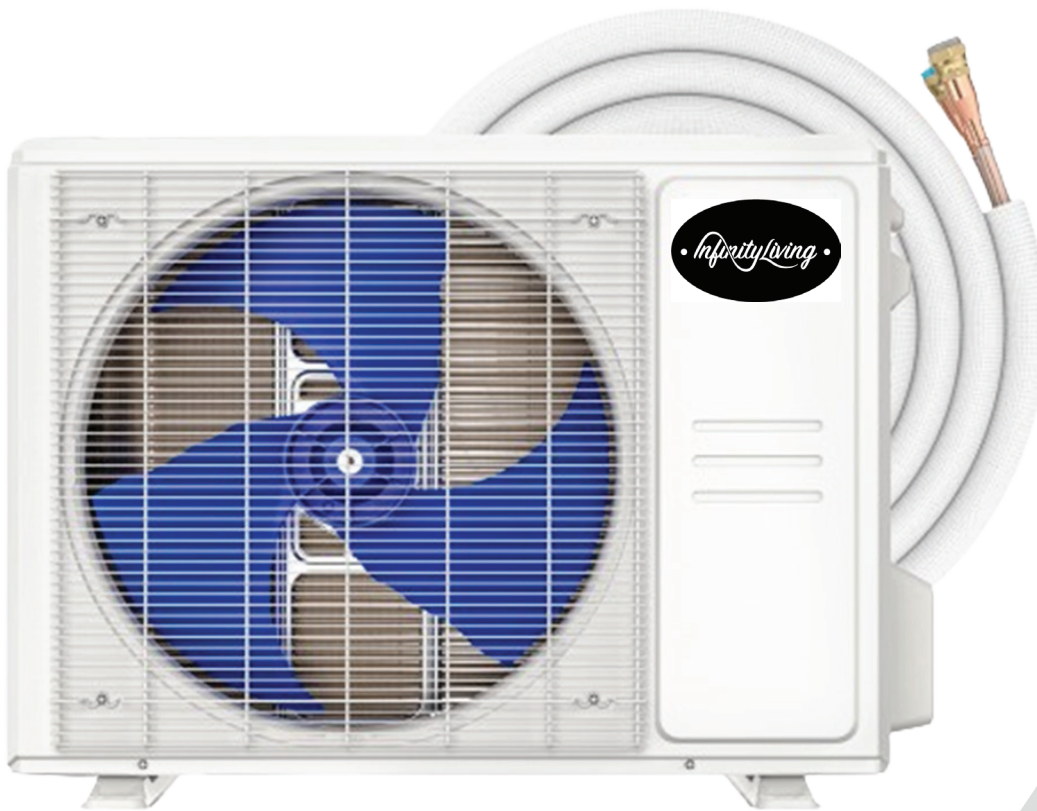




**INFINITY LIVING PRE-CHARGED LINE SET
WITH DIYCOOL TECHNOLOGY**

INSTALLATION MANUAL



IMPORTANT NOTE:

Read this manual carefully before installing or operating your system. Please be sure to save this manual for future reference.

Version Date: 06-26-24

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Safety Precautions

Read Safety Precautions Before Operation and Installation

Incorrect installation due to ignoring instructions can cause serious damage or injury.

The seriousness of potential damage or injuries is classified as either a **WARNING** or **CAUTION**



WARNING

This symbol indicates the possibility of personnel injury or loss of life.



CAUTION

This symbol indicates the possibility of property damage or serious consequences.



WARNING

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision (European Union countries).

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.



WARNINGS FOR PRODUCT USE

- If an abnormal situation arises (like a burning smell), immediately turn off the unit and disconnect the power. Call your dealer for instructions to avoid electric shock, fire or injury.
- **Do not** insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- **Do not** use flammable sprays such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.
- **Do not** operate the air conditioner in places near or around combustible gases. Emitted gas may collect around the unit and cause explosion.
- **Do not** operate your air conditioner in a wet room such as a bathroom or laundry room. Too much exposure to water can cause electrical components to short circuit.
- **Do not** expose your body directly to cool air for a prolonged period of time.
- **Do not** allow children to play with the air conditioner. Children must be supervised around the unit at all times.
- If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
- In certain functional environments, such as kitchens, server rooms, etc., the use of specially designed air-conditioning units is highly recommended.

CLEANING AND MAINTENANCE WARNINGS

- Turn off the device and disconnect the power before cleaning. Failure to do so can cause electrical shock.
- **Do not** clean the air conditioner with excessive amounts of water.
- **Do not** clean the air conditioner with combustible cleaning agents. Combustible cleaning agents can cause fire or deformation.

CAUTION

- Turn off the air conditioner and disconnect the power if you are not going to use it for a long time.
- Turn off and unplug the unit during storms.
- Make sure that water condensation can drain unhindered from the unit.
- **Do not** operate the air conditioner with wet hands. This may cause electric shock.
- **Do not** use device for any other purpose than its intended use.
- **Do not** climb onto or place objects on top of the outdoor unit.
- **Do not** allow the air conditioner to operate for long periods of time with doors or windows open, or if the humidity is very high.

ELECTRICAL WARNINGS

- Only use the specified power cord. If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Keep power plug clean. Remove any dust or grime that accumulates on or around the plug. Dirty plugs can cause fire or electric shock.
- **Do not** pull power cord to unplug unit. Hold the plug firmly and pull it from the outlet. Pulling directly on the cord can damage it, which can lead to fire or electric shock.
- **Do not** modify the length of the power supply cord or use an extension cord to power the unit.
- **Do not** share the electrical outlet with other appliances. Improper or insufficient power supply can cause fire or electrical shock.
- The product must be properly grounded at the time of installation, or electrical shock may occur.
- For all electrical work, follow all local and national wiring standards, regulations, and the Installation Manual. Connect cables tightly, and clamp them securely to prevent external forces from damaging the terminal. Improper electrical connections can overheat and cause fire, and may also cause shock. All electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
- All wiring must be properly arranged to ensure that the control board cover can close properly. If the control board cover is not closed properly, it can lead to corrosion and cause the connection points on the terminal to heat up, catch fire, or cause electrical shock.
- If connecting power to fixed wiring, an all-pole disconnection device which has at least 3mm clearances in all poles, and have a leakage current that may exceed 10mA, the residual current device(RCD) having a rated residual operating current not exceeding 30mA, and disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

TAKE NOTE OF FUSE SPECIFICATIONS

The air conditioner's circuit board (PCB) is designed with a fuse to provide overcurrent protection. The specifications of the fuse are printed on the circuit board, such as :
T3.15AL/250VAC, T5AL/250VAC, T3.15A/250VAC, T5A/250VAC, T20A/250VAC, T30A/250VAC, etc.

NOTE: For the units using R32 or R290 refrigerant, only the blast-proof ceramic fuse can be used.



WARNINGS FOR PRODUCT INSTALLATION

1. Installation must be performed by an authorized dealer or specialist. Defective installation can cause water leakage, electrical shock, or fire.
2. Installation must be performed according to the installation instructions. Improper installation can cause water leakage, electrical shock, or fire.
(In North America, installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.)
3. Contact an authorized service technician for repair or maintenance of this unit. This appliance shall be installed in accordance with national wiring regulations.
4. Only use the included accessories, parts, and specified parts for installation. Using non-standard parts can cause water leakage, electrical shock, fire, and can cause the unit to fail.
5. Install the unit in a firm location that can support the unit's weight. If the chosen location cannot support the unit's weight, or the installation is not done properly, the unit may drop and cause serious injury and damage.
6. Install drainage piping according to the instructions in this manual. Improper drainage may cause water damage to your home and property.
7. For units that have an auxiliary electric heater, **do not** install the unit within 1 meter (3 feet) of any combustible materials.
8. **Do not** install the unit in a location that may be exposed to combustible gas leaks. If combustible gas accumulates around the unit, it may cause fire.
9. Do not turn on the power until all work has been completed.
10. When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.
11. How to install the appliance to its support, please read the information for details in "indoor unit installation" and "outdoor unit installation" sections.

Note about Fluorinated Gasses (Not applicable to the unit using R290 Refrigerant)

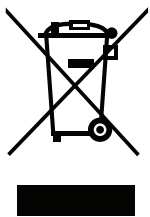
1. This air-conditioning unit contains fluorinated greenhouse gasses. For specific information on the type of gas and the amount, please refer to the relevant label on the unit itself or the "Owner's Manual - Product Fiche" in the packaging of the outdoor unit. (European Union products only).
2. Installation, service, maintenance and repair of this unit must be performed by a certified technician.
3. Product uninstallation and recycling must be performed by a certified technician.
4. For equipment that contains fluorinated greenhouse gases in quantities of 5 tonnes of CO₂ equivalent or more, but of less than 50 tonnes of CO₂ equivalent, If the system has a leak-detection system installed, it must be checked for leaks at least every 24 months.
5. When the unit is checked for leaks, proper record-keeping of all checks is strongly recommended.

WARNING for Using R32/R290 Refrigerant

- When flammable refrigerant are employed, appliance shall be stored in a well -ventilated area where the room size corresponds to the room area as specific for operation.
For R32 frigerant models:
Appliance shall be installed, operated and stored in a room with a floor area larger than 4m².
Appliance shall not be installed in an unvertilated space, if that space is smaller than 4m².
For R290 refrigerant models, the minimum room size needed:
<=9000Btu/h units: 13m²
>9000Btu/h and <=12000Btu/h units: 17m²
>12000Btu/h and <=18000Btu/h units: 26m²
>18000Btu/h and <=24000Btu/h units: 35m²
- Reusable mechanical connectors and flared joints are not allowed indoors. (**EN** Standard Requirements).
- Mechanical connectors used indoors shall have a rate of not more than 3g/year at 25% of the maximum allowable pressure. When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated. (**UL** Standard Requirements)
- When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated. (**IEC** Standard Requirements)

European Disposal Guidelines

This marking shown on the product or its literature, indicates that waste electrical and eletrical equipment should not be mixed with general household waste.



Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

This appliance contains refrigerant and other potentially hazardous materials. When disposing of this appliance, the law requires special collection and treatment. **Do not** dispose of this product as household waste or unsorted municipal waste.

When disposing of this appliance, you have the following options:

- Dispose of the appliance at designated municipal electronic waste collection facility.
- When buying a new appliance, the retailer will take back the old appliance free of charge.
- The manufacturer will take back the old appliance free of charge.
- Sell the appliance to certified scrap metal dealers.

Special notice

Disposing of this appliance in the forest or other natural surroundings endangers your health and is bad for the environment. Hazardous substances may leak into the ground water and enter the food chain.

Troubleshooting



SAFETY PRECAUTIONS

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

Issue	Possible Causes
Unit does not turn on when pressing ON/OFF button	The Unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off.
The unit changes from COOL/HEAT mode to FAN mode	The unit may change its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating in the previously selected mode again.
	The set temperature has been reached, at which point the unit turns off the compressor. The unit will continue operating when the temperature fluctuates again.
The indoor unit emits white mist	In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.
Both the indoor and outdoor units emit white mist	When the unit restarts in HEAT mode after defrosting, white mist may be emitted due to moisture generated from the defrosting process.
The indoor unit makes noises	A rushing air sound may occur when the louver resets its position.
	A squeaking sound may occur after running the unit in HEAT mode due to expansion and contraction of the unit's plastic parts.
Both the indoor unit and 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.

Issue	Possible Causes
The outdoor unit makes noises	The unit will make different sounds based on its current operating mode.
Dust is emitted from either the indoor or outdoor unit	The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.
The unit emits a bad odor	The unit may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during 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.
Operation is erratic, unpredictable, or unit is unresponsive	Interference from cell phone towers and remote boosters may cause the unit to malfunction. In this case, try the following: <ul style="list-style-type: none"> • Disconnect the power, then reconnect. • Press ON/OFF button on remote control to restart 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 your model number.

Troubleshooting

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




Problem	Possible Causes	Solution
Poor Cooling Performance	Temperature setting may be higher than ambient room temperature	Lower the temperature setting
	The heat exchanger on the indoor or outdoor unit is dirty	Clean the affected heat exchanger
	The air filter is dirty	Remove the filter and clean it according to instructions
	The air inlet or outlet of either unit is blocked	Turn the unit off, remove the obstruction and turn it back on
	Doors and windows are open	Make sure that all doors and windows are closed while operating the unit
	Excessive heat is generated by sunlight	Close windows and curtains during periods of high heat or bright sunshine
	Too many sources of heat in the room (people, computers, electronics, etc.)	Reduce amount of heat sources
	Low refrigerant due to leak or long-term use	Check for leaks, re-seal if necessary and top off refrigerant
SILENCE function is activated (optional function)	SILENCE function can lower product performance by reducing operating frequency. Turn off SILENCE function.	

Problem	Possible Causes	Solution
The unit is not working	Power failure	Wait for the power to be restored
	The power is turned off	Turn on the power
	The fuse is burned out	Replace the fuse
	Remote control batteries are dead	Replace batteries
	The Unit's 3-minute protection has been activated	Wait three minutes after restarting the unit
	Timer is activated	Turn timer off
The unit starts and stops frequently	There's too much or too little refrigerant in the system	Check for leaks and recharge the system with refrigerant.
	Incompressible gas or moisture has entered the system.	Evacuate and recharge the system with refrigerant
	The compressor is broken	Replace the compressor
	The voltage is too high or too low	Install a manostat to regulate the voltage
Poor heating performance	The outdoor temperature is extremely low	Use auxiliary heating device
	Cold air is entering through doors and windows	Make sure that all doors and windows are closed during use
	Low refrigerant due to leak or long-term use	Check for leaks, re-seal if necessary and top off refrigerant
Indicator lamps continue flashing	The unit may stop operation or continue to run safely. If the indicator lamps continue to flash or error codes appear, wait for about 10 minutes. The problem may resolve itself. If not, disconnect the power, then connect it again. Turn the unit on. If the problem persists, disconnect the power and contact your nearest customer service center.	
Error code appears and begins with the letters as the following in the window display of indoor unit:		
• E(x), P(x), F(x)		
• EH(xx), EL(xx), EC(xx)		
• PH(xx), PL(xx), PC(xx)		

NOTE: If your problem persists after performing the checks and diagnostics above, turn off your unit immediately and contact an authorized service center.

Accessories

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

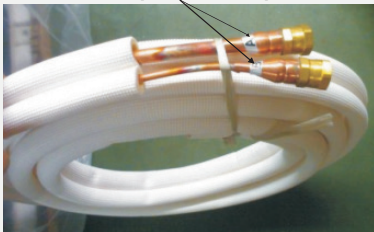
Name	Shape	Quantity (per line set)
EZ-Connect Pre-Charged Line Set		1
Sound Deadening Pads		2 (used to wrap line set quick connectors)
Insulation Sheath		2 (Apply over line set connectors and sound deadening pads to insulate piping)

Preparation & Connecting Line Set to Indoor Unit

IMPORTANT INFORMATION

- Follow the instructions fully when connecting the line set to the indoor & outdoor units. The warranty of the equipment will only be valid if the line set is installed correctly as described in the instructions.
- **DO NOT** remove the caps sealing the ends of the line set until immediately before installing the line set.
- To prevent leaks, ensure the quick-connect fittings are completely free of dirt & debris. Moisture & foreign bodies could affect the integrity of the line set connection points and lead to a loss of refrigerant, which is not covered by the warranty.
- **ONLY** install the line set outdoors during dry weather.
- **DO NOT** plaster over installed refrigerant lines.
- **DO NOT** allow refrigerant to be released in the environment, as improper handling and exposure to refrigerant may be harmful to your health.
- **ALWAYS** wear gloves and safety goggles when handling or working around refrigerant.
- **DO NOT** smoke during the installation of this equipment.
- **DO NOT** operate any of the equipment without refrigerant lines installed, otherwise the units could be damaged immediately upon startup.
- The line set connections must only be tightened using the appropriate tools (open-ended crescent wrenches/spanner and/or an HVAC torque wrench) as described in this manual.

Line Set Piping Connectors
(both ends)



- The line set connectors **MUST** be tightened with an appropriate amount of torque to ensure they seal and function properly. If they are tightened with too little torque, it could cause refrigerant to leak. If they are tightened with too much torque, the line set connectors could sustain damage, which could also cause them to leak. If you do not feel confident connecting the line set, please contact an HVAC professional.

WARNING!

The EQ valves are only designed for one-time installation. Their seal cannot be guaranteed if they are installed more than once. If more than one installation is attempted the warranty will be voided.

Tools Required

The following tools are needed to complete the installation and connection of the DIYCOOL pre-charged line set:

- Appropriately-sized open-ended wrenches to fit the line connectors (19mm, 22mm, 24mm, 27mm, depending on capacity and line set size). NOTE: Because wrenches of these sizes may be difficult to acquire, the preferred tools are two adjustable, crescent-style wrenches as these can be adjusted to fit the different-sized connectors of the various sizes of line sets available depending on your application.
- An HVAC torque wrench (if available, but not required).
- 5mm Allen key
- Phillips head screwdriver
- Leak detection spray or soap and water mixture in a spray bottle.

STEP 1: Unwind line set to necessary length for your application

1. Carefully unwind one end of the line set to the necessary length by hand, leaving the excess and the other end of the line set to remain coiled. Ensure the unrolled end of the line set has been unwound until the connectors of that end are close to flat with the ground. This will help make it easier to connect this end of the line set to the air handler.

CAUTION!

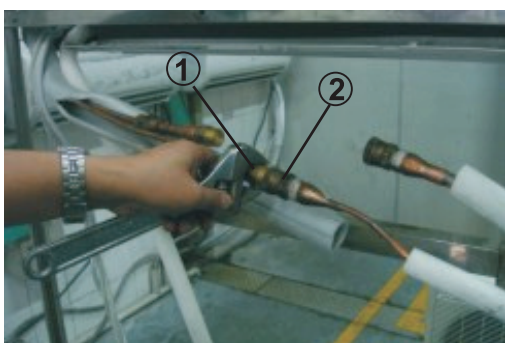
When bending the line set, any bends should have a minimum radius of ≥ 4 in (10 cm). If the line set is bent repeatedly, it could become difficult to bend. Avoid bending/extending the line set more than 3 times, or at angles greater than 90° , as it could cause the piping to crack or break.

STEP 2: Connect Line Set to Indoor Unit

- DO NOT** remove the plastic seals from the line set connection points of the indoor unit, or from the line set connectors, until immediately before connecting the line set to the indoor unit.
- Align the line set connectors with each corresponding connection port on the air handler. Ensure the dimensions of each of the line set connectors match the dimensions of the connection ports of the air handler.
- Now, remove the seals from the end of the line set, as well as the connection ports of the air handler.
- Place the screw connector of one the line set pipes onto the threads of the connection port of the air handler and tighten the first few threads by hand, while ensuring that the orientation of the screw connector stays in alignment with the connection port of the air handler and cross-threading does not occur.



- Using the image below, and in the next column above, as a guide hold the connection points marked "1" and "2" in the image below using two open-ended crescent style wrenches. Carefully tighten the screw connection of the line set by turning the wrench held at point "2" clockwise. Continue to tighten the connector until it becomes snug. **NOTE: Work quickly and check the line set connector as you tighten it to make sure it does not become crooked.**



- Once the connector is snug, if an HVAC torque wrench is available torque the connector to specified torque rating in the table below (torque rating is based on the size of the connector). If an HVAC torque wrench is not available, once the the connector is snug continue tightening the connector using the two wrenches (as shown in the image above) beyond that point slightly to apply torque to the connector, but do not overtighten it.
- Now, using leak detection spray or a soapy water solution in a spray bottle, spray the connections. If any bubbles appear, it indicates there is a leak and the connection needs to be retightened.
- Repeat the steps 1-7 for the second line.

Torque Ratings for Line Set Connectors		
Coupling (last 2 digits on connector)	Coupling Size inch (millimeter)	Torque Rating foot-pound (newton-meters)
06	1/4 in (6.35 mm)	18-20 lb/ft (24.4-27.1 Nm)
09	3/8 in (9.62 mm)	30-35 lb/ft (40.6-47.4 Nm)
12	1/2 in (12.7 mm)	45-50 lb/ft (61.0-67.7 Nm)
16	5/8 in (15.88 mm)	60-65 lb/ft (81.3-88.1 Nm)
19	3/4 in (19.05 mm)	33 lb/ft (45 Nm)*

*Testing this size line set connector for the maximum allowable torque rating could not be performed, so only the minimum recommended torque amount has been provided.

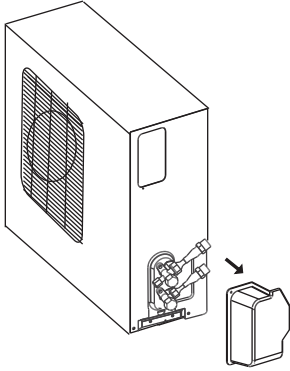
WARNING!

- DO NOT** exceed the torque ratings in the table above. Excessive torque will damage the piping.
- If a torque wrench is used it must be an open-ended style HVAC torque wrench (available from online retailers). A socket-style automotive torque wrench will not work.
- If an HVAC torque wrench is not available, it is possible to correctly torque the line set connectors using two adjustable, crescent-style open-ended wrenches.
- Once the line set is connected, it is important to check every connection point for leaks.

Connecting Line Set to Outdoor Unit

STEP 1: Remove condenser water tray and ensure check valves are tight.

1. Remove water tray (if applicable) from the outdoor unit as shown in the image below.



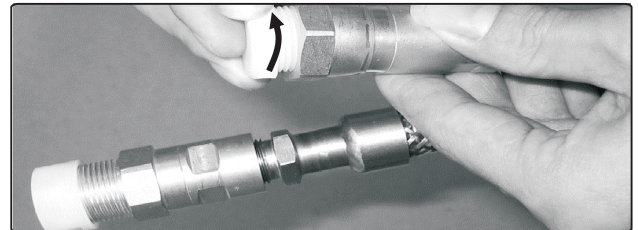
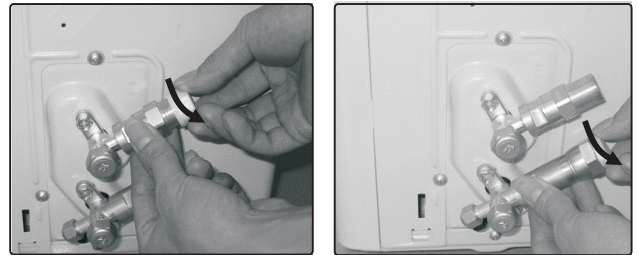
2. Before the line set can be connected to the condenser you must ensure the check valves and shut-off valve are tight. Using the open-ended wrenches you used in the previous steps check the tightness of each of the check valves and shut-off valve. If the valves are loose, turn the wrench clockwise as depicted by the arrows in the image below to secure the valves. If the valves are not secured this could create an area for a potential refrigerant leak to occur. **NOTE: If installing a multi-zone condenser, there will be multiple check valves for each air handler connection point that will need to be checked for tightness (also depicted in the image below).**



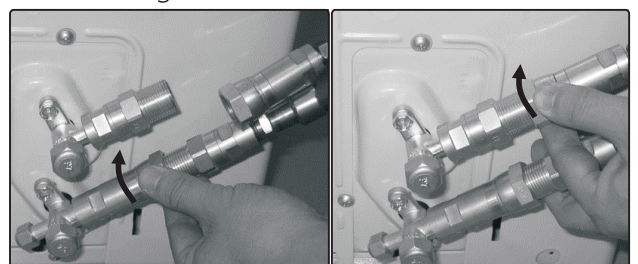
NOTE: All images and illustrations depicted in this manual are for explanatory purposes only, The actual shape and size of the equipment purchased for your application may vary or differ.

STEP 2: Connect Line Set to Outdoor Unit

1. **DO NOT** remove the plastic seals from the line set connection points of the outdoor unit, or from the line set connectors, until immediately before connecting the line set to the outdoor unit.
2. Align the line set connectors of the coiled end of the line set with each corresponding valve on the condenser. **NOTE: Make sure the line set and connectors can be connected easily to the condenser valves with as little stress as possible placed on the line set. Some light bending of the line set piping may be necessary in order for this to occur.**
3. Ensure the dimensions of each of the line set connectors match the dimensions of the valves of the outdoor unit.
4. Now, remove the seals from the end of the line set, as well as the connection ports of the air handler.



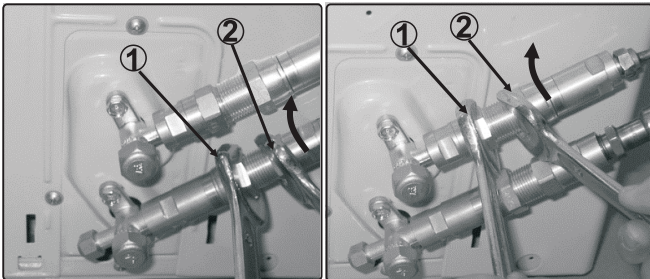
5. Place the screw connector of one the line set pipes onto the threads of the valve of the outdoor unit and tighten the first few threads by hand, while ensuring that the orientation of the screw connector stays in alignment with the valver of the condenser and cross-threading does not occur (refer to the image below).



IMPORTANT!

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

- Using the image below as a guide, you will tighten the bottom screw connector first. Hold the bottom screw connector at the points marked "1" and "2" using two open-ended crescent style wrenches. Carefully tighten the screw connection of the line set by turning the wrench held at point "2" clockwise. Continue to tighten the connector until it becomes snug. **NOTE: Work quickly and check the line set connector as you tighten it to make sure it does not become crooked.**



- Once the connector is snug, if an HVAC torque wrench is available torque the connector to specified torque rating in the table below (torque rating is based on the size of the connector). If an HVAC torque wrench is not available, once the the connector is snug continue tightening the connector using the two wrenches (as shown in the image above) beyond that point slightly to apply torque to the connector, but do not overtighten it.

Torque Ratings for Line Set Connectors		
Coupling (last 2 digits on connector)	Coupling Size inch (millimeter)	Torque Rating foot-pound (newton-meters)
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12	1/2 in (12.7 mm)	45-50 lb/ft (61.0-67.7 Nm)
16	5/8 in (15.88 mm)	60-65 lb/ft (81.3-88.1 Nm)
19	3/4 in (19.05 mm)	33 lb/ft* (45 Nm)*

*Testing this size line set connector for the maximum allowable torque rating could not be performed, so only the minimum recommended torque amount has been provided.

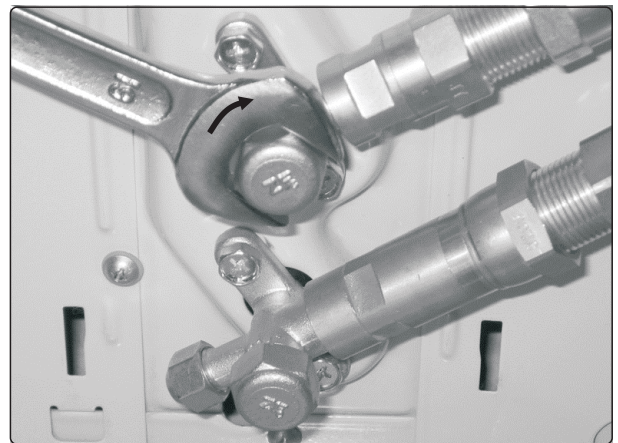
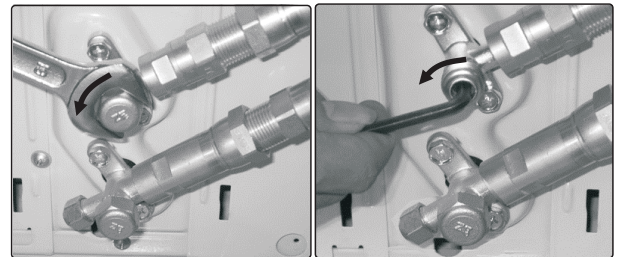
IMPORTANT!

The coupling inside the connector uses tapping rings. If you attempt to loosen and reconnect the piping it could cause it to leak. This will also void the warranty.

- Now, using leak detection spray or a soapy water solution in a spray bottle, spray the connections. If any bubbles appear, it indicates there is a leak and the connection needs to be retightened.
- Repeat the same process for the second line.
- If you're installing a multi-zone system, with multiple air handlers, repeat steps 1-9 with each air handler being connected to the condenser before progressing to the next step.

STEP 3: Opening condenser refrigerant valves

- Using the images below as a guide, remove the cover on the top valve using an open-ended wrench.
- Then, insert a 5 mm Allen key into the valve and open it by turning it counter-clockwise as far as it will turn. The valve is now open. **DO NOT force it, as this could cause damage to the valve and cause it to leak.**
- Screw the cap back onto the valve and tighten it using the wrench to ensure it is properly sealed.



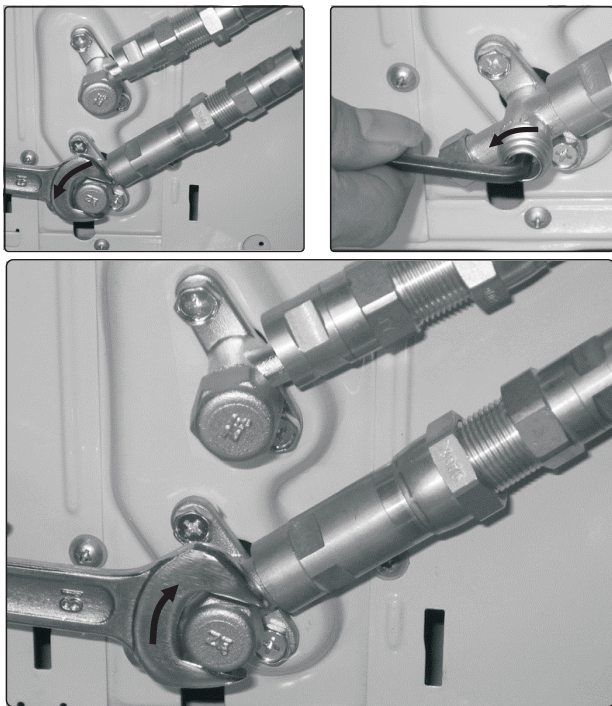
IMPORTANT!

The conical ring on the valve has an important sealing function together with the sealing seat within the caps. Ensure that you do not damage the cone when completing these steps and you keep the cap free from dirt, dust, or debris.

- Using the images below as a guide, remove the cover on the bottom valve using an open-ended wrench.
- Then, insert a 5 mm Allen key into the valve and open it by turning it counter-clockwise as far as it will turn. The valve is now open.

DO NOT force it, as this could cause damage to the valve and cause it to leak.

- Screw the cap back onto the valve and tighten it using the wrench to ensure it is properly sealed.



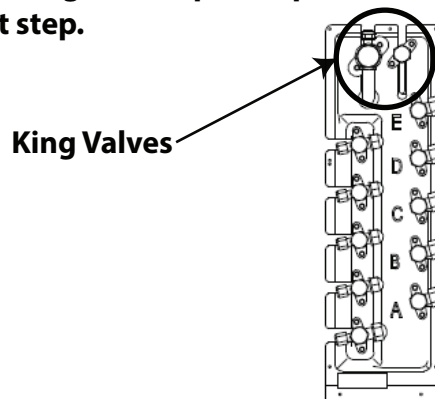
- Now, using leak detection spray or a soapy water solution in a spray bottle, respray the connections. If any bubbles appear it indicates there is a leak and the connection needs to be retightened.
- If you're installing a multi-zone system, with multiple air handlers, repeat steps 1-7 with each of the valves for each air handler being connected to the condenser before progressing to the next step.

IMPORTANT!

If all valves are not fully opened, the system may malfunction and suffer damage.

STEP 4: Opening the King Valves (dependent upon type of unit & capacity)

- Depending on your application, some multi-zone condensers are equipped with two additional main valves, referred to as King Valves (please refer to image below). If your condenser is equipped with King Valves these will also need to be opened before proceeding. The king valves are opened by following the previous steps for the opening the other valves. **If your condenser is not equipped with King Valves, please proceed to the next step.**



Side View of Multi-Zone Condenser

STEP 5: Starting system and rechecking all connections for leaks.

WARNING!

- DO NOT** attempt this step until all other steps contained within all manuals provided have been completed. Ensure all electrical work is completed and conforms to all regional & national codes, and the indoor and outdoor units have been fully installed. The following steps require starting the system so that system pressure will build and the entire system can be rechecked for leaks. If the system is started without all work completed, damage to the unit and potential bodily injury could occur.
- As system pressure increases, it could reveal leaks that were not initially present which is why rechecking all of the line set connections and valves for leaks is essential. If any leaks are found, turn off the system, retighten the leaking connection and repeat this step. Please refer to the Electrical & Gas Leak Checks & Test Run sections of this manual for more information.

- Start the system. Then, using leak detection spray or a soapy water solution in a spray bottle, spray all the line set connections and valves. If any bubbles appear it indicates there is a leak. Stop the system retightened any leaking connections and repeat this step.
- Reinstall condenser water tray (if applicable).

Wrapping & Insulating Line Set Connections

STEP 1: Install sound deadening pads over line set connectors

1. Once the system has been checked and no leaks are found, wrap all of the indoor air handler line set connectors with the adhesive sound deadening pads tightly (refer to the image below). These will prevent the line set connectors from being exposed to the air and aid in protecting them from any other external elements.



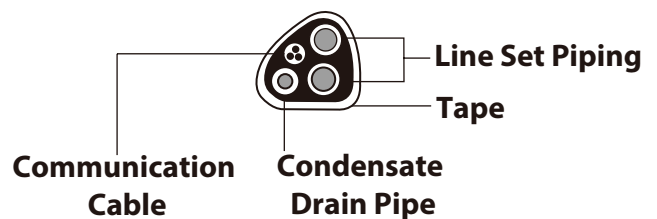
STEP 2: Insulate line set connection with insulation material

1. Then, using the black insulation material wrap around the line set connection and sound deadening pad with the opening of the insulation pointed toward the upward (Refer to image below).
2. Now, cover the opening of the black insulation material and exposed portion of the line set with the white insulation material to wrap up the line set connection completely (refer to the image below).



STEP 3: Bundle and tape line set, communication cable, and condensate drain pipe (dependent upon on application and type of installation being performed)

1. Depending upon the application and the installation being performed, you might be required to bundle the line set with the condensate drain pipe, and communication cable that connects the indoor unit to the outdoor unit (ex: to pass all of them through a hole in the wall so they can be connected to an outdoor unit). You may also be required to perform additional wrapping of this bundle with tape. If your installation or application requires this, please be sure to position the line set piping, communication cable, and condensate drain pipe in the orientation shown in the illustration below (with the condensate drain pipe at the bottom of the bundle).



Electrical and Gas Leak Checks

Before Test Run

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

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

Electrical Safety Checks

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

BEFORE TEST RUN

Check Grounding Work

Measure grounding resistance by visual detection and with grounding resistance tester. Grounding resistance must be less than 0.1 Ω .

Note: This may not be required for some locations in North America.

DURING TEST RUN

Check for Electrical Leakage

During the **Test Run**, use an electroprobe and multimeter to perform a comprehensive electrical leakage test.

If electrical leakage is detected, turn off the unit immediately and call a licensed electrician to find and resolve the cause of the leakage.

Note: This may not be required for some locations in North America.

WARNING – RISK OF ELECTRIC SHOCK

ALL WIRING MUST COMPLY WITH LOCAL AND NATIONAL ELECTRICAL CODES, AND MUST BE INSTALLED BY A LICENSED ELECTRICIAN.

Gas Leak Checks

There are two different methods to check for gas leaks.

Soap and Water Method

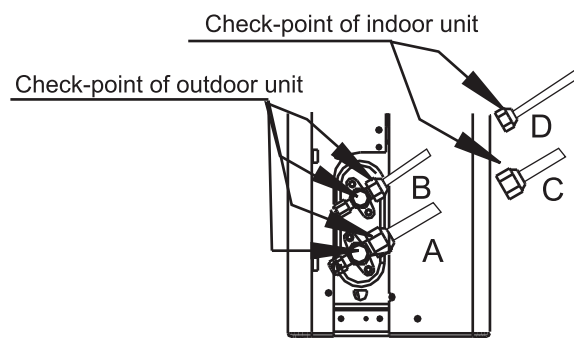
Using a soft brush, apply soapy water or liquid detergent to all pipe connection points on the indoor unit and outdoor unit. The presence of bubbles indicates a leak.

Leak Detector Method

If using leak detector, refer to the device's operation manual for proper usage instructions.

AFTER PERFORMING GAS LEAK CHECKS

After confirming that the all pipe connection points DO NOT leak, replace the valve cover on the outside unit.



A: Low pressure stop valve
B: High pressure stop valve
C & D: Indoor unit flare nuts

Test Run

Test Run Instructions

You should perform the **Test Run** for at least 30 minutes.

1. Connect power to the unit.
2. Press the **ON/OFF** button on the remote controller to turn it on.
3. Press the **MODE** button to scroll through the following functions, one at a time:
 - COOL – Select lowest possible temperature
 - HEAT – Select highest possible temperature
4. Let each function run for 5 minutes, and perform the following checks:

List of Checks to Perform	PASS/FAIL	
No electrical leakage		
Unit is properly grounded		
All electrical terminals properly covered		
Indoor and outdoor units are solidly installed		
All pipe connection points do not leak	Outdoor (2):	Indoor (2):
Water drains properly from drain hose		
All piping is properly insulated		
Unit performs COOL function properly		
Unit performs HEAT function properly		
Indoor unit louvers rotate properly		
Indoor unit responds to remote controller		

DOUBLE-CHECK PIPE CONNECTIONS

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

5. After the Test Run is successfully completed, and you confirm that all checks points in List of Checks to Perform have PASSED, do the following:
 - a. Using remote control, return unit to normal operating temperature.
 - b. Using insulation tape, wrap the indoor refrigerant pipe connections that you left uncovered during the indoor unit installation process.

NOTES

Infinity Living

Any instructions, designs, or specifications contained in this manual for the products, systems, or any associated accessories covered within it, are subject to change without prior notice due to constant product improvement. Consult with the sales agency or manufacturer for details. All materials for Infinity Living products are available on the company website. Please consult the Infinity Living website to ensure you have the latest version of this manual.

