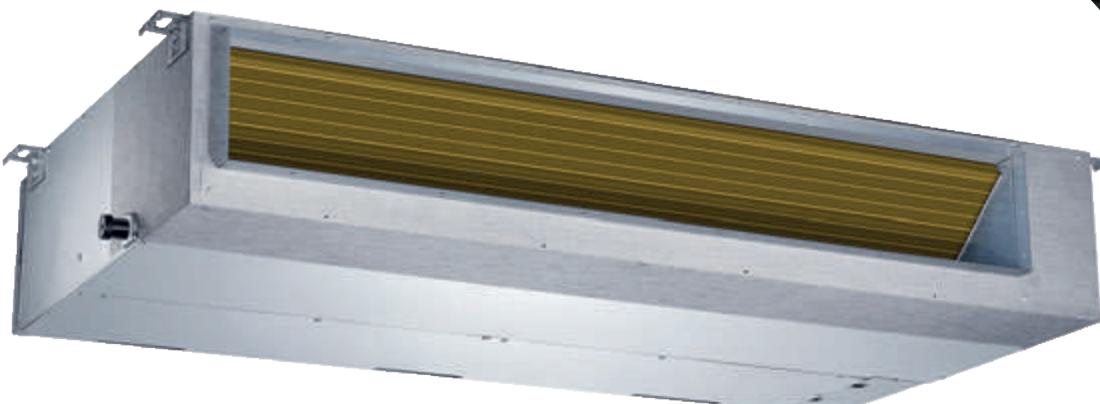




## MAIORI INVERTER SERIES

### DUCTED SERIES

# USER MANUAL



#### IMPORTANT:



Please read this manual carefully before installing or operating the machine. Please keep this manual for future reference.

Please check the applicable models, technical data, F-GAS (if any) and manufacturer information from the "Instruction Manual - Product Sheet" in the outdoor unit packaging.  
(European Union products only)

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## User Manual

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# Installation Manual

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## Safety precautions

**Read safety precautions before installation and operation.**

**Improper installation resulting from failure to follow the instructions may cause serious damage or injury.** Information warning of potential damage or injury is marked with **ATTENTION** or **CAUTION**.

### **ATTENTION**

This symbol indicates the possibility of personal injury or death.

### **CAUTION**

This symbol indicates the possibility of material damage or serious consequences.

### **ATTENTION**

- 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, without supervision or if they have been given instructions on how to use 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 (EN Standard Requirements).
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, without 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.

### **WARNINGS FOR USE OF THE PRODUCT**

- If an abnormal situation (such as a burning smell) occurs, immediately turn off the unit and disconnect the power. Contact your dealer for instructions on how to avoid electric shock, fire, or injury.
- **Not** Insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, as the fan may rotate at high speeds.
- **Not** use flammable sprays such as hairspray, hairspray or paint near the unit. This may cause a fire or combustion.
- **Not** operate the air conditioner near or in places with combustible gases. The emitted gas may accumulate around the unit and cause an explosion.
- **Not** Operate the air conditioner in a humid room such as a bathroom or laundry room. Excessive exposure to humidity can cause electrical components to short out.
- **Not** exposing the body directly to cold air for a prolonged period of time.
- **Not** allow children to play with the air conditioner. Children should be supervised at all times when they are near the unit.
- If the air conditioner is used together with burners or other heating devices, ventilate the room thoroughly to avoid oxygen deficiency.
- In some functional environments, such as kitchens, server rooms, etc., the use of specially designed air conditioners is strongly recommended.

**WARNINGS CLEANING AND MAINTENANCE**

- Turn off the device and unplug the power before cleaning. Otherwise, it may cause electric shock.
- **Not** clean the air conditioner with excessive amounts of water.
- **Not** Clean the air conditioner with combustible detergents. Combustible detergents may cause fire or deformation.

**CAUTION**

- Turn off the air conditioner and unplug the power supply if you do not intend to use it for a long time.
- Turn off and unplug the unit during lightning storms.
- Make sure that condensation water can drain away from the unit without obstruction.
- **Not** operate the air conditioner with wet hands. This may result in electric shock. **Not** use the device for purposes other than those intended **Not** climb or place objects on top of the outdoor unit.
- **Not** leaving the air conditioner running for long periods of time with doors or windows open, or if the humidity is very high.

**ELECTRICAL WARNINGS**

- Use only the specified power cord. If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Keep the power plug clean. Remove any dust or dirt that accumulates on or around the plug. Dirty plugs can cause fire or electric shock.
- **Not** Pull the power cord to unplug the unit. Hold the plug firmly and pull it out of the outlet. Pulling directly on the cord may damage it, which may cause fire or electric shock.
- **Not** change the length of the power cord or use an extension cord to power the unit. **Not** share the electrical outlet with other appliances. Inadequate or insufficient electrical power may cause fire or electric shock.
- The product must be properly grounded when installed to avoid the occurrence of electric shock.
- For all electrical work, follow all local and national wiring standards, regulations and the Installation Manual. Connect wires securely and securely to prevent external forces from damaging the terminal. Improperly made electrical connections can overheat and cause fire and electric shock. All electrical connections must be made in accordance with the Wiring Diagram located on the indoor and outdoor unit panels.
- All wiring must be arranged correctly to ensure that the control board cover can close properly. If the control board cover is not closed properly, it may promote corrosion and cause the connection points on the terminal to heat up, resulting in fire or electric shock.
- If the power supply is connected to the mains, a isolating device must be installed on all poles with at least 3 mm contact separation and which has a leakage current that can exceed 10 mA. The leakage current monitoring device (RCD) must have a rated residual operating current not exceeding 30 mA and incorporate fixed wiring disconnection in accordance with the wiring rules.

**WARNINGS CLEANING AND MAINTENANCE**

The air conditioner printed circuit board (PCB) is designed with a fuse for overcurrent protection. The specifications of the fuse are printed on the PCB, such as:

T5A/250VAC, T10A/250VAC, etc.

T20A/250VAC(< =24000Btu/h units), T30A/250VAC(>24000Btu/h units)

**NOTE:**For units with R32 or R290 refrigerant, only the explosion-proof ceramic fuse can be used.



## WARNINGS FOR PRODUCT INSTALLATION

1. Installation must be done by an authorized dealer or specialist. Faulty installation may cause water leakage, electric shock or fire.
2. Installation must be done according to the instructions. Improper installation may cause water leakage, electric shock or fire.  
(In North America, installation must be performed according to NEC and CEC requirements by authorized personnel only.)
3. Contact an authorized technician for repair or maintenance of this unit. This appliance must be installed in accordance with national wiring regulations.
4. Use only the specified accessories, parts and components supplied for installation. Using non-standard parts may cause water leakage, electric shock, fire and unit failure.
5. Install the unit on a stable surface that can support the weight of the unit. If the location selected is not able to support the weight of the unit, or if the installation is not performed properly, the unit may fall and cause serious injury and damage.
6. Install drainage pipes according to the instructions in this manual. Improper drainage may cause water leakage and damage to household items.
7. For units that have an auxiliary electric heater, **Not** Install the unit within 1 meter (3 feet) of combustible materials.
8. **Not** Install the unit in a location where it may be exposed to combustible gas leaks. If combustible gas accumulates around the unit, it may cause a fire.
9. Do not apply power until all work has been completed.
10. When moving or relocating the air conditioner, use experienced technicians to disengage and reinstall the unit.
11. To install the appliance on its stand, read the detailed information in the sections "Installing the indoor unit" and "Installing the outdoor unit".

### Note on fluorinated gases (not applicable to the unit using R290 refrigerant)

1. This air conditioning unit contains fluorinated greenhouse gases. For specific information on the type of gas and quantity, please refer to the relevant label on the unit itself or to the "User Manual - Product Sheet" in the outdoor unit packaging. (European Union products only)
2. Installation, service, maintenance and repair of this unit must be performed by a certified technician.
3. Uninstallation and recycling of the product must be performed by a certified technician.
4. For equipment containing fluorinated greenhouse gases (in quantities equal to or greater than 5 tonnes of CO<sub>2</sub>equivalent to, but less than 50 tonnes of CO<sub>2</sub>equivalent), if the system is equipped with a leak detection system, it must be checked at least every 24 months.
5. If the unit is checked for leaks, it is strongly recommended that a proper record of all checks is kept.



## CAUTION for the use of R32/R290 refrigerant

- When using a flammable refrigerant, the appliance must be placed in a well-ventilated area, and the size of the room must correspond to the specific surface area for operation.

For models with R32 refrigerant:

The appliance must be installed, operated and maintained in a room with a surface area greater than X m<sup>2</sup>.

The appliance must not be installed in an unventilated space, if this space is less than X m<sup>2</sup> (please observe the following indications).

Model (Btu/h)	Quantity of refrigerant to be charged (kg)	Minimum room surface area (m <sup>2</sup> )
≤12000	≤1.11	1
18000	≤1.65	2
24000	≤2.58	5
30000	≤3.08	7
36000	≤3.84	10
42000-48000	≤4.24	12
60000	≤4.39	13

- Reusable mechanical connectors and flared joints are not allowed inside. (Standard Requirements **EN**).
- Mechanical connectors used indoors shall have a rate not exceeding 3g/year at 25% of the maximum allowable pressure. When mechanical connectors are reused indoors, the sealing parts shall be renewed. When flared joints are reused indoors, the flared part shall be remanufactured. (Standard requirements **UL**)
- When mechanical connectors are reused indoors, the sealing parts must be renewed. When flared joints are reused indoors, the flared part must be remanufactured. (Standard Requirements **IEC**)
- Mechanical connectors used inside must comply with ISO 14903.

## European guidelines for waste disposal

This marking, shown on the product or its literature, indicates that waste electrical equipment should not be disposed of with general household waste.



### Correct disposal of this product (Waste electrical and electronic equipment)

This appliance contains refrigerant and other potentially hazardous materials. For the disposal of this appliance, special collection and treatment is required by law. **Not** dispose of this product as household waste or unsorted municipal waste.

The following options are available for the disposal of this appliance:

- Please dispose of the appliance at your local electronic waste collection point.
- When purchasing a new appliance, the dealer will take back the old appliance free of charge. The manufacturer will take back the old appliance free of charge.
- Sell the appliance to certified scrap metal dealers.

## Special Notice

Disposal of this appliance in vegetation or other natural environments endangers your health and is harmful to the environment. Hazardous substances can enter groundwater and the food chain.

# Unit Specifications and Features

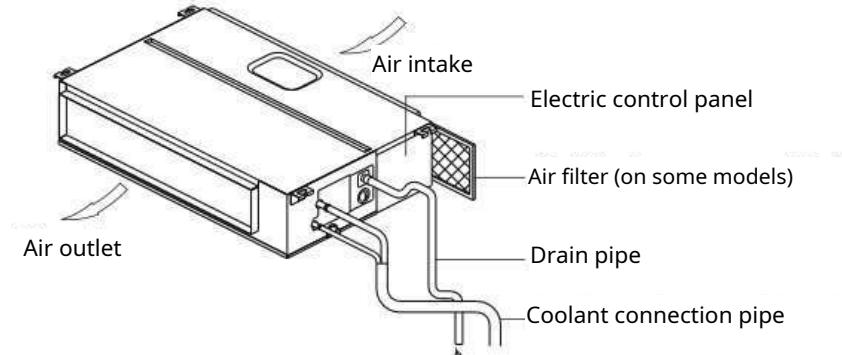
## Internal unit

**NOTE:** Different models have different display panels. Not all indicators described below are available for the air conditioner you purchased. Please check the internal display panel of the unit you purchased.

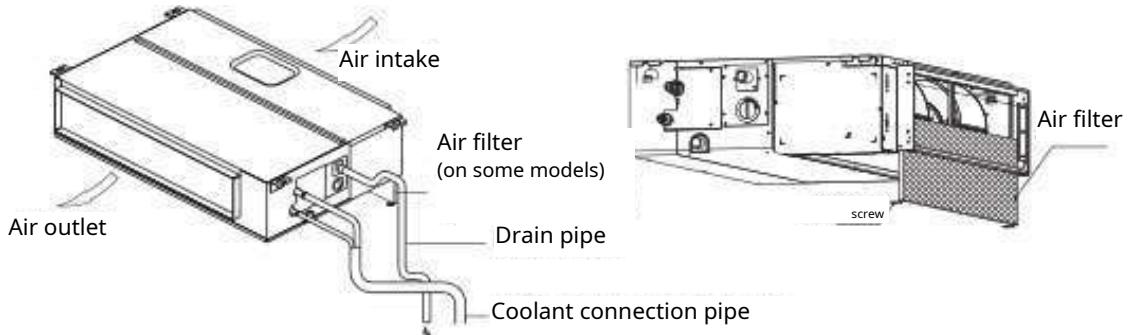
The illustrations in this manual are for explanation purposes only. The actual shape of your indoor unit may differ slightly. The actual shape shall prevail.

The display panel on the indoor unit can be used to operate the unit in case the remote control has been configured incorrectly or has low batteries.

### (A) For unit with filter removal on left or right side

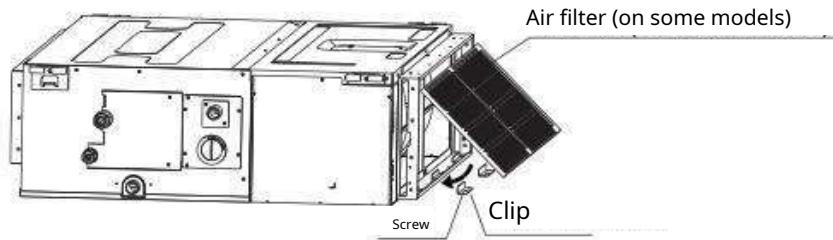


### (B) For the unit with filter removal on the bottom



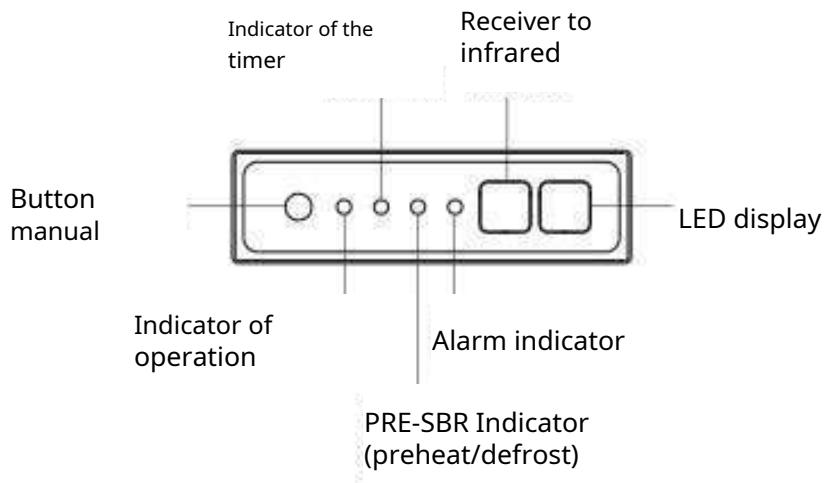
1. Insert the filter into the flanged subassembly through the bottom side;
2. Lock the screw.

### (C) For the unit with filter removal on the back



1. Remove the two flange protectors;
2. Insert the filter into the flange subassembly;
3. Rotate the air filter;
4. Replace the flange protectors.

## Panel View



- MANUAL button:** This button selects the mode in the following order: AUTO, HARD COOLING, OFF.

**INTENSE COOLING mode:** In HIGH COOL mode, the operation indicator light flashes. The system will then switch to AUTO after cooling with high fan speed for 30 minutes. The remote control will be disabled during this operation.

**OFF mode:** When the display panel is turned off, the unit turns off and the remote control is reactivated.

## Operating temperature

When the air conditioner is used outside the following temperature ranges, some safety protection functions may activate and cause the unit to shut down.

### Inverter subdivision type

	Mode COOLING	Mode HEATING	Mode DEHUMIDIFIER	PER UNIT EXTERNAL WITH HEATER ELECTRIC AUXILIARY
Temperature environment	17°C - 32°C (62°F - 90°F)	0°C - 30°C (32°F - 86°F)	10°C - 32°C (50°F - 90°F)	
Temperature external	0°C - 50°C (32°F - 122°F)	- 15°C - 50°C (5°F - 122°F) (For models with cooling systems low temperature).	- 15°C - 24°C (5°F - 75°F)	0°C - 50°C (32°F - 122°F)
	0°C - 52°C (32°F - 126°F) (For models tropical special)		0°C - 52°C (32°F - 126°F) (For models tropical special)	When the outside temperature is below 0°C (32°F), it is recommended I strongly recommend keeping the unity always connected for to guarantee a operation regular and continuous.

## Fixed speed typology

	COOLING mode	Mode HEATING	Mode DEHUMIDIFIER
Temperature environment	170C-320C (62°F -90°F)	0°C-30°C (32°F-86°F)	10°C-32°C (50°F-90°F)
Temperature external	18°C -43°C (64°F -109°F)	- 7°C-24°C (19°F -75°F)	11°C-43°C (52°F-109°F)
	- 7°C -43°C (19°F -109°F) (For models with cooling systems low temperature)		18°C-43°C (64°F-109°F)
	18°C-52°C (64°F-126°F) (For special tropical models)		18°C-52°C (64°F-126°F) (For special tropical models)

**NOTE:**Relative humidity of the environment less than 80%. If the air conditioner operates in excess of these values, its surface may accumulate condensation. In this case, place the shutter at its maximum angle in a vertical position (vertically to the floor) and set the ventilation mode to HIGH

### To further optimize the performance of your drive, proceed as follows:

- Keep doors and windows closed.
- Limit energy consumption by using the TIMER on and off functions. Do not block the air inlet or outlet.
- Regularly inspect and clean air filters.

## Other features

### Default setting

When the air conditioner restarts after a power failure, it returns to the factory settings (AUTO mode, AUTO fan, 24°C (76°F)). This may cause inconsistencies on the remote control and the unit panel. Use the remote control to update the status.

### Auto restart (some models)

In case of power failure, the system will stop immediately. When the power returns, the operation lamp of the indoor unit will flash. To restart the unit, press the button

**ON/OFF** on the remote control. If the system has an auto restart function, the unit restarts with the same settings.

### Three-minute protection function (some models)

A protective function prevents the air conditioner from turning on for about 3 minutes when it restarts immediately after operation.

### Shutter angle memory function (some models)

Some models are designed with a shutter angle memory function. When the unit restarts after a power failure, the shutter's horizontal slat angle will automatically return to the previous position. The shutter's horizontal slat angle should not be too small, as condensation may form and drip into the machine. To reset the shutter, press the manual button, which will reset the shutter's horizontal slat settings.

### Refrigerant leak detection system (some models)

The indoor unit will automatically display "EC" or "ELOC" or the display LEDs will flash (depending on the model) when it detects a refrigerant leak.

## Care and maintenance

### Cleaning the indoor unit



#### BEFORE CLEANING OR MAINTENANCE

**ALWAYS TURN OFF THE AIR CONDITIONER AND DISCONNECT THE POWER SUPPLY BEFORE CLEANING OR MAINTENANCE.**



#### CAUTION

To clean the unit use only a soft, dry cloth.

If the unit is particularly dirty, you can use a cloth soaked in warm water to clean it.

- **Not** use chemicals or chemically treated cloths to clean the unit
- **Not** Use benzene, paint thinner, polishing powder or other solvents to clean the unit. They may cause cracking or deformation of the plastic surface.
- **Not** use water hotter than 40°C (104°F) to clean the front panel. This may cause deformation or discoloration of the panel.

### Cleaning the air filter

A clogged air conditioner can reduce the cooling efficiency of the unit and can also be harmful to your health. Make sure to clean the filter once every two weeks.



#### CAUTION: DO NOT REMOVE OR CLEAN THE FILTER YOURSELF

Removing and cleaning the filter can be dangerous. Removal and maintenance must be performed by a certified technician.

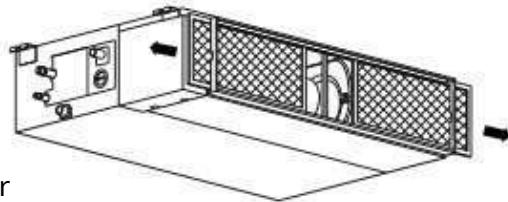
1. If the unit you purchased has the fan located at the rear, remove the filter in the direction indicated by the arrows in the following diagram.
2. If the appliance you purchased is a downward ventilation model, remove the filter in the direction indicated by the arrows in the following diagram.

3. Remove the air filter.
4. Clean the air filter by vacuuming the surface or washing it in warm water with a mild detergent.
5. Rinse the filter with clean water and let it air dry. **NOT** Let the filter dry in direct sunlight.
6. Reinstall the filter.

Care and maintenance

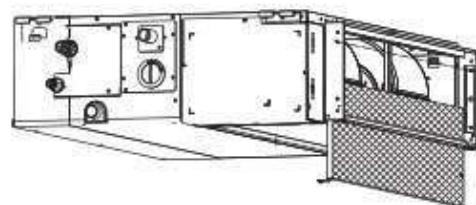
#### Rear ventilated model

(A)



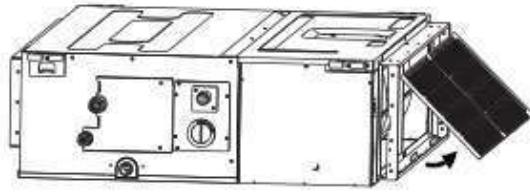
or

(B)



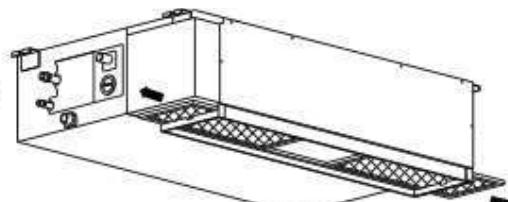
or

(C)



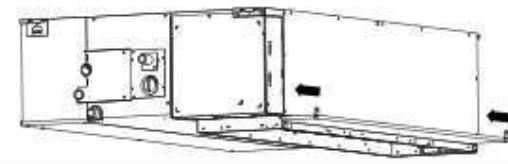
#### Downward facing fan model

(A)



or

(B)



If using water, the inlet side should face down and away from the water flow.



If Yes uses a vacuum cleaner, the inlet side must be addressed towards the vacuum cleaner.



### ⚠ CAUTION

- Before replacing the filter or cleaning, turn off the appliance and disconnect the power supply.
- When removing the filter, do not touch the metal parts of the unit. Sharp metal edges may cause injury.
- Do not use water to clean the inside of the indoor unit. This may destroy the insulation and cause electric shock.
- Do not expose the filter to direct sunlight while drying. This may shrink the filter.

### ⚠ CAUTION

- Maintenance and cleaning of the outdoor unit must be performed by an authorized dealer or authorized service provider.
- Any repairs to the unit must be performed by an authorized dealer or authorized service provider.

## Maintenance - Long periods of non-use

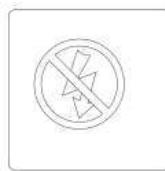
If you plan not to use the air conditioner for a long period of time, proceed as follows:



Clean all filters



Activate the function FAN until the unit does not dry completely



Turn off the unit and unplug the power



Remove the batteries from the remote control

## Maintenance - Pre-use inspection seasonal

After long periods of non-use, or before periods of frequent use, proceed as follows:



Check if the cables are damaged



Clean all filters



Check for the presence of losses



Replace the batteries



Make sure there are no blockages in the entrances and exits of the air



# troubleshooting



## SAFETY PRECAUTIONS

If any of the following conditions occur, turn off the appliance immediately!

- The power cord is damaged or abnormally hot
- There is a burning smell
- The unit makes loud or abnormal sounds
- A power fuse blows or the circuit breaker trips frequently
- Water leaks or objects fall into or out of the unit

**DO NOT ATTEMPT TO SOLVE THESE PROBLEMS YOURSELF! CONTACT AN AUTHORIZED SERVICE PROVIDER IMMEDIATELY!**

### Normal situations

The following problems are not malfunctions and in most situations do not require repairs.

Problem	Possible causes
<b>The unit does not turn on when the ON/OFF button is pressed</b> <b>NTO</b>	The unit has a 3-minute protection function to prevent overload. The unit cannot be restarted within three minutes after being turned off.  Cooling and heating models: If the operation lamp and PRE-SBR (Pre-heat/Defrost) indicators are on, it means that the outside temperature is too low and the anti-freeze mode is activated to defrost the unit.  In cooling only models: If the "Fan Only" indicator is on, it means that the outside temperature is too low and the anti-freeze mode is activated to defrost the unit.
<b>The unit switches from COOL/HEATING mode WARMING up at FAN mode</b>	The unit can change its setting to prevent ice from forming on the unit. Once the temperature increases, the unit will resume operation in the previously selected mode.  The set temperature has been reached, at this point the unit turns off the compressor. The unit will restart if the temperature fluctuates again.
<b>The indoor unit emits white steam</b>	In humid regions, a large temperature difference between the room air and the air conditioning can cause the emission of white vapor.
<b>Both the indoor and outdoor units emit white mist</b>	When the unit restarts in HEAT mode after defrosting, white mist may be emitted due to the humidity generated by the defrosting process.
<b>The indoor unit makes noise</b>	When the shutter resets, a rushing sound may occur.  A squeaking sound is heard when the system is off or in COOL mode. The noise is also heard when the drain pump (optional) is running.  After operating the unit in HEAT mode, a squeaking noise may occur due to the expansion and contraction of the plastic parts of the unit.
<b>Both the indoor unit and outdoor unit make noise</b>	A hissing sound is heard during operation: This is normal and is caused by the flow of refrigerant gas through the indoor and outdoor units.  A hissing sound is heard when the system starts, has just stopped working or is defrosting: This noise is normal and is caused by the refrigerant gas stopping or changing direction.  Squeaking Sound: The normal expansion and contraction of plastic and metal parts caused by temperature changes during operation can cause squeaking noises.

Problem	Possible causes
<b>The external unit does noise</b>	The unit makes different noises depending on its operating mode.
<b>Dust is emitted both from the internal unit than from the external one</b>	The unit may accumulate dust during long periods of non-use, which will be blown out when turned on. This can be reduced by covering the unit during long periods of non-use.
<b>The unit emits a bad smell</b>	The unit can absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) that will be emitted during operation. The unit's filters have become moldy and need to be cleaned.
<b>The fan of the external unit not works</b>	During operation, the fan speed is controlled to optimize the operation of the device.

**NOTE:** If the problem persists, contact a local dealer or the nearest customer service center. Provide them with a detailed description of the malfunction of the appliance and the model number.

## troubleshooting

If you encounter any problems, please check the following points before contacting repair service.

Problem	Possible causes	Solution
<b>Poor performance of cooling</b>	The temperature setting may be higher than the room temperature	Lower the temperature settings
	The heat exchanger of the indoor or outdoor unit is dirty	Clean the affected heat exchanger
	The air filter is dirty	Remove the filter and clean it according to the instructions
	The air inlet or outlet of one of the two units is blocked	Turn the unit off, remove the obstruction and turn it back on. And
	Doors and windows are open	Make sure all doors and windows are closed when operating the unit
	Sunlight generates excessive heat	Close windows and curtains during periods of scorching heat or bright sunshine
	Too many heat sources in the room (people, computers, electronics, etc.)	Reduce the amount of heat sources
	Reduced amount of refrigerant due to leaks or prolonged use over the years	Check for leaks, repair if necessary and top up the coolant.

Problem	Possible causes	Solution
<b>The unit does not work</b>	Power outage	Wait for the power to be restored
	The power is off	Turn on the power
	The fuse is blown	Replace the fuse
	The remote control batteries are dead	Replace the batteries
	The unit's 3-minute protection has been activated	Wait three minutes after the unit restarts
	The timer is activated	Turn off the timer
<b>The unit starts and stops frequently</b>	There is too much or too little refrigerant in the system	Check for leaks and recharge the system with refrigerant.
	Incompressible gas or moisture has entered the system.	Evacuate and recharge the system with refrigerant
	The system circuit is blocked	Determine which circuit is stuck and replace the faulty equipment
	The compressor is damaged	Replace the compressor
	The voltage is too high or too low	Install a manostat to regulate the voltage
<b>Poor performance of heating</b>	The outside temperature is extremely low	Use the auxiliary heating device
	Cold air enters through doors and windows	Make sure all doors and windows are closed during use
	Reduced amount of refrigerant due to leaks or prolonged use over the years	Check for leaks, repair if necessary and top up the coolant.
<b>The lights keep flashing</b>	The unit may stop working or continue to work safely. If the lights continue to flash or error codes appear, wait about 10 minutes. The problem may resolve itself. If not, unplug the power and then plug it back in. Turn on the unit. If the problem persists, unplug the power and contact your nearest customer service center.	
<b>The error code is displayed and begins with the following letters on the display panel of the indoor unit:</b> <ul style="list-style-type: none"><li>• E(x), P(x), F(x)</li><li>• EH(xx), EL(xx), EC(xx)</li><li>• PH(xx), PL(xx), PC(xx)</li></ul>		

**NOTE:** If the problem persists after performing the above checks and diagnostics, turn off the unit immediately and contact an authorized service center.

## Accessories

The air conditioning system comes with the following accessories. Use all installation parts and accessories in installing the air conditioner. Improper installation may cause water leakage, electric shock and fire, or equipment failure. The items are not included with the air conditioner and must be purchased separately.

Name of accessories	Qty (pcs)	Form	Name of accessories	Qty (pcs)	Form
<b>Manual</b>	2~4		<b>Exhaust joint (some models)</b>	1	
<b>Sheath soundproofing/insulating</b>	2		<b>Sealing ring (some models)</b>	1	
<b>Copper nut</b>	2		<b>Connection wire for display (2m) (some models)</b>	1	
<b>Orifice (some models)</b>	1		<b>Magnetic ring (double wrap the S1 and S2 (P &amp; Q &amp; E) electrical wires around to the magnetic ring) (some models)</b>	1	 S1&S2(P&Q&E)
<b>Transfer connector (ΦΦ 12.7-ΦΦ 15.9) (some models)</b>	1		<b>Magnetic ring (after the installation, hook it up to the connection cable between the indoor unit and the outdoor unit). (some models)</b>	It varies in based on model	
<b>Transfer connector (ΦΦ 9.52-ΦΦ 12.7) (some models)</b>	1				
<b>Transfer connector (ΦΦ 6.35-ΦΦ 9.52) (some models)</b>	1		<b>Rubber ring for cable protection (some models)</b>	1	
<b>Display panel</b> * For testing purposes only (some models - KJR-120G, KJR-120H)	1				

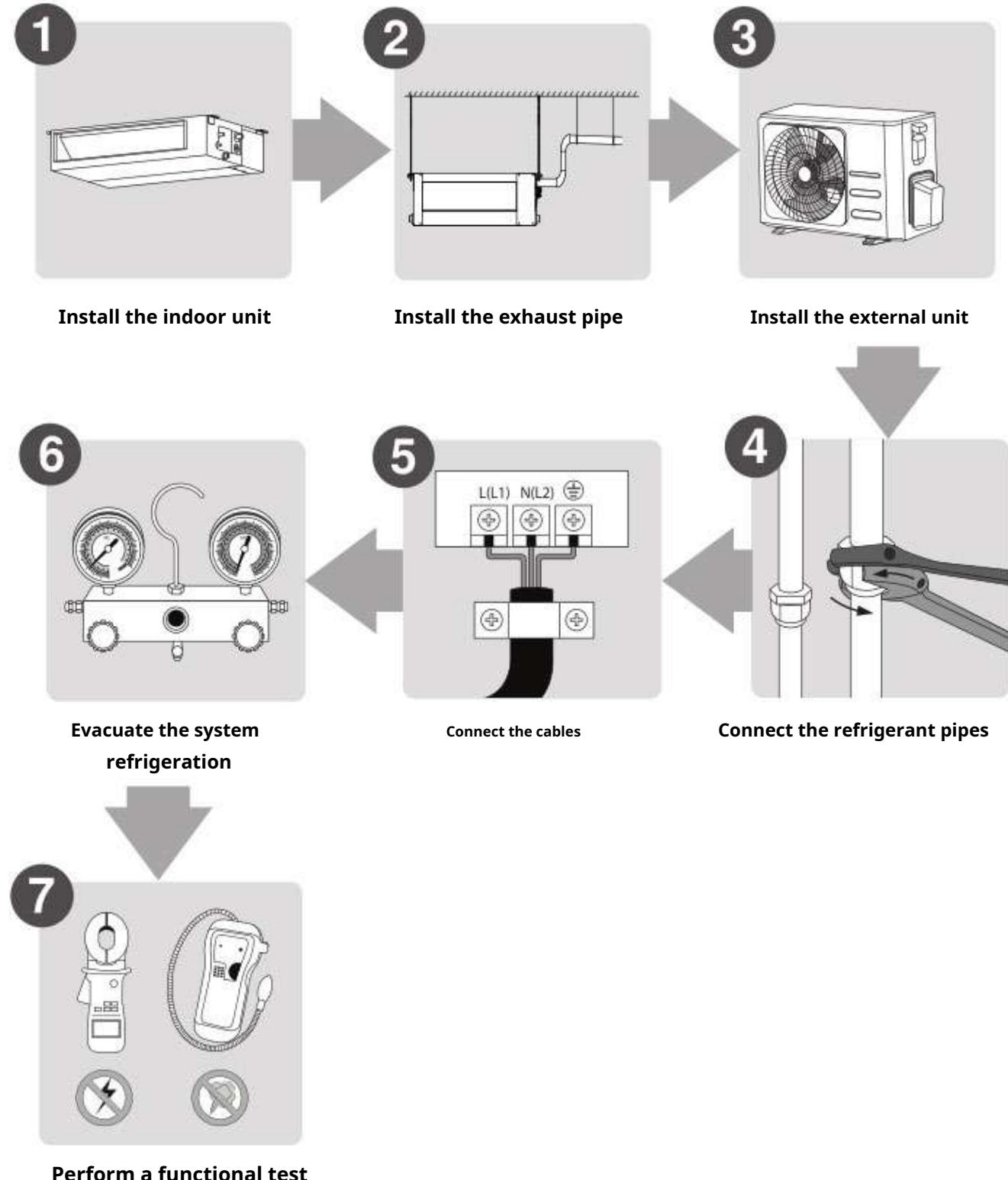
## Optional accessories

- There are two types of remote control: wired and wireless.

Select a remote control according to the customer's preferences and needs and install it in an appropriate place. Consult the catalogs and technical documentation to choose the appropriate remote control.

Name	Form	Quantity (PCS)											
<b>Mounting the connecting pipe</b>	<table border="1"> <tr> <td rowspan="3"><b>Liquid side</b></td> <td><b>Φ6.35(1/4in)</b></td> <td rowspan="6">Replacement parts must be purchased separately. Consult your dealer for the correct hose size for your unit.</td> </tr> <tr> <td><b>Φ9.52(3/8in)</b></td> </tr> <tr> <td><b>Φ12.7(1/2in)</b></td> </tr> <tr> <td rowspan="5"><b>Gas side</b></td> <td><b>Φ9.52(3/8in)</b></td> </tr> <tr> <td><b>Φ12.7(1/2in)</b></td> </tr> <tr> <td><b>Φ16(5/8in)</b></td> </tr> <tr> <td><b>Φ19(3/4in)</b></td> </tr> <tr> <td><b>Φ22(7/8in)</b></td> </tr> </table>	<b>Liquid side</b>	<b>Φ6.35(1/4in)</b>	Replacement parts must be purchased separately. Consult your dealer for the correct hose size for your unit.	<b>Φ9.52(3/8in)</b>	<b>Φ12.7(1/2in)</b>	<b>Gas side</b>	<b>Φ9.52(3/8in)</b>	<b>Φ12.7(1/2in)</b>	<b>Φ16(5/8in)</b>	<b>Φ19(3/4in)</b>	<b>Φ22(7/8in)</b>	
<b>Liquid side</b>	<b>Φ6.35(1/4in)</b>		Replacement parts must be purchased separately. Consult your dealer for the correct hose size for your unit.										
	<b>Φ9.52(3/8in)</b>												
	<b>Φ12.7(1/2in)</b>												
<b>Gas side</b>	<b>Φ9.52(3/8in)</b>												
	<b>Φ12.7(1/2in)</b>												
	<b>Φ16(5/8in)</b>												
	<b>Φ19(3/4in)</b>												
	<b>Φ22(7/8in)</b>												

# Installation summary



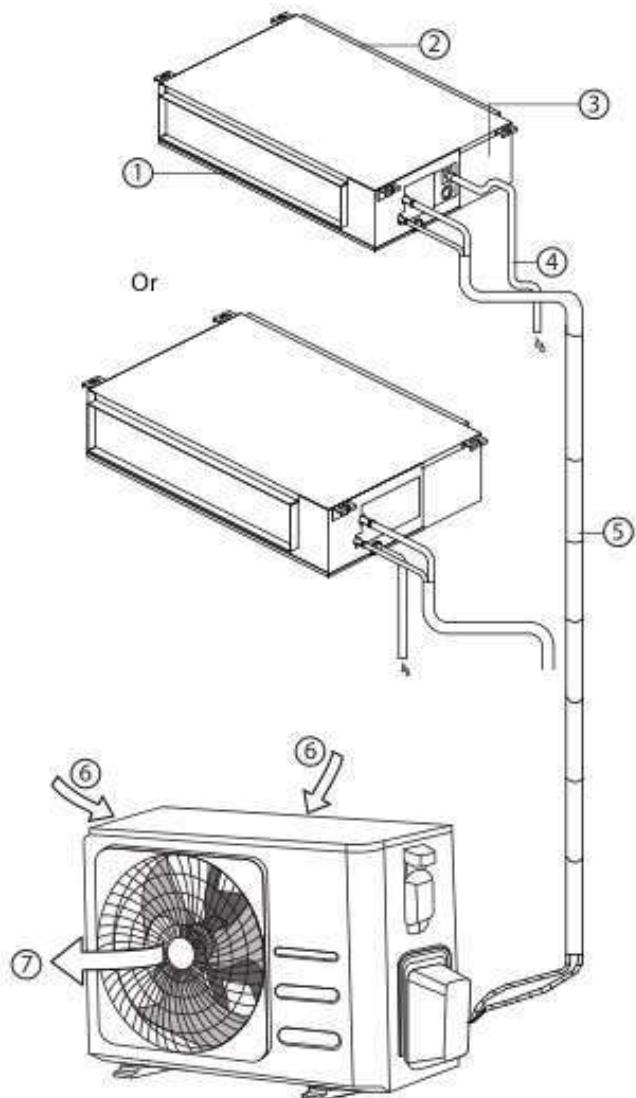
## Parts of the unit

**NOTE:** Installation must be done in accordance with local and national code requirements. Installation may be slightly different in different areas.

Parts of the unit

- ① Air outlet
- ② Air intake
- ③ Electric control panel
- ④ Exhaust pipe

- ⑤ Connecting pipe
- ⑥ Air intake
- ⑦ Air outlet



### NOTE ON ILLUSTRATIONS

The illustrations in this manual are for explanation purposes only. The actual shape of your indoor unit may differ slightly. The actual shape shall prevail.

# Installation of the indoor unit

## Installation Instructions - Indoor Unit

**NOTE:** Installation of the panel should be done after the piping and wiring are completed.

### Step 1: Select the installation location

Before installing the indoor unit, you need to choose a suitable location. Below are the standards that will help you choose a suitable location for the unit.

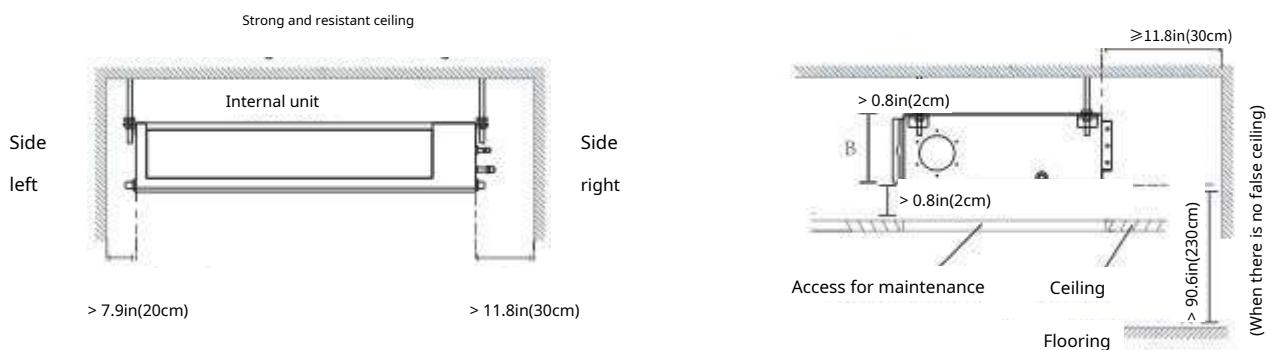
### Suitable installation locations meet the following standards:

- There is enough space for installation and maintenance.
- There is enough space for connecting pipes and exhaust pipe.
- The ceiling is horizontal and its structure can support the weight of the indoor unit.
- The air inlet and outlet are not blocked.
- The airflow is suitable for the size of the room.
- There is no direct radiation coming from the heaters.
- Models with a cooling capacity of 9000Btu to 18000Btu are suitable for use in a single room.

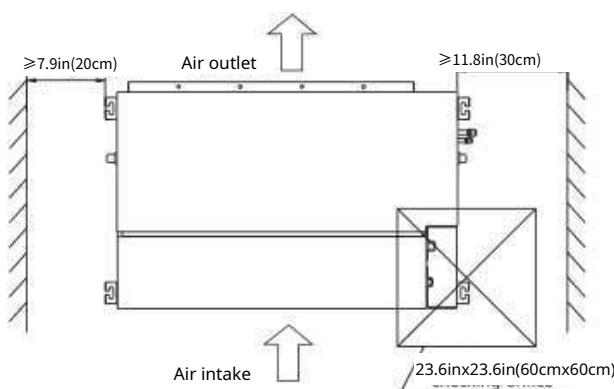
### NOT Install the unit in the following locations:

- ∅ Oil drilling or fracking areas Coastal areas with
- ∅ high salt content in the air Areas with caustic
- ∅ gases in the air, such as hot springs Areas subject
- ∅ to power fluctuations, such as factories
- ∅ Closed spaces, such as closets
- ∅ Near natural gas cookers Areas exposed to
- ∅ strong electromagnetic waves Areas where
- ∅ flammable materials or gases are stored
- ∅ High humidity rooms, such as bathrooms or laundry rooms

### Place of installation



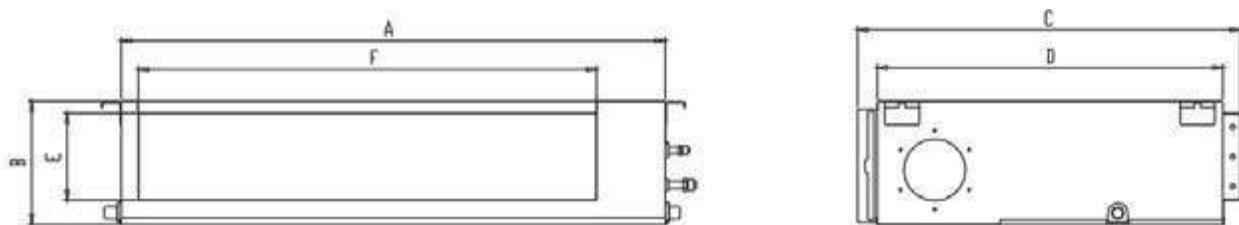
### Maintenance space



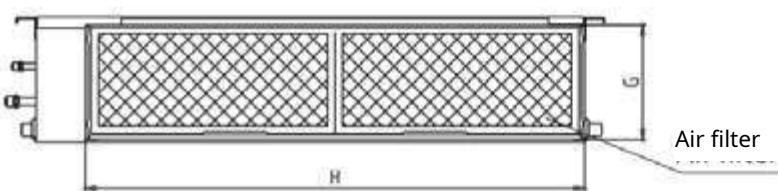
## Step 2: Hang the indoor unit

1. Refer to the following diagrams to locate the four holes for the positioning screws on the ceiling. Be sure to mark the locations where you will drill the holes for the ceiling hook.

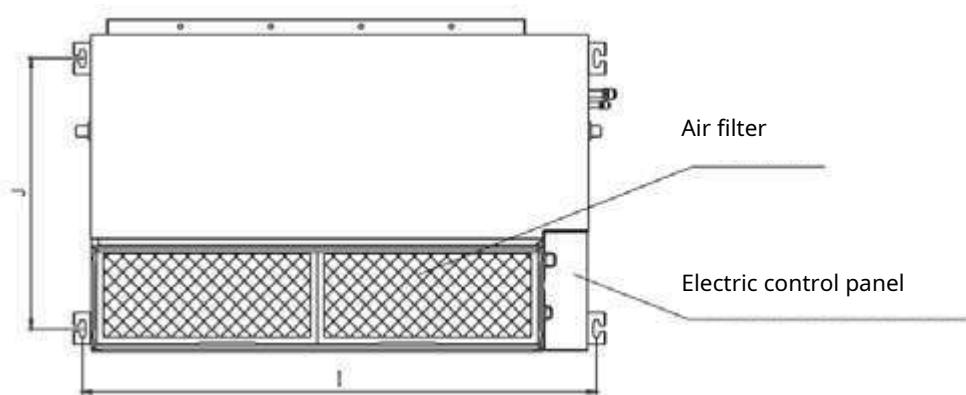
### Air outlet dimensions



### Air inlet dimensions



### Descending ventilation opening and mounting hook

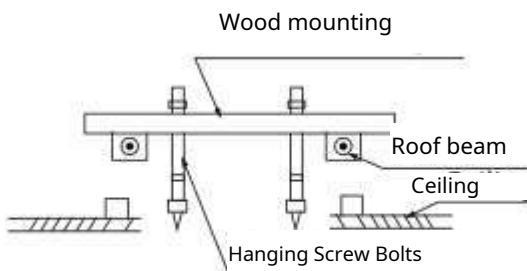


(unit: mm/inch)

MODEL (Btu/h)	Outline size				size of the opening of air outlet		size of the opening of return of air		Size of the mounted headstock	
	A	B	C	D	E	F	G	H	I	J
9K/12K	700/27,6	200/7,9	506/19,9	450/17,7	152/6	537/21,1	186/7,3	599/23,6	741/29,2	360/14,2
18K	880/34,6	210/8,3	674/26,5	600/23,6	136/5,4	706/27,8	190/7,5	782/30,8	920/36,2	508/20
24K~36K	1100/43,3	249/9,8	774/30,5	700/27,6	175/6,9	926/36,5	228/8,9	1001/39,4	1140/44,9	598/23,5
30K~36K	1360/53,5	249/9,8	774/30,5	700/27,6	175/6,9	1186/46,7	228/8,9	1261/49,6	1400/55,1	598/23,5
36K~60K	1200/47,2	300/11,8	874/34,4	800/31,5	227/8,9	1044/41,1	280/11	1101/43,3	1240/48,8	697/27,4

## Wood

Place the wood support across the roof beam, then install the hanging screw bolts.



**New concrete bricks** Inlay or embed the tiles.



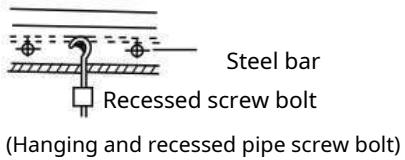
(shape tiles)



(Slide Insert)

## Concrete bricks

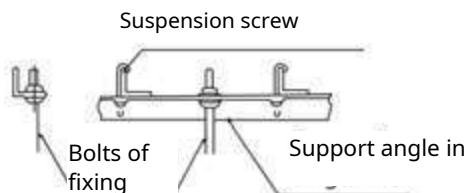
Use a built-in screw bolt, and a harness.



(Hanging and recessed pipe screw bolt)

## Steel roof beam

Install and use the steel support angle.



### CAUTION

The unit body must be completely aligned with the hole. Make sure the hole dimensions on the unit and the countertop are the same before proceeding.

2. Install and assemble pipes and wires after completing the installation of the main body. Determine the direction of the pipes to be pulled out before starting. Especially in cases where there is a false ceiling, align the refrigerant pipes, drain pipes, and internal and external lines with their connection points before assembling the unit.

### 3. Install the hanging screw bolts.

- Cut the roof beam.
- Reinforce the cut point. Consolidate the roof beam.

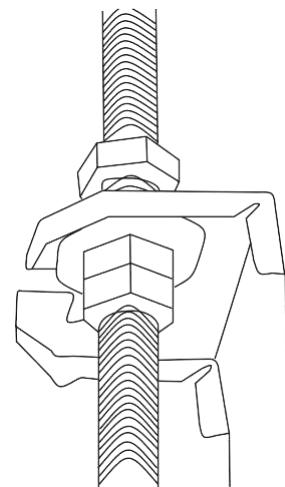
4. After selecting an installation location, before mounting the unit, align the refrigerant pipes, drain pipes, and internal and external cables with their connection points.

5. Drill 4 holes 10cm (4") deep in the ceiling mounting locations. Make sure to hold the drill at a 90° angle to the ceiling.

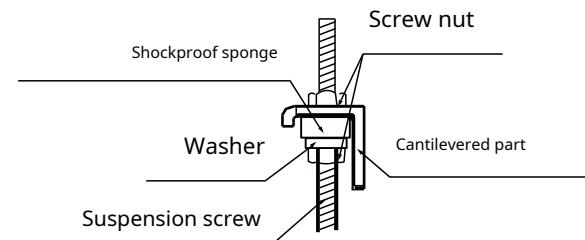
6. Secure the bolt with the supplied washers and nuts.

7. Place the four suspension bolts.

8. Assemble the indoor unit using at least two people to lift and secure it. Insert the suspension bolts into the suspension holes of the unit. Secure them with the supplied washers and nuts.



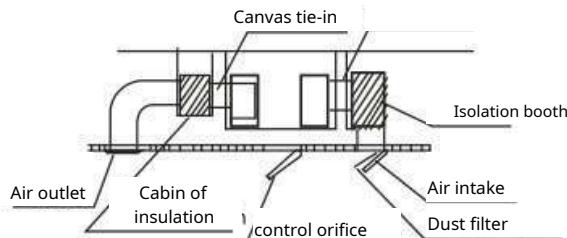
9. Mount the indoor unit on the hanging screw bolts and lock them in place. Place the indoor unit level using a level gauge to prevent leakage.



**NOTE:** Confirm that the minimum slope of the exhaust is 1/100 or more.

**Phase 3: Installing the duct and accessories**

1. Install the filter (optional) according to the size of the air inlet.
2. Install the canvas fitting between the body and the duct.
3. The air inlet and outlet duct must be far enough apart to prevent the air from flowing back.
4. Connect the duct according to the following diagram:



5. Refer to the following static pressure guidelines when installing the indoor unit.

MODEL (Btu/h)	Static pressure (Pa/in.wg)
9K	0~50/0~0.2
12K	0~50/0~0.2
18K	0~100/0~0.4
24K	0~160/0~0.64
30K~36K	0~160/0~0.64
42K~60K	0~160/0~0.64

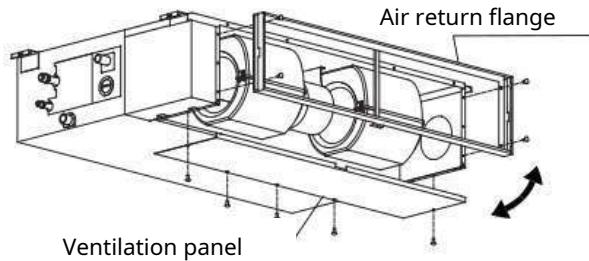
Adjust the static pressure of the fan motor according to the static pressure of the external duct.

**NOTE:**

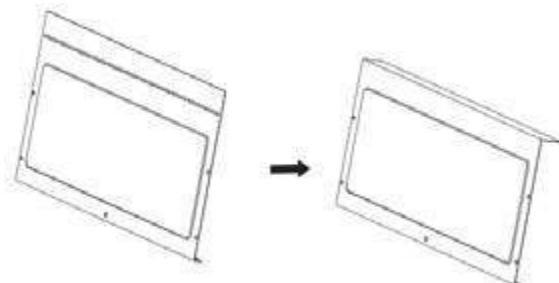
1. Do not place the weight of the connecting duct on the indoor unit.
2. When connecting the duct, use non-flammable canvas fitting to avoid vibration.
3. The insulating sponge should be wrapped outside the duct to prevent condensation. A layer under the inner duct can be added to reduce noise if the user requires.

**Step 4: Adjust the air inlet direction (from the back side to the bottom side)**

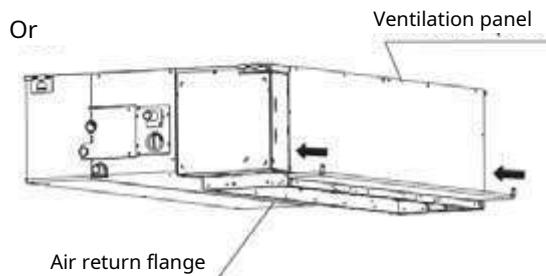
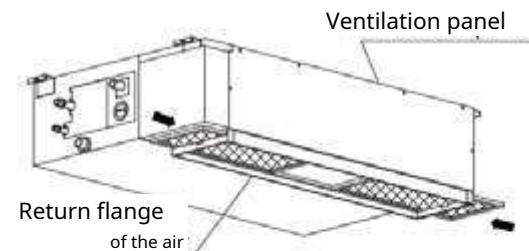
1. Remove the ventilation panel and flange.



Fold the rear vent panel 90 degrees along the dotted line into a drop vent panel. (some models)



2. Change the mounting positions of the ventilation panel and the air return flange.
3. When installing the mesh filter, insert it into the flange as shown in the following figure.

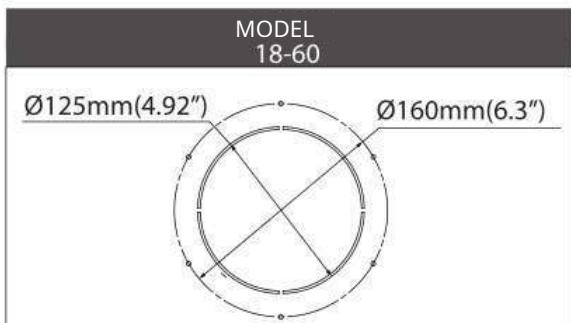
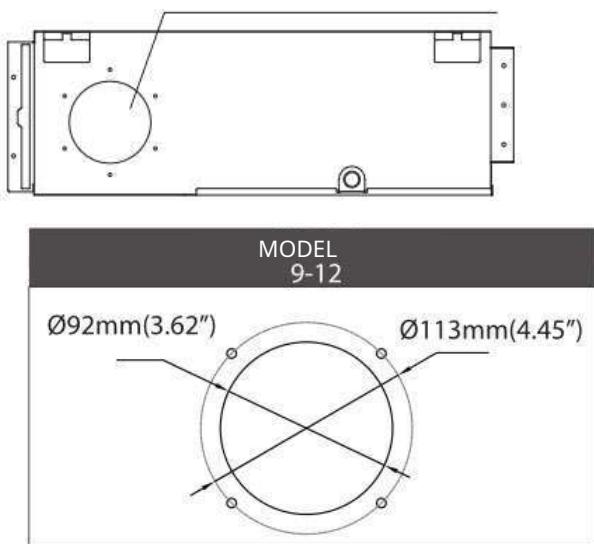


**NOTE:** All figures in this manual are for illustration purposes only. The air conditioner you purchased may be slightly different in design, although similar in shape.

## Step 5: Installing the cold air duct

Size:

Cold air duct joint

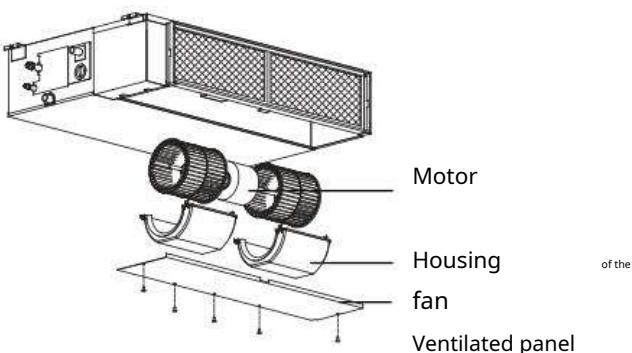


## Step 6: Engine and Drain Pump Maintenance

(the model with rear ventilation panel is used as an example)

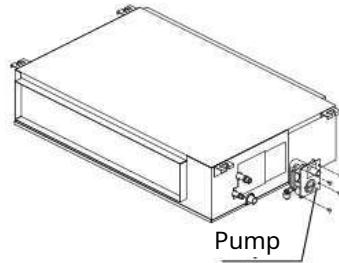
### Engine maintenance:

1. Remove the ventilation panel.
2. Remove the fan housing.
3. Remove the engine.



### Pump Maintenance:

1. Remove the four screws from the drain pump.
2. Disconnect the pump power cord and the water level switch cord.
3. Disconnect the pump.



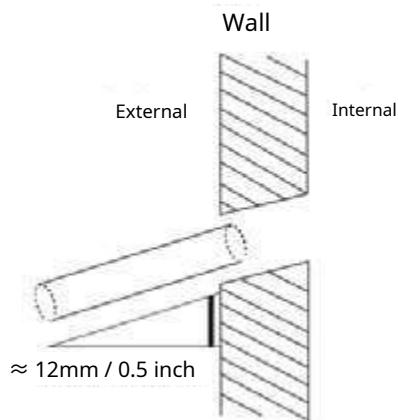
## Step 7: Drill the hole in the wall for the connecting pipes

1. Determine the position of the wall hole based on the position of the outdoor unit.
2. Using a 65mm (2.5in) or 90mm (3.54in) core drill bit (depending on model), drill a hole into the wall. Ensure that the hole is drilled at a slight downward angle, so that the outer end of the hole is approximately 12mm (0.5" in) lower than the inner end. This will ensure adequate water drainage.
3. Place the wall protection bracelet into the hole. This will protect the edges of the hole and help seal it once the installation process is complete.

Installation  
of the internal unit

### CAUTION

When drilling the hole in the wall, be sure to avoid cables, pipes and other sensitive components.



**Step 8: Connect the drainage hose**

The drain hose is used to drain water from the unit. Improper installation may cause damage to the unit and property.

**CAUTION**

- Insulate all pipes to prevent condensation from forming, which could cause damage.
- If the drain hose is bent or positioned incorrectly, water leakage may occur and cause the float switch to malfunction.
- In HEAT mode, the outdoor unit drains water. Make sure the drain pipe is placed in an appropriate area to prevent water from causing damage or making the area slippery.
- **NOT** Pull the drain hose hard. It may come off.

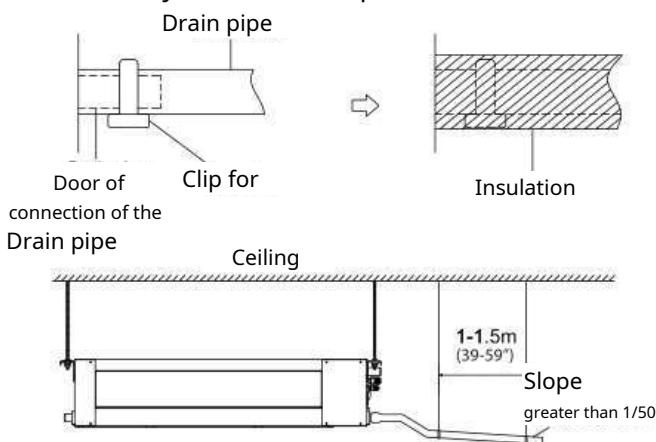
**NOTE ON PURCHASING TUBES**

Installation requires polyethylene pipe (outer diameter = 3.7-3.9 cm, inner diameter = 3.2 cm), which can be purchased at a hardware store or from your retailer.

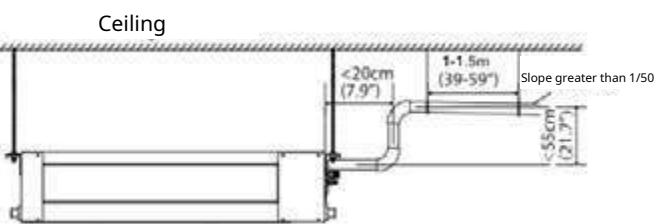
**Installing the internal drainage pipe**

Install the drain pipe as shown in the following figure.

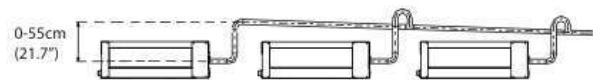
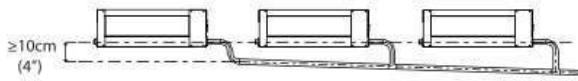
1. Cover the exhaust pipe with thermal insulation to prevent condensation and leaks.
2. Connect the drain hose mouth to the unit's outlet pipe. Cover the hose mouth and secure it securely with a hose clip.

**NOTE ON DRAIN PIPE INSTALLATION**

- When using a very long exhaust pipe, tighten the internal connection with an additional protective tube. This prevents it from loosening.
- The drain pipe should slope downward at least 1/100 to prevent water from flowing back into the air conditioner.
- To prevent the hose from sagging, secure it every 1-1.5 m (39-59").
- If the drain pipe outlet is higher than the pump joint, raise the drain pipe of the indoor unit. The raised part of the pipe should be no more than 55 cm (21.7") from the ceiling tile. The distance between the unit and the raised pipe should be less than 20 cm (7.9"). Improper installation may cause water to backflow into the unit and cause flooding.
- To avoid air bubbles, keep the exhaust pipe level or slightly inclined (<75mm / 3").

**Drainage system for pumped units**

**NOTE:** When connecting multiple drain pipes, install the pipes as illustrated.

**Unit with pump****Unit without pump**

### 3. Pass the drain hose through the hole in the wall.

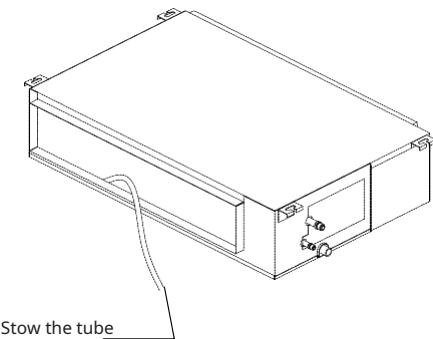
Make sure the water drains to a safe place where it will not cause damage or slip hazards.

**NOTE:** The drain hose outlet must be at least 5 cm (1.9") above the ground. If it touches the ground, the unit may become blocked and not function properly. If discharging water directly into a sewer, make sure the drain has a U- or S-trap to capture odors that might otherwise re-enter the home.

### Drainage test

Check that the exhaust pipe is not blocked. This test should be performed on new homes before installing a false ceiling.

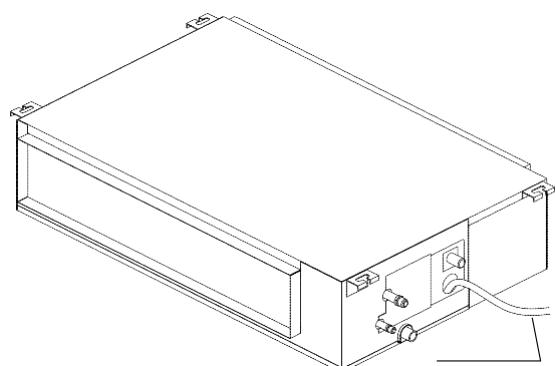
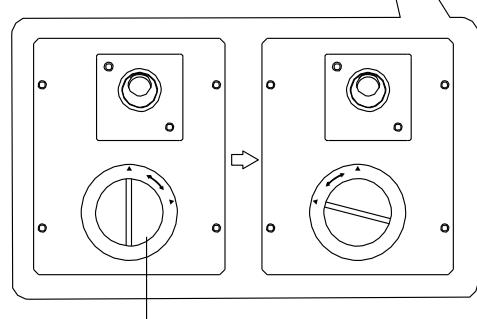
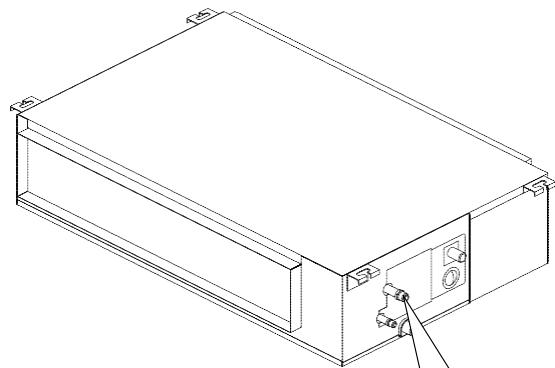
#### Unit without pump.



Fill the tank with 2 litres of water. Check that the drain hose is not blocked.

#### Unit with pump.

1. Remove the service lid. Fill the tank with 2 liters of water.

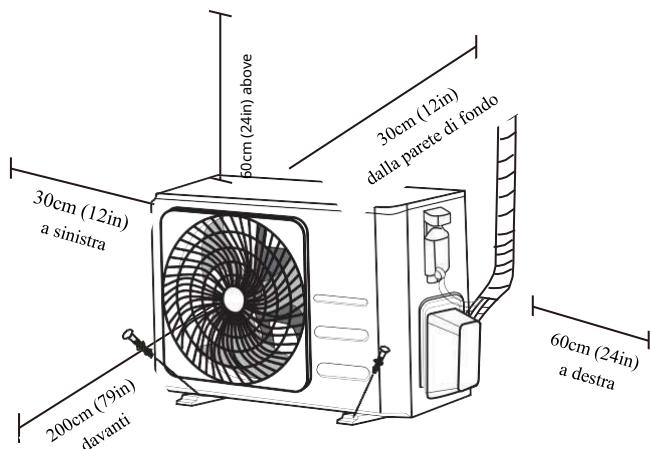


2. Turn on the unit in COOLING mode. Listen to the sound of the drain pump. Check if the water is draining properly (a delay of 1 minute is possible, depending on the length of the drain hose). Check if water is coming out of the joints.

3. Turn off the air conditioner and replace the cover.

# Installing the external unit

Install the unit following local codes and regulations, there may be slight differences between different regions.



## Installation Instructions - Outdoor Unit

### Step 1: Select the installation location

Before installing the outdoor unit, you need to choose a suitable location. Below are the standards that will help you choose a suitable location for the unit.

#### Suitable installation locations meet the following standards:

- All space requirements listed in the previous "Space Requirements" section must be met.
- Good air circulation and ventilation
- Firm and solid position - the position must be able to support the unit without vibration
- The noise of the unit must not disturb the neighbors
- Protection from prolonged periods of direct sunlight or rain
- In case of snow, place the unit on a base to prevent ice accumulation and damage to the coil. Mount the unit at a height that exceeds the average snowfall accumulation. The minimum height should be 18 inches

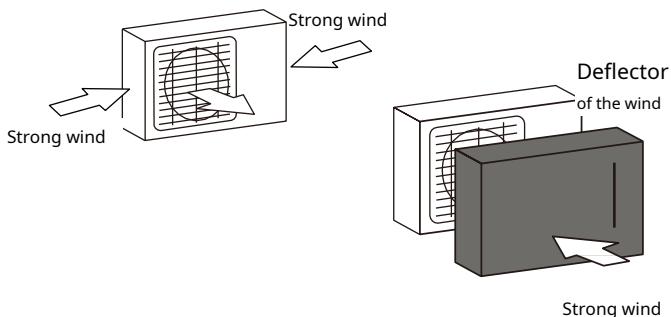
#### **NOT** Install the unit in the following locations:

- Near an obstacle that will block the air inlet and outlet
- Near a public road, in crowded areas or where the noise from the unit disturbs others
- Near animals or plants that will be harmed by the hot air outlet
- Near any source of combustible gas In a place exposed to large amounts of dust In a place exposed to excessive amounts of salt air

## SPECIAL CONSIDERATIONS FOR EXTREME WEATHER

### If the unit is exposed to strong wind:

Install the unit so that the air outlet fan is at a 90° angle to the wind direction. If necessary, build a barrier in front of the unit to protect it from extremely strong winds. See the figures below.



### If the appliance is frequently exposed to heavy rain or snow:

Build a shelter over the unit to protect it from rain or snow. Be careful not to obstruct the airflow around the unit.

### If the unit is frequently exposed to salt (sea) air:

Use an external unit specifically designed to resist corrosion.

## Step 2: Install the drainage joint (only for heat pump units)

Before screwing the outdoor unit, it is necessary to install the drain joint on the bottom of the unit.

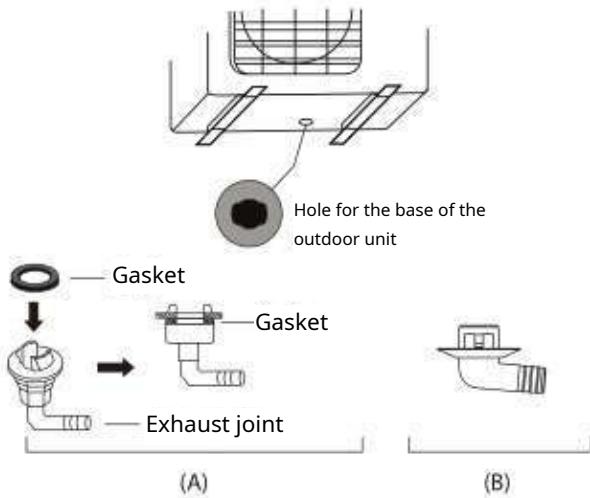
Please note that there are two different types of exhaust joints depending on the type of outdoor unit.

### If the exhaust joint is equipped with a rubber gasket (you see Fig. A), proceed as follows:

1. Fit the rubber gasket to the end of the drain joint that will connect to the outdoor unit.
2. Insert the drain joint into the hole in the base tray of the appliance.
3. Rotate the exhaust joint 90° until it snaps into place facing the front of the unit.
4. Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.

### If the exhaust joint is not equipped with a gasket rubber (you see Fig. B), proceed as follows:

1. Insert the drain joint into the hole in the base tray of the appliance. The drain joint will click into place.
2. Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.



## Step 3: Anchoring the outdoor unit

The outdoor unit can be anchored to the ground or to a wall bracket with a bolt (M10). Prepare the installation base of the unit according to the following dimensions.

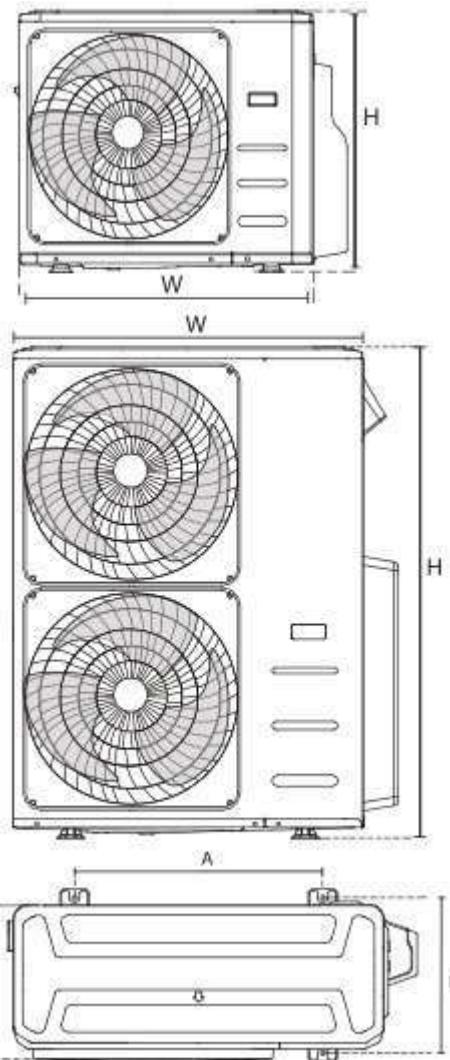
### UNIT MOUNTING DIMENSIONS

Below is a list of the different sizes of outdoor units and the distance between their mounting feet.

Prepare the installation base of the unit according to the following dimensions.

#### External Drive Types and Specifications

##### Split type external unit



### COLD CLIMATES

In cold climates, make sure the drain hose is as vertical as possible to ensure rapid water drainage. If the water drains too slowly, it can freeze in the hose and flood the appliance.

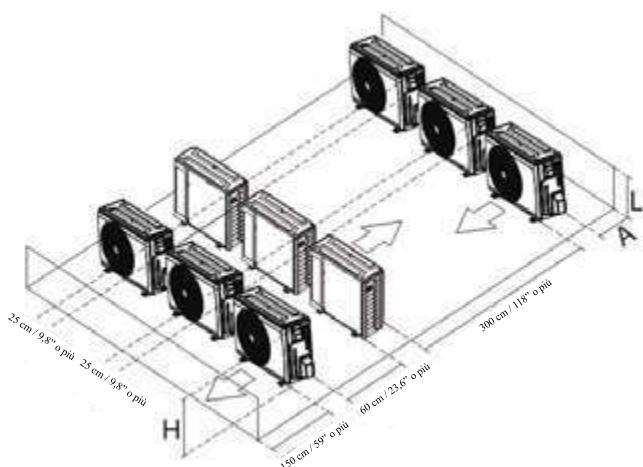
(unit: mm/inch)

Dimensions of the outdoor unit	Mounting dimensions	
	Distance A	Distance B
760x590x285 (29.9x23.2x11.2)	530 (20.85)	290 (11.4)
810x558x310 (31.9x22x12.2)	549 (21.6)	325 (12.8)
845x700x320 (33.27x27.5x12.6)	560 (22)	335 (13.2)
900x860x315 (35.4x33.85x12.4)	590 (23.2)	333 (13.1)
945x810x395 (37.2x31.9x15.55)	640 (25.2)	405 (15.95)
990x965x345 (38.98x38x13.58)	624 (24.58)	366 (14.4)
938x1369x392 (36.93x53.9x15.43)	634 (24.96)	404 (15.9)
900x1170x350 (35.4x46x13.8)	590 (23.2)	378 (14.88)
800x554x333 (31.5x21.8x13.1)	514 (20.24)	340 (13.39)
845x702x363 (33.27x27.6x14.3)	540 (21.26)	350 (13.8)
946x810x420 (37.24x31.9x16.53)	673 (26.5)	403 (15.87)
946x810x410 (37.24x31.9x16.14)	673 (26.5)	403 (15.87)
952x1333x410 (37.5x52.5x16.14)	634 (24.96)	404 (15.9)
952x1333x415 (37.5x52.5x16.34)	634 (24.96)	404 (15.9)
890x673x342 (35x26.5x13.46)	663 (26.1)	354 (13.94)

## Serial installation

The relationships between H, A and L are as follows.

	THE	TO
L ≤ H	L ≤ 1/2H	25cm / 9.8" or more
	1/2H < L ≤ H	30cm / 11.8" or more
L > H	Cannot be installed	



# Connecting the refrigerant pipes

When connecting refrigerant pipes, **Not** Allowing substances or gases other than the specified refrigerant to enter the unit. The presence of other gases or substances will reduce the capacity of the unit and may cause abnormally high pressure in the refrigeration cycle. This may cause explosions and injury.

## Note on tube length

Make sure that the length of the refrigerant pipe, the number of bends and the drop height between the indoor and outdoor units meet the requirements in the following table:

**Maximum length and maximum drop height by model. (Unit: m/ft.)**

Model type	Capacity (Btu/h)	Length of the Pipes	Maximum fall height
Conversions for Split models related to North America, Australia and EU	<15K	25/82	10/32,8
	≥15K - <24K	30/98,4	20/65,6
	≥24K - <36K	50/164	25/82
	≥36K - ≤60K	65/213	30/98,4
Other type of Split	12K	15/49	8/26
	18K-24K	25/82	15/49
	30K-36K	30/98,4	20/65,6
	42K-60K	50/164	30/98,4



## CAUTION

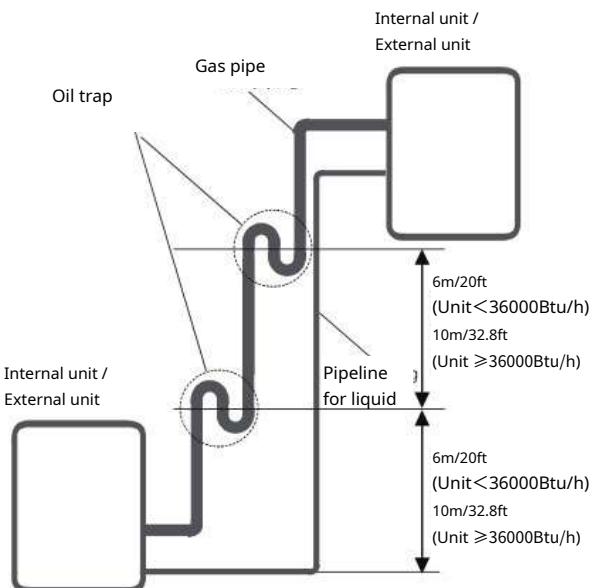
### Oil trap

If oil flows back into the compressor of the outdoor unit, this may cause compression of the liquid or deterioration of the oil.

Oil traps in gas pipes with high elevations can prevent this.

An oil trap must be installed every 6m (20ft) of vertical rise in the suction line (Units <36000Btu/h).

An oil trap must be installed every 10 m (32.8 ft) of vertical elevation of the suction line (units ≥36000Btu/h).



Connection of the pipes of the refrigerant

## Connection Instructions - Refrigerant Pipes



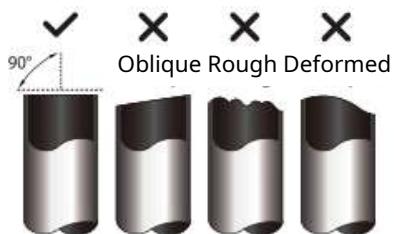
### CAUTION

- The branch pipe must be installed horizontally. An angle greater than 10° may cause malfunction.
- **NOT** Install the connecting pipe before installing both the indoor and outdoor units.
- Insulate both the gas and liquid pipes to prevent water leakage.

### Step 1: Cut the pipes

When preparing refrigerant lines, take special care to cut and flare them correctly. This will ensure efficient operation and minimize the need for future maintenance.

1. Measure the distance between the indoor and outdoor unit.
2. Using a pipe cutter, cut the pipe a little longer than the measured distance.
3. Make sure the tube is cut at a perfect 90° angle.



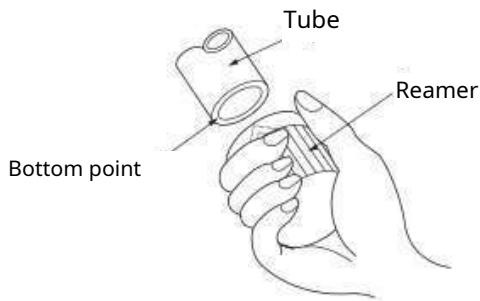
### NOT DEFORMING THE PIPE DURING CUTTING

Be very careful not to damage, dent or deform the tube when cutting. This will drastically reduce the heating efficiency of the unit.

### Step 2: Remove burrs.

Burrs can compromise the tightness of the refrigerant pipe connection. They must be completely removed.

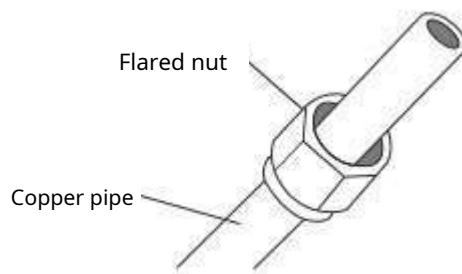
1. Keep the tube facing down to prevent burrs from falling into the tube.
2. Using a reamer or deburr, remove all burrs from the cut section of pipe.



### Step 3: Flaring the tube end

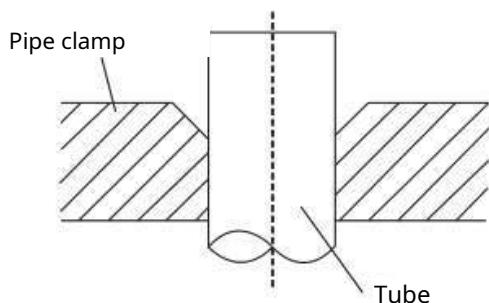
Proper flaring is essential to achieve a tight seal.

1. After removing the burrs from the cut pipe, seal the ends with PVC tape to prevent foreign materials from entering the pipe.
2. Cover the pipe with insulating material.
3. Place the flare nuts on both ends of the pipe. Make sure they are facing the right direction, because their direction cannot be changed after flaring.



4. Remove the PVC tape from the ends of the pipe when you are ready to flare.

5. Place the clamp on the end of the tube. **Step 4: Connect the pipes** The end of the tube must extend beyond the clamp.



6. Place the countersink on the clamp.  
 7. Rotate the flare handle clockwise until the pipe is completely flared. Flare the pipe according to the dimensions.

#### EXTENSION OF PIPING BEYOND THE FLARING

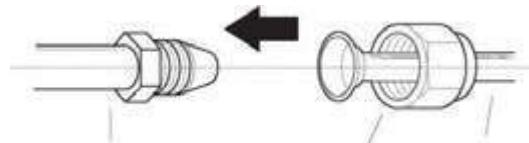
Meter for pipes	Pair of tightening	Size		Form flared
		flaring (A) (unit: mm/inch)	Min.      Max.	
Ø 6.35	18-20 Nm (183-204 kgf.cm)	8.4/0.33	8.7/0.34	
Ø 9,52	25-26 Nm (255-265 kgf.cm)	13.2/0.52	13.5/0.53	
Ø 12.7	35-36 Nm (357-367 kgf.cm)	16.2/0.64	16.5/0.65	
Ø 16	45-47 Nm (459-480 kgf.cm)	19.2/0.76	19.7/0.78	
Ø 19	65-67 Nm (663-683 kgf.cm)	23.2/0.91	23.7/0.93	
Ø 22	75-85 N.m (765-867 kgf.cm)	26.4/1.04	26.9/1.06	

8. Remove the flare tool and clamp then inspect the pipe end for cracks and uneven flaring.

Connect the copper pipe to the indoor unit first, then connect it to the outdoor unit. Connect the low pressure pipe first, then the high pressure pipe.

1. When connecting the flare nut, apply a thin layer of refrigerant oil to the flared ends of the pipes.

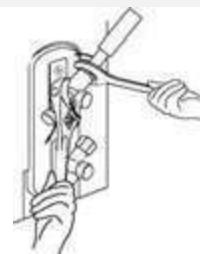
2. Align the center of the two pipes that will be connected.



Pipes for internal units      Flared nut      Tube

3. Tighten the flare nut as tightly as possible by hand.
4. Using a wrench, secure the nut onto the unit tube.
5. Use a torque wrench to tighten the flare nut to the torque values listed in the table above.

**NOTE:** Use both a wrench and a torque wrench when connecting or disconnecting the connecting hose to/from the unit.



#### CAUTION

- Be sure to wrap insulation around the pipes.

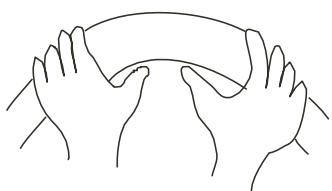
Direct contact with bare tubing can cause burns or frostbite.

- Make sure the hose is connected properly. Over-tightening can damage the flare edge and under-tightening can cause leaks.

## NOTE ON MINIMUM CURVATURE RADIUS

Carefully bend the tube in the center according to the following diagram. **NOT** bend the pipe more than 90° or more than 3 times.

Bend the tube with your thumb



minimum radius 10cm (3.9")

6. After connecting the copper pipe to the indoor unit, wrap the power cable, signal cable and piping with protective tape.

**NOTE:NOT** Twist the signal cable with other cables. When bundling these items, do not twist or cross the signal cable with other cables.

7. Thread this pipe through the wall and connect it to the outdoor unit.
8. Isolate all piping, including the outdoor unit valves.
9. Open the shut-off valves on the outdoor unit to start the refrigerant flow between the indoor unit and the outdoor unit.

### ⚠ CAUTION

Check for refrigerant leaks after completing installation work. If refrigerant leaks, ventilate the area immediately and evacuate the system (refer to the Air Evacuation section of this manual).

## Wiring



### BEFORE CARRYING OUT ANY ELECTRICAL WORK, READ THE FOLLOWING RULES

1. All wiring must comply with local and national electrical codes and regulations and must be installed by a licensed electrician.
2. All electrical connections must be made according to the Electrical Connection Diagram located on the indoor and outdoor unit panels.
3. If there is a serious safety problem with the power supply, stop the work immediately. Explain the reasons to the customer and refuse to install the unit until the safety problem is solved properly.
4. The power supply voltage should be within 90-110% of the rated voltage. Insufficient power supply may cause malfunction, electric shock or fire.
5. If you connect the power supply directly to the mains, you must install a surge protector and a mains switch.
6. If the power supply is connected directly to the mains, a switch must be incorporated which disconnects all poles and has a contact separation of at least 1/8 in (3mm). The qualified technician must use an approved switch.
7. Connect the unit only to a single outlet on the branch circuit. Do not connect another appliance to that outlet.
8. Be sure to ground the air conditioner properly.
9. Each cable must be firmly connected. Loose wiring may cause the terminal to overheat, resulting in product malfunction and possible fire.
10. Do not let cords touch or rest against refrigerant pipes, compressor, or any moving parts inside the unit.
11. If the unit is equipped with an auxiliary electric heater, it must be installed at least 1 metre (40 in) away from any combustible materials.

12. To avoid receiving an electric shock, never touch electrical components immediately after turning off the power. After turning off the power, always wait 10 minutes or more before touching electrical components.

13. Make sure not to cross the electrical wiring with the signal wiring. This can cause distortion and interference.

14. The unit must be connected to the mains socket. Normally, the power supply must have an impedance of 32 ohms.

15. No other appliance should be connected to the same supply circuit.

16. Connect external cables before connecting internal cables.



### ATTENTION

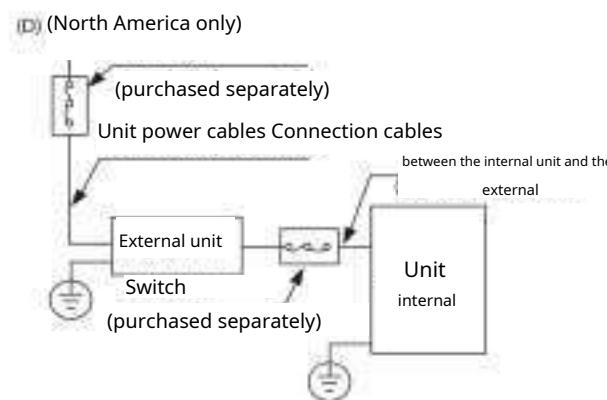
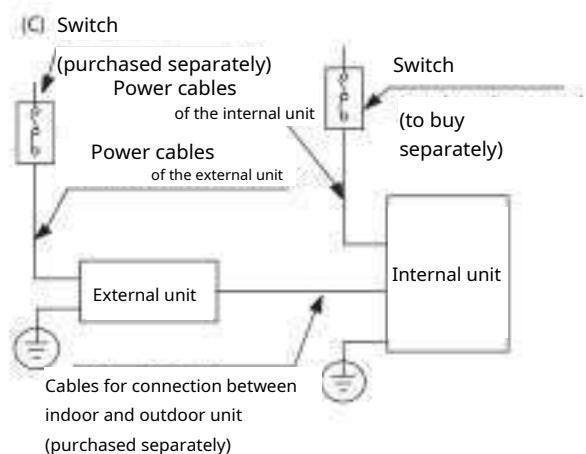
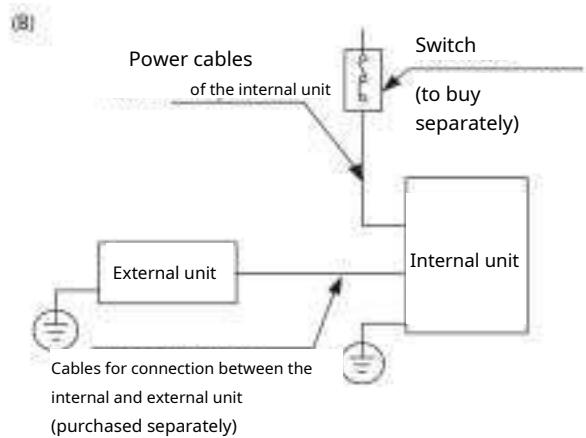
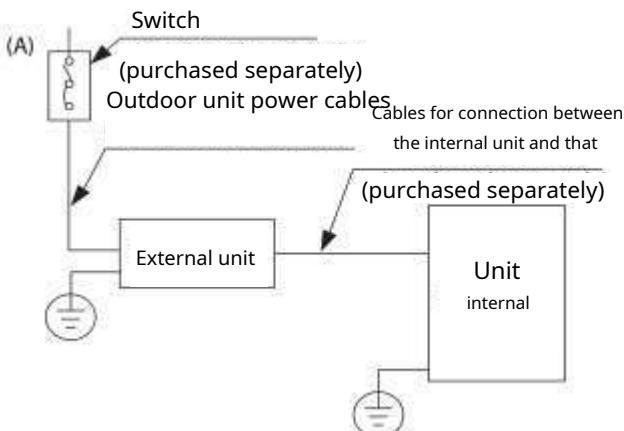
**BEFORE PERFORMING ANY ELECTRICAL OR WIRING WORK, TURN OFF THE MAIN POWER TO THE SYSTEM.**

#### NOTE ON THE SWITCH OF THE CONDITIONER

If the maximum current of the air conditioner is more than 16A, a leakage protection switch with protective device (purchased separately) must be used.

If the maximum current of the air conditioner is less than 16A, the power cord of the air conditioner must be equipped with a plug (purchased separately).

In North America, the device must be wired according to NEC and CEC requirements.



**NOTE:** The pictures are for explanation purposes only. The machine may be slightly different. The actual shape shall prevail.

## Wiring the outdoor unit

### ATTENTION

BEFORE PERFORMING ANY ELECTRICAL OR WIRING WORK, TURN OFF THE MAIN POWER TO THE SYSTEM.

#### 1. Prepare the cable for connection

- You must first choose the right size of cable. Make sure you use H07RN-F cables.

**NOTE:** In North America, choose the cable type according to local electrical codes and regulations.

#### Surface minimum transversal of the cables of power and signal (for reference)

Rated current of the appliance (A)	Nominal surface area transversal (mm <sup>2</sup> )
> 3 and ≤ 6	0.75
> 6 and ≤ 10	1
> 10 and ≤ 16	1.5
> 16 and ≤ 25	2.5
> 25 and ≤ 32	4
> 32 and ≤ 40	6

#### CHOOSING THE RIGHT CABLE SIZE

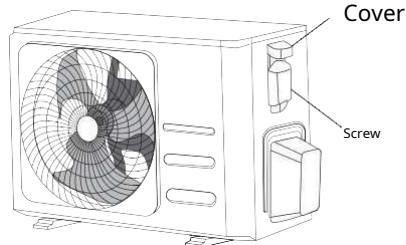
The size of the power cord, signal cable, fuse and circuit breaker required is determined by the maximum current of the unit. The maximum current is indicated on the nameplate located on the side panel of the unit. Refer to this nameplate to select the correct cord, fuse or circuit breaker.

**NOTE:** In North America, select the correct cord size based on the minimum circuit amperage rating indicated on the unit's nameplate.

- Using wire strippers, strip the rubber sheath from both ends of the signal cable to expose approximately 15 cm (5.9") of cable.
- Strip the insulation at the ends.
- Using a cable crimper, crimp the U-shaped cable covers onto the ends.

**NOTE:** When connecting the wires, carefully follow the wiring diagram located inside the electrical box cover.

- Remove the electrical cover of the outdoor unit. If there is no cover on the outdoor unit, remove the bolts from the maintenance board and remove the protection board.



- Connect the U-shaped cable covers to the terminals.

Match the wire colors/labels with the labels on the terminal block. Screw the U-shaped cap of each wire tightly onto the corresponding terminal.

- Secure the cable with the cable clamp.
- Insulate unused wires with electrical tape. Keep them away from electrical or metal parts.
- Refit the control unit cover.

## Wiring the indoor unit

#### 1. Prepare the cable for connection

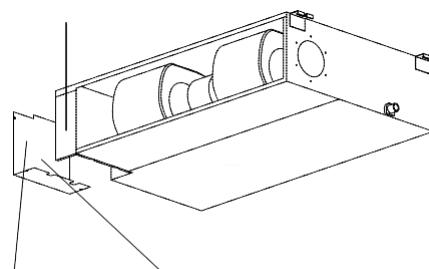
- Using wire strippers, strip the rubber sheath from both ends of the signal cable to expose approximately 15 cm (5.9") of cable.
- Strip the insulation at the ends of the cables.
- Using a cable crimper, crimp the U-shaped cable covers onto the ends.

- Remove the electrical box cover of the indoor unit.

- Connect the U-shaped cable covers to the terminals.

Match the wire colors/labels with the labels on the terminal block. Screw the U-shaped lug of each wire securely into its corresponding terminal. Refer to the serial number and wiring diagram located on the cover of the electrical control box.

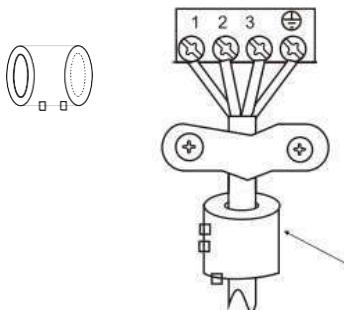
Control unit



Electrical diagram

Connection diagram

**Magnetic ring**(if supplied and packaged with accessories)



Pass the strap through the hole in the magnetic ring to secure it to the cable



### CAUTION

- When connecting the cables, carefully follow the wiring diagram.
- The refrigerant circuit can become very hot.

Keep the interconnect cable away from the copper pipe.

- Secure the cable with the cable clamp. The cable must not be loose or pulled on the U-connectors.
- Reassemble the electrical control unit cover.

### Power Specifications (not applicable for North America)

**NOTE:** The circuit breaker/fuse for models with auxiliary electric heating must be greater than 10 A.

#### Internal Power Specifications

MODEL (Btu/h)		≤18K	19K~24K	25K~36K	37K~48K	49K~60K
POWER	PHASE	1 Phase	1 Phase	1 Phase	1 Phase	1 Phase
	VOLT	208-240V	208-240V	208-240V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE		25/20	32/25	50/40	70/55	70/60

MODEL (Btu/h)		≤36K	37K~60K	≤36K	37K~60K
POWER	PHASE	3 Phases	3 Phases	3 Phases	3 Phases
	VOLT	380-420V	380-420V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE		25/20	32/25	32/25	45/35

#### External Power Specifications

MODEL (Btu/h)		≤18K	19K~24K	25K~36K	37K~48K	49K~60K
POWER	PHASE	1 Phase	1 Phase	1 Phase	1 Phase	1 Phase
	VOLT	208-240V	208-240V	208-240V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE		25/20	32/25	50/40	70/55	70/60

MODEL (Btu/h)		≤36K	37K~60K	≤36K	37K~60K
POWER	PHASE	3 Phases	3 Phases	3 Phases	3 Phases
	VOLT	380-420V	380-420V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE		25/20	32/25	32/25	45/35

**Independent power supply specifications**

MODEL (Btu/h)		≤18K	19K~24K	25K~36K	37K~48K	49K~60K
POWER (internal)	PHASE	1 Phase	1 Phase	1 Phase	1 Phase	1 Phase
	VOLT	208-240V	208-240V	208-240V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE(A)		15/10	15/10	15/10	15/10	15/10
POWER (external)	PHASE	1 Phase	1 Phase	1 Phase	1 Phase	1 Phase
	VOLT	208-240V	208-240V	208-240V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE(A)		25/20	32/25	50/40	70/55	70/60

MODEL (Btu/h)		≤36K	37K~60K	≤36K	37K~60K
POWER (internal)	PHASE	1 Phase	1 Phase	1 Phase	1 Phase
	VOLT	208-240V	208-240V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE(A)		15/10	15/10	15/10	15/10
POWER (external)	PHASE	3 Phases	3 Phases	3 Phases	3 Phases
	VOLT	380-420V	380-420V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE(A)		25/20	32/25	32/25	45/35

**A/C type inverter power specifications**

MODEL (Btu/h)		≤18K	19K~24K	25K~36K	37K~48K	49K~60K
POWER (internal)	PHASE	1 Phase	1 Phase	1 Phase	1 Phase	1 Phase
	VOLT	220-240V	220-240V	220-240V	220-240V	220-240V
SWITCH AUTOMATIC/FUSE(A)		15/10	15/10	15/10	15/10	15/10
POWER (external)	PHASE	1 Phase	1 Phase	1 Phase	1 Phase	1 Phase
	VOLT	208-240V	208-240V	208-240V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE(A)		25/20	25/20	40/30	50/40	50/40

MODEL (Btu/h)		≤36K	37K~60K	≤36K	37K~60K
POWER (internal)	PHASE	1 Phase	1 Phase	1 Phase	1 Phase
	VOLT	220-240V	220-240V	220-240V	220-240V
SWITCH AUTOMATIC/FUSE(A)		15/10	15/10	15/10	15/10
POWER (external)	PHASE	3 Phases	3 Phases	3 Phases	3 Phases
	VOLT	380-420V	380-420V	208-240V	208-240V
SWITCH AUTOMATIC/FUSE(A)		25/20	32/25	32/25	40/30

# Air evacuation

## Preparations and precautions

Air and foreign matter in the refrigerant circuit can cause abnormal pressure increases, which can damage the air conditioner, reduce its efficiency and cause injury. Use a vacuum pump and manifold pressure gauge to evacuate the refrigerant circuit, removing any non-condensable gas and moisture from the system.

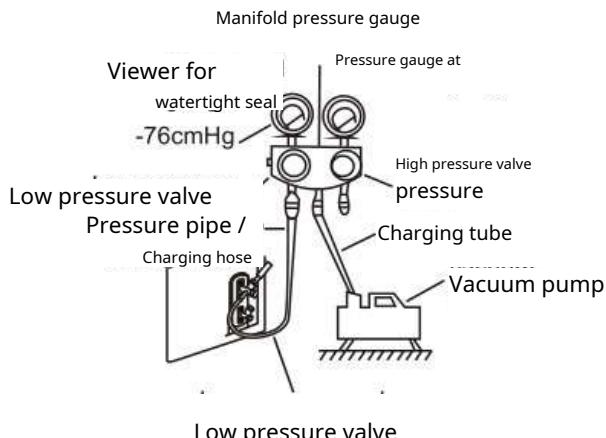
Evacuation must be performed upon initial installation and when the unit is moved.

### BEFORE CARRYING OUT THE EVACUATION

- Check that the connecting pipes between the indoor and outdoor units are connected correctly.
- Check that all cables are connected correctly.

## Evacuation instructions

1. Connect the charging hose of the manifold pressure gauge to the service port on the low pressure valve of the outdoor unit.
2. Connect another hose from the manifold gauge to the vacuum pump.
3. Open the low pressure side of the manifold gauge. Keep the high pressure side closed.
4. Turn on the vacuum pump to evacuate the system.
5. Run the vacuum for at least 15 minutes, or until the watertightness indicator indicates -76cmHG (-105Pa).

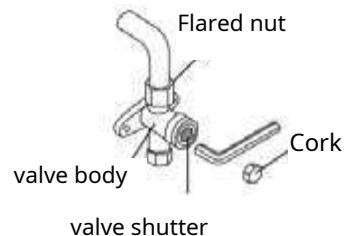


6. Close the low pressure side of the pressure gauge manifold, and turn off the vacuum pump. Wait 5 minutes, and verify that there have been no pressure changes in the system.
8. If there is a change in system pressure, see the Gas Leak Check section for information on how to check for leaks. If there is no change in system pressure, unscrew the cap.

Insert the hex key into the sealed valve (high pressure valve) and open the valve by turning the key 1/4 counterclockwise. You will hear the sound of gas entering the circuit; close the valve after 5 seconds.

10. Observe the pressure gauge for one minute to ensure that there are no changes in pressure. The pressure gauge should read slightly higher than atmospheric pressure.

11. Remove the charging hose from the service port.



12. Using a hex wrench, fully open both the high pressure and low pressure valves.

13. Hand tighten the valve caps on all three valves (service, high pressure, low pressure). If necessary, you can tighten them further with a torque wrench.



### OPEN GENTLY THE VALVE SHUTTER

When unscrewing the valve plug, turn the hex key until it stops against the edge. Do not try to force the valve open further.

## Note on adding coolant

Some systems require additional charging depending on the length of the hoses. The standard hose length varies based on local regulations. For example, in North America, the standard hose length is 25' (7.5 m). In other areas, the standard pipe length is 5m (16'). Refrigerant should be charged from the service port on the low pressure valve of the outdoor unit. The additional refrigerant to be charged can be calculated with the following formula:

Liquid side diameter			
	φ6.35(1/4")	φ9.52(3/8")	φ12.7(1/2")
<b>R22</b> <b>(Expansion valve in the internal unit):</b>	(Total length of the tube - length tube standard) x 30g (0.32oZ)/m(ft)	(Total length of the tube - length tube standard) x 65g(0.69oZ)/m(ft)	(Total length of the tube - length tube standard) x 115g(1.23oZ)/m(ft)
<b>R22</b> <b>(Expansion valve in the external unit):</b>	(Total length of the tube - length tube standard) x 15g(0.16oZ)/m(ft)	(Total length of the tube - length tube standard) x 30(0.32oZ)/m(ft)	(Total length of the tube - length tube standard) x 60g(0.64oZ)/m(ft)
<b>R410A:</b> <b>(Expansion valve in the internal unit):</b>	(Total length of the tube - length tube standard) x 30g(0.32oZ)/m(ft)	(Total length of the tube - length tube standard) x 65g(0.69oZ)/m(ft)	(Total length of the tube - length tube standard) x 115g(1.23oZ)/m(ft)
<b>R410A:</b> <b>(Expansion valve in the external unit):</b>	(Total length of the tube - length tube standard) x 15g(0.16oZ)/m(ft)	(Total length of the tube - length tube standard) x 30g(0.32oZ)/m(ft)	(Total length of the tube - length tube standard) x 65g(0.69oZ)/m(ft)
<b>R32:</b>	(Total length of the tube - length tube standard) x 12g(0.13oZ)/m(ft)	(Total length of the tube - length tube standard) x 24g(0.26oZ)/m(ft)	(Total length of the tube - length tube standard) x 40g(0.42oZ)/m(ft)

 **CAUTION** NOTmix types of refrigerant.

For Australia models only:

- This unit contains factory-charged refrigerant sufficient for 20 m of piping and therefore no additional refrigerant charge is required for an installation with piping up to 20 m. When the refrigerant piping exceeds 20 m, charge an additional amount of refrigerant calculated based on the total piping length as shown in the table above exceeding 20 m.
- If using an existing piping system, the required refrigerant charge volume will vary depending on the size of the liquid pipe.

Formula to calculate the volume of additional refrigerant required:

Additional charging volume (kg) = {Main length (m) - Factory charging volume 20(m)} × 0.03(kg/m)

- Be sure to remove additional amount of refrigerant according to the nominal charge shown on the nameplate (less than 5m of refrigerant piping) based on market or government verification tests.

# Running the test

## Before running the test

A test should be performed after the entire system has been fully installed. Confirm the following points before performing the test:

- a) The indoor and outdoor units are installed correctly.
- b) The pipes and wiring are connected correctly.
- c) No obstacles near the inlet and outlet of the unit that may cause poor performance or malfunction of the product.
- d) The refrigeration system is not leaking.
- e) The drainage system is unobstructed and discharges to a safe location.
- f) Thermal insulation is installed correctly.
- g) The ground wires are connected correctly.
- h) The length of the pipes and the amount of refrigerant added were recorded.
- i) The supply voltage is the correct voltage for the air conditioner.



### CAUTION

Failure to perform the test may result in damage to the unit, property damage, or personal injury.

## Instructions for performing the test

1. Open both the liquid and gas shut-off valves.
2. Turn on the main power switch and allow the unit to warm up.
3. Set the air conditioner to COOL mode.
4. For the indoor unit
  - a. Make sure the remote control and its buttons work properly.
  - b. Make sure that the shutters move correctly and can be directed with the remote control.
  - c. Check whether the room temperature is displayed correctly.
  - d. Make sure that the indicators on the remote control and the display panel of the indoor unit are working properly.
  - e. Make sure the manual button on the indoor unit works properly.

f. Check that the drainage system is free of obstructions and that drainage occurs without problems.

g. Make sure there is no abnormal vibration or noise during operation.

5. For the external unit

a. Check the refrigeration system for leaks.

b. Make sure there is no abnormal vibration or noise during operation.

c. Ensure that the airflow, noise and water generated by the unit do not disturb neighbors or pose a safety hazard.

6. Drainage test

a. Make sure the drain pipe drains freely. New buildings should perform this test before finalizing the suspended ceiling installation.

b. Remove the service lid. Add 2,000 ml of water to the tank through the connected hose.

c. Turn on the main switch and operate the air conditioner in COOL mode.

d. Listen to the sound of the drain pump to see if it makes any unusual noises.

e. Check that the water is draining. It may take up to a minute for the unit to begin draining depending on the drain hose.

f. Make sure there are no leaks in any of the pipes.

g. Stop the air conditioner. Turn off and replace the service cover.

**NOTE:** If the unit malfunctions or does not perform as expected, please refer to the Troubleshooting section of the user manual before calling customer service.

## Impedance information

(Applicable to some countries in the Middle East area only)

To comply with EN61000-3-11, the MTI-48HWN1-R product must only be connected to a power supply that provides a system impedance of:  $|Z_{sys}| = 0.267802236 \Omega$  or less. Before connecting the product to the public power grid, consult your local power supply authority to ensure that your power grid meets the above requirements.

To comply with EN61000-3-11, the MTI-60HWN1-R product must only be connected to a power supply that provides a system impedance of:  $|Z_{sys}| = 0.214 \Omega$  or less. Before connecting the product to the public power grid, consult your local power supply authority to ensure that the power grid meets the above requirements.

To comply with EN61000-3-11, the MTIT4-36CWN1-QC5 product (Indoor unit: MTIT4-36CWN1-QC5, Outdoor unit: MOT4DU-36CN1-QC5) must only be connected to a power supply that provides a system impedance of:  $|Z_{sys}| = 0.021893 \Omega$  or less. Before connecting the product to the public power grid, consult your local power supply authority to ensure that the power grid meets the above requirements.

To comply with EN61000-3-11, the MTIT4-36CWN1-QC5 product (Indoor unit: MTIT4-36CWN1-QC5, Outdoor unit: MOT4V-36CN1-QC5) must only be connected to a power supply that provides a system impedance of:  $|Z_{sys}| = 0.024 \Omega$  or less. Before connecting the product to the public power grid, consult your local power supply authority to ensure that the power grid meets the above requirements.

To comply with EN61000-3-11, the MTIT-32CWN1-QC5 product must only be connected to a power supply that provides a system impedance of:  $|Z_{sys}| = 0.083964 \Omega$  or less. Before connecting the product to the public power grid, consult your local power supply authority to ensure that the power grid meets the above requirements.



**Design and specifications are subject to change without notice for product improvement. Consult your dealer or manufacturer for details. Any updates to the manual will be uploaded to the supplier's website, please check the latest version.**

**QS001UI-T2**

# **AIR CONDITIONER**

## **REMOTE CONTROL USER MANUAL**

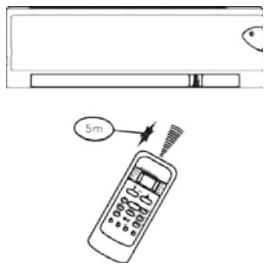
Warning: batteries not supplied

# **SUMMARY**

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# Remote control management

## REMOTE CONTROL POSITION



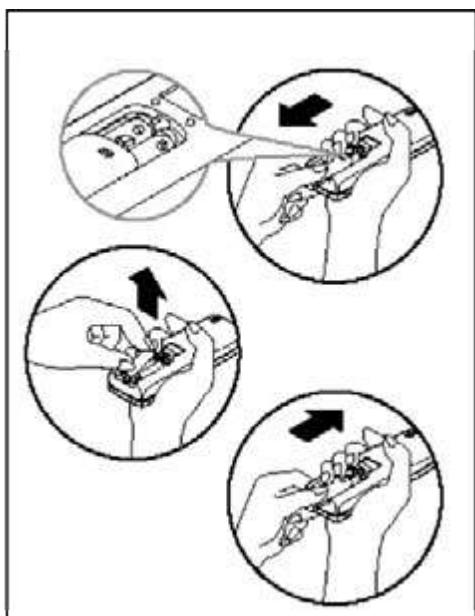
Hold the remote control where the infrared signal can reach the receiver of the indoor unit.

A maximum distance of 5 metres is permitted in open fields.

### Precautions

- The air conditioner will not operate if curtains, doors or other materials block the indoor unit from receiving the remote control signal.
- Prevent any liquid from accidentally falling on the remote control.
- Do not expose the remote control to direct sunlight or heat sources.
- If the infrared signal receiver on the indoor unit is exposed to direct sunlight, the air conditioner may not operate properly.
- If other electrical appliances react to the remote control, you should move these appliances or contact your local dealer.

## INSERTING THE REMOTE CONTROL BATTERIES



(1) Two alkaline batteries (R03/LR03 x 2) are required for the remote control.

(2) Press the arrow printed on the cover behind the remote control and open it by sliding the cover in the direction of the arrow.

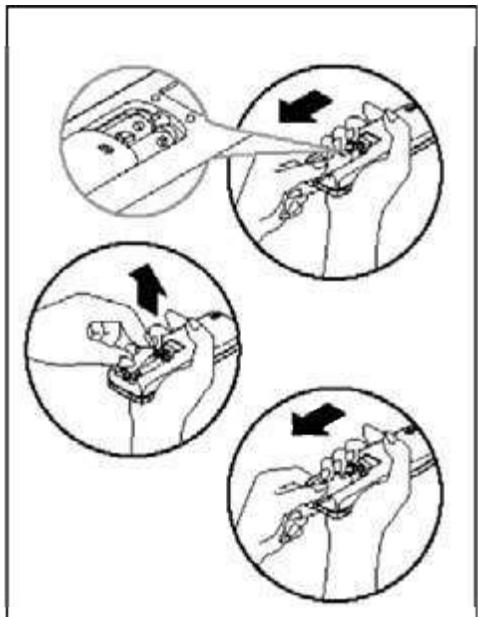
(3) Insert the two batteries, checking the correct polarity.

(4) Replace the door by sliding it upwards until you hear the characteristic click.

### NOTE:

- Use only new batteries. Remove the batteries if the unit is not to be used for a long time.

## REPLACING THE REMOTE CONTROL BATTERIES



- (1) If the remote control display does not work, the remote control batteries need to be replaced.
- (2) Two alkaline batteries (R03/LR03 x 2) are required for the remote control.
- (3) Slide the battery compartment cover on the back of the remote control in the direction of the arrow.
- (4) Insert two batteries and check that the poles+And-are positioned correctly.
- (5) Replace the door by sliding it upwards until you hear the characteristic click.
- (6) After replacing the batteries, set the remote control clock to the current time.

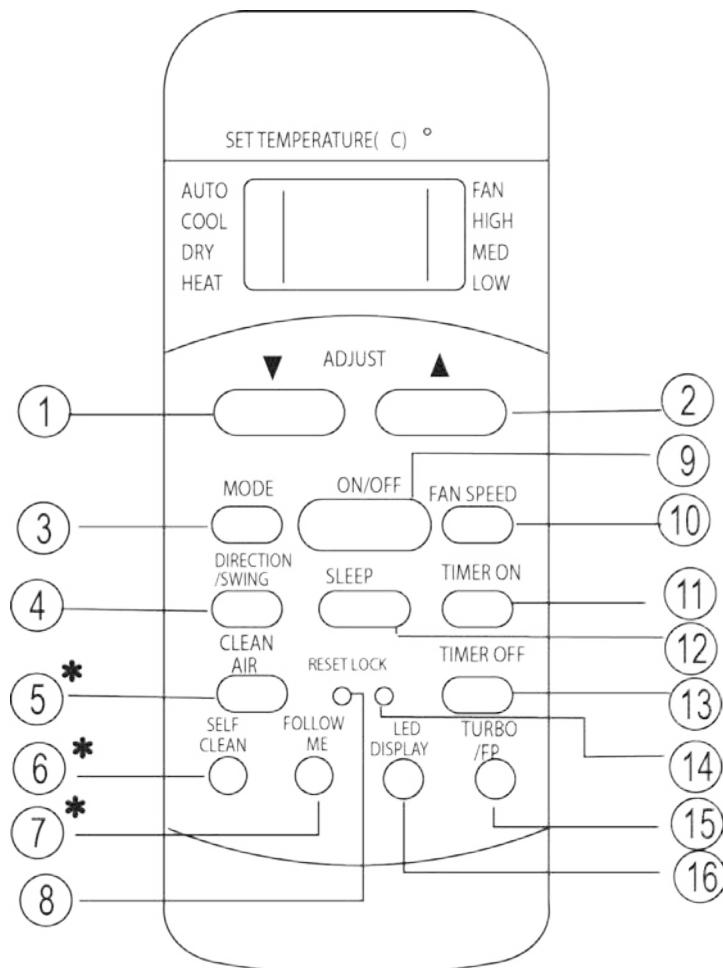
### NOTE:

- Use only new batteries.
- Batteries removed from the remote control must be disposed of separately from other waste and in compliance with local laws.

# Remote Control Features

1. Operating modes: COOL, HEAT, DRY, FAN and AUTO.
2. 24-hour timer setting function.
3. Internal temperature range: 17°C ~ 30°C.
4. Full functions via LCD (Liquid Crystal Display).

## REMOTE CONTROL BUTTON FEATURES



- **NOTE:** The SELF CLEAN and FOLLOW ME buttons are not available for the RG51I29/BG(C)E models.

**NOTE:** The RG51I43/BGEF model does not have the SELF CLEAN and CLEAN AIR buttons.

**NOTE:** The RG51I44/BGEF model does not have the CLEAN AIR button.

### NOTE:

- The remote control buttons may be slightly different from the one shown depending on the indoor unit models.
- All the functions described are available for the indoor units.
- If the indoor unit does not have this function, pressing the corresponding button on the remote control will not activate any corresponding operation.

1. **TEMP button**:  Press this button to decrease the temperature setting in 1°C increments to a minimum of 17°C.
2. **TEMP button**:  Press this button to increase the temperature setting in 1°C increments up to a maximum of 30°C.
3. **MODE button**: Used to select the operating mode. The following functions can be selected in sequence:  
CAR (  ) > COOL (  ) > DRY (  ) >  
HEAT (  ) > FAN (  )
4. **AIR DIRECTION/SWING button**: Press this button to change the airflow direction of the horizontal louver. Each time you press the button, the louver angle changes by 6°. Press and hold the button for at least 2 seconds, the horizontal louver moves automatically. Press again to stop the swing. If the louver stops in a position where it may adversely affect the cooling or heating effect of the air conditioner, it will automatically change the angle (up or down).
5. **CLEAN AIR button (on some models)**: When you press this button, the Plasma Ionizer collects dust and helps remove pollen and impurities from the air.
6. **SELF CLEAN /AUTO CLEAN button (on some models)**: Pressing this button in COOL or DEHUMIDIFY mode activates the function and prevents the formation of bad odors, allowing the exchanger of the indoor unit to dry. Pressing it again will stop operation and the unit will turn off.
7. **FOLLOW ME button (on some models)**: Press this button to activate the FOLLOW ME function (the infrared remote control becomes a room thermostat). The remote control will send a signal to the air conditioner every 3 minutes to check the room temperature until we intervene by pressing the FOLLOW ME button again. The air conditioner will beep to indicate that the FOLLOW ME function is active; if the air conditioner does not receive the signal from the remote control for more than 7 minutes, the FOLLOW ME function will be deactivated and the reference temperature will be the suction temperature of the indoor unit of the air conditioner.
8. **RESET button**: Once the RESET button is pressed, all current settings will be cleared and the control will return to the initial settings.
9. **ON/OFF button**: Press this button to start the indoor unit. Press it again to stop the unit operation.
10. **FAN SPEED button**: Press the button to select the fan speed in the sequence: AUTO, LOW, MED and HIGH. Each time you press the button, the fan speed selection changes.
11. **TIMER ON button**: Press this button to activate the time setting for the appliance to start. Each press of the button will increase the time setting in 30 minute increments if the setting time is less than 10 hours. When the setting time reaches 10 hours, each press will increase the setting time in 1 hour increments. To cancel the appliance to start function, simply press the button until the time setting is 0.0.

**12. SLEEP/ECONOMIC button:**Press this button to activate the energy saving mode. Press it again to stop the function. This function is available in the COOL, HEAT or AUTO modes and is used to maintain a more comfortable temperature. The SLEEP/ECONOMIC mode is canceled if the ON / OFF, FAN SPEED, or MODE button is pressed.

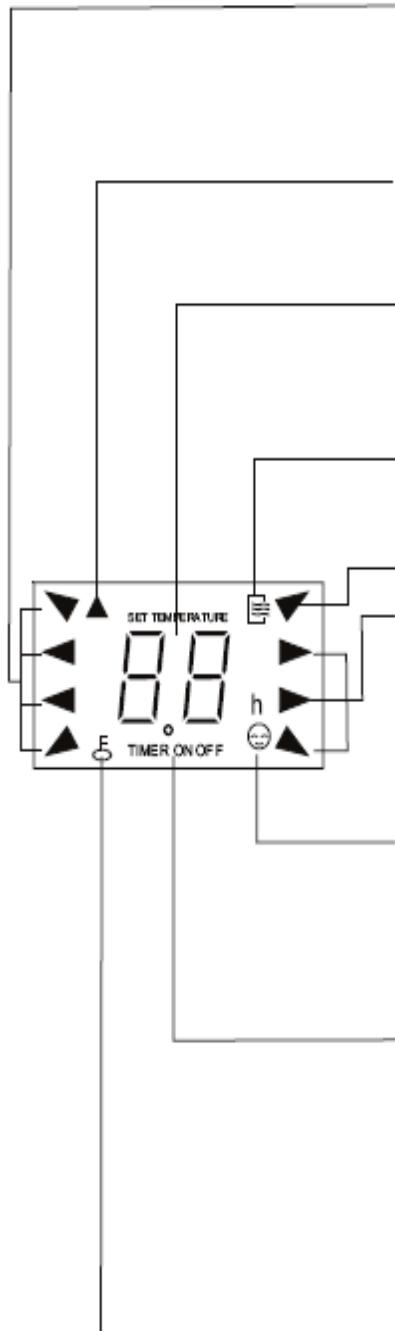
**13. TIMER OFF button:**Press this button to activate the time setting for turning off the appliance. Each press of the button will increase the time setting in 30 minute increments if the setting time is less than 10 hours. When the setting time reaches 10 hours, each press will increase the setting time in 1 hour increments. To cancel the power off function, simply press the button until the time setting is 0.0.

**14. LOCK button:**Pressing this button (recessed) will lock all current settings and the remote control will not accept any operations other than LOCK. Use the LOCK mode when you want to prevent the settings from being changed accidentally. Press the LOCK button again to cancel the LOCK function. A lock symbol will appear on the remote control display when the LOCK function is activated.

**15. TURBO/POWERFULL button:**Press this button to activate the Turbo function which allows the unit to reach the set temperature in the shortest time. When you press this button in cooling mode, it will quickly cool the air with the highest fan speed. When you press this button in heating mode (only applicable to units adopting PTC), the PTC will be activated and it will quickly heat up. Note: The system will automatically return to the previous setting after operating in TURBO/POWERFULL mode for about 30 minutes.

**16. LED DISPLAY button:**Press this button to turn off the display on the indoor unit, press it again to turn the display on again.

# Display indicators



**DISPLAY MODE:** Displays the current mode selected. Including AUTO, COOL, DRY, HEAT (heating only models), and FAN.

**TRANSMISSION INDICATOR:** This transmission indicator lights up when the remote control transmits signals to the indoor unit.

**TIME/TEMPERATURE:** The temperature setting (17°C to 30°C) or timer setting (0~24 hours) will be displayed. If FAN mode is selected, there will be no display.

**ON/OFF:** This indicator is displayed when the unit is operating.

**VENTILATION:** Ventilation mode.

**VENTILATION SPEED:** Displays the selected fan speed: AUTO, HIGH, MED and LOW. Nothing will be displayed when the fan speed has been selected in AUTO speed. When AUTO or DRY mode is selected, there will be no signal displayed.

**FOLLOW ME:** When you press the FOLLOW ME button in cooling or heating mode, the remote sensing function is activated and this indicator is displayed.

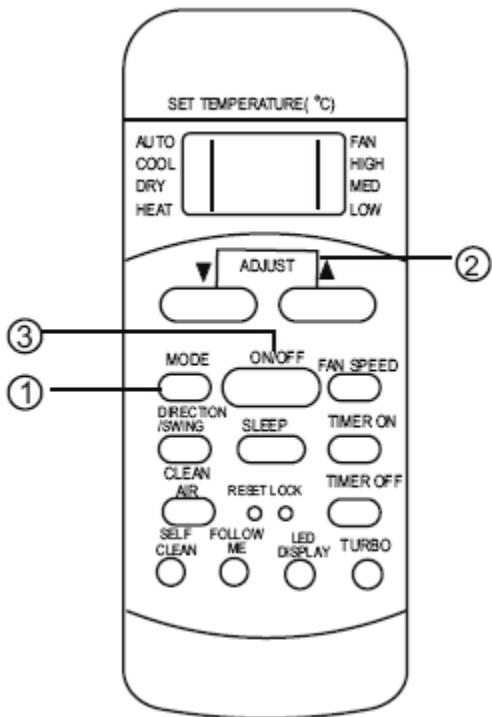
**TIMER:** This area of the display shows the TIMER settings, so: if only the on function is set, TIMER ON will be displayed. If only the off function is set, TIMER OFF will be displayed. If both functions are set, TIMER ON OFF will be displayed indicating that you have chosen both the on and off function.

**LOCK (Display lock):** is displayed when the LOCK button is pressed. Press the LOCK button to clear the indicator from the display.

## NOTE:

The figure above (which shows all indications at once) is for informational purposes only.

# AUTO operation



When you set the air conditioner to AUTO mode, it automatically activates cooling, heating (some models only) or fan only operation depending on the temperature that has been selected in the room. Once the operation mode is selected, the operating conditions are saved in memory. The next time you start the air conditioner, you can operate under the same conditions by pressing the ON / OFF button on the remote control.

## START:

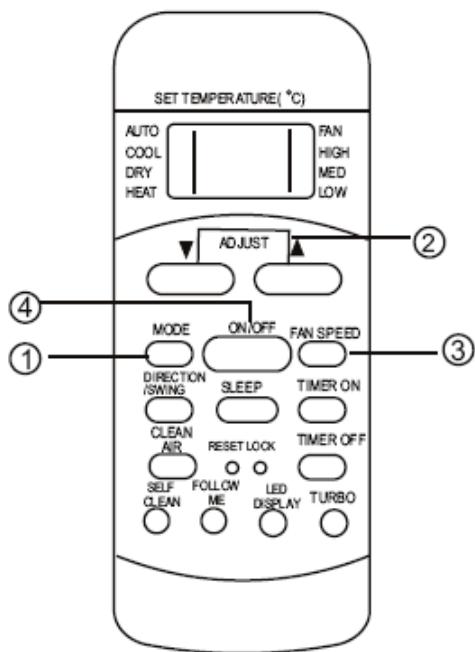
Make sure the unit is plugged in and power is available. The OPERATION indicator on the indoor unit display window is lit:

1. Selection button (MODE): Press to select AUTO.
2. Temperature button (TEMP): Set the desired temperature.
3. ON/OFF button: Press the ON/OFF button to start the air conditioner.

## STOP:

ON / OFF button: Press this button again to stop the air conditioner. If the AUTO mode is not suitable, you can manually select the desired conditions. When you select the AUTO mode, you do not need to set the fan speed. The fan speed will be controlled automatically.

# MODE Operation



## START:

1. Selection button (MODE): Press to select COOL (cooling), HEAT (heating) or FAN (ventilation) mode.
2. Temperature button (TEMP): Set the desired temperature.
3. Fan speed button (FAN SPEED): Press to select the fan speed: "AUTO", "LOW", "MED" and "HIGH".
4. ON/OFF button: Press the ON/OFF button to start the air conditioner.

The OPERATION indicator on the indoor unit display lights up. The operation mode is selected based on the room temperature and starts operating after about 3 minutes (if FAN mode is selected, the unit will start immediately).

## STOP:

ON/OFF button: Press this button again to stop the air conditioner operation.

## NOTE:

Temperature cannot be controlled in FAN mode.

# DRY dehumidification mode

## START:

Make sure the unit is plugged in and power is available. The OPERATION indicator on the indoor unit display window is lit:

1. Selection button (MODE): Press to select DRY.
2. Temperature button (TEMP): Press the "TEMP" button to set the desired temperature.
3. ON/OFF button: Press the ON/OFF button to start the air conditioner.

Fan speed cannot be set when the unit is in DRY and no indicator appears on the display.

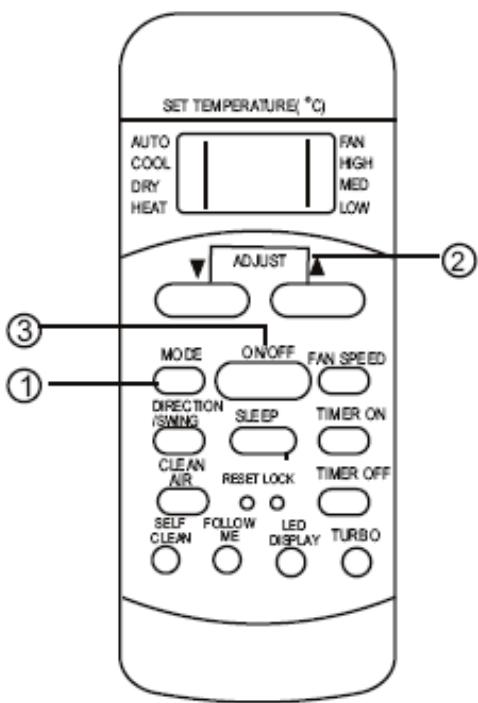
The fan speed will be automatically selected as LOW.

## STOP:

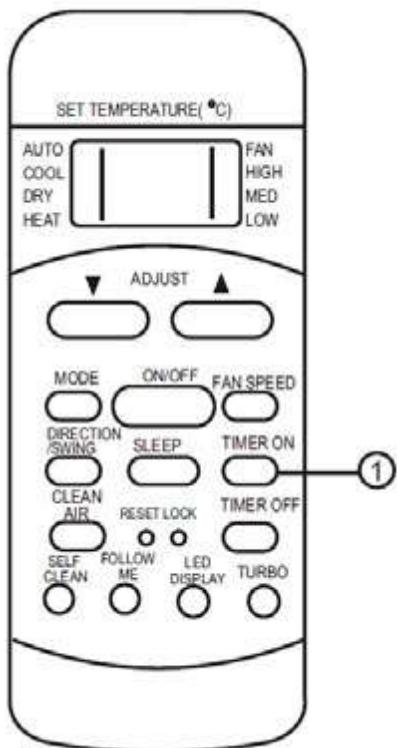
ON/OFF button: Press this button again to stop the air conditioner.

## NOTE:

In DRY mode, based on the temperature difference between the set temperature and the actual indoor temperature, the indoor unit automatically operates in COOLING or FAN mode.



# TIMER Operation



By pressing the TIMER ON button you can set the unit to turn on automatically.

## To set the auto start function:

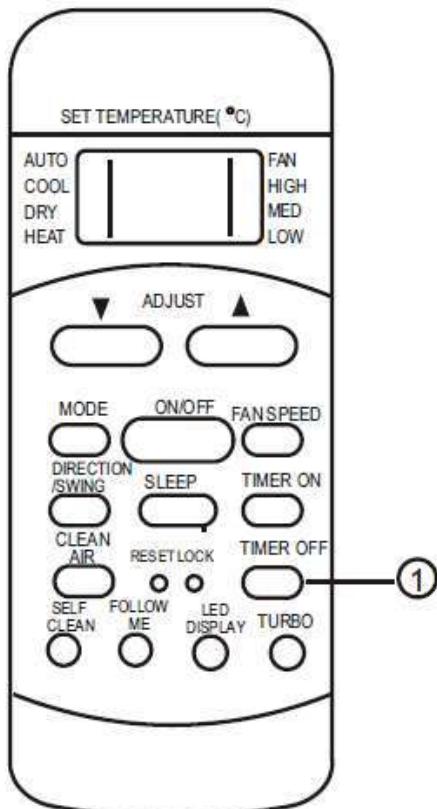
1. Pressing TIMER ON button, the remote control shows TIMER ON with the last auto start setting and the "h" signal will be displayed on the LCD display.

Now you are ready to set the function and start the operation.

2. Press the TIMER ON button again to automatically set the desired time.

Each time you press the button, the time increases by half an hour between 0 and 10 hours and by one hour between 10 and 24 hours. 3. After setting the TIMER ON, there will be a half-second delay before the remote control transmits the signal to the air conditioner.

Then, after about another 2 seconds, the "h" signal will disappear and the set temperature will reappear on the LCD display window.



By pressing the TIMER OFF button you can set the unit to turn off automatically.

## To set the auto power off function:

1. Press TIMER OFF button, the remote control shows TIMER OFF with last auto-off setting and the "h" signal will be displayed on the LCD display.

Now you are ready to set the function and start the operation.

2. Press the TIMER OFF button again to automatically set the desired time.

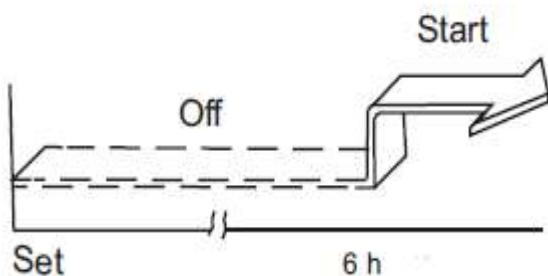
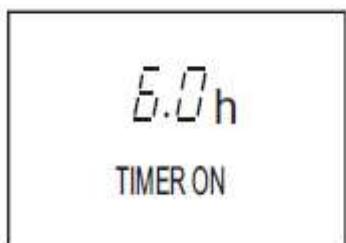
Each time you press the button, the time increases by half an hour between 0 and 10 hours and by one hour between 10 and 24 hours. 3. After setting the TIMER OFF, there will be a half-second delay before the remote control transmits the signal to the air conditioner.

Then, after about another 2 seconds, the "h" signal will disappear and the set temperature will reappear on the LCD display window.

## Precautions

The actual operating time set by the remote control for the timer function is limited to the following settings: 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 24.

# TIMER setting example



## TIMER ON

### Auto Start Operation:

The TIMER ON function is useful when you want the unit to turn on automatically after a desired amount of time.

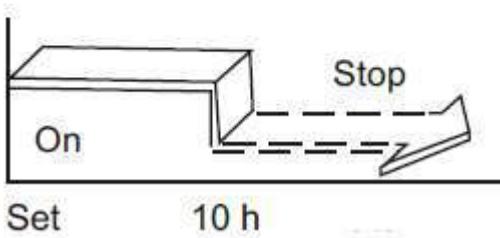
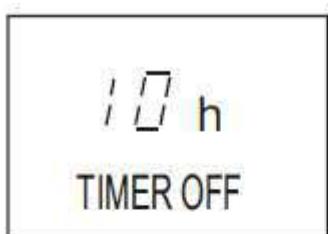
The air conditioner will start working automatically at the set time.

#### Example:

To start the air conditioner in 6 hours:

1. Press the TIMER ON button with the last starting setting and the "h" signal with the value display will appear.
2. Press the TIMER ON button to display "6.0h" TIMER ON on the remote control display.
3. Wait for about 3 seconds and the digital display area will show the set temperature.

This feature is now enabled.



## TIMER OFF

### Auto Power Off Operation:

The TIMER OFF function is useful when you want the unit to turn off automatically after a desired amount of time.

The air conditioner will automatically stop at the set time.

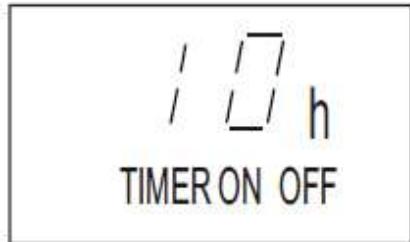
#### Example:

To stop the air conditioner in 10 hours: 1. Press the TIMER OFF button with the last off setting and the "h" signal with the value display.

2. Press the TIMER OFF button to display "10h" TIMER OFF on the remote control display.

3. Wait for about 3 seconds and the digital display area will show the set temperature.

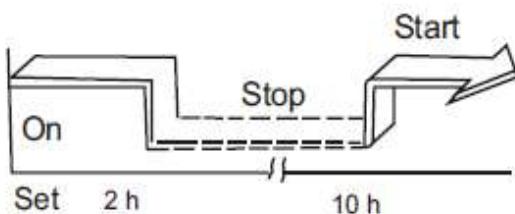
This feature is now enabled.



## Start and stop combination:

Setting TIMER ON and TIMER OFF at the same time:

TIMER OFF - TIMER ON  
(Stop/Start Operation)



### Example:

Stop the air conditioner operation 2 hours after turning it on and restart it automatically 10 hours later: 1.

1. Press the TIMER OFF button.
2. Press the TIMER OFF button again to display 2.0h on the TIMER OFF display.
3. Press the TIMER ON button.
4. Press the TIMER ON button again to display 10h on the TIMER ON display.
5. Wait for the remote control to display the set temperature.

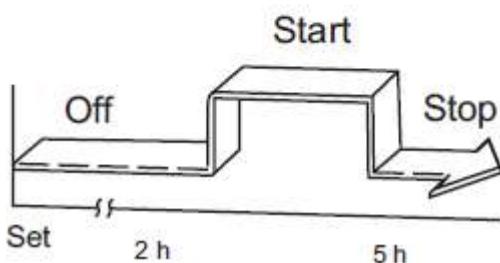


TIMER ON - TIMER OFF  
(Start/Stop Operation)

### Example :

Start the air conditioner 2 hours after setting, and stop operation 5 hours later:

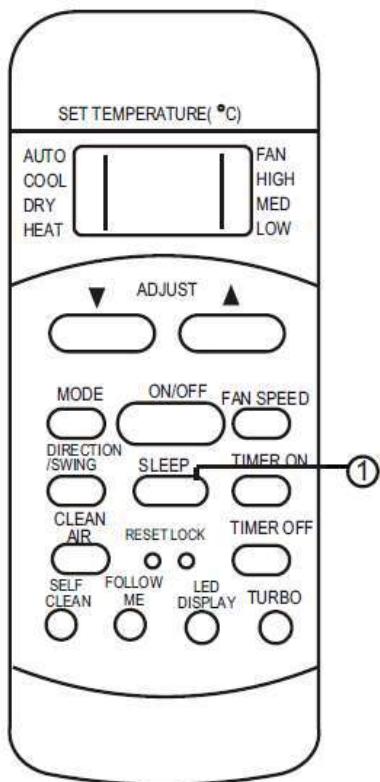
1. Press the TIMER ON button.
2. Press the TIMER ON button again to display 2.0h on the TIMER ON display.
3. Press the TIMER OFF button.
4. Press the TIMER OFF button again to display 5.0h on the TIMER OFF display.
5. Wait for the remote control to display the set temperature.



### Attention :

- The timer setting (TIMER ON or OFF TIMER) activates and follows the sequence of setting the set time with the lowest value being activated first.
- If the set time is the same for both TIMER ON and TIMER OFF, no timer operation is performed.
- The air conditioner may stop working, immediately or after about 10 minutes.

# NIGHT OPERATION

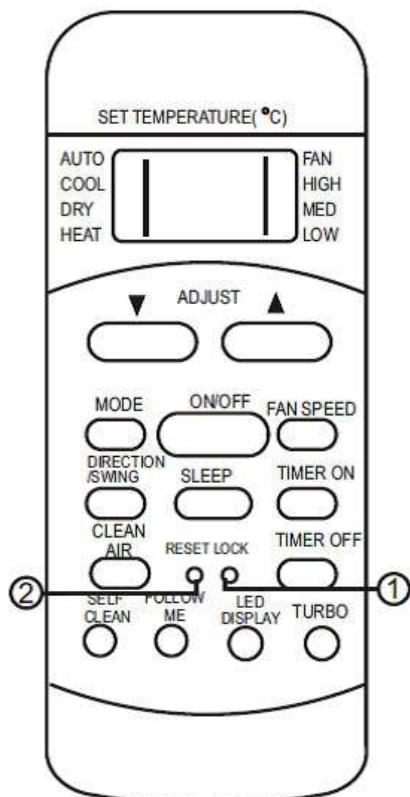


The SLEEP function allows the unit to automatically increase (in cooling) or decrease (in heating) by 1°C per hour for the first two hours of operation and to keep the temperature constant for the next 5 hours, after which the unit will stop automatically operation.

In this way, you can maintain a more comfortable temperature and save energy.

NOTE: The SLEEP function is only available in cooling, heating and AUTO operations.

## Lock button (LOCK) and RESET



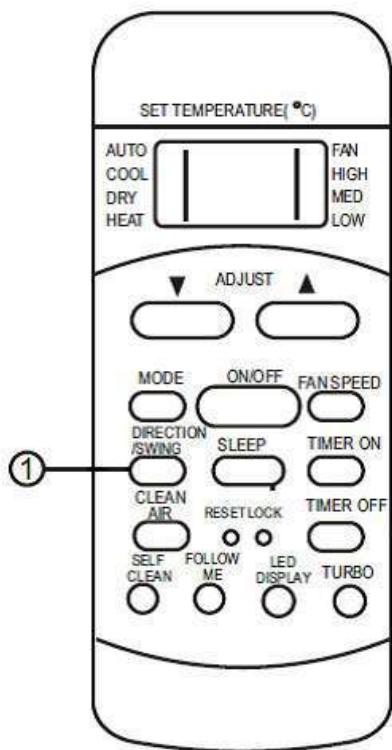
1. When you press the recessed LOCK button, all settings are locked and the remote control does not accept any other operations.

Use LOCK mode when you do not want the settings to be changed accidentally. Press the LOCK button again when you want to cancel LOCK mode.

A lock symbol will appear on the bottom right of the remote control display when the LOCK function is activated.

2. When you press the RESET button, all current settings are cleared and the original factory settings are restored.

# Airflow function button



Use the DIRECTION button / SWING button to activate the horizontal vane swing function or lock it in the desired position.

1. When you press this button quickly and once, the deflector is activated. The movement angle of the louver is 6°.

Press and hold the DIRECTION button / SWING button to move the flap to the desired position

2. When you press the button without releasing it for more than 2 seconds, the automatic swing function of the deflector is activated.

The horizontal deflector swings automatically.

Press again to stop the deflector.

## Precautions

1. When replacing batteries, do not use old batteries or batteries of a different type than those recommended by the Manufacturer. Otherwise, the remote control may malfunction.
2. If you do not use the remote control for a couple of weeks or more, remove the batteries. Otherwise, the battery fluid leakage may damage the remote control.
3. The average battery life with normal use is about one year. Replace the batteries when the indoor unit does not receive the signal or if the transmission indicator on the remote control does not light up.
4. Make sure there are no barriers between the remote control and the receiver of the indoor unit, otherwise the air conditioner will not work.
5. Keep the remote control away from liquids.
6. Protect the remote control from high temperatures and radiation exposure.
7. Keep the remote control and the air conditioner away from electromagnetic sources produced by other household appliances.





# ARYA

well L ness

air

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