

TCL

Hi! Let's Get Started.

814100723

Ductless Mini Split

Please read this manual carefully before operating your unit and retain for future reference.

SAFETY PRECAUTIONS

SAFETY RULES AND RECOMMENDATIONS FOR THE INSTALLER

- It is necessary to read this guide in its entirety before beginning installation.
- Installation must be completed in accordance with all local, state, or federal laws and regulations. Please note that in many jurisdictions it is illegal for HVAC installation to be completed by anyone other than a licensed contractor.
- Prior to beginning any electrical work, it is necessary to turn off the main circuit breaker and to ensure that there is no power flowing through the electrical system. Failure to do so can result in severe injury or death.
- It is important to take steps to make sure that refrigerant leakage does not occur. Refrigerant leakage can be extremely dangerous, with the possibility of explosion or poisoning. Keep gas-burning appliances, electric heaters, and any other heat or flame sources away from the location where HVAC work is occurring. Under no circumstances should installers smoke during installation. If refrigerant comes into contact with a flame, poisonous gases will be released. If any refrigerant leakage does occur, immediately stop work and ventilate the room.
- All electrical work must be performed by a qualified technician according to local laws and regulations and the instructions given in this manual. Do not use intermediate connection of the electric wires. Use only specified cables for wiring. The wiring connections must be made securely with no tension applied to the terminal connections. Also, never splice the cables for wiring (unless otherwise indicated in this document). Failure to observe these instructions may result in overheating or a fire.
- Only use the specified refrigerant written on outdoor unit to charge the refrigerant lines. Do not mix it with any other refrigerant and do not allow air to remain in the lines. If air is mixed with the refrigerant, then an explosion can occur.
- During the installation of the indoor and outdoor units, access to the working area should be forbidden for children. Unforeseeable accidents could happen.
- During the installation of the indoor and outdoor units, access to the working area should be forbidden for 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.
- Protect the indoor unit with a fuse of suitable capacity for the maximum input current or with another overload protection device.
- Ensure that the mains voltage corresponds to that stamped on the rating plate. Keep the switch or 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.
- 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 "over voltage 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 install the appliance at a distance of less than 50cm 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 packaging materials are recyclable and should be disposed of in the separate waste bins. Take the air conditioner at the end of its useful life to a special waste collection center for disposal.
- 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.
- The appliance must be installed in accordance with applicable local, state and national laws and regulations.
- Before accessing the terminals, all the power circuits must be disconnected from the power supply.
- The appliance shall be installed in accordance with local, state and national laws and regulations according to NEC code.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or a 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 should not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- Do not try to install the 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 or 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.
- Always use the appliance with the air filter mounted. The use of the 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 earthing/grounding is done in accordance with current legislation and insert a thermos magnetic circuit breaker.
- The batteries in the remote controller must be recycled or disposed of properly. For disposal of scrap batteries, please discard the batteries as sorted municipal waste at the accessible collection point.
- 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 a 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 Provider of the manufacturer. 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.
- Ensure that the appliance is disconnected from the power supply when it will remain inoperative for a long period and before carrying out any cleaning or maintenance.

SAFETY RULES AND PROHIBITIONS

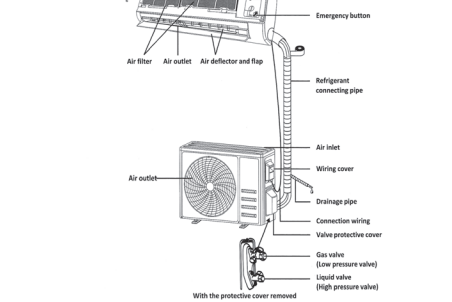
- Do not bend, tug or compress the power cord since this could damage it. Electrical shocks or fire are probable due to a damaged power cord. Specialized technical personnel only must replace a damaged power cord.
- Do not use power strips, extension cords, or multi-plug adapters
- Do not touch the appliance 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 causes a reduction in the operative efficiency of the conditioner with possible consequent failures or damages.
- In no way alter the characteristics of the appliance.
- 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 for long periods when the air conditioner is operating.
- Do not direct the airflow onto plants or animals.
- A long direct exposure to the flow of cold air of the conditioner could have negative effects on plants and animals.
- Do not put the 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 a stick or similar object into the appliance. It could cause injury.
- Children should be supervised to ensure that they do not play with the appliance. If the supply cord is damaged, contact a service center.

NAME OF PARTS

Indoor Unit



Outdoor Unit



Note: This figure shown may be different from the actual object. Please take the latter as the standard.

Indoor Display

No.	LED	Function
1	88	Indicator for Time, temperature and Error codes.
2	⬇️	Lights up during Timer operation.

3	⬆️	SLEEP mode
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The shape and position of switches and indicators may be different according to the model, but their function is the same.

REMOTE CONTROL



NOTE: The images shown in this manual are for illustrative purposes only and may be subject to change. The actual descriptions of control panel and their locations may vary depending on the model.

Remote controller buttons

No.	Buttons	Function
1	⬆️	To turn on/off the air conditioner
2	TURBO	To switch on/off the TURBO mode
3	MODE	To select the operation mode: AUTO, COOL, DRY FAN, HEAT.
4	⬆️ (TEMP UP)	To increase the setting temperature, lengthen the time in TIMER setting.
5	⬇️ (TEMP DN)	To decrease the setting temperature, reduce the time in TIMER setting.
6	⬆️	To adjust the air flow direction vertically(optional).
7	⬆️	To adjust the I FEEL/MUTE function
8	FAN	To adjust the fan speed: auto, mute, low, mid-low, mid, mid-high, high, Turbo
9	ECO	To switch on/off the ECO mode
10	GENTLE WIND	To activate the GENTLE WIND mode
11	DISPLAY	To switch on/off the led DISPLAY mode
12	TIMER / SLEEP	To switch on/off the TIMER function / To switch on/off the SLEEP mode
13	I FEEL / MUTE	To activate the I FEEL/MUTE function
14	HEALTH/CLEAN	To activate the HEALTH/CLEAN function
15	⬆️ (⬇️ + ⬆️)	To activate the function of Child Lock. Press ⬆️ and ⬇️ buttons together for more than 3 seconds.

⚠️ 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 button with a beep.

⚠️ There might some functions notify for your state conditions, you will hear a beep when you press these buttons, but air conditioner do not response, we express our apologies.

NOTE: The remote control vary depend of model. The buttons on the remote control may have a different name or location than the remote control shows in this manual.

Remote controller DISPLAY, meaning of symbols on the liquid crystal display

No.	Symbols	Meaning
1	⬆️	AUTO MODE indicator
2	❄️	COOLING MODE indicator
3	☀️	DRY MODE indicator
4	🌀	FAN MODE indicator
5	🔥	HEATING MODE indicator
6	🌬️	BATTER indicator
7	888h	TEMPERATURE / CLOCK indicator
8	⬆️ or ⬇️	FLAP SWING (Air flow) indicator
9	🔊	MUTE indicator
10	⬆️ or ⬇️	FAN SPEED indicator
11	⬆️ or ⬇️	AUTO FAN indicator
12	⚡️	TURBO indicator
13	🔒	CHILD LOCK indicator
14	👤	I FEEL indicator
15	🔊	ECO indicator
16	🌬️	TIMER indicator
17	🌙	SLEEP MODE indicator
18	💡	DISPLAYLIGHT indicator
19	👤	HEALTH/CLEAN function indicator
20	🌬️	GENTLE WIND indicator

Replacement of Batteries

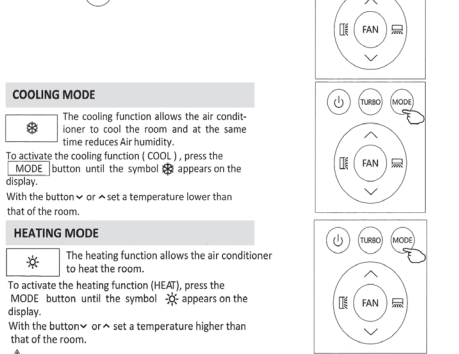
Remove the battery cover plate from the rear of the remote controller, by sliding it in the direction of the arrow. Install the batteries according the direction (+ and -) shown on the remote controller. Reinstall the battery cover by sliding it into place. (Batteries not included)

⚠️ Use 2 LRO 3 AAA (1.5V) batteries. Do not use rechargeable batteries. Replace the old batteries with new ones of the same type when the display is no longer legible. Do not dispose batteries as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.

Recommendations for locating and using the remote controller (if present). The remote controller be kept in a wall-mounted holder.

Turn ON / Turn OFF the air conditioner

Press the button ⬆️ to turn on or turn off the air conditioner.



In HEATING operation, the appliance can automatically activate a defrost cycle, which is essential to clean the frost on the condenser so as to recover its heat exchange function. This procedure usually lasts for 2-10 minutes. During defrosting, indoor unit fan stop operation. After defrosting, it resumes to HEATING mode automatically.

COOLING MODE

The cooling function allows the air conditioner to cool the room and at the same time reduce the indoor air humidity.

To activate the cooling function (COOL), press the MODE button until the symbol ❄️ appears on the display.

With the button ⬆️ or ⬇️ set a temperature lower than that of the room.

HEATING MODE

The heating function allows the air conditioner to heat the room.

To activate the heating function (HEAT), press the MODE button until the symbol ☀️ appears on the display.

With the button ⬆️ or ⬇️ set a temperature higher than that of the room.

DRY MODE

This function reduces the humidity of the air to make the room more comfortable.

To set the DRY mode, Press MODE until 🌀 appears in the display. An automatic function of pre-setting is activated.

FAN MODE (Not FAN button)

Fan mode, air ventilation only.

To set the FAN mode, press MODE until 🌀 appears on the display.

AUTO MODE

Automatic mode.

To set the AUTO mode, press MODE until ⬆️ appears on the display.

In AUTO mode the run mode will be set automatically according to the room temperature.

TURBO FUNCTION

To activate turbo function, press the TURBO button, and ⚡️ will appear on the display.

Press again to cancel this function.

In COOL or HEAT mode, when you select TURBO feature, the appliance will operate the fast cooling/ fast heating with the highest fan speed.

CHANGE THE FAN SPEED

Press FAN button to set the running fan speed. It can be set to AUTO/MUTE/LOW/MID-LOW/MID/MID-HI/HIGH/TURBO speed.

Flashing: ⬆️ or ⬇️

AIR FLOW CONTROL

1. Normal 4 way airflow (vertical and horizontal): Press ⬆️ to activate the horizontal flaps to swing from up to down. Press again to stop the swing movement at the current angle.

2. Press ⬆️ to activate the vertical deflectors to swing from left to right. Press again to stop the swing movement at the current angle.

3. If the vertical deflectors are positioned manually which placed under the flaps, they are allowed to move the air flow direct to rightward or leftward.

⚠️ This adjustment must be done while the appliance is switched off.

⚠️ Never Position Flaps manually, the delicate mechanism might be seriously damaged!

⚠️ Never poke fingers, sticks or other objects in the air inlet or outlet vents. Such contact with moving parts might cause unforeseeable damage or injury.

I FEEL function

I FEEL

Press I FEEL button to activate the function, the 👤 will appear on the remote display. Do it again to deactivate this function.

This function enables the remote control to measure the temperature at its current location, and send this signal to the air conditioner to optimize the temperature around you and ensure the comfort.

SLEEP MODE

Pre-setting automatic operating program.

Press SLEEP button to activate the sleep mode, a 🌙 appears on the display. Press again to cancel this mode.

In sleep mode, the air conditioner will automatically adjust the temperature and fan speed to make the room more comfortable during the night. After 10 hours running in sleep mode, the hose controller will change to the previous setting mode.

ECO MODE

In this mode the appliance automatically sets the operation to save energy.

Press the ECO button, the ⬆️ appears on the display, and the appliance will run in ECO mode. Press again to cancel it..

NOTE: The ECO function is available in both COOLING and HEATING modes.

TIMER MODE-SET TIMER OFF

To set the air conditioner switching-off automatically.

With the AC off, press the Timer button then use the ⬆️ and ⬇️ buttons to set the length of time before the AC will turn off. Press the timer button again to start the countdown.

Note: To cancel the set function, press the TIMER button again.

Note: In case of power off, it is necessary to set TIMER OFF again

0.5h → 1.0h → 1.5h → 2.0h → 2.5h → 3.0h → 3.5h → 4.0h → 4.5h → 5.0h → 5.5h → 6.0h → 6.5h → 7.0h → 7.5h → 8.0h → 8.5h → 9.0h → 9.5h → 10.0h

TIMER MODE---SET TIMER ON

To set the air conditioner switching-on automatically.

With the AC off, press the Timer button and use the ⬆️ and ⬇️ buttons to set the desired amount of time before the AC turns on. Press the timer button again to start the countdown.

When the timer setting was done, you can set the operation mode, fan speed, desired temperature, air flow when air conditioner start to run.

Note: To cancel the timer function, press the TIMER button again.

Note: In case of power off, it is necessary to set TIMER ON again

LED display light ON/OFF

Press DISPLAY button to turn on/off the indoor LED display light.

SELF-CLEAN function (Optional)

- This function help carry away the accumulated dirt, bacteria, etc from the evaporator.
- Turn off the air conditioner, press "CLEAN" button to enter this function and it will show "CL" on the display of indoor unit.
- This function will run about 30 minutes, and it will exit automatically You will hear 2 beeps when it's finished or cancelled.
- It's normal if there are some noise during this function process, as plastic materials expand with heat and contract with cold.
- We suggest operate this function at the following ambient condition to avoid certain safety protection features.

Indoor unit	Temp<30°C
Outdoor unit	5°C<Temp<30°C
- We suggest operate this function once every 3 months.

ENTLE WIND (Optional)

- Turn on the indoor unit, and change to COOL mode, then press GENTLE WIND button to active this function, 🌬️ will appear on the display. Do it again to deactivate it.
- This function will auto close the vertical flaps, and give you the comfortable gentle wind feeling.

Mute Mode

Long press the I FEEL/MUTE button to active this function, and 🔊 will appear on the remote display. Do it again to deactivate this function.

When FAN / TURBO button is pressed, the MUTE function will be canceled. MUTE function can not be activated under dry mode.

OPERATION INSTRUCTIONS

⚠️ CAUTION: The HVAC System is designed to operate in the following temperature ranges. Operation in temperatures outside of the below ranges can damage the system and may trigger a shut down of the system to protect it from damage. IMPORTANT: If you live in a location where temperatures are reached outside of these ranges, you should consider adding supplemental heating or cooling as protection for these conditions. TCL accepts no liability in the event that the system shuts down during conditions in these ranges.

Inverter air conditioner:

TEMPERATURE	MODE	Heating	Cooling	Dry
Room temperature	32°F ~ 85°F	52.0°F ~ 89.0°F		
Outdoor temperature	13°F ~ 86°F	5°F ~ 122°F		

With the power supply connected, restart the air conditioner after shutdown, or switch it to other mode during operation, and the air conditioner protection device will start. The compressor will resume operation after 3 minutes.

Characteristics of heating operation (applicable to Heat pump models)

Preheating: When the heating function is enabled, the indoor unit will take 2~5 minutes for preheating, after that the air conditioner will start heating and blows warm air.

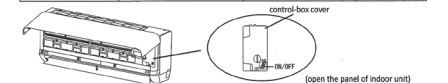
Defrosting: During heating, when the outdoor unit frosted, the air conditioner will enable the automatic defrosting function to improve the heating effect. During defrosting, the indoor and outdoor fans stop running. The air conditioner will resume heating automatically after defrosting finish.

Reset button:

In the event of an operational issue or if the remote isn't working, open the panel and find the Reset Button labeled "ON/OFF."

CAUTION: Care should be used in pressing the on/off button to avoid damaging the electrical equipment, which could cause injury. The "on/off" button should only be depressed using a tool with electrical insulation to avoid electrical shock.

Current status	Operation	Respond	Enter mode
Standby	Press the reset button once.	It beeps briefly once.	Cooling mode
Standby (Only for Heat pump models)	Press the reset button TWICE within 3 seconds.	It beeps briefly twice.	Heating mode
Running	Press the reset button once.	It keeps beeping for a while	Off mode



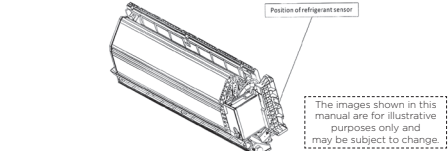
REFRIGERANT SENSOR (OPTIONAL)

Important Notes:

- Replacement and maintenance of the refrigerant sensor must only be done by a licensed HVAC professional and only with a replacement sensor as recommended by the manufacturer. Replacement with a non-recommended sensor will void your warranty.
- The design life of the refrigerant sensor is 15 years, please replace the sensor within the range of the service life.
- The refrigerant sensor automatically detects the condition of the machine while in operation, and will automatically start the circulating air flow and stop the compressor when the concentration reaches the alarm range.
- The alarm signal of the refrigerant sensor is as follows table:

	Error Code
Refrigerant Leak Protection	Display "Hd"
The communication of the refrigerant sensor is abnormal	Display "Ed"

5. The installation position of the refrigerant sensor is shown in the figure below (for example, the appearance of different cabinets may be different).



- This unit is equipped with a refrigerant leak detector for safety. To be effective, the unit must be electrically powered at all times after installation, other than when servicing.
- This refrigerant sensor shall only be replaced with manufacturer approved sensor.
- The Leak Detection system will only operate when the unit is powered on.

INSTRUCTIONS FOR SERVICING(R32)

⚠️ Work with refrigerant must ONLY be conducted by a licensed HVAC professional. Installation by an unlicensed individual may violate local, state of federal law or regulations or building codes. DO NOT ATTEMPT to work with refrigerant unless you are a licensed HVAC contractor.

- Check the information in this manual to find out the dimensions of space needed for proper installation of the device, including the minimum distances allowed compared to adjacent structures.
- Appliance shall be installed, operated and stored in a room with a floor area larger than 4m².
- The installation of pipe-work shall be kept to a minimum.
- The pipe-work shall be protected from physical damage, and shall not be installed in an unventilated space if the space is smaller than 4m².
- Installation and use of refrigerant MUST be done in compliance with all local, state, and federal laws and in compliance with all building codes and environmental regulations.
- The mechanical connections shall be accessible for maintenance purposes.
- Follow all local, state, and federal laws and regulations and the instructions on this manual regarding the storage, handling, installation, maintenance, and disposal of the refrigerant.
- Make sure ventilation openings are clear of any obstruction.
- Notice: The servicing shall be performed only as recommended by the manufacturer.
- Warning: The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.

11. Warning: The appliance shall be stored in a room without continuously operating open flames (for example an operating gas appliance) and ignition sources (for example an operating electric heater). CAUTION: Under no circumstances should you ever smoke while installing HVAC equipment.

12. The appliance shall be stored so as to prevent mechanical damage from occurring.

13. It is appropriate that anyone who is called upon to work on a refrigerant circuit should hold a valid and up-to-date certificate from an assessment authority accredited by the industry and recognizing their competence to handle refrigerants. In accordance with the assessment specification recognized in the industrial sector concerned. Service operations should only be carried out in accordance with the recommendations of the equipment manufacturer.

- * The appliance shall be stored in a room without continuously operating ignition sources (for example open flames, an operating gas appliance or an operating electric heater).
- * Do not pierce or burn.
- * Be aware that refrigerants may not contain an odor.

CAUTION: Only the refrigerant specified in this manual should be utilized. Use of any other refrigerant is DANGEROUS and may cause injury and will VOID the warranty.



16. Information on servicing:

- Checks to the area
- Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system.
- Work procedure
- Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.
- General work area
- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material
- Checking for presence of refrigerant
- The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.
- Presence of fire extinguisher
- If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO₂ fire extinguisher adjacent to the charging area.
- No ignition sources
- No person carrying out work in relation to a refrigeration system which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.
- Ventilated area
- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any work that will produce heat. A degree of ventilation shall continue during the period that the work is carried out.
- The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.
- Checks to the refrigeration equipment
- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed.
- If in doubt consult the manufacturer's technical department for assistance.
- The following checks shall be applied to installations using flammable refrigerants:
 - The charge size is in accordance with the room size within which the refrigerant containing parts are installed;
 - The ventilation machinery and outlets are operating adequately and are not obstructed;
 - If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
 - Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
 - Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.
- Checks to electrical devices
- Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.
- Initial safety checks shall include:
 - That capacitors are discharged; this shall be done in a safe manner to avoid possibility of sparking;
 - That no live electrical components and wiring are exposed while charging, recovering or purging the system;
 - That there is continuity of earth bonding.
- Repairs to sealed components
- During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc. Ensure that apparatus is mounted securely. Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.
- The use of silicone sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.
- Repair to intrinsically safe components
- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use. Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating. Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.
- Cabling
- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or swelling on cabling from sources such as compressors or fans.
- Detection of flammable refrigerants
- Under no circumstances shall potential sources of ignition be in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.
- Leak detection methods
- The following leak detection methods are deemed acceptable for systems containing flammable refrigerants:
 - Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area). Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed. Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

- e) that mechanical connections made in accordance with 22.118 shall be accessible for maintenance purposes;
- f) That pipe-work including piping material, pipe routing, and installation shall include protection from physical damage in operation and service, and be in compliance with national and local codes and standards, such as ASHRAE 15, ASHRAE 15.2, IAPMO Uniform Mechanical Code, ICC International Mechanical Code, or CSA B52. All field joints shall be accessible for inspection prior to being covered or enclosed;
- g) That after completion of field piping for split systems, the field pipework shall be pressure tested with an inert gas and then vacuum tested prior to refrigerant charging, according to the following requirements;
- h) The appliance shall be stored so as to prevent mechanical damage from occurring.
- i) Working personnel for maintenance, service and repair operations.
- Every working procedure that affects safety means shall only be carried out by competent persons according to Annex HH.
- Examples for such working procedures are:
- breaking into the refrigerating circuit;
 - opening of sealed components;
 - opening of ventilated enclosures.

1. Minimum installation height, minimum room area (operating or storage) refer to installation manual.
2. Risk Of Fire-Auxiliary devices which may be ignition sources shall not be installed in the ductwork, other than auxiliary devices listed for use with the specific appliance. See instructions.
3. Mount with the lowest moving parts at least 2.5m (8ft) above floor or grade level.
4. Risk of electric shock. Can cause injury or death. Disconnect all remote electric power supplies before servicing.
5. Risk Of Fire. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Puncture Refrigerant Tubing.
6. Risk Of Fire. Dispose Of Properly In Accordance With Federal Or Local Regulations. Flammable Refrigerant Used.
7. Risk Of Fire. Flammable Refrigerant Used. Consult Repair Manual/Owner's Guide Before Attempting To Service This Product. All Safety Precautions Must Be Followed.
8. Risk Of Fire. Due to Flammable Refrigerant Used. Follow Handling Instructions Carefully in Compliance with National Regulations.

Important Considerations

1. The air conditioner must be installed by professional personnel and the installation manual is used only for the professional installation personnel! The installation specifications should be subject to our after-sale service regulations.
2. CAUTION - Refrigerant is volatile, flammable, and combustible. When charging the system with refrigerant, it is IMPORTANT to follow all instructions, HVAC best practices, local, state, and federal laws and regulations, and requirements in these instructions to avoid serious injury, death, or property damage.
3. A leak test must be done after the installation completed.
4. Prior to any work being done on the system, a full safety check of the system must be completed, including checking for any refrigerant leaks.
5. It is necessary to operate the machine under a controlled procedure in order to ensure that any risk arising from the combustible gas or vapor during the operation is reduced to minimum.
6. Requirements for the total weight of filled refrigerant and the area of a room to be equipped with an air conditioner (are shown as in the following Tables GG.1 and GG.2)

The maximum charge and the required minimum floor area
 $m = (0.7m^2 \times LFL \cdot n_h + (52 \cdot m^2) \times LFL \cdot n_h) \div (200 \cdot m^2) \times LFL$
Where LFL is the lower flammable limit in kg/m³ R32 LFL is 0.306 kg/m³.
For the appliances with a charge amount $m < M < m_h$
The maximum charge in a room shall be in accordance with the following:
 $M_{max} = 2.5 \times (LFL)^{1/3} \times n_h \times (A)^{2/3}$, not to exceed $M_{max} \leq SF \times LFL \times h \times A$
The required minimum floor area A_{min} to install an appliance with refrigerant charge
(Mkg) shall be in accordance with following:
 $A_{min} = (M \div (2.5 \times (LFL)^{1/3} \times h_h))^{3/2}$, not less than $A_{min} = M(SF \times LFL \times h)$

Refrigerant Charge and Room Area Limitations

In EU/CSA 60335-2-40, R32 refrigerant is classified as a class A2L, which is mildly flammable. Therefore, R32 refrigerant is suitable for systems needing additional refrigerant charge and which will limit the area of the rooms being served by the system. Similarly, the total amount of refrigerant in the system shall be less than or equal to the allowable maximum refrigerant charge. The allowable maximum refrigerant charge depends on the area of the rooms being served by the system.

- NOTE:**
The nouns in this section are explained as follows:
Mc: The actual refrigerant charge in the system.
A: the actual room area where the appliance is installed.
Amin: The required minimum room area.
Mmax: The allowable maximum refrigerant charge in a room.
Qmin: The minimum opening area for connected rooms.
Anmin: The minimum opening area for connected rooms.

1. The room area calculation requirements

CAUTION:
The space considered shall be any space which contains refrigerant-containing parts or into which refrigerant could be release.
The room area (A) of the smallest, enclosed, occupied space shall be used in the determination of the refrigerant quantity limits.

For determination of room area (A) when used to calculate the refrigerant charge limit, the following shall apply.
The room area (A) shall be defined as the room area enclosed by the projection to the base of the walls, partitions and doors of the space in which the appliance is installed.
Spaces connected by only drop ceilings, ductwork, or similar connections shall not be considered a single space.

Units mounted higher than 70-55/64 inches and spaces divided by partition walls that are no higher than 62-43/64 inches shall be considered a single space.
Rooms on the same floor and connected by an open passageway between the spaces can be considered a single room when determining compliance to Amin, if the passageway complies with all of the following.

1. It is a permanent opening.
2. It extends to the floor.
3. It is intended for people to walk through.

The area of the connected rooms on the same floor, connected by permanent opening in the walls and/or doors between occupied spaces, including gaps between the wall and the floor can be considered a single room when determining compliance to Amin, provided all of the following conditions are met as fig. 2-1.

1. Low level opening
 - 1) The opening shall not be less than Anmin in Table 2-1.
 - 2) The area of any openings above 11-13/16 inches from the floor shall not be considered in determining compliance with Anmin.
 - 3) At least 50% of the opening area of Anmin shall be below 7-7/8 inches from the floor.
 - 4) The bottom of the opening is not more than 3-15/16 inches from the floor.
- 5) The opening is a permanent opening that cannot be closed.
- 6) For openings extending to the floor the height shall not be less than 2-5/32 inches above the surface of the floor covering.

2. High level opening

- 1) The opening shall not be less than 50% of Anmin in Table 2-1.
- 2) The opening is a permanent opening that cannot be closed.
- 3) The opening shall be at least 59 inches above the floor.
- 4) The height of the opening is not less than 25/32 inches.

NOTE:
The requirement for the second opening can be met by drop ceilings, ventilation ducts, or similar arrangements that provide an airflow path between the connected rooms.

INSTALLATION PRECAUTIONS(R32)

The minimum opening for natural ventilation (Anmin) in connected rooms is related to the room area (A), the actual refrigerant charge of refrigerant in the system (Mc), and the allowable MAXIMUM REFRIGERANT CHARGE in the system (Mmax). Amin can be determined according to Table 2-1.

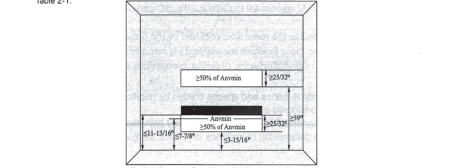


Fig. 2-1: Opening Conditions for Connected Rooms
The minimum opening area for connected rooms.
Note: Take the Mc=1.59kg Anmin=2x0

When the unit detects a refrigerant leak, the minimum airflow of the indoor unit is as follows:

Category	LFL (kg/m ³)	h _m (m)	Floor area (m ²)					
			4	7	10	15	20	30
R32	0.306	2.5	1.53	2.68	3.93	5.74	7.66	11.48
		2.8	1.71	3.00	4.28	6.43	8.57	12.85
		3.0	1.84	3.21	4.59	6.89	9.16	13.77

For R32 refrigerant charge amount and minimum room area:
The machine you purchased may be one of the types in the table below. The indoor and outdoor units are designed to be used together. Please check the machine you purchased. The indoor unit should be installed at least 8.2ft (2.5m) above from the floor, and the minimum room area of operating or storage should be as specified in the following table.

Category	LFL (kg/m ³)	h _m (m)	Charge amount (M) (kg)					
			0.55	0.77	0.87	1.00	1.27	1.50
R32	0.306	2.5	1.44	2.01	2.27	2.61	3.32	2.92
		2.8	1.28	1.86	2.03	2.33	2.96	3.50
		3.0	1.20	1.68	1.90	2.18	2.77	3.27

Installation Safety Principles

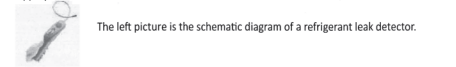
1. Site Safety



2. Operation Safety



- 3. Installation Safety**
- Refrigerant Leak Detector
 - Appropriate Installation Location



- Please note that:
1. The installation site should be well-ventilated.
 2. The sites for installing and maintaining an air conditioner using Refrigerant R454B should be free from open fire or welding, smoking, drying oven or any other heat source higher than 548 which easily produces open fire.
 3. When installing an air conditioner, it is necessary to take appropriate anti-static measures such as wear anti-static clothing and/or gloves.
 4. It is necessary to choose the site convenient for installation or maintenance wherein the air inlets and outlets of the indoor and outdoor units should be not surrounded by obstacles or close to any heat source or combustible and/or explosive environment.
 5. If the indoor unit suffers refrigerant leak during the installation, it is necessary to immediately turn off the valve of the outdoor unit and all the personnel should go out till the refrigerant leaks completely for 15 minutes. If the product is damaged, it is a must to carry such damaged product back to the maintenance station and it is prohibited to weld the refrigerant pipe or conduct other operations on the user's site.
 6. It is necessary to choose the place where the inlet and outlet air of the indoor unit is even.
 7. It is necessary to avoid the places where there are other electrical products, power switch plugs and sockets, kitchen cabinet, bed, sofa and other valuables right under the lines on two sides of the indoor unit.

Suggested Tools		(Tools not included)	
Tool	Picture	Tool	Picture
Standard Wrench		Pipe Cutter	
Adjustable/Crescent Wrench		Screw drivers (Phillips & Flat blade)	
Torque Wrench		Manifold and Gauges	
Hex Keys or Allen Wrenches		Level	
Drill & Drill Bits		Flaring tool	
		Micron Gauge	
		Vacuum Pump	
		Safety Glasses	
		Work Gloves	
		Refrigerant Scale	

Hole Saw		Clamp on Amp Meter		
Pipe Length and Additional Refrigerant				
Inverter Models Capacity (Btu/h)		9K/12K	18K/24K	
Length of pipe with standard charge		7.5m/25ft	7.5m/25ft	
Maximum distance between indoor and outdoor unit		20m/66ft	25m/82ft	
Additional refrigerant charge		0.11oz/ft	0.11oz/ft	
Max. diff. in level between indoor and outdoor unit		10m/33ft	10m/33ft	
Type of refrigerant		R32	R32	
Torque Parameters				
PIPE SI e	Newton meter[N x m]	Pound-force foot (lbf-ft)	Kilogram-force meter (kgf-m)	
1/4 " (φ 6.35)	15 - 20	11.1 - 14.8	1.5 - 2.0	
3/8 " (φ 9.52)	31 - 35	22.9 - 25.8	3.2 - 3.6	
1/2 " (φ 12.7)	45 - 50	33.2 - 36.9	4.6 - 5.1	
5/8 " (φ 15.88)	60 - 65	44.3 - 48.0	6.1 - 6.6	

Wiring material ampacities		AWG	
4		22	
7		20	
10		18	
13		16	
18		14	
25		12	
30		10	
40		8	
55		6	
70		4	

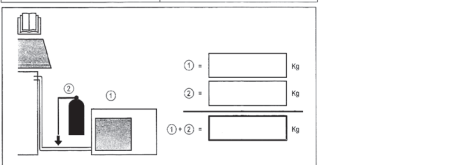


Diagram 1: REFRIGERANT CHARGE (the percentage of the appliance)
Diagram 2: REFRIGERANT CHARGE (the percentage of the appliance)

Note: This table is only for reference, the installation shall meet the requirements of local, state and federal laws and regulations.

Power Supply			
Model	Voltage	MCA	Breaker
9K-Heat Pump	115V	16	25
12K-Heat Pump	115V	17	25
12K-Heat Pump	208/230V	11	15
18K-Heat Pump	208/230V	17	25
24K-Heat Pump	208/230V	19	30

The images shown in this manual are for illustrative purposes only and may not be identical to the actual product.

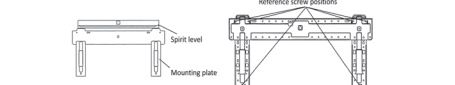
INDOOR UNIT INSTALLATION STEP 1

- Step1: Select Installation location**
- 1.1 Ensure the installation complies with the installation minimum dimensions (defined below) and meets the minimum and maximum connecting piping length and maximum change in elevation as defined in the System Requirements section.
 - 1.2 Air inlet and outlet will be clear of obstructions, ensuring proper airflow throughout the room.
 - 1.3 Condensate can be easily and safely drained.
 - 1.4 All connections can be easily made to outdoor unit.
 - 1.5 Indoor unit is out of reach of children.
 - 1.6 A mounting wall strong enough to withstand four times the full weight and vibration of the unit.
 - 1.7 Filter can be easily accessed for cleaning.
 - 1.8 Leave enough free space to allow access for routine maintenance.
 - 1.9 Unit at least 10 ft. (3 m) away from the antenna of TV set or radio. Operation of the air conditioner may interfere with radio or TV reception in areas where reception is weak. An amplifier may be required for the affected device.
 - 1.10 Do not mount in any corrosive environment, including, but not limited to laundry rooms, near swimming pools, grow rooms, mortuaries, facilities where chemicals are used, or similar locations.
 - 1.11 For ETL certification area, Caution: Mount with the lowest moving parts at least 8 ft. (2.4 m) above Floor or grade level.



INDOOR UNIT INSTALLATION STEP 2 and STEP 3

- Step2: Install Mounting Plate**
- 2.1 DO NOT ATTEMPT TO INSTALL THIS UNIT ALONE. Installation should only be conducted by a minimum of two people.
 - 2.2 Installation should only occur on a flat/level wall. If the wall is not flat or level, the wall needs to be fixed prior to installation. Failure to do so can result in damage to the wall and the unit, possible injury, deficient operation, leakage and mold growth, and/or excessive vibration and noise from the unit.
 - 2.3 Adjust the mounting plate to a horizontal state with a spirit level, then mark out the screw hole positions on the wall.
 - 2.4 Put down the mounting plate and drill holes in the marked positions with drill.
 - 2.5 Insert expansion plastic anchors into the holes, then hang the mounting plate and affix it with screws.



Note:
(I) Make sure the mounting plate is firm enough and flat against the wall after installation.
(II) This figure shown may be different from the actual object, please take the latter as the standard.

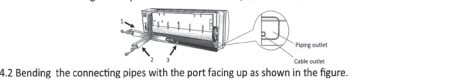
Step3: Drill Wall Hole

- A hole in the wall should be drilled for refrigerant piping, the drainage pipe, and connecting cables.
- 3.1 Determine the location of wall holebase onto the position of mounting plate.
 - 3.2 The hole should be have a 70mm diameter at least and a small oblique angle to facilitate drainage. It is ESSENTIAL that the drain hole be drilled in a location that allows for a continuous downward slope from the unit to the external discharge point. The hose needs to also be run in a way that prevents kinking. At no point in the running of the hose should the hose's angle change such that it creates any amount of upward slope. Failure to do so, can result in significant property damage and health risks from leakage and/or mold/mildew growth.
 - 3.3 Drill the wall hole with 70mm core drill and with small oblique angle lower than the indoor end about 5mm to 10mm.
 - 3.4 Place the wall sleeve and wall sleeve cover(both are optional parts) to protect the connection parts.
- Caution:**
When drill the wall hole, make sure to avoid wires, plumbing and other sensitive components.



INDOOR UNIT INSTALLATION STEP 4

- Step4: Connecting Refrigerant Pipe**
- 4.1 According to the wall hole position, select the appropriate piping mode.
 - There are three optional piping modes for indoor units as shown in the figure below:
In Piping Mode 1 or Piping Mode 3, a notch should be made by using scissors to cut the plastic sheet of piping outlet and cable outlet on the corresponding side of the indoor unit.
Note: When cutting off the plastic sheet at the outlet, the cut should be trimmed to smooth.



- 4.2 Bending the connecting pipes with the port facing up as shown in the figure.
- 4.3 Take off the plastic cover in the pipe ports and take off the protective cover on the end of piping connectors.
- 4.4 Check whether there is any sundry on the part of the connecting pipe and make ensure the port is clean.
- 4.5 After align the center, rotate the nut of the connecting pipe to tighten the nut as tightly as possible by hand.
- 4.6 Use a torque wrench to tighten it according to the torque values in the torque requirements table; (Refer to the torque requirements table on section INSTALLATION PRECAUTIONS)
- 4.7 Wrap the joint with the insulation pipe.



Note: When flared joints are reused indoors, the flare part shall be re-fabricated.



INDOOR UNIT INSTALLATION STEP 5 and STEP 6

- Step5: Connect Drainage Hose**
- 5.1 Adjust the drainage hose(if applicable)
 - In some model, both sides of the indoor unit are provided with drainage ports, you can choose one of them to attach the drainage hose. And plug the unused drain port with the rubber attached in one of the ports.



- 5.2 Connect the drainage hose to the drainage port, ensure the joint is firm and the sealing effect is good.
- 5.3 Wrap the joint firmly with teflon tape to ensure no leaks.
- Note:** Make sure there is no twists or dents, and the pipes should be placed obliquely downward to avoid blockage, to ensure proper drainage.



Step6: Connect Wiring

- CAUTION:** Prior to beginning any electrical work make sure that all electrical is shut off to the wires being connected. Failure to do so can result in serious injury or death.
- 6.1 Choose the right cables size determined by the maximum operating current on the nameplate. (Check the cables size refer to section INSTALLATION PRECAUTIONS)
 - 6.2 Open the front panel of indoor unit.
 - 6.3 Use a screwdriver, open the electric control box cover, to reveal the terminal block.
 - 6.4 Unscrew the cable clamp.
 - 6.5 Insert one end of the cable into the position of control box from the back of the right end of the indoor unit.
 - 6.6 Connect the wires to corresponding terminal according to the wiring diagram on the electric control box cover. And make sure that they are well connected.
 - 6.7 Screw the cable clamp to fasten the cables.
 - 6.8 Reinstall the electric control box cover and front panel.



INDOOR UNIT INSTALLATION STEP 7 and STEP 8

- Step7: Wrap Piping and Cable**
- After installing the refrigerant and drainage pipes, bundle them with insulating tape to save space, protect them, and provide insulation before passing them through the wall hole.
- 7.1 Arrange the pipes, cables and drainage hose well as the following picture.
- Note:**
(I) Make sure the drainage hose is at the bottom.
(II) Avoid crossing and bending of parts.
(III) Failure to use insulation tape may result in condensation forming on the lines resulting in corrosion to the pipes and/or water damage.
7.2 Using the insulating tape wrap the refrigerant pipes, connecting wires and drainage hose together tightly.

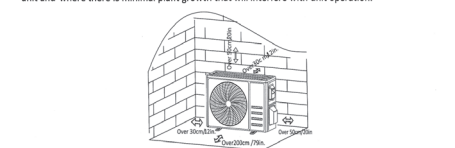


- Step8: Mount Indoor Unit**
- 8.1 Slowly pass the refrigerant pipes, connecting wires and drainage hose wrapped bundle through the wall hole.
 - 8.2 Hook the top of indoor unit on the mounting plate.
 - 8.3 Apply slight pressure to the left and right sides of the indoor unit, make sure the indoor unit's hooked firmly.
 - 8.4 Push down the bottom of indoor unit to let the snaps onto the hooks of the mounting plate, and make sure it's hooked firmly.
- (I) Grab both ends of the bottom plate, apply a little outward force to take off the bottom plate.
 - (II) Hook the top of the indoor unit on the mounting plate without piping and wiring.
 - (III) Lift the indoor unit opposite the wall, unfold the bracket on the mounting plate, and use this bracket to prop up the indoor unit, there will be a big space for operation.
 - (IV) Do the refrigerant piping, wiring, connect drainage hose, and wrap them as **Step 4** to **7**.
 - (V) Replace the bracket of mounting plate.
 - (VI) Push down the bottom of indoor unit to let the snaps onto the bottom hooks of the mounting plate, and make sure it is hooked firmly.
 - (VII) Replace the bottom plate of the indoor unit.



OUTDOOR UNIT INSTALLATION STEPS 1, 2 AND 3

- Step1: Select Installation Location**
- Select a site that allows for the following:
- 1.1 Do not install the outdoor unit near sources of heat, steam or flammable gas.
 - 1.2 Do not install the unit in too windy or dusty places.
 - 1.3 Do not install the unit where people often pass. Select a place where the air discharge and operating sound will not disturb the neighbors.
- 1.4 Avoid installing the unit where it will be exposed to direct sunlight (otherwise use a protection, if necessary, that should not interfere with the air flow).
 - 1.5 Reserve the spaces as shown in the picture for the air to circulate freely.
 - 1.6 Install the outdoor unit in a safe and solid place.
 - 1.7 If the outdoor unit is subject to vibration, place rubber blankets onto the feet of the unit.
 - 1.8 Install in a location where there are minimal vermin, lizards, or reptiles that can cause damage to the unit and where there is minimal plant growth that will interfere with unit operation.



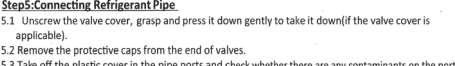
- Step2: Install Drainage Hole**
- 2.1 This step only for heat pump models or RCACs.
 - 2.2 Insert the drainage joint to the hole at the bottom of the outdoor unit.
 - 2.3 Connect the drainage hose to the joint and make the connection well enough.
- Step3: Fix Outdoor Unit**
- 3.1 According to the outdoor unit installation dimensions to mark the installation position for expansion bolts.
 - 3.2 Drill holes and clean the concrete dust and place the bolts.
 - 3.3 If applicable install 4 rubber insulators in the holes before placing the outdoor unit. (Optional) This will reduce vibrations and noise.
 - 3.4 Place the outdoor unit base on the bolts and pre-drilled holes.
 - 3.5 Use wrench to fix the outdoor unit firmly with bolts.

- Note:**
The outdoor unit can be fixed on a wall-mounting bracket. Follow the instruction of the wall-mounting bracket to fix the wall-mounting bracket on the wall, and then fasten the outdoor unit on it and keep it horizontal. The wall-mounting bracket must be able to support at least 4 times of the weight of outdoor unit.

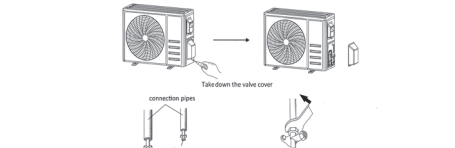
OUTDOOR UNIT INSTALLATION - PRO STEPS STEP 4 and 5

Step 4: Install Wiring-Qualified Licensed Professional Steps

- CAUTION:** Prior to beginning any electrical work make sure that all electrical is shut off to the wires being connected. Failure to do so can result in serious injury or death.
- 4.1 Use a Phillips screwdriver to unscrew wiring cover, grasp and press it down gently to take it down.
 - 4.2 Unscrew the cable clamp and take it down.
 - 4.3 According to the wiring diagram posted inside the wiring cover, connect the connecting wires to the corresponding terminals, and ensure all connections are firm and secure.
 - 4.4 Reinstall the cable clamp and wiring cover.
- Note:** When connecting the wires of indoor and outdoor units, the power should be cut off.



- Step5: Connecting Refrigerant Pipe**
- 5.1 Unscrew the valve cover, grasp and press it down gently to take it down(if the valve cover is applicable).
 - 5.2 Remove the protective caps from the end of valves.
 - 5.3 Take off the plastic cover in the pipe ports and check whether there are any contaminants on the port of the connecting pipe and make ensure the port is clean.
 - 5.4 After aligning the center, rotate the flare nut of the connecting pipe to tighten the nut as tightly as possible by hand.
 - 5.5 Use a spanner to hold the body of the valve and use a torque wrench to tighten the flare nut according to the torque values in the torque requirements table. (Refer to the torque requirements table on section INSTALLATION PRECAUTIONS)



OUTDOOR UNIT INSTALLATION -PRO STEP STEP 6

- Step6: Vacuum Pumping-DANGER-MUST only be performed by licensed HVAC professional**
- 6.1 Use a spanner to take down the protective caps from the service port, low pressure valve and high pressure valve of the outdoor unit.
 - 6.2 Connect the pressure hose of manifold gauge to the service port on the outdoor unit low pressure valve.
 - 6.3 Connect the charge hose from the manifold gauge to the vacuum pump.
 - 6.4 Open the low pressure valve of the manifold gauge and close the high pressure valve.
 - 6.5 Turn on the vacuum pump to vacuum the system.
 - 6.6 The vacuum time should not be less than 15 minutes, or make sure the compound gauge indicates -0.1 MPa (-76 cmHg).
 - 6.7 Close the low pressure valve of the manifold gauge and turn off the vacuum.
 - 6.8 Hold the pressure for 5 minutes, make sure that the rebound of compound gauge pointer does not exceed 0.005 MPa.
 - 6.9 Open the low pressure valve counterclockwise for 1/4 turn with hexagonal wrench to let a little refrigerant fill in the system, and close the low pressure valve after 5 seconds and quickly remove the pressure hose.
 - 6.10 Check all indoor and outdoor joints for leakage with soapy water or leak detector.
 - 6.11 Fully open the low pressure valve and high pressure valve of the outdoor unit with hexagonal wrench.
 - 6.12 Reinstall the protective caps of the service port, low pressure valve and high pressure valve of the outdoor unit.
 - 6.13 Reinstall the valve cover.