



# Zoneline® Vertical AIR CONDITIONER

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Write the model and serial numbers here:

Model # \_\_\_\_\_

Serial # \_\_\_\_\_

You can find them on a label on the top panel.

## OWNER'S MANUAL

Heat Pump Models  
AZ91H18D\*E  
AZ91H18E\*E  
Large Chassis

### ESPAÑOL

For a Spanish version of this manual, visit our Website at [www.zoneline.com](http://www.zoneline.com).

Para consultar una version en español de este manual de instrucciones, visite nuestro sitio de internet [www.zoneline.com](http://www.zoneline.com).

### FRANÇAIS

For a French version of this manual, visit our Website at [www.zoneline.com](http://www.zoneline.com).

Pour un version français de ce manuel d'utilisation, veuillez visiter notre site web à l'adresse [www.zoneline.com](http://www.zoneline.com).

## **THANK YOU FOR MAKING GE APPLIANCES A PART OF YOUR HOME.**

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Whether you grew up with GE Appliances, or this is your first, we're happy to have you in the family.

We take pride in the craftsmanship, innovation and design that goes into every GE Appliances product, and we think you will too. Among other things, registration of your appliance ensures that we can deliver important product information and warranty details when you need them.

Register your GE appliance now online. Helpful websites and phone numbers are available in the Consumer Support section of this Owner's Manual. You may also mail in the pre-printed registration card included in the back of this manual.



# IMPORTANT SAFETY INFORMATION

## READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE

### WARNING

For your safety, the information in this manual must be followed to minimize the risk of fire, explosion, electric shock, property damage, personal injury, or loss of life.

### SAFETY PRECAUTIONS

- This Zoneline must be properly installed in accordance with the Installation Instructions before it is used. See the Installation Instructions in the back of this manual.
- Disconnect the Zoneline at the fuse box or circuit breaker before making any repairs.

**NOTE:** We strongly recommend that any servicing be performed by a qualified individual.

- All air conditioners contain refrigerants, which under federal law must be removed prior to product disposal. If you are getting rid of an old product with refrigerants, check with the company handling disposal about what to do.
- These R410A air conditioning systems require contractors and technicians to use tools, equipment and safety standards approved for use with this refrigerant. **DO NOT use equipment certified for R22 refrigerant only.**

## READ AND SAVE THESE INSTRUCTIONS

# Features

## Power Disconnect

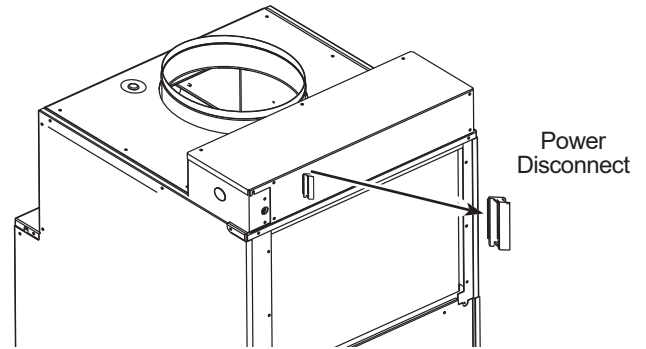
The power disconnect is located on the front of the Zoneline.

**NOTE:** The power disconnect does not remove power from the terminal block located under the control box panel.

**⚠ WARNING Electric Shock Hazard**

Before servicing, disconnect power to the Zoneline at the fuse box or circuit breaker and pull out electrical disconnect on front of the chassis.

Failure to do so can result in personal injury and/or death.



## Ventilation Control

The ventilation control lever is located on the front of the Zoneline unit.

When the lever is in the **CLOSE** position, only the air inside the room is circulated and filtered.

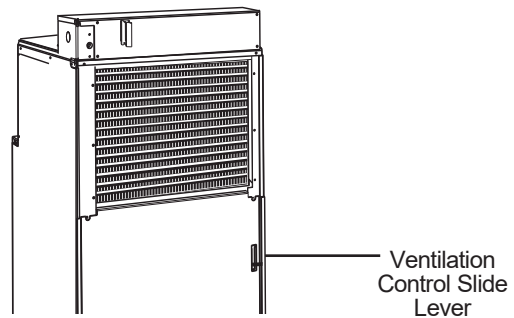
When the lever is in the **OPEN** position, some outdoor air will be drawn into the room. This will reduce the heating or cooling efficiency.

**To close the vent,** move the slide lever up.

**To open the vent,** move the slide lever down.

**Energy Tip:** Keep the vent control in the **CLOSE** position. The room air will be filtered and circulated.

**NOTE:** Ventilation openings are not intended to be the source of make-up air for building ventilation systems due to the additional heating and cooling loads generated.



## Room Freeze Protection

This feature will monitor the indoor room conditions, and in the event that the room falls below 40°, the unit will cycle on high fan with the electric heater. This occurs regardless of mode as long as power is applied to the unit.

## About Your Heat Pump (on some models)

Heat pumps can reduce operating costs by exchanging heat from the outside air—even when the outside temperature is below freezing— and releasing that heat indoors.

To get the best economic benefit from your heat pump, don't change the room thermostat setting very often. Raising the heat setting 2–3 degrees will cause the Zoneline to use its electric heating elements in order to reach the new temperature setting quickly.

There is a three minute minimum compressor run time at any setting to prevent short cycling.

The indoor fan motor starts before the compressor and stops after the compressor cycles off.

The electric heating elements use much more electricity than heat pumps and cost more to operate.

# Care and Cleaning

## Air Filters

**NOTICE: Do not operate the Zonline without the filter in place. If a filter becomes torn or damaged, it should be replaced immediately.**

Operating without the filter in place or with a damaged filter will allow dirt and dust to reach the indoor coil and reduce the cooling/heating, performance, airflow and efficiency of the unit.

The most important thing you can do to maintain the Zonline is to change the filter at least every 30 days. Dirty filters reduce cooling, heating performance and air flow.

**Changing the filter will:** Decrease cost of operation, save energy, prevent clogged heat exchanger coils and reduce the risk of premature component failure.

Replacement filters should be purchased from your local retailer where air conditioner and furnace accessories are sold.

Filter size for front of unit is 14" x 20" x 1".

Filter size for RAVRG2 is 20" x 20" x 1".

Filter size for RAVRG3 is 25" x 20" x 1".

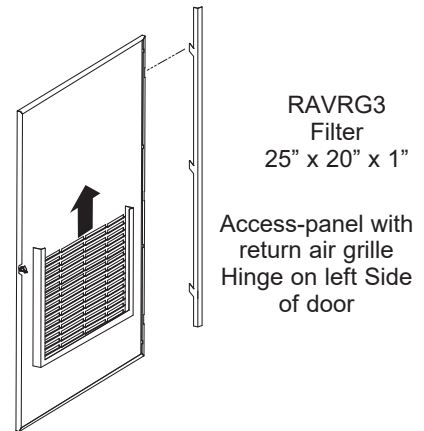
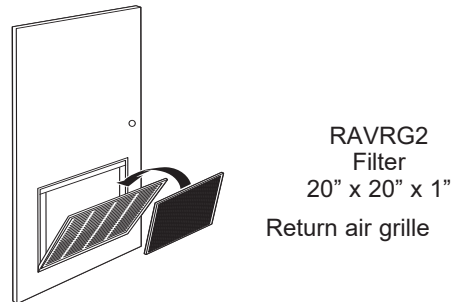
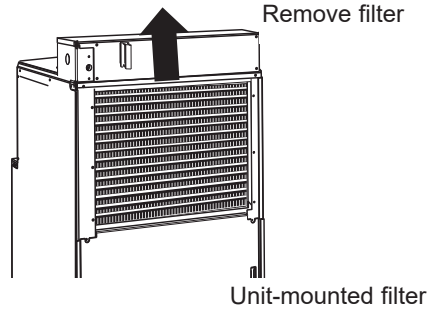
**NOTE: Use only one filter in the installation.**

**To replace the filter (chassis mounted return air filter):**

1. Slide the filter to the right or left to clear the filter holders or rotate upper filter holder to clear top of the filter.
2. Remove the filter.
3. Install new disposable filter.

**To maintain optimum performance, change the filter at least every 30 days.**

To remove and replace the filter:



## Drain

**Clean the drain system regularly to prevent clogging.**

The condensate drain must be routed to a suitable drainage area. Check the unit condensate drain periodically. Keep it free of anything that may block or impeded the flow of condensate water. If there is any accumulation of foreign matter in the drain pipe, it should be removed and cleaned. The entire drain line must be protected from freezing.

# Care and Cleaning

## Indoor/Outdoor Coils

The Indoor/Outdoor coils on the Zoneline should be cleaned and checked regularly.

**NOTE:** When cleaning the coils do not use acid based coil cleaners. Care must be taken to avoid bending the aluminum fins on the coils.

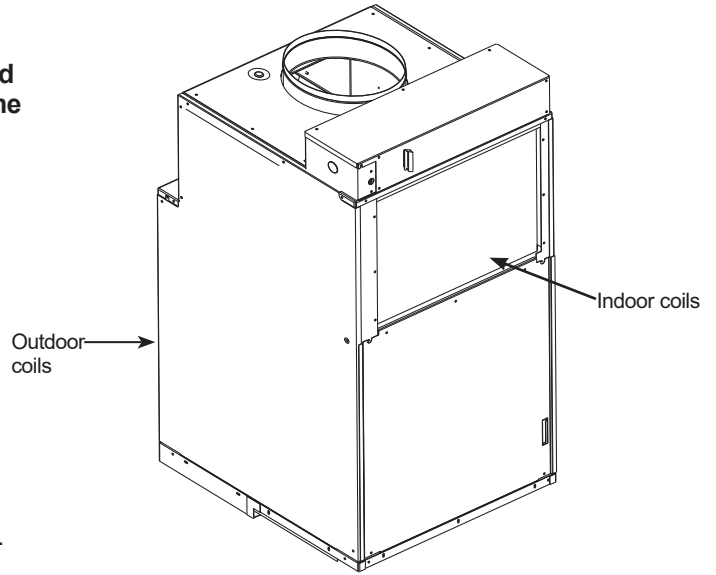
### Indoor-Air Coil

Minor amounts of lint and dirt may pass through the filter and collect on the indoor-air coil. These minor accumulations can be carefully vacuumed away with a brush attachment on a vacuum cleaner or professionally steam cleaned away.

### Outdoor-Air Coil

The unit's outdoor-air intake and outdoor-air exhaust paths must remain clear. Check the outdoor-air exhaust frequently. Keep it free of all debris, snow, or ice. The outdoor-air intake should also be kept free of obstructions. Blocking the outdoor-air exhaust or outdoor-air intake opening will reduce the efficiency of your unit and could cause premature compressor failure.

Inspection and cleaning of the outdoor-air coils may require the unit to be removed from the closet. See servicing section of this manual for instructions on how to remove the unit.



Have the coils cleaned regularly.

## Base Pan

In some installations, dirt or other debris may be blown into the unit from the outside and settle in the base pan (the bottom of the unit).

In some areas of the United States, a "gel-like" substance may be present in the base pan.

Check it periodically and clean, if necessary.

# Installation Preparation

Questions? Call 844-GE4-PTAC (or 844-434-7822 ) or Visit our Website at: [GEAppliances.com](http://GEAppliances.com)

## BEFORE YOU BEGIN

Read these instructions completely and carefully.

- **IMPORTANT** — Save these instructions for local inspector's use.
- **IMPORTANT** — Observe all governing codes and ordinances.
- **Note to Installer** — Be sure to leave these instructions with the owner.
- **Note to Owner** — Keep these instructions for future reference.
- Proper installation is the responsibility of the installer.
- Product failure due to improper installation is not covered under the Warranty.
- You must use all supplied parts and use proper installation procedures as described in these instructions when installing this air conditioner.

## IMPORTANT ELECTRICAL SAFETY—READ CAREFULLY

### WARNING

- All electrical connections and wiring **MUST** be installed by a qualified electrician.
- Follow the National Electrical Code (NEC) and local codes and ordinances.
- For personal safety, this Zoneline must be properly grounded.
- Protective devices (fuses or circuit breakers) acceptable for Zoneline installations are specified on the nameplate of each unit.
- Do not use an extension cord with this unit.
- Aluminum building wiring may present special problems—consult a qualified electrician.
- When the unit is not running there is still voltage to the electrical controls.
- Disconnect the power to the unit before servicing by removing the branch circuit fuses or turning the circuit breakers off at the panel.

## ELECTRICAL REQUIREMENTS

Wire Size	Use <b>ONLY</b> wire size recommended for single outlet branch circuit
Fuse/Circuit Breaker	Use <b>ONLY</b> type and size fuse or HACR circuit breaker indicated on units rating plate. Proper over current protection to the units is the responsibility of the owner.
Grounding	Unit <b>MUST</b> be grounded from branch circuit to unit, or through separate ground wire provided on permanently connected units. Be sure that branch circuit is grounded.
Wire Sizing	Use recommended wire size given in tables and install a single branch circuit. All wiring must comply with local and national codes. <b>NOTE: Use copper conductors only.</b>

**NOTE: All field wiring must comply with NEC and local codes. It is the responsibility of the installer to insure that the electrical codes are met.**

- Use **ONLY** the wiring size recommended for single outlet branch circuit.
- Proper current protection is the responsibility of the owner.

Recommended branch circuit wire sizes*	
Nameplate maximum circuit breaker size	AWG Wire size**
15A	14
20A	12
30A	10

AWG – American Wire Gauge

\* Single circuit breaker from main box

\*\* Based on 100' or less of copper wire, single insulated conductor at 60° C. Wire sizes are per NEC.

**NOTE: Use copper conductors only.**

# Installation Preparation

## Indoor Air Flow Data

Indoor air flow may be determined by measuring the external static pressure (ESP) of the duct system using an inclined manometer or magnehelic gauge, then consulting chart "A" to determine actual air flow. Use the air flow correction multipliers contained in chart "B" to determine accurate air flow under the listed conditions. Under no circumstances should the SPVU equipment be operated at an external static pressure in excess of .30" W.C. Operation of the SPVU under these conditions will result in inadequate air flow leading to poor performance and/or premature component failure.

**Chart A - CFM - Determining the Indoor CFM**

Models		
AZ91H18D*E/ AZ91H18E*E		
Fan Speed	Low	High
ESP(")	CFM	
.10"	420	465
.15"	390	420
.20"	345	380
.25"	300	325
.30"	255	280

ESP = external static pressure in inches water column

Rated CFM at High Speed:

AZ91H18D\*E/AZ91H18E\*E = 465

For single speed thermostats connect to the GL terminal for Low Speed or GH terminal for High Speed. Two speed control thermostats will use both terminals.

**Chart B - Correction Multipliers  
Correct CFM (if needed)**

Correction Multipliers for:	
230V/265V	1.00
208V	0.97
Heating	1.00
Cooling	0.95

Your airflow should be balanced based on many factors, such as available ESP, room CFM, and ductwork. Consult an HVAC engineer for proper applications. External static pressure (ESP) can be measured with a manometer or pitot tube. Once this ESP is established, you can calculate the CFM using the above chart.

Higher CFMs tend to increase SENSIBLE capacity, enhance room circulation and increase duct noise, while lower CFMs tend to increase LATENT capacity and reduce noise.

## Ductwork

The supply duct system should be designed via a recognized method such as the equal friction method, or velocity reduction method, using the appropriate duct calculator(s) for the type(s) of duct (i.e. metal duct, duct board, or flex duct) being used in the system. The duct system should be designed for a maximum friction rate of .30" water column taking into consideration all fittings, registers and/or diffusers. **DO NOT operate unit without a supply duct attached.**

The return air to SPVU series units MUST NOT be ducted, and all units MUST have a free return air configuration to perform properly.

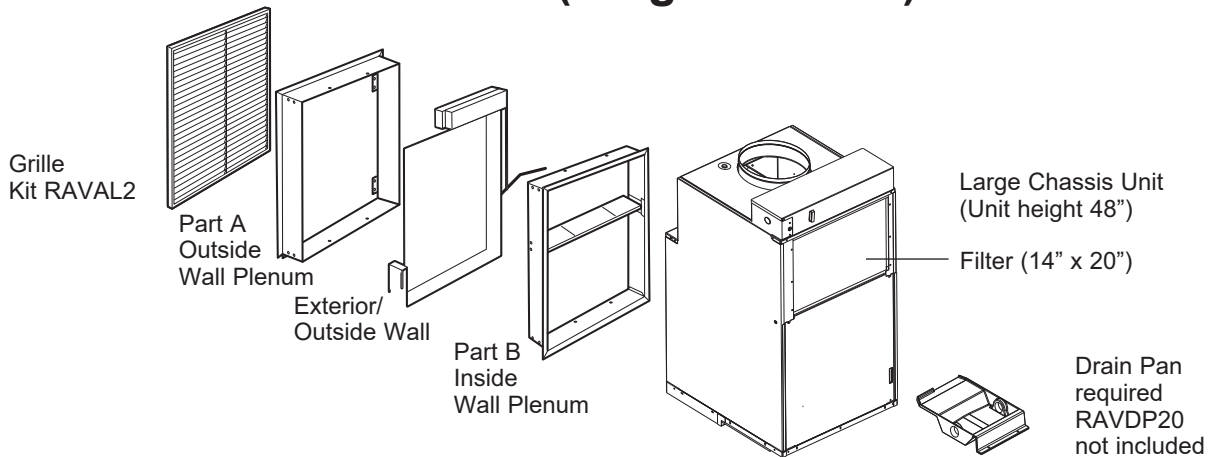
The total flow rate (CFM) and external static pressure (ESP) available can be estimated from the charts to the left. Use these charts to select your fan speed setting.

The collar on top of the unit accepts standard 10" duct. Pull all duct tight. Extra duct slack can greatly increase static pressure.

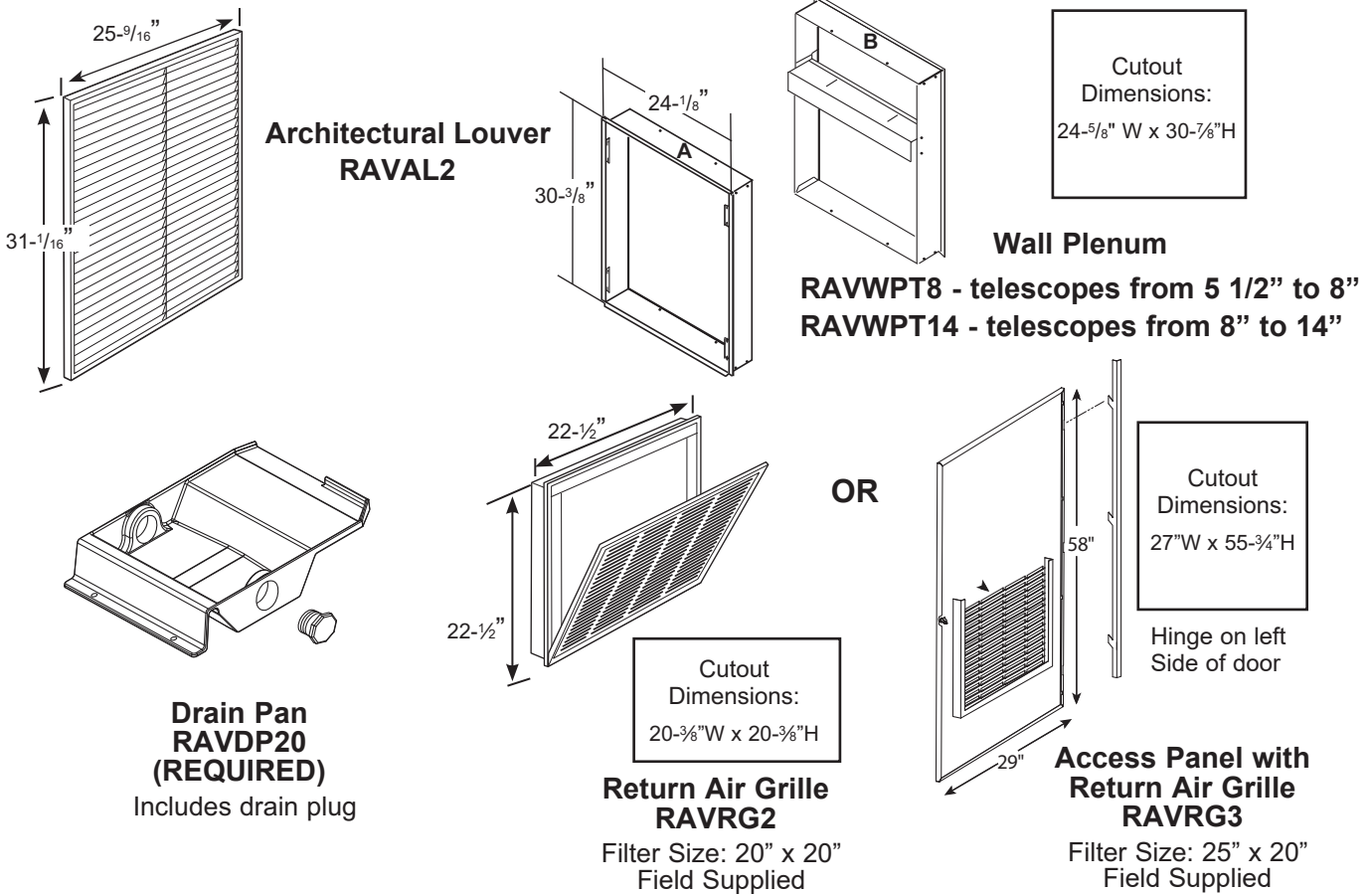
**NOTICE:** Flex duct can collapse and cause airflow restrictions. Do not use flex duct for 90° bends or unsupported runs of 5 ft. or more.



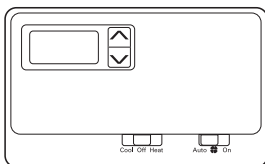
## ZONELINE COMPONENTS (Large Chassis)



## REQUIRED ACCESSORIES for NEW Installation\*



\* For conversions from AZ75/AZ85 series to AZ90/AZ91 series vertical air conditioners RAVTRANS Kit is required.



### Wall Thermostat

Model Type	Electronic Thermostat	Kit Number
Heat Pump Models	6-wire	RAK148P2 and RAK148D2
Heat Pump Models	7-wire	RAK148F2

# Installation Overview

## RETURN AIR GRILLE INSTALLATION OPTIONS

The room return air grille may be installed toward the front or either side of the unit. Improper return air arrangements will cause performance problems.

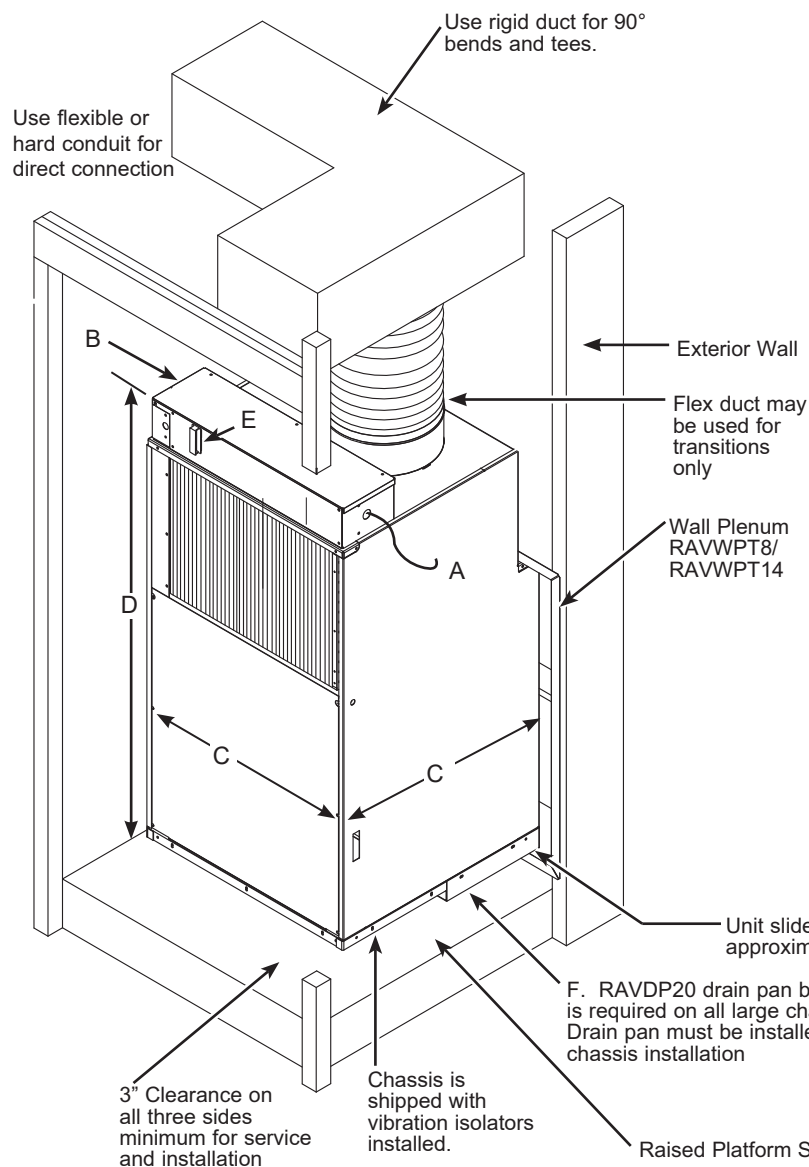
**There are three indoor return air grille installation options.** Choose the option that best suits your installation requirements. Follow the Installation Instructions provided with the return air grille accessory for installation details.

**NOTE: Use only one filter in the installation.** The filter may be installed on the unit or in the access panel/door.

## UTILITY CLOSET CONNECTION LOCATIONS

**IMPORTANT:** Plan and locate plenum, electrical connection, drains and thermostat carefully to avoid interference. Hard-to-reach locations will make installation and service difficult!

### Large Chassis



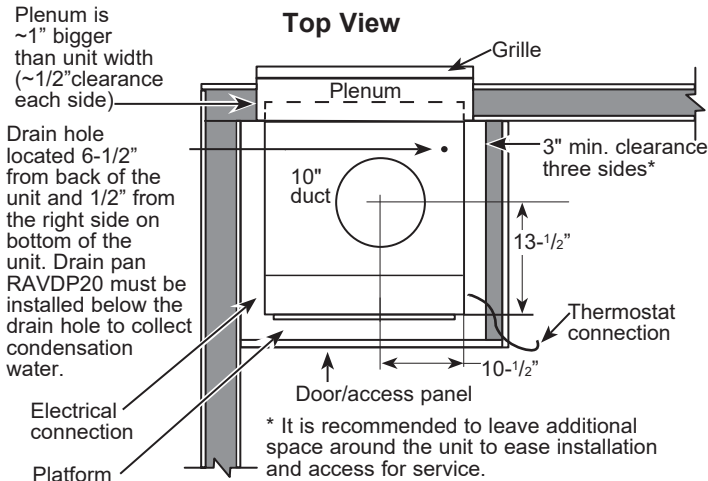
### Reference Dimensions

- A Thermostat cable
- B Incoming Power Conduit
- C Unit width and depth: 23-1/8"
- D Unit height: 48-1/4"
- E Power Disconnect
- F Condensate drains:
  - Drain hole is located on bottom of unit approximately 6-1/2" from the back of the unit, 1/2" from the right side .
  - On the bottom of the unit condensate water drips from the drain hole into the drain pan.
  - Drain Pan Kit RAVDP20 is required for large chassis installs. Drain kit to be installed into plenum prior to the unit being installed.
  - Primary drain can exit from the left or right sides of the RAVDP20 Drain Pan.
  - Secondary drain water flows into plenum from the back of the unit.

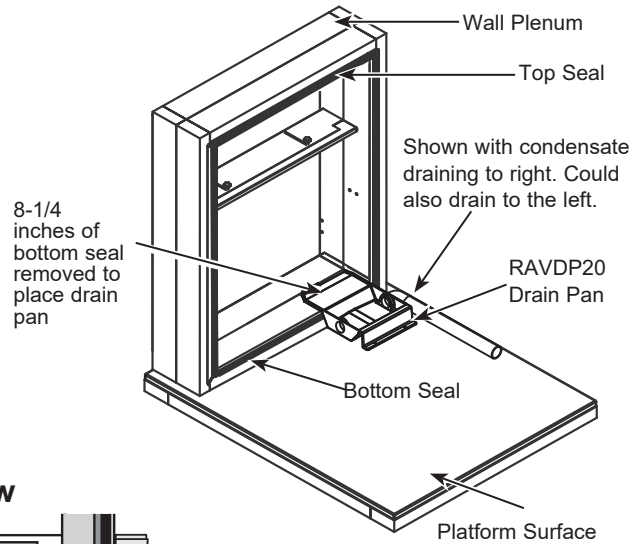
# Installation Overview

## LARGE CHASSIS TYPICAL UTILITY CLOSET AND DIMENSIONS (FOR REFERENCE ONLY)

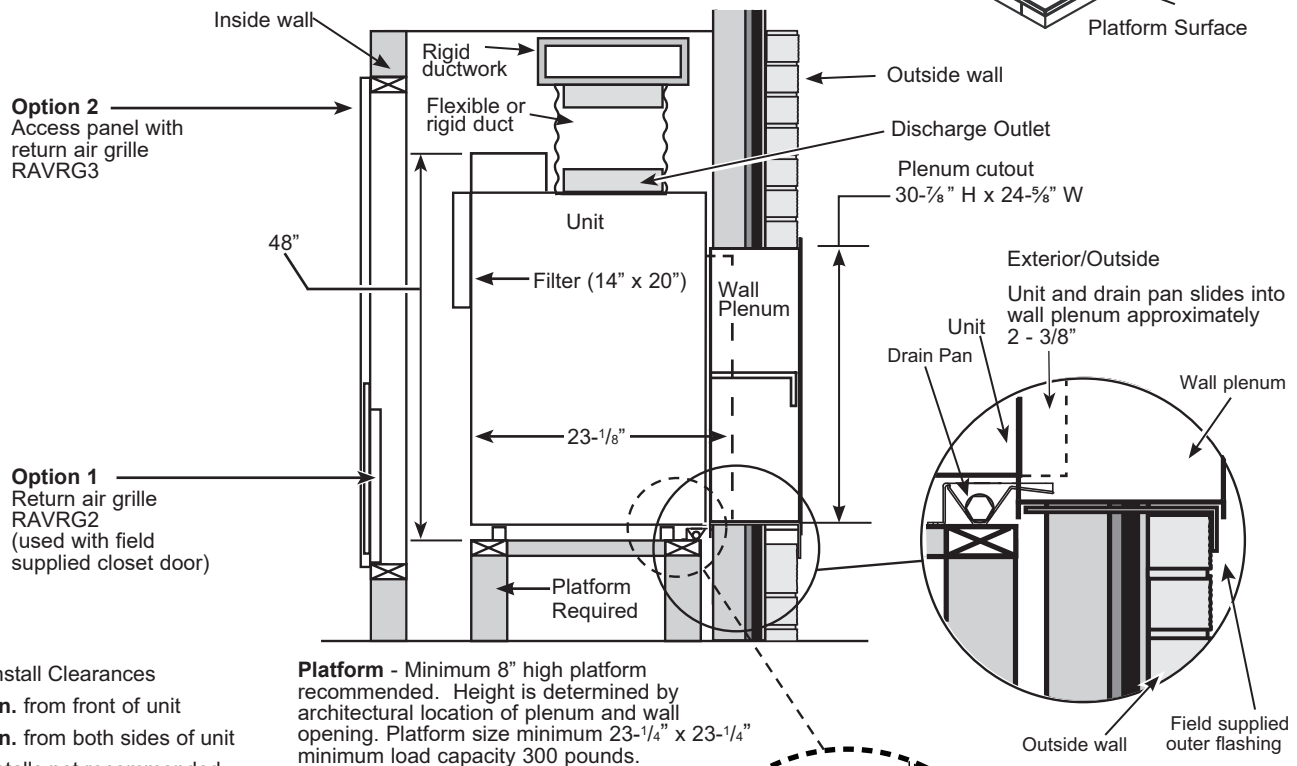
### UNIT INSTALLED THROUGH FRONT OF PLENUM



### Drain Pan Location



### Side View



#### Front Install Clearances

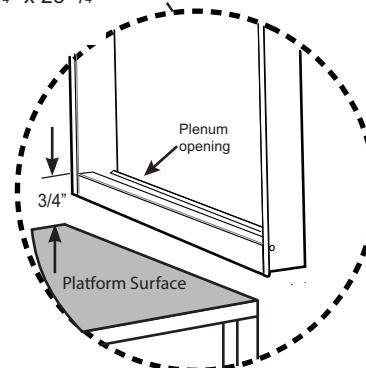
- 3" min. from front of unit
- 3" min. from both sides of unit

Side installs not recommended, but maybe accomplished with larger closet and other accommodations.

#### Available Accessories

- Architectural Louver - RAVAL2
- Wall Plenum - RAVWPT8 - telescopes from 5-1/2" to 8"
- Wall Plenum - RAVWPT14 - telescopes from 8" to 14"
- Return Air Grille - RAVRG2
- Access Panel with Return Air Grille - RAVRG3
- Wall Thermostat (Digital and Programmable)
- RAVDP20 (REQUIRED)

Plenum opening must be 3/4" above platform surface for large chassis installation.



# Installation Instructions

## INSTALLATION SEQUENCE

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Plan for proper electrical supply, drains and ductwork locations.</li> <li>2. Install wall plenum.</li> <li>3. Install the grille.</li> <li>4. Build and install platform.</li> <li>5. Install drain pan.</li> <li>6. Place unit on the platform and slide the exterior side of the unit into the plenum until it is fully seated. (Unit touches air divider)</li> </ol> | <ol style="list-style-type: none"> <li>7. Connect unit to the ductwork.</li> <li>8. Connect the thermostat.</li> <li>9. Connect the electrical power.</li> <li>10. Install air return grille or access cover.</li> <li>11. Review the installation checklist.</li> <li>12. Check operation of the unit.</li> </ol> |
|--|--|

## INSTALLATION INSTRUCTIONS

### Install the Wall Plenum

Install the wall plenum. Refer to instructions included in the wall plenum kit RAVWP8 or RAVWPT14 for proper installation procedures.

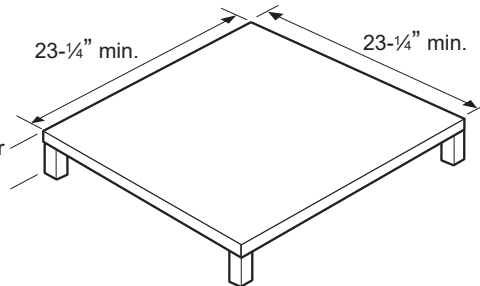
### Install the Grille

Install the grille. Refer to instructions included in the grille kit RAVAL2 for proper installation procedures.

### Build and Install the Zoneline Base Platform

1. Construct a 23-1/4" min. x 23-1/4" min. square platform with legs to raise the platform.  
NOTE: The platform must have a load-bearing capacity of 300 lbs. minimum.

**Recommended platform height:**  
Platform surface should be 3/4" below wall plenum opening. See Plenum Installation Instructions for details



NOTE: For large chassis units Drain Kit RAVDP20 is required to drain condensate water to the building DWV system.

2. Place the platform in the utility closet with the following clearance between it and the interior surface of the walls/door/panel:
  - 3" min. from front of the unit – Unit to be installed through FRONT of case
  - 3" min. from two sides of the unit
3. Align the platform with the opening of the wall plenum and secure to the floor using appropriate brackets and bolts.

### Condensate Disposal System

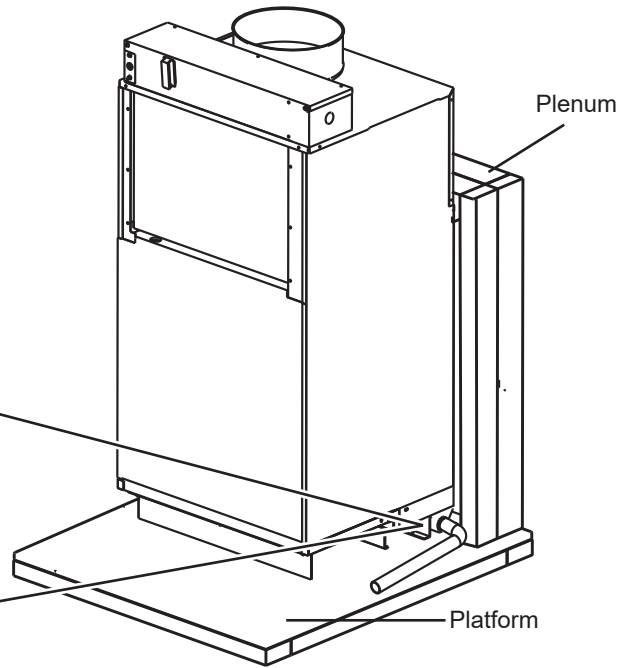
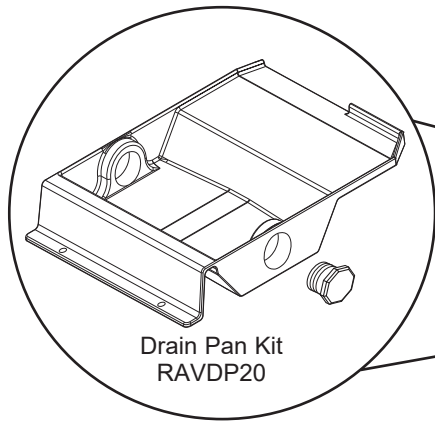
The Condensate Disposal System increases energy efficiency utilizing a factory installed fan that slings the condensate onto the hot outdoor coil.

When high outdoor humidity prevents the slinger from disposing of all condensate, the excess condensate overflows into the condensate drain pan and out of the 3/4" internal drain connections.

**NOTE: If the Condensate Disposal System fails to remove all of the condensate from the unit, any excess condensate will overflow from a spillway in the rear of the unit directly into the wall plenum, and drain outside the building. This is your indication that the chassis or drain requires servicing.**

## Install the Drain Pan

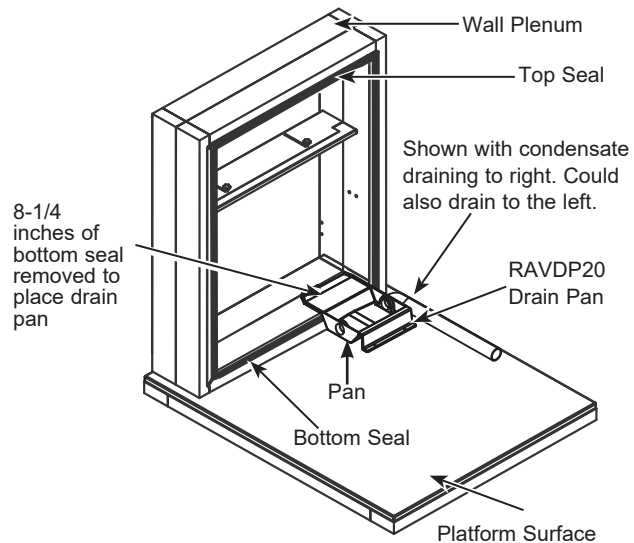
**NOTE:** THE ACCESSORY DRAIN PAN (RAVDP20) MUST BE INSTALLED BEFORE INSTALLING THE UNIT. This kit is only used on the 18,000 BTU units with a chassis height of 48 inches.



### Typical Installation

1. Install drain pan.  
Refer to instructions included in the drain pan kit RAVDP20 for proper installation procedures.
2. Place unit on the platform and slide the exterior side of the unit into the plenum until it is fully seated and unit touches air divider in plenum.

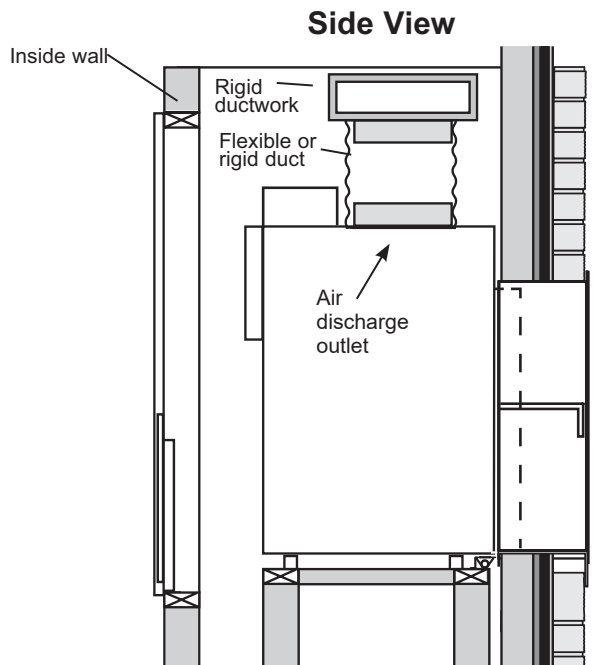
An external or internal drain must be attached to one of the two primary drain connections located to the right or left side of the drain pan. The drain spillway located on the back of the unit is the secondary drain if required by state and local codes. A field supplied secondary condensation pan may be required. Refer to the local codes for proper installation of drain.



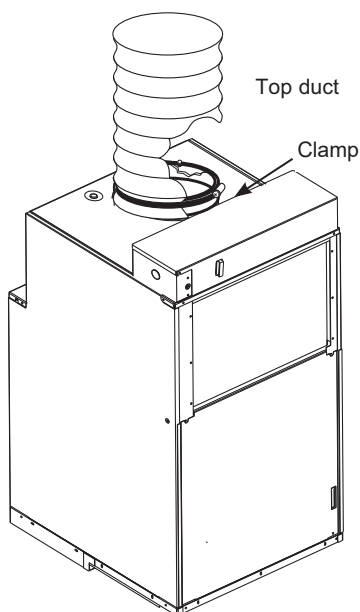
# Installation Instructions

## Connect the Top Duct

1. Install the duct onto the air discharge outlet.



2. Use a field supplied clamp to secure the top duct to the air discharge outlet.



## Remote Thermostat

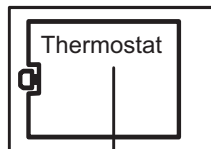
### **⚠ WARNING** Electric Shock Hazard

Before servicing, disconnect power to the Zoneline at the fuse box or circuit breaker and pull out electrical disconnect on front of the chassis.

Failure to do so can result in personal injury and/or death.

All SPVU units are factory configured to be controlled by using a single stage heat/cool remote wall mounting thermostat. The thermostat may be auto or manual changeover as long as the control configuration matches that of the SPVU unit.

**NOTE:** See the *Remote Thermostat and Low Voltage Control Connections* sections of this manual and the manual with the separate thermostat for proper connections and settings.



### Maximum Wiring Length for Thermostat Connection to the Unit

66 ft. for AWG 18
60 ft. for AWG 20
40 ft. for AWG 24
AWG – American Wire Gauge



Unit Connections

### IMPORTANT:

The Zoneline thermostat connections provide 24V AC only.

If using a digital/electronic wall thermostat you must set it to the 24V AC setting. See the Installation Instructions for the wall thermostat.

### NOTICE:

Damage to a wall thermostat or to the Zoneline electronics can result from improper connections. Exercise extra attention when connecting blue and black wires. No line voltage connections should be made to any circuit in the thermostat. Isolate all wires in building from line voltage.

## REMOTE THERMOSTAT AND LOW VOLTAGE CONTROL CONNECTIONS

### To Connect the wall-mounted thermostat

Terminal connections are located under the control box panel.

1. Pull the power disconnect located in the front of the chassis.
2. Disconnect the power coming into the unit from the main breaker panel or the closet mounted disconnect.
3. Remove the control box panel by removing the 4 front screws and 3 top screws that secure the panel.
4. Run the thermostat wires through the small hole on the top of the box to reach the terminal connections on the right side of the control.
5. Make the wire connections per the instructions that are included with the thermostat.
6. Once each wire is matched and connected, the unit is now ready for operation.
7. Reattach the control box panel.

### Thermostat terminals requirements

For cooling with electric heat units: C, R, GL, Y, W.

For heat pump units: C, R, GL, Y, W, B.

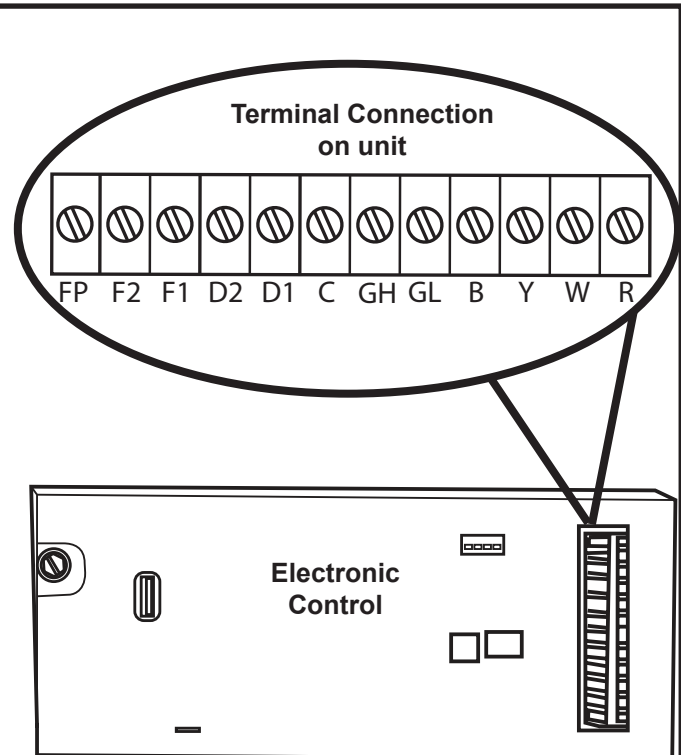
For two fan speeds, thermostat must have 2 fan speed selection.

### Heat Pump Units During Heat Mode:

The B terminal must be continuous energized. The W terminal must have 24 VAC output to call for heat. The control board decides on whether to turn on the Heat Pump Heat (compressor) or Electric Heat. The Y terminal should not have 24 VAC output during the Electric Heat mode.

### ⚠ CAUTION

Improper CDC wiring may damage the Zoneline electronics or cause erratic Zoneline operation. No Common busing is permitted. A separate wire pair must be run from each separate controlling switch to each individual Zoneline.



Interface Definition	
Terminal Code	Wire Connection Function
FP	Factory use only. (Ensure there is not jumper at FP and F2)
F2	Used with F1 to provide 24 VAC to external fan relay. (Ensure there is no jumper at FP and F2)
F1	Used with F2 to provide 24 VAC to external fan relay
D2	Used with D1 for desk control on or off operation
D1	Used with D2 for desk control on or off operation
C	Common Ground Terminal
GH	Call for High Fan
GL	Call for Low Fan
B	Call for Heat Pump Reversing Valve
Y	Call for Compressor
W	Call for Heating
R	24V Power from Electronic Control to Wall Thermostat

# Installation Instructions

## REMOTE THERMOSTAT AND LOW VOLTAGE CONTROL CONNECTIONS

### Desk Control Terminals

The SPVU has built-in provisions for connection to an external switch to control power to the unit. The switch can be a central desk control system or even a normally open door switch.

For desk control operation, connect one side of the switch to the D1 terminal and the other to the D2 terminal. Whenever the switch closes, the unit operation will stop.

**NOTE:** The desk control system and switches must be field supplied.

### Maximum Wire Length for Desk Control Switch

Wire Size	Maximum Length
#24	400 ft.
#22	600 ft.
#20	900 ft.
#18	1500 ft.
#16	2000 ft.

### Auxiliary Fan Control

The Smart Center also has the ability to control a 24VAC relay to activate an auxiliary, or transfer, fan. The outputs are listed as F1 and F2 on the control board.

To connect the relay, simply wire one side of the relay to F1 and the other side to F2. Anytime that the fan runs, the terminals will send a 24VAC signal to the relay. The relay must be 24VAC, 100mA or less.

**NOTE:** The relay and auxiliary fans must be field supplied.

**NOTE:** It is the installer's responsibility to ensure that all control wiring connections are made in accordance with the installation instructions. Improper connection of the thermostat control wiring and/or tampering with the unit's internal wiring can void the equipment warranty and may result in property damage, personal injury or death.

### Air Return Panel/Grille

Install the air return grille or access cover. Refer to instructions included with the kit chosen.



## ELECTRICAL CONNECTIONS

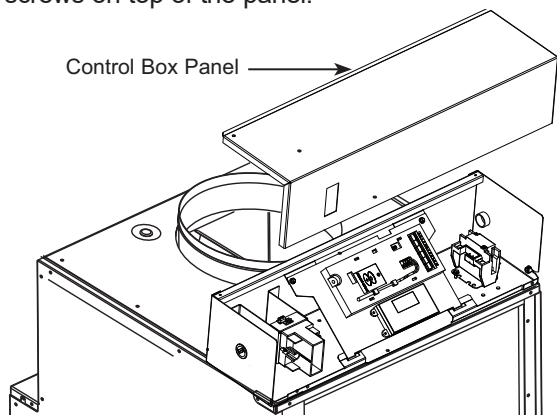
### 1. REMOVE CONTROL BOX PANEL

**⚠ WARNING Electric Shock Hazard**

Before servicing, disconnect power to the Zoneline at the fuse box or circuit breaker and pull out electrical disconnect on front of the chassis.

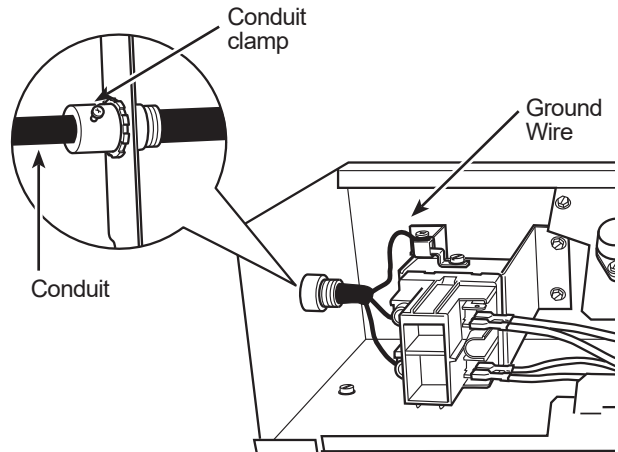
Failure to do so can result in personal injury and/or death.

Remove the control box panel by taking out the 2 screws on top of the panel.



### 2. ATTACH CONDUIT

Use the round knockout hole on the left side of the control box to install conduit coming from the branch circuit. Install and clamp the conduit through the conduit clamp and bring wire leads into the junction box. Leave 8" of wire free from the end of the conduit.



### 3. MAKE WIRE LEAD CONNECTIONS INSIDE THE CONTROL BOX

**⚠ WARNING RISK OF ELECTRIC SHOCK**

Can cause injury or death. This appliance must be properly grounded.

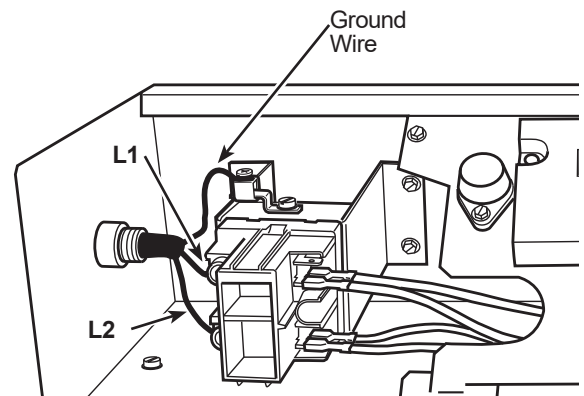
Turn OFF electrical power before service or installation.

Pull the power disconnect located in the front of the chassis. Disconnect the power coming into the unit from the main breaker panel or the closet mounted disconnect.

**NOTE:**

- All electrical connections and wiring must be installed by a qualified electrician and conform to the National Electric Code (NEC) and all local codes which have jurisdiction.
- All chassis must be hard wired with properly sized breakers. Use HACR type breakers to avoid nuisance trips.
- Unit must be properly grounded.

1. Make all wire connections by using appropriate UL-listed electrical connectors and techniques.
2. Be sure that all wire leads are inside the control box and not pinched between the panel and the unit. The green insulated ground wire from the Zoneline MUST BE connected to the branch circuit ground wire.
3. Replace the control box panel and secure to the unit by replacing the 2 screws removed earlier.



# Installation Instructions

## ELECTRICAL CONNECTIONS (continued)

### DIRECT CONNECTION

Heater Wattage @ 230/208 Volts	Circuit Protective Device
2.50/2.05 KW 3.40/2.78 KW 5.00/4.09 KW	15-Amp Time Delay-Fuse or Breaker 20-Amp Time Delay-Fuse or Breaker 30-Amp Time Delay-Fuse or Breaker
Heater Wattage @ 265 Volts	Circuit Protective Device
2.50 KW 3.40 KW 5.00 KW	15-Amp Time Delay-Fuse or Breaker 20-Amp Time Delay-Fuse or Breaker 30-Amp Time Delay-Fuse or Breaker

\* See NEC for application for 265 Volts.

## FINAL INSTALLATION

### FINAL INSTALLATION CHECKLIST

- Ensure that all installation instructions concerning clearances around the unit have been adhered to.
- Inspect and ensure that all components and accessories have been installed properly and that they have not been damaged during the installation process.
- Wall plenum flashing is installed, plenum level and calked.
- Unit is level, front to back and left to right.
- Check to ensure that the unit air filter, indoor coil, and outdoor coil are free from any obstructions.
- Check to make sure only one air filter is installed in the system.
- Check the condensate water drain(s) to ensure that they are connected and adequate for the removal of condensate water and that they meet approval of the end user.
- Ductwork is connected and secure to air discharge outlet.
- Secure all access panels (i.e. front cover and/or control box).
- Wall thermostat is wired correctly.
- Unit is wired correctly.
- Ensure that the circuit breaker(s) /fuse(s) and supply circuit wire size have been sized correctly.
- Ensure the unit has correct line voltage to it, is on a single circuit and is properly grounded.
- Ensure that the entire installation is in compliance with all applicable national and local codes and ordinances having jurisdiction.

### CONNECT POWER

1. If all the items on the checklist are correct, reinstall the power disconnect on the front of the unit.
2. Turn the power on at the main service panel.
3. Turn on and adjust the thermostat so the unit begins to run.
4. Check for proper operation in each mode. Instruct the owner or operator regarding the unit's operation, and the recommended routine maintenance schedule.

**NOTE:** Maintaining a log for recording the dates of maintenance and/or service is recommended, and should be suggested to the owner or operator of the equipment.

### SERVICING

#### WARNING

**Risk of Electric Shock, can cause injury or death.** Before servicing, switch power off at the service panel and lock the area to prevent power from being switched on accidentally. When the area cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

**NOTE:** We strongly recommend that any servicing be performed by a qualified individual.

#### To remove the unit from the closet.

1. Switch the wall thermostat to off.
2. Pull the Power Disconnect located in the front of the chassis.
3. Turn off all power coming into the unit at the main breaker panel or the closet mounted disconnect.
4. Disconnect the electrical connection at the unit.
5. Disconnect the drain system.
6. Disconnect the duct work.
7. Slide the chassis out of the wall plenum.
8. Lift the chassis out of the utility closet.

## *Normal Operating Sounds*



You may hear a pinging noise caused by water being picked up and thrown against the condenser on rainy days or when the humidity is high. This design feature helps remove moisture and improve efficiency.

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**“CLICK”**

You may hear relays click when the controls cycle on and off or are adjusted to change the room temperature.

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Water will collect in the base pan during high humidity or on rainy days. The water may overflow and drip from the outdoor side of the unit.

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The indoor fan runs continuously when the unit is operating in the cooling mode, unless it is set to cycle. This will cause the fan to cycle on and off with the compressor. You may also hear a fan noise stop and start.

There are times when the fan on the unit will run even when the unit is not heating or cooling. If the system is set up to be in continuous fan the indoor fan will run regardless if the unit may be cooling or heating. Other times the fan will run longer than the heating/cooling cycle or kick on occasionally. This is normal and is done to circulate air to improve room comfort and balance.

If the unit is equipped with a make-up air ventilation system, fans will run continuously.

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**3-Minute Delay**



You may notice a few minutes delay in starting if you try to restart the Zoneline too soon after turning it off or if you adjust the thermostat right after the compressor has shut off. This is due to a built-in restart protector for the compressor that causes a 3-minute delay.

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**SILENCE**

During the defrost cycle, both indoor and outdoor fans stop and the compressor will operate in the cooling mode to remove frost from the outdoor coil. After defrost, the unit will restart in electric heat to quickly warm the room to the desired comfort level.

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**COMPRESSOR PROTECTION**

To protect the compressor and prevent short cycling, the unit is designed to run for a minimum of 3 minutes after the compressor starts at any thermostat setting.

## Troubleshooting Tips... Before you call for service

Save time and money! Review the charts on the following pages first and you may not need to call for service.

<b>Problem</b>	<b>Possible Cause</b>	<b>What To Do</b>
<b>Zoneline does not start.</b>	<b>The fuse is blown/circuit breaker is tripped.</b>	Check the house fuse/circuit breaker box and replace the fuse or reset the breaker.
	<b>The unit is waiting for the compressor overload protector to reset.</b>	This is normal. The Zoneline will start again after it resets.
	<b>Power Failure.</b>	There is a protective time delay (up to 3 minutes) to prevent tripping of the compressor overload. For this reason, the unit may not start normal heating or cooling for 3 minutes after it turned back on.
<b>Zoneline does not cool or heat as it should.</b>	<b>Indoor airflow is restricted.</b>	Make sure there are not curtains, blinds or furniture blocking the front of the Zoneline.
	<b>Outdoor airflow is restricted or recirculated.</b>	Make sure the architectural louver is not restricted. This can cause the unit to cycle off due to the compressor overload protector.  Outdoor grille must have a minimum of 65% free area. Non-GE Appliances grills may be too restrictive for proper performance. Consult your salesperson for assistance.
	<b>The air filter is dirty.</b>	Change the filter at least every 30 days. See the Care and Cleaning - Air Filters section
	<b>The room may have been hot or cold.</b>	When the Zoneline is first turned on you need to allow time for the room to cool down or warm up.
	<b>Outdoor air is entering the room.</b>	Set the vent control to the closed position.
<b>Burning odor at the start of heating operation.</b>	<b>Dust on the surface of the heating elements.</b>	This can cause a "burning" odor at the beginning of the heating operation. This should quickly fade.
<b>The air is not always cool or hot during operation.</b>	<b>The heat pump is not producing hot air.</b>	This is normal. The heat pump will produce warm air but not as hot as air produced when the higher-cost electric heat is used.
	<b>The fan switch may be set to continuous fan.</b>	This causes the fan to blow room temperature air even when the compressor or heater cycles off. The continuous air movement provides better overall temperature control in the cool mode.
<b>The air does not feel warm enough during heating operation</b>	<b>The heat pump alone produces air that feels cooler than desired.</b>	Use the Electric Heat Option. This turns off the heat pump and warms with electric heat only. NOTE: Use of this option will result in increased energy consumption.

# Error Codes

## Electronic Control Error Code Diagnostics and Test Mode

### Error Code Diagnostics

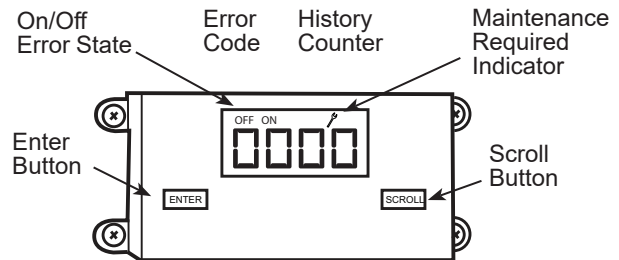
The SPVU electronic control continuously monitors the unit operation and will store error codes if certain conditions are witnessed. In some cases the unit may take action and shut the unit off until conditions are corrected.

To access the error code menu press the “ENTER” button. If error codes are present they will be displayed. If multiple codes exist you can toggle between error codes using the “SCROLL” button. To clear all codes press the “ENTER” and “SCROLL” buttons for three seconds while in the error code mode.

### Error Codes and Alarm Status

#### Unit Control Panel

The display shown below has four digits. The left two digits indicate the error code (1 to 24), the On/Off icons above these two digits indicate the current state of the error code. The right two digits show the history count (up to 99) of the associated error code. The display contains a maintenance icon (wrench) that will illuminate to indicate when the unit needs maintenance.



#### Check Error Codes:

1. Press the ENTER key to activate the display.
2. Each press of the scroll key display the next error code.

#### Clear History Counters:

1. Press and hold the ENTER key and SCROLL KEY for about 6 seconds.

Error Code	Problem	Action
1	Front panel button stuck for more than 20 seconds	Continue to monitor for "OPEN" (unstuck) switch. Do not process switch input.
2	Input voltage out of specification (103-127/187-253)	Unit stops, open all relays until voltage is back within specs then resumes operation
3	Indoor temperature sensor is open or shorted	Unit defaults to 75° F in COOLING or 68° F in HEATING and will continue to operate.
4	Indoor coil temperature sensor is open or shorted	The unit's control board defaults 40° F. It will override the sensor and the unit will continue to operate.
5	Outdoor coil temperature sensor is open or shorted	The unit defaults to 20° F, overriding the sensor. The unit will continue to operate. Using Electric heat if available for HEATING. If not available, it will use HEAT PUMP if the outdoor temperature allows.
6	Outdoor coil > (greater than) 175° F	The unit will shut down for 5 minutes, resume operation for 3 minutes. If test fails 3 times, the severity is increased and the unit operation is locked out.
7	Indoor coil < (less than) 30° F for 2 consecutive minutes	The compressor will turn off and the High Fan speed will run. When coil temp reaches 45° F the unit will resume operation after lockout time.
8	Unit cycles > (greater than) 9 times per hour	The unit will continue to operate and be monitored.
9	Unit cycles < (less than) 3 times per hour	The unit will continue to operate and be monitored.
10	Room freeze protection	Only use if Electric Heat is available. Run High Speed and Electric Heat until room temperature reaches 46° F. The unit will display "FRZ" during operation. Logged only.
11	Wall stat problem or connection issue	The unit will not operate.
12	Not applicable	Not applicable
13	High pressure limit switch is open	If using is cooling or heat pump is on, shut down compressor. Run high fan until switch closes, then resume operation. The third occurrence in 1 hour locks unit out. Applicable to 24K unit only.
14	Not applicable	Not applicable
15	Heat pump error	If indoor coil temperature is less than ambient temperature for 3 minutes the unit will use electric heat to satisfy the heating demand.
16	Temperature beyond operating limits	Occurs if the ambient temperature range falls below 0° F or greater than 130° F. The error code will remain on until the temperature reaches the operating range and then the unit will return to normal operation.
17	Equipment doesn't meet minimum configuration	The compressor must be enabled and have at least 2 fan speeds.
18	Not applicable	Not applicable
19	Not applicable	Not applicable
20	Not applicable	Not applicable
21	Not applicable	Not applicable
22	Outdoor coil temperature <30°F for 2 consecutive minutes	Unit will use electric heat to satisfy heating demands until the temperature equals or exceeds 45°F. Applicable for the Heat Pump models only.
23	Not applicable	Not applicable
24	Not applicable	Not applicable



# Product Registration

Follow these three steps to protect your new appliance investment:

**1** Complete and mail your Consumer Production Registration today. Have the peace of mind of knowing we can contact you in the unlikely event of a safety modification.

**2** After mailing the registration below, store this document in a safe place. It contains information you will need should you require service. Our service number is 844-GE4-PTAC (or 844-434-7822 ).

**3** Read your Owner's Manual carefully. It will help you operate your new appliance properly.

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## CONSUMER PRODUCT OWNERSHIP REGISTRATION

Three ways to register your appliance:



**SCAN**  
this code with your smart-phone app

**GO ONLINE**  
[geappliances.com/register](http://geappliances.com/register)

**COMPLETE & MAIL**  
this registration card

Product:  
Model:  
Serial:

Mr.  Mrs.  Ms.

First Name  Last Name

Street Address  Apt.#

Email Address   
We'll use your email address to send you information about your product, as well as discounts and other offers from GE Appliances

City  State  ZIP Code

Month  Day  Year  Phone Number (  )   
Date appliance was installed or placed in use

GE Appliances takes your privacy seriously. All information you provide shall be held in strict accordance with the GE Appliances Privacy Policy. Read the full policy at [www.geappliances.com/privacy/privacy\\_policy.htm](http://www.geappliances.com/privacy/privacy_policy.htm).

[geappliances.com/register](http://geappliances.com/register)

Revised 6/15  
245D1499P001

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## FOR CANADIAN CONSUMERS / POUR LES CONSOMMATEURS CANADIENS

MODEL/MODÈLE		SERIAL/SÉRIE		P.O. BOX/C.P. 1780 MISSISSAUGA, ONT. L4V 4G1	
				INSTALLATION DATE Y/A M DATE D'INSTALLATION	
PLEASE COMPLETE AND RETURN THIS CARD IMMEDIATELY TO ENABLE US TO CONTACT YOU IN THE REMOTE EVENT A SAFETY NOTIFICATION IS ISSUED FOR THIS PRODUCT.			VEUILLEZ REMPLIR ET RETOURNER LA PRÉSENTE FICHE SANS TARDER AFIN DE NOUS PERMETTRE DE COMMUNIQUER AVEC VOUS SI JAMAIS UN AVIS DE SÉCURITÉ CONCERNANT CE PRODUIT ÉTAIT ÉMIS.		
CHECK ONE COCHEZ	MR. <input type="checkbox"/> MISS <input type="checkbox"/>	MRS. <input type="checkbox"/> MME <input type="checkbox"/> MS <input type="checkbox"/>	FIRST NAME/PRÉNOM	LAST NAME/NOM	
STREET NO. N° RUE		STREET NAME/RUE		APT.NO./APP./RR#	
CITY/VILLE		PROVINCE	POSTAL CODE/POSTAL		
AREA CODE IND. REG.	TELEPHONE	NAME OF SELLING DEALER/NOM DU MARCHAND			

Canada consumers, visit [geappliances.ca/register/index.jsp](http://geappliances.ca/register/index.jsp)

CORRESPONDENCE  
CORRESPONDANCE

FRENCH  
FRANÇAIS

ENGLISH  
ANGLAIS

245D1499P002  
Revised 06/14

# Product Registration

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Please place in envelope and mail to:

PRODUCT REGISTRATION DEPARTMENT  
PO BOX 34980  
LOUISVILLE KY 40232-4980

Please place in envelope and mail to:  
Veuillez mettre dans une enveloppe et envoyez à :

OWNERSHIP REGISTRATION  
PO BOX 1780  
MISSISSAUGA, ONTARIO  
L4Y 4G1



# GE Appliances Vertical Zoneline Warranty

All warranty service provided by our Factory Service Centers or an authorized Customer Care® technician. To schedule service, on-line, visit us at [GEAppliances.com](http://GEAppliances.com), or call 844-GE4-PTAC (or 844-434-7822 ). For service in Canada, contact Gordon Williams Corp. at 1.888.209.0999. Please have serial number and model number available when calling for service.

For The Period Of:	GE Will Replace:
<b>One Year</b> <i>From the date of the original purchase</i>	<b>Any part</b> of the air conditioner which fails due to a defect in materials or workmanship. During this <b>limited one-year warranty</b> , GE will provide, <b>free of charge</b> , all labor and related service cost to replace the defective part.
<b>Five Year</b> <i>From the date of the original purchase</i>	<b>Sealed Refrigerating System, if any part of the sealed refrigerating system</b> (the compressor, condenser, evaporator and all connecting tubing including the make up air system) should fail due to a defect in materials or workmanship. During this <b>limited five-year warranty</b> , GE will provide, <b>free of charge</b> , all labor and related service cost to replace the defective part.
<b>Second through Fifth Year</b> <i>From the date of the original purchase</i>	For the <b>second through the fifth year</b> from the date of original purchase, GE will replace <b>certain parts</b> that fail due to a defect in materials or workmanship. Parts covered are fan motors, switches, thermostats, electric resistance heater, electric resistance heater protectors, compressor overload, solenoids, circuit boards, thermistors, frost controls, capacitors, varistors and indoor blower bearing. During this <b>four-year limited additional warranty</b> , you will be responsible for any labor or on-site service costs.

## What GE Will Not Cover:

- Service trips to your site to teach you how to use the product.
- Improper installation, delivery or maintenance.  
If you have an installation problem, or if the air conditioner is of improper cooling capacity for the intended use, contact your dealer or installer. You are responsible for providing adequate electrical connecting facilities.
- In commercial locations, labor necessary to move the unit to a location where it is accessible for service by an individual technician.
- Failure or damage resulting from corrosion due to installation in an environment containing corrosive chemicals.
- Replacement of fuses or resetting of circuit breakers.
- Failure of the product resulting from modifications to the product or due to unreasonable use, including failure to provide reasonable and necessary maintenance.
- Failure or damage resulting from corrosion due to installation in a coastal environment, except for models treated with special factory-applied anti-corrosion protection as designated in the model number.
- Damage to product caused by improper power supply voltage, accident, fire, floods or acts of God.
- Incidental or consequential damage to personal property caused by possible defects with this air conditioner.
- Damage caused after delivery.
- Product not accessible to provide required service.

**EXCLUSION OF IMPLIED WARRANTIES—Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.**

This warranty is extended to the original purchaser and any succeeding owner for products purchased for use within the USA and Canada. If the product is located in an area where service by a GE Appliances Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Appliances Service location for service. In Alaska, the warranty excludes the cost of shipping or service calls to your site.

Some states or provinces 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 or province to province. To know what your legal rights are, consult your local, state or provincial consumer affairs office or your state's Attorney General.

**Warrantor: GE Appliances, a Haier company**

Staple your receipt here. Proof of the original purchase date is needed to obtain service under the warranty.

# Consumer Support

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## GE Appliances Website

Have a question or need assistance with your appliance? Try the GE Appliances Website 24 hours a day, any day of the year! You can also shop for more great GE Appliances products and take advantage of all our on-line support services designed for your convenience. In the US: [GEAppliances.com](http://GEAppliances.com)

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## Register Your Appliance

Register your new appliance on-line at your convenience! Timely product registration will allow for enhanced communication and prompt service under the terms of your warranty, should the need arise. You may also mail in the pre-printed registration card included in the packing material. In the US: [GEAppliances.com/register](http://GEAppliances.com/register)

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## Schedule Service

Expert GE Appliances repair service is only one step away from your door. Get on-line and schedule your service at your convenience any day of the year. In the US: [GEAppliances.com/ge/service-and-support/service.htm](http://GEAppliances.com/ge/service-and-support/service.htm) or call 800.432.2737 during normal business hours.

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## Extended Warranties

Purchase a GE Appliances extended warranty and learn about special discounts that are available while your warranty is still in effect. You can purchase it on-line anytime. GE Appliances Services will still be there after your warranty expires. In the US: [GEAppliances.com/ge/service-and-support/shop-for-extended-service-plans.htm](http://GEAppliances.com/ge/service-and-support/shop-for-extended-service-plans.htm) or call 800.626.2224 during normal business hours.

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## Parts and Accessories

Individuals qualified to service their own appliances can have parts or accessories sent directly to their homes (VISA, MasterCard and Discover cards are accepted). Order on-line today 24 hours every day. In the US: [GEApplianceparts.com](http://GEApplianceparts.com) or by phone at 877.959.8688 during normal business hours.

**Instructions contained in this manual cover procedures to be performed by any user. Other servicing generally should be referred to qualified service personnel. Caution must be exercised, since improper servicing may cause unsafe operation.**

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## Contact Us

If you are not satisfied with the service you receive from GE Appliances, contact us on our Website with all the details including your phone number, or write to:

In the US: General Manager, Customer Relations | GE Appliances, Appliance Park | Louisville, KY 40225  
[GEAppliances.com/ge/service-and-support/contact.htm](http://GEAppliances.com/ge/service-and-support/contact.htm)