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U User **I** Installer **A** Assistance

Before using the air conditioner, be sure to check and preset the following.

• Remote Controller presetting

The remote controller is NOT presetting as Cooling Only Air Conditioner or Heat Pump by manufacturer.


Each time after the remote controller replaces batteries or is energized, the Cooling indicator  and Heating indicator  will flashes alternately on LCD of the remote controller.

User can preset the remote controller type depending on the air conditioner type you have purchased as follows:

Press any button when  flashes, Heat Pump is set.

Press any button when  flashes, Cooling Only is set.

If you don't press any button within 12 seconds, the remote controller is preset as Heat Pump automatically.

 **If the air conditioner you purchased is a Cooling Only one, but you preset the remote controller as Heat Pump, it doesn't bring any matter. But if the air conditioner you purchased is a Heat Pump one, and you preset the remote controller as Cooling Only, then you CAN NOT preset the Heating operation with the remote controller.**


• Back-light function (optional)

Hold down any button of remote controller for about 2 seconds, back-light turns on. Release the button, it lights off automatically 10 seconds later.

 **Back-light is an optional function.**

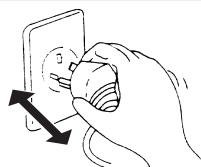
• Auto Restart Presetting

The appliance is preset as auto restart function by manufacturer. If hold down the Emergency button (ON/OFF) on the indoor unit for over 5 seconds, auto restart function is canceled with buzz sound, air conditioner is on standby.

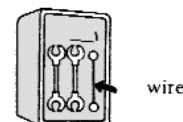
 **This operation must be done by specialized technicians only.**



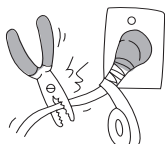
Use the power supply voltage shown on the rating plate. Keep the power switch or plug clean. Connect the power cable correctly and securely to the outlet, avoiding the risk of electric shock or fire due to insufficient contact.



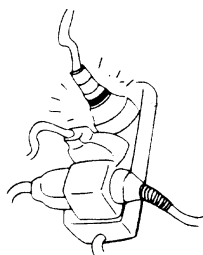
Check that the outlet is suitable for the plug, otherwise have the outlet replaced. Do not use the power switch or pull out the plug to switch the appliance off when operating. This may cause fires due to sparks, etc.



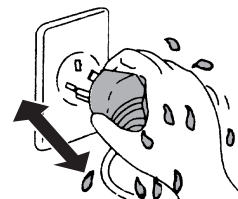
The user must contact qualified personnel to earth the appliance, in compliance with the legislation in force, and to install a thermal-magnetic circuit breaker.



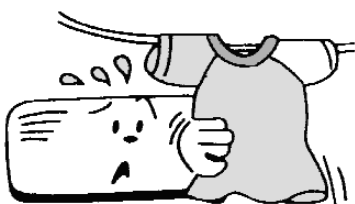
Do not bend, pull or press the power cable, as it may break. Electric shock or fire are usually caused by damaged power cables. The power cable must only be replaced by specialist technicians.



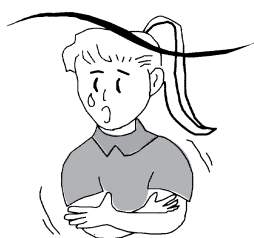
Do not use power supply cables that are too long, or multiple adapters.



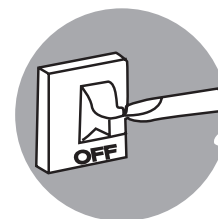
Do not operate the air-conditioner with wet hands; this may cause electric shock.



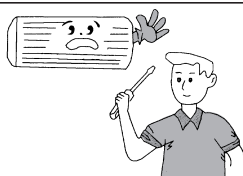
Do not block the air inlet or outlet of either the indoor or outdoor unit.



Extended exposure to cold air is a health risk.



If smoke or a smell of burning is detected, immediately disconnect power and contact the Service Centre.



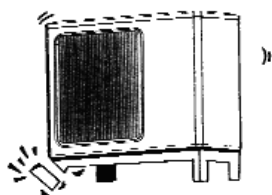
Do not modify or alter the characteristics of the appliance in any way. Contact the Service Centres authorised by the Manufacturer for all repairs. Incorrect repair may cause electric shock, etc.



Make sure the appliance is disconnected from the power supply when not used for extended periods, and before performing any cleaning or maintenance operations.



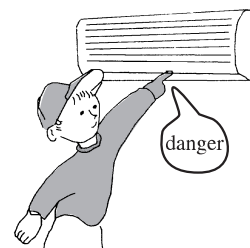
Do not install the appliance in environments where the air may contain gases, oil or sulphur, or near sources of heat.



Check that the base of the outdoor unit is installed securely.



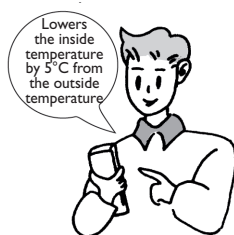
This appliance must only be used by adults; do not allow children to play with the appliance. Do not climb onto or rest objects on the outdoor unit.



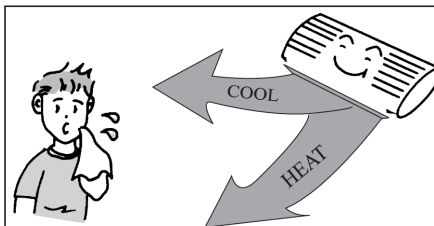
Never insert sticks or tools into the appliance. This may cause injuries.



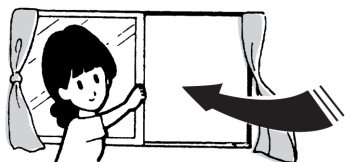
Keep the appliance at least 50cm from flammable substances (alcohol, etc.) or from pressurised containers (e.g. spray cans).



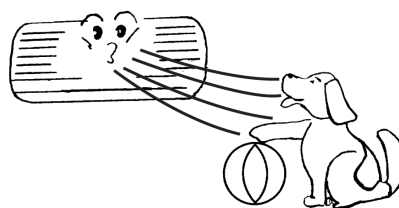
Selecting the most suitable temperature will avoid damaging the appliance.



The direction of air flow must be adjusted correctly. The louvers must be adjusted downwards in heating mode, and upwards in cooling mode.



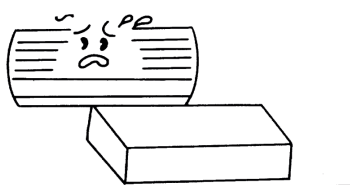
Do not leave doors and windows open when the air-conditioner is operating for long periods.



Do not aim the air stream directly at plants or animals.



Do not spray water onto the air-conditioner.



This appliance has been designed to air-condition the home and must not be used for other purposes, such as drying clothes, cooling food, etc.



If the appliance is used in areas without the renewal of fresh air, precautions must be taken to prevent any leaks of refrigerant gas from stagnating in the environment and creating the risk of fire.



Do not rest heavy or hot objects on the appliance.

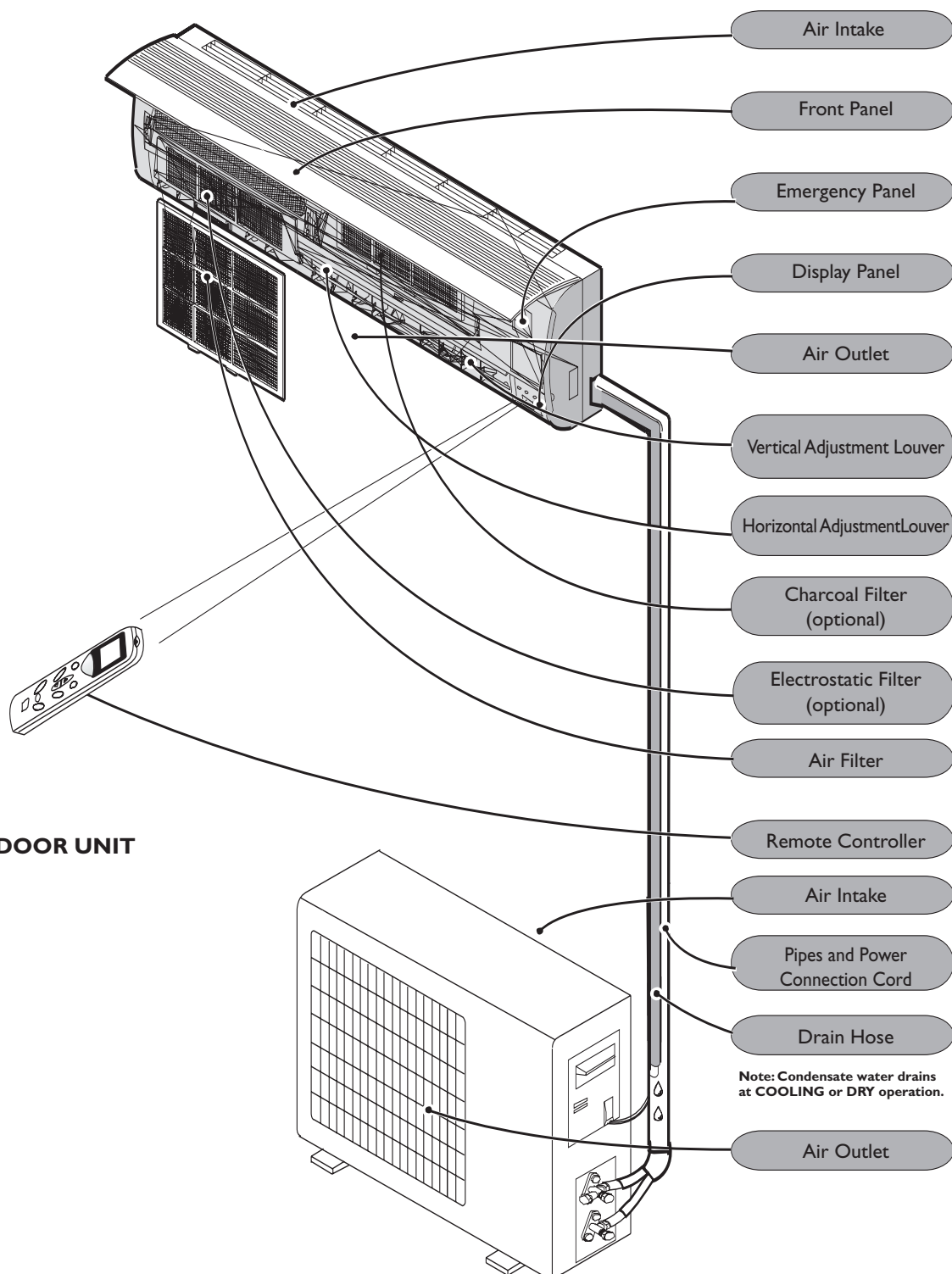


The packing materials are recyclable. It is therefore recommended to place them in suitable containers for separate waste disposal. At the end of its working life, take the air-conditioner to a special waste disposal centre.



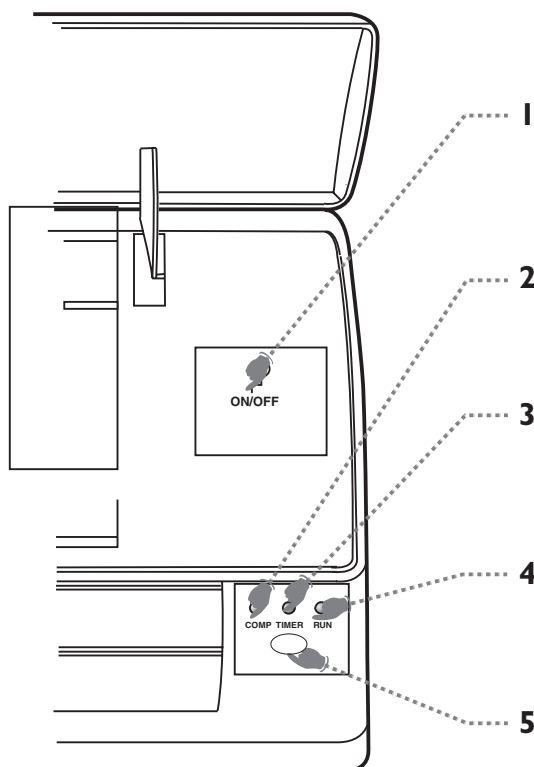
Only use the air-conditioner as shown in this booklet. These instructions are not intended to cover every possible situation that may arise. Common sense and prudence must be applied in the installation, operation and conservation of all household appliances.

INDOOR UNIT



The figures in this manual are based on the external view of a standard model. Consequently, the shape may differ from that of the air conditioner you have selected.

OPERATING AND DISPLAY



1. Emergency button

Used to control the unit when the remote controller is out of work. Used to set or cancel auto restart function*.

2. Compressor indicator (red)

It lights up when compressor is running.

3. Timer Indicator (yellow)

It lights up during the set time.

4. Run Indicator (green)

It is on during operation. It flashes during defrosting.

5. Signal Receptor

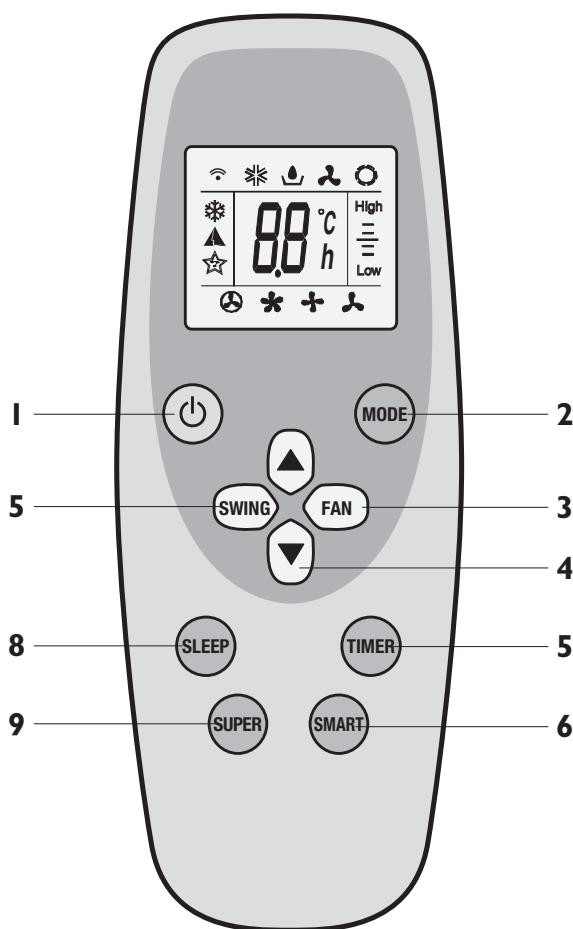
Receive signal from the remote controller.

❗ The shape and position of the switches and indicators may vary from different models, but their function are similar.

❗ Voltage presence when panel is open.

❗ *This operation must be done by specialized technicians only.

The remote controller transmits signals to the system.



1. ON/OFF BUTTON

The appliance will be started when it is energized or will be stopped when it is in operation, if you press this button.

2. MODE BUTTON

Used to select the operation mode.

3. FAN BUTTON

Used to select fan speed in sequence auto, high, medium or low.

4. ROOM TEMPERATURE SETTING BUTTONS

Used to select the room temperature. Used to set time in TIMER mode.

5. SWING BUTTON

Used to stop or start vertical adjustment louver swinging and set the desired up/down airflow direction.

6. SMART BUTTON

Used to enter fuzzy logic operation directly, regardless of the unit is on or off.

7. TIMER SET/CANCEL BUTTON

Used to set or cancel the timer operation.










8. SLEEP BUTTON

Used to set or cancel Sleep Mode operation.

9. SUPER BUTTON

Used to start or stop the fast cooling. Fast cooling operates at high fan speed with 18°C set temp automatically.

Indication symbols on LCD:


-  Signal transmit
-  Cooling indicator
-  Dry indicator
-  Heating indicator
-  Auto fan speed
-  High fan speed
-  Medium fan speed
-  Low fan speed
-  Used to regulate temperature in Smart mode or Dry mode.



Remote controller display remains active even if unit stop operations.

HOW TO INSERT THE BATTERIES

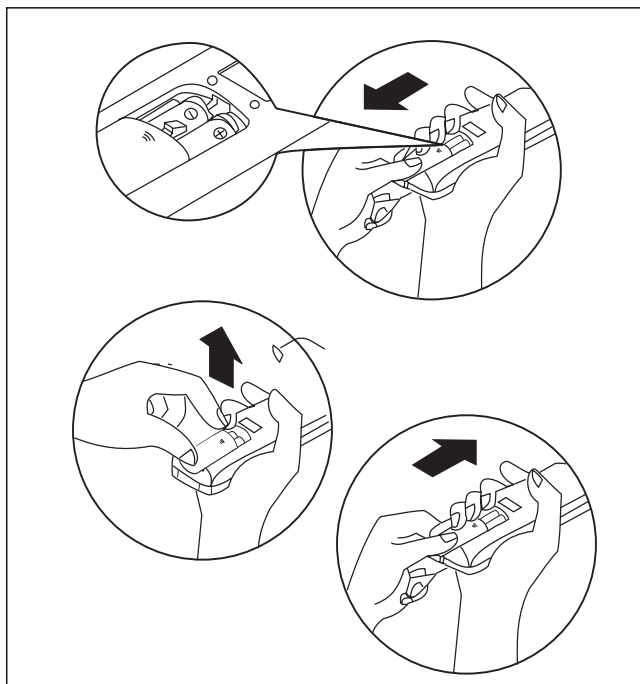
- Remove the battery cover according to the arrow direction.
- Insert new batteries making sure that the (+) and (-) of battery are matched correctly.
- Reattach the cover by sliding it back into position.

 **Use 2 LR03 AAA(1.5volt) batteries. Do not use rechargeable batteries.**

Replace batteries with new ones of the same type when the display becomes dim.

If the replacement is done within 1 minute, the remote controller will keep original presetting. However, if you want to change the presetting from Heat Pump to Cool Only or Cool Only to Heat Pump, you should reload batteries 3 minutes after removing the old ones.

The battery of the remote controlled must be disposed of according with the country rules.



STORAGE AND TIPS FOR USING THE REMOTE CONTROLLER

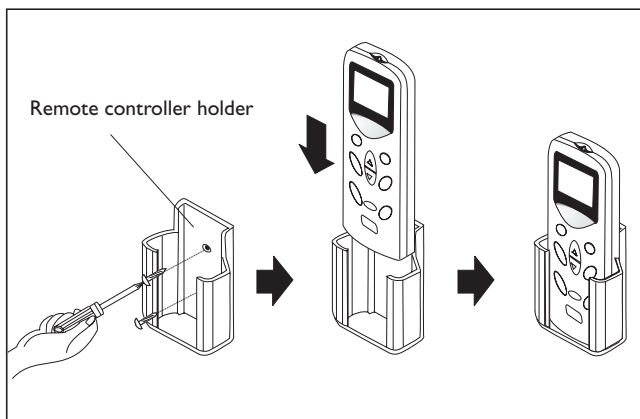
The remote controller may be stored mounted on a wall with a holder.

 **The remote controller holder is an optional part.**

HOW TO USE

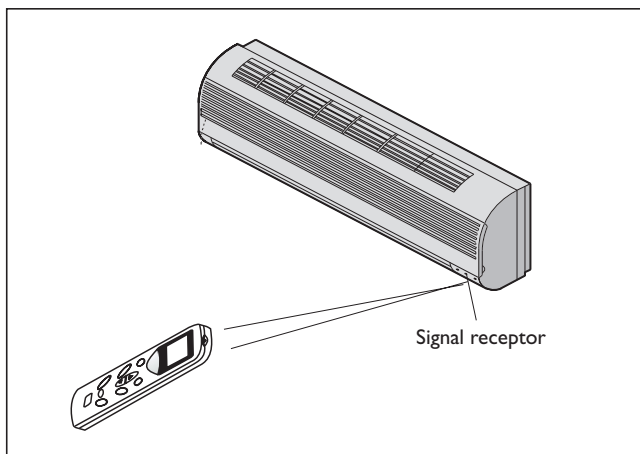
To operate the room air conditioner, aim the remote controller to the signal receptor.

The remote controller will operate the air conditioner at a distance of up to 7m when pointing at signal receptor of indoor unit.



BACK-LIGHT FUNCTION (OPTIONAL)

Please refer to page 2 "Preparation before use" for details.



OPERATION MODES

1. Selecting mode

Each time **MODE** button is pressed, the operation mode is changed in sequence:


COOLING → DRY → FAN ONLY → HEATING
↑

 **Heating mode is NOT available for cooling only air conditioner.**

2. FAN MODE


Each time the **"FAN"** button is pressed, the fan speed is changed in sequence:

AUTO → HIGH → MEDIUM → LOW
↑

 At **"FAN ONLY"** mode, only **"High"**, **"Medium"** and **"Low"** are available. At **"DRY"** mode, air-flow is set at **"Low"** automatically, **"FAN"** button is ineffective in this case.

3. Setting temperature

 Press once to **raise** temperature setting by 1°.


 Press once to **lower** temperature setting by 1°.


Range of available set temperature:

HEATING*	18°C ~ 32°C
COOLING	18°C ~ 32°C
DRY	room temperature ± 2°C
FAN ONLY	unable to set

 * **Heating mode is NOT available for cooling only models.**

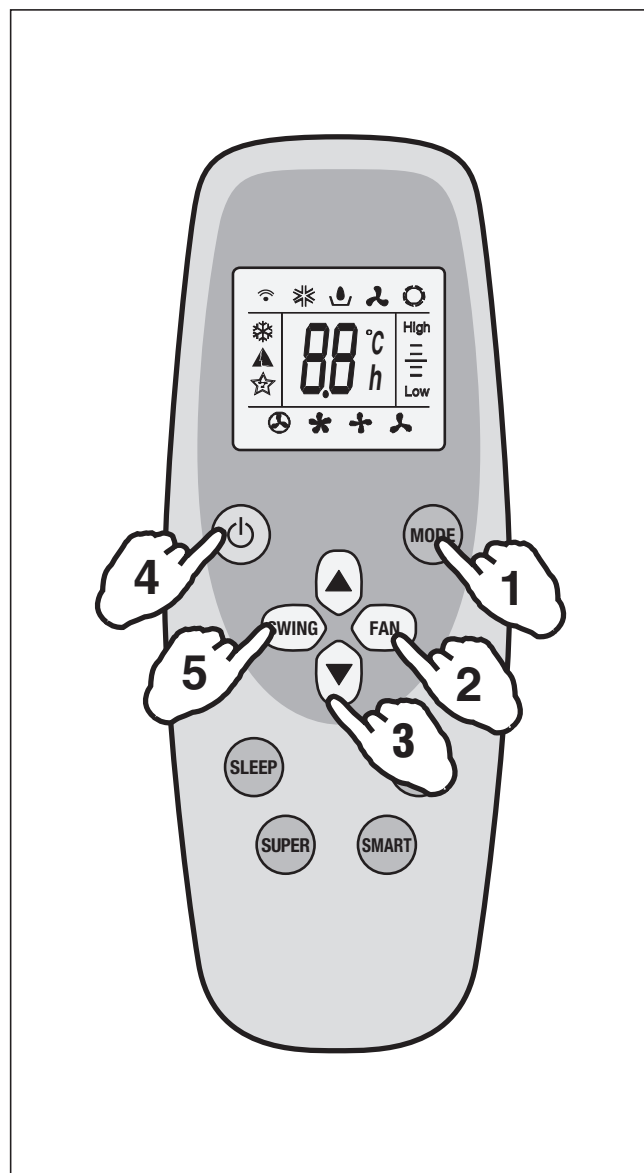
4. Turning on

Press  button, when the appliance receives the signal, the RUN indicator of the indoor unit lights up.

 **Changing modes during operation, sometimes the unit does not response at once. Wait 3 minutes.**

During heating operation, air flow is not discharged at the beginning. After 2-5 minutes, the air flow will be discharged until temperature of indoor heat exchanger rises.

Wait 3 minutes before restarting the appliance.



5. Airflow direction control

Vertical airflow is automatically adjusted to a certain angle in accordance with the operation mode after turning on the unit. The direction of airflow can be also adjusted to your own requirement by pressing the "SWING" button of the remote controller.

COOLING	horizontal airflow
DRY	horizontal airflow
HEATING*	downward airflow
FAN ONLY	downward airflow

* Only available for heat pump models.

Vertical airflow control (with the remote controller)

Using remote controller to set various angles of flow or specific angle as you like.

Swinging airflow

Pressing "SWING" button once, the vertical adjustment louver will swing up and down automatically.

Desired direction airflow

Pressing the "SWING" button again when the louvers swing to a suitable angle as desired.

Horizontal airflow control (with hands)

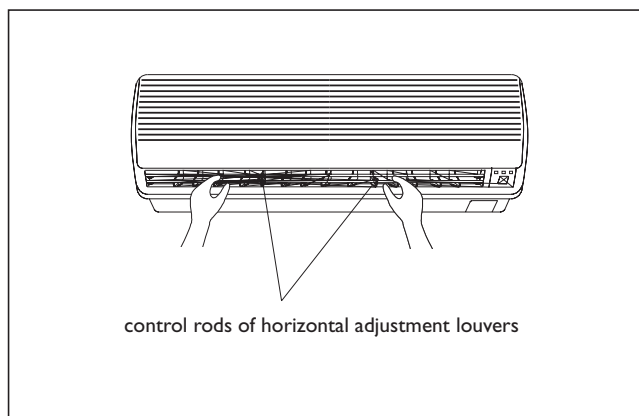
Turning the control rods of the horizontal adjustment louvers to change horizontal air flow as shown (the shape of the unit may look different from that of the air conditioner you have selected).



Do not turn the vertical adjustment louvers manually, otherwise malfunction may occur. If that happens, turn off the unit first and cut off the power supply, then restore power supply again.

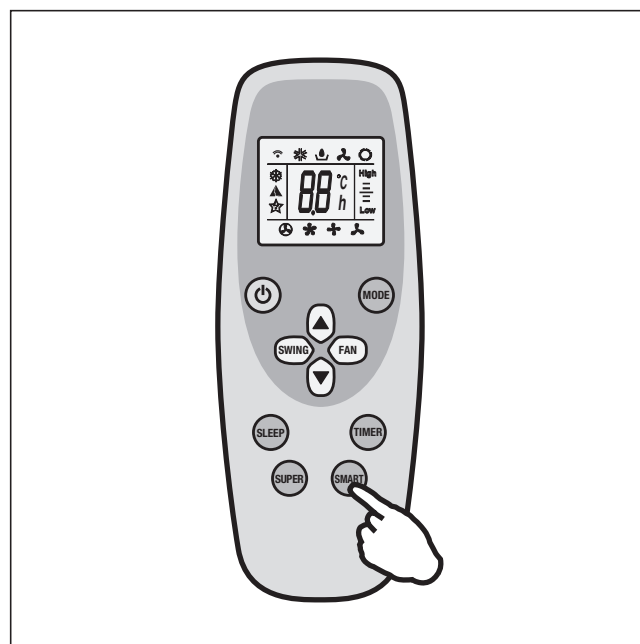
It is better not to let the vertical adjustment louver tilt downward for a long time at COOLING or DRY mode to prevent condensed water from dripping.

This operation must be done by specialized technicians only.



Press the **SMART** button, the unit enters smart mode(fuzzy logic operation) directly regardless of the unit is on or off. In this mode, temperature and fan speed are automatically set based on the actual room temperature.

Operation mode and temperature are determined by indoor temperature.



Heat pump models

Indoor temperature	Operation mode	Target temperature
21°C or below	HEATING	22°C
21°C ~ 26°C	DRY	Room temperature decrease 1,5°C after operate for 3 minutes
Over 26°C	COOLING	26°C

Cooling only models

Indoor temperature	Operation mode	Target temperature
26°C or below	DRY	Room temperature decrease 1,5°C after operate for 3 minutes
Over 26°C	COOLING	26°C

- SMART button is ineffective in SUPER mode.**
- Temperature, airflow and direction are controlled automatically in SMART mode.**
- However, a decrease or rise of up to 2°C can be set with the remote controller if you still feel uncomfortable.**

Your feeling	Button	Adjustment procedure
Slightly warmer A decrease up to 2°C can be set		Press once to lower the set temperature by 1°C <u>High</u> <u>Low</u>
		Press twice to lower the set temperature by 2°C <u>High</u> <u>Low</u>
Slightly cooler A decrease up to 2°C can be set		Press once to raise the set temperature by 1°C <u>High</u> <u>Low</u>
		Press twice to raise the set temperature by 2°C <u>High</u> <u>Low</u>
Uncomfortable because of unsuitable air flow volume		Indoor fan speed alternates among High, Medium and Low each time this button is pressed
Uncomfortable because of unsuitable air flow direction		Press it once, the vertical adjustment louver swings to change vertical airflow direction. Press it again, swings stops. For horizontal airflow direction, please refer to the previous page for details

It is convenient to set the timer on with the TIMER button when you go out in the morning to achieve a comfortable room temperature at the time you get home. You can also set the timer off at night to enjoy a good sleep.

Timer-setting



Setting a switch-on timer when the appliance is off.

Setting a switch-off timer during operation.

- A** As time goes by, the LCD on the remote controller only displays the remained time instead of the set temperature.
- B** The previous set time is stored and the next set time begins with the previous setting.
- C** On-timer and off-timer can not be set at the same time.
- D** The room may not reach your desired temperature within the preset time because of the different size of the room.

Example: set an operation after 9.5 hours

1. Set the desired operating mode, temperature setting and indoor fan speed first, then press the TIMER button and "h" flashes on the LCD.
2. Point the remote control at the signal receptor of the indoor unit, press the ▲ or ▼ (2) button when "h" flashes. Choose the timer you want, then press the TIMER button.
 - A "beep" can be heard:
 - Timer indicator on the indoor unit lights up.
 - "h" stops flashing.



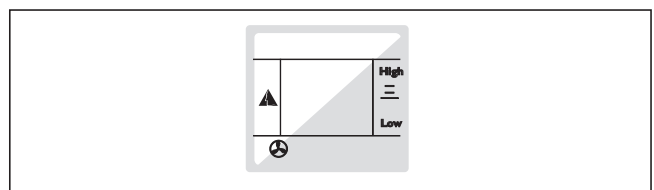
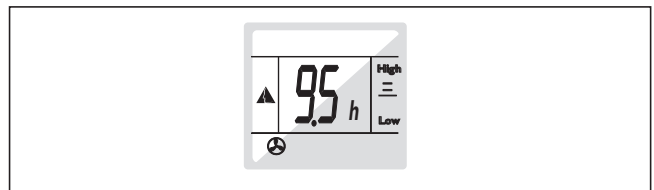
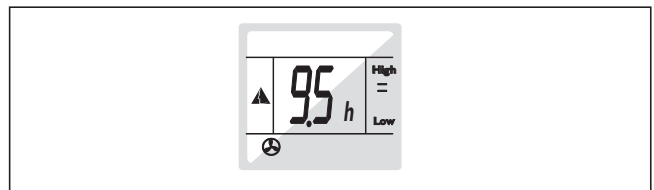
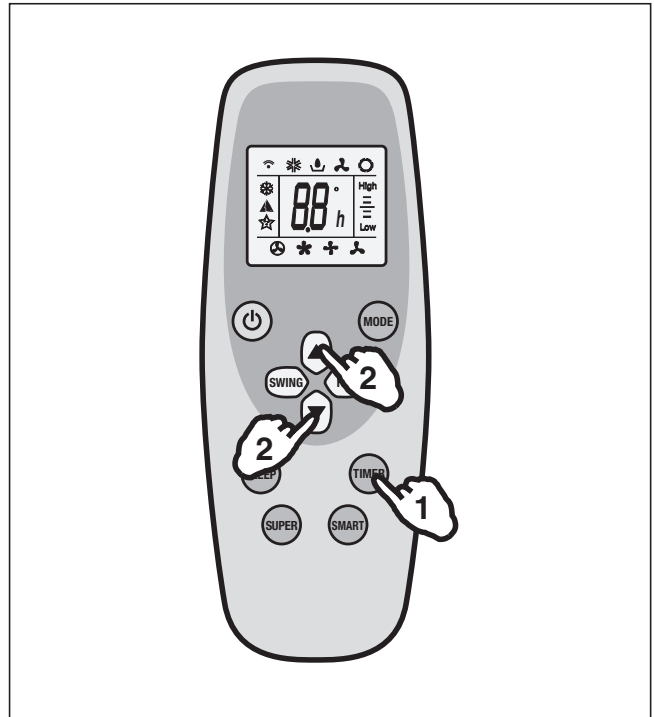
Press the TIMER button, "h" flashes on the LCD, then you can set the time.

Each time the ▲ or ▼ button is pressed: if the desired time is within 10 hours, the set time increases or decreases by 0.5 hour.

If the desired time is beyond 10 hours, it increases or decreases by 1 hour.

The range can be set is 0.5 hour to 24 hours.

3. To cancel the set timer: press the TIMER button again, a "beep" can be heard and the timer indicator on the indoor unit lights off.



SUPER mode is used to start or stop fast cooling. Fast cooling operates at high fan speed, changing the set temperature automatically to 18°C.

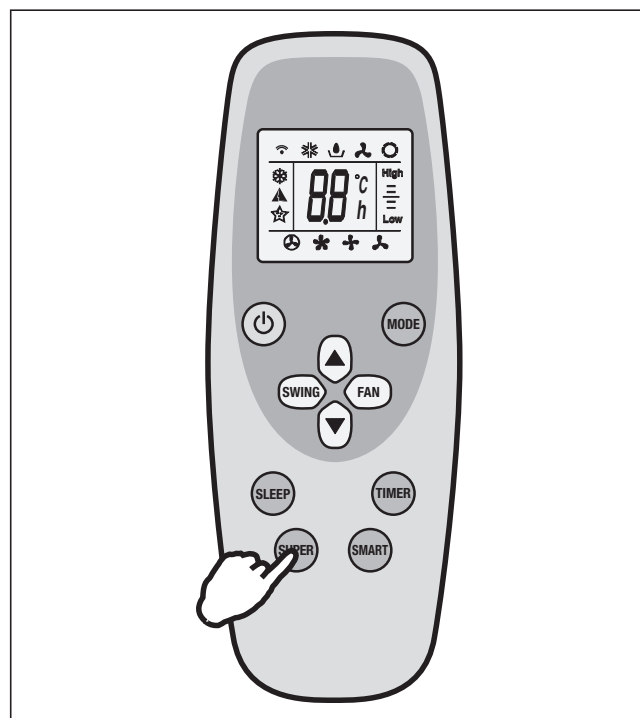
SUPER mode can be set when the appliance is in operation or energized.

In SUPER mode, you can set airflow direction or timer. If you want to escape from SUPER mode, press any -SUPER, MODE, FAN, ON/OFF or TEMPERATURE SETTING button, the display will return to the original mode.

✎ SLEEP and SMART buttons are not available in SUPER mode.

SUPER button is ineffective in HEATING mode.

The Appliance will continue working in SUPER mode with set temperature of 18°C, if you don't escape from it by pressing any of the buttons mentioned above.



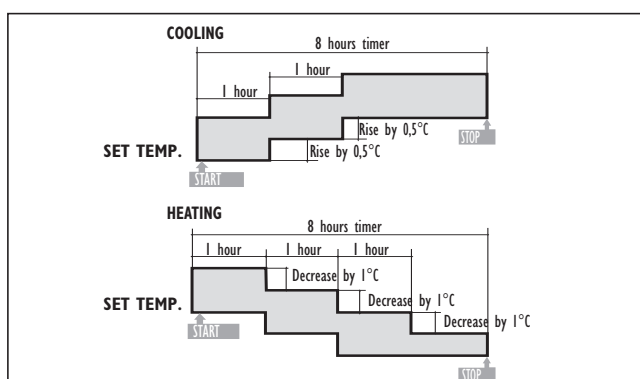
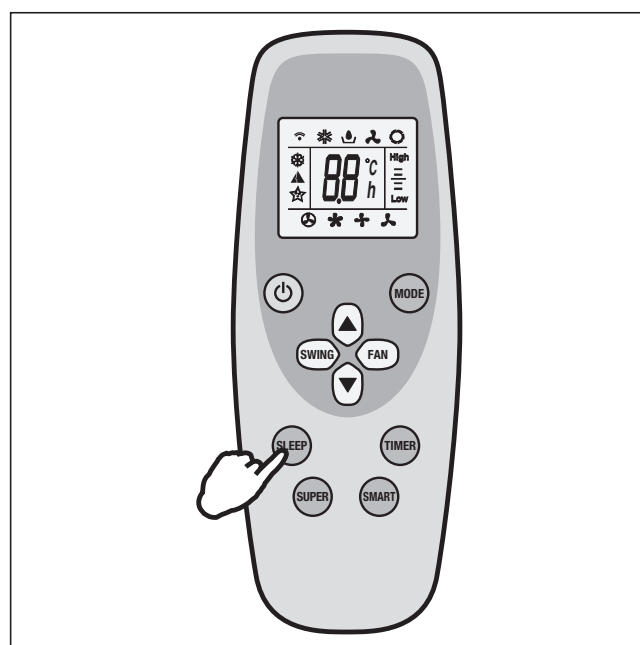
SLEEP mode can be set in COOLING or HEATING operation mode. This function gives you a more comfortable environment for sleep.

In SLEEP mode,

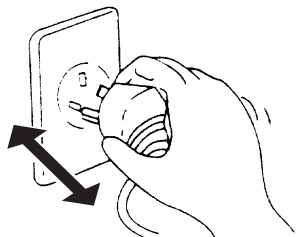
- The appliance will stop operation automatically after operating for 8 hours.
- Fan speed is automatically set at low speed.
- Set temperature will rise by 1°C at most if the appliance operates in cooling mode for 2 hours constantly, then keeps steady.
- Set temperature will decrease by 3°C at most if the appliance operates in heating mode for 3 hours constantly, then keeps steady.

✎ In cooling mode, if room temperature is 26°C or above, set temperature will not change.

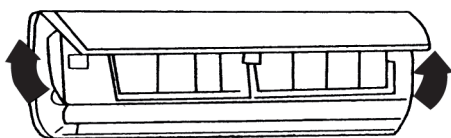
Heating is NOT available for cooling only air conditioner.



Unplug the appliance from the power outlet



To remove the front panel, pull it outwards, as shown by the arrows in the figure

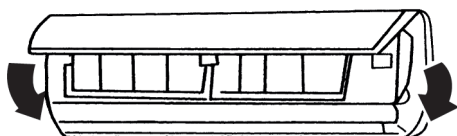


Clean with a soft damp cloth, using water or detergent, then dry in the shade.

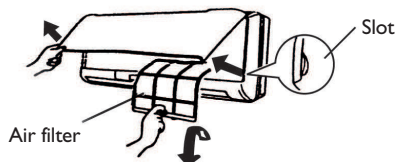
Never use water at temperatures above 45°C, as the panel may be deformed or fade in colour.



Insert the front panel as shown by the arrows in the figure

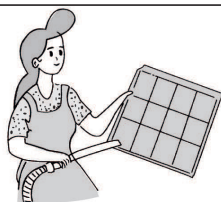


Cleaning the air filters



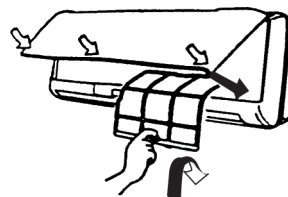
Open the front panel, grip the filter and lift it slightly, then remove it.

Never use water at temperatures above 45°C, as the panel may be deformed or fade in colour.



To remove dust from the filter, use a vacuum cleaner or wash the filter in water and then leave it to dry in the shade.

Replace the filters with the side marked as "FRONT" facing the outside



Installation of the activated carbon filters*

- Remove the air filters
- Remove the new filters from the packaging
- Insert them in the special slots
- Reposition the air filters



The air filters should be cleaned every 3 weeks



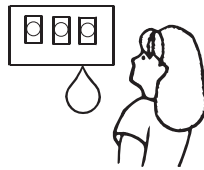
These operations must be performed by specialist technicians.

***The carbon filters can't be washed.**

TROUBLE

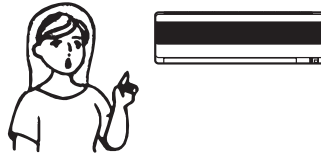
ANALYSIS

Does not run



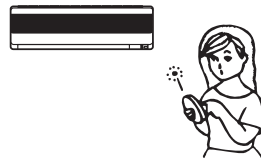
- If the protector trip or fuse is blown.
- Please wait for 3 minutes and start again, protector device may be preventing unit to work.
- If batteries in the remote controller exhausted.
- If the plug is not properly plugged.

No cooling or heating air



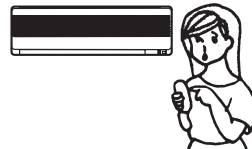
- Is the air filter dirty?
- Are the intakes and outlets of the air conditioner blocked?
- Is the temperature set properly?

Ineffective control



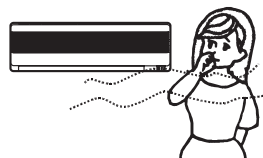
- If strong interference (from excessive static electricity discharge, power supply voltage abnormality) presents, operation will be abnormal. At this time, disconnect from the power supply and connect back 2-3 seconds later.

Does not operate immediately



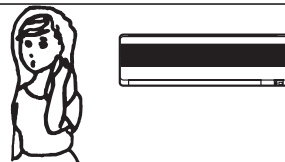
- Changing mode during operation, 3 minutes will delay.

Peculiar odor



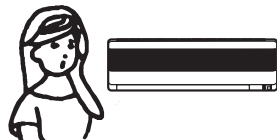
- This odor may come from another source such as furniture, cigarette etc, which is sucked in the unit and blows out with the air.

A sound of flowing water



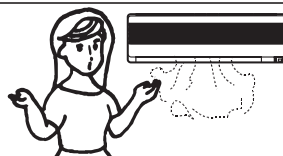
- Caused by the flow of refrigerant in the air conditioner, not a trouble.
- Defrosting sound in heating mode.

Cracking sound is heard



- The sound may be generated by the expansion or contraction of the front panel due to change of temperature.

Spray mist from the outlet



- Mist appears when the room air becomes very cold because of cool air discharged from indoor unit during COOLING or DRY operation mode.

The compressor indicator (red) lights on constantly, and indoor fan stops.

- The unit is shifting from heating mode to defrost. The indicator will light off within ten minutes and returns to heating mode.

OPERATING CONDITION

The protective device maybe trip and stop the appliance in the cases listed below.

HEATING	Outdoor air temp. is over 24°C
	Outdoor air temp. is below -7°C
	Room temp. is over 27°C
COOLING	Outdoor air temp. is over 43°C
	Room temp. is below 21°C
DRY	Room temp. is below 18°C

If the air conditioner runs in COOLING or DRY mode with door or window opened for a long time when relative humidity is above 80%,dew may drip down from the outlet.

FEATURES OF PROTECTOR

The protective device will work at following cases:

- Restarting the unit at once after operation stops or changing mode during operation, you need to wait 3 minutes.
- Connect to power supply and turn on the unit at once, it may start 20 seconds later.
- If all operation has stopped, press ON/OFFbutton again to restart,Timer should be set again. if it has been cancelled.

NOISE POLLUTION

- Install the air conditioner at a place that can bear its weight in order to operate more quietly.
- Install the outdoor unit at a place where the air discharged and the operation noise would not annoy your neighbors.
- Do not place any obstacles in front of the air outlet of the outdoor unit lest it increases the noise level.

FEATURES OF HEATING MODE

Preheat

At the beginning of HEATING operation, the airflow from indoor unit is discharged 2-5 minutes later.

Sbrinamento

In HEATING operation the appliance will defrost (de-ice) automatically to raise efficiency.

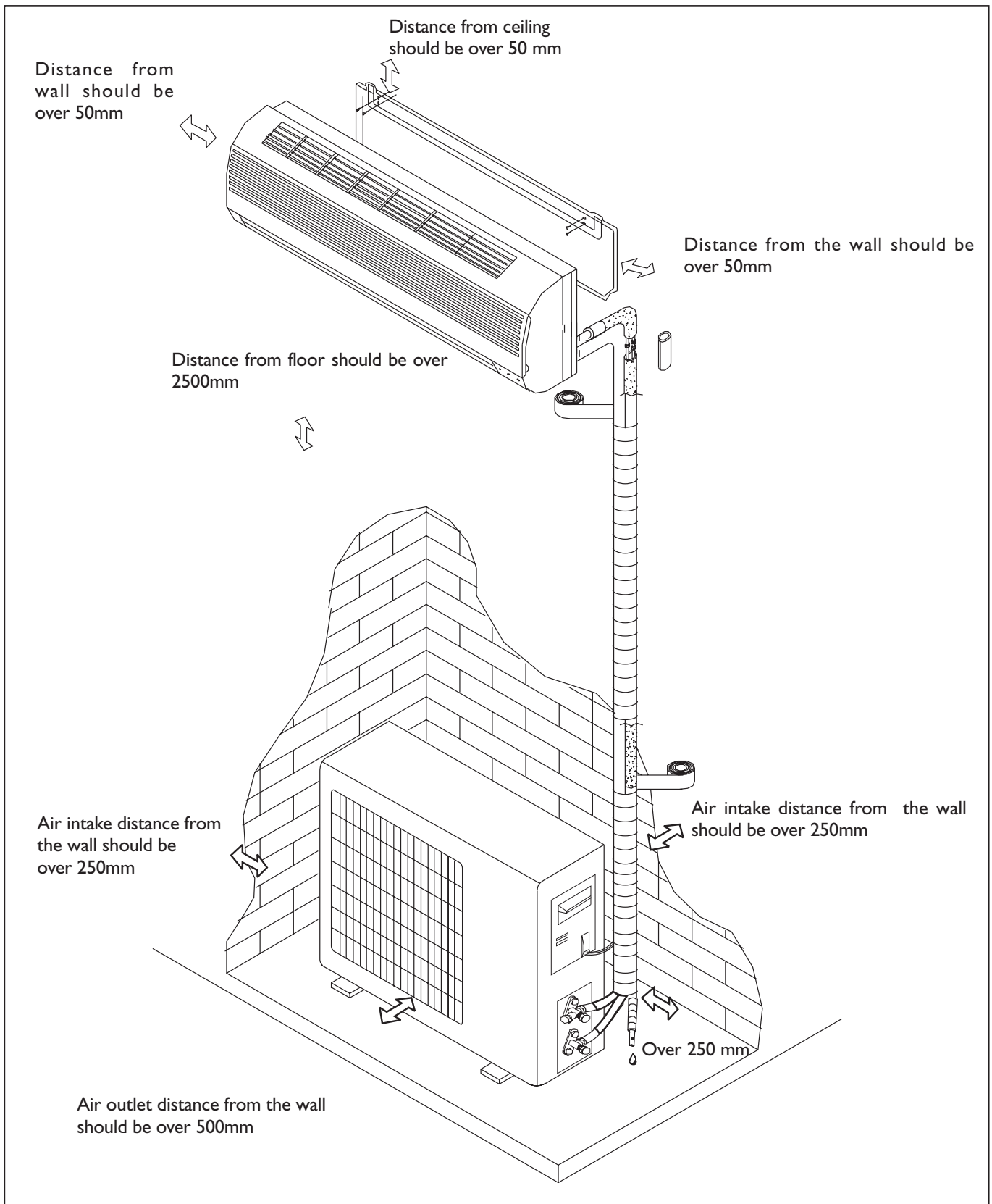
This procedure usually lasts 2-10 minutes. During defrosting, fans stop operation.

After defrosting completes, it returns to HEATING mode automatically.



Heating is NOT available for cooling only air conditioner models.

INSTALLATION DIAGRAM



Above figure is only a simple presentation of the unit, it may not match the external appearance of the unit you purchased.

SELECT THE BEST LOCATION

Location for Installing Indoor Unit

- Where there is no obstacle near the air outlet and air can be easily blown to every corner.
- Where piping and wall hole can be easily arranged.
- Keep the required space from the unit to the ceiling and wall according to the installation diagram on previous page.
- Where the air filter can be easily removed.
- Keep the unit and remote controller 1m or more apart from television, radio etc.
- To prevent the effects of a fluorescent lamps, keep as far as possible.
- Do not put anything near the air inlet to obstruct it from air absorption.
- Where there is strong enough to bear the weight and is not tend to increase operation noise and vibration.



The indoor unit must be installed at minimum 2.5 height.

Location for Installing Outdoor Unit

- Where it is convenient to install and well ventilated.
- Avoid installing it where flammable gas could leak.
- Keep the required distance apart from the wall.
- The distance between Indoor and outdoor unit should be 7 meters and can go up to maximum 15 meters with additional refrigerant charge.
- Keep the outdoor unit away from a place of greasy dirt, vulcanization gas exit.
- Avoid installing it at the roadside where there is a risk of muddy water.
- A fixed base where is not subject to increasing operation noise.
- Where there is not any blockage for air outlet.

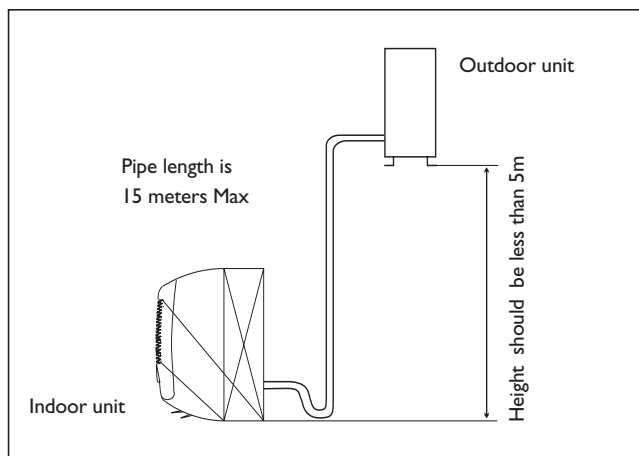
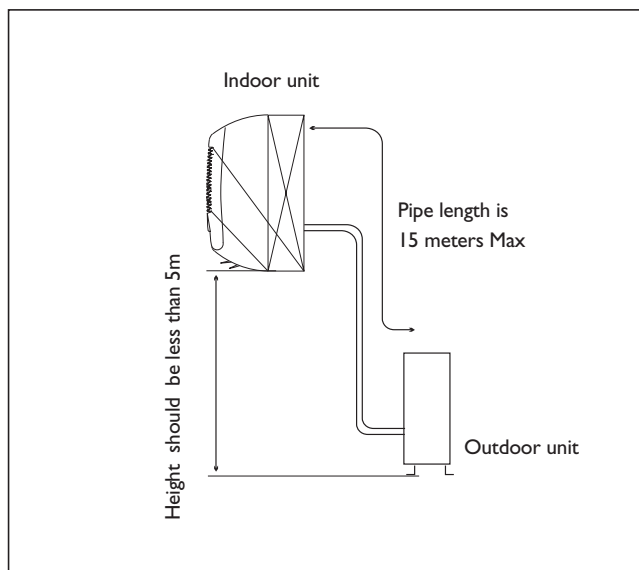


The system must not be started up before its complete assembly and connection.

Installation and maintenance of the unit must be done by specialized technicians only.

The unit must be installed according with the country rules.

Before using the appliance check the correct grounding must be disposed of according with the country rules.



1. INSTALLING THE MOUNTING PLATE

Decide an installing location for the mounting plate according to the indoor unit location and piping direction.

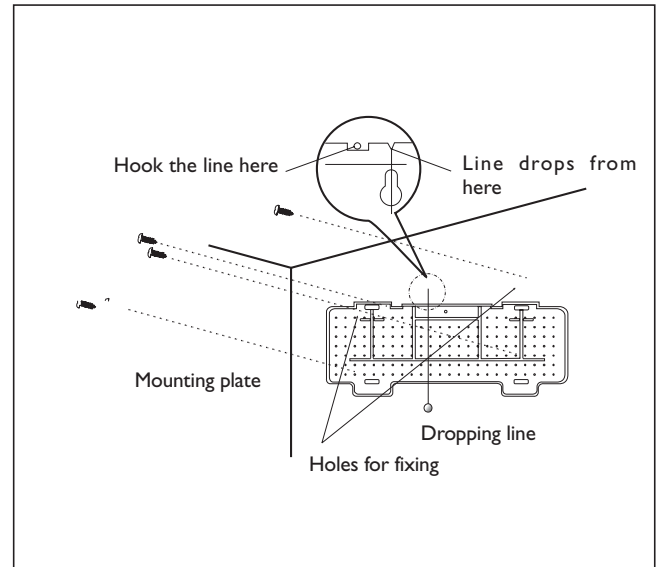
Keep the mounting plate horizontally with a horizontal ruler or dropping line.

Drill holes of 32mm in depth on the wall for fixing the plate.

Insert the plastic plugs to the hole, fix the mounting plate with tapping screws.

Inspect if the mounting plate is well fixed. Then drill a hole for piping.

The shape of your mounting plate may be different from the one above, but installation method is similar.

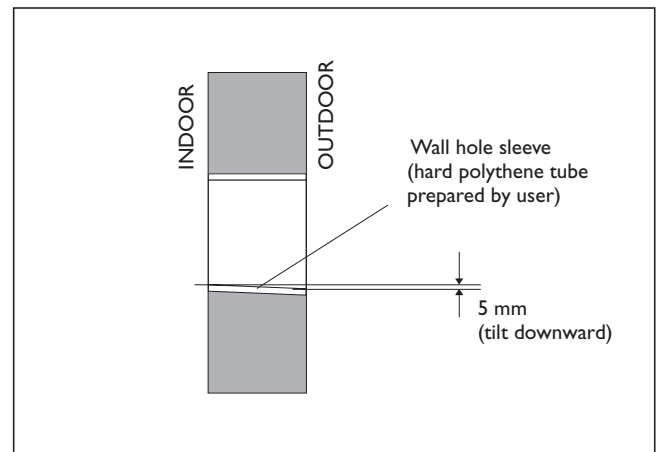


2. DRILL A HOLE FOR PIPING

Decide the position of hole for piping according to the location of mounting plate

Drill a hole on the wall. The hole should tilt a little downward toward outside.

Install a sleeve through the wall hole to keep the wall tidy and clean.



3. INDOOR UNIT PIPING INSTALLATION

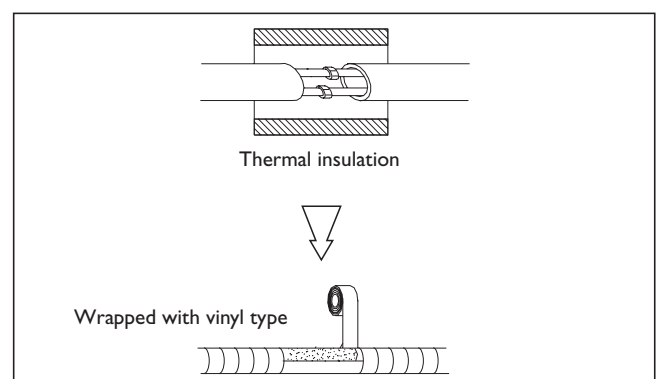
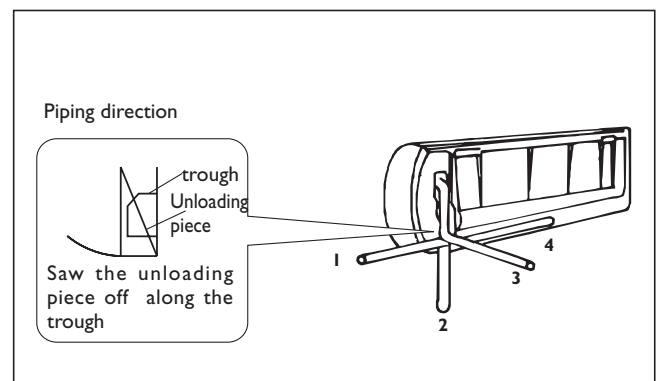
Put the piping (liquid and gas pipe) and cables through the wall hole from outside or put them through from inside after indoor piping and cables connection complete so as to connect to outdoor unit.

Decide whether saw the unloading piece off in accordance with the piping direction.(as shown below)

When installing the pipe at the directions 1,2 or 4, saw the corresponding unloading piece off the indoor unit base.

After connecting piping as required, install the drain hose. Then connect the power cords. After connecting, wrap the piping, cords and drain hose together with thermal insulation materials.

Wrap the piping joints with thermal insulation materials and then wrap with a vinyl tape.



Piping Thermal Insulation

- Place the drain hose under the piping.
- Insulation material uses polythene foam over 6mm in thickness.



Drain hose is prepared by user.

- Drain pipe should point downward for easy drain flow.
- Do not arrange the drain pipe twisted, sticking out or wave around, do not immerse the end of it in water.
- If an extension drain hose is connected to the drain pipe, make sure to thermal insulated when passing along the indoor unit.
- When the piping is directed to the right, piping, power Cord and drain pipe should be thermal insulated and fixed onto the back of the unit with a piping fixer.

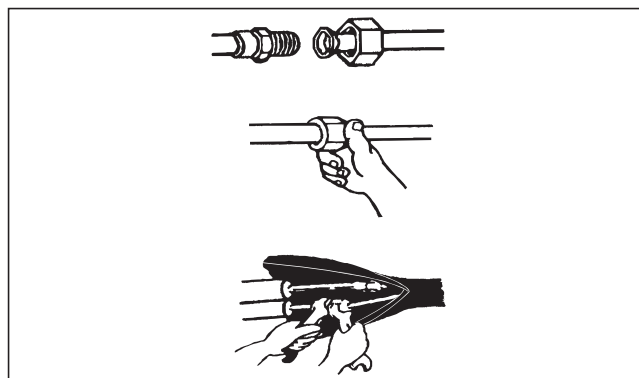
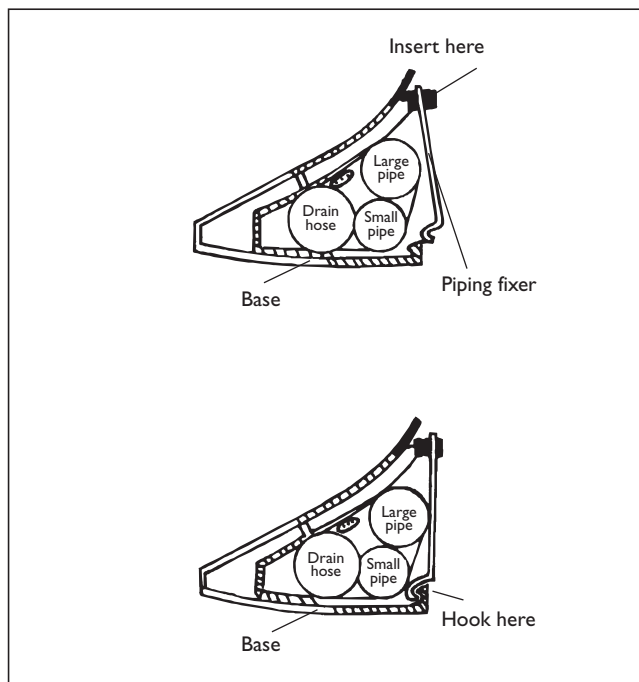
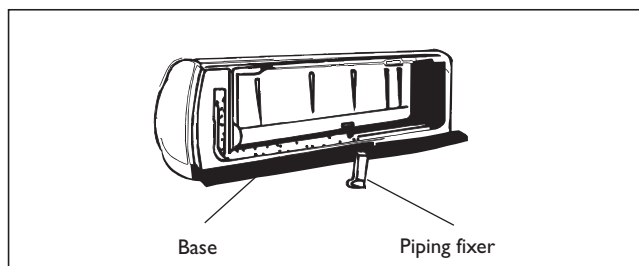
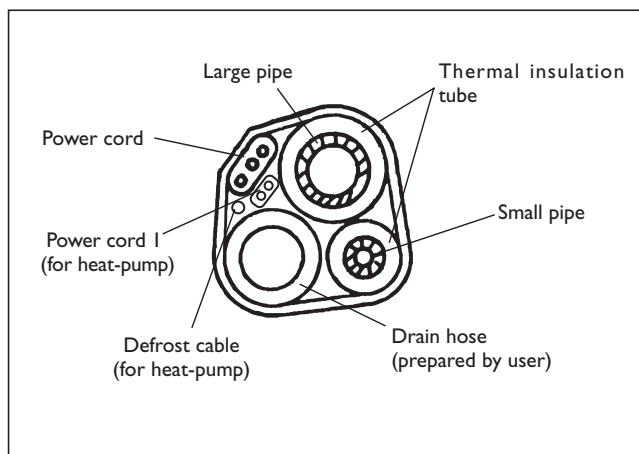
Piping Connection

- Connect indoor unit pipes with two wrenches. Pay special attention to the allowed torque as shown below to prevent the pipes, connectors and flare nuts from being deformed and damaged.
- Pre-tighten them with fingers at first, then use the wrenches.

Model	Pipe size	Torque	Nut
7-9-12 K	Liquid side (ø 6 or 1/4")	1,8 Kg.m	17 mm
18-24 K	Liquid side (ø 10 or 3/8")	3,5 Kg.m	22 mm
7-9 K	Gas side (ø 10 or 3/8")	3,5 Kg.m	22 mm
12 K	Gas side (ø 12 or 1/2")	5,5 Kg.m	24 mm
18-24 K	Gas side (ø 16 or 5/8")	7,5 Kg.m	27 mm

Model	Q/m (l)
7 - 9 - 12 - 18 - 24 K	20 g/m


(l) Quantity of coolant for each metre of piping over 5 m.



3. CONNECTING OF THE CABLE

Indoor Unit

Connect the power connecting cord to the indoor unit by connecting the wires to the terminals on the control board individually in accordance with the outdoor unit connection.


 **For some models, it is necessary to remove the cabinet to connect to indoor unit terminal.**

Outdoor Unit

Remove the access door from the unit by loosening the screw. Connect the wires to the terminals on the control board individually as the following.

Secure the power connecting cord onto the control board with cable clamp. Reinstall the access door to the original position with the screw.

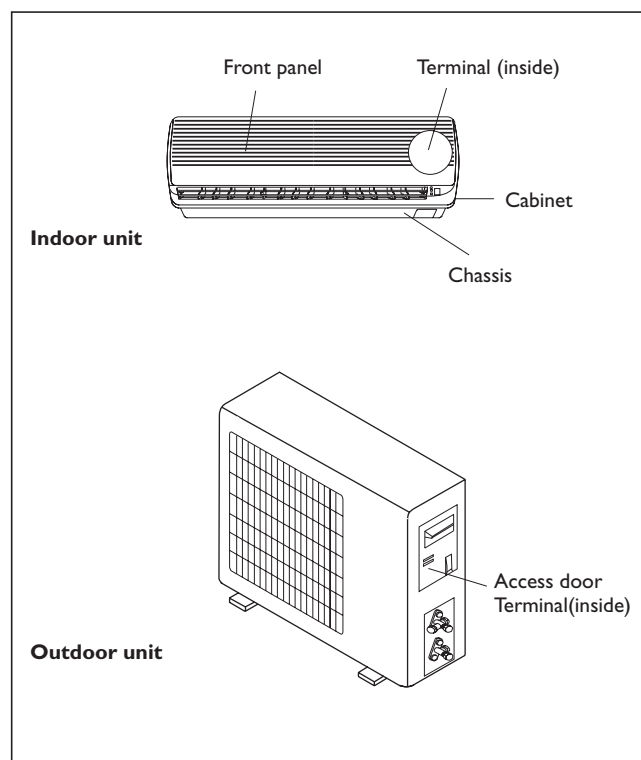
Use a recognized circuit breaker for 24K model between the power source and the unit. A disconnecting device to adequately disconnect all supply lines must be fitted.

 **Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, refer to the circuit diagram posted on the inside of the access door. Confirm that the cable thickness is as specified in the power source specification. (See the cable specification table below).**

Check the wires and make sure that they are all tightly fastened after cable connection.

Assicurarsi di installare un interruttore di perdite di terra in un'area bagnata o umida.

Be sure to install an earth leakage circuit breaker in wet or moist area.



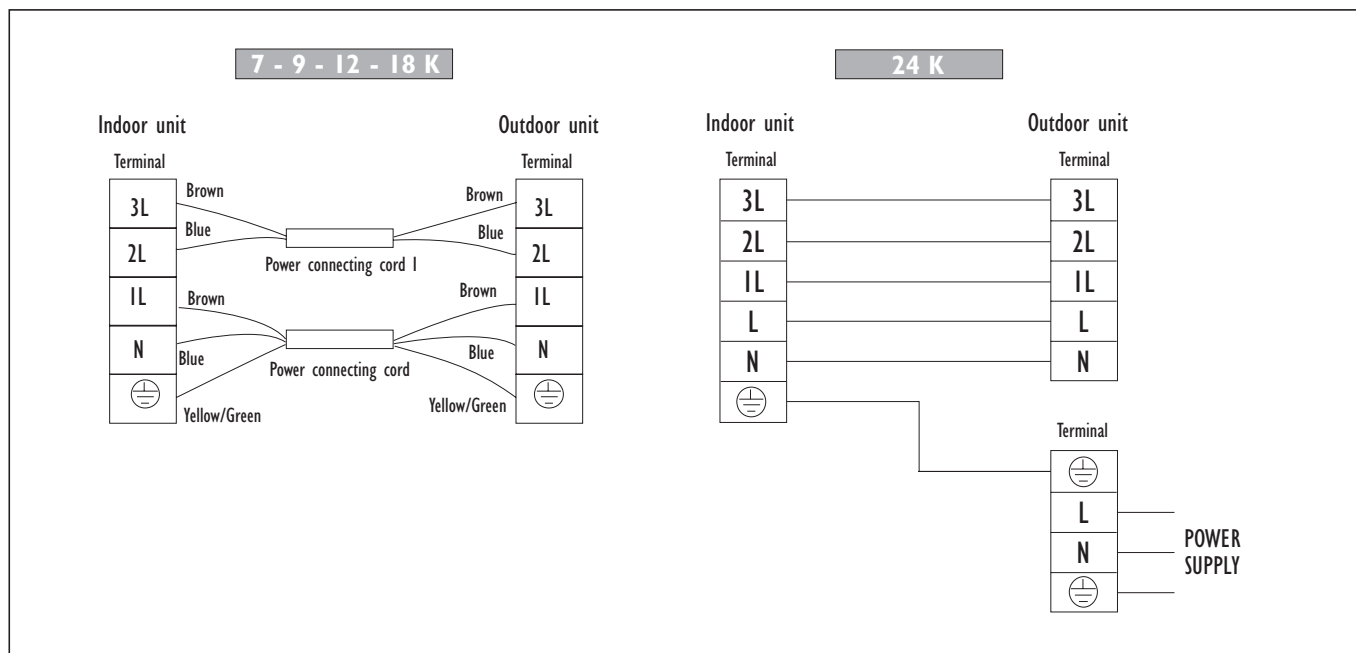
Capacity (Btu/h)	Power cord		Power connecting cord		Power connecting cord (heat pump)	
	Type	Normal cross-sectional area	Type	Normal cross-sectional area	Type	Normal cross-sectional area
7 K - 9 K	H05VV-F	1,5 mm ² x 3	H07RN-F	1,5 mm ² x 3	H07RN-F	1,5 mm ² x 2
12 K	H05VV-F	1,5 mm ² x 3	H07RN-F	1,5 mm ² x 3	H07RN-F	1,5 mm ² x 2
18 K	H05VV-F	2,0 mm ² x 3	H07RN-F	1,5 mm ² x 3	H07RN-F	1,5 mm ² x 2
22 K - 24K	H05VV-F	2,5 mm ² x 3	H07RN-F	1,5 mm ² x 3 (1)	H07RN-F	1,5 mm ² x 3
				2,5 mm ² x 3 (2)		

(1) Heat pump

(2) Cooling only

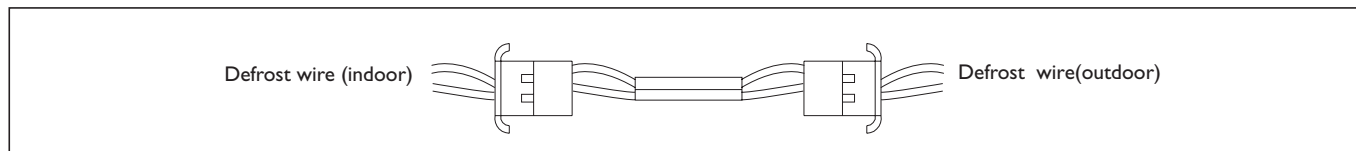
Accessibility to the plug must be guaranteed even after the installation of the appliance to disconnect it in case of need. If not possible, connect appliance to a double-pole switching device with contact separation of at least 3 mm² placed in an accessible position even after installation.

WIRING DIAGRAM (7K, 9K, 12K, 18K, 24K MODELS)



- ⚠ **Make sure that the color of wires of the outdoor unit and the terminal No are the same as those of the indoor unit.**

DEFROST CABLE (FOR HEAT PUMP AIR CONDITIONER ONLY)



- ⚠ **Electrical connections must be done by specialized technicians only according with the country rules.**

1. Install Drain Port and Drain Hose (for heat-pump model only)

The condensate drains from the outdoor unit when the unit operates in heating mode. In order not to disturb your neighbor and protect the environment, install a drain port and a drain hose to direct the condensate water. Just install the drain port and rubber washer to the chassis of the outdoor unit, then connect a drain hose to the port as the right figure shown.

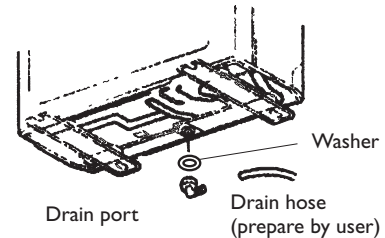
2. Install and Fix Outdoor Unit

Fix with bolts and nuts tightly on a flat and strong floor. If installed on the wall or roof, make sure to fix the supporter well to prevent it from shaking due to serious vibration or strong wind.

3. Outdoor Unit Piping Connection

Remove the valve caps from the 2-way and 3-way valve. Connect the pipes to the 2-way and 3-way valves separately according to the required torque.

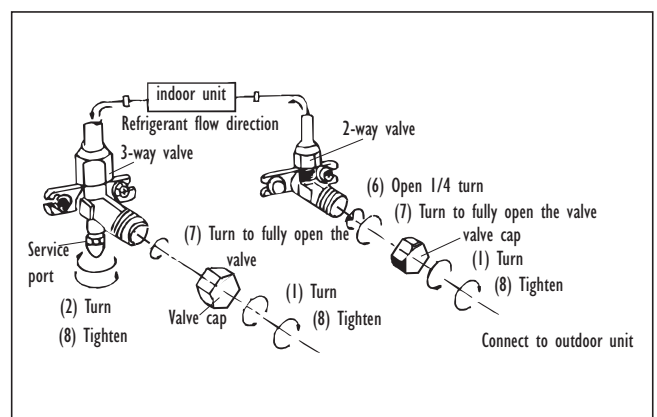
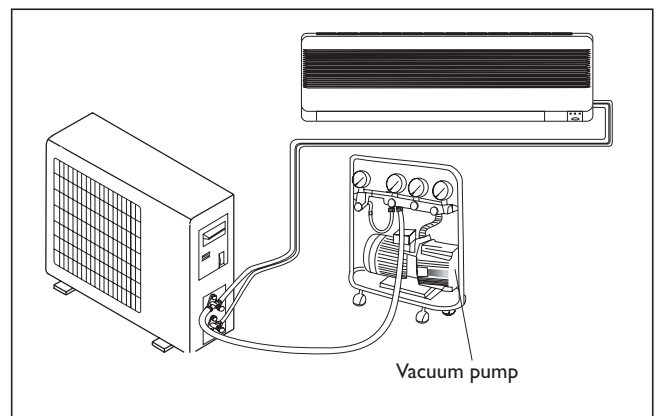
4. Outdoor Unit Cable Connection (see previous page)



The air which contains moisture remaining in the refrigeration cycle may cause a malfunction on the compressor. After connecting the indoor and outdoor units, evacuate air and moisture from refrigerant cycle using a vacuum pump.

To protect the environment, be sure not to discharge the refrigerant to the air directly.

- (1) Unscrew and remove caps from 2 and 3-way valves.
- (2) Unscrew and remove cap from service valve.
- (3) Connect vacuum pump flexible hose to the service valve.
- (4) Start vacuum pump for 10-15 minutes until reaching a vacuum of 10 mm Hg absolutes.
- (5) With vacuum pump still running close the low pressure knob on vacuum pump manifold. Then stop vacuum pump.
- (6) Open 2-way valve 1/4 turn then close it after 10 seconds. Check tightness of all joints using liquid soap or an electronic leak detector.
- (7) Turn 2 and 3-way valves stem to fully the valves. Disconnect vacuum pump flexible hose.
- (8) Replace and tighten all valve caps.



- Please read this manual before installing and using it.
- Do not let air enter the refrigeration system or discharge refrigerant when moving the air conditioner.
- When charging refrigerant into the system, make sure to charge in liquid state. Otherwise, chemical composition of refrigerant (R407c) inside the system may change and thus affect performance of the air conditioner.
- Testing run the air conditioner after finishing installation, and record details of operation.
- IType of fuse used on indoor unit controller for 7K,9K,12K is 50T, with rating 2.5 A,T,250V.
- For 18K,22K,24K models use 5A,T,250V.
- The fuse for the whole unit is to be provided by the user according to the current at maximum power
- Input or use other over-current protective device instead.

USEFUL INFORMATION

For information on service and the supply of spare parts, please contact:

**FIXED AIR-CONDITIONING TECHNICAL SERVICE DEPARTMENT
DE' LONGHI GROUP**

via L. Seitz,47 - 31100 Treviso (ITALY)

