

# Floor Standing MVD DC2

## Installation and User Manual



CONTENTS	PAGE
PRECAUTIONS.....	1
INSTALLATION INFORMATION.....	2
INCLUDED ACCESSORIES .....	3
INDOOR UNIT INSTALLATION.....	4
Water Discharge Piping Installation .....	10
Electrical Wiring .....	10
On-site Configuration.....	12
Test Run .....	13
Part Names.....	15
Display Panel .....	16
Air Conditioner Operations and Performance .....	16
Maintenance .....	17
Symptoms That Are Not Faults .....	18
Troubleshooting.....	18

## 1. PRECAUTIONS

- Be sure to be in conformity with the local, national and international laws and regulations.
- Read "PRECAUTIONS" carefully before installation.
- The following precautions include important safety items. Observe them and never forget.
- Keep this manual with the owner's manual in a handy place for future reference.

The safety precautions listed here are divided into two categories. In either case, important safety information is listed which must be read carefully.



### WARNING

Failure to observe a warning may result in death.



### CAUTION

Failure to observe a caution may result in injury or damage to the equipment.

After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained. Also, inform customers that they should keep this installation manual along the with user manual for future reference.



### WARNING

**Be sure only trained and qualified service personnel install, repair or do the maintenance of the equipment.**

Improper installation, repair, and maintenance may result in electric shocks, short-circuit, leaks, fire or other damage to the equipment.

**Install according to this installation instructions strictly.** If installation is defective, it will cause water leakage, electrical shock and fire.

**Disconnect the power supply before cleaning and maintenance.**

**When installing the unit in a small room, take measures against to keep refrigerant concentration from exceeding allowable safety limits in the event of refrigerant leakage.** Contact the place of purchase for more information. Excessive refrigerant in a closed space can lead to hypoxemia (oxygen deficiency).

**Use the attached accessories and specified parts for installation.**

Otherwise, it will cause the set to fall, leak water, produce electrical shocks and fire.

**Install at a strong and firm location which is able to withstand the equipment's weight.**

If the strength is not enough or installation is not properly done, the set will drop and cause injury.

**The appliance should not be installed in a laundry.**

**Before obtaining access to terminals, all supply circuits must be disconnected.**

**The appliance must be positioned so that the plug is accessible (for European products).**

**The enclosure of the appliance should be marked with words or symbols with the direction of the fluid flow.**

**For electrical work, follow the local national wiring standard, regulation and this installation instructions. An independent circuit and outlet must be used.**

If electrical circuit capacity is not enough or if the electrical work is faulty, it will cause electrical shock fire.

**Use the specified cable, connect tightly and clamp it in a way that no external force can be acted on the terminal.**

If a connection or fixing is not perfect, it will cause the appliance to heat-up or create a fire at the connection.

**Wiring routing must be properly arranged so that control board cover is fixed properly.**

If the control board cover is not fixed properly, it will cause heat-up at the connection point of the terminal, fire or electrical shock.

**If the supply cord is damaged, it must be replaced by the manufacture, a service agent or a similarly qualified person in order to avoid a hazard (for European products).**

**An all-pole disconnection switch with a contact separation of at least 3 mm in all poles should be connected in fixed wiring (for European products).**

**When carrying out piping connection, take caution in not letting air go inside the refrigeration cycle.**

Otherwise, it will lower the capacity, cause abnormal high pressure in the refrigeration cycle, explosion and injury.

**Do not modify the length of the power supply cord or use an extension cord, and do not share the single outlet with other electrical appliances (for European products).** Otherwise, it will cause a fire or an electrical shock.

**Carry out the specified installation work after taking into account strong winds, typhoons and earthquakes.** Improper installation work may result in the falling of the equipment and in accidents.

**If the refrigerant leaks during installation, ventilate the area immediately.**

Toxic gas may be produced if the refrigerant comes into contact with fire.

Keep the interconnection cable away from the copper tube.

After completing the installation work, check if the refrigerant does not leak.

Toxic gas may be produced if the refrigerant leaks into a room and comes into contact with a source of fire, such as a fan heater, stove or oven.

This appliance is not intended to be used by people (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions concerning the use of the appliance by a person responsible for their safety.

Disconnect the power supply before cleaning and maintenance.



## CAUTION

### Ground the air conditioner.

Do not connect the ground wire to gas or water pipes, lightning rod or a telephone ground wire. Incomplete grounding may result in electric shocks.

### Check the power supply.

Check the power supply before installation. Ensure that the power supply must be reliably grounded following local, national and European Electrical Codes. If the ground wire is detected while charged, installation is prohibited before the wire is repaired. Otherwise, there is a risk of fire and electric shock, causing physical injury or death.

### Check the layout.

Check the electric wire, water and gas pipeline layout inside the wall, floor and ceiling before installation. Do not drill unless safety is confirmed together with the user, especially for hidden power wires. A mains test can be used to check whether a passing wire is at the drilling location, to prevent physical injury or death caused by insulation broken cords.

### Be sure to install an earth leakage breaker.

Failure to install an earth leakage breaker may result in electric shocks.

### Connect the outdoor unit wires, then connect the indoor unit wires.

You are not allowed to connect the air conditioner with the power source until wiring and piping is done.

While following the instructions in this installation manual, install drain piping in order to ensure proper drainage and insulate piping in order to prevent condensation.

Improper drain piping may result in water leakage and property damage.

Install the indoor and outdoor units, power supply wiring and connecting wires at least 1 meter away from televisions or radios in order to prevent image interference or noise.

Depending on the radio waves, a distance of 1 meter may not be enough to eliminate the noise.

The appliance is not intended to be used by young children or by people with disabilities without supervision.

**DISPOSAL:** Do not dispose of this product as unsorted municipal waste. Waste must be collected separately for necessary special treatment.



### Don't install the air conditioner in the following locations:

- If there is petrolatum nearby.
- If there is salty air surrounding it (near the coast).
- If there is caustic gas (such as sulfide, for example) present in the air (near a hot spring).
- If there is high voltage variation (within factories).
- In buses or closed cabinets.
- If there is oil gas inside a kitchen.
- If strong electromagnetic waves are present.
- Around inflammable materials or gas.
- If there is acid or alkaline liquid evaporating.
- Around other special conditions.

---

## 2. INSTALLATION INFORMATION

- 
- To perform the installation properly, please read this "installation manual" first.
  - The air conditioner must be installed by qualified personnel.
  - When installing the indoor unit or its pipes, please follow this manual as strictly as possible.
  - If the air conditioner is installed on a metal part of the building, it must be electrically insulated according to the relevant standards on electrical appliances.
  - When all the installation work is finished, please turn on the power only after a thorough check.
  - This manual can be changed without further announcement if there is any change of this manual caused by product improvement.
- 

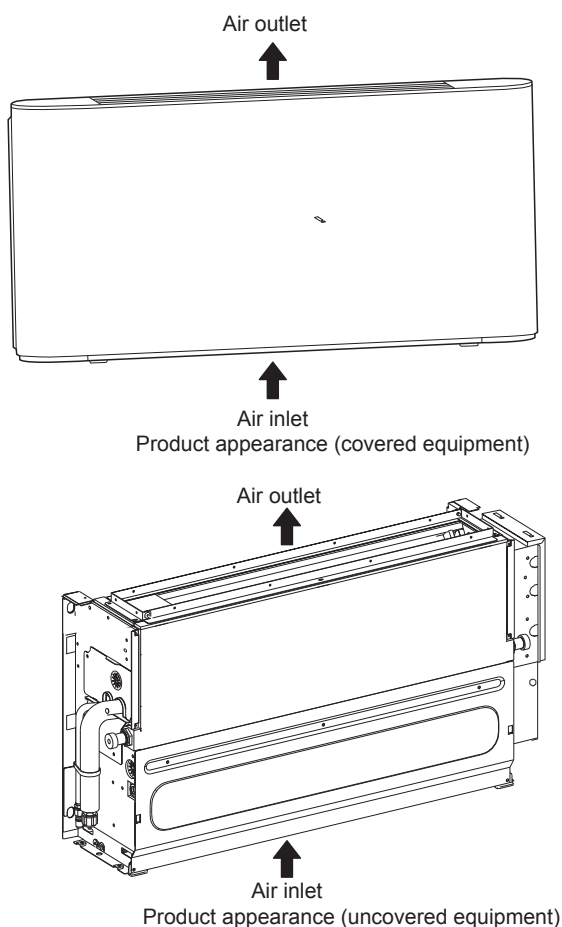
## INSTALLATION ORDER

- Select the location;
  - Install the indoor unit;
  - Install the outdoor unit;
  - Install the connecting pipes;
  - Connect the drain pipe;
  - Wiring;
  - Test operation.
-



#### NOTE

All the illustrations of this manual are for explanatory purpose only. The appearance, functions and physical objects may differ, please refer to the actual product.



(The following contents only applicable for the unit with a remote control)

Remote control & stand	
1. Remote control.....	1
2. Remote control stand.....	1
3. Mounting screw (ST2.9x10-C-H).....	2
4. Alkaline dry battery(AM4) .....	2
5. Remote control user manual .....	1

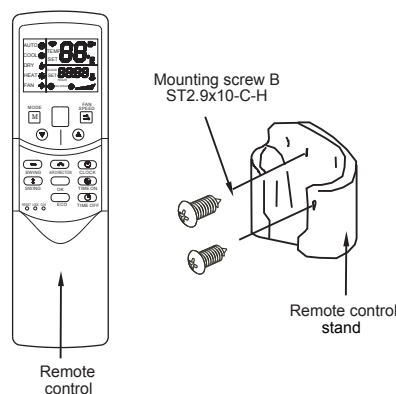


Fig.3-1

### 3. INCLUDED ACCESSORIES

Please check whether the following accessories are in good condition. If there are some spare accessories, please store them carefully.

Accessory name	Qty	Appearance	Function
Mounting Screw	4		_____
Installation manual	1	(This manual)	_____
Pipe insulation material	2		Heat insulation
Signal receiver display board	1		Receives signals
Base (for some units)	2		_____
Copper nut	2		Used to connect refrigeration pipes

(The following contents are only applicable to the unit with a wired control)

The wired control should be purchased separately from the manufacturer.

You can install the wired control on the right side of the unit or on the wall, as required. Make sure the wired control is close to the electric control box. Please refer to the Wired Control Operation and Installation Manual for installation methods.

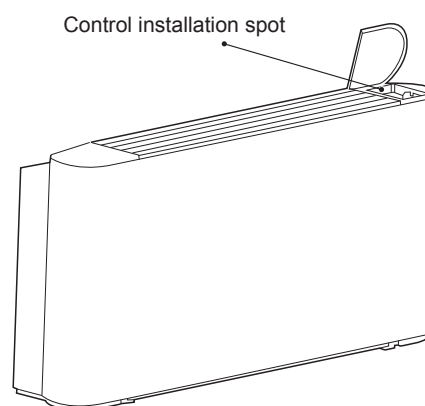


Fig.3-2 Installation position of wired control

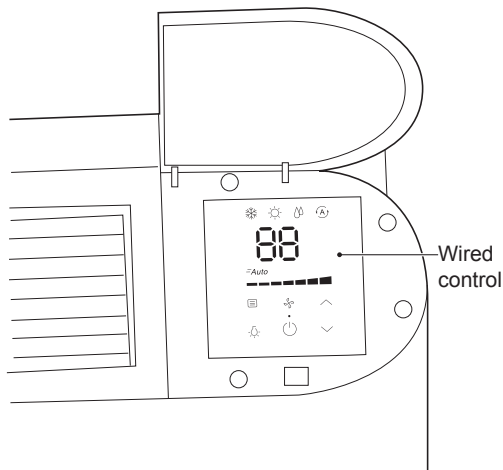


Fig.3-3 Complete installation of wired control



## CAUTION

- Never throw or break the control.
- Before installation, operate the remote control to determine its location in a reception range.
- Keep the remote control at least 1 m apart from the nearest TV set or stereo equipment. (This is necessary to prevent image disturbance or noise interference.)
- Do not install the remote control in a place exposed to direct sunlight or close to a heating source, such as a stove.
- Note that the positive and negative poles are correct when loading batteries.



## NOTE

This manual is subject to changes without further notice due to technological improvement.

# 4. INDOOR UNIT INSTALLATION

## 4.1 Before the Installation

1. Determine the right route to carry the unit to the installation site.
2. First unseal and unpack the unit. Then drag the bottom to move the unit. Refrain from exerting force on other parts of the unit, especially on the refrigerant piping, water discharge piping, and plastic parts.

## 4.2 Choosing an Installation Site

1. Choose a site that fully complies with the following conditions and user requirements to install the air conditioning unit.
  - ♦ Well ventilated.
  - ♦ Unobstructed airflow.
  - ♦ Strong enough to bear the weight of the indoor unit.

- ♦ The ceiling has no obvious slant.
- ♦ There is sufficient space for repair and maintenance work to be carried out.
- ♦ No flammable gas leak.
- ♦ The piping length between the indoor and outdoor units is within the permitted range (refer to the outdoor unit installation manual).

## 2. Space required for the installation (unit (mm):

Incorrect positioning or installation may increase the noises and vibration of the unit during operation.

If there isn't enough space reserved for the installation, the unit may become difficult to maintain and reduce its performance.

The unit allows vertical installation, provided that correct positioning is arranged in advance. As shown below, a is greater than 150 mm, b is between 90 and 100 mm, c greater than 50 mm and d greater than 1500 mm.

The feet shown in Fig.4-2 are optional. You can purchase them separately.

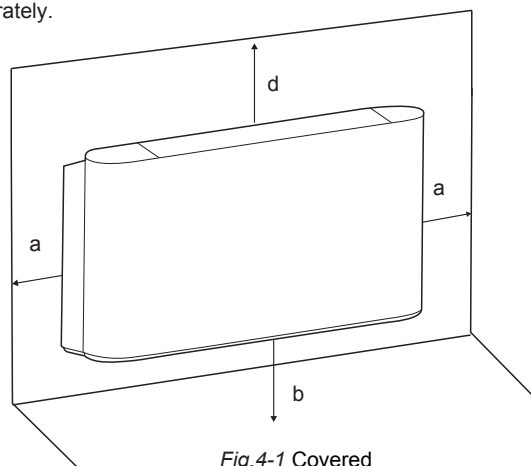


Fig.4-1 Covered

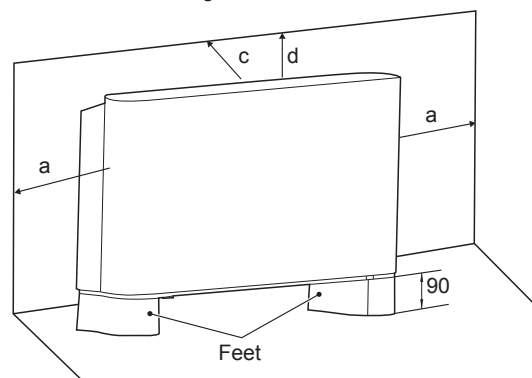


Fig.4-2 Covered

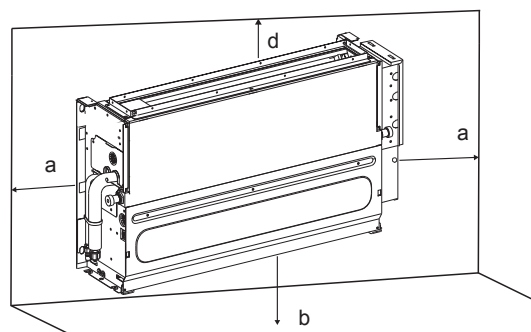


Fig.4-3 Uncovered

## 4.3 Indoor Unit Installation

### 1. Remove the frame (covered equipment)

Remove screws ①\*2 and ②\*2 and then the frame.

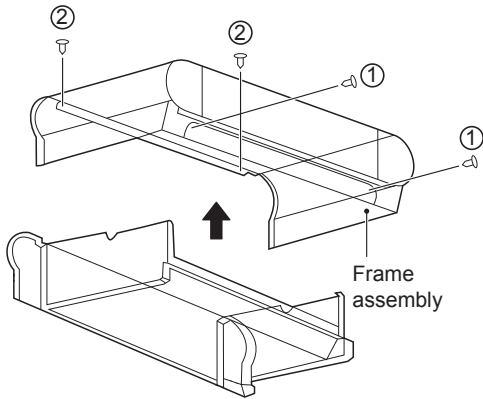


Fig.4-4

### 2. Version I Installation

Mark where the screws will go on the wall, according to the unit mounting holes or dimensions specified in Fig.4-11, Fig.4-12. The drain pipe for condensate water must be smooth enough to allow unobstructed water discharge.

As shown in Fig.4-5, fasten four screws (①) into a proper masonry structure.

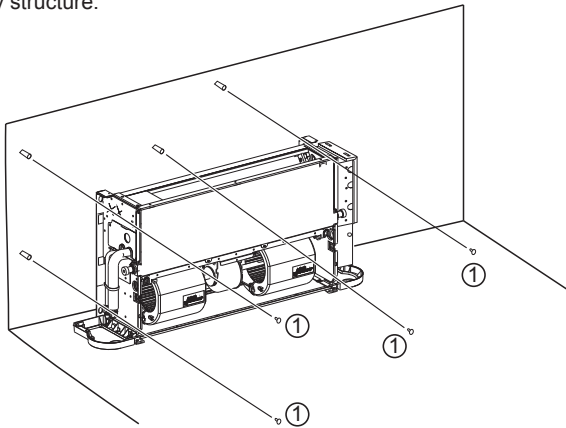


Fig.4-5 Diagram for fixing the unit body

### 3. Version II Installation

The footings shown in Fig.4-6a, Fig.4-6b are optional. You can purchase them separately and install them as follows:

1. For the covered equipment, fix the base according to Fig.4-6a beforehand.
2. Place the feet alongside the unit to be installed.
3. Place the unit base mounting holes into the corresponding feet positioning pin and install the screws ①\*2 and ②\*2 to fix the feet, according to Fig.4-6b.

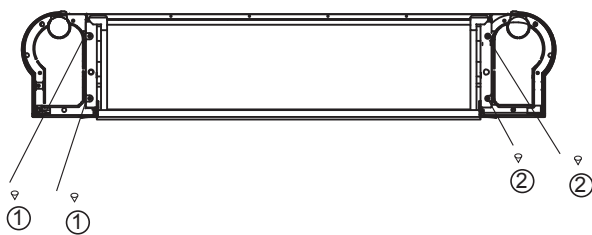


Fig.4-6a Covered equipment

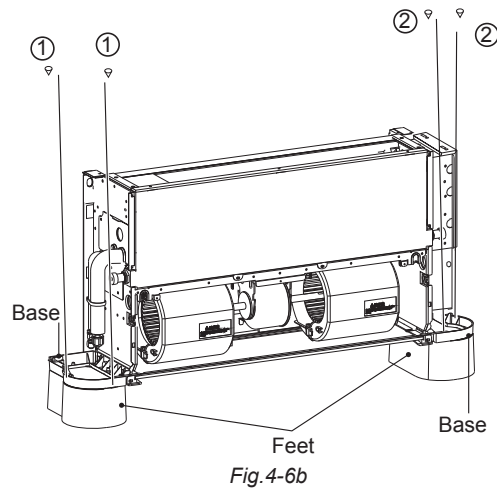


Fig.4-6b

### 4. Installation with lifting eye bolts

Use different bolts for the installation, according to the installation surroundings.

## WOOD STRUCTURE

Put the square timber horizontally on the roof beam, and then install the hanging bolts.

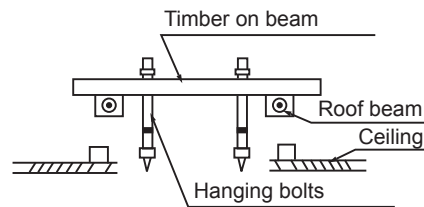


Fig.4-7

## CONCRETE BRICKS

Embedding bolts.

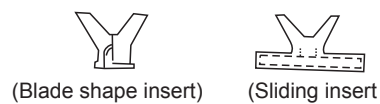


Fig.4-8

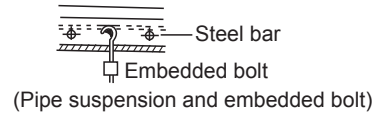


Fig.4-9

## FOR ORIGINAL CONCRETE BRICKS

Install the hanging hook with expansible bolt into the concrete deep to 45~50mm to prevent loose.

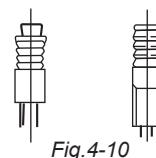


Fig.4-10

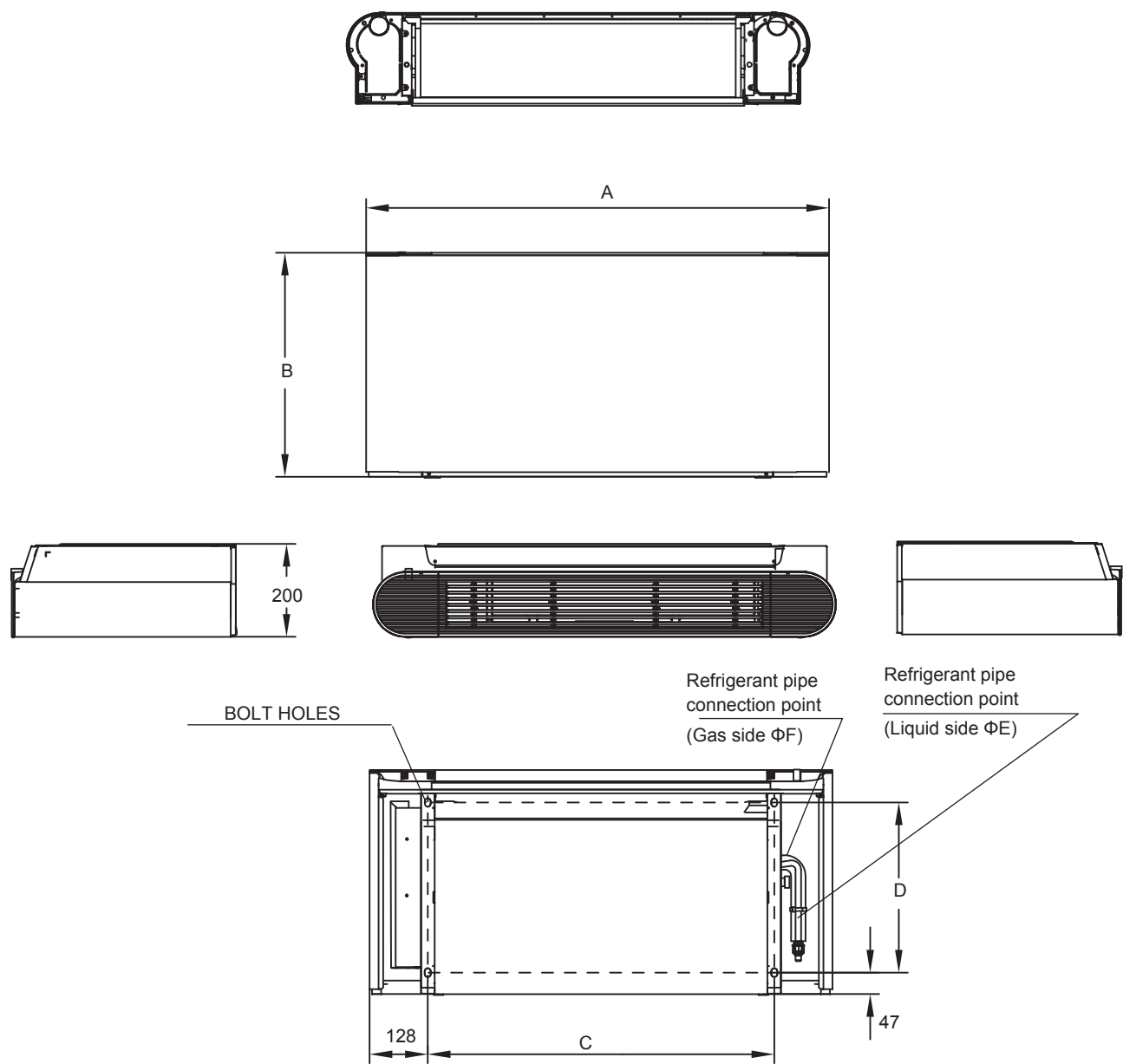


Fig.4-11 Covered equipment

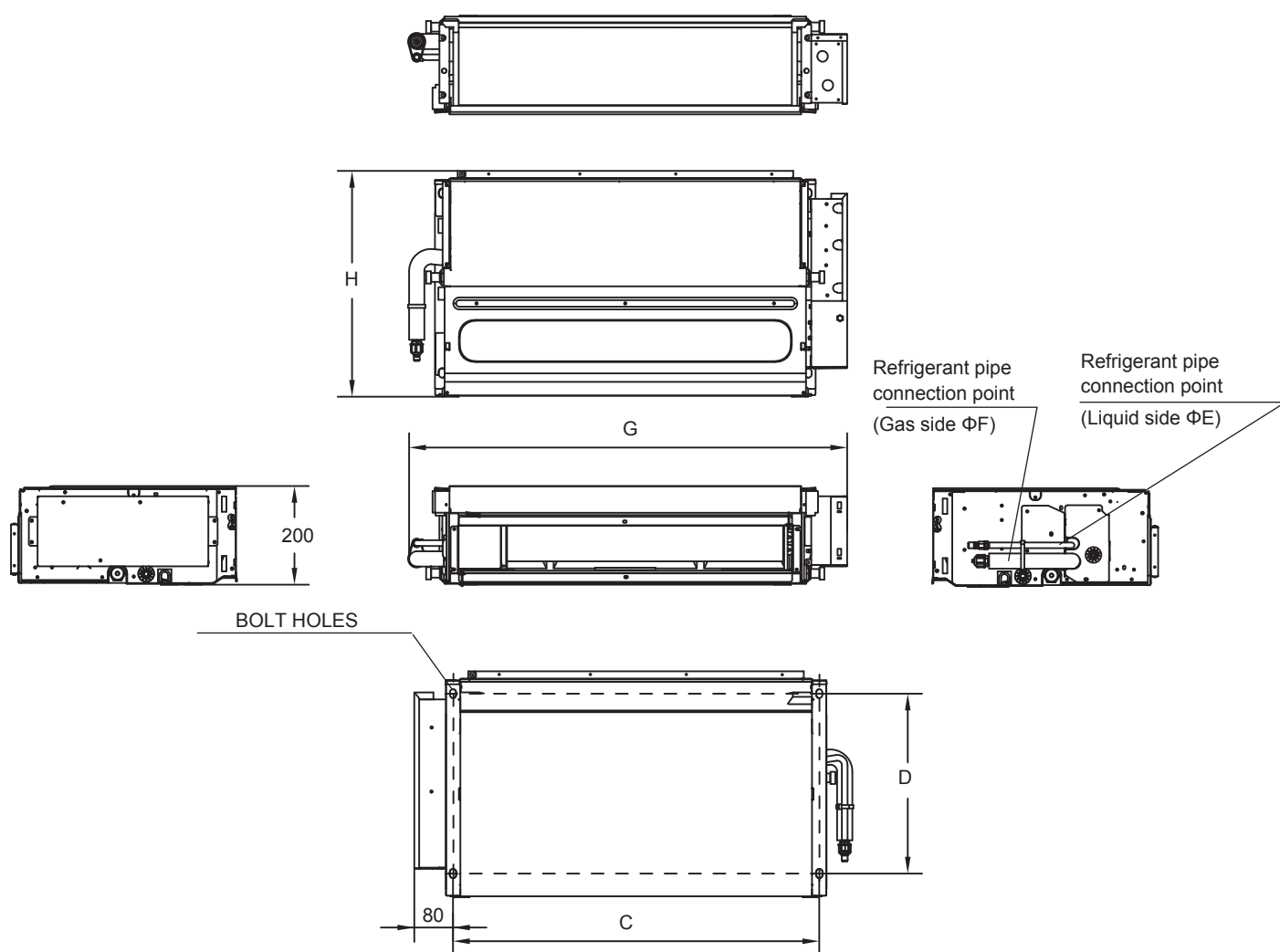


Fig.4-12 Uncovered equipment

Table 4-1

Capacity (KW)	2.2	2.8	3.6	4.5	5.6	7.1	8.0
A	1020	1020	1020	1240	1360	1360	1360
B	495	495	495	495	591	591	591
C	764	764	764	984	1104	1104	1104
D	375	375	375	375	391	391	391
E	6.4	6.4	6.4	6.4	6.4	9.5	9.5
F	12.7	12.7	12.7	12.7	12.7	15.9	15.9
G	915	915	915	1133	1253	1253	1253
H	470	470	470	470	566	566	566

## 4.4 Cleaning the air filter

To ensure proper air return, clean the air filter at least once every month. If used in a dusty environment, the filter must be cleaned on a more regular basis. Take the air filter out before cleaning it.

The filter is at the bottom of the unit, while the air return outlet is either at the bottom or on the back.

To take the air filter out, do as follows:

- a) Remove screws ① and ②.
- b) Lower the filter housing.
- c) Pull out the filter.

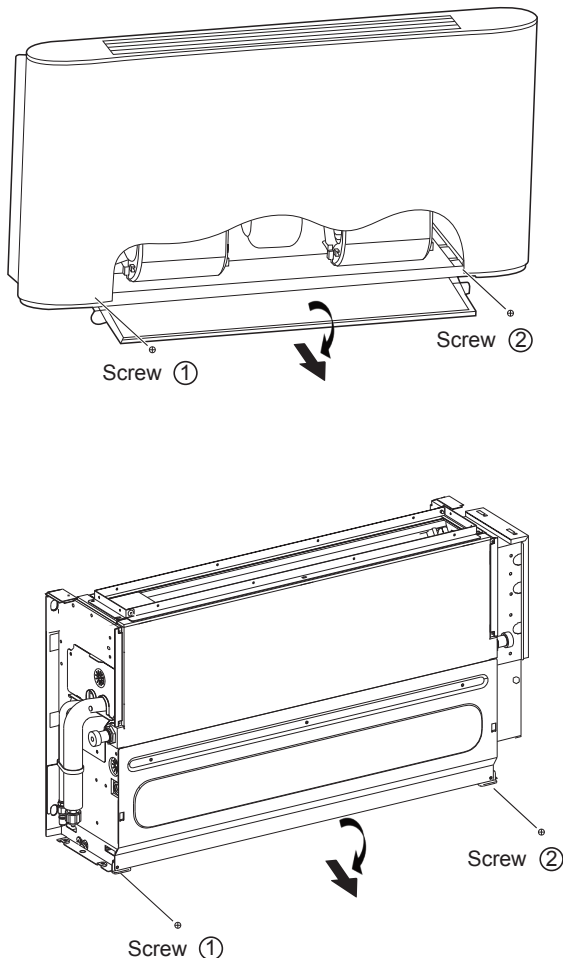


Fig.4-13 Filter extraction diagram

Blow the air filter with compressed air or clean it with water.  
Before putting the filter back, make sure it is clean and dry.  
If the filter is damaged, replace it with a new one.

## 4.5 INSTALLING THE CONNECTING PIPE



### CAUTION

Do not let air, dust, or other impurities accumulate inside the piping system during installation.  
The connecting pipe should not be installed until the indoor and outdoor units have been completely fixed.  
Keep the connecting pipe dry and do not let moisture in during installation.

### 4.5.1 Connecting Pipes Procedure

5.1.1 Measure the necessary length of the connecting pipe and follow the instructions.

- 1) Connect the indoor unit first and then the outdoor unit.
  - a. Bend the pipes properly. Don't damage them.



### CAUTION

1. Daub the surfaces of the flare pipe and the joint nuts with frozen oil, and twist them for 3~4 rounds with your hands before fastening the flare nuts.
2. Be sure to use two wrenches simultaneously when connecting or disconnecting the pipes.

2) The stop valve of the outdoor unit should be closed completely (as in its original state). Every time you connect it, first loosen the nuts at the stop valve, then connect the flare pipe immediately (within 5 minutes). If the nuts have been loosened for a long time, dusts and other impurities may enter the pipe system and may cause malfunction later on. So please expel the air out of the pipe with refrigerant before connecting.

3) Expel the air (refer to the "Expel The Air" section) after connecting the refrigerant pipe to the indoor unit and the outdoor unit. Afterwards, fasten the nuts at the repair points.

#### ■ Precautions while bending pipes.

- The bending angle should not exceed 90°.
- Bending position is best in the bendable pipe. The larger the easier it is to bend.
- Do not bend the pipe more than three times.

#### ■ Bending a connecting pipe with a small wall thickness.

- Cut the required notch in the curved part of the insulating pipe.
- Then expose the pipe (cover it with tape after bending).  
To prevent deformation and collapse, please bend the pipe to the maximum radius.
- Use a bender to get small radius pipes.

#### ■ Use market brass pipe.

When buying brass pipes, be sure to use the same insulating material. (More than 9 mm thick)

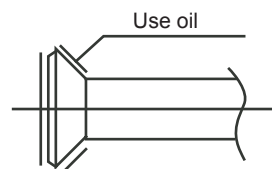


Fig. 4-14

## 4.6 Refrigerant Piping Installation

### 4.6.1 Length and Height Difference Requirements for Piping Connections to the Indoor and Outdoor Units

The length and height difference requirements for the refrigerant piping vary for different indoor and outdoor units. Refer to the installation manual of the outdoor unit.

### 4.6.2 Piping Material and Size

1. Piping material: Copper pipes for air handling.
2. Piping size: Choose and purchase copper pipes that correspond to the length and size calculated for the selected model in the installation manual of the outdoor unit and your actual project requirements.

### 4.6.3 Piping Layout

1. Seal the two piping ends properly before connecting the indoor and outdoor piping. Once unsealed, connect the piping of the indoor and outdoor units as quickly as possible to prevent dust or other debris from entering the piping system through the unsealed ends, as this may cause the system to malfunction.
2. If the pipe needs to go through walls, drill the opening in the wall and place accessories like casings and covers properly on the opening.
3. Place the refrigerant connecting piping and the communication wiring for the indoor and outdoor units together, bundle them tightly to make sure air does not enter and does not produce water condensation.
4. Insert the bundled piping and wiring from outside the room through the wall opening. Be careful when laying out the piping. Do not damage the piping.

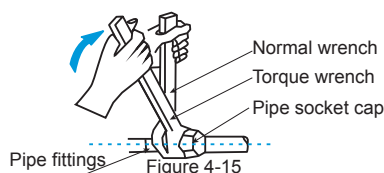
### 4.6.4 Piping Installation

For the installation of the outdoor unit's refrigerant pipe, please refer to the installation manual provided with the outdoor unit.

- All gas and liquid piping must be properly insulated; otherwise, this may cause water to leak. Use heat insulating materials that can withstand high temperatures above 120°C to insulate the gas pipes. In addition, the refrigerant piping insulation should be reinforced (20 mm or thicker) in situations where there is high temperature and/or high humidity (when sections of the refrigerant piping is higher than 30°C or when the humidity exceeds RH 80%). Otherwise, the surface of the heat insulating material may be exposed.

Before the works are carried out, check if the refrigerant is the R410A.

- If the wrong refrigerant is used, the unit may malfunction. Other than the specified refrigerant, do not let air or other gases enter the refrigeration circuit.
- If the refrigerant leaks during installation, make sure you fully ventilate the room.
- Use two wrenches when installing or dismantling the piping, a common wrench and a torque wrench. See Figure 4-15.



Slot the refrigerant piping into the brass nut (accessory 14), and expand the pipe socket. Refer to the following table for the pipe socket size and the proper tightening torque.

External diameter (mm)	Tightening torque	Flared opening diameter (A)	Flared opening
Φ6.35	14.2-17.2N·m	8.3-8.7mm	
Φ9.53	32.7-39.9N·m	12-12.4mm	
Φ12.7	49.5-60.3N·m	15.4-15.8mm	
Φ15.9	61.8-75.4N·m	18.6-19mm	
Φ19.1	97.2-118.6N·m	22.9-23.3mm	

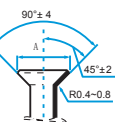


Figure 4-16

#### ⚠ Caution

- Apply the proper tightening torque according to the installation conditions. Excessive torque may damage the socket cap and little torque will not tighten the cap sufficiently, leading to leaks.

- Before the socket cap is installed on the pipe socket, apply some oil onto the socket (both inside and outside), afterwards rotate it three or four times before tightening the cap. See Figure 4-17.

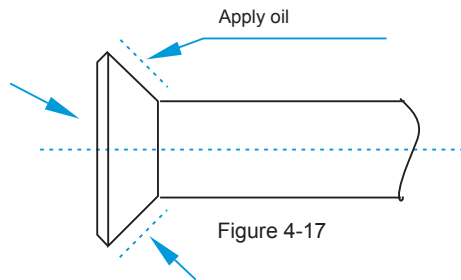


Figure 4-17

#### ⚠ Precautions when welding refrigerant pipes

- Before welding the refrigerant pipes, please fill the pipes with nitrogen to exhaust the air in the pipes. If no nitrogen is filled during the welding process, a large amount of oxide film will form inside the pipes, which may cause the air conditioning system to malfunction.
- Welding can be carried out on the refrigerant pipes after the nitrogen gas has been replaced or refilled.
- When the pipe is filled with nitrogen during the welding process, the nitrogen must be reduced to 0.02 MPa via the pressure release valve. See Figure 4-18.

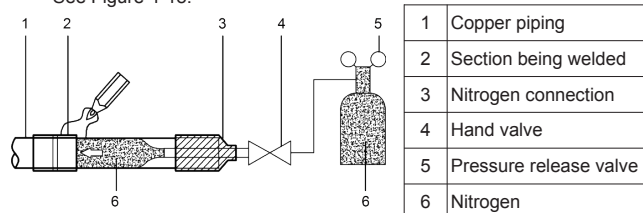


Figure 4-18

### 4.6.5 Air Tightness Test

Carry out the air tightness test on the system according to the instructions in the outdoor unit installation manual.

#### ⚠ Caution

- The Air Tightness Test helps ensure that the air and liquid shut off valves of the outdoor unit are all closed (keep factory settings).

### 4.6.6 Heat Insulation for Indoor Unit Gas-Liquid Piping Connections

- Heat insulation is carried out on the gas and liquid indoor unit piping sides, respectively.
  - a. The piping on the gas side must use heat insulation material that can withstand temperatures of 120°C and more.
  - b. For the indoor unit piping connections, use the copper pipes insulation sleeve to carry out the insulation and close all gaps.

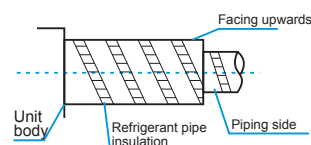


Figure 4-19

### 4.6.7 Vacuum

Create a vacuum in the system according to the instructions in the outdoor unit installation manual.

#### ⚠ Caution

- For the vacuum, make sure that the outdoor unit air and liquid cut-off valves are all closed (keep factory settings).

### 4.6.8 Refrigerant

Charge the system with refrigerant according to the instructions in the outdoor unit installation manual.

## 5. Water Discharge Piping Installation

### 5.1. Indoor Unit Water Discharge Piping Installation

1. Use PVC pipes as water discharge pipes (outer diameter: 37~39 mm, inner diameter: 32 mm). Based on the actual installation circumstances, users can purchase the appropriate piping length from their sales agent, local service centre or purchase them directly from the local market.
2. Insert the water discharge pipe into the end of the water suction connection pipe of the unit body, and use the ring clamp to clamp the water discharge pipes together with the insulation sleeve for the water outlet
3. Use the insulation sleeve of the water discharge piping to tie the water suction and discharge pipes of the indoor unit (especially the indoor section) together, and securely tie for the water discharge pipe with a cable tie to ensure that air does not enter and condense.
4. In order to prevent water from returning to the air conditioner when the operation is stopped, the water discharge pipe should slope downwards towards the outside (drainage side) and the slope angle shouldn't be greater than 1/100. Make sure that the water discharge pipe does not swell or collect water; otherwise, it will cause strange noises. See Figure 5.1.
5. When connecting the water discharge piping, do not pull the pipes to prevent the water suction pipe connector from loosening. At the same time, set a support point at every 0.8~1 m to prevent the water discharge pipes from bending. See Figure 5.1.

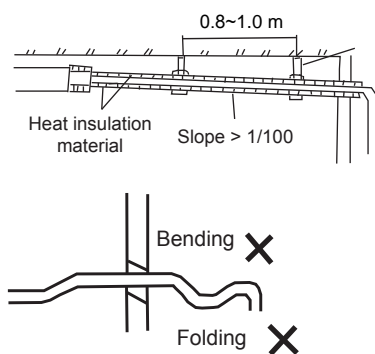


Figure 5.1

6. When connecting to a long water discharge pipe, the connections must be covered with an insulating sleeve to prevent the long pipe from loosening.
7. When the water discharge pipe outlet is higher than the water suction pipe connection, try to keep the water discharge pipe as vertical as possible and the water outlet connection fittings will be bent so that the height of the water discharge pipe should be within 1000 mm from the base of the drain pan. Otherwise, there will be excessive water flow when operation stops. See Figure 5.2.

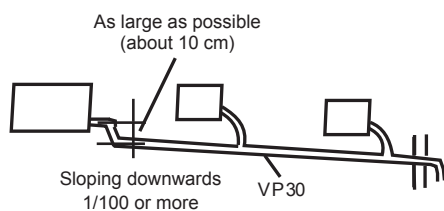


Figure 5.2 Centralised water discharge

8. The end of the water discharge pipe must be at least 50 mm above the ground or the base of the water discharge slot. In addition, do not put it in the water.

#### ⚠ Caution

- Make sure all the connections in the piping system are properly sealed to prevent water leaks.

## 5.2 Water Discharge Test

- Before testing, make sure that the water discharge pipe is smooth and check if each connection is properly sealed. Conduct the water discharge test once the unit is installed.
  1. Use the water injection pipe to inject 500 ~ 1000 ml of water into the water pan.
  2. Check if the water discharge piping outlet drains water properly and if there are any water leaks at each joint.

## 6. Electrical Wiring

### ⚠ Warning

- All the supplied parts, materials and electrical works must comply with local regulations.
- Use only copper wires.
- Use a dedicated power supply for the air-conditioners. The power voltage must be in line with the rated voltage.
- The electrical wiring works must be carried out by a professional technician, and must comply with the labels stated in the circuit diagram.
- Before the electrical connection works are carried out, turn off the power supply to prevent injuries caused by electric shock.
- The external power supply circuit of the air conditioner must include an earth line, and the earth line of the power cord connecting to the indoor unit must be securely connected to the earth line of the external power supply.
- Leakage protective devices must be configured according to the local technical standards and requirements for electrical and electronic devices.
- The fixed wiring connected must be equipped with an all-pole disconnection device with at least 3 mm contact separation.
- The distance between the power cord and signalling line must be at least 300 mm to prevent the electrical interference, malfunction or damage to electrical components. On the other hand, this lines must not come in contact with the piping and valves.
- Choose electrical wiring that is in conformity with the corresponding electrical requirements.
- Connect to the power supply only after all the wiring and connection works have been completed and carefully checked.

### 6.1 Power Cord Connection

- Use a dedicated power supply for the indoor unit that is different from the outdoor unit's.
- Use the same power supply, circuit breaker and leakage safety device for the indoor units connected to the same outdoor unit.

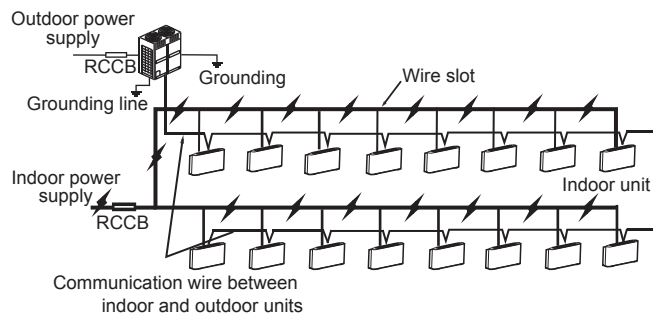


Figure 6.1

Figure 6.2 shows the power supply terminal of the indoor unit.

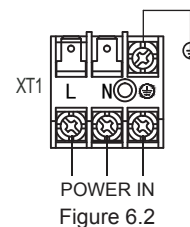


Figure 6.2

When connecting to the power supply terminal, use the circular wiring terminal with the insulation sleeve (see Figure 6.3).

If the circular wiring terminal with the insulation sleeve cannot be used, please make sure that:

- Two power cords with different diameters are not connected to the same power supply terminal (may cause the wires to overheat). See Figure 6.4.
- A power cord in conformity with the specifications is used and that the power cord is connected firmly. To prevent the cord from being pulled by external force, make sure it is securely fixed.

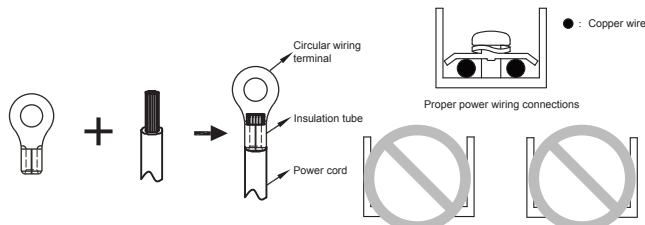


Figure 6.3

Figure 6.4

## 6.2 Electrical Wiring Specifications

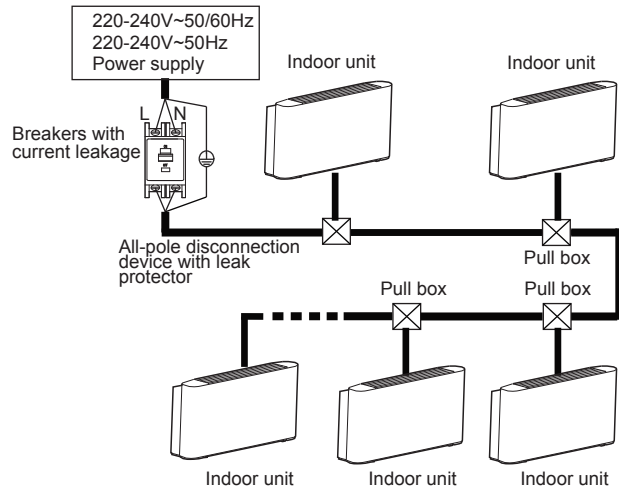


Figure 6.5

Refer to Table 6.1 for power cord and communication wire specifications. A wiring capacity that is too low will cause electrical wiring overheating and eventually lead to accidents when the unit burns and becomes damaged.

Table 6.1

Model		2.2-8.0kW
Power supply	Phase	1-phase
	Volt and frequency	220-240V~50Hz 220-240V~50/60Hz
Communication wire between indoor and outdoor units		Shielded 3×AWG16-AWG18
Communication wire between indoor unit and wired control *		Shielded AWG16-AWG20
Field fuses		15A

\* Please refer to the corresponding wired control manual for the corresponding control wiring.

Table 6.2 Indoor units electrical characteristics

Capacity	Power supply				IFM	
	Hz	Volts	MCA	MFA	kW	FLA
2.2kW	50 50/60	220 – 240	0.3	15	0.1	0.5
2.8kW			0.3	15	0.1	0.5
3.6kW			0.3	15	0.1	0.5
4.5kW			0.3	15	0.1	0.5
5.6kW			0.4	15	0.1	0.6
7.1kW			0.4	15	0.1	0.6
8.0kW			0.4	15	0.1	0.6

Abbreviations:  
MCA: Minimum Circuit Amps  
MFA: Maximum Fuse Amps  
IFM: Indoor Fan Motor  
kW: Rated motor output  
FLA: Full Load Amps

1. Select the wire diameters (minimum value) individually for each unit based on the table 6.3.
2. The maximum allowed voltage range variation between phases is 2%.

3. Choose a circuit breaker whose contact separation between all poles is, at least, 3 mm to provide full disconnection. MFA is used to select current circuit breakers and residual current operated breakers:

Table 6.3

Rated appliance current (A)	Nominal cross-sectional area (mm <sup>2</sup> )	
	Flexible cords	Fixed wiring cable
≤3	0.5 and 0.75	1 to 2.5
>3 and ≤6	0.75 and 1	1 to 2.5
>6 and ≤10	1 and 1.5	1 to 2.5
>10 and ≤16	1.5 and 2.5	1.5 to 4
>16 and ≤25	2.5 and 4	2.5 to 6
>25 and ≤32	4 and 6	4 to 10
>32 and ≤50	6 and 10	6 to 16
>50 and ≤63	10 and 16	10 to 25



### Warning

Refer to local laws and regulations when deciding on power cord and wiring dimensions. Get a professional to choose and install the wiring.

## 6.3 Communication Wiring

- Use only shielded wires for the communication wiring. Any other type of wires may produce signal interferences that will cause the unit to malfunction.
- Do not carry out electrical works like welding with the power on.
- Do not bind the refrigerant piping, power cords and communication wiring together. When the power cord and communication wiring are parallel, the distance between the two lines must be at least 300 mm or more in order to prevent signal source interferences.
- Communication wiring must not form a close loop.

### 6.3.1 Communication wiring between indoor and outdoor units

- The indoor and outdoor units communicate through the RS485 serial port.
- The communication wiring between the indoor and outdoor units should connect one unit after another in a daisy chain from the outdoor unit to the last indoor unit, the shielded layer must be properly grounded and a build-out resistance must be added to the last indoor unit to enhance communication system stability. (see Figure 6.6).
- Incorrect wiring such as a star connection or a closed ring will cause communication system instability and control system anomalies.
- Use a 3-core shielded wire (greater than or equal to 0.75 mm<sup>2</sup>) for the communication wiring between the indoor and outdoor units. Make sure the wiring is connected correctly. The connecting lead for this communication wire must come from the main outdoor unit.
- All network shielded wiring are interconnected and will eventually be connected to earth at the same point "⊕".

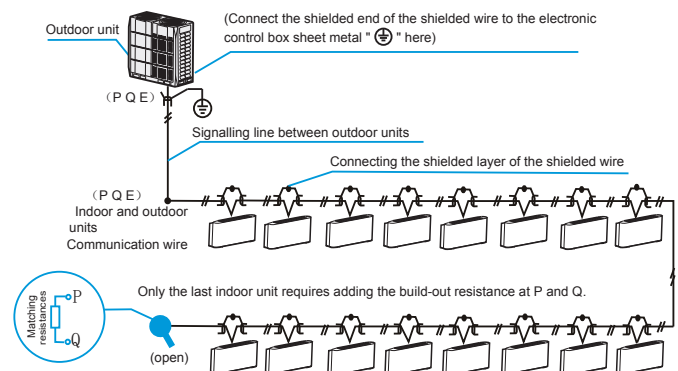


Figure 6.6

### 6.3.2 Communication wiring between the indoor unit and the wired control

The wired control and the indoor unit can be connected in different ways, according to the different forms of communication.

- 1) For a bidirectional communication mode:

- Use 1 wired control to control 1 indoor unit or 2 wired controls (one primary and one secondary control) to control 1 indoor unit (see Figure 6.7);
- Use 1 wired control to control multiple indoor units or 2 wired controls (one primary and one secondary control) to control multiple indoor units (see Figure 6.8);

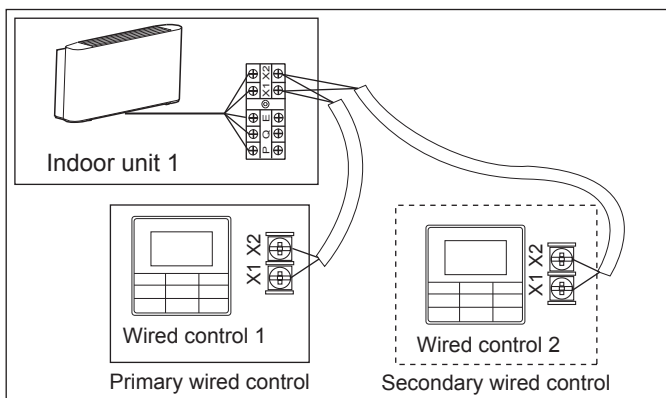


Figure 6.7

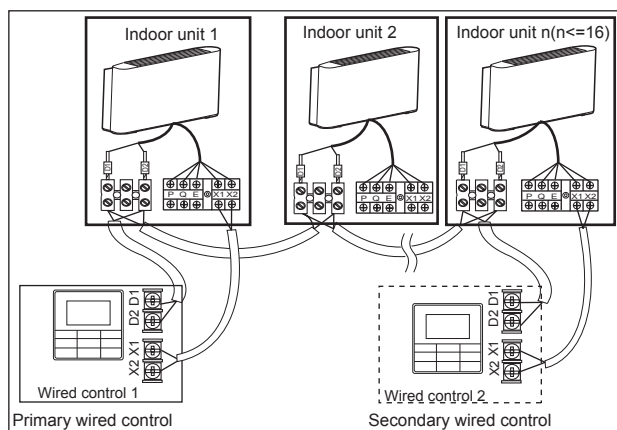


Figure 6.8

2) For a unidirectional communication mode:

- Use 1 wired control to control 1 indoor unit (see Figure 6.9).

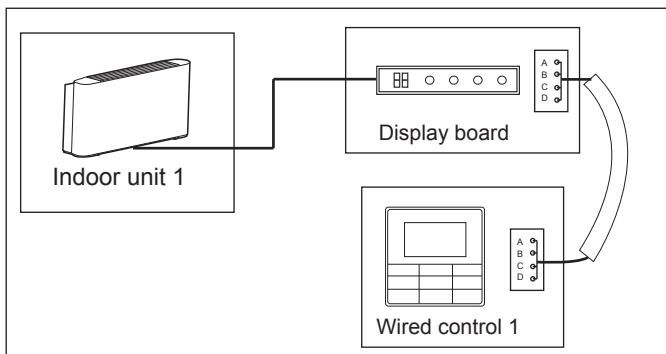


Figure 6.9

- The X1/X2, D1/D2 ports on the sides of the main control board and the unidirectional communication port (display board side) are for different types of wired controls (see Figure 6.10).
- Use the connecting wires (accessories) to connect the D1/D2 terminals.

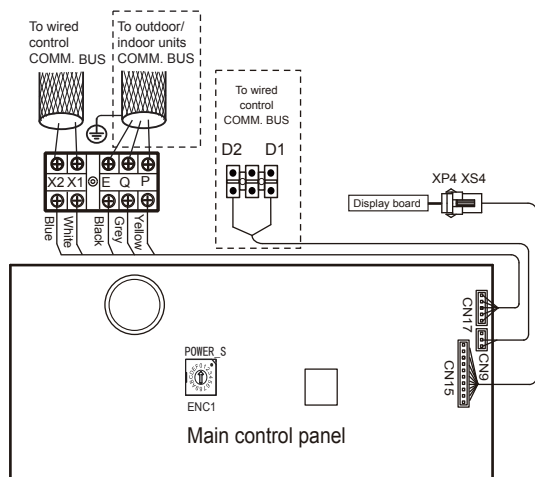


Figure 6.10

## ⚠ Caution

- For the specific connection method, refer to the instructions in the corresponding wired control manual to carry out the wiring and connections.

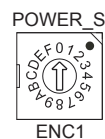
## 6.4 Handling the Electrical Wiring Connection Points

- Once the wiring and connections are done, use cable ties to secure the wiring properly so that the connection joint cannot be pulled apart by external forces. The connection wiring must be straight out so that the electrical box cover is leveled and can be closed tightly.
- Use professional insulation and sealing material to seal and protect the perforated wires. Poor sealing may lead to condensation and entry of small animals and insects that may cause short circuits in parts of the electrical system, causing the system to fail.

## 7. DIP Switch Configuration

### 7.1 Capacity Settings

Set up the PCB DIP switch on the indoor electric control box to cater to different uses. Once the settings are done, make sure you cut off the main power switch again, and then switch the power on. If the power is not cut off and switched on again, the settings will not be executed.



ENC1 DIP Switch Capacity Settings:

DIP Switch Code	Capacity
0	1000W/1200W
1	1500W/1700W/1800W
2	2200W
3	2500W/2800W
4	3200W/3600W
5	4000W
6	4500W
7	5000W/5600W
8	6300W/7100W
9	8000W

## ⚠ Caution

- The capacity DIP switches have been configured before delivery. Only a professional maintenance personnel should change these settings.



### 7.2 Address Settings

When a indoor unit is connected to the outdoor unit, the outdoor unit will automatically allocate an address for the indoor unit. Alternatively, you may use the control to manually set the address.

- The addresses of any two indoor units in the same system cannot be the same.
- The network address and the indoor unit address are the same, and does not have to be configured separately.
- Once the address settings are completed, mark the address of each indoor unit to facilitate after-sales maintenance.
- The centralized indoor unit control is completed on the outdoor unit. For details, refer to the manual on the outdoor unit.

## ⚠ Caution

- After completing the centralized control function of the indoor unit has been on the outdoor unit, the DIP switch on the main control panel of the outdoor unit must be set to auto addressing; otherwise, the indoor unit in the system will not be controlled by the centralized control.
- The system can connect up to 64 indoor units (address 0~63) at the same time. Each indoor unit can only have one address DIP switch in the system. The addresses of any two indoor units in the same system cannot be the same. Units with the same address may malfunction.

J1	
	Auto restart function enabled
	Auto restart function disabled

### Caution

The DIP switch capacity has been configured before delivery.  
Only professional maintenance personnel should change these settings.

## 7.4 Error Codes and Definitions

Error code	Content
A0	Emergency stop
A1	Refrigerant leak error
E0	Mode conflict error
E1	Communication error with outdoor unit
E2	T1 Indoor ambient temperature sensor error
E3	T2 Indoor heat exchanger mid-point temperature sensor error
E4	T2B Indoor heat exchanger outlet temperature sensor error
E6	Fan error
E7	EEPROM error
E9	Communication error with wired control
Eb	Indoor EXV coil error
Ed	Outdoor unit error
EE	Water level alarm
F7	Repeated indoor units address
F8	MS-Box error
FA	Capacity (HP number) has not been set
FE	Indoor unit has not been assigned an address
U4	MS-Box self-check error
H4	Communication error between indoor unit and adapter board or panel
H5	EEPROM error(adapter board or panel)
HA	Smart Eye error

## 8. Test Run

### 8.1 Precautions Before Test Run

- Indoor and outdoor units are properly installed;
- Piping and wiring are correct;
- No refrigerant piping system leaks;
- Smooth water discharge;
- Insulation is complete;
- Grounding has been properly connected;
- Piping length and filled refrigerant amount have been recorded;
- The power supply voltage is the same as the air conditioner's rated voltage;
- The indoor and outdoor units air inlet and outlet not obstructed;
- Shut off valves for the gas and liquid ends of the outdoor unit are opened;

### 8.2. Test Run

When the wired/remote control is used to set the air conditioner's cooling operations, please check the following items one by one. If there is a fault, troubleshoot it according to the manual.

- Function keys of the wired/remote control are operating normally;
- Room temperature regulation is normal;
- LED indicator is on;
- Water discharge is normal;
- No vibration and strange sounds during operation;

Note: Once the power is connected, when the unit is turned on or started immediately after the unit is turned off, the air conditioner has a safety function which delays the start of the compressor.

## Operation Manual

There are two types of precautions described below:



**Warning:** Failure to comply may lead to death or serious injury.



**Caution:** Failure to comply may lead to injury or damaging the unit.

Depending on the situation, this may also lead to serious injury.

Once the installation is completed, please store the manual properly for future reference. When this air conditioner is handed over to other users, make sure that the manual is included with the handover.



### Warning

- Do not use this unit in places where flammable gas may exist. If flammable gas comes into contact with the unit, a fire may occur, which could result in serious injury or death.
- If this unit exhibits any abnormal behavior (such as emitting smoke) there is a danger of serious injury. Disconnect the power supply and contact your supplier or service engineer immediately.
- The refrigerant in this unit is safe and should not leak if the system is designed and installed properly. However, if a large amount of refrigerant leaks into a room, the oxygen concentration will decrease rapidly, which can cause serious injury or death. The refrigerant used in this unit is heavier than air, so the danger is greater in basements or other underground spaces. In the event of a refrigerant leak, turn off any devices that produce a naked flame and any heating devices, ventilate the room, and contact your supplier or service engineer immediately.
- Toxic fumes may be produced if the refrigerant in this unit comes into contact with naked flames (such as from a heater, gas stove/burners, or electric appliances).
- If this unit is used in the same room as a cooker, stove, hob, or burner, ventilation for sufficient fresh air must be ensured, otherwise the oxygen concentration will fall, which may cause injury.
- Dispose of this unit's packaging carefully, so children cannot play with it. Packaging, especially plastic packaging, can be dangerous, can cause serious injury or death. Screws, staples and other metal packaging components can be sharp and should be disposed of carefully to avoid injury.
- Do not attempt to inspect or repair this unit yourself. This unit should only be serviced and maintained by a professional air conditioning service engineer. Incorrect servicing or maintenance can cause electric shocks, fire or water leaks.
- This unit should only be re-positioned or re-installed by a professional technician. Incorrect installation can lead to electric shocks, fire or water leaks. The installation and grounding of electrical appliances should only be carried out by licensed professionals.  
Ask your supplier or installation engineer for further information.
- Do not allow this unit or its remote control to come into contact with water, as this can lead to electric shocks or fire.
- Turn off the unit before cleaning it to avoid electric shocks. Otherwise, an electric shock and injury may result.
- To avoid electric shocks and fires, install an earth leakage detector.
- Do not use paint, varnish, hair spray, other flammable sprays or other liquids that may give off flammable fumes/vapor near this unit, as doing so can cause fires.
- When replacing a fuse, ensure that the new fuse to be installed completely complies with requirements.
- Do not open or remove the unit's panel when the unit is powered on. Touching the unit's internal components while the unit is powered on can lead to electric shocks or injuries caused by moving parts such as the unit's fan.
- Ensure that the power supply is disconnected before any servicing or maintenance is carried out.

- Do not touch the unit or its remote control with wet hands, as doing so can lead to electric shocks.
- Do not allow children to play near this unit, as doing so risks injury.
- Do not insert your fingers or other objects into the unit's air inlet or air outlet to avoid injury or damage to the equipment.
- Do not spray any liquids onto the unit or allow any liquids to drip onto the unit.
- Do not place vases or other liquid containers on the unit or in places where liquid could drip onto it. Water or other liquids that come into contact with the unit can lead to electric shocks or fires.
- Do not remove the remote control's front or back covers and do not touch the remote control's internal components, as doing so can cause injury. If the remote control stops working, contact your supplier or service engineer.
- Ensure that the unit is properly grounded, otherwise electric shocks or a fire may result. Electrical surges (such as those that can be caused by lightning) can damage electrical equipment. Ensure that suitable surge protectors and circuit breakers are properly installed, otherwise electric shocks or a fire may result.
- Dispose of this unit properly and in accordance with regulations. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and thus enter the food chain.
- Do not use the unit until the qualified technician instructs you that it is safe to do so.
- Do not place appliances that produce naked flames in the path of the airflow from the unit. The airflow from the unit may increase the rate of combustion, which may cause a fire and cause serious injury or death. Alternatively, the airflow may cause incomplete combustion which can lead to reduced oxygen concentration in the room, which can cause serious injury or death.



### Caution

- Only use the air conditioner for its intended purpose. This unit should not be used to provide refrigeration or cooling for food, plants, animals, machinery, equipment or art.
- Do not insert your fingers or other objects into the unit's air inlet or air outlet to avoid injury or damage to the equipment.
- The fins on the unit's heat exchanger are sharp and can cause injury if touched. To prevent injury, when the unit is being serviced, gloves should be worn or the heat exchanger should be covered.
- Do not place items which might be damaged by moisture under the unit. When the humidity is greater than 80% or if the drain pipe is blocked or the air filter is dirty, water could drip from the unit and damage objects placed under the unit.
- Ensure that the drain pipe functions properly. If the drain pipe is blocked by dirt or dust, water leaks may occur when the unit is running in cooling mode. If this happens, turn the unit off and contact your supplier or service engineer.
- Do not touch the internal parts of the control. Do not remove the front panel. Some internal parts may cause injury or be damaged.
- Ensure that children, plants and animals are not directly exposed to the airflow from the unit.
- When fumigating a room with insecticide or other chemicals, cover the unit well and do not run it. Failure to observe this caution could lead to chemicals getting deposited inside the unit and later emitted from the unit when it running, endangering the health of any room occupants.
- Do not dispose of this product as unsorted waste. It must be separately collected and processed. Ensure that all applicable legislation regarding the disposal of refrigerant, oil and other materials is adhered to. Contact your local waste disposal authority for information about disposal procedures.

- To avoid damaging the remote control, exercise caution when using it and replacing its batteries. Do not place objects on top of it.
- Do not place appliances that have naked flames under or near the unit, as heat from the appliance can damage the unit.
- Do not place the unit's remote control in direct sunlight. Direct sunlight can damage the remote control's display.
- Do not use strong chemical cleaners to clean the unit, as doing so can damage the unit's display or other surfaces. If the unit is dirty or dusty, use a slightly damp cloth with very diluted and mild detergent to wipe the unit. Then, dry it with a dry cloth.
- Children shall not play with the appliance.
- Do not dispose of this product as unsorted waste. It must be separately collected and processed. Ensure that all applicable legislation regarding the disposal of refrigerant, oil and other materials is adhered to. Contact your local waste disposal authority for information about disposal procedures.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.



## 9. Part Names

The figure shown above is for reference only and may be slightly different from the actual product.

Air Outlet Louver (adjustable)

For onsite adjustment to three-direction or two-direction, please contact the local dealer.

### • Version I

Vertical unit with casing. The air intake is on the front and the air outlet on top for installing on a wall or with feet on the floor.

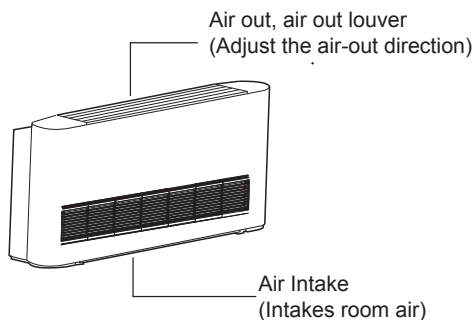


Figure 9.1

### • Version II

Vertical unit with casing. The air intake is at the bottom and the air outlet on top for installing on a wall or with feet on the floor.

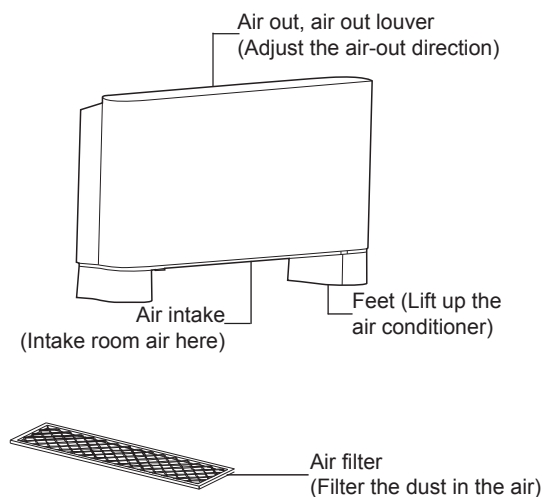


Figure 9.2

### • Version III

The vertical unit is concealed in the wall after installation, with air intake from the bottom and air delivery at the top.

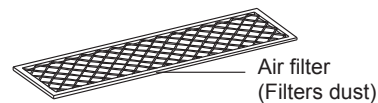
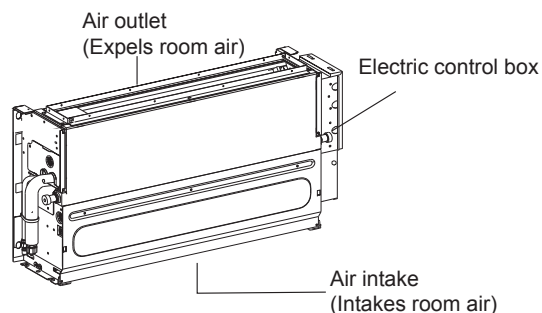


Figure 9.3

## 10. Display Panel

There is only one type of display panel, and its appearance is shown below, in Figure 10.1.

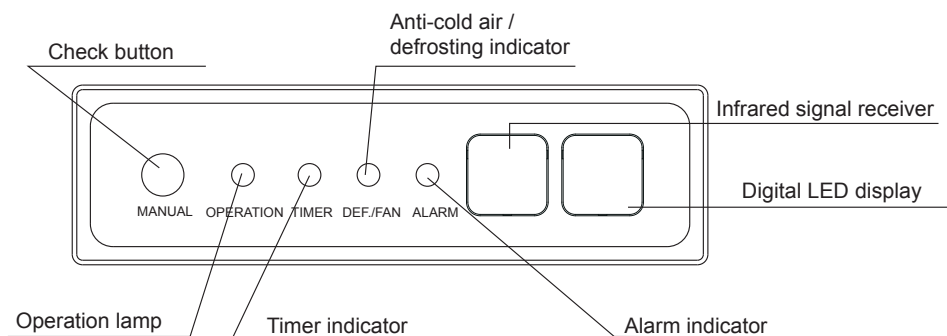


Figure 10.1

Table: Display panel output under normal operating conditions.

Unit state		Display output	
		Digital display panels	
		Unit state	Digital display
Standby		Operation indicator flashes slowly	
Shutting-down		All indicators off	
Operation	Normal operation	Operation indicator on	Cooling and heating modes: set temperature Fan only mode: indoor ambient temperature
	Cold draft prevention or outdoor unit defrosting operation	Operation and Anti-cold / defrosting indicators on	Set temperature
A timer has been set		Timer indicator on	

## 11. Air Conditioner Operations and Performance

The operating temperature range under which the unit runs stably is given in the table below.

	Cooling mode	Heating mode
Indoor temperature	17 ~ 32°C(DB)	15 ~ 27°C(DB)
Indoor humidity	≤80% <sup>(a)</sup>	

(a) Condensation will form on the unit surface and water may drip out of the unit when indoor humidity is beyond 80%

### ⚠ Caution

- The unit performs stably within the temperature range given in the table above. If the indoor temperature is outside the unit's normal operating range, it may stop running and display an error code.

To ensure the desired temperature is achieved efficiently, ensure that:

- All windows and door are closed.
- The airflow direction is adjusted to work in running mode.
- The air filter is clean.

Please note how you can best save energy and achieve the best cooling/heating effect.

- Regularly clean air filters inside indoor units.

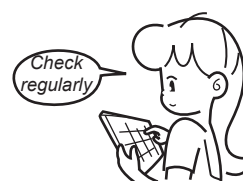


Figure 11.1

- Avoid too much outdoor air coming into air-conditioned spaces.



Figure 11.2

- ♦ Note that outlet air is either cooler or hotter than the set room temperature. Avoid direct exposure to outlet air as it may be too cool or hot.

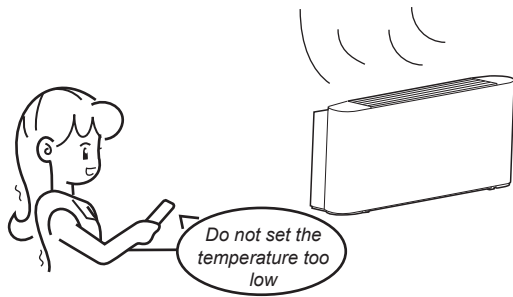


Figure 11.3

- ♦ Maintain a proper air distribution. Air outlet louvers should be used to adjust the direction of outlet airflow, as doing so might ensure more efficient operation.

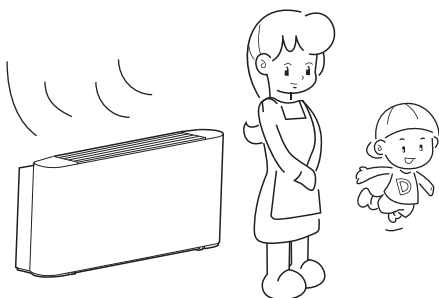


Figure 11.4

## 12. Maintenance

### ⚠ Caution

- Please release pressure before disassembly.
- Before you clean the air conditioner, ensure it is powered off.
- Check that the wiring is undamaged and connected.
- Use a dry cloth to wipe the indoor unit and remote control.
- A wet cloth may be used to clean the indoor unit if it is very dirty.
- Never use a damp cloth on the remote control.
- Do not use a chemically treated duster on the unit or leave this type of material on the unit to avoid damaging the finish.
- Do not use benzene, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or warp.

### ♦ Method for cleaning the air filter

- The air filter can prevent the dust or other particles from entering the unit. If the filter is blocked, the unit will not work well. Clean the filter every two weeks when you use it regularly.
- If the air conditioner is positioned in a dusty place, clean the filter often.
- Replace the filter if it is too dusty to clean (the replaceable air filter is an optional fitting).

1. Take out the air intake grille  
Remove the bolts, push the grille switches simultaneously, as indicated in Figure 12.1. Then pull down the air intake grille (together with the air filter, as shown in Figure 12.2). Pull the air intake grille down to 15°, and lift it up to remove the grille.

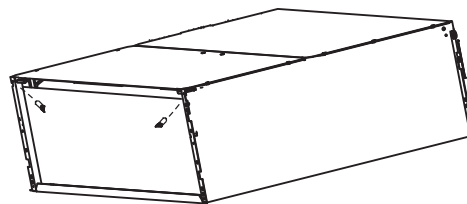


Figure 12.1

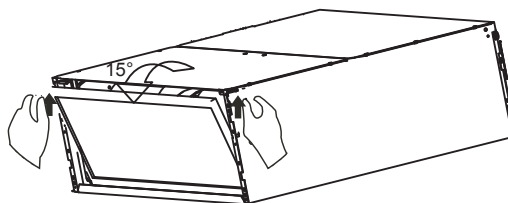


Figure 12.2

### ⚠ Caution

- The control box cables originally connected to the electrical terminals on the main body must be removed, as indicated above.

2. Take out the air filter.

3. Clean the air filter

During the operation of the equipment, dust will accumulate on the filter and needs to be removed from the filter, otherwise the unit will not operate effectively.

Clean the filter every two weeks with regular use.

Clean the air filter with a vacuum cleaner or water.

- a. The air intake side should face up when using a vacuum cleaner. (Refer to Figure 12.3)
- b. The air intake side should face down when using clean water. (Refer to Figure 12.4)

For excessive dusts, use a soft brush and natural detergent to clean it and dry in a cool place.

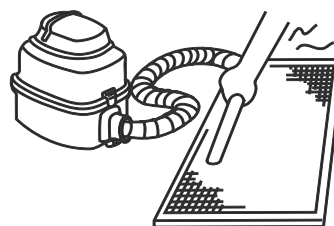


Figure 12.3

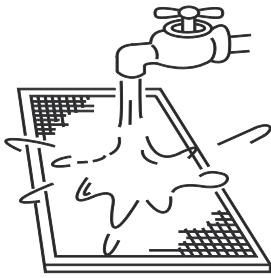


Figure 12.4

#### ⚠ Caution

- Do not dry out the air filter under direct sunshine or with fire.
- The air filter should be installed before the unit body installation.

4. Re-install the air filter.
  5. Install and close the air inlet grille by reversing steps 1 and 2, and connect the control box cables to the corresponding terminals in the main body.
- ♦ **Maintenance before stopping using the unit for a long time (e.g., at the end of the season)**
    - a. Let the indoor units run in fan only mode for about half a day to dry the interior of the unit.
    - b. Clean the air filter and indoor unit casing.
    - c. Refer to "Cleaning the air filter" for details. Install cleaned air filters back in their original positions.
    - d. Turn off the unit with the ON/OFF button on the remote control and then unplug it.

#### ⚠ Caution

- When the power switch is connected, some energy will be consumed even if the unit is not running. Disconnect the power to save energy.
- A degree of dirt will accumulate when the unit has been used several times, which will require cleaning.
- Take of the batteries from the remote control.

- ♦ **Maintenance after a long period of non-use**
  - a. Check for and remove anything that might be blocking the inlet and outlet vents of the indoor units and outdoor units.
  - b. Clean the unit casing and clean the filter. Refer to [Cleaning the filter] and "Cleaning the filter" for instructions. Re-install the filter before running the unit.
  - c. Turn on the power at least 12 hours before you want to use the unit to ensure it works properly. As soon as the power is turned on, the remote control display appears.

## 13. Symptoms That Are Not Faults

The following symptoms may be experienced during the normal operation of the unit and are not considered faults. Note: If you are not sure whether a fault has occurred, contact your supplier or service engineer immediately.

### Symptom 1: The unit will not run

- ♦ Symptom: When the ON/OFF button on the remote control is pressed, the unit does not immediately start running.  
Cause: to protect certain system components, system start-up or re-start is intentionally delayed for up to 12 minutes under some operating conditions. If the OPERATION LED on the unit's panel is lighting, the system is working normally and the unit will start after the intentional delay is complete.
- ♦ Heating mode is running when the following panel lights are on: operation and the "DEF./FAN LED indicator".  
Cause: the indoor unit activates safety measures because of the low outlet temperature.

### Symptom 2: The unit emits white mist

- ♦ White mist is generated and emitted when the unit starts to operate in a very humid environment. This phenomenon will stop once the humidity in the room is reduced to normal levels.
- ♦ The unit occasionally emits white mist when it runs in heating mode. This occurs when the system finishes periodic defrosting. Moisture that may accumulate on the unit's heat exchanger coil during defrosting becomes mist and is emitted from the unit.

### Symptom 4: Dust is emitted from the unit

- ♦ This can occur when the unit first runs after a long idle period.

### Symptom 5: The unit gives off a strange smell

- ♦ If smells such as those of strong-smelling food or tobacco smoke are present in the room, they can enter the unit, leave a trace on the unit's internal components and later be emitted from the unit.

## 14. Troubleshooting

### 14.1 General

- ♦ Sections 14.2 and 14.3 describe some initial troubleshooting steps that can be taken when an error occurs. If these steps do not resolve the issue, arrange for a professional technician to investigate the problem. Do not attempt further investigations or troubleshooting yourself.
- ♦ If any of the following errors occur, turn off power, contact a professional technician immediately and do not attempt to troubleshoot yourself:
  - a. A safety device such as a fuse or circuit breaker frequently blows/trips.
  - b. An object or water enters the unit.
  - c. Water is leaking from the unit.

#### ⚠ Caution

- Do not attempt to inspect or repair this unit by yourself. Arrange for a qualified technician to carry out all servicing and maintenance.

## 14.2 Unit Troubleshooting

Symptom	Possible causes	Troubleshooting steps
The unit does not start	A power cut has occurred (the power of the premises has been cut-off).	Wait for the power to come back on.
	The unit is powered off.	Power on the unit. This indoor unit forms part of an air conditioning system that has multiple indoor units that are all connected. The indoor units cannot be powered on individually - they are all connected to one, single power switch. Ask a professional technician for advice regarding how to safely power on the units.
	The power switch fuse may have burned out.	Replace the fuse.
	The remote control batteries are dead.	Replace the batteries.
Air flows normally but doesn't cool	The temperature setting is not correct.	Set the desired temperature on the remote control.
The unit starts or stops frequently	Arrange for a professional technician to check out the following: <ul style="list-style-type: none"> <li>♦ Too much or too little refrigerant.</li> <li>♦ No gas in the refrigerant circuit.</li> <li>♦ The outdoor unit compressors have malfunctioned.</li> <li>♦ The power supply voltage is too high or too low.</li> <li>♦ There is a blockage in the piping system.</li> </ul>	
Low cooling effect	Doors or windows are open.	Close the doors and windows.
	Sunlight is shining directly onto the unit.	Close shutters/blinds to shield the unit from direct sunlight.
	The room contains many heat sources such as computers or refrigerators.	Turn off some of the computers during the hottest part of the day.
	The unit's air filter is dirty.	Clean the filter.
	The outside temperature is unusually high.	The cooling capacity of the system will decrease as the outdoor temperature rises, and if the local climatic conditions are not considered when selecting the outdoor unit of the system, the system may not be able to provide sufficient cooling.
	Arrange for a professional air conditioning technician to check out the following: <ul style="list-style-type: none"> <li>♦ The unit's heat exchanger is dirty.</li> <li>♦ The unit's air inlet or outlet is obstructed.</li> <li>♦ A refrigerant leak has occurred.</li> </ul>	
Low heating effect	Doors or windows are not completely closed.	Close doors and windows.
	Arrange for a professional technician to check out the following: A refrigerant leak has occurred.	

### 14.3 Remote Control Troubleshooting

#### Warning:

Certain troubleshooting steps that a professional technician may perform when investigating an error are described in this owner's manual for reference only. Do not attempt to undertake these steps yourself – arrange for a professional technician to investigate the problem.

If any of the following errors occur, power the unit off and contact a professional technician immediately. Do not attempt troubleshooting yourself:

- ♦ A safety device such as a fuse or circuit breaker frequently blows/trips.
- ♦ An object or water enters the unit.
- ♦ Water is leaking from the unit.

Symptom	Possible causes	Troubleshooting steps
The fan speed cannot be adjusted	Check whether the MODE indicated on the display is "AUTO".	In automatic mode, the air conditioner will automatically change the fan's speed.
	Check whether the MODE indicated on the display is "DRY".	When dry mode is selected, the air conditioner automatically adjusts the fan speed. (The fan speed can be selected during "COOL", "FAN ONLY", and "HEAT".)
The remote control signal is not transmitted even when the ON/OFF button is pressed	A power cut has occurred (the power to the premises has been cut-off).	Wait for the power to come back on.
	The remote control batteries are dead.	Replace the batteries.
The indication on the display disappears after a certain time	Check whether the timer operation has come to an end when TIMER OFF is indicated on the display.	The air conditioner operation will stop up to the set time.
The TIMER ON indicator goes off after a certain time	Check whether the timer operation has come to an end when TIMER ON is indicated on the display.	Up to the set time, the air conditioner will automatically start and the appropriate indicator will go off.
No receiving sound from the indoor unit when the ON/OFF button is pressed	Check whether the signal transmitter of the remote control is properly directed to the infrared signal receiver of the indoor unit when the ON/OFF button is pressed.	Directly transmit the signal transmitter of the remote control to the infrared signal receiver of the indoor unit, and then press the ON/OFF button twice.

#### 14.4 Error Codes

With the exception of a mode conflict error, contact your supplier or service engineer if any of the error codes listed in the following table are displayed on the unit's display panel. If the mode conflict error is displayed and persists, contact your supplier or service engineer. These errors should only be investigated by a professional technician. The descriptions are provided in this manual for reference only.

Content	Digital display output	Possible causes
Mode conflict error	E0	<ul style="list-style-type: none"> <li>The indoor unit's operating mode conflicts with that of the outdoor units.</li> </ul>
Communication error between indoor and outdoor units	E1	<ul style="list-style-type: none"> <li>Communication wires between indoor and outdoor units are not connected properly.</li> <li>Interference from high voltage wires or other sources of electromagnetic radiation.</li> <li>Communication wire too long.</li> <li>Damaged main PCB.</li> </ul>
T1 Indoor ambient temperature sensor error	E2	<ul style="list-style-type: none"> <li>Temperature sensor not connected properly or has malfunctioned.</li> <li>Damaged main PCB.</li> </ul>
T2 Indoor heat exchanger mid-point temperature sensor error	E3	
T2B Indoor heat exchanger outlet temperature sensor error	E4	
Fan error	E6	<ul style="list-style-type: none"> <li>Fan stuck or blocked.</li> <li>Fan motor not connected properly or has malfunctioned.</li> <li>Power supply abnormal.</li> <li>Damaged main PCB.</li> </ul>
EEPROM error	E7	<ul style="list-style-type: none"> <li>Damaged main PCB.</li> </ul>
Indoor EEV coil error	Eb	<ul style="list-style-type: none"> <li>Line loosened or broken.</li> <li>The electronic expansion valve is stuck.</li> <li>Damaged main PCB.</li> </ul>
Outdoor unit error	Ed	<ul style="list-style-type: none"> <li>Outdoor unit error.</li> </ul>
Water level error	EE	<ul style="list-style-type: none"> <li>Water level float stuck.</li> <li>Water level switch not connected properly.</li> <li>Damaged main PCB.</li> <li>Drain pump has malfunctioned.</li> </ul>
Indoor unit has not been assigned an address	FE	<ul style="list-style-type: none"> <li>Indoor unit has not been assigned an address.</li> </ul>
Refrigerant leakage failure	A1	<ul style="list-style-type: none"> <li>MS box actually detects that the quantity of connected refrigerant leak sensors does not match the quantity of sensors set by ENC1.</li> <li>The refrigerant leak sensor is open circuit, that means that there is a refrigerant leak.</li> <li>MS box PCB malfunction.</li> </ul>
Emergency stop	A0	<ul style="list-style-type: none"> <li>The indoor unit receives the emergency stop signal sent by the outdoor unit or centralized control.</li> </ul>
MS self-check failure	U4	<ul style="list-style-type: none"> <li>During the commissioning of the outdoor unit, the outdoor unit found the indoor unit PQE connection under the MS, but the actual refrigerant pipe connection did not match.</li> </ul>
MS failure	F8	<ul style="list-style-type: none"> <li>The connected MS box has an error or protection.</li> </ul>
IDU address repeat. Error code display F7 and repeated address by turns in 1 Hz	F7	<ul style="list-style-type: none"> <li>Multiple virtual addresses will appear in 20-56kw high pressure ducts. And it didn't repower after setting the unit's capacity.</li> <li>There are other indoor units that repeat the address.</li> </ul>
Failure in communication with the wired control	E9	<ul style="list-style-type: none"> <li>Line loosened or broken.</li> <li>Damaged main PCB.</li> </ul>
Communication error between indoor unit and adapter board or panel	H4	<ul style="list-style-type: none"> <li>Damaged main PCB.</li> </ul>
EEPROM error(adapter board or panel)	H5	<ul style="list-style-type: none"> <li>Damaged main PCB.</li> </ul>
Smart Eye error	HA	<ul style="list-style-type: none"> <li>Damaged main PCB.</li> </ul>

Notes:

Flashing rapidly means flashing twice per second; flashing slowly means flashing once per second.

MUNDO  CLIMA®



[www.mundoclima.com](http://www.mundoclima.com)

C/ NÁPOLES 249 P1  
08013 BARCELONA  
SPAIN  
(+34) 93 446 27 80  
SAT: (+34) 93 652 53 57