

ForestAir

INSTALLATION AND OPERATION MANUAL MINI SPLIT AIR CONDITIONER / HEAT PUMP



FA-H09-A20TL
FA-H12-A20TL
FA-H09-D20TL
FA-H12-D20TL
FA-H18-D20TL
FA-H24-D20TL
FA-H36-D20TL

IMPORTANT : Please read this manual carefully before running this unit, and save it for future reference.

FOREWORD

Air conditioners, heat pumps and dehumidifiers are pieces of high value. In order to ensure your lawful rights and interests, if you are not familiar with the installation of this type of appliance, please have a professional technician do the installation for you. This instruction manual is the universal-purpose version for mini split air conditioners/heat pumps manufactured by ForestAir. The appearance of the unit that you have purchased may differ from the ones seen in this manual, however it does not change the basic instructions on how to operate and use the appliance.

To ensure satisfactory operation for many years to come, this manual should be read carefully before using the air conditioner. After reading, store in a safe place. Please refer to the manual for questions on use or in the event that any irregularities occur.

TABLE OF CONTENT

1.0. SAFETY INSTRUCTIONS	4 – 6
2.0. COMPONENTS	7
3.0. INDOOR UNIT DISPLAY	8
4.0. EMERGENCY & AUTO-RESTART FUNCTIONS	9
5.0. REMOTE CONTROL	
5.1. Remote Control Overview	10
5.2. Button and Indicator Description	11
5.3. General Instructions	12
5.4. Functions	13 – 22
6.0. INSTALLATION INSTRUCTIONS	
6.1. Location Recommendations	23 – 24
6.2. Indoor Unit Installation	25 – 28
6.3. Outdoor Unit Installation	29 – 30
6.4. Installation Finalization	31
6.5. Information for the Installer	32 – 34
7.0. MAINTENANCE	35
8.0. TROUBLESHOOTING	36 – 37
9.0. WARRANTY	38



Electrical products should be properly disposed.
Please recycle where facilities exist.
Check with your local authority or retailer for recycling.

1.0. SAFETY INSTRUCTIONS

Read the following safety instructions before installing the unit or doing service work.



DANGER



This symbol indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury, death, or substantial property damage.



WARNING



This symbol indicates a potentially hazardous situation that, if not avoided, can cause severe personal injury, death, or substantial property damage.



CAUTION



This symbol indicates a potentially hazardous situation that, if not avoided, will or can cause minor personal injury or property damage.

NOTE

This is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.



CAUTION



- Read this guide before installing and using the appliance.
- During the installation of the indoor and outdoor units the access to the working area should be forbidden to children. Unforeseeable accidents could happen.
- Make sure that the base of the outdoor unit is firmly fixed.
- Check that air cannot enter the refrigerant system and check for refrigerant leaks when moving the air conditioner.
- Carry out a test cycle after installing the air conditioner and record the operating data.
- The ratings of the fuse installed in the built-in control unit are T 5A / 250 V.
- The user must protect the indoor unit with a fuse of suitable capacity for the maximum input current or with another overload protection device.
- Check that the socket is suitable for the plug, otherwise have the socket changed.
- The appliance must be fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III conditions, and these means must be incorporated in the fixed wiring in accordance with the wiring rules.
- The air conditioner must be installed by professional or qualified persons.
- Do not try to install the air conditioner alone. Always contact specialized technical personnel.
- Cleaning and maintenance must be carried out by specialized technical personnel. In any case disconnect the appliance from the mains electricity supply before carrying out any cleaning or maintenance.
- Ensure that the mains voltage corresponds to that stamped on the rating plate. Keep the switch and power plug clean. Insert the power plug correctly and firmly into the socket, thereby avoiding the risk of electric shock or fire due to insufficient contact.
- Do not pull out the plug to switch off the appliance when it is in operation, since this could create a spark and cause a fire, etc.
- This appliance has been made for air conditioning domestic environments and must not be used for any other purpose, such as for drying clothes, cooling food, etc.

1.0. SAFETY INSTRUCTIONS



CAUTION



- The packaging materials are recyclable and should be disposed of in separate waste bins. Take the air conditioner at the end of its life to an authorized waste collection center for disposal.
 - Always use the appliance with the air filter mounted. The use of the air conditioner without air filter could cause an excessive accumulation of dust or waste on the inner parts of the device with possible subsequent failures.
 - The user is responsible for having the appliance installed by a qualified technician, who must check that it is earthed in accordance with current legislation and insert a thermomagnetic circuit breaker.
 - Do not install the appliance at a distance of less than 50cm (20 in) from inflammable substances (alcohol, etc.) or from pressurized containers (e.g. spray cans).
 - If the appliance is used in areas without the possibility of ventilation, precautions must be taken to prevent any leaks of refrigerant gas from remaining in the environment and creating a danger of fire
 - The appliance must be installed in accordance with applicable national regulations.
 - Before accessing the terminals, all the power circuits must be disconnected from the power supply.
 - Installation must be preformed in accordance with the requirements of NEC and CEC by authorized personnel only.
 - This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- The batteries in the remote control must be recycled or disposed of properly. Please dispose of batteries at a municipal collection point for special waste.
 - Never remain directly exposed to the flow of cold air for a long time. The direct and prolonged exposition to cold air could be dangerous for your health. Particular care should be taken in the rooms where there are children, old or sick people.
 - If the appliance gives off smoke or there is a smell of burning, immediately cut off the power supply and contact an authorized service center. The prolonged use of the device in such conditions could cause fire or electrocution.
 - Have repairs carried out only by an authorized Service Center. Incorrect repair could expose the user to the risk of electric shock, etc.
 - Unhook the automatic switch if you foresee not using the device for a long time.
 - The airflow direction must be properly adjusted. The flaps must be directed downwards in the heating mode and upwards in the cooling mode.
 - Only use the air conditioner as instructed in this booklet. These instructions are not intended to cover every possible condition and situation. As with any electrical household appliance, common sense and caution are therefore always recommended for installation, operation and maintenance.
 - Ensure that the appliance is disconnected from the power supply when it is not used for a long period of time and before carrying out any cleaning or maintenance.
 - Selecting the most suitable temperature can prevent damage to the appliance.



WARNING

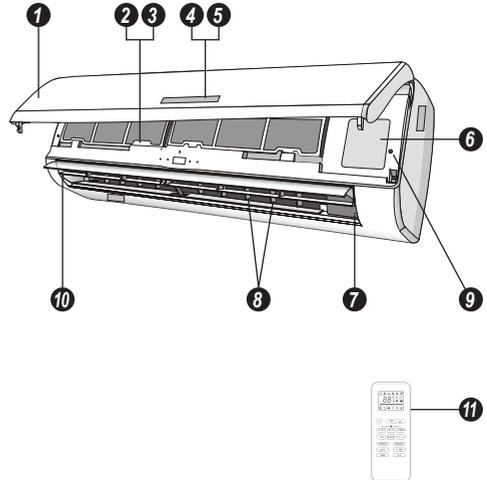


- Do not bend, tug or compress the power cord as this could damage it. Electrical shocks can be caused by a damaged power cord. A damaged power cord must only be replaced by qualified technical personnel.
- Do not use extension cords, power strips or wall adapters.
- Do not touch the appliance when barefoot or parts of the body are wet or damp.
- Do not obstruct the air inlet or outlet of the indoor or the outdoor unit. The obstruction of these openings can cause a reduction in the operative efficiency of the air conditioner with possible consequent failures or damages.
- The characteristics of the appliance must not be changed under any circumstances.
- Do not install the appliance in environments where the air could contain gas, oil or sulphur or near sources of heat.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Do not climb onto or place any heavy or hot objects on top of the appliance.
- Do not leave windows or doors open when the air conditioner is operating.
- Do not direct the air onto plants or animals. A long direct exposition to cold air of the conditioner could have negative effects on them.
- Do not put the air conditioner in contact with water. The electrical insulation could be damaged and thus causing electrocution.
- Do not climb onto or place any objects on the outdoor unit
- Never insert your finger, a stick, etc. into the air inlet/outlet. Doing so could cause injury.
- Children should be supervised to ensure that they do not play with the appliance.
- 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.

2.0. COMPONENTS

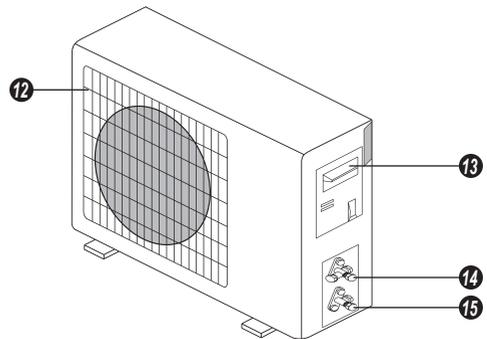
INDOOR UNIT

1. Front panel
2. Air filter
3. Additional filter (if installed)
4. LED display
5. Signal receiver
6. Terminal block cover
7. Ionizer generator (if installed)
8. Deflectors
9. Emergency button
10. Directional air flaps
11. Remote control



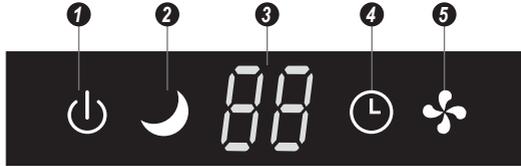
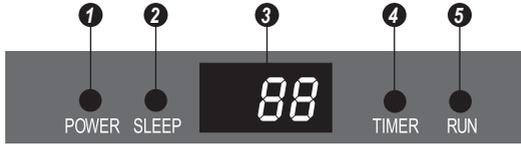
OUTDOOR UNIT

12. Air outlet guard
13. Cover
14. Gas valve
15. Liquid valve



Note: The illustrations above are intended only as simplified diagrams of the appliance and may not correspond to the exact appearance of the purchased unit.

3.0. INDOOR UNIT DISPLAY



INDICATOR	DESCRIPTION
1	POWER  This symbol appears when the unit is power on
2	SLEEP  This symbol appears when in <i>Sleep</i> operating mode
3	 a) This symbol lights up when the unit is operational by timer. b) The unit displays a malfunction code when a fault occurs.
4	TIMER  This symbol lights up during timer operation.
5	RUN  This symbol appears when the unit is turned on, and disappears when the unit is turned off.

Notes:

- The shape and position of switches and indicators differ depending on the model, but their function remains the same.
- Some models of the mural unit can only display 2 temperature digits. On the other hand, the remote control displays up to 3 digits (example: 28.5 on the remote control, but 28 on the indoor unit).

4.0. EMERGENCY & AUTO-RESTART FUNCTIONS

EMERGENCY FUNCTION

If the remote controller fails to work or maintenance necessary, proceed as following:

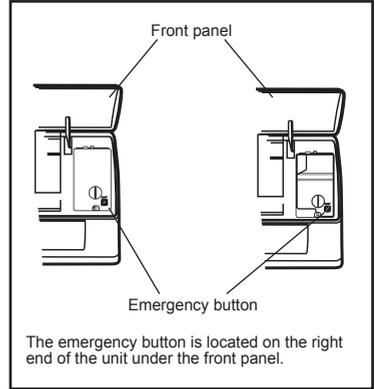
Open and lift the front panel up to an angle to reach the emergency button.

- The first time the emergency button is pressed, the unit will operate in *Cooling* mode.
- A second press within 3 seconds will change the operating mode to *Heating*.
- A third press after 5 seconds will turn the unit off.

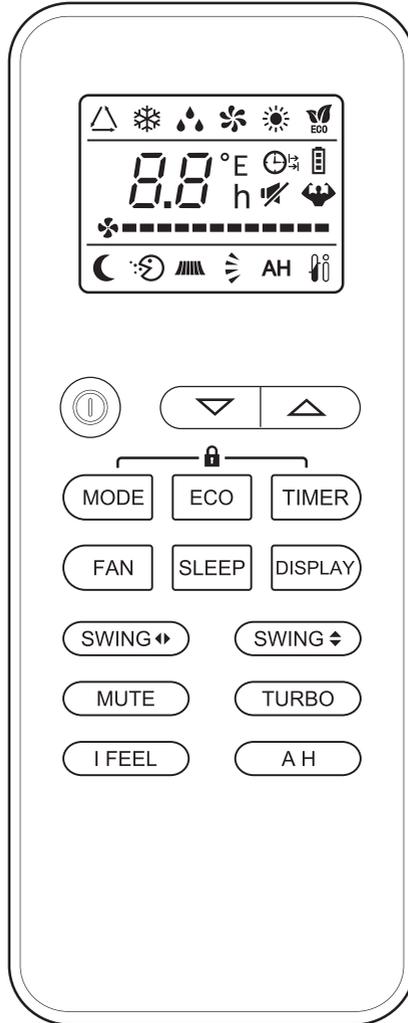
Note: The shape and position of the emergency button may be different according to the model, but their function is the same.

AUTO-RESTART FUNCTION

The appliance is preset with an an automatic restart function. In the event of a sudden power failure, the module will memorizes the setting conditions preceding the power failure. When power is restored, the unit automatically restarts with the settings stored by the memory function.



5.1. REMOTE CONTROL OVERVIEW



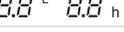
Notes:

- The display and some functions of the remote control may vary according to the model.
- The shape and position of buttons and indicators may vary according to the model, but their function is the same.
- The unit confirms the correct reception of each command with a beep.

5.0. REMOTE CONTROL

5.2. BUTTON AND INDICATOR DESCRIPTION

BUTTON	DESCRIPTION
1	 Turns on or off the air conditioner.
2	 Decreases the set temperature or time setting.
3	 Increases the set temperature or time setting.
4	MODE Selects the operation mode.
5	TIMER Sets a switch-on or switch-off timer.
6	ECO Activates or deactivates the <i>Eco</i> function.
7	FAN Selects the fan speed.
8	DISPLAY Turns the indoor unit's display on or off.
9	SLEEP Activates or deactivates the <i>Sleep</i> function.
10	SWING ⇄ Adjusts the angle of the vertical flaps directing the airflow left or right.
11	SWING ⇕ Adjusts the angle of the horizontal flaps directing the airflow up or down.
12	MUTE Activates or deactivates the <i>Mute</i> function.
13	TURBO Activates or deactivates the <i>Turbo</i> function.
14	I FEEL Activates or deactivates the <i>I Feel</i> function.
15	AH Activates or deactivates the 8°C Heating function.

INDICATOR	DESCRIPTION
1	 Battery level indicator.
2	 Operation mode indicators.
3	 <i>Eco</i> function indicator.
4	 Switch-on or switch-off timer indicator.
5	 Temperature or time indicator.
6	 Fan speed indicators.
7	 <i>Mute</i> function indicator.
8	 <i>Turbo</i> function indicator.
9	 Vertical swing indicator.
10	 Horizontal swing indicator.
11	 <i>Sleep</i> function indicator.
12	 <i>Health</i> function indicator.
13	 <i>I Feel</i> function indicator.
14	AH 8°C Heating functions indicator.

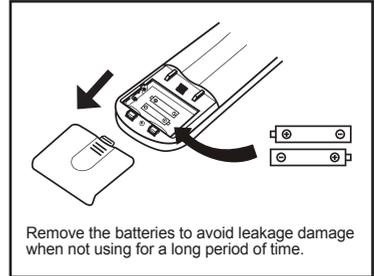
5.3. GENERAL INSTRUCTIONS

BATTERY REPLACEMENT

- 1) Remove the battery cover plate from the rear of the remote control by sliding it in the direction of the arrow.
- 2) Insert 2 new LRO3 AAA (1.5V) batteries according to the polarity markings (+ and -) shown on the remote control.
- 3) Replace the battery cover by sliding it into place.

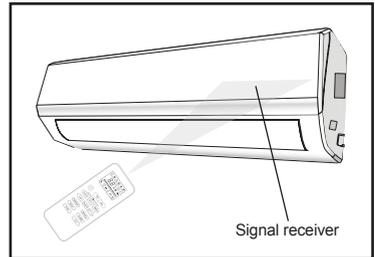
Notes:

- Do not use rechargeable batteries.
- Do not dispose of used batteries with other domestic waste. Separate collection of such waste for special treatment is necessary.



USAGE RECOMMENDATIONS

- Direct the remote control toward the signal receiver of the appliance for optimal use.
- Make sure that there are no objects between the remote control and the signal receiver of the indoor unit.
- Never leave the remote control exposed to the sun.
- Keep the remote control at a distance of at least 1 meter (3ft) from the television or other electrical appliances.



COOLING ONLY OR COOLING & HEATING TYPE

Some models require that you set the remote control to the control type matching the product you have purchased: "Cooling Only" or "Cooling and Heating". When inserting the batteries in the remote control for the first time, the indicators ❄️ and ☀️ will start flashing alternatively on the display screen. Proceed as follow:

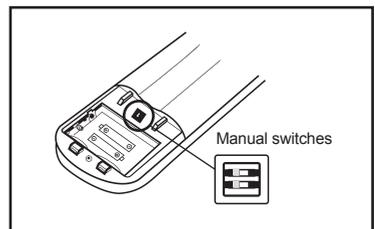
For "Cooling Only" Models:

When the indicator ❄️ is displayed, press any button to set the remote control type to "Cooling Only".

For "Cooling and Heating" Models:

When the indicator ☀️ is displayed, press any button to set the remote control type to "Cooling and Heating".

For some remote control models, this can be achieved using the manual DIP switches found under the battery compartment cover. You may also set you preferred temperature unit (°C or °F) using the switches.

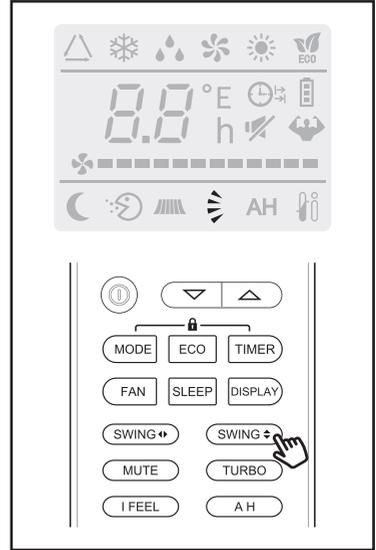


5.4. FUNCTIONS

VERTICAL SWING ADJUSTMENT

Press the **SWING ↕** button on the remote control to activate the automatic swinging of the horizontal flaps directing the airflow up and down.

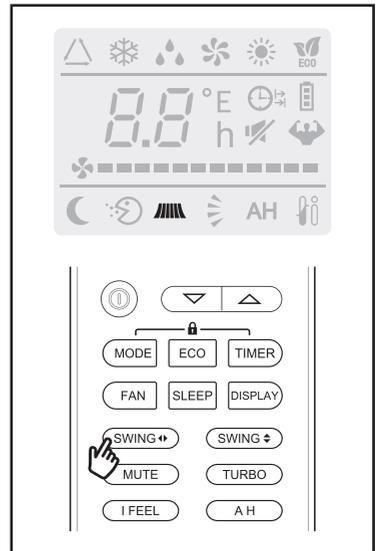
Press the button again to stop the swinging motion at the current angle.



HORIZONTAL SWING ADJUSTMENT

Press the **SWING ↔** button on the remote control to activate the automatic swinging of the vertical flaps directing the airflow left and right.

Press the button again to stop the swinging motion at the current angle.



Notes :

- This adjustment must be done while the appliance is switched off.
- Never position the flaps manually, their delicate mechanism might get seriously damaged.
- Never insert fingers, sticks or other objects in the air inlet or outlet vents. Accidental contact with live parts might cause unforeseeable damage or injury.

5.0. REMOTE CONTROL

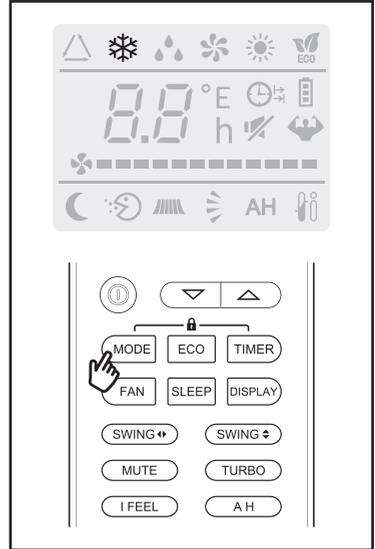
COOLING MODE

This mode allows the air conditioner to cool the room to the desired temperature as well as remove moisture from the air.

To set the appliance to *Cooling* mode, press the **MODE** button on the remote control until the indicator ☀️ appears on the display screen.

Adjust the temperature to the desired setting using the arrow buttons ▼ or ▲.

Note: The function will only start when the ambient room temperature exceeds the set temperature.



HEATING MODE

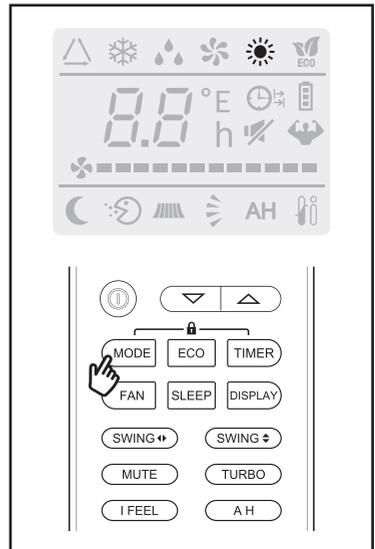
This mode allows the air conditioner to heat the room to the desired temperature.

To set the appliance to *Heating* mode, press the **MODE** button on the remote control until the indicator ☀️ appears on the display screen.

Adjust the temperature to the desired setting using the arrow buttons ▼ or ▲.

Notes:

- The function will only start when the ambient room temperature falls below the set temperature.
- In *Heating* mode, the appliance will occasionally activate a defrost cycle in order to remove frost from the condenser. This is essential to allow the heat exchange function of the condenser to regain its full efficiency. This process usually lasts 2 to 10 minutes. During defrosting, the fan of the indoor unit stops operation. Once the process is completed, the unit automatically resumes heating.

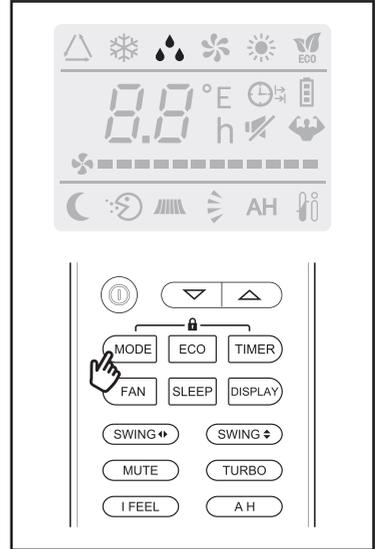


5.0. REMOTE CONTROL

DRYING MODE

This mode allows the air conditioner to reduce humidity in the air by automatically alternating between cooling cycles and ventilation.

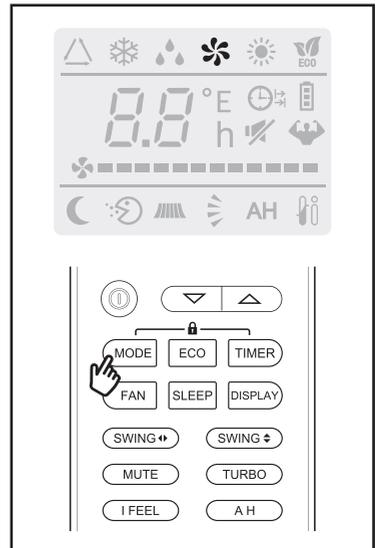
To set the appliance to *Drying* mode, press the **MODE** button on the remote control until the indicator  appears on the display screen.



FAN MODE

This mode allows the air conditioner to operate in ventilation only.

To set the appliance to *Fan* mode, press the **MODE** button on the remote control until the indicator  appears on the display screen.

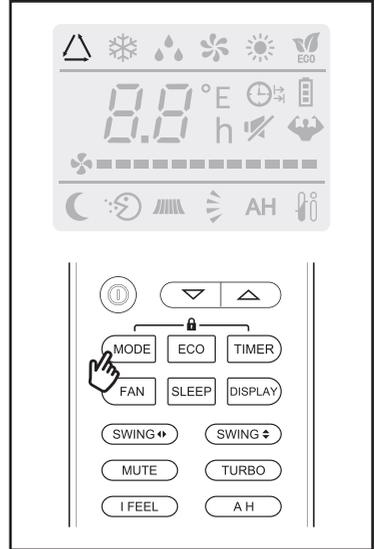


5.0. REMOTE CONTROL

AUTO MODE

This mode allows the air conditioner to set automatically the operation mode based on the ambient room temperature.

To set the appliance to *Auto* mode, press the **MODE** button on the remote control until the indicator \triangle appears on the display screen.



DISPLAY FUNCTION OF THE MURAL UNIT

This function allows to switch on or off the LED display of the front panel of the indoor unit.

To turn off the display on the indoor mural unit, press the **DISPLAY** button on the remote control.

Press the button again to turn on the display.



5.0. REMOTE CONTROL

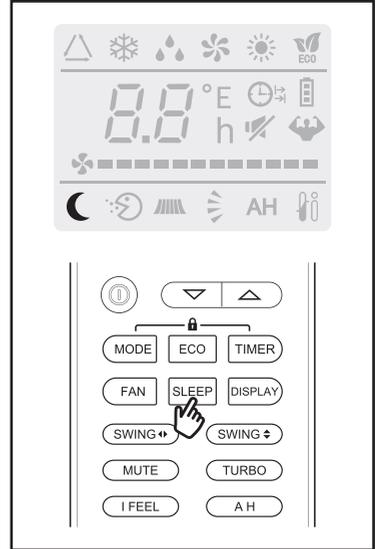
SLEEP FUNCTION

This mode allows the appliance to use a preset automatic operating program.

To activate the *Sleep* function, press the **SLEEP** button on the remote control. The indicator  appears on the display screen.

Press the button again to deactivate the function.

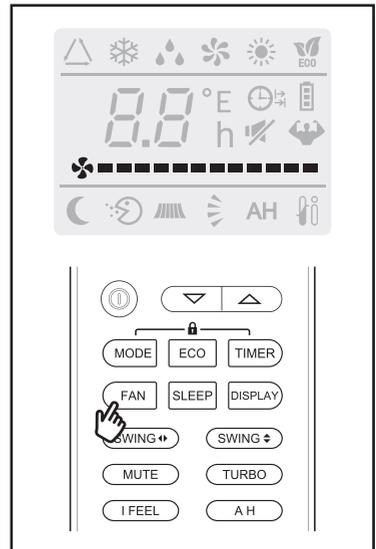
Note: After 10 hours of running in *Sleep* mode, the air conditioner will automatically switch back to the previously set mode.



FAN SPEED SETTING

This function allows the user to set the air ventilation of the air conditioner to the desired speed.

Press the **FAN** button on the remote control to adjust the ventilation speed. The fan speed settings cycle as follows: *Auto, Low, Medium, High*. The indicator  will adjust to reflect the strength of the selected speed.



5.0. REMOTE CONTROL

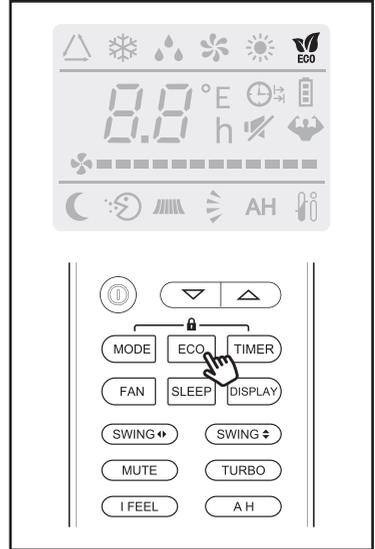
ECO FUNCTION

This function allows the air conditioner to adjust its own operation to achieve energy-saving performance.

To activate the energy-saving *Eco* function, press the **ECO** button on the remote control. The indicator  appears on the display screen.

Press the button again to deactivate the function.

Note : This function is only available in *Cooling* or *Heating* mode.



TURBO FUNCTION

This function allows the air conditioner to use the highest fan speed to reach the set temperature as quickly as possible.

To activate the *Turbo* function, press the **TURBO** button on the remote control. The indicator  appears on the display screen.

Press the button again to deactivate the function.



5.0. REMOTE CONTROL

SWITCH-ON TIMER FUNCTION

This function allows the user to set a switch-on timer. The unit will switch on once the start delay has been reached using the user-programmed operating mode, fan speed and temperature.

- 1) Ensure the appliance is turned off. Press the **TIMER** button a first time on the remote control. The indicator  appears on the display screen.
 - 2) Set the operating mode by pressing the **MODE** button. Next, set the fan speed by pressing the **FAN** button. Finally, set the temperature using the arrow buttons  or .
 - 3) Press the **TIMER** button a second time to set the start delay. Press the arrow buttons  or  to set the time value.
 - 4) Press the **TIMER** button a third time to confirm the setting.
- To cancel the timer setting, press the **TIMER** button.

Note: If no programming is made inside 5 seconds, the setting will be cancelled.



SWITCH-OFF TIMER FUNCTION

This function allows the user to set a switch-off timer. The unit will stop running when the set operating time has elapsed.

- 1) Ensure the appliance is turned on. Press the **TIMER** button a first time on the remote control. The indicator  appears on the display screen.
- 2) Set the operating time using the arrow buttons  or .
- 3) Press the **TIMER** button a second time to confirm the setting.

To cancel the timer setting, press the **TIMER** button.

Note: If no programming is made inside 5 seconds, the setting will be cancelled.



5.0. REMOTE CONTROL

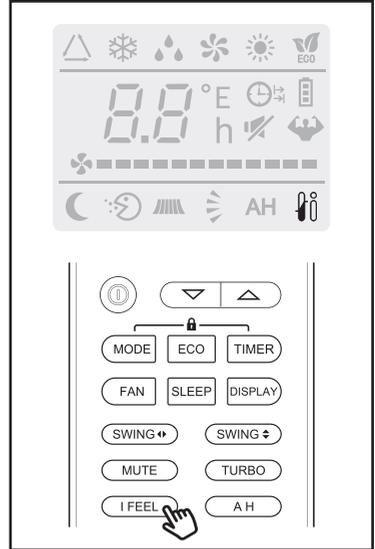
I FEEL FUNCTION

This function allows the remote control to measure the temperature at its current location and to signal the air conditioner to optimize the temperature around you to ensure your comfort with greater accuracy.

To activate the *I Feel* function, press the **I FEEL** button on the remote control. The indicator  appears on the display screen.

Press the button again to deactivate the function.

Note: The function automatically deactivates after 2 hours.



SELF-CLEANING FUNCTION (OPTIONAL)

This function allows the air conditioner to clean itself, removing the accumulated dirt and bacteria from the evaporator. It is recommended to utilize this function every 3 months.

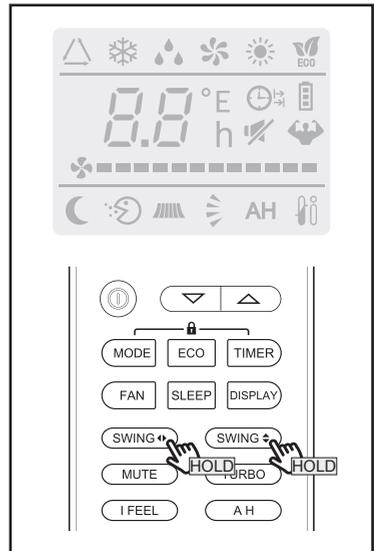
To activate the self-cleaning function, press and hold the **SWING**  and **SWING**  buttons simultaneously until a beep can be heard from the indoor unit.

The cleaning process lasts for 30 minutes. Once completed, the unit resumes operation using the previously set mode. You can cancel at any point during the process by pressing the  button. You will hear 2 beeps when it is completed or cancelled.

We recommend using this function according to the following ambient conditions to avoid certain safety protection features.

- Indoor unit: Ambient temp. < 30 °C (86 °F)
- Outdoor unit: 5 °C (41 °F) < Ambient temp. < 30 °C (86 °F)

Note: It is normal to hear cracking noises during the cleaning process as plastic parts expand with heat and contract with cold.



5.0. REMOTE CONTROL

8°C HEATING FUNCTION (OPTIONAL)

If the unit is in standby, this function will automatically start heating operation when the indoor temperature is equal or lower than 8 °C (46 °F). The unit returns to standby once the temperature reaches 18 °C (64 °F) or higher.

To activate the 8 °C Heating function, press the **AH** button. The indicator **AH** appears on the remote control screen.

Press the button again to deactivate the function.



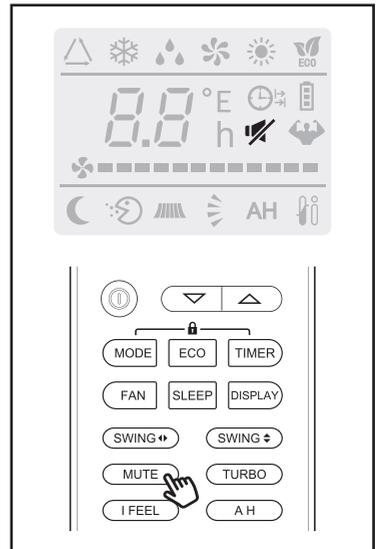
MUTE FUNCTION

This function allows the indoor unit to operate at the lowest fan speed setting in order to be as quiet as possible.

To activate the *Mute* function, press the **MUTE** button on the remote control. The indicator  appears on the display screen.

Press the button again to deactivate the function.

Pressing the **FAN**, **TURBO** or **SLEEP** button will also deactivate the function.



Note: The function can not be activated in *Drying* mode.

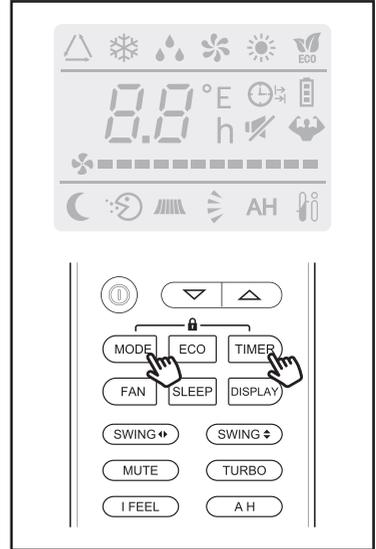
5.0. REMOTE CONTROL

CHILD LOCK FUNCTION

This function allows the user to lock the controls of the remote control to prevent modifications of the settings by a young child.

To lock the controls, press the **MODE** and **TIMER** buttons simultaneously on the remote control.

Press the two buttons again to unlock.

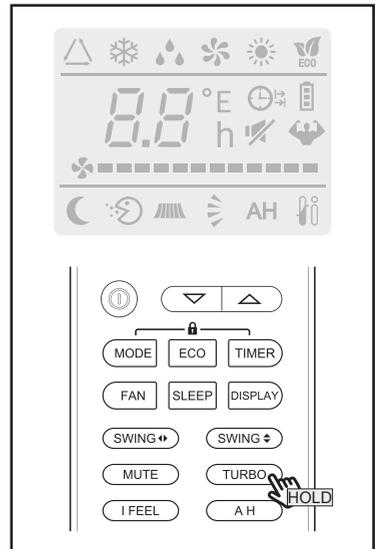


CELSIUS OR FAHRENHEIT SETTING

This function allows the user to choose between Celsius or Fahrenheit as the preferred temperature unit for the display.

- 1) Hold down the **TURBO** button for at least 5 seconds to get into the temperature unit settings.
- 2) Press and hold down the **TURBO** button again until the temperature unit switches from Celsius to Fahrenheit.
- 3) Release the pressing and wait 5 seconds. The temperature unit will be selected.

Repeat the previous steps to switch from Fahrenheit to Celsius.



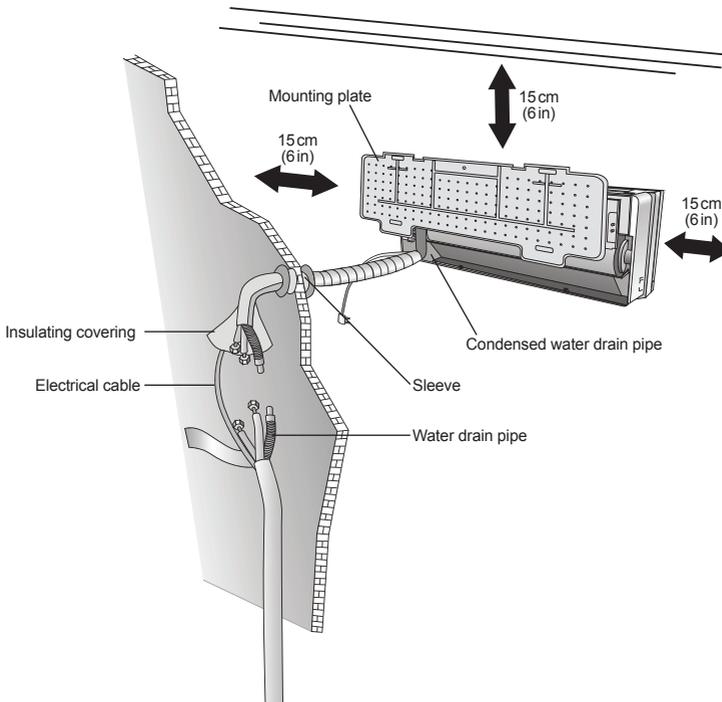
6.0. INSTALLATION INSTRUCTIONS

Only persons and/or companies qualified and experienced in the installation, service and repair of refrigerant products should be authorized to carry out the work. The user must ensure that the person and/or company who is to carry out the installation, servicing or repairs of this air conditioner has qualifications and experience in refrigerant products.

6.1. LOCATION RECOMMENDATIONS

INDOOR MURAL UNIT

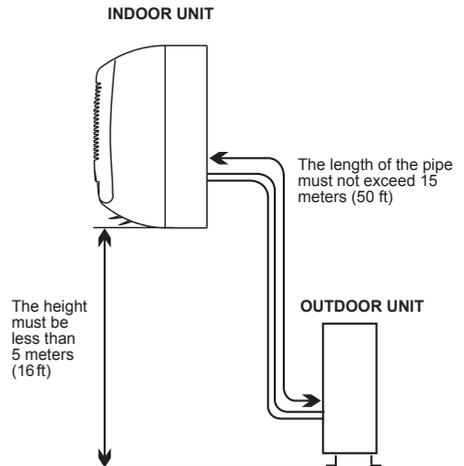
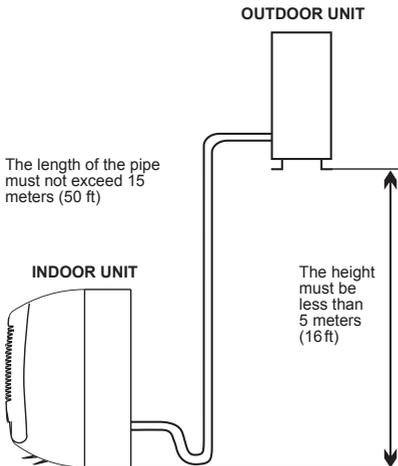
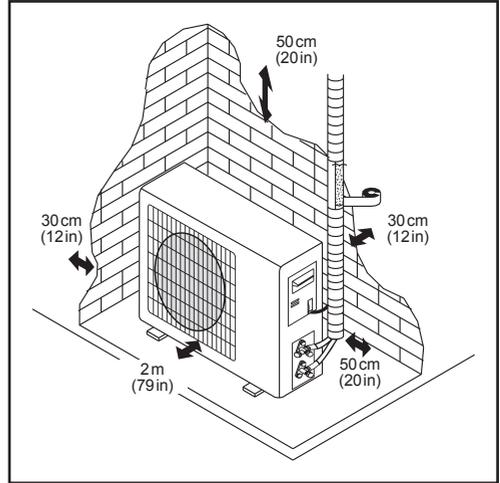
- Install the indoor unit level on a solid wall that is not subject to vibration.
- The air inlet and outlet vents must not be blocked. The air must be able to reach all 4 corners of the room.
- Do not install the appliance near a source of heat, steam, or flammable gas.
- Install the unit near an electric socket or private circuit. Do not install the mural unit where it will be exposed to direct sunlight.
- Install the unit where the connection between the indoor and the outdoor unit is as simple as possible.
- Install the appliance where it is easy to drain the condensed water.
- Check the unit operation regularly and leave the necessary space (as shown in the illustration below).
- Install the mural unit where the filter can be easily accessible.



6.0. INSTALLATION INSTRUCTIONS

OUTDOOR UNIT

- Do not install the outdoor unit near sources of heat, steam or flammable gas.
- Do not install the unit in too windy or dusty areas.
- Do not install the unit where people pass frequently. Choose a location where the air discharge and operating sound level will not disturb the neighbourhood.
- Avoid installing the unit where it will be exposed to direct sunlight (other wise use a protection, if necessary, that should not interfere with the air flow). Leave space for the air to circulate freely (as shown in the illustration on the right).
- Install the outdoor unit in a safe and solid place.
- If the outdoor unit is subject to vibration, place rubber gaskets onto the feet of the unit.



6.0. INSTALLATION INSTRUCTIONS

6.2. INDOOR UNIT INSTALLATION

Before starting installation, decide on the position of the indoor and outdoor units, taking into account the minimum space required around the units.

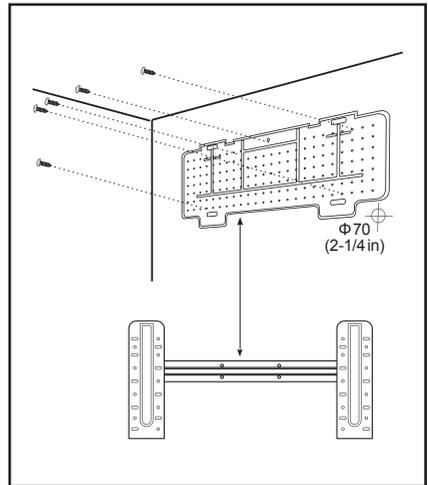
Notes:

- Install the indoor unit in the room to be air conditioned avoiding in corridors or communal areas.
- Install the indoor unit at a height of at least 2.5 meters (8 ft) from the ground.

INSTALLATING THE MOUNTING PLATE

- 1) By using a level, put the mounting plate in a perfect square position vertically and horizontally.
- 2) Drill 32 mm (1-1/4 in) deep holes in the wall to fix the plate.
- 3) Insert the plastic anchors into the hole.
- 4) Fix the mounting plate by using the provided tapping screws.
- 5) Check that the mounting plate is correctly fixed.

Note: The shape of the mounting plate may be different from the one shown on the right, but installation method is similar.

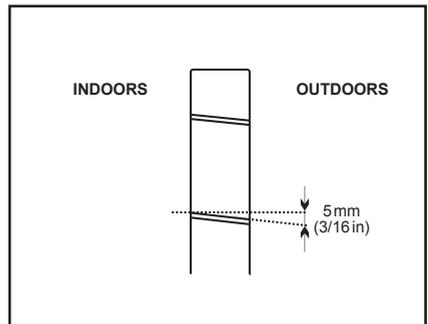


DRILLING HOLES IN THE WALL

- 1) Decide where to drill the hole in the wall for the piping (if necessary) according to the position of the mounting plate.
- 2) Install a flexible flange through the hole in the wall to keep the latter intact and clean.

Notes:

- The hole must slope downwards towards the exterior.
- The drain pipe must go downwards in the direction of the wall hole, otherwise leakage may occur.



6.0. INSTALLATION INSTRUCTIONS

ELECTRICAL CONNECTIONS

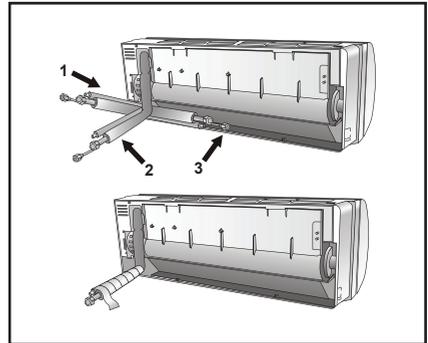
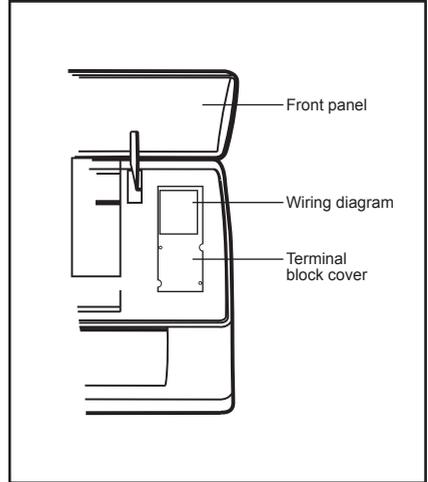
- 1) Lift the front panel.
- 2) Take off the cover (by removing a screw or by un-hinging the hooks).
- 3) For the electrical connections, see the circuit diagram on the right part of the unit under the front panel.
- 4) Connect the cable wires to the screw terminals by following the numbering. Use wire size suitable to the electric power input (see name plate on the unit) and according to all current national safety code requirements.
- 5) The cable connecting the outdoor and indoor units must be suitable for outdoor use.
- 6) The plug must be accessible also after the appliance has been installed so that it can be pulled out if necessary.
- 7) An efficient earth connection must be ensured.
- 8) If the power cable is damaged, it must be replaced by an authorized Service Centre.

Note: The cable wires has been connected to the main PCB of indoor unit by manufacturer for models without a terminal block.

REFRIGERANT PIPING CONNECTION

The refrigerant piping can be run in the 3 directions indicated in the illustration on the right. When the piping is run in direction 1 or 3, cut a notch along the groove on the side of the indoor unit with a cutter.

Lead the pipe to the wall hole and wrap the copper pipes, drain pipe and power cables with the tape, making sure to keep the drain pipe at the bottom so that water can flow freely.



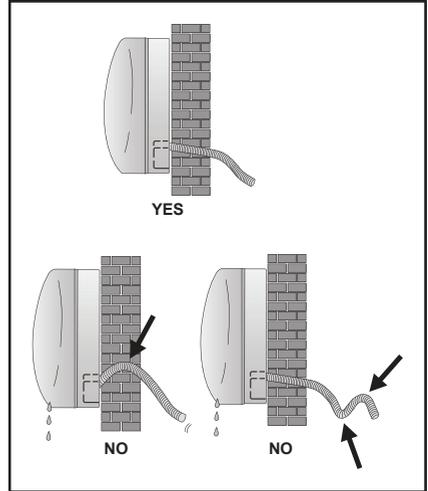
6.0. INSTALLATION INSTRUCTIONS

INDOOR UNIT CONDENSED WATER DRAINAGE

The efficient drainage of condensation water from the indoor unit is fundamental to the success of the installation.

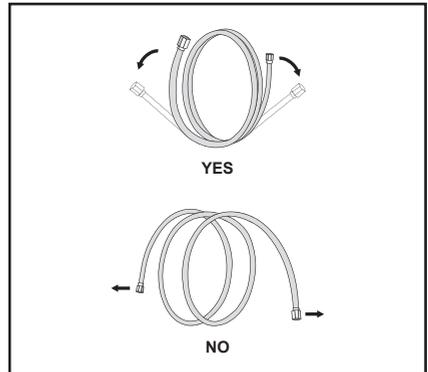
- Place the drain hose below the piping, taking care not to create siphons.
- The drain hose must slant downwards to aid drainage.
- Do not bend the drain hose or leave it protruding or twisted and do not put the end of it in water. If an extension is connected to the drain hose, ensure that it is lagged when it passes into the indoor unit.
- If the piping is installed through the back of the wall unit, the pipes, power cable and drain hose must be lagged and secured onto the rear of the unit with a pipe connection.

- a) Insert the pipe connection into the corresponding slot.
- b) Press to join the pipe connection to the base.



EXTENDING THE PIPES

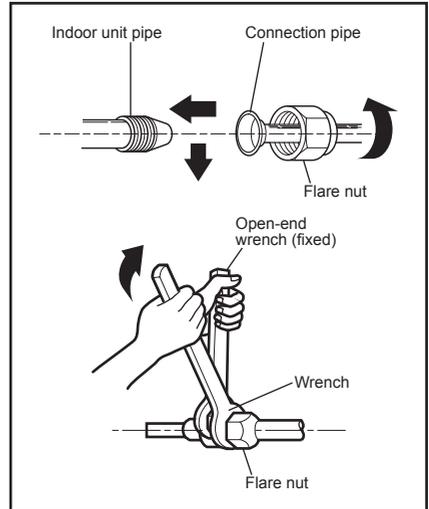
- Do not remove the cap from the pipe until connecting it to prevent dampness or dirt from entering it.
- Do not bend the pipe more than three times at one point. If the hose is bent or pulled too often, it will stiffen.
- When extending the rolled pipe, straighten the pipe by unwinding it gently as shown in the picture.



6.0. INSTALLATION INSTRUCTIONS

CONNECTIONS TO THE INDOOR UNIT

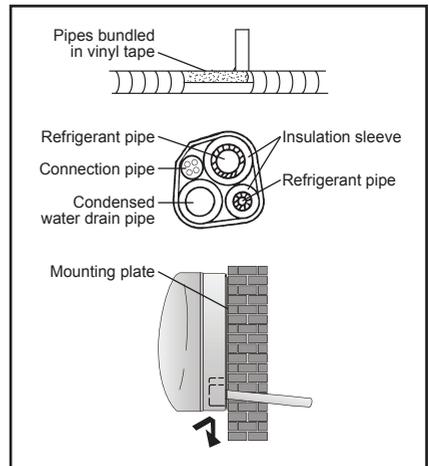
- 1) Remove the indoor unit pipe cap (check that there is no debris inside).
- 2) Insert the flare nut and create a flare at the end of the connection pipe.
- 3) Tighten the connections by using two wrenches in opposite directions.



COMPLETING THE INSTALLATION

After having connected the pipe according to the instructions, install the connection cables. Now install the drain hose. After connection, lag the pipe, cables and drain hose with insulating material.

- 1) Arrange the pipes, cables and drain hose well.
- 2) Lag the pipe joints with insulating material and wrap everything with vinyl tape.
- 3) Run the bundle through the wall hole and mount the indoor unit securely to the upper part of the mounting plate.
- 4) Press and push the lower part of the indoor unit firmly against the mounting plate.



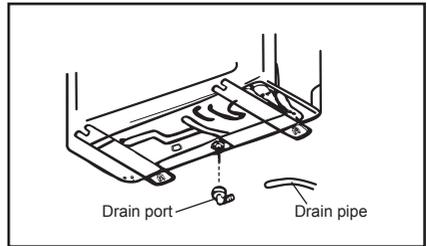
6.3. OUTDOOR UNIT INSTALLATION

- The outdoor unit should be installed on a solid wall and fastened securely.
- The following procedure must be observed before connecting the pipes and connecting cables: decide which is the best position on the wall and leave enough space to be able to carry out maintenance easily.
- Fasten the support to the wall using screw anchors which are particularly suited to the type of wall.
- Use a larger quantity of screw anchors than normally required for the weight they must support in order to avoid vibration during operation and to ensure that they remain firmly fixed in the same position for years without loosening.
- The unit must be installed following national regulations.

OUTDOOR UNIT CONDENSED WATER DRAINAGE

The condensed water and the ice formed in the outdoor unit during heating operation can be drained through the drain pipe.

- 1) Attach the drain port to the 25 mm (1 inch) hole underneath the unit (as shown in the illustration on the right).
- 2) Connect the drain pipe to the drain port. Ensure that the water is drained to a suitable place.

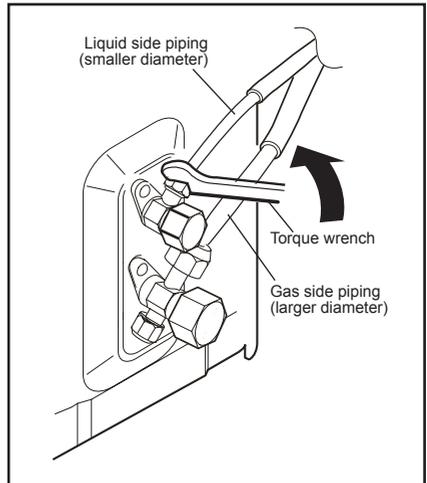


CONNECTING THE PIPES

Screw the flare nuts to the pipes of the outdoor unit using the same tightening method described for the indoor unit.

To avoid leaks, observe the following points:

- Tighten the flare nuts using two wrenches. Be careful not to damage the pipes.
- Use appropriate torque. Insufficient or excessive tightening torque may cause leakage.
- The safest method of tightening is to use a fixed wrench and a torque wrench. Refer to the table on page 31 for the appropriate tightening torque.

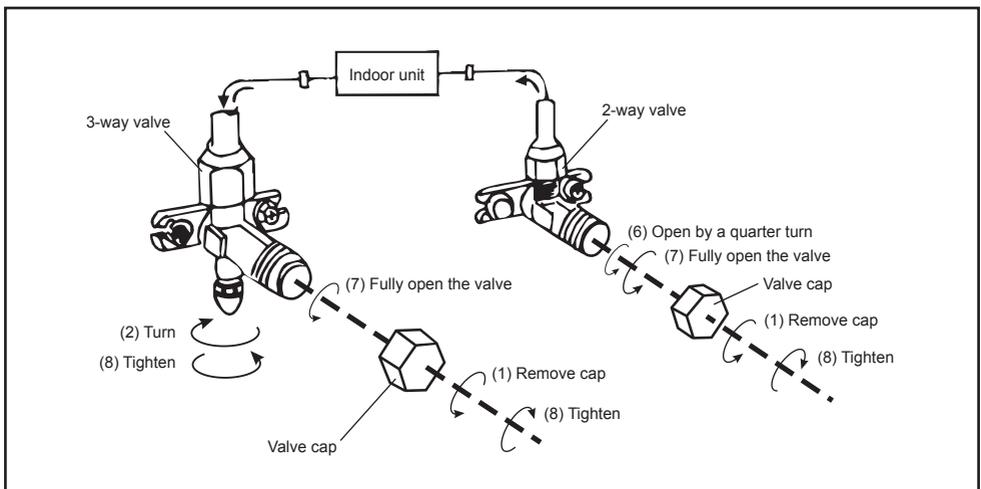
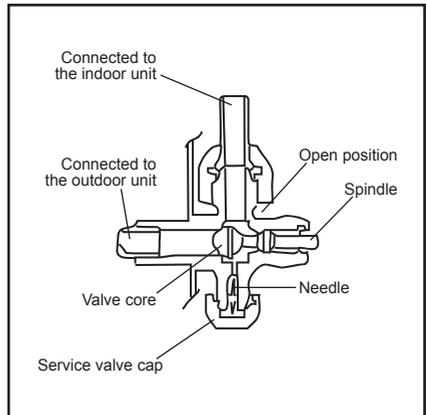
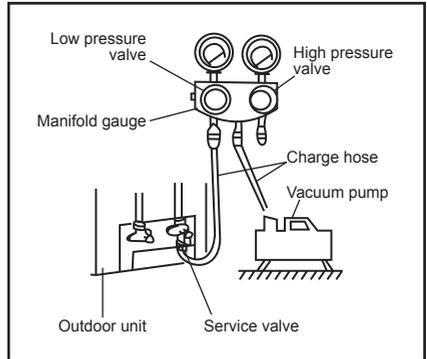


6.0. INSTALLATION INSTRUCTIONS

SYSTEM VACUUM AND CHARGE

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

- 1) Unscrew and remove the cap from the 2-way and 3-way valves.
- 2) Unscrew and remove the cap from the service valve.
- 3) Connect the vacuum pump charge hose to the service valve.
- 4) Start the vacuum pump and let it run for 10 to 15 minutes until an absolute vacuum of 10mm Hg is reached.
- 5) With the vacuum pump still running, close the low pressure valve on the vacuum pump manifold, then stop the pump.
- 6) Open the 2-way valve by a quarter turn, then close it after 10 seconds. Check the tightness of all joints using liquid soap or an electronic leak detector.
- 7) Fully open the 2-way and 3-way valves. Disconnect the charge hose of the vacuum pump from the service valve.
- 8) Replace and tighten all valve caps.



6.0. INSTALLATION INSTRUCTIONS

6.4. INSTALLATION FINALIZATION

- 1) Wrap the insulating covering around the joints of the indoor unit and secure it with insulating tape.
- 2) Fix the excess portion of the signal cable to the piping or to the outdoor unit.
- 3) Fix the piping to the wall (after having covered it with insulating tape) with clamps or insert it into plastic channels.
- 4) Seal the hole in the wall through which the piping passes so that no air or water can enter.

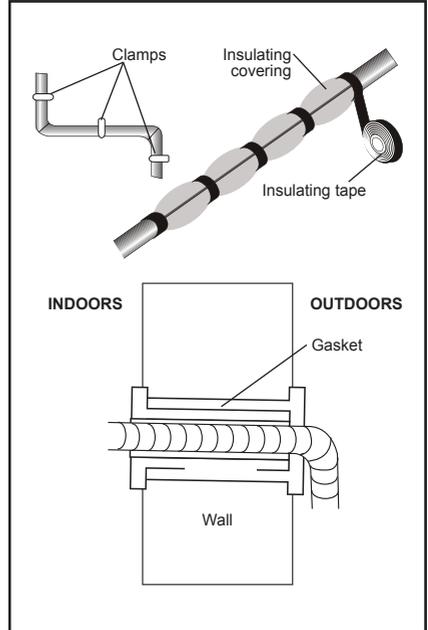
INDOOR UNIT TEST-RUN

- Do the ON/OFF and FAN operate normally?
- Does the MODE operate normally?
- Do the set point and TIMER function properly?
- Does each lamp light normally?
- Do the directional airflow flaps operate normally?
- Does condensed water drain regularly?

OUTDOOR UNIT TEST-RUN

- Are there any abnormal noise or vibration during operation?
- Can noise, air discharge or condensation water drainage disturb neighbours?
- Is there any refrigerant leakage?

Note: The electronic controller allows the compressor to start only three minutes after voltage has reached the system.



6.0. INSTALLATION INSTRUCTIONS

6.5. INFORMATION FOR THE INSTALLER

TECHNICAL SPECIFICATIONS

MODEL CAPACITY (BTU/H)	9,000	12,000	18,000	24,000	36,000
Liquid pipe diameter	Φ6 (1/4 in)	Φ6 (1/4 in)	Φ6 (1/4 in)	Φ6 (1/4 in)	Φ9.52 (3/8 in)
Gas Pipe diameter	Φ9.52 (3/8 in)	Φ9.52 (3/8 in)	Φ9.52 (3/8 in)	Φ12.7 (1/2 in)	Φ15.88 (5/8 in)
Pipe length with standard charge	7.5 m (23 ft)				
Maximum distance between indoor and outdoor unit	15 m (49 ft)				
Additional refrigerant charge	20 g/m (0.215 oz/ft)	20 g/m (0.215 oz/ft)	20 g/m (0.215 oz/ft)	20 g/m (0.215 oz/ft)	20 g/m (0.323 oz/ft)
Maximum elevation between indoor and outdoor unit	5 m (16 ft)				
Type of refrigerant ⁽¹⁾	R410A	R410A	R410A	R410A	R410A

(1) Refer to the data rating label stucked on the outdoor unit.

TIGHTENING TORQUE FOR PROTECTION CAPS AND FLANGE CONNECTION

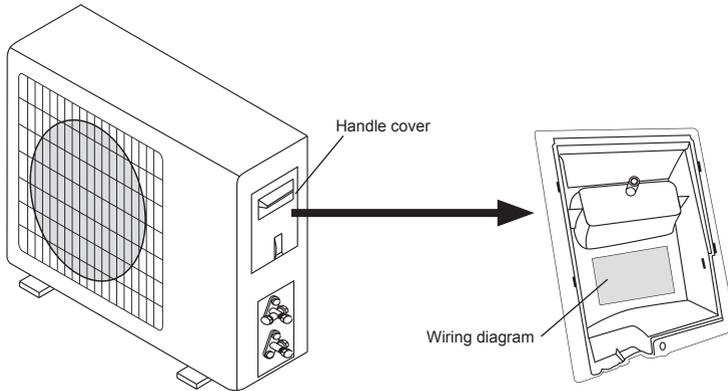
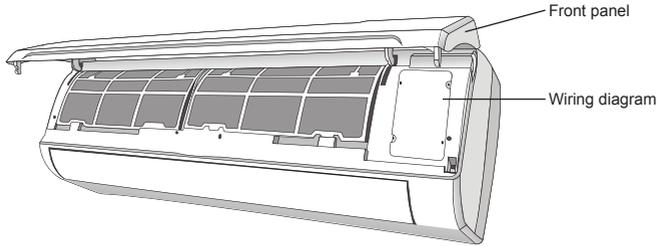
PIPE SIZE	TIGHTENING TORQUE (N x m)	CORRESPONDING STRESS (using a 20 cm wrench)		TIGHTENING TORQUE (N x m)
Φ6 (1/4 in)	15 – 20	wrist strength	Service port nut	7 – 9
Φ9.52 (3/8 in)	31 – 35	arm strength	Protection caps	25 – 30
Φ12.7 (1/2 in)	35 – 45	arm strength		
Φ15.88 (5/8 in)	75 – 80	arm strength		

6.0. INSTALLATION INSTRUCTIONS

WIRING DIAGRAM

The wiring diagram may differ depending on the model. Please refer to the wiring diagrams of the indoor and outdoor units respectively.

- On the indoor unit, the wiring diagram is located under the front panel.
- On the outdoor unit, the wiring diagram is located on the back of the handle cover.



Note: Some models of the indoor unit without terminal block will have wires connected to the main PCB.

6.0. INSTALLATION INSTRUCTIONS

CABLE WIRES SPECIFICATIONS

MODEL CAPACITY (BTU/H)		9,000 (115 V)	12,000 (115 V)	9,000 (230 V)	12,000 (230 V)	18,000	24,000	36,000
		SECTIONAL AREA						
Power supply cable	N (L2)	3.0 mm ² (AWG 12)						
	L (L1)	3.0 mm ² (AWG 12)						
		3.0 mm ² (AWG 12)						
Connection supply cable	3 (L)	1 mm ² (AWG 16)						
	2 (N)	1 mm ² (AWG 16)						
	1 (S)	1 mm ² (AWG 16)						
		1 mm ² (AWG 16)						

- 220 V 9K, 12K, 18K, 24K, 36K models: The unit fuse parameter is 50 T, 3.15A.
- 110 V 9K, 12K models: The indoor unit fuse parameter is 50 T, 3.15A.
- 125 V 9K, 12K models: The outdoor unit fuse parameter is 61 T, 15A.
- 250 V 18K, 22K, 24K models: The outdoor unit fuse parameter is 65 TS, 25A.

7.0. MAINTENANCE

Periodic maintenance is essential to maintain the efficiency of your air conditioner.

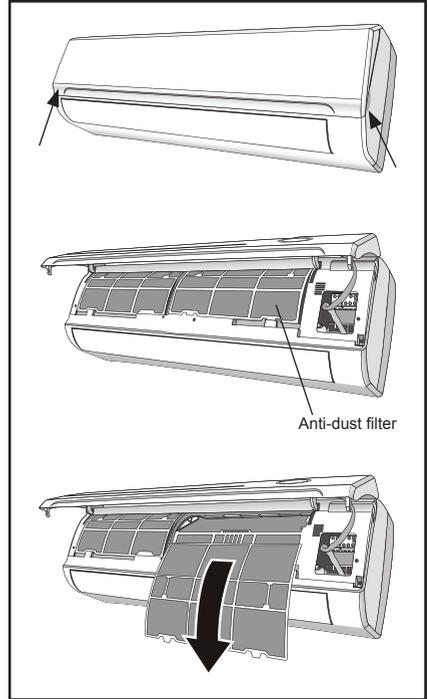
Before performing any maintenance, disconnect the power supply.

INDOOR UNIT

Anti-dust Filters

- 1) Open the front panel (following the direction of the arrows shown on the right).
- 2) Holding the front panel open with one hand, remove the air filter with the other.
- 3) Clean the filter with water. If the filter is dirty with oil, it can be washed in warm water not exceeding 45 °C (113 °F). Leave to dry in a cool, dry place.
- 4) Holding the front panel open with one hand, insert the air filter with the other.
- 5) Close the front panel.

The electrostatic and deodorant filter (if installed) cannot be washed and must be replaced with new filters every 6 months.



CLEANING THE HEAT EXCHANGER

- 1) Open the front panel of the unit and unhooking it from the hinges to make the cleaning easier.
- 2) Clean the indoor unit with a cloth soaked in water no warmer than 40 °C (104 °F) and neutral soap. Never use aggressive solvents or detergents.
- 3) If the air inlet and outlet of the outdoor unit are clogged, remove any leaves or waste by hand and remove the dust with a jet of air or a bit of water.

END OF SEASON MAINTENANCE

- 1) Disconnect the automatic switch or the plug.
- 2) Clean and replace the filters.
- 3) On a sunny day, let the air conditioner run in *Fan* mode for several hours so that the inside of the unit can dry completely.

8.0. TROUBLESHOOTING

Before you call for service, review the following list. It may save you time and expense. This list includes common occurrences that are not the result of a defect in workmanship or materials.

SITUATION	POSSIBLE CAUSES	SOLUTIONS
The appliance does not operate.	There is no electricity.	If there is a power outage, wait for electricity to be restored.
	The indoor or outdoor unit fan motor may be damaged.	Contact Customer Service.
	The compressor thermomagnetic circuit breaker may be faulty.	Contact Customer Service.
	A fuse may have been tripped.	Verify the fuses and circuit breakers. If the appliance still does not operate, contact Customer Service.
	The connections may be loose or the plug may be disconnected.	Verify the connections and plug. If the appliance still does not operate, contact Customer Service.
	A protection function may have been tripped.	When changing operation modes, a 3-minute protection delay will be triggered to protect the compressor.
	Voltage may be higher or lower than the voltage range.	Contact Customer Service.
	There may be an active switch-on <i>Timer</i> currently preventing operation.	If the <i>Timer</i> function was not intended, cancel the timer setting (see Section 5.5 – Timer Function), otherwise wait until the unit starts at the set time.
The electronic control board may be damaged.	Contact Customer Service.	
Noises and odours.	There is a strange odour emitting from the appliance.	There may be a garbage bin located near the outdoor unit or the air filter may require a cleaning.
	There is a sound of moving water coming from inside the unit.	This sound is produced by the circulation of refrigerant in the unit and is no cause for alarm.
	There is a fine mist emitting at the air outlet.	This is normal. This occurs when the air in the room becomes very cold, for example in <i>Cooling</i> or <i>Drying</i> modes.
	There is cracking sounds coming from the unit.	These sounds are produced by the expansion or contraction of the front panel due to temperature variations and does not indicate a problem.
The efficiency of the cooling or heating is very poor.	The temperature setting may be unsuitable for the current outdoor temperature.	Adjust the set temperature to be higher (in <i>Heating</i> mode) or lower (in <i>Cooling</i> mode) than the outdoor temperature.
	The air inlet or outlet is obstructed.	Clear objects or furniture that could be blocking the inlet or outlet of the unit.
	The filters are dirty.	Clean or replace the air filters.
	The fan speed setting may be too low to cool or warm the ambient air.	Increase the speed of the fan or use the <i>Turbo</i> function to cool or warm an area as fast as possible.
	When attempting to cool the room, there are other sources of heat present in the room.	Turn off or remove any heat sources that could be counteracting the cooling efficiency of the unit.
There may not be sufficient refrigerant left in the unit.	Contact Customer Service.	

8.0. TROUBLESHOOTING

The appliance does not respond to commands.	The remote control may be too far from the mural unit or not aligned with it.	Get closer to the unit so the remote control signal can reach the signal receiver and make sure to be facing the mural unit when pressing keys.
	The batteries of the remote control may be depleted.	Replace with new batteries.
	There may be objects obstructing the signal from the remote control.	Remove any possible obstructions between the remote control and the mural unit.
The display is off.	The display of the mural unit may have been turned off from the remote control.	Restore the display function (see Section 5.5 – Display Function of the Indoor Unit)

⚠ **Caution:** Switch off the appliance immediately and cut off the power supply in the following events :

- Strange noises during operation
- Faulty electronic control board
- Faulty fuses or switches
- After having accidentally sprayed water or inserted objects into the unit
- Overheated cables or plugs
- Very strong smells coming from the appliance

If the air conditioner has a faulty component, an error code will appear on the mural unit display. Refer to the table below to understand the meaning :

ERROR CODE	DESCRIPTION
E1	Indoor temperature sensor fault
E2	Indoor pipe temperature sensor fault
E3	Outdoor pipe temperature sensor fault
E4	Refrigerant system leakage or fault
E6	Malfunction of indoor fan motor
E7	Outdoor air temperature sensor fault
E8	Outdoor discharge temperature sensor fault
E9	Outdoor IPM module fault
EA	Outdoor current detection fault
EE	Outdoor PCB EEPROM fault
EF	Outdoor fan motor fault
EH	Outdoor suction temperature sensor fault

If you encounter a problem that requires the help of a qualified technician, please contact Customer Service by phone at **1-800-686-2175** or e-mail at **proservice@sunrisetradox.com**.

LIMITED WARRANTY

This product is covered by a limited warranty against manufacturing defects in materials and workmanship, if used for the applications specified in this manual, for a period of **ONE (1) year on parts and FIVE (5) years on compressor** from the date of original purchase in Canada.

During the warranty period, if the appliance fails under normal use, ForestAir will, at its option, either repair the unit or replace it, free of charge, within a reasonable period of time after the product is returned.

As a condition to any warranty service obligation, the customer must present this warranty certificate along with the proof of purchase.

THIS WARRANTY DOES NOT COVER...

- Damage, accidental or otherwise, to the appliance that is not caused by materials or workmanship defect.
- Damage caused by misuse, tampering or failure to follow the operating and maintenance instructions provided in this manual.
- Damage to the finish of the unit enclosure or to other outer features caused by wear.
- The filters.
- Damage caused by repairs or modifications to the appliance made by any person not duly authorized by ForestAir.
- Insurance and freight costs for the warranty service.

ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, ARE LIMITED TO A **ONE-YEAR (1) PERIOD ON PARTS AND A FIVE-YEAR (5) PERIOD ON COMPRESSOR** COVERED BY THIS EXPRESS LIMITED WARRANTY. FORESTAIR DISCLAIMS ANY LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES AND, IN NO EVENT SHALL FORESTAIR LIABILITY EXCEED THE RETAIL VALUE OF THE APPLIANCE FOR BREACH OF ANY WRITTEN OR IMPLIED WARRANTY WITH RESPECT TO THIS PRODUCT.

Keep this manual along with your proof of purchase in a safe place for future reference. You must provide proof of purchase for warranty service.

Enter the following information about your product; it will help you upon getting assistance or service, if you ever need it. You will have to provide the model and serial numbers of the product. These informations are detailed on the rating plate of the unit.

Dealer name : _____

Address : _____

Model number : _____

Serial number : _____

Date of purchase : _____