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 website.

NOTICE

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: FIRE OR EXPLOSION HAZARD
Failure to follow safety warnings exactly could result in serious injury, death, or property damage.

- 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.
  - Leave the building immediately.
  - 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.

In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter. See Table of Contents for location of additional Commonwealth of Massachusetts requirements.

DANGER

HOT GLASS WILL CAUSE BURNS.
DO NOT TOUCH GLASS UNTIL COOLED.
NEVER ALLOW CHILDREN TO TOUCH GLASS.

A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals.

This appliance may be installed as an OEM installation in manufactured home (USA only) or mobile home and must be installed in accordance with the manufacturer’s instructions and the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 in the United States, or the Standard for Installation in Mobile Homes, CAN/CSA Z240 MH Series, in Canada. This appliance is only for use with the type(s) of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.
A. Congratulations

Congratulations on selecting a Heat & Glo gas fireplace, an elegant and clean alternative to wood burning fireplaces. The Heat & Glo gas fireplace you have selected is designed to provide the utmost in safety, reliability, and efficiency. As the owner of a new fireplace, 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 that 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 Heat & Glo gas fireplace will give you years of durable use and trouble-free enjoyment. Welcome to the Heat & Glo family of fireplace products!

Homeowner Reference Information

We recommend that you record the following pertinent information about your fireplace.

Model Name: ___________________________ Date purchased/installed: __________________
Serial Number: __________________________ Location on fireplace: ________________________
Dealership purchased from: __________________ Dealer Phone: __________________________
Notes: ___________________________________________________________________________________
_______________________________________________________________________________________

Listing Label Information/Location

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

Model: XXXXXXXX
Serial (Series): XXXXXXXX

Minimum Permissible Gas Supply for Purposes of Input Adjustment.
Approved Minimum (De Gaz) Acceptable 0.0 in w.c. (Po. Col. d’eau)
Maximum Pressure (Pression) 0.0 in w.c. (Po. Col. d’eau)
Maximum Manifold Pressure (Pression) 0.0 in w.c. (Po. Col. d’eau)
Minimum Manifold Pressure (Pression) 0.0 in w.c. (Po. Col. d’eau)
Total Electrical Requirements: 000Vac, 00Hz., less than 00 Amperes

Heat & Glo, a brand of Hearth & Home Technologies
7571 215th Street West, Lakeville, MN 55044

Read this manual before installing or operating this appliance.
Please retain this owner’s manual for future reference.
14 Appliance Setup
A. Remove Fixed Glass Assembly ................. 44
B. Remove Shipping Materials .................... 44
C. Clean the Appliance ............................ 44
D. Accessories .................................... 44
E. Install the Log Assembly ....................... 45
F. Fixed Glass Assembly .......................... 47
G. Replacing Light Bulb ............................ 47
H. Air Shutter Setting ............................... 47

15 Troubleshooting
A. Intellifire Ignition System ...................... 48

16 Reference Materials
A. Appliance Dimension Diagram ................. 50
B. Vent Components Diagrams .................... 51
C. Service Parts ................................... 55
D. Contact Information ............................. 57
B. Limited Lifetime Warranty

Hearth & Home Technologies
LIMITED LIFETIME WARRANTY

Hearth & Home Technologies, on behalf of its hearth brands (“HHT”), extends the following warranty for HHT gas, wood, pellet, coal and electric hearth appliances that are purchased from an HHT authorized dealer.

WARRANTY COVERAGE:
HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownership of the appliance at the site of installation within two years following the date of original purchase, that the HHT appliance will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. HHT, at its own discretion, may fully discharge all of its obligations under such warranties by replacing the product itself or refunding the verified purchase price of the product itself. The maximum amount recoverable under this warranty is limited to the purchase price of the product. This warranty is subject to conditions, exclusions and limitations as described below.

WARRANTY PERIOD:
Warranty coverage begins on the date of original purchase. In the case of new home construction, warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the product by an independent, authorized HHT dealer/distributor, whichever occurs earlier. The warranty shall commence no later than 24 months following the date of product shipment from HHT, regardless of the installation or occupancy date. The warranty period for parts and labor for covered components is produced in the following table.

The term “Limited Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood, pellet, and coal appliances. These time periods reflect the minimum expected useful lives of the designated components under normal operating conditions.

<table>
<thead>
<tr>
<th>Warranty Period</th>
<th>HHT Manufactured Appliances and Venting</th>
<th>Components Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Parts</td>
<td>Labor</td>
</tr>
<tr>
<td>1 Year</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2 years</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3 years</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>5 years 1 year</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7 years 3 years</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>10 years 1 year</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Limited Lifetime</td>
<td>3 years</td>
<td>X</td>
</tr>
<tr>
<td>90 Days</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

See conditions, exclusions, and limitations on next page.
B. Limited Lifetime Warranty (continued)

WARRANTY CONDITIONS:
• This warranty only covers HHT appliances that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
• This warranty is only valid while the HHT appliance remains at the site of original installation.
• This warranty is only valid in the country in which the HHT authorized dealer or distributor that sold the appliance resides.
• Contact your installing dealer for warranty service. If the installing dealer is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the product.
• Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.

WARRANTY EXCLUSIONS:
This warranty does not cover the following:
• Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under warranty.
• Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
• Repair or replacement of parts that are subject to normal wear and tear during the warranty period. These parts include: paint, wood, pellet and coal gaskets, firebricks, grates, flame guides, batteries and the discoloration of glass.
• Expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.
• Damages resulting from: (1) failure to install, operate, or maintain the appliance in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the appliance; (2) failure to install the appliance in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs; (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operating instructions; (7) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the appliance.
• Non-HHT venting components, hearth components or other accessories used in conjunction with the appliance.
• Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
• HHT’s obligation under this warranty does not extend to the appliance’s capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

This warranty is void if:
• The appliance has been over-fired or operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
• The appliance is subjected to prolonged periods of dampness or condensation.
• There is any damage to the appliance or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

LIMITATIONS OF LIABILITY:
• The owner’s exclusive remedy and HHT’s sole obligation under this warranty, under any other warranty, express or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above. In no event will HHT be liable for any incidental or consequential damages caused by defects in the appliance. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you may also have other rights, which vary from state to state. EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE.
A. Appliance Certification

**MODEL:** Crescent II  
**LABORATORY:** Underwriters Laboratories, Inc. (UL)  
**TYPE:** Direct Vent Heater  
**STANDARD:** ANSI Z21.88-2014/CSA 2.33-2014

This product is listed to ANSI standards for “Vented Gas Appliance Heaters” and applicable sections of “Gas Burning Heating Appliances for Manufactured Homes and Recreational Vehicles”, and “Gas Fired Appliances for Use at High Altitudes”.

**NOTICE:** 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.

**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.

B. Tempered Glass Specifications

Hearth & Home Technologies appliances manufactured with tempered glass may be installed in hazardous locations such as bathtub enclosures as defined by the Consumer Product Safety Commission (CPSC). The tempered glass has been tested and certified to the requirements of ANSI Z97.1 and CPSC 16 CFR 1202 (Safety Glazing Certification Council SGCC# 1595 and 1597, Architectural Testing, Inc. Reports 02-31919.01 and 02-31917.01).

This statement is in compliance with CPSC 16 CFR Section 1201.5 “Certification and labeling requirements” which refers to 15 U.S. Code (USC) 2063 stating “…Such certificate shall accompany the product or shall otherwise be furnished to any distributor or retailer to whom the product is delivered.”

Some local building codes require the use of tempered glass with permanent marking in such locations. Glass meeting this requirement is available from the factory. Please contact your dealer or distributor to order.

C. BTU Specifications

<table>
<thead>
<tr>
<th>Models (U.S. or Canada)</th>
<th>Maximum Input BTU/h</th>
<th>Minimum Input BTU/h</th>
<th>Orifice Size (DMS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crescent II (NG) US (0-2000 FT)</td>
<td>11,500</td>
<td>8,500</td>
<td>52</td>
</tr>
<tr>
<td>CANADA (2000-4500 FT)</td>
<td>10,350</td>
<td>7,650</td>
<td>53</td>
</tr>
<tr>
<td>Crescent II (LP) US (0-2000 FT)</td>
<td>11,500</td>
<td>N/A</td>
<td>61</td>
</tr>
<tr>
<td>CANADA (2000-4500 FT)</td>
<td>10,350</td>
<td>N/A</td>
<td>62</td>
</tr>
</tbody>
</table>

D. High Altitude Installations

**NOTICE:** If the heating value of the gas has been reduced, these rules do not apply. Check with your local gas utility or authorities having jurisdiction.

When installing above 2000 feet elevation:

- In the USA: Reduce input rate 4% for each 1000 feet above 2000 feet.
- In CANADA: Reduce input rate 10% for elevations between 2000 feet and 4500 feet. Above 4500 feet, consult local gas utility.

Check with your local gas utility to determine proper orifice size.

E. Non-Combustible Materials Specification

Material which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plaster, or any combination thereof.

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 Specification

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 plastered or unplastered shall be considered combustible materials.

G. Electrical Codes

**NOTICE:** This appliance 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.

- A 110-120 VAC circuit for this product must be protected with ground-fault circuit-interrupter protection, in compliance with the applicable electrical codes, when it is installed in locations such as in bathrooms or near sinks.
H. Requirements for the Commonwealth of Massachusetts

For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

Installation of Carbon Monoxide Detectors

At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gas fitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gas fitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors.

In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

Approved Carbon Monoxide Detectors

Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.

Signage

A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) in. in size, “GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS”.

Inspection

The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

Exemptions

The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

- The equipment listed in Chapter 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and
- Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

MANUFACTURER REQUIREMENTS

Gas Equipment Venting System Provided

When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

- Detailed instructions for the installation of the venting system design or the venting system components; and
- A complete parts list for the venting system design or venting system.

Gas Equipment Venting System NOT Provided

When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies “special venting systems”, the following requirements shall be satisfied by the manufacturer:

- The referenced “special venting system” instructions shall be included with the appliance or equipment installation instructions; and
- The “special venting systems” shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

See Gas Connection section for additional Commonwealth of Massachusetts requirements.
A. Gas Fireplace Safety

**DANGER**

**HOT GLASS WILL CAUSE BURNS.**

**DO NOT TOUCH GLASS UNTIL COOLED.**

**NEVER ALLOW CHILDREN TO TOUCH GLASS.**

- Keep children away.
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures.

High temperatures may ignite clothing or other flammable materials.
- Clothing, furniture, draperies, and other flammable materials must not be placed on or near the appliance.

A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals. DO NOT operate the appliance with the barrier removed. If the barrier becomes damaged, the barrier shall be replaced with the manufacturer’s barrier for this appliance.

Contact your dealer or Hearth & Home Technologies if the barrier is not present or help is needed to properly install one.

Young children should be carefully supervised when they are in the same room as the appliance. Toddlers, young children and others may be susceptible to accidental contact burns.
- A physical barrier is recommended if there are at risk individuals in the house.
- To restrict access to a fireplace or stove, install an adjustable safety gate to keep toddlers, young children and other at risk individuals out of the room and away from hot surfaces.
- Install a switch lock or a wall/remote control with child protection lockout feature.
- Keep remote controls out of reach of children.
- Never leave children alone near a hot fireplace, whether operating or cooling down.

- Teach children to NEVER touch the fireplace.
- Consider not using the fireplace when children will be present.

Contact your dealer for more information, or visit: [www.hpba.org/safety-information](http://www.hpba.org/safety-information). To prevent unintended operation when not using your fireplace for an extended period of time (summer months, vacations, trips, etc):
- Remove batteries from remote controls.
- Turn off wall controls.
- Unplug 3 volt adapter plug (IPI) and remove batteries on IPI models.

B. Your Fireplace

**WARNING! DO NOT operate fireplace before reading and understanding operating instructions.** Failure to operate fireplace according to operating instructions could cause fire or injury.

![Figure 2.1 General Operating Parts](image-url)
C. Clear Space

**WARNING! DO NOT** place combustible objects in front of the fireplace or block louvers. High temperatures may start a fire. See Figure 2.2.

Avoid placing candles and other heat-sensitive objects on mantel or hearth. Heat may damage these objects.

![Figure 2.2 Clear Space](image)

D. Decorative Doors and Fronts

**WARNING! Risk of Fire!** Install ONLY doors or fronts approved by Hearth & Home Technologies. Unapproved doors or fronts may cause fireplace to overheat.

*This fireplace has been supplied with an integral barrier to prevent direct contact with the fixed glass panel. DO NOT operate the fireplace with the barrier removed.*

Contact your dealer or Hearth & Home Technologies if the barrier is not present or help is needed to properly install one.

For more information refer to the instructions supplied with your decorative door or front.

E. Fixed Glass Assembly

See Section 14.F.

F. Remote Controls, Wall Controls and Wall Switches

Follow the instructions supplied with the control installed to operate your fireplace:

For safety:
- Install a switch lock or a wall/remote control with child protection lockout feature.
- Keep remote controls out of reach of children.

See your dealer if you have questions.

G. Before Lighting Fireplace

Before operating this fireplace for the first time, have a qualified service technician:
- Verify all shipping materials have been removed from inside and/or underneath the firebox.
- Review proper placement of logs, ember material and/or other decorative materials.
- Check the wiring.
- Check the air shutter adjustment.
- Ensure that there are no gas leaks.
- Ensure that the glass is sealed and in the proper position and that the integral barrier is in place.
- Ensure that the flow of combustion and ventilation air is not obstructed (front grilles and vent caps).

**WARNING! Risk of Fire or Asphyxiation! DO NOT operate fireplace with fixed glass assembly removed.**
H. Lighting Instructions (IPI)

The IPI system may be operated with two D-cell batteries. When using batteries, unplug the transformer. To prolong battery life, remove them when using the transformer.

FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance is equipped with an intermittent pilot ignition (IPI) device which automatically lights the burner. DO NOT try to light the burner by hand.

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.

WHAT TO DO IF YOU SMELL GAS

- DO NOT try to light any appliance.
- DO NOT touch any electric switch; do not use any phone in your building.

LIGHTING INSTRUCTIONS (IPI)

1. This appliance is equipped with an ignition device which automatically lights the burner. DO NOT try to light the burner by hand.

2. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow “B” in the Safety Information located on the top of this label. If you do not smell gas, go to next step.

3. To light the burner:
   - Equipped with wall switch: Turn ON/OFF switch to ON.
   - Equipped with remote or wall control: Press ON or FLAME button.
   - Equipped with thermostat: Set temperature to desired setting.

4. If the appliance does not light after three tries, call your service technician or gas supplier.

TO TURN OFF GAS TO APPLIANCE

1. Equipped with wall switch: Turn ON/OFF switch to OFF.
   - Equipped with remote or wall control: Press OFF button.
   - Equipped with thermostat: Set temperature to lowest setting.

2. Service technician should turn off electric power to the control when performing service.

DANGER

HOT GLASS WILL CAUSE BURNS.
DO NOT TOUCH GLASS UNTIL COOLED.
NEVER ALLOW CHILDREN TO TOUCH GLASS.

A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals.

WARNING:

DO NOT CONNECT LINE VOLTAGE (110/120 VAC OR 220/240 VAC) TO THE CONTROL VALVE.

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.

This appliance needs fresh air for safe operation and must be installed so there are provisions for adequate combustion and ventilation air.

If not installed, operated, and maintained in accordance with the manufacturer’s instructions, this product could expose you to substances in fuel or fuel combustion which are known to the State of California to cause cancer, birth defects, or other reproductive harm.

Keep burner and control compartment clean. See installation and operating instructions accompanying appliance.

CAUTION:

Hot while in operation. DO NOT touch. Keep children, clothing, furniture, gasoline and other liquids having flammable vapors away.

DO NOT operate the appliance with fixed glass assembly removed, cracked or broken. Replacement of the fixed glass assembly should be done by a licensed or qualified service person.

NOT FOR USE WITH SOLID FUEL

For use with natural gas and propane. A conversion kit, as supplied by the manufacturer, shall be used to convert this appliance to the alternate fuel.

Also Certified for Installation in a Bedroom or a Bed sitting Room.

This appliance must be installed in accordance with local codes, if any; if none, follow the National Fuel Gas Code, ANSI Z223.1/ NFPA 54, or the National Gas and Propane Installation code, CSA B149.1.

For additional information on operating your Hearth & Home Technologies fireplace, please refer to www.fireplaces.com.

593-913i
I. After Fireplace is Lit

Initial Break-in Procedure

- The fireplace should be run three to four hours continuously on high.
- Turn the fireplace off and allow it to completely cool.
- Remove fixed glass assembly. See Section 14.F.
- Clean fixed glass assembly. See Section 3.
- Replace the fixed glass assembly and run continuously on high an additional 12 hours.

This cures the materials used to manufacture the fireplace.

**NOTICE! Open windows for air circulation during fireplace break-in.**

- Some people may be sensitive to smoke and odors.
- Smoke detectors may activate.

J. Frequently Asked Questions

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condensation on the glass</td>
<td>This is a result of gas combustion and temperature variations. As the fireplace warms, this condensation will disappear.</td>
</tr>
<tr>
<td>Blue flames</td>
<td>This is a result of normal operation and the flames will begin to yellow as the fireplace is allowed to burn for 20 to 40 minutes.</td>
</tr>
<tr>
<td>Odor from fireplace</td>
<td>When first operated, this fireplace may release an odor for the first several hours. This is caused by the curing of the paint and the burning off of any oils remaining from manufacturing. Odor may also be released from finishing materials and adhesives used around the fireplace.</td>
</tr>
<tr>
<td>Film on the glass</td>
<td>This is a normal result of the curing process of the paint and logs. Glass should be cleaned within 3 to 4 hours of initial burning to remove deposits left by oils from the manufacturing process. A non-abrasive cleaner such as gas fireplace glass cleaner may be necessary. See your dealer.</td>
</tr>
<tr>
<td>Metallic noise</td>
<td>Noise is caused by metal expanding and contracting as it heats up and cools down, similar to the sound produced by a furnace or heating duct. This noise does not affect the operation or longevity of the fireplace.</td>
</tr>
<tr>
<td>Is it normal to see the pilot flame burn continually?</td>
<td>In an intermittent pilot ignition system (IPI), the pilot flame should turn off when appliance is turned off. Some optional control systems available with IPI models may allow pilot flame to remain lit.</td>
</tr>
</tbody>
</table>
3 Maintenance and Service

Any safety screen or guard removed for servicing must be replaced prior to operating the fireplace.

When properly maintained, your fireplace will give you many years of trouble-free service. We recommend annual service by a qualified service technician.

A. Maintenance Tasks-Homeowner

Installation and repair should be done by a qualified service technician only. The fireplace should be inspected before use and at least annually by a professional service person.

The following tasks may be performed annually by the homeowner. If you are uncomfortable performing any of the listed tasks, please call your dealer for a service appointment.

More frequent cleaning may be required due to lint from carpeting or other factors. Control compartment, burner and circulating air passageway of the fireplace must be kept clean.

CAUTION! Risk of Burns! The fireplace should be turned off and cooled before servicing.

Glass Cleaning

Frequency: Seasonally

By: Homeowner

Tools Needed: Protective gloves, glass cleaner, drop cloth and a stable work surface.

CAUTION! Handle fixed glass assembly with care. Glass is breakable.

- Avoid striking, scratching or slamming glass
- Avoid abrasive cleaners
- DO NOT clean glass while it is hot

- Prepare a work area large enough to accommodate fixed glass assembly and door frame by placing a drop cloth on a flat, stable surface.

Note: Fixed glass assembly and gasketing may have residue that can stain carpeting or floor surfaces.

- Remove door or decorative front from fireplace and set aside on work surface.

- See Section 14.F for instructions to remove fixed glass assembly.

- Clean glass with a non-abrasive commercially available cleaner.
  - Light deposits: Use a soft cloth with soap and water
  - Heavy deposits: Use commercial fireplace glass cleaner (consult with your dealer)

- Carefully set fixed glass assembly in place on fireplace. Hold glass in place with one hand and secure glass latches with the other hand.

- Reinstall door or decorative front.

Doors, Surrounds, Fronts

Frequency: Annually

By: Homeowner

Tools needed: Protective gloves, glass cleaner, drop cloth and a stable work surface.

- Assess condition of screen and replace as necessary.
- Inspect for scratches, dents or other damage and repair as necessary.
- Check that louvers are not blocked.
- Vacuum and dust surfaces.

Remote Control

Frequency: Seasonally

By: Homeowner

Tools needed: Replacement batteries and remote control instructions.

- Locate remote control transmitter and receiver.
- Verify operation of remote. Refer to remote control operation instructions for proper calibration and setup procedure.
- Place batteries as needed in remote transmitters and battery-powered receivers.
- Place remote control out of reach of children.

If not using your fireplace for an extended period of time (summer months, vacations/trips, etc), to prevent unintended operation:

- Remove batteries from remote controls.
- Unplug 3 volt adapter plug on IPI models.

Venting

Frequency: Seasonally

By: Homeowner

Tools needed: Protective gloves and safety glasses.

- Inspect venting and termination cap for blockage or obstruction such plants, bird nests, leaves, snow, debris, etc.
- Verify termination cap clearance to subsequent construction (building additions, decks, fences, or sheds). See Section 6.
- Inspect for corrosion or separation.
- Verify weather stripping, sealing and flashing remains intact.
- Inspect draft shield to verify it is not damaged or missing.

Heat & Glo • Crescent II • 2083-902 Rev. W • 6/16
B. Maintenance Tasks-Qualified Service Technician
The following tasks must be performed by a qualified service technician.

Gasket Seal and Glass Assembly Inspection
Frequency: Annually
By: Qualified Service Technician
Tools needed: Protective gloves, drop cloth and a stable work surface.
• Inspect gasket seal and its condition.
• Inspect fixed glass assembly for scratches and nicks that can lead to breakage when exposed to heat.
• Confirm there is no damage to glass or glass frame. Replace as necessary.
• Verify that fixed glass assembly is properly retained and attachment components are intact and not damaged. Replace as necessary.

Logs
Frequency: Annually
By: Qualified Service Technician
Tools needed: Protective gloves.
• Inspect for damaged or missing logs. Replace as necessary. Refer to Section 14 for log placement instructions.
• Verify correct log placement and no flame impingement causing sooting. Correct as necessary.

Firebox
Frequency: Annually
By: Qualified Service Technician
Tools needed: Protective gloves, sandpaper, steel wool, cloths, mineral spirits, primer and touch-up paint.
• Inspect for paint condition, warped surfaces, corrosion or perforation. Sand and repaint as necessary.
• Replace fireplace if firebox has been perforated.

Control Compartment and Firebox Top
Frequency: Annually
By: Qualified Service Technician
Tools needed: Protective gloves, vacuum cleaner, dust cloths
• Vacuum and wipe out dust, cobwebs, debris or pet hair. Use caution when cleaning these areas. Screw tips that have penetrated the sheet metal are sharp and should be avoided.
• Remove all foreign objects.
• Verify unobstructed air circulation.

Burner Ignition and Operation
Frequency: Annually
By: Qualified Service Technician
Tools needed: Protective gloves, vacuum cleaner, whisk broom, flashlight, voltmeter, indexed drill bit set, and a manometer.
• Verify burner is properly secured and aligned with pilot or igniter.
• Clean off burner top, inspect for plugged ports, corrosion or deterioration. Replace burner if necessary.
• Replace Glowing embers with new dime-size pieces. DO NOT block ports or obstruct lighting paths. Refer to Section 14 for proper ember placement.
• Verify batteries have been removed from battery back-up IPI systems to prevent premature battery failure or leaking.
• Check for smooth lighting and ignition carryover to all ports. Verify that there is no ignition delay.
• Inspect for lifting or other flame problems.
• Verify air shutter setting is correct. See Section 14 for required air shutter setting. Verify air shutter is clear of dust and debris.
• Inspect orifice for soot, dirt and corrosion. Verify orifice size is correct. See Service Parts List for proper orifice sizing.
• Verify manifold and inlet pressures. Adjust regulator as required.
• Inspect pilot flame pattern and strength. See Figure 3.1 for proper pilot flame pattern. Clean or replace orifice spud as necessary.
• Inspect IPI flame sensing rod for soot, corrosion and deterioration. Polish with fine steel wool or replace as required.
• Verify that there is not a short in flame sense circuit by checking continuity between pilot hood and flame sensing rod. Replace pilot as necessary.

Light Bulbs
Frequency: As needed
By: Qualified Service Technician
Tools needed: Protective gloves, replacement light bulbs.
• See Section 14.G for instructions on replacing light bulb.
**Firebox**

**Frequency:** Annually  
**By:** Service Technician

**Tools needed:** Protective gloves, sandpaper, steel wool, cloths, mineral spirits, primer and touch-up paint.

- Inspect for paint condition, warped surfaces, corrosion or perforation. Sand and repaint as necessary.
- Replace appliance if firebox has been perforated.
- Surface cracking or crazing of firebrick material is normal and expected. The following types of cracks are acceptable and do not require replacement of the unit or the firebox:
  - Cracks that do not propagate entirely through the material.
  - Light fracture lines or "spider-webbing" on the surface of the material.
  - Cracks that are less than 1/32 in. wide and less than 3 in. long.
  - If cosmetically unacceptable, such cracks may be repaired with the patch kit. See Service Parts List for details.

Cracks that are unacceptable and require maintenance:

- Cracks greater than 1/32 in. wide and 3 in. long are at risk of growing.
- Cracks that penetrate entirely through the firebrick material.
- Cracks that extend past the inner wall to the glass sealing flange.

Inspection for cracking should be run when the appliance is cool. Cracks tend to close as the appliance heats up. The crack may be repairable with the PATCHKIT-FB. Report the case to a Product Specialist with Hearth & Home Technologies.

![Figure 3.1 IPI Pilot Flame Patterns](image)
A. Typical Appliance System

NOTICE: Illustrations and photos reflect typical installations and are for design purposes only. Illustrations/diagrams are not drawn to scale. Actual product varies from pictures in manual.

Note: The figures on this page do not represent the Crescent II specifically. They are intended to show the typical components of the gas fireplace system.

Figure 4.1 Typical System
B. Design and Installation Considerations

Heat & Glo direct vent gas appliances are designed to operate with all combustion air siphoned from outside of the building and all exhaust gases expelled to the outside. No additional outside air source is required.

Installation MUST comply with local, regional, state and national codes and regulations. Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

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

D. Inspect Appliance and Components

• Carefully remove the appliance and components from the packaging.
• The vent system components and decorative doors and fronts may be shipped in separate packages.
• If packaged separately, the log set and appliance grate must be 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! Risk of Fire or Explosion! Damaged parts could impair safe operation. DO NOT install damaged, incomplete or substitute components. Keep appliance dry.

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.

WARNING! Risk of Fire, Explosion or Electric Shock! DO NOT use this appliance if any part has been under water. Call a qualified service technician to inspect the appliance and to replace any part of the control system and/or gas control which has been under water.

C. Tools and Supplies Needed

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

Tape measure Framing material
Pliers Hammer
Phillips screwdriver Manometer
Gloves Framing square
Voltmeter Electric drill and bits (1/4 in.)
Plumb line Safety glasses
Level Reciprocating saw
Flat blade screwdriver
Non-corrosive leak check solution
1/2 - 3/4 in. length, #6 or #8 Self-drilling screws
Caulking material (300°F minimum continuous exposure rating)

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. For assistance or additional information, consult a qualified service technician, service agency or your dealer.

Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.
A. Selecting Appliance Location

When selecting a location for the appliance it is important to consider the required clearances to walls (see Figure 5.1).

**WARNING! Risk of Fire or Burns!** Provide adequate clearance around air openings and for service access. *Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.*

**NOTICE:** 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.

![Figure 5.1 Appliance Locations](image-url)
B. Constructing the Appliance Chase

A chase is a vertical box-like structure built to enclose the gas appliance and/or its vent system. In cooler climates the vent should be enclosed inside the chase.

**NOTICE:** Treatment of ceiling firestops and wall shield firestops and construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Therefore, you MUST check local building codes to determine the requirements to these steps.

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 may be sheetrocked and taped for maximum air tightness.

To further prevent drafts, the wall shield and ceiling firestops should be caulked with caulk with a minimum of 300°F continuous exposure rating to seal gaps. Gas line holes and other openings should be caulked with caulk with a minimum of 300°F continuous exposure rating or stuffed with unfaced insulation. If the appliance is being installed on a cement surface, a layer of plywood may be placed underneath to prevent conducting cold up into the room.

C. Clearances

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

**WARNING! Risk of Fire!** Maintain specified air space clearances to appliance and vent pipe:

- Insulation and other materials must be secured to prevent accidental contact.
- The chase must be properly blocked to prevent blown insulation or other combustibles from entering and making contact with fireplace or chimney.
- Failure to maintain airspace may cause overheating and a fire.

---

**CLEARANCES TO COMBUSTIBLES:**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rough Opening (Vent Pipe)</td>
<td>Rough Opening (Height)</td>
<td>Rough Opening (Depth)</td>
<td>Rough Opening (Width)</td>
<td>Clearance to Ceiling</td>
<td>Non-Combustible Floor</td>
<td>Combustible Flooring</td>
<td>Behind Appliance</td>
<td>Sides of Appliance</td>
<td>Front of Appliance</td>
</tr>
<tr>
<td>Inches</td>
<td>10</td>
<td>37</td>
<td>15-5/8</td>
<td>24-1/2</td>
<td>27</td>
<td>0</td>
<td>0</td>
<td>1/2</td>
<td>1/2</td>
<td>36</td>
</tr>
<tr>
<td>mm</td>
<td>254</td>
<td>940</td>
<td>397</td>
<td>622</td>
<td>686</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>13</td>
<td>914</td>
</tr>
</tbody>
</table>

Figure 5.2 Clearances to Combustibles
D. Mantel and Wall Projections

**WARNING! Risk of Fire!** Comply with all minimum clearances as specified. Framing or finishing material closer than the minimums listed must be constructed entirely of non-combustible materials (i.e., steel studs, concrete board, etc).

![Figure 5.3 Clearances to mantels or other combustibles above appliance](image)

**Note:** All measurements in inches.

![Figure 5.4 Clearances to Mantel Legs or Wall Projections](image)

(Acceptable on both sides of opening.)
A. Vent Termination Minimum Clearances

**WARNING**

Fire Risk. Maintain vent clearance to combustibles as specified.

- **DO NOT** pack air space with insulation or other materials. Failure to keep insulation or other materials away from vent pipe may cause overheating and fire.

<table>
<thead>
<tr>
<th>Roof Pitch</th>
<th>H (Min.) Ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat to 6/12</td>
<td>1.0*</td>
</tr>
<tr>
<td>Over 6/12 to 7/12</td>
<td>1.25*</td>
</tr>
<tr>
<td>Over 7/12 to 8/12</td>
<td>1.5*</td>
</tr>
<tr>
<td>Over 8/12 to 9/12</td>
<td>2.0*</td>
</tr>
<tr>
<td>Over 9/12 to 10/12</td>
<td>2.5*</td>
</tr>
<tr>
<td>Over 10/12 to 11/12</td>
<td>3.25</td>
</tr>
<tr>
<td>Over 11/12 to 12/12</td>
<td>4.0</td>
</tr>
<tr>
<td>Over 12/12 to 14/12</td>
<td>5.0</td>
</tr>
<tr>
<td>Over 14/12 to 16/12</td>
<td>6.0</td>
</tr>
<tr>
<td>Over 16/12 to 18/12</td>
<td>7.0</td>
</tr>
<tr>
<td>Over 18/12 to 20/12</td>
<td>7.5</td>
</tr>
<tr>
<td>Over 20/12 to 21/12</td>
<td>8.0</td>
</tr>
</tbody>
</table>

* 3 foot minimum in snow regions

**Figure 6.1 Minimum Height From Roof To Lowest Discharge Opening**

**Figure 6.2 Staggered Termination Caps**

If using decorative cap cover(s), this distance may need to be increased. Refer to the installation instructions supplied with the decorative cap cover.

**In a staggered installation with both gas and wood or fuel oil terminations, the wood or fuel oil termination cap must be higher than the gas termination cap.**

**Table**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 in. (minimum) up to 20 in.</td>
<td>18 in. minimum</td>
</tr>
<tr>
<td>152 mm/508 mm</td>
<td>457 mm</td>
</tr>
<tr>
<td>20 in. and over</td>
<td>0 in. minimum</td>
</tr>
</tbody>
</table>

Gas, Wood or Fuel Oil Termination Cap
Figure 6.3 Minimum Clearances for Termination

- **A** = 12 inches clearance above grade, veranda, porch, deck or balcony
- **B** = 12 inches clearance to window or door that may be opened, or to permanently closed window
- **C** = 18 inches clearance below unventilated soffit
- **D** = 9 inches clearance to outside corner
- **E** = 6 inches clearance to inside corner
- **F** = 3 ft. (Canada) not to be installed above a gas meter/ regulator assembly within 3 feet horizontally from the center-line of the regulator
- **G** = 3 ft clearance to gas service regulator vent outlet
- **H** = 12 inches clearance to non-mechanical (unpowered) air supply inlet, combustion air inlet or direct-vent termination
- **I** = 3 ft. (U.S.A.) 6 ft. (Canada) clearance to a mechanical (powered) air supply inlet

All mechanical air intakes within 10 feet of a termination cap must be a minimum of 3 feet below termination.

- **J** = 7 ft on public property: clearance above paved sidewalk or a paved driveway.

A vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings.

### Covered Alcove Applications
(Spaces open only on one side and with an overhang)

- **N** = 6 inches non-vinyl sidewalls
- **O** = 18 inches non-vinyl soffit and overhang

### Table

<table>
<thead>
<tr>
<th>Termination Caps</th>
<th>$Q_{MIN}$</th>
<th>$R_{MAX}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cap</td>
<td>3 feet</td>
<td>2 x $Q_{ACTUAL}$</td>
</tr>
<tr>
<td>2 caps</td>
<td>6 feet</td>
<td>1 x $Q_{ACTUAL}$</td>
</tr>
<tr>
<td>3 caps</td>
<td>9 feet</td>
<td>2/3 x $Q_{ACTUAL}$</td>
</tr>
<tr>
<td>4 caps</td>
<td>12 feet</td>
<td>1/2 x $Q_{ACTUAL}$</td>
</tr>
</tbody>
</table>

Where:

- $Q_{ACTUAL} = Q_{MIN}$
- $Q_{MAX} = (2 / # termination caps) x Q_{ACTUAL}$

CAUTION! Risk of Burns! Termination caps are HOT, consider proximity to doors, traffic areas or where people may pass or gather (sidewalk, deck, patio, etc.). Listed cap shields available. Contact your dealer.

- Local codes or regulations may require different clearances.
- Vent system termination is NOT permitted in screened porches.
- Vent system termination is permitted in porch areas with two or more sides open.
- Hearth & Home Technologies assumes no responsibility for the improper performance of the appliance when the venting system does not meet these requirements.
- Vinyl protection kits are suggested for use with vinyl siding.

**K** = 6 inches clearance from sides of electrical service

**L** = 12 inches clearance above electrical service

Location of the vent termination must not interfere with access to the electrical service.

**M** = 18 inches clearance under veranda, porch, deck, balcony or overhang

42 inches vinyl or composite overhang

Permitted when veranda, porch, deck or balcony is fully open on a minimum of 2 sides beneath the floor.

Figure 6.3 Minimum Clearances for Termination
A. Approved Pipe

This appliance is approved for use with Hearth & Home Technologies DVP venting systems. Refer to Section 16.B for vent component information.

**DO NOT** mix pipe, fittings or joining methods from different manufacturers.

The pipe is tested to be run inside an enclosed wall. There is no requirement for inspection openings at each joint within the wall.

**WARNING! Risk of Fire or Asphyxiation.** This appliance requires a separate vent. **DO NOT** vent to a pipe serving a separate solid fuel burning appliance.

B. Vent Table Key

The abbreviations listed in this vent table key are used in the vent diagrams.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V₁</td>
<td>First section (closest to appliance) of vertical length</td>
</tr>
<tr>
<td>V₂</td>
<td>Second section of vertical length</td>
</tr>
<tr>
<td>H₁</td>
<td>First section (closest to appliance) of horizontal length</td>
</tr>
<tr>
<td>H₂</td>
<td>Subsequent sections of horizontal length</td>
</tr>
</tbody>
</table>

C. Use of Elbows

Diagonal runs have both vertical and horizontal vent aspects when calculating the effects. Use the rise for the vertical aspect and the run for the horizontal aspect (see Figure 7.1).

Two 45° elbows may be used in place of one 90° elbow. On 45° runs, one foot of diagonal is equal to 8-1/2 in. (216 mm) horizontal run and 8-1/2 in. (216 mm) vertical run. A length of straight pipe is allowed between two 45° elbows (see Figure 7.1).

D. Measuring Standards

Vertical and horizontal measurements listed in the vent diagrams were made using the following standards.

- Pipe measurements are shown using the effective length of pipe (see Figure 7.2).

- Horizontal terminations are measured to the outside mounting surface (flange of termination cap) (see Figure 6.3).

- Vertical terminations are measured to bottom of termination cap.

- Horizontal pipe installed level with no rise.
E. Vent Diagrams

To replace the first 90° starter elbow with two 45° elbows, refer to Figure 7.3. All other 90° elbows can be replaced with two 45° elbows.

General Rules:

- **SUBTRACT 3 ft. from the total H measurement for each 90° elbow installed horizontally.**
- **SUBTRACT 1-1/2 ft. from the total H measurement for each 45° elbow installed horizontally.**
- A maximum of three 90° elbows (or six 45° elbows) may be used in any vent configuration. Some elbows may be installed horizontally. See vent diagrams.
- Elbows may be placed back to back anywhere in the system as long as the first 90° elbow is a starter elbow.
- When penetrating a combustible wall, a wall shield firestop must be installed.
- When penetrating a combustible ceiling, a ceiling firestop must be installed.
- Horizontal runs of vent do not require vertical rise; horizontal runs may be level.
- Horizontal termination cap should have a 1/4 inch downward slant to allow any moisture in cap to be released. See Figure 7.3.
E. Vent Diagrams

**WARNING**

Do NOT pack insulation or other combustibles between ceiling firestops.
- ALWAYS maintain specified clearances around venting and firestop systems.
- Install wall shield and ceiling firestops as specified.
Failure to keep insulation or other material away from vent pipe may cause fire.

1. Top Vent - Horizontal Termination

**One Elbow**

![Diagram of one elbow ventilation system]

<table>
<thead>
<tr>
<th>$V_1$ Minimum</th>
<th>$H_1$ Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbow only</td>
<td>2 ft 610 mm</td>
</tr>
<tr>
<td>6 in</td>
<td>2 ft 610 mm</td>
</tr>
<tr>
<td>1 1/2 ft</td>
<td>3 ft 914 mm</td>
</tr>
<tr>
<td>2 1/2 ft</td>
<td>5 ft 1.5 m</td>
</tr>
<tr>
<td>3 1/2 ft</td>
<td>7 ft 2.1 m</td>
</tr>
<tr>
<td>4 1/2 ft</td>
<td>15 ft 4.6 m</td>
</tr>
</tbody>
</table>

$V_1 + H_1 = 38$ ft (11.6 m) Maximum
$H_1 = 15$ ft (4.6 m) Maximum

**Two Elbows**

![Diagram of two elbows ventilation system]

<table>
<thead>
<tr>
<th>$V_1$ Minimum</th>
<th>$H_1 + H_2$ Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 90° Elbows back to back</td>
<td>Cannot do</td>
</tr>
<tr>
<td>6 in</td>
<td>152 mm 2 ft 610 mm</td>
</tr>
<tr>
<td>1 1/2 ft</td>
<td>457 mm 3 ft 914 mm</td>
</tr>
<tr>
<td>2 1/2 ft</td>
<td>762 mm 5 ft 1.5 m</td>
</tr>
<tr>
<td>3 1/2 ft</td>
<td>1067 mm 7 ft 2.1 m</td>
</tr>
<tr>
<td>4 1/2 ft</td>
<td>1.4 m 15 ft 4.6 m</td>
</tr>
</tbody>
</table>

$V_1 + H_1 + H_2 = 38$ ft (11.6 m) Maximum
$H_1 + H_2 = 15$ ft (4.6 m) Maximum
Three Elbows

<table>
<thead>
<tr>
<th></th>
<th>$V_1$ Min.</th>
<th>$H_1$ Max.</th>
<th>$V_2$ Min.</th>
<th>$H_2$ Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbow only</td>
<td>2 ft</td>
<td>610 mm</td>
<td>*</td>
<td>$\frac{V_2}{2}$</td>
</tr>
<tr>
<td>1-1/2 ft</td>
<td>457 mm</td>
<td>2 ft</td>
<td>610 mm</td>
<td>*</td>
</tr>
<tr>
<td>1-1/2 ft</td>
<td>457 mm</td>
<td>3 ft</td>
<td>914 mm</td>
<td>*</td>
</tr>
<tr>
<td>2-1/2 ft</td>
<td>762 mm</td>
<td>5 ft</td>
<td>1.5 m</td>
<td>*</td>
</tr>
<tr>
<td>3-1/2 ft</td>
<td>1.06 m</td>
<td>7 ft</td>
<td>2.1 m</td>
<td>*</td>
</tr>
<tr>
<td>4-1/2 ft</td>
<td>1.4 m</td>
<td>15 ft</td>
<td>4.6 m</td>
<td>*</td>
</tr>
</tbody>
</table>

*When using $V_2$, $H_2$ Max = $V_2$. If $V_2 = 0$, then $H_2$ Max = 1-1/2 ft (38 mm).

$(H_1 + H_2)$ cannot exceed 15 ft (381 mm) when using appropriate $V_2$.

Figure 7.6
Top Vent - Vertical Termination

No Elbow

**Note:** If installing a vertical vent/termination off the top of the appliance, the flue restrictor should be used.

**Figure 7.8**

**Two Elbows**

<table>
<thead>
<tr>
<th>$V_1$</th>
<th>$H_1$ Maximum</th>
<th>$V_2$</th>
<th>$V_1 + V_2$ Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Elbow</td>
<td>2 ft 610 mm</td>
<td>*</td>
<td>* * *</td>
</tr>
<tr>
<td>6 in</td>
<td>152 mm 2 ft 610 mm</td>
<td>*</td>
<td>* * *</td>
</tr>
<tr>
<td>1 1/2 ft</td>
<td>457 mm 3 ft 914 mm</td>
<td>*</td>
<td>* * *</td>
</tr>
<tr>
<td>2 1/2 ft</td>
<td>762 mm 5 ft 1.5 m</td>
<td>*</td>
<td>* * *</td>
</tr>
<tr>
<td>3 1/2 ft</td>
<td>1067 mm 7 ft 2.1 m</td>
<td>*</td>
<td>* * *</td>
</tr>
<tr>
<td>4 1/2 ft</td>
<td>1.4 m 15 ft 4.6 m</td>
<td>*</td>
<td>* * *</td>
</tr>
</tbody>
</table>

$V_1 = 45$ ft. Max. (13.7 m)

**Note:** For vertical venting of 8 feet or higher, the restrictor plate should be used. The restrictor is shipped in bottom of fireplace (secured on right side with a tie strap). Insert the restrictor plate in center of flue. Once installed in center of flue turn the restrictor plate so it sits on top of firebox.

**Figure 7.7**
A. Pipe Clearances to Combustibles

**WARNING! Risk of Fire!** Maintain air space clearance to vent. **DO NOT** pack insulation or other combustibles:

- Between ceiling firestops
- Between wall shield firestops
- Around vent system

Failure to keep insulation or other material away from vent pipe may cause overheating and fire.

Note: Heat shields MUST overlap by a minimum of 1-1/2 in. (38 mm).

- **DVP heat shield** - designed to be used on a wall 4 in. to 7-1/4 in. (102 mm to 184 mm) thick.
- If wall thickness is less than 4 in. the existing heat shields must be field trimmed. If wall thickness is greater than 7-1/4 in. a DVP-HSM-B will be required.

B. Wall Penetration Framing

**Combustible Wall Penetration**

Whenever a combustible wall is penetrated, you must frame a hole for the wall shield firestop(s). The wall shield firestop maintains minimum clearances and prevents cold air infiltration.

- The opening must be framed on all four sides using the same size framing materials as those used in the wall construction.
- **DVP pipe** - A wall shield firestop is required on one side only on interior walls. If your local inspector requires a wall shield firestop on both sides, then both wall shield firestops must have a heat shield (refer to Section 16.B.) attached to them.
- See Section 10.M. for information for regarding the installation of a horizontal termination cap.

**Non-Combustible Wall Penetration**

If the hole being penetrated is surrounded by non-combustible materials such as concrete, a hole with diameter one inch greater than the pipe is acceptable.

Whenever a non-combustible wall is penetrated, the wall shield firestop is only required on one side and no heat shield is necessary.

---

*DVP-SLP Pipe Shown*
C. Install the Ceiling Firestop

A ceiling firestop MUST be used between floors and attics.

- **DVP pipe only** - Frame an opening 10 in. by 10 in. (254 mm by 254 mm) whenever the vent penetrates a ceiling/floor (see Figure 8.3).

- Frame the area with the same sized lumber as used in ceiling/floor joist.

- The ceiling firestop may be installed above or below the ceiling joists when installed with an attic insulation shield. It must be under joists between floors that are not insulated. Refer to Figure 8.4.

- Secure with three fasteners on each side.

**WARNING! Risk of Fire! DO NOT pack insulation around the vent. Insulation must be kept back from the pipe to prevent overheating.**

D. Install Attic Insulation Shield

**WARNING! Fire Risk. DO NOT** allow loose materials or insulation to touch vent. Hearth & Home Technologies requires the use of an attic shield.

The International Fuel Gas Code requires an attic shield constructed of 26 gauge minimum steel that extends at least 2 in. (51 mm) above insulation.

- Attic insulation shields must meet specified clearances to combustible materials and be secured in place.

- An attic insulation shield kit is available from Hearth & Home Technologies. Contact your dealer to order. Install attic insulation shield according to instructions included with kit.

![Figure 8.3 Installing Ceiling Firestop](image1)

![Figure 8.4 Installing the Attic Shield](image2)
A. Securing and Leveling the Appliance

**WARNING! Risk of Fire!** Prevent contact with:

- Sagging or loose insulation
- Insulation backing or plastic
- Framing and other combustible materials

Block openings into the chase to prevent entry of blown-in insulation. Make sure insulation and other materials are secured.

**DO NOT** notch the framing around the appliance standoffs.

Failure to maintain air space clearance may cause overheating and fire.

**CAUTION! Risk of Cuts, Abrasions or Flying Debris.** Wear protective gloves and safety glasses during installation. Sheet metal edges are sharp.

The diagram shows how to properly position, level, and secure the appliance. See Figure 9.1. 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.
- Remove two side screws from each nailing tab. See Figure 9.2. Refasten nailing tabs to the appliance. Note: Return bend on nailing tab faces back of unit.
- Keep nailing tabs flush with the framing.
- Secure the appliance to the framing by using nails or screws through the nailing tabs.
- Holes are also provided in appliance bottom to secure appliance to floor.
A. Assemble Vent Sections (DVP Pipe Only)

**Attach Vent to the Firebox Assembly**

*Note:* The end of the pipe sections with the lanced tabs will face toward the appliance.

Attach the first pipe section to the starting collar:
- Lanced pipe end of the starting collar.
- Inner pipe over inner collar.
- Push the pipe section until all lanced tabs snap in place.
- Lightly tug on pipe to confirm it has locked.

**Commercial, Multi-family (Multi-level exceeding two stories), or High-Rise Applications**

All outer pipe joints must be sealed with high temperature silicone (300°F minimum continuous exposure rating), including the slip section that connects directly to the horizontal termination cap.
- Apply a bead of silicone sealant (300°F minimum continuous exposure rating) inside the female outer pipe joint prior to joining sections. See Figure 10.1.
- Only outer pipes need to be sealed. All unit collar, pipe, slip section, elbow and cap outer flues shall be sealed in this manner, unless otherwise stated.

**WARNING! Risk of Fire or Explosion! DO NOT** break silicone seals on slip sections. Use care when removing termination cap from slip pipe. If slip section seals are broken during removal of the termination cap, vent may leak.

**Assemble Pipe Sections**

Per Figure 10.2:
- Start the inner pipe on the lanced end of section A into the flared end of section B.
- Start the outer pipe of section A over the outer pipe of section B.
- Once both vents sections are started, push firmly until all lanced tabs lock into place.
- Lightly tug on the pipe to confirm the tabs have locked.

It is acceptable to use screws no longer than 1/2 in. (13 mm) to hold outer pipe sections together. If predrilling holes, **DO NOT** penetrate inner pipe.

For 90° and 45° elbows that are changing the vent direction from horizontal to vertical, one screw minimum should be put in the outer flue at the horizontal elbow joint to prevent the elbow from rotating. Use screws no longer than 1/2 in. (13 mm). If predrilling screw holes, **DO NOT** penetrate inner pipe.
B. Assemble Slip Sections

- Slide the inner flue of the slip section into the inner flue of the pipe section and the outer flue of the slip section over the outer flue of the pipe section. See Figure 10.5.
- Slide together to the desired length.

![Figure 10.6 Slip Section Pilot Holes](image)

- Maintain a 1-1/2 in. (38 mm) overlap between the slip section and the pipe section.
- Secure the pipe and slip section with two screws no longer than 1/2 in. (13 mm), using the pilot holes in the slip section. See Figure 10.6.

![Figure 10.6 Screws into Slip Section](image)

- Continue adding pipe as necessary following instructions in “Assembling Pipe Sections.”

**NOTICE:** If slip section is too long, the inner and outer flues of the slip section can be cut to the desired length.

**NOTICE:** When installing a vent system with an HRC termination cap, all pipe system joints shall be sealed using a high temperature silicone sealant (300°F minimum continuous exposure rating).

- Apply a bead of silicone sealant (300°F minimum continuous exposure rating) inside the female outer pipe joint prior to joining sections.
- Only outer pipes are sealed, sealing the inner flue is not required.
- All unit collar, pipe, slip section, elbow and cap outer flues shall be sealed.

C. Secure the Vent Sections

- Vertical runs originating off the top of the appliance, with no offsets, must be supported every 8 ft. (2.44 m) after the maximum allowed 25 ft. (7.62 m) of unsupported rise.
- Vertical runs originating off the rear of the appliance, or after any elbow, must be supported every 8 ft. (2.44 m).
- Horizontal runs must be supported every 5 feet (1.52 m).
- Vent supports or plumbers strap (spaced 120° apart) may be used to support vent sections. See Figures 10.7 and 10.8.
- Wall shield firestops may be used to provide horizontal support to vent sections.

**WARNING! Risk of Fire, Explosion or Asphyxiation!**
Improper support could allow vent to sag and separate. Use vent run supports and connect vent sections per installation instructions. **DO NOT** allow vent to sag below connection point to appliance.

![Figure 10.7 Securing Vertical Pipe Sections](image)

![Figure 10.8 Securing Horizontal Pipe Sections](image)
D. Disassemble Vent Sections

- Rotate either section (see Figure 10.9) so the seams on both pipe sections are aligned as shown in Figure 10.10.
- Pull carefully to separate the pieces of pipe.
E. Install Metal Roof Flashing

- See minimum vent heights for various pitched roofs (Figure 10.11) to determine the length of pipe to extend through the roof.
- Slide the roof flashing over the pipe sections extending through the roof as shown in Figure 10.12.

<table>
<thead>
<tr>
<th>Roof Pitch</th>
<th>H (Min.) Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat to 6/12</td>
<td>1.0*</td>
</tr>
<tr>
<td>Over 6/12 to 7/12</td>
<td>1.25*</td>
</tr>
<tr>
<td>Over 7/12 to 8/12</td>
<td>1.5*</td>
</tr>
<tr>
<td>Over 8/12 to 9/12</td>
<td>2.0*</td>
</tr>
<tr>
<td>Over 9/12 to 10/12</td>
<td>2.5*</td>
</tr>
<tr>
<td>Over 10/12 to 11/12</td>
<td>3.25</td>
</tr>
<tr>
<td>Over 11/12 to 12/12</td>
<td>4.0</td>
</tr>
<tr>
<td>Over 12/12 to 14/12</td>
<td>5.0</td>
</tr>
<tr>
<td>Over 14/12 to 16/12</td>
<td>6.0</td>
</tr>
<tr>
<td>Over 16/12 to 18/12</td>
<td>7.0</td>
</tr>
<tr>
<td>Over 18/12 to 20/12</td>
<td>7.5</td>
</tr>
<tr>
<td>Over 20/12 to 21/12</td>
<td>8.0</td>
</tr>
</tbody>
</table>

* 3 foot minimum in snow regions

**NOTICE:** Failure to properly caulk the roof flashing and pipe seams may permit entry of water.
- Caulk the gap between the roof flashing and the outside diameter of the pipe.
- Caulk the perimeter of the flashing where it contacts the roof surface. See Figure 10.15.
- Caulk the overlap seam of any exposed pipe sections that are located above the roof line.

F. Assemble and Install Storm Collar

**CAUTION! Risk of Cuts, Abrasions or Flying Debris.** Wear protective gloves and safety glasses during installation. Sheet metal edges are sharp.

- Insert bolt (provided) through the brackets and install nut. Do not completely tighten.
- Slide the assembled storm collar down the pipe section until it rests on the roof flashing. See Figure 10.13.
- Tighten nut and make sure the collar is tight against the pipe section.
- Caulk around the top of the storm collar. See Figure 10.14.
G. Install Vertical Termination Cap

- Attach the vertical termination cap by sliding the inner collar of the cap into the inner flue of the pipe section while placing the outer collar of the cap over the outer flue of the pipe section.
- Secure the cap by driving three self-tapping screws (supplied) through the pilot holes in the outer collar of the cap into the outer flue of the pipe. See Figure 10.14.

H. Heat Shield Requirements for Horizontal Termination

WARNING! Risk of Fire! To prevent overheating and fire, heat shields must extend through the entire wall thickness.

- DO NOT remove the heat shields attached to the wall shield firestop and the horizontal termination cap (shown in Figure 10.15).
- Heat shields must overlap 1-1/2 in. (38 mm) minimum.

There are two sections of the heat shield. One section is factory-attached to the wall shield firestop. The other section is factory-attached to the cap. See Figure 10.15.

If the wall thickness does not allow the required 1-1/2 in. (38 mm) heat shield overlap when installed, an extended heat shield must be used.

- If the wall thickness is less than 4 in./102 mm (DVP), the heat shields on the cap and wall shield firestop must be trimmed. A minimum 1-1/2 in. (38 mm) overlap MUST be maintained.
- Use an extended heat shield if the finished wall thickness is greater than 7-1/4 in. (184 mm).
- The extended heat shield may need to be cut to length maintaining sufficient length for a 1-1/2 in. (38 mm) overlap between heat shields.
- Attach the extended heat shield to either of the existing heat shields using the screws supplied with the extended heat shield. Refer to vent components diagrams in the back of this manual.
- Rest the small leg on the extended heat shield on top of the pipe section to properly space it from the pipe section.

Important Notice: Heat shields may not be field constructed.
I. Install Horizontal Termination Cap

**WARNING! Risk of Fire!** The telescoping flue section of the termination cap MUST be used when connecting vent.

- 1-1/2 (38 mm) minimum overlap of flue telescoping section is required.

Failure to maintain overlap may cause overheating and fire.

- Vent termination must not be recessed in the wall. Siding may be brought to the edge of the cap base.

- Flash and seal as appropriate for siding material at outside edges of cap.

- When installing a horizontal termination cap, follow the cap location guidelines as prescribed by current ANSI Z223.1 and CAN/CGA-B149 installation codes and refer to Section 6 of this manual.

**CAUTION! Risk of Burns!** Local codes may require installation of a cap shield to prevent anything or anyone from touching the hot cap.

**NOTICE:** For certain exposures which require superior resistance to wind-driven rain penetration, a flashing kit and HRC caps are available. When penetrating a brick wall, a brick extension kit is available for framing the brick.

Note: When using termination caps with factory-supplied heat shield attached, no additional wall shield firestop is required on the exterior side of a combustible wall.

![Diagram of venting through the wall]
A. Fuel Conversion
- Make sure the appliance is compatible with available gas types.
- Conversions must be made by a qualified service technician using Hearth & Home Technologies specified and approved parts.

B. Gas Pressure
- Optimum appliance performance requires proper input pressures.
- Gas line sizing requirements will be determined in ANSI Z223.1 National Fuel Gas Code in the USA and CAN/CGA B149 in Canada.
- Pressure requirements are:

<table>
<thead>
<tr>
<th>Gas Pressure</th>
<th>Natural Gas</th>
<th>Propane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum inlet pressure</td>
<td>5.0 in. w.c.</td>
<td>11.0 in. w.c.</td>
</tr>
<tr>
<td>Maximum inlet pressure</td>
<td>10.0 in. w.c.</td>
<td>13.0 in. w.c.</td>
</tr>
<tr>
<td>Manifold pressure</td>
<td>3.5 in. w.c.</td>
<td>10.0 in. w.c.</td>
</tr>
</tbody>
</table>

**WARNING! Risk of Fire or Explosion!** High pressure will damage valve. Low pressure may cause explosion.
- Verify inlet pressures. Verify minimum pressures when other household gas appliances are operating.
- Install regulator upstream of valve if line pressure is greater than 1/2 psig.

**WARNING**

Fire Risk.
Explosion Hazard.
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.

Note: Have the gas supply line installed in accordance with local 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.

C. Gas Connection
- Refer to Reference Section 16 for location of gas line access in appliance.
- The gap between supply piping and gas access hole may be caulked with caulk with a minimum of 300°F continuous exposure rating 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 the appliance. Follow local codes.
- Pipe incoming gas line into valve compartment.
- Connect incoming gas line to the 1/2 in. (13 mm) connection on manual shutoff valve.

**WARNING! Risk of Fire or Explosion!** Support control when attaching pipe to prevent bending gas line.
- A small amount of air will be in the gas supply lines.

**WARNING! Risk of Fire or Explosion!** Gas build-up during line purge could ignite.
- Purge should be performed by qualified service technician.
- Ensure adequate ventilation.
- Ensure there are no ignition sources such as sparks or open flames.

Light the appliance. It will take a short time for air to purge from lines. When purging is complete the appliance will light and operate normally.

**WARNING! Risk of Fire, Explosion or Asphyxiation!** Check all fittings and connections with a non-corrosive commercially available leak-check solution. **DO NOT** use open flame. Fittings and connections could have loosened during shipping and handling.

**WARNING! Risk of Fire!** **DO NOT** change valve settings. This valve has been preset at the factory.

D. High Altitude Installations

**NOTICE:** If the heating value of the gas has been reduced, these rules do not apply. Check with your local gas utility or authorities having jurisdiction.

When installing above 2000 feet elevation:
- In the USA: Reduce burner orifice 4% for each 1000 feet above 2000 feet.
- In CANADA: Reduce burner orifice 10% for elevations between 2000 feet and 4500 feet. Above 4500 feet, consult local gas utility.
A. Wiring Requirements

**NOTICE:** This appliance 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.

• Wire the appliance junction box to 110-120 VAC. This is required for proper operation of the appliance.

• A 110-120 VAC circuit for this product must be protected with ground-fault circuit-interrupter protection, in compliance with the applicable electrical codes, when it is installed in locations such as in bathrooms or near sinks.

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

**WARNING! Risk of Shock or Explosion! DO NOT** wire 110V to the valve or to the appliance wall switch. Incorrect wiring will damage controls.

B. Intellifire Ignition System Wiring and 3 Function Circuit Board

This appliance requires a 110-120 VAC supply to the appliance junction box for operation. A wiring diagram is shown in Figure 12.1.

This appliance is equipped with an Intellifire control valve which operates on a 3 volt system.

This appliance is equipped with a 3 function circuit board which operates on 110-120 VAC and 12 VDC.

This appliance is supplied with a 3 volt AC transformer and a 12 volt DC 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 reconstruction.

Optional Remote Control Requirements

To attach remote receiver in series with 3 function wall switch see wiring diagram. See Figure 12.2.

C. Optional Accessories Requirements

• This appliance may be used with a wall switch, wall mounted thermostat and/or a remote control.

Wiring for optional Hearth & Home Technologies approved accessories should be done now to avoid reconstruction. Follow instructions that come with those accessories.
Figure 12.1 Intellifire Pilot Ignition (IPI) Wiring Diagram - Standard Method  
Note: Appliance will not operate unless properly grounded.

D. Electrical Service and Repair

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

WARNING! Risk of Shock! Replace damaged wire with type 105°C rated wire. Wire must have high temperature insulation.
E. Junction Box Installation

It is recommended to wire the unit from outside the appliance.

- Remove the junction box assembly located on the outer shell - right side. See Figure 12.3.
- Cut the zip ties holding the adaptor on the junction box.
- Remove the junction box from the cover plate.
- Loosen two screws on the Romex connector, feed the necessary wire through the connector and tighten the screws.
- Make all necessary wire connections and reattach the junction box to the cover plate and to the outer shell.

Figure 12.2 Intelliﬁre Pilot Ignition (IPI) Wiring Diagram with optional remote wired in series

Figure 12.3 Junction Box Detail

NOTE: Do NOT wire 110-120 VAC to wall switch.
F. Installing Flame Control Solenoid  
(Natural Gas Only)

1. Remove the screw and knob from the variable regulator and discard.
2. Unscrew the nut from the regulator and discard.
3. Remove the bag containing a washer and blue and red plungers from the side of the flame control solenoid. Discard the red plunger.
4. Place washer on flame control solenoid (see Figure 12.4).
5. Insert the blue (natural gas) plunger into the flame control solenoid (see Figure 12.4).
6. Thread the flame control solenoid with correct plunger into the thread hole in the variable regulator. Turn one to two turns only. Do not tighten or damage may occur.
7. Connect the two leads from the flame control solenoid to the orange solenoid leads from the circuit board.
8. Install a manometer into the pressure tap.

**NOTE:** A manometer MUST be used to set the manifold pressure on the gas valve.

9. Light the fireplace as directed in the Owner's Manual.
10. Set the manifold pressure on the gas valve by rotating the flame control solenoid. Adjust until the reading on the manometer is 3.5 inches w.c. for natural gas.
11. Tighten the jam nut (see Figure 4) to the face of the variable regulator body.
12. Turn the fireplace OFF.
13. Remove the manometer from the pressure tap and screw the tap closed.
A. Mantel and Wall Projections

**WARNING! Risk of Fire!** Comply with all minimum clearances as specified. Framing closer than the minimums listed must be constructed entirely of non-combustible materials (i.e., steel studs, concrete board, etc.).

Figure 13.1 shows the minimum vertical and corresponding maximum horizontal dimensions of appliance mantels or other combustible projections above the top front edge of the appliance.

![Diagram of clearances to mantels or other combustibles above appliance](image)

Figure 13.1 Clearances to mantels or other combustibles above appliance

![Diagram of mantel leg or wall projections](image)

Figure 13.2 Mantel leg or wall projections (Acceptable on both sides of opening.)
B. Facing Requirements

There are two options to finish the front facing on the fireplace, outside fit surround and inside fit surround.

WARNING! Risk of Fire! DO NOT apply combustible materials beyond the minimum clearances. Comply with all minimum clearances to combustibles as specified in this manual. Overlapping materials could ignite and will interfere with proper operation of doors and louvers.

- Facing and/or finishing materials must not interfere with air flow through louvers, operation of louvers or doors, or access for service.
- Facing and/or finishing materials must never overhang into the glass opening.
- Observe all clearances when applying combustible materials.

Outside Fit Surround

The outside fit surround design is used for facing materials less than 3/4 inch for combustibles, and less than one inch for non-combustibles. The surround is designed to fit flush on finishing materials. Hearth & Home Technologies approved cabinets or 1/2 inch finishing materials are recommended. See Figure 13.3.

Adjust fireplace position if facing material is other than 1/2 inch thick.

NOTICE: For Outside Fit Surrounds
- Surface temperatures are hot around fireplace opening.
- Facing material finishes may discolor or peel if not suited to temperatures above 200º F.

Inside Fit Surround

The inside fit surround design is used with finishing materials greater than 3/4 inch for non-combustible finishing. The surround is designed to set back on finishing materials. See Figure 13.5.

To cut the arch use the dimensions shown in Figure 13.6.

WARNING! Risk of Fire! DO NOT apply combustible materials beyond the minimum clearances. Comply with all minimum clearances to combustibles as specified in this manual. Overlapping materials could ignite and will interfere with proper operation of doors and louvers.
A. Remove Fixed Glass Assembly
See Section 14.F.

B. Remove Shipping Materials
Remove shipping materials from inside and underneath the firebox. A shipping bracket on the bottom front face must be removed. Remove the screws and shipping bracket and discard. See Figure 14.1.

C. Clean the Appliance
Clean/vacuum any sawdust that may have accumulated inside the firebox or underneath in the control cavity.

D. Accessories
Install approved accessories per instructions included with accessories. Contact your dealer for a list of approved accessories.

**WARNING! Risk of Fire and Electric Shock! Use ONLY Hearth & Home Technologies-approved optional accessories with this appliance. Using non-listed accessories could result in a safety hazard and will void the warranty.**
E. Install the Log Assembly

Log Set Assembly: LOGS-Crescent II

CAUTION: Logs are fragile.

STEP 1: Remove the rubber band from the log set and the packing around the log. Check to see if the back lighting / ember bed bulb works. See Replacing Light Bulb section in appliance installation manual if bulb needs to be replaced.

STEP 2: LOG REPLACEMENT ONLY: Remove old log set from fireplace by removing one screw from the pilot. Remove old logs and burner. Slide the new log set over the orifice and make sure the orifice engages into the burner neck. Also, make sure the pinched end of the burner tube fits in the V-shaped slot in the bracket. Then, install one screw through the pilot and log set, then through the bracket.

STEP 3: Place log (SRV2083-181) on right side of burner between burner and firebox, and tip the log so it rests on the burner tube.

STEP 4: Place clear rock on top of orange film in front of log set. It is recommended using the clear rock which is no bigger than one inch.
STEP 5: Place lava rock around the outer parts of firebox as shown.

STEP 6: Turn on ember light/ember bed. Use high temperature black paint and lightly fog the clear rock.

**Note:** Do not overspray the clear rock. Overspray will prevent light from shining through.

STEP 7: (SRV2083-185) Final placement appearance.
F. Fixed Glass Assembly

**WARNING! Risk of Asphyxiation!** Handle fixed glass assembly with care. Inspect the gasket to ensure it is undamaged and inspect the glass for cracks, chips or scratches.

- **DO NOT** strike, slam or scratch glass.
- **DO NOT** operate fireplace with glass removed, cracked, broken or scratched.
- Replace as a complete assembly.

Removing Glass Assembly
Pull the two glass assembly latches out of the groove on the glass frame. Remove glass door from the appliance. See Figure 14.2.

Replacing Glass Assembly
Replace the glass door on the appliance. Slide the top of glass into slot at top. Pull out and latch the two glass latches into the groove on the glass frame.

---

G. Replacing Light Bulb

**WARNING**

![HOT SURFACES!](image)
Glass and other surfaces are hot during operation AND cool down. Do NOT change bulb when appliance is hot.

- **DO NOT** touch glass until it is cooled.

**NOTICE:** Avoid damaging light bulb or glass. Use cotton gloves or rag to handle bulb. Oil film on bulb, including skin oil, will cause premature failure of bulb.

- Pull out the tray that houses the light bulb. See Figure 14.3.

- Remove old light bulb and replace it with a new bulb. See Figure 14.4. Recommended replacement: Sylvania Candelabra 75 watts.

- Put tray back in original location, making sure that the tray engages the clip inside the light box and that it is flush with the box.

H. Air Shutter Setting

Air shutter settings should be adjusted by a qualified service technician at the time of installation if necessary. **NOTICE:** If sooting occurs, provide more air by opening the air shutter.

<table>
<thead>
<tr>
<th>AIR SHUTTER SETTINGS</th>
<th>NG</th>
<th>LP</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREESCENT-II</td>
<td>1/16 in.</td>
<td>FULL OPEN</td>
</tr>
</tbody>
</table>
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 technician 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. Contact your dealer to arrange a service call by a qualified service technician.

A. Intellifire Ignition System

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pilot won’t light. The ignitor/module makes noise, but no spark.</td>
<td>A. Incorrect wiring.</td>
<td>Verify “S” wire (white) for sensor and “I” wire (orange) for ignitor are connected to correct terminals on module and pilot assembly.</td>
</tr>
<tr>
<td></td>
<td>B. Loose connections or electrical shorts in the wiring.</td>
<td>Verify no loose connections or electrical shorts in wiring from module to pilot assembly. Verify connections underneath pilot assembly are tight; also verify connections are not grounding out to metal chassis, pilot burner, pilot enclosure, mesh screen if present, or any other metal object.</td>
</tr>
<tr>
<td></td>
<td>C. Ignitor gap is too large.</td>
<td>Verify gap of igniter to right side of pilot hood. The gap should be approximately .095 in. (2.41 mm) to .135 in. (3.43 mm).</td>
</tr>
<tr>
<td></td>
<td>D. Module.</td>
<td>Turn ON/OFF rocker switch or wall switch to OFF position. Remove ignitor wire “I” from module. Place a grounded wire about 3/16 in. (5 mm) away from “I” terminal on module. Place ON/OFF rocker switch or wall switch in ON position. If there is no spark at “I” terminal module must be replaced. If there is a spark at “I” terminal, module is fine. Inspect pilot assembly for shorted sparker wire or cracked insulator around electrode. Replace pilot if necessary.</td>
</tr>
<tr>
<td>2. Pilot won’t light, there is no noise or spark.</td>
<td>A. No power or transformer installed incorrectly.</td>
<td>Verify that transformer is installed and plugged into module. Check voltage of transformer under load at spade connection on module with ON/OFF switch in ON position. Acceptable readings of a good transformer are between 3.2 and 2.8 volts AC.</td>
</tr>
<tr>
<td></td>
<td>B. A shorted or loose connection in wiring configuration or wiring harness.</td>
<td>Remove and reinstall the wiring harness that plugs into module. Verify there is a tight fit. Verify pilot assembly wiring to module. Remove and verify continuity of each wire in wiring harness. Replace any damaged components.</td>
</tr>
<tr>
<td></td>
<td>C. Improper wall switch wiring.</td>
<td>Verify that 110/VAC power is “ON” to junction box.</td>
</tr>
<tr>
<td></td>
<td>D. Module not grounded.</td>
<td>Verify black ground wire from module wire harness is grounded to metal chassis of appliance.</td>
</tr>
<tr>
<td></td>
<td>E. Module.</td>
<td>Turn ON/OFF rocker switch or wall switch to OFF position. Remove ignitor wire “I” from module. Place ON/OFF rocker switch or wall switch in ON position. If there is no spark at “I” terminal module must be replaced. If there is a spark at “I” terminal, module is fine. Inspect pilot assembly for shorted sparker wire or cracked insulator around electrode.</td>
</tr>
<tr>
<td>3. Pilot sparks, but Pilot will not light.</td>
<td>A. Gas supply.</td>
<td>Verify that incoming gas line ball valve is “open”. Verify that inlet pressure reading is within acceptable limits.</td>
</tr>
<tr>
<td></td>
<td>B. Ignitor gap is too large.</td>
<td>Verify gap of igniter to right side of pilot hood. The gap should be approximately .095 in. (2.41 mm) to .135 in. (3.43 mm).</td>
</tr>
<tr>
<td></td>
<td>C. Module is not grounded.</td>
<td>Verify module is securely grounded to metal chassis of appliance.</td>
</tr>
<tr>
<td></td>
<td>D. Module voltage output / Valve/Pilot solenoid ohms readings.</td>
<td>Verify battery voltage is at least 2.7 volts. Replace batteries if voltage is below 2.7.</td>
</tr>
</tbody>
</table>
### Intellifire Ignition System - (continued)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Pilot lights but continues to spark, and main burner will not ignite. (If the pilot continues to spark after the pilot flame has been lit, flame rectification has not occurred.)</td>
<td>A. A shorted or loose connection in flame sensing rod.</td>
<td>Verify all connections to wiring diagram in manual. Verify connections underneath pilot assembly are tight. Verify connections are not grounding out to metal chassis, pilot burner, pilot enclosure or screen if present, or any other metal object.</td>
</tr>
<tr>
<td></td>
<td>B. Poor flame rectification or contaminated flame sensing rod.</td>
<td>With fixed glass assembly in place, verify that flame is engulfing flame sensing rod on left side of pilot hood. Flame sensing rod should glow shortly after ignition. Verify correct pilot orifice is installed and gas inlet is set to pressure specifications. Polish flame sensing rod with fine steel wool to remove any contaminants that may have accumulated on flame sensing rod.</td>
</tr>
<tr>
<td></td>
<td>C. Module is not grounded.</td>
<td>Verify module is securely grounded to metal chassis of appliance. Verify that wire harness is firmly connected to the module.</td>
</tr>
<tr>
<td></td>
<td>D. Damaged pilot assembly or contaminated flame sensing rod.</td>
<td>Verify that ceramic insulator around the flame sensing rod is not cracked, damaged, or loose. Verify connection from flame sensing rod to white sensor wire. Polish flame sensing rod with fine steel wool to remove any contaminants that may have accumulated on flame sensing rod. Verify continuity with a multimeter with ohms set at lowest range. Replace pilot if any damage is detected.</td>
</tr>
<tr>
<td></td>
<td>E. Module.</td>
<td>Turn ON/OFF rocker switch or wall switch to OFF position. Remove ignitor wire &quot;I&quot; from module. Place ON/OFF rocker switch or wall switch in ON position. If there is no spark at &quot;I&quot; terminal module must be replaced. If there is a spark at &quot;I&quot; terminal, module is fine.</td>
</tr>
</tbody>
</table>
A. Appliance Dimension Diagram

Dimensions are actual appliance dimensions. Use for reference only. For framing dimensions and clearances refer to Section 5.

Figure 16.1 Appliance Dimensions

<table>
<thead>
<tr>
<th>Location</th>
<th>Inches</th>
<th>Millimeter</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>23-1/4</td>
<td>589</td>
</tr>
<tr>
<td>B</td>
<td>20-1/8</td>
<td>511</td>
</tr>
<tr>
<td>C</td>
<td>30-3/4</td>
<td>780</td>
</tr>
<tr>
<td>D</td>
<td>24-5/16</td>
<td>618</td>
</tr>
<tr>
<td>E</td>
<td>1-3/4</td>
<td>43</td>
</tr>
<tr>
<td>F</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>G</td>
<td>6</td>
<td>152</td>
</tr>
<tr>
<td>H</td>
<td>15-1/8</td>
<td>385</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Inches</th>
<th>Millimeter</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>8</td>
<td>203</td>
</tr>
<tr>
<td>J</td>
<td>5-3/16</td>
<td>132</td>
</tr>
<tr>
<td>K</td>
<td>4-1/2</td>
<td>113</td>
</tr>
<tr>
<td>L</td>
<td>13-1/2</td>
<td>342</td>
</tr>
<tr>
<td>M</td>
<td>11-1/4</td>
<td>283</td>
</tr>
<tr>
<td>N</td>
<td>39-7/8</td>
<td>1013</td>
</tr>
<tr>
<td>O</td>
<td>6</td>
<td>152</td>
</tr>
<tr>
<td>P</td>
<td>2-7/8</td>
<td>74</td>
</tr>
</tbody>
</table>
B. Vent Components Diagrams

- **DVP Pipe (see chart)**
- **DVP Pipe (see chart)**
- **DVP Pipe (see chart)**
- **DVP Pipe (see chart)**
- **DVP Pipe (see chart)**
- **DVP Pipe (see chart)**
- **DVP Pipe (see chart)**
- **DVP Pipe (see chart)**

<table>
<thead>
<tr>
<th>Pipe</th>
<th>Effective Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVP4</td>
<td>4 in. 102 mm</td>
</tr>
<tr>
<td>DVP6</td>
<td>6 in. 152 mm</td>
</tr>
<tr>
<td>DVP12</td>
<td>12 in. 305 mm</td>
</tr>
<tr>
<td>DVP24</td>
<td>24 in. 610 mm</td>
</tr>
<tr>
<td>DVP36</td>
<td>36 in. 914 mm</td>
</tr>
<tr>
<td>DVP48</td>
<td>48 in. 1219 mm</td>
</tr>
<tr>
<td>DVP6A</td>
<td>3 to 6 in. 76 to 152 mm</td>
</tr>
<tr>
<td>DVP12A</td>
<td>3 to 12 in. 76 to 305 mm</td>
</tr>
</tbody>
</table>

- **DVP-HVS (Vent Support)**
- **DVP-HVS (Vent Support)**
- **DVP-HVS (Vent Support)**
- **DVP-HVS (Vent Support)**

- **DVP-FS (Ceiling Firestop)**

- **DVP90ST (90° Elbow)**

- **DVP45 (45° Elbow)**

- **UNIV-AS2 (Attic Insulation Shield)**

- **DVP-WS (Wall Shield Firestop)**

**Figure 16.2 DVP vent components**

**Pipe Effective Length**

<table>
<thead>
<tr>
<th>Pipe</th>
<th>Inches</th>
<th>Millimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVP4</td>
<td>4</td>
<td>102</td>
</tr>
<tr>
<td>DVP6</td>
<td>6</td>
<td>152</td>
</tr>
<tr>
<td>DVP12</td>
<td>12</td>
<td>305</td>
</tr>
<tr>
<td>DVP24</td>
<td>24</td>
<td>610</td>
</tr>
<tr>
<td>DVP36</td>
<td>36</td>
<td>914</td>
</tr>
<tr>
<td>DVP48</td>
<td>48</td>
<td>1219</td>
</tr>
<tr>
<td>DVP6A</td>
<td>3 to 6</td>
<td>76 to 152</td>
</tr>
<tr>
<td>DVP12A</td>
<td>3 to 12</td>
<td>76 to 305</td>
</tr>
</tbody>
</table>

**Effective Height/Length**

- **Finished Height: 19-3/4 in./502 mm**
- **UNIV-AS2 (Attic Insulation Shield)**

**Pipe Effective Length**

<table>
<thead>
<tr>
<th>Pipe</th>
<th>Inches</th>
<th>Millimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVP4</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>DVP6</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>DVP12</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>DVP24</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>DVP36</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>DVP48</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>DVP6A</td>
<td>10</td>
<td>254</td>
</tr>
<tr>
<td>DVP12A</td>
<td>10</td>
<td>254</td>
</tr>
</tbody>
</table>
B. Vent Components Diagrams (continued)

Note: Heat shields MUST overlap by a minimum of 1-1/2 in. (38 mm). The heat shield is designed to be used on a wall 4 in. to 7-1/4 in. (102 mm to 184 mm) thick. If wall thickness is less than 4 in. (102 mm) the existing heat shields must be field trimmed. If wall thickness is greater than 7-1/4 in. (184 mm) a DVP-HSM-B will be required.

<table>
<thead>
<tr>
<th>Term Cap</th>
<th>Minimum Effective Length</th>
<th>Maximum Effective Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trap1</td>
<td>3-1/8 in.</td>
<td>4-5/8 in.</td>
</tr>
<tr>
<td></td>
<td>79 mm</td>
<td>117 mm</td>
</tr>
<tr>
<td>Trap2</td>
<td>5-3/8 in.</td>
<td>9-3/8 in.</td>
</tr>
<tr>
<td></td>
<td>137 mm</td>
<td>238 mm</td>
</tr>
</tbody>
</table>

Figure 16.3 DVP vent components
B. Vent Components Diagrams (continued)

Figure 16.4 DVP vent components
B. Vent Components Diagrams (continued)

DVP-HRC-SS NOT APPROVED FOR ALL UNITS.

DVP-HRC-ZC-SS NOT APPROVED FOR ALL UNITS.
D. Contact Information

Heat & Glo, a brand of Hearth & Home Technologies
7571 215th Street West, Lakeville, MN 55044
www.heatnglo.com

Please contact your Heat & Glo dealer with any questions or concerns.
For the location of your nearest Heat & Glo dealer,
please visit www.heatnglo.com.

- NOTES -

________________________________________________________________________________
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NOTICE

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) 5613487, 5647340, 5890485, 5941237, 6006743, 6019099, 6053165, 6145502, 6374822, 6484712, 6601579, 6769426, 6863064, 7077122, 7098269, 7258116, 7470729, 8147240 or other U.S. and foreign patents pending.