40MBFAQ
Floor Console Ductless System
Size 12K

Installation Instructions

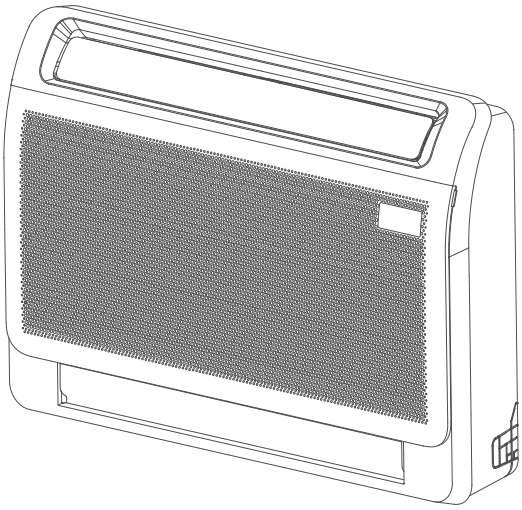


Fig. 1 — Floor Console 12K

NOTE: Read the entire instruction manual before starting the installation. Images are for illustration purposes only. Actual models may differ slightly.

TABLE OF CONTENTS

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 cleaning coils. 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 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 National Electrical Code (NEC) for special requirements.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit and in instruction manuals, be alert to the potential for personal injury.

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 will result in enhanced installation, reliability, or operation.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

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

Before installing or servicing unit, always turn off all power to the unit. There may be more than one disconnect switch. Turn off the accessory heater power if applicable. 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.

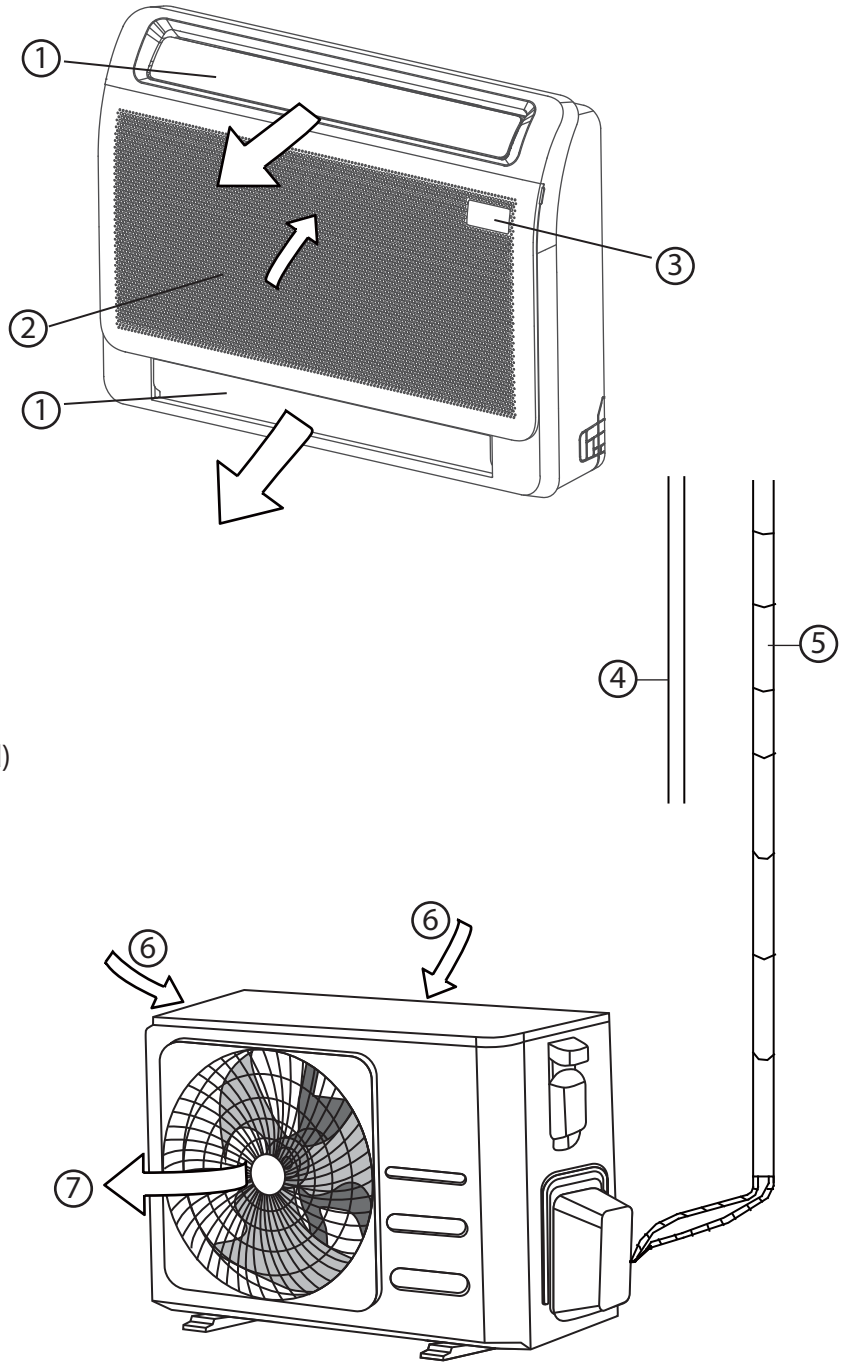
⚠ CAUTION

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 startup.

PARTS LIST

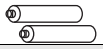
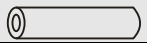


① Air flow louver (at air outlet)
② Air inlet (with air filter installed)
③ Display panel
④ Drain pipe
⑤ Connecting pipe
⑥ Air inlet
⑦ Air outlet

Fig. 2 — Parts

ACCESSORIES

Table 1 — Accessories

ACCESSORY	QUANTITY	SHAPE
Literature package including owner's manuals, installation instructions and warranty card	3	
Wireless remote controller	1	
Batteries	2	
Heat insulation pipe	1	
Copper nut	2	
Air freshening filter	2	

NOTES:

- If the outdoor unit is higher than the indoor unit, prevent rain from flowing into the indoor unit along the connection pipe by creating a downward arc in the connection pipe before it enters the wall and enters the indoor unit. Doing so helps ensure rain drips from the connection pipe before it enters the wall.

- Piping and the interconnecting wiring are field supplied.

Table 2 — Indoor Unit Model Number

KBTUH	V-PH-HZ	ID MODEL NO.
12	208/230-1-60	40MBFAQ12XA3

SYSTEM REQUIREMENTS

Allow sufficient space for airflow and servicing unit (see Fig. 3 — on page 6 for the minimum required distances between the unit and 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 3 lists the pipe sizes for the indoor unit. Refer to the outdoor unit installation instructions for other allowed piping lengths and refrigerant information.

Table 3 — Indoor Unit Pipe Sizes

NAME	12K
LIQUID PIPE	Ø1/4" (6.35)
GAS PIPE	Ø1/2" (12.7)

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:

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.

⚠ WARNING

ELECTRICAL 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.

NOTE: Before performing any electrical work, read these regulations.

1. All wiring must comply with the local and national electrical codes, regulations and must be installed by a licensed electrician.
2. All electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
3. If there is a serious safety issue with the power supply, stop work immediately. Explain your reasoning to the client, and do not install the unit until the safety issue is properly resolved.
4. Power voltage should be within 90-110% of rated voltage. Insufficient power supply can cause malfunction, electrical shock, or fire.
5. If connecting power to wiring, a surge protector and main power switch should be installed.
6. If connecting power to fixed wiring, a switch or circuit breaker that disconnects all poles and has a contact separation of at least 1/8in (3mm) must be incorporated in the fixed wiring. The qualified technician must use an approved circuit breaker or switch.
7. Only connect the unit to an individual branch circuit outlet. **Do not** connect another appliance to that outlet.
8. Make sure to properly ground the air conditioner.
9. Every wire must be firmly connected. Loose wiring can cause the terminal to overheat, resulting in product malfunction and possible fire.
10. **Do not** allow wires to touch or rest against the refrigerant tubing, the compressor, or any moving parts within the unit.
11. 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 touching the electrical components.
12. Make sure that you do not cross your electrical wiring with your signal wiring. This may cause distortion and interference.
13. The unit must be connected to the main outlet.
14. No other equipment should be connected to the same power circuit.
15. Connect the outdoor wires before connecting the indoor wires.

DIMENSIONS AND CLEARANCES

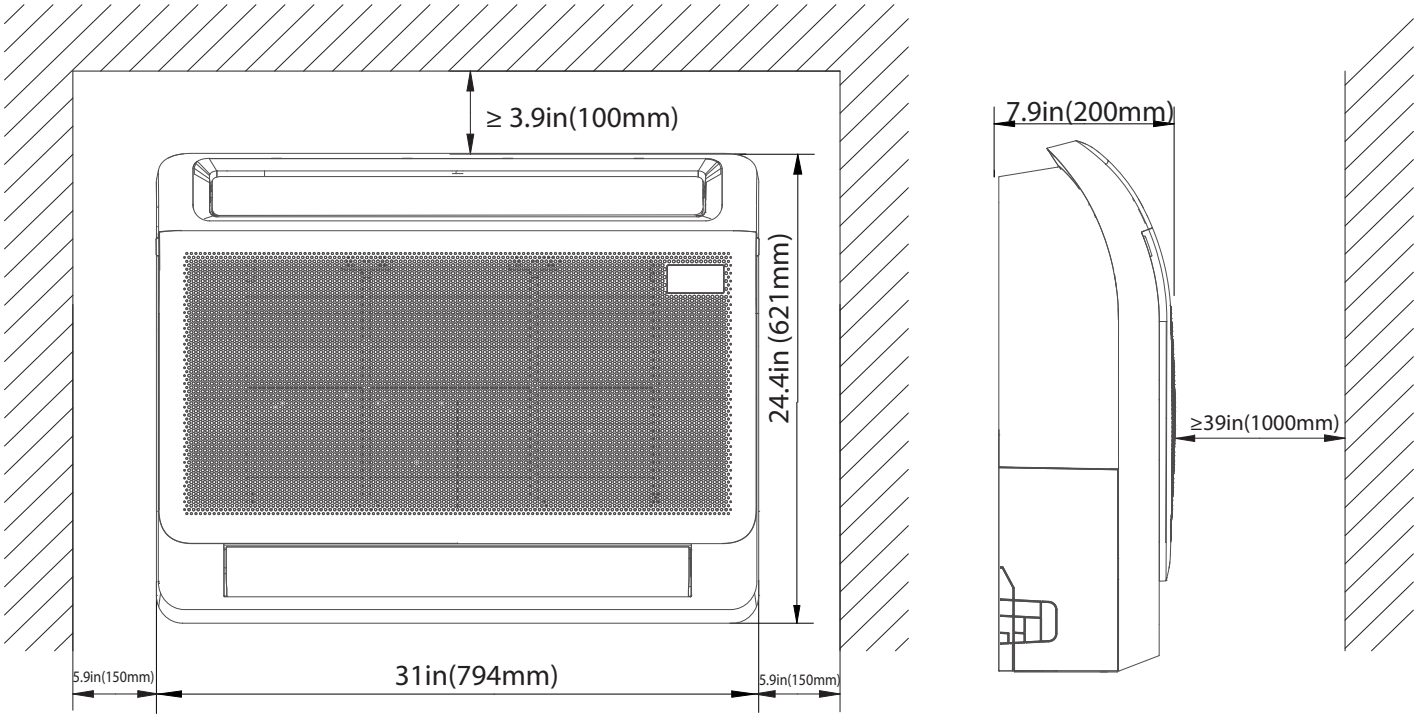


Fig. 3 — Dimensions and Clearances

PRIOR TO INSTALLATION

REFRIGERANT PIPING CONNECTION

NOTE: When connecting refrigerant piping, do not allow substances or gases other than the specified refrigerant to enter the unit. The presence of other gases or substances will lower the unit's capacity, and can cause abnormally high pressure in the refrigeration cycle. This can cause explosion and injury.

NOTE: Ensure that the length of the refrigerant pipe, the number of bends, and the drop height between the indoor and outdoor units meets the requirements listed in Table 4.

Table 4 — Maximum Length and Drop Height Based on Models

CAPACITY (BTU/H)	PIPING LENGTH	MAXIMUM DROP HEIGHT
12K	15/49	8/26

CAUTION

The branching pipe must be installed horizontally. An angle of more than 10° may cause malfunction.

DO NOT install the connecting pipe until both indoor and outdoor units have been installed.

Insulate both the gas and liquid piping to prevent water leakage.

Step 1 - Cut Pipes

When preparing refrigerant pipes, take extra care to cut and flare them properly. This ensures efficient operation and minimizes the need for future maintenance.

1. Measure the distance between the indoor and outdoor units.
2. Using a pipe cutter, cut the pipe a little longer than the measured distance.
3. Ensure the pipe is cut at a perfect 90° angle.

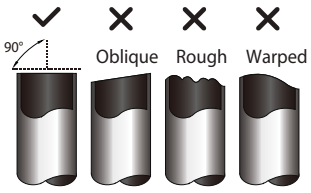


Fig. 4 — Pipe Cutter

CAUTION

DO NOT DEFORM PIPE WHILE CUTTING

Be extra careful not to damage, dent, or deform the pipe while cutting. This drastically reduces the heating efficiency of the unit.

Step 2 - Remove Burrs

Burrs can affect the air-tight seal of refrigerant piping connection. They must be completely removed.

1. Hold the pipe at a downward angle to prevent burrs from falling into the pipe.
2. Using a reamer or deburring tool, remove all burrs from the cut section of the pipe.

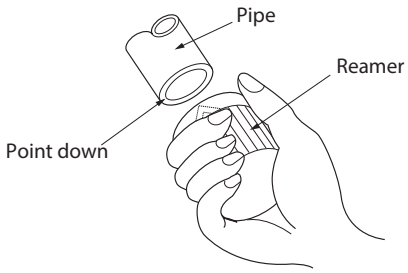


Fig. 5 — Reamer

Step 3 - Flare Pipe Ends

Proper flaring is essential to achieving an airtight seal.

1. After removing burrs from cut pipe, seal the ends with PVC tape to prevent foreign materials from entering the pipe.
2. Sheath the pipe with insulating material.
3. Place are nuts on both ends of pipe. Ensure they are facing in the right direction, because you can not put them on or change their direction after flaring.

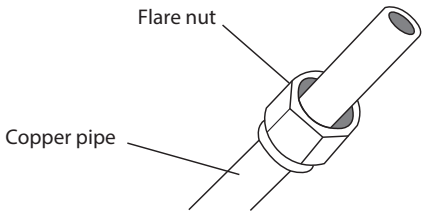


Fig. 6 — Flare Pipe Ends

4. Remove PVC tape from the pipe ends when ready to perform flaring work.
5. Clamp flare form on the end of the pipe. The end of the pipe must extend beyond the flare form.

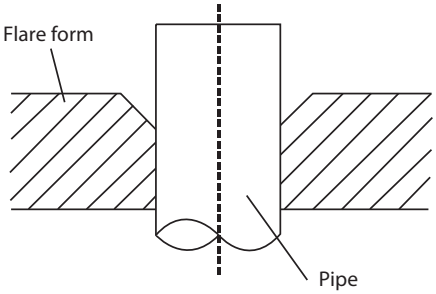


Fig. 7 — Clamp Flare Form

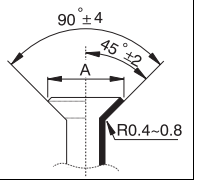
6. Place the flaring tool onto the form.

Table 5 — Specifications

OUTER DIAM. IN.(MM)	IN. (MM)	
	MAX.	MIN.
Ø1/4" (6.35)	0.05 (1.3)	0.03 (0.7)
Ø3/8" (9.52)	0.06 (1.6)	0.04 (1.0)
Ø1/2" (12.7)	0.07 (1.8)	0.04 (1.0)

7. Turn the flaring tool handle clockwise until the pipe is fully flared. Flare the pipe in accordance with the dimensions.

Table 6 — Piping Extension Beyond Flare Form

Pipe Gauge	Tightening Torque	Flare Dimensions (A) (Unit: In/mm)		Flare Shape
∅1/4" (∅6.35)	13.27-14.75 lbsf-ft (180-200kgf.com)	0.33 /8.4	0.37 /8.7	
∅3/8" (∅9.52)	23.6-28.8 lbsf-ft (320-390kgf.cm)	0.52/ 13.2	0.53/ 13.5	
∅1/2" (∅12.7)	36.14-43.52 lbsf-ft (490-590kgf.cm)	0.64/ 16.2	0.65/ 16.5	

8. Remove the flaring tool and flare form, then inspect the end of the pipe for cracks and even flaring.

Step 4 - Connect the Pipes

Connect the copper pipes to the indoor unit first, then connect them to the outdoor unit. Connect the low pressure pipe then the high pressure pipe.

1. When connecting the flare nuts, apply a thin coat of refrigeration oil to the flared ends of the pipes.
2. Align the center of the two pipes to connect.

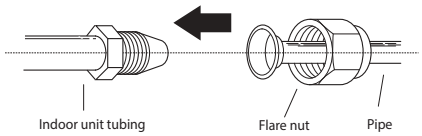


Fig. 8 — Align the Pipes

3. Tighten the flare nut as tight as possible by hand.
4. Use an adjustable wrench, grip the nut on the unit tubing.
5. While firmly gripping the nut, use a torque wrench to tighten the flare nut according to the torque values in Table 6 on page 8.

NOTE: Use an adjustable wrench and a torque wrench when connecting or disconnecting pipe to or from the unit.

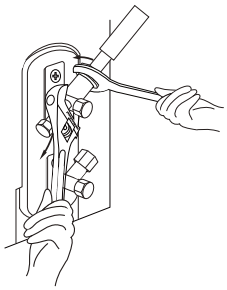


Fig. 9 — Torque fittings

⚠ CAUTION

- Be sure to wrap the insulation around the piping. Direct contact with the bare piping may result in burns or frostbite.
- Ensure the pipe is properly connected. Over tightening may damage the bell mouth and under tightening may lead to leakage.

NOTE: Carefully bend the tubing in the middle. DO NOT bend the tubing more than 90 degrees or more than three times.

6. After connecting the copper pipes to the indoor unit, wrap the power cable, signal cable and the piping together with binding tape.

NOTE: DO NOT intertwine signal cable with other wires. While bundling these items together, do not intertwine or cross the signal cable with any other wiring.

7. Thread this pipeline through the wall and connect it to the outdoor unit.
8. Insulate all the piping, including the valves of the outdoor unit.
9. Open the stop valves of the outdoor unit to start the flow of the refrigerant between the indoor and outdoor unit.

⚠ CAUTION

Ensure there is no refrigerant leak after completing the installation work. If there is a refrigerant leak, ventilate the area immediately and evacuate the system **(refer to the Air Evacuation section of this manual)**.

NOTE: After connecting the piping, wrap the connecting pipe head with the insulation pipe in the accessory package.

INTERCONNECTING PIPING

Table 7 — Tightening

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

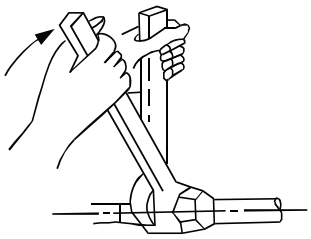


Fig. 10 — Tighten

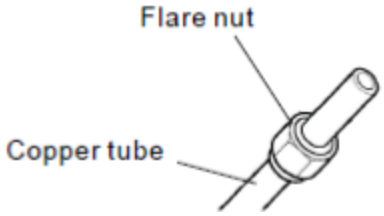


Fig. 11 — Flare Nut and Copper Tube

CONDENSATE DRAIN CONNECTION

The unit is supplied with a drain connection to connect the drain piping. When installing condensate piping, follow these recommendations:

- Condensate piping should slope downward in the direction of the condensate flow, with a minimum gradient of 1 in. per 100 inches.
- When multiple units are connected to a common condensate drain, ensure the drain is large enough to accommodate the volume of condensate from all units. It is also recommended to place an air vent in the condensate piping to prevent any air locks.
- Condensate piping must not be installed where it may be exposed to freezing temperatures.

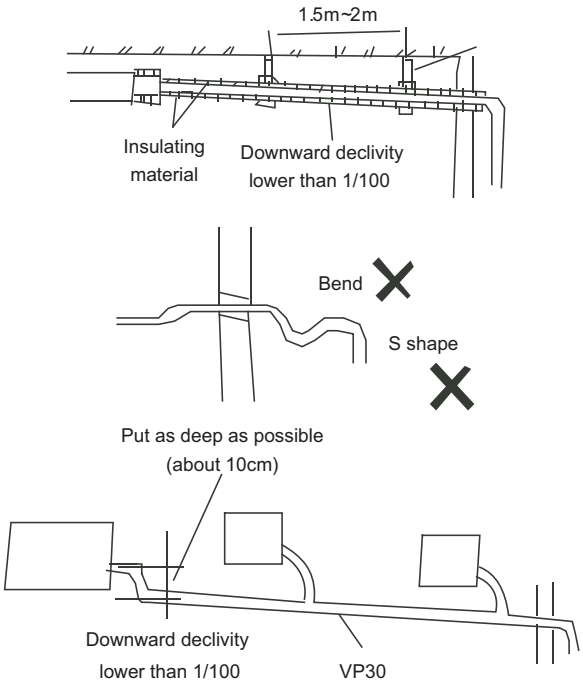


Fig. 12 —Condensate Flow

ELECTRICAL

Connections

Remove the sensing device's installation bearer (see Fig. 13).

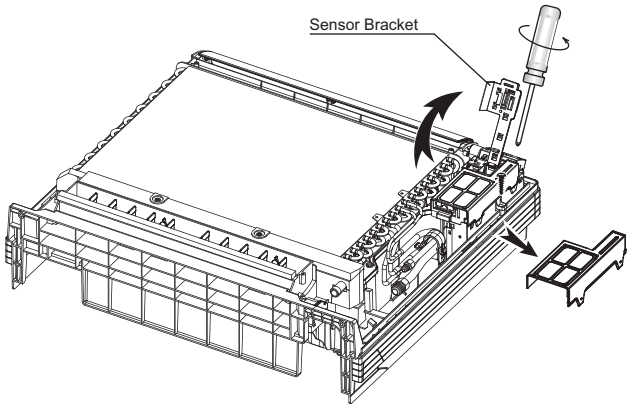


Fig. 13 — Remove the sensor bracket

ELECTRICAL DATA

Table 8 — Electrical Data

INDOOR UNITS	INDOOR FAN				MAX FUSE CB AMP
	V-PH-HZ	FLA (A)	HP	SYSTEM POWER FACTOR (%)	
12K	208-230/1/60	0.5	1/55	95.6	Refer to outdoor unit installation instructions. Indoor unit is powered by the outdoor unit.

CONNECTION DIAGRAM

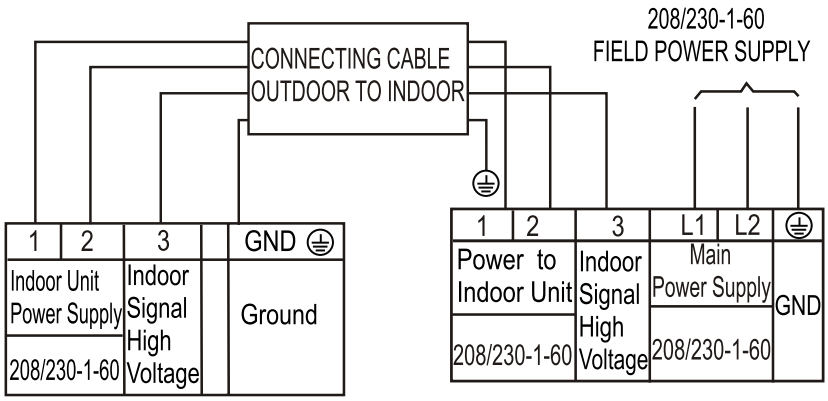


Fig. 14 — Connection Diagram Size 12

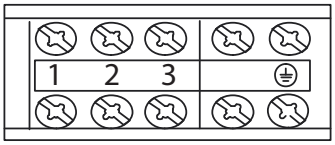


Fig. 15 — Control and Power Wiring

NOTE: For applications where gravity cannot be used for drainage, a condensate pump is required for proper drainage.

WIRING DIAGRAM

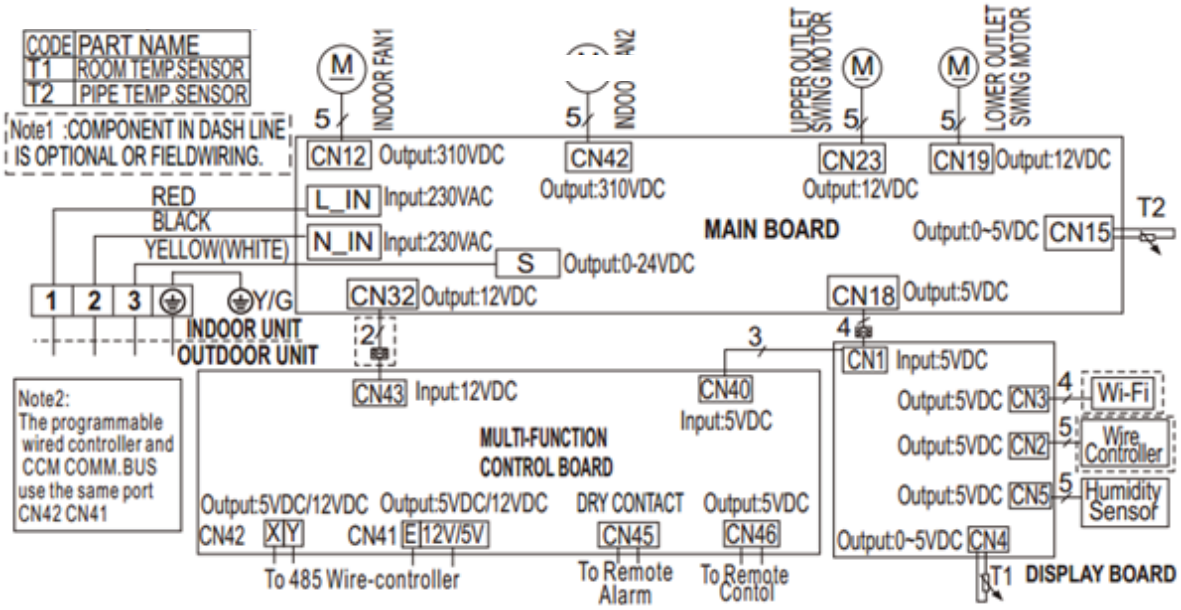


Fig. 16 — Wiring Diagram Size 12K

INSTALLATION

NOTE: Panel installation should be performed after piping and wiring have been completed.

Step 1 - Select Installation Location

Before installing the indoor unit, select an appropriate location. The following standards are provided to help select 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 connection pipe and drainage
- 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

NOTE: Recommended distances between the indoor unit. The distance between the mounted indoor unit should meet the specifications illustrated (see Fig. 3 — on page 6).

Step 2 - Installing the Main Body

1. After loosening the screws, remove the mounting plate from the unit.

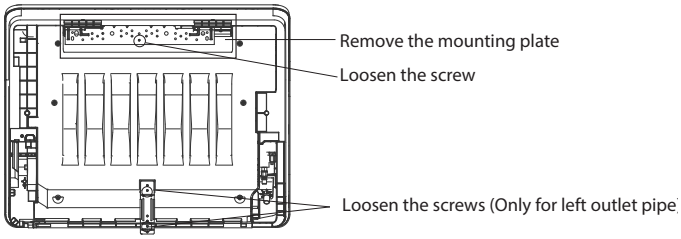


Fig. 17 — Remove the mounting plate

NOTE: If the pipe comes out on the left, it is necessary to loosen the screws on the bottom mounting plate. If the pipe comes out in other directions, it is not necessary.

2. Secure the mounting plate, with a tapping screw, onto the wall.

NOTE: It is recommended to secure it to the wall according to the hanging hole indicated by the arrow on the mounting plate. The mounting plate must be installed horizontally.

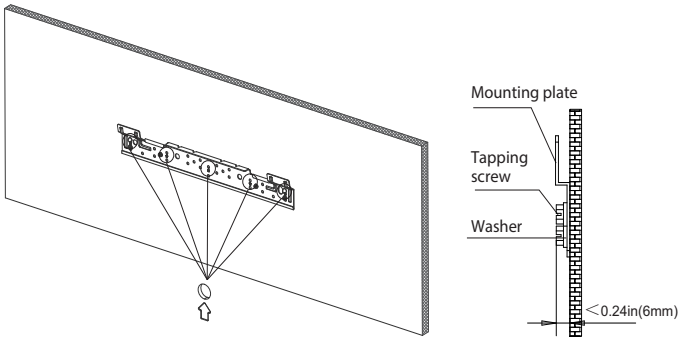


Fig. 18 — Mounting plate

3. Hang the indoor unit on the mounting plate. The unit's bottom may touch the floor or remain suspended, however the unit must be installed vertically.

NOTE: After installation, the unit should remain horizontal without tilting.

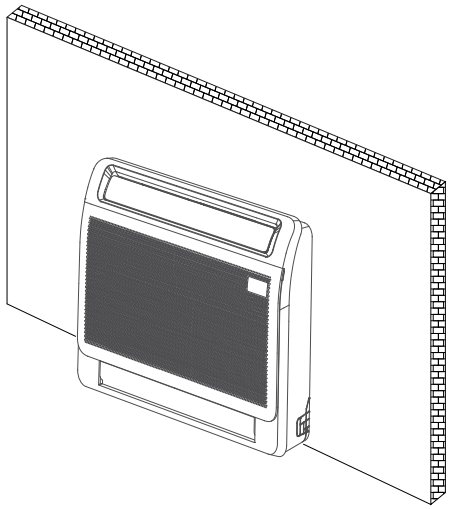


Fig. 19 — Horizontal along wall

Bottom Mounting Plate Installation

Installation with a baseboard

If there is a baseboard (see Figure 20) along the intended installation location, the bottom mounting plate (see Figure 21) needs to be straightened for unit installation. Use a pair of needle nose pliers (or a sheet metal hand seamer) to straighten the bottom mounting plate and then secure to the baseboard.

NOTE: The tab is used to secure the lineset when it comes from the left side of the unit (rear view). If the lineset comes from the right side, the tab is irrelevant and should be disregarded.

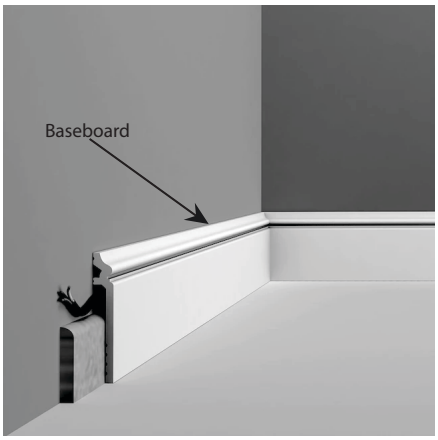


Fig. 20 — Baseboard

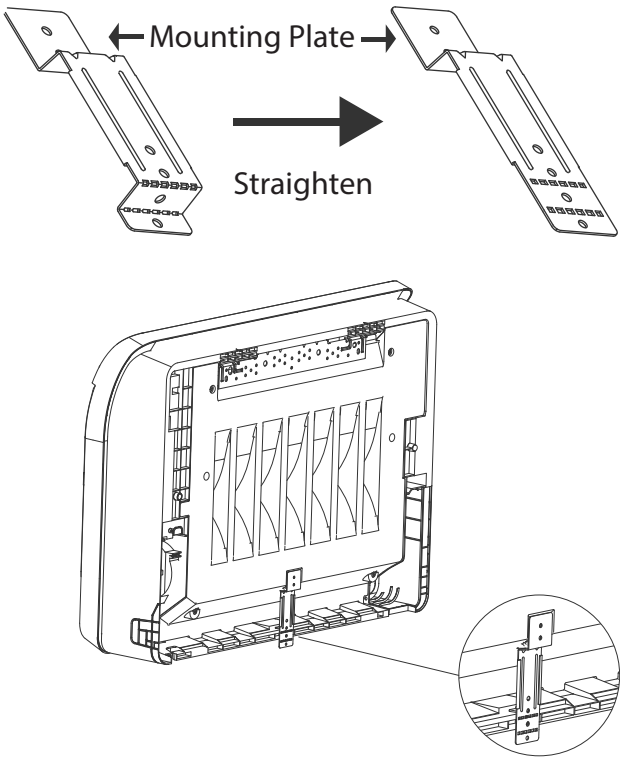
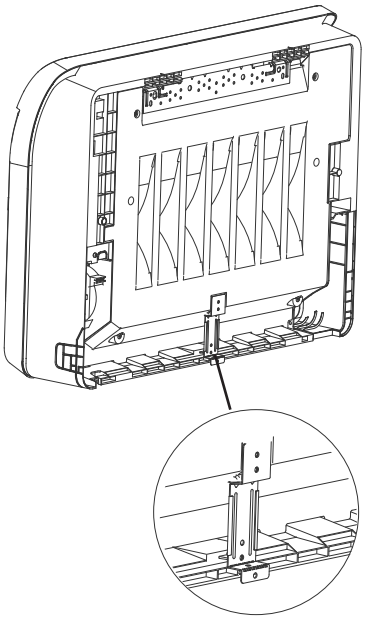


Fig. 21 — Straighten

Installation without a baseboard

The bottom mounting plate is secured directly to the wall.



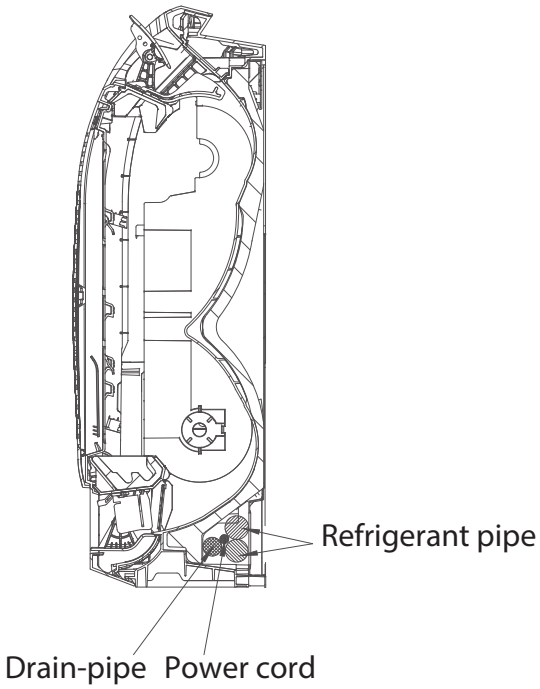


Fig. 22 — Secured to wall

NOTE: To drain smoothly, the position of the drain pipe must resemble the position in Figure 22 when discharging on the right hand side.

Step 3 - Take the Indoor Unit Apart to Connect the Pipes

1. Press and hold the two bottom straps, and then rotate to open the piping cover plate.

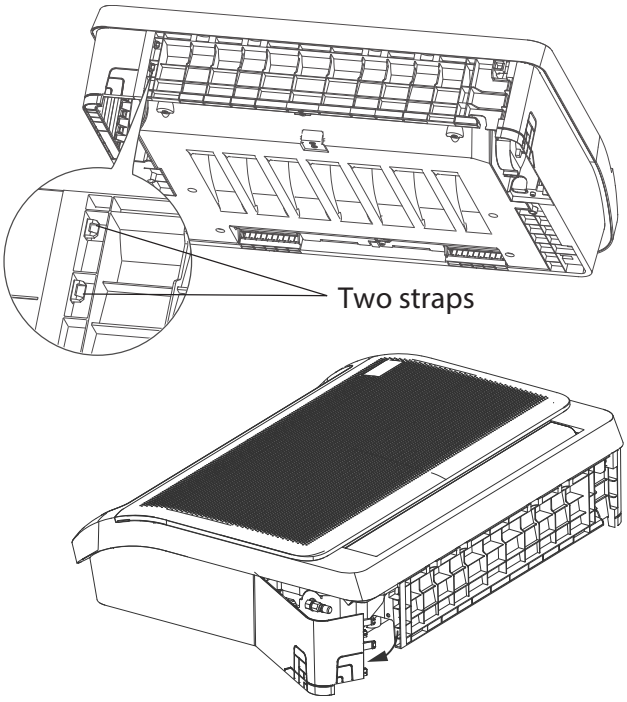


Fig. 23 — Press and hold two straps

2. Remove the pipe cover plate and install the internal and external connecting pipes.

NOTE: Install the small piping first, and then the large piping.

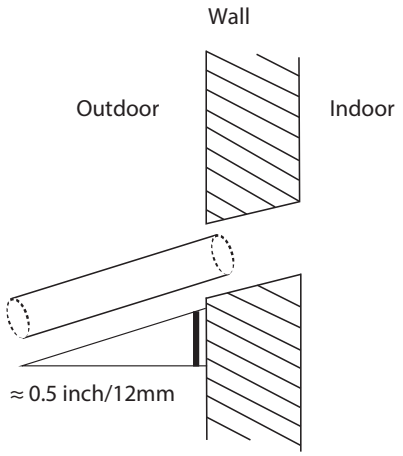
Step 4 - Drill a Wall Hole for Connective Pipe

1. Determine the location of the wall hole based on the location of the outdoor unit.
2. Use a 2.5in (65mm) or 3.54in (90mm) hole saw, 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 0.5in (12mm). This ensures proper water drainage.
3. Place the protective wall cuff in the hole. This protects the edges of the hole and helps seal it when you finish the installation.

⚠ CAUTION

EQUIPMENT DAMAGE HAZARD

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



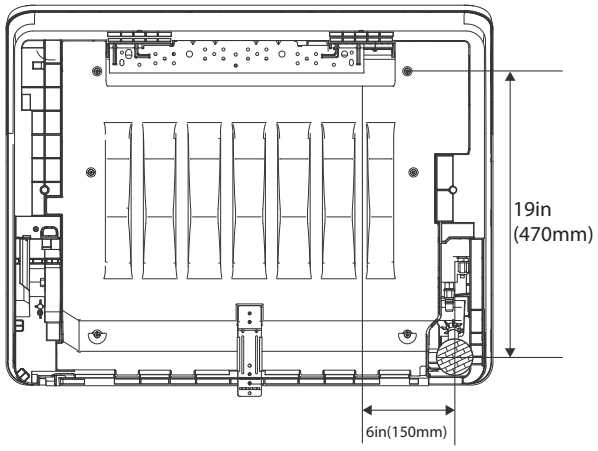


Fig. 24 — Drill the Wall Hole

Step 5 - Connect the Drain Hose

The drainpipe is used to drain water away from the unit. An 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 the **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 it.

NOTE ON PURCHASING PIPES: Installation requires a polyethylene tube (exterior diameter = 1-1/2" (3.8cm), interior diameter = 1-1/4" (3.2cm), which can be obtained at your local hardware store or dealer.

1. Cover the drainpipe with heat insulation to prevent condensation and leakage.
2. Attach the mouth of the drain hose to the unit's outlet pipe. Sheath the mouth of the hose and clip it firmly with a pipe clasp.

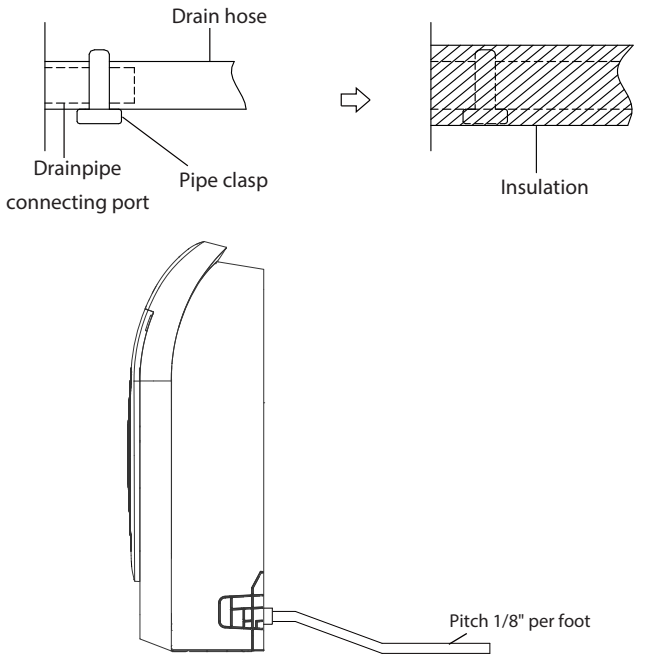


Fig. 25 — Drain Hose Installation

NOTE ON DRAINPIPE INSTALLATION

When using an extended drainpipe, tighten the indoor connection with an additional protection tube. This prevents it from pulling loose.

The drainpipe should be pitch down at 1/8" per foot to prevent water from flowing back into the air conditioner.

Incorrect installation could cause water to flow back into the unit and flood.

When connecting multiple drainpipes, install the pipes as shown in Figure 26.

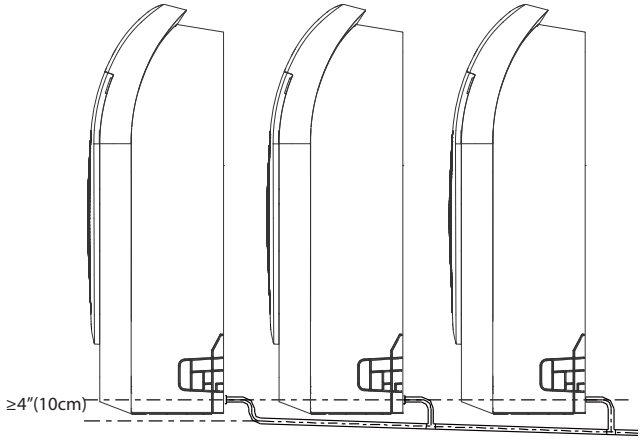


Fig. 26 — Installing Multiple Drainpipes

To ensure smooth drainage, the height difference between the wall outlet and the hanging plate must be greater than 19in(470mm).

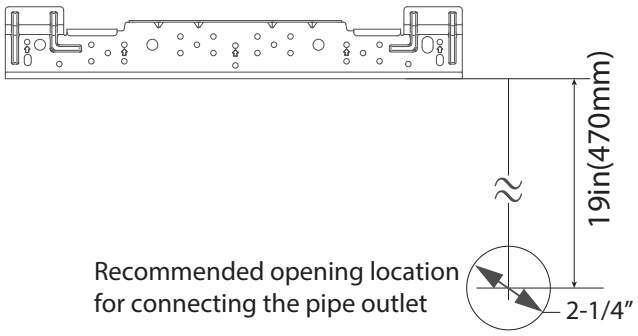


Fig. 27 — Recommended Opening Location

Drainage pipe securing requirements

When installing the drainage pipe (field supplied), secure it with a tie or rope.

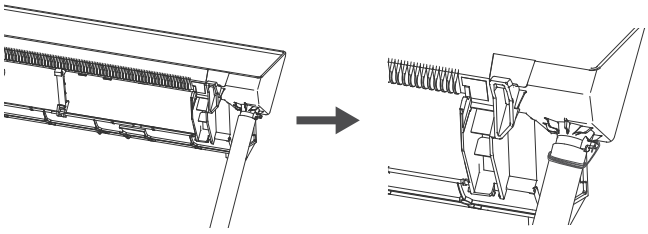


Fig. 28 — Secure the Drainage Pipe

WIRELESS REMOTE CONTROL HOLDER INSTALLATION

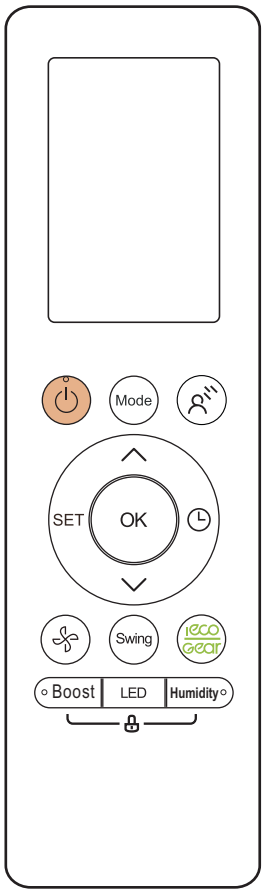


Fig. 29 — Wireless Remote RG10L3(2HS)/BGEFU1

1. Use the two screws supplied with the wireless remote control to attach the mounting bracket to the wall in a location selected by the customer and within operating range.
2. Install the batteries in the remote control.
3. Place the remote control into the remote control mounting bracket.

NOTE: For remote control operation, refer to the remote control's owners manual.

OPTIONAL WIRED WALL-MOUNTED REMOTE CONTROL INSTALLATION

NOTE: For setup instructions, refer to the Wired Controller Installation Manual (KSACN0801AAA).

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 tubes to the outside wall, when possible.
5. Seal the hole through which the cables and tubing pass.

INDOOR UNIT

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

Explain the Following Items To the 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 the air deflection louver.
4. Explain care and maintenance.
5. Present the owner's manual and installation instructions to customer.

TROUBLESHOOTING

⚠ CAUTION

SAFETY PRECUATIONS
If any of the following conditions occurs, turn off your unit immediately:
The power cord is damaged or abnormally warm
You smell a burning odor
The unit emits loud or abnormal sounds
A power fuse blows or the circuit breaker frequently trips
Water or other objects fall into or out of the unit
DO NOT ATTEMPT TO FIX THESE YOURSELF! CONTACT AN AUTHORIZED SERVICE PROVIDER IMMEDIATELY!

Common Issues

The issues listed in Table 9 are not malfunctions and in most situations will not require repairs.

Table 9 — Common Issues

ISSUE	POSSIBLE CAUSES
Unit does not turn on when pressing **ON/OFF**	The unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off.
	Cooling and Heating Models: If the Operation light and PRE-DEF (Pre-heating/Defrost) indicators are illuminated, or the Operation light is illuminated and the LCD screen displays **"dF"**, the outdoor temperature is too cold and the unit's anti-cold wind is activated to defrost the unit.
The unit changes from **COOL** mode to **FAN** mode	The unit may change its setting to prevent frost from forming on the unit. Once the temperature increases, the unit starts operating in the previously selected mode again.
	The set temperature has been reached, at which point the unit turns off the compressor. The unit continues operating when the temperature fluctuates again.
The indoor unit emits white mist	In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.
Both the indoor and outdoor units emit white mist	When the unit restarts in **HEAT** mode after defrosting, white mist may be emitted due to moisture generated from the defrosting process.
The indoor unit makes noises	A squeaking sound is heard when the system is **OFF** or in **COOL** mode. The noise is also heard when the drain pump (optional) is in operation.
	A squeaking sound may occur after running the unit in **HEAT** mode due to expansion and contraction of the unit's plastic parts.
Both the indoor unit and outdoor unit make noises	Low hissing sound during operation: This is normal and is caused by refrigerant gas flowing through both indoor and outdoor units.
	Low hissing sound when the system starts, has just stopped running, or is defrosting: This noise is normal and is caused by the refrigerant gas stopping or changing direction.
	Squeaking sound: Normal expansion and contraction of plastic and metal parts caused by temperature changes during operation can cause squeaking noises.
The outdoor unit makes noises	The unit will make different sounds based on its current operating mode.
Dust emits from either the indoor or outdoor unit	The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.
The unit emits a bad odor	The unit may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operations.
	The unit's filters have become moldy and should be cleaned.
The fan of the outdoor unit does not operate	During operation, the fan speed is controlled to optimize product operation.

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

NOTE: When troubles occur, check the following points before contacting a repair company.

Table 10 — Troubleshooting

RUNNING LAMP	TIMER LAMP	DISPLAY	MALFUNCTION AND PROTECTION DEFINITION
★1 time	X	E0	Indoor EEPROM malfunction
★2 times	X	E1	Indoor and outdoor unit communication malfunction
★4 times	X	E3	Indoor fan speed malfunction
★5 times	X	E4	Indoor room temperature sensor error
★6 times	X	E5	Evaporator coil temperature sensor leak
★7 times	X	EC	Refrigerant leak detection system malfunction
★8 times	X	EE	Water level alarm malfunction
★11 times	X	Ed	Wrong outdoor unit
★1 time	●	F0	Overload protection
★2 times	●	F1	Outdoor temperature sensor error
★3 times	●	F2	Outdoor condenser pipe sensor error
★4 times	●	F3	Discharge air temperature sensor error
★5 times	●	F4	Outdoor EEPROM error
★6 times	●	F5	Outdoor fan speed (DC fan motor only) malfunction
★7 times	●	F6	T2b sensor error
★8 times	●	F7	Auto-lifting panel communication error
★9 times	●	F8	Auto-lifting panel malfunction
★10 times	●	F9	Auto-lifting panel is open
★1 time	★	P0	Inverter module IPM protection
★2 times	★	P1	High/Low voltage protection
★3 times	★	P2	Compressor top overheating protection
★4 times	★	P3	Outdoor low temperature protection
★5 times	★	P4	Compressor drive error
★6 times	★	--	Mode conflict
★7 times	★	P6	Compressor low-pressure protection
★8 times	★	P7	Outdoor IGBT sensor error

NOTE: ★FLASH, ●LIGHT, X EXTINGUISHED

DUCTLESS START-UP CHECKLIST - Single Zone

Installation Data

Site Address:_____

City:_____ **State:**_____ **Zip Code:**_____

Installing Contractor:_____ **Contractor Contact #:** ( ) _____-_____

Job Name:_____ **Start-up Date:**_____

Distributor:_____

System Details

UNITS	MODEL NO.	SERIAL NO.	CONTROLLER
OUTDOOR UNIT			
INDOOR UNIT A			

Are the outdoor unit and indoor unit compatible? YES:_____ NO:_____

Wiring Electrical

Wire Size and Type Used? AWG:_____ TYPE:_____

Are there any breaks, splices, wire nuts or butt connectors between the outdoor unit and the indoor unit? YES:_____ NO:_____

Was the wiring from the outdoor unit port to the correct indoor unit verified? YES:_____ NO:_____

REMARKS:_____

_____

Voltage Check

Wiring: Single Zone

Outdoor Unit Disconnect	1(L1):GND		Outdoor Unit Terminal Block	1(L1):GND		**NOTES:**
	2(L2):GND			2(L2):GND		
	1(L1):L2(2)			1(L1):2(L2)		
Indoor Unit Voltage Check @ Outdoor Unit	1(L1):GND		Indoor Unit Voltage Check @ Indoor Unit	1(L1):GND		**NOTES:**
	2(L2):GND			2(L2):GND		
	1(L1):2(L2)			1(L1):2(L2)		
	2(L2):3(S)			2(L2):3(S)		

Outdoor Unit Disconnect	1(L1):GND		Outdoor Unit Terminal Block	1(L1):GND		**NOTES:**
	2(L2):GND			2(L2):GND		
	1(L1):L2(2)			1(L1):2(L2)		
Indoor Unit Voltage Check @ Outdoor Unit	1(L1):GND		Indoor Unit Voltage Check @ Indoor Unit	1(L1):GND		**NOTES:**
	2(L2):GND			2(L2):GND		
	1(L1):2(L2)			1(L1):2(L2)		
	2(L2):3(S)			2(L2):3(S)		

Ductless Start-Up Checklist (CONT)

Piping

Leak Check:
System held 500 psig (max. 550psi) for a minimum of 30 minutes using dry nitrogen. YES:_____ NO:_____

Evacuation Method:

- Was the Triple Evacuation Method used as outlined in the installation manual? YES:_____ NO:_____
- Was the Deep Vacuum Method used as outlined in the installation manual? YES:_____ NO:_____
- Did the System Hold 500 microns for 1 hour? YES:_____ NO:_____
- Does the line set match the diameter of the evaporator connections? YES:_____ NO:_____
- For Conventional Fan Coils, does the line set match the outdoor unit size? YES:_____ NO:_____

Single Zone Piping:
Has the liquid pipe length been measured and the additional charge calculated? Size:_____ Length:_____ Charge:_____

NOTES:

PORT	LIQUID SIZE		SUCTION SIZE		LENGTH	CHARGE	NOTES:_____
A							

Performance Check

For 1:1 Single Zone Systems: Adjust the set-point to create an operational call for the desired testing operation. Allow the system to run for a minimum of 10 min. and record the following details:

(Operational data recorded on applicable heads with the wireless remote controller's Point Check function)

UNIT	SET-POINT	MODE	T1	T2	T3	T4	Tb	Tp	Th	LA/Lr
A										

NOTE:

- T1 - Ambient Space Temperature Sensor
- T2 - IDU Coil Temperature Sensor
- T3 - Outdoor Coil Temperature Sensor
- T4 - Outdoor Ambient Temperature
- Tb - Suction Line Temperature @PMV
- Tp - Discharge Temperature Sensor
- Th - IPM Board Temperature
- LA/Lr - PMV Position

Error Codes

Were there any error codes present at start-up? YES:_____ NO:_____

		Notes:
Indoor Unit Error Code:		
Outdoor Unit Error Code:		
Wall Controller:		
24V Interface:		

Comments:

_____

_____

_____

Edition Date: 01/23
Catalog No: IM-40MBFAQ-01
Replaces: NEW