

Installation Instructions: List of Materials

Required Tools for Installation

- 17mm, 22mm, 26mm or Adjustable Wrench
- #2 Phillips Screwdriver
- Drill
- 45° Flaring Tool
- Hex Wrench
- Hole Saw 2 3/4"
- Level
- Manifold Gauge
- Measuring Tape
- Micron Gauge
- Mini-Split Adapter (5/16"F to 1/4"M)
- Nitrogen (consumable)
- Pipe Cutter
- Razor Knife
- Reamer
- Sealant, non-expanding (for lineset hole)
- Soap/water solution or gas leakage detector
- Stud Finder
- Torque Wrench
- Vacuum Pump
- Wire Strippers

Supplied with Unit

- Condensate connecting tube
- Clamp
- Flare nuts
- YR-HQ remote (batteries included)
- Insulation
- Mounting Template

Supplied by Installer

Model	Liquid (inch)	Vapor (inch)
US09CB2BEA	1/4	3/8
US12CB2BEA	1/4	3/8
US18CB2BEA	1/4	1/2

- Insulated copper tubing
- 14/4 (14 gauge – 4 conductor) AWG SOOW Non-Shielded Stranded Copper Cable
- 3/4 inch PVC for condensate
- Insulation for condensate drain
- 3/8 threaded rod, washers and nuts
- 16/2 AWG Shielded SOOW Cable for high speed communication
- R454B Refrigerant

Installation Instructions: Introduction and Overview

Cassette Product Information

The Cassette Indoor Air Handler ships consists of a cassette assembly and operational louver. The Cassette Indoor Unit is operated via a factory supplied remote control. A wired controller is optional.

The Cassette unit will install between standard dropped ceiling grids. It is mounted using threaded rods that fit into brackets that are located at all four corners of the cassette assembly.

The Cassette unit receives 230 volt line voltage from a connection at the outdoor condensing unit. There is no requirement for independent line voltage connections.

The cassette unit has a built in condensate pump and associated float switch that manages the operation of the condensate pump. A flexible hose is included with the Cassette unit. This hose connects the cassette condensate drain outlet to the buildings condensate drain system.

The motorized louver is controlled via the remote control. The louver has indicator lights that communicate function and diagnostic information to the user and service technician.

Factory provided insulating tape is included with the cassette unit. This tape should be placed over the refrigerant piping connections at the indoor unit to prevent sweating.



Factory Supplied Remote. See Owner's manual for more information

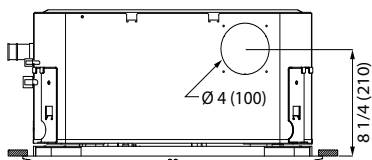


Wired Controller is optional

Installation Instructions: Introduction and Overview

Fresh Air Intake Option

The cassette has a marked area to cut out if outside air is desired. The piping connection should be made with a 4 inch diameter pipe. Outside air should be pre-filtered prior to entry into the cassette.

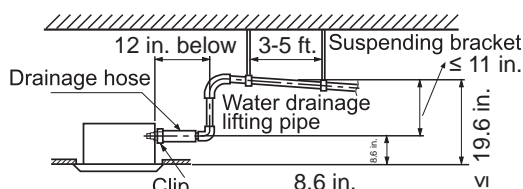


Condensate Handling

The Cassette unit has a built in condensate pump and water level safety switch. There is no option for gravity drain. The condensate pump is rated to lift water up to 47 3/16" from the point of discharge on the cassette assembly. Recommended pump flow rate is 0.106 gpm to 0.159 gpm.



The cassette unit comes with a grey connection hose with clamp. This hose is connected to the cassette assembly discharge hose port. The other end of the hose is sized to accept 3/4 " PVC piping. Recommended condensate piping configurations are shown here:



Electrical Power

Follow all local codes and regulations when installing electrical wiring.

Route required electrical power to area where the Cassette unit is to be located. Maintain at least a 10 foot separation between TV, Radio or any communication wiring and the power to the indoor unit.

14/4 AWG SOOW Non- Shielded Stranded Copper Cable should be used to make the electrical connection and communication link between indoor and outdoor units.

16/2 AWG Shielded SOOW Cable should be used for high speed communication on H1 and H2 terminals.

Note: In applications with multiple indoor units, only connect one indoor unit to the outdoor unit with the high speed communication cable. It is recommended to connect the indoor unit that is closest to the outdoor unit.

The wiring is connected at the indoor unit electrical terminal blocks screws 1, 2, 3 and ground. There should be no splices in the wires between the indoor and outdoor units as these serve as communication signal wires and electrical power connections. Any accessory added to shut off power to the indoor section should break the Number 2 terminal only.



Air Delivery Clearances

Make certain to maintain proper clearances around the cassette as specified in the installation instructions. Standard clearances for cassette air handlers require 5 feet of clearance in each direction. There should be 8 feet of clearance from the face of the cassette grille to the floor. Inadequate clearances can cause system freezing and temperature control problems.

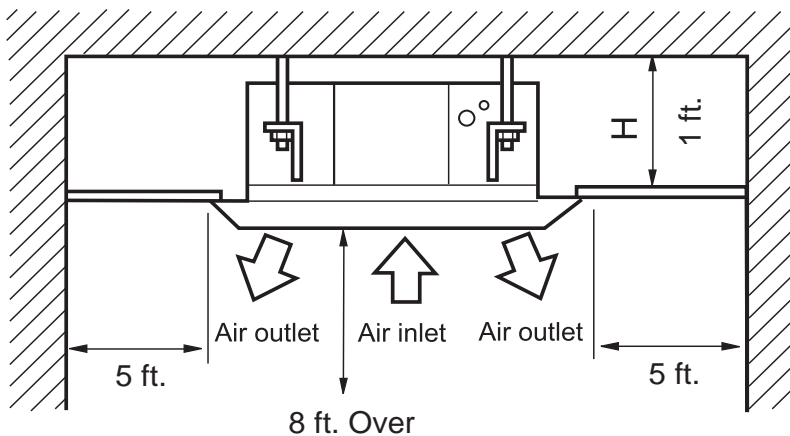
Service and Maintenance Clearances

Make sure there are adequate clearances for future maintenance and service. Allow enough room to access the condensate pump assembly and the electrical control box.

Installation Instructions

MINIMUM CLEARANCES (Appearance may vary)

This picture is for reference only. Your product may look different.



Installation Instructions

Step 1 - Preparation

A. Before installing the indoor unit, determine if a refrigerant leak sensor is required.

Refer to the outdoor unit installation instructions for calculating the total refrigerant charge. Measure the area of the space that will be conditioned by the indoor unit, and refer to the below table :

Compact Cassette without Refrigerant Leak Sensor Installed ¹													
Maximum Refrigerant Charge	lbs	≤3.9	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9
	oz	≤62.4	64	72	80	88	96	104	112	120	128	136	144
Minimum Room Size	ft²	No restriction	59	67	74	82	89	97	104	112	119	127	134

If your room size is smaller than the minimum room size listed above, a refrigerant leak sensor may be required. See below table:

Compact Cassette with Refrigerant Leak Sensor Field-Installed ¹													
Maximum Charge	lbs	≤3.9	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9
	oz	≤62.4	64	72	80	88	96	104	112	120	128	136	144
Minimum Room Size	ft²	No restriction	60	68	75	83	90	98	105	113	120	128	135

Installation in rooms smaller than the minimum sizes listed above are not allowed based on the standard of UL60335-2-40 Edition 4².

- 1: Calculated based on a minimum install height of 7 ft 2-3/4 inches (2.2m) measured from the floor to the bottom of the indoor unit.
- 2: UL60335-2-40 Edition 4 has been adopted by majority of state and local codes. A limited number of local and state codes may require compliance to UL 60335-2-40 Edition 3. Please refer to our website at **GEAppliancesAirandWater.com** for guidance on installations in those localities.

Note: Additional room area may be needed for different installation altitudes. Please use **Altitude Adjustment Factor** table below by multiplying minimum room size by the altitude adjustment factor based on install altitude.

Altitude Adjustment Factor

Altitude (m)	0	200	400	600	800	1000	1200	1400	1600
Altitude (ft)	0	660	1310	1970	2620	3280	3940	4590	5250
Adj. Factor	1	1	1	1	1.02	1.05	1.04	1.1	1.12
Altitude (m)	1600	1800	2000	2200	2400	2600	2800	3000	3200
Altitude (ft)	5250	5910	6560	7220	7870	8530	9190	9810	10500
Adj. Factor	1.12	1.15	1.18	1.21	1.25	1.28	1.32	1.36	1.4

B. If leak sensor is not needed, make sure to flip dip switch 1-5 to ON.

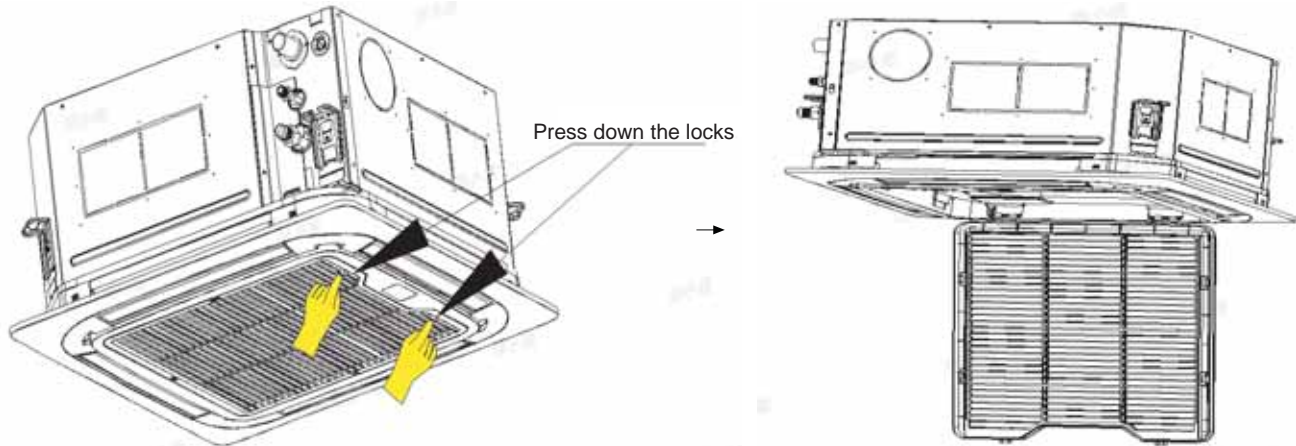
Missing this step will result getting error code bA.
If leak sensor is needed, please go to step C.

Installation Instructions

Step 1 - Preparation (cont)

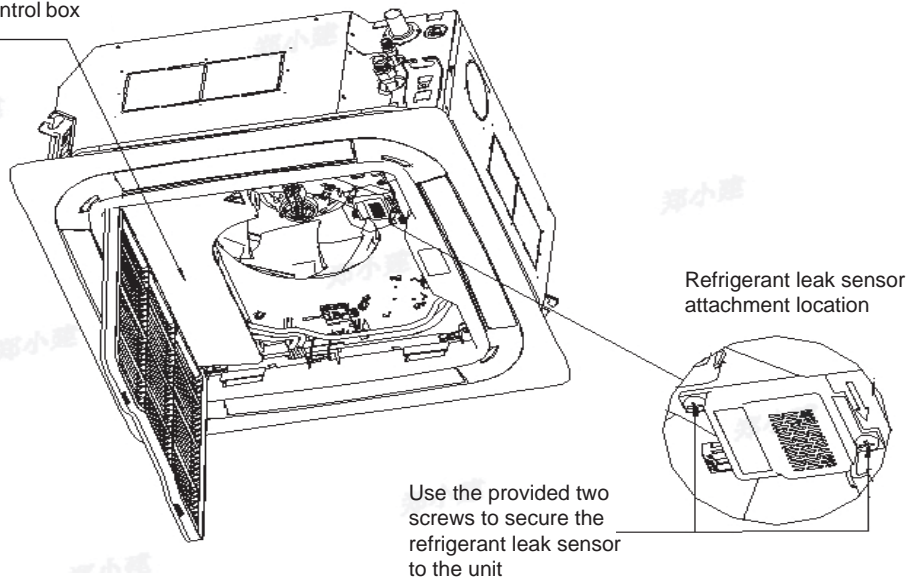
C. Install the Leak Sensor

Step 1: Press down the locks located on the panel.



Step 2: Open the air inlet grille.

Electronic control box



Step 3: Wiring for the sensor is already present. Plug refrigerant leak sensor into the wire connected to CN23.

Step 4: Close the air inlet grille.

Installation Instructions

Step 1 - Preparation (cont)

D. Procedure for selecting the location:

- Place above the ceiling where you have enough space to position the unit.
- Place where the drainage pipe can be properly positioned.
- Place where the inlet and outlet air of the indoor unit will not be blocked.
- Do not install the unit in a place with heavy oil or moisture (e.g. - kitchens and workshops)
- Do not install in a location with destructive gas (such as sulfuric acid gas) or pungent gas (thinner and gasoline) are used or stored.
- Choose a place solid enough to bear the weight and vibration of the unit and where the operation noise will not be amplified.

- Install where there are no expensive items like a television or piano below the indoor unit.
- Leave enough space for maintenance.
- Install at least 3 ft. away from televisions and radios to avoid interference.

NOTES:

- R454B refrigerant is a mildly flammable refrigerant. However, if there is a concern about a dangerous level of refrigerant concentration in the case of refrigerant leakage, add extra ventilation.

E. Threaded Rod Mounting Information:

The Cassette unit should be mounted to the building structure using threaded rods. The threaded rods should have washers and nuts to allow the height and level of the cassette to be adjusted.

The threaded rods and attachment brackets are field supplied items. The materials required for mounting to the brackets on the cassette assembly include:

- 4- 3/8" Threaded Rods
- 4- Mounting Brackets
- 8- Washers
- 8- Nuts (Double nut the assembly as shown)



Installation Instructions

Step 2 - Installation of the Cassette Unit

- A.** Use supplied cardboard template to locate center point of cassette for mounting. Use a plumb bob and string to position cassette by referencing center hole of template. Mark the mounting positions of the threaded rods using the guides on the cardboard template.



- B.** Install threaded rods to structure using appropriate fasteners.

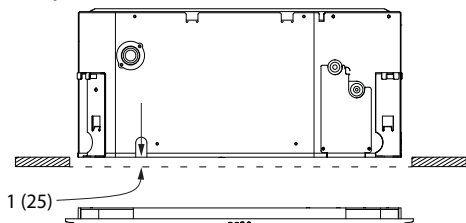


- C.** Lift the cassette and position the threaded rods into the 4 mounting clips on each corner of the cassette unit.



One Inch Recess:

1 inch recess between ceiling surface and bottom of unit without panel on.



- D.** Install threaded rods to structure using appropriate fasteners.



- E.** Prior to routing the refrigerant lines to the unit, install the supplied flare nuts onto the refrigerant lines. Using a R454B flaring tool, flare the refrigerant lines. Remove the caps attached to the ends of the refrigerant line connections at the cassette. A nitrogen charge will leak out.

Using a torque wrench, torque the fittings to the proper specifications. (See outdoor Unit Section for flare torque settings.)



- F.** Connect the grey flexible drain hose supplied with the cassette unit to the condensate pump discharge pipe of the cassette. Tighten the clamp securely. Using the 3/4" PVC, connect the flexible hose to the building's condensate drain system.



Installation Instructions

Step 2 - Installation of the Cassette Unit (Cont.)

G. Remove the electrical box cover. Remove the rubber grommet and insert a 1/2 inch electrical connector and reducing washer. Route electrical wiring into cassette unit. Connect to wire terminals as indicated in wiring diagram (use 14/4 AWG SOOW Non-Shielded Stranded Copper Cable for power and main communication line; use 16/2 AWG Shielded SOOW Cable for high speed communication).



H. Connect Grille assembly to cassette assembly. Connect wires from louver to the harness on the cassette assembly. There are two wire connections (see photo for connections).

- Secure louver with four screws.
- Reinstall electrical box cover.
- Install return air grille into louver assembly.
- Installation is now complete.



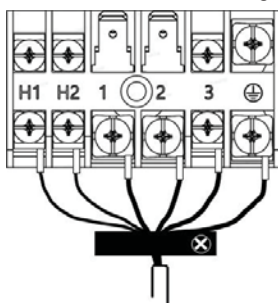
Installation Instructions

Step 3 - Electrical Connections

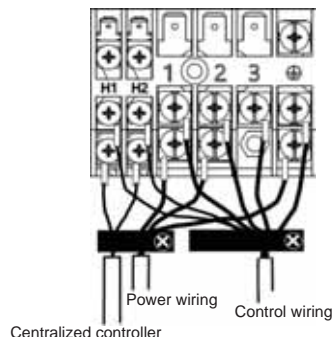
Electrical connections indoor and outdoor units

- 14 AWG AWG SOOW Non-Shielded Stranded Copper Wire Only. (Central Controller Not Used)
- 16/2 AWG Shielded SOOW Cable should be used for high speed communication on H1 and H2 terminals. Note: In applications with multiple indoor units, only connect one indoor unit to the outdoor unit with the high speed communication cable. It is recommended to connect the indoor unit that is closest to the outdoor unit.
- Maintain 10 feet of separation between TV and any Radio wiring.

Indoor Unit Control Wiring



Outdoor Unit



Step 4 - Leak Testing, Evacuation and Wifi

Refer to the outdoor Installation Manual for the recommended procedure.

Wifi Pairing

1. Download the "SmartHQ" app from Google Play (Android) or the Apple app store (IOS).

After downloading the App:

2. Open the app.
3. Select "Sign In".
4. Sign into your account or register as a new user.
5. Select the "+" icon to add a new device and follow the directions in the app.



Software Notice

To ensure product is functioning optimally and with the latest feature set, connect AC unit to WiFi and update with latest software. Refer to Owner's Manual on how to connect WiFi.

Installation Instructions

Step 5 - Final Check

Final Check

Start Up Checklist

- ☐ Refrigerant charge is verified and system has been leak tested
- ☐ Line sets have been insulated
- ☐ Electrical connections are secure
- ☐ Electrical ground has been checked and verified
- ☐ Electrical wiring terminals match at indoor and outdoor unit
- ☐ Wire between outdoor and indoor must be 14/4 AWG SOOW Non-Shielded Stranded Copper Cable for power and main communication cable
- ☐ Wire between outdoor and indoor must be 16/2 AWG Shielded SOOW Cable for high speed communication if unit is primary indoor unit
- ☐ Outdoor to indoor wires 1, 3, and Ground are free of splices
- ☐ Condensate drain has correct pitch and has been leak tested insulated to avoid condensate.
- ☐ Verify 100% pump reservoir drains to avoid risks of leaks.
- ☐ Check reservoir for any contaminants from installation that could promote bacteria growth
- ☐ Indoor and outdoor units are compatible
- ☐ Indoor and outdoor units are firmly mounted
- ☐ Power source voltage is within +/- 10% tolerances
- ☐ The indoor and outdoor sections are quiet and free of vibration
- ☐ All functions of the controller have been verified
- ☐ Operation in cooling or heating modes is normal (see sequence of operation in service manual)
- ☐ Operation of the system has been explained to the owner
- ☐ Indoor unit capacity check has been completed

Verify Refrigerant Leak Sensor Function

When a refrigerant leak or other leak sensor related error is detected, the indoor fan will turn on at high speed, and the compressor on the outdoor unit will turn off. These functions can be verified by temporarily disconnecting the leak sensor from the indoor unit and waiting up to 30 seconds for the system response. The leak sensor connects to connector CN23 on the indoor PCB (see section C for reference). When the system is powered on and the leak sensor is disconnected, the indoor unit should display "Ac," turn on the fan at high speed, and turn the compressor in the outdoor unit off. When the system is powered off, the leak sensor is disconnected, and the system is powered on, the indoor unit should display "bA," turn on the fan at high speed, and turn the compressor on the outdoor unit off.

Explaining Operation to the End User

- ☐ Using the User Manual, explain to the user how to use the air conditioner/heat pump:
 - the wired controller
 - adding/removing the air filters
 - placing or removing the wired controller from the wired control holder
 - cleaning methods
 - precautions for operation, etc
- ☐ Review precautions for operation.
- ☐ Recommend that the user read the Operating Instructions carefully.
- ☐ Leave this manual with the end user - that way future service techs can verify these steps were completed if they have problems

Service Tech:_____	Phone number:_____	Date:_____
Service Tech:_____	Phone number:_____	Date:_____
Service Tech:_____	Phone number:_____	Date:_____
Service Tech:_____	Phone number:_____	Date:_____

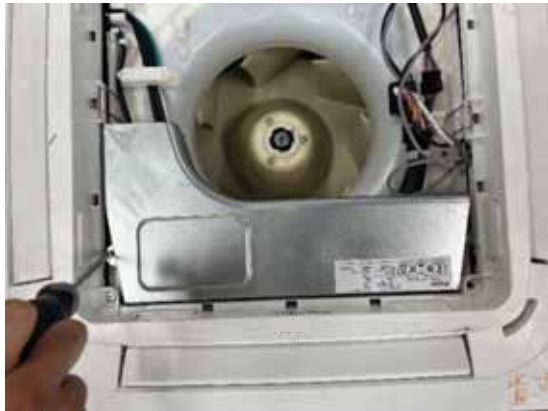
Installation Instructions

Refrigerant Leak Sensor Replacement Instructions

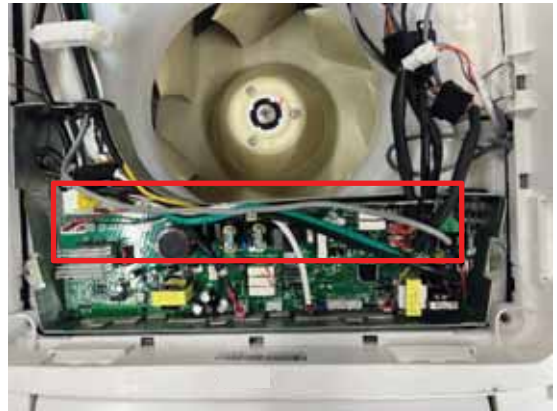
1. Open Grill.



2. Remove the PCB cover by removing the two screws connecting the cover to the enclosure.



3. Unplug the Refrigerant Leak Sensor from CN23 on PCB.



4. Remove Refrigerant Leak Sensor from unit.



5. Perform Steps 1 through 4 in reverse to connect new Refrigerant Leak Sensor.

GE Appliances Ductless HVAC Limited Warranty

GEAppliances.com. Please save your receipt showing the date of original purchase and the date of installation.

For the product models listed on Attachment 1 (the "Product"), this Standard Limited Warranty is provided to the Original Owner of the Product:

For The Period Of:	GE Appliances Will Replace:
1 Year <u>Remote Controller Warranty</u> From the date of the original installation	If the Remote Controller proves to be defective due to improper workmanship and/or material for a period of one (1) year from the date of installation , GE Appliances, A Haier Company ("Haier") will provide a new or refurbished controller, at Haier's sole discretion.
5 year <u>Limited Parts Warranty</u> From the date of the original installation	If any parts should prove to be defective due to improper workmanship and/or material for a period of five (5) years from the date of installation , Haier will replace any defective parts without charge for the part. Parts used for replacement may be new or refurbished parts, determined at Haier's sole discretion, and provided to your licensed HVAC technician installer.
10 Year <u>Registered Limited Parts Warranty</u> From the date of the original installation (ONLINE REGISTRATION REQUIRED at GEAppliances.com) MUST BE A RESIDENTIAL SINGLE-FAMILY HOME	If any of the parts should prove defective due to improper workmanship and/or material for a period of ten (10) years from the date of installation , Haier will replace any defective parts without charge for the part. The replacement part is warranted for the remainder of the original ten (10) year warranty period. Parts used for replacement may be new or refurbished parts, determined at Haier's sole discretion, and provided to your licensed HVAC technician installer. This Registered Limited Parts Warranty requires online registration within sixty (60) days from the original date of installation or occupancy. NON-RESIDENTIAL/COMMERCIAL APPLICATIONS ARE NOT ELIGIBLE FOR THIS REGISTERED LIMITED PARTS WARRANTY.

LABOR NOT COVERED:

These limited warranties **DO NOT** include labor or any other costs incurred for service, maintenance, repair, removing, replacing, installing, complying with local building or electrical codes, shipping or handling, replacement of the system, compressors or other parts.

EXCLUDED COMPONENTS:

The following components are not covered by this warranty: cabinets, cabinet pieces, air filters, driers, refrigerant, refrigerant line sets, belts, wiring, fuses, oil nozzles, unit accessories and any parts not affecting unit operation.

WHAT IS THE DATE OF PURCHASE:

The "Date of Purchase" is the date the Product is purchased by the Original Owner. The "Date of Installation" is the date that the original installation was completed and all Product start-up procedures were properly completed and verified by the installer's invoice. If the installation date cannot be verified, then the Date of Installation will either be sixty (60) days after the manufacture date, as determined by the Product's serial number or thirty (30) days from the Date of Purchase. You should keep and be able to provide your original sales receipt from the installer as proof of the Date of Purchase and the Date of Installation. For new construction, the Date of Purchase will be the date of purchase of the residence by the Owner from the builder.

WHO IS COVERED:

Owner occupied: The "Original Owner" means the original owner (and his or her spouse) of a residential single family where the Product was originally installed.

Non-Owner occupied: The "Non-Owner occupied" is defined as a) single family or multi-family residential buildings that are not Owner Occupied, or b) light commercial applications, (such as office buildings, retail establishments, hotels/motels).

For Non-owner occupied, this limited warranty requires that the Product be installed and maintained annually by a licensed HVAC technician (proof of annual maintenance is required).

HOW CAN YOU GET SERVICE:

Contact your licensed HVAC technician installer. All installation and service must be performed by a licensed HVAC technician. Failure to use a licensed HVAC technician for installation of this Product voids all warranty on this Product.

GE Appliances Ductless HVAC Limited Warranty

WHAT GE APPLIANCES WILL NOT COVER:

- Improper service or installation.
- Damage in shipping.
- Defects other than manufacturing defects (i.e., other than workmanship or materials).
- Damage from misuse, abuse, accident, alteration, lack of proper care and/or regular maintenance.
- Damage resulting from floods, fires, wind, lightning, accidents or similar conditions.
- Product that was not installed or serviced by a licensed HVAC technician.
- Labor and related services for repair or installation of the Product.
- A product purchased from an unauthorized online retailer.
- Damage as a result of subjecting Product to an atmosphere with corrosives or high levels of particulates (such as soot, aerosols, fumes, grease).
- Modification, change or alteration of the equipment, except as directed in writing by Haier.
- Use of contaminated or refrigerant not compatible with the unit.
- Operation with system components (indoor unit, outdoor unit, and refrigerant control devices) which are not an AHRI match or meet the specifications recommended by Haier.
- A Product sold and/or installed outside of the 50 United States, the District of Columbia, or Canada.
- Batteries for the controller and other accessories provided with the Product for installation (e.g., plastic hose).
- Normal maintenance, such as cleaning of coils, cleaning filters, and lubrication.
- For Product installed in non-owner occupied applications, Product that has not been maintained annually by a licensed HVAC technician (proof required).
- Damage caused by a used or unapproved component or part by Haier (e.g., a used and/or unapproved condenser / air handler).
- Component or parts not provided by Haier.
- Product that has been moved from its original installation to a new residence or building.
- Accident, or neglect or unreasonable use or operation of the equipment including operation of electrical equipment at voltages other than the range specified on the unit nameplate (includes damages caused by brownouts).
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this product.

LEGAL RIGHTS:

Some states and provinces do not allow warranty terms to be subject to registration. In those states and provinces, the 10 year Registered Limited Parts Warranty applies. In addition, if allowed by the law of the state or province where the Product is installed, the subsequent owners of the residence or building may have additional rights or longer warranty terms.

REGISTERED LIMITED PARTS WARRANTY COVERAGE REQUIREMENTS:

- The unit is a GE Appliances or a Haier branded unit.
- The unit is installed in a residential application.
- The unit is properly registered at **GEAppliances.com** within 60 days after the original date of installation or occupancy.
- The unit is part of a complete AHRI matched system and installed by a state certified or licensed contractor in accordance with the unit installation, operation, and maintenance instructions provided with the unit.
- Indoor and outdoor ductless units are covered only when they are branded GE Appliances and are purchased and installed as a system along with a qualifying unit. (Third party coils are not covered).
- Installation is in compliance with applicable laws, regulations, codes, and ordinances.
- Unit was not ordered via the internet. Proof of purchase may be required.

GE Appliances Ductless HVAC Limited Warranty

EXCLUSION OF IMPLIED WARRANTIES:

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, THIS LIMITED WARRANTY IS EXCLUSIVE AND GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

UNDER NO CIRCUMSTANCES SHALL HAIER BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, LOST GOODWILL, LOST REVENUE OR PROFITS, WORK STOPPAGE, SYSTEM FAILURE, IMPAIRMENT OF OR DAMAGE TO OTHER EQUIPMENT OR GOODS, COST OF REMOVAL AND REINSTALLATION OF THE SYSTEM, LOSS OF USE, INJURY TO PERSONS OR PROPERTY ARISING OUT OF OR RELATED TO THE SYSTEM. HAIER'S TOTAL LIABILITY, IF ANY, UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE INVOICE VALUE PAID BY THE CUSTOMER FOR THE SYSTEM WHICH IS THE SUBJECT OF A CLAIM OR DISPUTE.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR ALLOW DISCLAIMERS OF IMPLIED WARRANTIES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO THE CUSTOMER. THIS LIMITED WARRANTY GIVES THE CUSTOMER SPECIFIC LEGAL RIGHTS. CUSTOMERS MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

The remedy provided in this warranty is exclusive and is granted in lieu of all other remedies. This warranty does not cover incidental or consequential damages. Some states and provinces do not allow the exclusion of incidental or consequential damages, so this limitation may not apply to you. Some states and provinces do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary by state and province. This warranty covers Products within the 50 United States, the District of Columbia and Canada.

This warranty is provided by:

**GE Appliances, a Haier company
Louisville, KY 40225**

For US Customers: This limited warranty is extended to the original purchaser for products purchased for home use within the USA. In Alaska and Hawaii, the limited warranty does not include the costs of shipping units.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

**Warrantor: GE Appliances, a Haier company
Louisville, KY 40225**