

Installation Instructions

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Fig. 1 — Cassette Unit

A220039

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Fig. 2 — Remote Controller

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NOTES:

- Read the entire instruction manual before starting the installation.**
- The images in this manual are for illustration purposes only. The actual model may differ slightly.**

SAFETY CONSIDERATIONS

Installing, starting up, and servicing air-conditioning equipment can be hazardous due to system pressures, electrical components, and equipment location (roofs, elevated structures, etc.).


Only trained, qualified installers and service mechanics should install, start-up, and service this equipment.

Untrained personnel can perform basic maintenance functions such as coil cleaning. All other operations should be performed by trained service personnel.

When working on the equipment, observe precautions in the literature and on tags, stickers, and labels attached to the equipment.

Follow all safety codes. Wear safety glasses and work gloves. Keep a quenching cloth and fire extinguisher nearby when brazing. Use care in handling, rigging, and setting bulky equipment.

Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes and current editions of the National Electrical Code (NEC) NFPA 70. In Canada, refer to current editions of the Canadian electrical code CSA 22.1.

Recognize safety information. This is the safety-alert symbol . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury. Understand these signal words:

DANGER, **WARNING**, and **CAUTION**. These words are used with the safety-alert symbol. **DANGER** identifies the most serious hazards which will result in severe personal injury or death. **WARNING** signifies hazards which could result in personal injury or death. **CAUTION** is used to identify unsafe practices which may result in minor personal injury or product and property damage. **NOTE** is used to highlight suggestions which results in enhanced installation, reliability, or operation.



WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing, modifying, or servicing system, main electrical disconnect switch must be in the **OFF** position.

There may be more than 1 disconnect switch. Lock out and tag switch with a suitable warning label.



WARNING



EXPLOSION HAZARD

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

Never use air or gases containing oxygen for leak testing or operating refrigerant compressors. Pressurized mixtures of air or gases containing oxygen can lead to an explosion.



CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

Do not bury more than 36 in. (914 mm) of refrigerant pipe in the ground. If any section of pipe is buried, there must be a 6 in. (152 mm) vertical rise to the valve connections on the outdoor units. If more than the recommended length is buried, refrigerant may migrate to the cooler buried section during extended periods of system shutdown. This causes refrigerant slugging and could possibly damage the compressor at start-up.

PARTS LIST

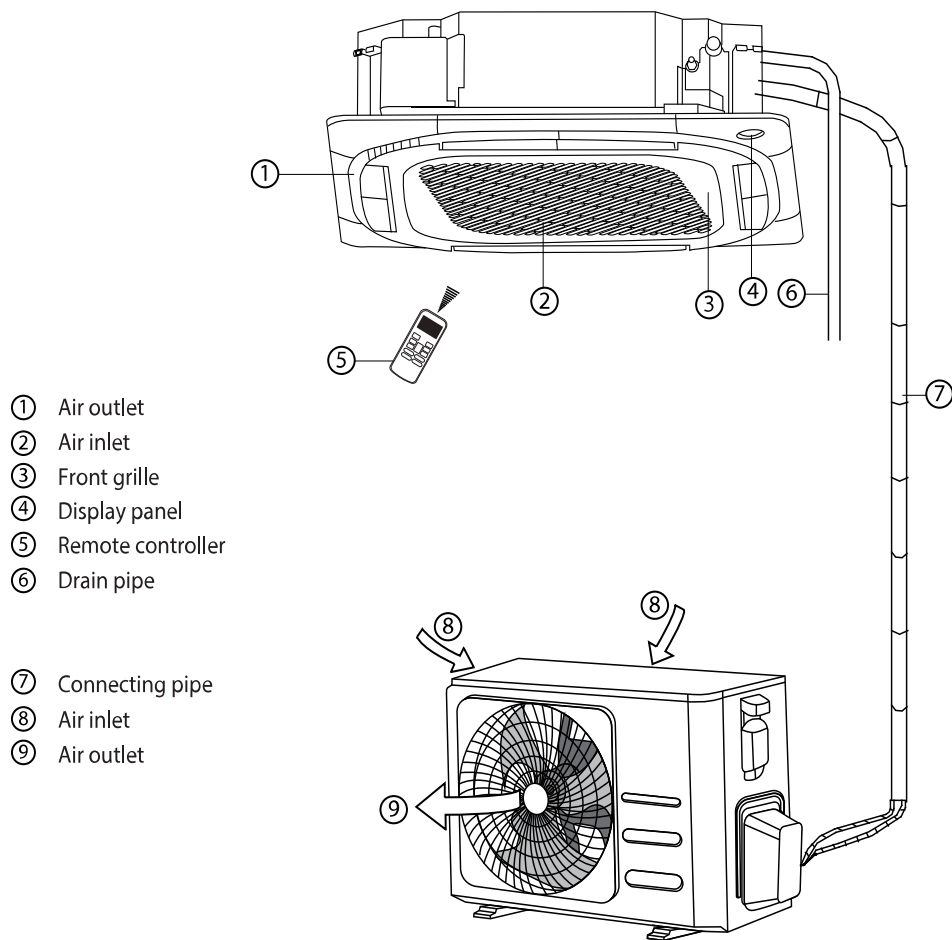


Fig. 3 —Parts List

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NOTES:

- If the outdoor unit is higher than the indoor unit, prevent rain from flowing into the indoor unit along the connection pipe by making a downward arc in the connection pipe before it enters the wall to the indoor unit. This ensures that rain drips from the connection pipe before it enters the wall.
- Piping and the interconnecting wiring are field supplied.
- The illustration above (Fig. 3) is only a sketch. Different models may differ slightly.

The units listed in Table 1 are covered in this manual.

Table 1 — Indoor Units

kBTUh	V-Ph-Hz	Outdoor Model
24	208/230-1-60	40MBCAQ24XA3
36		40MBCAQ36XA3
48		40MBCAQ48XA3

SYSTEM REQUIREMENTS

Allow sufficient space for airflow and unit servicing. See Fig. 5 for the minimum required distances between the unit and the walls or ceilings.

PIPING

IMPORTANT: Both refrigerant lines must be insulated separately.

- **Minimum refrigerant line length between the indoor and outdoor units is 10 ft. (3 m).**
- **Table 2 lists the pipe sizes for the indoor unit. Refer to the outdoor unit installation instructions for other allowed piping lengths and refrigerant information.**

Table 2 — Indoor Unit Pipe Sizes

SYSTEM SIZE			24K	36K	48K
Piping	Gas Pipe (size - connection type)	In. (mm)	5/8 (16)		
	Liquid Pipe (size - connection type)	In. (mm)	3/8 (9.52)		

WIRING

All wires must be sized per NEC (National Electrical Code) or CEC (Canadian Electrical Code) and local codes. Use Electrical Data table MCA (minimum circuit amps) and MOCP (maximum over current protection) to correctly size the wires and the disconnect fuse or breakers respectively.

Recommended Connection Method for Power and Communication Wiring

Power and Communication Wiring: (24K)

The main power is supplied to the outdoor unit. The field supplied 14/3 power/communication wiring from the outdoor unit to the indoor unit consists of four (4) wires and provides the power for the indoor unit. Two wires are high voltage AC power, one is communication wiring and the other is a ground wire.

To minimize communication interference: If installed in a high Electromagnetic field (EMF) area and communication issues exist, a 14/2 stranded shielded wire can be used to replace L2 and (S) between outdoor unit and indoor unit - landing the shield onto ground in the outdoor unit only.

Recommended Connection Method for Power and Communication Wiring (36K through 48K) Power Wiring:

The main power is supplied to the outdoor unit. The field supplied power wiring from the outdoor unit to the indoor unit consists of three (3) wires and provides the power for the indoor unit. Two wires are high voltage AC power and one is a ground wire. To minimize voltage drop, the factory recommended wire size is 14/2 stranded with a ground.

Communication Wiring:

A separate shielded stranded copper conductor only, with a 600 volt rating and double insulated copper wire, must be used as the communication wire from the outdoor unit to the indoor unit.

Be sure to use a separate shielded 16GA stranded control wire.



WARNING

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

Wires should be sized based on NEC and local codes.



CAUTION

EQUIPMENT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

Be sure to comply with local codes while running wire from the indoor unit to the outdoor unit.

Every wire must be connected firmly. Loose wiring may cause the terminal to overheat or result in unit malfunction. A fire hazard may also exist. Ensure all wiring is tightly connected.

No wire should touch the refrigerant tubing, compressor or any moving parts.

Disconnecting means must be provided and shall be located within sight and readily accessible from the air conditioner.

Connecting cable with conduit shall be routed through the hole in the conduit panel.

DIMENSIONS

Table 3 — Dimensions

Cassette Unit Size		24K	36K	48K
Voltage			208/230V	
DIMENSIONS				
Height (H)	In/ (mm)	8.07 (205)	9.65 (245)	11.3 (287)
Width (W)	In/ (mm)	32.68 (830)	32.68 (830)	32.68 (830)
Depth (D)	In/ (mm)	32.68 (830)	32.68 (830)	32.68 (830)
PACKAGING				
Height	In/ (mm)	9.84 (250)	11.42 (290)	12.99 (330)
Width	In/ (mm)	35.83 (910)	35.83 (910)	35.83 (910)
Depth	In/ (mm)	35.83 (910)	35.83 (910)	35.83 (910)
Thickness	In/ (mm)	0.295 (7.5)	0.295 (7.5)	0.295 (7.5)
Drawing No.	-	ZXW-895*895*235S-NP	ZXW-895*895*275S-N	ZXW-895*895*315S-NP
Material	-	Double corrugated		
Weight-Gross	lbs. (kg)	55.34 (25.1)	69.00 (31.3)	74.07 (33.6)
Weight -Net	lbs. (kg)	47.18 (21.4)	59.97 (27.2)	64.59 (29.3)

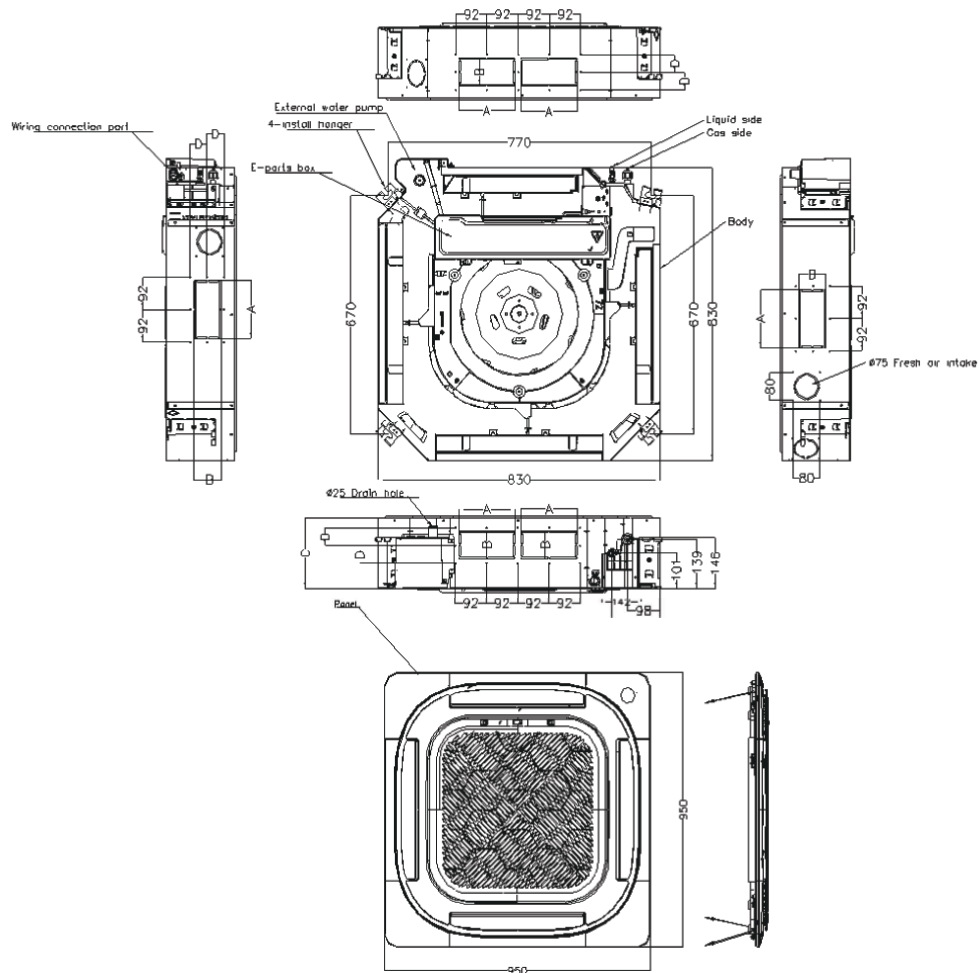
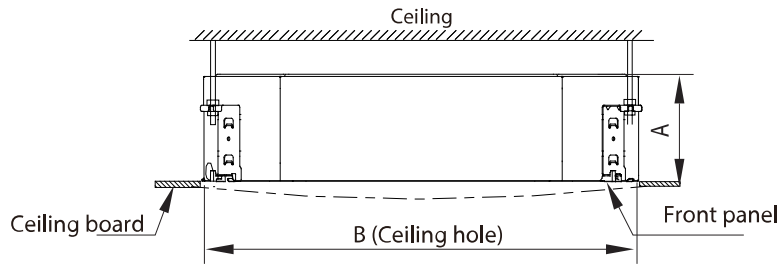
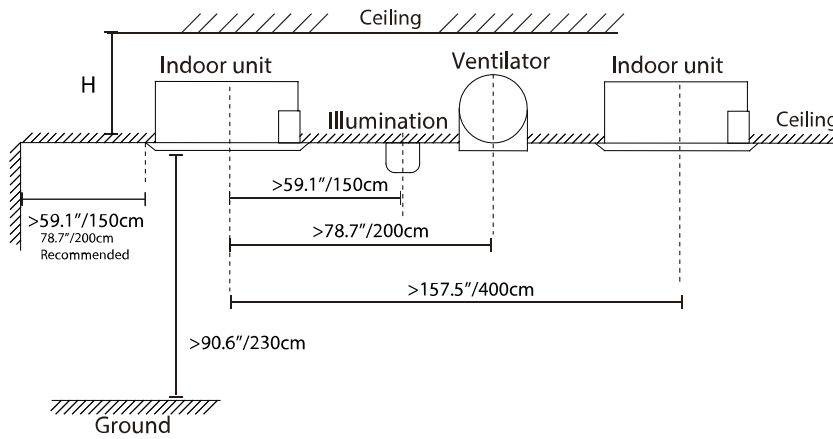


Fig. 4 —Indoor Unit (Sizes 24-48)

Table 4 — Indoor Unit (Sizes 24-48)

Capacity (Btu/h)		A	B	C	D
24K	mm	160	75	205	50
	inch	6.30	2.95	8.07	1.97
36K	mm	160	95	245	60
	inch	6.30	3.74	9.65	2.36
48K	mm	160	95	287	60
	inch	6.30	3.74	11.30	2.36

CLEARANCES

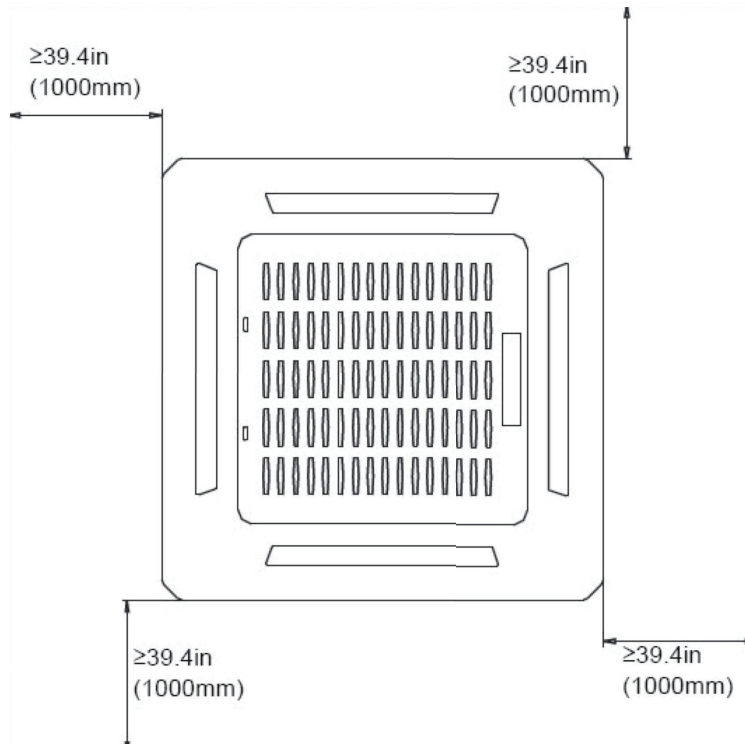


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Fig. 5 — Clearances

Table 5 — Clearances

MODEL	LENGTH OF A (in./mm)	LENGTH OF H (in./mm)	LENGTH OF B (in./mm)
24	8.07/204	9.06/230	35.4/900
36	9.65/245	10.7/271	
48	11.3/287	12.3/313	



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Fig. 6 —Cassette Unit Clearance

INDOOR UNIT INSTALLATION

NOTE: Panel installation should be performed after the piping and wiring work has been completed.

STEP 1: Select installation location

Before installing the indoor unit, you must select an appropriate location. The following are standards to help you choose an appropriate location for the unit.

Proper installation locations meet the following standards:

- Enough room exists for installation and maintenance.
- Enough room exists for the connecting the pipe and drainpipe.
- The ceiling is horizontal and its structure can sustain the weight of the indoor unit.
- The air inlet and outlet are not blocked.
- The airflow can fill the entire room.
- There is no direct radiation from heaters.

DO NOT install the unit in the following locations:

- Areas with oil drilling or fracking
- Coastal areas with high salt content in the air
- Areas with caustic gases in the air, such as hot springs
- Areas that experience power fluctuations, such as factories
- Enclosed spaces, such as cabinets
- Kitchens that use natural gas
- Areas with strong electromagnetic waves
- Areas that store flammable materials or gas
- Rooms with high humidity such as bathrooms or laundry rooms

Recommended Distances Between the Indoor Unit and the Ceiling

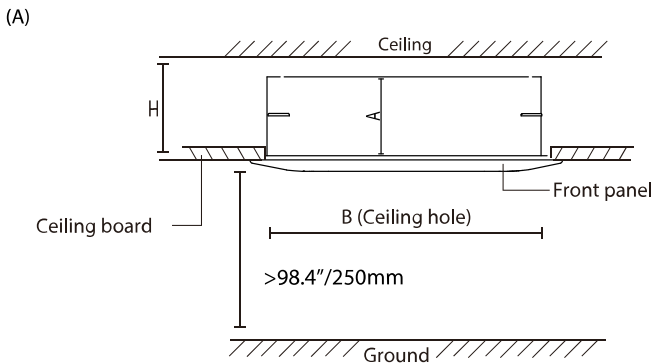


Fig. 7 — Indoor Unit Installation

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STEP 2: Hang the Indoor Unit

1. Use the included paper template to cut a rectangular hole in the ceiling, leaving at least 39" (1m) clearance on all sides. The cut hole size should be 1.6" (4cm) larger than the body size on each side. Be sure to mark the drill areas for the ceiling hook holes.

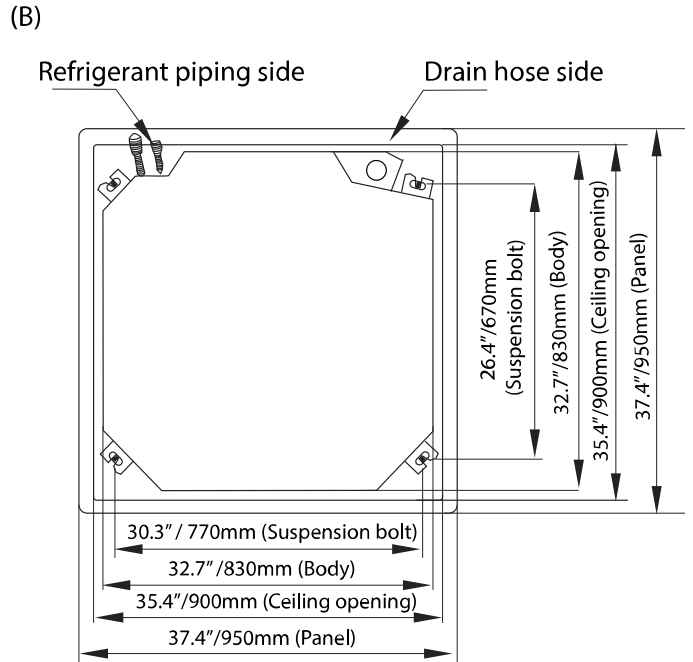


Fig. 8 — Indoor Unit Installation

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⚠ CAUTION

The unit body should align perfectly with the hole. Ensure that the unit and the hole are the same size before proceeding.

2.
 - a. Drill 4 holes 4.7"–6.1" (12cm–15.5cm) deep at the ceiling hook positions in the internal ceiling. Be sure to hold the drill at a 90° angle to the ceiling.
3. Secure the ceiling hooks into the pre-drilled holes. Secure the bolt with the included washers and nuts.
4. Install the four suspension bolts. Use either a M8 or M10 bolt.

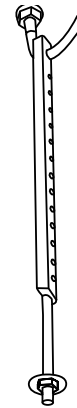


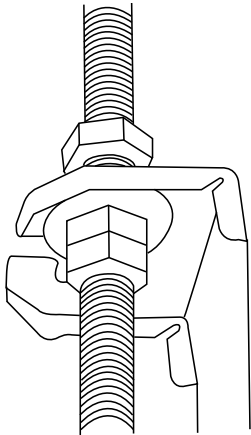
Fig. 9 — Suspension Bolts

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5. Mount the indoor unit.

NOTE: You will need two people to lift and secure it.

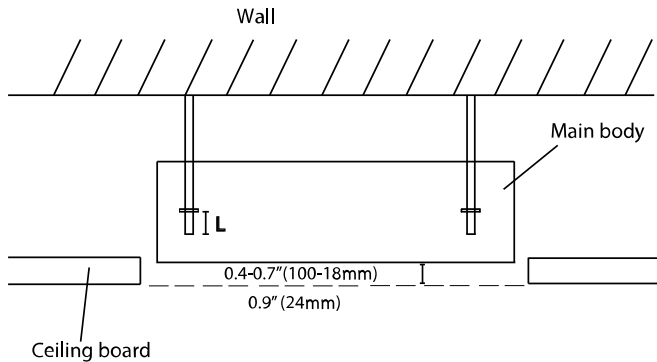
6. Insert suspension bolts into the unit's hanging holes.
7. Use the included washers and nuts to fasten the bolts.



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Fig. 10 — Indoor Unit Installation

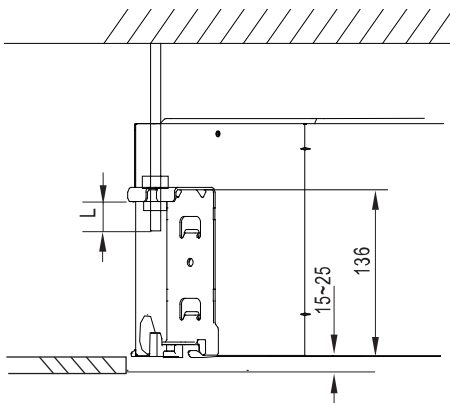
- a. **NOTE: The bottom of the unit should be 0.4-0.7" (10-18mm) (Super-Slim models) higher than the ceiling board. Generally, L (indicated in figure 11) should be half the length of the suspension bolt or long enough to prevent the nuts from coming off.**



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Fig. 11 — Indoor Unit Installation

- b. **NOTE: The bottom of the unit should be 0.4-0.98" (10-25mm) higher than the ceiling board. Generally, L (indicated in figure 12) should be half the length of the suspension bolt or long enough to prevent the nuts from coming off.**



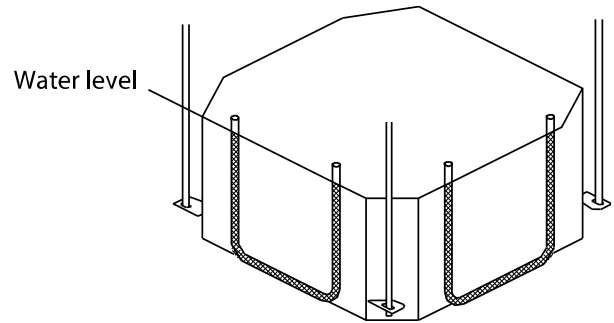
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Fig. 12 — Indoor Unit Installation

CAUTION

Ensure that the unit is completely level. Improper installation can cause the drain pipe to back up into the unit or water leakage.

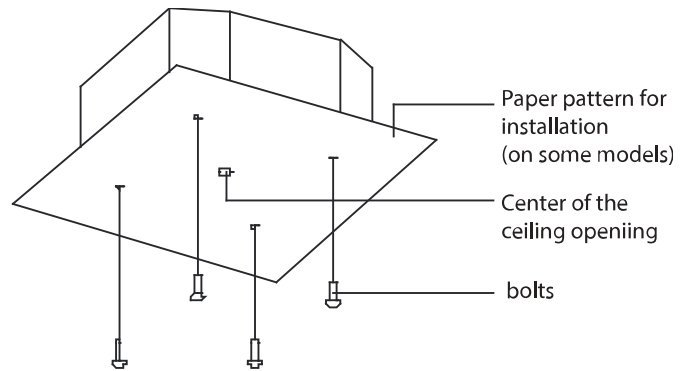
NOTE: Ensure that the indoor unit is level. The unit is equipped with a built-in drain pump and float switch. If the unit is tilted against the direction of condensate flows (the drainpipe side is raised), the float switch may malfunction and cause water to leak.



A220095

Fig. 13 — Water Level

NOTE FOR THE NEW HOME INSTALLATION: When installing the unit in a new home, the ceiling hooks can be embedded in advance. Ensure the hooks do not come loose due to concrete shrinkage. After installing the indoor unit, fasten the installation paper template onto the unit with bolts to determine in advance the dimension and position of the opening on the ceiling. Follow the instructions above for the remainder of the installation.



A220098

Fig. 14 — Indoor Unit Installation

STEP 3: Drill a hole in the wall for the connective piping

1. Determine the location of the wall hole based on the location of the outdoor unit.
2. Use a 2.56" (65mm) or 3.54" (90mm) (depending on model) core drill to drill a hole in the wall. Ensure the hole is drilled at a slight downward angle so that the outdoor end of the hole is lower than the indoor end by about 0.5"(12mm). This ensures proper water drainage.
3. Place the protective wall cuff in the hole. This protects the edges of the hole and helps to seal it when you finish the installation process.

CAUTION

When drilling the wall hole, be sure to avoid wires, plumbing, and other sensitive items.

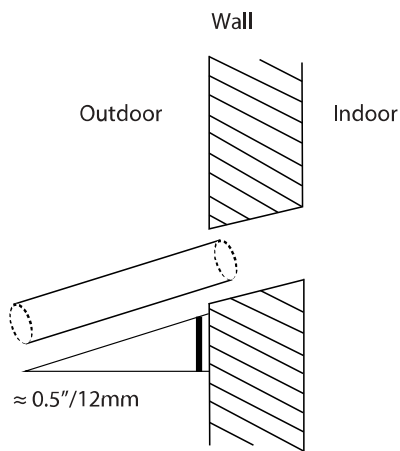


Fig. 15 — Indoor Unit Installation

STEP 4: Connect a drain hose

The drainpipe is used to drain water away from the unit. Improper installation may cause unit and property damage.

CAUTION

Insulate all piping to prevent condensation, which could lead to water damage.
 If the drainpipe is bent or installed incorrectly, water may leak and cause a water-level switch malfunction.
 In **HEAT** mode, the outdoor unit discharges water. Ensure that the drain hose is placed in an appropriate area to avoid water damage and slippage.
DO NOT pull the drainpipe forcefully. Doing so may disconnect the drainpipe.

NOTE ON PURCHASING PIPES: Installation requires a polyethylene tube (exterior diameter =.98in (2.5cm), which can be obtained at your local hardware store or dealer.

Indoor Drainpipe Installation

Install the drainpipe as shown in figure 16.

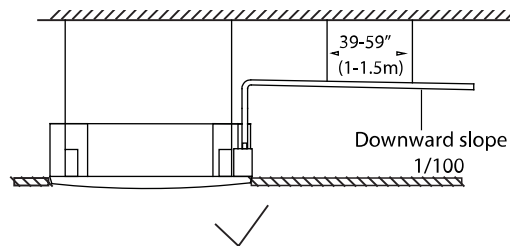
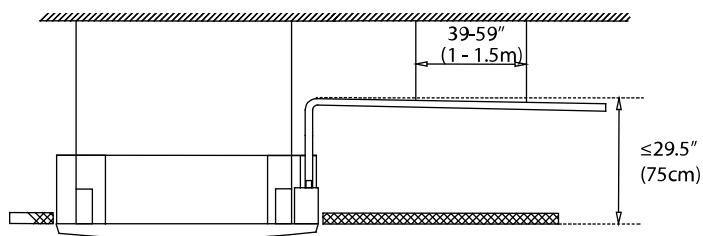


Fig. 16 — Indoor Unit Installation

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NOTE: When using an extended drainpipe, tighten the indoor connection with an additional protection tube to prevent it from loosening.

- The drainpipe should slope downward at a gradient of at least 1/100 to prevent water from flowing back into the air conditioner.
- To prevent the pipe from sagging, space hanging wires every 39-59"(1-1.5m).
- If the drainpipe outlet is higher than the body's pump joint, provide a lift pipe for the exhaust outlet of the indoor unit. The lift pipe must be installed no higher than 29.5" (75cm) from the ceiling board and the distance between the unit and the lift pipe must be less than 11.8" (30cm) (depending on models). Incorrect installation could cause water to flow back into the unit and flood.
- To prevent air bubbles, keep the drain hose level or slightly tilted up (< 3"/75mm).

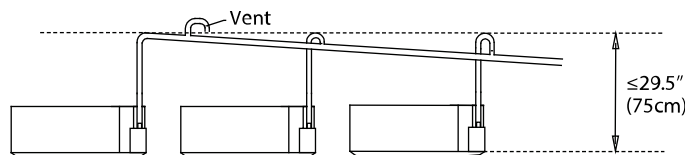


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A220108

Fig. 17 — Indoor Unit Installation

NOTE: When connecting multiple drainpipes, install the pipes as shown in figure 18.



A220110

Fig. 18 — Indoor Unit Installation

Pass the drain hose through the wall hole. Ensure the water drains to a safe location where it will not cause water damage or create a slipping hazard.

NOTE: The drainpipe outlet should be at least 1.9" (5cm) above the ground. If the outlet touches the ground, the unit may become blocked and malfunction. If you discharge the water directly into a sewer, ensure the drain has a U or S pipe to catch odors that might otherwise come back into the house.

Conduit Installation Pipe Installation (if supplied)

1. Fix the sheath connector (not supplied) on the wire hole of the conduit installation plate.
2. Fix the conduit installation plate on the chassis of the unit.

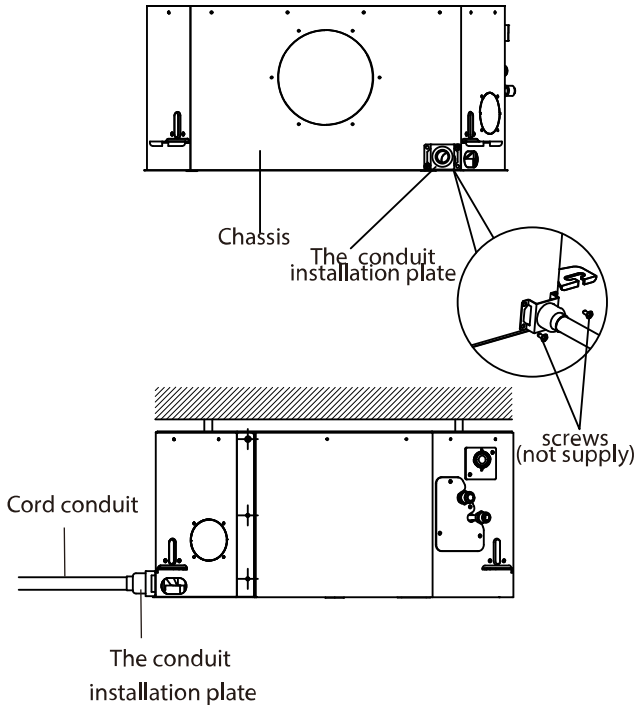


Fig. 19 —Indoor Unit Installation

A220113

PANEL INSTALLATION

Remove the Front Grille

Step 1: Remove the front grille

1. Push both tabs towards the middle simultaneously to unlock the hook on the grille.
2. Hold the grille at a 45° angle.
3. Lift the grille up slightly then detach it from the main body.

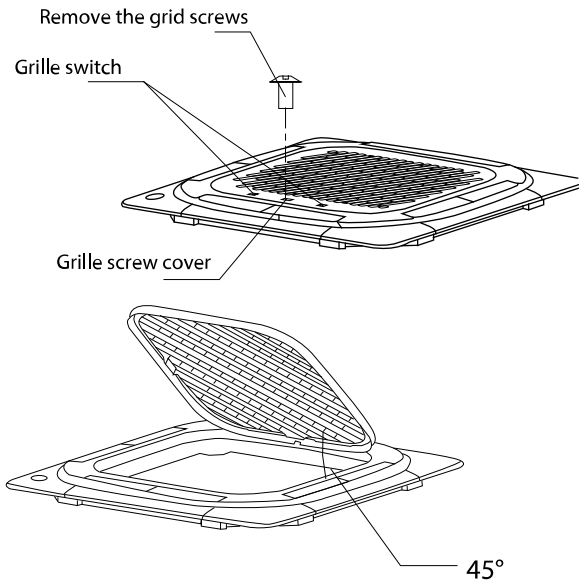
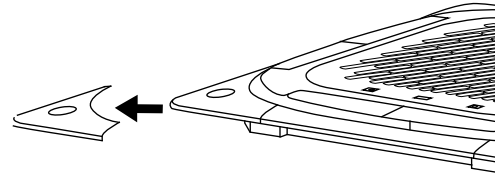


Fig. 20 — Panel Installation

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Step 2: Remove the installation covers from the four corners by sliding them outwards



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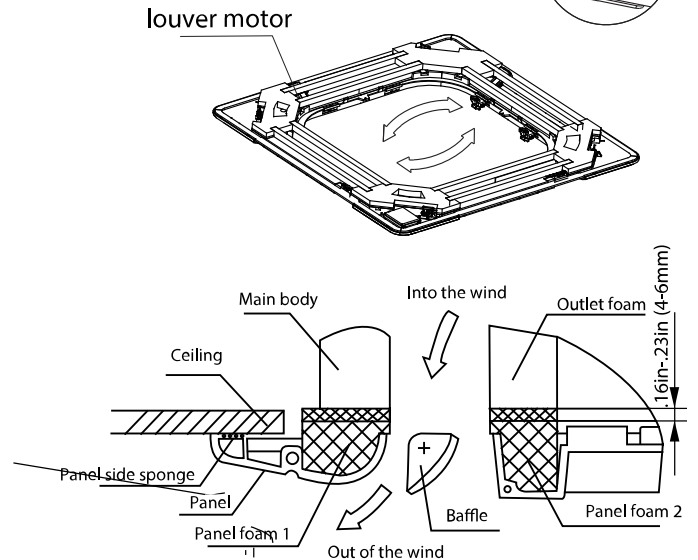
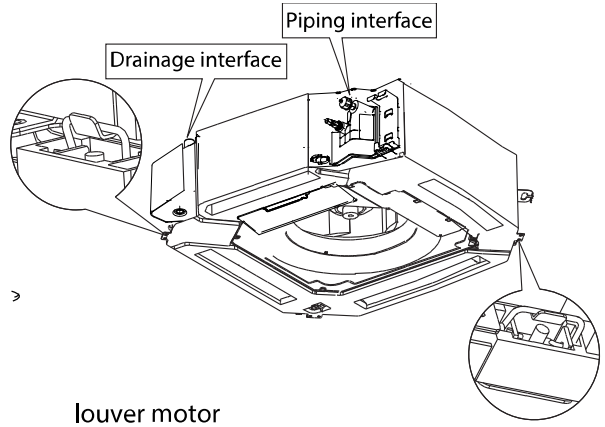
Fig. 21 — Panel Installation

Step 3: Install the panel

1. Align the front panel to the main body, taking into account the position of the piping and drain sides.
2. Hang the four latches of the decorative panel to the indoor unit's hooks.
3. Tighten the panel hook screws evenly at the four corners.

NOTE: Tighten the screws until the thickness of the sponge between the main body and the panel reduces to 0.2-0.3”(4-6mm). The edge of the panel should be firmly connected to the ceiling.

4. Adjust the panel by turning it to the arrowed direction so that the ceiling opening is completely covered.



A220142

Fig. 22 —Panel Installation

NOTE: If the indoor unit's height needs to be adjusted, use the openings at the panel's four corners. Ensure the internal wiring and drainpipe are not affected by this adjustment.

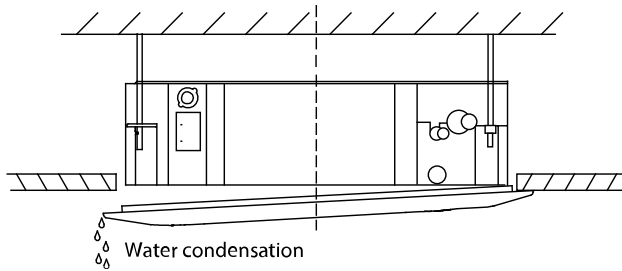


Fig. 23 — Panel Installation

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CAUTION

Failure to tighten screws can cause water leakage.

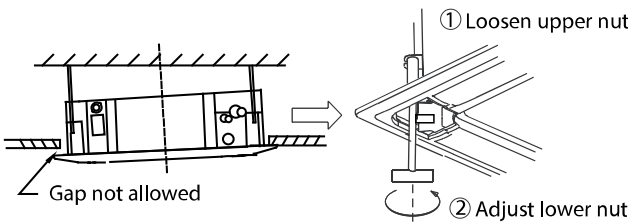


Fig. 24 — Panel Installation

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CAUTION

If the unit is not hung correctly and a gap exists, the unit's height **must** be adjusted to ensure proper function. The unit's height can be adjusted by loosening the upper nut, and adjusting the lower nut.

Hang the intake grille on the panel, and then connect the lead connectors of the louver motor and the control box on the panel to the corresponding connectors of the main body.

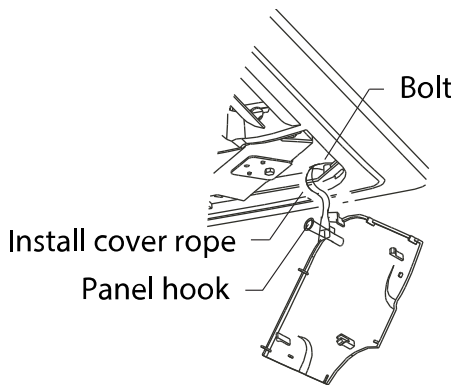
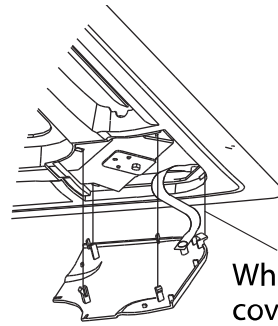


Fig. 25 — Panel Installation

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Re-install into the style grid

1. Reinstall the installation cover.
2. Secure the installation cover plate rope to the pillar of the installation cover plate, and gently press the installation cover plate into the panel.



When installing the cover, slide the four slide fasteners into the corresponding slots on the panel.

Fig. 26 — Panel Installation

A220148

NOTE: After installation, the display's Molex plugs, the swing, water pump and other wire bodies must be placed in the electric control box.

ELECTRICAL DATA

Table 6 — Electrical Data

UNIT SIZE	OPER. VOLTAGE MAX / MIN*	INDOOR FAN				MAX FUSE CB AMP
		V-PH-HZ	FLA	HP	W	
24	253/187	208-230/1/60	1	0.06	45	Refer to outdoor unit installation instructions – Indoor unit powered by the outdoor unit
36			1	0.168	125	
48			1.5	0.168	125	

CONNECTION DIAGRAMS

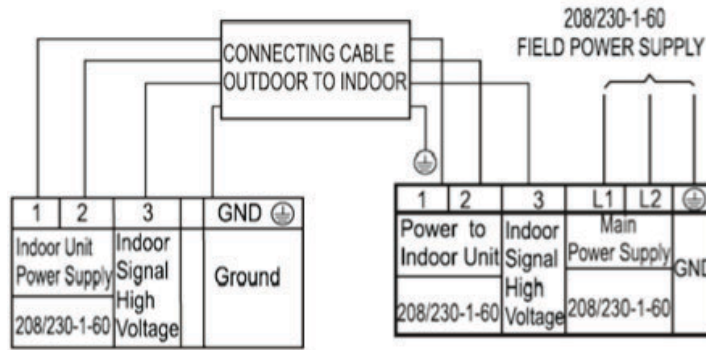


Fig. 27 — Connection Diagram Size 24K

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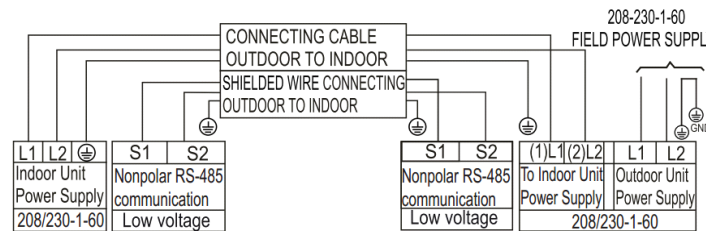


Fig. 28 — Connection Diagram Size 36K

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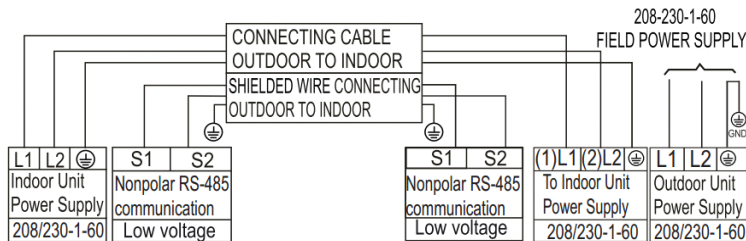


Fig. 29 — Connection Diagram Size 48K

A220921

INSTALL ALL POWER, INTERCONNECTING WIRING, AND PIPING TO INDOOR UNIT

1. Run interconnecting piping and wiring from the outdoor unit to the indoor unit.
2. Connect wiring from the outdoor unit per the connection diagram (see Fig. 27 and 29).
3. Replace the field wiring cover and close the indoor unit front cover.
4. Connect the refrigerant piping and a drain line outside of the indoor unit. Complete the pipe insulation at the flare connection then fasten the piping and wiring to the wall as required.
5. Completely seal the hole in the wall.
6. Piping:
 - a. Cut the pipe, with a pipe cutter, at 90° degrees (see Fig. 30).
 - b. Remove the service connection, if provided with the unit.

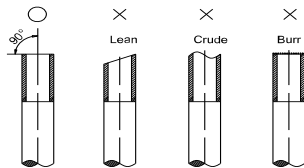


Fig. 30 — Pipe Cutting

- c. Remove all the burrs from the cut cross section of the pipe, avoiding any burrs from falling into the tubes.
- d. Remove the flare nuts attached to the indoor and outdoor units.
- e. Install the correct size flare nut onto the tubing and make the flare connection. See Table 7 for the flare nut spaces.

Table 7 — Flare Nut Spacing

OUTER DIAM. (mm)	A (mm)	
	Max.	Min.
Ø 1/4" (6.35)	0.05 (1.3)	0.03 (0.7)
Ø 3/8" (9.52)	0.06 (1.6)	0.04 (1.0)
Ø 1/2" (12.7)	0.07 (1.8)	0.04 (1.0)
Ø 5/8" (15.88)	0.09 (2.2)	0.08 (2.0)

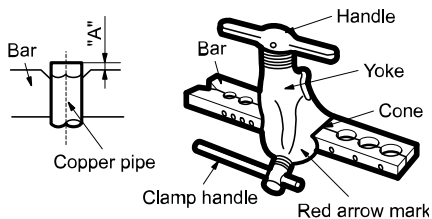


Fig. 31 — Flare Nut Spacing

- f. Apply a small amount of refrigerant oil to the flare connection on the tubing.
- g. Align the center of the pipes and/or service valve.

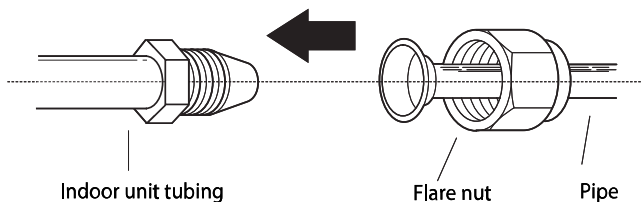


Fig. 32 —Align Pipe Center

- h. Connect both the liquid and gas piping to the indoor unit.
- i. Tighten the flare nut using a torque wrench as specified in Table 8.

Table 8 — Tightening Torque

PIPE DIAMETER INCH (mm)	TIGHTENING TORQUE	
	Ft-lb	N-m
Ø1/4" (6.35)	10 to 13	13.6 to 17.6
Ø3/8" (9.52)	24 to 31	32.5 to 42.0
Ø1/2" (12.7)	37 to 46	50.1 to 62.3
Ø5/8" (15.88)	50 to 60	67.7 to 81.3

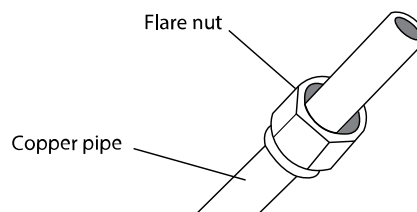


Fig. 33 — Tighten the Flare Nut

7. Connect the drain line. The drain line must not have a trap anywhere in its length. The drain line must pitch downwards. The drain line must be insulated up to the outside wall.

NOTE: For applications where gravity cannot be used for drainage, a condensate pump accessory is available. Consult the condensate pump Installation Instructions for more information.

WIRELESS REMOTE CONTROL INSTALLATION

Mounting Bracket (if installed on the wall)

1. Use the two screws supplied with the control to attach the mounting bracket to the wall in a location selected by the customer and within operating range.
2. Install the remote control batteries.
3. Place the remote control into the remote control mounting bracket.
4. For remote control operation, refer to unit owner's manual.

WIRED REMOTE CONTROLLER

For setup instructions, refer to the wired controller installation manual.

⚠ CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

Never use the system compressor as a vacuum pump.

Refrigerant tubes and the indoor coil should be evacuated using the recommended deep vacuum method (500 microns). The alternate triple evacuation method may be used if the procedure, shown in figure 34, is followed. Always break a vacuum with dry nitrogen.

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FINAL TUBING CHECK

IMPORTANT: Ensure certain factory tubing on the indoor unit has not shifted during shipment. Ensure tubes are not rubbing against each other or any sheet metal. Pay close attention to the feeder tubes, making sure the wire ties on the feeder tubes are secure and tight.

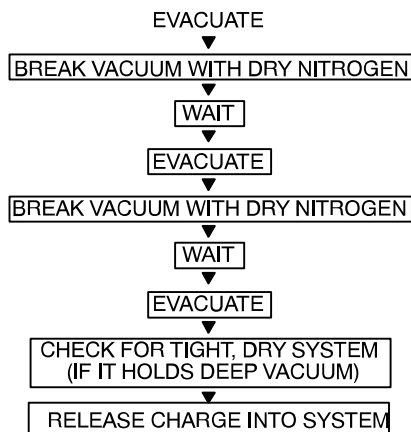


Fig. 34 —Triple Evacuation Method

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START-UP**Test Operation**

Perform a test operation after completing a gas leak and electrical safety check.

1. Press **ON/OFF** (on the remote control) to begin testing.

NOTE: A protection feature prevents the air conditioner from being activated for approximately 3 to 4 minutes.

2. Press **MODE** and select the **COOLING, HEATING, FAN** modes to ensure all the functions work correctly.
3. To run the test using the manual button in the indoor unit:
 - a. Open the indoor unit's front panel;
 - b. Press the manual switch once to energize the unit. Set the manual operation conditions as follows:
 - Preset set point: 76°F (24°C)
 - Fan speed: **AUTO**
 - Discharge air direction: Pre-set position based on operation in **COOL** or **HEAT** mode.
4. Set the manual switch to **OFF** (by pressing it twice again) after finishing the test operation.

SYSTEM CHECKS

1. Conceal the tubing where possible.
2. Ensure the drain tube slopes downward along its entire length.
3. Ensure all tubing and connections are properly insulated.
4. Fasten the tubes to the outside wall, when possible.
5. Seal the hole through which the cables and tubing pass.

INDOOR UNIT

1. Do all the remote control buttons function properly?
2. Do the display panel lights work properly?
3. Does the air deflection louver
4. Does the drain work?

OUTDOOR UNIT

1. Are there unusual noises or vibrations during operation?

Explain the Following Items To Customer (with the aid of the Owner's Manual):

1. How to turn the air conditioner on and off; selecting **COOLING, HEATING** and other operating modes; setting a desired temperature; setting the timer to automatically start and stop the air conditioner operation; and all other features of the remote control and display panel.
2. How to remove and clean the air filter.
3. How to set air deflection louver.
4. Explain care and maintenance.
5. Present the owner's manual and installation instructions to customer.

TROUBLESHOOTING

For ease of service, the systems are equipped with diagnostic code display LEDs on both the indoor and outdoor units. The outdoor diagnostic display consists of two LEDs (Red and Green) on the outdoor unit board and is limited to a few errors.

The indoor diagnostic display is a combination of flashing LEDs on the display panel or the front of the unit. If possible, always check the diagnostic codes displayed on the indoor unit first. The diagnostic codes displayed on the indoor unit are listed in Table 9.

Table 9 — Indoor Unit Diagnostic Guides

Operation Lamp	Timer Lamp	Display	Error Information
1 time	OFF	EH 00/EH 0A	Indoor unit EEPROM parameter error
2 times	OFF	EL 01	Indoor / outdoor unit communication error
4 times	OFF	EH 03	The indoor fan speed is operating outside of the normal range (for some models)
6 times	OFF	EH 60	Indoor room temperature sensor T1 is in open circuit or has short circuited
6 times	OFF	EH 61	Evaporator coil temperature sensor T2 is in open circuit or has short circuited
8 times	OFF	EL 0C	Refrigerant Leakage Detection (for some models)
13 times	OFF	EH 0E	Water-level alarm malfunction
5 times	OFF	EC 53	Outdoor room temperature sensor T4 is in open circuit or has short circuited
5 times	OFF	EC 52	Condenser coil temperature sensor T3 is in open circuit or has short circuited
5 times	OFF	EC 54	Compressor discharge temperature sensor TP is in open circuit or has short circuited
5 times	OFF	EC 5b	Evaporator coil outlet temperature sensor T2B is in open circuit or has short circuited (for free-match indoor units)
5 times	ON	EC 51	Outdoor unit EEPROM parameter error
12 times	OFF	EC 07	The outdoor fan speed is operating outside of the normal range (for some models)
7 times	FLASH	PC 00	IPM malfunction or IGBT over-strong current protection
2 times	FLASH	PC 01	Over voltage or over low voltage protection
3 times	FLASH	PC 02	Top temperature protection of compressor or High temperature protection of IPM module
5 times	FLASH	PC 04	Inverter compressor drive error
7 times	FLASH	PC 03	High pressure protection or low pressure protection (for some models)
14 times	OFF	EC 0d	Outdoor unit malfunction
1 time	ON	--	Indoor units mode conflict (match with multi outdoor unit)

For additional diagnostic information, refer to the *Service Manual*.

