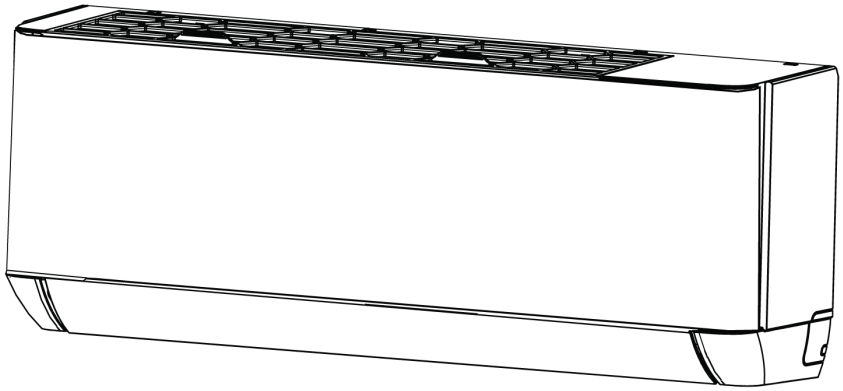
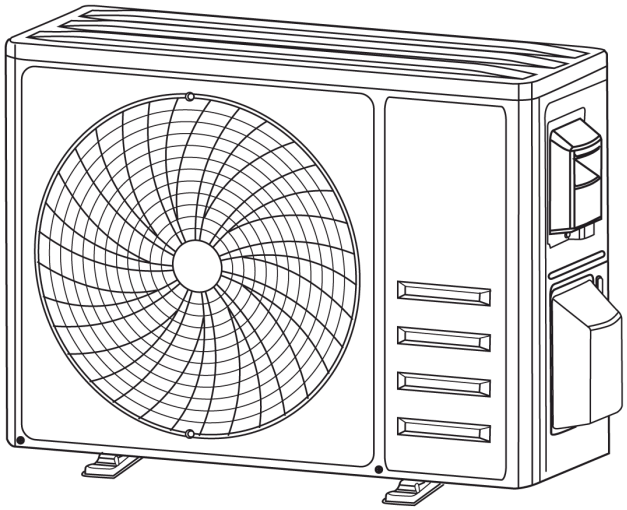
TRUINVERTER
MINI SPLIT HEAT PUMP





Owner's & Installation Manual

Outdoor Split System Unit 9K, 12k, 18K, 24K R32	*Mini Split Heat Pump*	*Version Date:* *9 / 24 / 26*

Initial Release ..... **5 / 08 / 26**

Revision A ..... 9 / 24 / 26

Condenser

AEPL** MH V 22 S0 63 1B 1 A

Brand

AEPL** = Any Brand

Product Category

S = Split System Condenser
P = Package Unit
M = Mini Split Condenser
T = Package Terminal
W = Window Unit
R = Through the Wall

Product Type

A = AC
H = Heat Pump

Compressor Type

S = Single Stage
T = Two Stage
V = Inverter

Efficiency (SEER2)

22 = 22 SEER2
23 = 23 SEER2

Air Flow

T = Top Discharge (Condenser)
S = Side Discharge (Condenser)
M = Multi-Position (Pkg Unit)
H = Horizontal (Pkg Unit)
D = Down Flow (Pkg Unit)

Nominal Capacity

06 = 0.5 Tons	30 = 2.5 Tons
09 = 0.75 Tons	36 = 3 Ton
12 = 1 Ton	42 = 3.5 Tons
18 = 1.5 Tons	48 = 4 Tons
24 = 2 Tons	60 = 5 Tons

Refrigerant

1 = R410a
2 = R454b
3 = R32

Electrical

1 = 208/230 V, 1 Phase, 60 Hz
2 = 120 V, 1 Phase, 60 Hz

Series

B

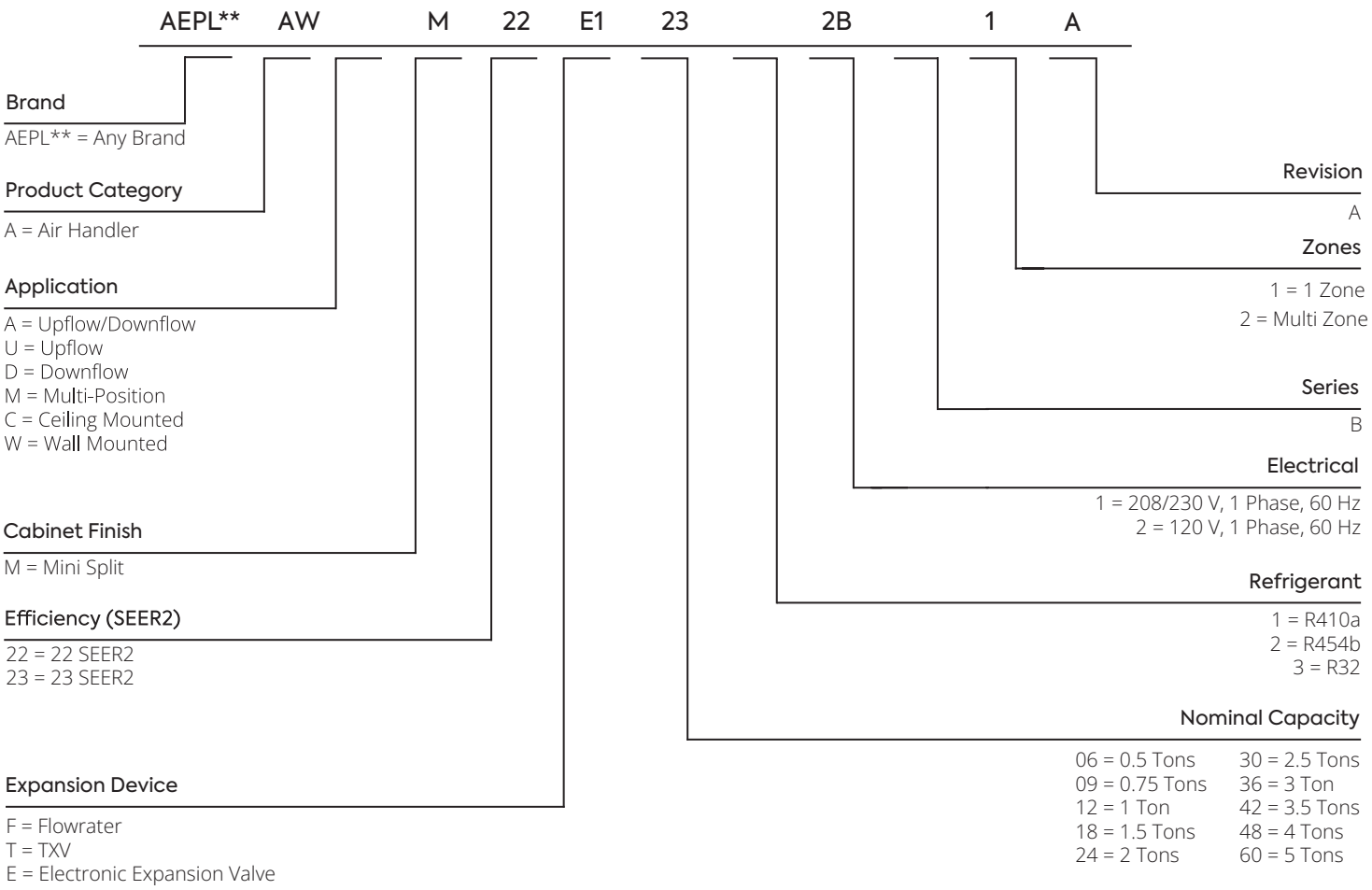
Zones

1 = 1 Zone
2 = 2 Zone
3 = 3 Zone
4 = 4 Zone
5 = 5 Zone

Revision

A

Air Handler


AEPL** AW M 22 E1 23 2B 1 A
Brand
AEPL** = Any Brand
Product Category
A = Air Handler
Application
A = Upflow/Downflow
U = Upflow
D = Downflow
M = Multi-Position
C = Ceiling Mounted
W = Wall Mounted
Cabinet Finish
M = Mini Split
Efficiency (SEER2)
22 = 22 SEER2
23 = 23 SEER2
Expansion Device
F = Flowrater
T = TXV
E = Electronic Expansion Valve
Revision
A
Zones
1 = 1 Zone
2 = Multi Zone
Series
B
Electrical
1 = 208/230 V, 1 Phase, 60 Hz
2 = 120 V, 1 Phase, 60 Hz
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48 = 4 Tons
60 = 5 Tons

Thank you for purchasing our mini split heat pump. This manual contains critical safety, installation, operation, and servicing information. To ensure prolonged, consistent operation, ***read this Owner's & Installation Manual carefully before servicing your mini split heat pump***. After reading the manual thoroughly, store it in a safe place for future reference. Consult this manual if you have questions about your heat pump's regular operation or any irregularities.

This mini split heat pump is intended for residential use.

This manual is intended for the following audiences and situations:

- **Users/Owners** — Operation and basic maintenance only
- **Installers** — Installation and electrical connection
- **Service Personnel** — Refrigerant handling, repair, and recovery

Sections marked "**Professional Use Only**" must be performed exclusively by licensed or certified technicians. All installation, service, and refrigerant handling procedures must strictly comply with this manual and all applicable regulations. Failure to follow these instructions voids the warranty and may result in hazardous operation.

Note – User Servicing Prohibited

Users may not attempt to access, modify, repair, relocate, or service any internal components, refrigeration circuits, or electrical parts. Unauthorized servicing may result in fire, explosion, electric shock, serious injury, or death, ad will void all warranties.

DANGER – RISK OF FIRE OR EXPLOSION



This appliance is charged with R32 flammable refrigerant, classified as A2L (mildly flammable). R32 is odorless and may create a flammable atmosphere if leaked and exposed to an ignition source. Improper installation, servicing, or use may result in fire, explosion, serious injury, or death.

Compared with common refrigerant, R32 is an environmentally-friendly refrigerant that has no harm to the ozone layer and a weak greenhouse effect. Its GWP is 675. Because of its thermodynamic characteristics, R32 requires a smaller charging quantity to reach high energy efficiency.

i. SAFETY RULES AND RECOMMENDATIONS FOR INSTALLERS

1. Read this guide **before** installing and using the appliance.
2. During the installation of the indoor and outdoor units, **do not allow children access** to the working area. Serious accidents may occur.
3. Make sure that the base of the unit is firmly fixed.
4. Check that air cannot enter the refrigeration system and for refrigerant leaks before turning on the appliance.
5. Carry out a test cycle after installing the air conditioner and record the operating data.
6. Protect the unit with a fuse of suitable capacity for the maximum input current or with another overload protection device.
7. Ensure that the mains voltage corresponds to the voltage on the rating plate. Keep the switch or power terminal clean. Connect the power terminal correctly and firmly into the socket to avoid the risk of electric shock or fire due to insufficient contact.
8. The appliance must be equipped with devices capable of disconnection from the mains power supply, and have a contact separation in all poles to provide full disconnection under “over voltage category III conditions.” These devices must also be incorporated into the fixed wiring in accordance with the wiring rules.
9. Installation may only be performed by licensed or certified HVAC professionals authorized to work with flammable refrigerants. **Installation by unqualified persons may result in fire, electric shock, serious injury, or death, and will void the warranty**.
10. Do not install the appliance less than 20 inches from flammable substances (alcohol, etc.) or pressurized containers (e.g. spray cans).
11. If the appliance is used in areas without the possibility of ventilation, precautions must be taken to prevent refrigerant gas leaks from remaining in the environment and creating a fire hazard.
12. The packaging materials are recyclable and should be disposed of appropriately. When no longer usable, dispose of the appliance at a specialized waste collection center.
13. Only use the appliance as instructed in this manual. These instructions are not intended to cover every possible condition and situation. As with any electrical household appliance, **common sense and caution are recommended** for installation, operation, and maintenance.
14. The installer is solely responsible for ensuring that installation complies with all applicable national, state, and local electrical, mechanical, fire, and building codes. **The manufacturer assumes no responsibility for damage, malfunction, or injury resulting from non-compliant installation**.
15. Before accessing the terminals, all power circuits must be disconnected from the power supply. Do not pull out the power terminal to switch off the appliance when it is in operation, as this could create a spark and cause a fire.
16. Cleaning and maintenance must be carried out by specialized technical personnel. Disconnect the appliance from the mains electricity supply before carrying out any cleaning or maintenance.
17. This appliance is made for heating and cooling residential environments and must not be used for any other purposes, such as for drying clothes, cooling, food, etc.
18. Always use this appliance with the air filter mounted. Using this appliance without an air filter could cause an excessive accumulation of dust and/or lead to inner parts function failure.
19. The user is responsible for having the appliance installed by a qualified technician, who must check that earthing/grounding is done in accordance with current legislation and insert a thermal magnetic circuit breaker.
20. The batteries in the remote controller must be recycled or disposed of properly. For disposal of scrap batteries, follow any and all local regulations.
21. If the appliance creates smoke or there is a burning smell, immediately cut off the power supply and contact the Service Center. Prolonged use in such conditions could cause fire or electric shock.
22. Have repairs carried out only by an authorized Service Center of the manufacturer. Incorrect repair could expose the user to the risk of electric shock, etc.
23. Unhook the automatic switch if you will not use the device for an extended time. The airflow direction must be properly adjusted.

24. Ensure that the appliance is disconnected from the power supply when it will be inoperative for an extended period and before cleaning or maintenance.
25. Select the most suitable temperature to prevent damage to the appliance.
26. Do not remain directly exposed to cold air flow for a long time as it could be dangerous for your health.
27. This appliance may be used by children over 8 years old and persons with reduced physical, sensory, or mental capacities **ONLY** under continuous supervision and after receiving instruction on safe use. **DO NOT** let children play with the appliance or perform cleaning, maintenance, or inspection of the appliance.

ii. SAFETY RULES AND PROHIBITIONS

1. Do not bend, tug, or compress the power cord. This could cause damage. Damaged power cords are often the cause of electrical shock and fire. Only specialized technical personnel should inspect damaged power cords.
2. Do not use extensions or gang modules.
3. Do not touch the appliance when barefoot, or if parts of your body are wet or damp.
4. Do not obstruct the air inlet or outlet of the indoor or outdoor units. Obstructions reduce the operating efficiency of the air conditioner, with possible consequent failures or damages.
5. Do not alter the characteristics of the appliance in any way.
6. Do not install the appliance in environments where the air could contain flammable gas, oil, or sulfur, or near heat sources.
7. This appliance may be used by children over 8 years old and persons with reduced physical, sensory, or mental capacities **ONLY** under continuous supervision and after receiving instruction on safe use. **DO NOT** let children play with the appliance or perform cleaning, maintenance, or inspection of the appliance.
8. Do not climb onto or place any heavy or hot objects on top of the appliance.
9. Do not leave windows or doors open for a long time when the mini split is operating.
10. Do not remain directly exposed to the flow of cold air for a long time. Do not direct the airflow onto plants or animals. The direct and prolonged exposure to cold air could be dangerous for your health. Particular care should be taken in the rooms where children, elderly, and sick people are.
11. Do not put the appliance in contact with water as it could damage the electrical insulation and cause electric shock.
12. Do not climb onto or place any objects on the outdoor unit.
13. Do not insert sticks or similar objects into the appliance as it could cause injury.
14. This unit is equipped with a refrigerant leak sensor for safety. To be effective, the unit must be electrically powered at all times after installation, other than during servicing. This sensor can only be replaced with a manufacturer approved sensor. If it is replaced as part of the component assembly, the component should be labeled. (Some models have refrigerant leak sensors, subject to the actual product received.)
15. This appliance must be installed according to the manufacturer's instructions, and the ventilation pipe must not exceed the maximum length and number of turns specified by the manufacturer.
16. Appliances that can be installed in different locations should be tested in all locations permitted by the manufacturer. The intake or exhaust openings should not be covered, and the manufacturer's recommended air filter should be installed according to the instructions.

Note for Wireless Network Compatible Models

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

1. *This device may not cause harmful interference.*
2. *This device must accept any interference received, including interference that may cause undesired operation.*

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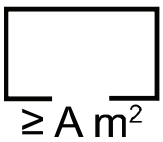
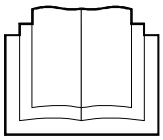
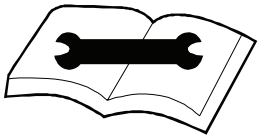
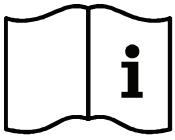
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The following safety codes are used in this manual. Pay close attention to them to minimize safety risks.

DANGER
Indicates a dangerous situation, which, if not avoided, ***will*** lead to death or serious injury.
WARNING
Indicates a dangerous situation, which, if not avoided, ***may*** lead to death or serious injury.
CAUTION
Indicates a dangerous situation, which, if not avoided, ***may*** cause mild to moderate injury.
Note
Used to indicates additional information unrelated to personal injury, such as installation tips.

The following symbols are displayed on the unit. Pay close attention to them to minimize safety risks.

	**DANGER**	This appliance uses a mildly flammable refrigerant. If this refrigerant leaks and is exposed to an external ignition source, it will create a fire risk.
	**WARNING**	This appliance must be installed, operated, and stored in a room with a floor area no less than the minimum allowed floor area.
	**CAUTION**	Carefully read this manual.
	**CAUTION**	A service personnel should handle this equipment in accordance with this manual.
	**CAUTION**	Relevant information is available in the operational or installation manual.

Abbreviation	Meaning
Mc	Actual refrigerant charge in the system
A	Actual room area where the appliance is installed
A_{min}	Required minimum room area
M_{max}	Allowable maximum refrigerant charge in a room
Q_{min}	Minimum circulation airflow
Anv_{min}	Minimum opening area for connected rooms

1. 1 Precautions

1. Check the information in this manual to find the dimensions of space needed for proper device installation, including minimum distances allowed compared to adjacent structures.
2. This appliance must be installed, operated, and stored in a room with a floor areas larger than 43 ft^2 (4 m^2).
3. The installation of pipework must be kept to a minimum.
4. Pipework must be protected from physical damage and not installed in unventilated spaces less than 43 ft^2.

⚠ WARNING ⚠

The appliance must be stored in a well-ventilated area where the room size corresponds to the room area specified for operation. The appliance must be stored in a room without continuously operating open flames (an operating gas appliance, etc.) and ignition sources (an operating electric heater, etc.)

5. You must comply with national gas regulations.
6. The mechanical connections must be accessible for maintenance purposes.
7. You **must** follow these instructions for handling, installing, cleaning, maintaining, and disposing refrigerant.
8. Make sure ventilation openings are clear of obstruction.
9. The appliance must be stored in a way to prevent mechanical damage from occurring.

NOTICE

Servicing may only be performed as recommended by the manufacturer.

10. Any person performing installation, maintenance, repair, or refrigerant handling must a valid and current certification recognized by the applicable regulatory authority (e.g., EPA Section 608, F-Gas, or an equivalent). Unauthorized servicing is strictly prohibited.

⚠ WARNING ⚠

1. Do not use any means other than those recommended by the manufacturer to accelerate the defrosting process or to clean the unit.
2. Do not store this appliance near continuously operating fuel sources (e.g. open flames, operating gas appliances, operating electric heaters.)
3. Do not pierce or burn
4. Be aware that refrigerants may not emit an odor.

11. Every working procedure that affects safety may only be performed by competent persons.
12. **Repairs to sealed components**: Sealed electrical components must be replaced.
13. **Repair to intrinsically safe components**: Intrinsically safe components must be replaced.

1. 2 Emergency Refrigerant Leak Procedure

If a refrigerant leak is suspected or detected:

1. Immediately disconnect electrical power.
2. Open doors and windows to ventilate the area.
3. Eliminate all ignition sources.
4. Evacuate all occupants from the space.
5. Contact authorized service personnel.

Do not re-enter the area until the refrigerant has fully dissipated.

1. 3 Important Considerations

1. The appliance must be installed by professional personnel. The installation manual is intended only for the professional personnel. The installation specifications are subject to our after-sale service regulations.
2. When filling the combustible refrigerant, rough handling operations may cause serious injury or injuries to people and objects.
3. A leak test must be done after the installation is completed.
4. A safety inspection must be done before maintaining or repairing the appliance using combustible refrigerant in order to ensure the fire risk is reduced to a minimum.
5. Operate machine under controlled procedure to minimize risk from combustible gas or vapor.
6. Follow requirements for the total weight of filled refrigerant and the area of a room to be equipped with an air conditioner (as shown in **Tables 1-1, 1-2, 1-3, and 1-4**)

1. 4 Refrigerant Charge and Room Area Limitations

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

The maximum charge and the required minimum floor area:

m_1 = (6 m^3) x LFL, m_2 = (52 m^3) x LFL, m_3 = (260 m^3) x LFL

Where LFL is the lower flammable limit in kg/m^3, R32 LFL is 0.306 kg/m^3

For the appliances with a charge amount $m_1 < M = m_2$:

$M_{max} = 2.5 \times (LFL)^{(5/4)} \times h_0 \times (A)^{1/2}$ not to exceed $M_{max} = SF \times LFL \times h_0 \times A$ (GG.3DV)

Required minimum floor area $A_{min} = (M / (2.5 \times (LFL)^{(5/4)} \times h_0))^2$ not less than $A_{min} = M / (SF \times LFL \times h_0)$ (GG.4DV)

Table 1-1 Maximum Charge (ft)

Category	LFL (kg/ft³)	h_0(ft)	Floor Area (ft²)						
			43	75.3	107.6	161.4	215.2	322.9	538.1
R32	10.8	8.2	16.4	28.8	41.2	59.3	68.4	83.8	108.2
		9.1	18.4	32.2	46	66.4	76.6	93.9	121.3
		9.8	19.8	34.5	49.4	71.1	82.1	100.6	129.9

Table 1-2 Maximum Charge (m)

Category	LFL (kg/m³)	h_0(m)	Floor Area (m²)						
			4	7	10	15	20	30	50
R32	0.306	2.5	1.53	2.68	3.83	5.51	6.36	7.79	10.06
		2.8	1.71	3.00	4.28	6.17	7.12	8.73	11.27
		3	1.84	3.21	4.59	6.61	7.63	9.35	12.07

For R32 refrigerant charge amount and minimum room area:

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

Table 1-3 Minimum Room Area (ft)

Category	LFL (kg/ft³)	h_0(ft)	Charge Amount (M) (kg) Minimum Room Area (ft²)						
			6.2	6.4	10.7	11.5	12.9	17	21.5
R32	10.8	8.2	16.3	16.9	28	30.1	33.7	44.4	56.2
		9.1	14.5	15	25	26.9	30.1	39.7	50.2
		9.8	13.5	14.1	23.4	25	28	37	46.9

Table 1-4 Minimum Room Area (m)

Category	LFL (kg/m³)	h_0(m)	Charge Amount (M) (kg) Minimum Room Area (m²)						
			0.58	0.60	1.00	1.07	1.20	1.58	2.00
R32	0.306	2.5	1.52	1.57	2.61	2.80	3.14	4.13	5.23
		2.8	1.35	1.40	2.33	2.50	2.80	3.69	4.67
		3	1.26	1.31	2.18	2.33	2.61	3.44	4.36

1. 5 Information on Servicing

1. Check the Area

Prior to beginning work on systems containing flammable refrigerants, perform safety checks to minimize the risk of ignition. For repair to the refrigerating system, the following precautions must be complied with prior to conducting work on the system.

2. Work Procedure

Perform work under a controlled procedure to minimize the risk of a flammable gas or vapor being present while the work is being performed.

3. General Work Area

Instruct all maintenance staff and others working in the local area on the nature of the work being carried out. Avoid work in confined spaces. Section off the area around the workspace. Ensure that the conditions within the area have been made safe by the control of flammable material.

4. Checking for the Presence of Refrigerant

Check the area with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potential flammable atmospheres. Ensure that the leak detection equipment is suitable for use with flammable refrigerants (i.e. non-sparking, adequately sealed, or intrinsically safe).

5. Presence of a Fire Extinguisher

If any hot work is to be conducted on the refrigeration equipment or any associated parts, keep appropriate fire extinguishing equipment on hand. Keep a dry powder or CO_2 fire extinguished adjacent to the charging area.

6. Ignition Source

No person working on a refrigeration system involving exposing pipework may use any sources of ignition in such a manner that may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, must 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 must be surveyed for flammable hazards or ignition risks. You must display “No Smoking” signs.

7. Ventilated Area

Ensure that the area is in the open or that it is adequately ventilated before opening the system or conducting any work that will produce heat. Ensure ventilation continues during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and expel it externally into the atmosphere.

8. Checks to the Refrigerant Equipment

Where electrical components are being changed, they must be fit for the intended purpose and to the correct specification. At all times, the manufacturer’s maintenance and service guidelines must be followed. If in doubt, consult the manufacturer’s technical department for assistance.

You must complete the following checks on installations using flammable refrigerant:

- The charge size is in accordance with the room size where the refrigerant containing parts are installed
- The ventilation machinery and outlets are operating adequately and are not obstructed
- If an indirect refrigerating circuit is used, check the secondary circuit for the presence of refrigerant
- Marking on the equipment continues to be visible and legible. Correct markings and signs that are illegible
- Refrigeration pipe or components are installed where they are unlikely to be exposed to any substance that may corrode refrigerant containing components, unless the components are constructed of materials inherently resistant to or are suitably protected against corrosion

9. Checks to Electrical Devices

Repair and maintenance to electrical components must include initial safety checks and component inspection. If a fault exists that could compromise safety, do not connect electrical supply to the circuit until satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, use an adequate temporary solution. Report this to the owner of the equipment so all parties are properly advised.

Initial safety checks must include:

- That capacitors are discharged. This must be done safely to avoid the possibility of sparking
- That no live electrical components and wiring are exposed while charging, recovering, or purging the system
- That there is continuity of earth bonding

1. 6 Cabling

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges, or any other adverse environmental effects. The check must also take into account the effects of aging or continual vibration from sources such as compressors or fans.

1. 7 Detection of Flammable Refrigerants

Under no circumstances may potential sources of ignition be used in the searching for or detection of refrigerant leaks. Do no use a halide torch (or any other detector using a naked flame).

1. 8 Leak Detection Methods

The following leak detection methods are acceptable for systems containing flammable refrigerants:

- Use electronic leak detectors to detect flammable refrigerants. The sensitivity may not be adequate, or may need re-calibration. (Detection equipment must 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. Set leak detection equipment at a percentage of the LFL of the refrigerant and calibrate to the refrigerant employed and confirms the appropriate percentage of gas (25% maximum). Leak detection fluids are suitable for use with most refrigerants, but avoid the use of detergents containing chlorine as it may react with the refrigerant and corrode the copper pipework. If a leak is suspected, all naked flames must be removed or extinguished. If a leakage of refrigerant is found that requires brazing, all refrigerant must be recovered from the system, or isolated (by shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) must then be purged through the system both before and during the brazing process.

1. 9 Removal and Evacuation

When breaking into the refrigerant circuit to make repairs, or for any other purpose, use conventional procedures. Follow best practices is due to flammability. The follow procedure must be adhered to:

1. Remove refrigerant
2. Purge the circuit with inert gas
3. Evacuate
4. Purge again with inert gas
5. Open the circuit by cutting or brazing

The refrigerant charge must be recovered into the correct recovery cylinders. The system must be flushed with OFN to render the unit safe. This process may need to be repeated several times.

Compressed air or oxygen must not be used for this task.

Flushing may be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to the atmosphere, and finally pulling down to a vacuum. This process must be repeated until no refrigerant is within the system. When the final OFN charge is used, the system must be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipework are to take place.

Ensure that the outlet for the vacuum pump is not close to any ignition sources and ventilation is available.

1. 10 Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its details. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample must be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.

1. Become familiar with the equipment and its operation.
2. Isolate the system electrically.

3. 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.
4. Pump down refrigerant system, if possible.
5. If a vacuum is not possible, make a manifold so refrigerant can be removed from parts of the system.
6. Make sure that the cylinder is situated on the scales before recovery takes place.
7. Start the recovery machine and operate in accordance with the manufacturer's instructions.
8. Do not overfill cylinders (No more than 80% volume liquid charge).
9. Do not exceed the maximum working pressure of the cylinder, even temporarily.
10. When the cylinders have been filled correctly and the process is completed, make sure that the cylinders and the equipment are removed from the site promptly and all isolation valves on the equipment are closed off.
11. Do not charge recovered refrigerant into another refrigeration system unless it has been cleaned and checked.

1. 11 Labeling

Label equipment stating it has been de-commissioned and emptied of refrigerant. The label must be dated and signed. Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

1. 12 Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely. Ensure the following:

- When transferring refrigerant into cylinders, use the appropriate refrigerant recovery cylinders and check that the correct number of cylinders for holding the total system charge are available. All cylinders used must be designated and labeled for the recovered refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders must be complete with pressure-relief valves and associated shut-off valves in good working order.
- Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.
- Recovery equipment must be in good working order with instructions for the equipment on hand, and must be suitable for the recovery of all appropriate refrigerants, including, when applicable, flammable refrigerants. In addition, a set of calibrated weighing scales must be available and in good working order. Hoses must be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained, and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. If in doubt, consult the manufacturer.
- The recovered refrigerant must be returned to the refrigerant supplier in the correct recovery cylinder with the relevant waste note attached. Do not mix refrigerants in recover units, especially not in the cylinders.
- If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level so that flammable refrigerant does not remain within the lubricant.
- The evacuation process must be carried out prior to returning the compressor to the suppliers.
- Only electric heating to the compressor body can be employed to accelerate this process. When oil is drained from a system, it must be carried out safely.

⚠ WARNING ⚠

1. Do not use any means other than those recommended by the manufacturer to accelerate the defrosting process or to clean the unit.
2. Do not store this appliance near continuously operating fuel sources (e.g. open flames, operating gas appliances, operating electric heaters.)
3. Do not pierce or burn
4. Be aware that refrigerants may not emit an odor.

1. 13 Statement

1. Use a flammable gas detector to check before unloading and opening the container.
2. Do not bring a fire source near this appliance. No smoking near the appliance.
3. Protect pipework from physical damage and, in the case of **FLAMMABLE REFRIGERANTS**, do not install in an unventilated space, if that space is smaller than A_{min} in **Tables 1-1, 1-2, 1-3, and 1-4**. In case of field charge, the effect on **REFRIGERANT CHARGE** caused by the different pipe length has to be quantified
4. Compliance with national gas regulations must be observed.
5. Must be shipped with a **FLAMMABLE REFRIGERANT CHARGE**. Make joints in the installation between parts of the **REFRIGERATION SYSTEM**, with at least on part charged, in accordance with the following:
   - A brazed, welded, or mechanical connection must be made before opening the valves to permit refrigerant to flow between the **REFRIGERATING SYSTEM** parts. Provide a vacuum valve to evacuate the interconnecting pipe and/or any uncharged **REFRIGERATING SYSTEM** parts.
   - Mechanical connectors used indoors must comply with ISO 14903. When mechanical connectors are reused indoors, renew sealing parts. When flared joints are reused indoors, re-fabricate the flare part.
   - Protect or enclose refrigerant tubing to avoid damage.
   - Protect flexible refrigerant connectors (such as connecting lines between the indoor and outdoor unit) that may be displaced during **NORMAL OPERATION** against mechanical damage.
6. Pipework including piping material, pipe routing, and installation must include protection from physical damage in operation and service, and be in compliance with national and local codes and standards, such as ASHRAE 15, ASHRAE 15.2, IAPMO Uniform Mechanical Code, ICC International Mechanical Code, or CSA B52. All field joints must be accessible for inspection prior to being covered or enclosed.
7. After completion of field piping for split systems, pressure test the field pipework with an inert gas and then vacuum test prior to refrigerant charging, according to the following requirements.
8. The appliance must be stored to prevent mechanical damage from occurring.
9. Working personnel for maintenance, service, and repair operations must be present. Every working procedure that affects safety means must only be carried out by competent persons.

   Examples for such working procedures are:
   - Breaking into the refrigerating circuit
   - Opening of sealed components
   - Opening of ventilated enclosures

INTENDED USE LIMITATION

This appliance is designed solely for residential and light commercial air conditioning applications.

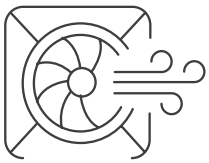
Any use outside the scope described in this manual—including industrial cooling, food preservation, or process control—is prohibited voids all warranties.

1. 14 Operation Safety Principles

Site Safety



Open Flames Prohibited



Ventilation Necessary

Operation Safety



Mind Static Electricity



Must Wear Protective Clothing and Anti-Static Gloves



Don't Use Mobile Phone

Installation Safety

Ensure you have a refrigerant leak detector on hand and have chosen an appropriate installation location



A schematic diagram of a refrigerant leak detector

Please note that:

1. The installation site should be well-ventilated.
2. The sites for installing and maintaining an R32 air conditioner should be free from open fires or welding, smoking, drying ovens, or any other heat source higher than 1000°F (548°C) that easily produces open fire.
3. When installing an air conditioner, it is necessary to take appropriate anti-static measures, such as wearing anti-static clothing and/or gloves.
4. It is necessary to choose a site convenient for installation or maintenance where the air inlets and outlets of the indoor and outdoor units should not be surrounded by obstacles or close to any heat source or combustible and/or explosive environments.
5. If the indoor unit suffers a refrigerant leak during the installation, it is necessary to immediately turn off the valve of the outdoor unit and all the personnel should go out until the refrigerant leaks completely for 15 minutes. If the product is damaged, you must carry the damaged product back to the maintenance station. It is prohibited to weld the refrigerant pipe or conduct other operations on the user's site.
6. Avoid the places where there are other electrical products, power switch plugs and sockets, kitchen cabinets, beds, sofas, and other valuables right under the lines on two sides of the indoor unit.

Table 1-5 Suggested Tools for Flare Install

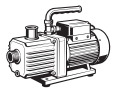
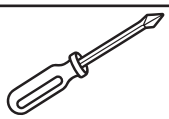
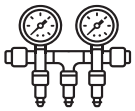
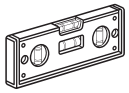
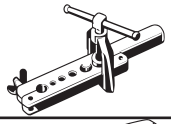
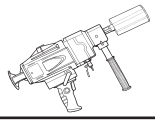
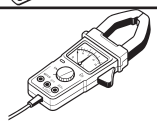
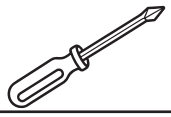
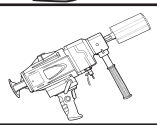
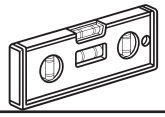
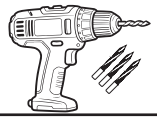
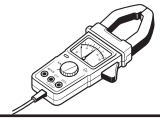
Tool	Picture	Tool	Picture	Tool	Picture
Standard Wrench		Pipe Cutter		Vacuum Pump	
Adjustable/ Crescent Wrench		Screwdrivers (Phillips & Flat Blade)		Safety Glasses	
Torque Wrench		Manifold & Gauges		Work Gloves	
Hex Keys or Allen Wrenches		Level		Refrigerant Scale	
Drill & Drill Bits		Flaring Tool		Micron Gauge	
Hole Saw		Clamp on Amp Meter		Welding Gun	

Table 1-6 Suggested Tools for Install with MRCOOLDIY® Quick Connect Pre-Charged Line Set

Tool	Picture	Tool	Picture
Standard Wrench		Safety Glasses	
Adjustable/ Crescent Wrench		Screwdrivers (Phillips & Flat Blade)	
Torque Wrench		Work Gloves	
Hole Saw		Level	
Drill & Drill Bits		Clamp on Amp Meter	

Operating Condition

Inverter Air Conditioner:

Heating	Room Temperature 32°F~80°F (0°C~27°C)
	Outdoor Temperature -13°F~75°F (-25°C~24°C)
Cooling / Dry	Room Temperature 63°F~90°F (17°C~32°C)
	Outdoor Temperature T1 Climate: 5°F~127°F (-15°C~53°C)

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

Noise Pollution

- Install the air conditioner in a place that can bear its weight in order to operate more quietly
- Install the outdoor unit in a place where the air discharged and the operation noise do not annoy your neighbors
- Do not place any obstacles in front of the outlet of the outdoor unit. It might affect operation and increase noise level

Inspection

After a long time of operation, the air conditioner should be inspected for the following items:

- Abnormal heating or the power supply cord or a burning smell
- Abnormal operating noise or vibration
- Water leakage from the indoor unit
- Metal cabinet electrified

Stop using the air conditioner if the above problems occur. The air conditioner should be given a detailed check-up after five years of use, even if none of the above happens.

Features of HEATING Mode

PREHEAT

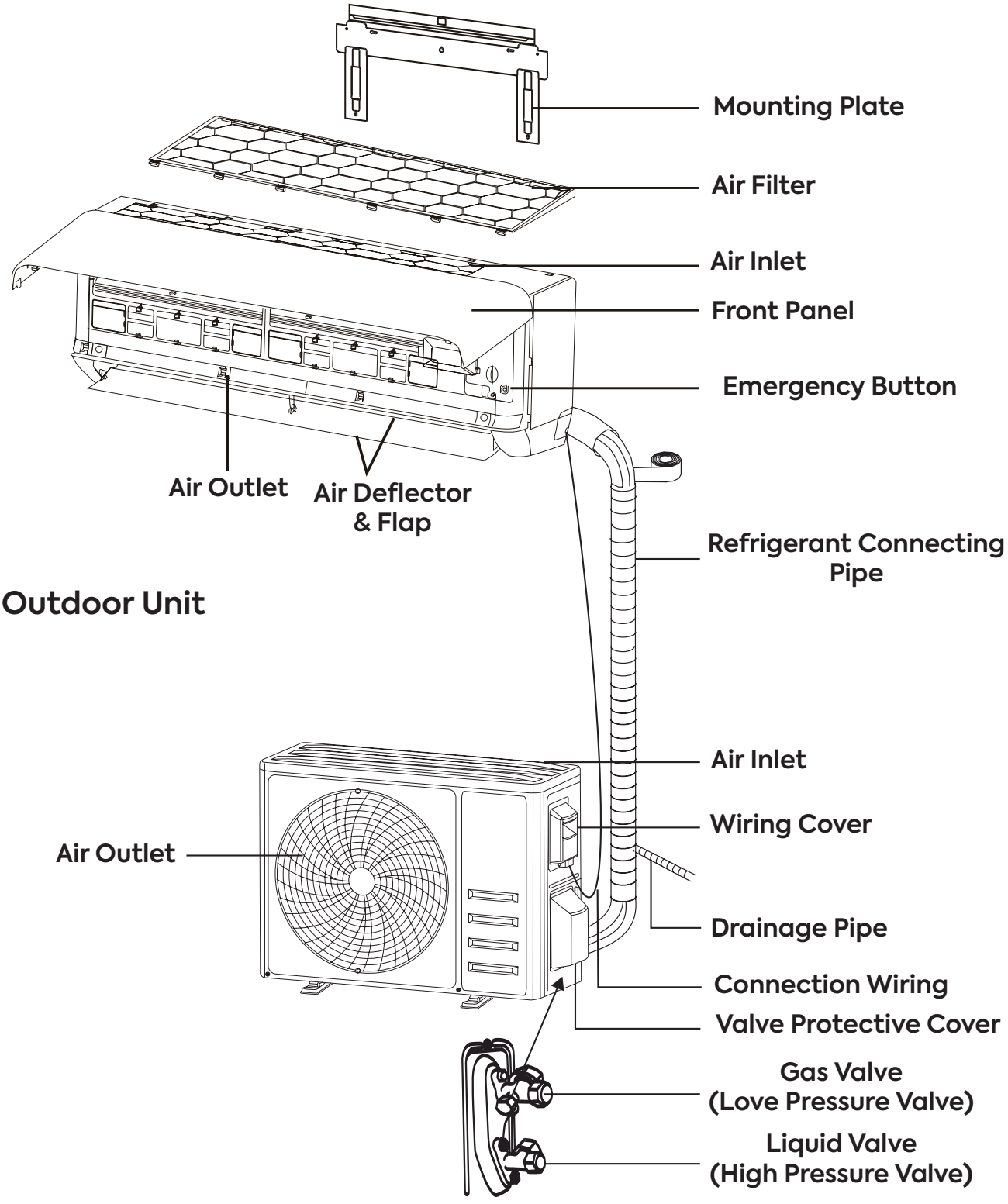
It take 2-5 minutes to preheat the indoor heat exchanger at the beginning of HEATING operation, otherwise cold air will be discharged.

Defrost

In HEATING operation the appliance will defrost automatically. This procedure lasts 2~10 minutes, then returns to HEATING mode automatically. During defrosting, the indoor fan will stop running and return to heating mode operation automatically when defrosting has finished.

2. 1 Indoor Unit

Fig. 2-1 Indoor & Outdoor System Components



2. 2 Outdoor Unit

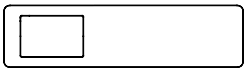
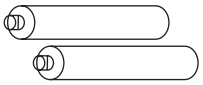
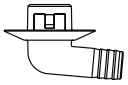
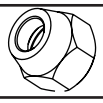
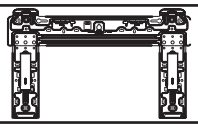
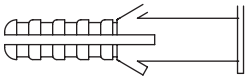
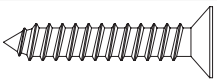
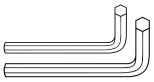
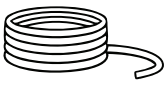
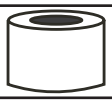
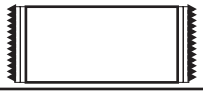
With the protective cover removed

2. 3 Requirements

- When the air temperature is below 5°F (-15°C), the air conditioner cannot be started up until it is powered on for 2 hours. In case of a shutdown lasting for one day, do not cut off the electricity supply.
- Notice that the air inlet/outlet must not be choked up. If a choke up takes place, the air conditioner behavior may be affected, or the air conditioner cannot run due to activation of the protector.

Check whether you have the full scope of the following items. If you have spare parts, carefully store them.
Note: *The figure shown may be different from the actual object. Take the latter as standard.*

2. 4 Packing List:

Name	Quantity	Sketch Map
Remote Control Unit	x1	
Battery	x2	
Drain Pipe Assembly (Some Models)	x1	
Copper Nut	2~4 (Model Dependent)	
Instruction Book	1~2 (Model Dependent)	
Mounting Plate + Cardboard Template	1+1	
Anchor	6~8 (Model Dependent)	
Tapping Screw	6~8 (Model Dependent)	
Mounting Foot Pads for the Outdoor Unit (Some Models)	x2	
Allen Wrench	x2	
Communication Wire	x1	
Drain Line	x1	
Foam Pipe Insulation	x1	
UV Wrap	x1	
Sealant	x2	

3. 1. Infrared Signal Receiver (Receives signal from the remote controller)

To make your remote controller operation more efficient, aim the remote controller at the infrared signal receiver.

3. 2 Buzzer (First power supplied or remote controller operations will make the buzzer sound once)

Some obstacles occurring in the system will be recognized by the intelligent unit recognition system. Lighting on the **DISPLAY PANEL** will flash showing the type of obstacles.

3. 3 Display Functions

Fig. 3-1 Air Handler Display

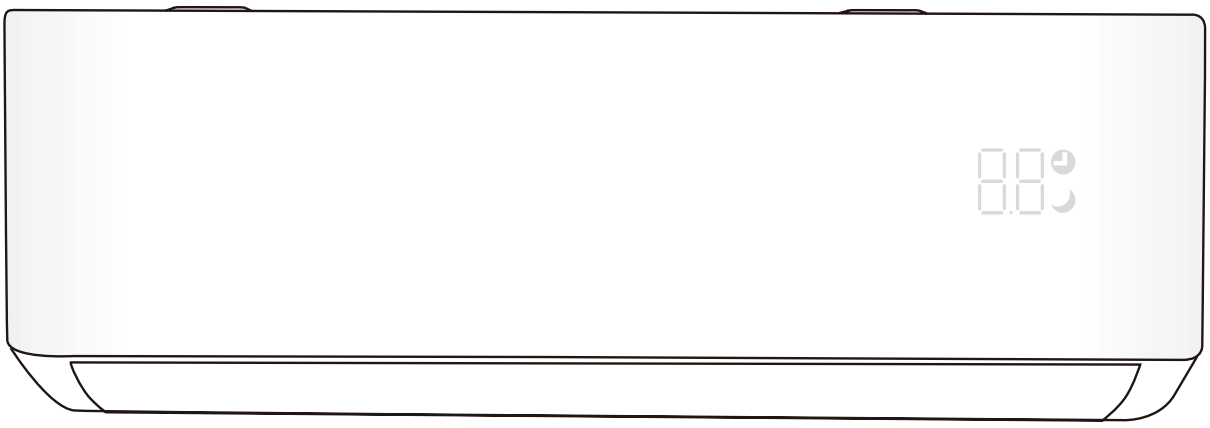




Table 3-1 Air Handler Display Functions

No.	LED	Function
1		Indicator for timer, temperature, and error codes
2		Lights up during timer operation
3		SLEEP mode

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

4.1 Installation Dimensions

Select a space to install the indoor unit according to the dimensions shown below, then install correctly, with enough space for maintenance.

Fig. 4-1 Air Handler Dimensions

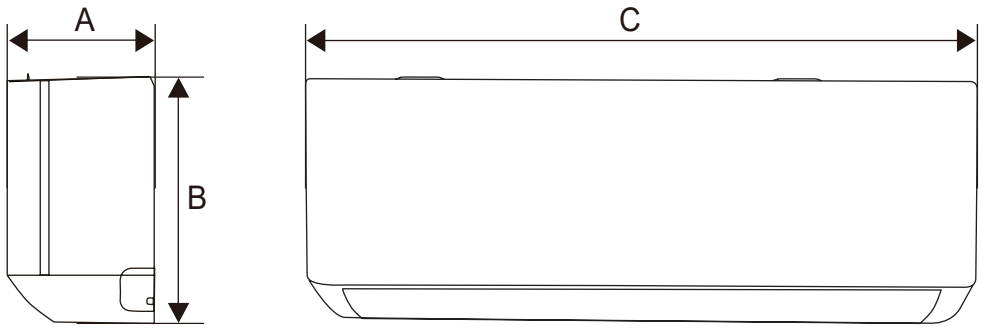


Table 4-1 Air Handler Dimensions

Model	Indoor Unit (mm)		
	A	B	C
9K (800T)	195	306	820
12K (900T)	195	306	920
18k (900T)	195	306	920
24K (1080T)	222	332	1097

4.2 Steps for Installation with a Flare Line Set

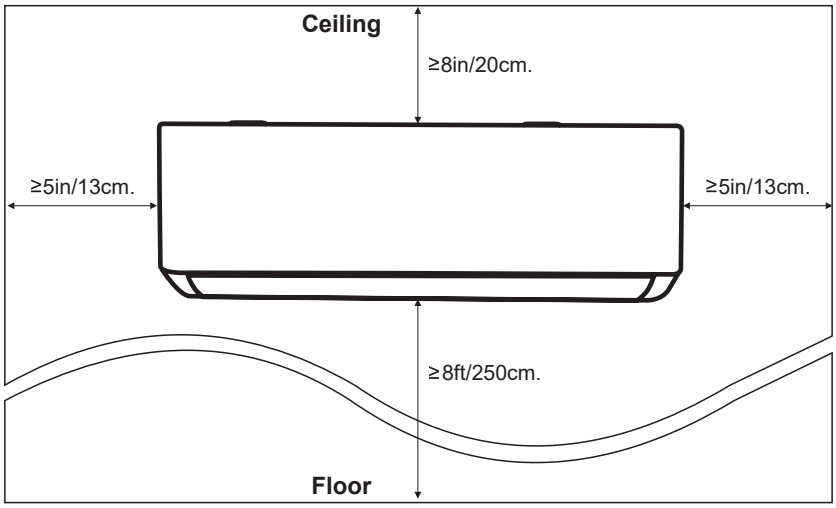
1 Select Installation Location

1. Ensure the installation complies with the installation minimum dimensions (defined on next page) and meets the minimum and maximum connecting piping length and maximum change in elevation as defined on **Pages 28-29**.
2. Air inlet and outlet must be clear of obstructions, ensuring proper airflow throughout the room.
3. Ensure condensate can drain easily.
4. Ensure all connections to the outdoor unit can be made easily.
5. Ensure the indoor unit is out of reach of children.
6. Ensure the mounting wall is strong enough to withstand four times the full weight and vibration of the unit
7. Ensure the filter can be accessed easily for cleaning.
8. Leave enough free space to allow access for routine maintenance.
9. Install at least 10 ft (3 m) away from TV or radio antennas. Operation of the air conditioner may interfere with radio or TV reception in areas where reception is weak. An amplifier may be required for the affected device.
10. Do not install in a laundry room or by a swimming pool due to the corrosive environment.

CAUTION FOR ETL CERTIFICATION AREAS
Mount with the lowest moving parts at least 8 ft (2.4 m) above the floor or grade level.

Minimum Indoor Clearances

Fig. 4-2 Air Handler Minimum Indoor Clearances

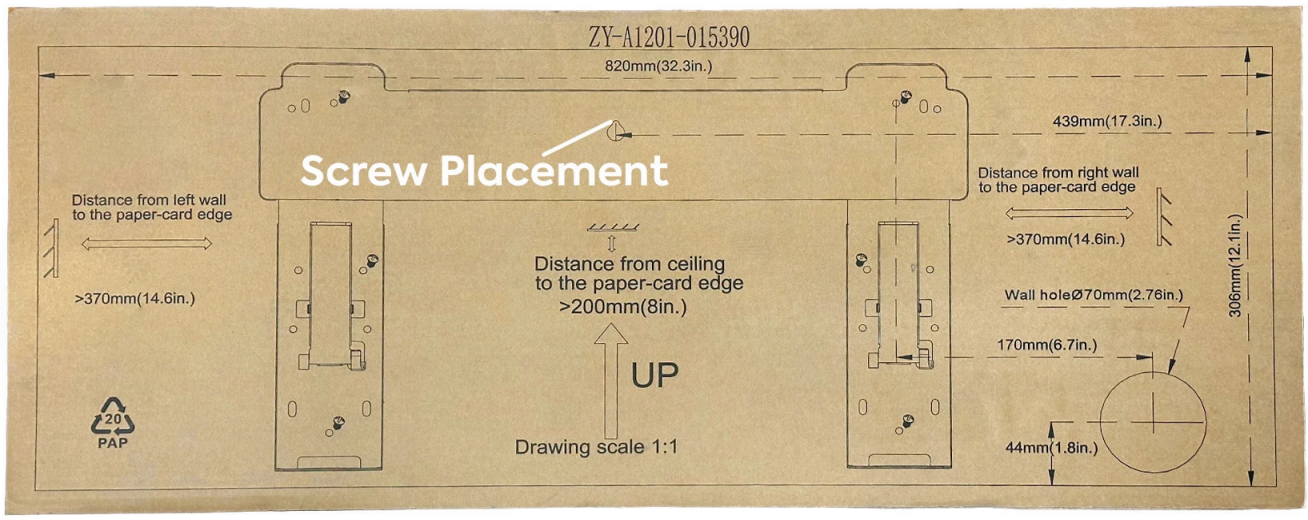


2 Hang Cardboard Mounting Template

After determining the correct wall position with the required clearances dictated in **Fig. 4-2**, hang the provided cardboard mounting template.

1. Measure and mark the correct clearances required for your indoor air handler using the edges of the cardboard template as a guide. **THE TEMPLATE DOES NOT INCLUDE THE CLEARANCES.**
2. Using wall-safe tape, hang the cardboard template. Use a level to ensure it is straight.
3. Using a drill, insert a screw according to **Fig. 4-3**.

Fig. 4-3 Screw Cardboard Template to Wall



3 Drill Wall Hole

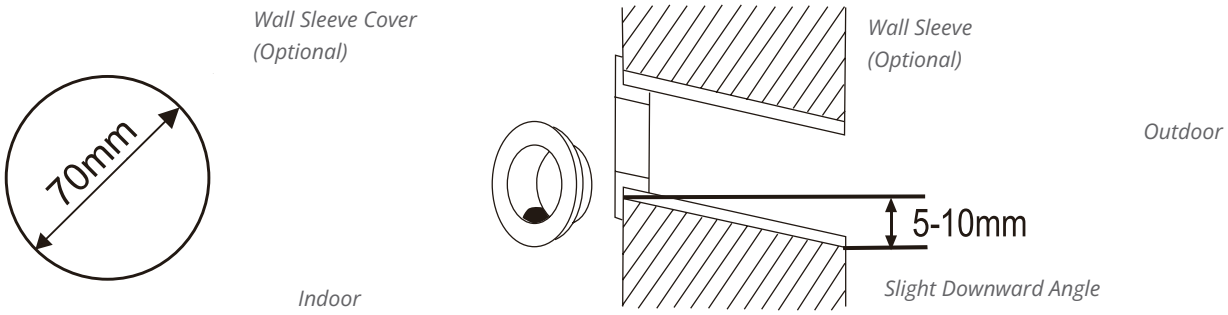
Drill a hole in the wall for refrigerant piping, the drainage pipe, and connecting cables using the cardboard mounting template as a guide.

1. Determine the wall hole location based on the position of the mounting plate.
2. The hole should be 70mm in diameter at least and have a slight downward angle to facilitate drainage.
3. Drill the wall hole with a 70mm core drill and with a slight downward angle lower than the indoor end, about 5-10mm.
4. Unscrew the cardboard mounting template from the wall and remove the template.

CAUTION FOR ETL CERTIFICATION AREAS
When drilling the wall hole, make sure to avoid wires, plumbing, and other sensitive components.

Optional: Use the wall sleeve and wall sleeve cover to protect the connection parts

Fig. 4-4 Wall Sleeve Installation



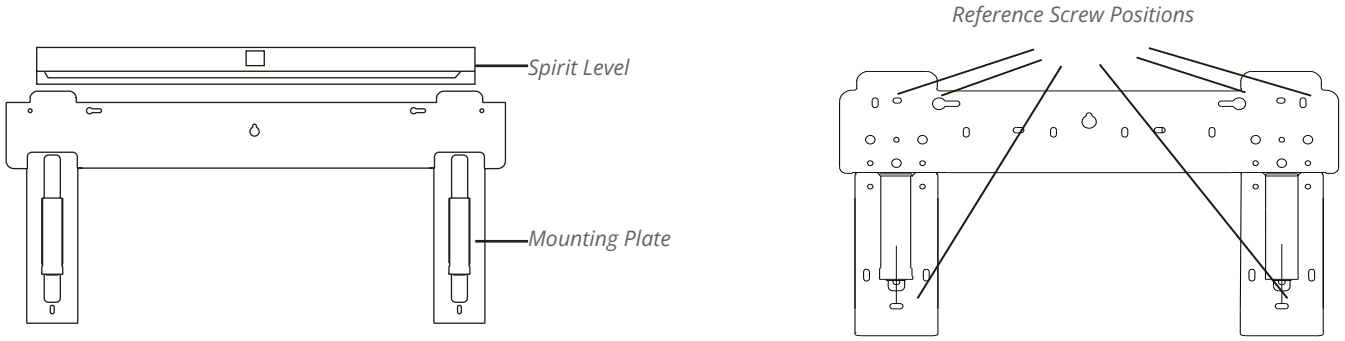
DANGER
DO NOT connect or disconnect line set unless system is fully sealed and service valvees are closed. Open service valves ONLY after the line set it fully installed, secured, and leak-checked.

4 Mounting Plate

1. Replace the screw used to mount the template to the wall.
2. According to the size of the mounting plate, determine the position and stick the mounting plate close to the wall with consideration for installation requirements in **Step 1.**
3. Adjust the mounting plate horizontally with a spirit level, then mark out the screw hole positions on the wall
4. Put down the mounting plate and drill holes in the marked positions with a drill.
5. Insert expansion rubber plugs into the holes, then hang the mounting plate and fix it with screws.

Note: *It is highly recommended to install the indoor unit in walls made of brick, concrete, or similar materials.*

Fig. 4-5 Air Handler Mounting Plate



1. *Make sure the mounting plate is firm enough and flat against the wall after installation.*
2. *The figure shown may be different from the actual object. Take the latter as the standard.*

5 Connect the Communication Wire

⚠ WARNING ⚠

Before performing any electrical work, read the following regulations.
Before performing any electrical work, 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.

Table 4-2 Cable Amperage & AWG

Capacity (Btu/h)	Power Supply	Amperage		AWG
		Min.	Max.	Min.
9K	115V~, 60Hz, 1 Phase	17	20	12
12K		19.5	20	12
18K	208/230V~, 60Hz, 1 Phase	15	20	12
24K		19	20	12

Select the Correct Cable:
See table to the left for gauge requirements.

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

**** Wire size is a recommendation based on the MCA. Always follow local codes and inspector recommendations***

1. All wiring must comply with local and national electric codes, regulations, and must be installed by a licensed electrician
2. All electrical connections must be made according to the **Figures 4-6 and 4-7** located on the panels of the indoor and outdoor units

NOTE ON FUSE SPECIFICATIONS

The air conditioner's circuit board (PCB) is designed with a fuse to provide overcurrent protection. The specifications of the fuse are printed on the circuit board.
EXAMPLE: T3.15L/250VAC, T5AL/250VAC, T3.15/250VAC, T5A/250VAC, T20/250VAC, T30A/250VAC, etc.

Only blast-proof ceramic fuses can be used.

3. If there is a serious 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 no 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

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. Choose the right cable size according to the Minimum Circuit Ampacity located on the nameplate of the unit.

⚠ DO NOT MIX LIVE AND NULL WIRES ⚠

This is dangerous and can cause the unit to malfunction

Fig. 4-6 Connection Diagram (115V)

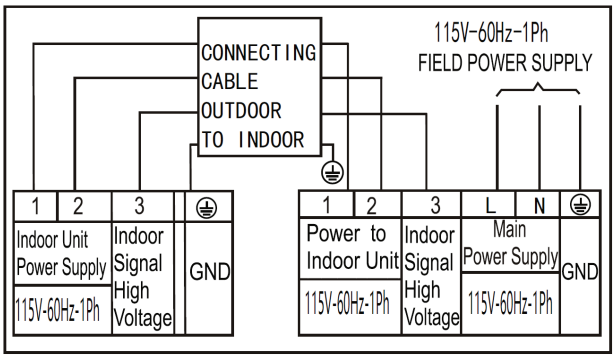


Fig. 4-7 Connection Diagram (208/230V)

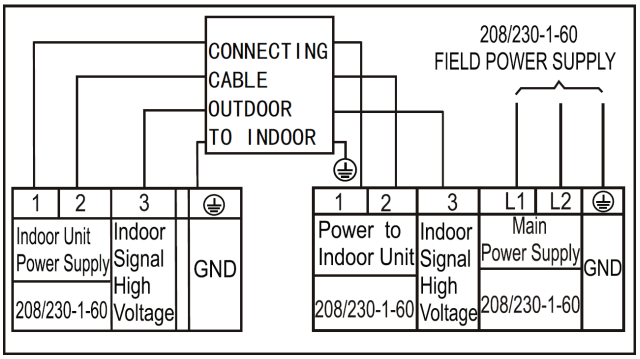
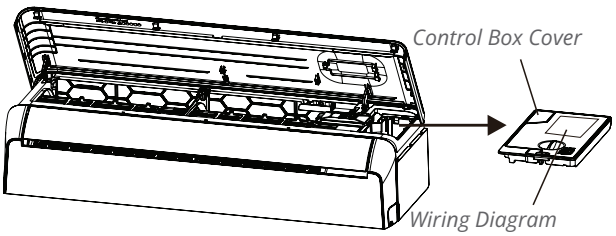
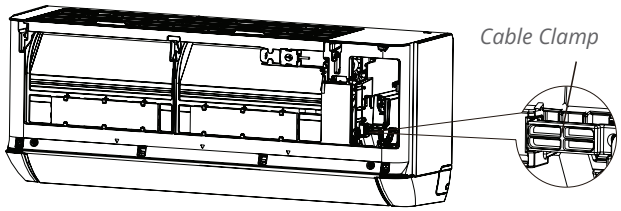


Fig. 4-8 Connecting the Communication Wire

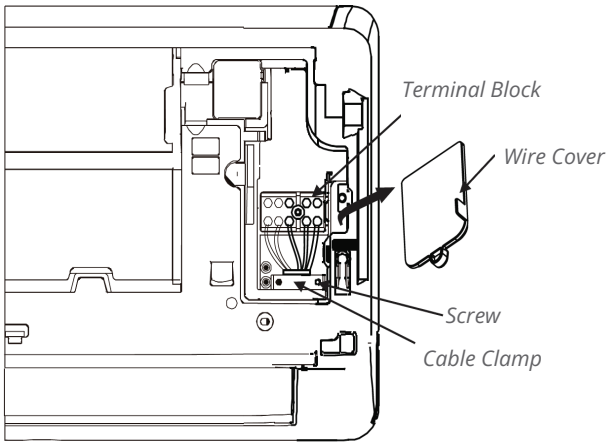




1. Open the front panel of the indoor unit
2. Using a screwdriver, open the wire box cover on the right side of the unit. This will reveal the terminal block
3. Unscrew the cable clamp
4. Insert one end of the cable into the control box from the back right end of the indoor unit
5. Connect the wires to the corresponding terminal according to the wiring diagram on the electric control box cover. Make sure they are well connected
6. Screw the cable clamp to fasten the cables
7. Reinstall the electric control box cover and front panel

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

Fig. 4-9 Indoor Communication Wire Hookup



⚠ DO NOT MIX LIVE AND NULL WIRES ⚠

This is dangerous and can cause the unit to malfunction

CAUTION FOR ETL CERTIFICATION AREAS

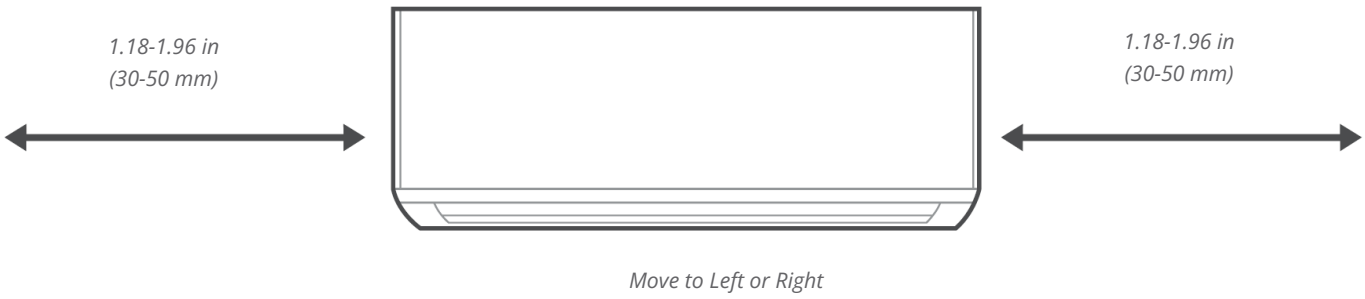
Before servicing, all power supplies must be disconnected, locked out, and verified de-energized. Failure to isolate electrical power may result in electric shock or death.

6 Mount Indoor Unit

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 1.18-1.96 inches (30-50 mm), depending on the model.

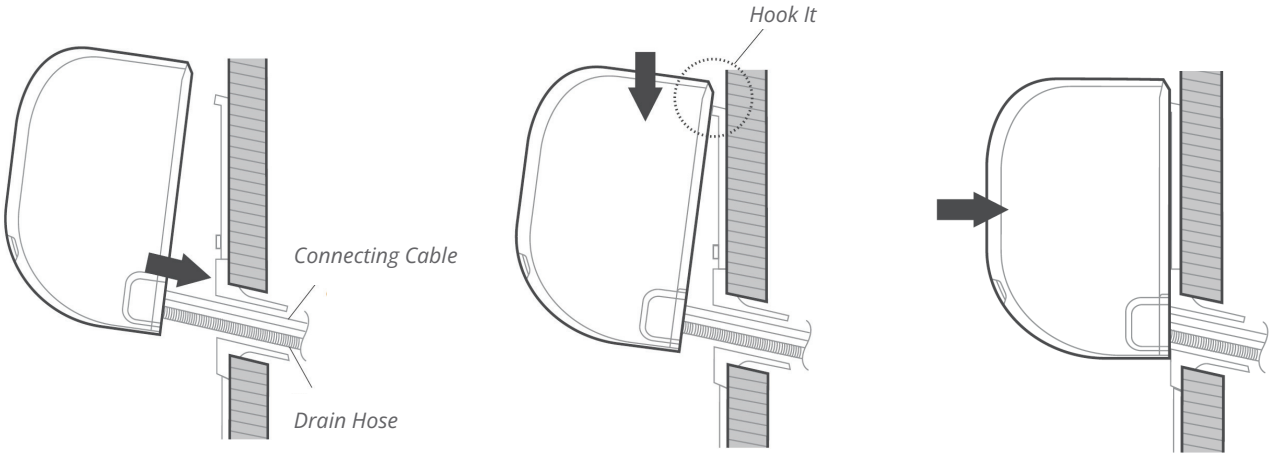
Fig. 4-10 Mounting the Indoor Air Handler



If you installed new connective piping to the outdoor unit, do the following:

1. Double-check that the ends of the refrigerant pipes are sealed to prevent dirt or foreign materials from entering the pipes
2. Slowly pass the bundle of refrigerant pipes, drain hose, and communication wire through the wall hole
3. Hook the top of the indoor unit on the upper hook of the mounting plate
4. 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
5. Using even pressure, push down on the bottom half of the unit. Keep pushing down until the unit snaps onto the hooks along the bottom of the mounting plate
6. Check that the unit is firmly mounted by applying slight pressure to the left and right-hand sides of the unit

Fig. 4-11 Mounting With New Connective Piping



Put pipes in wall hole

Hook it and press down lightly to secure

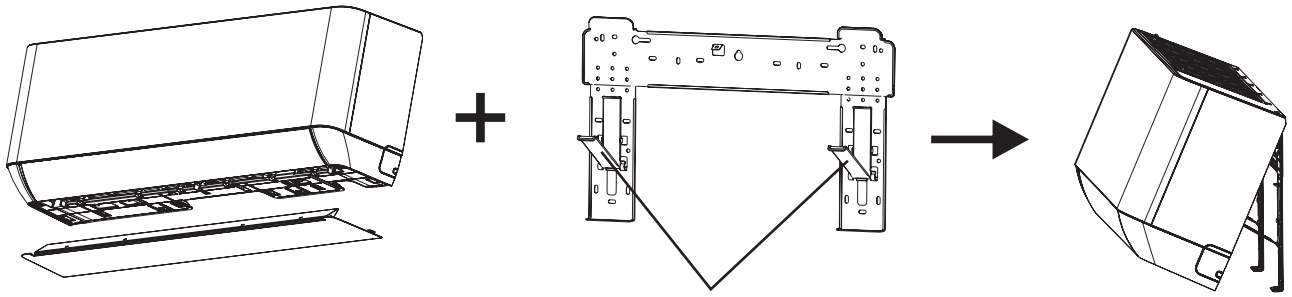
Check that the unit is mounted firmly

If the refrigerant piping is already embedded in the wall, do the following:

1. Hook the top of the indoor unit on the upper hook of the mounting plate
2. Use a bracket or wedge to prop the unit for room to connect the refrigerant piping, communication wire, and drain hose
3. Connect drain hose and refrigerant piping according to **Steps 7 & 8**.
4. Keep the service valve exposed to perform the leak test according to **Step 13** in **Section 4. 3 Installing the Outdoor Condenser**.

5. After the leak test, wrap the connection point with insulation tape
6. Remove the bracket or wedge that is propping up the unit
7. Using even pressure, push down on the bottom half of the unit. Keep pushing down until the unit snaps onto the hooks along the bottom of the mounting plate

Fig. 4-12 Mounting With Pipe Pre-Embedded in the Wall



Take Off the Bottom Plate

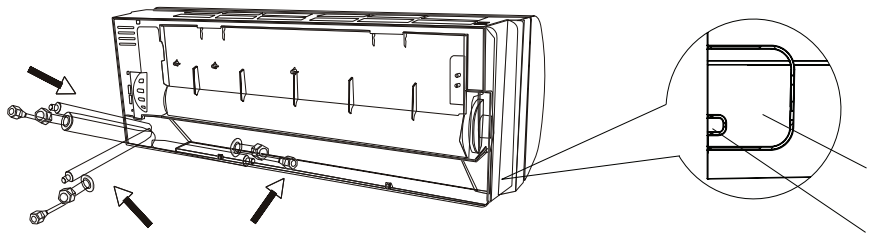
Unfold the Bracket on the Mounting Plate

7 Connect Refrigerant to Indoor Unit Using Connecting Line Set



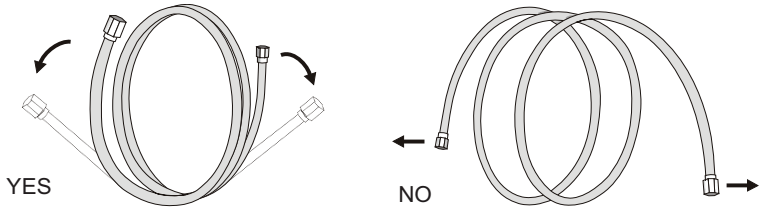
1. According to the wall hole position, select the appropriate piping model. There are three optional piping models for indoor units, as shown in the figure below. In Piping Model 1, a notch should be made using scissors to cut the plastic sheet of piping outlet and cable outlet on the corresponding side of the indoor unit. ***Note:*** *When cutting off the plastic sheet at the outlet, the cut should be trimmed smooth.*

Fig. 4-13 Piping Model



2. Bend the connecting pipes with the port facing up as shown in the figure below.

Fig. 4-14 Bending Pipes



3. Take off the plastic cover in the pipe ports and take off the protective cover on the end of piping connectors
4. Check whether any debris is on the port of the connecting pipe and make sure the port is clean
5. After aligning the center, rotate the nut of the connecting pipe and tighten as tightly as possible by hand
6. Use a torque wrench to tighten it according to the torque values in the torque requirements table. (Refer to the torque requirements table in the **Instructions for Servicing** section of this manual)
7. Wrap the joint with the insulation pipe. **DO NOT OPEN STOP VALVE AT THIS STAGE**

Table 4-3 Torque Specs with Quick Connector

Coupling Size	Tightening Torque
1/4	15N
3/8	
1/2	25-30N

Table 4-4 Torque Specs with Standard Nuts and Tubes

Coupling Size	Tightening Torque
1/4	25N
3/8	36N
1/2	40N

Fig. 4-15 Tightening & Wrapping Joint

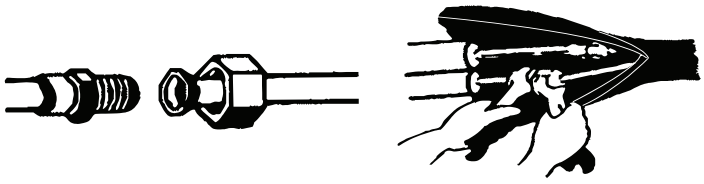
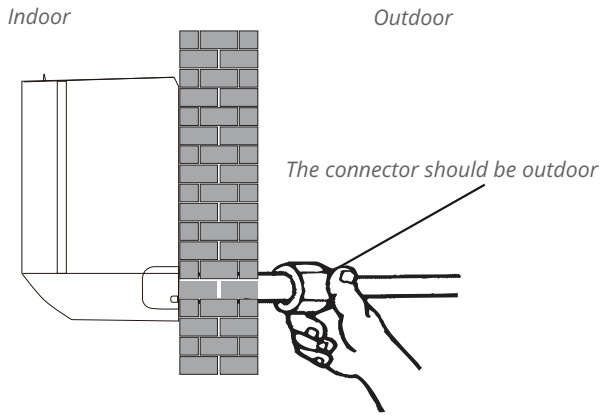


Fig. 4-16 Outdoor Connection

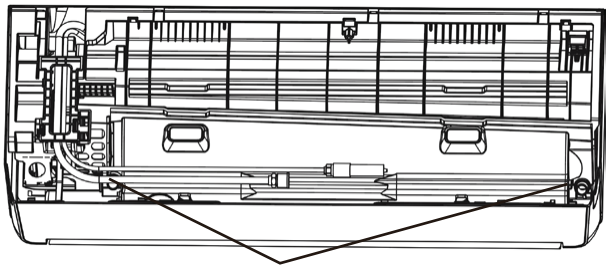


Note: For R32 refrigerant, the connectors should be placed outdoor.

8 Adjust Drainage Hose if Necessary

In some models, both sides of the indoor unit are provided with drainage ports. You can choose one of them to attach the drainage hose, and block the unused drain port with the rubber attached in one of the ports.

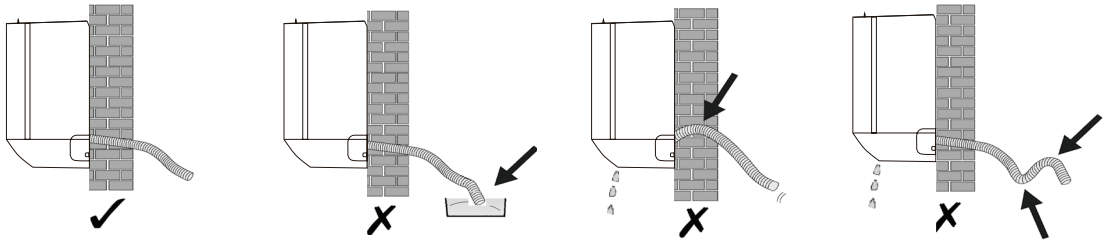
Fig. 4-17 Drainage Ports



Drainage ports

1. Connect the drainage hose to the drainage port. Ensure the joint is firm and the sealing effect is good
2. Wrap the joint firmly with Teflon tape to ensure no leaks
   Note: Make sure there are no twists or dents. The pipes should be placed obliquely downward to avoid blockage and ensure proper drainage.

Fig. 4-18 Drainage Pipe



4. 3 Installing the Outdoor Condenser

Fig. 4-19 Outdoor Condenser Dimensions

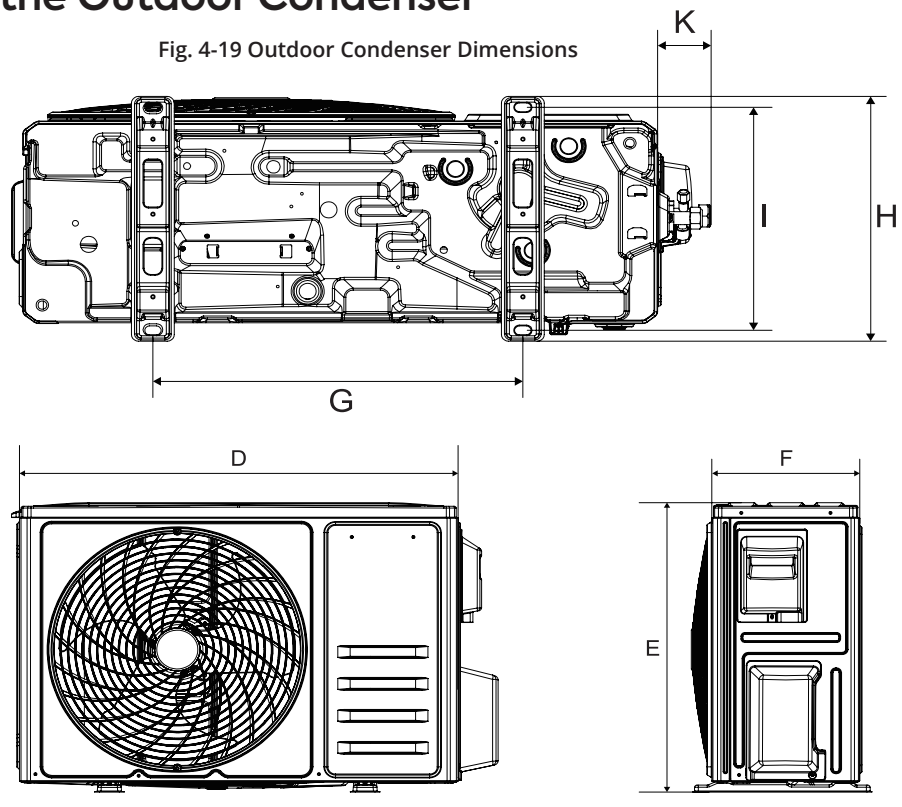


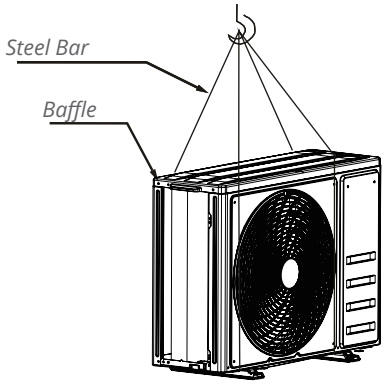
Table 4-5 Outdoor Condenser Dimensions

Model	Outdoor Unit (mm)						
	D	E	F	G	H	I	K
9K (660D)	716	499	240	415	290	265	60
9K (728C)	728	554	253	434	305	285	60
12K (728D)	728	551	253	434	305	278	60
18K (845D)	843	700	330	586	375	348	48
24K (910C)	904	804	353	607	421	390	60

1 Move Outdoor Unit (High-Rise Applications and Large/Heavy Models):

1. Use 4 pieces of 6mm steel wire to lift the outdoor unit and move it to the desired location
2. To prevent the outdoor unit from being damaged, add baffles on the surface where the steel wires will come into contact with the unit
3. After moving, remove the wooden tray from the bottom

Fig. 4-20 Moving Large/Heavy Models



2 Set Up Installation Space

1. After setting up the repair space as illustrated to the right, install the outdoor unit with power supply equipment installed at the side. Refer to the **Electric Supply Installation Manual** for the installation method
2. Guarantee necessary space for installation and repair

Fig. 4-21 Outdoor Condenser Installation Space

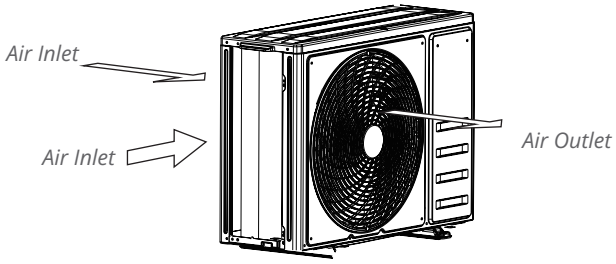


Fig. 4-22 Outdoor Installation Clearances

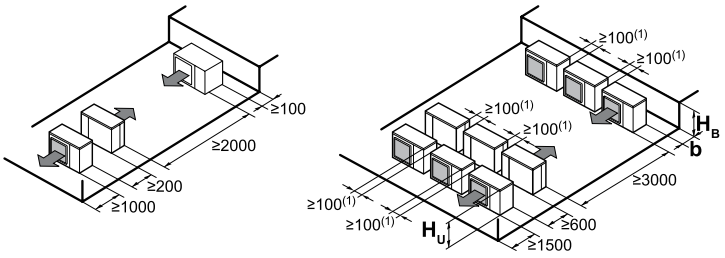


Table 4-6 Outdoor Installation Clearances

H_BH_U	b (mm)
$H_B \leq ½H_U$	b≥250
$½H_U < H_B \leq H_U$	b≥300
$H_B > H_U$	/

3 Condenser Body Installation

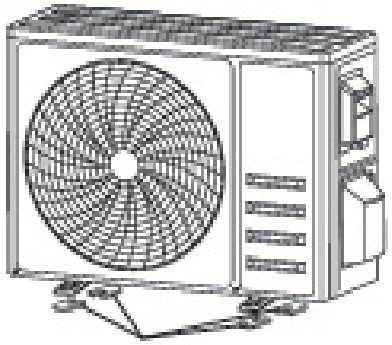
1. Mark the installation position for expansion bolts according to the outdoor unit's installation dimensions.
2. Drill bolt holes, clear the holes or debris, and insert the expansion bolts.
3. If applicable, install 4 rubber pads on the installation holes before placing the outdoor unit (Optional). Doing so will reduce vibrations and noise.
4. Place the outdoor unit onto the bolts and pre-drilled holes.
5. Use a wrench to firmly secure the outdoor unit with the bolts.

Note: The outdoor unit can be fixed on a wall-mounting bracket.

Follow the wall-mounting bracket's instructions to attach the bracket to the wall. Then, fasten the outdoor unit to the bracket and ensure it is level.

The wall-mounting bracket must support at least 4 times the weight of the outdoor unit.

Fig. 4-23 Installing Rubber Blankets



Install 4 Rubber Blankets (Optional)

Precautions

- Confirm that the installation personnel are qualified for relevant installation work. If the air conditioner is installed by persons without the special required skills, normal operations cannot be ensured, and personal and property safety may be affected.
- Installed the air conditioner securely. Poor installation may lead to abnormal noise and vibration.
- Install the outdoor unit at a spot where air outlet noises and hot exhaust will not disturb your neighbors.

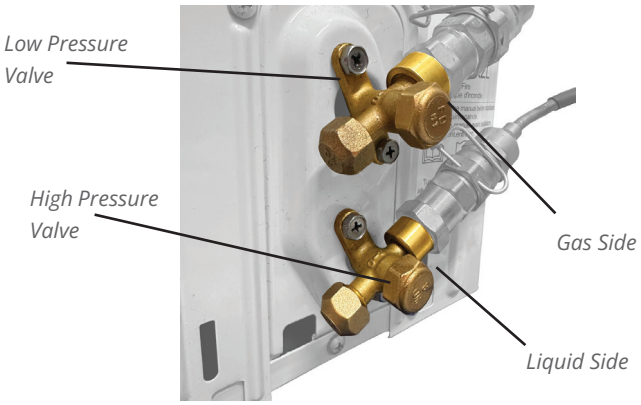
User Guidelines

- The user's installation site should have a regular power supply conforming to that indicated on the air conditioner's nameplate. Its voltage should be within the range of 90-110% of the rate voltage value.
- Equip the power circuit with a protective device, such as a leakage protector or an air switch, which should have a capacity greater than 1.5 times the maximum current value of the air conditioner.
- Please use the fuse or circuit breaker described on **Page 18.**
- Only a qualified electrician may carry out wiring tasks strictly according to the electrical safety requirements.
- Ensure proper grounding of the air conditioner. (i.e., The main power switch of the air conditioner must be connected to a reliable ground wire.)

4 Connecting Refrigerant Pipes to Outdoor Unit

1. The junction is inside the cover of the right panel. Remove the cover first.
2. Route the pipe through the side gap of the cover. **DO NOT OPEN THE CONDENSER VALVES AT THIS STAGE.**
3. After connecting via the valve opening, reinstall the cover from the left, right, or back.
4. The image on the right is of the outdoor unit's valve installation panel. The gas side (low pressure side) is oriented upward, and the liquid side (high pressure side) is oriented downward.

Fig. 4-24 Connecting Refrigerant Pipes



NOTICE

According to the installation conditions, an excessively large tightening torque will damage the nut.

Fig. 4-25 Tightening the Pipe Connection

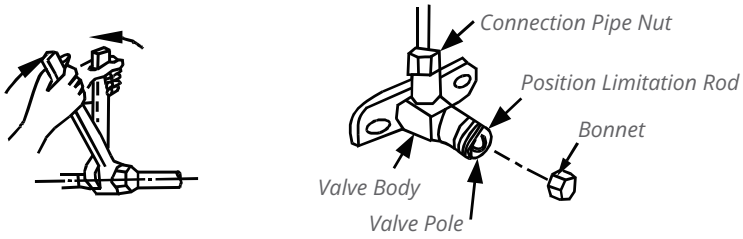


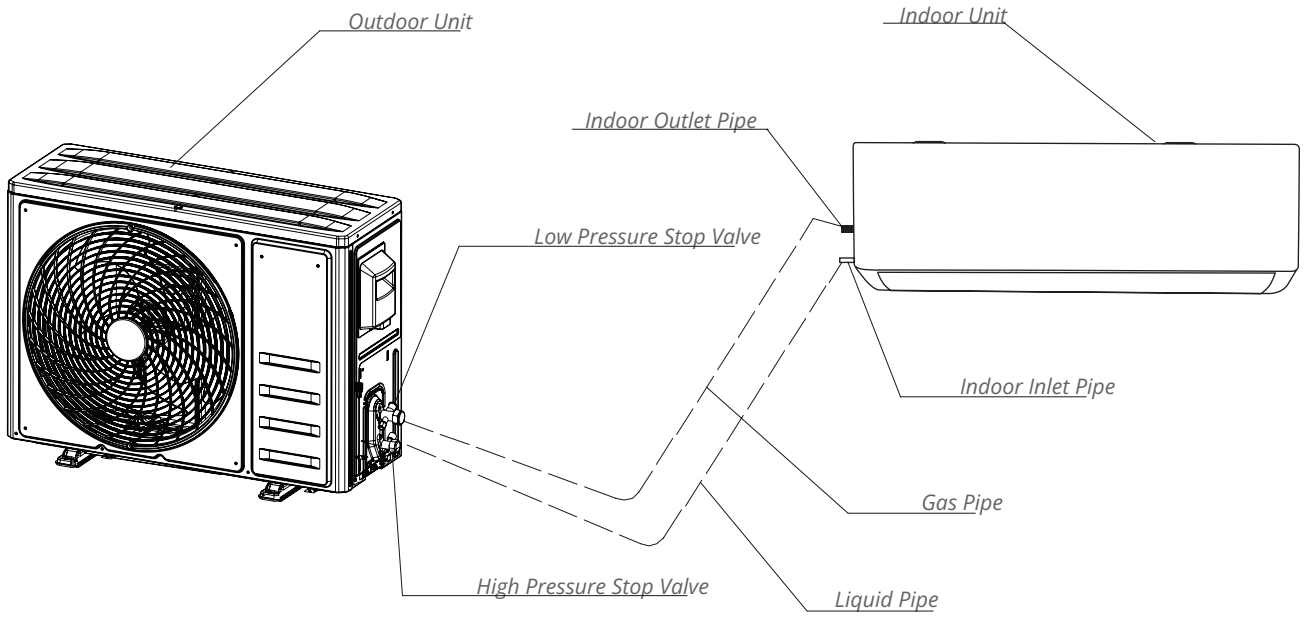
Table 4-7 Torque Requirements for Connection Pipe

Pipe Size	Newton Meter (N x m)	Pound-Force Foot (lbf-ft)	Kilogram-Force Meter (kgf-m)
1/4" (Φ6.35)	15-20	11.1-14.8	1.5-2.0
3/8" (Φ9.52)	31-35	22.9-25.8	3.2-3.6
1/2" (Φ12)	45-50	33.2-36.9	4.6-5.1
5/8" (Φ15.88)	60-65	44.3-48.0	6.1-6.6

This table is only for reference. The installation must meet the requirements of local laws and regulations.

- *The following figure is only for reference. The installation must meet the requirements of local laws and regulations.*
- *The following figure only shows the assembly relationship of the indoor unit, outdoor unit, and refrigerant pipes.*
- *Please refer to the following figures to install.*

Fig. 4-26 Indoor & Outdoor Connections



NOTE

- The throttle subassembly has been installed in the outdoor unit.
- Use two spanners to connect the pipe with indoor/outdoor pipes to avoid copper pipe cracking.
- Pay attention to the connection orientation when connecting.

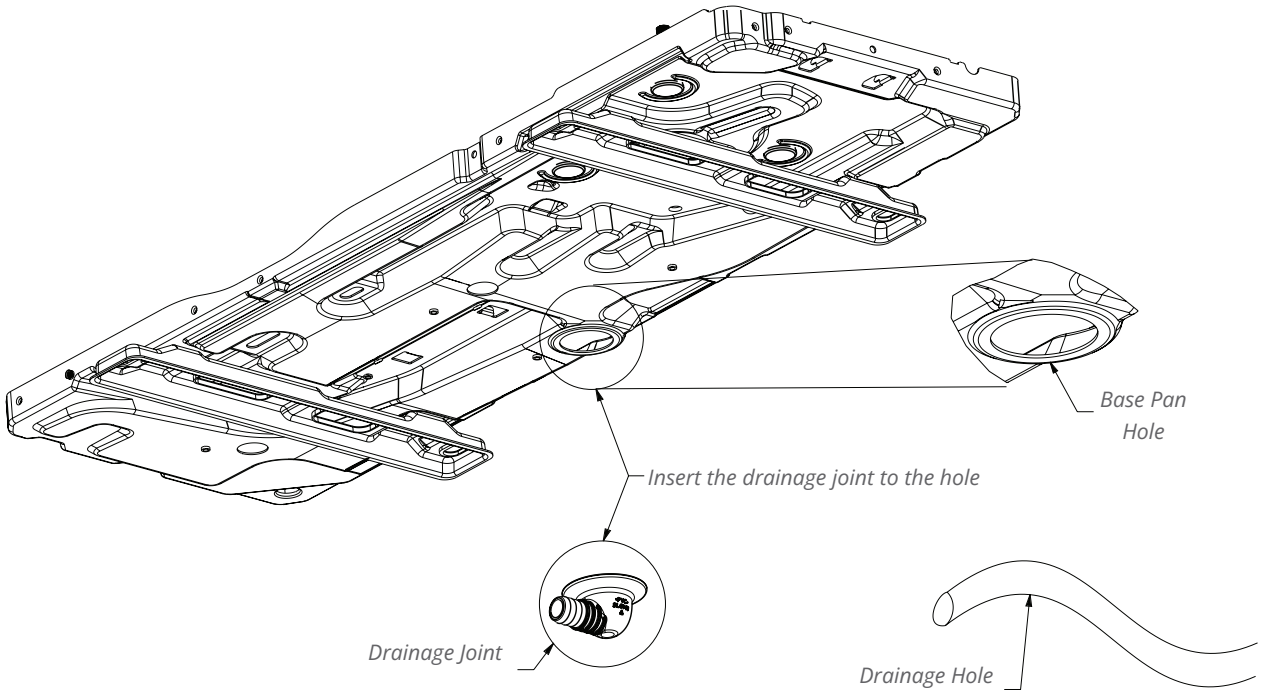
Joints must be tested with detection equipment with a capability of 5g/year of refrigerant or better, with the equipment in standstill and under operation or under a pressure of at least these standstill or operation conditions.

5 Install Drainage Hose

This step is only for heat pump models or reverse cooling air conditioners (RCACs).

1. Insert the drainage joint to the hold at the bottom of the outdoor unit.
2. Connect the drainage hose to the joint and connect securely.

Fig. 4-27 Drainage Hose Installation



NOTE

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

In cold climates, ensure 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.

6 Pipe Dimensions and Ways of Installation

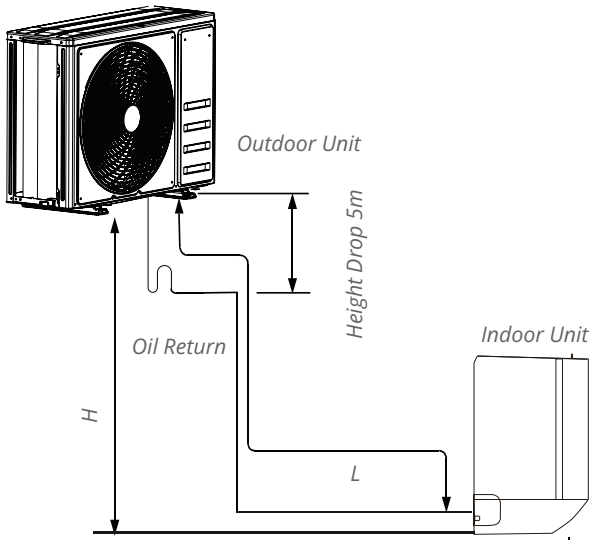
Table 4-8 Outdoor Pipe Dimension and Ways of Installation (in sequence of cooling capacity)

Pipe Material		Copper Pipe for Air Conditioner	
Model		9 ~ 12K	18K ~ 24K
Size (mm)	Liquid Side	Φ6.35 (1/4 in)	Φ6.35 (1/4 in)
	Gas Side	Φ9.52 (3/8 in)	Φ9.52 (1/2 in)

Conventional Pipe		9/12K	18/24K
Maximum Pipe Length (Liquid Side) L		50ft/15m	65ft/20m
Maximum Height Drop	Height Drop Between Indoor and Outdoor Unit H	30ft/10m	50ft/15m

Fig. 4-28 Allowed Length & Height Drop

Refer to the refrigerant pipe connection section for details



7 Remove Objects & Water

- Use high-pressure nitrogen to clean the pipe instead of using outdoor refrigerant for this cleaning process.
- Before installing the refrigerant pipe, please clean the pipe to prevent foreign objects from being inside.

8 Additional Refrigerant Charge

PER MANUFACTURER RECOMMENDATION

INSTALLING TECHNICIAN MUST ADD .16 OUNCES PER FOOT OF R32 REFRIGERANT IN ¼" ⅜" SIZED LINE SET AND .16 OUNCES PER FOOT OF R32 REFRIGERANT IN ¼" ½" SIZED LINE SET.

Table 4-9 Additional Refrigerant Charge

Line Set Connector Size	Ounces per Foot of R32 Refrigerant
1/4" 3/8"	.16 oz per ft
1/4" 1/2"	.16 oz per ft

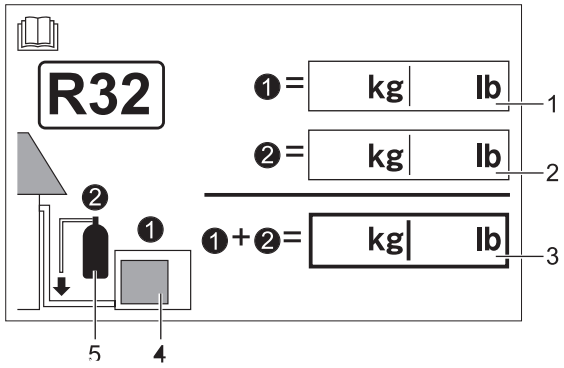
Refrigerant Charge Label

Fill with indelible ink:

- (1) The factory refrigerant charge of the product
- (2) The additional refrigerant amount charged in the field.
- (1) + (2) the total refrigerant charge on the refrigerant charge label supplied with the product.

Affix the refrigerant charge label near the manufacturer's label after filling it out.

Fig. 4-29 Refrigerant Charge Label



1. Factory refrigerant charge of the product: see unit manufacturer's label
2. Additional refrigerant amount charge in field
3. Total refrigerant charge
4. Outdoor unit
5. Refrigerant cylinder and manifold for charging

9 Non-return Bend and Oil Return Bend

Outdoor Unit Is Beneath the Indoor Unit

There's no need to add non-return bend at the lowest or highest position of the vertical pipe, as shown to the right:

Fig. 4-30 Non-Return & Oil Return Bend: Outdoor Unit Beneath Indoor Unit

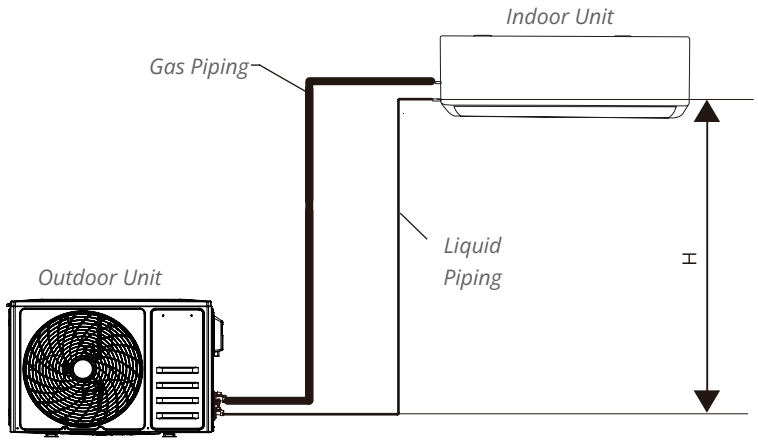
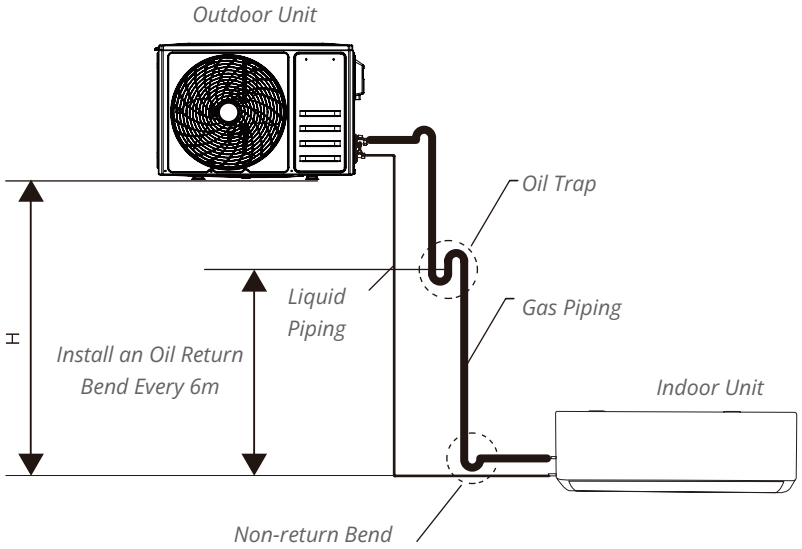


Fig. 4-31 Non-Return & Oil Return Bend: Outdoor Unit Above Indoor Unit

Outdoor Unit Is Above the Indoor Unit

It's necessary to add oil return bend and non-return bend at the lowest and highest position of the vertical pipe, as shown to the right:



Dimensions for the making of oil return bend are as follows:

Fig. 4-32 Making Oil Return Bend

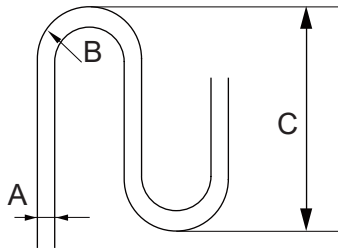


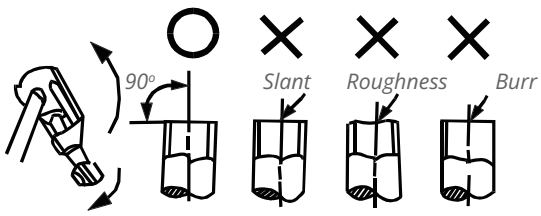
Table 4-10 Making Oil Return Bend

A (inch)	B (mm)	C (mm)
Φ3/8	≥20	≤150
Φ1/2	≥26	≤150
Φ5/8	≥33	≤150

10 Flaring

Cut the refrigerant pipe with a pipe cutter

Fig. 4-33 Cutting Refrigerant Pipe



Flare the pipe after putting it into the connection nut

Fig. 4-34 Flaring the Refrigerant Pipe

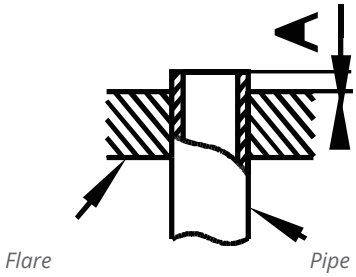
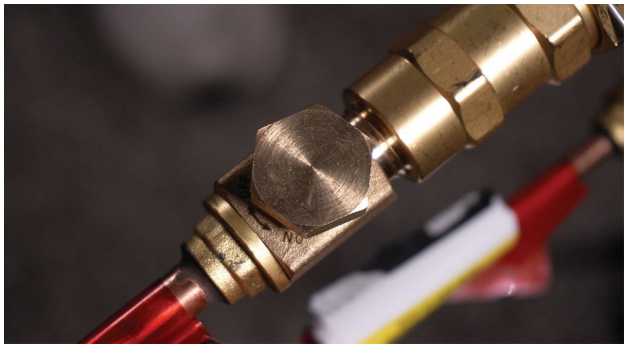


Table 4-11 Flaring the Refrigerant Pipe

Outside Diameter	A (mm)	
	MAX	MIN
Φ1/4″	8.7	8.3
Φ3/8″	12.4	12.0
Φ1/2″	15.8	15.4
Φ5/8″	19.0	18.6
Φ3/4″	23.3	22.9

12 Stop Valve Connection – Opening the Indoor Air Handler Stop Valve

1. Remove the cap from the stop valve.





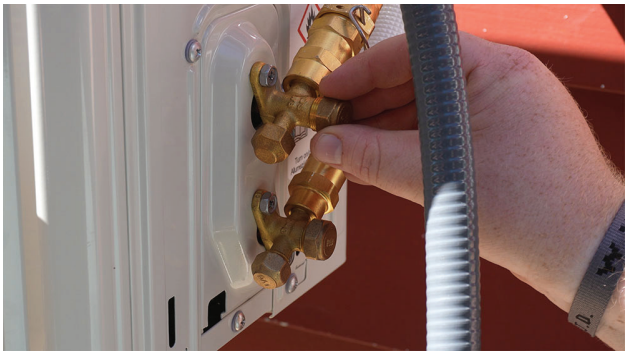
2. Using the provided small Allen wrench, perform a counterclockwise quarter turn until it stops. The valve indicator should be at the **ON** position. **DO NOT FORCE IT**.

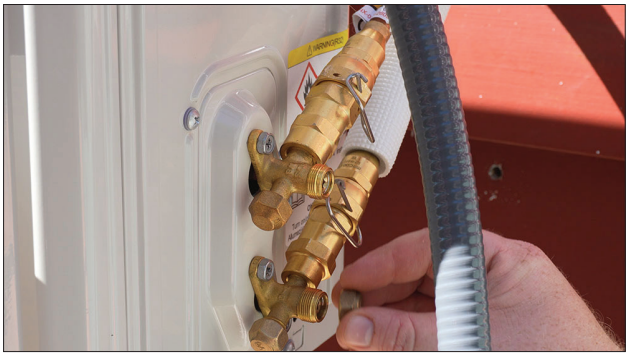


3. Replace the cap.

13 Stop Valve Connection – Opening the Outdoor Condenser Valve

1. Remove the cap from both stop valves.





2. Using the provided large Allen wrench, turn the valve counterclockwise as far as it will go. DO NOT FORCE IT.

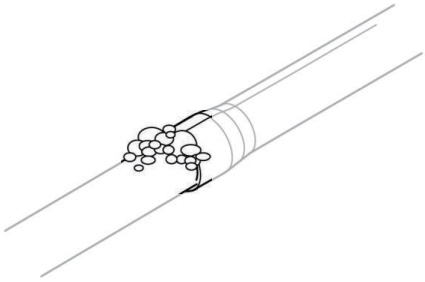


3. Replace the caps.

13 Check for Leaks

Perform bubble test on the line set connections to ensure there are no leaks.

Fig. 4-35 Leak Check

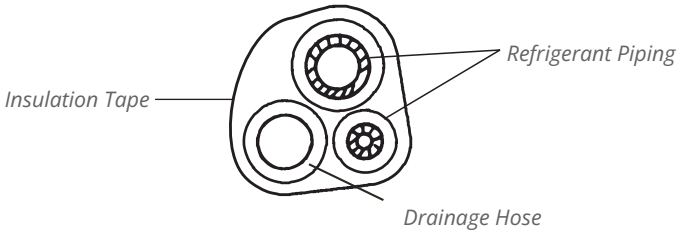


14 Wrap Piping and Cable

Install connecting wires and drainage hose after the refrigerant pipes in order to save space and protect and insulate them. Bundle with insulating tape before passing them through the wall hole.

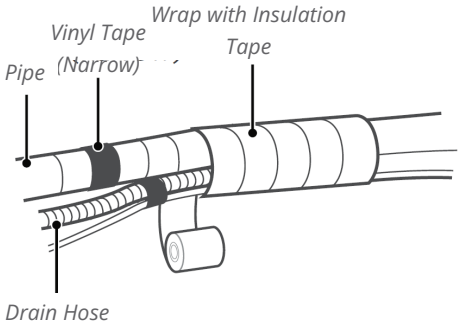
Fig. 4-36 Arranging Piping & Cables

1. Arrange the pipes, cables, and drainage hose according to the following picture



NOTE
Make sure the drainage hose is at the bottom. Avoid crossing and bending parts.

Fig. 4-37 Wrapping Piping & Cables



2. Using the insulating tape, wrap the refrigerant pipes, connecting wires, and drainage hose together tightly

DRAIN HOSE MUST BE ON BOTTOM

Make sure the drain hose is at the bottom of the bundle. Putting the drain hose at the top of the bundle can cause the drain pan to overflow, which can lead to fire or water damage.

5. 1 Installation Dimensions

Select a space to install the indoor unit according to the dimensions shown below, then install correctly, with enough space for maintenance.

Fig. 5-1 Air Handler Dimensions

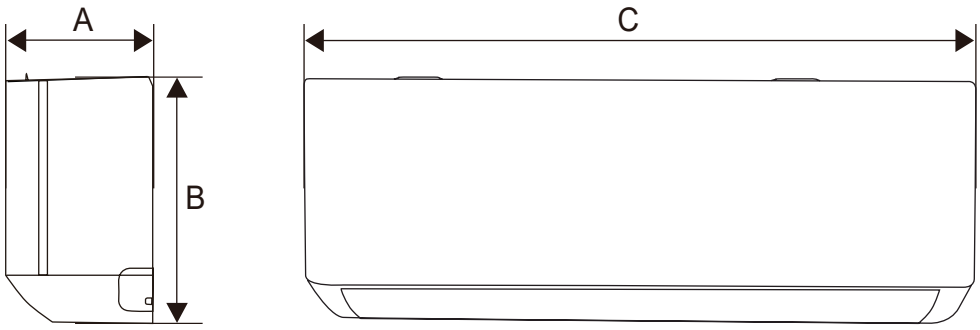


Table 5-1 Air Handler Dimensions

Model	Indoor Unit (mm)		
	A	B	C
9K (800T)	195	306	820
12K (900T)	195	306	920
18k (900T)	195	306	920
24K (1080T)	222	332	1097

5. 2 Steps for Installation with a MrCool DIY Quick Connect Pre-Charged Line Set

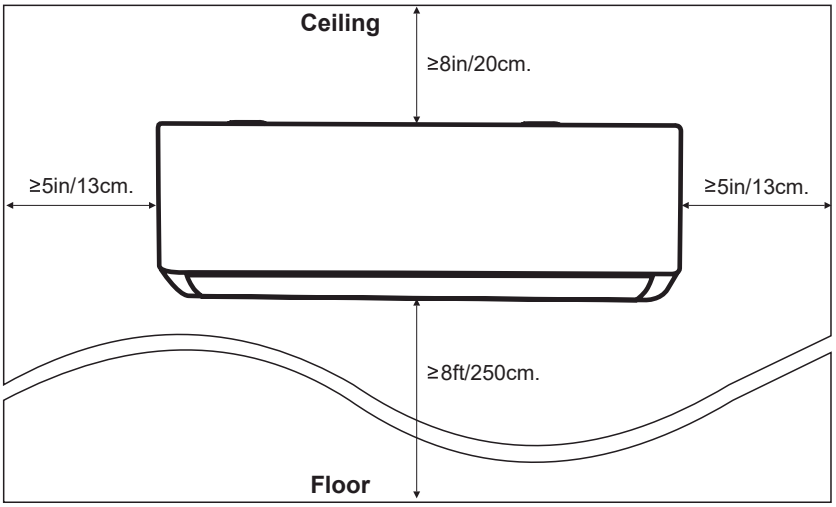
1 Select Installation Location

1. Ensure the installation complies with the installation minimum dimensions (defined on next page) and meets the minimum and maximum connecting piping length and maximum change in elevation as defined on **Pages 51-52**.
2. Air inlet and outlet must be clear of obstructions, ensuring proper airflow throughout the room.
3. Ensure condensate can drain easily.
4. Ensure all connections to the outdoor unit can be made easily.
5. Ensure the indoor unit is out of reach of children.
6. Ensure the mounting wall is strong enough to withstand four times the full weight and vibration of the unit.
7. Ensure the filter can be accessed easily for cleaning.
8. Leave enough free space to allow access for routine maintenance.
9. Install at least 10 ft (3 m) away from TV or radio antennas. Operation of the air conditioner may interfere with radio or TV reception in areas where reception is weak. An amplifier may be required for the affected device.
10. Do not install in a laundry room or by a swimming pool due to the corrosive environment.

CAUTION FOR ETL CERTIFICATION AREAS
Mount with the lowest moving parts at least 8 ft (2.4 m) above the floor or grade level.

Minimum Indoor Clearances

Fig. 5-2 Air Handler Minimum Indoor Clearances

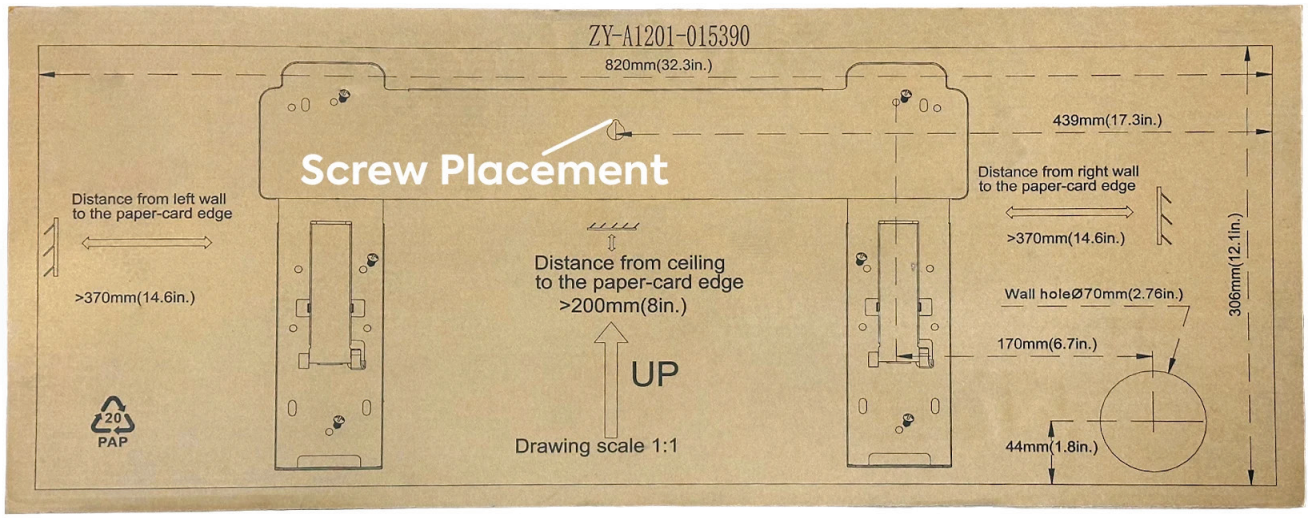


2 Hang Cardboard Mounting Template

After determining the correct wall position with the required clearances dictated in **Fig. 5-2**, hang the provided cardboard mounting template.

1. Measure and mark the correct clearances required for your indoor air handler using the edges of the cardboard template as a guide. **THE TEMPLATE DOES NOT INCLUDE THE CLEARANCES.**
2. Using wall-safe tape, hang the cardboard template. Use a level to ensure it is straight.
3. Using a drill, insert a screw according to **Fig. 5-3**.

Fig. 5-3 Screw Cardboard Template to Wall



3 Drill Wall Hole

Using the provided mounting template as a guide, drill a hole in the wall for refrigerant piping, the drainage pipe, and connecting cables.

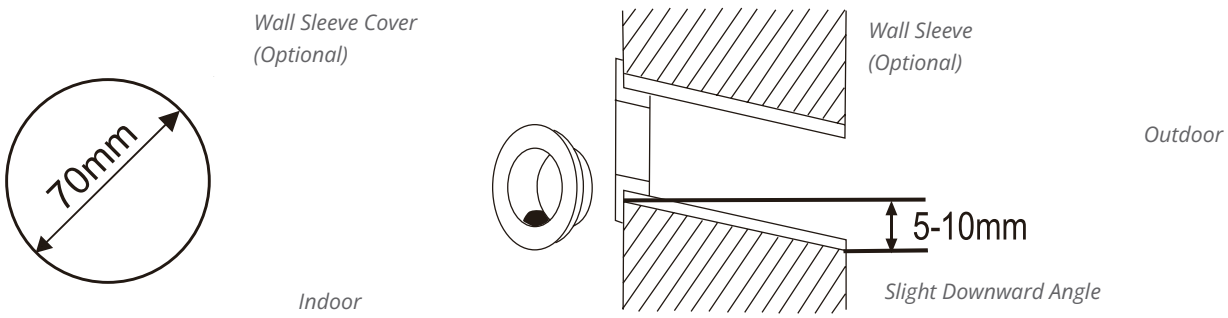
1. Determine the wall hole location based on the position of the mounting plate
2. The hole should be 70mm in diameter at least and have a slight downward angle to facilitate drainage
3. Drill the wall hole with a 70mm core drill and with a slight downward angle lower than the indoor end, about 5-10mm

CAUTION FOR ETL CERTIFICATION AREAS

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

Optional: Use the wall sleeve and wall sleeve cover to protect the connection parts

Fig. 5-4 Wall Sleeve Installation



DANGER

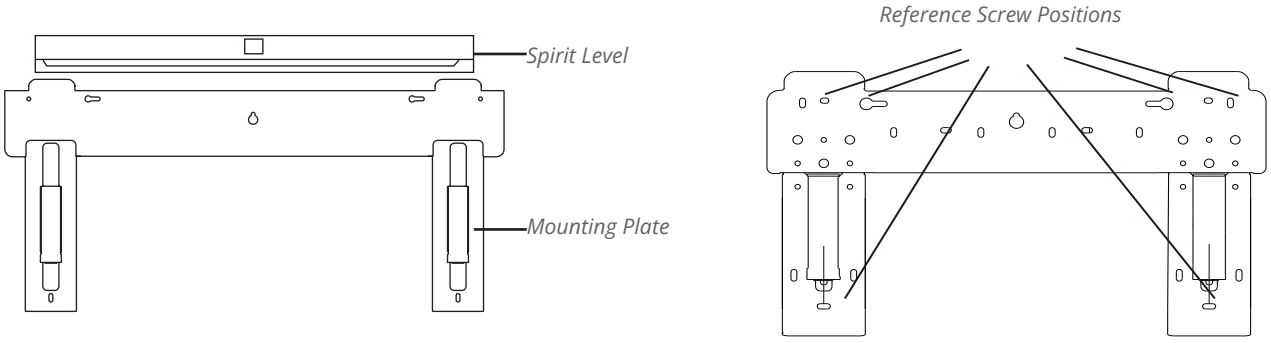
DO NOT connect or disconnect line set unless system is fully sealed and service valvees are closed. Open service valves ONLY after the line set it fully installed, secured, and leak-checked.

4 Mounting Plate

1. Use the provided mounting template to determine the air handler's position on the wall. Make sure to check that it is level, then tape it to the wall. Take the mounting plate from the back of the indoor unit.
2. According to the size of the mounting plate, determine the position and stick the mounting plate close to the wall with consideration for installation requirements in **Step 1.**
3. Adjust the mounting plate horizontally with a spirit level, then mark the screw hole positions on the wall.
4. Put down the mounting plate and drill holes in the marked positions with a drill.
5. Insert expansion rubber plugs into the holes, then hang the mounting plate and fix it with screws.

Note: *It is highly recommended to install the indoor unit in walls made of brick, concrete, or similar materials.*

Fig. 5-5 Air Handler Mounting Plate



1. *Make sure the mounting plate is firm enough and flat against the wall after installation*
2. *The figure shown may be different from the actual object. Take the latter as the standard.*

5 Connect the Communication Wire

⚠ WARNING ⚠

Before performing any electrical work, read the following regulations.
Before performing any electrical work, 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.

Table 5-2 Cable Amperage & AWG

Capacity (Btu/h)	Power Supply	Amperage		AWG
		Min.	Max.	Min.
9K	115V~, 60Hz, 1 Phase	17	20	12
12K		19.5	20	12
18K	208/230V~, 60Hz, 1 Phase	15	20	12
24K		19	20	12

Select the Correct Cable:
See table to the left for gauge requirements.

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

**** Wire size is a recommendation based on the MCA. Always follow local codes and inspector recommendations***

1. All wiring must comply with local and national electric codes, regulations, and must be installed by a licensed electrician.
2. All electrical connections must be made according to the **Electrical Connection Diagrams [Fig. 5-6, 5-7]** located on the panels of the indoor and outdoor units.

NOTE ON FUSE SPECIFICATIONS

The air conditioner's circuit board (PCB) is designed with a fuse to provide overcurrent protection. The specifications of the fuse are printed on the circuit board.
EXAMPLE: T3.15L/250VAC, T5AL/250VAC, T3.15/250VAC, T5A/250VAC, T20/250VAC, T30A/250VAC, etc.

Only blast-proof ceramic fuses can be used.

3. If there is a serious 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 no 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.

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. Choose the right cable size according to the Minimum Circuit Ampacity located on the nameplate of the unit.

⚠ DO NOT MIX LIVE AND NULL WIRES ⚠

This is dangerous and can cause the unit to malfunction

Fig. 5-6 Connection Diagram (115V)

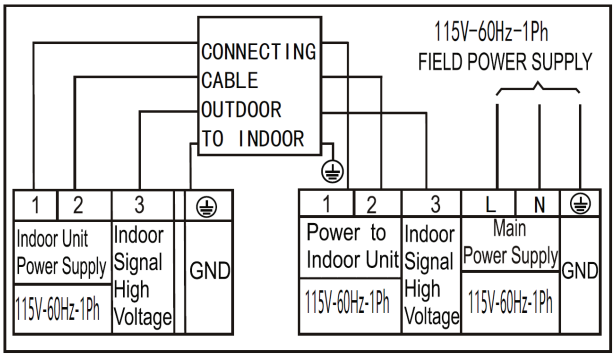


Fig. 5-7 Connection Diagram (208/230V)

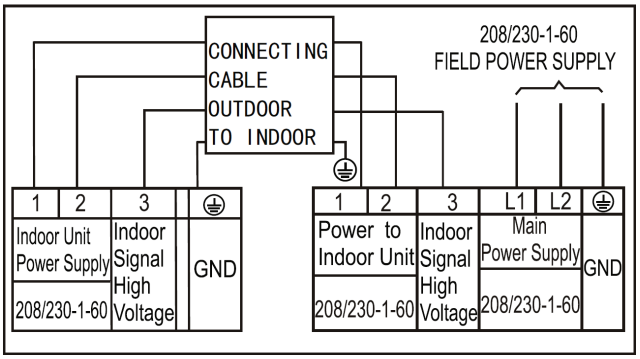
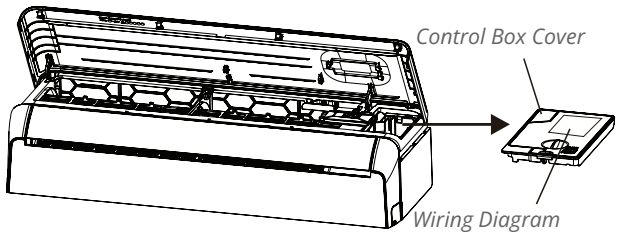
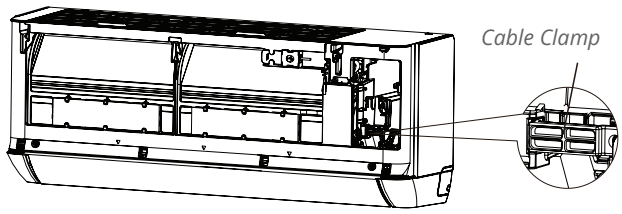


Fig. 5-8 Connecting the Communication Wire

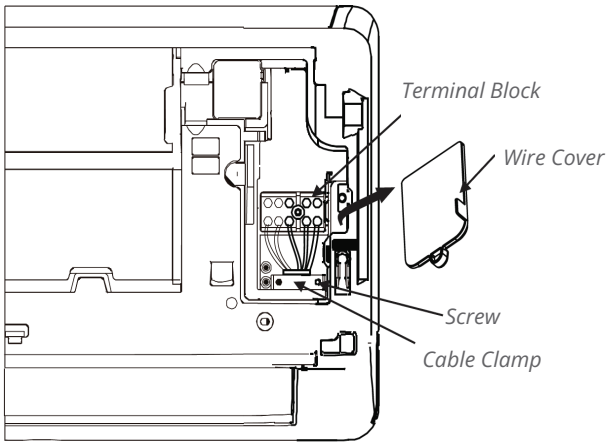




1. Open the front panel of the indoor unit.
2. Using a screwdriver, open the wire box cover on the right side of the unit. This will reveal the terminal block.
3. Unscrew the cable clamp.
4. Insert one end of the cable into the control box from the back right end of the indoor unit.
5. Connect the wires to the corresponding terminal according to the wiring diagram on the electric control box cover. Make sure they are well connected.
6. Screw the cable clamp to fasten the cables.
7. Reinstall the electric control box cover and front panel.

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

Fig. 5-9 Indoor Communication Wire Hookup



⚠ DO NOT MIX LIVE AND NULL WIRES ⚠

This is dangerous and can cause the unit to malfunction

CAUTION FOR ETL CERTIFICATION AREAS

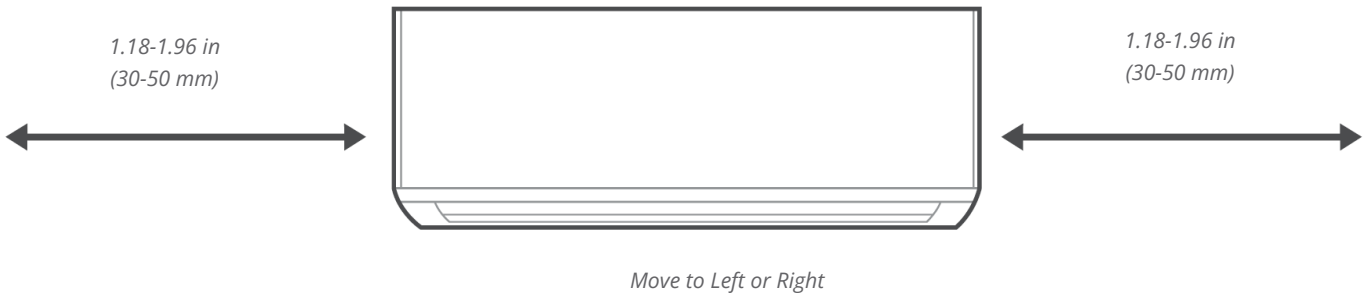
Before servicing, all power supplies must be disconnected, locked out, and verified de-energized. Failure to isolate electrical power may result in electric shock or death.

6 Mount Indoor Unit

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 1.18-1.96 inches (30-50 mm), depending on the model.

Fig. 5-10 Mounting the Indoor Air Handler



NOTE

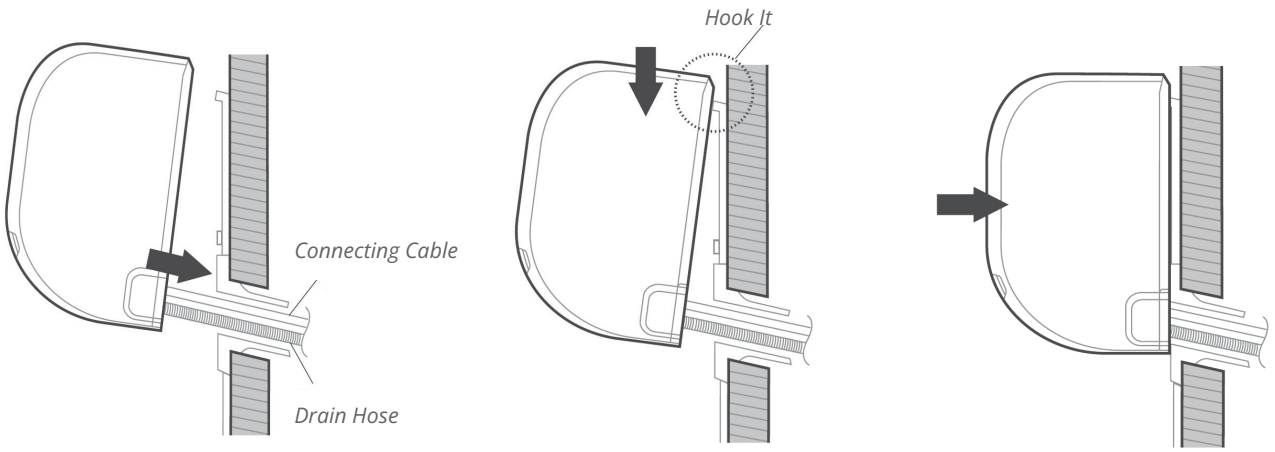
Before passing the piping and drain hose through the wall hole, you must bundle them together to save space, protect them, and insulate them.
Ensure that the communications wire is wrapped in conduit at the time of insulation.

If you installed new connective piping to the outdoor unit, do the following:

1. Double-check that the ends of the refrigerant pipes are sealed to prevent dirt or foreign materials from entering the pipes
2. Slowly pass the bundle of refrigerant pipes, drain hose, and communication wire through the wall hole
3. Hook the top of the indoor unit on the upper hook of the mounting plate
4. 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
5. Using even pressure, push down on the bottom half of the unit. Keep pushing down until the unit snaps onto the hooks along the bottom of the mounting plate
6. Check that the unit is firmly mounted by applying slight pressure to the left and right-hand sides of the unit

Note: *The quick connector parts must be located outside of the room. Use the wall hole sleeve, cap, and neoprene to seal the wall hole.*

Fig. 5-11 Mounting With New Connective Piping



Put pipes in wall hole

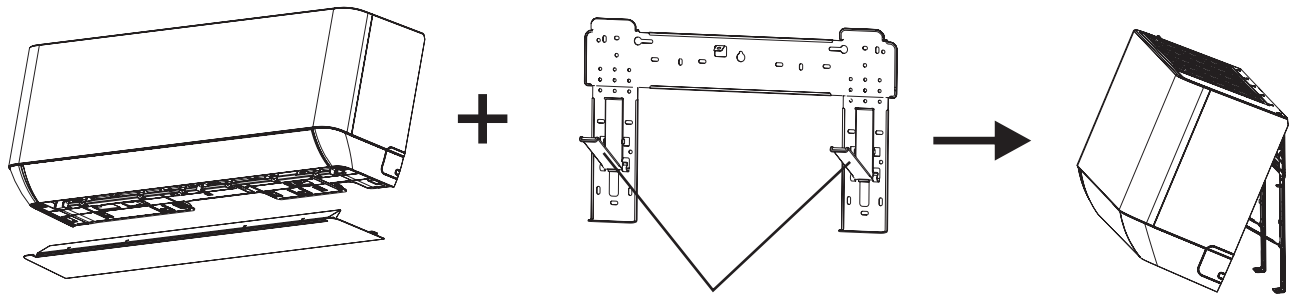
Hook it and press down lightly to secure

Check that the unit is mounted firmly

If the refrigerant piping is already embedded in the wall, do the following:

1. Hook the top of the indoor unit on the upper hook of the mounting plate.
2. Use a bracket or wedge to prop up the unit for enough room to connect the refrigerant piping, signal cable, and drain hose.
3. Connect drain hose and refrigerant piping according to **Steps 7-8**.
4. Keep pipe connection point exposed to perform the leak test according to **Step 13** in **4. 3 Installing the Outdoor Condenser**.
5. After the leak test, wrap the connection point with insulation tape.
6. Remove the bracket or wedge that is propping up the unit.
7. Using even pressure, push down on the bottom half of the unit. Keep pushing down until the unit snaps onto the hooks along the bottom of the mounting plate.

Fig. 5-12 Mounting With Pipe Pre-Embedded in the Wall



Take Off the Bottom Plate

Unfold the Bracket on the Mounting Plate

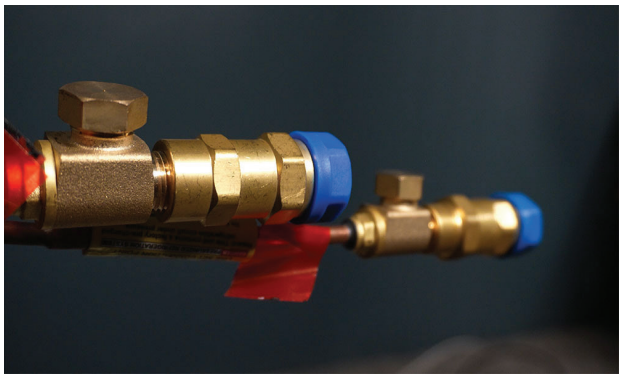
7 Connect Refrigerant to Indoor Unit Using MrCool DIY Quick Connect Pre-Charged Line Set



1. Remove the flare fitting from the stop valve on the air handler.



2. Remove and discard the copper dust cover on the end of the adapter before attaching the line set. The dust cover is a factory placeholder to keep debris out during transit and **IS NOT** used during installation.
3. Install the MrCool DIY® Quick Connect® Fitting to the stop valve on the air handler.





4. Connect the MRCOOL DIY® line set to the MRCOOL DIY® Quick Connect® Fitting on the indoor air handler. **TWO** adjustable wrenches are required. Hold the Quick Connect® Fitting body completely stationary with Wrench 1 while tightening the line set nut with Wrench 2. Then, install the pin lock to the Quick Connect® Fitting and tighten. The pin lock will not go in if the connection is over-tightened or if it is too loose.

⚠ WARNING ⚠

Failing to hold fitting stationary will cause it to back off the stop valve, resulting in an immediate refrigerant leak when the valve is opened.







IMPORTANT

Since the coupling works with tapping rings, it may leak if you disconnect and reconnect the pipes. This will also void the warranty.

Torque Requirements

1. Excessive force can break the connector or damage the refrigerant piping. You must not exceed the torque requirements shown in **Table 5-3**.
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 following table.
3. Please note that there may be different Torque Wrenches (i.e. automotive torque wrenches versus and an HVAC torque wrench) and that a socket style wrench cannot be used in this installation

NOTE

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

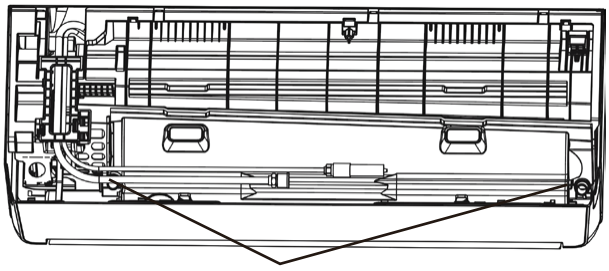
Table 5-3 Torque Specs

Stamp (On Connector)	**Coupling Size Inch** (Millimeter)	**Tightening Torque lb-ft** (N-m)
FA06	3/8 in (9.5 mm)	18-20 lb/ft (24.4-27.1 Nm)
FA09	1/2 in (12.7 mm)	30-35 lb/ft (40.6-47.4 Nm)
FA12	3/4 in (19.1 mm)	45-50 lb/ft (61.0-37.7 Nm)
FA16	1 in (25.4 mm)	60-65 lb/ft (81.3-88.1 Nm)

8 Adjust Drainage Hose if Necessary

In some models, both sides of the indoor unit are provided with drainage ports. You can choose one of them to attach the drainage hose, and block the unused drain port with the rubber attached in one of the ports.

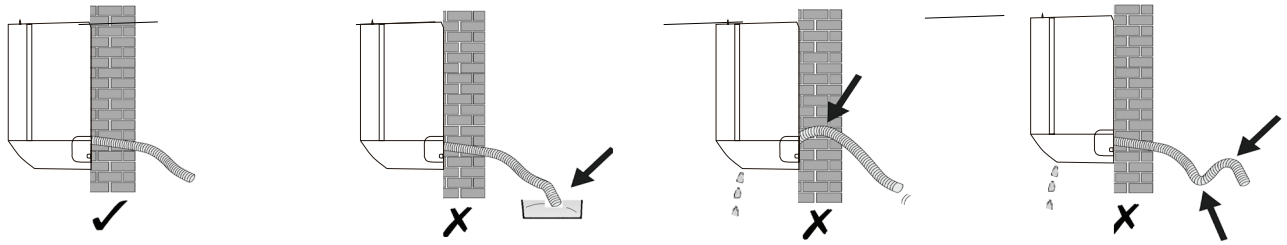
Fig. 5-13 Drainage Ports



Drainage ports

1. Connect the drainage hose to the drainage port. Ensure the joint is firm and the sealing effect is good.
2. Wrap the joint firmly with Teflon tape to ensure no leaks.
   Note: Make sure there are no twists or dents. The pipes should be placed obliquely downward to avoid blockage and ensure proper drainage.

Fig. 5-14 Drainage Ports



CORRECT
Make sure there are no kinks or dents in the drain hose to ensure proper drainage.

NOT CORRECT
Do not place the end of the drain hose in water or in containers that collect water. This will prevent proper drainage.

NOT CORRECT
Kinks in the drain hose will create water traps.

NOT CORRECT
Kinks in the drain hose will create water traps.

5. 3 Installing the Outdoor Condenser

Fig. 5-15 Outdoor Condenser Dimensions

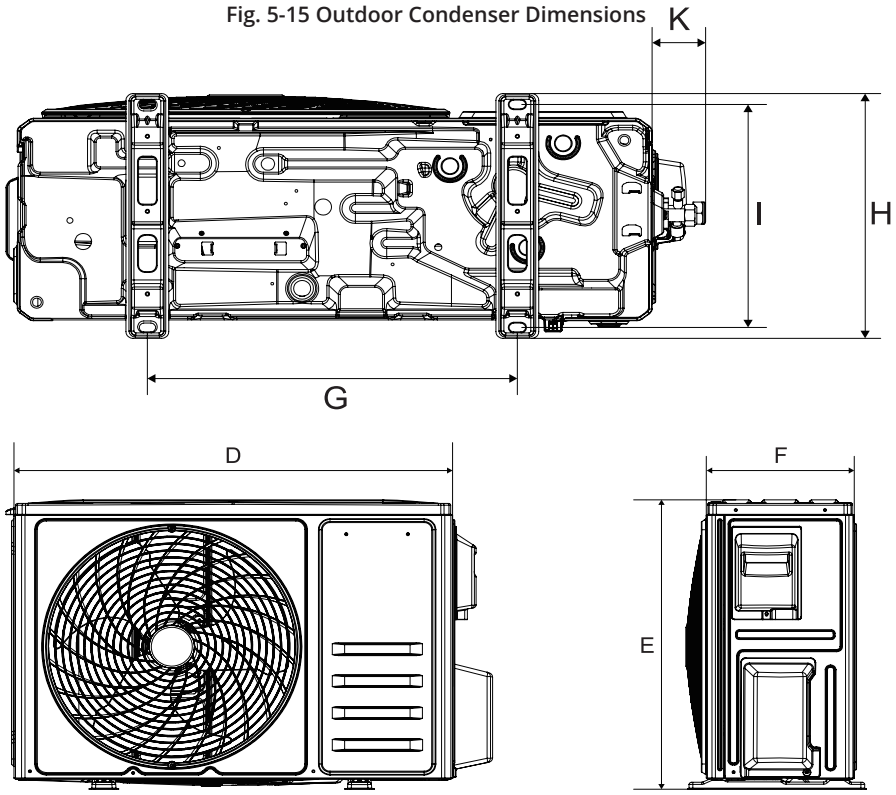


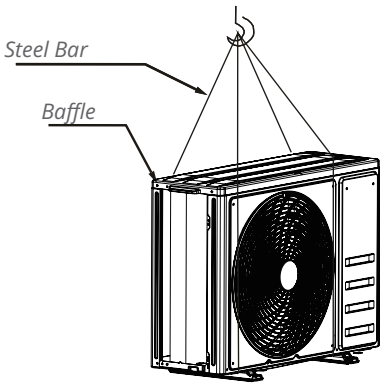
Table 5-4 Outdoor Condenser Dimensions

Model	Outdoor Unit (mm)						
	D	E	F	G	H	I	K
9K (660D)	716	499	240	415	290	265	60
9K (728C)	728	554	253	434	305	285	60
12K (728D)	728	551	253	434	305	278	60
18K (845D)	843	700	330	586	375	348	48
24K (910C)	904	804	353	607	421	390	60

1 Move Outdoor Unit (High-Rise Applications and Large/Heavy Models):

1. Use 4 pieces of 6mm steel wire to lift the outdoor unit and move it to the desired location.
2. To prevent the outdoor unit from being damaged, add baffles on the surface where the steel wires will come into contact with the unit.
3. After moving, remove the wooden tray from the bottom.

Fig. 5-16 Moving Large/Heavy Models



2 Set Up Installation Space

1. After setting up the repair space as illustrated to the right, install the outdoor unit with power supply equipment installed at the side. Refer to the **Electric Supply Installation Manual** for the installation method.
2. Guarantee necessary space for installation and repair.

Fig. 5-17 Outdoor Condenser Installation Space

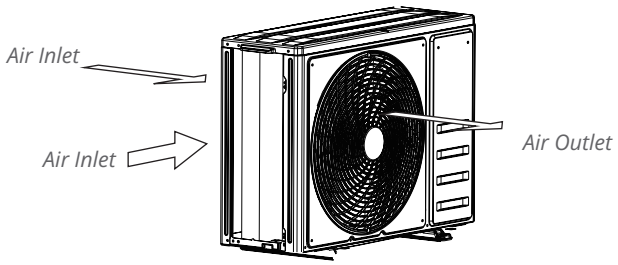


Fig. 5-18 Outdoor Installation Clearances

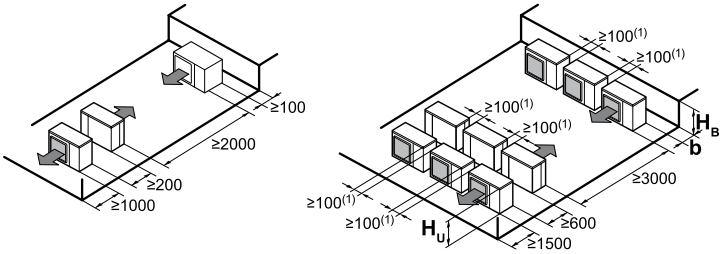


Table 5-5 Outdoor Installation Clearances

H_BH_U	b (mm)
$H_B \leq ½H_U$	b≥250
$½H_U < H_B \leq H_U$	b≥300
$H_B > H_U$	/

3 Condenser Body Installation

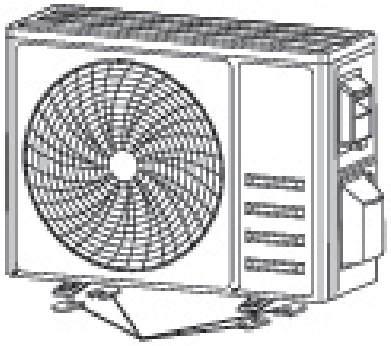
1. Mark the installation position for expansion bolts according to the outdoor unit's installation dimensions.
2. Drill bolt holes, clear the holes or debris, and insert the expansion bolts.
3. If applicable, install 4 rubber pads on the installation holes before placing the outdoor unit (Optional). Doing so will reduce vibrations and noise.
4. Place the outdoor unit onto the bolts and pre-drilled holes.
5. Use a wrench to firmly secure the outdoor unit with the bolts.

Note: The outdoor unit can be fixed on a wall-mounting bracket.

Follow the wall-mounting bracket's instructions to attach the bracket to the wall. Then, fasten the outdoor unit to the bracket and ensure it is level.

The wall-mounting bracket must support at least 4 times the weight of the outdoor unit.

Fig. 5-19 Installing Rubber Blankets



Install 4 Rubber Blankets (Optional)

Precautions

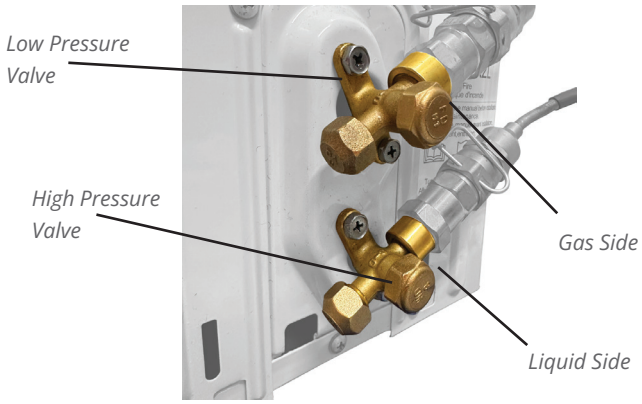
- Confirm that the installation personnel are qualified for relevant installation work. If the air conditioner is installed by persons without the special required skills, normal operations cannot be ensured, and personal and property safety may be affected.
- Installed the air conditioner securely. Poor installation may lead to abnormal noise and vibration.
- Install the outdoor unit at a spot where air outlet noises and hot exhaust will not disturb your neighbors.

User Guidelines

- The user's installation site should have a regular power supply conforming to that indicated on the air conditioner's nameplate. Its voltage should be within the range of 90-110% of the rate voltage value.
- Equip the power circuit with a protective device, such as a leakage protector or an air switch, which should have a capacity greater than 1.5 times the maximum current value of the air conditioner.
- Please use the fuse or circuit breaker described on **Page 38**.
- Only a qualified electrician may carry out wiring tasks strictly according to the electrical safety requirements.
- Ensure proper grounding of the air conditioner. (i.e., The main power switch of the air conditioner must be connected to a reliable ground wire.).

4 Connect MrCool DIY Quick Connect Pre-Charged Line Set to Condenser

Fig. 5-20 Connecting Refrigerant Pipes



1. Remove the flare fitting from the condenser valves.



2. Install the MRCOOL DIY® Quick Connect Fitting to the valves on the outdoor condenser.



CAUTION

Make sure the MRCOOL DIY® Quick Connect® Fitting is tightened before connecting the line sets. DO NOT FORCE IT.

⚠ WARNING ⚠

Failing to hold the fitting stationary will cause it to back off the valve, resulting in an immediate refrigerant leak when the valve is opened.

3. Connect the MRCOOL DIY® line set to the MRCOOL DIY® Quick Connect® Fittings on the condenser. TWO adjustable wrenches are required. Hold the Quick Connect® Fitting body completely stationary with Wrench 1 while tightening the line set nut with Wrench 2. Install the pin lock to the Quick Connect® Fitting and tighten. The pin lock will not go in if the connection is over-tightened or if it is too loose.





NOTICE

According to the installation conditions, an excessively large tightening torque will damage the nut.

Fig. 5-21 Tightening the Pipe Connection

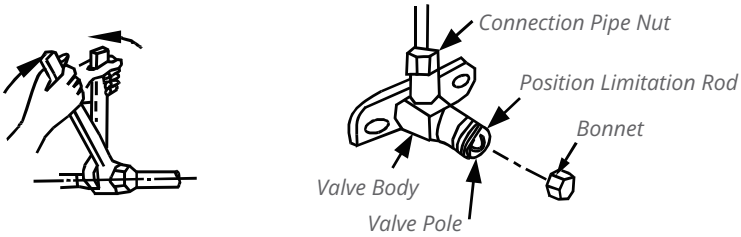


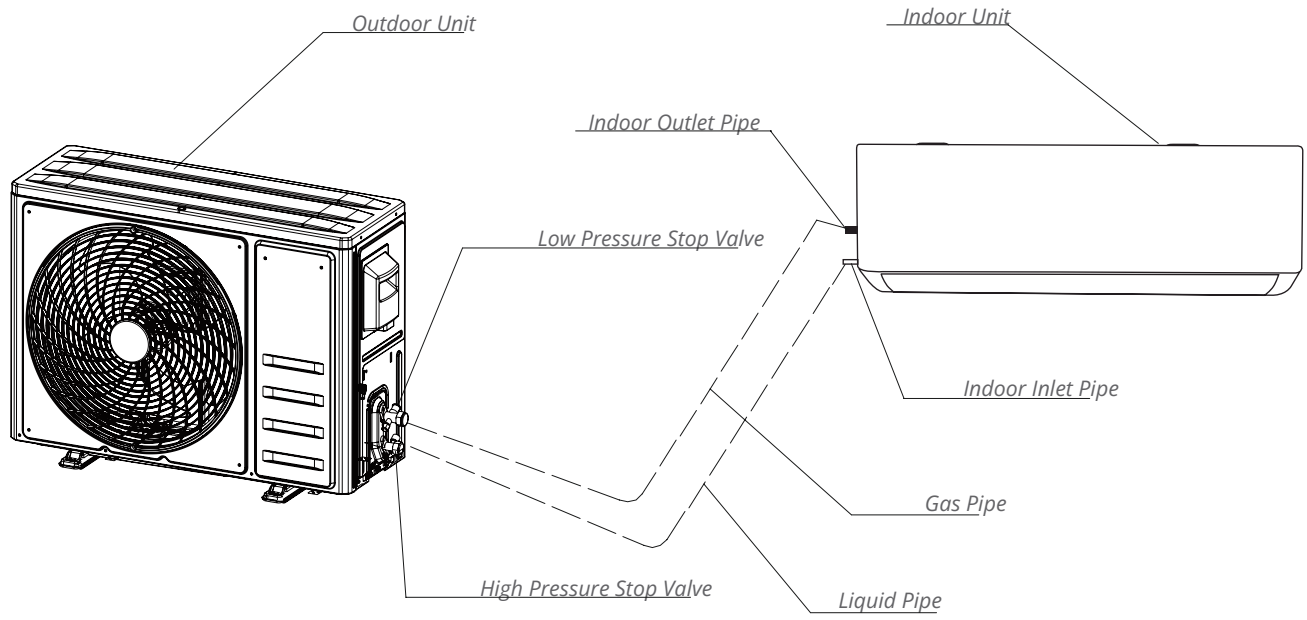
Table 5-6 Torque Requirements for Connection Pipe

Pipe Size	Newton Meter (N x m)	Pound-Force Foot (lbf-ft)	Kilogram-Force Meter (kgf-m)
1/4" (Φ6.35)	15-20	11.1-14.8	1.5-2.0
3/8" (Φ9.52)	31-35	22.9-25.8	3.2-3.6
1/2" (Φ12)	45-50	33.2-36.9	4.6-5.1
5/8" (Φ15.88)	60-65	44.3-48.0	6.1-6.6

Note: *This table is only for reference. The installation must meet the requirements of local laws and regulations.*

- *The following figure is only for reference. The installation must meet the requirements of local laws and regulations.*
- *The following figure only shows the assembly relationship of the indoor unit, outdoor unit, and refrigerant pipes.*
- *Please refer to the following figures to install.*

Fig. 5-22 Indoor & Outdoor Connections

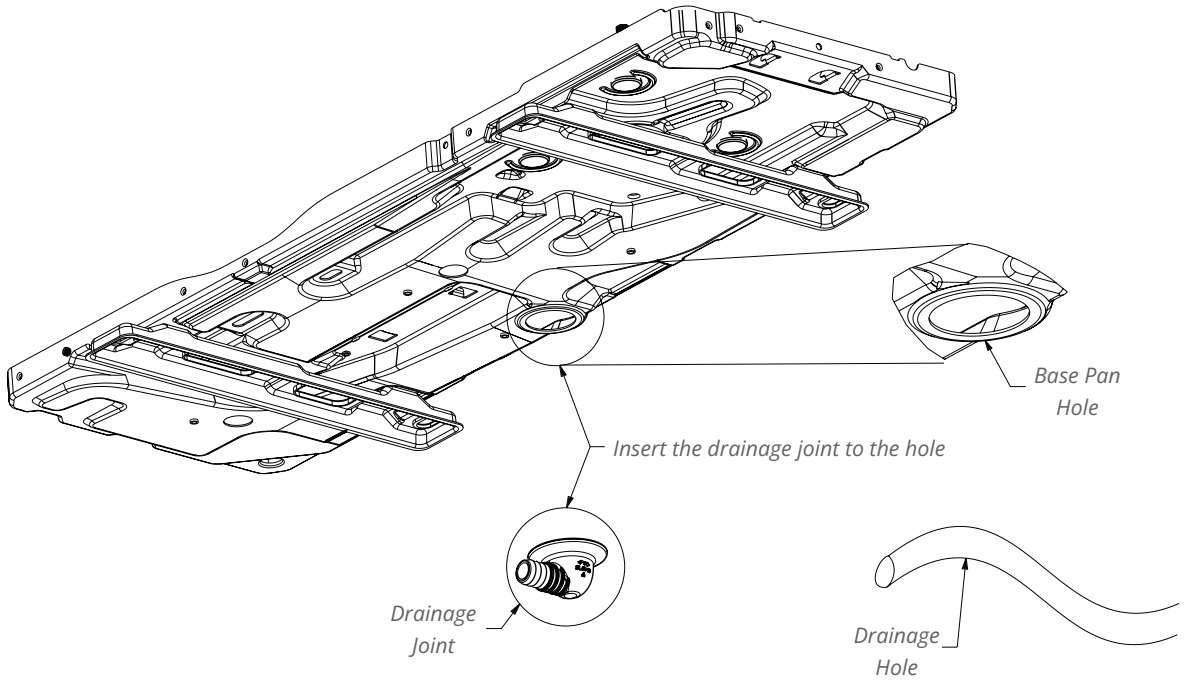


5 Install Drainage Hose

Note: This step is only for heat pump models or reverse cooling air conditioners (RCACs).

1. Insert the drainage joint to the hold at the bottom of the outdoor unit.
2. Connect the drainage hose to the joint and connect securely.

Fig. 5-23 Drainage Host Installation



NOTE

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

In cold climates, ensure 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.

6 Pipe Dimensions and Ways of Installation

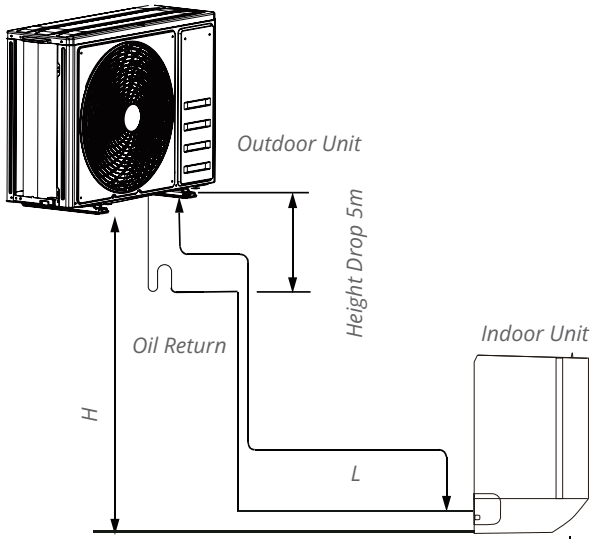
Table 5-7 Outdoor Pipe Dimension and Ways of Installation (in sequence of cooling capacity)

Pipe Material		Copper Pipe for Air Conditioner	
Model		9 ~ 12K	18K ~ 24K
Size (mm)	Liquid Side	Φ6.35 (1/4 in)	Φ6.35 (1/4 in)
	Gas Side	Φ9.52 (3/8 in)	Φ9.52 (1/2 in)

Conventional Pipe		9/12K	18/24K
Maximum Pipe Length (Liquid Side) L		50ft/15m	65ft/20m
Maximum Height Drop	Height Drop Between Indoor and Outdoor Unit H	30ft/10m	50ft/15m

Fig. 5-24 Allowed Length & Height Drop

Refer to the refrigerant pipe connection section for details



7 Remove Objects & Water

- Use high-pressure nitrogen to clean the pipe instead of using outdoor refrigerant for this cleaning process.
- Before installing the refrigerant pipe, please clean the pipe to prevent foreign objects from being inside.

8 Additional Refrigerant Charge

PER MANUFACTURER RECOMMENDATION

INSTALLING TECHNICIAN MUST ADD .16 OUNCES PER FOOT OF R32 REFRIGERANT IN ¼" ⅜" SIZED LINE SET AND .16 OUNCES PER FOOT OF R32 REFRIGERANT IN ¼" ½" SIZED LINE SET.

Table 5-8 Additional Refrigerant Charge

Line Set Connector Size	Ounces per Foot of R32 Refrigerant
1/4" 3/8"	.16 oz per ft
1/4" 1/2"	.16 oz per ft

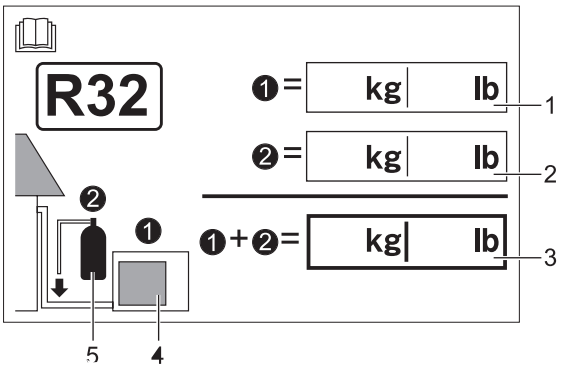
Refrigerant Charge Label

Fill with indelible ink:

- (1) The factory refrigerant charge of the product.
- (2) The additional refrigerant amount charged in the field.
- (1) + (2) the total refrigerant charge on the refrigerant charge label supplied with the product.

Affix the refrigerant charge label near the manufacturer's label after filling it out.

Fig. 5-25 Refrigerant Charge Label



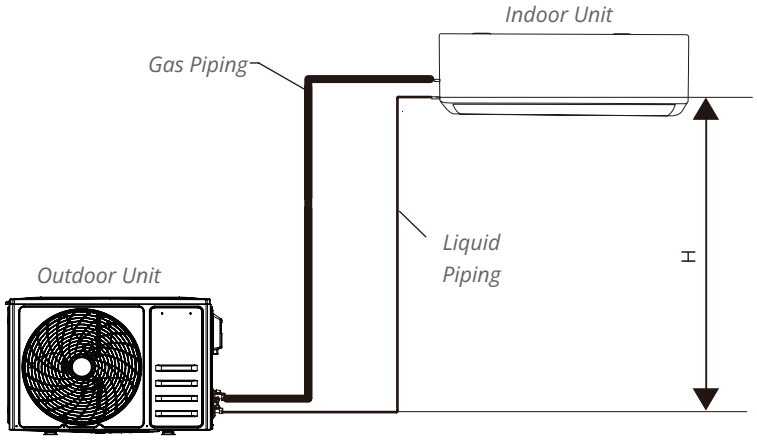
1. Factory refrigerant charge of the product: see unit manufacturer's label
2. Additional refrigerant amount charge in field
3. Total refrigerant charge
4. Outdoor unit
5. Refrigerant cylinder and manifold for charging

9 Non-return Bend and Oil Return Bend

Outdoor Unit Is Beneath the Indoor Unit

There's no need to add non-return bend at the lowest or highest position of the vertical pipe, as shown to the right.

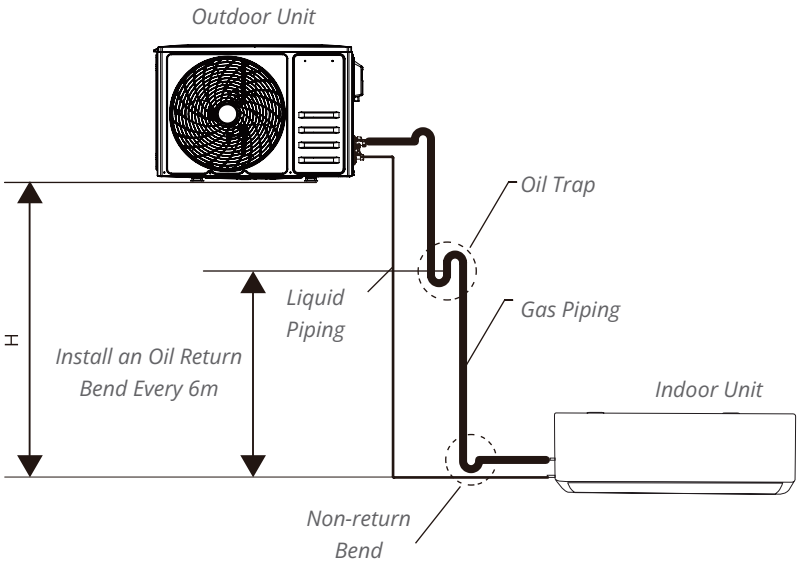
Fig. 5-26 Non-Return & Oil Return Bend: Outdoor Unit Beneath Indoor Unit



Outdoor Unit Is Above the Indoor Unit

It's necessary to add oil return bend and non-return bend at the lowest and highest position of the vertical pipe, as shown to the right.

Fig. 5-27 Non-Return & Oil Return Bend: Outdoor Unit Above Indoor Unit



Dimensions for the making of oil return bend are as follows:

Fig. 5-28 Making Oil Return Bend

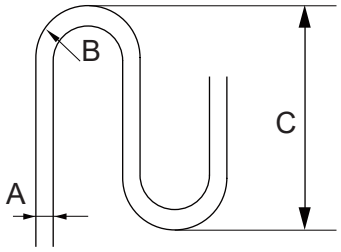


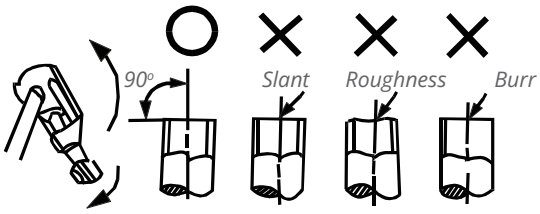
Table 5-9 Making Oil Return Bend

A (inch)	B (mm)	C (mm)
Φ3/8	≥20	≤150
Φ1/2	≥26	≤150
Φ5/8	≥33	≤150

10 Flaring

Cut the refrigerant pipe with a pipe cutter

Fig. 5-29 Cutting Refrigerant Pipe



Flare the pipe after putting it into the connection nut

Fig. 5-30 Flaring the Refrigerant Pipe

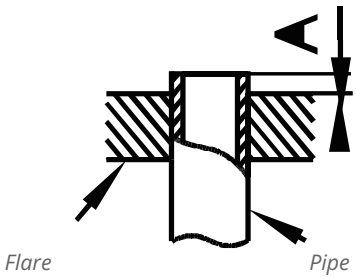


Table 5-10 Flaring the Refrigerant Pipe

Outside Diameter	A (mm)	
	MAX	MIN
Φ1/4"	8.7	8.3
Φ3/8"	12.4	12.0
Φ1/2"	15.8	15.4
Φ5/8"	19.0	18.6
Φ3/4"	23.3	22.9

11 Stop Valve Connection – Opening the Indoor Air Handler Stop Valve

CAUTION

LINE SET CONNECTION POINT

DANGER PRESSURIZED REFRIGERATION SYSTEM

Hazard: This unit contains a factory pre-charged refrigeration circuit under pressure.

Do NOT connect or disconnect line set unless system is fully sealed and service valves are closed.

DANGER PRESSURIZED REFRIGERATION SYSTEM

SERVICE VALVE

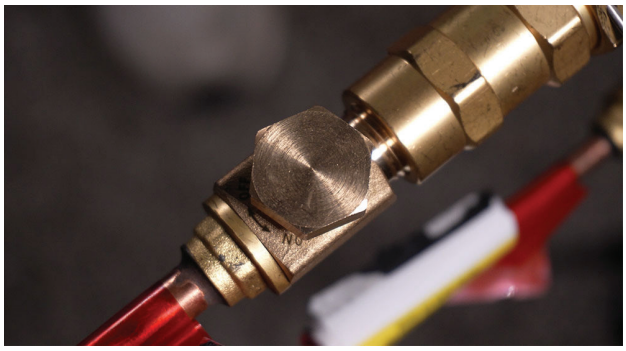
DO NOT OPEN SERVICE VALVE UNTIL LINE SET IS CONNECTED

DANGER (Open this service valve ONLY after the line set is fully installed, secured, and leak-checked)

HAZARD Opening this service valve will release high-pressure refrigerant into the atmosphere if the line set is not connected

Opening this valve prematurely may cause:
Violent discharge of refrigerant
Frostbite, eye injury, or other bodily injury
Compressor damage or system failure
Loss of factory refrigerant charge
Possible warranty voiding

1. Remove the cap from the stop valve.





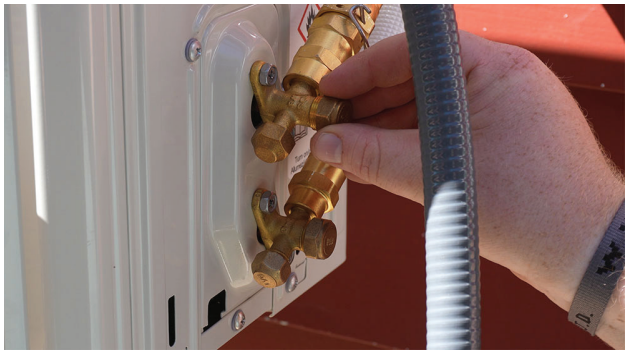
2. Using the provided small Allen wrench, perform a counterclockwise quarter turn until it stops. The valve indicator should be at the ON position. DO NOT FORCE IT.

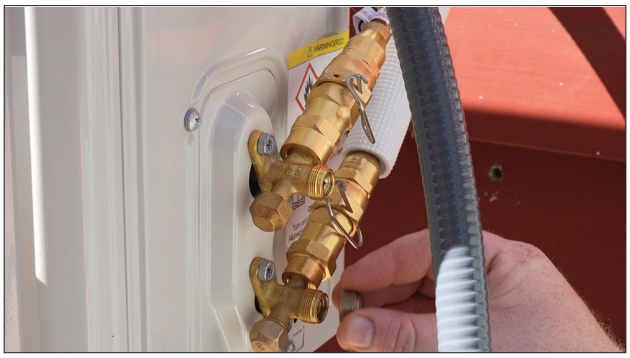


3. Replace the cap.

12 Stop Valve Connection - Opening the Outdoor Condenser Valve

1. Remove the cap from both stop valves.





2. Using the provided large Allen wrench, turn the valve counterclockwise as far as it will go. DO NOT FORCE IT.

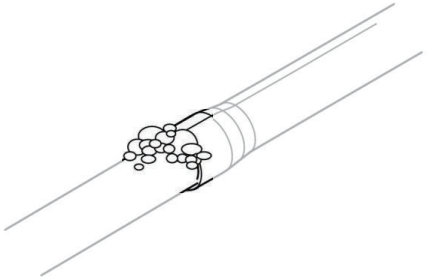


3. Replace the caps.

13 Check for Leaks

Perform bubble test on the line set connections to ensure there are no leaks.

Fig. 5-31 Leak Check

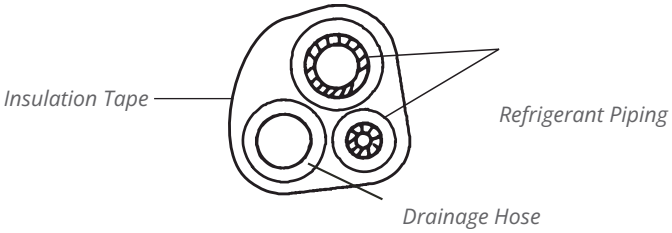


14 Wrap Piping and Cable

Install connecting wires and drainage hose after the refrigerant pipes in order to save space and protect and insulate them. Bundle with insulating tape before passing them through the wall hole.

1. Arrange the pipes, cables, and drainage hose according to the following picture.

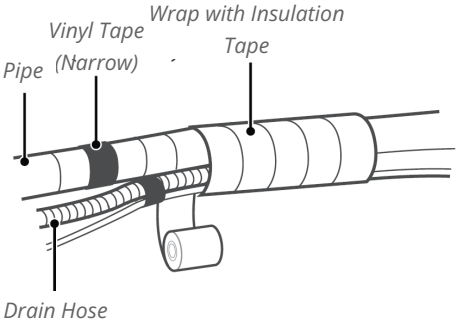
Fig. 5-32 Pipe & Cable Arrangement



***Note**: Make sure the drainage hose is at the bottom. Avoid crossing and bending parts.*

2. Using the insulating tape, wrap the refrigerant pipes, connecting wires, and drainage hose together tightly.

Fig. 5-33 Wrapping Pipes



DRAIN HOSE MUST BE ON BOTTOM
Make sure the drain hose is at the bottom of the bundle. Putting the drain hose at the top of the bundle can cause the drain pan to overflow, which can lead to fire or water damage.

CAUTION

Before servicing, all power supplies must be disconnected, locked out, and verified de-energized. Failure to isolate electrical power may result in electric shock or death.

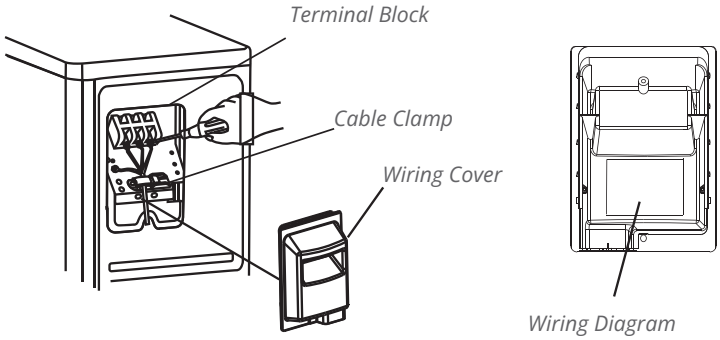
- Be sure to install current leakage protection switch
- Failure to install current leakage protection will result in electric shock, fire, serious injury, or death
- The appliance must be positioned so that the power terminal is accessible
- This appliance must be installed in accordance with all applicable national, state, provincial, and local wiring regulations

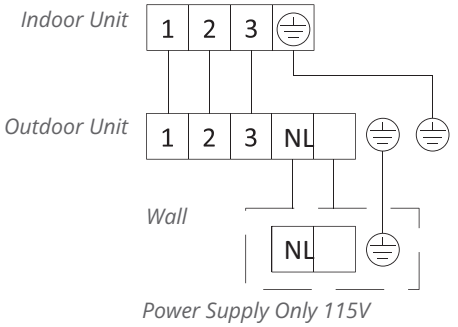
1. The power cord must be selected according to national regulations
2. The outdoor unit power cord should be selected and connected according to the outdoor unit installation manual
3. Wiring should be away from high temperature components, or the insulation layer of the wires may melt
4. Use wire clamps to fix the wires and terminal block after connection
5. Control wire should be wrapped together with heat insulated refrigerant pipes
6. Connect the indoor unit to power only after the refrigerant has been vacuumed
7. Don't connect the power wire to the signal wire connection end

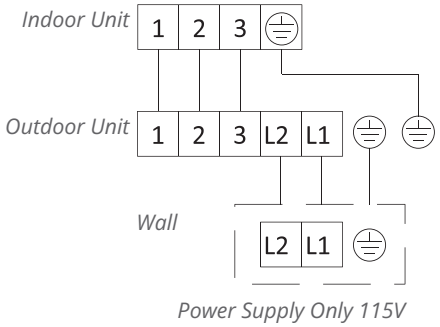
6. 1 Install Wiring

1. Use a Phillips screwdriver to unscrew wiring cover. Grasp and press it down gently to take it down
2. Unscrew the cable clamp and take it down
3. According to the wiring diagram inside the wiring cover, connect the connecting wires to the corresponding terminals, and ensure all connections are firm and secure
4. Reinstall the cable clamp and wiring cover
   Note: When connecting the wires of indoor and outdoor units, the power should be cut off.

Fig. 6-1 Wiring Installation







6. 2 Dedicated Distribution Device and Wire for Air Conditioner

Table 6-1 Dedicated Distribution Device & Wire AWG

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

NOTE

This table is only for reference. The installation must meet the requirements of local laws and regulations. The suitable temperature for selecting wire gauge is 77oF+41oF (25oC+5oC)

Table 6-2 Power Cord Specifications

Power Supply				
Model	Voltage	MCA	Breaker	Recommended Power Cord Specifications
9K	115V	16	25	14AWG
9K	208-230V	10	15	14AWG
12K	115V	17	25	14AWG
12K	208-230V	11	15	14AWG
18K	208-230V	17	25	14AWG
24K	208-230V	19	30	14AWG

NOTE

This air conditioner does not include a power cord. A licensed electrician should be consulted to select and install the appropriate power cord based on the model and local voltage requirements.

7. 1 Inspections Before Test Run

Do the following checks before a test run:

Description	Inspection Method
Electrical Safety Inspection	• Check whether the power supply voltage complies with specifications • Check whether there are any wrong or missing connections, between the power lines, signal lines, and earth wires • Check whether the earth resistance and insulation resistance comply with requirements
Installation Safety Inspection	• Confirm the direction and smoothness of drainage pipe • Confirm that the joint of refrigerant pipe is installed completely • Confirm the safety of outdoor unit, mounting plate, and indoor unit installation • Confirm that the valves are fully open • Confirm that there are no foreign objects or tools left inside the unit • Complete installation of indoor unit air inlet grille panel
Refrigerant Leakage Detection	• Check the piping joint, the connector of the two valves of the outdoor unit, the valve spool, the welding port, etc., where leakage may occur • **Foam Detection Method**: Apply soapy water or foam evenly on the parts where leakage may occur and observe whether bubbles appear or not. If not, it indicates that the leakage detection result is safe • **Leak Detector Method**: Use a professional leak detector and read the operation instructions. Detect at the position where leakage may occur • The duration of leak detection for each position should last for 3 minutes or more. If the test result shows that there is leakage, the nut should be tightened and tested again until there is not leakage. After the leak detection is complete, wrap the exposed pipe connector of indoor unit with thermal insulation material and wrap with insulation tape

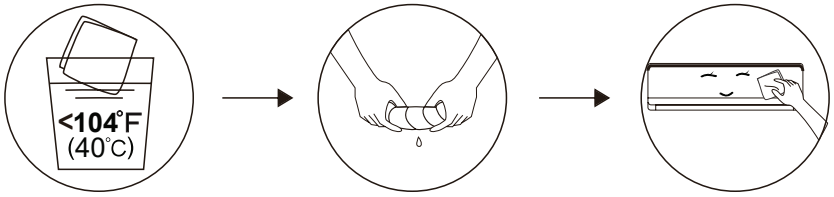
7. 2 Test Run Instructions

1. Turn on the power supply.
2. Press the ON/OFF button on the remote controller to turn on the air conditioner.
3. Press the MODE button to switch the mode from COOLING and HEATING.
   In each mode set as below:
   - COOLING: Set the lowest temperature
   - HEATING: Set the highest temperature
4. Run about 8 minutes in each mode and check all functions are properly running and responding to the remote controller.
   Functions check as recommended:
   - If the outlet air temperature responds to the COOLING and HEATING modes.
   - If the water drains properly from the drainage hose.
   - If the Louver and deflectors (option) rotate properly.
5. Observe a successful test run of the air conditioner for at least 30 minutes.
6. After a successful test run, return to the normal setting and press the ON/OFF button on the remote controller to turn off the unit.
7. Instruct the user to read this manual carefully before use, and demonstrate to the user how to use the air conditioner, the necessary knowledge for service and maintenance, and a reminder to store all accessories.

Note: If ambient temperature exceeds the range mentioned in the Instruction for Servicing section, and it cannot run COOLING or HEATING mode, lift the front panel and refer to the emergency button operation to run the COOLING and HEATING mode.

<table>
<tr><td>Warning</td><td>

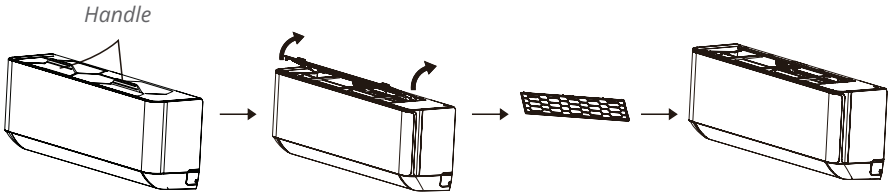
When cleaning, you must shut down the machine and cut off the power supply for more than 5 minutes.
Under no circumstances should the air conditioner be flushed with water.
Volatile liquid (e.g. thinner or gasoline) will damage the air conditioner, so only use a soft dry cloth or wet cloth dipped with neutral detergent to clean the air conditioner.
Clean the filter screen regularly to avoid dust covering, which will affect the filter screen efficiency. When the operating environment is dusty, the cleaning frequency should be increased appropriately.
After removing the filter screen, do not touch the fins of the indoor unit to avoid scratching.

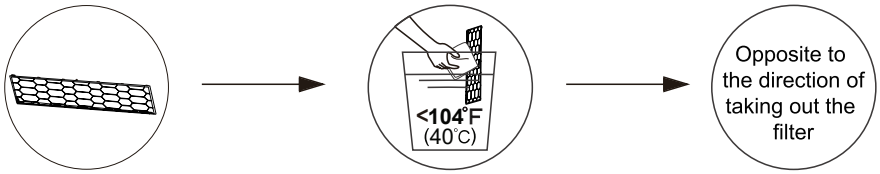
</td></tr>
<tr><td>Clean the Unit</td><td>


Wring it dry and gently wipe the surface of the unit

Tip: Wipe frequently to keep the air conditioner clean and in good appearance.
</td></tr>
<tr><td>Disassembly and Assembly of Filter</td><td>

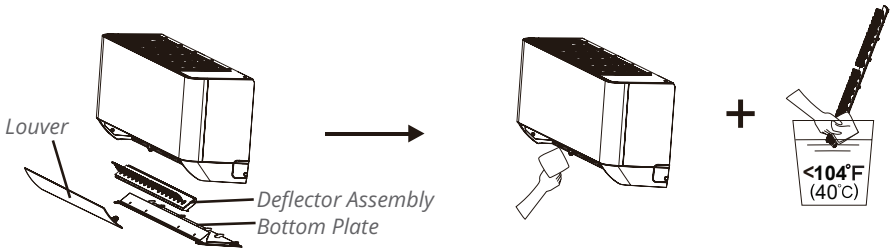
Grasp the raised handle on the filter with your hand, and then pull the filter out away from the unit, so that the upper edge of the filter is separated from the unit. The filter can be removed by lifting it upwards.
When installing the filter, first insert the lower end of the filter screen into the corresponding position of the unit, and then squeeze the upper end of the filter into the corresponding buckling position of the unit body.



</td></tr>
<tr><td>Clean the Filter</td><td>


Take out the air filter
Clean the filter with soapy water and air dry it
Replace the filter

Tip: When you find accumulated dust in the filter, clean the filter quickly to ensure the clean, healthy, and efficient operation inside the air conditioner.
</td></tr>
</table>

Cleaning of the Inner Air Duct	• First, loosen the knob on the middle of the louver and bend the louver outwards to take it out. • Then, grasp both sides of the bottom plate and push downwards to take down the bottom plate. • Finally, loosen the buckle of the deflector assembly with your thumb and take it out. • Wipe the air duct and fan assembly with a clean and wrung wet rag. • Clean the removed parts with soapy water and air dry them. • After cleaning, restore the removed parts in turn. 
Service and Maintenance	• When the air conditioner is not in use for a long time, do the following: 1. Take out the batteries of the remote controller and disconnect the power supply of the air conditioner • When using after a long-term shutdown: 1. Clean the unit and filter screen 2. Check whether there are obstacles at the air inlet and outlet of indoor and outdoor units 3. Install the batteries of the remote controller and check whether the power is on.

9. 1 Malfunctions & Causes

MALFUNCTION	POSSIBLE CAUSES
The appliance does not operate	Wrong wiring connection
	Power failure/power terminal pulled out
	Damaged indoor/outdoor unit fan motor
	Faulty compressor thermomagnetic circuit breaker
	Faulty protective device or fuses
	Loose connections or power terminal pulled out
	It sometimes stops operating to protect the appliance
	Voltage higher or lower than the voltage range
	Active TIMER-ON function
	Damaged electronic control board
Strange Odor	Dirty air filter
Noise of running water	Back flow of liquid in the refrigerant circulation
Fine mist comes from the air outlet	The air in the room is very cold, such as in the COOLING or DEHUMIDIFYING/DRY modes
A strange noise can be heard	The expansion or contraction of the front panel due to variations in temperature and does not indicate a problem
Insufficient airflow, either hot or cold	Unsuitable temperature setting
	Obstructed air conditioner intakes and outlets
	Dirty air filter
	Fan speed set at minimum
	Other sources of heat in the room
	No refrigerant
The appliance does not respond to commands	Remote control is not close enough to indoor unit
	The batteries of remote control need to be replaced
	Obstacles between remote control and signal receiver in indoor unit
The display is off	Activate DISPLAY function
	Power failure
Switch off the air conditioner immediately and cut off the power supply in the event of:	Strange noises during operation
	Faulty electronic control board
	Faulty fuses or switches
	Spraying water or objects inside the appliance
	Overheated cables
	Very strong smells coming from the appliance

9. 2 Display Code

Display	Description of the Code
0-9A	Number +A indicates current limit in Generator Mode (e.g., 3A means the unit is limited to 3A)
C8	Forced defrosting functions (Heat Pump)
CL	Filter cleaning reminder / Dust full reminder

Note:

- *The designation "0-9A" does not indicate an error code. It indicates that the GEN function has been activated*
- *"C8" is not an error. It indicates active defrost function. It will resume automatically when defrosting is finished*
- *The designation "CL" does not indicate an error code. Rather, it signifies that the indoor dust filter requires cleaning. To reset the alarm, please disconnect the power supply for 30 seconds before restoring it.*

For wireless network models only:

- *Display "PP" indicates that the wireless module is attempting to connect to the router*
- *Display "SA" indicates that the wireless module can connect through the router*
- *Display "AP" indicates that the wireless module can connect through the internet*

9. 3 Error Code

Display	Description of the Code	Troubleshooting Method
HD	Refrigerant leakage sensor protection	When this code appears, open windows for ventilation, prevent the generation of open flames, then leave the room where the product is located immediately and contact after-sales service for handling.
FD	Refrigerant sensor fault	
F4	Refrigerant cycle abnormality protection	

10. Specifications

HEAT PUMP			9K(115V)	12K(115V)	9K(230V)	12K(230V)	18K(230V)	24K(230V)
Indoor Unit			AEPL**AWM23E 0932B1A	AEPL**AWM23E 1232B1A	AEPL**AWM23E 0931B1A	AEPL**AWM23E 1231B1A	AEPL**AWM22E 1831B1A	AEPL**AWM22E 2431B1A
Outdoor Unit			AEPL**MHV23S 0932B1A	AEPL**MHV23S 1232B1A	AEPL**MHV23S 0931B1A	AEPL**MHV23S 1231B1A	AEPL**MHV22S 1831B1A	AEPL**MHV22S 2431B1A
Power Supply			115V~/60Hz /1P	115V~/60Hz /1.5P	208/230V~ /60Hz/1.5P	208/230V~ /60Hz/1.5P	208/230V~ /60Hz/2P	208/230V~ /60Hz/3P
Rated Cooling (95°F/35°C)	Rated Cooling Capacity	Btu/h	9000	12000	9000	12000	18000	23000
	EER2	Btu/W.h	12	12	12	12	12	12
	SEER2	Btu/W.h	23	23	23	23	22	22
Rated Heating (47°F/8.3°C)	Rated Heating Capactiy	Btu/h	9000	12000	9000	12000	18000	24000
	HSPF2 Rating (Region IV)	Btu/W.h	9.8	9.8	9.8	9.8	9.5	9.5
Min. Circuit Ampacity		A	16	17	10	11	17	19
Max. Fuse Size		A	25	15	15	15	25	30
Indoor Noise Level	Turbo/High/Med./ Low/Mute	dB(A)	43/40/33 /31/30	46/44/36/ 32/30	43/40/33/ 31/30	46/44/36/ 32/30	46/44/36/ 32/30	50/47/43/ 38/34
Outdoor Noise Level		dB(A)	54	56	54	56	57	59
Connecting Pipe	Gas	inches	3/8"	3/8"	3/8"	3/8"	3/8"	5/8"
	Liquid	inches	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Refrigerant		Type	R32	R32	R32	R32	R32	R32
		g	550	770	600	770	870	1270
	1oz = 28.35g	oz	19.40	27.16	21.16	27.16	30.69	44.80
Net dimensions (W x D x H)	Indoor	inch	32.28×7.68×12.05	36.22×7.68×12.05	32.28×7.68×12.05	36.22×7.68×12.05	36.22×7.68×12.05	43.19×8.74×13.07
	Outdoor	inch	31.3×12×21.61	31.89×12×21.61	30.75×11.42×19.61	31.89×12×21.61	36.5×27.5×14.96	38.5×16.57×31.61
Net weight	Indoor	kg/lbs	9.3/20.5	10/22.0	9.3/20.5	10/22	11/24.3	14/30.9
	Outdoor	kg/lbs	23.5/51.8	26.3/57.98	23/50.71	26/57.32	38.5/84.88	45/99.21
Packing dimensions (W x D x H) (without pipe)	Indoor	inch	35.04×10.43×14.96	38.98×10.43×14.96	38.98×10.43×14.96	38.98×10.43×14.96	45.87×11.61×15.94	45.87×11.61×15.94
	Outdoor	inch	33.54×14.49×25.20	33.54×14.49×25.20	32.2×12.8×20.28	33.98×14.49×25.20	37.60×16.73×30.24	41.14×19.88×34.25
Outdoor Packing dimensions (W x D x H) (with pipe)		inch	32.99×13.31×21.26	33.54×14.49×25.20	32.99×13.31×21.26	33.54×14.49×25.20	37.60×16.73×30.24	41.14×19.88×34.25
Gross weight (without pipe)	Indoor	lbs	25.1	28.6	25.1	28.6	29.7	37.4
	Outdoor	lbs	59.01	62.6	58	61.7	84.9	108
Factory Precharge Line		m/ft	7.5/25	7.5/25	7.5/25	7.5/25	7.5/25	7.5/25
Maximum Line Length		m/ft	15 / 50	15 / 50	15 / 50	15 / 50	20 / 67	20 / 67
Maximum Height Difference Between Indoor and Outdoor		m/ft	10 / 33	10 / 33	10/33	10/33	10/33	10/33

The manufacturer is not liable for malfunction, damage, or injury caused by abnormal environmental conditions, including but not limited to flooding, lightning, power surges, earthquakes, corrosive atmospheres, or unstable power supply.

1. For minimum installation height and minimum room area (operating or storage), refer to installation manual.
2. Risk of fire-auxiliary devices which may be ignition sources must not be installed in the ductwork, other than the auxiliary devices listed for use with the specific appliance. See instruction.
3. Mount with the lowest moving parts at least 8.25 ft (2.5 m) above floor or grade level.
4. **Risk of electric shock.** Can cause injury or death. Disconnect all remote electric power supplies before servicing.
5. **Risk of fire due to flammable refrigerant used.** Follow handling instructions carefully in compliance with all applicable federal, state, and local regulations.
6. **Risk of fire due to flammable refrigerant used.** Consult repair manual/owner's guide before attempting to service this product. All safety precautions must be followed.
7. **Risk of fire due to flammable refrigerant used.** To be repaired only by trained service personnel. Do not puncture refrigerant tubing.
8. **Risk of fire.** This appliance contains flammable refrigerant and electronic components that must be disposed of in accordance with all applicable federal, state, and local regulations. Improper disposal may result in environmental harm, fire risk, and legal penalties.



TRUINVERTER
MINI SPLIT HEAT PUMP

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