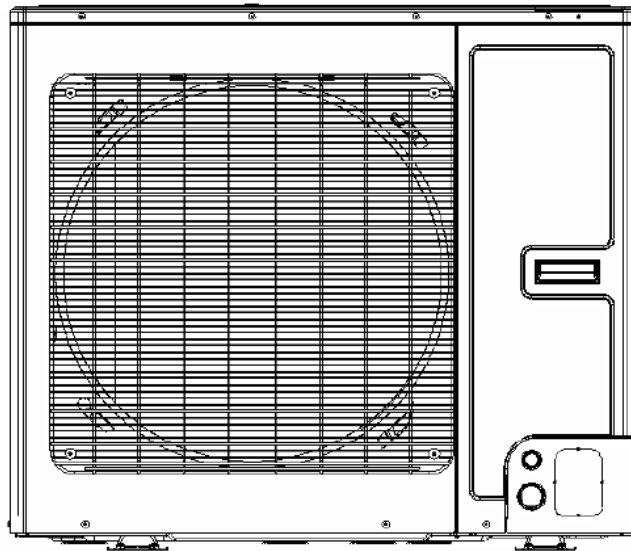


# Installer's Manual

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## DC Inverter U-match Series for R410A Unitary Split Air Conditioner



### Models:

#### HP Outdoor Units:

4TXD2036A10NUA

4TXD2060A10NUA

#### HP Indoor Units:

4MXA2024A10NUA

4MXA2036A10NUA



4MXA2048A10NUA

4MXA2060A10NUA

# Warnings and Cautions

Warnings are provided to alert others of the potential hazards that could result in severe personal injury or death, while cautions are designed to alert others of the conditions that could result in minor or moderate injury.

Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

<b>Attention</b>	Warnings and Cautions appear at appropriate sections throughout this literature. Read these carefully.
 <b>WARNING</b>	This mark indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 <b>CAUTION</b>	This mark indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also be used to alert against unsafe practices.
<b>NOTICE</b>	This mark indicates a situation which could result in equipment and/or property damage.

## **WARNING**

**This equipment is to be serviced by professionally trained personnel ONLY. Under NO circumstances should an unqualified person service it. This equipment contains refrigerant under PRESSURE and operates at HIGH VOLTAGE. Improperly installed, adjusted or altered equipment by an unqualified person poses safety hazards including FIRE, ELECTROCUTION, or EXPLOSION, which could result in death or serious injury.**

## **WARNING**

### **Electrocution and Fire Hazards with Improperly Installed and Grounded Field Wiring!**

Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in the National Electrical Codes (NEC) and your State and/or local electrical codes. All field wiring MUST be performed by qualified personnel. Failure to follow these requirements could result in death or serious injury.

## **WARNING**

This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## **WARNING**

### **R410-A Refrigerant under Higher Pressure than R-22!**

The units described in this manual use R410-A refrigerant which operates at 50 to 70% higher pressures than R-22. Use only R-410A approved service equipment. Refrigerant cylinders are painted with "pink" color to indicate the type of refrigerant and may contain a "dip" tube to allow for charging of liquid refrigerant into the system. For specific handling concerns with R-410A, please contact your local sales office.

Failure to use R-410A approved service equipment could result in standard equipment exploding under R-410A higher pressure which could result in death or serious injury.

## ***NOTICE***

Use appropriate oil with R410A systems. Oil type is found at the bottom of Connection Pipe Requirements table (included in the outdoor unit installation manual). R-410A systems utilize POE (Polyolester) or PVE(Polyvinyl Ether) oil. Both oil types absorb moisture readily, yet, lubrication properties vary. Do not leave the sealed system open to atmosphere except during service for a short period of time. If the sealed system is left open longer than four hours, the compressor oil must be changed. These systems utilize strainers placed before and after the expansion device in the outdoor unit, if debris or moisture is suspected, these strainers must be changed. Do not break a vacuum with air. Do not leak check the sealed system with compressed air. Unless instructed by factory service representative, external refrigeration driers are prohibited.

## **USE ONLY THE FACTORY RECOMMENDED OIL TYPE!**

Warnings are provided to alert others of the potential hazards that could result in severe personal injury or death, while cautions are designed to alert others of the conditions that could result in minor or moderate injury.

Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

### **Important!**

#### **Environmental Concerns**

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain chlorofluorocarbons (CFC's) and those containing hydro-chlorofluorocarbons (HCFC's). Not all refrigerants containing these compounds have the same potential impact to the environment. The Company advocates the responsible handling of all refrigerants, including industry replacements for CFC's such as HCFC's and HFC's.



#### **Responsible Refrigerant Practices**


The manufacturer believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified. The Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

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## Safety Precautions

 <b>WARNING</b>	This mark indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
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<b>NOTICE</b>	This mark indicates a situation which could result in equipment and/or property damage.

 <b>WARNING</b>	
1.	Installation should be performed by a qualified HVAC professional. Industry Standard Personal Protective Equipment (PPE) and gear for height related safety should be worn during installation. Improper personal safety precautions and installation may cause death or serious injury.
2.	Install the air conditioner according to the instructions given in this manual. Incomplete installation work may cause water leakage, electrical shock or fire.
3.	Use the supplied or specified installation parts. Use of other parts may cause the unit to come loose, resulting in water leakage, electrical shock or fire.
4.	Install the unit in a location that can support the weight of the unit. An inadequate support structure or incomplete installation may cause injury or property damage in the event the unit falls off of the installation location. Refer to the installation specifications for additional requirements.
5.	Electrical work should be carried out in accordance with the installation manual and local, state and National Electric Code (NEC). Insufficient capacity or incomplete electrical work may cause electrical shock or fire.
6.	Use a dedicated power circuit. Never use a power supply shared by another appliance.
7.	For wiring, use a cable that is long enough to cover the entire distance without splicing. Do not use an extension cord. Do not put other loads on the power supply; use a dedicated power circuit. Failure to do so may cause abnormal heat, electric shock or fire.
8.	Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the interconnecting wires so their terminals receive no external stresses. Incomplete connections or clamping may cause terminal overheating or fire.
9.	After joining the interconnecting and supply wiring, shape the cables so that they do not put undue force on the electrical covers or panels. Install covers over the wires. Incomplete cover installation may cause terminal overheating, electrical shock, or fire.
10.	If any refrigerant leaks out during the installation, ventilate the room. The refrigerant produces a toxic gas if exposed to flames.
11.	When installing or relocating the system, keep the refrigerant circuit free from substances other than the specified refrigerant (R410-A), such as air. The presence of air or other foreign substances in the refrigerant circuit can cause an abnormal pressure rise or rupture, which could result in injury and damage.
12.	If a system pump-down is performed, turn off the associated equipment and close service valves prior to removing the refrigerant piping. Failure to do so will introduce non-condensables in the system, causing abnormal pressure in the refrigeration cycle which could lead to injury and damage.

## Safety Precautions

13.	Before system start-up, attach the refrigerant piping securely. Failure to do so will introduce noncondensables into the system when the compressor is running, causing abnormal pressure in the refrigeration cycle which could lead to injury and damage.
14.	Establish a complete ground. Do not ground the unit to a utility pipe, arrester, or telephone ground. An incomplete ground may cause electrical shock, or fire. A high surge current from lightning or other sources may cause damage to the air conditioner.
15.	If the power supply cable is damaged, it must be replaced by the manufacturer, its service agent or another qualified professional in order to avoid electrical risk during and after replacement.

### CAUTION

1.	Do not install the unit in a place where there is danger of exposure to flammable gas leakage. If gas leaks and builds up around the unit, it may result in fire.
2.	After system installation is completed, make sure no refrigerant leakage is present.
3.	This appliance is not intended for use by persons with a lack of experience and knowledge, unless they have been given adequate supervision or instruction concerning use of the appliance by a person responsible for their safety.
4.	Children should be supervised to ensure that they do not play with the appliance.

### NOTICE

1.	Establish drain piping according to the instructions in this manual. Inadequate piping may cause flooding.
2.	Tighten the flare nut according to the specified method. If the flare nut is tightened too hard, the flare nut may crack and cause refrigerant leakage.

## Pre-Installation Checklist



1. Unpack and inspect the unit.
2. Check for any damage to the unit.
3. Check the model numbers to ensure a proper match.
4. Check the unit nameplate to ensure the proper electrical requirements will be met.
5. Check the installation locations to ensure the weight of the units can be supported.
6. Check the refrigerant pipe sizes and ensure they have been or will be installed according to the requirements in this manual.
7. Check the outdoor unit nameplate for electrical power supply and wiring requirements to ensure the proper wiring has been installed prior to connection.

## Product Introduction

### Operating Range

	Cooling	Heating
Outdoor Temperature	5°F(-15°C)~129.2°F (54°C)	-22°F (-30°C)~75.2°F (24°C)

### Standard Accessories

Outdoor Unit Accessories				
No.	Name	Appearance	Qty	Usage
1	Drain Plug		3	To plug the unused drain hole
2	Drainage Connector	 or	1	To connect with the hard PVC drain pipe

# Installation

## Installation Preparation

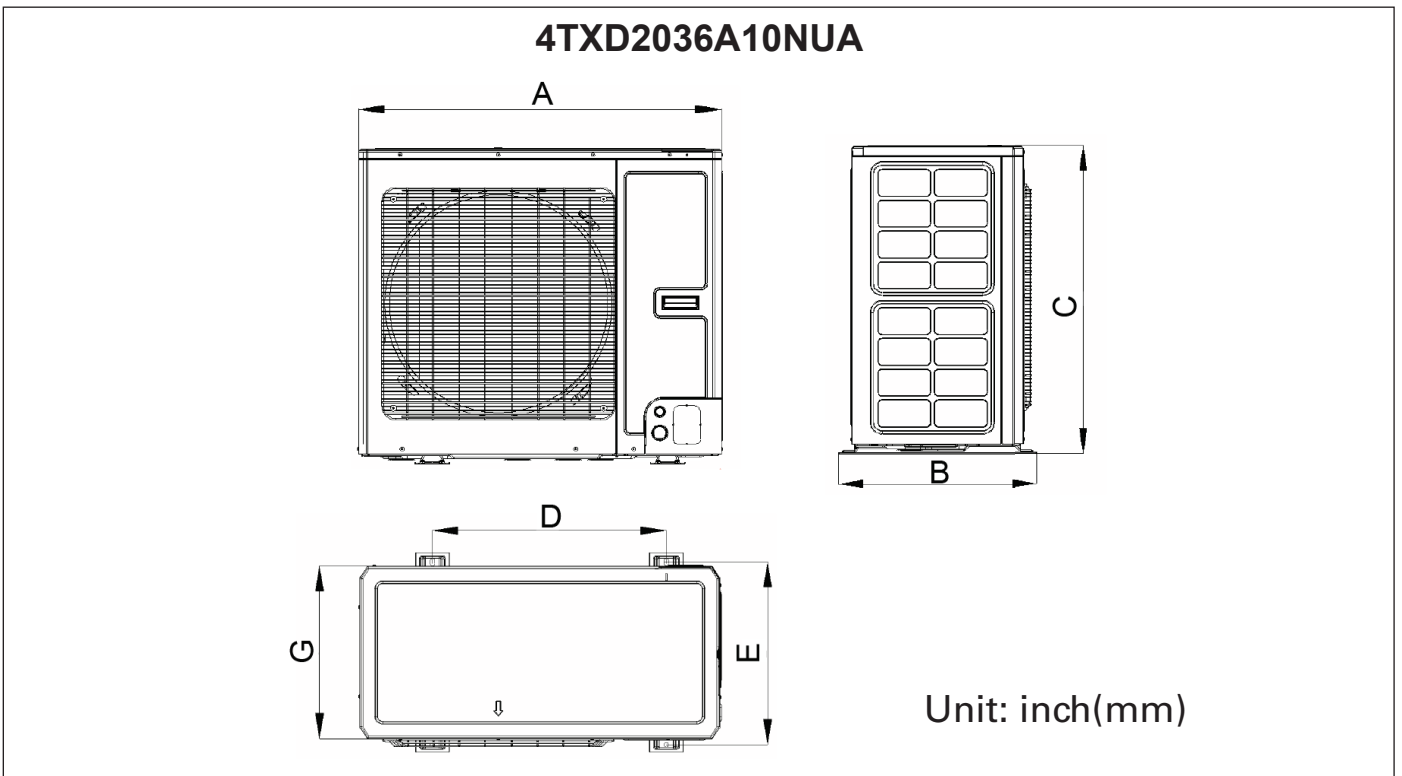
### Selection of Installation Location

<b>⚠ WARNING</b>	
1.	The unit must be installed level with enough structural support for the weight of the unit and be securely fastened.
2.	Do not install where there is the danger of combustible gas leakage.

Selection of installation location for outdoor unit (Select a location pursuant to the following condition).

- Noise and air flow produced by the outdoor unit will not disturb others.
- Install at a place with good ventilation. Make sure the outdoor unit stays at a well-ventilated place with no obstacles nearby that may obstruct the air inlet and outlet.
- Avoid installing at a place with leakage of inflammable gas, oil smoke or corrosive gas.
- Keep it away from strong wind because strong wind will affect the outdoor fan and lead to insufficient air flow volume and thus affecting the unit's performance.
- Install the outdoor unit at a place where condensate can be easily drained.

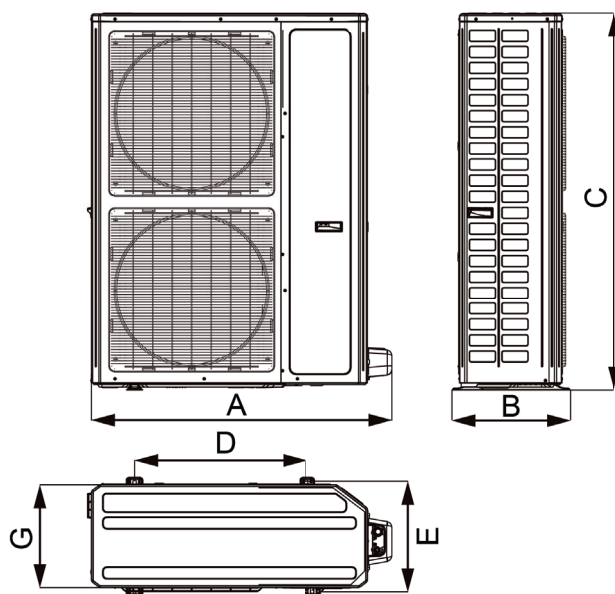
### Unit Dimension



Model \ Dimensions	A	B	C	D	E	G
4TXD2036A10NUA	37 (940)	20-7/8 (530)	32-1/4 (820)	24 (610)	19-1/8 (486)	18-1/8 (460)



### 4TXD2060A10NUA



Unit: inch(mm)

Model \ Dimensions	A	B	C	D	E	G
4TXD2060A10NUA	42-3/4 (1085)	16-7/8 (427)	53-3/4 (1365)	24-1/2 (620)	15-1/2 (395)	14-1/2 (370)

## Unit Installation

### NOTICE

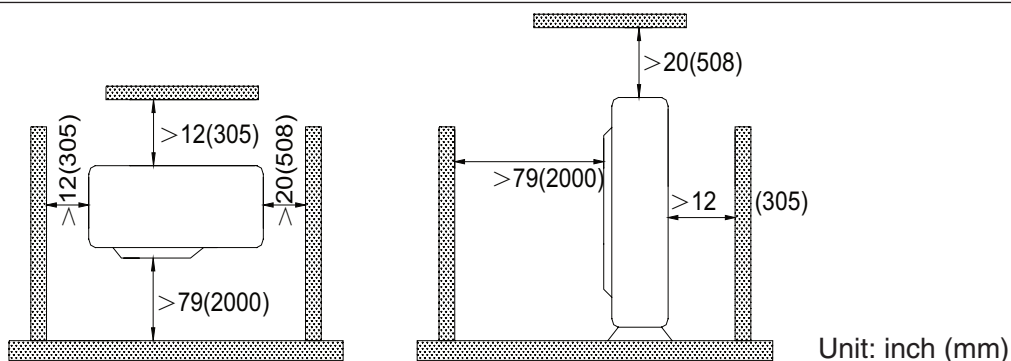
The outdoor unit does not have a TXV (thermal expansion valve), please make sure there is a throttling valve (which throttles the unit when it operates in cooling mode and opens fully when it operates in heating mode) in the indoor unit (air handler or A coil).

## Outdoor Unit Installation

### ⚠ WARNING

1. Install the unit on a level surface or on supports that are level.
2. If the location is subject to strong winds, the additional force must be accounted for and the unit must be fixed securely to the base. Refer to local codes for additional requirements.

When the outdoor unit is surrounded by walls or other obstructions, the installation space of the unit should be no less than the clearances indicated below. For efficient operation, leave three of four directions of peripheral constructions open when possible.

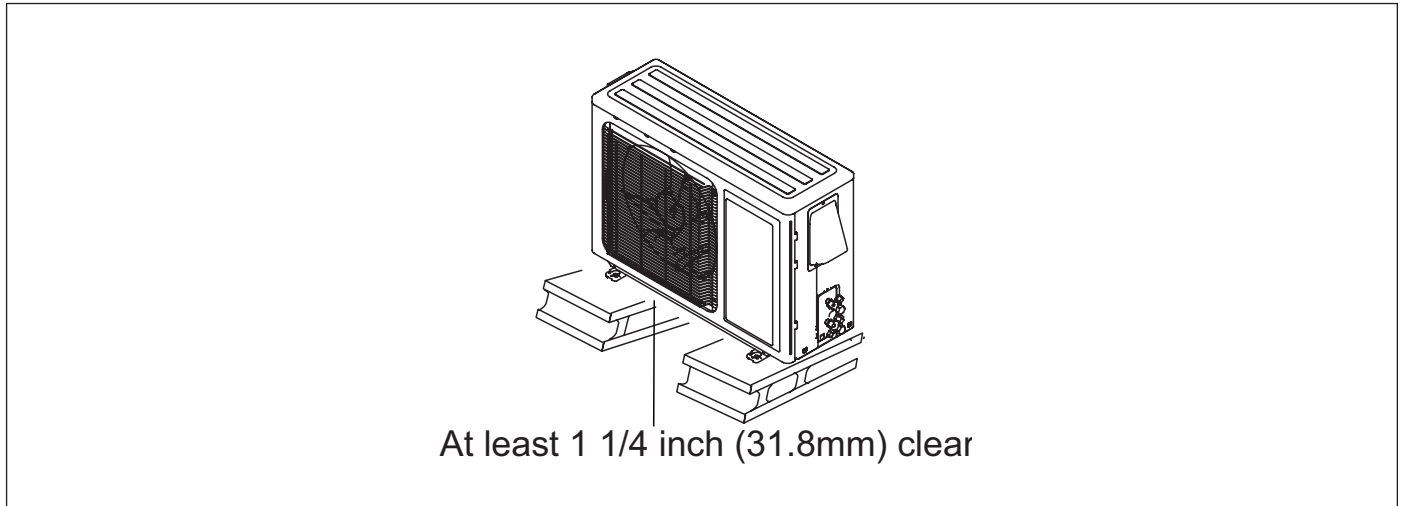


Unit: inch (mm)

## Installation

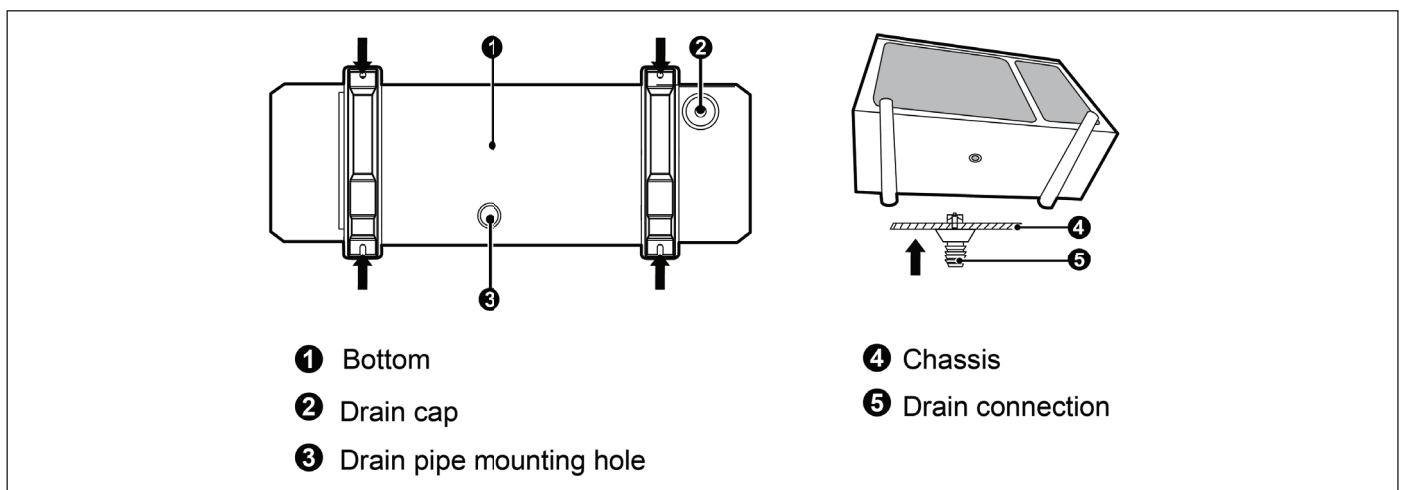
Select the installation location that provides easy access to the indoor unit.

1. Make sure the location can support at least four times the weight of the unit.
2. Secure the outdoor unit on the selected base location with expansion screws.
3. The outdoor unit should be installed at least 1 1/4 inch above the ground or base in order to install a drain pipe and connector (shown below).

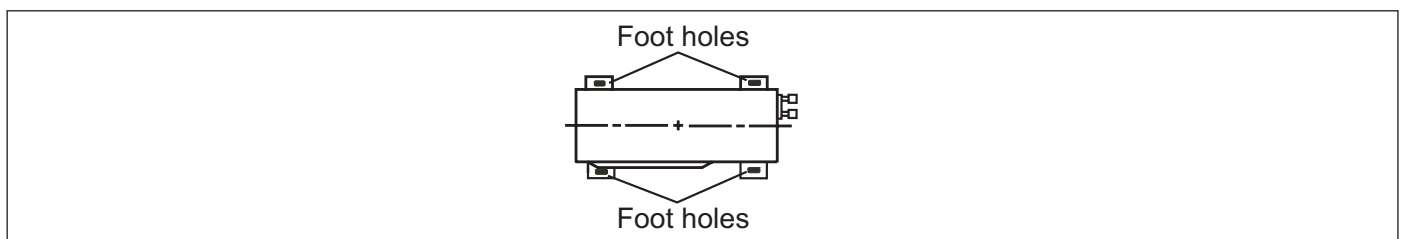


### Condensate Management of the Outdoor Unit

1. The outdoor unit(s) should be located where condensate poses no hazard or safety risk. Each unit is supplied with a drain pipe connector.
2. Before installing the drain pipe fitting, appropriately plug all other base pan holes not used.
3. Install the drain pipe fitting into the appropriate hole located at the base of the unit and then connect the drain pipe to it.

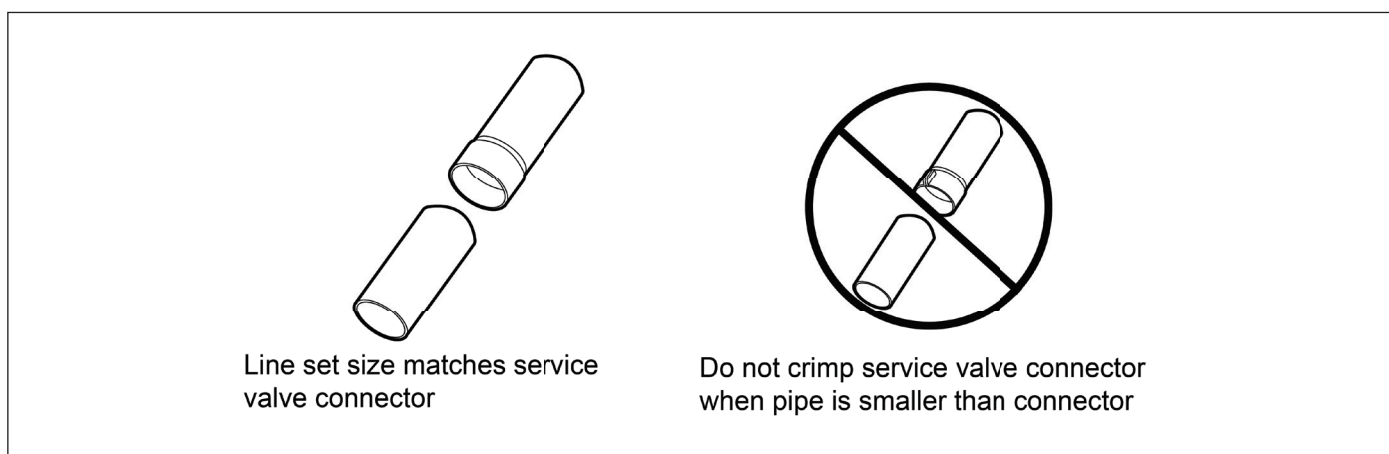


4. Place the outdoor unit on the support base.
5. Secure the foot holes of the outdoor unit with bolts (shown below).



## Connection Pipe Installation

### Installation Notice and Requirement on Connection Pipe



**Installation method:** Connect the connection pipes first to the unit. When bending a connection pipe, be careful not to damage the pipe. Do not over-tighten the screw nut, otherwise leakage will occur.

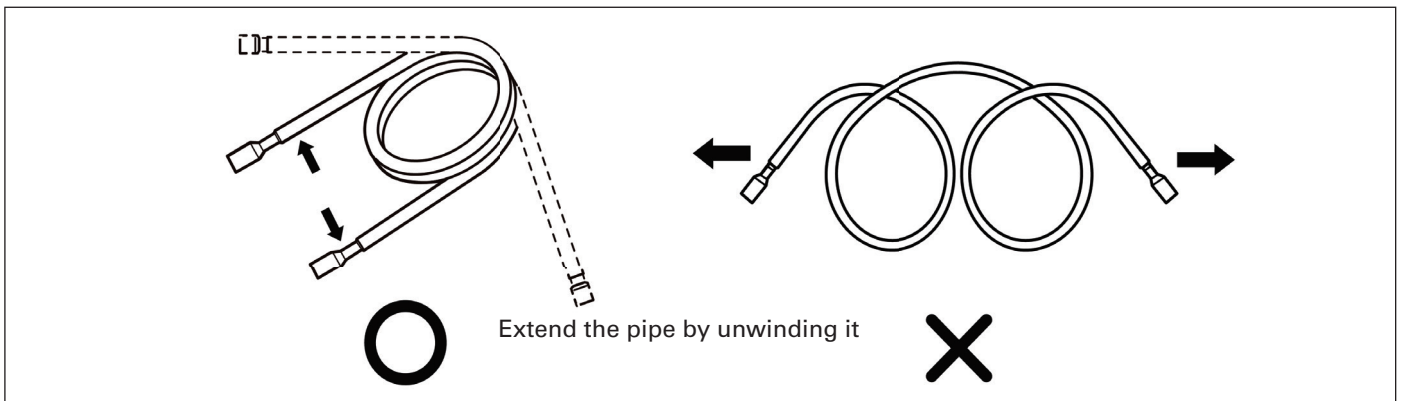
Model	Item	Size of fitting pipe(inch)		Maximum pipe length feet(m)	Biggest drop between indoor and outdoor units feet(m)
		Liquid pipe	Gas pipe		
4TXD2036A10NUA 4TXD2060A10NUA		Ø3/8	Ø3/4	98.4(30)	49.2(15)

Connection pipe should have water-proof insulation.

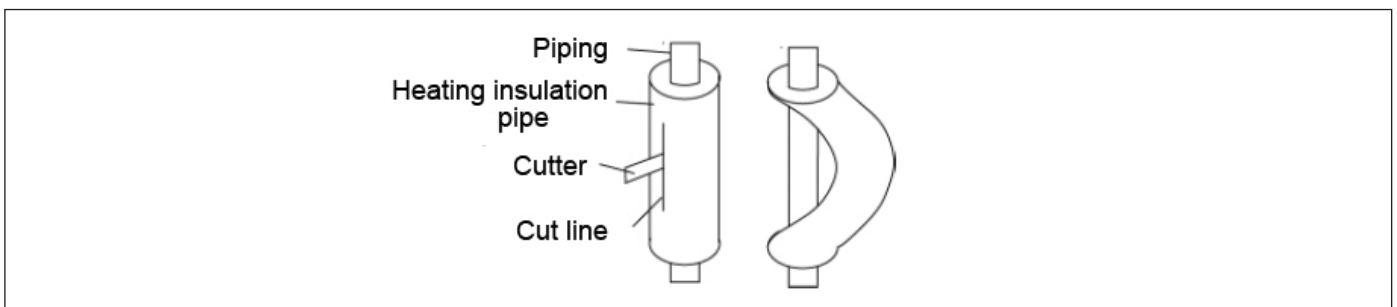
### Flaring Process

1. Hold the pipe downward to prevent cuttings from entering the pipe.
2. Using an appropriate tube cutter and deburring tool, cut and deburr the refrigerant pipe.
3. Remove the flare nuts at the stop valve of the outdoor unit and inside the accessory bag of the indoor unit, put them onto the refrigerant pipe as shown below then flare the refrigerant pipe with a flaring tool.
4. When flaring copper tubing, only use flaring tools that utilize an orbiting mandrel and clutched handle. These are typically referenced as R410A flaring tools which will create a 45° flare. By using this type of flaring tool, the copper tubing is rolled while being pressed, thereby reducing the probability of copper flare cracking.
5. Check if the flare part is spread evenly and there are no cracks.

### Bending Pipes



1. Use a refrigerant pipe bending tool to shape refrigerant piping; smaller diameter piping may allow for light hand bending, providing minimum diameter of 6 inches.
2. Do not bend the pipes in an angle more than 90°.
3. When pipes are repeatedly bent or stretched, the material will be prone to damage, which may lead to refrigerant leaks. Do not bend or stretch the pipes more than three times.
4. Do not bend the pipe while insulated. First, cut the insulation with a sharp cutting tool and expose it to the appropriate bend radius, as shown below. After bending the pipe, replace the insulation and seal it with pipe wrap tape.



**NOTICE**

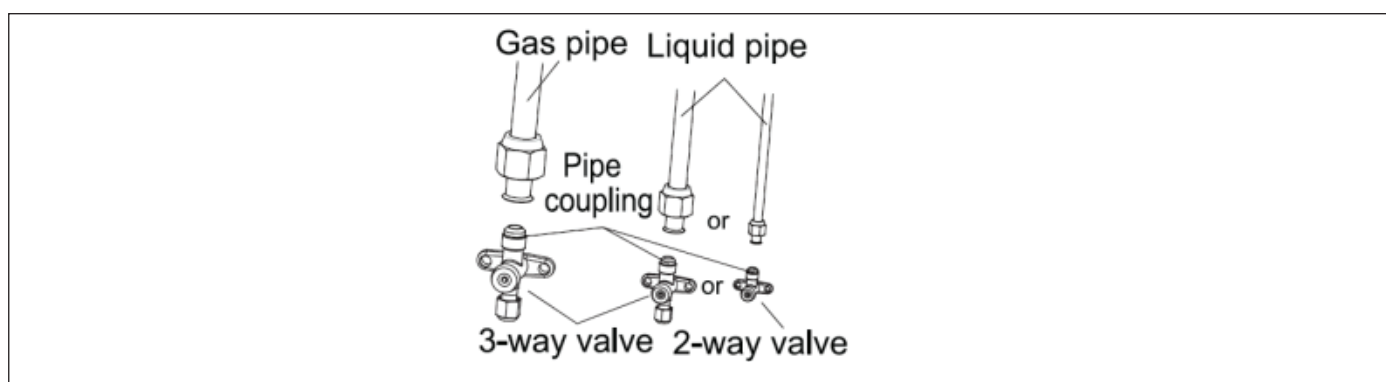
1. To prevent distortion and breaking of the pipe, bend the pipe with a radius of curvature of 6 in. (150 mm) or more. Use a tubing bender when forming the copper tubing into a bend.
2. If the pipe is bent repeatedly at the same place, it will break.

**CAUTION**

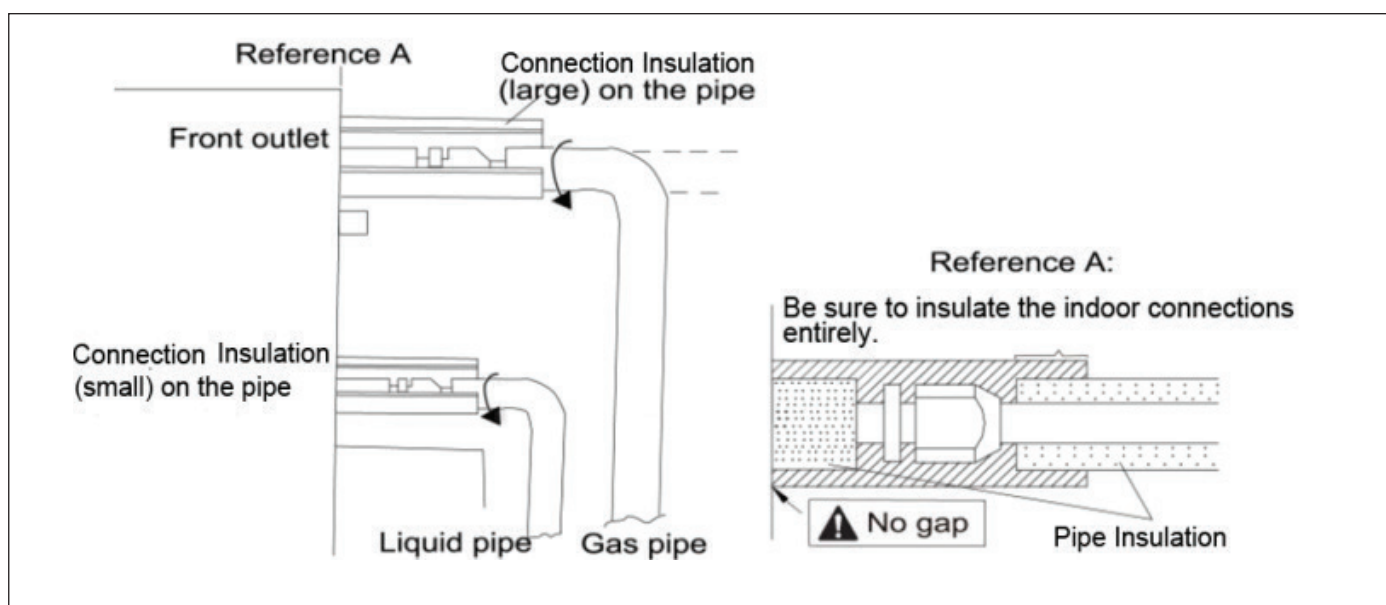
Connect the gas pipe after connecting the liquid pipe completely.

**Refrigerant Piping at the Outdoor Unit**

Tighten the flare nut of the connection pipe at the outdoor unit valve connector. Follow the flare nut guidelines in this manual.

**Insulating the Refrigerant Piping and Connections**

1. The refrigerant pipes should be insulated and wrapped with appropriate insulating material and wrapping tape. This will prevent condensation, water leakage and damage to the insulating material.
2. The connections at the indoor unit should be wrapped with insulating material. No gap is allowed on the joint of the indoor unit, as shown below.

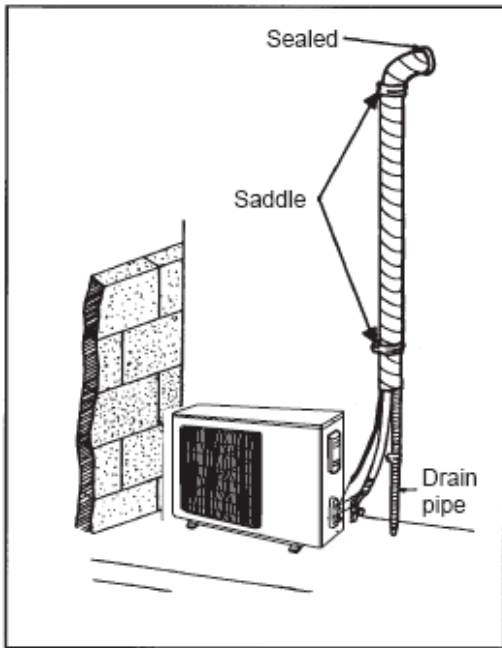


### Piping Requirements

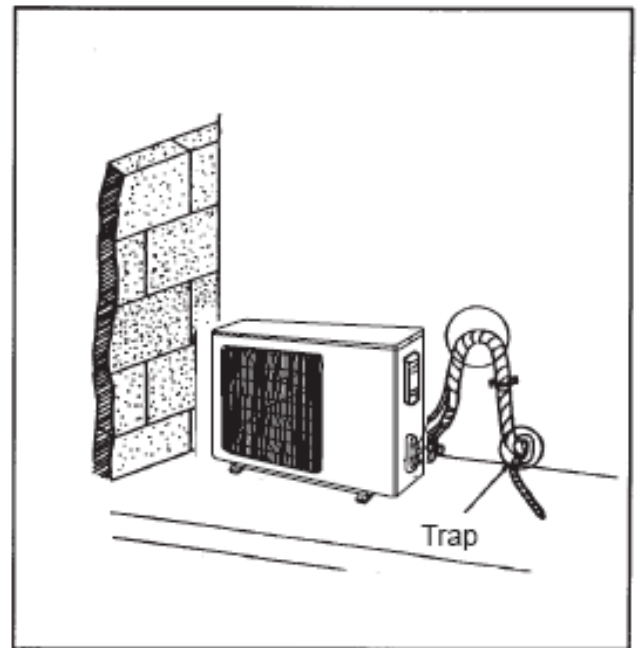
If the outdoor unit is installed lower than the indoor unit:

1. A drain pipe should be above ground and the end of the pipe should not dip into water.
2. Taping pipes must be done from bottom to top. Do not wrap too tightly to avoid compression of the insulation, otherwise its effectiveness is reduced.
3. All pipes are bound together by pipe tape and secured to the wall with saddles.

**NOTE:** Oil traps are sometimes needed when the outdoor unit is installed lower than the indoor unit. One oil trap is required for each 33 ft. (10m) of vertical gas pipe length.



Outdoor Unit Installed Lower than Indoor Unit

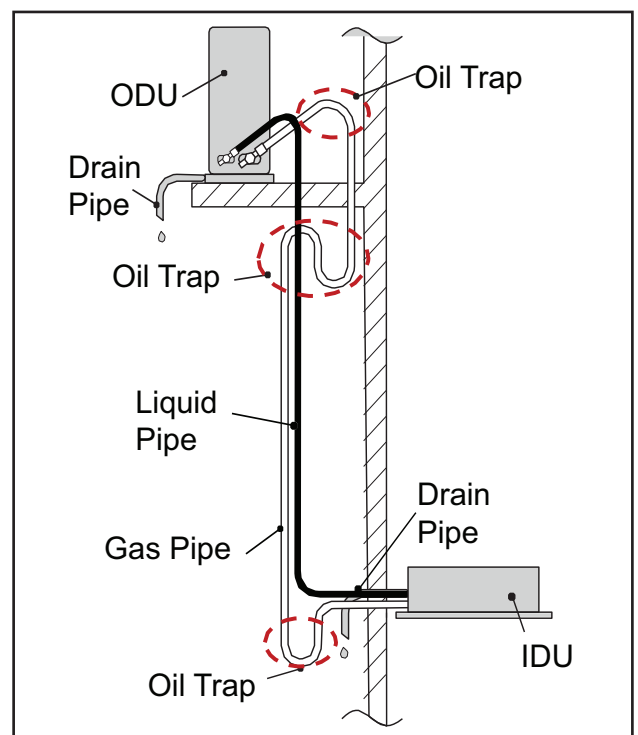


Outdoor Unit Installed Higher than Indoor Unit

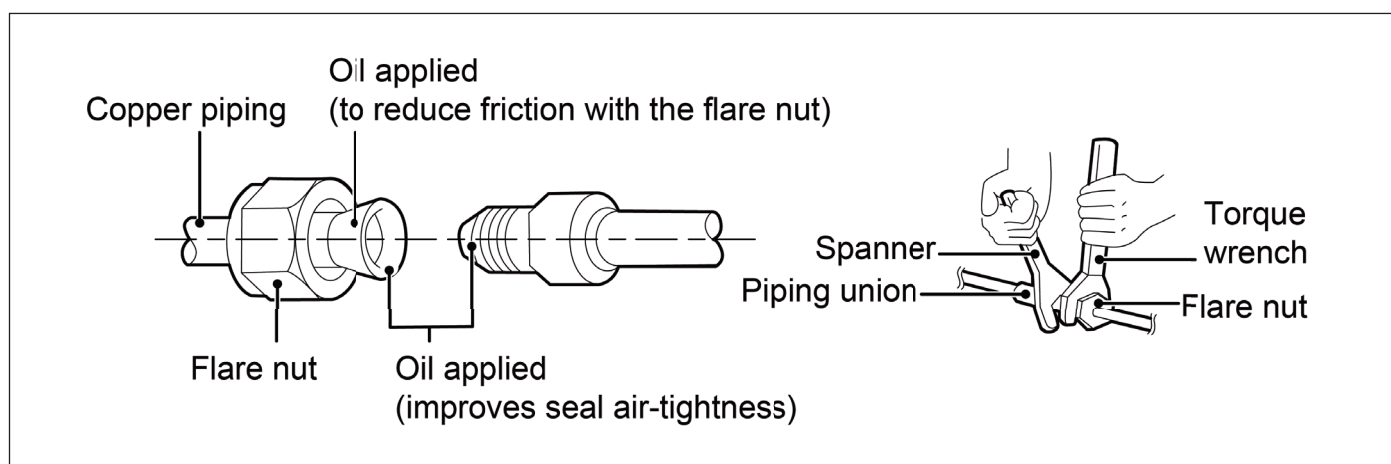
**If the outdoor unit is installed higher than the indoor unit:**

1. Taping should be done from the lower to the upper part. Do not wrap too tightly to avoid compression of the insulation, otherwise its effectiveness is reduced.
2. All pipes are bound and taped together and also should be trapped to prevent water from returning to the room.
3. Secure all pipes to the wall with saddles.

**NOTE:** Oil traps are sometimes needed when the outdoor unit is installed higher than the indoor unit. An oil trap is needed for each 20 ft. (6m) of vertical rise on the gas pipe.



## Screw Connection



Pipe Diameter inch (mm)	Tightening Torque ft-lb (N-m)
Ø 1/4 (6.35)	11.06 - 22.13 (15 - 30)
Ø 3/8 (9.53)	25.82 - 29.5 (35 - 40)
Ø 1/2 (12.7)	33.19 - 36.88 (45 - 50)
Ø 5/8 (15.88)	44.25 - 47.94 (60 - 65)
Ø 3/4 (19.05)	51.63 - 55.32 (70 - 75)
Ø 7/8 (22.23)	59 - 62.69 (80 - 85)

## Vacuum and Refrigerant Leakage Detection

### NOTICE

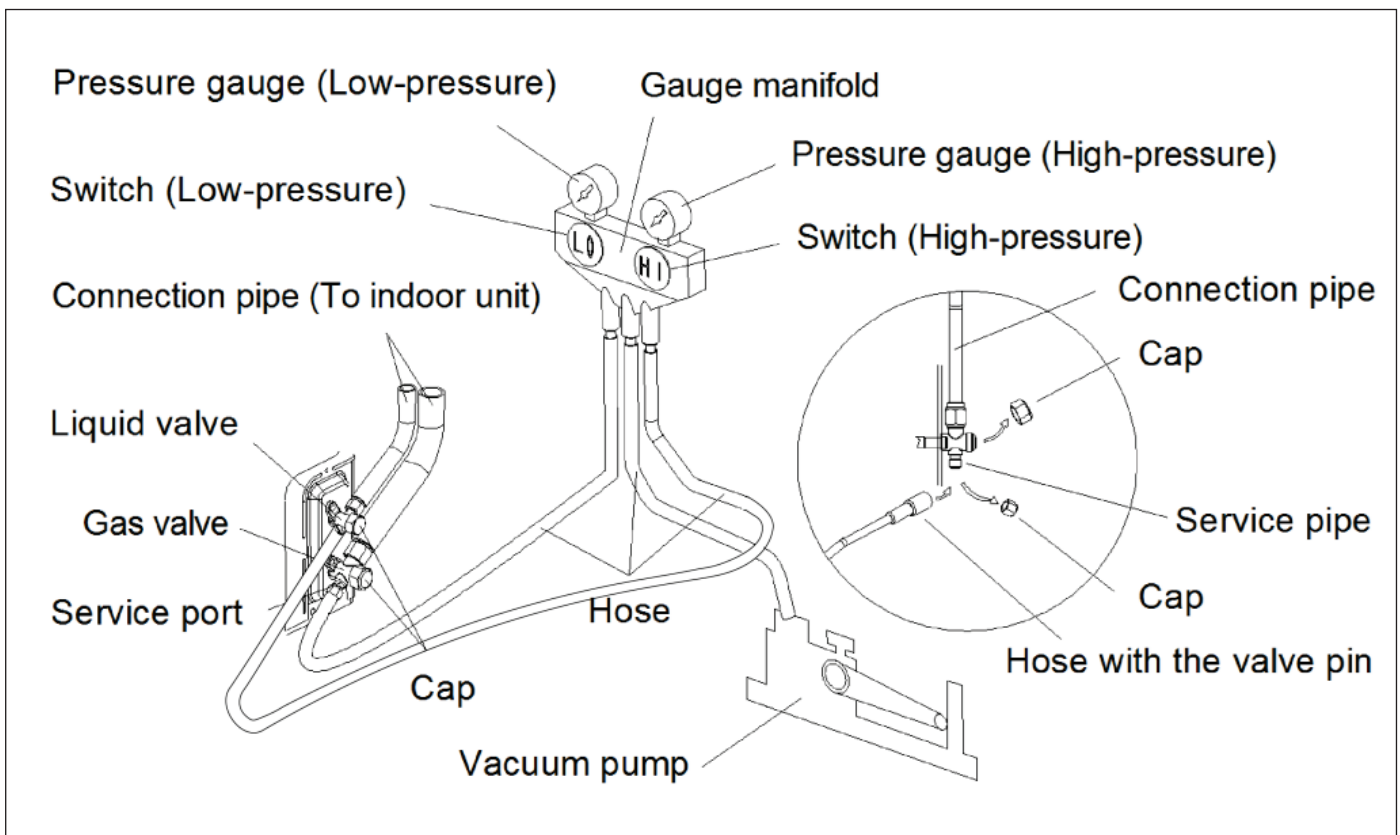
Do not purge the air with refrigerant. Use a vacuum pump to vacuum the installation!

1. When connecting refrigerant pipe to the unit or removing it from the unit, please use both a back-up wrench and the torque wrench.
2. When connecting, place the equipment specified oil type on the backside of the copper tube flare prior to tightening. Do not place oil on the flare face, as this will promote system contamination, tighten it by hand and then tighten it with the spanner or adjustable wrench.
3. Refer to the torque reference table within this document before tightening to determine the appropriate torque (over-tightening will damage the nut and lead to leakage).
4. Use dry Nitrogen to pressurize the piping circuit with 150 PSIG and allow it to hold while performing other installation processes. It is recommended to apply a soap bubble solution and observe the connection.
5. Evacuate each individual refrigeration circuit to 350 microns or below, and close off the valve to the vacuum pump. If the pressure rises above 500 microns within one minute, but not above 1500 microns within 5 minutes, moisture is present. If the pressure continues to rise above 1500 microns, a leak exists in the circuit being tested.
  - a) If moisture is present, use triple evacuation process to eliminate the moisture.
  - b) If a leak is present, leak check all joints and piping.



Evacuation is not completed until the micron gauge does not rise above 500 microns within one minute after achieving 350 micron pressure vacuum.

6. After evacuation is complete, additional charge is to be added.
  - a) If no additional charge is required, break the vacuum with refrigerant, then remove the gauge connectors.
  - b) slightly open the liquid valve at the outdoor unit, allow system to equalize, then fully open the liquid valve and then open the vapor service valve.
7. After leak checking is complete, apply thermal insulation around the flare connections and all exposed refrigeration pipes.
  - a) Seal the insulation
  - b) Inspect the insulation to ensure no breakages are present.




### Adding Refrigerant

Model	Item	Standard pipe length	Additional refrigerant amount for extra pipe
	4TXD2036A10NUA 4TXD2060A10NUA	25 ft (7.5 m)	0.33 oz/ft (30 g/m)



## Electrical Installation

### Requirement and Notice on Electrical Installation

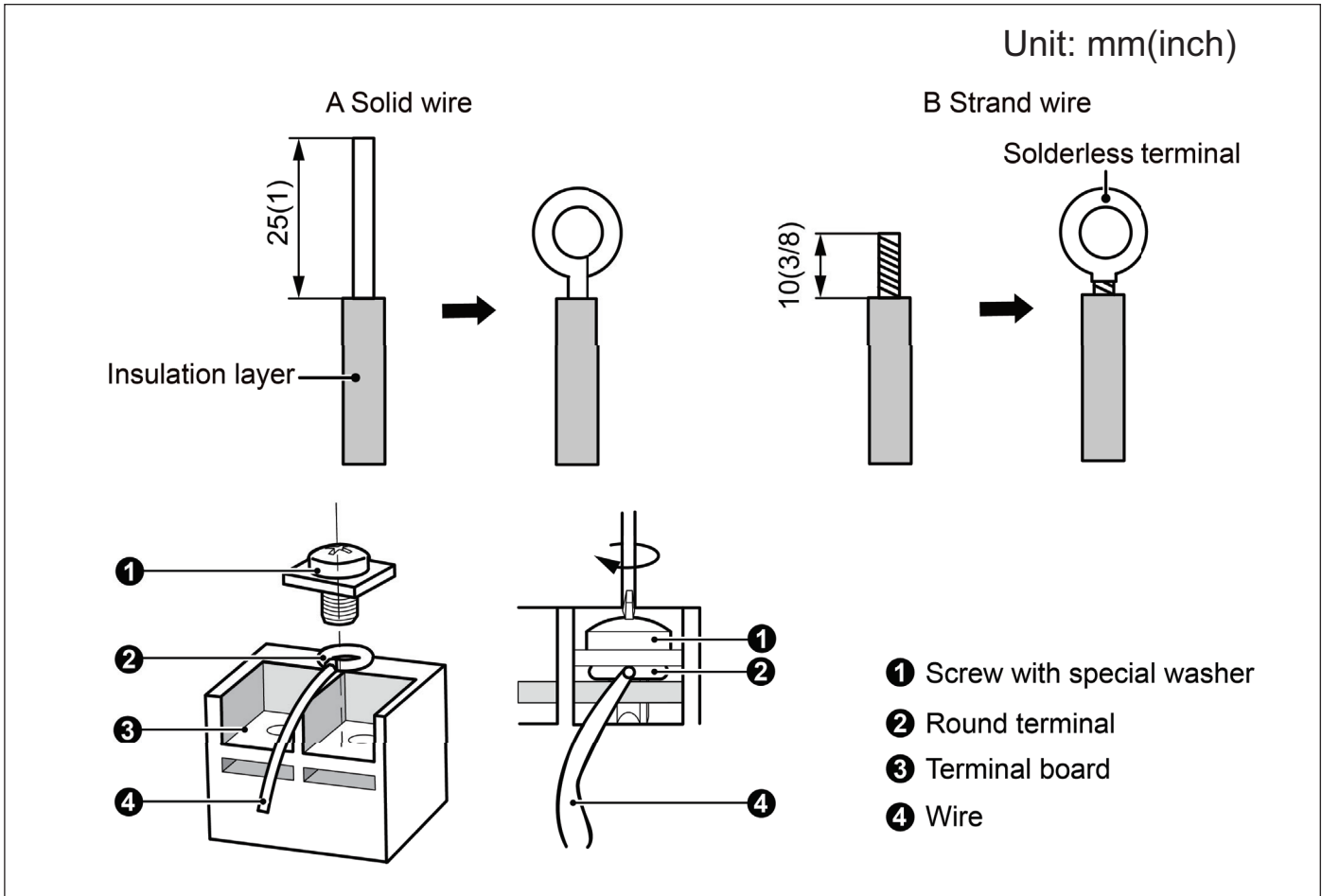
 <b>WARNING</b>	
The electrical installation for the air conditioner should observe the following requirements:	
1.	The electrical installation must be conducted by trained personnel and done according to the National Electric Code in addition to local rules and regulations. The electric circuit must be equipped with a circuit breaker with sufficient capacity.
2.	The unit's operating power must be within the nominal range stated in the installation manual. Use a dedicated power circuit for the air conditioner. Do not draw power from another power circuit.
3.	The air conditioner circuit should be at least 5 feet (1.5 m) away from any flammable surface.
4.	Connect wiring by referring to the circuit diagram labeled on the unit and securely tighten.
5.	This outdoor unit has a heating four-way valve.

### Electrical Parameters

Model	Power supply	Fuse capacity (A)	Maximum over-current protection (A)	Minimum circuit ampacity (A)
4TXD2036A10NUA	208/230V-1Ph-60Hz	35	35	24
4TXD2060A10NUA	208/230V-1Ph-60Hz	45	45	35

### Connection of Power Wiring and Thermostat Wires

1. For solid wires (as shown below):
  - a. Use wire cutters to cut off the wire end and then peel away about 1 in (25 mm) of the insulation layer.
  - b. Use a screwdriver to unscrew the terminal screw on the terminal board.
  - c. Use nippers to bend the solid wire into a ring that fits the terminal screw.
  - d. Form a proper ring and then put it on the terminal board. Use a screwdriver to tighten up the terminal screw.
2. For strand wires (as shown below):
  - a. Use wire cutters to cut off the wire end and then peel away about 3/8 in (10 mm) of the insulation layer.
  - b. Use a screwdriver to unscrew the terminal screw on the terminal board.
  - c. Use a round terminal fastener or clamp to fix the round terminal firmly on the peeled wire end.
  - d. Locate the round terminal conduit. Use a screwdriver to replace it and tighten up the terminal screw (as shown below).

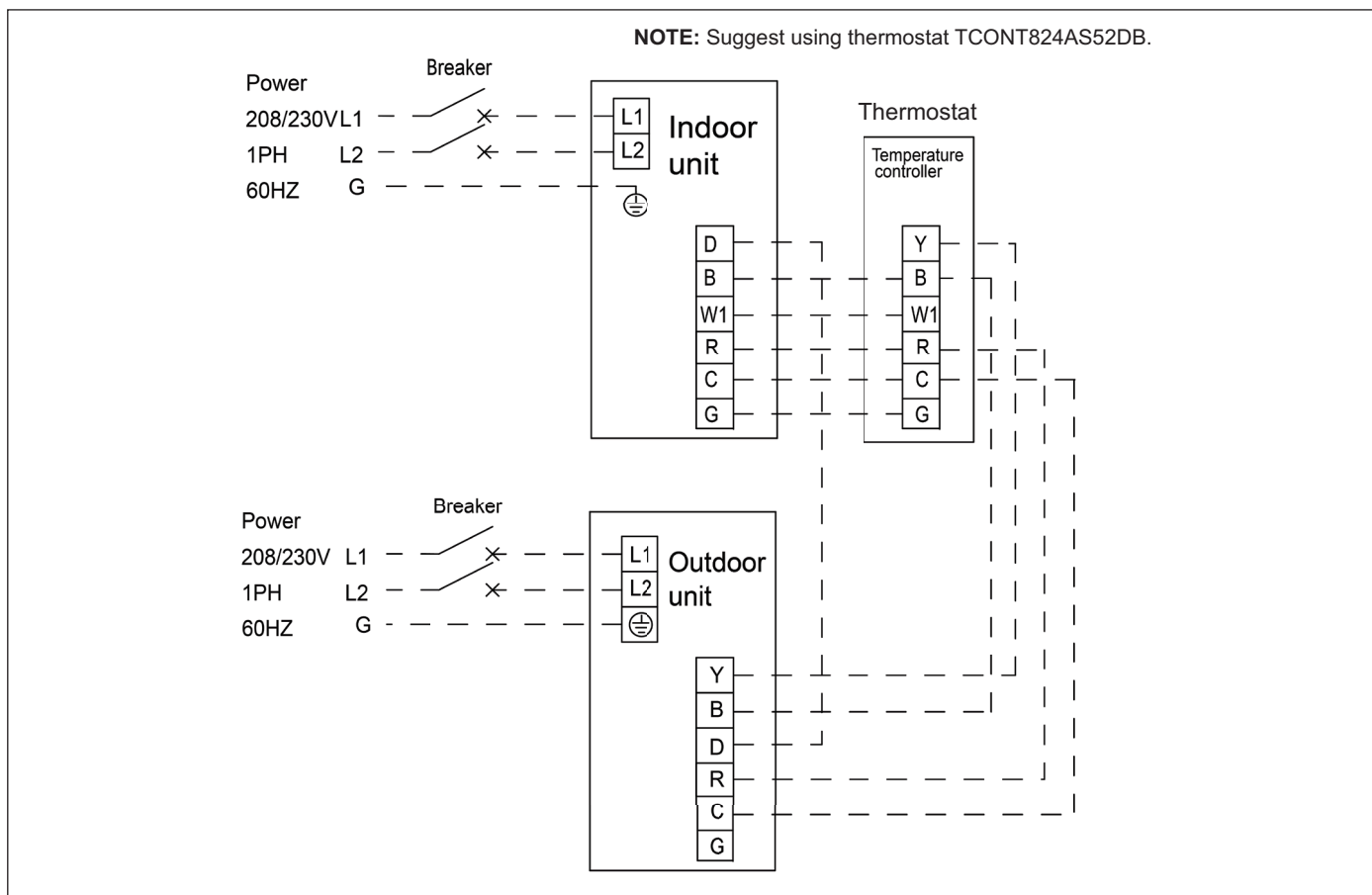


**⚠ WARNING**

Failure to follow this Warning could result in property damage, serious personal injury, or death.

1. Before working, check whether the indoor unit and thermostat are powered on.
2. Match the terminal numbers and wire colors with the colors indicated in the indoor unit. Wrong wire connection may burn the electrical components.
3. Connect the wires firmly to the wiring box. Incomplete installation may lead to fire hazard.
4. Connect wiring by referring to the circuit diagram labeled on the unit and securely tighten.
5. Ground wire should be connected.

**Table 1. Wires of Outdoor Unit**



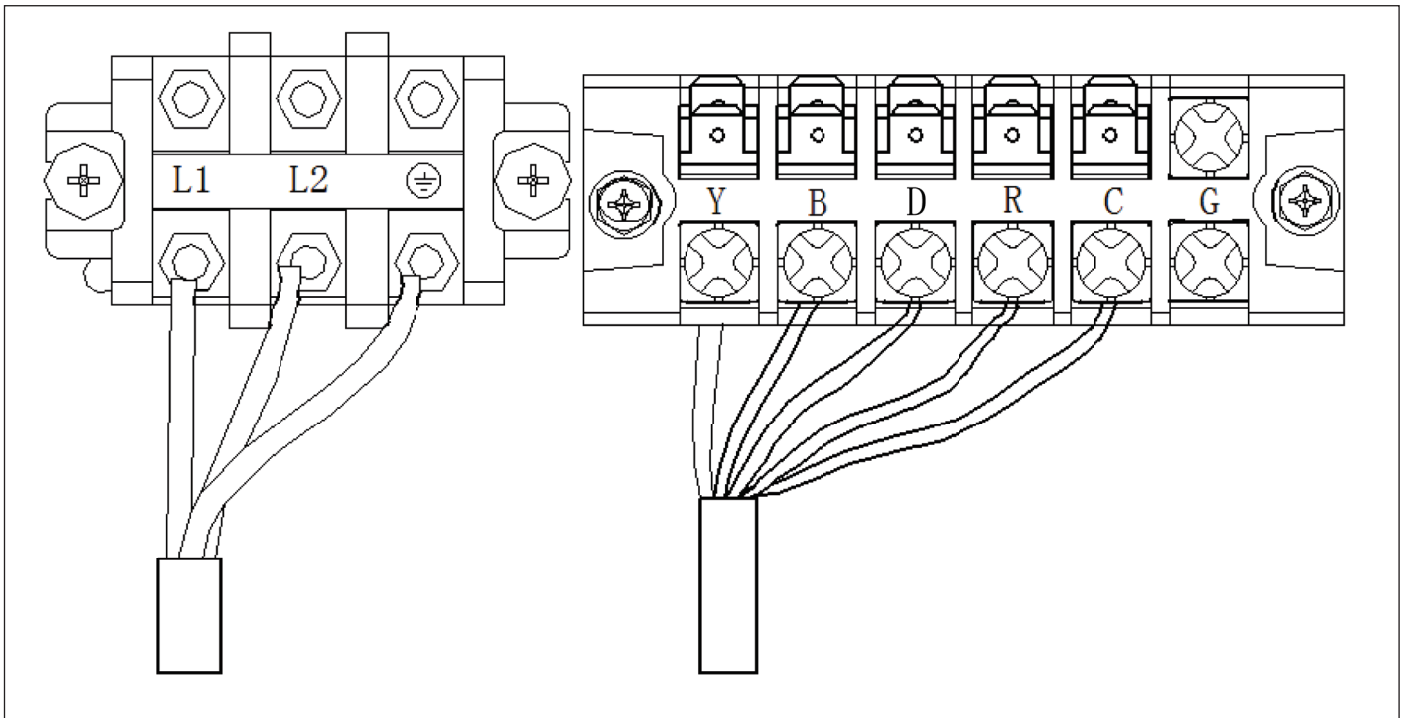
**NOTES:**

- Y means Compressor control signal for the outdoor unit;
- B which is energized under the heating mode means 4-way valve control signal;
- D means defrosting signal;
- R means 24V AC power supply;
- C means 24V common;
- G means indoor unit fan signal for the indoor unit;
- W1 means heater control signal.
- For cooling only unit, there is no need to connect the B and D terminals.
- When outdoor defrosts, D of outdoor unit will send 24V signal.

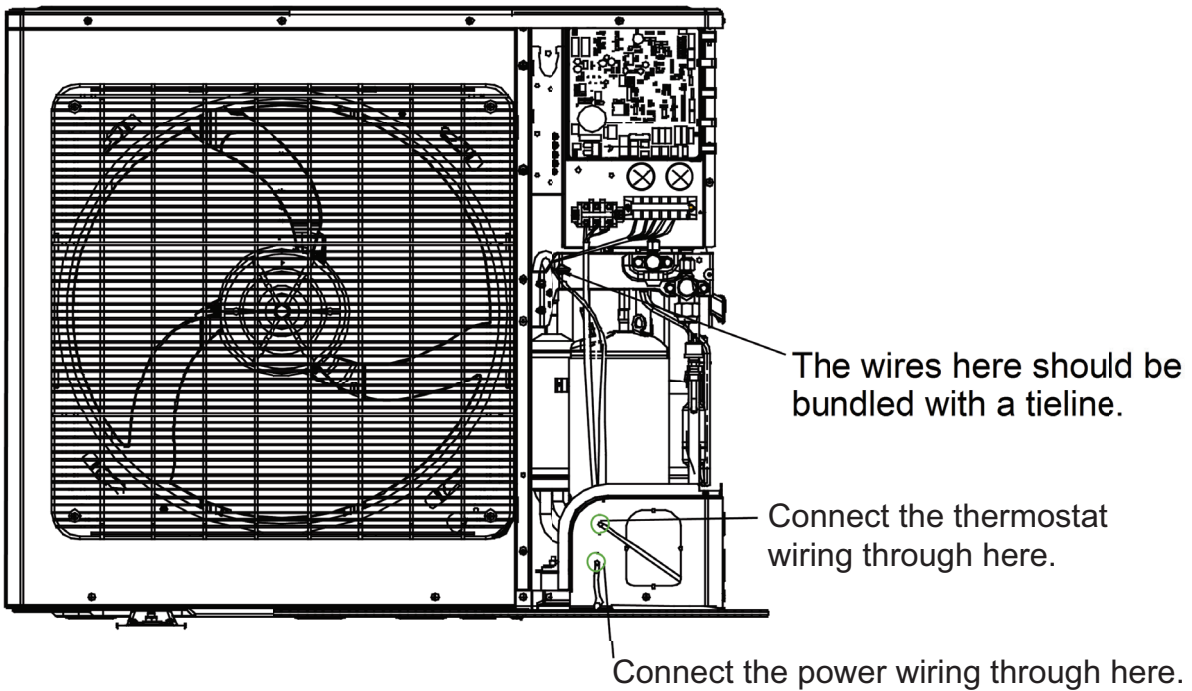
<b>⚠ WARNING</b>	
1.	High and low voltage wires should be routed through different openings of the electric box cover.
2.	Use screws to tighten up the thermostat wires and power wiring of unit on the terminal board. Wrong connection may lead to fire hazard.
3.	Ground the unit through connecting the ground wire.
4.	The units should comply with applicable local and national rules and regulations on power consumption.
5.	When connecting the power wiring, make sure the phase sequence of the power supply matches with the corresponding terminals, otherwise the compressor will get reversed and operate abnormally.

## Installation

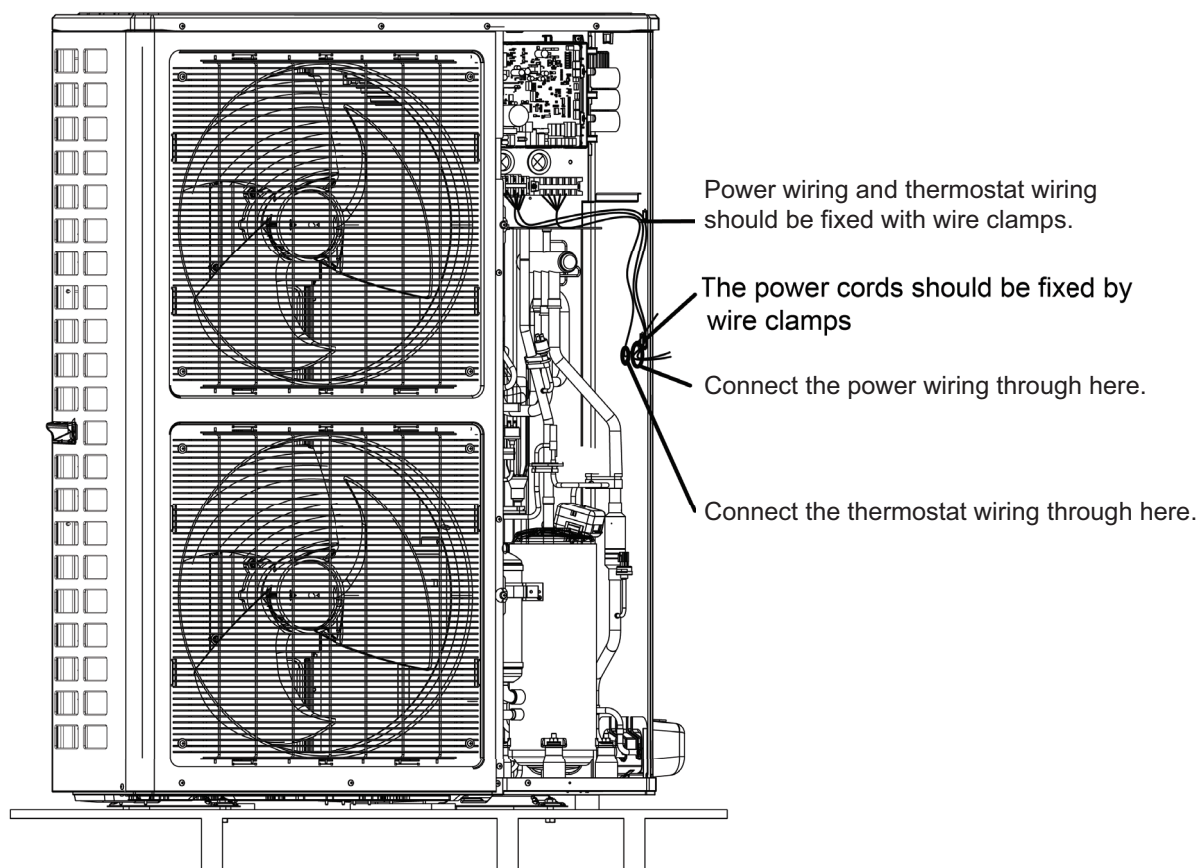
Remove the front panel of the outdoor unit and connect the power wiring and thermostat wiring as shown below.



Single-phase unit: 4TXD2036A10NUA



Single-phase unit: 4TXD2060A10NUA



**Check after Installation**

Items to be checked	Problems might happen due to improper installation	Check
Check if the unit has been installed correctly.	The unit might vibrate or emit noise.	
Check if the unit has passed the leakage test.	May cause cooling (heating) capacity loss.	
Check if the unit has been insulated properly.	It may cause condensation.	
Check if the condensate drains freely.	It may cause water damage from condensate.	
Check if the power voltage matches the nameplate.	Electrical damage to components may occur.	
Check if the wiring has been installed correctly.	Electrical damage to components may occur.	
Check if the unit has been grounded properly.	Electrical damage to components may occur.	
Check if the wiring is the correct wire gage.	Electrical damage to components may occur.	
Check if there is any obstruction blocking the air inlet/outlet.	Cooling (heating) capacity will be affected.	
Make sure that supply and return ducts are properly connected.	Air leakage, vibration and noise may result if not connected properly.	

## **Test Running**

### **Preparation before Connecting the Power**

1. Never power on the unit until all the installation work has been done.
2. All the control circuit and wiring has been connected correctly and is secure. Valves on the gas and liquid line should be completely open.
3. Check if the unit appearance and piping system has been damaged during installation.
4. Check if the terminals are loose and the phases are correct.

### **Operation after Connecting the Power**

1. If all the above preparations are complete, power on the unit.
2. If the outside temperature is more than 86° F (30° C), heating mode can't be enabled.
3. Before test operation, make sure unit is power on and compressor has been preheated for more than 8 hours.
4. Make sure the units can run normally.

## Unit Maintenance

### Failures Not Caused by Faults of the AC

If your air conditioner fails to function normally, check the following items:

Problem	Cause	Corrective measure
The air conditioner can't run.	If you turn off the unit and then immediately turn it on, in order to protect the compressor and avoid system overload, compressor will delay running for 3min.	Wait for 3 minute time delay.
	Wire connection is wrong.	Connect wires according to the wiring diagram.
	Fuse or circuit breaker is broken.	Replace the fuse or switch on the circuit breaker.
	Power failure.	Restart after power is resumed.
Bad cooling or heating effect.	Air inlet/outlet of the unit is blocked.	Clean unit or remove obstruction.
	Improper temperature setting.	Adjust temperature setting at the thermostat.
	Fan speed is too low.	Change fan speed.

## Error Code

If the LED displayer on mainboard of outdoor unit displays an error code, refer to the error code meaning stated in the following table.

No.	Error code	Error
1	E1	Compressor high-pressure protection
2	E3	Compressor low-pressure protection.
3	E4	Compressor air discharge high-temperature protection.
4	F2	Condenser temperature sensor error
5	F3	Outdoor ambient temperature sensor error
6	F4	Discharge temperature sensor error
7	F6	ODU tube temperature sensor error
8	EE	ODU memory chip error
9	H4	Overload
10	H5	IPM protection
11	H6	DC fan error
12	H7	Driver out-of-step protection
13	HC	PFC protection
14	Lc	Startup failure
15	P0	Driver reset protection
16	P5	Over-current protection
17	P6	Master control and driver communication error
18	P7	Driver module sensor error
19	P8	Driver module high temperature protection
20	PA	AC current protection
21	Pc	Driver current error
22	PL	Bus low-voltage protection
23	PH	Bus high-voltage protection
24	PU	Charge loop error
25	ee	Drive memory chip error
26	e1	High pressure sensor error
27	C4	ODU jumper cap error



## Unit Maintenance

This product is designed for dependable service; however, periodic maintenance should be scheduled and conducted by trained professional service personnel. This service should be conducted at least annually, and should include testing and inspection of electrical and refrigerant components.

1. The system air filter(s) should be inspected, cleaned or replaced at least monthly.
2. Make certain that the access panels are replaced and secured properly before placing the unit back in operation.
3. The heat transfer surface should be cleaned.
4. The blower motor is permanently lubricated for normal operating conditions.

## Drain Pipe

Regularly check to see if the drain pipe is clogged in order to ensure drain condensate doesn't overflow and cause water damage.

## Parts Replacement

Purchase parts from the installing or servicing dealer if necessary.

**NOTE:** During leakage testing, never mix oxygen, ethyne (acetylene) or other dangerous gases into the refrigeration circuit. Nitrogen should be used for leakage testing.

## After-Sales Service

In the event you have problems with the unit or require service, please contact your local installing / servicing dealer.

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