This product utilizes **R-454B** *refrigerant*

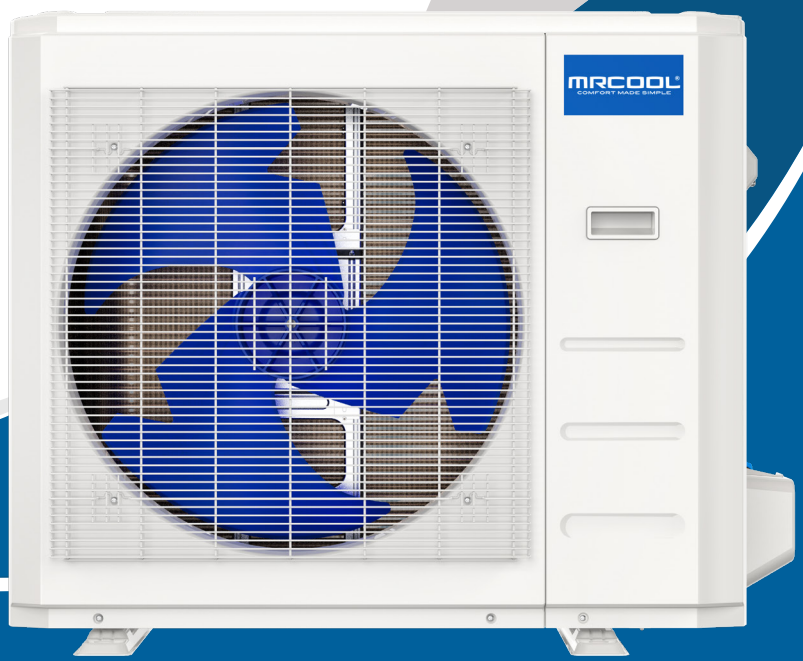
DIY® Hyper Heat Series Single-Zone Mini-Split System

INSTALLATION & OWNER'S MANUAL

MODELS:

DIY-*-HP-WMAH-230D25-O
DIYCASSETTE*HP-230D25-O
DIYHH-*-HP-C-230D25-O





Read this manual carefully before installation and keep it where the operator can easily find it for future reference.

Due to updates and constantly improving performance, the information and instructions within this manual are subject to change without notice.

Version Date: November 11, 2025
Please visit www.mrcool.com/documentation to ensure you have the latest version of this manual.

MRCOOL®
COMFORT MADE SIMPLE

CONTENTS

1 SAFETY 2
2 UNIT OVERVIEW 9
- 2.1 Packing List 9
- 2.2 Indoor Unit Display 10
- 2.3 Additional Functions 11
- 2.4 Setting Angle of Airflow 12
- 2.5 Manual Operation 12
- 2.6 Packing & Unpacking the Unit 13
- 2.7 Operating Conditions 13

3 INDOOR UNIT INSTALLATION 14
- 3.1 Installation Overview 14
- 3.2 Installation Location 14
- 3.3 Drilling Wall Opening 17

4 OUTDOOR UNIT INSTALLATION 20
- 4.1 Location Selection 20
- 4.2 Drain Joint Installation 21
- 4.3 Anchor Outdoor Unit 22

5 REFRIGERANT PIPING CONNECTION 23
- 5.1 Prepare Exterior Wall Hole 23
- 5.2 Unwind Quick Connect Line Set 24
- 5.3 Connect Line Set to Indoor Unit 24
- 5.4 Connect Line Set to Outdoor Unit 26
- 5.5 Opening Refrigerant Valves 27
- 5.6 Wrap Piping Connections 28
- 5.7 Connect Drain Pipe 29

6 ELECTRICAL CONNECTIONS 30
- 6.1 Electrical Precautions 30
- 6.2 Signal & Power Cable Connection 31

7 POST-INSTALLATION 33
- 7.1 Electrical & Gas Leak Checks 33
- 7.2 Test Run 34
- 7.3 Care & Maintenance 35
- 7.4 Troubleshooting 37
- 7.5 Error Display (Indoor Unit) 39
- 7.6 Error Display (Outdoor Unit with Auxiliary Board) 40
- 7.7 Quick Maintenance by Error Code 41



This marking indicates that this product should not be disposed with other household wastes throughout North America. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

Safety Precautions

Read Before Using

Incorrect usage may cause serious damage or injury.

The symbols below are used throughout this manual to indicate instructions that should be followed closely or actions that should be avoided to prevent death, injury, and/or property damage.

WARNING	Indicates the possibility of personal injury or loss of life.
CAUTION	Indicates the possibility of property damage or serious consequences.

WARNING FOR PRODUCT INSTALLATION

INSTALLATION MUST BE PERFORMED BY AN AUTHORIZED DEALER OR SPECIALIST. DEFECTIVE INSTALLATION CAN CAUSE WATER LEAKAGE, ELECTRICAL SHOCK, OR FIRE.

******ELECTRICAL WORK MUST BE COMPLETED BY A QUALIFIED ELECTRICAL TECHNICIAN******

- ⊘ ***DO NOT*** **install the unit in a location that may be exposed to combustible gas leaks. If combustible gas accumulates around the unit, it could cause fire.**
- ⊘ ***DO NOT*** **turn on the power until the installation and all work has been completed.**

1. Installation must be performed according to the installation instructions. Improper installation could cause water leakage, electrical shock, or fire.
2. Contact an authorized service technician for repair or maintenance of this unit.
3. This appliance must be installed in accordance with national wiring regulations.
4. Only use the included accessories, parts, and specified parts for installation. Using non-standard parts can cause water leakage, electrical shock, fire, and/or failure of the unit.
5. Install the unit in a firm location that can support the unit's weight. If the location cannot support the unit's weight, or the installation is not done properly, the unit may drop and cause serious injury and damage.
6. Install the drainage piping according to the instructions in this manual. Improper drainage could cause water damage to your home and/or property.
7. When moving or relocating the air conditioner, consult experienced service technicians for disconnection and re-installation of the unit.
8. For detailed information of how to install the indoor and outdoor units to their respective supports, please refer to the indoor unit installation and outdoor unit installation sections of this manual.
9. USB device access, replacement, and maintenance operations must be carried out by professional staff.

WARNING FOR CLEANING & MAINTENANCE

1. **DO NOT** clean the unit with excessive amounts of water.
2. **DO NOT** clean the unit with combustible cleaning agents, as these could cause deformation and/or fire.
3. Turn off the device and disconnect the power before cleaning. Failure to do this could result in electrical shock.

TAKE NOTE OF FUSE SPECIFICATIONS

- The unit's circuit board (PCB) is designed with a fuse to provide over-current protection.
- The specifications of the fuse are printed on the circuit board, examples of such are T5A/250VAC and T10A/250VAC.

Note: Only a blast-proof ceramic fuse can be used.

1 SAFETY

WARNING FOR PRODUCT USE

- ⊘ ***DO NOT*** **insert fingers, rods, or other objects into the air inlet or outlet. This could cause injury, since the fan may be rotating at high speeds.**
- ⊘ ***DO NOT*** **use flammable sprays such as hair spray, lacquer or paint near the unit, as this could cause fire and/or an explosion.**
- ⊘ ***DO NOT*** **operate the unit in places near or around combustible gases. Emitted gas may collect around the unit and cause an explosion.**
- ⊘ ***DO NOT*** **allow children to play with the appliance. Children must be supervised around the unit at all times.**
- ⊘ ***DO NOT*** **operate the unit in a room where it could be exposed to excessive amounts of water, such as a bathroom or laundry room. Exposure to excessive water amounts can cause the electrical components to short circuit.**
- ⊘ ***DO NOT*** **expose your body directly to direct cool airflow from the unit for a prolonged period of time.**

1. If the unit operates abnormally (emits strange noises or a burning smell), immediately turn off the unit and disconnect the power in order to avoid electric shock, fire, and/or injury. Call your local dealer, or MRCOOL® tech support at (270) 366-0457, for further assistance.
2. If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room in order to avoid an oxygen deficiency.
3. In certain functional environments (such as kitchens and server rooms etc.), the use of specially designed air-conditioning units is highly recommended.
4. This appliance is not intended for use by persons(including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
5. Turn off the unit and disconnect the power before performing any cleaning, installation, or repairing. Failure to do so can cause electric shock.

CAUTION

- ⊘ ***DO NOT*** **allow the air conditioner to operate for extended periods of time with the doors or windows open, or in very high humidity.**
- ⊘ ***DO NOT*** **operate the air conditioner with wet hands, as this could cause electric shock.**
- ⊘ ***DO NOT*** **use device for any other purpose than its intended use.**
- ⊘ ***DO NOT*** **climb onto or place objects on top of the outdoor unit.**

1. Make sure that water condensation can drain smoothly and unhindered from the unit.
2. Turn off the unit and disconnect the power if the unit will not be used for an extended period of time.
3. Turn off and unplug the unit during storms.

ELECTRICAL WARNINGS

******ELECTRICAL WORK MUST BE COMPLETED BY A QUALIFIED ELECTRICAL TECHNICIAN******

- ⊘ ***DO NOT*** **share the power supply with other appliances. An improper or insufficient power supply could cause fire and/or electrical shock.**

1. Only use the specified wire. If the wire is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
2. The product must be properly grounded during installation or electrical shock could occur.
3. Appropriate wiring standards, regulations, and the installation manual must be followed for all electrical work.
4. If connecting power to fixed wiring, an all-pole disconnection device must be incorporated in the fixed wiring in accordance with the wiring rules and must meet the following requirements: at least 3 mm of clearances in all poles, a leakage current that may exceed 10 mA, and a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.
5. Connect cables tightly and clamp them securely to prevent external forces from damaging the terminal.

ELECTRICAL WARNINGS

6. Improper electrical connections could overheat, causing fire and/or electrical shock.
7. All electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
8. All wiring must be properly arranged to ensure that the control board cover can close properly. If the control board cover is not properly closed, it can lead to corrosion and cause the connection points on the terminal to heat up, catch fire, or cause electrical shock.
9. Disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

FLAMMABLE REFRIGERANT WARNINGS

1. The installation of pipe-work should be kept to a minimum and should be protected from physical damage.
2. Refrigerant pipes should comply with national gas regulations.
3. All mechanical connections and ventilation openings should be kept clear of obstruction.
4. Utilize proper disposal processes based on national regulations.
5. Any person involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorizes their competence to handle refrigerants safely in accordance with an industry recognized assessment specification.
6. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
7. Do not use any means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
8. 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).
9. Do not allow foreign matter (oil, water, etc.) to enter the piping, and securely seal the opening by pinching, taping, etc.
10. Do not pierce or burn.
11. Refrigerants may not contain an odor.
12. Working procedures that affect safety should only be carried out by competent persons.
13. The unit should be stored in a well-ventilated area where the room size corresponds to the room area as specific for operation, and should be stored so as to prevent potential mechanical damage from occurring.
14. Joints should be tested with detection equipment with a capability of 5 g/year of refrigerant or better, with the equipment in standstill and under operation or under a pressure of at least these standstill or operation conditions after installation. Detachable joints should NOT be used in the indoor side of the unit (brazed, welded joint could be used).
15. A leak detection system is installed. The unit must be powered except for service. For units with a refrigerant sensor, the indoor unit will display an error code and emit a buzzing sound, the compressor of the outdoor unit will immediately stop, and the indoor fan will start running. The service life of the refrigerant sensor is 15 years. When the refrigerant sensor malfunctions, the indoor unit will display the error code "FHCC". The refrigerant sensor cannot be repaired and can only be replaced by the manufacturer. It should only be replaced with the sensor specified by the manufacturer.
16. When a flammable refrigerant is used, the requirements for installation space of the appliance and/or ventilation requirements are determined according to:
    - The mass charge amount (M) used in the unit.
    - The installation location.
    - The type of ventilation of the location of the unit.
    - Piping material, pipe routing, and installation must include protection from physical damage in operation and service. This must be in compliance with local codes and standards, such as ASHRAE 15, IAPMO Uniform Mechanical Code, ICC International Mechanical Code, or CSA B52. All field joints must be accessible for inspection prior to being covered or enclosed.
    - Protection devices, piping and fittings must be protected as much as possible against adverse environmental effects. For example, against the danger of water collecting and freezing in relief pipes or against accumulation of dirt or debris.

FLAMMABLE REFRIGERANT WARNINGS

- Piping in refrigeration systems must be designed and installed to minimize the likelihood of hydraulic shock, resulting in damage from the system.
- Steel pipes and components must be protected against corrosion with a rust-proof coating before applying insulation.
- Precautions must be taken against excessive vibration or movement of the unit.
- The minimum floor area of the room must be mentioned in the form of a table or a single figure without reference to a formula.

17. After completion of field piping for split systems, the field pipework should be pressure tested with an inert gas and then vacuum tested prior to refrigerant charging, according to the following requirements:
    - The minimum test pressure for the low side of the system should be the low side design pressure and the minimum test pressure for the high side of the system should be the high side design pressure, unless the high side of the system cannot be isolated from the low side of the system in which case the entire system should not be pressure tested to the low side design pressure.
    - The test pressure after removal of pressure source shall be maintained for at least 1 hour with no decrease of pressure indicated by the test gauge, with test gauge resolution not exceeding 5% of the test pressure.
18. Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repairs to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system.
19. Work should 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.
20. All maintenance staff and others working in the local area should be instructed on the nature of work being carried out. Avoid work in confined spaces.
21. The area should 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. no sparking, adequately sealed, or intrinsically safe.
22. If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment should be on site and readily available. Have a dry power or CO2 fire extinguisher adjacent to the charging area.
23. No person carrying out work in relation to a refrigerating system which involves exposing any pipe work should 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 should be displayed.
24. Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. 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.
23. 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 ad service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance. The following checks should be applied to installations using flammable refrigerants:
    - the actual refrigerant charge 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 circuits should be checked for the presence of refrigerant;
    - marking to the equipment continues to be visible and legible, marking and signs that are illegible should be corrected;
    - refrigerant 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 or protected against corrosion.

FLAMMABLE REFRIGERANT WARNINGS

24. 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 should be used.
25. Initial safety checks should include:
    - that capacitors are discharged: this should be done in a safe manner to avoid the possibility of sparking;
    - that there are no live electrical components and wiring are exposed while charging, recovering, or purging the system;
    - that there is continuity of earth bonding.
26. Sealed electrical components should be replaced if damaged.
27. Intrinsically safe components should be replaced if damaged.
28. Check that wiring 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 continual vibration from sources such as compressors or fans.
29. Under no circumstances should potential sources of ignition be used in the search for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) should not be used. The following leak detection methods are deemed acceptable for refrigerant systems. Electronic leak detectors may be used to detect refrigerant leaks but, in the case of flammable refrigerants, 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 should be calibrated to the refrigerant employed, and the appropriate percentage of gas (25% minimum) is confirmed. Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine may react with the refrigerant and corrode the copper work. Examples of leak detection fluids are the bubble method, fluorescent method agents, etc. If a leak is suspected, all naked flames should be removed/extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant should be recovered from the system, or isolated (by means of shut-off valves) in a part of the system remote from the leak. See the following instructions of removal of refrigerant.
30. When breaking into the refrigerant circuit to make repairs, or for any other purpose, conventional procedures should be used. However, for flammable refrigerants, it is even more vital to follow best practice. The following procedure should be adhered to:
    - safely remove refrigerant following local and national regulations;
    - evacuate;
    - purge the circuit with inert gas;
    - evacuate;
    - continuously flush or purge with inert gas when using flame to open circuit;
    - open the circuit
31. The refrigerant charge should be recovered into the correct recovery cylinders if venting is not allowed by local and national codes. For units containing flammable refrigerants, the system should be purged with oxygen-free nitrogen to render the appliance safe for flammable refrigerants. This process might need to be repeated several times. Compressed air or oxygen shall not be used for purging refrigerant systems. For appliances containing flammable refrigerants, refrigerant purging should be achieved by breaking the vacuum in the system with oxygen-free nitrogen and continuing to fill the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process should be repeated until no refrigerant is within the system. When the final oxygen-free nitrogen charge is used, the system should be vented down to atmospheric pressure to enable work to take place. The outlet for the vacuum pump should not be close to any potential ignition sources, and ventilation should be available.
32. In addition to conventional charging procedures, the following requirements should be followed:
    - Work should be undertaken with appropriate tools only (in case of uncertainty, please consult the manufacturer of the tools for use with flammable refrigerants)
    - Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
    - Ensure that the refrigeration system is grounded prior to charging the system with refrigerant.
    - Label the system when charging is complete (if not already).

FLAMMABLE REFRIGERANT WARNINGS

- Extreme care should be taken not to overfill the refrigeration system.
- Prior to recharging the system, it should be pressure tested with oxygen-free nitrogen (OFN). The system should be leak-tested on completion of charging but prior to commissioning. A follow-up leak test shall be carried out prior to leaving the site.

33. Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is good recommended practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample should be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.
    a. Become familiar with the equipment and its operation.
    b. Isolate the system electrically.
    c. Before attempting the procedure ensure that:
        - mechanical handling equipment is available, if required, for handling refrigerant cylinders;
        - all personal protective equipment is available and being used correctly;
        - the recovery process is supervised at all times by a competent person;
        - recovery equipment and cylinders conform to the appropriate standards

    Pump down refrigerant system, if possible.
    e. If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
    f. Make sure that the cylinder is situated on the scales before recovery takes place.
    g. Start the recovery machine and operate in accordance with instructions.
    h. Do not overfill cylinders (no more than 80% volume liquid charge).
    i. Do not exceed the maximum working pressure of the cylinder, even temporarily.
    j. When the cylinders have been filled correctly and the process completed, make sure that the cylinders and equipment are removed from the site promptly and all isolation valves on the equipment are closed off.
    k. Recovered refrigerant should not be charged into another refrigeration system unless it has been cleaned and checked.
34. Equipment shall be labeled stating that it has been decommissioned and emptied of refrigerant. The label should be dated and signed. For appliances containing flammable refrigerants, ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.
35. When removing refrigerant from a system, either for servicing or decommissioning, it is good recommended practice that all refrigerants are removed safely. When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used should be designated for the recovered refrigerant and labeled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs. The recovery equipment should be in good working order with a set of instructions concerning the equipment that is at hand and should be suitable for the recovery of the flammable refrigerant. If in doubt, the manufacturer should be consulted. In addition, a set of calibrated weighing scales should be available and in good working order. Hoses should be complete with leak-free disconnect couplings and in good condition. The recovered refrigerant should be processed according to local legislation in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.
36. If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The compressor body should not be heated by an open flame or other ignition sources to accelerate this process. When oil is drained from a system, it should be carried out safely.
37. An unventilated area where the appliance using flammable refrigerants is installed should be constructed so that should any refrigerant leak, it will not stagnate so as to create a fire or explosion hazard. If appliances connected via an air duct system to one or more rooms below the ventilation requirements, that room should never contain potential ignition sources. A flame-producing device may be installed in the space if the device is provided with an effective flame arrest. Auxiliary devices which may be a potential

FLAMMABLE REFRIGERANT WARNINGS

potential ignition source should not be installed in the duct work. Examples of such are hot surfaces with a temperature exceeding 1292°F (700°C) and electric switching devices. Only auxiliary devices (such as a certified heater kit) approved by the manufacturer or declared suitable with the refrigerant should be installed in connecting ductwork. False or drop ceilings may be used as a return air plenum if a refrigerant detection system is provided in the appliance and any external connections are also provided with a sensor immediately below the return air plenum duct joint. Refrigerant sensors for refrigerant detection systems should only be replaced with sensors specified by the manufacturer. A leak detection system is installed. The unit must be powered except for service.

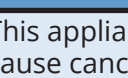
38. Transport of equipment containing flammable refrigerants should comply with transportation regulations.
39. Marking of equipment using signs should comply with local regulations.
40. Disposal of equipment using flammable refrigerants should comply with national regulations.
41. Storage of equipment/appliances should be in accordance with the manufacturer's instructions.
42. Storage of packed (unsold) equipment should be constructed so that mechanical damage to the equipment inside the package will not cause a leak of the refrigerant charge. The maximum number of pieces of equipment permitted to be stored together will be determined by local regulations.
43. During the evacuation test, after achieving a vacuum level specified in the manual or less, the refrigeration system shall be isolated from the vacuum pump and the pressure shall not rise above 1500 microns within 10 minutes. The vacuum pressure level should be specified in the manual, and should be the lessor of 500 microns of the value required for compliance with national and local codes and standards, which may vary between residential, commercial, and industrial buildings.
    - Field-made refrigerant joints indoors should be tightness-tested according to the following requirements: the test method should have a sensitivity of 5 grams per year of refrigerant or better under a pressure of at least 0.25 times the maximum allowable pressure. No leak should be detected.
    - Any servicing should be performed only as recommended by MRCOOL®.

43. Any maintenance, service, or repair operations must be performed by qualified personnel. Every working procedure that affects safety should only be carried out by competent persons that are both trained and certified. The training of these procedures should be carried out by national training organizations or manufacturers that are accredited to teach the relevant national competency standards that may be set in legislation. All training should follow the ANNEX HH requirements of UL 60334-2-40 4th Edition.

    Examples of such working procedures are:
    - breaking into a refrigerant circuit
    - opening of sealed components
    - opening of ventilated enclosures

WARNING: PROPOSITION 65

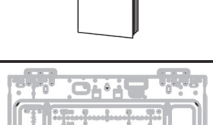
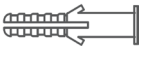
This appliance contains fiberglass insulation. Respirable particles of fiberglass are known to the state of California to cause cancer. Exhaust gas from this appliance contains chemicals, including carbon monoxide, known to the state of California to cause birth defects or other reproductive harm.

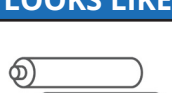
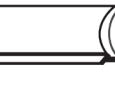
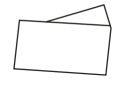
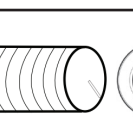
Symbols Displayed on Indoor & Outdoor Unit		
	**WARNING**	This symbol shows that this appliance uses a flammable refrigerant. If the refrigerant is leaked and exposed to an external ignition source, there is a risk of fire.
	**CAUTION**	This symbol shows that the operation manual should be read carefully.
	**CAUTION**	This symbol shows that a service personnel should be handling this equipment with reference to the installation manual.
	**CAUTION**	
	**CAUTION**	This symbol shows that information is available such as the operating manual or installation manual.

2 UNIT OVERVIEW

2.1 Packing List

This system comes with the following accessories. Use all of the installation parts and accessories to install the unit. Improper installation may result in water leakage, electrical shock and fire, or cause the equipment to fail. The items that are not included with the air conditioner must be purchased separately.

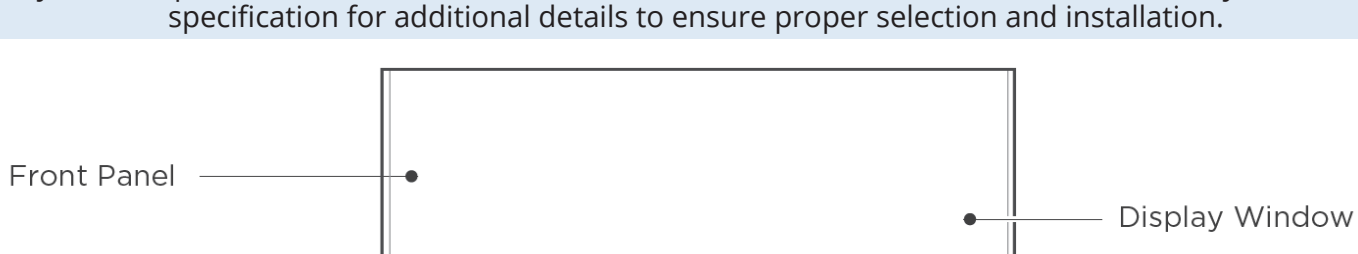
PART	LOOKS LIKE	QUANTITY
Manuals		2 (Installation & Remote)
Mounting Plate & Template		1 *1- Metal Mounting Plate* *1 - Cardboard Template*
Remote Control		1
Drain Pipe		1
Anchor		5-8 each (Packaged Together)
Mounting Plate Fixing Screw		
Smart Controller Kit		1
DIYPRO® Cable		1
Small Filter		2
Allen Wrench		1
Non-Adhesive Tape		1

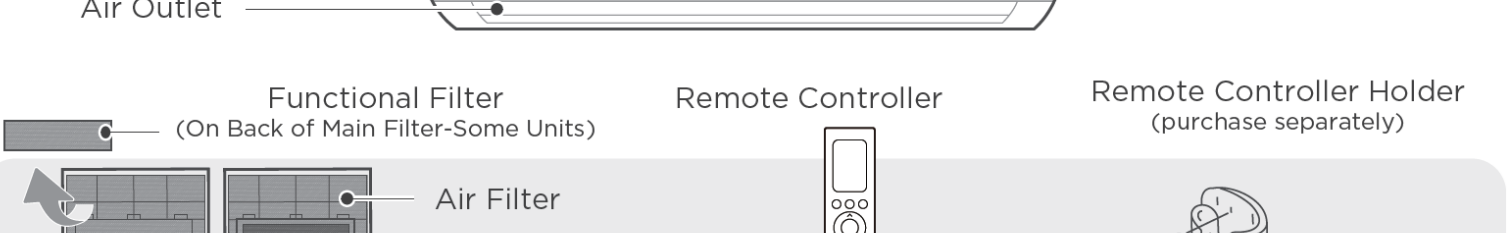
PART	LOOKS LIKE	QUANTITY
AAA Battery		2
Remote Control Holder		1
Fixing Screw for Remote Control Holder		2
Insulation Sleeve		2
Sound-Absorbent Pads		2
Seal		1
Drain Joint		1
Plastic Wall Sleeve & Cap		1
Quick Connect® Line Set		1
Neoprene		1

**For OUTTASIGHT® accessories and installation please refer to the OUTTASIGHT® installation manual.*

2.2 Indoor Unit Display

Only use compatible modules certified for use with the model. Refer to the Electric Auxiliary Heat Model specification for additional details to ensure proper selection and installation.





Display Code	Display Code Meaning
	• When Wireless Control feature is activated (For APP control units)
	• Displays temperature, operation feature and Error codes:
 *(for 3 seconds)*	• TIMER ON is set (if the unit is OFF, "" remains on when TIMER ON is set). • SWING, TURBO or SILENCE feature is turned on.
 *(for 3 seconds)*	• TIMER OFF is set. • SWING, TURBO or SILENCE feature is turned off.
	• When defrosting.
	• When Active Clean feature is turned on.
	• When 46 F(8 C) heating feature is turned on.

2.3 Additional Functions

Note: When the unit is powered on, a buzzing sound will be heard to indicate that the unit has been powered on normally. If there is no sound, it is possible that there is a problem with the unit. If this happens, power off and then on again. Also, check the circuit. Check the indoor display and remote control for your unit.
(See the Remote Controller Manual for more features.)

Auto-Restart

In the event that there is a power loss, the unit will automatically restart with the prior settings once power has been restored.

Breeze Away

This feature avoids airflow from blowing directly on the body. The louver will set to a 35°angle. The fan will adjust to continue to maintain a cool atmosphere in the room.

Wireless Control(For App control units)

Allows you to control your air conditioner using your mobile phone and a wireless connection.

Active Clean function

The Active Clean Technology washes away dust when it adheres to the heat exchanger by automatically freezing and then rapidly thawing the frost. This operation is used to produce more condensed water to improve the cleaning effect, and the cold air will blow out. After cleaning, the internal wind wheel then keeps operating with hot air to blow-dry the evaporator, thus keeping the inside clean. When this function is turned on, the indoor unit display window appears "CL ", after 20 to 45 minutes, the unit will turn off automatically and cancel the Active Clean function.

Louver Angle Memory

When turning on your unit, the louver will automatically resume its former angle.

Heat Exchanger Dust Removal Function

This feature helps keep the outdoor coil cleaner and may extend the duration between regular maintenance intervals depending on local conditions. When the unit is turned off, a 10 second delay occurs then the outdoor fan runs in reverse rotation for 70 seconds. This will blow off loose accumulated dust and debris.

Refrigerant Leakage Detection

When the system detects a malfunction of the refrigerant, the indoor unit will automatically display the following error codes:

"EL0C (System lacks refrigerant)" ,

"EHC1 (Refrigerant sensor detects leakage)",

"EHC2 (Working condition of the refrigerant sensor is out of range and leakage is detected)", "EHC3(Working condition of the refrigerant sensor is out of range)", or

"ECC1 (Other indoor unit refrigerant sensor detects leakage (Multi-zone)".

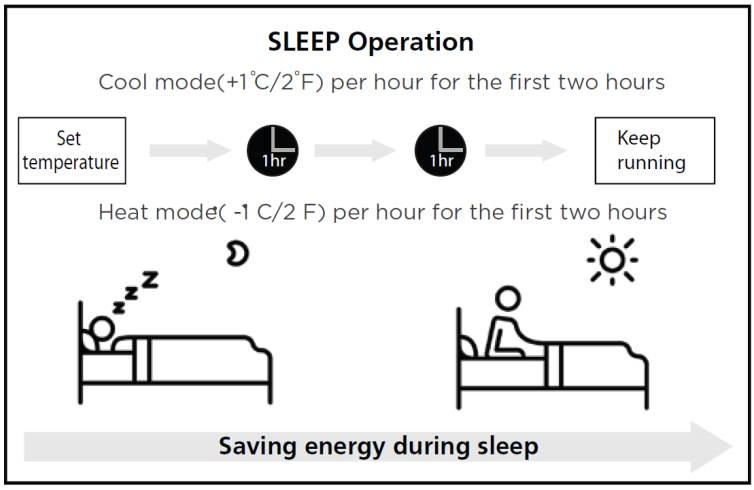
When "EHC1" or "EHC2" error occurs, the buzzer will continue to beep for 5 to 6 minutes before stopping. You can also press any button on the remote controller to stop the buzzer.

Note: Error codes of "EHC1", "EHC2","EHC3" and "ECC1" are only applicable to the units with refrigerant sensor.

Sleep Operation

The SLEEP function is used to maximize energy usage while you sleep. When in COOL mode, press the SLEEP button on remote control. The unit will increase the temperature by 2°F (1°C) after 1 hour, and will increase an additional 2°F (1°C) after another hour. When in HEAT mode, the unit will decrease the temperature by 2°F (1°C) after 1 hour, and will decrease an additional 2°F (1°C) after another hour.

The sleep feature will stop after 8 hours and the system will keep running with final temperature setting.

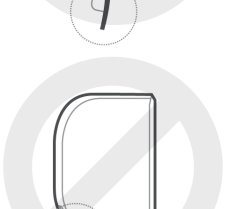


2.4 Setting Angle of Airflow

When using COOL or DRY mode, do not set louver at too vertical of an angle for long periods of time. This will cause the water to condense, which will result in water dropping below the unit.



When using COOL or HEAT mode, setting the louver at too small an angle can reduce the performance of the unit due to restricted air flow.



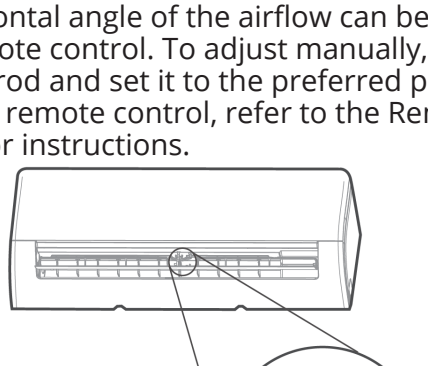
Set the vertical air flow louver to it's maximum angle according to the relative standards requirement under heating capacity test.



Note: While the unit is on, use the SWING/DIRECT button (Located on the remote control) to set the direction, or vertical angle, of airflow. Please refer to the Remote Control Manual for details. Do not manually move the louver. To reset the louver, turn off the unit and disconnect from power.

Setting Horizontal Angle of Airflow

The horizontal angle of the airflow can be set manually or by remote control. To adjust manually, grip the deflector rod and set it to the preferred position. To adjust my remote control, refer to the Remote Control Manual for instructions.



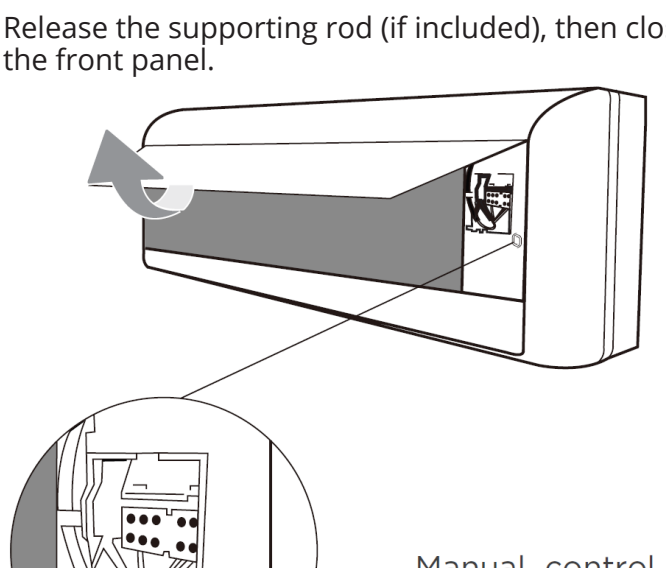
! CAUTION

DO NOT put your fingers in or near the blower and suction side of the unit. The high-speed fan inside the unit may cause injury.

2.5 Manual Operation

To Operate the Unit Manually:

1. Open the front panel of the air handler. **Note:** If there is a supporting rod located on the left or right side, use that to secure to panel.
2. Locate the MANUAL CONTROL button on the right-hand side of the unit.
3. Press the MANUAL CONTROL button one time to activate FORCED AUTO mode.
4. Press the MANUAL CONTROL button again to activate FORCED COOLING mode.
5. Press the MANUAL CONTROL button a third time to turn the unit off.
6. Release the supporting rod (if included), then close the front panel.



! CAUTION

The manual button is intended for testing purposes and emergency operation only. Please do not use this function unless the remote control is unavailable. To restore regular operation, use the remote control to activate the unit. The unit must be turned off before manual operation.

2.6 Packing & Unpacking the Unit

Unpacking the Indoor Unit

1. Cut the sealing tape on the carton on the left, one cut in the middle, and one cut on the right.
2. Use a vice to take out the sealing nails on the top of the carton.
3. Open the carton.
4. Take out the middle support plate if it is included.
5. Take out the accessory package, then take out the connecting wire (if included).
6. Lift the machine out of the carton and lay it flat.
7. Remove the packing foam, and untie the packaging bag.

Unpacking the Outdoor Unit

1. Cut the packing belt.
2. Take the unit out of the carton.
3. Remove the foam from the unit.
4. Remove the packaging bag from the unit.

Packing the Indoor Unit

1. Place the indoor unit into the packing bag.
2. Attach the packing foam to the unit.
3. Place the unit into the carton, then add the accessory package.
4. Close the carton can seal it with packing tape.
5. Use the packing belt, if necessary.

Packing the Outdoor Unit

1. Place the outdoor unit into the packing bag.
2. Inset the packing foam into the box.
3. Place the unit into the carton, then put the upper packing foam on the unit.
4. Close the carton and seal it with packing tape.
5. Use the packing belt, if necessary.

2.7 Operating Conditions

When your unit is used outside of the following temperature ranges, certain safety protection features may activate and cause the unit to disable.

	Cool Mode	Heat Mode
Room Temperature	60°F-90°F (16°C-32°C)	32°F-86°F (0°C-30°C)
Outdoor Temperature	-22°F-122°F (-30°C-50°C)	-22°F-75°F (-30°C-24°C)

For Outdoor Units with Auxiliary Electric Heater:

When the outside temperature is below 32°F (0°C), we strongly recommend keeping the unit plugged in at all times to ensure smooth ongoing performance.

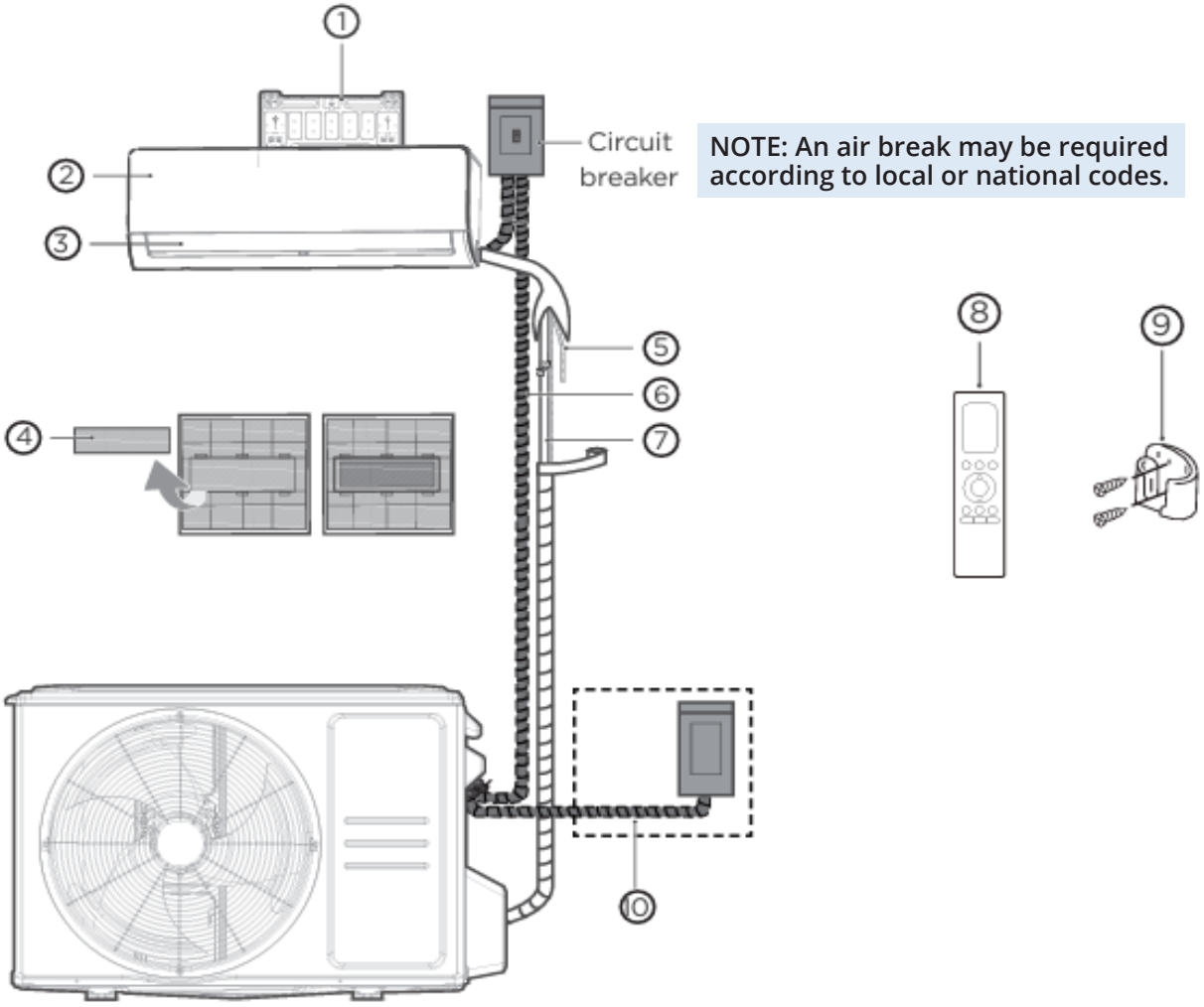
NOTE: Room relative humidity should be less than 80%. If the unit operates in excess of this figure, the surface of the unit may accumulate condensation. Set the vertical air flow louver to its maximum angle (vertically to the floor), and set the fan mode to HIGH.

To further optimize the performance of your unit, do the following:

- Keep doors and windows closed
- Limit energy usage by using the timer functions.
- Do not block air inlets or outlets.
- Regularly inspect and clean air filters.

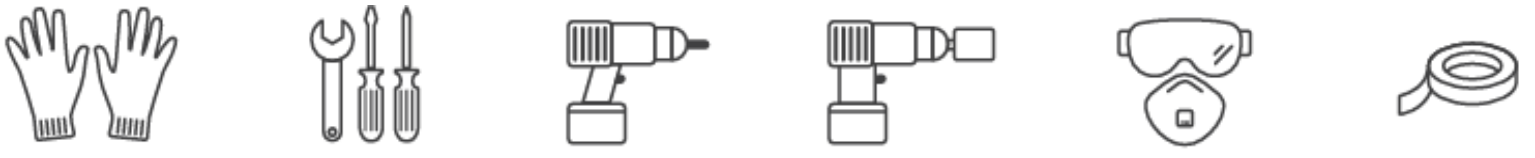
3.1 Installation Overview

Note: Illustrations in this manual are for explanatory purposes. The shape of your actual unit may be slightly different.



1. Wall Mounting Plate
2. Front Panel
3. Louver
4. Air Filter
5. Drain Pipe
6. Connection Cable
7. Refrigerant Piping
8. Remote Control
9. Remote Control Holder
10. Outdoor Unit Power Cable (purchase separately)

Tools NOT Included:



3.2 Installation Location

Note: Before you begin installation, refer to the label on the product box to make sure that the model number of the indoor unit matches the model number of the outdoor unit.

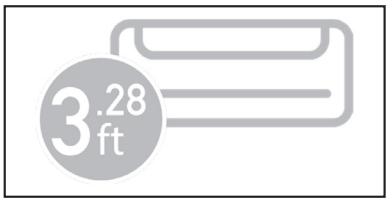
The following standards will help you choose an appropriate location for the unit. Proper installation must meet the following specifications:



☑ *Good air circulation & ventilation.*



☑ *Convenient Drainage*



☑ *A location at least 3.28ft (1m) from all other electrical devices (e.g., TV, radio, computer)*



☑ *Noise from the unit will not disturb other people.*



☑ *Firm & Solid - the location will not vibrate & is strong enough to support the weight of the unit.*

Do NOT install the unit in the following locations:

- ⊘ Near any source of heat, steam, or combustible gas.
- ⊘ Near flammable items such as curtains or clothing.
- ⊘ Near any obstacle that might block air circulation.
- ⊘ Near a doorway.
- ⊘ In a location that is subject to direct sunlight.

Note for Product Installation:

When choosing a location, be aware that you should leave ample room for a wall hole (see steps for drilling a wall hole for connecting piping) for the signal cable and refrigerant piping that connect the indoor and outdoor units. The default position for all piping is the right side of the indoor unit (when facing the unit).
After the piping and signal wire are installed, use the provided neoprene to pack the space left in the hole, in order to seal it and make it airtight. If preferred, spray foam can be used instead.

For R454B Refrigerant Charge Amount and Minimum Room Area:

See below for unit refrigerant specifications. The indoor and outdoor units are designed to be used together. Double check for the correct specifications for your purchased unit. The indoor unit should be installed at least 6.0ft/1.8m above the floor. The height of the room cannot be less than 7.3ft/2.2m. The minimum room area of operation or storage should be according to the table below:

Amin [ft²/m²]	hinst[ft/m]					
mc or mREL [oz/kg]	6.0~7.3/ 1.8~2.2	7.6/2.3	7.9/2.4	8.6/2.6	9.2/2.8	9.9/3.0
<=62.6/1.776	12/1.10					
63.4/1.8	60/5.53	57/5.29	55/5.07	51/4.68	47/4.35	44/4.06
70.5/2.0	67/6.15	64/5.88	61/5.64	56/5.2	52/4.83	49/4.51
77.5/2.2	73/6.76	70/6.47	67/6.2	62/5.72	58/5.31	54/4.96
84.6/2.4	80/7.38	76/7.06	73/6.76	68/6.24	63/5.8	59/5.41
91.7/2.6	86/7.99	83/7.64	79/7.32	73/6.76	68/6.28	64/5.86
98.7/2.8	93/8.6	89/8.23	85/7.89	79/7.28	73/6.76	68/6.31
105.8/3.0	100/9.22	95/8.82	91/8.45	84/7.8	78/7.24	73/6.76
112.8/3.2	106/9.83	102/9.41	97/9.01	90/8.32	84/7.73	78/7.21
119.9/3.4	113/10.45	108/9.99	104/9.58	96/8.84	89/8.21	83/7.66
126.9/3.6	120/11.06	114/10.58	110/10.14	101/9.36	94/8.69	88/8.11
134/3.8	126/11.68	121/11.17	116/10.7	107/9.88	99/9.17	93/8.56
141.1/4.0	133/12.29	127/11.76	122/11.27	112/10.4	104/9.66	97/9.01
148.1/4.2	139/12.9	133/12.34	128/11.83	118/10.92	110/10.14	102/9.46
155.1/4.4	146/13.52	140/12.93	134/12.39	124/11.44	115/10.62	107/9.91
162.2/4.6	153/14.13	146/13.52	140/12.96	129/11.96	120/11.11	112/10.37
169.2/4.8	159/14.75	152/14.11	146/13.52	135/12.48	125/11.59	117/10.82
176.3/5.0	166/15.36	159/14.69	152/14.69	140/13	130/12.07	122/11.27

Area Formula:

Amin is the required minimum room area in ft²/m²
mc is the actual refrigerant charge in the system oz/kg
mREL is the refrigerant releasable charge in oz/kg (Applicable to the unit with the refrigerant sensor only.)
hinst is the height of the bottom of the appliance relative to the floor of the room after installation.

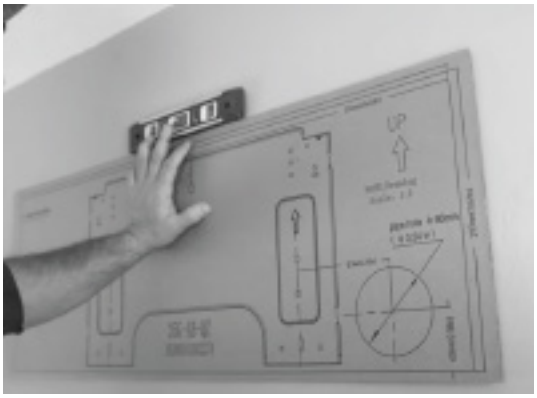
⚠ WARNING

The minimum room area or minimum room area of conditioned space is based on releasable charge and total system refrigerant charge.

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

Model	Indoor Unit	Outdoor Unit	Indoor Normal Air Volume	
12K	DIY-12-HP-WMAH-230D25-O	DIYHH-12-HP-C-230D25-O	540m³/h	318CFM
12K	DIYCASSETTE12HP-230D25-O	DIYHH-12-HP-C-230D25-O	600m³/h	353CFM
18K	DIY-18-HP-WMAH-230D25-O	DIYHH-18-HP-C-230D25-O	800m³/h	470CFM
18K	DIYCASSETTE18HP-230C25-O	DIYHH-18-HP-C-230D25-O	680m³/h	400CFM

3.3 Drill Wall Opening

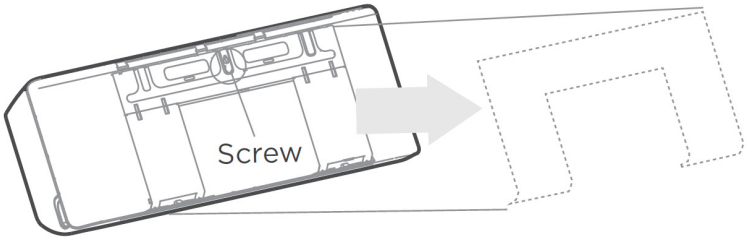


NOTE

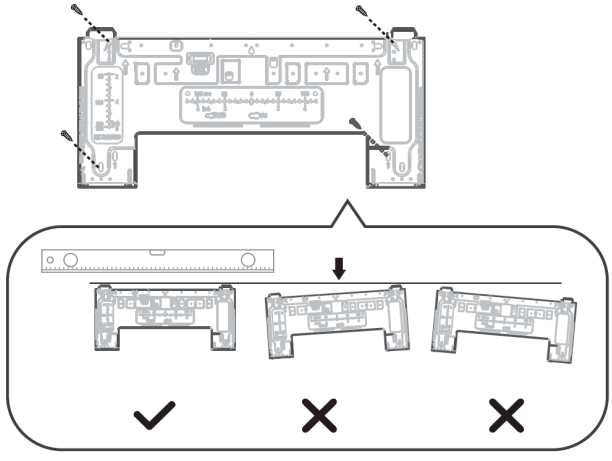
A cardboard template of the mounting plate is included to aid in installation. It can be placed against the wall in place of the actual mounting plate before drilling into the wall.

Attach Mounting Plate to Wall

Step 1:
Remove the screw that attaches the mounting plate to the back of the indoor unit.



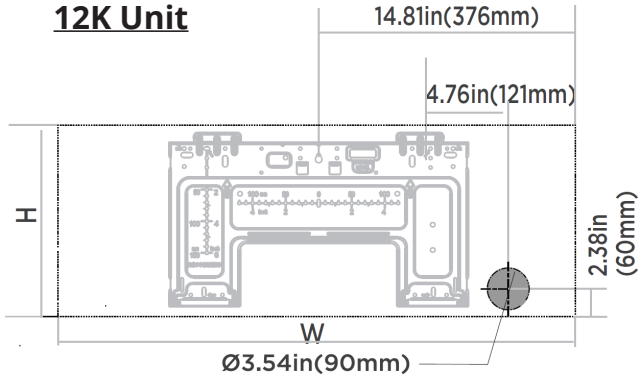
Step 2:
Secure the mounting plate to the wall with the screws provided. Ensure the mounting plate is flat against the wall.



Correct orientation of Mounting Plate

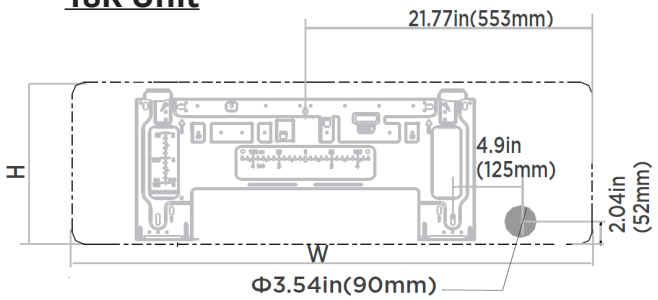
Step 3:
Determine the location of the wall hole based on the position of the mounting plate. The dotted rectangular box on the right figure shows the size of your product.

12K Unit

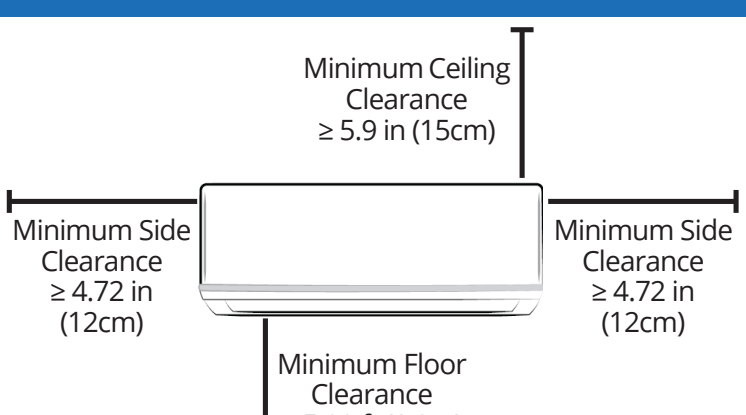


Indoor unit dimensions(WxH):
31.54in(802mm)x11.69in(297mm)

18K Unit

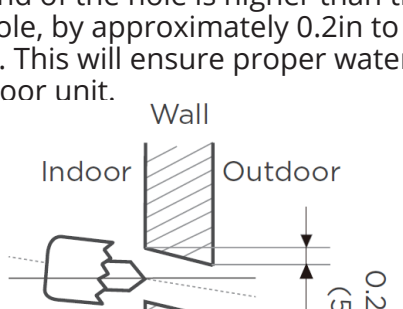


Indoor unit dimensions(WxH):
42.52in(1080mm)x13.19(335mm)



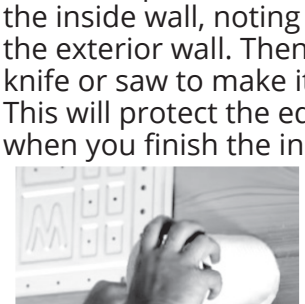
Drill Wall Hole

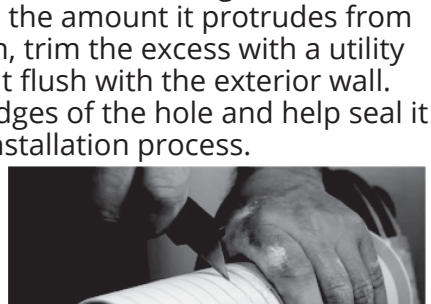
Step 1:
Using a core drill with a 3.54in (90mm) diameter, drill a hole in the wall at a slight downward angle, so that the indoor end of the hole is higher than the outdoor end of the hole, by approximately 0.2in to 0.275in (5mm-7mm). This will ensure proper water drainage from the indoor unit.



Drill the wall hole

Step 2:
Insert the protective wall sleeve through the hole of the inside wall, noting the amount it protrudes from the exterior wall. Then, trim the excess with a utility knife or saw to make it flush with the exterior wall. This will protect the edges of the hole and help seal it when you finish the installation process.





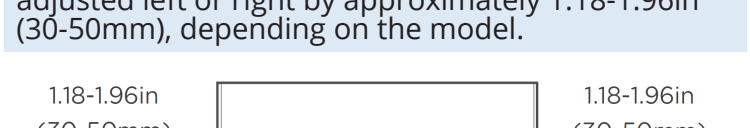
! CAUTION

When drilling the wall hole, make sure to avoid wires, plumbing, and other sensitive components.

Note for Concrete or Brick Walls:
If the wall is made of brick, concrete, or similar material, drill 0.2in-diameter (5mm-diameter) holes in the wall and insert the sleeve anchors provided. Then, secure the mounting plate to the wall by tightening the screws directly into the clip anchors.

NOTE: UNIT IS ADJUSTABLE

Keep in mind that the hooks on the mounting plate are smaller than the holes on the back of the unit. If you find that you don't have ample room to connect embedded pipes to the indoor unit, the unit can be adjusted left or right by approximately 1.18-1.96in (30-50mm), depending on the model.

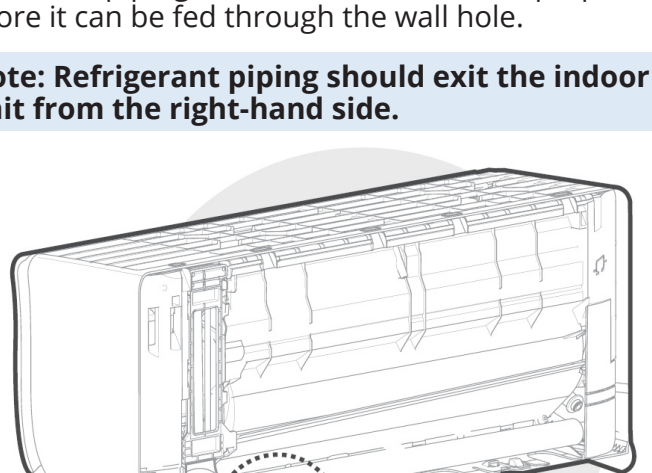


Move to left or right

Prepare Indoor Unit Refrigerant Piping:

The piping of the indoor unit is attached to the back of the unit towards the bottom. It will be covered with insulation, and there will also be a drain pipe with these. This piping will need to be bent and prepared before it can be fed through the wall hole.

Note: Refrigerant piping should exit the indoor unit from the right-hand side.



Left rear

Step 1:
Based on the position of the wall hole, relative to the mounting plate, determine the necessary angle the piping will need to be bent to pass through the wall hole when the unit is mounted to the bracket.

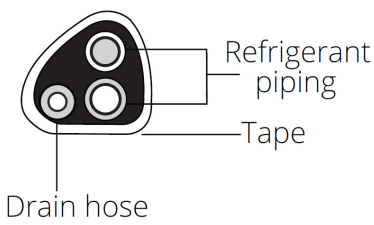
Step 2:
Grip the refrigerant piping at the base of the bend. Then, slowly, with even pressure, bend the piping away from the back of the unit roughly 90 degrees. The piping should be sticking straight out from behind the unit once completed.

! CAUTION

Be extremely careful not to dent or damage the piping while bending it away from the unit, as this could negatively affect the performance.

Step 3:
Now, you will need to lightly tape the refrigerant piping and drain pipe together in a bundle, using electrical tape, making sure that the drain pipe is at the bottom. DO NOT tape the ends of the piping (connectors). Refer to the image below for the correct orientation of the piping when taping.





DRAIN HOSE MUST BE ON BOTTOM

The drain hose must be placed at the bottom of the bundle. If it is not, it could cause the drain pan to overflow, which could lead to fire or water damage.

Mount the Indoor Unit:

In the following steps, the indoor unit will now be mounted to the wall bracket and the piping and wires will be fed through the wall hole.

Step 1:
Double-check that the ends of the refrigerant pipes are sealed (screw on caps are still in place) to prevent any dirt or foreign material from entering the pipes.

Step 2:
Feed the DIYPRO® cable through the wall hole.

Step 3:
Carefully lift the indoor air handler, and slowly feed the taped bundle of refrigerant pipes and drain hose through the wall hole, as you position it to mount to the wall bracket.

NOTE: Positioning the air handler onto the wall bracket, while feeding the piping through the wall hole, might be difficult for a single person to manage. If so, it may be necessary to seek the assistance of another person for this step.

Step 4:
Slightly lean the top of the air handler toward the wall and hook the top of the indoor unit on the upper hook of the wall mounting plate.

Step 5:
Check that the unit is hooked firmly on the mounting plate by applying slight pressure to the left and right-hand sides of the unit. The unit should not jiggle or shift.

Step 6:
Using even pressure, push down on the bottom half of the unit. Continue pushing down until the unit snaps onto the hooks along the bottom of the mounting plate.

Step 7:
Again, check that the unit is firmly mounted to the wall bracket by applying slight pressure to the left and right-hand sides of the unit.



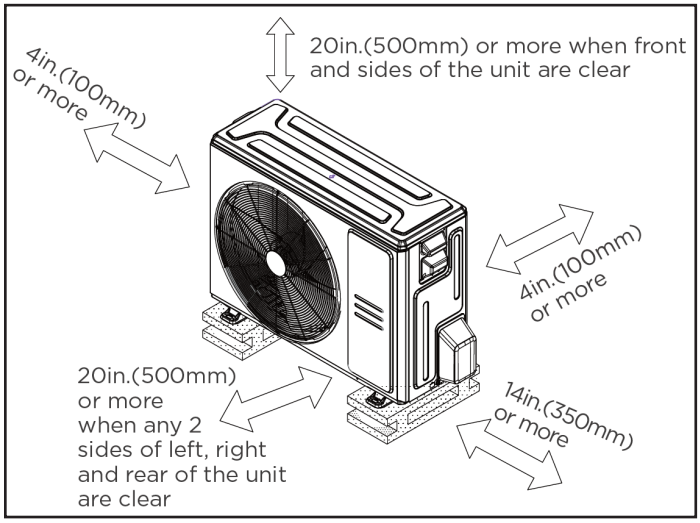


4.1 Location Selection

NOTE: PRIOR TO INSTALLATION

Before installing the outdoor unit, you must choose an appropriate location. The following are standards that will help you choose an appropriate location for the unit.

Proper Installation Locations Meet the Following Standards:



☑ *Meets all spatial requirements shown in Installation requirements above,.*



☑ *Good air circulation & ventilation.*



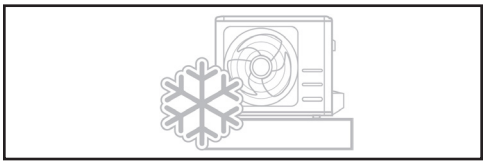
☑ *Firm & solid-the location can support the unit & will not vibrate.*



☑ *Noise from the unit will not disturb other people.*



☑ *Protected from prolonged periods of direct sunlight or rain.*

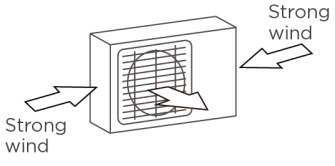


☑ *Where snowfall is anticipated, take appropriate measures to prevent ice buildup & coil damage.*

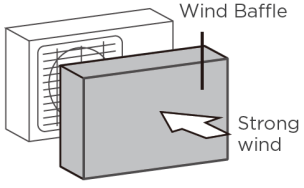
NOTE: Install the unit by following local codes and regulations. These may differ slightly between different regions.

! CAUTION: SPECIAL CONSIDERATIONS FOR EXTREME WEATHER

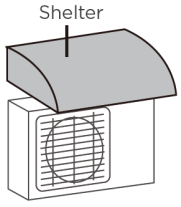
If the unit is exposed to heavy wind:
Install the unit so that the air outlet fan is at a 90° angle to the direction of the wind. If needed, build a barrier in front of the unit to protect it from extremely heavy winds.
If the unit is frequently exposed to heavy rain or snow:
Build a shelter above the unit to protect it from the rain or snow. Be careful not to obstruct air flow around the unit.
If the unit is frequently exposed to salty air (seaside):
Use outdoor unit that is specially designed to resist corrosion.



90° angle to the direction of the wind



Build a wind Baffle to protect the unit



Build a shelter to protect the unit

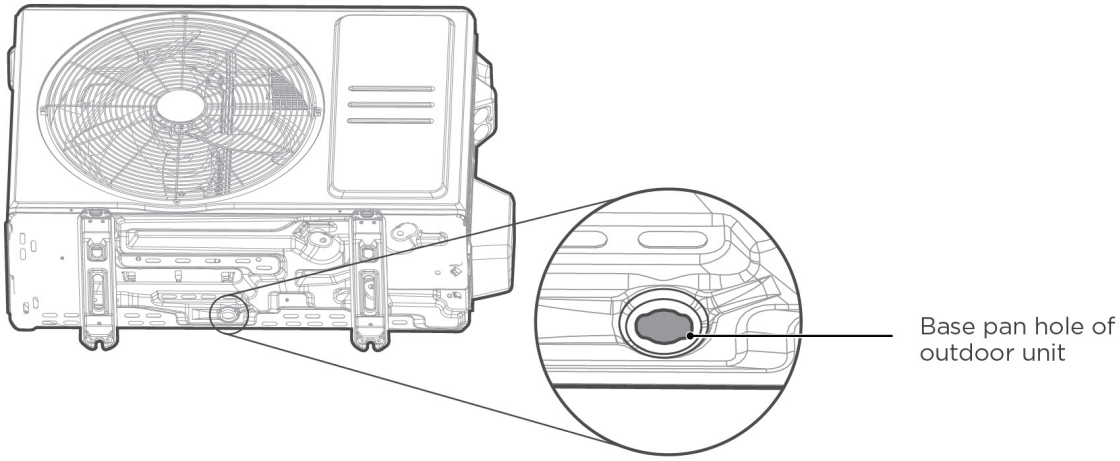
DO NOT install the unit in the following locations:

- ⊘ *Near an obstacle that will block air inlets & outlets.*
- ⊘ *Near a public street, crowded areas, or where noise from the unit will disturb others.*
- ⊘ *In a location exposed to excessive amounts of salty air.*
- ⊘ *Near animals or plants that will be harmed by hot air discharge.*
- ⊘ *Near any source of combustible gas.*
- ⊘ *In a location exposed to large amounts of dust.*

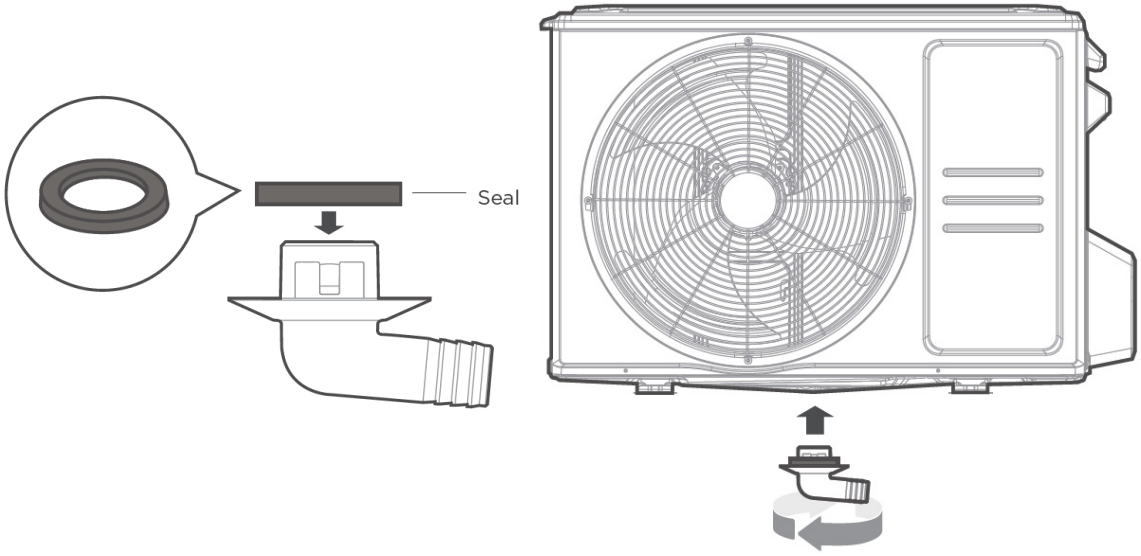
4.2 Drain Joint Installation

NOTE: PRIOR TO INSTALLATION

Before bolting the outdoor unit in place, you must install the drain joint at the bottom of the unit. For the units with base pan built-in with multiple holes for proper draining during defrost, the drain joint does not need to be installed.



Step 1:
Find the base pan hole on the outdoor unit.



Step 2:
- Fit the rubber seal on the end of the drain joint that will connect to the outdoor unit.
- Insert the drain joint into the hole in the base pan of the unit.
- Rotate the drain joint 90° until it clicks in place facing the front of the unit.
- Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.

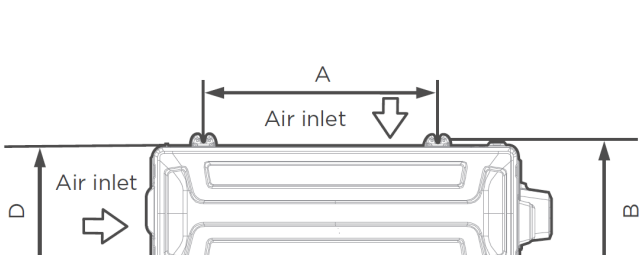
NOTE: In cold climates, ensure that the drain hose is as vertical as possible to ensure swift water drainage. If water drains too slowly, it can freeze in the hose and flood the unit.

4.3 Anchor Outdoor Unit

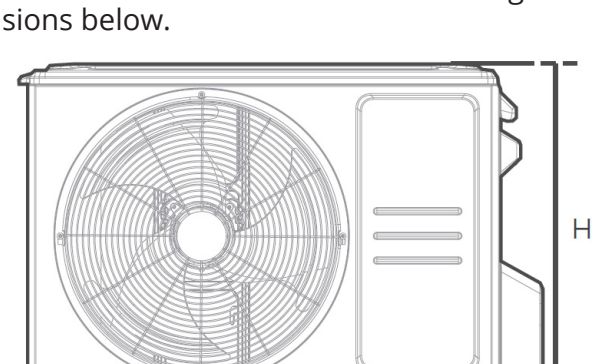
⚠ WARNING

When drilling into concrete, eye protection is recommended at all times.

- The outdoor unit can be anchored to the ground or to a wall-mounted bracket with bolts (M10). Prepare the installation base on the unit according to the dimensions below.
- The following is a list of different outdoor unit sizes and the distance between their mounting feet. Prepare the installation base of the unit according to the dimensions below.



Top View



Front View

Outdoor Unit Model	Outdoor Unit Dimensions W x H x D	Mounting Dimensions	
		Distance A	Distance B
DIYHH-12-HP-C-230D25-O	31.69in x 21.8in x 12.99in (805mm x 554mm x 330mm)	20.1in (511mm)	12.5in (317mm)
DIYHH-18-HP-C-230D25-O	35.0in x 26.5in x 13.5in (890mm x 673mm x 342mm)	26.1in (663mm)	13.9in (354mm)

If you will install the unit on the ground or on a concrete platform, do the following:

1. Mark the positions for four expansion bolts based on the dimensions chart.
2. Pre-drill holes for expansion bolts.
3. Place a nut on the end of each expansion bolt.
4. Hammer expansion bolts into the pre-drilled holes.
5. Remove the nuts from the expansion bolts, and place the outdoor unit on the bolts.
6. Put a washer on each expansion bolt, then replace the nuts.
7. Using a wrench, tighten each nut until snug.

If you will install the unit on a wall-mounted bracket, do the following:

1. Mark the position of the bracket holes based on the dimensions chart.
2. Pre-drill the holes for the expansion bolts.
3. Place a washer and nut on the end of each expansion bolt.
4. Thread expansion bolts through holes in the mounting brackets, put the mounting brackets in position, and hammer expansion bolts into the wall.
5. Check that the mounting brackets are level.
6. Carefully lift unit and place its mounting feet on the brackets.
7. If allowed, install the unit with rubber gaskets to reduce vibrations and noise.

! CAUTION: SPECIAL CONSIDERATIONS FOR EXTREME WEATHER

Make sure that the wall is made of solid brick, concrete, or of similarly strong material. The wall must be able to support at least four times the unit's weight.

5 REFRIGERANT PIPING CONNECTION

5.1 Prepare Exterior Wall Hole

Step 1:
Before the refrigerant piping can be installed and connected to the indoor and outdoor units, some additional steps are required to prepare the exterior.



Step 2:
Place your hand on the underside of the piping coming through the exterior wall hole (from indoor unit), close to the wall. With your other hand, using even pressure, carefully bend the piping downward toward the wall, being mindful not to damage or dent the piping in the process.



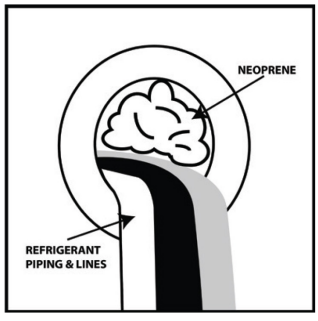


! CAUTION

Be extremely careful not to dent or damage the piping while bending it down the exterior wall as this could negatively affect the performance of the unit.

Step 3:
Pack the wall hole with the supplied neoprene (or spray foam can also be used) to seal the hole, filling any space that was not taken up by the refrigerant piping and lines.





5.2 Unwind Quick Connect® Line Set

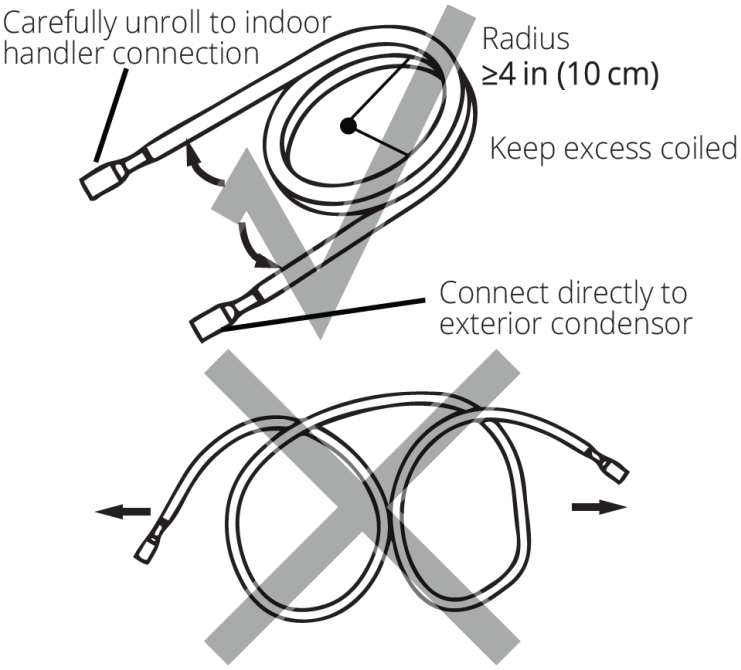
Step 1:
Use your hands to slowly unwind the copper piping of one end of the Quick Connect® Line Set. The end you unwind will connect to the indoor unit piping. You should unwind the end until the connectors are close to flat on the ground (with little to no bend). If this is not done, it could make the line set difficult to maneuver when aligning the connectors with the air handler piping. Only unwind as much as necessary for your application, and allow any excess to remain coiled.



MINIMUM BEND RADIUS:
When bending connective refrigerant piping, it needs to have a minimum bend radius of 4 inches.

! CAUTION

If the pipe is repeatedly bent or extended, it will become hard and difficult to manipulate. Avoid bending or extending the pipe more than 3 times, or at an angle greater than 90°, as it could break.



5.3 Connect Line Set to Indoor Unit

NOTE: Depending on the capacity rating of your unit, the wrench sizes needed will vary. Refer to the table below (the unit uses metric sizes, the standard sizes are approximations). Based on the availability of wrenches in some of the sizes needed, the recommended method is to use crescent wrenches that can be adjusted to fit the size that each step requires.

Tools Needed:

- Open-Ended Wrench (1x of each)

12K & 18K	24K & 36K
• 3/4" (19mm) • 7/8" (22mm) • 15/16" (24mm) • 1" (26mm)	• 3/4" (19mm) • 15/16" (24mm) • 1" (26mm) • 1-1/8" (29mm) • 1-1/4" (31mm)

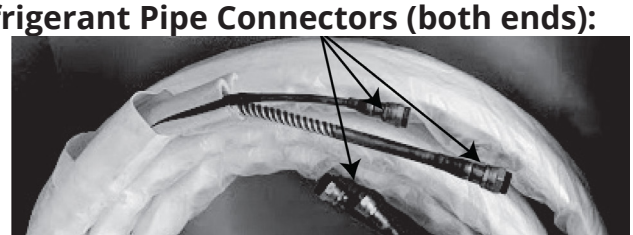
Or 2x Crescent (Adjustable-Type) Wrenches

- 1x HVAC Torque Wrench (if available)
- 1x Allen Key (5mm)
- 1x Phillips-Head Screwdriver
- 1x leak-detection spray or a soapy water solution (liquid detergent/mix applied by brush or spray bottle)

PLEASE FULLY READ BEFORE PROCEEDING TO THE NEXT STEP.

- Follow the detailed instructions for connecting the line set to the indoor unit and outdoor units.
- We can only provide a warranty if the line set is installed correctly as described in the instructions.
- To prevent leaks, ensure that the Quick Connect® connectors are free of dirt. Moisture or foreign bodies will adversely affect the function of the connectors and could lead to a risk of refrigerant loss (not covered by the warranty).
- Only install the line set outdoors in dry weather.
- The line set must not be plastered over after being installed.
- Always wear work gloves and googles and use caution when handling refrigerant. Please make sure that refrigerant is never allowed to enter the environment. Improper handling of refrigerant may be harmful to your health.
- The equipment must never be operated without the line set connected, otherwise the equipment will be damaged immediately.
- Quick Connect® line set connections must only be tightened using the appropriate open-ended or crescent (adjustable-type) wrenches.
- DO NOT remove the sealing caps and stoppers from the line set or valves until immediately before they are to be connected.
- DO NOT smoke during the installation.

Refrigerant Pipe Connectors (both ends):



If the screw connections are tightened with too little torque, they will leak. If they are tightened with too much torque, the screw connections could suffer damage. Please refer to the torque requirements section for more information. If you do not feel confident connecting the line set connectors yourself, it is imperative that you contact the MRCOOL® customer service team or an HVAC professional.

IMPORTANT:

The line sets are designed to only be installed once. The seal within the line set cannot be guaranteed if they are installed more than once. This will void the warranty. They also contain a compression fitting to seal and do not require a thread sealant (Teflon tape, etc.). Using a sealant may actually cause the connection to leak over time.

Connecting the Quick Connect® Line Set to Indoor Unit

1. Do not remove the plastic seals of the piping coming from the indoor unit, or the appropriate line set connector, until immediately before they are to be connected. The plastic seals on each of the connectors should be color-coded to match the seals of the corresponding pipes they are to be connected to.
2. Align the refrigerant pipes correctly, making sure the dimensions of the connecting refrigerant pipe match. Unscrew the seals and place the screw connector of the line set just onto the threads of the piping from the indoor unit and tighten the first few threads by hand.





Before you continue, it is essential that you read the following instructions fully and carefully.

5 REFRIGERANT PIPING CONNECTION

TORQUE REQUIREMENTS

1. Excessive force can break the connector or damage the refrigerant piping. You must not exceed the torque requirements shown in the table below.
2. You can find the outer pipe diameter stamped (in inches) on the valve set of the condenser. Refer to this when finding and applying the torque values in the table below.
3. Please note that there may be differences in torque wrenches (i.e. automotive torque wrench vs. an HVAC torque wrench) and that a socket-style wrench cannot be used in this installation.

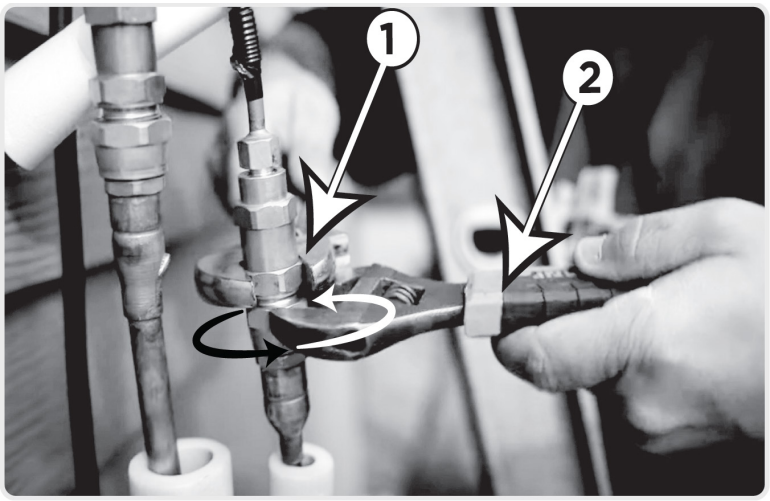
NOTE: Torque ratings in the table below are to be used if you have access to an HVAC torque wrench. These are available for purchase from online retailers. However, it is possible to complete installation of refrigerant line sets with conventional open-ended/crescent wrenches. It is imperative, however, that you not overtighten the connector, and that once the lines have been fully connected, you follow the steps to check for leaks. If you do not feel comfortable attempting this, please contact a qualified HVAC technician.

3. Using the image below as a guide, and the steps outlined in this paragraph, you will now tighten the nuts of the screw connectors of the line set to the indoor unit. Using two appropriate-sized open-ended wrenches (depending on the dimensions of the connector) or adjustable crescent wrenches, place one of the wrenches on the nut marked "1" and the other wrench on the nut marked "2", as shown in the image below. Now, turn the wrench marked "2" in the direction of the rotational arrows, as shown, while holding the other wrench in place. Continue to tighten the connector until snug.

NOTE: Work quickly and make sure the screw connectors do not become crooked as you tighten them.

***If an HVAC torque wrench is available:** Once the connector is snug, using the torque wrench, tighten the connector to the specified torque rating, as listed in the table to the right (based on pipe/coupling size).

***If an HVAC torque wrench is NOT available:** Using two wrenches you used to tighten the connector, once the connector is snug, turn the wrench slightly beyond that point to torque the connector, but do not overtighten it.



4. Repeat the same process for the second line.

Stamp (on connector)	Coupling Size in (mm)	Tightening Torque lb-ft (N-m)
FA06	3/8" (9.5mm)	18-20 lb/ft (24.4-27.1 Nm)
FA09	1/2" (12.7mm)	30-35 lb/ft (40.6-47.4 Nm)
FA12	3/4" (19.1mm)	45-50 lb/ft (61.0-67.7 Nm)
FA16	1" (25.4mm)	60-65 lb/ft (81.3-88.1 Nm)

! CAUTION

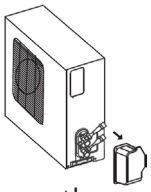
For your safety, always wear goggles and work gloves when connecting the pipes.

Line Set Maximum Run Length

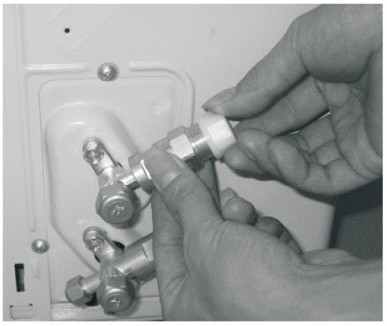
Capacity (Btu/h)	Standard Length	Max. Pipe Length	Max Elevation
12k	24.6ft (7.5m)	82ft (25m)	49.2ft (15m)
18K		98.4ft (30m)	65.6ft (20m)

5.4 Connect Line Set to Outdoor Unit

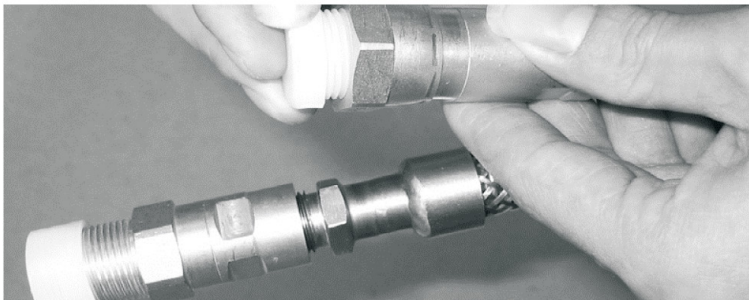
1. First remove the water tray on the outdoor unit as shown in the illustration to the right.



2. Do not remove the plastic seals from the outdoor unit piping connectors and corresponding refrigerant pipes (line set to be attached) until immediately before you connect them.

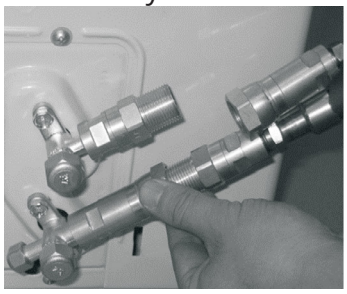


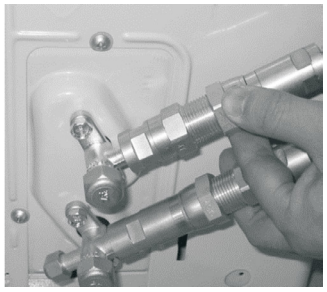




NOTE: Ensure the adapters attached to the outdoor valves have been tightened properly before attempting to connect the line set.

3. Align the refrigerant pipes so they line up with the corresponding valves and have enough slack. **NOTE: The refrigerant pipes must be connected to the valves with as little stress as possible.** Unscrew the plastic seals and place the screw connector of the refrigerant line just onto the threads of the outdoor unit, tightening the first few threads by hand.





IMPORTANT

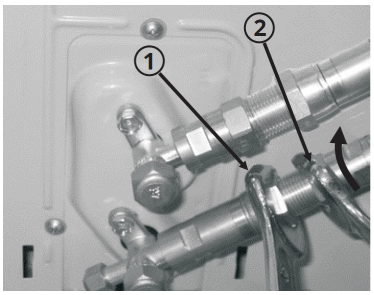
Before you continue, it is essential that you read the following instructions carefully.

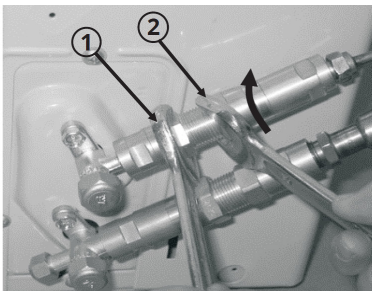
4. Using the first of the following images as a guide, you will now tighten the line set to the outdoor unit. Using two appropriate sized open-ended wrenches (depending on the dimensions of the connector), or adjustable crescent wrenches, place one of the wrenches on the nut marked "1", and the other wrench on the nut marked "2". Now, turn the wrench on nut "2" in the direction of the rotational arrow, while holding the other wrench in place, as seen in the first image. Continue to tighten the connector until snug. **NOTE: Work quickly and make sure the screw connectors do not become crooked as you tighten them.**

***If an HVAC torque wrench is available:** Once the connector is snug, using the torque wrench, tighten the connector to the specified torque rating, listed in the table on the next page (based on the pipe/coupling size).

***If an HVAC torque wrench is NOT available:** Using the two wrenches you used to tighten the connector, once the connector is snug, turn the wrench slightly beyond that point to torque the connector but do not overtighten it.

5. Repeat the same process for the top screw connector, using the second image below as a guide. Then, repeat all of these steps for every line set for all other air handlers to be connected.





IMPORTANT

The coupling of the outdoor unit uses tapping rings. If you disconnect and reconnect the refrigerant pipes, it could cause it to leak. This will also void the warranty.

NOTE: Keep excess refrigerant hose coiled. Wrap with protective tape and store behind the condenser in a horizontal position (flat with the ground).

TORQUE REQUIREMENTS

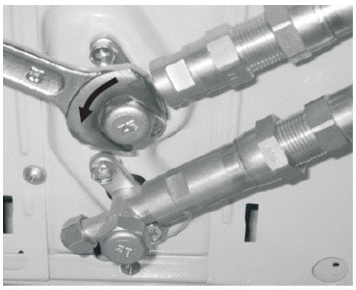
1. Excessive force can break the connector or damage the refrigerant piping. You must not exceed the torque requirements shown in the table below.
2. You can find the outer pipe diameter stamped (in inches) on the valve set of the condenser. Refer to this when finding and applying the torque values in the table below.
3. Please note that there may be differences in torque wrenches (i.e. automotive torque wrench vs. an HVAC torque wrench) and that a socket-style wrench cannot be used in this installation.

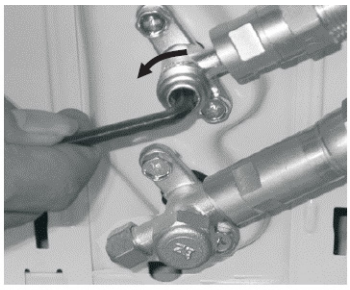
NOTE: Torque ratings in the table below are to be used if you have access to an HVAC torque wrench. These are available for purchase from online retailers. However, it is possible to complete installation of refrigerant line sets with conventional open-ended/crescent wrenches. It is imperative, however, that you not overtighten the connector, and that once the lines have been fully connected, you follow the steps to check for leaks. If you do not feel comfortable attempting this, please contact a qualified HVAC technician.

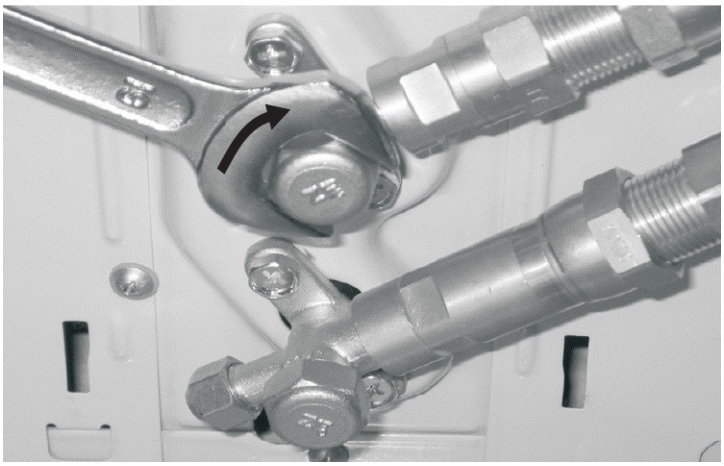
Stamp (on connector)	Coupling Size in (mm)	Tightening Torque lb-ft (N-m)
FA06	3/8" (9.5mm)	18-20 lb/ft (24.4-27.1 Nm)
FA09	1/2" (12.7mm)	30-35 lb/ft (40.6-47.4 Nm)
FA12	3/4" (19.1mm)	45-50 lb/ft (61.0-67.7 Nm)
FA16	1" (25.4mm)	60-65 lb/ft (81.3-88.1 Nm)

5.5 Opening Refrigerant Valves

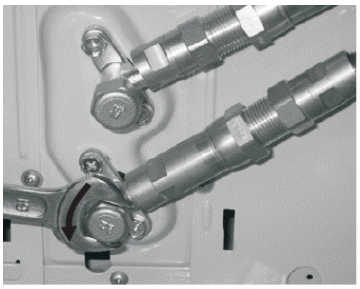
1. Using the images below as a guide, remove the cover on the top valve, using a 19mm open-ended wrench or a crescent (adjustable-type) wrench. Then, insert a 5mm Allen key and open the valve by turning it counter-clockwise as far as it will go. ***DO NOT*** **force it.** The valve is now open. Screw the cover back onto the top valve and tighten it well to ensure that it is properly sealed.

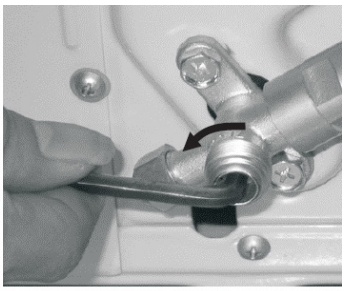


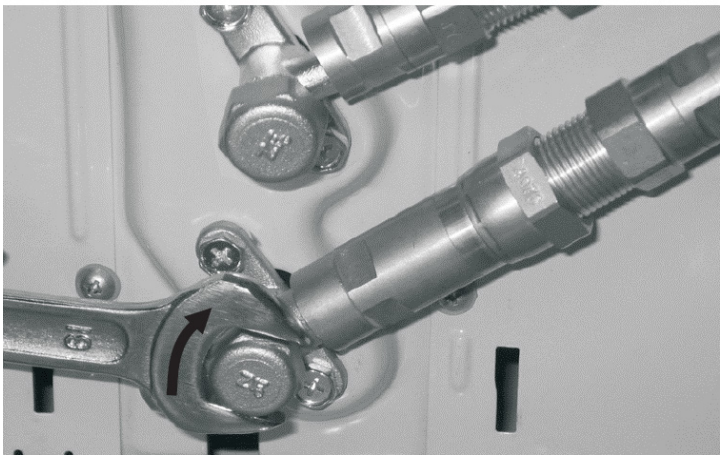




2. Using the images below as a guide, repeat the same process for the bottom valve. Remove the cover on the bottom valve, using a 19mm open-ended wrench or a crescent (adjustable-type) wrench. Then, insert a 5mm Allen key and open the valve by turning it counter-clockwise as far as it will go. ***DO NOT*** **force it.** Screw the cover back onto the bottom valve and tighten it well to ensure that it is properly sealed.







! CAUTION

If the King Valves are not fully opened, the system could malfunction and suffer damage.

3. You will now need to check all of the piping connections (at indoor unit and outdoor unit) for leaks. You can do this by using leak detection spray, or applying a soapy water solution (liquid detergent/water mixture) to the connection via a spray bottle or brush. If any bubbles begin to form, that indicates there is a leak, and the connection needs to be re-tightened. Tighten the connection and recheck it for leaks. Refer to the Electrical and Gas Leak Checks section of this manual for more information.

IMPORTANT: You will be asked to check for leaks at the piping connections multiple times throughout the following steps of the installation, because the pressures within the lines will change once the unit is turned on and this could reveal leaks not present during the initial check. These are imperative to make sure your connections are not allowing refrigerant to escape the system. When checking for leaks, if any bubbles form, it indicates the system has a leak and the screw connector needs to be re-tightened.





5.6 Wrap Piping Connections

Step 1:
Use the sound-absorbent pads to prevent the quick-connector parts from being exposed to the air. Wrap the quick-connectors with the sound-absorbent pads tightly.





Step 2:
Wrap the connectors with the black insulation material. For the exposed portion on the top, use the supplied white insulation material to wrap it up completely.

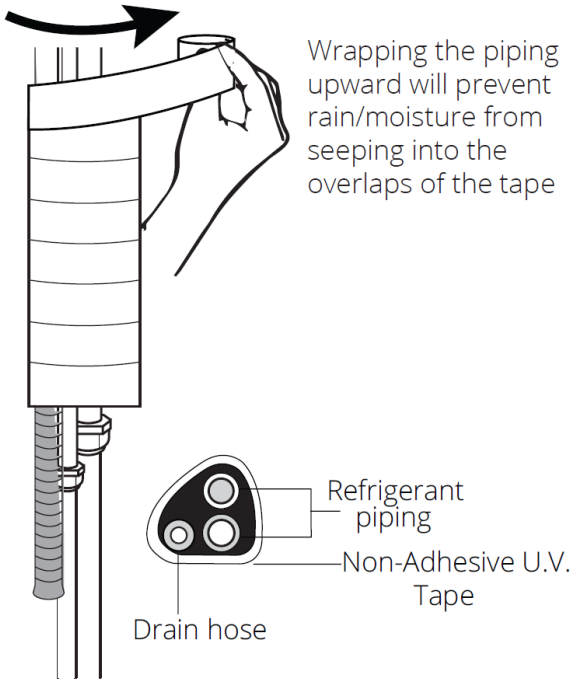




Step 3:
Now, starting where the line set is not covered with the factory plastic (close to the indoor air handler connection, you will wrap the line set upward to the wall hole, using the supplied non-adhesive U.V. tape. This will cover the insulated line set connections, cables, and drain hose. The drain pipe will need to be at the bottom of the bundle. **Do not wrap the end of the drain hose.**







If you would like the exterior piping on the side of your home to have a sleeker, more attractive look and add extra protection in the process, you can purchase a line set cover separately. This will encase your refrigerant piping and lines, protecting them from harsh weather conditions and sun exposure, which will extend the life of your system. These covers are available in various sizes to fit your particular application.

5.7 Connect Drain Pipe

In this step you will connect the drain hose extension to the drain hose exiting from the indoor unit that is within the piping bundle you wrapped in the previous steps.

1. Securely connect the drain hose extension to the drain piping from the indoor unit.

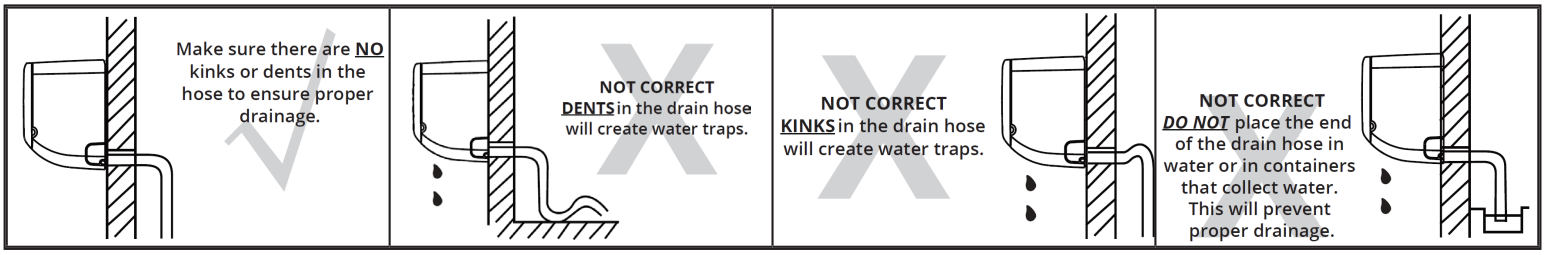


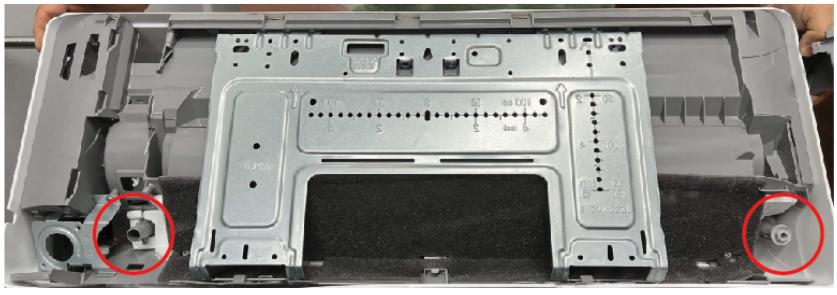
2. Use the first example in the following images to make sure your drain pipe is run in a similar manner. The other examples represent things you should avoid when installing your drain pipe.
3. Remove the air filter from the indoor unit and pour a small amount of water across the coils to test the drain pan. Ensure that the water exits the bottom of the unit and flows through the drain and drain pipe smoothly.

! CAUTION

Make sure to arrange the drain hose correctly according to the following images.

- DO NOT kink the drain hose.
- DO NOT create a water trap.
- DO NOT put the end of the drain hose in water or a container that will collect water.





ENSURE DRAIN HOLE IS PLUGGED

As shown in the figure above, there are two drain holes on the indoor unit: one on the left, and one on the right. The unit arrives with the drain hose connected to the left hole and a hollow center rubber plug in the right. Connect the drain hose to the drain hole that best works for your installation location. To prevent unwanted leaks, be sure that the plug is installed in the unused drain hole. The plug is depicted in the right hole in the figure.

6.1 Electrical Precautions

WARNING

- Before performing any electrical work, read the following regulations and disconnect the main power to the system.
- All wiring must be performed strictly in accordance with the wiring diagram located on the back of the indoor unit's front panel.

SELECT THE CORRECT CABLE

- See the table below for gauge requirements.

NOTE: The table below is a standard chart, the AWG ratings and wiring needs will change based on wire length and temperature.

Capacity (Btu/h)	Power Supply	Amperage		AWG
		MCA	MOP	Min.
12K	208/230V~, 60Hz, 1 Phase	15	15	12
18K		19	25	12

*** Wire size is a recomendation based on the MCA, always follow local codes and inspector recomendations.**

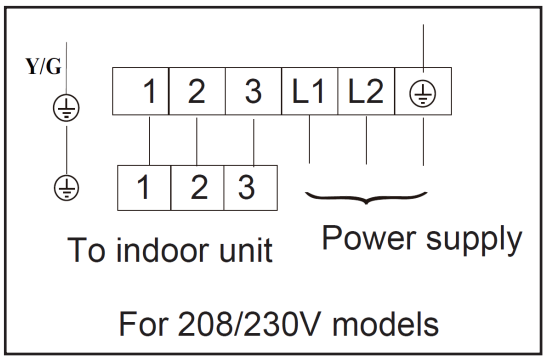
DO NOT MIX LIVE AND NULL WIRES.
This is dangerous, and can cause the unit to malfunction.

1. All wiring must comply with local and national electrical codes, regulations, and must be installed by a licensed electrician.
2. All electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
3. If there is a serious safety issue with the power supply, stop work immediately. Explain your reasoning to the client, and refuse to install the unit until the safety issue is properly resolved.
4. If connecting power to fixed wiring, a surge protector and main power switch should be installed.
5. Only connect the unit to an individual branch circuit outlet. Do not connect another appliance to that outlet.
6. Make sure to properly ground the unit.
7. Every wire must be firmly connected. Loose wiring can cause the terminal to overheat, resulting in product malfunction and possible fire.
8. Do not let wires touch or rest against refrigerant tubing, the compressor, or any moving parts within the unit.
9. To avoid getting an electric shock, never touch the electrical components soon after the power supply has been turned off. After turning off the power, always wait 10 minutes or more before you touch the electrical components.

6.2 Signal & Power Cable Connection

NOTE: The indoor unit arrives pre-wired from the factory. Use the following steps if wiring work is needed.

The signal cable enables communication between the indoor and outdoor units. You must first choose the right cable size before preparing it for connection.
NOTE: Choose the cable type according to local electrical codes and regulations. Please choose the right cable size according to the Minimum Circuit Ampacity located on the nameplate of the unit.

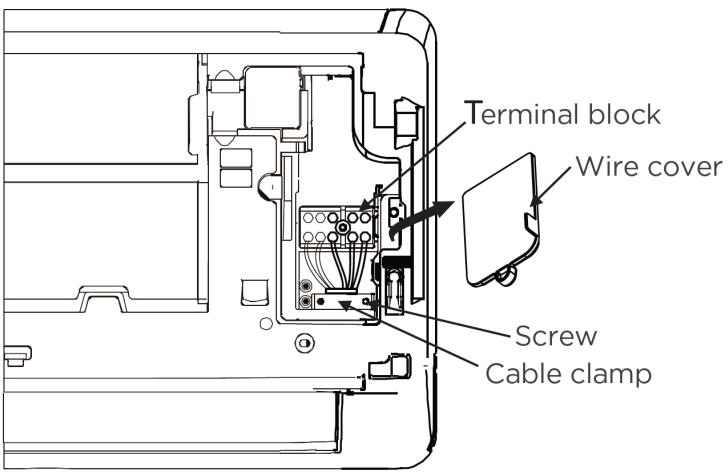


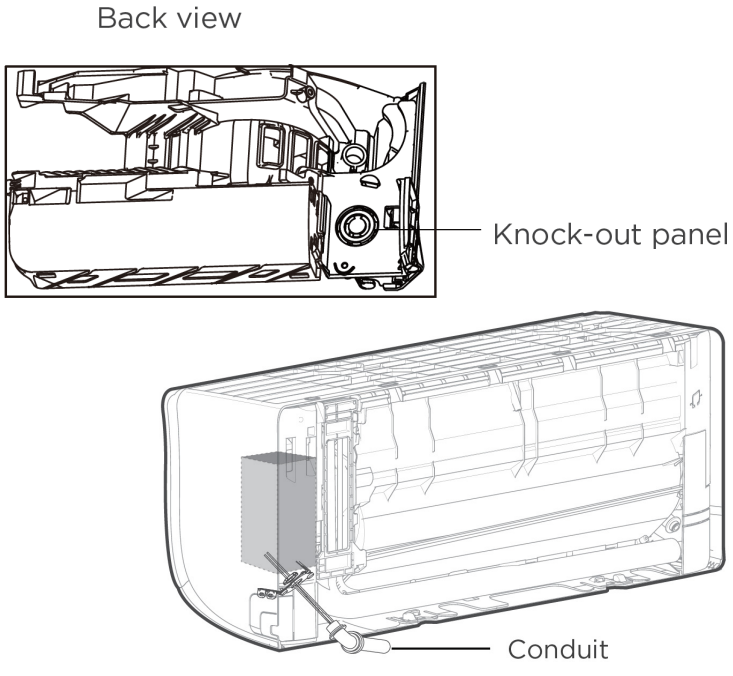
Connection Diagram (208/230V)

1. Open the front panel of the indoor unit.
2. Using a screwdriver, open the wire box cover on the right side of the unit. This will reveal the terminal block.
3. Facing the back of the unit, remove the large plastic knock-out panel to create a slot through which the conduit tube can be installed.

NOTE: For units with five-core cable, remove the small, middle plastic knock-out panel to create a slot through which the cable can exit. Use needle-nose pliers if the plastic panel is too difficult to remove by hand.

4. As shown in the illustration, insert the wires including the ground wire into the conduit and secure them with a lock nut onto the conduit mounting plate.
5. Match wire colors with terminal numbers on the indoor and outdoor unit's terminal blocks and firmly screw the wires to the corresponding terminals.
6. Connect the ground wires to the corresponding terminals.
7. Pull the wires and check that the wires are securely fixed to the terminal block.





⚠ WARNING

Before operation of the unit:

- All wiring work must be performed strictly in accordance with the wiring diagram located inside the wire cover of the outdoor unit.
- Before performing any electrical or wiring work, turn off the main power to the system.

1. Remove the screws from the electrical wiring cover from the outdoor unit and remove it.



2. Remove the retaining nut from the DIYPRO® cable that you fed through the wall hole earlier in the installation.

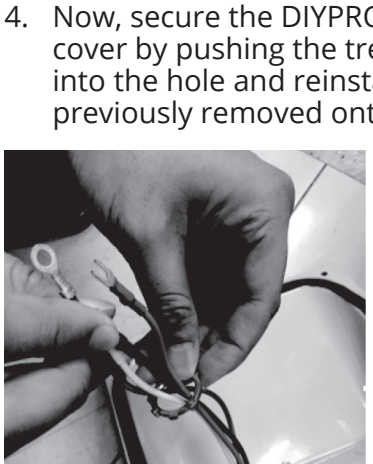


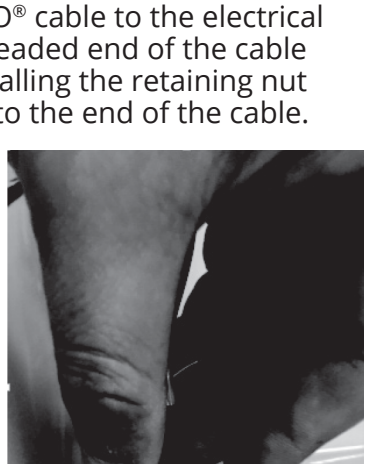
3. Pull the end of the DIYPRO® cable through the hole of the electrical cover (removed in step 1).



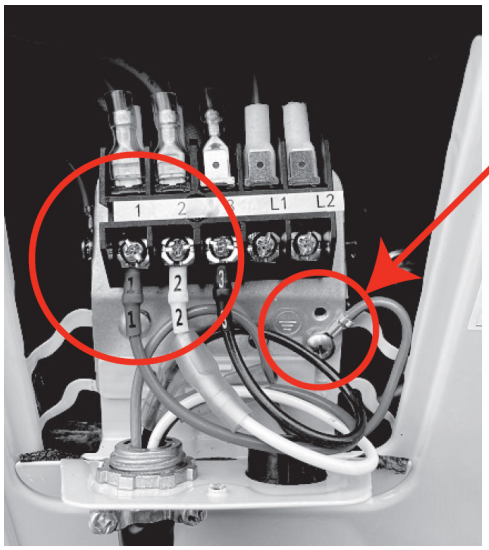


4. Now, secure the DIYPRO® cable to the electrical cover by pushing the treaded end of the cable into the hole and reinstalling the retaining nut previously removed onto the end of the cable.





5. Then, you will connect the wires to the terminal block. Each wire should be numbered and correspond with a connection port on the terminal block. Match up each wire with the correct port, and firmly screw the u-lug of each wire to its corresponding terminal. Now, screw the ground wire into the bottom screw of the terminal block, as shown in the image below.



6. Finally, reinstall the electrical wiring cover and secure it by reinstalling the screws you previously removed.



7.1 Electrical & Gas Leak Checks

⚠ WARNING-RISK OF ELECTRIC SHOCK

All wiring must comply with local and national electrical codes and must be installed by a licensed electrician.

Electrical Safety Checks

After installation, confirm that all electrical wiring is installed in accordance with local and national regulations, and according to the installation manual.

Gas Leak Checks

There are two different methods to check for gas leaks.

Soap & Water Method:
Using a soft brush, apply soapy water or liquid detergent to all pipe connection points on the indoor unit and outdoor unit. The presence of bubbles indicates a leak.

Leak Detector Method:
If using a leak detector, refer to the device's operation manual for proper usage instructions.

AFTER PERFORMING GAS LEAK CHECKS:
After confirming that all of the pipe connection points do not leak, replace the valve cover on the outside unit.

7.2 Test Run

BEFORE TEST RUN

Only perform the test run after you have completed the following steps:

- Electrical Safety Checks - Confirm that the unit's electrical system is safe and operating properly.
- Gas Leak Checks - Check all flare nut connections and confirm that the system is not leaking.
- Confirm that gas and liquid (high and low pressure) valves are fully open.

You should perform the test run for at least 30 minutes.

- Connect power to the unit.
- Press the ON/OFF button on the remote control to turn it on.
- Press the MODE button to scroll through the following functions, one at a time:
  -Cool: Select lowest possible temperature
  -Heat: Select highest possible temperature
- Let each function run for 5 minutes, and perform the following checks:

Checks to Perform	Pass/Fail	
No electrical leakage		
Unit is properly grounded		
All electrical terminals are properly covered		
Indoor & outdoor units are solidly installed		
All pipe connection points do not leak	Indoor (2):	Outdoor (2):
Water drains properly from drain hose		
All piping is properly insulated		
Unit performs cool function properly		
Unit performs heat function properly		
Indoor unit louvers rotate properly		
Indoor unit responds to remote control		

DOUBLE-CHECK PIPE CONNECTIONS

During operation, the pressure of the refrigerant circuit will increase. This may reveal leaks that were not present during your initial leak check. Take time during the Test Run to double-check that all refrigerant pipe connection points do not have leaks. Refer to the Gas Leak Checks section for instructions.

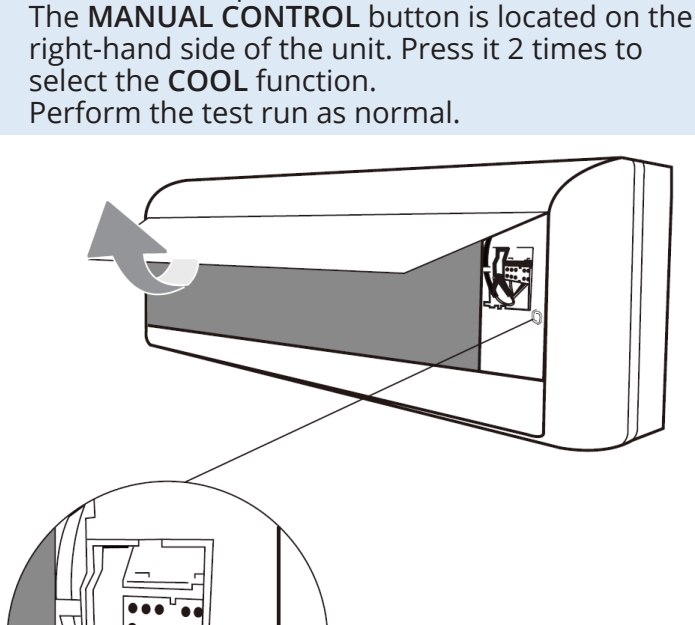
After the test run is successfully completed, and you confirm that all check points in the list have passed, do the following:

- Using the remote control, return unit to normal operating temperature.
- Using insulation tape, wrap the indoor refrigerant pipe connections that you left uncovered during the indoor unit installation process.

If Ambient Temperature is Below 60°F (16°C):

You can't use the remote control to turn on the cool function when the ambient temperature is below 60°F (16°C). In this instance, you can use the **MANUAL CONTROL** button to test the cool function.

- Lift the front panel of the indoor unit, and raise it until it clicks in place.
- The **MANUAL CONTROL** button is located on the right-hand side of the unit. Press it 2 times to select the **COOL** function.
- Perform the test run as normal.



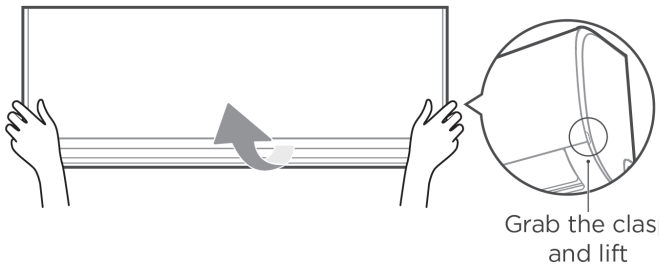
7.3 Care & Maintenance

! CAUTION

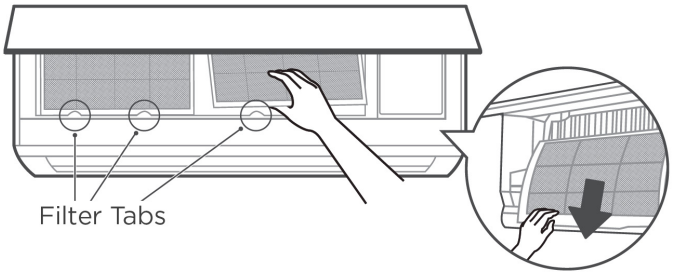
- Clean the filter on your unit every two weeks. Failing to do so can lead to reduced cooling efficiency or damage to your health.
- Always turn off the system and disconnect its power supply before cleaning or maintenance.
- Do not touch the filter within 10 minutes after turning off the unit.
- Only use a soft, dry cloth to wipe the unit clean. You can use a cloth soaked in warm water to wipe it clean if the unit is especially dirty.
- Do not use chemicals or chemically treated cloths to clean the unit.
- Do not use benzene, paint thinner, polishing powder, or other solvents to clean the unit. They can cause the plastic surface to crack or deform.
- Do not use water hotter than 104°F (40°C) to clean the front panel. This can cause the panel to deform or become discolored.

Cleaning the Air Filter

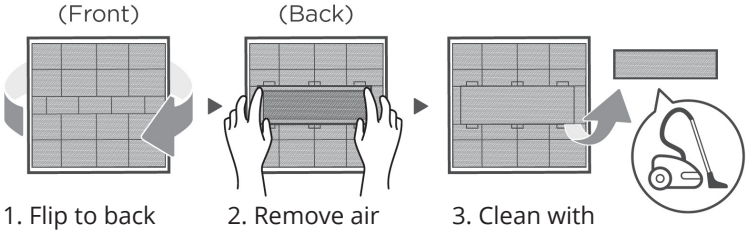
Step 1:
Lift the front panel of the indoor unit. For the unit with a supporting rod, use it to prop up the front panel.



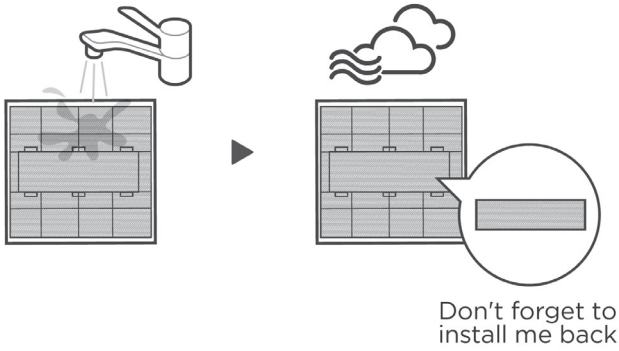
Step 2:
Grip the tab on the end of the filter, lift it up, then pull it towards you and pull the filter out.



Step 3:
If your filter has a small air freshening filter, unclip it from the larger filter. Clean this air freshening filter with a hand-held vacuum.



Step 4:
Clean the large air filter with warm, soapy water. Be sure to use a mild detergent. Rinse the filter with fresh water, then shake off excess water. Dry it in a cool, dry place, and refrain from exposing it to direct sunlight.



Step 5:
When dry, re-clip the air freshening filter to the larger filter, then slide it back into the indoor unit. Finally, close the front panel of the indoor unit.



CAUTION

- Before changing the filter or cleaning, turn off the unit and disconnect its power supply.
- When removing the filter, do not touch metal parts in the unit. The metal edges are sharp.
- Do not use water to clean the inside of the indoor unit. This can destroy insulation and cause electrical shock.
- Do not expose the filter to direct sunlight when drying. This can shrink the filter.
- Any maintenance and cleaning of the outdoor unit should be performed by an authorized dealer or a licensed service provider.
- Any unit repairs should be performed by an authorized dealer or service provider.

Maintaining the Unit

Long Periods of Non-Use

If you plan not to use the unit for an extended period of time, do the following:

Clean all filters.

Turn on fan function until unit dries out completely.

Turn off the unit & disconnect the power.

Remove batteries from remote control.

Pre-Season Inspection

After long periods of non-use, or before periods of frequent use, do the following:

Check for damaged wires.

Clean all filters.

Check for leaks.

Replace batteries.

Ensure nothing is blocking the air inlets & outlets.

7.4 Troubleshooting

! CAUTION

If any of the following conditions occur, turn off the unit immediately.

- The wire is damaged or abnormally warm.
- You smell a burning odor.
- The unit emits loud or abnormal sounds.
- A power fuse blows or the circuit breaker frequently trips.
- Water or other objects fall into or out of the unit.

DO NOT ATTEMPT TO FIX THESE YOURSELF! CONTACT AN AUTHORIZED SERVICE PROVIDER IMMEDIATELY.

The following problems are not a malfunction, and in most situations will not require repairs.

Issue	Possible Causes
Unit does not turn on when pressing ON/OFF button.	The unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within 3 minutes of being turned off.
The unit changes from COOL/ HEAT mode to FAN mode.	The unit may change its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating in the previously selected mode again. The set temperature has been reached, at which point the unit turns off the compressor. The unit will continue operating when the temperature fluctuates again.
The indoor unit emits white mist.	In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.
Both the indoor and outdoor units emit white mist.	When the unit restarts in heat mode after defrosting, white mist may be emitted due to moisture generated from the defrosting process.
The indoor unit makes noises.	A rushing air sound may occur when the louver resets its position. A squeaking sound may occur after running the unit in heat mode due to expansion and contraction of the unit's plastic parts.
Both the indoor unit and the outdoor unit make noises.	Low hissing sound during operation: this is normal and is caused by refrigerant gas flowing through both indoor and outdoor units.
	Low hissing sound when the system starts, has just stopped running, or is defrosting: This noise is normal and is caused by the refrigerant gas stopping or changing direction.
	Squeaking sound: Normal expansion and contraction of plastic and metal parts caused by temperature changes during operation can cause squeaking noises.
The outdoor unit makes noises.	The unit will make different sounds based on its current operating mode.
Dust is emitted from either the indoor or outdoor unit.	The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.
The unit emits a bad odor.	The unit may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operation.
	The unit's filters have become moldy and should be cleaned.
The fan of the outdoor unit does not operate.	During operation, the fan speed is controlled to optimize product operation.
Operation is erratic, unpredictable, or the unit is unresponsive.	Interference from cell phone towers and remote boosters may cause the unit to malfunction. In this case, try the following: • Disconnect the power, then reconnect. • Press the ON/OFF button on the remote control to restart operation.

Note: If a problem persists, contact a local dealer or MRCOOL® customer service. Provide them with a detailed description of the unit malfunction as well as your model number.

! CAUTION

Before contacting a repair company, check the following points.

Problem	Possible Causes	Solution
Poor Cooling Performance	**Temperature setting may be higher than ambient room temperature.**	Lower the temperature setting.
	The heat exchanger on the indoor or outdoor unit is dirty.	Use the Clean function by remote control to clean the affected heat exchanger.
	The air filter is dirty.	Remove the filter and clean it according to instructions.
	The air inlet or outlet of either unit is blocked.	Turn the unit off, remove the obstruction and turn it back on.
	Doors and windows are open.	Make sure that all doors and windows are closed while operating the unit.
	Excessive heat is generated by sunlight.	Close windows and curtains during periods of high heat or bright sunshine.
	Too many sources of heat in the room (people, computers, electronics, etc.)	Reduce the amount of heat sources.
	Low refrigerant due to leak or long-term use.	Check for leaks, re-seal if necessary, and top off refrigerant.
	Silence function is activated (optional function)	Silence function can lower product performance by reducing operating frequency. Turn off Silence function.
The unit is not working	**Power failure**	Wait for the power to be restored.
	The power is turned off.	Turn on the power.
	The fuse is burned out.	Call a technician to replace the fuse.
	Remote control batteries are dead.	Replace batteries
	The unit's 3-minute protection has been activated.	Wait three minutes after restarting the unit.
	Timer is activated.	Turn timer off.
The unit starts and stops frequently.	**There's too much or too little refrigerant in the system.**	Call a technician to check for leaks and recharge the system with refrigerant.
	Incompressible gas or moisture has entered the system.	Call a technician to evacuate and recharge the system with refrigerant.
	The compressor is broken.	Call a technician to replace the compressor.
	The voltage is too high or too low.	Install a manostat to regulate the voltage.
Poor heating performance	**The outdoor temperature is extremely low.**	Use auxiliary heating device.
	Cold air is entering through doors and windows.	Make sure that all doors and windows are closed during use.
	Low refrigerant due to leak or long-term use.	Call technician to check for leaks, re-seal if necessary, and top off refrigerant.
Indicator lamps continue flashing	The unit may stop operation or continue to run safely. If the indicator lamps continue to flash or error codes appear, wait for about 10 minutes. The problem may resolve itself. If not, disconnect the power, then connect it again. Turn the unit on. If the problem persists, disconnect the power and contact MRCOOL®.	
Error code appears and begins with the following letters in the display area: *E(x), P(x), F(x), EH(xx), EL(xx), EC(xx), PH(xx), PL(xx), PC(xx)*		

Note: If the problem persists after performing the checks and diagnostics above, turn off the unit immediately and contact MRCOOL®.

7.5 Error Display (Indoor Unit)

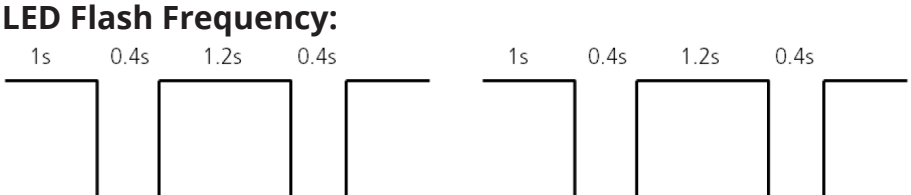
When the indoor unit encounters a recognized error, an error code will be displayed; the error codes are described in the tables below:

Display	Error Information
DF	Defrost
Cl	Active Clean
FP	Heating in Room Temperature under 46.4°F (8°C)
FC	Forced Cooling
AP	AP Mode of Wifi Connection
CP	Remote Switched Off
EH 00	IDU EEPROM Malfunction
EH 0A	Indoor EEPROM Parameter Error
EL 01	IDU & ODU Communication Error
EH 02	Zero-Crossing Signal Detection Error
EH 03	IDU Fan Speed Out of Control
EC 51	ODU EEPROM Parameter Error
EC 52	ODU Coil Temperature Sensor (T3) Error
EC 53	ODU Ambient Temperature Sensor (T4) Error
EC 54	Comp. Discharge Temperature Sensor (TP) Error
EC 56	IDU Coil Outlet Temperature Sensor (T2B) Error (Multi-Zone)
EH 60	IDU Room Temperature Sensor (T1) Error
EH 61	IDU Pipe Temperature (T2) Sensor Error
EC 07	ODU Fan Speed Out of Control
EH 0B	IDU Main Control Board & Display Board Communication Error
FH CC	Refrigerant Sensor Error
EH C1	Refrigerant Sensor Detects Leakage
EH C2	Refrigerant Sensor is Out of Range & Leakage is Detected
EH C3	Refrigerant Sensor is Out of Range
EC C1	Other IDU Refrigerant Sensor Detects Leakage (Multi-Zone)
EL 0C	System Lacks Refrigerant
PC 00	ODU IPM Module Protection
PC 01	ODU Voltage Protection
PC 02	Compressor Top (or IPM) Temperature Protection
PC 04	Inverter Compressor Drive Error
PC 03	Pressure Protection (low or high pressure)
PC 0L	Low Ambient Temperature Protection
----	IDUs Mode Conflict (Multi-Zone)

For other errors:
The display board may show a garbled code or a code undefined by the service manual. Ensure that this code is not a temperature reading.

Troubleshooting:
Test the unit using the remote control. If the unit does not respond to the remote, the indoor PCB requires replacement. If the unit responds, the display board requires replacement.

LED Flash Frequency:



7.6 Error Display (Outdoor Unit with Auxiliary Board)

Display	Error Information
DF	Defrost
FC	Forced cooling
EC 51	ODU EEPROM Parameter Error
EL 01	IDU & ODU Communication Error
PC 40	Communication Error between Outdoor Main Chip & Compressor-Driven Chip
PC 08	ODU Overcurrent Protection
PC 10	ODU Low AC Voltage Protection
PC 11	ODU Main Control Board DC Bus High Voltage Protection
PC 12	ODU Main Control Board DC Bus Low Voltage Protection/341 MCE Error
PC 00	ODU IPM Module Protection
PC 0F	PFC Module Protection
EC 71	Over Current Failure of ODU DC Fan Motor
EC 72	Lack Phase Failure of ODU DC Fan Motor
EC 07	ODU Fan Speed Out of Control
PC 43	ODU Compressor Lack Phase Protection
PC 44	ODU Zero Speed Protection
PC 45	ODU IR Chip Drive Failure
PC 46	Compressor Speed Out of Control
PC 49	Compressor Overcurrent Failure
PC 30	System High Pressure Protection
PC 31	System Low Pressure Protection
PC 0a	High Temperature Protection of Condenser
PC 06	Discharge Temperature Protection of Compressor
LC 06	High Temperature Protection of Inverter Module (IPM)
PC 02	Compressor Top (or IPM) Temperature Protection
PH 90	High Temperature Protection of Evaporator
PH 91	Low Temperature Protection of Evaporator
EC 52	ODU Coil Temperature Sensor (T3) Error
EC 53	ODU Ambient Temperature Sensor (T4) Error
EC 54	Comp. Discharge Temperature Sensor (TP) Error
EC 50	Open or Short Circuit of Outdoor Unit Temperature Sensor (T3, T4, TP)
PC 0l	Low Ambient Temperature Protection

7.7 Quick Maintenance by Error Code

If you do not have the time to test which specific parts are faulty, you can change the required parts according to the error code. You can find the parts to replace by error code in the following table.

Part Requiring Replacement	Error Code									
	EH 00/ EH 0A	EL 01	EH 02	Eh 03	EH 60	EH 61	EH 0B	EL 0c	ec 56	fh cc
Indoor PCB	√	√	√	√	√	√	√	√	x	x
Outdoor PCB	x	√	x	x	x	x	x	x	√	x
Display Board	x	x	x	x	x	x	√	x	x	x
Indoor Fan Motor	x	x	x	√	x	x	x	x	x	x
T1 Sensor	x	x	x	x	√	x	x	x	x	x
T2 Sensor	x	x	x	x	x	√	x	√	x	x
T2B Sensor	x	x	x	x	x	x	x	x	√	x
Refrigerant Sensor	x	x	x	x	x	x	x	x	x	√
Reactor	x	√	x	x	x	x	x	x	x	x
Compressor	x	x	x	x	x	x	x	x	x	√
Additional Refrigerant	x	x	x	x	x	x	x	√	x	x

Part Requiring Replacement	Error Code									
	EC 53	EC 52	EC 54	EC 51	EC 07	PC 00	PC 01	PC 02	PC 03	PC 04
Outdoor PCB	√	√	√	√	√	√	√	√	√	√
Indoor Fan Motor	x	x	x	x	x	x	x	x	x	x
Outdoor Fan Motor	x	x	x	x	√	√	x	√	x	√
T3 Sensor	x	√	x	x	x	x	x	x	x	x
T4 Sensor	√	x	x	x	x	x	x	x	x	x
TP Sensor	x	x	√	x	x	x	x	x	x	x
Reactor	x	x	x	x	x	x	√	x	x	x
Compressor	x	x	x	x	x	√	x	x	x	√
IPM Module Board	x	x	x	x	x	√	√	√	x	√
High Pressure Protector	x	x	x	x	x	x	x	√	x	x
Low Pressure Protector	x	x	x	x	x	x	x	x	√	x
Additional Refrigerant	x	x	x	x	x	x	x	x	√	x

Part Requiring Replacement	Error Code				
	PC 06	PC 08/44/49	PC 0a	PC of	PC 40
Outdoor PCB	√	√	√	√	√
Outdoor Fan Motor	x	√	√	x	x
T3 Sensor	x	x	√	x	x
TP Sensor	√	x	x	x	x
Pressure Sensor	x	x	x	x	x
Reactor	x	√	x	√	x
Compressor	x	x	x	x	x
IPM Module Board	x	√	x	x	√
High Pressure Valve Assembly	√	x	x	x	x
High Pressure Protector	x	x	x	x	x
Low Pressure Protector	x	x	x	x	x
Additional Refrigerant	√	x	√	x	x
Electric Control Box	x	x	x	x	√

Part Requiring Replacement	Error Code				
	PC 41	PC 43	PC 10/11/12	PC 30	PC 31
Outdoor PCB	√	√	√	√	√
Outdoor Fan Motor	x	x	x	√	x
T3 Sensor	x	x	x	x	x
TP Sensor	x	x	x	x	x
Pressure Sensor	x	x	x	x	x
Reactor	x	x	√	x	x
Compressor	x	√	x	x	x
IPM Module Board	x	x	√	x	x
High Pressure Valve Assembly	x	x	x	x	x
High Pressure Protector	x	x	x	√	x
Low Pressure Protector	x	x	x	x	√
Additional Refrigerant	x	x	x	x	√

MRCOOL®

COMFORT MADE SIMPLE

DIY® Hyper Heat Series Single-Zone Mini-Split System

The design and specifications of this product and/or manual are subject to change without prior notice.
Consult with the sales agency or manufacturer for details.