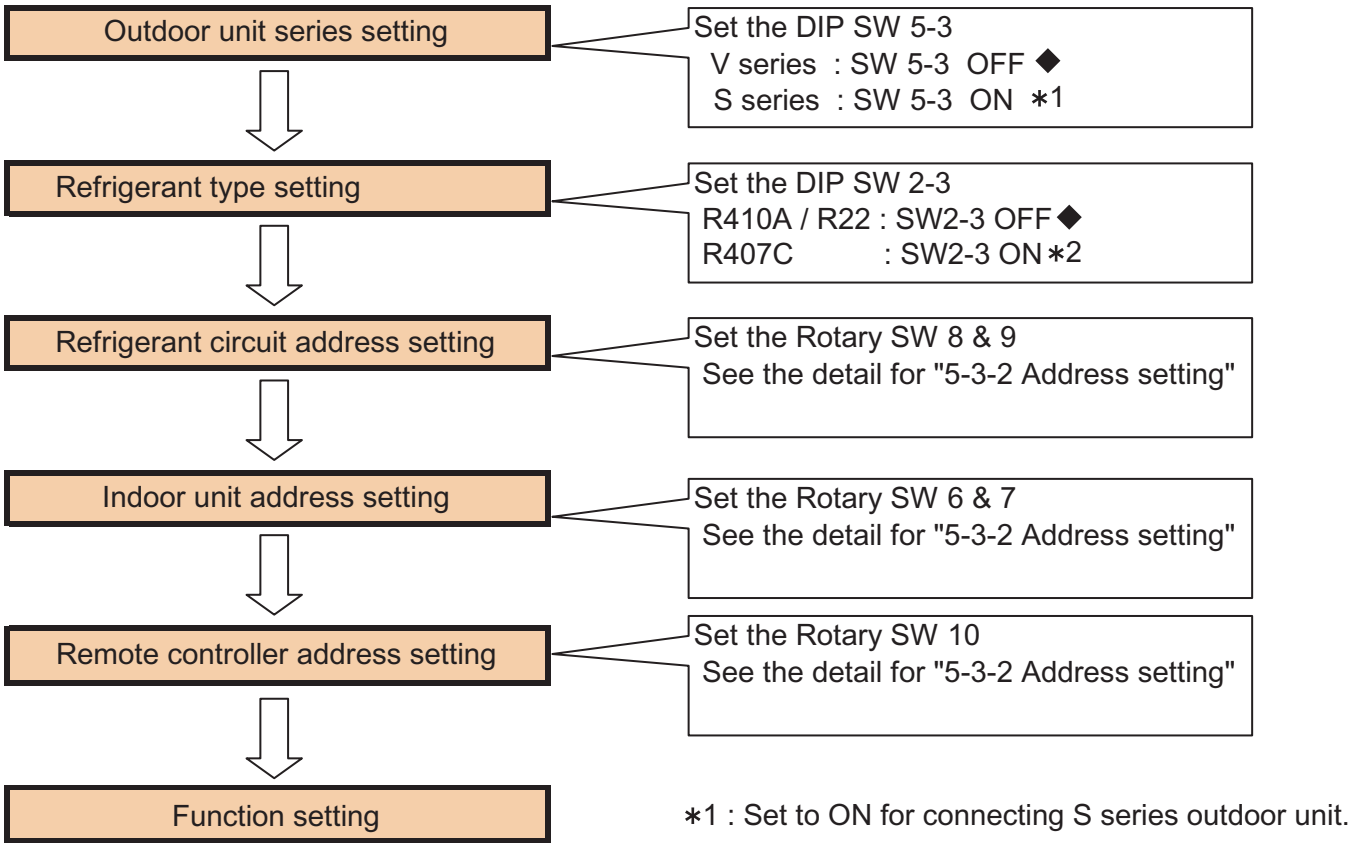
✳ Pipe length means the length between outdoor unit and the farthest indoor unit.



■ INDOOR UNIT SETTING

SW Number shows for other than compact wall mounted type.
Please refer to the correct SW position for 5-4 Function Setting.

(◆ . . . Factory Setting)



∗1 : Set to ON for connecting S series outdoor unit.

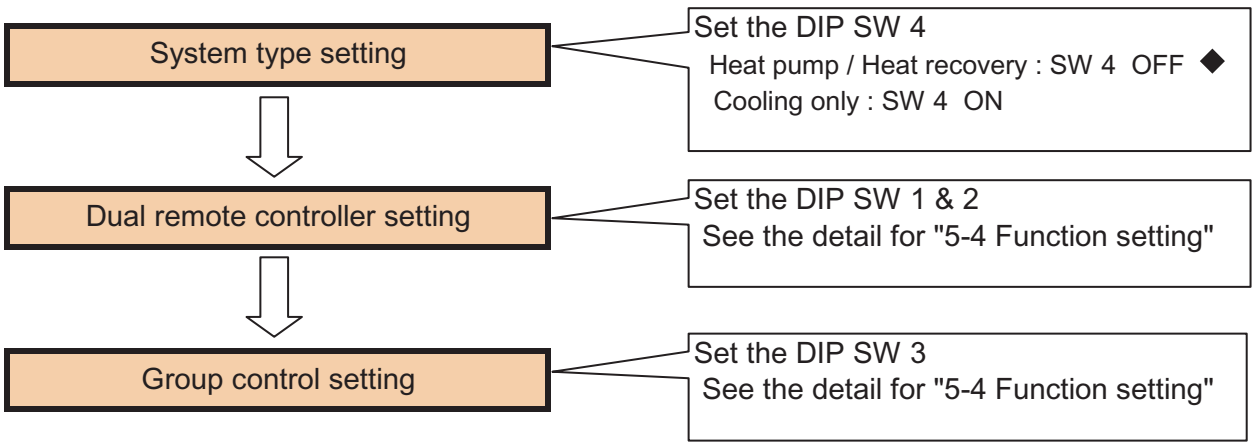
∗2 : Set to ON for connecting R407C outdoor unit.

INSTALLATION

INSTALLATION

■ REMOTE CONTROLLER SETTING

WIRED,SIMPLE REMOTE CONTROLLER

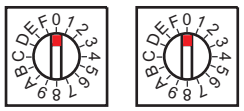
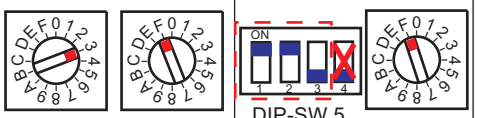
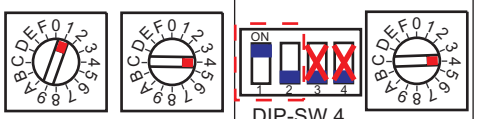
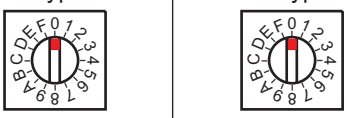


∗Other than above unit , Please refer the "5-4 Function setting " and installation manual.

5-3-2. ADDRESS SETTING

For this system, each address should be preset before operation.
Please refer following table for outdoor unit, indoor unit each remote controller.

■ KINDS OF ADDRESS AND SETTING RANGE

<table>
<tr><th>UNIT</th><th>SETTING</th><th>SETTING RANGE</th><th>TYPE OF SWITCH</th><th>REMARKS</th></tr>
<tr><td>Outdoor unit</td><td>Refrigerant circuit address</td><td>0～99</td><td>Setting example 0
 
SW 9 SW 8</td><td>Arbitrary numbers can be set in range of 00-99</td></tr>
<tr><td rowspan="3">Indoor unit</td><td>Refrigerant circuit address</td><td>0～99</td><td>■Manual address setting
● PCB Type A ✳1 ● PCB Type B ✳2
 
SW 9 SW 8 DIP-SW 5 SW 7
■Infrared address setting
After turning on the power, the wireless remote controller can be used to set the address. For details, refer to “5-3-4".
Set this switch to 00 at factory shipment.</td><td>Arbitrary numbers can be set in range of 00-99</td></tr>
<tr><td>Indoor unit address</td><td>0～63
✳4</td><td>■Manual address setting
● PCB Type A ✳1 ● PCB Type B ✳2
 
SW 7 SW 6 DIP-SW 4 SW 6
■Infrared address setting
After turning on the power, the wireless remote controller can be used to set the address. For details, refer to “5-3-4".
Set this switch to 00 at factory shipment.</td><td>Arbitrary numbers can be set in range of 00-63
✳4
See the setting method 5-3-3</td></tr>
<tr><td>Remote controller address</td><td>00～15</td><td>● PCB Type A ✳1 ● PCB Type B ✳2
 
SW 10 SW 8</td><td>Set from 0 to 15 in sequence</td></tr>
<tr><td rowspan="2">Wired, Simple remote controller</td><td>Dual remote controller switch</td><td>ON/OFF</td><td>DIP SW 1,2</td><td>OFF : Not terminated
ON : Terminated</td></tr>
<tr><td>Number of indoor unit connection</td><td>ON/OFF</td><td>DIP SW 3</td><td>Number of indoor unit
OFF : 1 unit
ON : multiple units</td></tr>
<tr><td>Central remote controller</td><td>Central remote controller address</td><td>0～15</td><td>Initial setting</td><td></td></tr>
<tr><td>Group remote controller</td><td>Group remote controller address</td><td>0～3</td><td>Initial setting</td><td></td></tr>
</table>

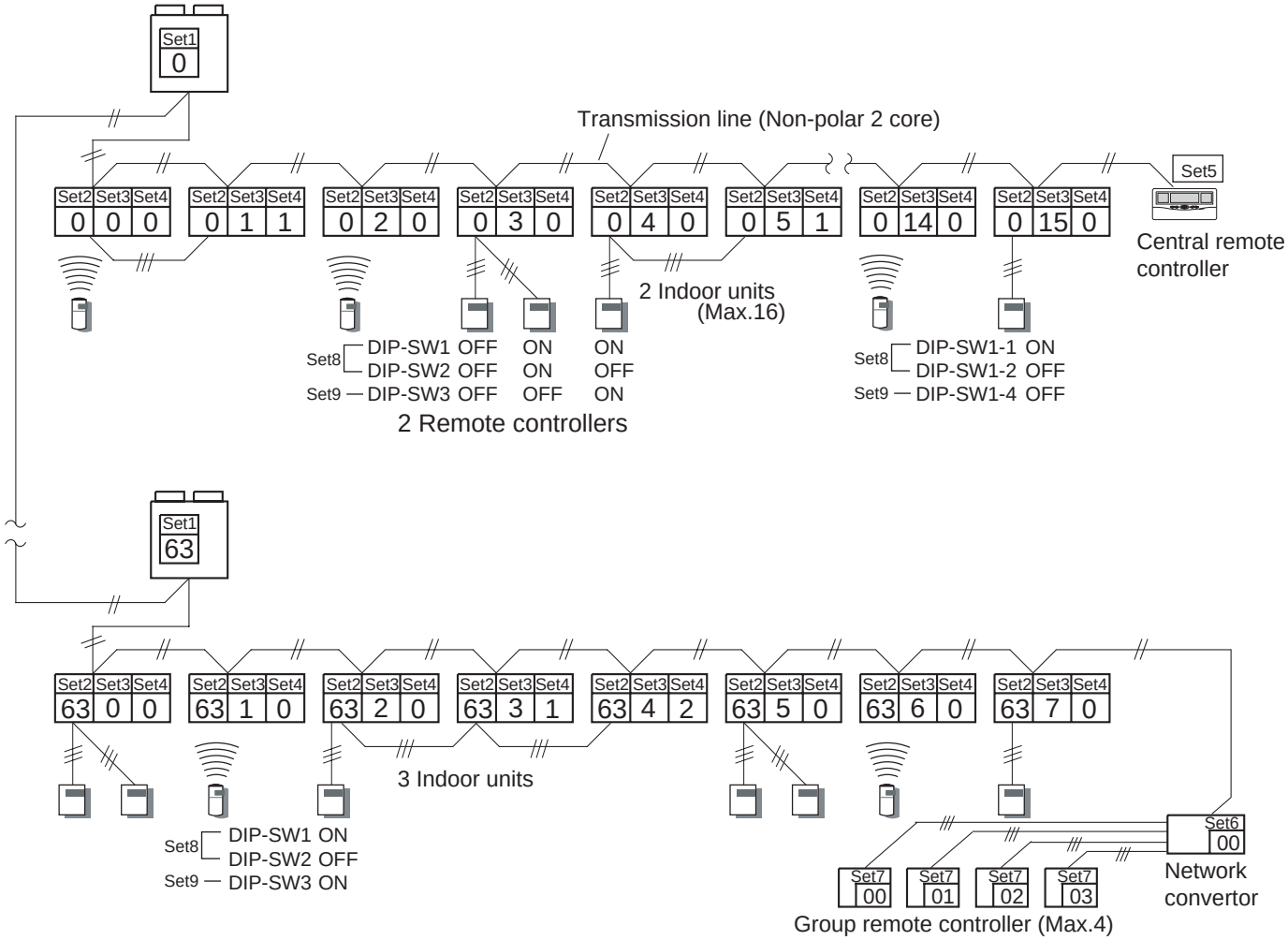
✳1 PCB Type A : Other than compact wall mounted type (Type B)
- Compact Cassette Type
- Cassette Type
- Compact Duct Type
- Low Static Pressure Duct Type
- Duct Type
- Floor / Ceiling Type
- Ceiling Type
- Wall Mounted Type
- Ceiling Wall Type

✳2 PCB Type B : Compact Wall Mounted Type (Comfort model) (AS*E07-14)

✳4 Indoor unit address can be set up to 63. However maximum connectable indoor unit is 16 units

INSTALLATION

■ SETTING EXAMPLE



• Outdoor unit setting

Set1: Refrigerant circuit address (Rotary SW9,8)

• Central remote controller setting

Set5: Controller address (Max.16)

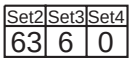
• Group remote controller setting

Set7: Controller address (Max.4)

• Wired, Simple remote controller setting

Set8: Dual remote controller (DIP-SW1,2)
Set9: Group control (DIP-SW3)

• Indoor unit setting



Set2: Refrigerant circuit address
Set3: Indoor unit address
Set4: Remote controller address

	Set2		Set3		Set4
	Refrigerant circuit address		Indoor unit address		Remote controller address
	Second digit	First digit	Second digit	First digit	First digit
※1 PCB TYPE A	Rotary SW 9	Rotary SW 8	Rotary SW 7	Rotary SW 6	Rotary SW 10
※2 PCB TYPE B	5-1 DIP-SW 5-2 5-3	Rotary SW 7	DIP-SW 4-1 4-2	Rotary SW 6	Rotary SW 8

※1 : PCB TYPE A : Other than Compact Wall Mounted type (TYPE B & TYPE C)
Compact Cassette type Cassette type Compact Duct type
Low Static Pressure Duct type Duct type Floor/Ceiling type
Ceiling type Wall Mounted type Ceiling Wall type

※2 : PCB TYPE B : Compact Wall Mounted type (comfort model) (AS*E07-14)

※ Instructions for setting up the address

1. The refrigerant circuit address of the indoor and outdoor units can be set to optional numbers in the range of 0 to 99.
2. The Indoor unit address can be set to optional numbers in the range of 0 to 63.
3. Set the remote controller address in the order of 0,1,2, . . . ,15.(Blank is not allowed)
4. The central remote controller address can be set to optional numbers in the range of 0 to 15.
5. The total numbers of indoor units ≦ 16.

INSTALLATION

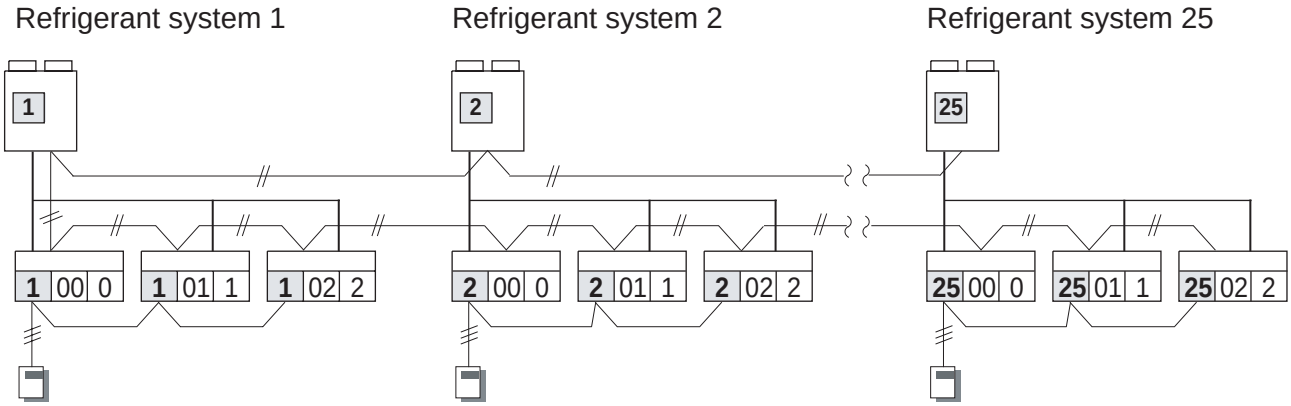
5-3-3. MANUAL ADDRESS SETTING METHOD

■ ADDRESS SETTING DESCRIPTION

● Refrigerant circuit address (set 1)

In case of 2 or more refrigerant system in VRF network system, each refrigerant system should be set an exclusive refrigerant circuit address.

Refrigerant system : It means same refrigerant circuit which has connected between outdoor unit and indoor unit by piping.



● Example

✳ Outdoor unit

Refrigerant circuit address	SW setting	
	Rotary SW 9	Rotary SW 8
1	0	1
11	0	B
25	1	9
50	3	2

Please refer to the conversion table

✳ Indoor unit

Refrigerant circuit address	PCB TYPE A ✳1		PCB TYPE B ✳2	
	Rotary SW 9	Rotary SW 8	DIP SW 5	Rotary SW 7
1	0	1	OFF OFF OFF	1
11	0	B	OFF OFF OFF	B
25	1	9	ON OFF OFF	9
50	3	2	ON ON OFF	2

Please refer to the conversion table

Setting range 00 - 99(Arbitrary numbers can be set)

All the indoor unit and outdoor unit in same refrigerant circuit should be set same address.

✳1 PCB Type A : Other than compact wall mounted type (Type B)

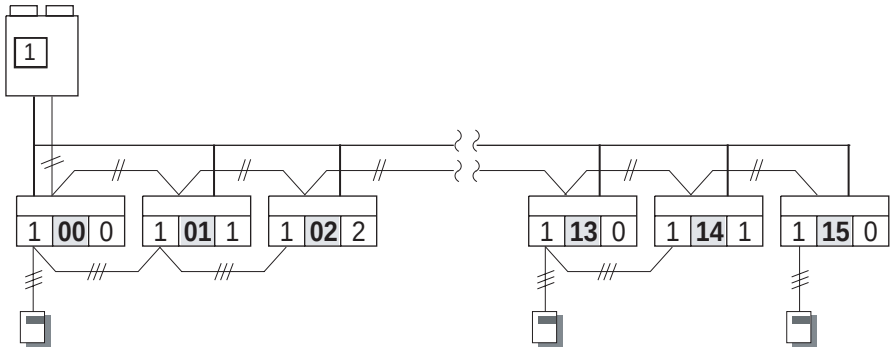
- Compact Cassette Type
- Cassette Type
- Compact Duct Type
- Low Static Pressure Duct Type
- Duct Type
- Floor / Ceiling Type
- Ceiling Type
- Wall Mounted Type
- Ceiling Wall Type

✳2 PCB Type B : Compact Wall Mounted Type (Comfort model) (AS*E07-14)

INSTALLATION

● Indoor unit address (set 3)

Each indoor unit in same refrigerant system should be set an exclusive indoor unit address.



Indoor unit address	PCB TYPE A ✱1		PCB TYPE B ✱2	
	Rotary SW 7	Rotary SW 6	DIP SW 4	Rotary SW 6
3	0	3	OFF OFF	3
11	0	B	OFF OFF	B
30	1	E	ON OFF	E
47	2	F	OFF ON	F

Please refer to the conversion table

Setting range 00 - 63(Arbitrary numbers can be set)

Connectable indoor units are maximum 16 units.

✱1 PCB Type A : Other than compact wall mounted type (Type B)

- Compact Cassette Type
- Cassette Type
- Compact Duct Type
- Low Static Pressure Duct Type
- Duct Type
- Floor / Ceiling Type
- Ceiling Type
- Wall Mounted Type
- Ceiling Wall Type

✱2 PCB Type B : Compact Wall Mounted Type (Comfort model) (AS*E07-14)

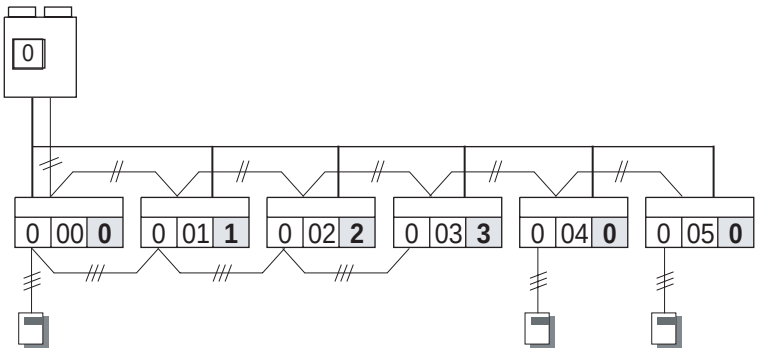
INSTALLATION

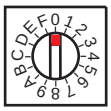
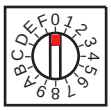
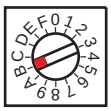
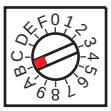
● Remote controller address (set 4)

1 individual remote controller can be controlled Max.16 indoor unit with connecting remote controller cable.

These units connecting by remote controller cable regards as remote controller group.

Even 1 indoor unit as 1 or no remote controller connection regards 1 remote controller group.



Remote controller address	✱1 PCB TYPE A	✱2 PCB TYPE B
	Rotary SW 10	Rotary SW 8
0	 0	 0
1	1	1
11	 B	 B
15	F	F

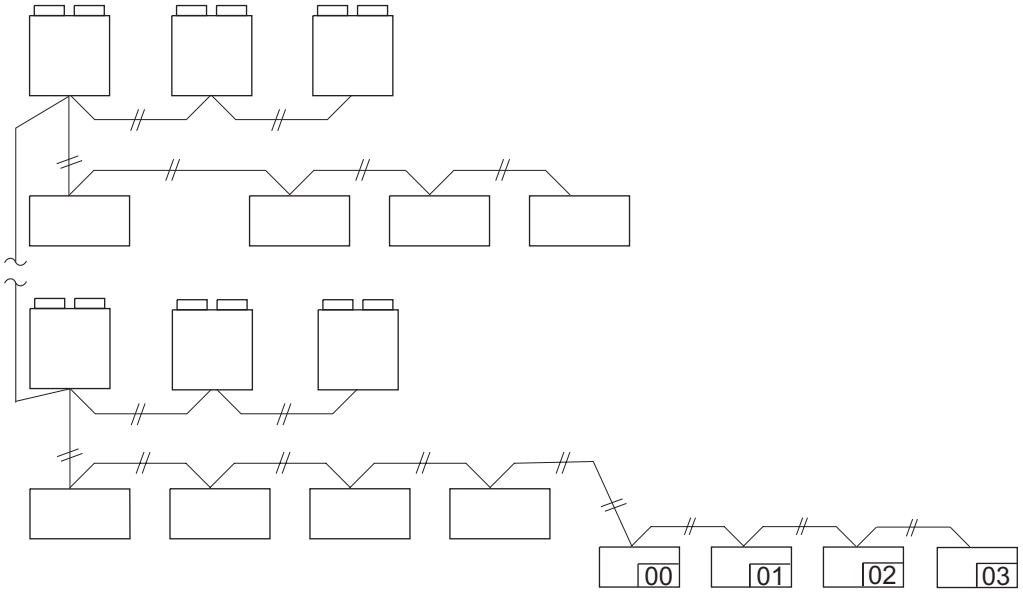
✱1 PCB Type A : Other than compact wall mounted type (Type B)

- Compact Cassette Type
- Cassette Type
- Compact Duct Type
- Low Static Pressure Duct Type
- Duct Type
- Floor / Ceiling Type
- Ceiling Type
- Wall Mounted Type
- Ceiling Wall Type

✱2 PCB Type B : Compact Wall Mounted Type (Comfort model) (AS*E07-14)

INSTALLATION

● Central remote controller address (set 5)

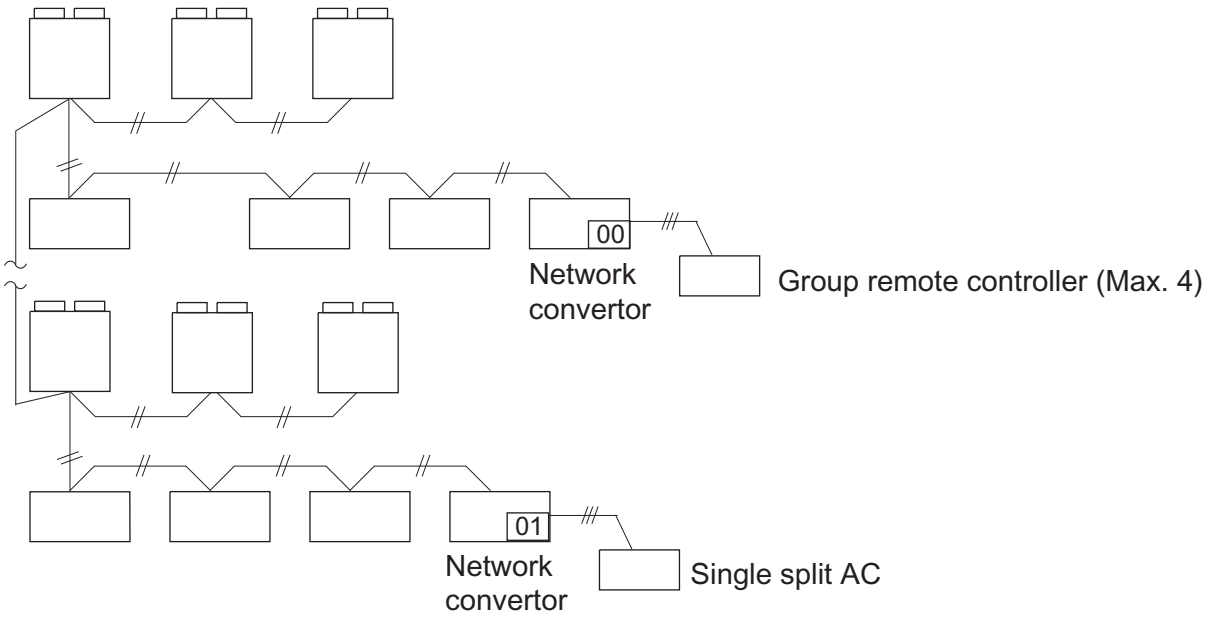


Central remote controller (Max. 16)

✳ Set central remote controller address first, to conduct the initial setting of it.
Refer to the "setting manual" for details.

INSTALLATION

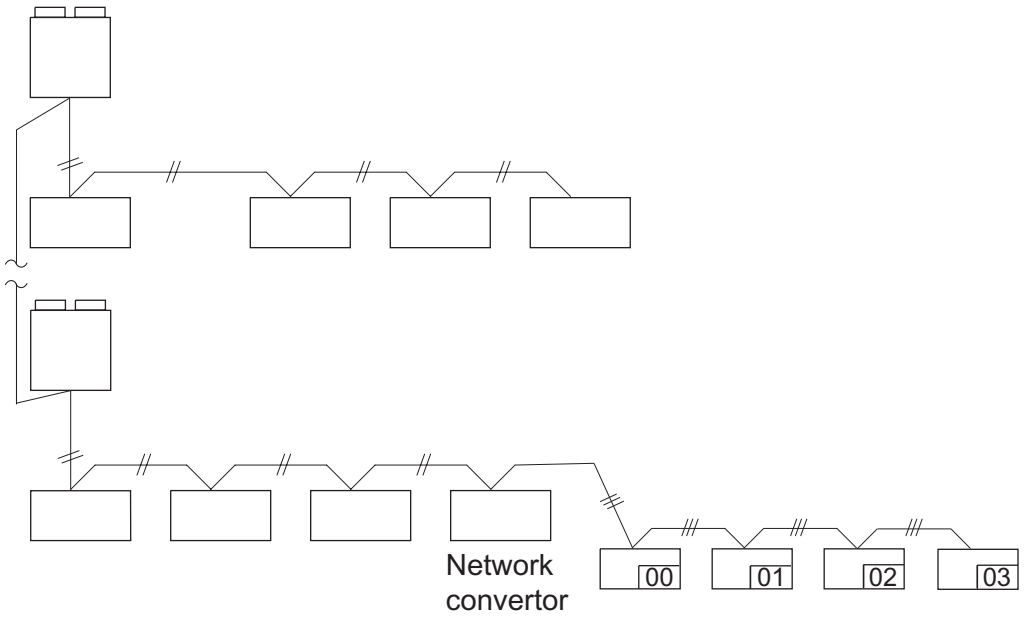
● Network convertor address (set 6)



Rotary SW 111

✳ Set the Rotary SW 111 on network convertor PCB.
Refer to the installation manual for details.

● Group remote controller address (set 7)



✳ Set group remote controller address first, to conduct the initial setting of it.

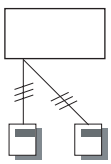
INSTALLATION

● Dual remote controller switch (set 8)

When 2 sets of wired remote controllers are connected to the remote control group, turn the DIP SW 1 and 2 of Master Remote Controller off.

✳ Slave remote controller will not be valid for timer setting.

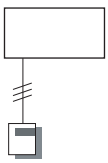
✳ Last command is priority.



[Master] [Slave]

SW1 OFF ON
SW2 OFF ON

Remote controller unit PCB
Setting by DIP SW 1 and 2

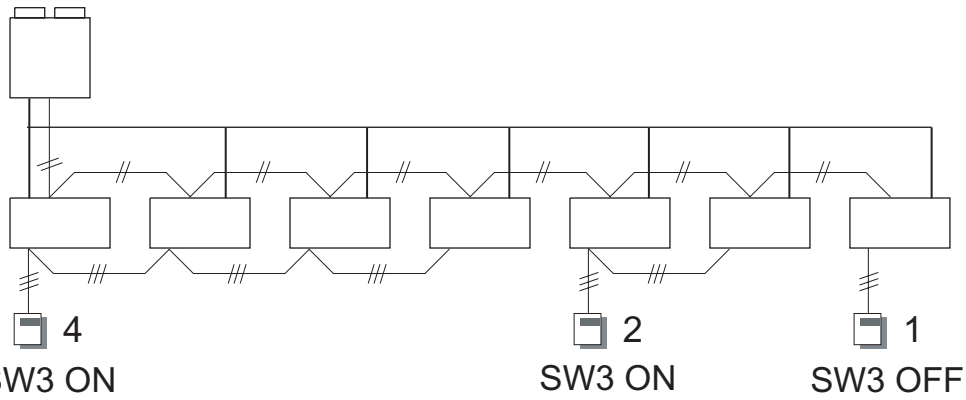


[Master]

SW1 ON
SW2 OFF

When only 1 remote controller will connect, this switch 1 must be set ON.

● Number of indoor unit connection (set 9)



Remote controller PCB
Setting by DIP SW 3

■ ADDRESS CONVERSION TABLE FOR MANUAL SETTING

● Refrigerant circuit address

In the case of a multiple refrigerant system, each refrigerant system should be set an exclusive refrigerant circuit address.

Conversion table of refrigerant circuit address and rotary switch setting are shown in the table below.

Do not use a nonexistent switch setting combination.

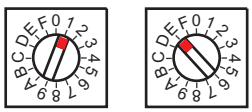
Rotary SW setting is formed with the Hexadecimal notation.

Refrigerant circuit address conversion table (Outdoor unit)

(SW9 : "0" , SW8 : "0" - - - Factory setting)

Refrigerant circuit address	Rotary Switch setting		Refrigerant circuit address	Rotary Switch setting		Refrigerant circuit address	Rotary Switch setting		Refrigerant circuit address	Rotary Switch setting		Refrigerant circuit address	Rotary Switch setting	
	SW9	SW8		SW9	SW8		SW9	SW8		SW9	SW8		SW9	SW8
0	0	0	20	1	4	40	2	8	60	3	C	80	5	0
1	0	1	21	1	5	41	2	9	61	3	D	81	5	1
2	0	2	22	1	6	42	2	A	62	3	E	82	5	2
3	0	3	23	1	7	43	2	B	63	3	F	83	5	3
4	0	4	24	1	8	44	2	C	64	4	0	84	5	4
5	0	5	25	1	9	45	2	D	65	4	1	85	5	5
6	0	6	26	1	A	46	2	E	66	4	2	86	5	6
7	0	7	27	1	B	47	2	F	67	4	3	87	5	7
8	0	8	28	1	C	48	3	0	68	4	4	88	5	8
9	0	9	29	1	D	49	3	1	69	4	5	89	5	9
10	0	A	30	1	E	50	3	2	70	4	6	90	5	A
11	0	B	31	1	F	51	3	3	71	4	7	91	5	B
12	0	C	32	2	0	52	3	4	72	4	8	92	5	C
13	0	D	33	2	1	53	3	5	73	4	9	93	5	D
14	0	E	34	2	2	54	3	6	74	4	A	94	5	E
15	0	F	35	2	3	55	3	7	75	4	B	95	5	F
16	1	0	36	2	4	56	3	8	76	4	C	96	6	0
17	1	1	37	2	5	57	3	9	77	4	D	97	6	1
18	1	2	38	2	6	58	3	A	78	4	E	98	6	2
19	1	3	39	2	7	59	3	B	79	4	F	99	6	3

Example : Refrigerant circuit address 30 : Set Rotary SW9 to "1" and SW8 to "E"



SW9 SW8

INSTALLATION

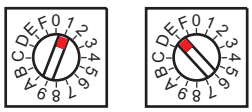
Refrigerant circuit address conversion table (Indoor unit)

✱1 PCB Type A : • Compact Cassette Type • Cassette Type • Compact Duct Type
• Low Static Pressure Duct Type • Duct Type • Floor / Ceiling Type
• Ceiling Type • Wall Mounted Type • Ceiling Wall Type

(SW9 : "0" , SW8 : "0" - - - Factory setting)

Refrigerant circuit address	Rotary Switch setting		Refrigerant circuit address	Rotary Switch setting		Refrigerant circuit address	Rotary Switch setting		Refrigerant circuit address	Rotary Switch setting		Refrigerant circuit address	Rotary Switch setting	
	SW9	SW8		SW9	SW8		SW9	SW8		SW9	SW8		SW9	SW8
0	0	0	20	1	4	40	2	8	60	3	C	80	5	0
1	0	1	21	1	5	41	2	9	61	3	D	81	5	1
2	0	2	22	1	6	42	2	A	62	3	E	82	5	2
3	0	3	23	1	7	43	2	B	63	3	F	83	5	3
4	0	4	24	1	8	44	2	C	64	4	0	84	5	4
5	0	5	25	1	9	45	2	D	65	4	1	85	5	5
6	0	6	26	1	A	46	2	E	66	4	2	86	5	6
7	0	7	27	1	B	47	2	F	67	4	3	87	5	7
8	0	8	28	1	C	48	3	0	68	4	4	88	5	8
9	0	9	29	1	D	49	3	1	69	4	5	89	5	9
10	0	A	30	1	E	50	3	2	70	4	6	90	5	A
11	0	B	31	1	F	51	3	3	71	4	7	91	5	B
12	0	C	32	2	0	52	3	4	72	4	8	92	5	C
13	0	D	33	2	1	53	3	5	73	4	9	93	5	D
14	0	E	34	2	2	54	3	6	74	4	A	94	5	E
15	0	F	35	2	3	55	3	7	75	4	B	95	5	F
16	1	0	36	2	4	56	3	8	76	4	C	96	6	0
17	1	1	37	2	5	57	3	9	77	4	D	97	6	1
18	1	2	38	2	6	58	3	A	78	4	E	98	6	2
19	1	3	39	2	7	59	3	B	79	4	F	99	6	3

Example : Refrigerant circuit address 30 : Set Rotary SW9 to "1" and SW8 to "E"



SW9 SW8

INSTALLATION

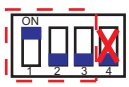
Refrigerant circuit address conversion table (Indoor unit)

✱2 PCB Type B : Compact Wall Mounted Type (Comfort model)
AS*E07, AS*E09, AS*E12, AS*E14

(SW5-1: "OFF" , SW5-2: "OFF", SW5-3: "OFF" ,SW7: "0" --- Factory setting)

Refrig-erant circuit address	DIP-SW			Rotary SW SW7	Refrig-erant circuit address	DIP-SW			Rotary SW SW7	Refrig-erant circuit address	DIP-SW			Rotary SW SW7	Refrig-erant circuit address	DIP-SW			Rotary SW SW7
	5-1	5-2	5-3			5-1	5-2	5-3			5-1	5-2	5-3			5-1	5-2	5-3	
0	OFF	OFF	OFF	0	25	ON	OFF	OFF	9	50	ON	ON	OFF	2	75	OFF	OFF	ON	B
1	OFF	OFF	OFF	1	26	ON	OFF	OFF	A	51	ON	ON	OFF	3	76	OFF	OFF	ON	C
2	OFF	OFF	OFF	2	27	ON	OFF	OFF	B	52	ON	ON	OFF	4	77	OFF	OFF	ON	D
3	OFF	OFF	OFF	3	28	ON	OFF	OFF	C	53	ON	ON	OFF	5	78	OFF	OFF	ON	E
4	OFF	OFF	OFF	4	29	ON	OFF	OFF	D	54	ON	ON	OFF	6	79	OFF	OFF	ON	F
5	OFF	OFF	OFF	5	30	ON	OFF	OFF	E	55	ON	ON	OFF	7	80	ON	OFF	ON	0
6	OFF	OFF	OFF	6	31	ON	OFF	OFF	F	56	ON	ON	OFF	8	81	ON	OFF	ON	1
7	OFF	OFF	OFF	7	32	OFF	ON	OFF	0	57	ON	ON	OFF	9	82	ON	OFF	ON	2
8	OFF	OFF	OFF	8	33	OFF	ON	OFF	1	58	ON	ON	OFF	A	83	ON	OFF	ON	3
9	OFF	OFF	OFF	9	34	OFF	ON	OFF	2	59	ON	ON	OFF	B	84	ON	OFF	ON	4
10	OFF	OFF	OFF	A	35	OFF	ON	OFF	3	60	ON	ON	OFF	C	85	ON	OFF	ON	5
11	OFF	OFF	OFF	B	36	OFF	ON	OFF	4	61	ON	ON	OFF	D	86	ON	OFF	ON	6
12	OFF	OFF	OFF	C	37	OFF	ON	OFF	5	62	ON	ON	OFF	E	87	ON	OFF	ON	7
13	OFF	OFF	OFF	D	38	OFF	ON	OFF	6	63	ON	ON	OFF	F	88	ON	OFF	ON	8
14	OFF	OFF	OFF	E	39	OFF	ON	OFF	7	64	OFF	OFF	ON	0	89	ON	OFF	ON	9
15	OFF	OFF	OFF	F	40	OFF	ON	OFF	8	65	OFF	OFF	ON	1	90	ON	OFF	ON	A
16	ON	OFF	OFF	0	41	OFF	ON	OFF	9	66	OFF	OFF	ON	2	91	ON	OFF	ON	B
17	ON	OFF	OFF	1	42	OFF	ON	OFF	A	67	OFF	OFF	ON	3	92	ON	OFF	ON	C
18	ON	OFF	OFF	2	43	OFF	ON	OFF	B	68	OFF	OFF	ON	4	93	ON	OFF	ON	D
19	ON	OFF	OFF	3	44	OFF	ON	OFF	C	69	OFF	OFF	ON	5	94	ON	OFF	ON	E
20	ON	OFF	OFF	4	45	OFF	ON	OFF	D	70	OFF	OFF	ON	6	95	ON	OFF	ON	F
21	ON	OFF	OFF	5	46	OFF	ON	OFF	E	71	OFF	OFF	ON	7	96	OFF	ON	ON	0
22	ON	OFF	OFF	6	47	OFF	ON	OFF	F	72	OFF	OFF	ON	8	97	OFF	ON	ON	1
23	ON	OFF	OFF	7	48	ON	ON	OFF	0	73	OFF	OFF	ON	9	98	OFF	ON	ON	2
24	ON	OFF	OFF	8	49	ON	ON	OFF	1	74	OFF	OFF	ON	A	99	OFF	ON	ON	3

Example : Refrigerant circuit address 30 : Set DIP-SW5-1 to "ON" ,5-2 and 5-3 to "OFF", Rotary SW7 to "E"



DIP-SW5

SW7

INSTALLATION

● Indoor unit address

Each indoor unit in a refrigerant system should be set an exclusive indoor unit address with rotary switches or DIP switches.
Conversion table of indoor unit address and rotary switch setting are shown in the table below.
Do not use a nonexistent switch setting combination.
Rotary SW setting is formed with the Hexadecimal notation

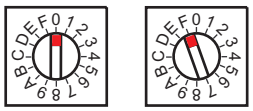
Indoor unit address conversion table

✱1 PCB Type A : • Compact Cassette Type • Cassette Type • Compact Duct Type
• Low Static Pressure Duct Type • Duct Type • Floor / Ceiling Type
• Ceiling Type • Wall Mounted Type • Ceiling Wall Type

(SW7 : "0" , SW6 : "0" - - - Factory setting)

Indoor unit address	Rotary Switch setting		Indoor unit address	Rotary Switch setting		Indoor unit address	Rotary Switch setting		Indoor unit address	Rotary Switch setting		Indoor unit address	Rotary Switch setting	
	SW7	SW6		SW7	SW6		SW7	SW6		SW7	SW6		SW7	SW6
0	0	0	13	0	D	26	1	A	39	2	7	52	3	4
1	0	1	14	0	E	27	1	B	40	2	8	53	3	5
2	0	2	15	0	F	28	1	C	41	2	9	54	3	6
3	0	3	16	1	0	29	1	D	42	2	A	55	3	7
4	0	4	17	1	1	30	1	E	43	2	B	56	3	8
5	0	5	18	1	2	31	1	F	44	2	C	57	3	9
6	0	6	19	1	3	32	2	0	45	2	D	58	3	A
7	0	7	20	1	4	33	2	1	46	2	E	59	3	B
8	0	8	21	1	5	34	2	2	47	2	F	60	3	C
9	0	9	22	1	6	35	2	3	48	3	0	61	3	D
10	0	A	23	1	7	36	2	4	49	3	1	62	3	E
11	0	B	24	1	8	37	2	5	50	3	2	63	3	F
12	0	C	25	1	9	38	2	6	51	3	3			

Example : Indoor unit address 15 : Set Rotary SW7 to "0" and SW6 to "F"



SW7 SW6

INSTALLATION

Indoor unit address conversion table

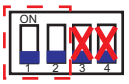
✳2 PCB Type B : Compact Wall Mounted Type (Comfort model)

AS*E07, AS*E09, AS*E12, AS*E14

(SW4-1: "OFF" , SW4-2: "OFF", SW6: "0" --- Factory setting)

Indoor unit address	DIP-SW		Rotary SW SW6	Indoor unit address	DIP-SW		Rotary SW SW6	Indoor unit address	DIP-SW		Rotary SW SW6	Indoor unit address	DIP-SW		Rotary SW SW6
	4-1	4-2			4-1	4-2			4-1	4-2			4-1	4-2	
0	OFF	OFF	0	16	ON	OFF	0	32	OFF	ON	0	48	ON	ON	0
1	OFF	OFF	1	17	ON	OFF	1	33	OFF	ON	1	49	ON	ON	1
2	OFF	OFF	2	18	ON	OFF	2	34	OFF	ON	2	50	ON	ON	2
3	OFF	OFF	3	19	ON	OFF	3	35	OFF	ON	3	51	ON	ON	3
4	OFF	OFF	4	20	ON	OFF	4	36	OFF	ON	4	52	ON	ON	4
5	OFF	OFF	5	21	ON	OFF	5	37	OFF	ON	5	53	ON	ON	5
6	OFF	OFF	6	22	ON	OFF	6	38	OFF	ON	6	54	ON	ON	6
7	OFF	OFF	7	23	ON	OFF	7	39	OFF	ON	7	55	ON	ON	7
8	OFF	OFF	8	24	ON	OFF	8	40	OFF	ON	8	56	ON	ON	8
9	OFF	OFF	9	25	ON	OFF	9	41	OFF	ON	9	57	ON	ON	9
10	OFF	OFF	A	26	ON	OFF	A	42	OFF	ON	A	58	ON	ON	A
11	OFF	OFF	B	27	ON	OFF	B	43	OFF	ON	B	59	ON	ON	B
12	OFF	OFF	C	28	ON	OFF	C	44	OFF	ON	C	60	ON	ON	C
13	OFF	OFF	D	29	ON	OFF	D	45	OFF	ON	D	61	ON	ON	D
14	OFF	OFF	E	30	ON	OFF	E	46	OFF	ON	E	62	ON	ON	E
15	OFF	OFF	F	31	ON	OFF	F	47	OFF	ON	F	63	ON	ON	F

Example : Indoor unit address 15 : Set DIP-SW4-1 to "OFF" ,4-2 to "OFF", Rotary SW6 to "F"



DIP-SW4

SW6

INSTALLATION

5-3-4. INFRARED ADDRESS SETTING

✳ A wireless remote controller (UTB- ✳VB) is required to set the infrared address setting.

✳ This function is available in all indoor unit with infrared signal receiver.

✳ Infrared address setting for duct type models can be made possible by using the optional IR receiver unit (UTB-✳WA).

Note : Since Beeping sound generate from indoor unit PCB installed far away (not from IR Receiver unit), sound might not be heard.

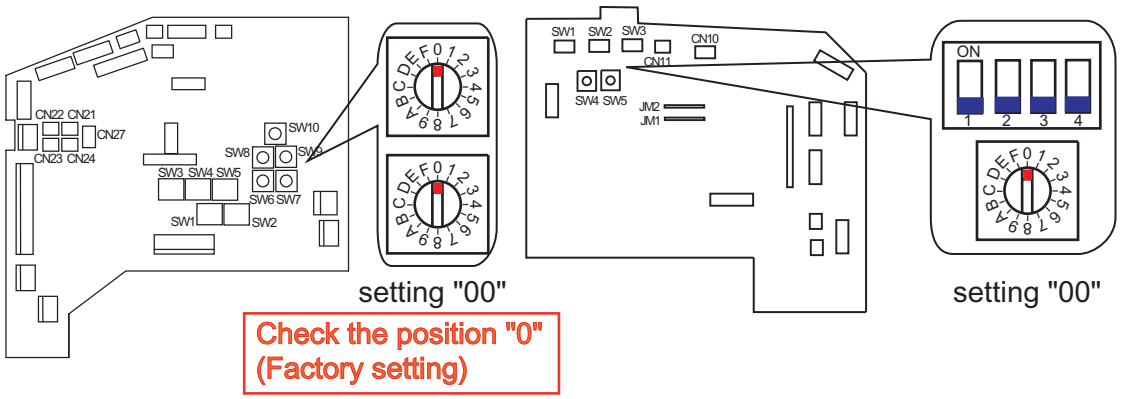
✳ The indoor unit's refrigerant circuit address and indoor unit address can be set using the infrared address setting.

✳ When remote controller address setting is required, set by the rotary switch on the indoor unit's PCB.

■ PREPARATION FOR INFRARED ADDRESS SETTING

(1) Set the switch on the indoor unit's PCB that is used for manual address setting is set to "00" at factory setting.

(This process is unnecessary for newly installed and not yet set the SW.)

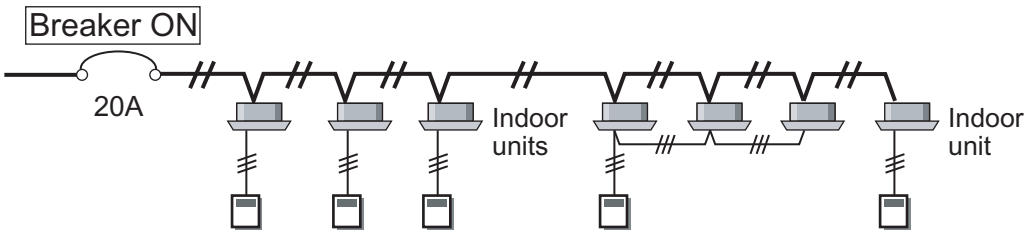


✳ If it is set to any other numbers, that setting value will be enabled.

(2) Turn on the power to the indoor unit.

✳ By turning on the power indoor units initializes EEV, so make sure the piping air-tight test and vacuuming have been conducted before turning on the power.

✳ Also check again to make sure no wiring mistakes were made before turning on the power.

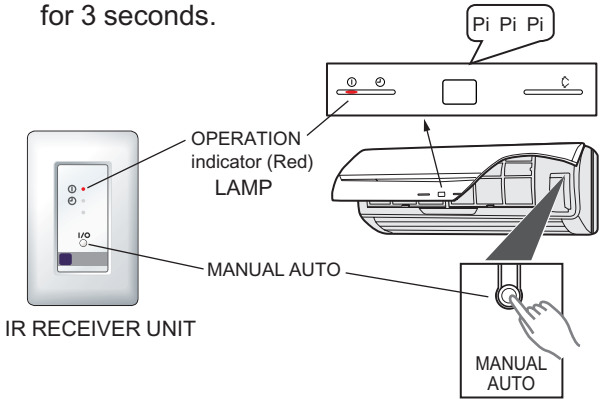


INSTALLATION

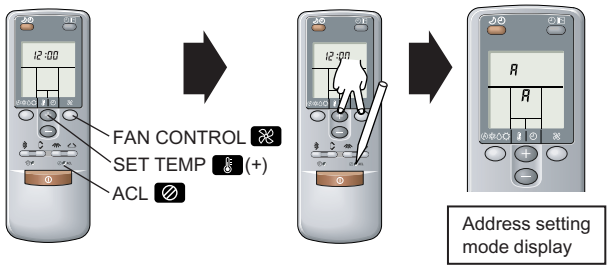
INSTALLATION

■ SWITCHING SELECTION OF ADDRESS SETTING MODE

(3) Press and hold the “MANUAL/AUTO” button for 3 seconds.



(4) Press and hold the “FAN CONTROL ” and the “+” buttons. Whilst holding these 2 buttons, press the "ACL" button.



✱ The position of the “MANUAL/AUTO” button varies depending on the model. Refer to the operation manual for the position that is included with the unit.

✱ The error will be displayed by continuosly pressing the "MANUAL/AUTO" for 10 sec or more. In this case release the button or turn off the power.

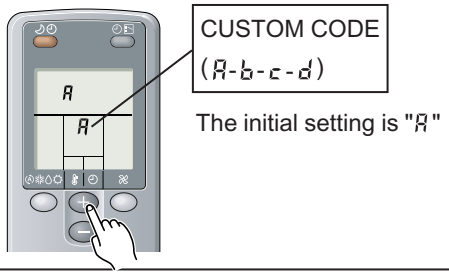
✱ When the address has already been set in the circuit board, the operation LAMP will light up and the TIMER and SWING LAMPs will display the number of setting address.

✱ An explanation of the displayed information as shown below.

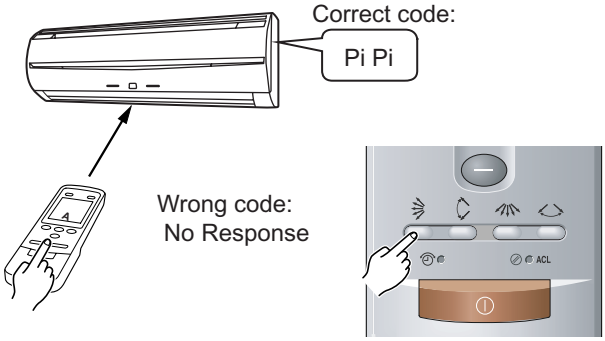
✱ As a Ceiling Wall type, LAMP color might be different.

■ SELECTION AND CONFIRMATION OF CUSTOM CODE

(5) Press the “+” or “-” buttons to select the custom code that matches the setting with the indoor unit. By selecting the appropriate custom code, the communication between the indoor unit and the wireless RC become possible.



(6) Press the “VERTICAL AIRFLOW ” button to send the code to the indoor unit.



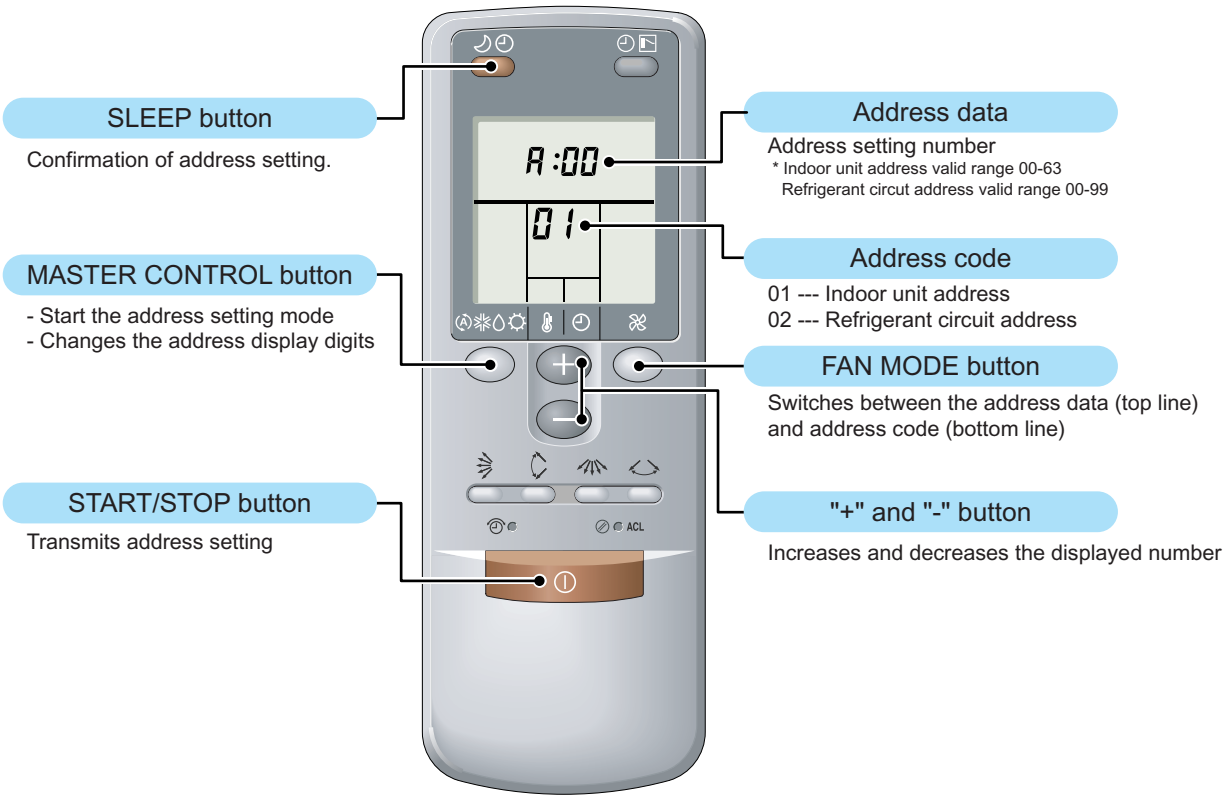
INSTALLATION

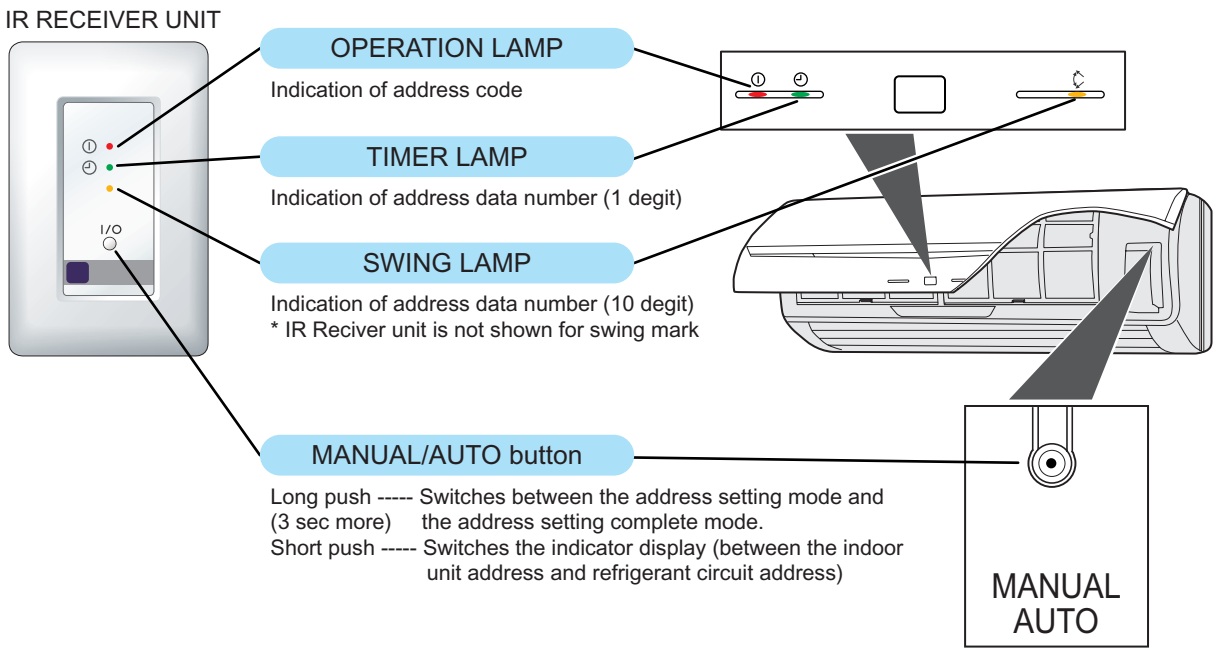
■ BUTTON NAME AND FUNCTION

✳ Refer to “5-3-2" for an outline of the address setting.

✳ It does not matter whether the refrigerant circuit address or indoor unit address is set first.
(The method shown here sets the indoor unit address first.)

✳ During address setting mode, indoor unit reject the any operation command from remote controller.





Note : Address code display is as follows (operation lamp display)

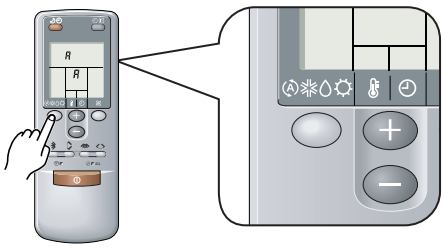
OPERATION LAMP	INDOOR UNIT ADDRESS DISPLAY	REFRIGERANT CIRCUIT ADDRESS DISPLAY
ADDRESS SETTING MODE	ON / OFF (Light continuously)	ON / OFF (Light 3 sec ON / 1 sec OFF)
ADDRESS SETTING COMPLETE MODE	ON / OFF (Light OFF)	ON / OFF (Light 0.5 sec ON / 0.5 sec OFF)

INSTALLATION

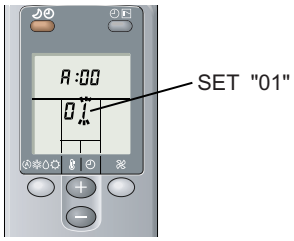
■ADDRESS SETTING

● INDOOR UNIT ADDRESS SETTING

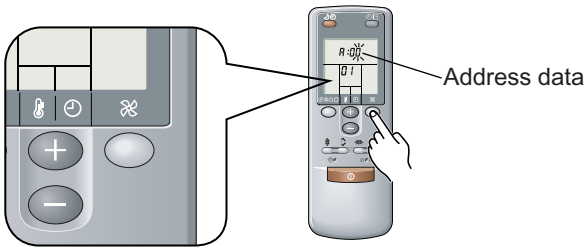
(7) Press the “MASTER CONTROL Ⓐ❋◊☼” button to access the address setting mode.



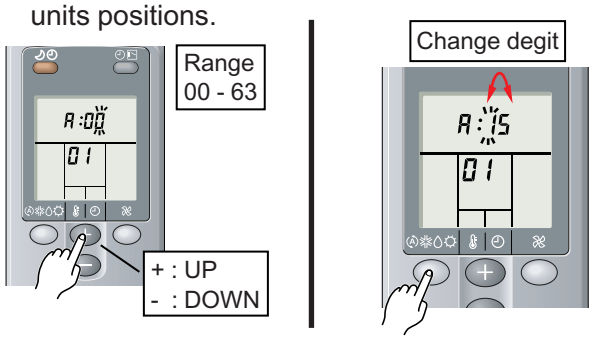
(8) Make sure the bottom number address code is ‘01’. If the number is other than ‘01’, press the “+” or the “-” buttons to alter.



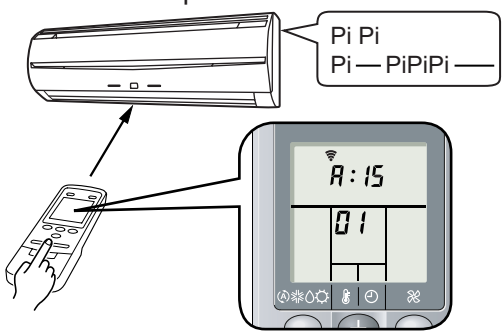
(9) Press the “FAN CONTROL ❋ ” button to access the address data setting mode. The address data will flash once this button is pressed.



(10) Press the “+” or the “-” buttons to adjust the address data. The indoor unit address range is between 00 and 63.
Each time the master control Ⓐ❋◊☼ button is pressed, it switches between 1 unit and 10 units positions.



(11) Press the “START/STOP ⏻” button once to send the information. A beeping noise will be heard if the command is accepted.

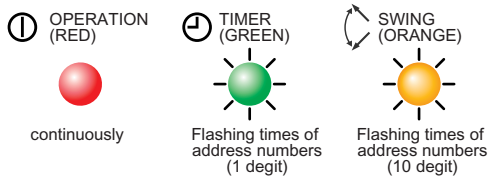


✱ In the following cases the setting signal is not read and a buzzer sounds.

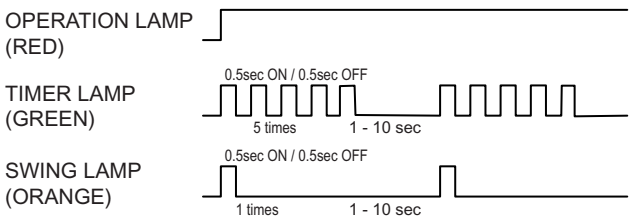
The indoor unit address No. is set out of range (64 or more) : Pi Pi Pi ———— (3 sec)

The setting of the rotary switch on the PCB is not "00" : Pi Pi Pi Pi Pi

(12) Indoor unit will display the indoor unit address data number on "TIMER ◴"(GREEN) and "SWING ⟳"(ORANGE) light.



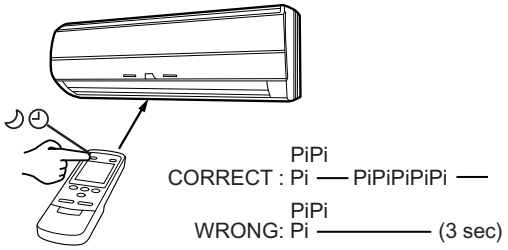
(Example) ADDRESS : 15



✱ ADDRESS 0 setting will not indicate TIMER LAMP.

● CHECK ADDRESS SETTING

(13) Press the “SLEEP” button.

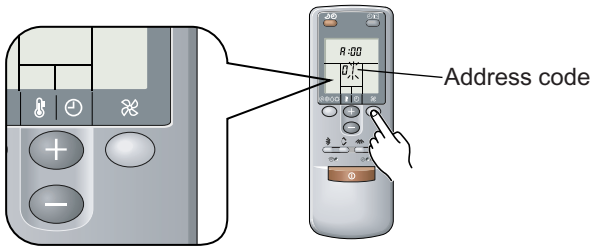


INSTALLATION

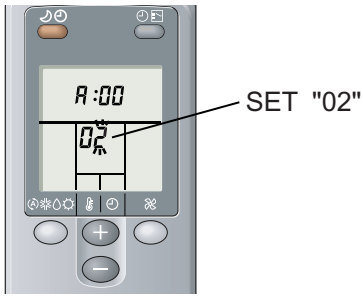
● REFRIGERANT CIRCUIT ADDRESS SETTING

Note : The refrigerant circuit address can also be set evenwhile above indoor unit address display.

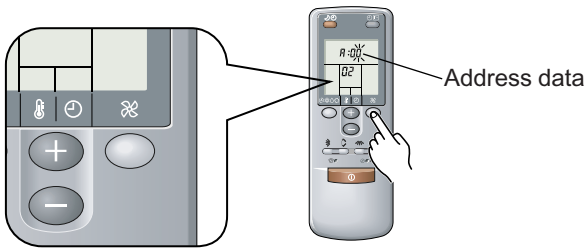
(14) Press the “FAN CONTROL ※ ” button to select the address code.



(15) Press the "+" or "-" button to adjust address code 02.

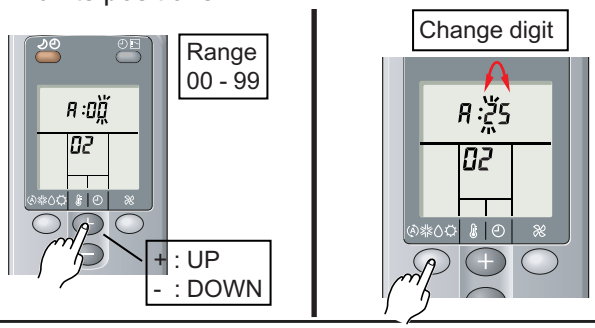


(16) Press the “FAN CONTROL ※ ” button to access the address data setting mode. The address data will flash once this button is pressed.

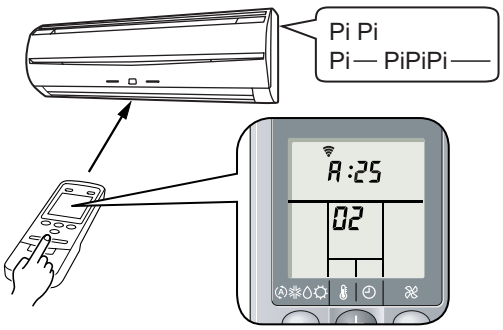


(17) Press the “+” or the “-” buttons to adjust the address data. The refrigerant circuit address range is between 00 and 99.

Each time the "master control Ⓐ❄◊☼" button is pressed, it switches between 1 unit and 10 units positions.



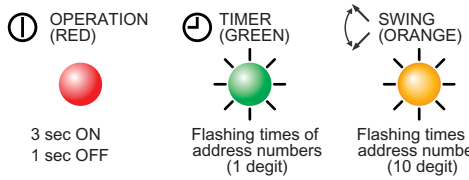
(18) Press the “START/STOP ⏻ ” button once to send the information. A beeping noise will be heard if the command is accepted.



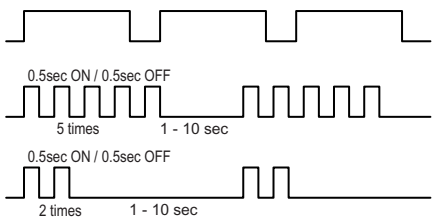
✱ In the following cases the setting signal is not read and a buzzer sounds.

The setting of the rotary switch on the PCB is not "00" : Pi Pi Pi Pi Pi

(19) Indoor unit will display the refrigerant circuit address data number on "TIMER ◴"(GREEN) and "SWING ⟳ "(ORANGE) light.



(Example) ADDRESS : 25

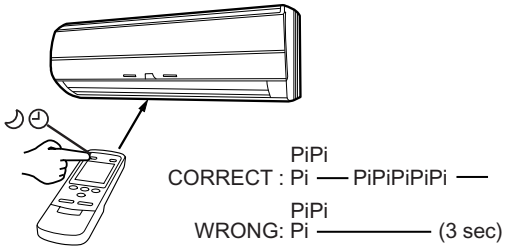


✱ ADDRESS 0 setting will not indicate TIMER LAMP and SWING LAMP.

✱ ADDRESS display will automatically switched from indoor unit address to refrigerant circuit address.

● CHECK ADDRESS SETTING

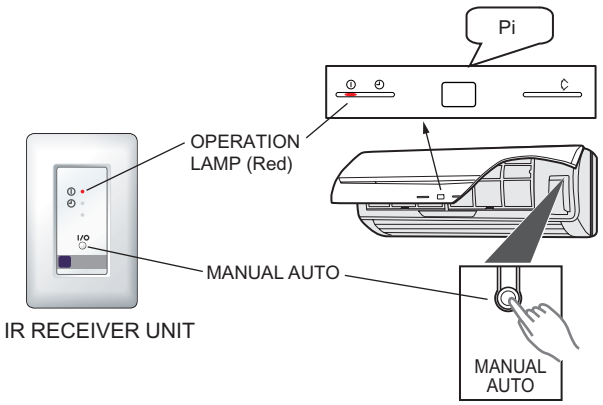
(20) Press the “SLEEP ◴ ” button.

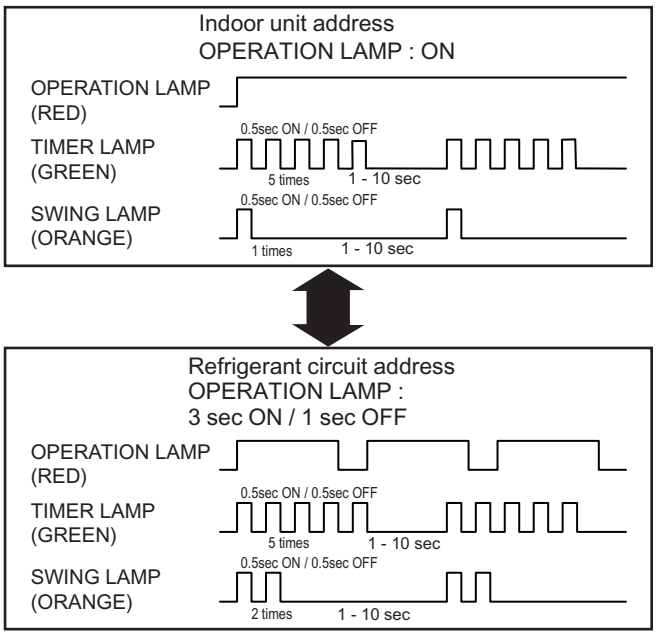


INSTALLATION

■ DISPLAY ADDRESS CODE SWITCHING

(21) Address display switches between indoor unit address and refrigerant circuit address by pressing "MANUAL/AUTO I/O " button once shortly.

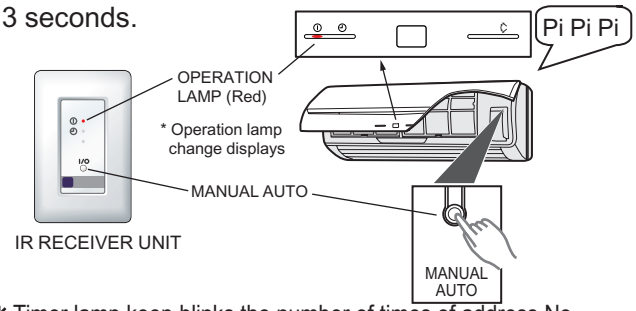




✱ Check to make sure the address setting is correct.

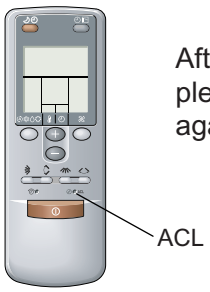
■ COMPLETION OF ADDRESS SETTING MODE

(22) Press and hold the "MANUAL/AUTO I/O" button for 3 seconds.



✱ Timer lamp keep blinks the number of times of address No.

(23) Press the "ACL" button.

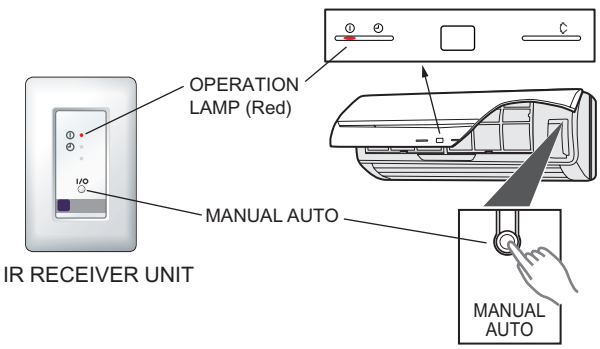


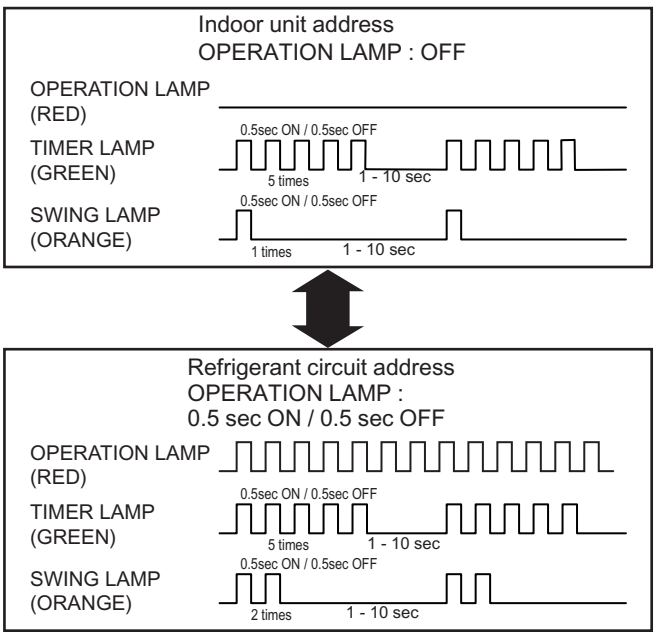
After pressing the ACL button, please set the custom code again if b,c,d setting.

✱ The address setting signal is not received afer switched address setting completion mode. (Pi Pi Pi Pi Pi)

✱ Press the "MANUAL/AUTO I/O " button again for 3 sec to return to if required to return the address setting mode.

(24) Press "MANUAL/AUTO I/O" button shortly to select the both address to be checked correct setting

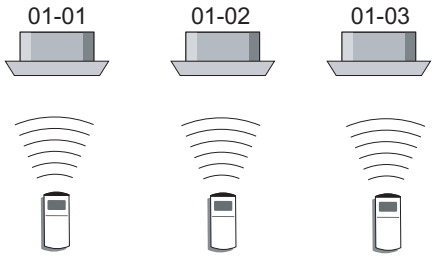




✱ Check to make sure the address setting is correct.

INSTALLATION

■ SETTING UP EACH INDOOR UNIT



Repeat steps (1) through to (24). Steps (1) through to (6) and (21) to (24) only need to carried out if the custom code is different to the factory setting of “A”.

■ RESET THE POWER AFTER SETTING UP ADDRESS OF ALL INDOOR UNITS

Important

⁕ If the reset is not performed, address can not be read in normally.

⁕ After all the addresses have been set, the circuit breaker needs to be switched off for at least 2 minutes.
After the 2 minutes has passed, power can be restored.

⁕ The set address is stored in the PCB and will remain in memory even when the power is turned off.
However setting address is effective after power reset.
Record the address set in the indoor unit on a label, etc., and affix the label to the unit so it can be used for after-sales service operations.

⁕ Address 0 setting will not indicate TIMER LAMP and SWING LAMP.

⁕ Once the "ACL" button is pressed on the remote controller, the MASTER CONTROL will be set in the "AUTO MODE".
Please adjust the MASTER CONTROL to either "COOLING" or "HEATING" before trying to operate the air conditioner.

⁕ Note : If CUSTOM CODE is set to anything other than "A" ,the remote control must be set accordingly to the INDOOR UNIT setting.

INSTALLATION

5-4. FUNCTION SETTING

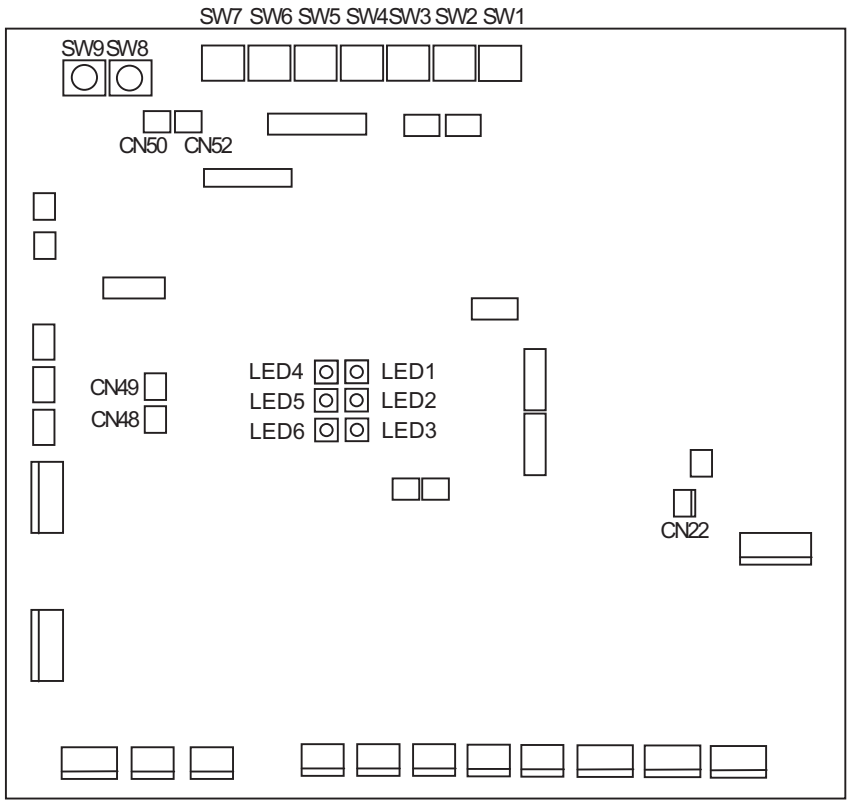
5-4-1. OUTDOOR UNIT

Outdoor unit			
DIP SW	SW 1	1	Test run (Cooling)
		2	Test run (Heating)
		3	Pump down operation
		4	Forced oil recovery operation
	SW 2	1	Silent operation mode
		2	Snow falling protection fan mode
		3	Sequential start shift switch 1
		4	Sequential start shift switch 2
	SW 3	1	Forbidden
		2	Forbidden
		3	Forbidden
		4	Forbidden
	SW 4	1	Forbidden
		2	Forbidden
		3	Forbidden
		4	Forbidden
	SW 5	1	Cooling capacity shift switch 1
		2	Cooling capacity shift switch 2
		3	Heating capacity shift switch 1
		4	Heating capacity shift switch 2
	SW 6	1	Pipe length switch 1
		2	Pipe length switch 2
		3	Forbidden
		4	Forbidden
	SW 7	1	Forbidden(System type switch 1)
		2	Forbidden(System type switch 2)
		3	Forbidden(Refrigerant type switch)
		4	Forbidden(MODEL CODE switch)
ROTARY SW	SW 8		Refrigerant circuit address 1
	SW 9		Refrigerant circuit address 2

INSTALLATION

■ SWITCH POSITION

● Outdoor unit control circuit board



■ DIP SWITCH SETTING

(1) SW1 setting

1-1 Test run (cooling & Heating)

All the indoor units connected to the outdoor unit can be test-operated by DIP switch setting.

SELECTOR SWITCH FOR TEST RUN AND NORMAL OPERATION (◆ - - - Factory setting)

	SW1-1	SW1-2	Test Run	Remarks
◆	OFF	OFF	Normal operation	
	ON	OFF	Cooling test run	(OFF-ON) and (operated continuously more than 1 min. with ON state)
	OFF	ON	Heating test run	Same as above
	ON	ON	Normal operation	

(when release ON → OFF)

1-2 Pump down operation

Pump down operation is set with SW1- 3

PUMP DOWN OPERATION (◆ - - - Factory setting)

	SW1-3	Pump down operation	Remarks
◆	OFF	Release	
	ON	Operate	(OFF-ON) and (operated continuously more than 40 sec. with ON state)

1-3 Forced oil recovery operation

Forced oil recovery operation is set with SW1- 4

FORCED OIL RECOVERY OPERATION (◆ - - - Factory setting)

	SW1-4	Forced oil recovery operation	Remarks
◆	OFF	Release	
	ON	Operate	(OFF-ON) and (operated continuously more than 10 sec. with ON state)

(2) SW2 setting

2-1 Silent operation mode

For a reduction of noise level at night, the operating mode of the outdoor unit can be switched. (In the cooling mode only.)

SILENT OPERATION MODE (◆ - - - Factory setting)

	SW 2-1	Silent operation mode
◆	OFF	Release
	ON	Operate

2-2 Snow falling protection fan mode

When snowing , to prevent the unit from being covered with snow, the outdoor fan is periodically operated by this switch even when the compressor is stopped.

SNOW FALLING PROTECTION FAN MODE (◆ - - - Factory setting)

	SW2-2	Snow falling protection fan mode
◆	OFF	Release
	ON	Operate

INSTALLATION

2-3 Sequential start shift

The start-up timing of outdoor unit can be set up so that it can delay several seconds.

(◆ - - - Factory setting)

	SW2-3	SW2-4	Sequential start shift timing
◆	OFF	OFF	Normal
	OFF	ON	2 sec. delay
	ON	OFF	4 sec. delay
	ON	ON	6 sec. delay

*This feature is useful when multiple number of outdoor units are installed and turned on at the same time to limit the start up current.

(3) SW3 setting

Dip SW3-1,3-2,3-3,3-4 setting forbidden.

SW3-1	OFF
SW3-2	OFF
SW3-3	OFF
SW3-4	OFF

(4) SW4 setting

Dip SW4-1,4-2,4-3,4-4 setting forbidden.

SW4-1	OFF
SW4-2	OFF
SW4-3	OFF
SW4-4	OFF

(5) SW5 setting

5-1 Cooling capacity shift switch

This setting makes it possible to vary the outflow air temperature within the range of about 2 degrees, by which 15% capacity increase and energy saving operation are realized.

(◆ - - - Factory setting)

	SW5-1	SW5-2	CAPACITY SHIFT
◆	OFF	OFF	Normal mode
	OFF	ON	Save energy mode
	ON	OFF	High power mode 1
	ON	ON	High power mode 2

5-2 Heating capacity shift switch

(◆ - - - Factory setting)

	SW5-3	SW5-4	CAPACITY SHIFT
◆	OFF	OFF	Normal mode
	OFF	ON	Save energy mode
	ON	OFF	High power mode 1
	ON	ON	High power mode 2

INSTALLATION

(6) SW6 setting

6-1 Pipe length switch

SW setting can provide the operation to supplement the loss created by the pipe length.

(◆ · · · Factory setting)

	SW 6-1	SW 6-2	PIPE LENGTH	Recommended Range of L (m)
◆	OFF	OFF	Standard	40 < L ≦ 60
	OFF	ON	Pipe length S	0 < L ≦ 40
	ON	OFF	Pipe length M	60 < L ≦ 80
	ON	ON	Pipe length L	80 < L ≦ 100

6-2 Dip SW 6-3 & 6-4 setting forbidden.

(7) SW7 setting (Never change at the site)

7-1 System type switch

The outdoor unit model can be selected by setting DIP switches 7-2 and 7-1 on the PCB.
(Heat pump / Cooling only / Heat recovery)

OUTDOOR UNIT TYPE SELECTION (◆ · · · Factory setting)

SW7-1	SW7-2	Type selection	
OFF	OFF	Heat pump	◆ Heat pump type
ON	OFF	Cooling only	◆ Cooling only type
OFF	ON	Forbidden	
ON	ON	Forbidden	

7-2 Refrigerant type switch

REFRIGERANT TYPE SWITCH

SW7-3	REFRIGERANT TYPE	
OFF	R22	◆ R22 model
ON	R407C	◆ R407C model

* AO90TPAMF must be OFF

7-3 Model code switch

MODEL CODE SWITCH

SW7-4	MODEL CODE	
OFF	90	◆ 90 model
ON	72	◆ 72 model

※ SW7 has been set up at the factory. There is no need to set it up at the installation.

■ROTARY SWITCH SETTING

SW8,9 setting

Rotary SW	Description	Remarks
8	Refrigerant circuit address SW 1	Refrigerant circuit address (the first digit)
9	Refrigerant circuit address SW 2	Refrigerant circuit address (the second digit)

■EXTERNAL INPUT AND OUTPUT

Connector	Input	Output
CN48	————	Operation Display (DC12V)
CN49	————	Error Display (DC12V)
CN50	OFF: Remote controller priority ON: External Input priority	————
CN52	Cool or Heat Select switch	————

INSTALLATION

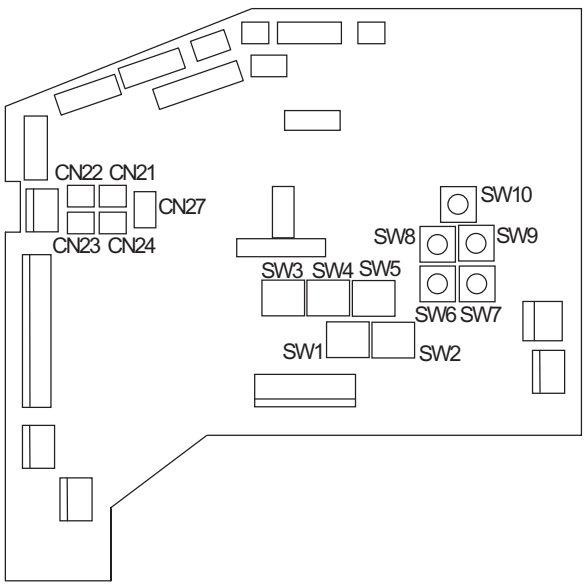
5-4-2. INDOOR UNIT

■ MODELS : AUXB, AU∗A, ARXB, ARXA, ARXC, AB∗A, AS∗A18-30, AW∗A

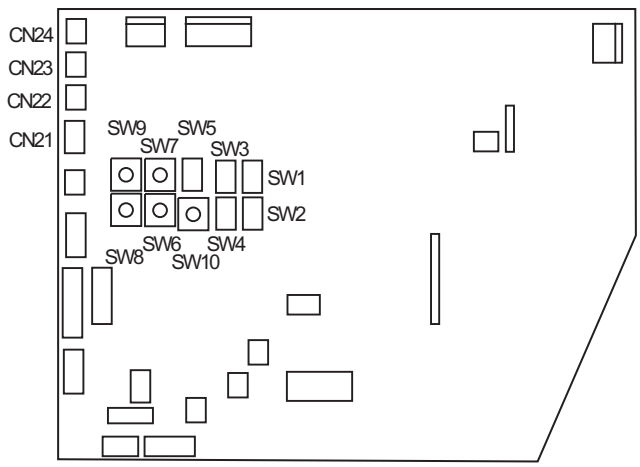
DIP-SW	SW 1	1	Forbidden
		2	Forbidden
		3	Room temp correct coefficient of heating 1
		4	Room temp correct coefficient of heating 2
	SW 2	1	Room temp correct coefficient of cooling
		2	Forbidden
		3	Refrigerant type
		4	Auto restart validity / invalidity
	SW 3	1	Forbidden (Indoor unit fan speed switch 1)
		2	Forbidden (Indoor unit fan speed switch 2)
		3	Forbidden (Indoor unit fan speed switch 3)
		4	External input select edge / pulse
	SW 4	1	Forbidden (Indoor unit model code)
		2	Forbidden (Indoor unit model code)
		3	Forbidden (Indoor unit model code)
		4	Forbidden (Indoor unit model code)
	SW 5	1	Wireless remote controller custom code switch 1
		2	Wireless remote controller custom code switch 2
		3	Outdoor unit series setting
		4	Draft prevention setting switch
Rotary SW	SW 6		Indoor unit address switch 1
	SW 7		Indoor unit address switch 2
	SW 8		Refrigerant circuit address switch 1
	SW 9		Refrigerant circuit address switch 2
	SW 10		Remote controller address switch

■ SWITCH POSITION

AUXB, AU∗A, ARXB, ARXA, AB∗A



AS∗A18-30, AW∗A



INSTALLATION

■DIP SWITCH SETTING

● SW1 setting

✳ DIP-SW1-1, SW1-2 setting forbidden

◆	SW1-1	OFF
◆	SW1-2	OFF

✳ Room temperature correct coefficient of heating.

Set the heating correct coefficient value for setting temperature. Indoor unit will be continued to operate until reaching to "Set Temperature" + "Coeffecient value".
It takes effect for mounting the unit at higher position in order to correct the temperature difference between floor and ceiling side.

HEATING TEMPERATURE CORRECTION (◆ ▪ ▪ ▪Factory setting)

	SW1-3	SW1-4	Coefficient value
◆	OFF	OFF	+ 4 deg
	ON	OFF	+ 8 deg
	OFF	ON	0 deg
	ON	ON	- 2 deg

● SW2 setting

✳ Room temperature correct coefficient of cooling.

Set the cooling correct coefficient value for setting temperature. Indoor unit will be continued to operate until reaching to "Set Temperature" + "Coeffecient value".
It takes effect for mounting the unit on floor position in order to correct the temperature defference between human around and floor side.

COOLING TEMPERATURE CORRECTION (◆ ▪ ▪ ▪Factory setting)

	SW2-1	Coefficient value
◆	OFF	0 deg
	ON	+ 2 deg

✳ DIP-SW2-2 setting forbidden

◆	SW2-2	OFF

✳ Refrigerant type

Selecting refrigerant type

REFRIGERNT TYPE (◆ ▪ ▪ ▪Factory setting)

	SW2-3	Refrigerant type
◆	OFF	R410A / R22
✳1	ON	R407C

✳1 : Set to ON for connecting R407C outdoor unit.

✳ Auto restart validity / invalidity

Auto restart function can be selected by turning this switch ON / OFF.

AUTO RESTART SETTING (◆ ▪ ▪ ▪Factory setting)

	SW2-4	Auto restart
◆	OFF	Invalidity
	ON	Validity

INSTALLATION

● SW3 setting (Never change at the site)

Indoor unit fan speed switch

This switch can select fan speed corresponding to each model.

✳ Compact Cassette Type

	AUXB07	AUXB09	AUXB12	AUXB14	AUXB18
SW 3-1	OFF	OFF	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF	OFF	OFF

✳ Cassette Type

	AU*A20	AU*A25	AU*A30	AU*A36	AU*A45	AU*A54
SW 3-1	ON	OFF	OFF	OFF	ON	OFF
SW 3-2	ON	ON	OFF	ON	OFF	OFF
SW 3-3	ON	ON	ON	OFF	OFF	OFF

✳ Compact Duct Type

	ARXB07	ARXB09	ARXB12	ARXB14	ARXB18
SW 3-1	OFF	OFF	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF	OFF	OFF

Please refer for static pressure setting 5-4-8

✳ Duct Type , Low Static Pressure Duct type

	ARXB25	ARXB30	ARXB36	ARXB45
	ARXA25	ARXA30	ARXA36	ARXA45
SW 3-1	OFF	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF	OFF

Please refer for static pressure setting 5-4-8 (for ARXB)

✳ High Static Pressure Duct type

	ARXC36	ARXC45	ARXC60
SW 3-1	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF

✳ Floor Ceiling Type

	AB*A12	AB*A14	AB*A18
SW 3-1	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF

✳ Ceiling Type

	AB*A30	AB*A36	AB*A45	AB*A54
SW 3-1	OFF	OFF	OFF	OFF
SW 3-2	OFF	ON	OFF	ON
SW 3-3	OFF	OFF	ON	ON

✳ Wall mounted Type

	AS*A18	AS*A24	AS*A30
SW 3-1	OFF	OFF	ON
SW 3-2	OFF	ON	ON
SW 3-3	ON	ON	ON

✳ Ceiling Wall Type

	AW*A07	AW*A09	AW*A12	AW*A14	AW*A18	AW*A24	AW*A30
SW 3-1	OFF	ON	OFF	ON	OFF	OFF	ON
SW 3-2	OFF	OFF	ON	ON	OFF	ON	ON
SW 3-3	OFF	OFF	OFF	OFF	ON	ON	ON

INSTALLATION

✳External input select edge / pulse

This switch is used to select the format of external input command as shown in the table below.

(◆ ▪ ▪ ▪Factory setting)

	SW3-4	External input select
◆	OFF	Edge
	ON	Pulse

●SW4 setting (Never change at the site)

✳Indoor unit model code

This switch for changing the model code information of indoor unit PCB.

INDOOR UNIT MODEL CODE

	7	9	12	14	18	20	25(24)	30	36	45	54	60
SW 4-1	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON
SW 4-2	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON
SW 4-3	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW 4-4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON

●SW5 setting

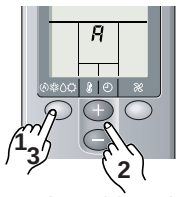
✳Wireless remote controller custom code switch

Decide the custom code and restrict the type of infrared control signal, in order to prevent mixing of multiple indoor unit signals.

Remote controller custom code switch

(◆ ▪ ▪ ▪Factory setting)

	SW5-1	SW5-2	Custom code
◆	OFF	OFF	Type A
	ON	OFF	Type B
	OFF	ON	Type C
	ON	ON	Type D



1. Press the MASTER CONTROL button for more than five seconds to start the code change.
2. Press the (+) or (-) button to select the desired code. → A → B → C → D
3. Press the MASTER CONTROL button again to end the code change.

Remote controller

✳Connected outdoor unit series

Selecting outdoor unit series.

(◆ ▪ ▪ ▪Factory setting)

	SW5-3	Outdoor unit series
◆	OFF	VRF V series
✳2	ON	VRF S series

✳2 : Set to ON for connecting S series outdoor unit.

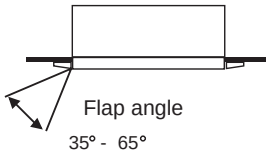
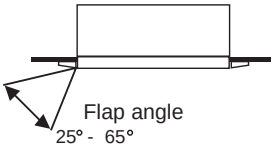
✳Draft prevention setting switch (only for cassette type)

Set the flap angle of cassette type unit.

Draft prevention switch

(◆ ▪ ▪ ▪Factory setting)

	SW5-4	flap angle
◆	OFF	Normal position
	ON	Draft prevention position

Normal position	Draft prevention position
	

An air flow direction, by moving the flap angle horizontally, It can prevent that a cold wind directly hits.

*If air conditioning cooling operation is performed in long time and a humid place, there is a possibility that waterdrop may hang down from a blow-off mouth.

INSTALLATION

■ROTARY SWITCH SETTING

● SW6,7 setting

✳ Indoor unit address switch

Sets the indoor unit addresses.
Please see "5-3-3 address setting" for type A indoor unit address conversion table.

INDOOR UNIT ADDRESS SWITCH (Factory setting SW 6: 0 SW 7: 0)

Rotary SW	Description	Remarks
6	Indoor unit address SW 1	Indoor unit address (the first digit)
7	Indoor unit address SW 2	Indoor unit address (the second digit)

● SW8,9 setting

✳ Refrigerant circuit address switch

Sets the refrigerant circuit address.
Please see "5-3-3 address setting" for type A refrigerant circuit address conversion table.

REFRIGERANT CIRCUIT ADDRESS SWITCH (Factory setting SW 8: 0 SW 9: 0)

Rotary SW	Description	Remarks
8	Refrigerant circuit address SW 1	Refrigerant circuit address (the first digit)
9	Refrigerant circuit address SW 2	Refrigerant circuit address (the second digit)

● SW10 setting

✳ Remote controller address switch

When the indoor unit is wired by remote controller group, to identity the indoor unit in the remote controller group, the number (remote controller address) in the remote controller group is set.
Set the remote controller address in the 0.1.2,~,15 order (Blank is not allowed)

REMOTE CONTROLLER ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
10	Remote controller address	Remote controller address

■EXTERNAL INPUT AND OUTPUT

Connector	Indoor unit type	Input	Output	Remarks
CN21	Wall mounted / Ceiling wall types	CONTROL INPUT (OPERATION / STOP)	——	See 5-5-2 for details
CN27	Other types			
CN22	All types	——	OPERATION DISPLAY (DC12V)	
CN23			ERROR DISPLAY (DC12V)	
CN24			INDOOR UNIT FAN STATUS DISPLY(DC12V)	

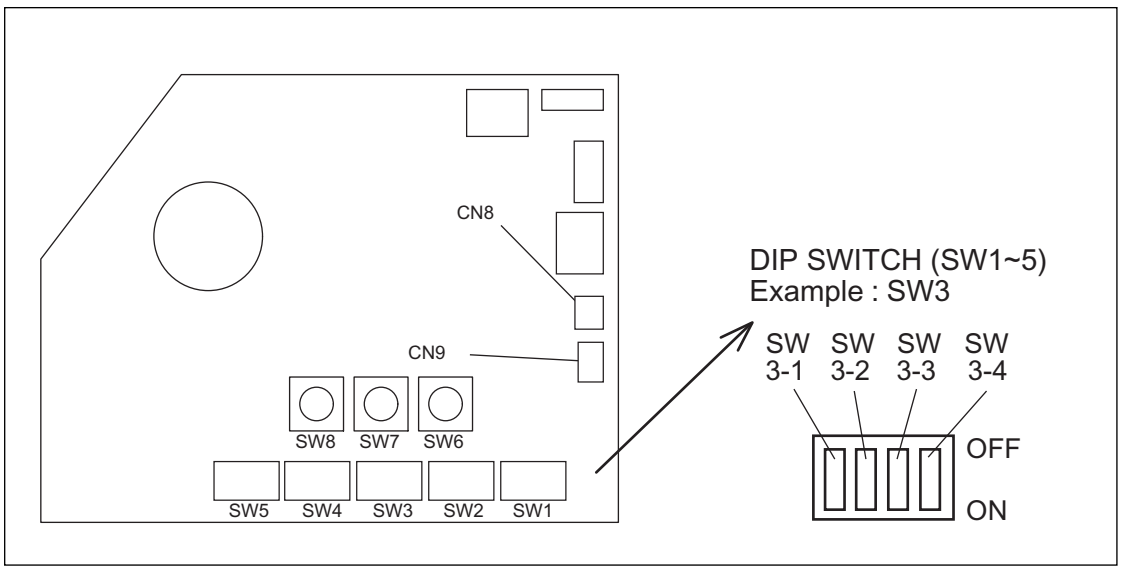
INSTALLATION

5-4-3. INDOOR UNIT (COMPACT WALL MOUNTED comfort model)

■ MODELS : AS∗E07-14

DIP-SW	SW 1	1	Forbidden (Indoor unit fan speed switch 1)
		2	Forbidden (Indoor unit fan speed switch 2)
		3	Forbidden
		4	External input select edge / pulse
	SW 2	1	Forbidden (Indoor unit model code)
		2	Forbidden (Indoor unit model code)
		3	Forbidden
		4	Auto restart validity / invalidity
	SW 3	1	Wireless remote controller custom code switch 1
		2	Wireless remote controller custom code switch 2
		3	Outdoor unit series setting
		4	Refrigerant type
	SW 4	1	Indoor unit address switch 2
		2	Indoor unit address switch 3
		3	Forbidden
		4	Forbidden
	SW 5	1	Refrigerant circuit address switch 2
		2	Refrigerant circuit address switch 3
		3	Refrigerant circuit address switch 4
		4	Forbidden
Rotary SW	SW 6		Indoor unit address switch 1
	SW 7		Refrigerant circuit address switch 1
	SW 8		Remote controller address switch

■ SWITCH POSITION



INSTALLATION

■ DIP SWITCH SETTING

● SW1 setting

✳ Fan speed setting switch (Never change at the site)

The fan speed corresponding to each model is set with the switch.

	AS*E07	AS*E09	AS*E12	AS*E14
SW1-1	OFF	ON	OFF	ON
SW1-2	OFF	OFF	ON	ON

DIP-SW 1-3 setting forbidden

(◆ ▪ ▪ ▪Factory setting)

◆	SW 1-3	OFF

✳ External input select edge / pulse

This switch is used to select the format of external input command as shown in the table below.

(◆ ▪ ▪ ▪Factory setting)

	SW1-4	External input select
◆	OFF	Edge
	ON	Pulse

INSTALLATION

● SW2 setting

✳ Model code setting switch (Never change at the site)

The model code information corresponding to each model is provided with the switch.

	AS*E07	AS*E09	AS*E12	AS*E14
SW2-1	OFF	ON	OFF	ON
SW2-2	OFF	OFF	ON	ON

DIP-SW 2-3 setting forbidden

(◆ ▪ ▪ ▪Factory setting)

◆	SW 2-3	OFF

✳ Auto restart validity / invalidity.

The auto restart function becomes validity by changing the switch position from OFF to ON.

AUTO RESTART SETTING (◆ ▪ ▪ ▪Factory setting)

	SW2-4	Auto restart
◆	OFF	Invalidity
	ON	Validity

● SW3 setting

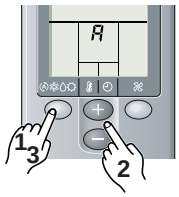
✳ Wireless remote controller custom code switch

Decide the custom code and restrict the type of infrared control signal, in c
mixing of multiple indoor unit signals.

Remote controller custom code switch

(◆ ▪ ▪ ▪Factory setting)

	SW3-1	SW3-2	Custom code
◆	OFF	OFF	Type A
	ON	OFF	Type B
	OFF	ON	Type C
	ON	ON	Type D



1. Press the MASTER CONTROL button for more than five seconds to start the code change.
2. Press the (+) or (-) button to select the desired code. → A → B → C → D
3. Press the MASTER CONTROL button again to end the code change.

Remote controller

✳ Connected outdoor unit series

Selecting outdoor unit series.

(◆ ▪ ▪ ▪Factory setting)

	SW3-3	Outdoor unit series
◆	OFF	VRF V series
∗1	ON	VRF S series

∗1 : Set to ON for connecting S series outdoor unit.

✳ Refrigerant type

Selecting refrigerant type

REFRIGERNT TYPE (◆ ▪ ▪ ▪Factory setting)

	SW3-4	Refrigerant type
◆	OFF	R410A / R22
∗2	ON	R407C

∗2 : Set to ON for connecting R407C outdoor unit.

● SW4 setting

✳ Indoor unit address switch

By combined with Rotary SW6, the indoor unit address(0 - 63)can be set.
Please refer "6-5-3 ADDRESS SETTING (Type B)" for the indoor unit address conversion table.

(◆ ▪ ▪ ▪Factory setting)

		SW 4-1	SW 4-2	Remarks
◆	0-15	OFF	OFF	Set with rotary SW6 see 5-3-3
	16-31	ON	OFF	
	32-47	OFF	ON	
	48-63	ON	ON	

✳ DIP-SW 4-3 and 4-4 setting forbidden

(◆ ▪ ▪ ▪Factory setting)

◆	SW4-3	OFF
◆	SW4-4	OFF

INSTALLATION

● SW5 setting

✳ Refrigerant circuit address

By combined with Rotary SW7 ,the refrigerant circuit address (0-99) can be set.
Please refer "5-3-3 ADDRESS SETTING" for refrigerant address conversion table.

(◆ ▪ ▪ ▪Factory setting)

Refrigerant circuit address	SW5-1	SW5-2	SW5-3	Remarks
◆ 0 - 15	OFF	OFF	OFF	Set with Rotary SW7, see 5-3-3
16 - 31	ON	OFF	OFF	
32 - 47	OFF	ON	OFF	
48 - 63	ON	ON	OFF	
64 - 79	OFF	OFF	ON	
80 - 95	ON	OFF	ON	
96 - 99	OFF	ON	ON	

✳ DIP SW 5-4 setting forbidden

Selecting outdoor unit series.

(◆ ▪ ▪ ▪Factory setting)

	SW 5-4	OFF
◆		

■ ROTARY SWITCH SETTING

● SW6 setting

✳ Indoor unit address switch

By combined with DIP switch 4-1 and 4-2,the indoor unit address(0 - 63)can be set.
Please refer "5-3-2 ADDRESS SETTING for type B" indoor unit address conversion table.

INDOOR UNIT ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
SW6	Indoor unit address SW	Set with DIP switch 4-1 and 4-2

● SW7 setting

✳ Refrigerant circuit address switch

By combined with DIP switch 5-1,5-2 and 5-3,the refrigerant circuit address(0 - 99)can be set.
Please refer "5-3-3 ADDRESS SETTING for type B" for the refrigerant circuit address conversion table.

REFRIGERANT CIRCUIT ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
SW7	Refrigerant circuit address SW	Set with DIP switch 5-1,5-2 and 5-3

● SW8 setting

✳ Remote controller address switch

When the indoor unit is wired by remote controller group, to identity the indoor unit in the remote controller group, the number (remote controller address) in the remote controller group is set.
Set the remote controller address in the 0.1.2,• • • ,15 order (Blank is not allowed)

REMOTE CONTROLLER ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
SW8	Remote controller address	Remote controller address

■ EXTERNAL INPUT AND OUTPUT

Connector	Input	Output	Remarks
CN10	CONTROL INPUT (OPERATION / STOP)	——	See 5-5-3 for details
CN11	——	OPERATION DISPLAY (DC12V)	

INSTALLATION

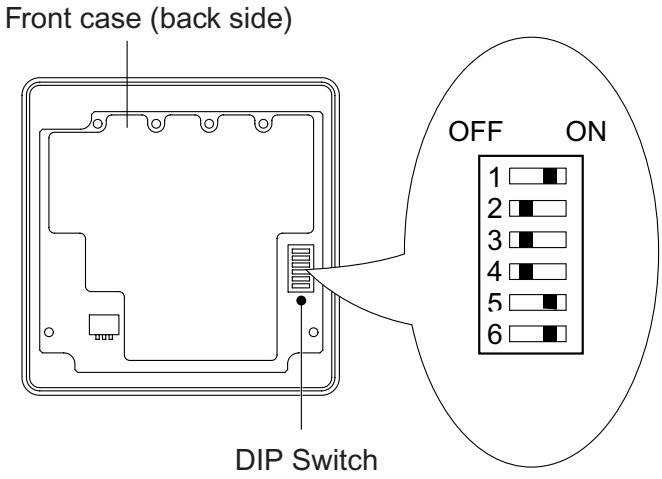
5-4-4. WIRED, SIMPLE REMOTE CONTROLLER

Wired, simple 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 (Wired remote controller only)

■ SWITCH POSITION

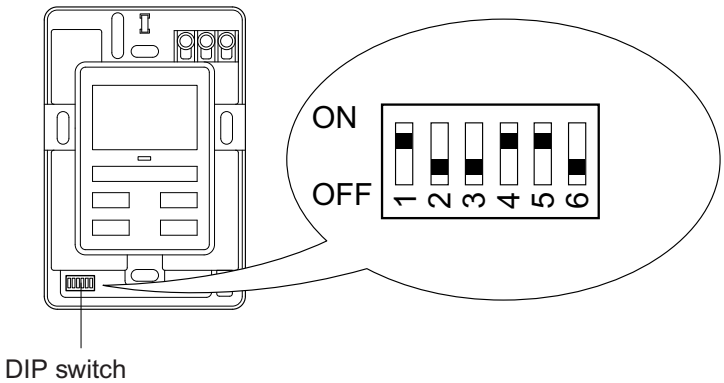
• Wired remote controller

MODEL : UTB - ∗UB

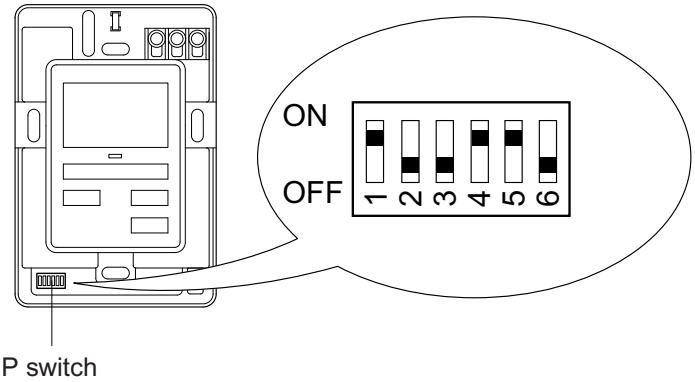


• Simple remote controller

MODEL : UTB - ∗PB



MODEL : UTB - ∗RA



INSTALLATION

■ DIP SWITCH SETTING

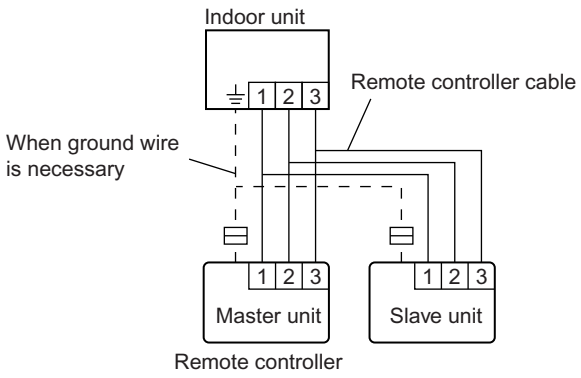
● SW1 setting

✳ 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	
		DIP-SW No.1	DIP-SW No.2	DIP-SW No.1	DIP-SW No.2
◆	1 (Normal)	ON	OFF	—	—
	2 (Dual)	OFF	OFF	ON	ON

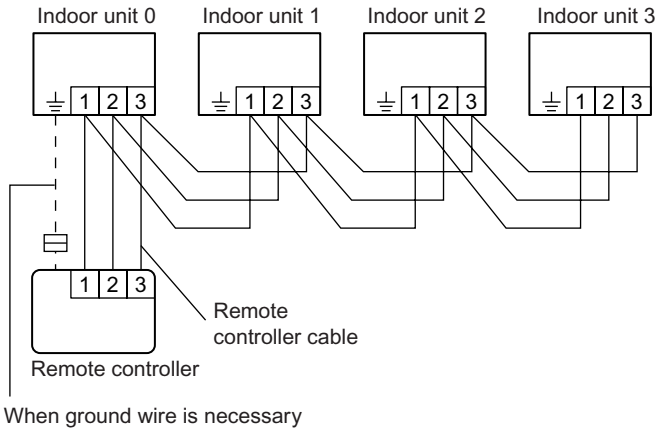


✳ Group control setting

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

(◆ ▪ ▪ ▪Factory setting)

	DIP-SW No.3	Number of indoor unit
◆	OFF	One unit connection
	ON	Multiple unit connection



✳ Model setting

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

(◆ ▪ ▪ ▪Factory setting)

	DIP-SW No.4	Model
◆	OFF	Heat Pump model or Heat Recovery model
	ON	Cooling only model

Do not forget to set to ON when system uses for cooling only.

INSTALLATION

✳ Auto changeover setting

Selecting auto changeover validity / invalidity.

(◆ ▪ ▪ ▪Factory setting)

	DIP-SW No.5	Auto changeover	
◆	OFF	Invalidity	※1
	ON	Validity	※2

※1 : Set to OFF for "HEAT PUMP TYPE".

※2 : Set to ON for "COOLING ONLY TYPE".

✳ Memory backup setting (Wired remote controller only)

Set to ON to use batteries for thr 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)

	DIP-SW No.6	Memory backup
◆	OFF	Invalidity
	ON	Validity

Never turn it ON in the case of simple remote controller.

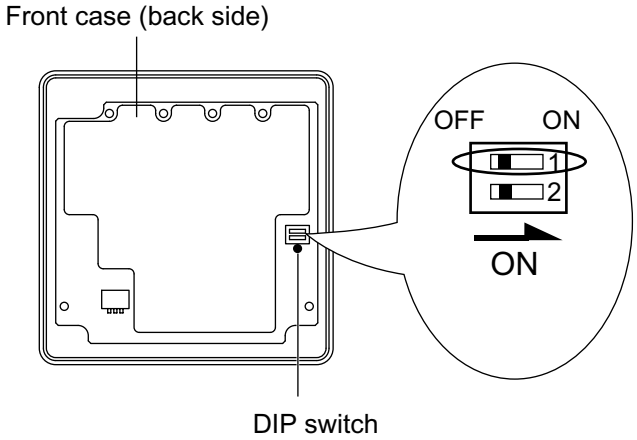
INSTALLATION

5-4-5. GROUP REMOTE CONTROLLER

Group remote controller		
DIP SW	1	Memory backup setting
	2	Forbidden

■ SWITCH POSITION

● Group remote controller



INSTALLATION

■ DIP SWITCH SETTING

● SW1 setting

∗ Set SW1 to ON to enable the memory backup.

If there is a power failure when the memory backup is enabled, the setting stored in the memory will be saved.

(◆ . . . Factory setting)

	SW1	Memory backup
◆	OFF	Invalidity
	ON	Validity

●SW2 setting : Forbidden

(◆ . . . Factory setting)

	SW2	OFF
◆		

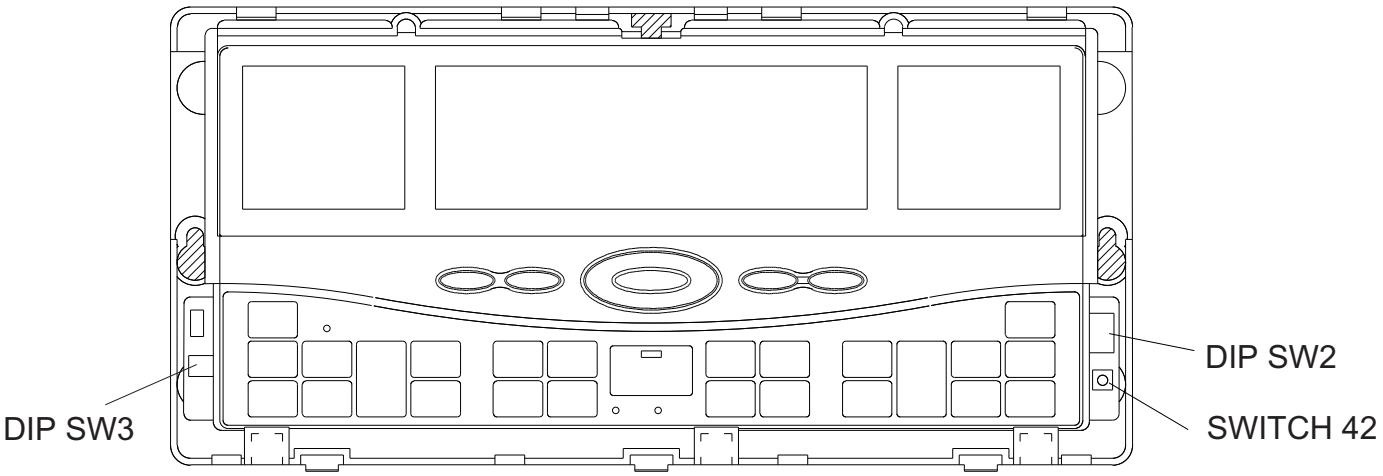
5-4-6. CENTRAL REMOTE CONTROLLER

Central remote controller			
DIP-SW	SW 2	1	External Input validity / invalidity
		2	External Input select Edge / pulse
		3	Filter sign indication ON / OFF
		4	°C / °F switch
		5	RC operation prohibit function validity / invalidity
		6	Forbidden
		7	Forbidden
		8	SRAM battery ON / OFF
	SW 3	1	Forbidden
		2	Forbidden
		3	Forbidden
		4	Forbidden
	SW 42		Initial setting

INSTALLATION

■ SWITCH POSITION

● Central remote controller



■DIP SWITCH SETTING

●SW2 SETTING

✳ External input validity / invalidity

For validity / invalidity the external input function.

(◆ ▪ ▪ ▪Factory setting)

	SW2-1	External input function
◆	OFF	Invalidity
	ON	Validity

✳ External input select edge / pulse

Select the external input command function.

(◆ ▪ ▪ ▪Factory setting)

	SW2-2	External input select
◆	OFF	Edge
	ON	Pulse

(Refer to 5-4-2 and 5-4-3 external input & output)

INSTALLATION

✳ Filter sign indication ON / OFF

Filter check sign indication or not when filter check signal come from indoor unit.

(◆ ▪ ▪ ▪Factory setting)

	SW2-3	Filter check sign indication
◆	OFF	Non-Display
	ON	Display

✳ ˚C / ˚F switch

Temperature display is centigrade(˚C) / Fahrenheit(˚F)

(◆ ▪ ▪ ▪Factory setting)

	SW2-4	˚C /˚F
◆	OFF	˚C
	ON	˚F

✳ RC operation prohibit function validity / invalidity

For validity / invalidity the wired ,simple and wireless remote controller operation prohibit function.

(◆ ▪ ▪ ▪ Factory setting)

	SW2-5	RC operation prohibit function
◆	OFF	Validity
	ON	Invalidity

✳ SW2-6 2-7 setting forbidden.

SW 2-6	OFF
SW 2-7	OFF

✳ SRAM battery ON / OFF

When installing the central remote controller, this switch must be set to ON.
(factory setting : OFF)

(◆ · · · Factory setting)

	SW2-8	SRAM Battery
◆	OFF	OFF
	ON	ON

At the time of shipment, the battery is turned off to avoid electricity consumption.
Be sure to set this switch to ON.

✳ SW42 Initial setting button

This switch is used when initializing the central remote controller.

INSTALLATION

5-4-7. DUCT STATIC PRESSURE SETTING

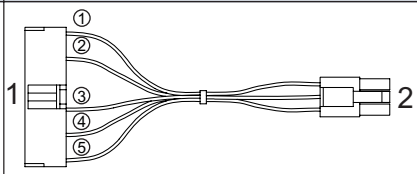
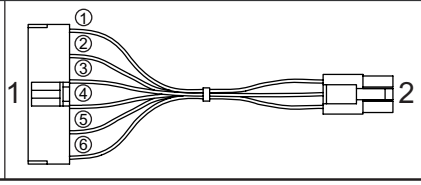
■MODELS : ARXB07, ARXB09, ARXB12, ARXB14, ARXB18

Change a setting of air flow, when external static pressure is more than 25 Pa.

A setting of air flow can be changed by exchanging wires for B type from A type. (Refer to following table)

How to set air flow

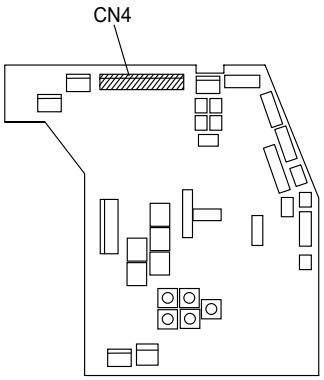
(1) Connect "1" of "B type" wire to "CN4" on circuit board and "2" to the connector connected to the fan motor.

TYPE	EXTERNAL STATIC PRESSURE	WIRE	REMARK
A	0 - 25 Pa	 ① BLUE ② VIOLET ③ PINK ④ WHITE ⑤ BLACK	Factory setting (Standard static pressure)
B	25 - 50 Pa	 ① VIOLET ② PINK ③ BLUE ④ RED ⑤ WHITE ⑥ BLACK	Standard parts (High static pressure)

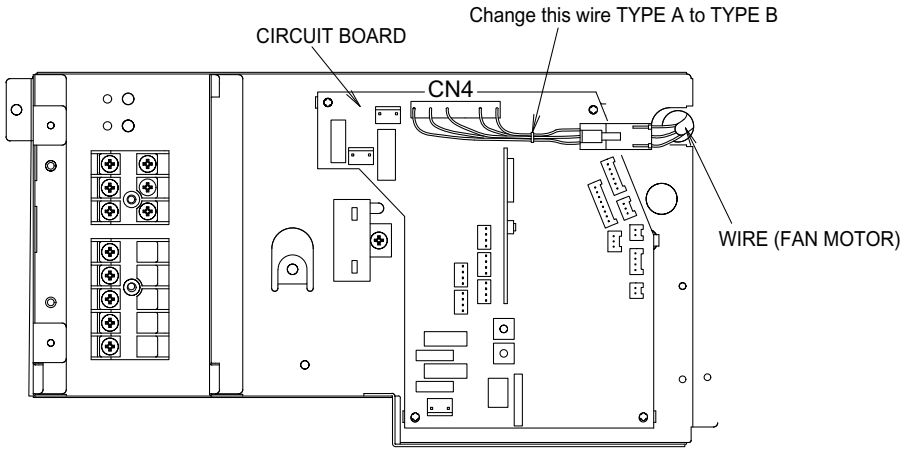
INSTALLATION

INSTALLATION

● Layout of circuit board



● Layout of control box



Be sure to connect the wire with connector.
If connection is improper, it will not operate properly.

■MODELS : ARXB25, ARXB30, ARXB36, ARXB45

Change a setting of air flow, when external static pressure is more than 40 Pa.

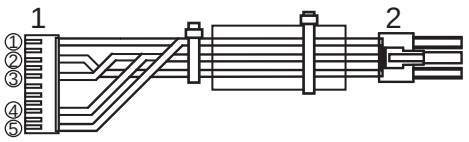
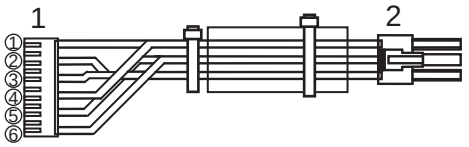
A setting of air flow can be changed by exchanging wires for B type from A type.(Refer to following table)

How to set air flow

(1) Cut a binder not to damage wires and remove "A type " wire.

(2) Connect "1" of "b type" wire to "CN4" on circuit board and "2" to the connector connected to the fan motor.

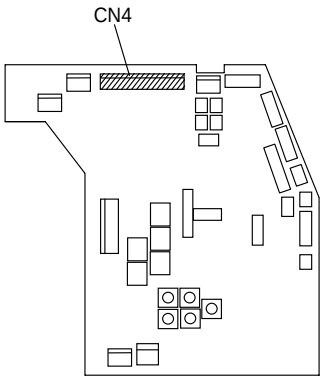
(3) Bind with the binder (small) of accessory together with *three wires bound first.
*AR25:two wires

TYPE	EXTERNAL STATIC PRESSURE	WIRE	REMARK
A	0 - 40 Pa	 ① BLACK ② WHITE ③ PINK ④ PURPLE ⑤ BLUE	Factory setting (Standard static pressure)
B	40 - 80 Pa	 ① BLACK ② WHITE ③ RED ④ BLUE ⑤ PINK ⑥ PURPLE	Standard parts (High static pressure)

INSTALLATION

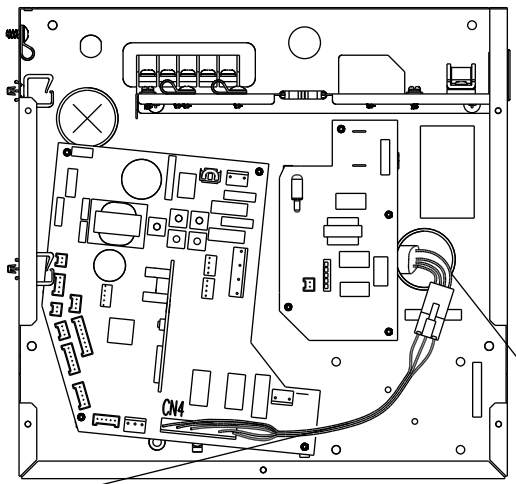
INSTALLATION

● Layout of circuit board



●Layout of control box

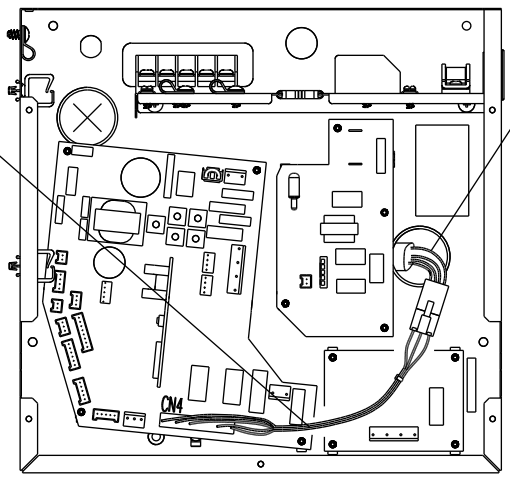
MODEL : ARXB25



WIRE (FAN MOTOR)

MODELS : ARXB30, ARXB36, ARXB45

Change this wire TYPE A to TYPE B



Be sure to connect the wire with connector.
If connection is improper, it will not operate properly.

5-5. EXTERNAL INPUT & OUTPUT

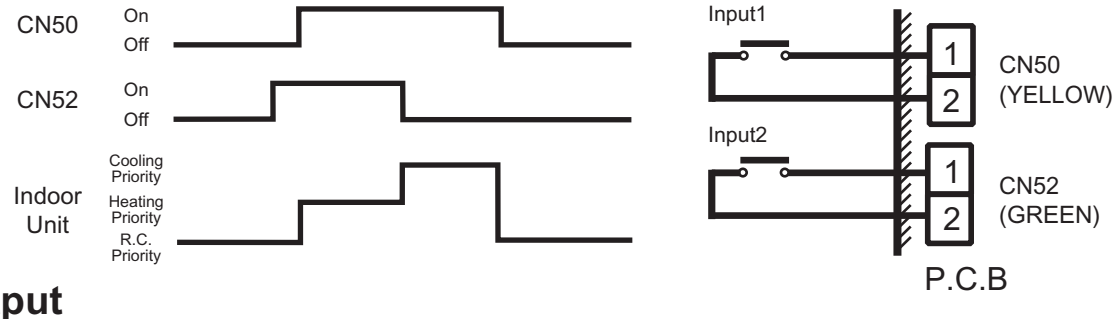
5-5-1. OUTDOOR UNIT

(1) Input

Heat and Cool switch (Heat pump type only)

"Cooling priority" or "Heating priority" can be selected by this input.

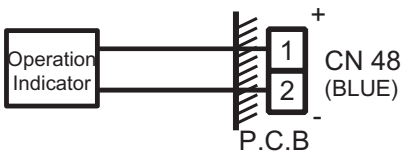
CONNECTOR	INPUT SIGNAL	STATUS	REMARKS
CN50 (YELLOW)	OFF	Remote Controller priority	
	ON	External input priority	
CN52 (GREEN)	OFF	Cooling priority	CN50 need to be "ON".
	ON	Heating priority	



(2) Output

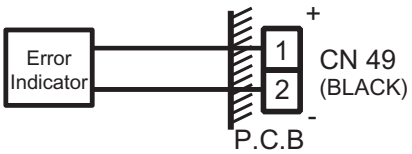
① Operation display

This output indicates the outdoor unit's "Operation" status.

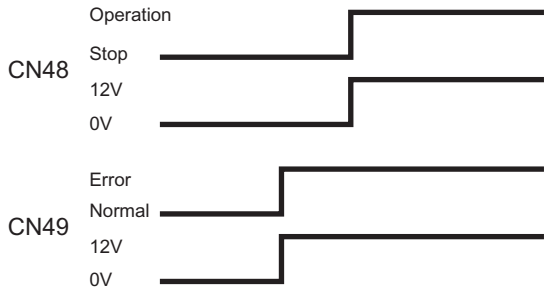


② Error display

This output indicates the outdoor unit and connected indoor unit's "Normal" or "Error" status.

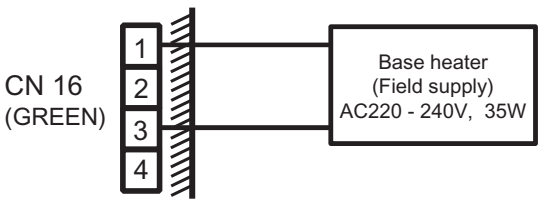


CONNECTOR	OUTPUT VOLTAGE	STATUS
CN48 (BLUE)	0V	Stop
	12V	Operation
CN49 (BLACK)	0V	Normal
	12V	Error



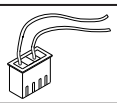
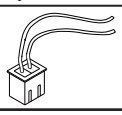
③ Base heater output

Turn ON when the ambient temperature is low in heating mode.(2℃ or less)



(3) Parts

Following cord (service parts) is required. Please use the parts number shown below to order the cord from your sales representative.

Name and shapes	Q'ty	Parts No.
BASE HEATER WIRE 	1	9368776008
EXTERNAL INPUT WIRE 	1	9368777005

INSTALLATION

5-5-2. INDOOR UNIT

■ CONTROL INPUT (Operation / Stop)

Indoor unit can be operated or stopped by using indoor unit PCB
CN 21 (Wall mounted type / ceiling wall type) or CN27 (other types)

- Open circuit voltage : ≦ 5.25 (V).
- Short circuit current : ≦ 0.6 (mA).
- Short circuit detection resistance (R_{ON}) : ≦ 500 (ohm).
- Open circuit detection resistance (R_{OFF}) : ≧ 100 (kilo-ohm).

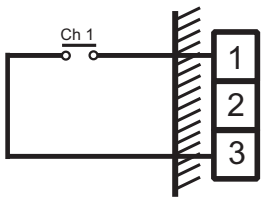
A twisted pair cable(22AWG) shoud be used. Maximum length of cable is 25m.

● Input select

Dip SW3-4	Input select
OFF	Edge
ON	Pulse

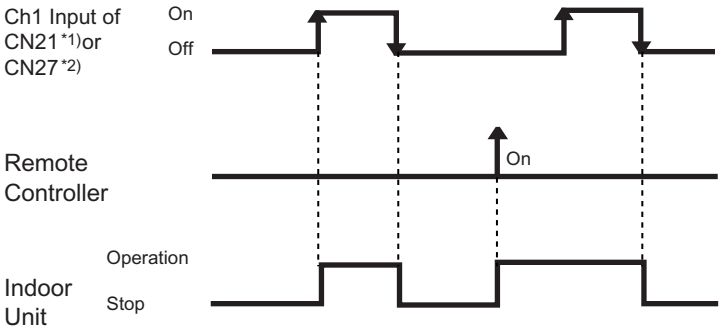
● In the case of "Edge" input

CONNECTOR	INPUT SIGNAL	COMMAND
Ch1 of CN21*1) (RED) or CN27*2)(RED)	OFF ⟶ ON	Operation
	ON ⟶ OFF	Stop



CN 21(RED) *1)
or
CN 27(RED) *2)

*1) For wall mounted type / ceiling wall type.
*2) For other types

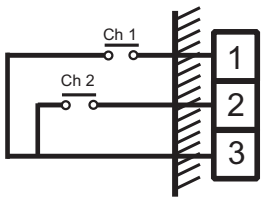


NOTE

1. The last command has priority.
2. The indoor units within the same remote controller group operates in the same mode.
3. The wire connection should be separate from the power cable line.

● In the case of "pulse" input

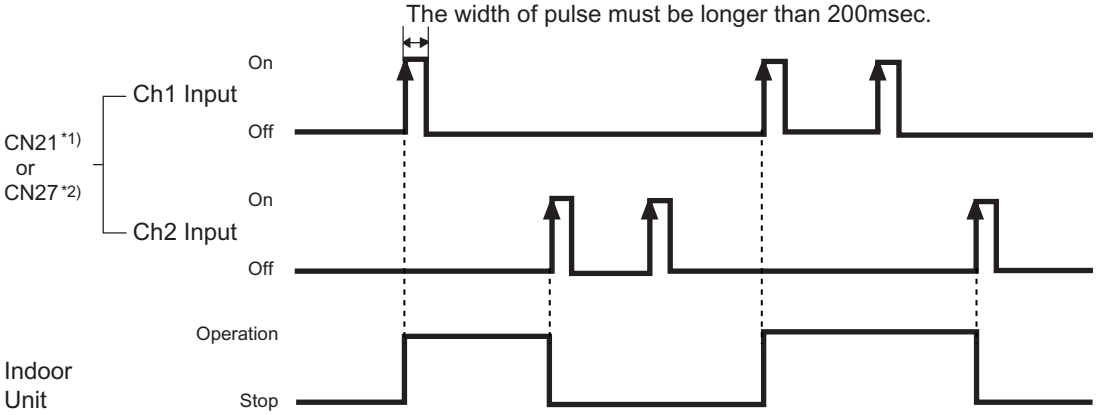
CONNECTOR		INPUT SIGNAL	COMMAND
CN21*1)(RED) or CN27*2)(RED)	Ch1	OFF ⟶ ON	Operation
	Ch2	OFF ⟶ ON	Stop



CN 21(RED) *1)
or
CN 27(RED) *2)

*1) For wall mounted type.
*2) For other types

The width of pulse must be longer than 200msec.



INSTALLATION

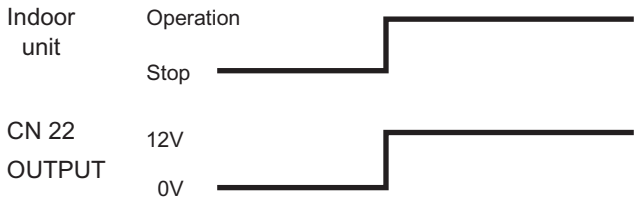
■ OUTPUT

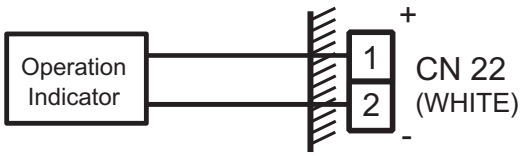
CONNECTOR	OUTPUT VOLTAGE	STATUS
CN22	12V	Operation
	0V	Stop
CN23	12V	Error
	0V	Normal
CN24	12V	Fan run
	0V	Fan stop

・Output voltage : Hi DC12V ± 2V
Lo 0V
・Permissible current : 15mA

● Operation display

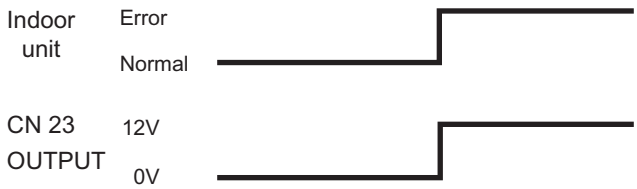
The output for CN22 is ON when the indoor unit is operating.
The output is off when the unit is stopped.

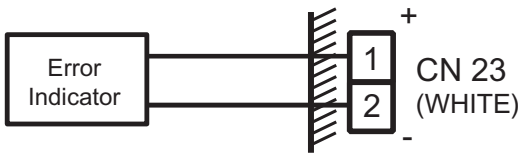




● Error display

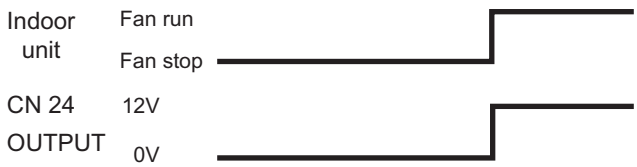
The output for CN23 is ON when an error is generated for the indoor unit.

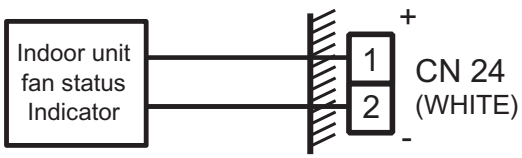




● Inter locking output with indoor unit fan

The output for CN24 is ON when the indoor unit fan is operating.
The output is off when the fan is stopped or during cold air prevention.
The output for CN24 is ON during DRY mode.

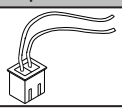
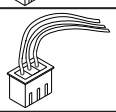




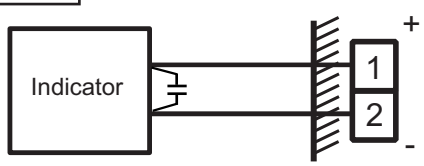
EX) Used for inter lock energize for exhaust fan.

■ PARTS

Following cord (service parts) is required. Please use the parts number shown below to order the cord from your sales representative.

Usage	Name and shapes	Q'ty	Parts No.
For output port	EXTERNAL INPUT WIRE 	1	9368778002
For control input port	EXTERNAL INPUT WIRE 	1	9368779009

※ If the external indicator has malfunction, due to noise please insert a ceramic capacitor (0.1μF 25V or more) near the input port of the equipment.



INSTALLATION

5-5-3. INDOOR UNIT (COMPACT WALL MOUNTED comfort model)

■ CONTROL INPUT (Operation / Stop)

Indoor unit can be operated or stopped by using the connector CN9 (RED) ON indoor unit PCB.

- Open circuit voltage : ≦ 5.25 (V).
- Short circuit current : ≧ 0.6 (mA).
- Short circuit detection resistance (R_{ON}) : ≦ 500 (ohm).
- Open circuit detection resistance (R_{OFF}) : ≧ 100 (kilo-ohm).

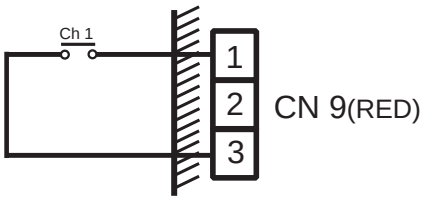
A twisted pair cable(22AWG) shoud be used. Maximum length of cable is 25m.

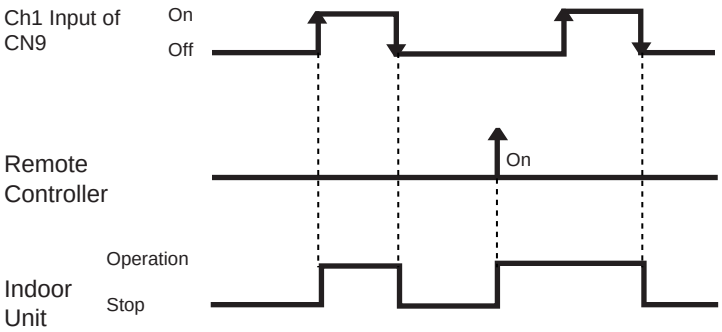
● Input select

Dip SW1-4	Input select
OFF	Edge
ON	Pulse

● In the case of "Edge" input

CONNECTOR	INPUT SIGNAL	COMMAND
CN9 (RED)	OFF ⟶ ON	Operation
	ON ⟶ OFF	Stop



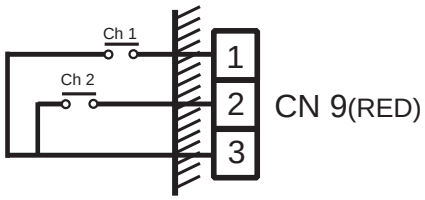


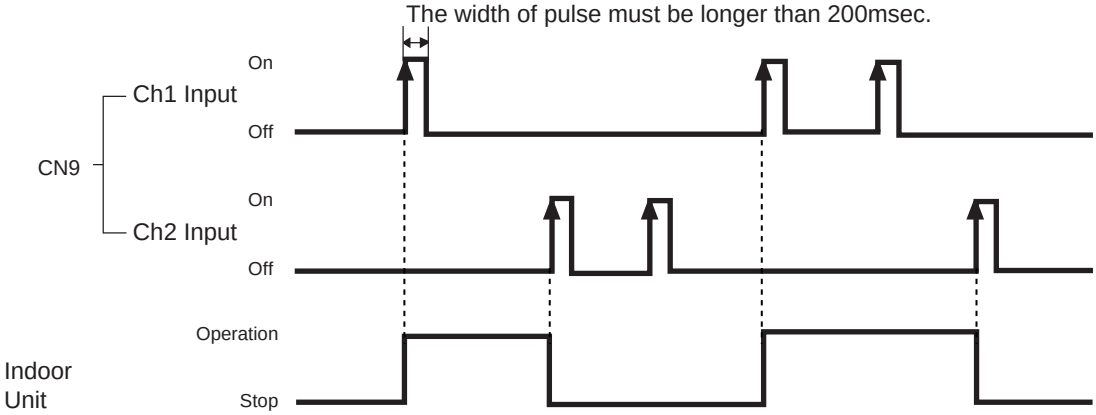
NOTE

1. The last command has priority.
2. The indoor units within the same remote controller group operates in the same mode.
3. The wire connection should be separate from the power cable line.

● In the case of "pulse" input

CONNECTOR		INPUT SIGNAL	COMMAND
CN9 (RED)	Ch1	OFF ⟶ ON	Operation
	Ch2	OFF ⟶ ON	Stop





INSTALLATION

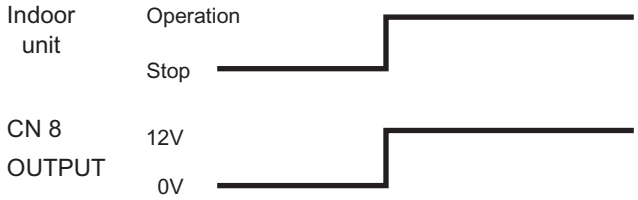
■ OUTPUT

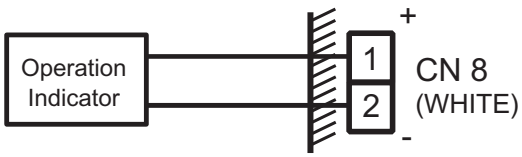
CONNECTOR	OUTPUT VOLTAGE	STATUS
CN8 (WHITE)	12V	Operation
	0V	Stop

- Output voltage : Hi DC12V ± 2V
  Lo 0V
- Permissible current : 15mA

● Operation display

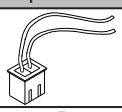
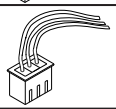
The output for CN8 is ON when the indoor unit is operating.
The output is off when the unit is stopped.



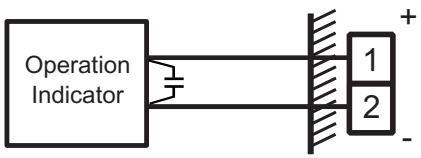


■ PARTS

Following cord (service parts) is required. Please use the parts number shown below to order the cord from your sales representative.

Usage	Name and shapes	Q'ty	Parts No.
For output port	EXTERNAL INPUT WIRE 	1	9368778002
For control input port	EXTERNAL INPUT WIRE 	1	9368779009

※ If the external indicator has malfunction, due to noise please insert a ceramic capacitor (0.1μF 25V or more) near the input port of the equipment.



INSTALLATION

5-5-4. CENTRAL REMOTE CONTROLLER / PC CONTROLLER

■ CONTROL INPUT (ALL ON / ALL OFF)

Indoor units which stored into Central R.C. or PC controller can be operated or stopped by this input. (set up in Transmission adoptor)

- Short circuit detection resistance (R_{ON}) : ≦ 500 (ohm).
- Open circuit detection resistance (R_{OFF}) : ≧ 100 (kilo-ohm).

● Input select

• Central remote controller

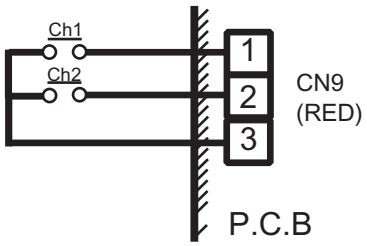
DIP 2-1	DIP 2-2	Input select
ON	OFF	"Edge"
ON	ON	"Pulse"

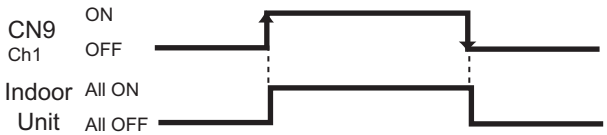
• PC controller

Input select can be set in environmental set up.
(Please refer to PC Controller's setting manual.)

● In the case of "Edge" input

CONNECTOR		INPUT SIGNAL	COMMAND
CN9 (RED)	Ch1	OFF ⟶ ON	All ON
		ON ⟶ OFF	All OFF

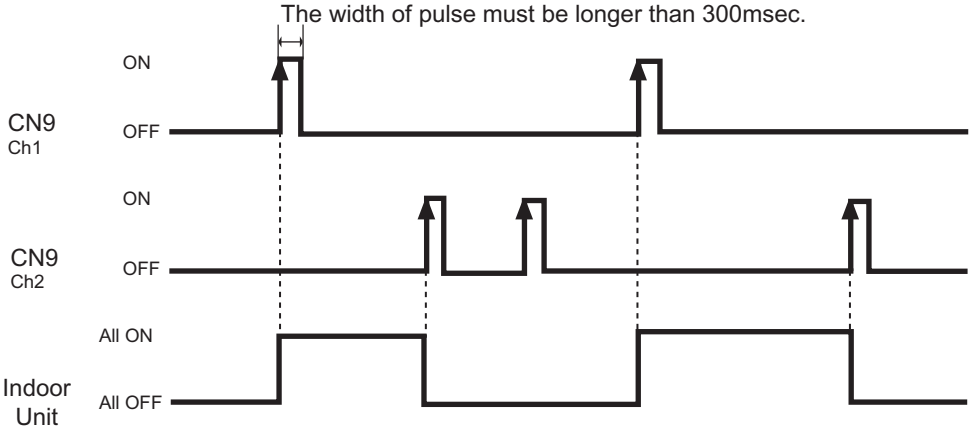




● In the case of "Pulse" input

CONNECTOR		INPUT SIGNAL	COMMAND
CN9 (RED)	Ch1	OFF ⟶ ON	All ON
	Ch2	OFF ⟶ ON	All OFF

The width of pulse must be longer than 300msec.



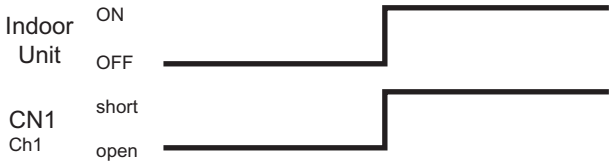
INSTALLATION

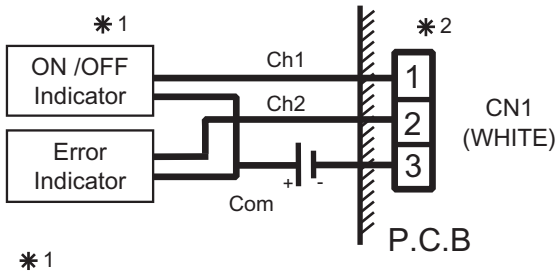
■ OUTPUT

● Operation display

This output indicates the indoor unit's "Operate" or "Stop" status.

CONNECTOR		OUTPUT SIGNAL	STATUS
CN1 (WHITE)	Ch1	open	All of indoor units "OFF"
		short	At least one more indoor units "ON"





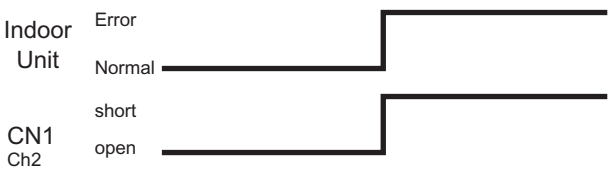
✱1
Necessary to insert a diode on both ends of relay coil.

✱2
Pin1 : NPN open collector output (15V 10mA Max)
Pin2 : NPN open collector output (15V 10mA Max)
Pin3 : Ground

● Error display

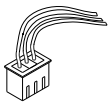
This output indicates the indoor unit's "Normal" or "Error" status.

CONNECTOR		OUTPUT SIGNAL	STATUS
CN1 (WHITE)	Ch2	open	All of indoor units "Normal"
		short	At least one more indoor units "Error"



■ PARTS

Following cord (service parts) is required. Please use the parts number shown below to order the cord from your sales representative.

Name and shapes	Q'ty	Parts No.
EXTERNAL INPUT WIRE 	1	9368779009

INSTALLATION

5-6. INSTALLATION WORK

5-6-1. INSTALLATION THE OUTDOOR UNIT

■ SELECTING THE MOUNTING POSITION

⚠ WARNING
Install the unit where it will not be tilted by more than 3°.
When installing the outdoor unit it may be exposed to strong wind, fasten it securely.

✳ If possible, do not install the unit where it will be exposed to direct sunlight. (If necessary ,install a blind that does not interfere with the air flow.

✳ Install the outdoor unit in a location where it will avoid getting dirty and getting wet from rain.

✳ Install the unit where connection to the indoor unit is easy.

✳ During heating operation, drain water flows from the outdoor unit. Therefore, install the outdoor unit in a place where drain water flow will not be obstructed. (Reverse cycle model only)

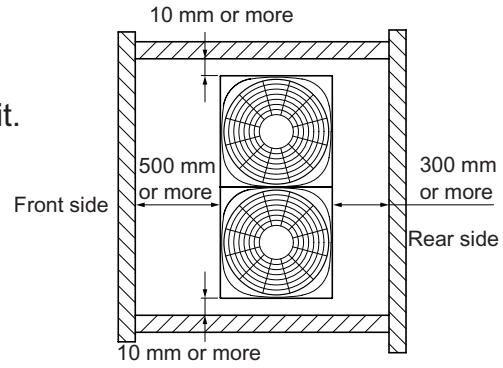
✳ Do not place animals and plants in the path of the warm air.

✳ Take the air conditioner weight into account and select a place where noise and vibration will be flow.

✳ Select a location so that the warm exhaust air and noise from the outdoor unit do not disturb neighbors.

✳ Install inlet and outlet ducts in order to maintain stable operation in cold or snowy regions.

● Installing the unit individually

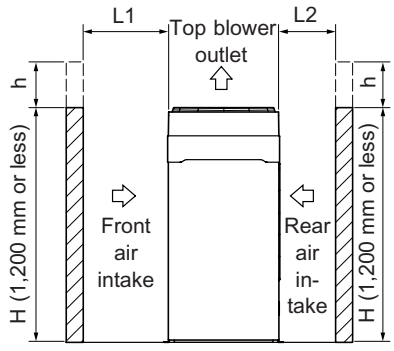


✱ While the gap in the rear side requires at least 300mm for inlet ventilation, but keep an enough spacing by considering the future servicing and constructions from the rear.

✳ Provide the required space shown in Figure so that the air flow is not blocked.

✳ The height of the wall (H) on the front side and rear side should be 1,200 mm or less.

✳ If the wall height exceeds 1,200 mm, add dimension (h) to the respective space dimensions L1 and L2.
H ≦ 1,200 : L1 ≧500, L2 ≧300
H > 1,200 : L1 > 500+h, L2 > 300+h



✳ The dimensions shown above are minimum required limit to prevent a decline in performance. The space provided should be increased in consideration of passageways and room for maintenance.

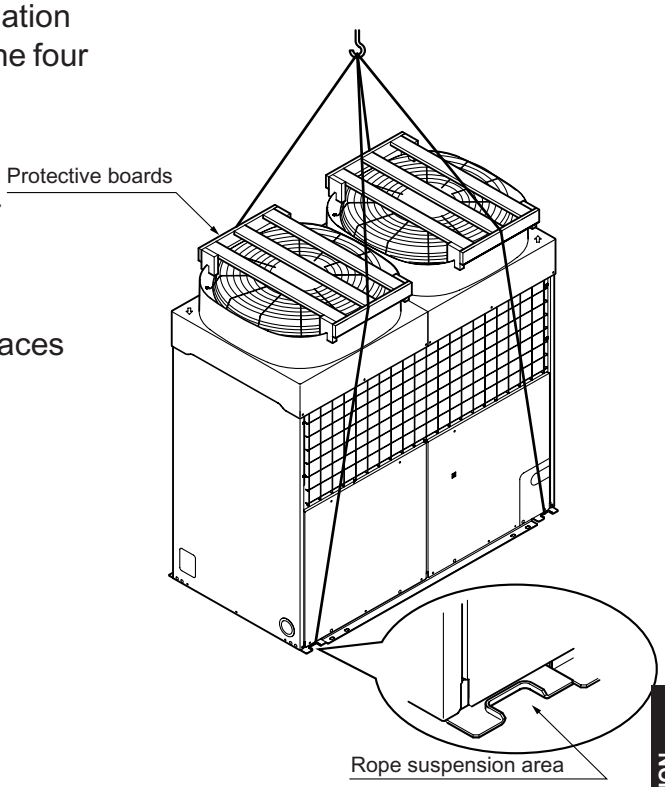
Note: For the installation of multiple units and the duct connections, please refer to the section 3-5 INSTALLATION SPACE.

INSTALLATION

■ HOISTING METHOD

	Weight
Outdoor unit	approx.300kg

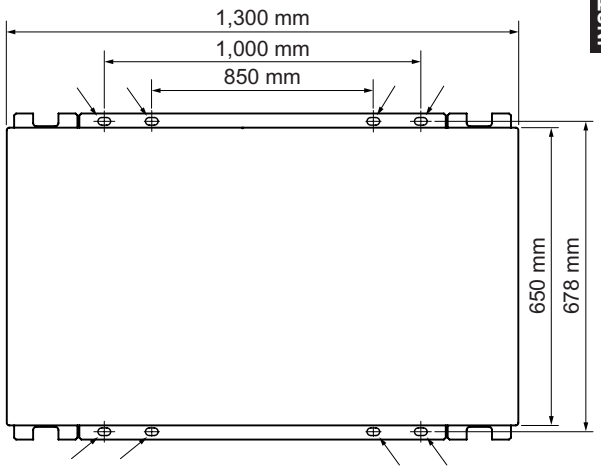
* If suspending the unit and conveying it to its installation location, place the ropes under the bottom, using the four cutouts places on the front and rear provided for suspending it.
* Use rope made of strong material enough to bear the unit's weight.
* Be sure to suspend the unit with ropes from 4 places and be careful not to subject it to impacts.
* Place protective boards on the unit so the rope doesn't make contact with the bell mouth.
* Use 2 ropes which are 7 m in length or longer



INSTALLATION

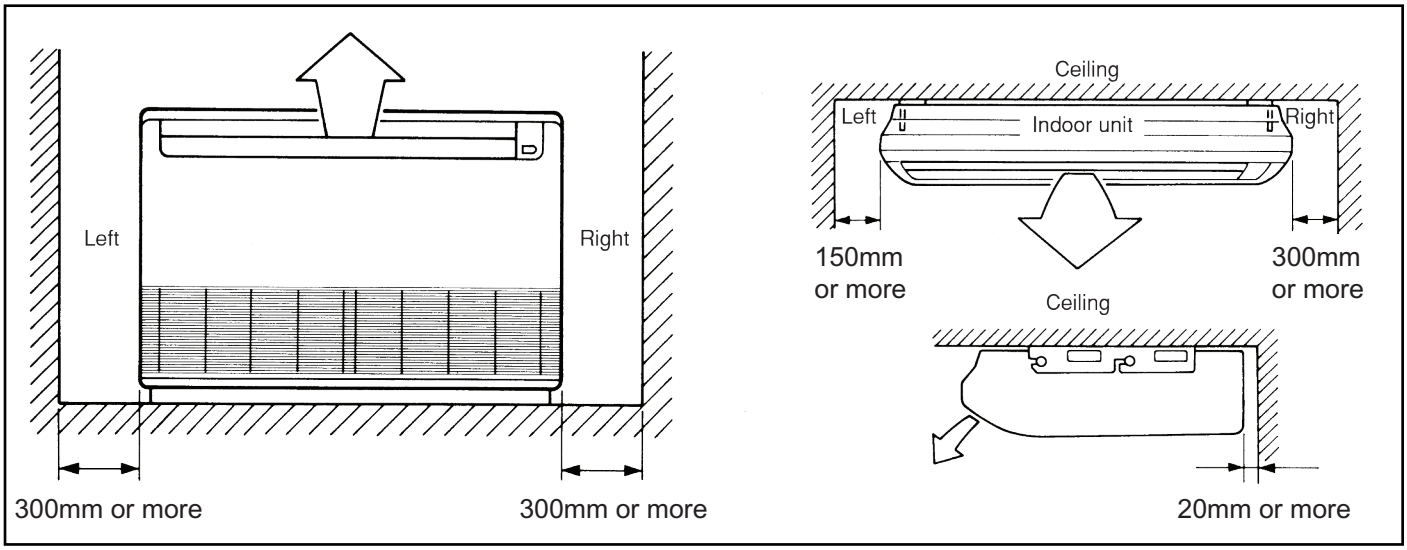
■ ANCHOR BOLT POSITIONS

* The distance between the left and right anchor bolts should be at least 850 mm.
* Set the unit on a strong stand, such as concrete blocks to minimize shock and vibration.
* Do not set the unit directly on the ground because it will cause problems.
* When the outdoor unit will be exposed to strong wind, fasten it strongly with anchor bolts.

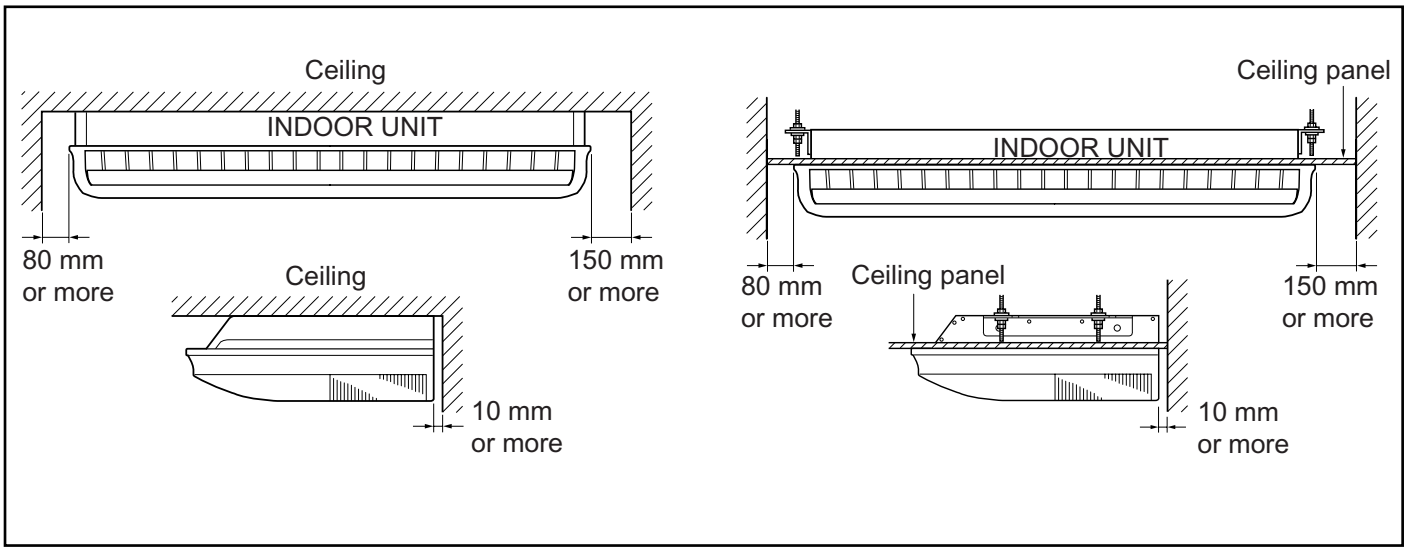


5-6-2. INSTALLATION SPACE

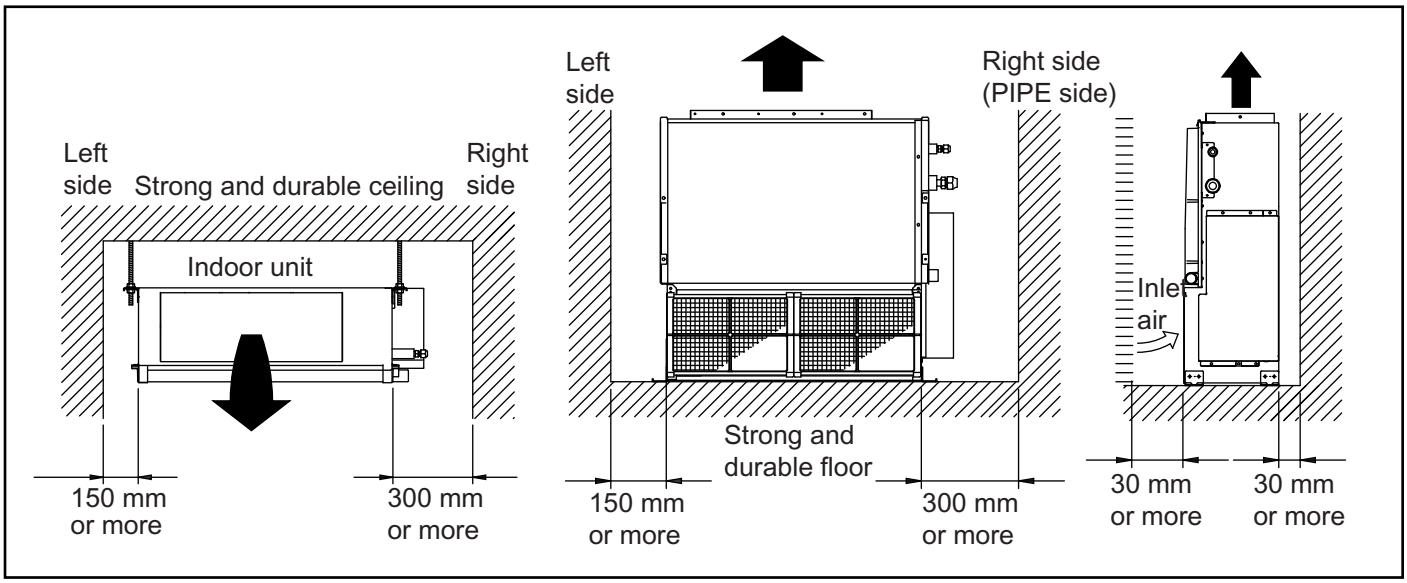
■ FLOOR / CEILING TYPE



■ CEILING TYPE

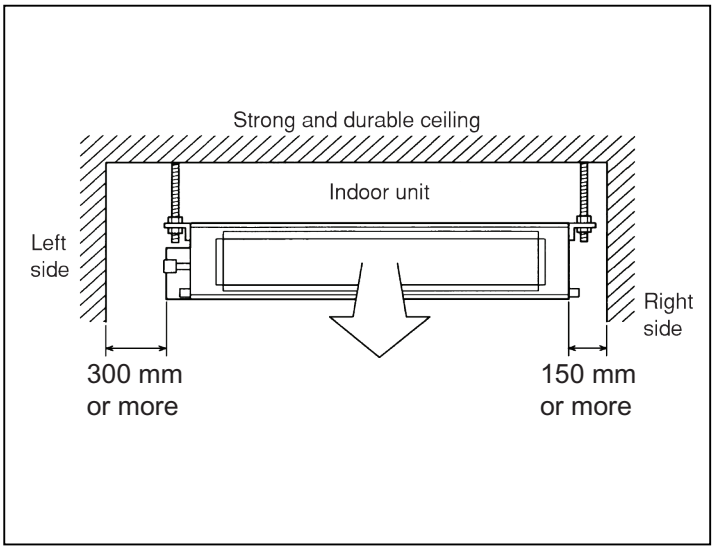


■ COMPACT DUCT TYPE

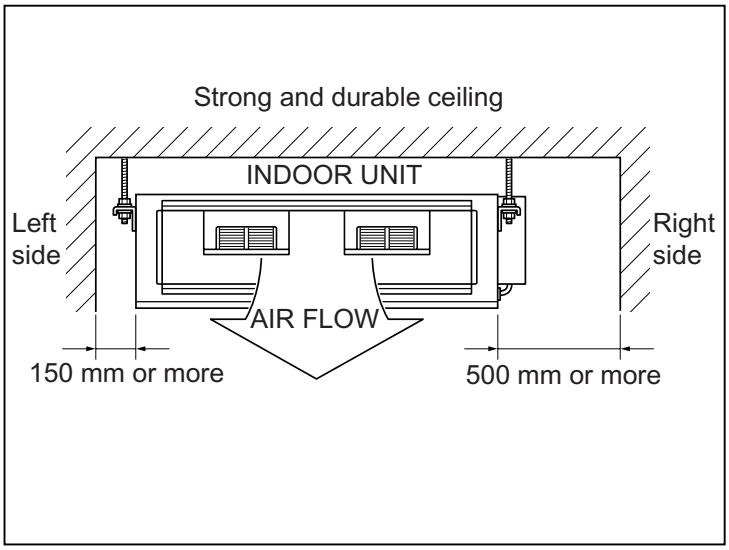


INSTALLATION

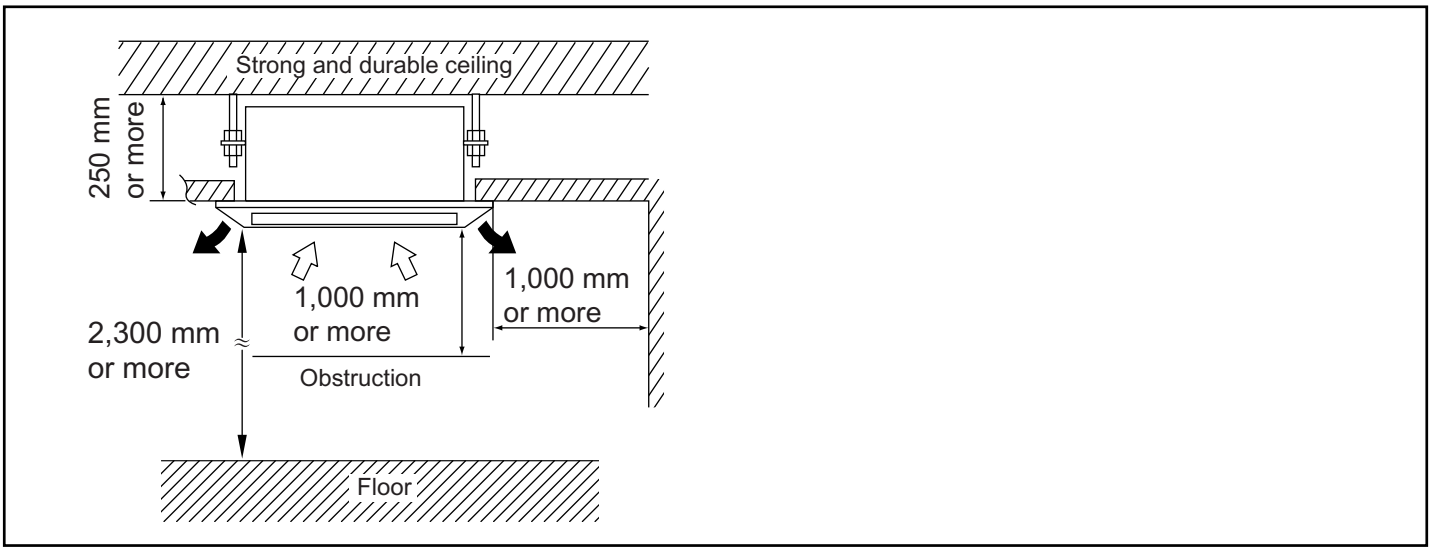
■DUCT TYPE



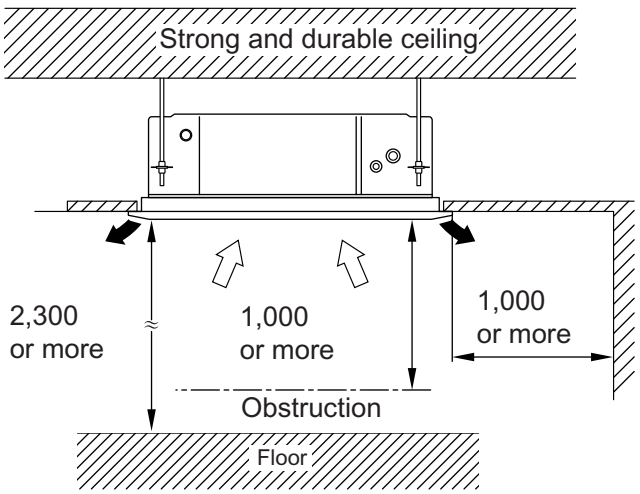
■HIGH PRESSURE DUCT TYPE



■COMPACT CASSETTE TYPE



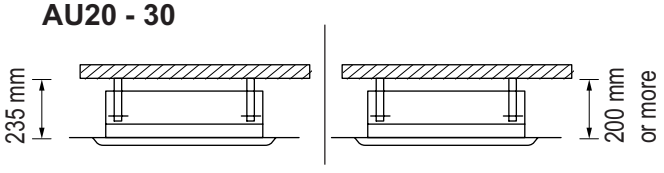
■CASSETTE TYPE



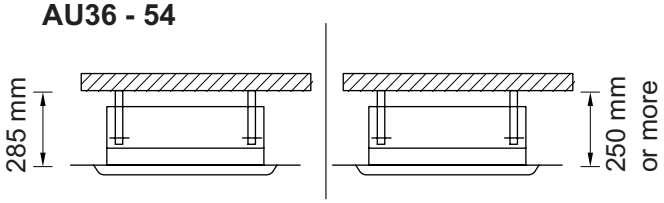
You can select 2-way setting

(A) Standard setting **(B) Slender setting**

AU20 - 30

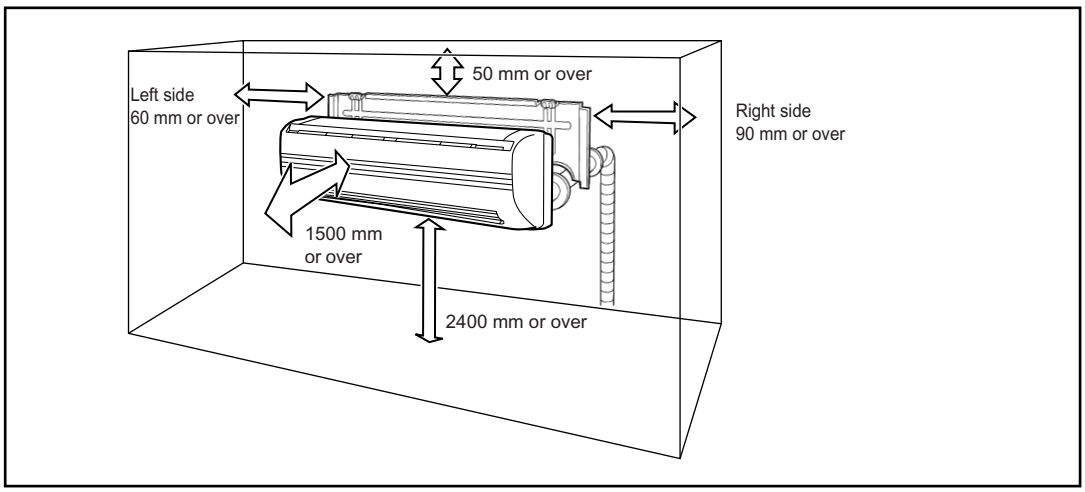


AU36 - 54

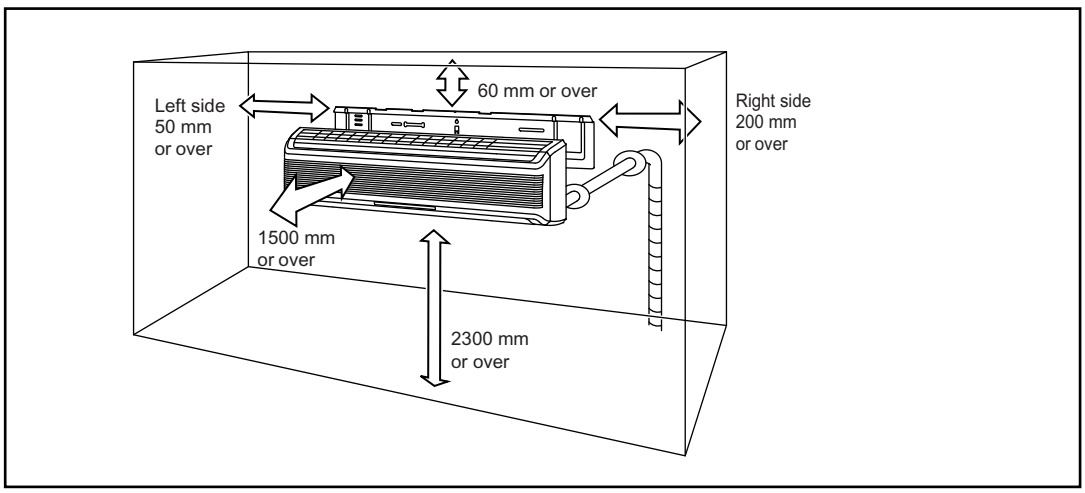


INSTALLATION

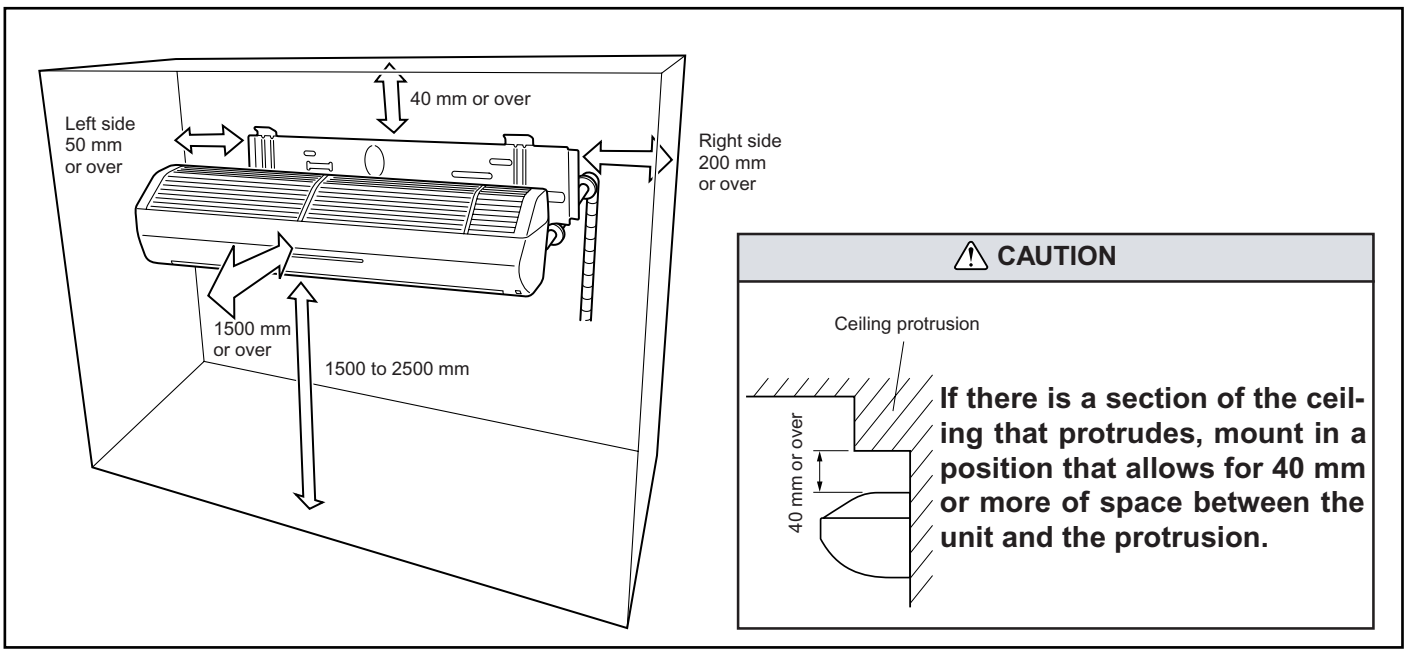
■ COMPACT WALL MOUNTED TYPE



■ WALL MOUNTED TYPE



■ CEILING WALL TYPE



INSTALLATION

■ CAUTION

⚠ WARNING
Install at a place that can withstand the weight of the indoor and outdoor units and install positively so that the units will not topple or fall.

⚠ CAUTION
Do not install where there is the danger of combustible gas leakage.
Do not install the unit near a source of heat, steam, or flammable gas.
If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.

Decide the mounting position with the customer as follows:

Install the indoor unit on a strong wall which is not subject to vibration.

The inlet and outlet ports should not be obstructed :the air should be able to blow all over the room.

Do not install the unit where it will be exposed to direct sunlight.

Install the unit where the connection pipe can be easily installed.

Install the unit where the drain pipe can be easily installed.

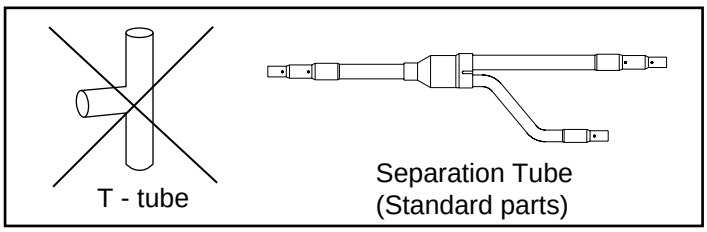
Take servicing, etc. into consideration and leave the spaces.
Also install the unit where the filter can be removed.

INSTALLATION

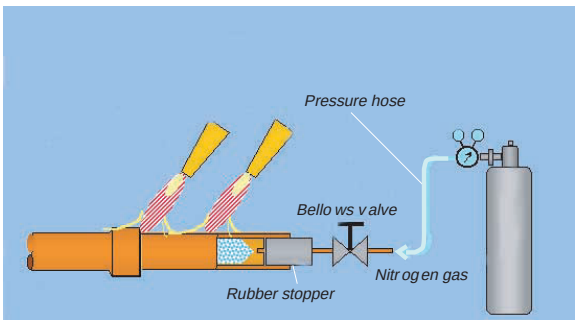
5-6-3. PIPING CONNECTION

■ 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.
- ✳ To be connecting V series indoor unit to S series outdoor unit, flare size of a part of models has differed from that connection pipe.
  Please use the adaptor (Accessory) for connecting pipe.

INSTALLATION

■ 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

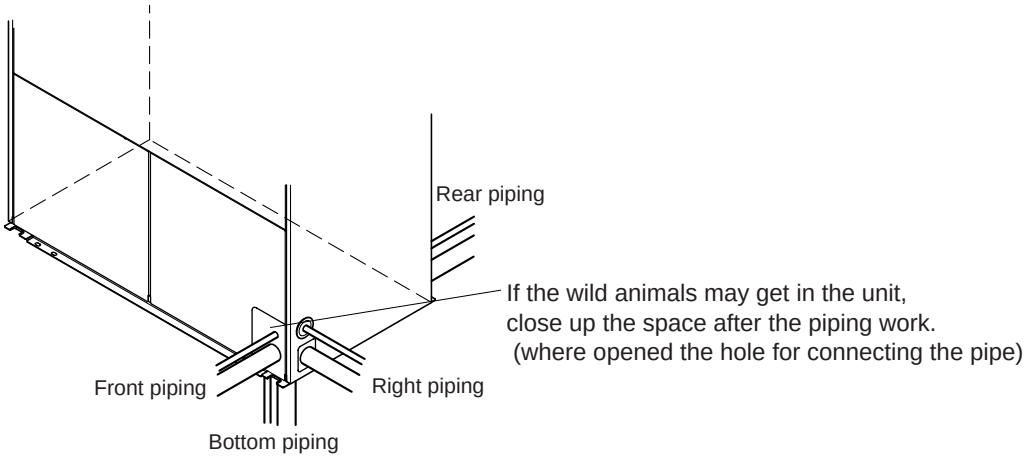
✳ Make sure to insulate the refrigeration pipes separately with ample thickness of heat-resistant polyethylene form etc. For the connecting portion, apply the enough insulation to avoid any gap.

INSTALLATION

■ OUTDOOR UNIT PIPE CONNECTION

● Piping mounting direction (4-way mounting possible)

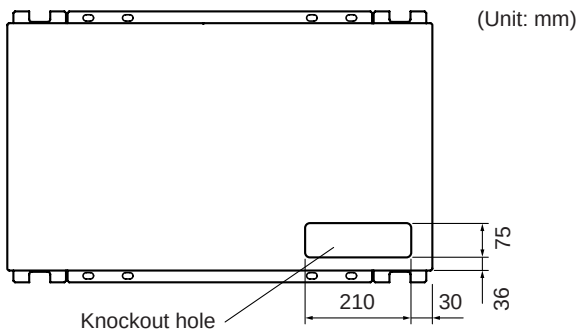
There are four possible ways to connect the piping to the outdoor unit.
Knockouts are provided all the place where the pipes need to be connected.



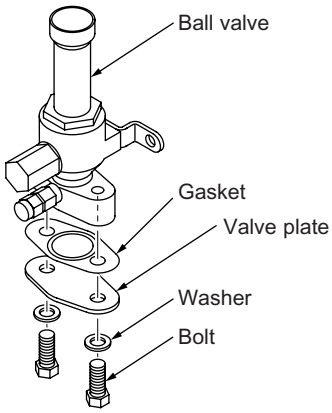
INSTALLATION

If the piping is connected from the rear or bottom, be sure that there is enough space around the unit to make connections.

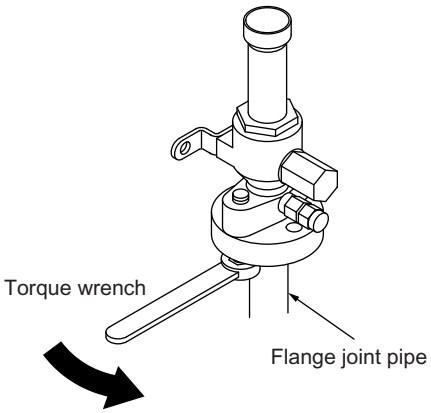
When connecting the piping to the bottom of the unit,open a knockout hole at the bottom of the unit.



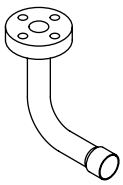
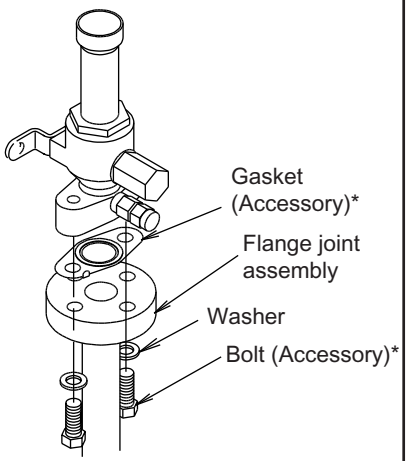
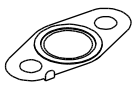
- **Before connecting flange joint assembly to ball valve. Remove bolts, valve plate and gasket.**



- **Connecting the flange joint pipe.**



ACCESSORY PARTS

Description	Q'ty	
Flange joint assembly 	1	
Gasket 	1	
Bolt	2	*Use the provided accessory parts. Never use the other or used parts.

Leave the valve of Outdoor Unit fully close and do not operate until all the piping connections are done and the pressure test and air vacuum have been successfully completed.

- **Flare nut tightening torque**

Pipe	Tightening torque
Liquid pipe	500 to 550 kgf·cm (49 to 53.9 N·m)
Gas pipe (Bolt)	350 to 400 kgf·cm (34.3 to 39.2 N·m)

- **Pipe diameter**

Unit:mm

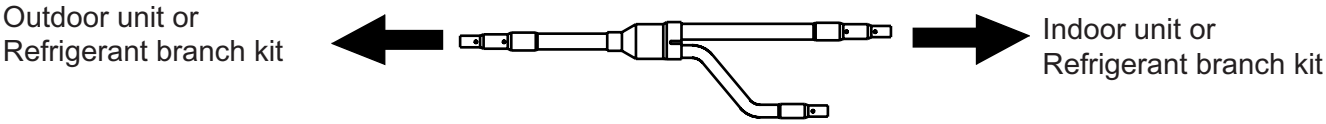
GAS	LIQUID
28.58(1.2)	12.70(0.8)

( ):thickness

■INSTALLATION

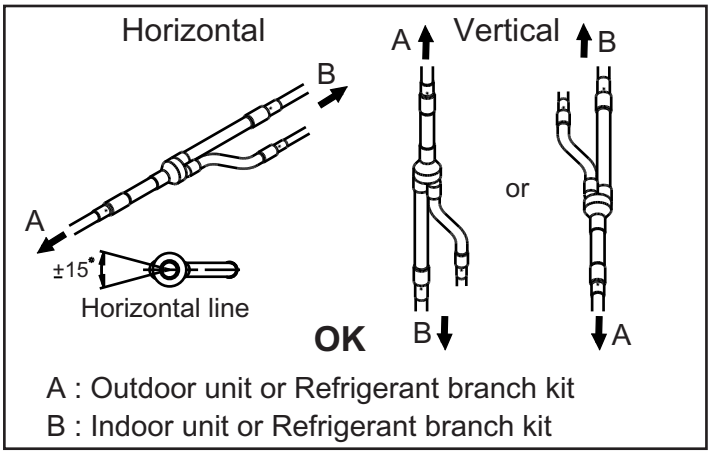
●Separation tube selection

Total capacity of indoor units	Model name of separation tube to be used
	Cooling only model Heat pump model
Less than 60	UTR-BP54TA
61 or more	UTR-BP90TA

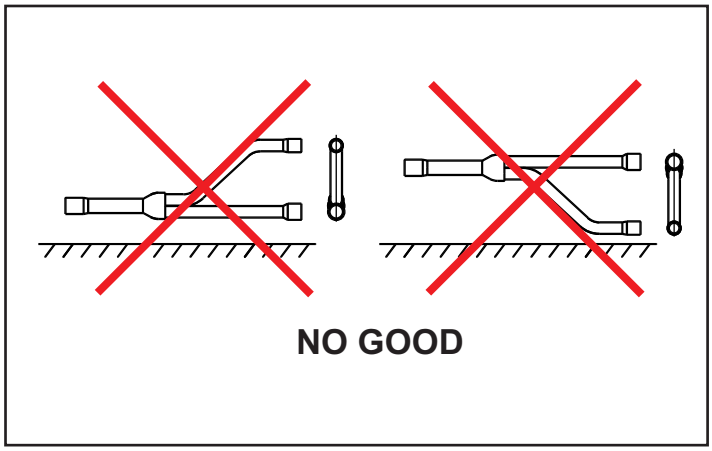


●Installation angle

Install the separation tube so that it branches either horizontally or vertically.

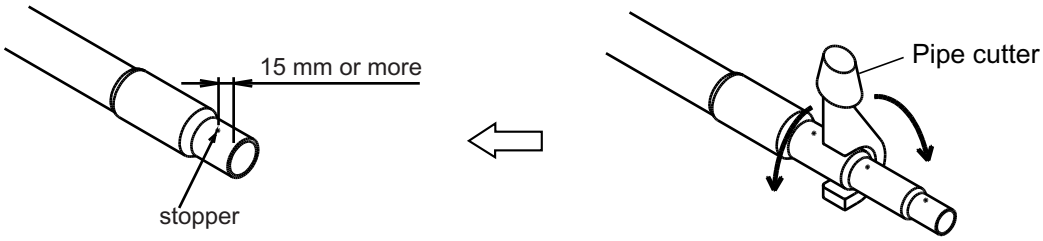


A : Outdoor unit or Refrigerant branch kit
B : Indoor unit or Refrigerant branch kit

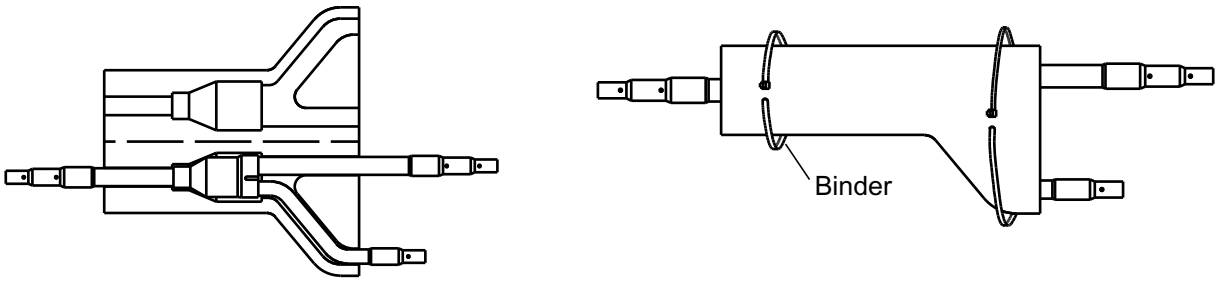


●Installation

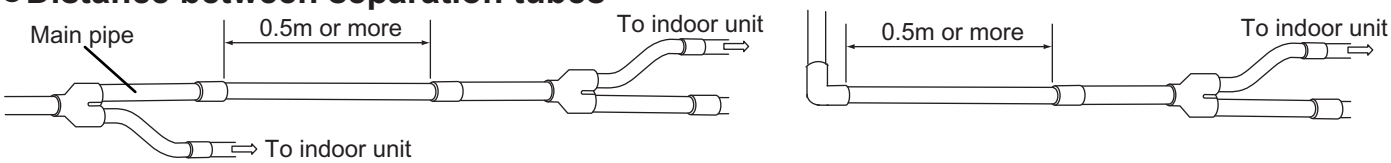
Use the pipe cutter to cut at the location which matches the piping size when the piping size is different.



After brazing the piping, attach heat insulation to the separation tube.
Remove the protective paper for the tape attached to the heat insulation for the separation tube.
Tighten by using binders in two locations.



●Distance between separation tubes



Caution

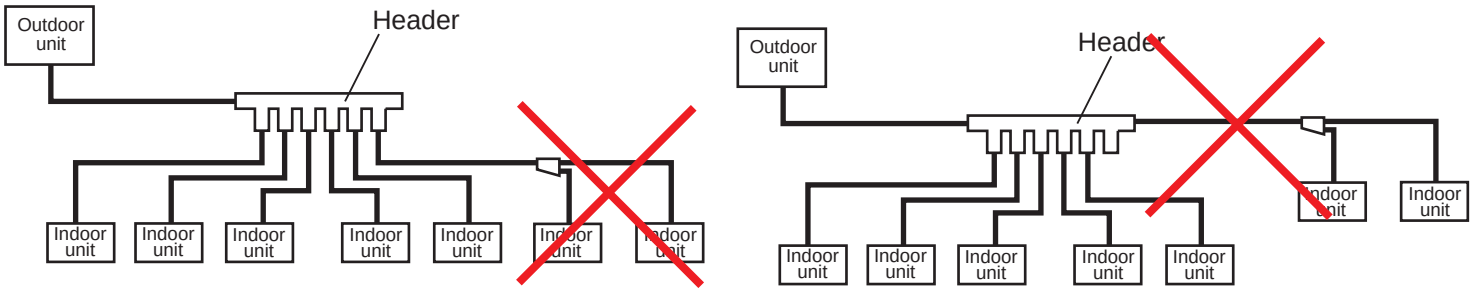
Leave the distance 0.5m or more for straight part to separation tube.
(To prevent the outdoor unit mulfunction and generation of refrigerant noise)

INSTALLATION

■ Header installation

• Caution

Separation after header is not allowed.



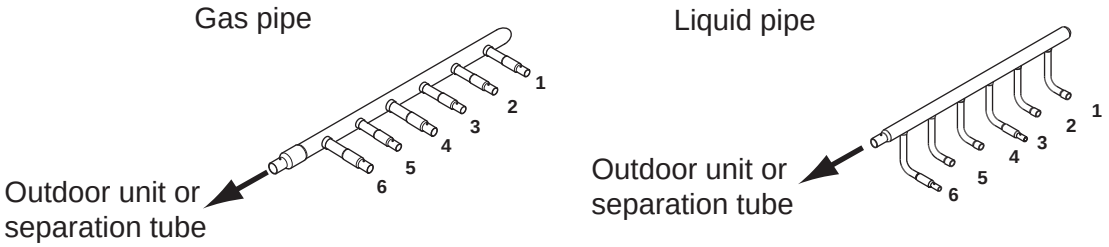
• Header selection

Number of branches (Number of indoor units connected)	Model name of header to be used
	Cooling only model Heat pump model
6 units or less	UTR-HD906A
7 to 8 units	UTR-HD908A

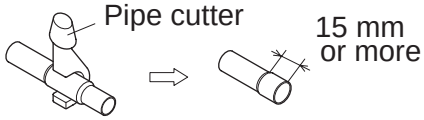
INSTALLATION

• Piping connection

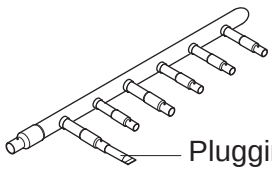
(1) When connecting the connection pipes from the indoor units, connect them to the header branch pipes in the order 1, 2, 3, etc.



(2) Use a pipe cutter to cut at the location that matches the piping size.
Be sure to cut the piping off at least 15 mm from the piping stopper
If the piping is cut too short, leaks can occur. After cutting the piping off, be sure to deburr it.
Make sure that dirt or water does not enter the piping when connecting the piping.



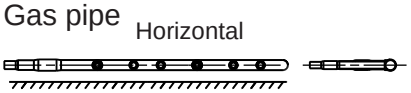
(3) Attach a plugging pipe provided if there is no piping connected at the headers.



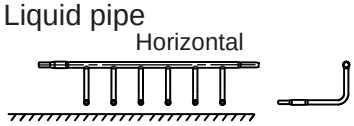
●Installation

∗Install the header so that it branches horizontally.

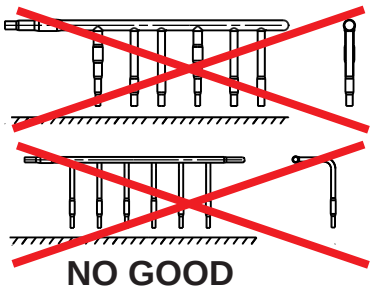
Gas pipe



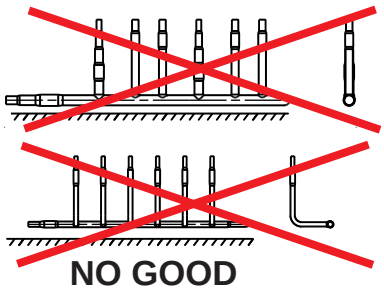
Liquid pipe



OK

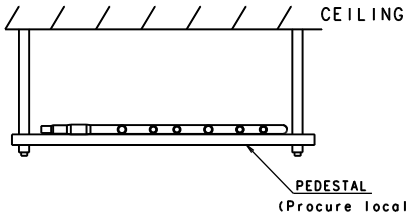


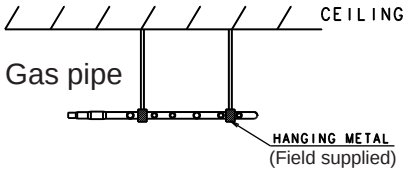
NO GOOD

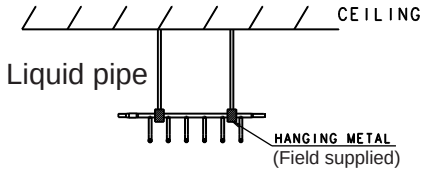


NO GOOD

∗Use header support as necessary.

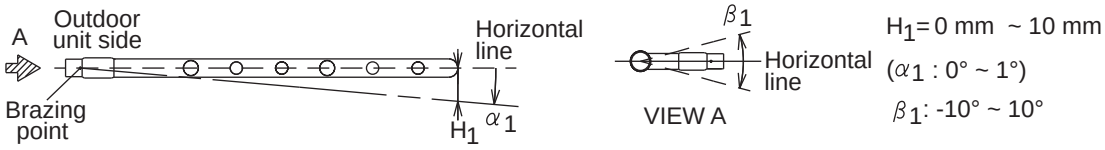




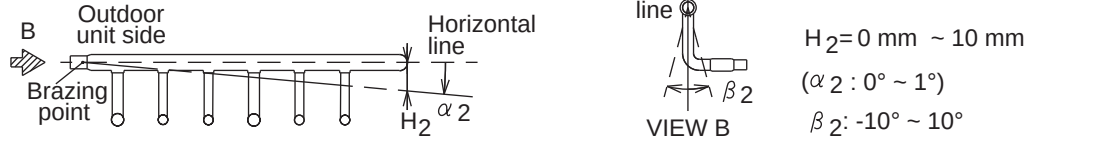


∗Use a level to make sure that the header is positioned as shown in following figure, and then, secure it in place.

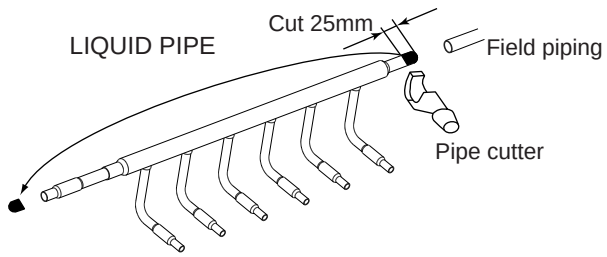
Gas pipe



Liquid pipe



∗Connecting the field piping from outdoor unit for opposite side,cut the pipe end to connect the pipe and close the opposite end.

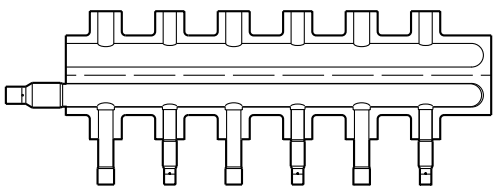


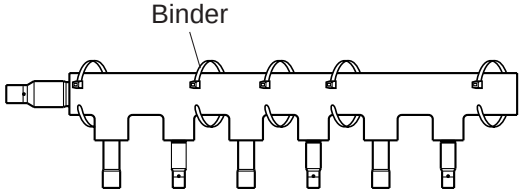
●Heat insulation installation

After brazing the piping, attach heat insulation.

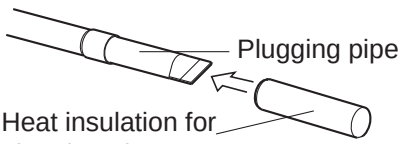
Remove the protective paper for the tape on the heat insulation for the header and attach it.

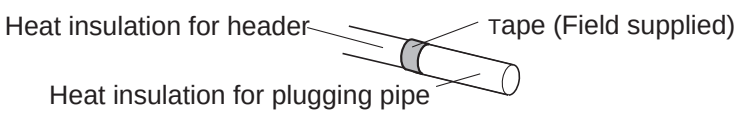
Tighten by using binders in five locations.





Cover the plugging pipe with heat insulation and seal with tape.





INSTALLATION

■ AIR TIGHT TEST

After the piping has been installed, perform a sealing test.
Charge the piping with nitrogen to within the sealing test pressure (2.94 MPa).
After 24 hours, check that the pressure has not fallen.
Make sure to add the pressure to both Gas pipe and Liquid pipe.
Perform the leak test on all flared and brazed parts.
Note: When the ambient temperature changes 5 deg. ,the test pressure changes 0.05MPa.

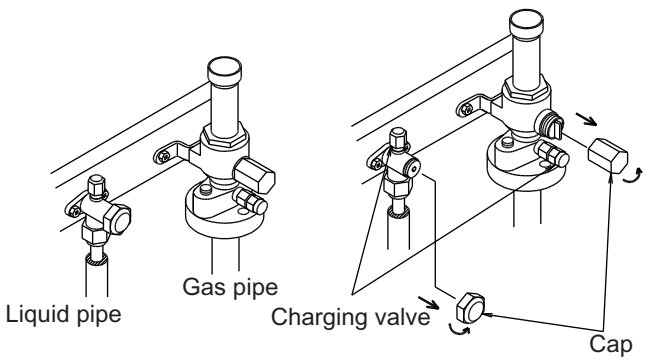
■ VACUUM PROCESS

⚠ CAUTION
Do not purge the air with refrigerant but use a vacuum pump to remove air from the indoor unit and connection pipes!

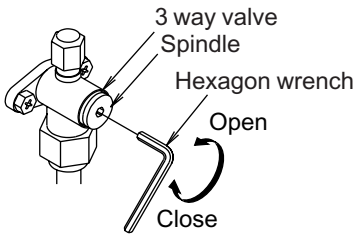
- ✳ Remove the cap, and connect the gauge manifold and the vacuum pump to the charging valve by the service hoses.
- ✳ Vacuum the indoor unit and the connecting pipes until the pressure gauge indicates -76 cmHg.
- ✳ When -76 cmHg is reached, operate the vacuum pump for at least 1 hour.
- ✳ After vacuuming inside the indoor unit and connecting pipes,remove the cap of the two valves.
- ✳ Open the handle (spindle) of the Large valves (3 way valve).
  Open the spindle of the Small valve (3 way valve) with a hexagon wrench.
- ✳ Tighten the cap of the two valves to the specified torque.

INSTALLATION

	Tightening torque	
	Ball valve	**3 way valve**
Spindle (handle)	15 kgf•cm (1.47 N•m) or less	100 to 120 kgf•cm (9.8 to 11.7 N•m)
Cap	150 to 200 kgf•cm (14.7 to 19.6 N•m)	200 to 250 kgf•cm (19.6 to 24.5 N•m)



3 way valve



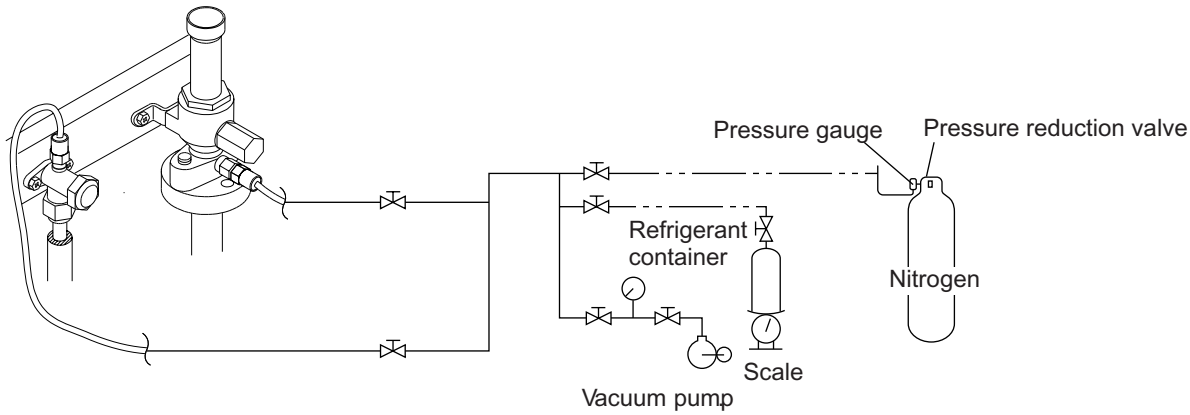
If the spindle (handle) is not fully open, performance will degrade and an abnormal sound will be generated.

■ADDITIONAL CHARGE

* Always add the refrigerant for the appropriate amount.
  Refer the additional refrigent charge amount to item 5-1-4 "ADDITIONAL CHARGE CALCULATION".
* Either larger or smaller refrigerant charge amount leads to the cause of trouble.
* For after service purpose , the added refrigerant charge amount and the calculation shall be indicated firmily on the service label over the control box cover.

⚠ CAUTION
When moving and installing the air conditioner,do not mix gas other than the specified refrigerant inside the refrigerant circuit.
When chaging the refrigerant ,always use an electronic balance for refrigerant chaging (to measure the refrigerant by weight).
Add refrigerant from the charging valve after the completion of the work.
The maximum length of the piping is 100 m (actual pipe length). If the units are further apart than this, correct operation can not be guaranteed.

INSTALLATION



5-6-4. EV KIT

An EV kit must always be required for the compact wall mounted type (Comfort model) on the liquid pipe side.

■ MODELS REQUIRING THE EV KIT

AS✱E07LACF, AS✱E09LACF, AS✱E12LACF, AS✱E14LACF

✱ Select the above indoor unit for use in small and, quiet rooms such as hotel or bedroom, where noise would be a distraction.

✱ The other indoor units, do not require an EV kit.

● EV kit selection

Model name	Application indoor units
UTR-EV09XA	AS*E07LACF AS*E09LACF
UTR-EV14XA	AS*E12LACF AS*E14LACF

✱ The parts of the built-in electronic expansion valve different, so be careful to select the right model.

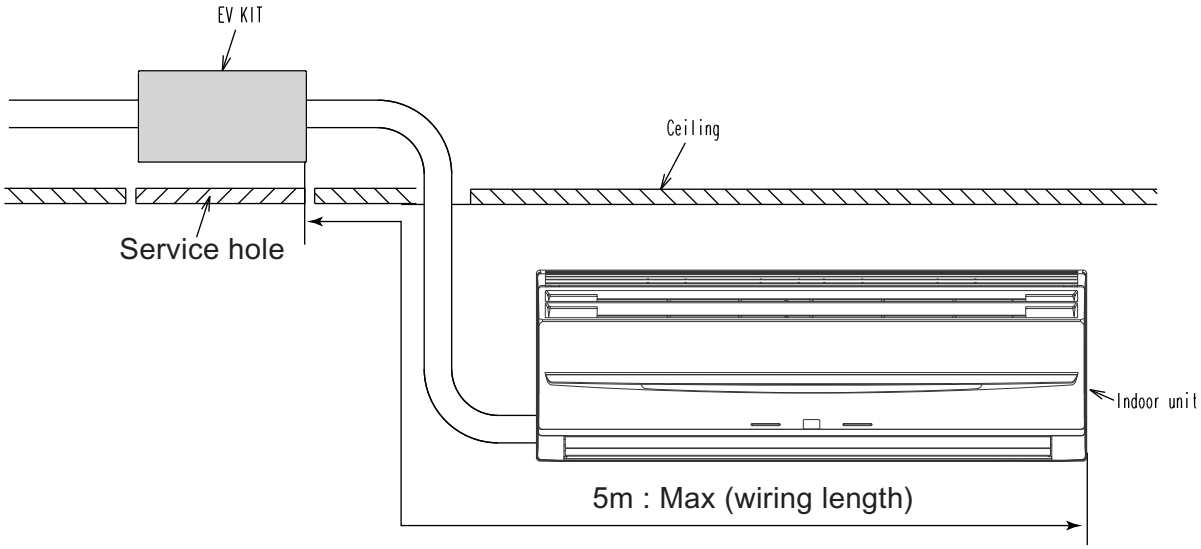
✱ A wrong selection could cause improper operation.

■ SELECTING THE INSTALLATION LOCATION

✱ A small amount of noise is generated from the operating EV kit, so it should be installed away from the living quarters, such as above the ceiling.

✱ Do not install the unit outdoors.

✱ Install the unit where it can be accessed for servicing or creating an opening for inspections.



✱ Keep the installed piping and wiring length under 5m.

✱ The piping length might be made shorter than 5 m depending on the installation style.

CAUTION
Do not install EV kit in a location with any of the following conditions. • Outdoor • There is the danger of combustible gas leakage • Near a fire place or other heating appartatus. • There is oily smoke, machine oil (i.e. factory),salty envilopment with direct sea breeze. • There is too much of dust. • Corrosive gas such as sulphurous acid gas is generated. • Not well-ventilated place not avoiding rains and direct sunlight.

INSTALLATION

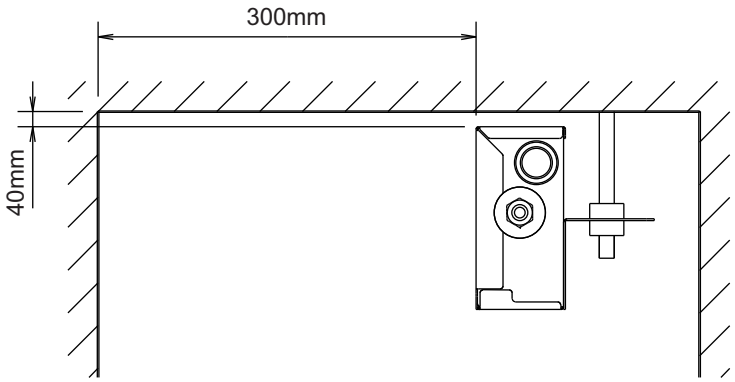
Decide the mounting position with the customer as follows:

(1) Install EV kit level on strong wall, floor, ceiling which is not subject to vibration.

(2) Install EV kit where the connection pipe can be easily installed.

(3) Install EV kit where vibration and noise are not amplified.

(4) Take servicing, etc. into consideration and leave the space as follows

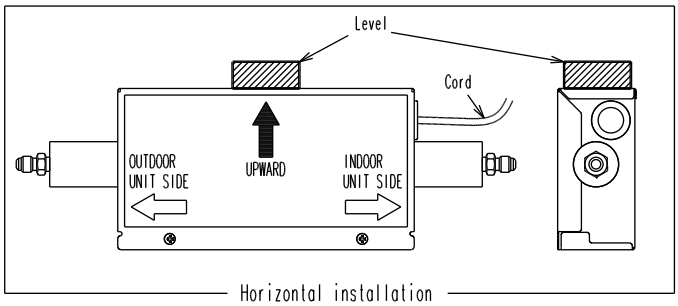


■ INSTALLATION METHOD

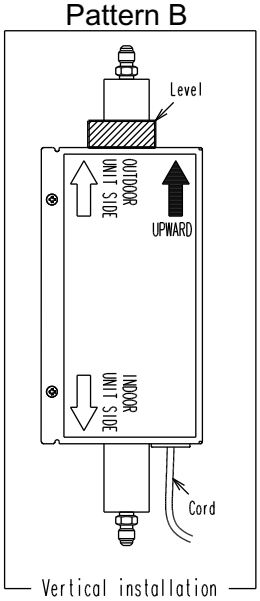
CAUTION

The installation direction can be either horizontal (Pattern A) or vertical (Pattern B), but keep the inclination within 5º.

Pattern A



Pattern B

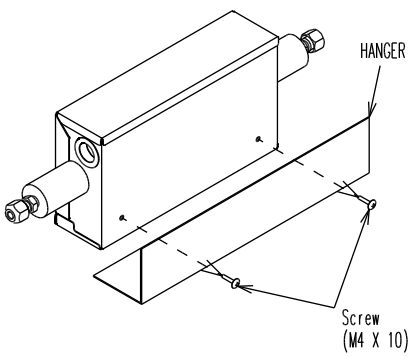


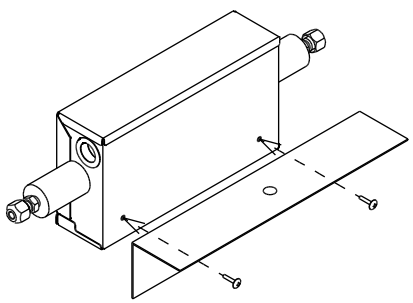
Incorrect installation direction or angle could cause improper operation.

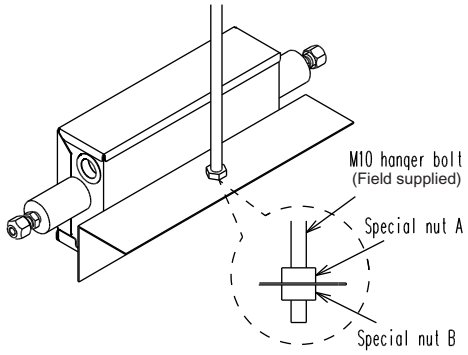
● Suspended installation

(1) Remove the 2 screws (M4x10) and replace them with the hanger.

(2) Use the hanger bolts to fasten the hanger.

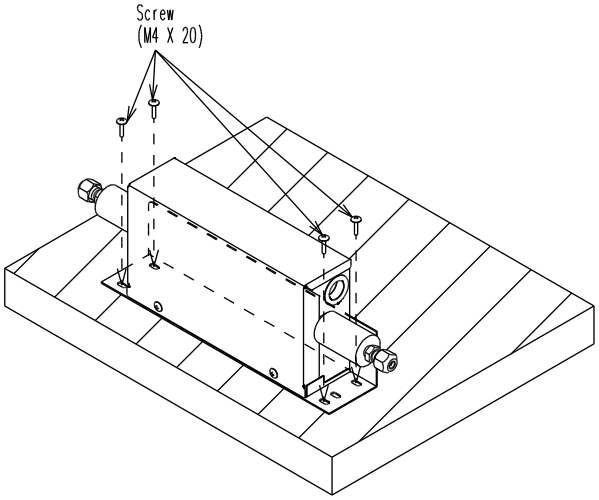






● Floor installation

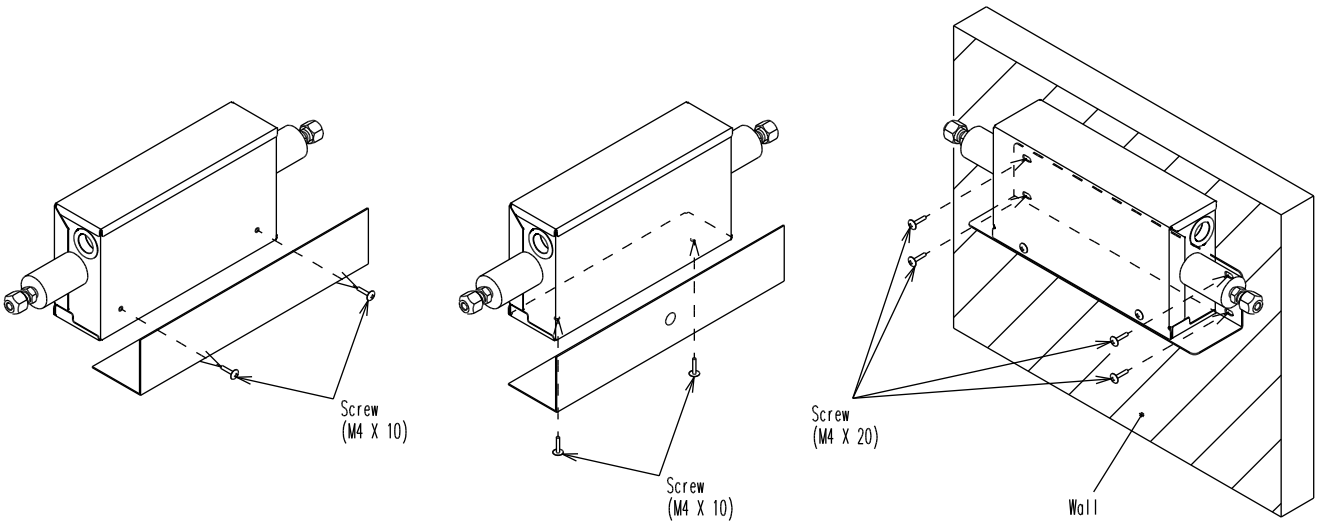
✳ Use the 4 screws to fasten the unit to the floor.



● Wall mounted installation

(1) Remove the 2 screws (M4x10) and replace them with the hanger.

(2) Use the 4 screws (M4x20) to fasten the unit to the wall.

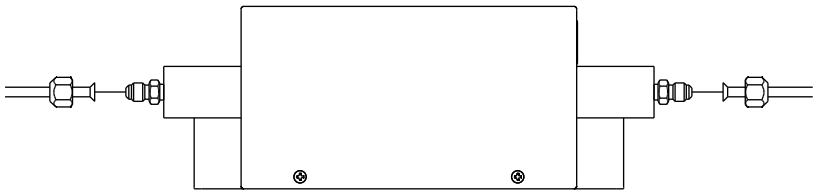


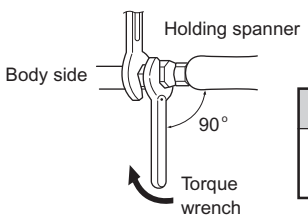
■ CONNECT THE PIPES

✳ Connect EV kit piping to liquid pipe of compact wall mounted (Comfort model) indoor unit.

Pipie size	Indoor unit side	ϕ 6.35mm	Flare connction
	Outdoor unit side	ϕ 6.35mm	

Use a toruque wrench to tighten the flare nut.

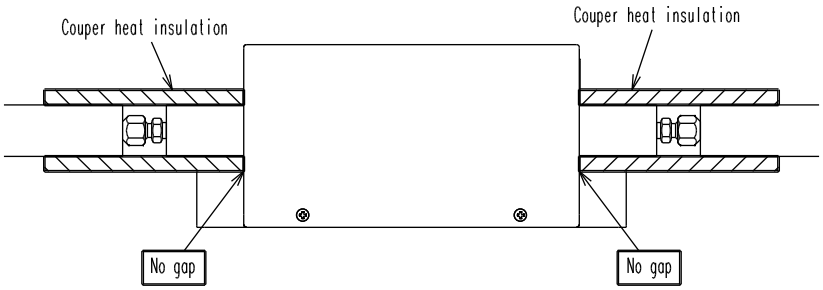




Pipe	Tightening torque
ϕ 6.35 (1/4")	16.0 to 18.0 N•m

■ ATTACH THE INSULATION MATERIAL

Insulate by the coupler heat insulation arround the pipe.

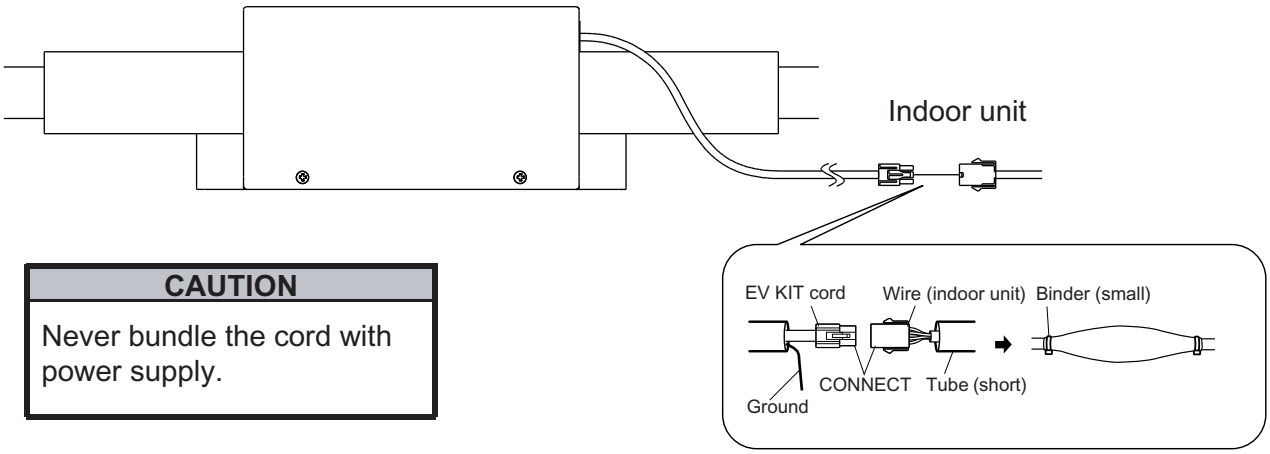


■ WIRING PROCEDURE

(1) Connect the EV kit cord to the indoor unit.

(2) Wrap the tube arround the connection, and fasten both ends binders.

(3) Connect the ground to the indoor unit.



CAUTION

Never bundle the cord with power supply.

■ SPECIFICATIONS

Model name	UTR-EV09XA	UTR-EV14XA
Dimensions (mm) (H x W x D)	121 x 416 x 65	
Weight (g)	1500	
Connection cord length (m)	5	

INSTALLATION

5-6-5. ELECTRICAL WIRING

Always perform the installation referring to the installation instruction sheet, based on your local regions related laws and regurations,and electric company

⚠ WARNING
Before starting work, check that power is not being supplied to the outdoor unit.
Connect the connection cord firmly to the terminal board. Imperfect installation may cause a fire.
Always fasten the outside covering of the connection cord with the cord clamp. (If the insulator is chafed,electric leakage may occur.)
Always connect the ground wire.

• Connect wiring to the terminals

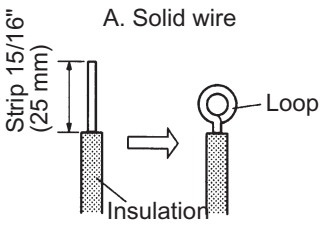
A. For solid core wiring (or F-cable)

Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 15/16"(25 mm) to expose the solid wire.

Using a screwdriver, remove the terminal screw(s) on the terminal board.

Using pliers, bend the solid wire to form a loop suitable for the terminal screw.

Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a screwdriver.



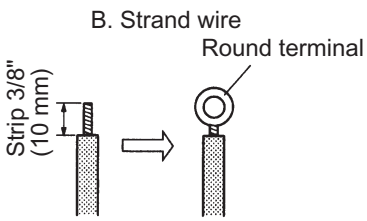
B. For strand wiring

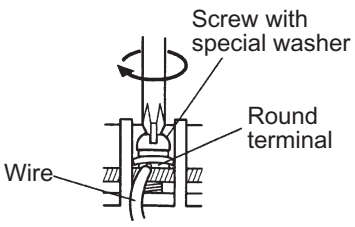
Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 3/8" (10 mm) to expose the strand wiring.

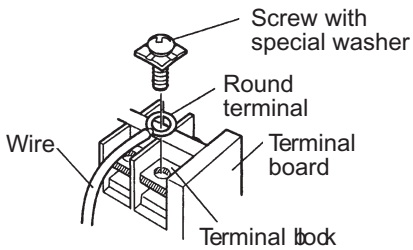
Using a scre wdriver, remove the terminal screw(s) on the terminal board.

Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.

Position the round terminal wire, and replace and tighten the terminal screw using a screwdriver.





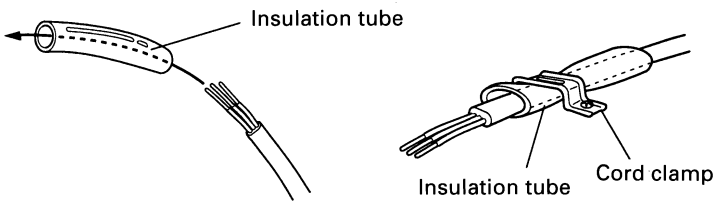


INSTALLATION

• Fix the connection cord and power supply cord at the cord clamp

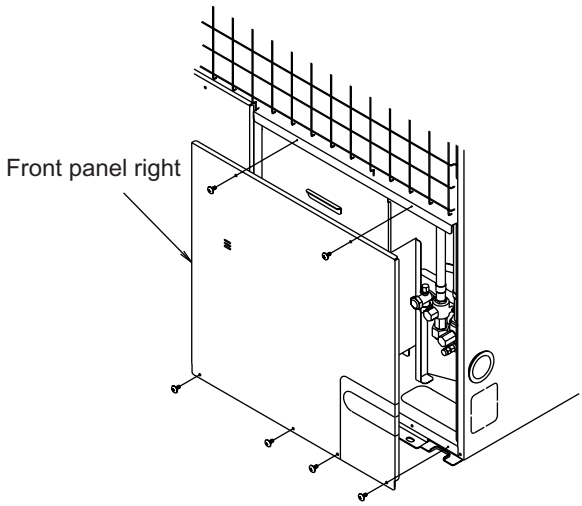
After passing the transmission cord and power supply cord through the insulation tube, fasten it with the cord clamp.

Use VW-1,0.5 to 1.0mm thick, PVC tube as the insulation tube.

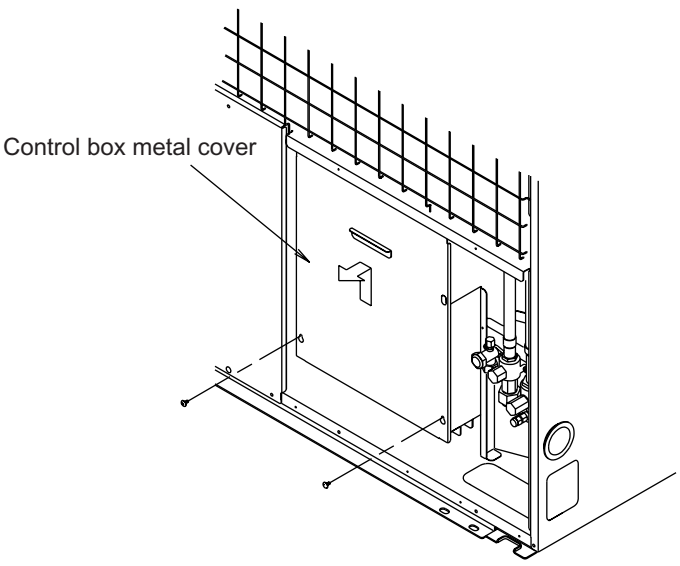


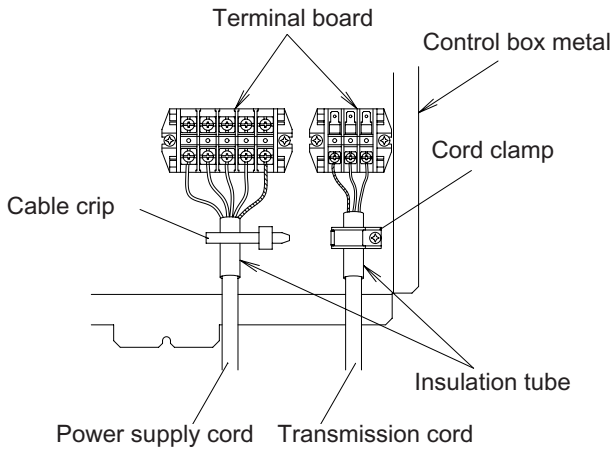
■ OUTDOOR UNIT

(1) Remove the front panel right.



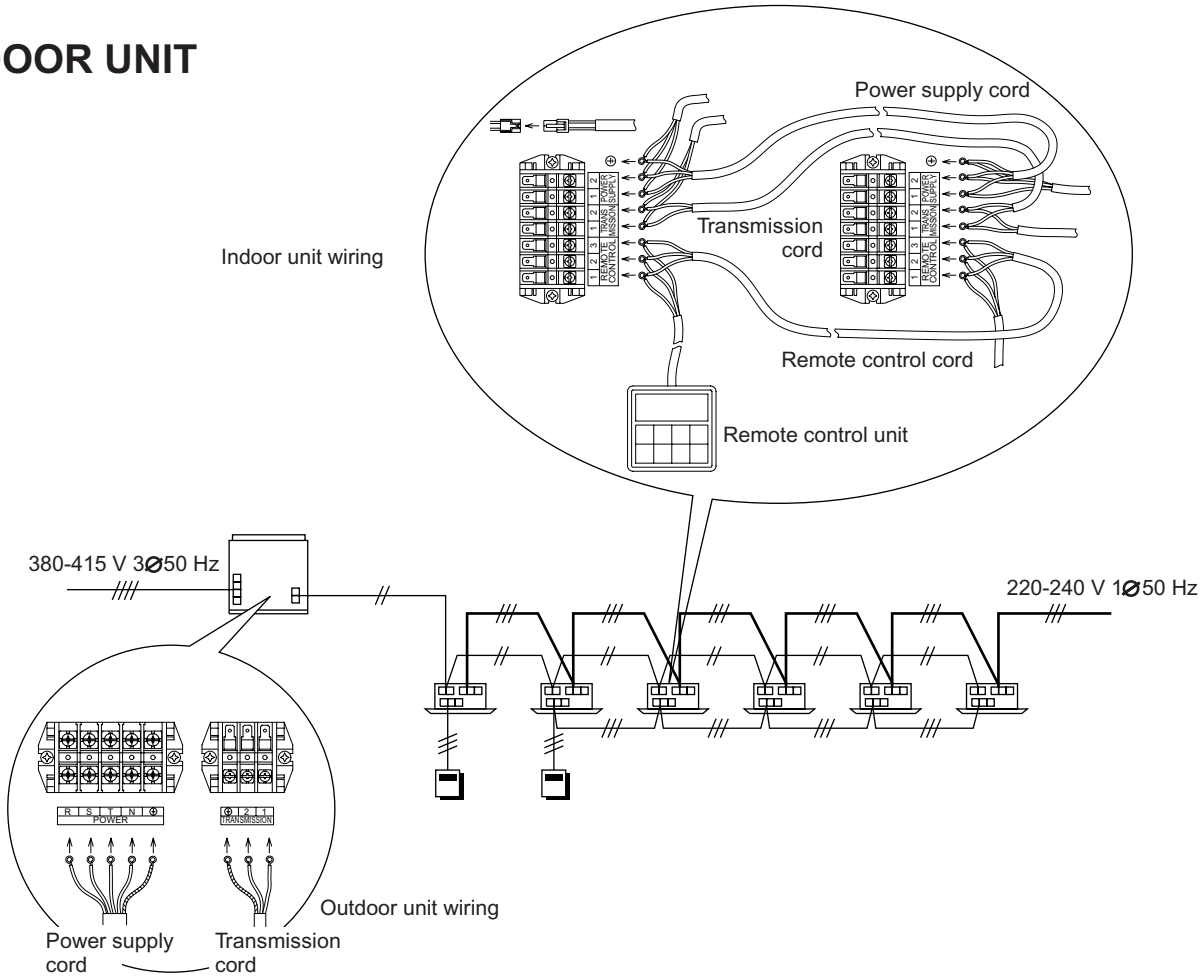
(2) Remove control box metal cover and connect the power supply cord and transmission cord.





INSTALLATION

■INDOOR UNIT



INSTALLATION

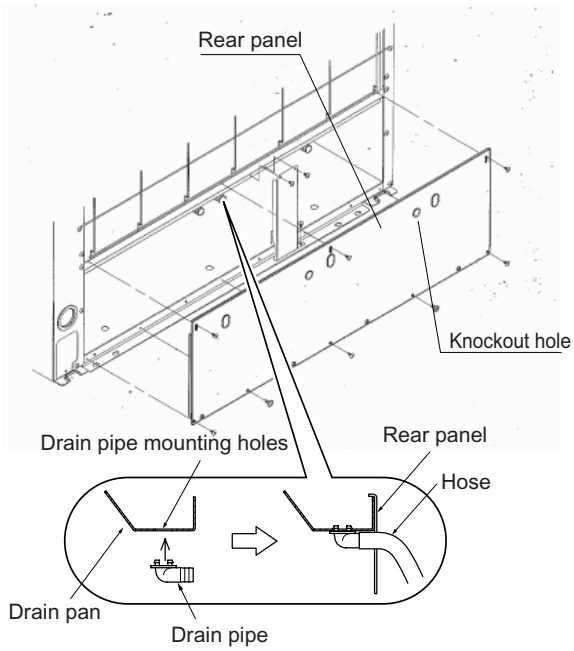
⚠ CAUTION
Use care to wire properly. (Miss-wiring will result in damage.)
Never bundle the power supply cord, transmission cord and remote controller cord together. Bundling these cords together will cause misoperation.
The total length of the transmission cord should not exceed 500 meters. Note that the total length of the transmission cord can be extended to 2,000 meters if the optional signal amplifier is used.
The power source capacity must be the sum of the air conditioner current and the current of other electrical appliances.When the current contracted capacity is insufficient,change the contracted capacity.
When the voltage is low and the air conditioner is difficult to start, contact the power company to raise electrical voltage.

⚠ WARNING
[1 phase TYPE] **The rated voltage of this product is 220-240V A.C.50 Hz.** **Before turning on verify that the voltage is within the 198 V to 264 V range.** **[3 phase TYPE]** **The rated voltage of this product is 380-415 V 3ϕ 50 Hz.** **Before turning on verify that the voltage is within the 342 V to 457 V range.**
Always use a special branch circuit and install a special receptacle to supply power to the air conditioner.
Use a circuit breaker and receptacle matched to the capacity of the air conditioner.
Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.
Install a leakage circuit breaker in accordance with the related laws and regulations and electric company standards.

5-7. DRAIN CONNECTION

5-7-1. OUTDOOR UNIT

Please connect the hose when the processing of the drain water of the installation in the room etc. is necessary by the following method.



* Remove the rear panel.

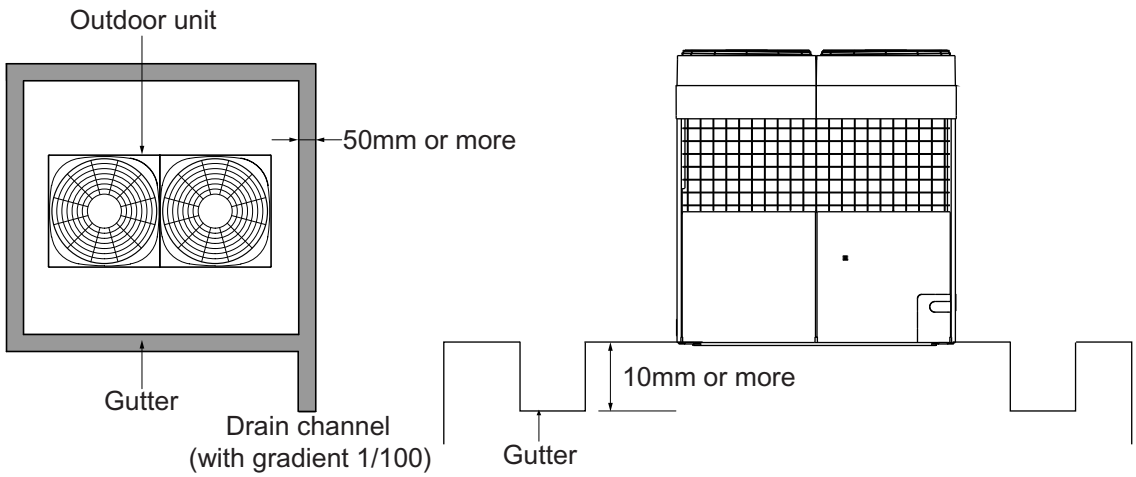
* Since the drain water flows out of the outdoor unit during heating operation, install the drain pipe and connect it to an commercial 16 mm hose.
  (When heating the outdoor temperature is 0°C or less, construct so that drain water from the outdoorunit will not freeze in the drain pipe.)

* Always use a drain pipe at three places.

INSTALLATION

⚠ CAUTION

Drain water will leak from the bottom of outdoor unit during cooling / heating operation,even if the drain pipe is connected.To prevent the area surrounding the outdoor unit from getting wet,install a gutter surrounding the outdoor unit as shown in the figure below for drain water.

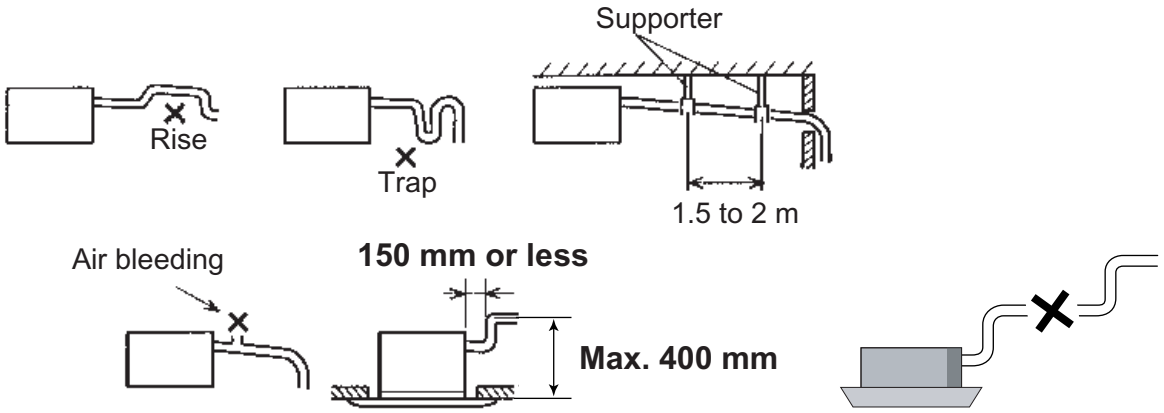


5-7-2. INDOOR UNIT

General Rules of drain process

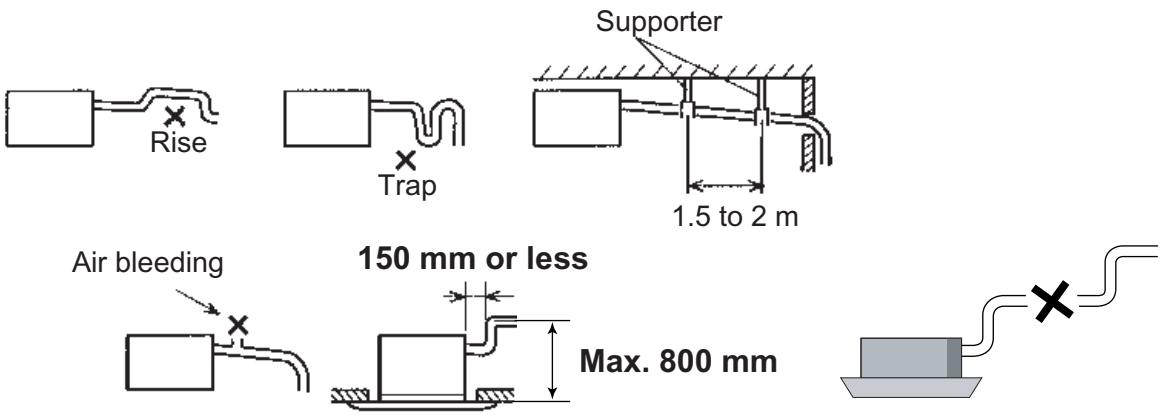
- ✳ Install the drain pipe with downward gradient (1/100 or more) and so there are no rises in the pipe.
- ✳ Use general hard polyvinyl chloride pipe (VP25) and connect it with adhesive (polyvinyl chloride) so that there is no leakage.
- ✳ Support the drain pipe with supporters each 1.5 to 2m.
- ✳ Do not perfrom air bleeding.
- ✳ Always heat insulate the indoor side of the drain pipe.

■ COMPACT CASSETTE TYPE



- ✳ When desiring a high drain pipe height, raise it up to 400 mm or less from the ceiling within a range of 150 mm from the body.
- ✳ A rise dimension over this range will cause leakage.

■ CASSETTE TYPE



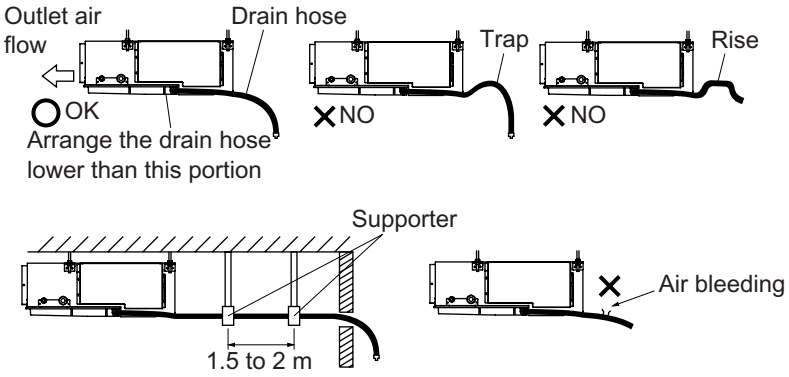
- ✳ When desiring a high drain pipe height, raise it up to 800 mm or less from the ceiling within a range of 150 mm from the body.
- ✳ A rise dimension over this range will cause leakage.

INSTALLATION

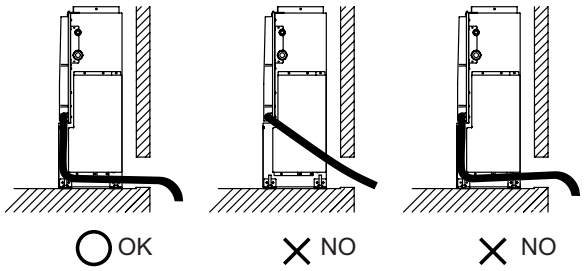
■COMPACT DUCT TYPE

Drain port : O.D ⌀26mm

A. CEILING CONCEALED SETTING



B. FLOOR STANDING CONCEALED SETTING



⚠ CAUTION

Connect the drain hose so that the control box cover can easily be removed for servicing when necessary.

In order to prevent water from leaking into the control box, make sure that the piping is well insulated.

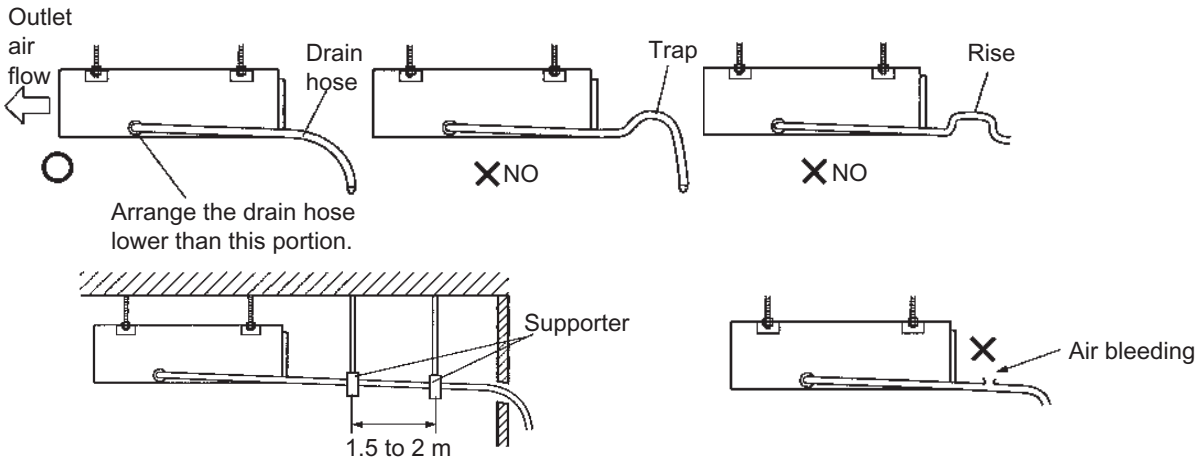
After finishing the piping, the drain hose installation and the wiring, seal the holes in the wall.

INSTALLATION

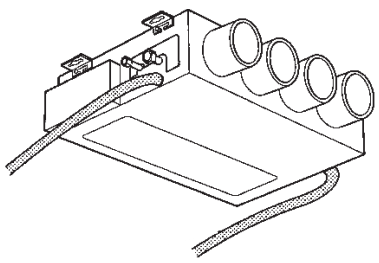
INSTALLATION

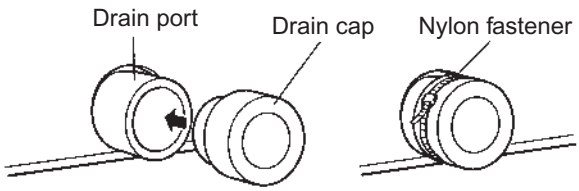
■LOW STATIC PRESSURE DUCT TYPE / DUCT TYPE

Drain port : O.D ⌀38mm



- ✳ The outside diameter of the drain port is 38 mm. Use a suitable drain hose.
- ✳ There is a drain port on both the left and right sides. Select the drain port to match the local conditions





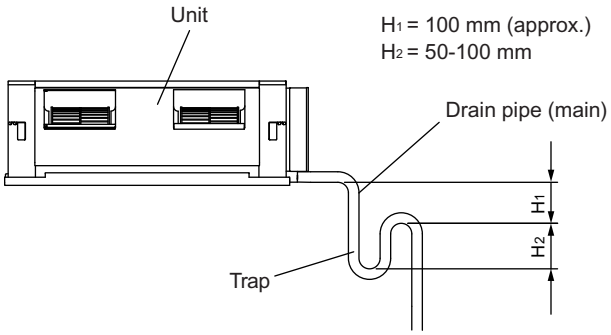
⚠ CAUTION

Always check that the drain cap is installed to the unused drain port and is fastened with the nylon fastener. If the drain cap is not installed, or is not sufficiently fastened by the nylon fastener, water may drip during the cooling operation.

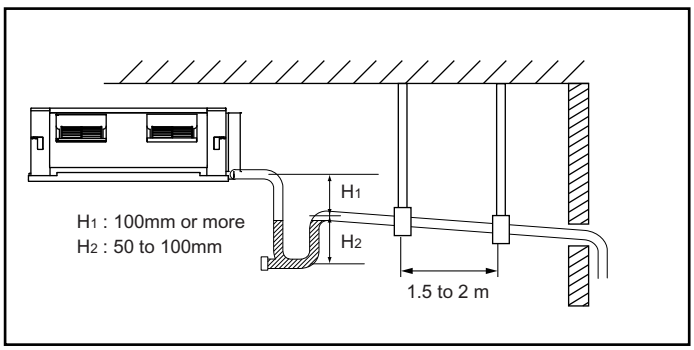
■HIGH STATIC PRESSURE DUCT TYPE

Drain port : O.D ⌀38mm

● Main drain pipe



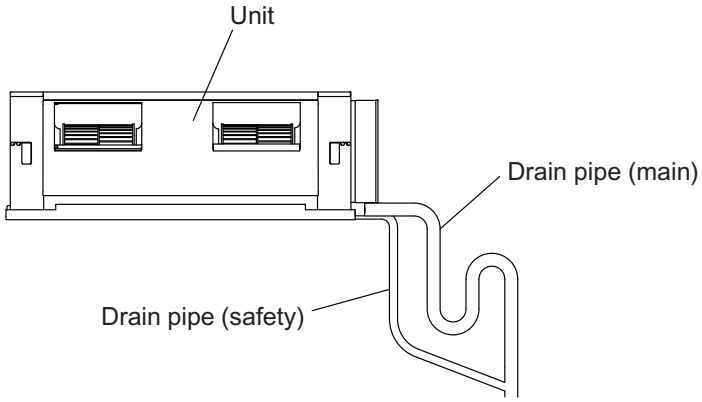
* Install the drain hose so that there is a trap.
* The position of the installed drain hose should have a downward gradient of (1/100 or more).
* Make sure that the drain hose is installed without rises.
* Make the trap near to the indoor unit.



* Be sure to provide a drain trap for indoor units that have a large negative pressure in the area of the drain pan outlet.
* Provide one trap for each indoor unit. A trap will have no effect if positioned after the flows from multiple indoor units have joined together.
* Position the trap in a location where it can be cleaned.

● Safety drain pipe

There is no need to provide a trap for the safety drain pipe. If the safety drain pipe is connected to the main drain pipe, make the connection below the trap on the main drain pipe.

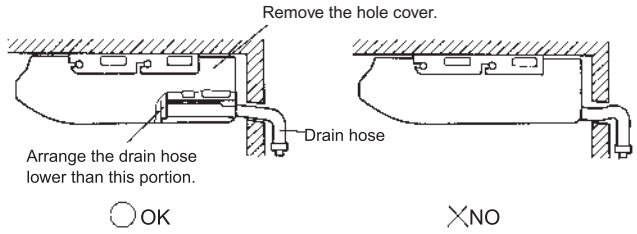


Once installation is complete, check the flow of the drain water.

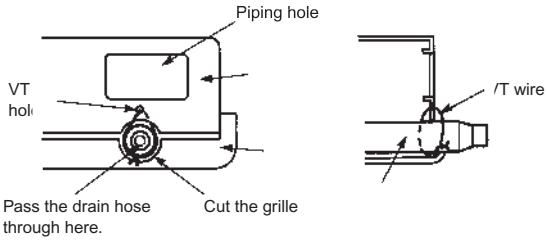
INSTALLATION

■FLOOR / CEILING TYPE

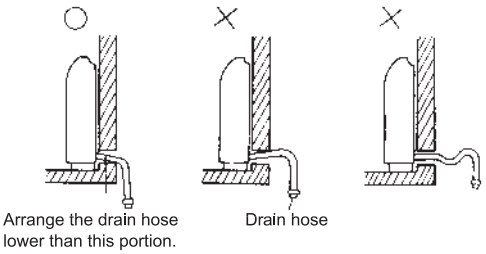
A.UNDER CEILING SETTING

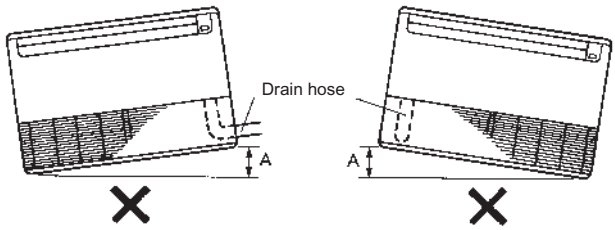


When drain hose is arranged backward.
Secure the drain hose with the VT wire (Fig. 20).



B.FLOOR CONSOLE SETTING





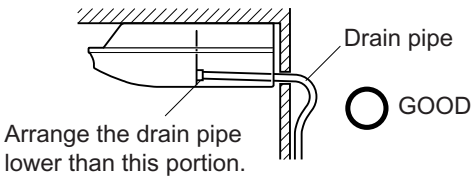
***Do not install the unit so that the drain hose side is too high.**
Height A should be less than 5mm.

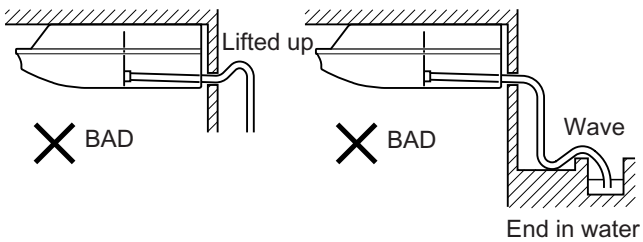
INSTALLATION

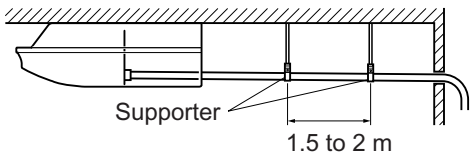
INSTALLATION

■CEILING TYPE

Drain port : O.D ⌀38mm

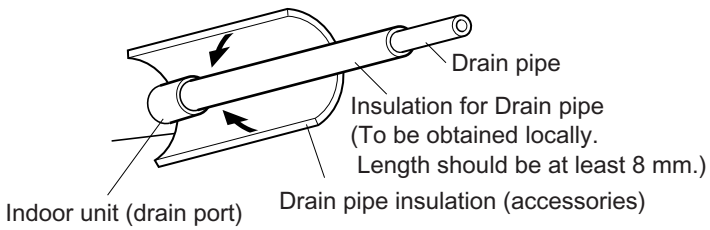


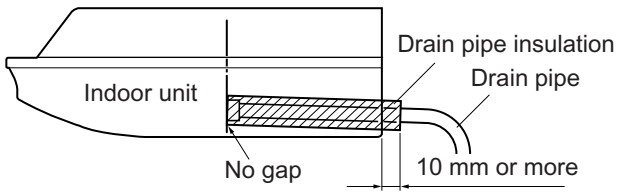




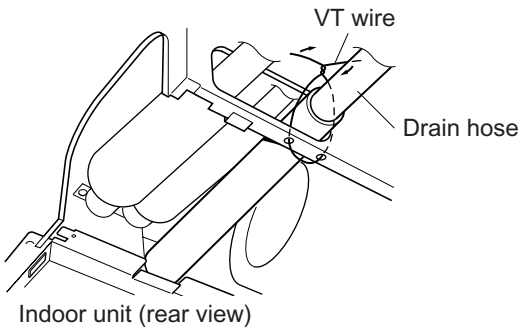
(1) Install insulation for the drain pipe.

Cut the included insulation material to an appropriate size and adhere it to the pipe.



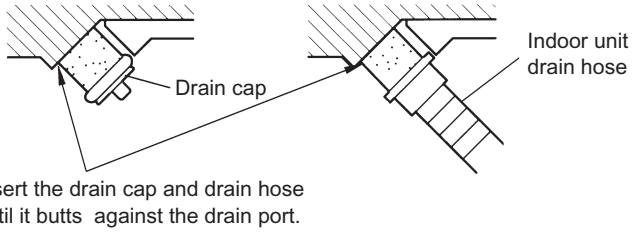


(2) If "1 Right rear piping" :fasten the drain pipe with VT wire so that the pipe slopes correctly within the indoor unit .



■ COMPACT WALL MOUNTED TYPE

Drain hose is attached.



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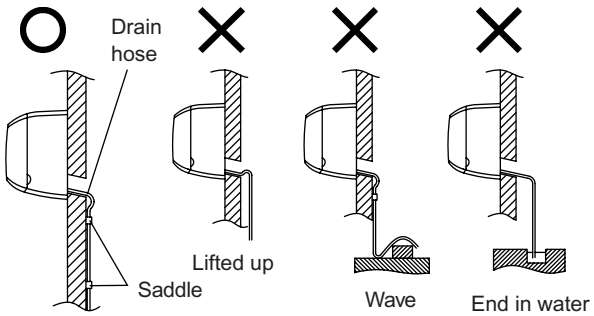
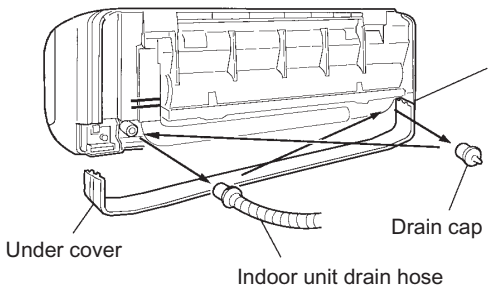


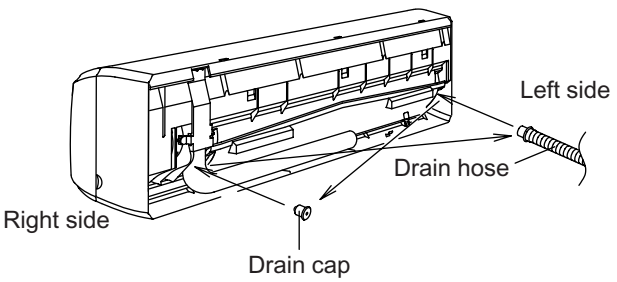


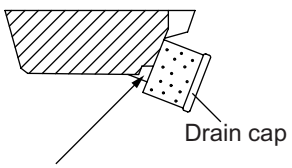
For left outlet piping, cut off the piping outlet cutting groove with a hacksaw.

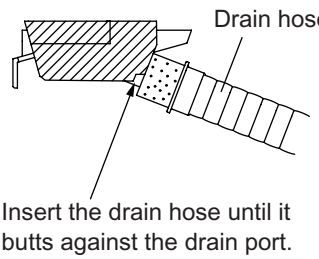
Remove the drain cap by pulling at the projection at the end of the cap with pliers, etc.

■ WALL MOUNTED TYPE

Drain hose is attached.







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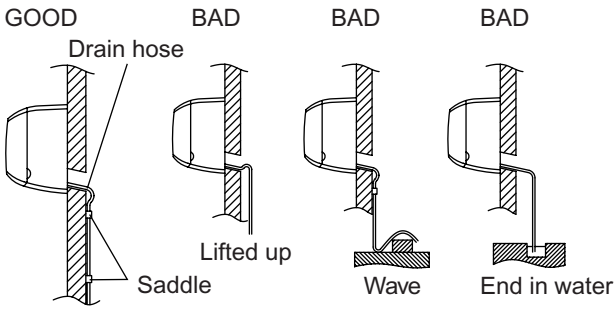
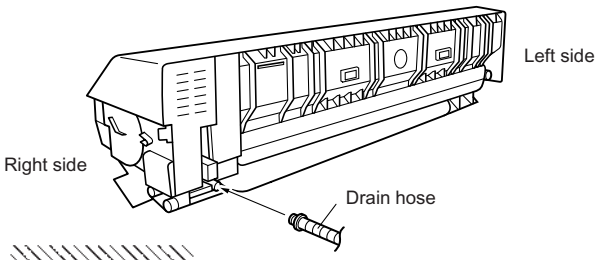


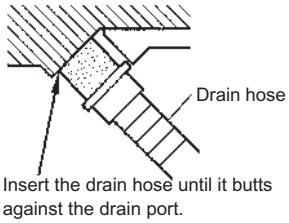
INSTALLATION

■ CEILING WALL TYPE

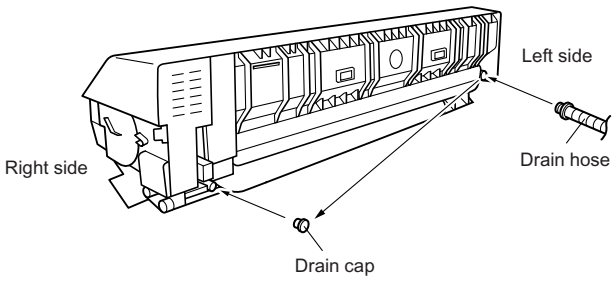
Drain hose is attached.

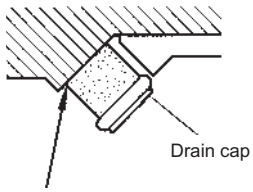
Mount the drain hose to the drain port on the right side.

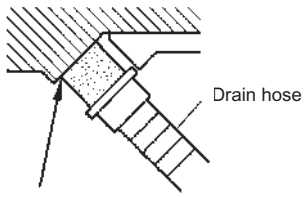




Remove the drain cap and mount to the drain port on the right side.
Mount the drain hose to the drain port on the left side.







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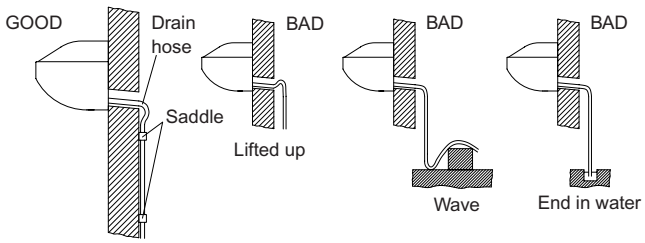
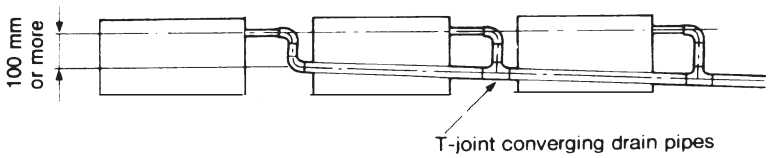
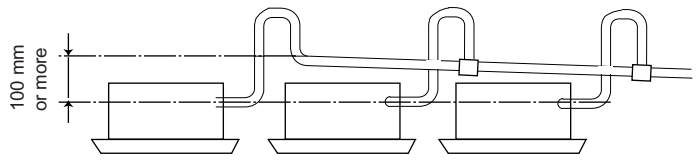


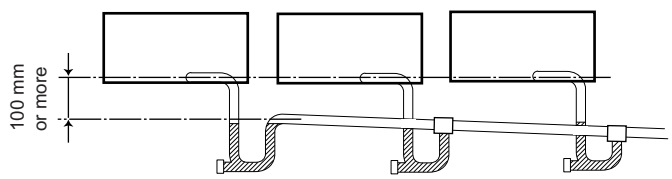
■ CENTRAL DRAIN PROCESS

When converging multiple drain pipes , install according to the procedure shown below.





For High static pressure duct type



Select converging drain pipes whose gauge is suitable for the operating capacity of the unit.

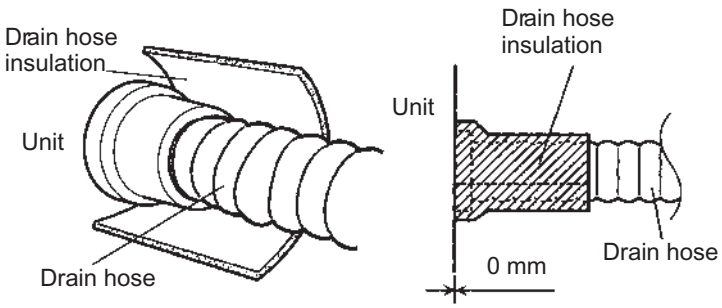
INSTALLATION

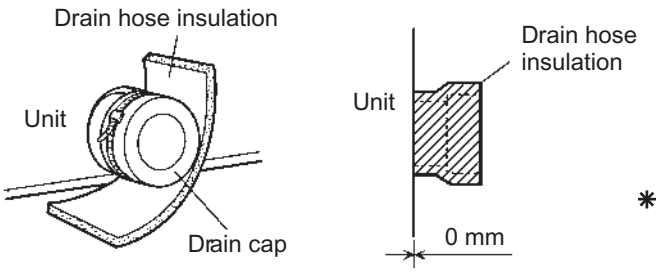
■ DRAIN INSULATION

✳ Please confirm water is injected into Drain pan of the indoor unit, and drain is done normally when the connection of Drain hose is completed.

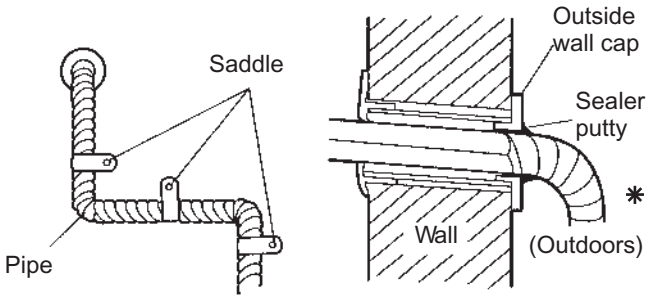
✳ Please check whether there is water leak part in the Drain piping.

✳ Please insulate it from heat by the heat insulator of enough thickness so that there is no be dewy when the confirmation ends. It causes the water leak like being imperfect.

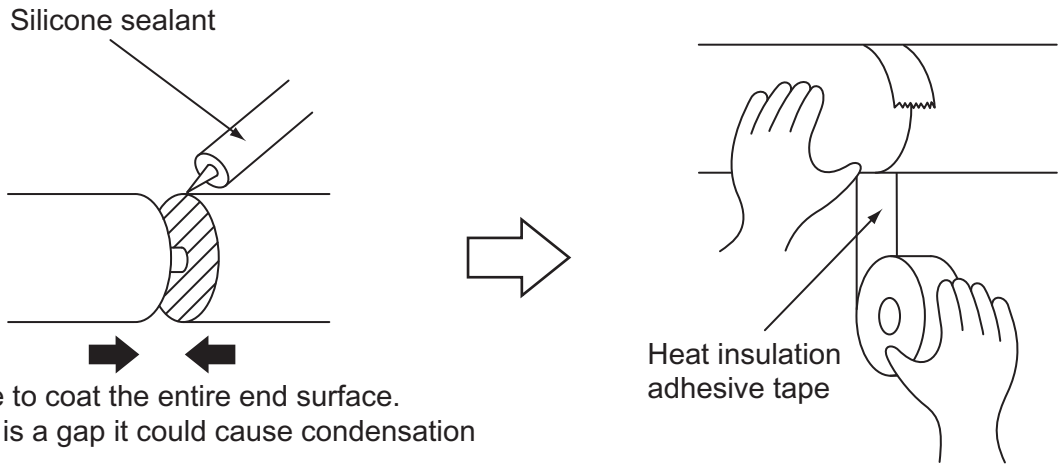




✳ Please roll the heat insulator also on the Drain cap side.(some models)



✳ Please cover the space with the putty etc. when you put out Drain hose from the wall.



✳ Be sure to coat the entire end surface.
If there is a gap it could cause condensation

INSTALLATION

5-8. TEST RUN

■ TEST RUN METHOD

The procedures for performing the test run are desribed below.
(Supply power for at least 12 hours before starting operation in the winter.)

(1) Perform a test run (cooling) separately for each indoor unit that is connected to the refrigerant system,and check the operation in order to confirm there is no problem on the wiring connection and the address.

(2)Perform a test run (cooling) simultaneously for all indoor units are connected to the refrigerant system,and check the operation in order to confirm all installation is completed.

• Test operation using circuit board (Outdoor unit)

If the test operation is to be done for cooling operation, set DIP switch (SW1-1) to on. If the test operation is to be done for heating, set DIP switch (SW1-2) to on.

• Test operation using remote controller

Refer to the installation instruction sheet for the indoor unit.

■ CHECK LIST

	Check item	Checking Method	Standard
1	After operating the indoor unit, the compressor operates?	Check operation sound and the LED of outdoor unit PCB.	Outdoor unit LED 3 :flushing
2	High pressure and low pressure are normal?	Confirm with a pressure gauge	Cooling : Low pressure 0.4 MPa (approx.) Heating : High pressure 2.0 MPa (approx.)
3	Intake and outlet air Temperature of indoor unit are normal?	Check that there is a difference between the intake and outlet air temperatures.	Cooling : Below -10˚C (approx.) Heating : Above 15˚C (approx.)
4	Water is drained from drain hose or by the drain pump smoothly? (Only for cooling mode)	Check operation sound of the drain pump.	—
		Confirm water is draining.	—
5	Expansion valve of the stopped indoor unit are normal?	Check the refrigerant flows to the heat exchanger.(Wait at least 5 minutes after the indoor unit has stopped before checking the refrigerant.)	Cooling : No refrigerant flow Heating : A little refrigerant flow

INSTALLATION

5-9. COMPATIBILITY OF VRF SYSTEM

■ COMPATIBILITY OF V series and S series

● OUTDOOR UNIT AND INDOOR UNIT

Compatibility of outdoor unit and indoor unit in refrigerant system as follows.

✱ "V series outdoor unit" and "S series indoor unit" are not allowed to connect.

			Indoor unit	
			V series	S series
Outdoor unit	V series	Heat Pump Cooling Only	○ OK	× NO GOOD
	S series	Heat Pump Cooling Only	○ OK	○ OK
		Heat Recovery	○ OK	○ OK

Applicable S series outdoor unit

HEAT PUMP, COOLING ONLY : MODEL CHANGE CODE "C"
HEAT RECOVERY : MODEL CHANGE CODE "B"

Applicable S series Indoor unit

MODEL CHANGE CODE "C" or later

● EXAMPLE CASES FOR COMPATIBILITY

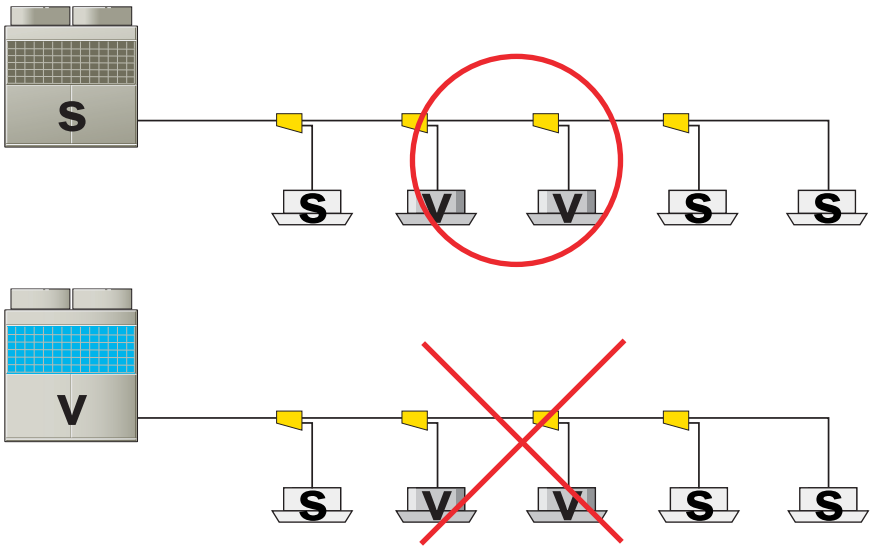
	OUTDOOR UNIT	INDOOR UNIT	
CASE 1	V series	V series	○ OK
CASE 2	V series	S series	× NO GOOD
CASE 3	S series	V series	○ ✱1 OK
CASE 4	S series	S series	○ OK

✱ Due to higher design pressure of V series(R410A) , S series indoor units has not permitted to connect V series outdoor unit.

✱1 • Following model of V series indoor unit can not be connected to S series outdoor unit.
ARXC90 High static pressure duct model.
• Following model of V series indoor unit can not be connected to S series Heat Recovery outdoor unit.
AS✱E07,09,12,14 Compact wall mounted model.

INSTALLATION

• For a same refrigerant system on S series,
V series and S series indoor units can be used together.

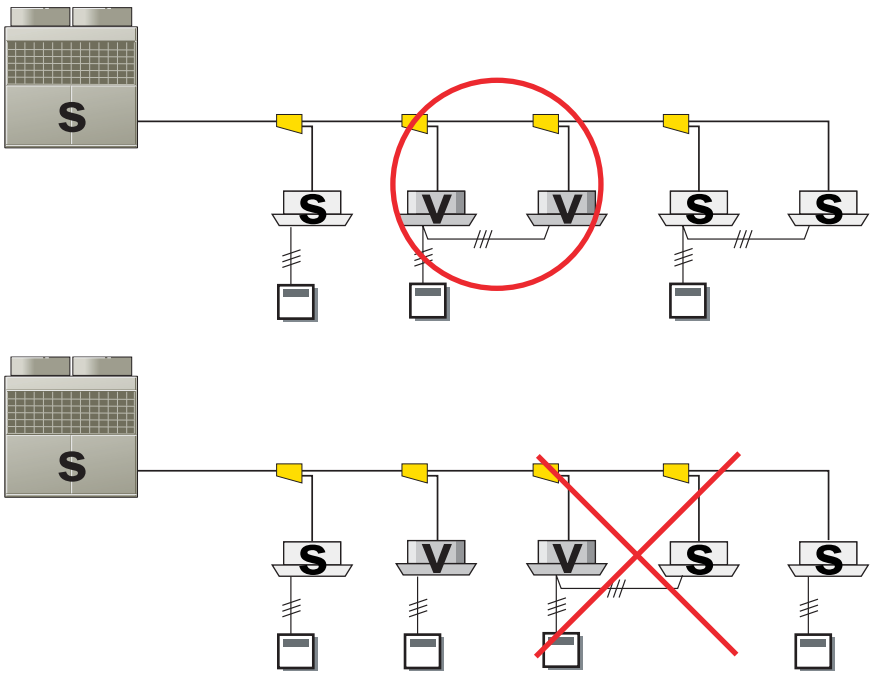


See on the previous page.
S series indoor unit can't be used with V series outdoor unit.

● INDOOR UNIT AND REMOTE CONTROLLER

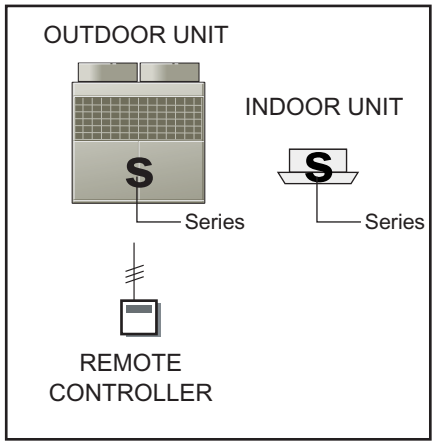
Compatibility of indoor unit and remote controller in remote controller group is follows.

• V series and S series indoor unit are not allowed to connect in same remote controller group.



✳ Built in remote sensor on wired RC doesn't work in S series indoor unit.

✳ Up to 16 indoor units can be connected to 1 remote controller.



■ COMPATIBILITY OF S Series

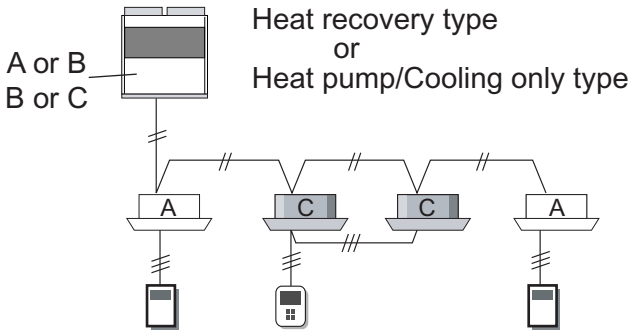
● OUTDOOR UNIT AND INDOOR UNIT

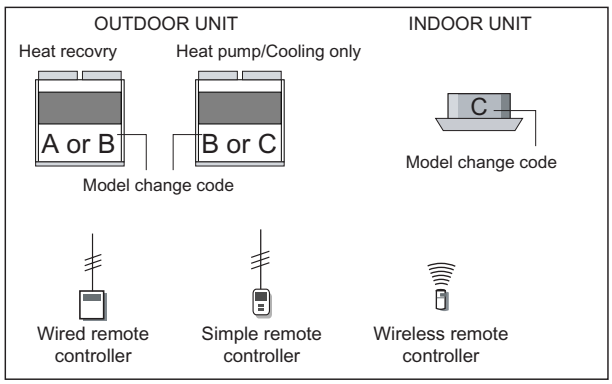
Compatibility table between Indoor unit and Outdoor unit

			Indoor unit		
			All model	Except for AS7-14	AS7-14
		Model change code	A or B (2000～2002)	C (2002～)	C (2002～2004) D (2005～)
Outdoor unit	Heat recovery type	A (2000～2005) B (2005～)	○	○	×
	Heat pump type Cooling only type	B (2002～) C (2005～)	○	○	○

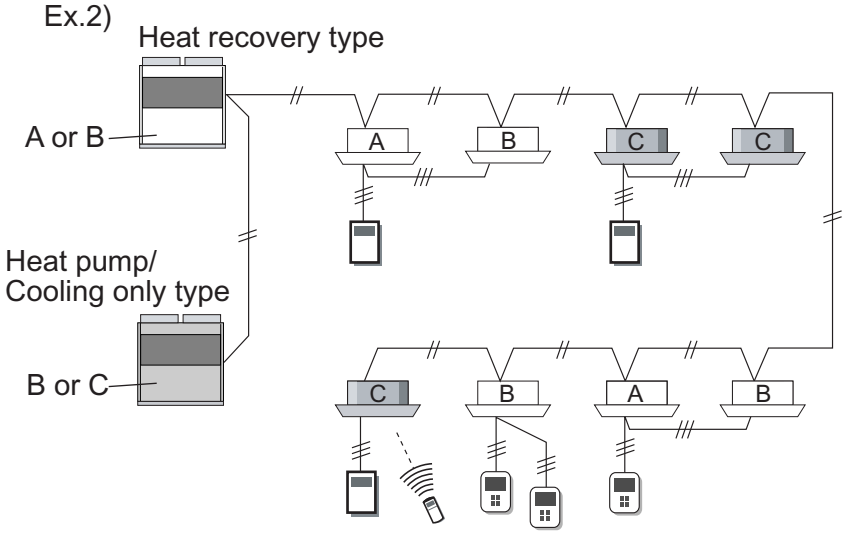
("A", "B", "C" ,"D" : MODEL CHANGE CODE)

Ex.1)





Ex.2)



Compact wall mounted type indoor unit (AS7 - 14) can't be operated by Heat recovery type outdoor unit.

In case of making remote controller group, refer to next page.

INSTALLATION

●Remote controller and remote controller group

Compatibility table

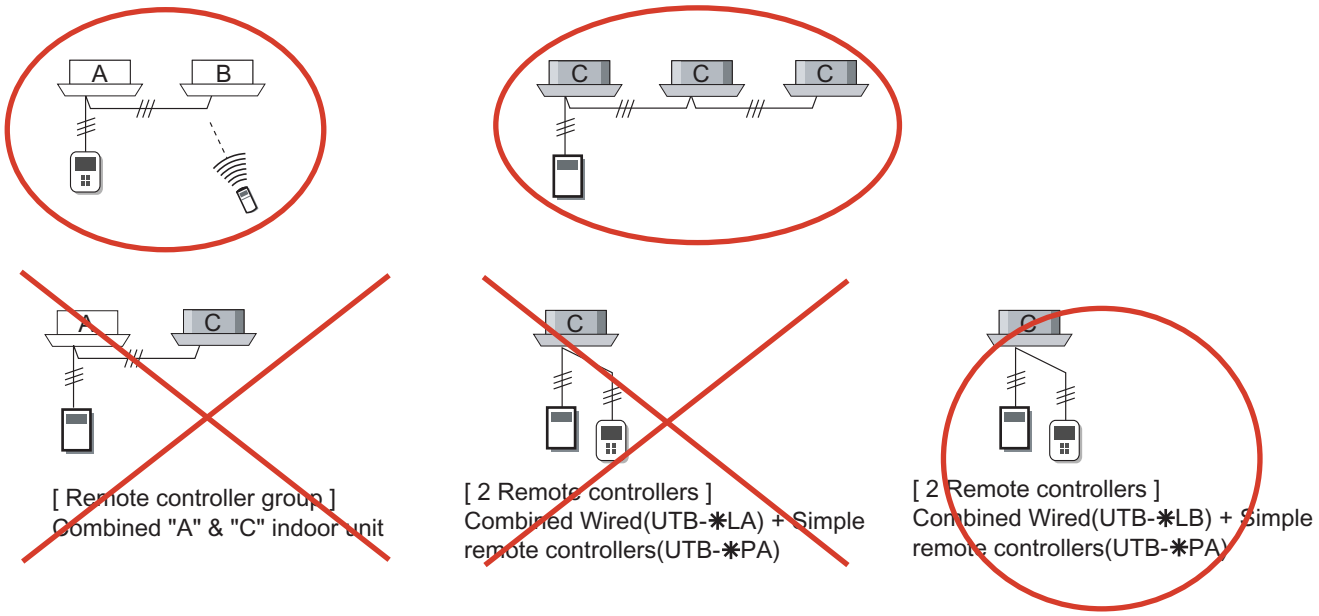
Combination of Indoor unit \ Combination of remote controller		1 Wired remote controller	1 Simple remote controller	1 Wireless remote controller	COMBINATION OF 2 REMOTE CONTROLLERS
Indoor unit	"A" "B"	○	○	○	See table below (Remote controller compatibility table)
	"C"	○	○	○	
Remote controller group (Combination of indoor unit)	"A" & "A" "A" & "B" "B" & "B"	○	○	○	
	"C" & "C" "C" & "D" "D" & "D"	○	○	○	
	"A" or "B" & "C" or "D"	×	×	×	×

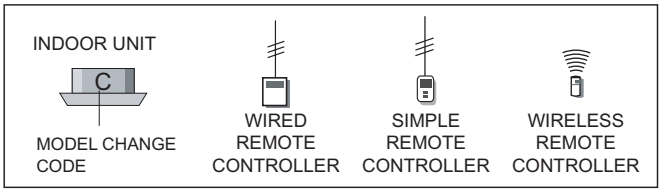
Remote controller compatibility table

		Wired			Wireless * 1)	Simple
		UTB-✳UB * 2) UTB-✳UA	UTB-✳LB	UTB-✳LA	UTB-✳VB UTB-✳VA UTB-✳SA	UTB-✳PA UTB-✳PB UTB-✳RA
Wired	UTB-✳UB * 2), UTB-✳UA	○	○	×	○	○
	UTB-✳LB	○	○	×	○	○
	UTB-✳LA	×	×	○	○	×
Wireless	UTB-✳VB, UTB-✳VA, UTB-✳SA	○	○	○	○	○
Simple	UTB-✳PA, UTB-✳PB, UTB-✳RA	○	○	×	○	○

* 1) AS7 - AS14 are only available for wireless remote controller.
* 2) Build-in thermo sensor doesn't work in S series system.

Ex.)





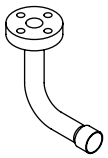
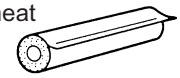
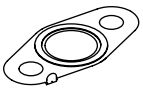
INSTALLATION

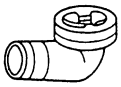
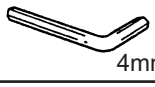
5-10. STANDARD ACCESSORIES

5-10-1. OUTDOOR UNIT

■HEAT PUMP TYPE

The following installation parts are supplied. Use them as required.

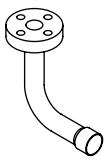
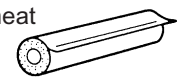
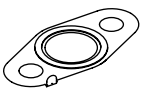
Description	Q'ty	Application
Flange joint assembly 	1	For connecting the piping
Coupler heat insulation 	1	For outdoor side pipe joint
Gasket 	1	Installation between flange joint assembly and valve B
Bolt	2	For fixing the flange joint assembly

Description	Q'ty	Application
Drain pipe 	3	For outdoor unit drain piping work (Heat pump type only)
Hexagon wrench  4mm	1	For opening the refrigerant valve on the outdoor unit

INSTALLATION

■COOLING ONLY TYPE

The following installation parts are supplied. Use them as required.

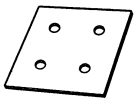
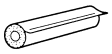
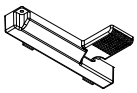
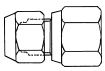
Description	Q'ty	Application
Flange joint assembly 	1	For connecting the piping
Coupler heat insulation 	1	For outdoor side pipe joint
Gasket 	1	Installation between flange joint assembly and valve B
Bolt	2	For fixing the flange joint assembly

Description	Q'ty	Application
Hexagon wrench 4mm	1	For opening the refrigerant valve on the outdoor unit

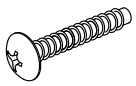
5-10-2. INDOOR UNIT

■ COMPACT CASSETTE TYPE

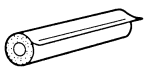
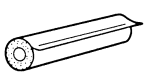
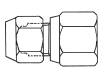
INDOOR UNIT ACCESSORIES

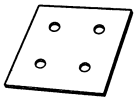
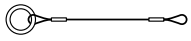
Name and Shape	Q'ty	Name and Shape	Q'ty	Name and Shape	Q'ty
Coupler heat insulation (Large)	1	Template 	1	Special nut A (Large flange)	4
Coupler heat insulation (Small) 	1	Binder	Small 2	Special nut B (Small flange)	4
Wire cover 	1		Large 4	Tapping screw (ϕ4 x 14)	2
Adapter  Use as needed ϕ12.7-ϕ9.52 (AU07/09) ϕ9.52-ϕ6.35 (AU18)	1				

GRILLE ACCESSORIES

Name and Shape	Q'ty	Name and Shape	Q'ty	Name and Shape	Q'ty
Bolt 	4	Washer	4	Blower cover insulation	2

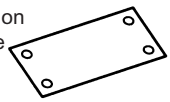
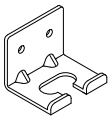
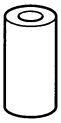
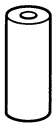
■ CASSETTE TYPE

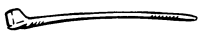
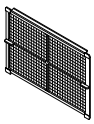
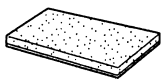
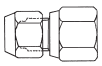
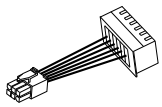
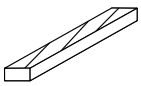
Name and Shape	Q'ty	Application
Binder (Laege)	4	For fixing the connection pipe (Large and Small)
Binder (Medium)	1	For power supply and transmission cord binding.
Binder (Small)	1	For remote control cord binding.
Coupler heat insulation (Small) 	1	For indoor side pipe joint (Small)
Coupler heat insulation (Large) 	1	For indoor side pipe joint (Large)
Adapter 	1	Use as needed ϕ9.52-ϕ6.35 (AU∗A20/25)

Name and Shape	Q'ty	Application
Special nut A (Large flange)	4	For suspending the indoor unit from ceiling.
Special nut B (Small flange)	4	
Template 	1	For suspending the indoor unit from ceiling.
Blower cover insulation	2	Use for static pressure more than 40 Pa.
Hook wire 	2	For installing intake grille.

INSTALLATION

■COMPACT DUCT TYPE

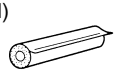
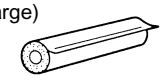
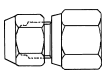
Name and Shape	Q'ty	Application
Installation template 	1	For positioning the indoor unit
Hanger 	4	For suspending the indoor unit from ceiling
Tapping screw (ϕ4 x 10)	8	For installing the hanger
Special nut A M10 Large flange	4	For suspending the indoor unit from ceiling
Special nut B M10 Small flange	4	
Coupler heat insulation (large) 	1	For indoor side pipe joint (large pipe)
Coupler heat insulation (small) 	1	For indoor side pipe joint (small pipe)

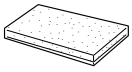
Name and Shape	Q'ty	Application
Binder 	Small 2	For transmission and remote control cord binding.
	Medium 1	For power supply cord binding.
	Large 4	For fixing the coupler heat insulation.
Filter 	2 (AR7/9)	
	3 (AR12/ 14/18)	
Drain pipe insulation 	1	Insulates the drain hose and vinyl hose connection
Adapter 	1	Use as needed ϕ12.7- ϕ9.52 (AR7/9) ϕ9.52- ϕ6.35 (AR18)
Wire 	1	Use for static pressure more than 25 Pa.
Insulation (outlet) 	2 (Small)	For outlet flange
	2 (Large)	

INSTALLATION

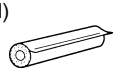
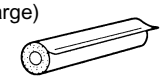
INSTALLATION

■DUCT TYPE

Name and Shape	Q'ty	Application
Binder (Large)	5	For fixing the connection pipe (Large and Small) and drain cap
Binder (Medium)	2	For power supply and transmission, remote control cord binding
Binder (Small)	2	For transmission and remote control cord binding
Coupler heat insulation (Small) 	1	For indoor side pipe joint (Small)
Coupler heat insulation (Large) 	1	For indoor side pipe joint (Large)
Adapter 	1	Use as needed ϕ9.52- ϕ6.35 (ARXA25L/ ARXB25L)

Name and Shape	Q'ty	Application
Special nut A (Large flange)	4	For suspending the indoor unit from ceiling
Special nut B (Small flange)	4	
Hanger	4	For suspending the indoor unit from ceiling
Drain hose insulation 	1	Insulates the drain hose and vinyl hose
Wire	1	Attached only ARXB25/ 30/36/45L model. Use for static pressure more than 40 Pa.

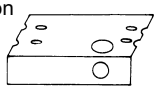
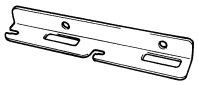
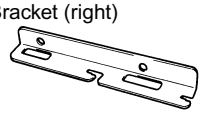
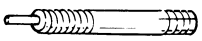
■ HIGH STATIC PRESSURE DUCT TYPE

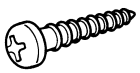
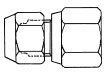
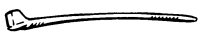
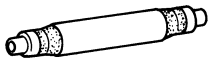
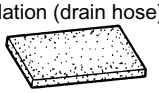
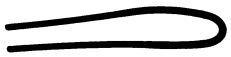
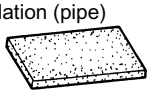
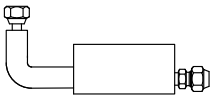
Name and Shape	Q'ty	Application
Binder (Large)	4	For fixing the connection pipe (Large and Small)
Binder (Medium)	1	For power supply cord binding
Binder (Small)	2	For transmission and remote control cord binding
Coupler heat insulation (Small) 	1	For indoor side pipe joint (Small)
Coupler heat insulation (Large) 	1	For indoor side pipe joint (Large)

Name and Shape	Q'ty	Application
Special nut A (Large flange)	4	For suspending the indoor unit from ceiling
Special nut B (Small flange)	4	

INSTALLATION

■ FLOOR / CEILING TYPE

Description	Q'ty	Application
Cover plate (left)	1	
Cover plate (right)	1	
Tapping screw (ϕ4 x 10)	2	
Installation template 	1	For positioning the indoor unit For under ceiling type
Bracket (left) 	1	For suspending the indoor unit from ceiling
Bracket (right) 	1	
Anchor bolt (M12) 	4	
Spring washer	4	
Special nut	4	
Wall bracket	2	For suspending the indoor unit on the wall

Description	Q'ty	Application
Tapping screw (ϕ4 x 20) 	6	For fixing the wall bracket
Coupler heat insulation	2	For indoor side pipe joint
Adapter 	1	AB 18/24 ONLY Use as needed ϕ9.52 -ϕ6.35
Binder 	Large 4	For fixing the coupler heat insulation
	Medium 1	For fixing the drain hose
	Small 2	For power supply, transmission and remote control cord binding
Drain hose 	1	
Insulation (drain hose) 	1	Adhesive type 70 x 230
VT wire 	1	For fixing the drain hose L 280 mm
Insulation (pipe) 	1	Adhesive type 160 x 110
Silencer pipe 	1	

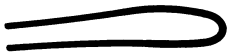
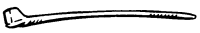
OPTIONAL PARTS FOR INDOOR UNIT

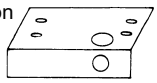
Description	Part No.	Application
Auxiliary pipe	9374714018	For indoor side pipe joint (18,000 and 24,000 BTU/h model)

INSTALLATION

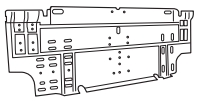
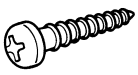
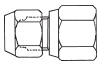
INSTALLATION

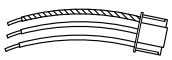
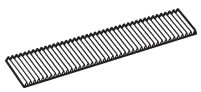
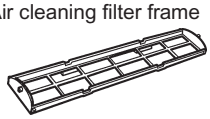
■ CEILING TYPE

Description	Q'ty	Application
Drain hose insulation	1	Adhesive type 70 x 230
VT wire 	1	For fixing the drain hose L 280 mm
Coupler heat insulation (large)	2	For indoor side pipe joint (large pipe)
Coupler heat insulation (small)	1	For indoor side pipe joint (small pipe)
Binder 	Extra large 4	For fixing the coupler heat insulation
	Large 4	
	Medium 1	For power supply cord binding
	Small 2	For transmission and remote control cord binding

Description	Q'ty	Application
Special nut A (large flange)	4	For installing indoor unit
Special nut B (small flange)	4	For installing indoor unit
Installation template 	1	For positioning the indoor unit
Auxiliary pipe assembly	1	For connecting the piping

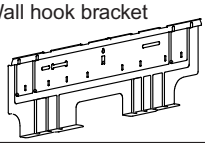
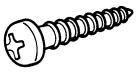
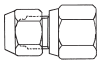
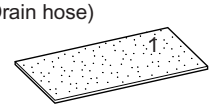
■ COMPACT WALL MOUNTED TYPE

Name and Shape	Q'ty	Application
Wall hook bracket 	1	For indoor unit installation
Binder	1	For remote control cord binding
Cloth tape	1	For indoor unit installation
Tapping screw 	8	For wall hook bracket installation
Adapter 	1	Use as needed ϕ12.7-ϕ9.52 (AS7/9)

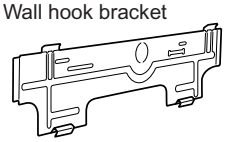
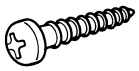
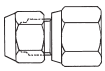
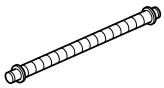
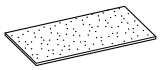
Name and Shape	Q'ty	Application
Wire assebly 	1	For wired remote control installation
Air cleaning filter 	2	
Air cleaning filter frame 	2	
Seal A	1	For indoor unit installation

INSTALLATION

■WALL MOUNTED TYPE

Name and Shape	Q'ty	Name and Shape	Q'ty
Wall hook bracket 	1	Tapping screw (big) (ϕ4 x 20) 	12
Adapter  Use as needed ϕ9.52 -ϕ6.35 (AS18/24)	1	Insulation (Drain hose) 	1

■CEILING WALL TYPE

Name and Shape	Q'ty	Name and Shape	Q'ty	Name and Shape	Q'ty
Wall hook bracket 	1	Tapping screw (big) (ϕ4 × 20) 	12	Adapter  Use as needed ϕ12.7-ϕ9.52 (AW7/9) ϕ9.52-ϕ6.35 (AW18/24)	1
Drain hose 	1	Insulation (Drain hose) 	1		

INSTALLATION

5-11. 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.

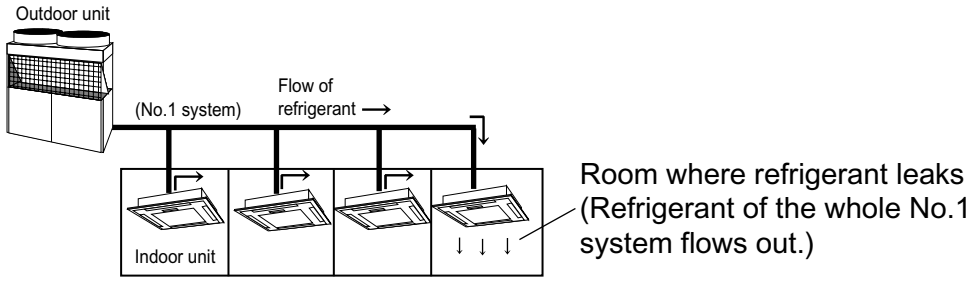
5-11-1. INTRODUCTION

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 /m³ air) to facilite calculation.

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



INSTALLATION

5-11-2. 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 additional replenished refrigerant = Total amount of replenished refrigerant in refrigerant facility (kg)

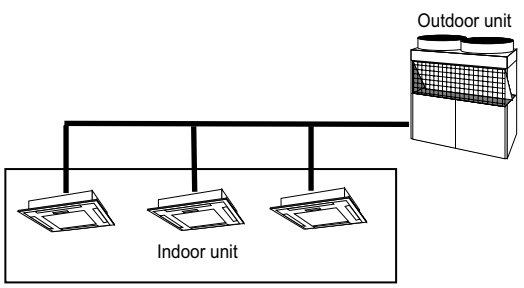
Amount of replenished refrigerant per refrigerant system
|
Amount of replenished refrigerant at factory shipment

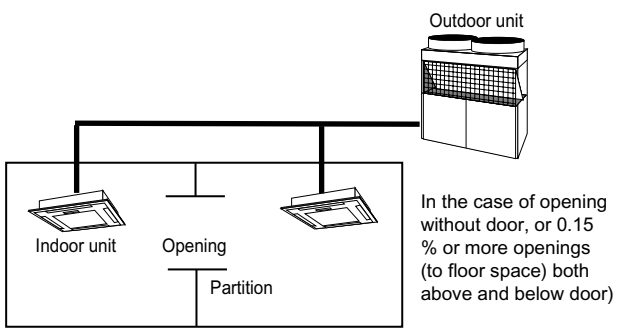
Amount of additional replenished refrigerant
|
Amount of additionally replenished refrigerant depending on piping length , piping diameter and indoorunit model at customer.

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.

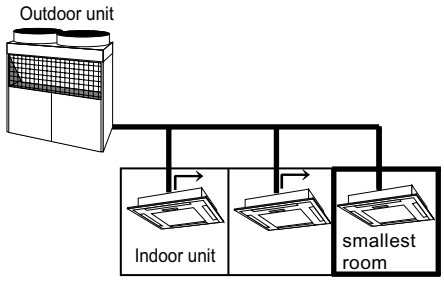
② Calculate minimum room capacity.
Calculate room capacity by regarding portion as one room or the smallest room.

(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 ①and②

$$\frac{\text{Total amount of replenished refrigerant in refrigerant facility(kg)}}{\text{Capacity of smallest room where Indoor unit is installed(m}^3\text{)}} = \text{Refrigerant concentration(kg/m}^3\text{)}$$

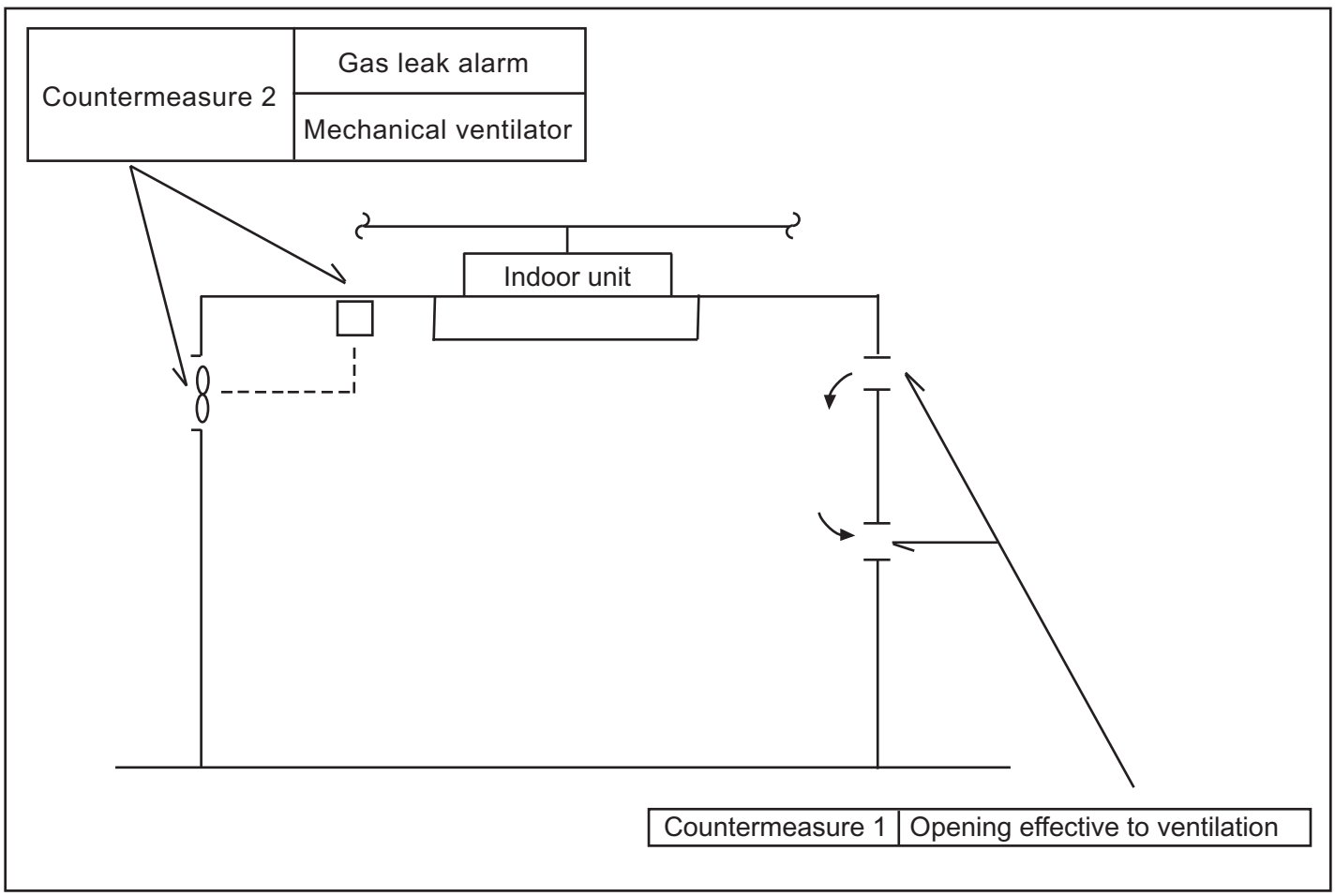
(R22 or R407C)

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 accummalate, since refrigerant is heavier than air.

INSTALLATION

Refrigerant R407C

AIRSTAGE™

S SERIES

6. TROUBLE SHOOTING

6-1 TROUBLE SHOOTING

6-1-1 OUTDOOR UNIT

■NORMAL OPERATING MODE

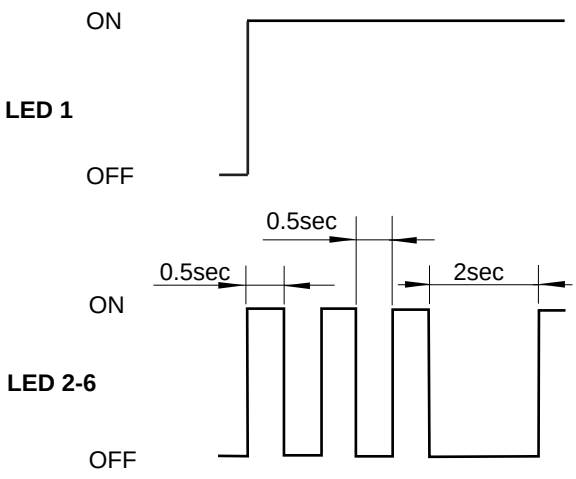
Display Type	LED 1	LED 2	LED 3	LED 4	LED 5	LED 6
Idling (stop)	◎					
Cooling operation	◎	○ (1)				
Heating operation	◎	○ (2)				
Compressor 1 output	◎		○ (1)			
Compressor 2 output	◎		○ (2)			
Compressor 3 output	◎		○ (3)			
Compressor 1,2 output	◎		○ (4)			
Compressor 1,3 output	◎		○ (5)			
Compressor 2,3 output	◎		○ (6)			
Compressor 1,2,3 output	◎		○ (7)			
Heat exchanger usage capacity STEP1	◎			○ (2)		
Heat exchanger usage capacity STEP2	◎			○ (3)		
Heat exchanger usage capacity STEP3	◎			○ (5)		
Pressure balance operation	◎			◎		
Oil recovery operation	◎				○ (1)	
Defrosting operation	◎				○ (2)	
Test run	◎				○ (3)	
Oil level balance operation	◎				○ (4)	
Pump down completed	◎	○ (2)	○ (2)	○ (2)	○ (2)	○ (2)
Liquid injection	◎					○ (1)
Hot gas bypass	◎					○ (2)
Recovery mode	◎					○ (4)

Display Method ◎ : Lighted continuously
○ : 0.5sec ON/0.5sec OFF flashing
( ) : Flashing times

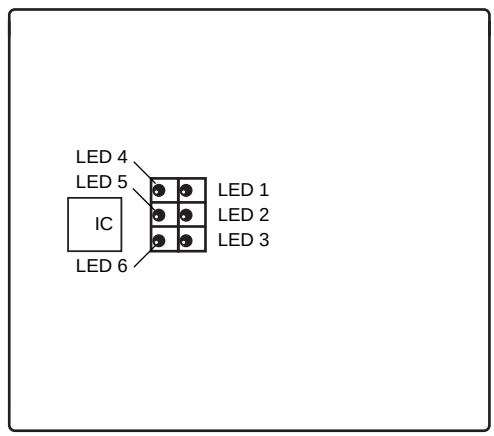
TROUBLE SHOOTING

TROUBLE SHOOTING

●Operation display



●Outdoor printed circuit board layouts



■ABNORMAL MODE

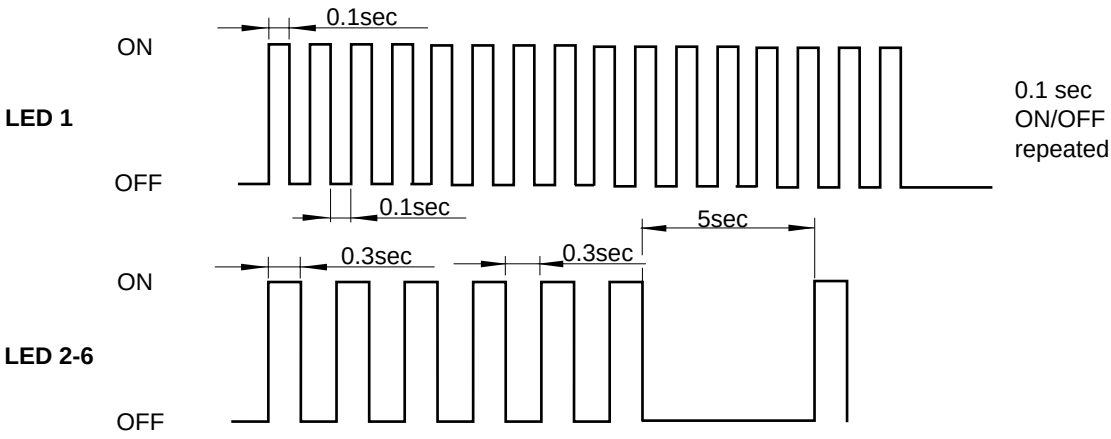
Display type	LED 1	LED 2	LED 3	LED 4	LED 5	LED 6
Compressor 1 error	◇	● (1)				
Compressor 2 error	◇	● (2)				
Compressor 3 error	◇	● (3)				
Discharge temperature 1 error	◇	● (4)				
Discharge temperature 2 error	◇	● (5)				
Discharge temperature 3 error	◇	● (6)				
High-pressure error	◇	● (7)				
Low-pressure error	◇	● (8)				
Pump down error	◇	● (9)				
Discharge temperature thermistor 1 error	◇		● (1)			
Discharge temperature thermistor 2 error	◇		● (2)			
Discharge temperature thermistor 3 error	◇		● (3)			
Heat exchanger thermistor 1 error	◇		● (4)			
Heat exchanger thermistor 2 error	◇		● (5)			
Suction temperature thermistor error	◇		● (10)			
Outdoor temperature thermistor error	◇		● (11)			
Discharge pressure sensor error	◇			● (1)		
Suction pressure sensor error	◇			● (3)		
Reverse phase blocker error	◇				● (1)	
Power supply frequency abnormal	◇				● (2)	
EEPROM access error	◇				● (3)	
Outdoor unit circuit board error 1	◇				● (6)	
Transmission error	◇				● (8)	
Node setting error	◇				● (9)	
Indoor unit error	◇					● (1)

Display method { ◇ : 0.1 sec ON / 0.1 sec OFF flashing
● : 0.3 sec ON / 0.3 sec OFF flashing
( ) : Flashing times

TROUBLE SHOOTING

TROUBLE SHOOTING

● Error display



6-1-2. INDOOR UNIT

If you use a wired remote controller, error codes will appear on the remote control display.
If you use a wireless remote controller, the lamp on the photodetector unit will output error codes by way of blinking patterns.
See the lamp blinking patterns and error codes in the table below.

■INDOOR UNIT TYPE A

• Compact Cassette Type • Cassette Type • Compact Duct Type • Low Static Pressure Duct Type
• Duct Type • High Static Pressure Duct Type • Compact Wall Mounted Type

ERROR CODE	ERROR CONTENT	OPERATION LAMP	TIMER LAMP	SWING (3rd) LAMP
E:00	No error	-	-	-
E:02	Model information abnormal	◇	◇	-
E:04	Power supply frequency abnormal	◇	◇	◇
E:09	Room temperature thermistor error	●(2)	◇	-
E:0b	Indoor unit heat exchanger thermistor (inlet) error	●(3)	◇	●(1)
E:0A	Indoor unit heat exchanger thermistor (middle) error	●(3)	◇	●(2)
E:11	Drain abnormal	●(4)	◇	-
E:18	Communication error 1 (indoor unit⇔wired/simple remote controller)	●(5)	◇	●(1)
E:18	Communication error 2 (indoor unit⇔wired/simple remote controller)	●(5)	◇	●(4)
E:13	Indoor unit fan error	●(6)	◇	-
E:32	Outdoor unit error	◇	●(3)	●(3)
E:06	EEPROM access error	◇	●(4)	●(1)
E:1F	Transmission error	◇	●(5)	●(1)
E:21	Parallel communication error	◇	●(6)	-

TROUBLE SHOOTING

■INDOOR UNIT TYPE B

• Floor / Ceiling Type • Ceiling Type • Wall Mounted Type • Ceiling Wall Type

ERROR CODE	ERROR CONTENT	OPERATION LAMP	TIMER LAMP	VERTICAL SWING LAMP	HORIZONTAL SWING LAMP
E:00	No error	-	-	-	-
E:02	Model information abnormal	◇	◇	-	-
E:04	Power supply frequency abnormal	◇	◇	◇	◇
E:09	Room temperature thermistor error	●(2)	◇	-	-
E:0b	Indoor unit heat exchanger thermistor (inlet) error	●(3)	◇	●(1)	-
E:0A	Indoor unit heat exchanger thermistor (middle) error	●(3)	◇	●(2)	-
E:11	Drain abnormal	●(4)	◇	-	-
E:18	Communication error 1 (indoor unit⇔wired/simple remote controller)	●(5)	◇	●(1)	-
E:18	Communication error 2 (indoor unit⇔wired/simple remote controller)	●(5)	◇	●(4)	-
E:13	Indoor unit fan error	●(6)	◇	-	-
E:32	Outdoor unit error	◇	●(3)	●(3)	-
E:06	EEPROM access error	◇	●(4)	●(1)	-
E:1F	Transmission error	◇	●(5)	●(1)	-
E:21	Parallel communication error	◇	●(6)	-	-

TROUBLE SHOOTING

6-1-3 WIRED,SIMPLE REMOTE CONTROLLER

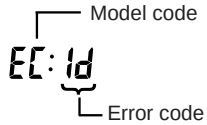
Error cord	Error contents
E : 00	No error
E : 02	Model information abnormal
E : 04	Power supply frequency abnormal
E : 06	EEPROM access error
E : 07	EEPROM deletion error
E : 09	Room temperature thermistor error
E : 0A	Indoor unit heat exchanger thermistor (middle) error
E : 0b	Indoor unit heat exchanger thermistor (inlet) error
E : 0C	Indoor unit heat exchanger thermistor (outlet) error
E : 0d	Blower temperature thermistor error
E : 11	Drain abnormal
E : 12	Room temperature abnormal
E : 13	indoor unit fan error
E : 1F	Transmission error
E : 20	Node setting error
E : 21	Parallel communication error
E : 32	Outdoor unit error

TROUBLE SHOOTING

6-1-4. GROUP REMOTE CONTROLLER

■ GROUP REMOTE CONTROLLER

The air conditioning system must be inspected if "E∗:∗∗" (error code) appears on the Timer and Clock Display, or the operation lamp is flashing.
The following explains the meaning of each of the error codes.



Model code 0 : Outdoor unit
1 : Indoor unit
C : Group remote controller
A : Convertor

Error Code	0 Outdoor unit error	1 Indoor unit error	CA Group remote controller error Convertor error
00	No error	No error	No error
01	—	—	—
02	Model information abnormal	Model information abnormal	—
03	Microcomputer communication error	Microcomputer communication error	Microcomputer communication error
04	Power supply frequency abnormal	Power supply frequency abnormal	—
05	—	—	Parallel communication error
06	EEPROM access error	EEPROM access error	EEPROM access error
07	EEPROM deletion error	EEPROM deletion error	—
08	—	—	—
09	Compressor 1 error	Room temperature thermistor error	—
0A	Compressor 2 error	Heat exchanger thermistor (middle) error	—
0b	Compressor 3 error	Heat exchanger thermistor (inlet) error	—
0C	—	Heat exchanger thermistor (outlet) error	—
0d	Discharge temperature thermistor 1 error	Blower temperature thermistor error	—
0E	Discharge temperature thermistor 2 error	—	—
0F	Discharge temperature thermistor 3 error	—	—
10	Outdoor temperature thermistor error	—	—
11	Heat exchanger inlet thermistor 1 error	Drain abnormal	—
12	Heat exchanger inlet thermistor 2 error	Room temperature abnormal	—
13	Heat exchanger inlet thermistor 3 error	Indoor unit fan error	—
14	Heat exchanger outlet thermistor 1 error	—	—
15	Heat exchanger outlet thermistor 2 error	—	—
16	Heat exchanger outlet thermistor 3 error	—	—
17	Suction temperature thermistor error	—	—
18	—	Standard wired remote control communication error	—
19	Discharge pressure sensor error	—	—
1A	Liquid pressure sensor error	—	Address setting error
1b	Suction pressure sensor error	—	—
1C	Oil sensor error	—	Connection error
1d	—	—	System error
1E	—	—	—
1F	Transmission error	Transmission error	Transmission error
20	—	—	—
21	Discharge temperature 1 error	—	—
22	Discharge temperature 2 error	—	—
23	Discharge temperature 3 error	—	—
24	High-pressure error	—	—
25	Low-pressure error	—	—
26	—	—	—
27	Oil recovery error	—	—
28	Pump down error	—	—

TROUBLE SHOOTING

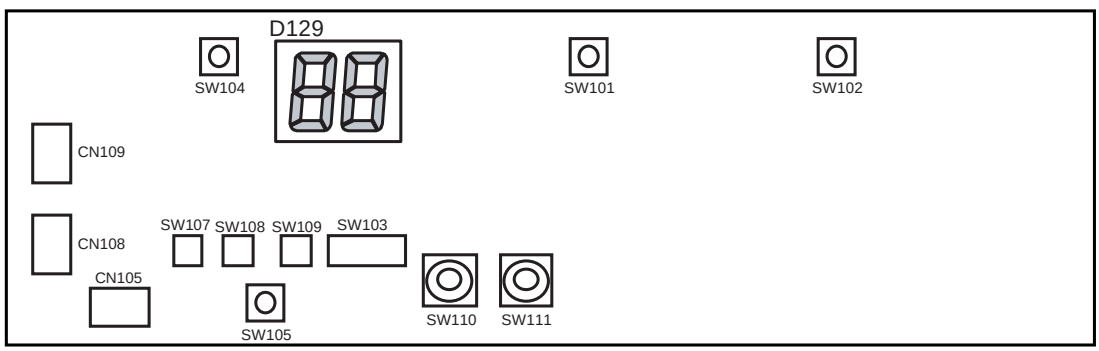
■ NETWORK CONVERTOR

Error code	Error contents
	No error (operation mode)
	Initial setting
	Circuit board error 1
	Circuit board error 2
	Transmission error with wired RC
	Transmission error with indoor unit *1
	Transmission error with VRF system
	Software error
	Indoor or outdoor unit error *1

*1 Displayed only when used as a single split type network convertor.

TROUBLE SHOOTING

● Circuit board and LED layouts



6-1-5 CENTRAL REMOTE CONTROLLER / PC CONTROLLER

Error Code	Indoor unit error	Outdoor unit error	Central remote controller
00	No error	No error	No error
01	–	–	–
02	Model information abnormal	Model information error	Printed circuit board error (Control panel)
03	Microcomputer communication error	Microcomputer communication error	Printed circuit board error (Transmission adaptor)
04	Power supply frequency abnormal	Power supply frequency abnormal	Memory error
05	–	Reverse phase blocker error	Node setting error
06	EEPROM access error	EEPROM access error	Parallel communication error
07	EEPROM deletion error	–	–
08	–	–	–
09	Room temperature thermistor error	Compressor 1 error	–
0A	Heat exchanger thermistor (middle) error	Compressor 2 error	–
0B	Heat exchanger thermistor (inlet) error	Compressor 3 error	–
0C	Heat exchanger thermistor (outlet) error	–	–
0D	Blower temperature thermistor error	Discharge temperature thermistor 1 error	–
0E	–	Discharge temperature thermistor 2 error	–
0F	–	Discharge temperature thermistor 3 error	–
10	–	Outdoor temperature thermistor error	–
11	Drain abnormal	Heat exchanger inlet thermistor 1 error	–
12	Room temperature abnormal	Heat exchanger inlet thermistor 2 error	–
13	Indoor unit fan error	Heat exchanger inlet thermistor 3 error	–
14	–	Heat exchanger outlet thermistor 1 error	–
15	–	Heat exchanger outlet thermistor 2 error	–
16	–	Heat exchanger outlet thermistor 3 error	–
17	–	Suction thermistor error	–
18	Standard wired remote controller communication error 1,2	–	–
19	–	Discharge pressure sensor error	–
1A	–	Liquid pressure sensor error	–
1B	–	Suction pressure sensor error	–
1C	–	–	Connection error
1D	–	–	Initial setting error
1E	–	–	Manual storing 2 error
1F	Transmission error	Transmission error	Transmission error
20	–	–	–
21	–	Discharge temperature 1 error	Software error (Output)
22	–	Discharge temperature 2 error	Software error (Input)
23	–	Discharge temperature 3 error	–
24	–	High-pressure error	–
25	–	Low-pressure error	–
26	–	–	–
27	–	–	–
28	–	Pump down error	–

TROUBLE SHOOTING

6-1-6 CASES SUCH AS THESE ARE NORMAL

■OPERATION NOT TROUBLE

From the standpoint of control, the following operations are incorporated for air conditioner operation and protection. They do not indicate trouble.

Operation		Description	Indoor unit	Remote indication
Red and green lamps flash alternately, or simultaneously.		Indicates that the power came on normally when power was applied (at power failure recovery). Indication is cleared by RUN command.	The red and green lamps flash alternately in the operation stop state.	
		When test run is performed, the unit operates without regard to the temperature setting. Stopped by remote controller stop. or reset after 60 minutes.	The red and green lamps flash simultaneously in the operation state.	TEST
Red lamp flashes.		Operation is stopped and refrigerant is passed through the indoor unit to remove the outdoor unit frost (defrosting operation) or to recover the refrigerant oil (oil recovery operation). The indoor unit stops in about 5-10 minutes.	The fan stops and the refrigerant passes through. The red lamp flashes slowly.	DEFROST
Indoor unit fan does not operate even through the RUN signal has entered.		The fan is stopped to prevent blowing out of cold air when the machine is still not warm at the start of heating operation. About 3 minutes are necessary.	The fan stops and the red lamp lights steadily.	
Fan turns on/off periodically.		When the room temperature at heating operation reaches the set temperature, the FAN is stopped and room temperature rise is prevented. At this time, the fan is operated periodically to detect the room temperature. (4 minutes stop, 1minute operate)	The fan continues to operate and the red lamp lights steadily.	
Remote controller airflow indication flashes.		This is the filter cleaning time. After cleaning the filter, press the ZONE/SET key for a few seconds to be released .	Same as normal.	Airflow indication flashes
Heating operation is performed when stopped.		Anti-freeze operation is set so that the water pipe and electronic devices do not freeze. Operation starts at room temperature 5°C or less and continues until the room temperature reaches 8°C or more.	At standby, the red lamp flashes and the fan continues to operate. At operation, the heating operation is performed.	ANTIFREEZE
RUN signal is input, but is not accepted. Buzzer sounds.		When operation is inhibited during central control by central remote controller, the buzzer that denies the wireless remote controller signals sounds.	Buzzer buzzes 5 times and setting is not received. Operation before setting continues.	CENTRAL
		When an [AUTO], [FAN] and an operation other than the operation another indoor unit is already performing at cooling/heating selection type or [HEAT] operation at a cooling only unit is commanded, operation cannot be performed at that setting.	Buzzer buzzes 5 times and setting is not received. Operation before setting continues.	
		Timer setting cannot be performed by wireless remote controller at an indoor unit with wired remote controller connected. Set the timer from the wired remote controller.	Buzzer buzzes 5 times and setting is not received. Operation before setting continues.	
Makes a sound even after operation stops.		The valve opens to return the refrigerant collected inside the indoor unit to the outdoor unit even after operation stops. Remains for about 4 minutes maximum.		
		After cooling operation stops, the drain pump is operated. Remains for 3 minutes.		
Makes a sound while operating.	Flowing liquid sound during operation	A sound changed by the refrigerant flow may be made by operation of another indoor unit connected to the same outdoor unit. A switching sound may be made at the start and after the end of defrosting operation and oil recovery operation.		
	Squeaking sound	This is due to expansion and contraction of resin parts by the temperature change during heating operation and oil recovery operation.		
	Switching sound	A sound is generated when the internal valve is switched at operation switching and at the start of defrosting operation and oil recovery operation.		

When operation and indication other than the above occurs, call the manager.

TROUBLE SHOOTING

Refrigerant R407C

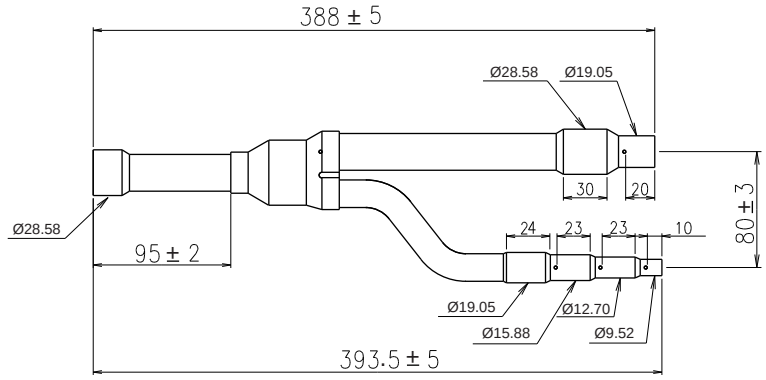
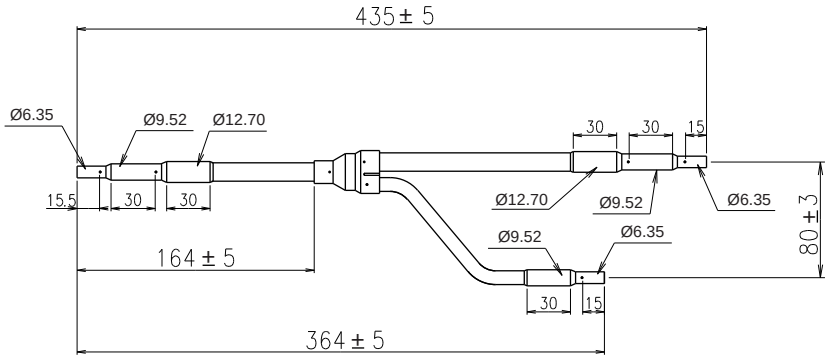
AIRSTAGE™

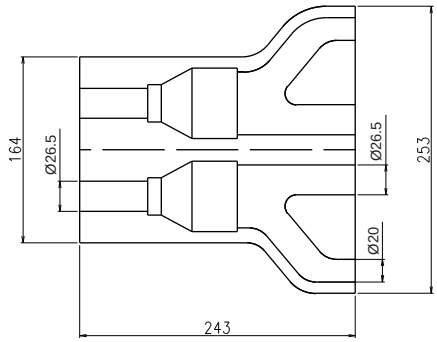
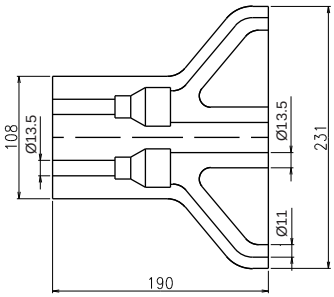
S SERIES

7 . OPTIONAL PARTS

7-1 SEPARATION TUBE

■UTR - BP90TA

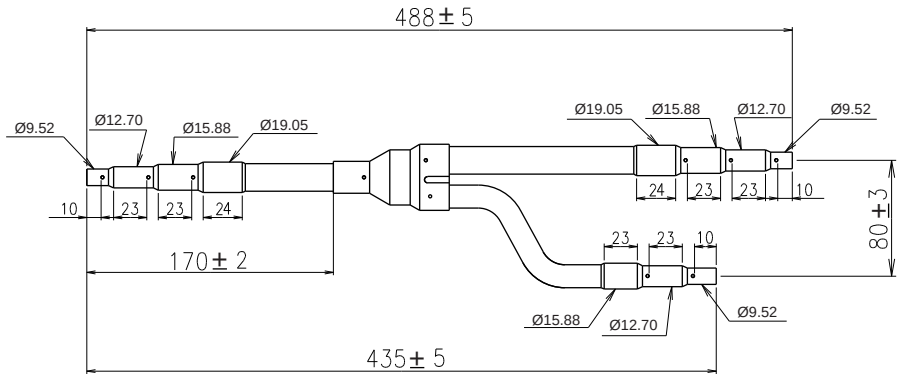
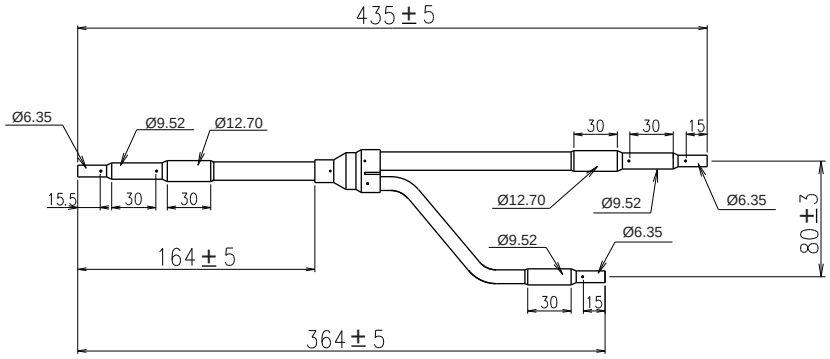
SEPARATION TUBE GAS PIPE side Q'ty 1	
SEPARATION TUBE LIQUID PIPE side Q'ty 1	

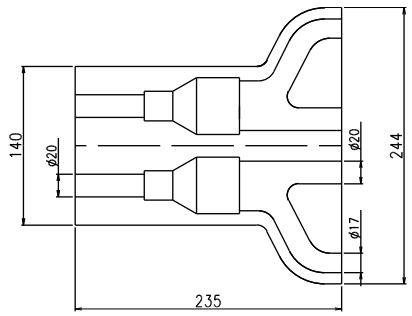
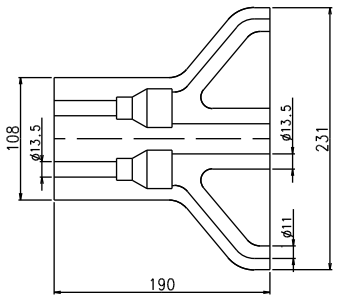
SEPARATION TUBE INSULATION GAS PIPE side	SEPARATION TUBE INSULATION LIQUID PIPE side
	
Q'ty 1	Q'ty 1

BINDER Q'ty 4	

OPTIONAL PARTS

■UTR - BP54TA

SEPARATION TUBE GAS PIPE side Q'ty 1	
SEPARATION TUBE LIQUID PIPE side Q'ty 1	

SEPARATION TUBE INSULATION GAS PIPE side	SEPARATION TUBE INSULATION LIQUID PIPE side
 Q'ty 1	 Q'ty 1

BINDER Q'ty 4	

OPTIONAL PARTS

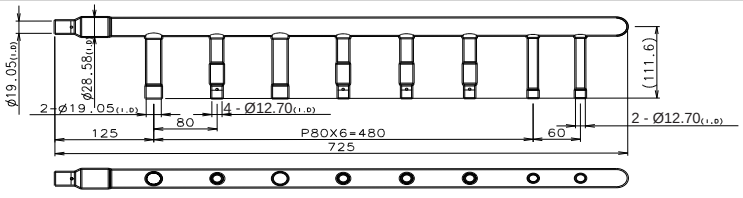
OPTIONAL PARTS

7-2 HEADER

■UTR - HD908A

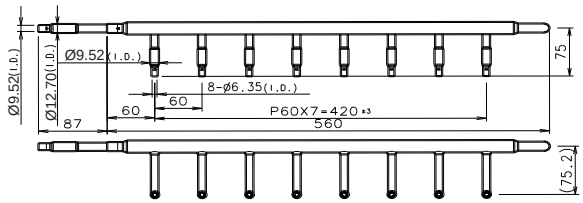
BRANCH HEADER A

Q'ty 1

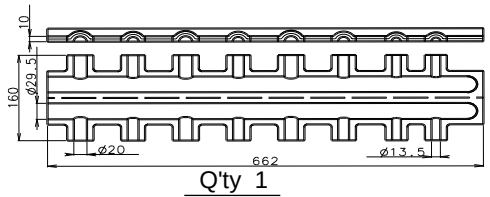


BRANCH HEADER C

Q'ty 1

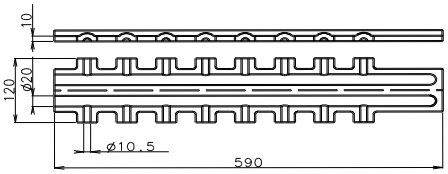


HEADER INSULATION- A



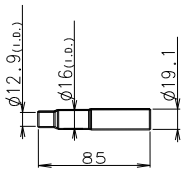
Q'ty 1

HEADER INSULATION- C



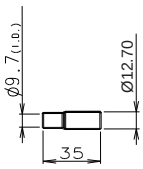
Q'ty 1

REDUCER I



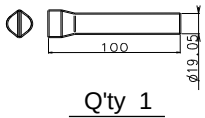
Q'ty 2

REDUCER F



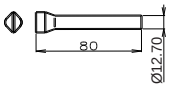
Q'ty 8

CLOSED PIPE A



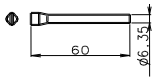
Q'ty 1

CLOSED PIPE C



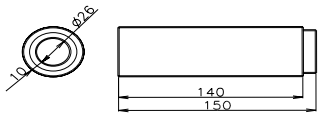
Q'ty 1

CLOSED PIPE E



Q'ty 1

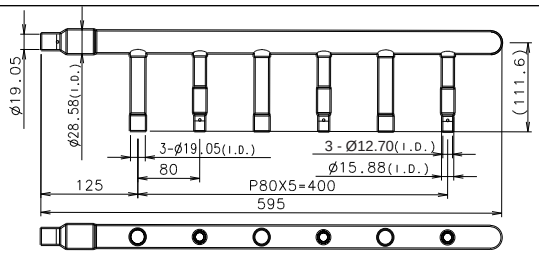
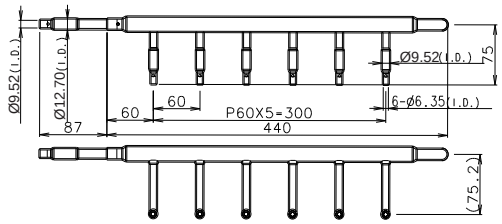
CLOSED PIPE INSULATION



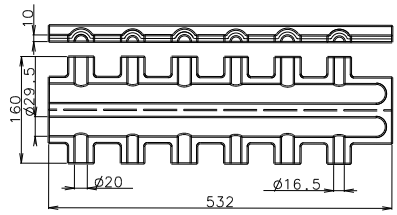
OPTIONAL PARTS

OPTIONAL PARTS

■UTR - HD906A

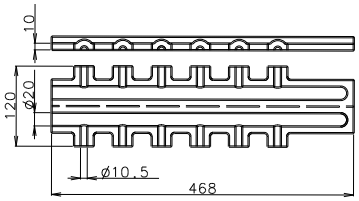
BRANCH HEADER D Q'ty 1	
BRANCH HEADER F Q'ty 1	

HEADER INSULATION- D

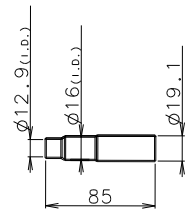
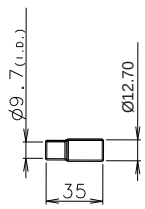


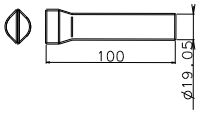
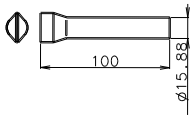
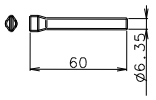
Q'ty 1

HEADER INSULATION- F

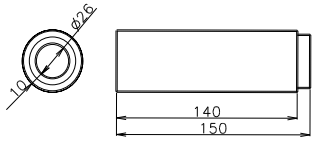


Q'ty 1

REDUCER I	REDUCER F
	
Q'ty 4	Q'ty 6

CLOSED PIPE A	CLOSED PIPE C	CLOSED PIPE E
		
Q'ty 3	Q'ty 3	Q'ty 4

CLOSED PIPE INSULATION



OPTIONAL PARTS

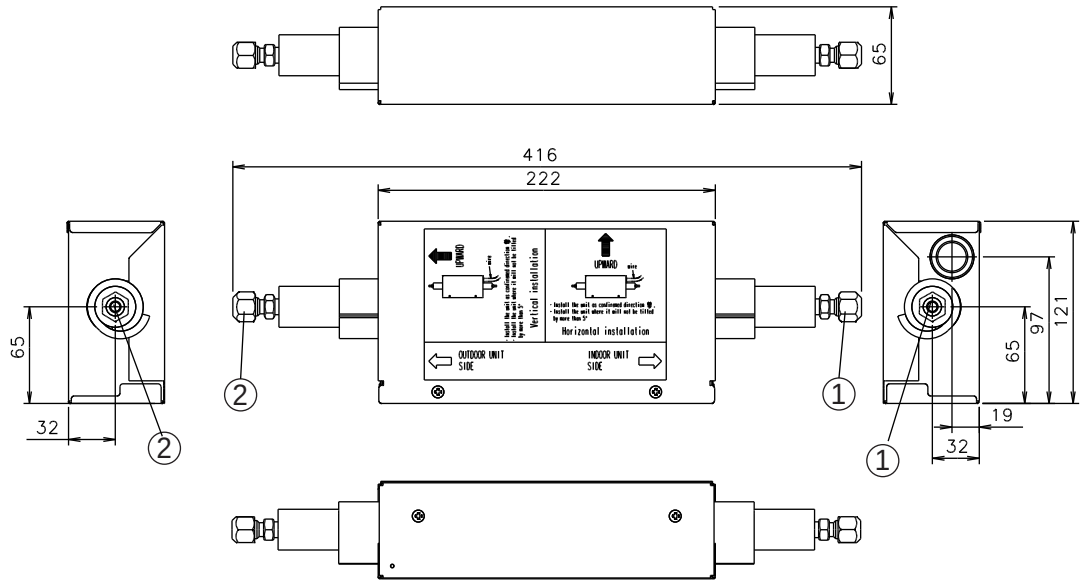
OPTIONAL PARTS

7-3. EV KIT

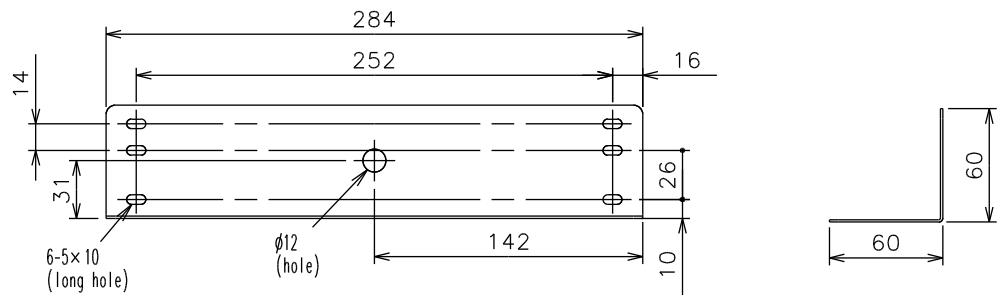
■MODELS : UTR - EV09XA, UTR - EV14XA

MODEL	Applicable model
UTR-EV09XA	AS*E07LACF AS*E09LACF
UTR-EV14XA	AS*E12LACF AS*E14LACF

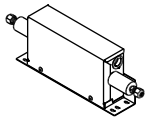
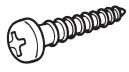
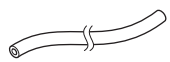
EV kit



Hanger



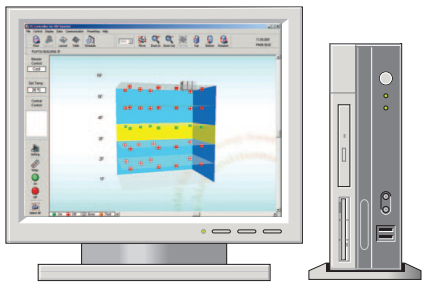
①	Refrigerant pipe flare connection (liquid pipe)	Indoor unit side	∅6.35 mm
②		Outdoor unit side	∅6.35 mm

Name and Shape		Q'ty	Name and Shape	Q'ty	Name and Shape	Q'ty	Name and Shape	Q'ty
EV KIT 		1	Coupler heat insulation	2	Special nut A (M10) (large flange)	1	Special nut B (M10) (small flange)	1
Binder	Large	5	Screw 	4	Tube 	1		
	Small	2						

7-4. CONTROLLER

■PC CONTROLLER [SOFTWARE]

- **UTR-YOTB**



✳Maximum 400 groups / 400 indoor units can be controlled.
✳Monitoring status of operation

■CENTRAL REMOTE CONTROLLER

- **UTB-YCA**
- **UTB-GCA**

✳Maximum 64 groups / 400 indoor units can be controlled.
✳With weekly timer

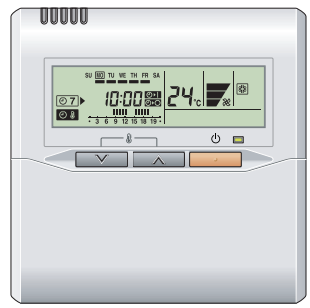
■GROUP REMOTE CONTROLLER

- **UTB-YDB**
- **UTB-GDB**

✳Maximum 8 remote controller groups (32 indoor units)
✳With weekly timer

■WIRED REMOTE CONTROLLER

- **UTB-YUB**
- **UTB-GUB**
- **UTB-TUB**



✳On/Off weekly timer
✳Built in thermo sensor

■SIMPLE REMOTE CONTROLLER

- **UTB-YPB**
- **UTB-GPB**
- **UTB-TPB**

With MASTER control

- **UTB-YRA**
- **UTB-GRA**
- **UTB-TRA**

Without MASTER control

✳Background light
✳Easy operation

■WIRELESS REMOTE CONTROLLER

- **UTB-YVB**
- **UTB-GVB**

✳On/Off sleep, program timer
✳Easy operation

OPTIONAL PARTS

OPTIONAL PARTS

7-5. ADAPTOR / CONVERTOR

■ NETWORK CONVERTOR

- UTR-YRDA

- (SPLIT SYSTEM CONVERTOR)
- (GROUP REMOTE CONVERTOR)

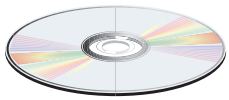
■ NETWORK CONVERTOR for LONWORKS®

- UTR-YLLA

(LON / LON CONVERTOR)

■ BACnet® Gateway [SOFTWARE]

- UTR-YLBA



・CD-ROM
・Software Protection key

(VRF / BMS CONVERTOR)

■ SIGNAL AMPLIFIER

- UTR-YRPC

■ TRANSMISSION ADAPTOR

- UTR-YTMA

■ EXTERNAL SWITCH CONTROLLER

- UTR-YESA

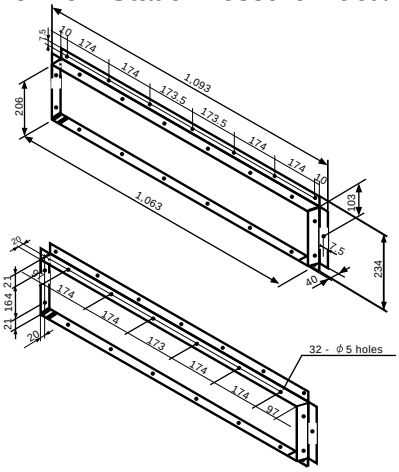
OPTIONAL PARTS

7-6. OTHERS

■ FLANGE (square)

Model : UTD–SF045T

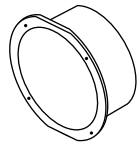
- For Low Static Pressure Duct / Duct type

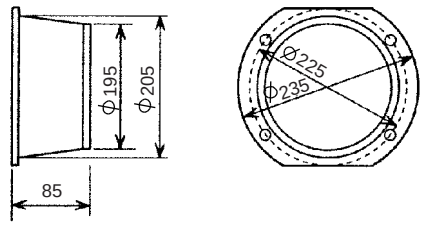


■ FLANGE (round)

Model : UTD–RF204

- For Low Static Pressure Duct / Duct type

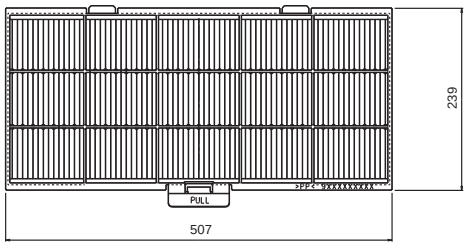




■ LONG-LIFE FILTER

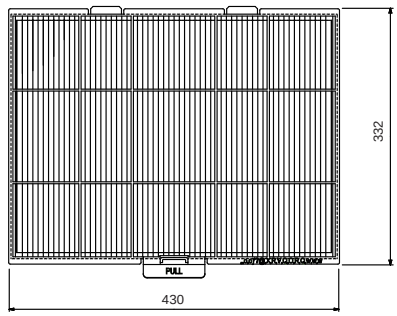
Model : UTD-LF25NA

- For Low Static Pressure Duct / Duct type
  (507 x 239 x 25) x 2pcs



Model : UTD-LF60KA

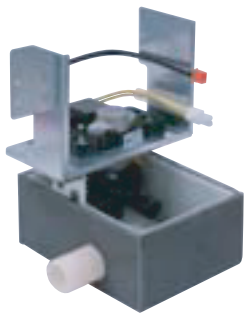
- For High Static Pressure Duct type
  (430 x 332 x 25) x 2pcs



■ DRAIN WATER RISER KIT

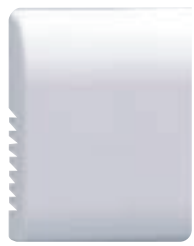
Model : UTR-DPB24T

- For Ceiling type



■ REMOTE SENSOR UNIT

Model : UTD-RS100



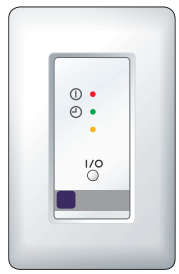
■ GRILLE KIT

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

- For Compact Cassette type

■ IR RECEIVER UNIT

Model : UTB-YWA
UTB-TWA



OPTIONAL PARTS

FUJITSU GENERAL LIMITED

1116, Suenaga, Takatsu-ku, Kawasaki 213-8502, Japan

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