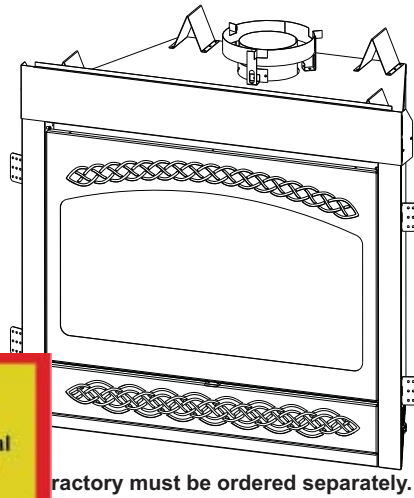


**Models:**  
**CNXT70PLUS**  
**Fresh Air Fireplace**



Factory must be ordered separately.

**GAS-FIRED**



This appliance has been retired. Service parts pages within have been removed. For replacement parts, please refer to the individual service parts list located on the brand websites.

**CAUTION**



**DO NOT DISCARD THIS MANUAL**

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.

**⚠ WARNING**



**If the information in these instructions is not followed exactly, a fire may result causing property damage, personal injury, or death.**

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **What to do if you smell gas:**
  - Do not try to light any appliance.
  - Do not touch any electrical switch. Do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

**⚠ WARNING**



**HOT! DO NOT TOUCH. SEVERE BURNS MAY RESULT. CLOTHING IGNITION MAY RESULT.**

Glass and other surfaces are hot during operation and cool down.

- Keep children away.
- **CAREFULLY SUPERVISE** children in same room as appliance.
- Alert children and adults to hazards of high temperatures.
- Do **NOT** operate with protective barriers removed or door open.
- Keep clothing, furniture, draperies and other combustibles away.

In the Commonwealth of Massachusetts:

- installation must be performed by a licensed plumber or gas fitter.
- a CO detector shall be installed in the room where the appliance is installed.



Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies suggests NFI certified or factory-trained professionals, or technicians supervised by an NFI certified professional.



**Read this manual before installing or operating this appliance.  
Please retain this owner's manual for future reference.**

**Congratulations**

Congratulations on selecting a Heatilator Home Products gas appliance—an elegant and clean alternative to wood burning appliances. The Heatilator Home Products gas appliance you have selected is designed to provide the utmost in safety, reliability, and efficiency.

As the owner of a new appliance, you'll want to read and carefully follow all of the instructions contained in this owner's manual. Pay special attention to all cautions and warnings.

This owner's manual should be retained for future reference. We suggest you keep it with your other important documents and product manuals.

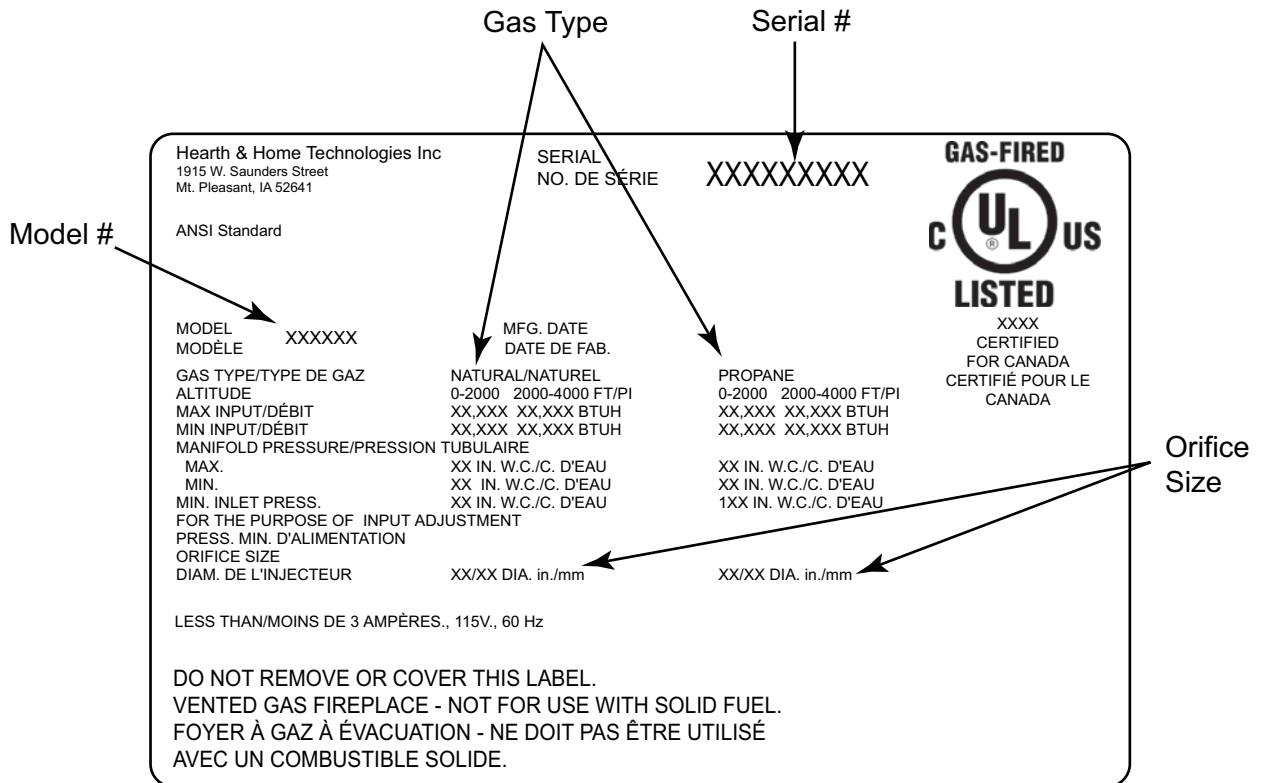
The information contained in this owner's manual, unless noted otherwise, applies to all models and gas control systems.

Your new Heatilator Home Products gas appliance will give you years of durable use and trouble-free enjoyment. Welcome to the Heatilator Home Products family of appliance products!

<b>Homeowner Reference Information</b>	<i>We recommend that you record the following pertinent information about your appliance:</i>
Model Name: _____	Date purchased/installed: _____
Serial Number: _____	Location on appliance: _____
Dealership purchased from: _____	Dealer phone: _____
Notes: _____	
_____	
_____	

**Listing Label Information/Location**

The model information regarding your specific appliance can be found on the rating plate located in the control area of the appliance.



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**Note:** An arrow (➔) found in the text signifies change in content.

# 1 Listing and Code Approvals

## A. Appliance Certification

**MODELS:** CNXT70PLUS  
**LABORATORY:** Underwriters Laboratories, Inc. (UL)  
**TYPE:** Vented Gas Appliance  
**STANDARD:** ANSI Z21.50-2000 • ANSI Z21.47-1998 •  
**CSA 2.22-2000 • CGA 2.3-M98**

**NOT INTENDED FOR USE AS A PRIMARY HEAT SOURCE.** This appliance is tested and approved as either supplemental room heat or as a decorative appliance. It should not be factored as primary heat in residential heating calculations.

**Note:** This installation must conform with local codes. In the absence of local codes you must comply with the **National Fuel Gas Code, ANSI Z223.1-latest edition** in the U.S.A. and the **CAN/CGA B149 Installation Codes** in Canada.

### WARNING

This is a power-vented gas appliance. Do not burn wood or materials other than as listed on the rating plate in this fresh air fireplace.

## B. BTU Specifications

Model		Max Input BTUH	Min Input BTUH	Orifice Size
CNXT70PLUS-LP	Front	43,500	33,000	.039 in./1.99 mm
	Back			.066 in./1.68 mm
CNXT70PLUS-NG	Front	47,000	34,000	.059 in./1.49 mm
	Back			.117 in/2.97 mm

## C. High Altitude Installations

The CNXT70PLUS is power vented. High altitude gas appliance considerations are no longer of concern, as long as the gas appliance is properly installed with the HRV200PLUS properly balanced (refer to HRV200PLUS manual).

**Note:** This appliance **CANNOT** be installed at an elevation above 6,200 ft (1,890 meters)

### WARNING

Do NOT use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## ➔ E. Non-Combustible Materials

Materials that are reported as passing **ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750° C**, shall be considered non-combustible materials.

## ➔ F. Combustible Materials

Materials made of or surfaced with wood, compressed paper, plant fibers, plastics, or other material that can ignite and burn, whether flame proofed or not, or whether plastered or unplastered shall be considered combustible materials.

# 2 Getting Started

## A. Design and Installation Considerations

Heatilator Home Products vented gas appliances are designed to operate with all exhaust gases expelled to the outside of the building.

### CAUTION

- Check building codes prior to installation.
- Installation **MUST** comply with local, regional, state and national codes and regulations.
  - Consult insurance carrier, local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

When planning an appliance installation, it's necessary to determine the following information before installing:

- Where the appliance is to be installed.
- The vent system configuration to be used.
- Gas supply piping.
- Electrical wiring.
- Framing and finishing details.
- Whether optional accessories—devices such as a fan, wall switch, or remote control—are desired.



### WARNING

- Keep appliance dry.
- Mold or rust may cause odors.
  - Water may damage controls.



## B. Tools and Supplies Needed

Before beginning the installation be sure that the following tools and building supplies are available.

- |                        |                                   |
|------------------------|-----------------------------------|
| Reciprocating saw      | Framing material                  |
| Pliers                 | Hi temp caulking material         |
| Hammer                 | Gloves                            |
| Phillips screwdriver   | Framing square                    |
| Flat blade screwdriver | Electric drill and bits (1/4 in.) |
| Plumb line             | Safety glasses                    |
| Level                  | Manometer                         |
| Voltmeter              | Tape measure                      |
- Non-corrosive leak check solution  
1/2 - 3/4 in. length, #6 or #8 Self-drilling screws  
One 1/4 in. female connection (for optional fan).

### CAUTION



#### Sharp Edges

- Wear protective gloves and safety glasses during installation.



## C. Inspect the Appliance and Components



### WARNING

Inspect appliance and components for damage. Damaged parts may impair safe operation.



- Do NOT install damaged components.
- Do NOT install incomplete components.
- Do NOT install substitute components.

Report damaged parts to dealer.

- Carefully remove the appliance and components from the packaging.
- The vent system components and trim doors are shipped in separate packages.
- The gas logs may be packaged separately and must be field installed.
- Report to your dealer any parts damaged in shipment, particularly the condition of the glass.
- **Read all of the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.**



### WARNING

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:


- Installation and use of any damaged appliance or vent system component.
- Modification of the appliance or vent system.
- Installation other than as instructed by Hearth & Home Technologies.
- Improper positioning of the gas logs or the glass door.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.


**Any such action may cause a fire hazard.**

# 3 Framing and Clearances

**Note:**

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.


**WARNING**



**Fire Risk**

Provide adequate clearance:

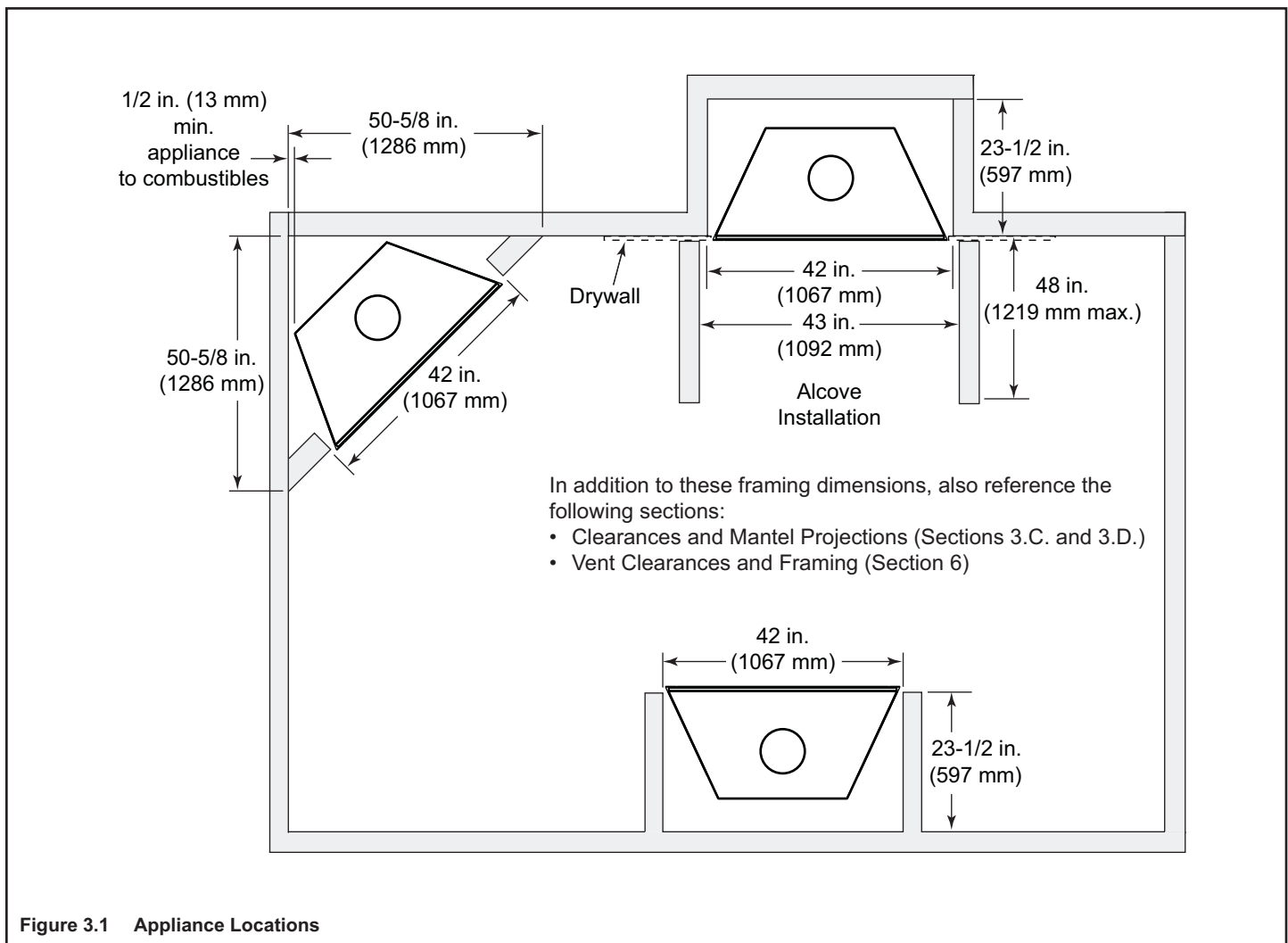
- Around air openings.
- For service access.

Locate appliance away from traffic areas.

**Note:** For actual appliance dimensions refer to Section 14.

## A. Select Appliance Location

When selecting a location for your appliance it is important to consider the required clearances to walls (See Figure 3.1).



➔ **Figure 3.1 Appliance Locations**

## B. Construct the Appliance Chase

A chase is a vertical boxlike structure built to enclose the gas appliance and/or its vent system. Vertical vents that run on the outside of a building may be, but are not required to be, installed inside a chase.

Construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Local building codes **MUST** be checked.

Chases should be constructed in the manner of all outside walls of the home to prevent cold air drafting problems. The chase should not break the outside building envelope in any manner.

Walls, ceiling, base plate and cantilever floor of the chase should be insulated. Vapor and air infiltration barriers should be installed in the chase as per regional codes for the rest of the home. Additionally, in regions where cold air infiltration may be an issue, the inside surfaces be sheetrocked and taped for maximum air tightness.

To further prevent drafts, the ceiling firestops should be caulked with high temperature caulk to seal gaps. Gas line holes and other openings should be caulked with high temperature caulk or stuffed with unfaced insulation. If the appliance is being installed on a cement slab, a layer of plywood may be placed underneath to prevent conducting cold up into the room.



### **WARNING**

#### **Fire Risk**

- Construct chase to all clearance specifications in manual.
- Locate and install appliance to all clearance specifications in manual.



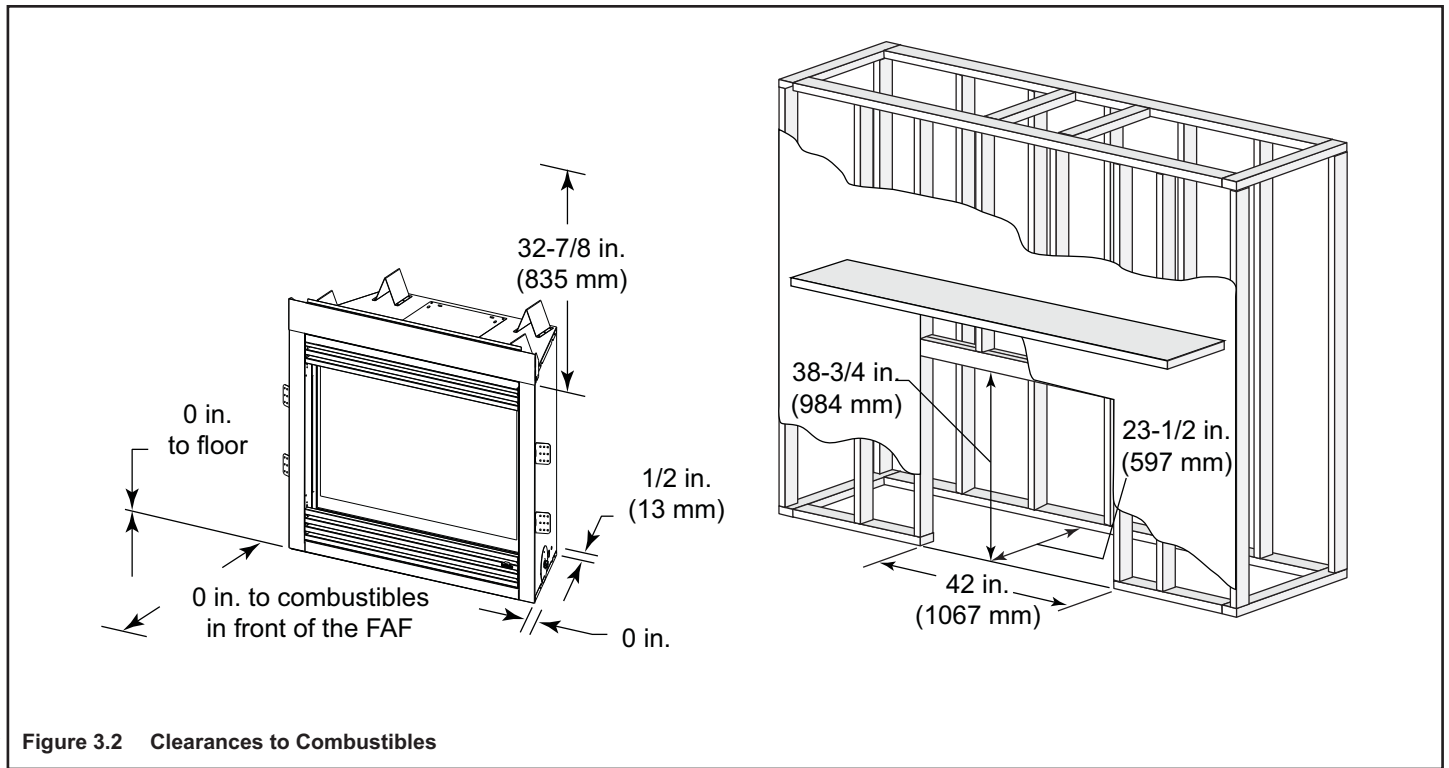
### **WARNING**

#### **Fire Risk**

#### **Odor Risk**

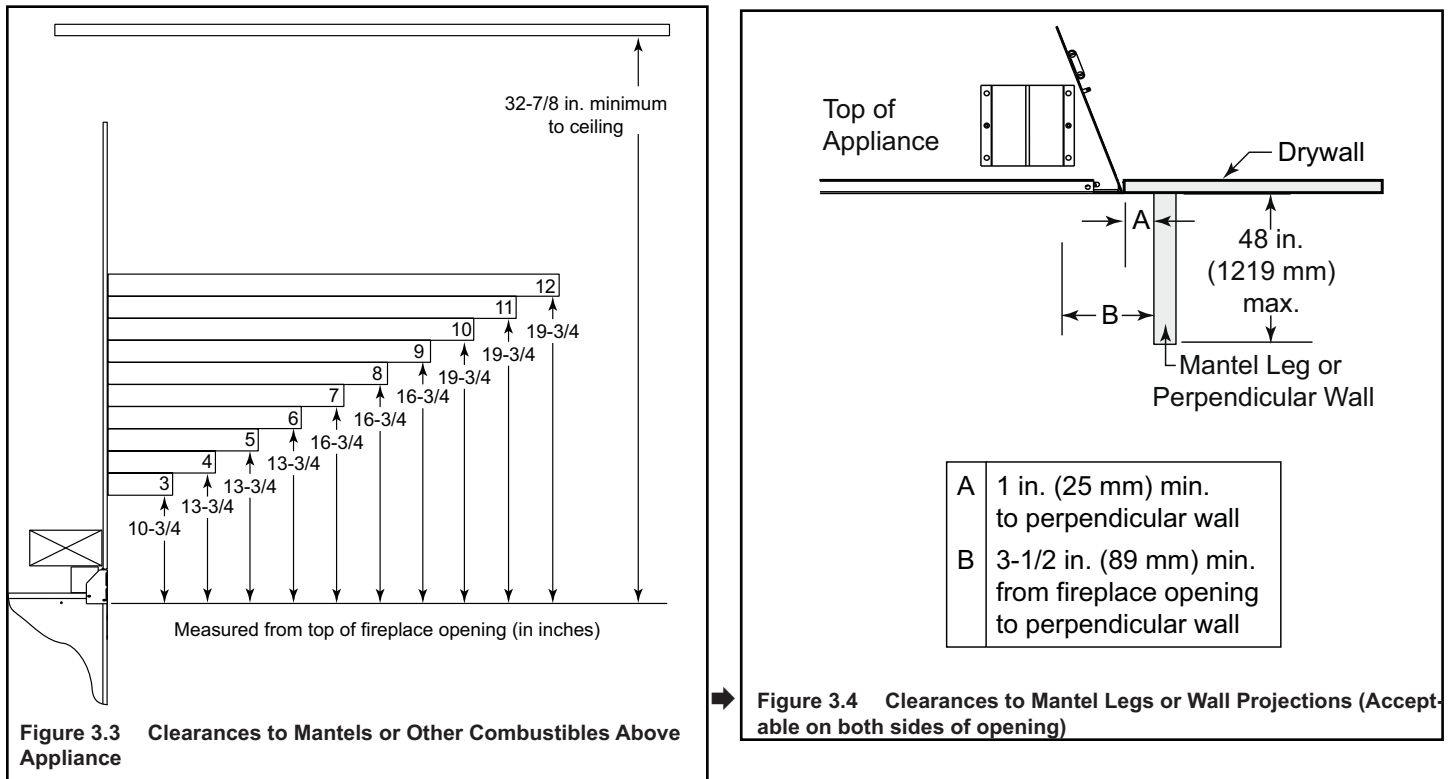
- Install appliance on hard metal or wood surfaces extending full width and depth of appliance.
- Do **NOT** install appliance directly on carpeting, vinyl, tile or any combustible material other than wood.

## C. Clearances



➔ Figure 3.2 Clearances to Combustibles

## D. Mantel Projections



➔ Figure 3.3 Clearances to Mantels or Other Combustibles Above Appliance




➔ Figure 3.4 Clearances to Mantel Legs or Wall Projections (Acceptable on both sides of opening)



# 4 Termination Locations

---




## A. Vent Termination Minimum Clearances

	<b>WARNING</b>
	<b>Fire Risk</b>
	<b>Explosion Risk</b>
	Maintain vent clearance to combustibles as specified.
	<ul style="list-style-type: none"><li>• Do not pack air space with insulation or other materials.</li></ul>
	Failure to keep insulation or other materials away from vent pipe may cause fire.

**Note:** Refer to the HRV200PLUS installation manual for additional installation and venting instructions.

# 5 Vent Information and Diagrams


---

	<b>WARNING</b>
	<b>Fire Risk</b>
	<b>Fumes Risk</b>
	This unit <b>MUST</b> be vented with the HRV200PLUS.
	<ul style="list-style-type: none"><li>• Do not connect to a chimney flue.</li></ul>
	The CNXT70PLUS will not vent correctly unless it is connected to the HRV200PLUS.

**Note:** Refer to the HRV200PLUS installation manual for additional installation and venting instructions.

# 6 Appliance Preparation

## A. Securing and Leveling the Appliance

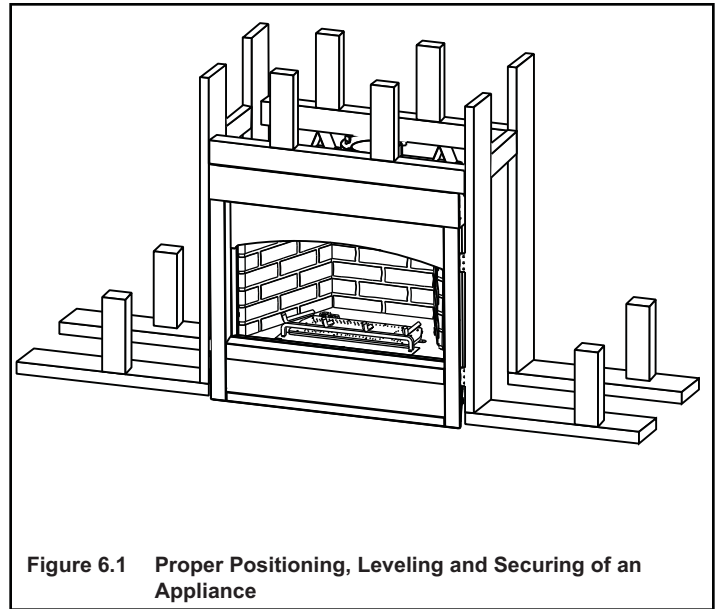
➔  **WARNING**

**Fire Risk!**

- Prevent contact with sagging, loose insulation.
- Do NOT install against combustible materials such as exposed insulation, plastic and insulation backer.


The diagram shows how to properly position, level, and secure the appliance. Nailing tabs are provided to secure the appliance to the framing members.

- Place the appliance into position.
- Level the appliance from side to side and front to back.
- ➔ • Shim the appliance as necessary. It is acceptable to use wood shims.
- Bend out nailing tabs on each side.
- Keep nailing tabs flush with the framing.
- Secure the appliance to the framing by using nails or screws through the nailing tabs.



**CAUTION**

Do NOT notch into the framing around the appliance spacers.

 **WARNING**

**Fire Risk**

- ALWAYS maintain specified clearances around the appliance.
- Do NOT notch into the framing around the appliance spacers.

Failure to keep insulation or other materials away from vent pipe may cause fire.

# 7 Gas Information


## A. Fuel Conversion


Before making gas connections ensure appliance being installed is compatible with the available gas type.

Any natural or propane gas conversions necessary to meet the appliance and locality needs must be made by a qualified technician using Hearth & Home Technologies specified and approved parts.

## B. Gas Pressure

Proper input pressures are required for optimum appliance performance. Gas line sizing requirements need to be made following **NFPA51**.


 **WARNING**




**Fire Risk**  
**Explosion Risk**

High pressure will damage valve.

- Disconnect gas supply piping **BEFORE** pressure testing gas line at test pressures above 1/2 psig.
- Close the manual shutoff valve **BEFORE** pressure testing gas line at test pressures equal to or less than 1/2 psig.

 **WARNING**



**Fire Risk**  
**Explosion Risk**

Verify inlet pressures.

- High pressure may cause overfire condition.
- Low pressure may cause explosion.
- Verify minimum pressures when other household gas appliances are operating.

Install regulator upstream of valve if line pressure is greater than 1/2 psig.

Pressure requirements for appliance are shown in table below. Minimum pressures must be met when other household gas appliances are operating.

Pressure	Natural Gas	Propane
Minimum Inlet Pressure	5.0 in. w.c.	11.0 in. w.c.
Maximum Inlet Pressure	7.0 in. w.c.	14.0 in. w.c.
Manifold Pressure	3.5 in. w.c.	10.0 in. w.c.

## C. Gas Connection


**Note:** Have the gas supply line installed in accordance with local building codes, if any. If not, follow **ANSI 223.1**. Installation should be done by a qualified installer approved and/or licensed as required by the locality. (In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter.)


**Note:** A listed (and Commonwealth of Massachusetts approved) 1/2 in. (13 mm) T-handle manual shut-off valve and flexible gas connector are connected to the 1/2 in. (13 mm) control valve inlet.

- If substituting for these components, please consult local codes for compliance.

Refer to Reference Section 14 for location of gas line access in appliance.

**Note:** Gas line may be run from the left side of appliance using the knockout provided. Hole in outer shell **NOT** to exceed 2-1/2 in. and should never penetrate the firebox.

 **WARNING**






**Gas Leak Risk**





- Support control when attaching pipe to prevent bending gas line.



→ **Note:** The gap between supply piping and gas access hole may be caulked with high temperature caulk or stuffed with non-combustible, unfaced insulation to prevent cold air infiltration.

- Ensure that gas line does not come in contact with outer wrap of appliance. Follow local codes.
- Incoming gas line should be piped into the valve compartment and connected to the 1/2 in. connection on the manual shutoff valve.

 <b>WARNING</b>	
  	<p><b>Fire Risk</b> <b>Explosion Risk</b></p> <ul style="list-style-type: none"> <li>• Gas build-up during line purge may ignite.</li> <li>• Purge should be performed by qualified technician.</li> <li>• Ensure adequate ventilation.</li> <li>• Ensure there are no ignition sources such as sparks or open flames.</li> </ul>

- A small amount of air will be in the gas supply lines. When first lighting appliance it will take a short time for air to purge from lines. When purging is complete the appliance will light and operate normally.

 <b>WARNING</b>	
    	<p style="text-align: center;"><b>CHECK FOR GAS LEAKS</b></p> <p><b>Fire Risk</b> <b>Explosion Risk</b> <b>Asphyxiation Risk</b></p> <ul style="list-style-type: none"> <li>• Check all fittings and connections.</li> <li>• Do not use open flame.</li> <li>• After the gas line installation is complete, all connections must be tightened and checked for leaks with a commercially available, non-corrosive leak check solution. Be sure to rinse off all leak check solution following testing.</li> </ul> <p>Fittings and connections may have loosened during shipping and handling.</p>

 <b>WARNING</b>	
	<p><b>Fire Risk</b></p> <p>Do NOT change the valve settings.</p> <ul style="list-style-type: none"> <li>• This valve has been preset at the factory.</li> <li>• Changing valve settings may result in fire hazard or bodily injury.</li> </ul>

## D. High Altitude Installations

The CNXT70PLUS is power vented. High altitude gas appliance considerations are no longer of concern, as long as the gas appliance is properly installed with the HRV200PLUS properly balanced (refer to HRV200PLUS manual).

# 8 Electrical Information

## A. Recommendation for Wire

- Requires 110 VAC to be wired to the junction box for proper operation of the appliance.

## B. Connecting to the Appliance

- Low voltage and 110 VAC voltage cannot be shared within the same wall box.

### CAUTION

**Battery** polarity must be correct or module damage will occur.

### CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.



### ⚠ WARNING

#### Shock Risk Explosion Risk

Do NOT wire 110V to valve.

Do NOT wire 110V to wall switch

- Incorrect wiring will damage millivolt values.
- Incorrect wiring will override IPI safety lockout and may cause explosion.



### ⚠ CAUTION

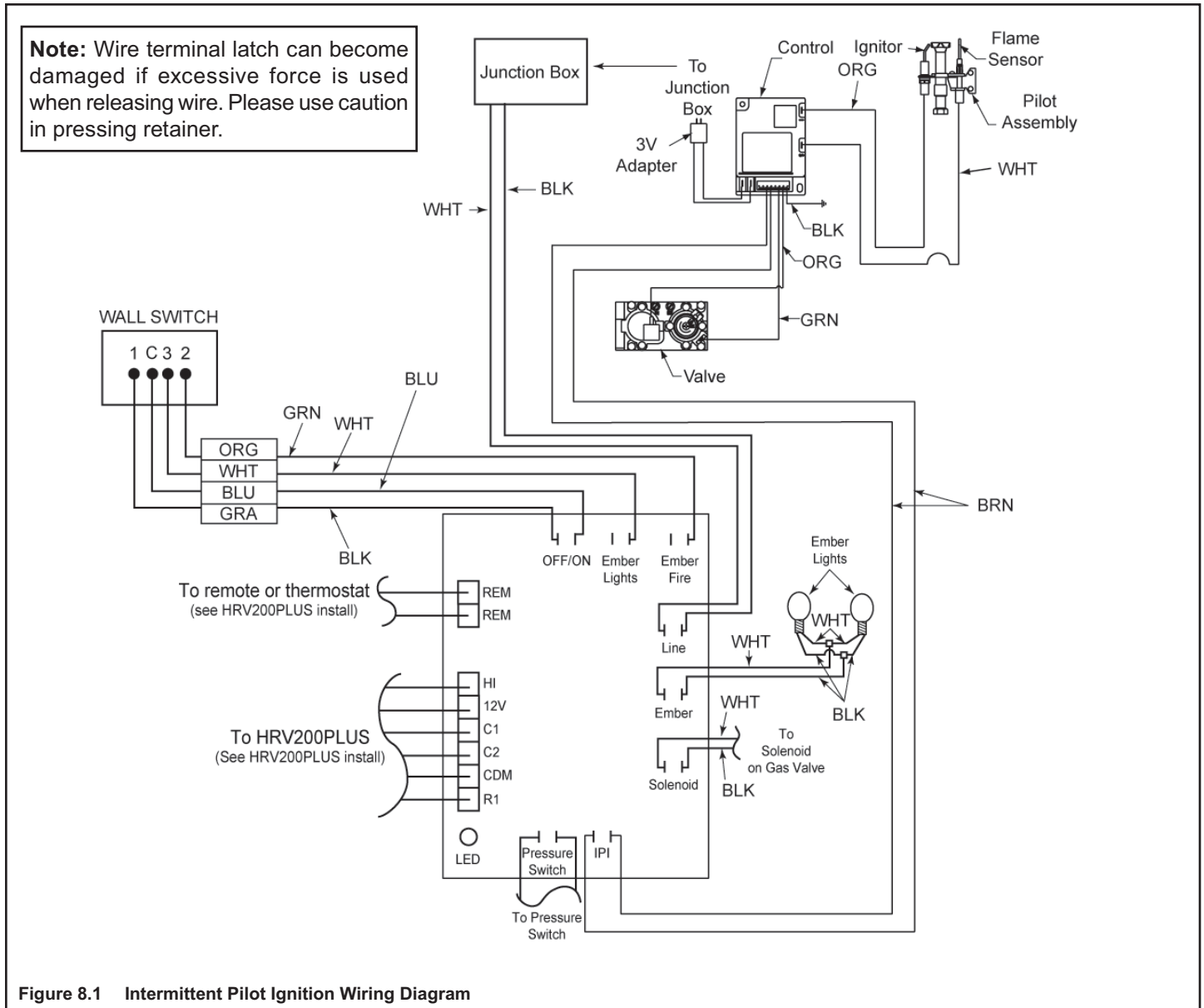
#### Shock Risk

- Replace damaged wire with type 105° C rated wire.
- Wire must have high temperature insulation.

## C. System Wiring

### CNXT70PLUS Requirements

- This gas appliance requires a 110VAC supply to the gas appliance junction box for operation. A wiring diagram is shown in Figure 8.1.
- The CNXT70PLUS is equipped with an intermittent pilot control valve which operates on a 3 volt system. See ignition wiring diagram, Figure 8.1.
- The CNXT70PLUS is supplied with a 3 volt AC transformer, which requires the installation of the supplied junction box. It is highly recommended that the junction box be installed at this time to avoid future reconstruction.



**Note:** The CNXT70PLUS must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with **National Electric Code ANSI/NFPA 70-latest edition** or the **Canadian Electric Code, CSA C22.1**.

## HRV200PLUS Control Wiring

The CNXT70PLUS is designed to operate as a system with the HRV200PLUS. Six low-voltage wires are required to electrically connect the two appliances. Common 24 gauge solid conductor thermostat wire, or equivalent may be used.

The connections are illustrated in Figure 8.2. A short jumper wire is required to be field installed between R2 and 12V on the HRV200PLUS control board.

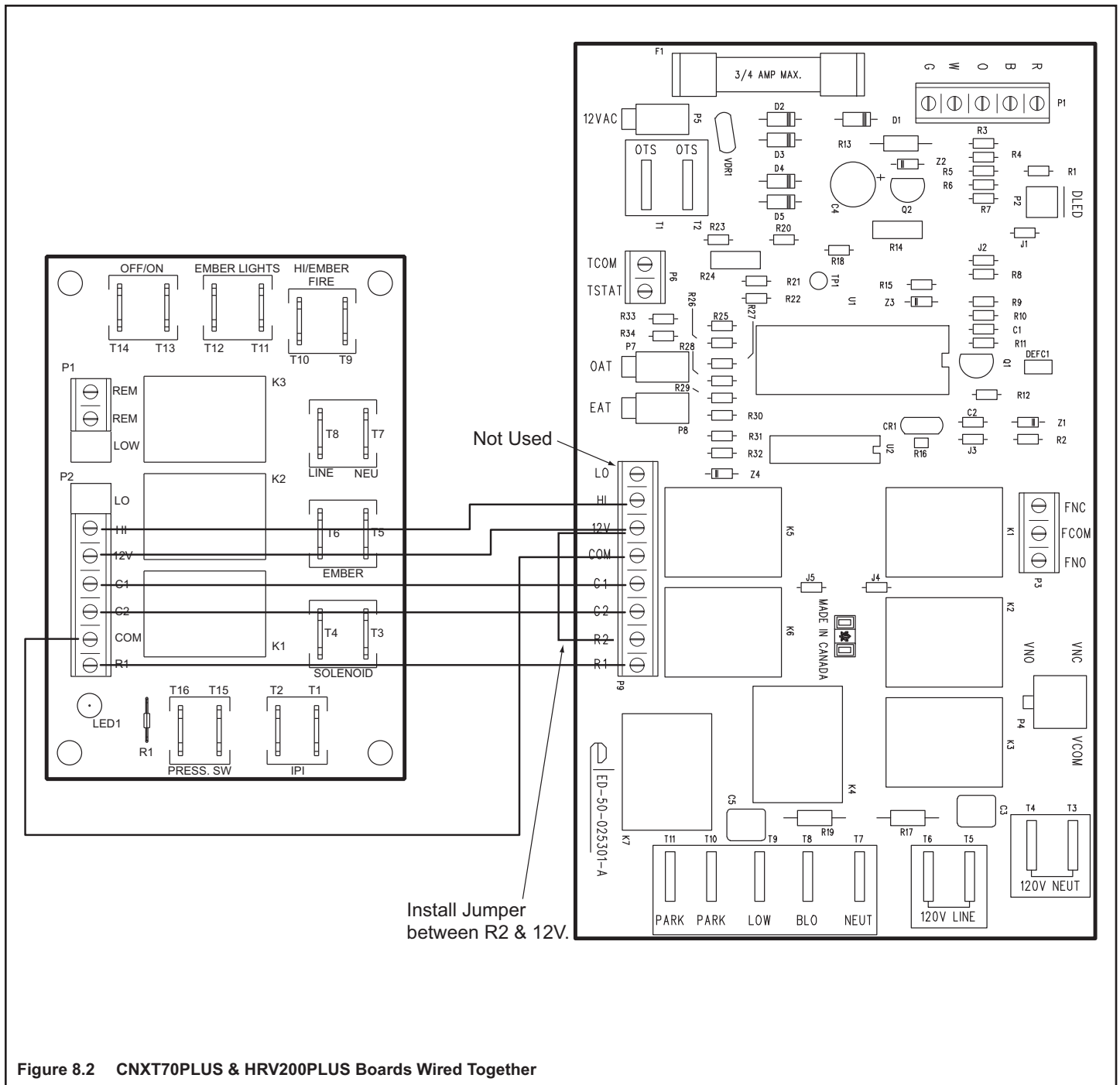


Figure 8.2 CNXT70PLUS & HRV200PLUS Boards Wired Together

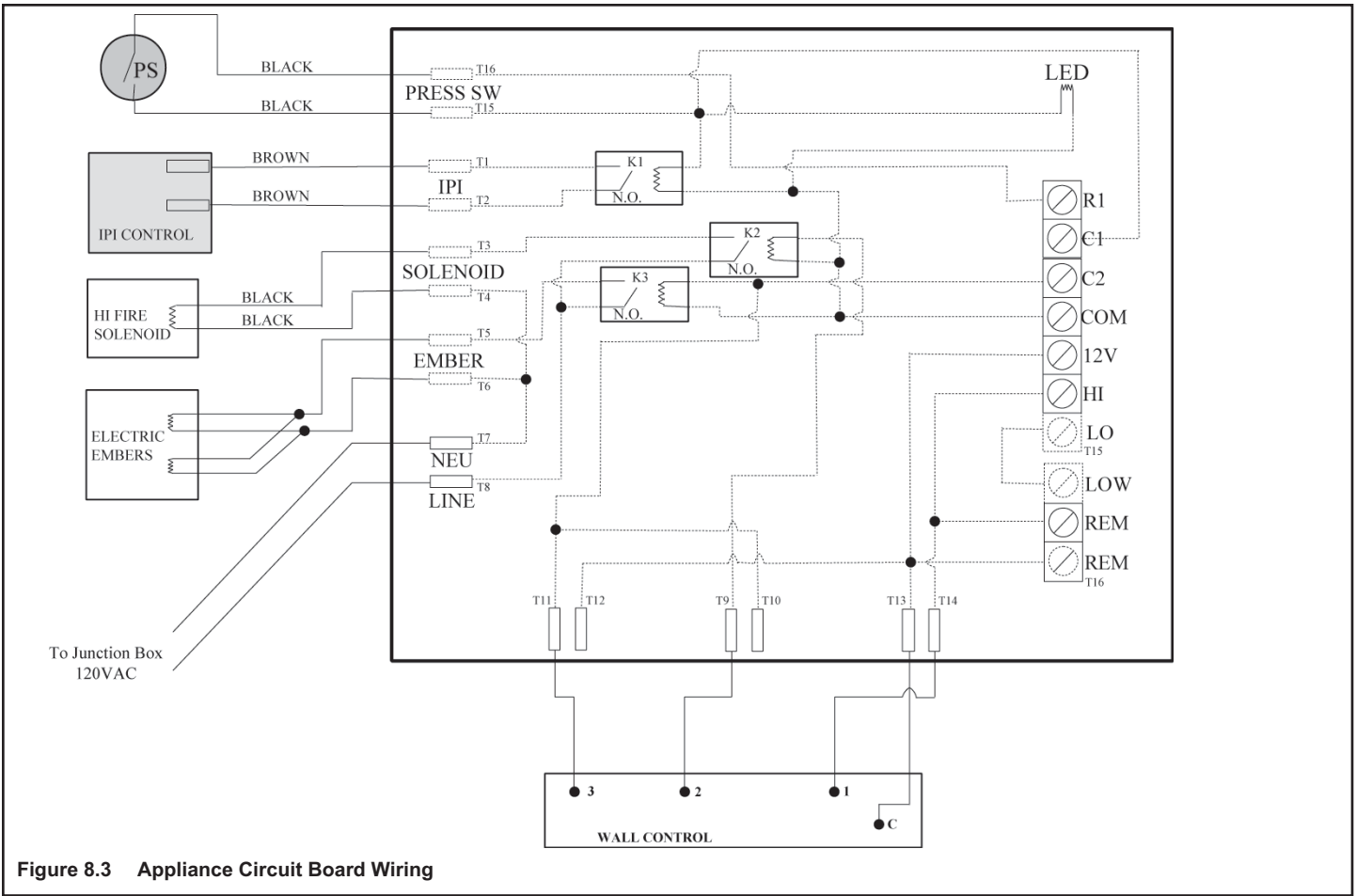


Figure 8.3 Appliance Circuit Board Wiring



## D. Wall Switch

This appliance comes with a triple-gang wall switch which controls the following functions:

- **Flame - On/Off**  
Turns the appliance burner operation on and off. This switch may be overridden by the use of a wall switch, remote control or hearth thermostat connected to the REM terminals.
- **Electric Embers - On/Off**  
Turns electric ember lights on and off. Electric ember lights are optional only when the appliance burners are not in use. Electric ember lights are always on during flame operation.
- **Hi Fire/Low Fire**  
Turns gas valve solenoid off for 100% rate operation and on for 70% rate operation.

**Note:** When wired as shown the appliance will operate when any of the following actions occur:

1. The wall switch is placed in the “ON” position, or
2. The remote control is placed in the “ON” mode, or
3. The hearth room thermostat is placed in the “ON” position.

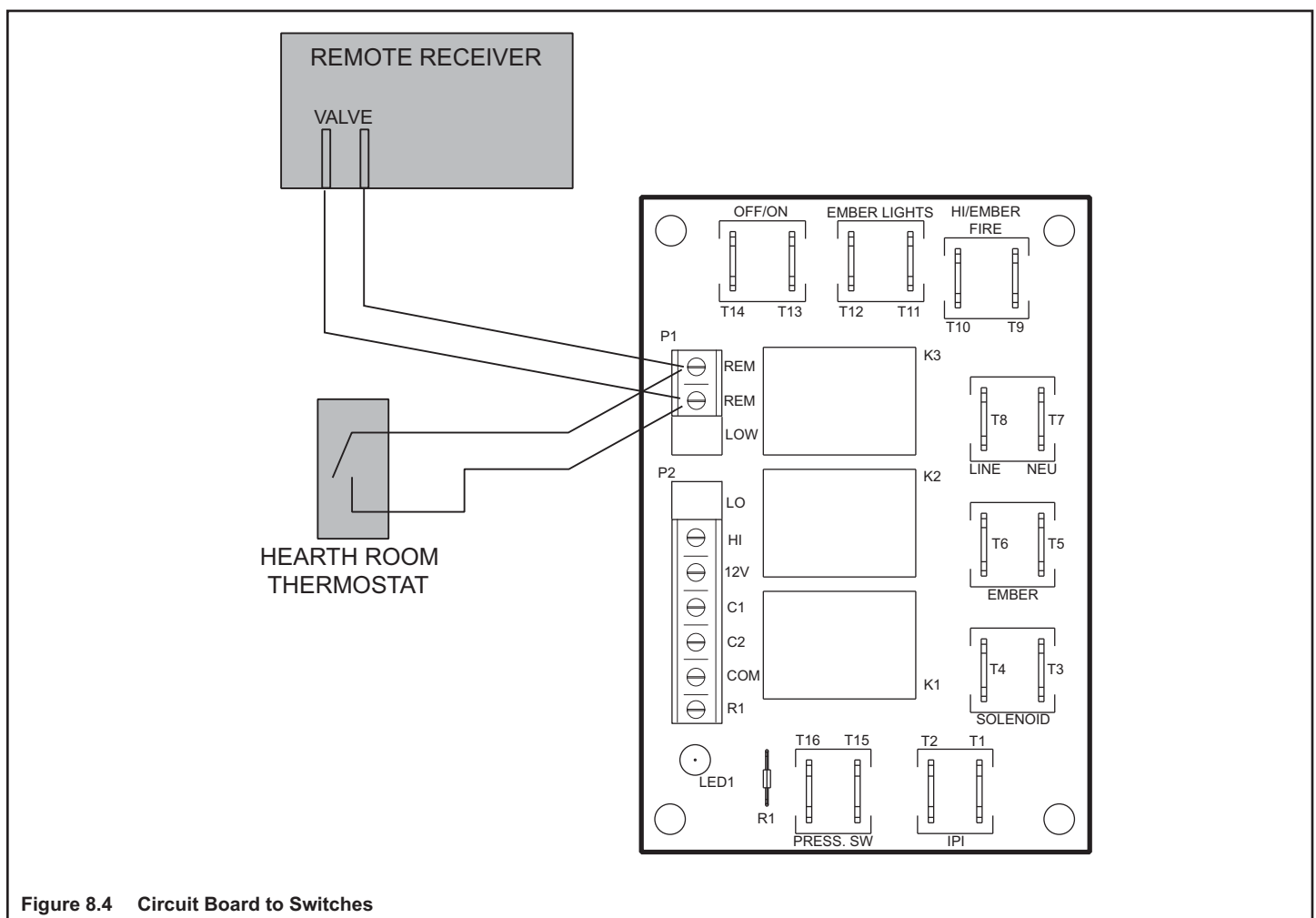


Figure 8.4 Circuit Board to Switches

## E. Optional Accessories Requirements

Wiring for optional accessories should be done now to avoid reconstruction. These controls must be connected to the appliance using the REM terminals on the control board. A wiring diagram is shown in Figure 8.4.

**Note:** Accessory circulating fans CANNOT be used with the CNXT70PLUS.

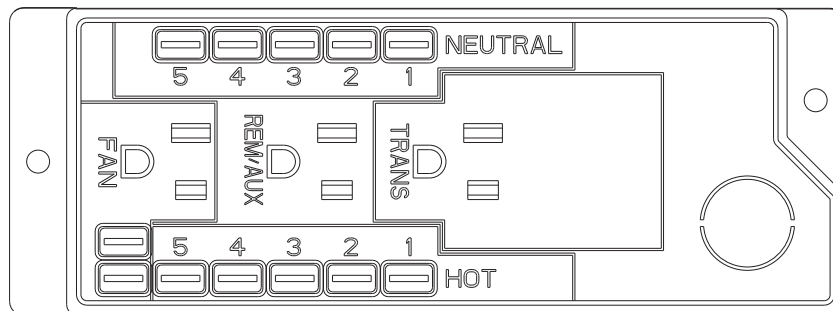
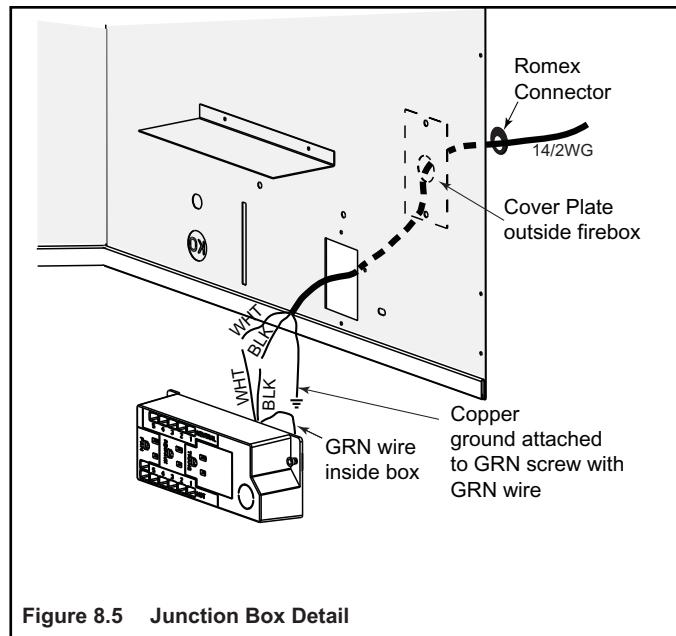
## ➔ F. Junction Box Installation

If the box is being wired from the **OUTSIDE** of the appliance:

- Remove the cover plate located on the outer shell - right side (see Figure 8.5).
- Install the supplied Romex™ connector in the cover plate.
- Feed the necessary length of wire through the connector.
- Make all necessary wire connections and reattach the cover plate to the outer shell.

If the box is being wired from the **INSIDE** of the appliance:

- Remove the screw attaching the junction box/receptacle to the outer shell, rotate the junction box inward to disengage it from the outer shell (see Figure 8.5).
- Pull the electrical wires from outside the appliance through this opening into the valve compartment.
- Feed the necessary length of wire through the connector.
- Make all necessary wire connections to the box/receptacle and reassemble the box/receptacle to the outer shell.

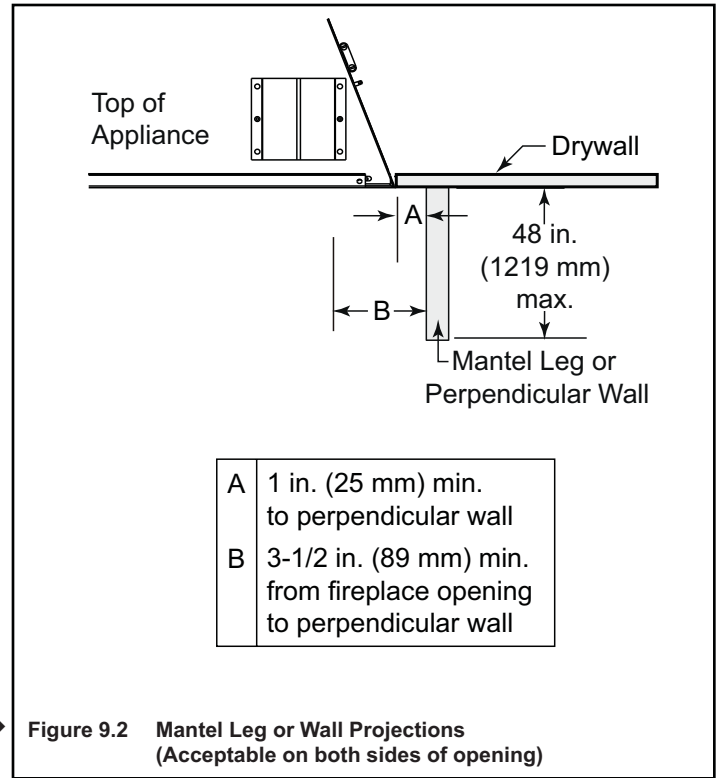
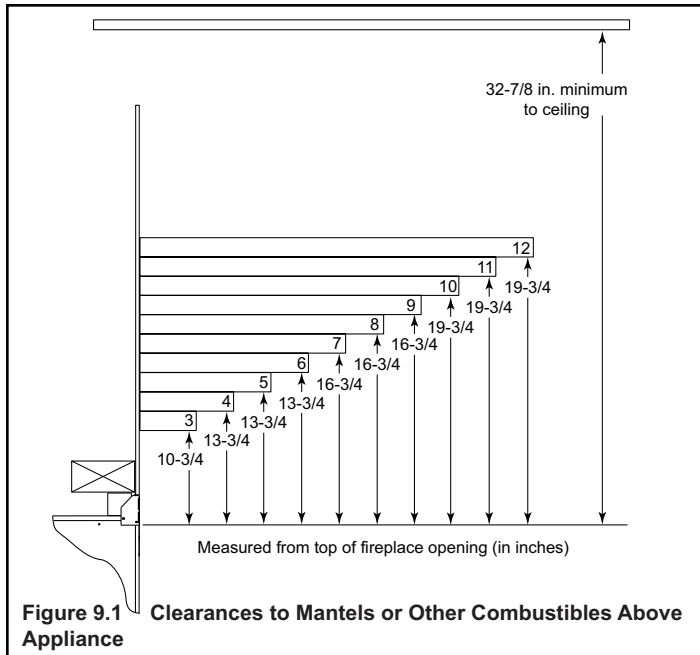


**Figure 8.6 Junction Box**

# 9 Finishing

## A. Mantel Projections

Figure 9.1 shows the minimum vertical and corresponding maximum horizontal dimensions of appliance mantels or other combustible projections above the top front edge of the appliance.



## B. Facing Material

**WARNING**

**Fire Risk**

Do NOT obstruct air inlets. Finishing materials must not interfere with:

- Air flow through inlets.
- Access for service.

**WARNING**

**Fire Risk**

**Explosion Risk**

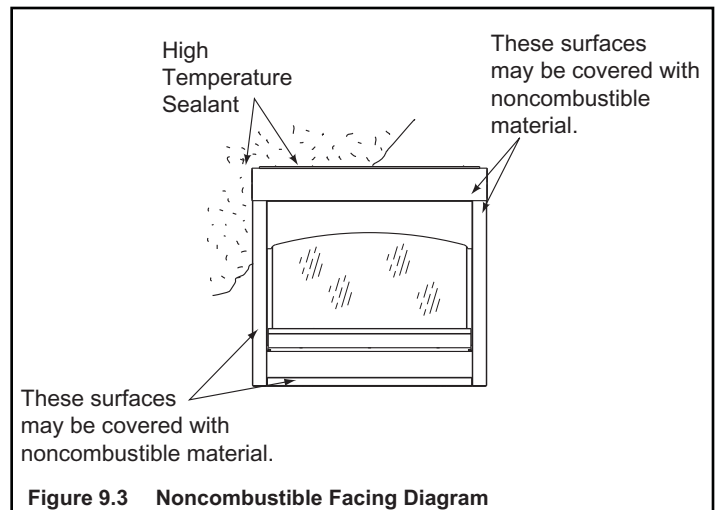
- Facing and/or finishing materials must never overhang into the glass opening.
- Overhanging materials may ignite.
- May interfere with proper operation of glass assembly.

**WARNING**

**Fire Risk**

Finish all edges and fronts to clearances and specifications listed in manual.

- Metal appliance front may be covered with non-combustible material only.
- Do NOT overlap combustible materials onto appliance front.
- Install combustible materials only up to specified clearances on top, front and sides.
- Seal joints between the finished wall and appliance top and sides using only a 300° F minimum sealant.



# 10 Appliance Setup

## A. Install the Refractory

Follow the installation instructions supplied with the refractory kit.

## B. Log Assembly

(See Service Parts, Complete Log Set for log numbers)

- Place left front Log (#9) on the far left grate bar so the notch on the log sets on the horizontal portion of the grate bar and the body of the log is on the grate burner. See Figure 10.1.



Figure 10.1 Place Left Front Log

- Place left top log (#5) on the white notches of left center log and back log. Set log so the "Y" is pointed down. See Figure 10.2.



Figure 10.2 Placing Left Top Log

- Place right center log (#4) on the white notches in left center log and back log. Log should set on log tab welded to back of far right grate bar. Long leg of "Y" in log should point towards front center of log set. See Figure 10.3.



Figure 10.3 Place Right Center Log

## C. Place the Silica Rock (Techno Sil)

- Paint the silica rocks with spray paint (supplied). See Figures 10.4 and 10.5.



Figure 10.4 Silica Rocks



Figure 10.5 Painting the Rocks

- Place the silica rock so it completely covers the ember bed. See Figure 10.6.



Figure 10.6 Placing the Silica Rock

## D. Place the Lava Rock

- Place the lava rock around the ember bed and up to front lip of hearth pan. See Figure 10.7.

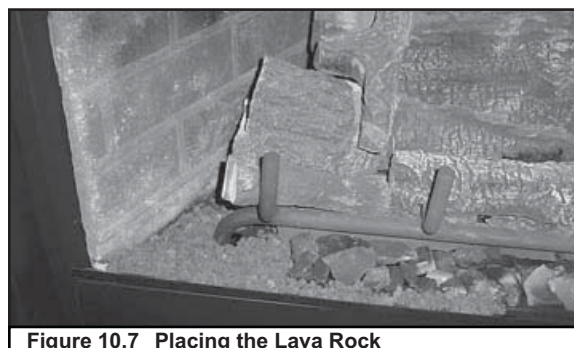


Figure 10.7 Placing the Lava Rock

# 11 Operating Instructions

## A. Sequence of Operation

The CNXT70PLUS must be installed with an HRV200PLUS. The appliance and ventilator operate as a system. The HRV200PLUS controls many of the operational sequences for the system, and the CNXT70PLUS gas appliance maintains safety control for the combustion process.

The sequence of operation for the system is as follows:

### Appliance Mode

- The user creates a demand for system operation using the remote control, wall switch or thermostat.
- A 12V DC signal is sent from the HI terminal on the appliance circuit board to the HRV200PLUS.
- The HRV200PLUS does the following:
  - Blower motor on HIGH for system pre-purge.
  - C2 terminal is energized 12VDC activating the electric ember lights on the Fresh Air Fireplace.
  - Fifteen-second pre-purge timer activates while the HRV closes the alternate exhaust damper.
  - C1 terminal is energized 12VDC to override pressure switch in the Fresh Air Fireplace.
- R1 is energized 12VDC activating the IPI ignition circuit to initiate the fireplace ignition process. In the HRV, the R2 terminal must be jumpered to 12V to supply power to R1 at the Fresh Air Fireplace.
- Thirty-second draft-proving delay timer activates.
- The Fresh Air Fireplace lights.
- The thirty-second draft-proving delay timer expires, C1 terminal is de-energized and the Fresh Air Fireplace pressure switch is monitored for sufficient flow at the flue collar for proper operation. **IF SUFFICIENT FLOW IS NOT SENSED AT THE FLUE COLLAR OF THE FRESH AIR FIREPLACE AFTER THIRTY SECONDS OF OPERATION, THE FRESH AIR FIREPLACE FLAMES WILL EXTINGUISH LEAVING THE ELECTRIC EMBERS ILLUMINATED ONLY. THE FRESH AIR FIREPLACE WILL NOT SUSTAIN NORMAL OPERATION UNTIL THE LACK OF FLOW IS CORRECTED!**
- When there is adequate draft at the flow sensor and 12VDC is present at the R1 terminal on the circuit board, the green LED on the lower left side of the board illuminates.
- When the user demand for appliance operation is removed, the HRV200PLUS de-energizes C1 and R1 terminals, terminating burner operation.
- There is a 20 second delay (post-purge).
- The HRV200PLUS de-energizes C1, turning the ember bed lights off.
- The HRV200PLUS executes a five-minute low speed post purge.



### ⚠ WARNING

**Fire Risk  
Burn Risk  
HOT! DO NOT TOUCH.  
SEVERE BURNS MAY RESULT.  
CLOTHING IGNITION MAY RESULT**



Glass and other surfaces are hot during operation and cool down.

- Keep children away.
- CAREFULLY SUPERVISE children in same room as appliance.
- Alert children and adults to hazards of high temperatures.
- Do NOT operate with protective barriers open or removed.
- Keep clothing, furniture, draperies and other combustibles away.

### ⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the owner's information manual provided with this appliance. For assistance or additional information consult a qualified installer, service agency or the gas supplier.

### ⚠ WARNING

Do NOT use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## HRV200PLUS Defrost Mode


- The HRV200PLUS demands gas appliance operation for defrost. This occurs when the following conditions exist:
  - The appliance is not in use.
  - The outdoor temperature falls below 25° F.
  - The DEFC1 jumper is not installed on the HRV200PLUS circuit board.
- The HRV200PLUS does the following:
  - Turns blowers on to high speed.
  - Sends a 12VDC signal to the C2 terminal to light the ember bed lights (by energizing relay K3 on the appliance circuit board). This acts to notify the user the appliance is preparing to operate.
  - Positions HRV200PLUS dampers (if installed) for appliance operations.
  - Performs a 15 second delay (pre-purge) before the burners are lit.
  - Sends a 12VDC signal to the R1 terminal to initiate the ignition sequence (by energizing relay K1 on the circuit board).
  - Sends a 12VDC signal to the C1 terminal to override the pressure switch for the first thirty seconds of ignition.
- The CNXT70PLUS senses adequate draft in the flow sensor (located in the appliance flue collar) to close the flow pressure switch.
- The intermittent pilot ignition (IPI) system activates and lights the burner.
- After thirty seconds, the HRV200PLUS de-energizes C1, placing the pressure switch into the CNXT70PLUS control circuit. The pressure switch monitors the flow at the flue collar of the CNXT70PLUS and shuts the appliance burner off if adequate flow is not present.
- When the user demand for appliance operation is removed, the HRV200PLUS de-energizes the R1 terminal terminating burner operation.
- There is a 20 second delay (post-purge).
- The HRV200PLUS de-energizes C1, turning the ember bed lights off.

**Note:** The HRV200PLUS can use indoor air instead of the gas appliance for defrost if the optional defrost kit (part # HRV99DEFKIT) is installed.

**Note:** The appliance may operate to defrost the HRV200PLUS when the flame switch is in the "OFF" position. The appliance will only operate in "EMBER FIRE" mode during HRV200PLUS defrost.

The electric ember bed will light for fifteen seconds then the ember fire flame will ignite to defrost the HRV core.

## B. Lighting the Appliance

 <h1 style="margin: 0;">FOR YOUR SAFETY READ BEFORE LIGHTING</h1>		<p>This appliance needs fresh air for safe operation and must be installed so there are provisions for adequate combustion and ventilation air.</p>
<p><b>WARNING:</b> If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.</p>		<p>This appliance must be installed in accordance with local codes, if any; if not, follow ANSI Z223.1 or, in Canada, current CAN/CGA-B149.</p>
<p><b>WARNING:</b> This appliance must be vented and electrically interfaced to an HRV200PLUS to operate properly. Do not attempt to operate the appliance without an HRV200PLUS to provide proper draft to remove flue products. Failure to comply with both the appliance installation instructions and the HRV200PLUS installation instructions may cause property damage, personal injury or death.</p>		<p>This appliance must be properly connected to a venting system in accordance with the manufacturer's installation instructions.</p>
<p>A. This appliance is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.</p> <p>B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.</p> <p><b>WHAT TO DO IF YOU SMELL GAS</b></p> <ul style="list-style-type: none"> <li>• Do not try to light any appliance.</li> <li>• Do not touch any electric switch; do not use any phone in your building.</li> <li>• Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.</li> </ul>	<ul style="list-style-type: none"> <li>• If you cannot reach your gas supplier, call the fire department.</li> </ul> <p>C. Use only your hand to push in and move the gas control valve or turn the gas control knob. Never use tools. If the lever or knob will not move by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.</p> <p>D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.</p>	<p><b>WARNING:</b> Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the owner's information manual provided with the appliance. For assistance or additional information consult a qualified installer, service agency or the gas supplier.</p>
<h2 style="margin: 0;">LIGHTING INSTRUCTIONS</h2>		<p><b>CAUTION:</b> Hot while in operation. Do not touch. Keep children, clothing, furniture, gasoline and other liquids having flammable vapors away.</p>
<p><b>WARNING:</b> The HRV200PLUS has an automatic defrost mode which can light the burner even though the "ON/OFF" switch for the appliance is in the "OFF" position. Turn off all electric power to the appliance and the HRV200PLUS to avoid unanticipated burner ignition.</p>		<p><b>WARNING RISK OF FIRE</b></p> <p>This appliance is intended to burn a specified gas fuel only. Do not attempt to use with solid wood fuel or another type of fuel. Do not attempt to modify or use any other type of gas burner system.</p>
<ol style="list-style-type: none"> <li>1. STOP! Read the safety information above on this label.</li> <li>2. Turn wall switch to the "OFF" position or thermostat to the lowest setting.</li> <li>3. Turn off all electric power to the appliance and the HRV200PLUS.</li> <li>4. This appliance is equipped with an ignition device which automatically lights the pilot. Do NOT try to light the pilot by hand.</li> </ol>	<ol style="list-style-type: none"> <li>5. Wait five minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.</li> <li>6. To turn on the burner, turn on all electric power to this appliance and the HRV200PLUS, and turn on the wall switch or set the thermostat to the desired setting.</li> <li>7. There is a fifteen second delay before the burners light.</li> <li>8. If the appliance will not operate, follow the instructions "TO TURN OFF GAS TO APPLIANCE" and call your service technician or gas supplier.</li> </ol>	<p><b>WARNING:</b> Disconnect the electric power from the appliance and the HRV200PLUS before servicing. If for any reason the original wire supplied with the appliance must be replaced, it must be replaced with 105° C or its equivalent.</p>
<h2 style="margin: 0;">TO TURN OFF GAS TO APPLIANCE</h2>		<p>For use with natural gas or propane. A conversion kit as supplied by the manufacturer shall be used to convert this appliance to the alternative fuel.</p>
<ol style="list-style-type: none"> <li>1. Turn off wall switch or set thermostat to lowest setting.</li> <li>2. Turn off all electric power to the appliance and the HRV200PLUS if service is to be performed.</li> </ol>	<ol style="list-style-type: none"> <li>3. Push the gas control lever in and move to the "OFF" position or push the gas control lever to the "OFF" position. Do not force.</li> <li>4. Replace the control access panel.</li> </ol>	<ul style="list-style-type: none"> <li>* Also certified for installation in a bedroom or a bed-sitting room.</li> <li>* For U.S. only!</li> </ul>
<p>Due to high surface temperatures, keep children, clothing and furniture away. Keep burner and control compartment clean. See installation and operating instructions accompanying the appliance.</p>		<p>4034-122A</p>

## C. After the Appliance is Lit

### Initial Break-in Procedure

When you light the appliance, you may notice that it produces heat which does have an associated odor or smell. If you feel this odor is excessive it may require the initial three to four hour continuous burn on high followed by a second burn up to 12 hours to fully drive off any odor from paint and lubricants used in the manufacturing process. Condensation of the glass is normal

**Note:** This appliance should be run three to four hours on the initial start-up. Turn it off and let it cool completely. Remove and clean the glass. Replace the glass and run the appliance for an additional 12 hours. This will help cure the products used in the paint and logs.

During this break-in period it is recommended that some windows in the house be opened for air circulation. This will help avoid setting off smoke detectors, and help eliminate any odors associated with the appliance's initial burning.

### CAUTION

- Prevent accidental appliance operation when not attended.
- Unplug or remove batteries from remote control if absent or if appliance will not be used for an extended period of time.
- Property damage possible from elevated temperatures.

### CAUTION

Smoke and odors are released during initial operation.

- Open windows for air circulation.
- Leave room during initial operation.
- Smoke may set off smoke detectors.

Smoke and odors may be irritating to sensitive individuals.



### ⚠ WARNING

#### Fire Risk High Temperatures

Keep combustible household items away from appliance.

Do NOT obstruct combustion and ventilation air.

- Do NOT place combustible items on top of or in front of appliance.
- Keep furniture, draperies away from appliance.



### ⚠ WARNING

#### Fire Risk

Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.

- Do NOT store flammable materials in the vicinity of the appliance.
- Do NOT use gasoline, lantern fuel, kerosene, charcoal lighter fluid or similar liquids in this appliance.

Combustible materials may ignite.



# 12 Troubleshooting

With proper installation, operation and maintenance your gas appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in the diagnosis of a problem and the corrective action to be taken. This troubleshooting guide can only be used by a qualified service technician.

## TROUBLESHOOTING GUIDE

Issues & Notes	Possible Causes	Solution
1. Blue flames	1. Cold start	This is normal operation and the flames will begin to yellow as the burners and logs heat.
	2. Glowing embers not installed	Ensure rockwool is placed per the installation instructions.
2. Odor from the appliance	1. New appliance	The appliance may release an odor for the first several hours of operation from paint curing and manufacturing oils burning off. This is normal and will dissipate with time.
3. Appliance does not turn on	1. No power to appliance	Check breaker and disconnects to the appliance.
	2. No power to HRV200PLUS	Check breaker to HRV200PLUS and ensure ventilator is plugged in with the door closed.
	3. No signal from the appliance to the HRV200PLUS; i.e., 12V DC not present at "H1" terminal	Check the wall control ON/OFF switch. Check any accessory switches connected to REM terminals. Replace as needed.
	4. No signal from the HRV200PLUS to the appliance; i.e., 12V DC not present at "R1" terminal	Check HRV200PLUS circuit board for jumper between 12V and R2 terminals. Install as needed.
	5. Control wiring between appliance and HRV200PLUS incorrect	Check wiring for correct connections and continuity.
	6. Appliance circuit board wired incorrectly	Check appliance wiring per wiring diagram.
	7. Inadequate draft	Check HRV200PLUS filters - clean as needed.
		Check HRV200PLUS exhaust termination - repair, clean or replace as needed.
		Check appliance exhaust venting and connections. Ensure venting is not kinked or crushed. Ensure all connections are properly installed and secured.
		Check HRV200PLUS blower motor. Ensure motor is operating on high speed.
		Check HRV200PLUS blower wheels. Ensure blower wheels are clean - service as necessary per HRV200PLUS manual.
Check HRV200PLUS heat exchanger core. Clean and service as necessary per HRV200PLUS manual.		
Check any dampers installed in the appliance exhaust or HRV200PLUS exhaust venting. Ensure dampers are properly set.		
8. Pressure switch hose cracked or disconnected.	Check hose connecting flow sensor tube to pressure switch connector. Ensure no cracks or kinks exist. Replace as needed.	
9. Pressure switch bad	Install a T-connector into the pressure switch tubing and connect a digital manometer or magnahelic gauge. If pressure reads 0.15 in. w.c. or greater and the pressure switch electrical contacts remain open, replace pressure switch.	
10. Appliance circuit board bad	Check appliance circuit board per the schematic shown in Figure 8.3. Replace as necessary.	
11. Flow sensor plugged	Attach a hose to the flow sensor tube and attempt to blow through the sensor. If the sensor is plugged, apply sufficient pressure to clear the sensor. Always assess the cause for flow sensor plugging.	

### CAUTION

If sooting occurs in the appliance or if combustible material is burned, the pressure switch ports could close and prevent the appliance from operating. Refer to HRV200PLUS manual.

# 13 Maintaining and Servicing the Appliance

Although the frequency of appliance servicing and maintenance will depend on use and the type of installation, a qualified service technician should perform an appliance check-up at the beginning of each heating season.

## ⚠ WARNING

### Risk of injury or property damage

#### Before servicing:

- Turn off gas.
- Turn off electricity to appliance.
- Disable remote control, if one is present.
- Ensure appliance is completely cooled.

#### After Servicing:

- Replace any screen or barrier that was removed.
- Reseal and reinstall any venting removed for servicing.

## ⚠ WARNING



### Fire Risk Explosion Risk

Inspect external vent cap regularly.

- Ensure no debris blocks cap.
- Combustible materials blocking cap may ignite.
- Restricted air flow affects burner operation.



## A. Annual Maintenance

To ensure that your gas appliance operates in a safe and efficient manner, it needs to be inspected at least on an annual basis by a qualified field service person. Like any gas appliance, This gas appliance must be tuned up to ensure optimum performance.

**Note:** After extended periods of burning, film may build up on the flame sensor. The flame sensor should be cleaned annually with emery cloth to remove this build up.

## B. Cleaning the Burner and Control Compartment

Keep the burner and control compartment clean by brushing and vacuuming at least once a year. Always turn the wall (or dashboard switch) and the gas valve off before cleaning.

## C. HRV200PLUS

Please refer to the HRV200PLUS manual for additional maintenance requirements for the ventilation portion of the CNXT70PLUS.

## ⚠ WARNING



Annual inspection by qualified technician recommended.

#### Check:

- Condition of doors, surrounds and fronts.
- Condition of glass, glass assembly and glass seal.
- Obstructions of combustion and ventilation air.
- Condition of logs.
- Condition of firebox.
- Burner ignition and operation.
- Burner air shutter adjustment.
- Gas connections and fittings.
- Obstructions of termination cap.

#### Clean:

- Glass.
- Air passageways, grilles, control compartment.
- Burner, burner ports.

#### Risk of:

- Fire
- Delayed ignition or explosion
- Exposure to combustion fumes
- Odors



## D. Ember Bed Bulb Replacement

- Remove two screws from dash plate holding each bulb bracket.
- Pull socket down and forward to access bulb, replace the bulb and return to installed position. See Figure 13.1.



Figure 13.1 Bulb Replacement

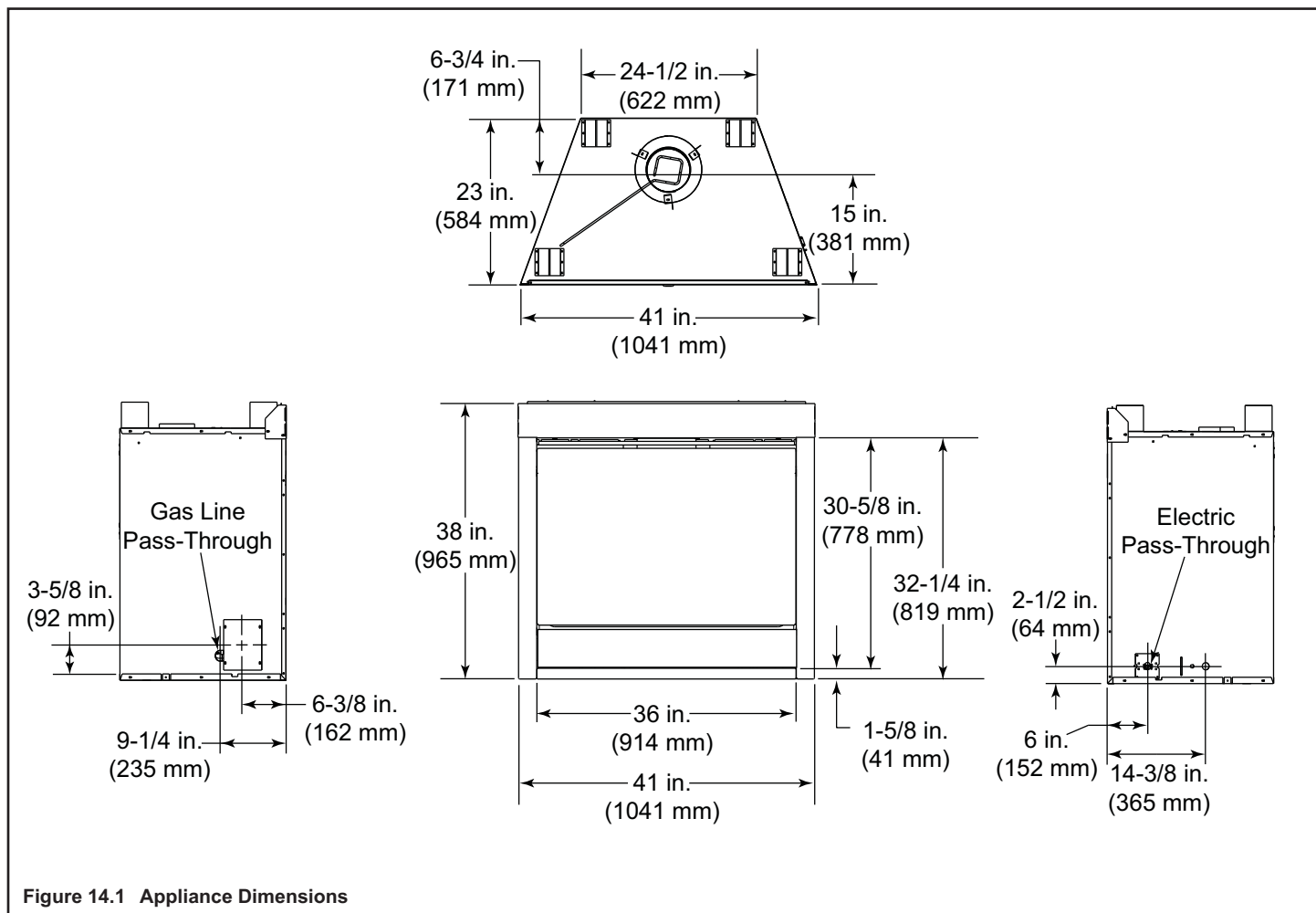
## E. Log Removal/Replacement

- Remove three loose logs.
- Remove screws on each end of burner assembly.
- Lift grate burner assembly until the right side clears the hearth refractory. While lifting, swing the right end towards you until the opposite end of assembly clears hearth.
- Remove the back log by removing screws holding log bracket. Lift log and bracket out of the appliance.
- Remove hearth logs by removing screws. Lift out.
- Replace the log assembly by reversing the above steps.

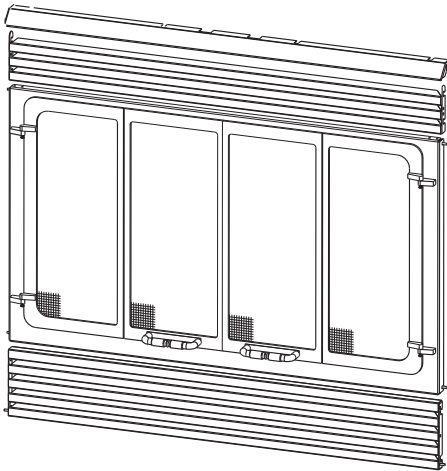
# 14 Reference Materials

## A. Appliance Dimension Diagram

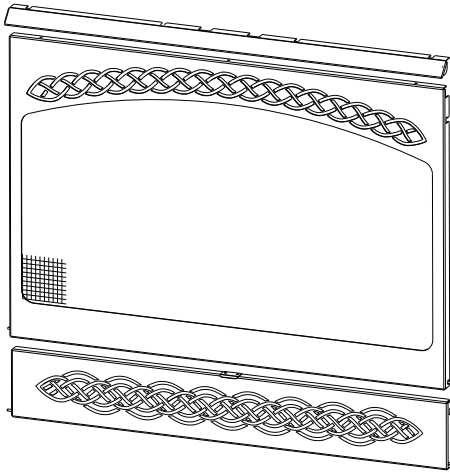
Dimensions are actual appliance dimensions. Use for reference only. For framing dimensions and clearances refer to Section 3.



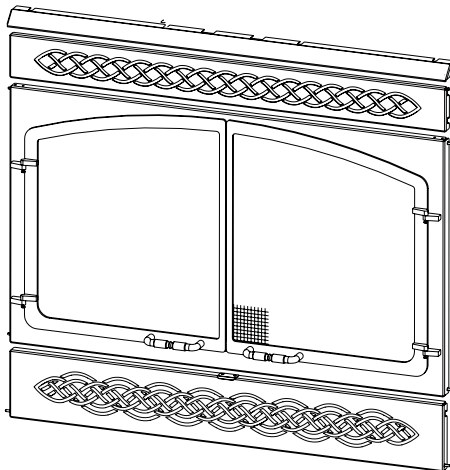
## C. Optional Components



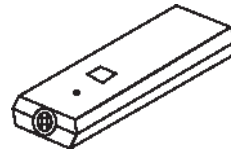
**Bi-fold Door Face**



**FF-NXT70PWT-P**



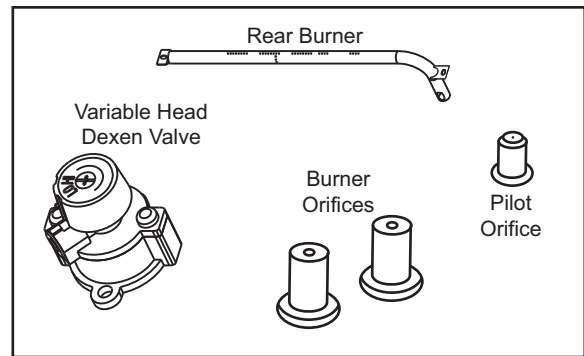
**FF-NXT70AC**



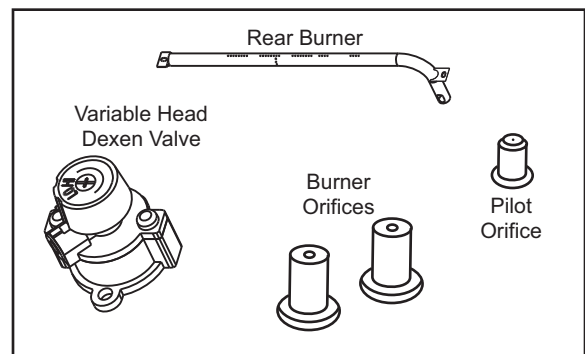
**RC-SMART-HTL**  
Remote Control  
**RCT-MLT-HTL**  
Multi-Function  
Remote Control  
**SMART-STAT-HTL**  
Remote Control  
with Thermostat  
Control



**WSK-MLT-HTL**  
Multi-Function Wall Switch



**DCKVN-NXTPLUS**  
Conversion Kit  
Propane to Natural Gas



**DCKVP-NXTPLUS**  
Conversion Kit  
Natural Gas to Propane

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## D. Limited Lifetime Warranty



### Caliber NXT Plus Gas Appliance Limited Warranty

Hearth & Home Technologies Inc. ("HHT") extends the following warranty for Heatilator® Caliber NXT Plus ("Appliance") products installed in homes in the United States of America and Canada. Dealers and employees of HHT have no authority to make any warranty or authorize any remedies in addition to or inconsistent with the terms of this warranty. This warranty gives you specific legal rights. You may also have other rights, which vary from state to state, regarding limitations on how long an implied warranty lasts, or that do not allow exclusion or limitation of incidental or consequential damages.

#### Limited 5-Year Warranty

HHT warrants that all components of your Appliance, except for the combustion chamber, burner tubes and logs, will be free from defects in material and workmanship for five years from the date of installation. The Limited 5-Year Warranty specified above is subject to the conditions, exclusions and limitations listed below, is for the original user only, and is nontransferable.

#### Limited 20-Year Warranty

HHT warrants that the combustion chamber, burner tubes and logs of your Appliance will be free from defects in material and workmanship for twenty years from the date of installation. The Limited 20-Year Warranty specified above is subject to the conditions, exclusions and limitations listed below, is for the original owner only, and is nontransferable.

#### Conditions, Exclusions, & Limitations of Liability

- A. The Limited Warranties supplied by HHT apply only while the Appliance is in its location of original installation. These Limited Warranties do not extend to defects caused by: (1) installation, operation or maintenance of the Appliance not in accordance with the Installation Instructions, Operating Instructions, and the Listing Agent Identification Label furnished with the Appliance; (2) installation which does not comply with local building codes; (3) shipping, improper handling, improper operation, abuse, accident or unworkmanlike repairs; (4) environmental conditions, additional air handling devices such as exhaust fans or forced air furnaces, or other causes; (5) interconnection with other appliances such as central vacuums or clothes dryers; (6) installation or use of components not supplied with the Appliance or any other components not expressly authorized and approved by HHT; and/or (7) modification of the Appliance not expressly authorized and approved by HHT in writing. This warranty does not extend to products not manufactured or supplied by HHT.
- B. This warranty is limited to the replacement or repair of defective components or workmanship. Your sole remedy, and HHT's sole obligation under this warranty shall be HHT repairing or, at its discretion, replacing the defective components. **In no event shall HHT be liable for any incidental or consequential damages caused by your Appliance.**
- C. **EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTIES SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE WARRANTY OF THE APPLICABLE COMPONENTS SPECIFIED ABOVE. TO THE EXTENT PERMITTED BY LAW, HHT DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING SPECIFICALLY THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

#### How to Obtain Service

To obtain service under this warranty you must:

1. Send written notice of the claimed condition to Heatilator Technical Service Department, Hearth & Home Technologies Inc., 1915 W. Saunders Street, Mt. Pleasant, Iowa 52641-1563. You may also register your claim online at [www.heatilator.com/contact.asp](http://www.heatilator.com/contact.asp).
2. Provide proof of purchase, proof of date of installation, model number and serial number to HHT.
3. Provide HHT reasonable opportunity to investigate the claim, including reasonable opportunity to inspect the Appliance prior to any repair or replacement work and before the Appliance or any component of the Appliance has been removed from the place of original installation.
4. Obtain HHT's consent to any warranty work before the work is done.

#### Additional Information

If you would like information on current Heatilator products or want to locate a dealer in your area, call: 1-877-427-8368.

E. Contact Information



Hearth & Home Technologies Inc., 1915 W. Saunders Street, Mt. Pleasant, Iowa 52645, phone 1-877-427-8368

**Please contact your Heatilator Home Products dealer with any questions or concerns.**

For the number of your nearest Heatilator Home Products dealer, please call 1-888-427-3973.

**- NOTES -**

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**CAUTION**

**DO NOT DISCARD THIS MANUAL**



- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.



➔ This product may be covered by one or more of the following patents: (United States) 4593510, 4686807, 4766876, 4793322, 4811534, 5000162, 5016609, 5076254, 5113843, 5191877, 5218953, 5263471, 5328356, 5341794, 5347983, 5429495, 5452708, 5542407, 5601073, 5613487, 5647340, 5688568, 5762062, 5775408, 5890485, 5931661, 5941237, 5947112, 5996575, 6006743, 6019099, 6048195, 6053165, 6145502, 6170481, 6237588, 6296474, 6374822, 6413079, 6439226, 6484712, 6543698, 6550687, 6601579, 6672860, 6688302B2, 6715724B2, 6729551, 6736133, 6748940, 6748942, 6769426, 6774802, 6796302, 6840261, 6848441, 6863064, 6866205, 6869278, 6875012, 6880275, 6908039, 6919884, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408, 2313972; (Australia) 780250, 780403, 1418504 or other U.S. and foreign patents pending.