## **Installation Manual**

## **Installation and Appliance Setup**

INSTALLER: Leave this manual with party responsible for use and operation.

CONSUMER: Retain this manual for future reference.

Outdoor lifestyles
by hearth & home technologies

Models:

Twilight-II-C

GAS-FIRED

LISTED

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.

## **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.



HOT GLASS WILL CAUSE BURNS. DO NOT TOUCH GLASS

**NEVER** ALLOW CHILDREN TO TOUCH GLASS.

UNTIL COOLED.

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.

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.

## ▲ Safety Alert Key:

- DANGER! Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- WARNING! Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- CAUTION! Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- NOTICE: Used to address practices not related to personal injury.

## **Table of Contents**

→ Installation Standard Work Checklist	3 E. Air Shutter Setting
1 Product Specific and Important Safety Informa	ation 8 Finishing
A. Appliance Certification	4       A. Mantel and Wall Projections.       23         4       B. Decorative Front Selection.       24         4       C. Facing Material.       27         4       4
<ul> <li>E. BTU Specifications.</li> <li>F. High Altitude Installations.</li> <li>G. Non-Combustible Materials Specification.</li> <li>H. Combustible Materials Specification</li> <li>I. Electrical Codes.</li> <li>J. California</li> <li>K. Requirements for the Commonwealth of Massachuse</li> </ul>	5       A. Fixed Glass Assembly       30         5       B. Remove the Shipping Materials       31         5       C. Clean the Appliance       31         5       D. Lava Rock and Ember Placement       31         5       E. Install the Log Assembly       32         tts. 6       F. Appliance Start Up       34
2 Getting Started	G. Install Trim and/or Surround
→ A. Design and Installation Considerations	8 A. Accessories
3 Framing and Clearances	
A. Appliance Dimension Diagram	
4 Termination Location and Vent Information	
→ A. Vent Terminal Clearances	12
5 Appliance Preparation	
A. Removing Non-combustible Facing Material Assembly     B. Securing and Leveling the Appliance C. Installing Non-combustible Facing Material (Outdoor Side)	13
6 Electrical Information	
A. General Information	
7 Gas Information	
A. Fuel Conversion	21 21
D. High Altitude Installations	21 $\Rightarrow$ = Contains updated information.

## → Installation Standard Work Checklist

## **ATTENTION INSTALLER:**

## Follow this Standard Work Checklist

This standard work checklist is to be used by the installer in conjunction with, not instead of, the instructions contained in this installation manual.

Customer: Lot/Address:		Date Installe Location of I Installer:		
Model (circle one):	Twilight-II-C		butor Phone #	
	Risk of Fire or Explose or explosion.	sion! Failure to install ap	ppliance accord	ing to these instructions can
	stible board is installed. (P combustibles. (Pg. 10-11 nd secured. (Pg. 13)		YES IF	NO, WHY?
Electrical Section 6 Unswitched power (17 Switch wires properly	0-120 VAC) provided to the	he appliance.		
	uel type.			
Verified all clearances	s not installed in non-comb meet installation manual			
Refractories, logs, me Glass assembly instal Accessories installed Mesh, doors, or decor Manual bag and all of the appliance and	ective materials removed (ir dia and embers installed led and secured.	ed. from inside/under for use and operation.		
· Photographing the i	nologies recommends to nstallation and copying the emain visible at all times of		nstallation is com	plete.
		who is responsible (Installe		Trades, etc) and corrective
Comments Communic	cated to party responsible	(Builder / Gen. Contractor	by	on (Date)

→ = Contains updated information.

2368-972 Rev. C 8/19

## **Product Specific and Important Safety Information**

## A. Appliance Certification

MODEL: Twilight-II-C

LABORATORY: Underwriters Laboratories, Inc. (UL)

TYPE: Direct Vent Gas Appliance

STANDARD: ANSI Z21.50-2016 • CSA 2.22-2016

This product is listed to ANSI standards for "Vented Gas Fireplaces" 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 HEAT SOURCE.

This appliance is decorative in nature and not intended to be a source of heat.

#### NOT FOR USE WITH SOLID FUEL.

This appliance is not intended to burn solid fuel.

## **B. Glass Specifications**

## **Tempered Glass (Interior Glass)**

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.

## Ceramic Glass (Exterior Glass)

This appliance is equipped with 5 mm ceramic glass. Replace glass only with 5 mm ceramic glass. Please contact your dealer for replacement glass.

### C. Thermal Performance Data

Model: Twilight-II-C					
Sound Transmission Class (STC)	Thermal Resistance (R Value)	Thermal Conductivity (K Value)			
27	0.8hr-sq ft-°F/BTU	1.25 BTU-in/hr-sq ft-°F			

## D. Air Infiltration, Water Resistance and Structural Tests

The Hearth & Home Technologies Twilight-II-C Indoor/ Outdoor Appliance unit was tested to the following ASTM standards at the Stork Twin City Testing laboratory.

Air infiltration test **ASTM:E283-(04)**. The sample was tested at 1.57 psf (equivalent to a 25-mph windload). Water resistance test **ASTM:E331-00**. The test specimen was tested at the requested test pressures of 8.0 & 25.0 psf.

Structural test **ASTM:E330-02**. The unit was tested to a design pressure of 50-psf, a test pressure of 75-psf.

#### **Test Results**

Model	Air Infiltration	Water Resistance	Structural Load
	(ASTM E283)	(ASTM E331)	(ASTM E330)
Twilight-II-C	0.07CFM/ft2	No leakage	No Blowout
Indoor/Outdoor		@ 8psf & 25psf	@ 75psf

## E. BTU Specifications

<b>Model</b> U.S. (0-2000 FT) ( Canada (2000-4500		Input BTU/h	Orifice Size (DMS)
Twilight-II-C	us	38,000	32
(NG)	CAN	34,200	33
Twilight-II-C	us	36,000	50
(Propane)	CAN	33,300	51

## F. 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.

## G. 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 plasters, 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.

## H. 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.

## I. 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.

### J. California

warning: This product and the fuels used to operate this product (liquid propane or natural gas), and the products of combustion of such fuels, can expose you to chemicals including benzene, which is known to the State of California to cause cancer and reproductive harm. For more information go to: www. P65Warnings.ca.gov.

**Note:** The following requirements reference various Massachusetts and national codes not contained in this document.

## K. 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.

## **2** Getting Started

## A. Design and Installation Considerations

Hearth & Home Technologies 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.

## → Outdoor Spaces

For the purposes of these instructions, an appliance is considered to be outdoors if installed with shelter no more inclusive than:

- 1. With walls on all sides, but no overhead cover
- Within a partial enclosure which includes an overhead cover and no more than two side walls. These side walls may be parallel, as in a breezeway, or at right angles to each other; or
- Within a partial enclosure which includes an overhead cover and three sidewalls, as long as 30% or more of the horizontal periphery of the enclosure is permanently open.

**Note:** Screen may be used on the open sides of the shelter, 14x18 and 16x18 screen mesh is approved for use. **DO NOT** use solar screen or no-see-um screen.

The Twilight-II-C has been carefully engineered to provide a unique fireplace experience. Since it is different than any other product on the market, care must be taken when installing this appliance so that our customer does not experience undesirable performance or conditions.

- Install the appliance according to this Installation manual paying particular attention to flashing and sealing instructions.
- In the cold northern climates pay attention to exposures and prevailing wind conditions when locating the appliance, the same as you would for locating exterior windows and doors.

The Twilight-II-C has the thermal characteristics of a high quality window system. Temperatures near the appliance will be cooler than what is realized with a fully insulated wall.

Operation of the appliance will eliminate any cool drafts and will provide the room with a comfortable ambiance.

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.
- · Gas supply piping requirements.
- Electrical wiring requirements.
- · Framing and finishing details.
- Whether optional accessories—devices such as a fan, wall switch, or remote control—are desired.

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.

## B. Tools and Supplies Needed

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

Tape measure Framing material

Pliers High temperature caulking material

Hammer Phillips screwdriver Gloves Framing square

Voltmeter Electric drill and bits (1/4 in.)

Plumb line Safety glasses
Level Reciprocating saw
Manometer Flat blade screwdriver

Non-corrosive leak check solution

1/2 - 3/4 in. length, #6 or #8 Self-drilling screws One 1/4 in. female connection (for optional fan).

## C. 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.

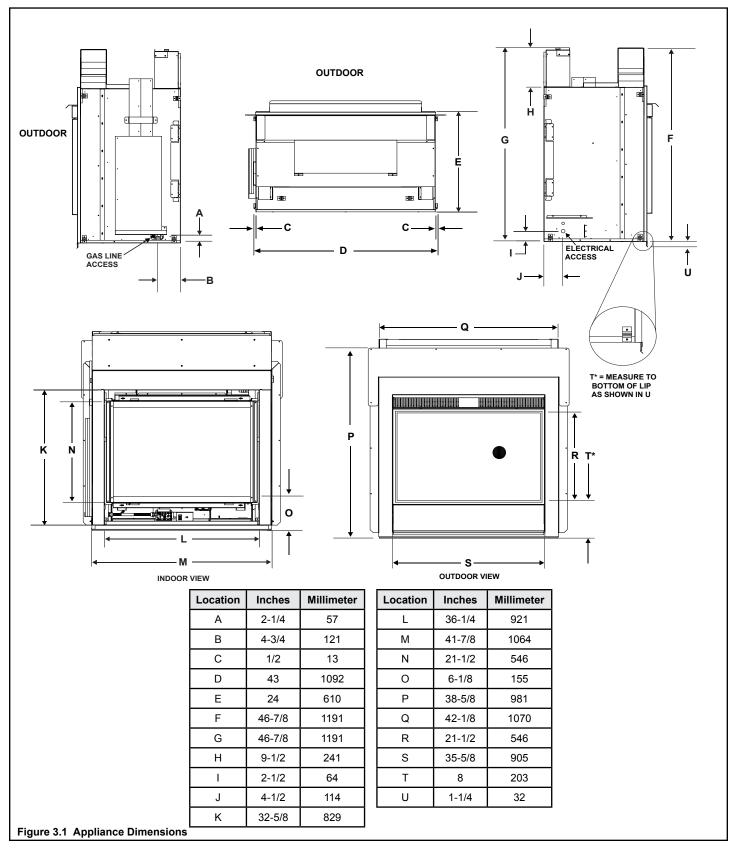
Any such action may cause a fire hazard.

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.

## **Framing and Clearances**

## A. Appliance Dimension Diagram

Dimensions are actual appliance dimensions. Use for reference only.



## **B.** Clearances to Combustibles

When selecting a location for the appliance it is important to consider the required clearances to walls (see Figure 3.2).

**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.

**WARNING!** Risk of Fire! The exterior side of the TWI-LIGHT-II-C CANNOT be recessed into the framing.

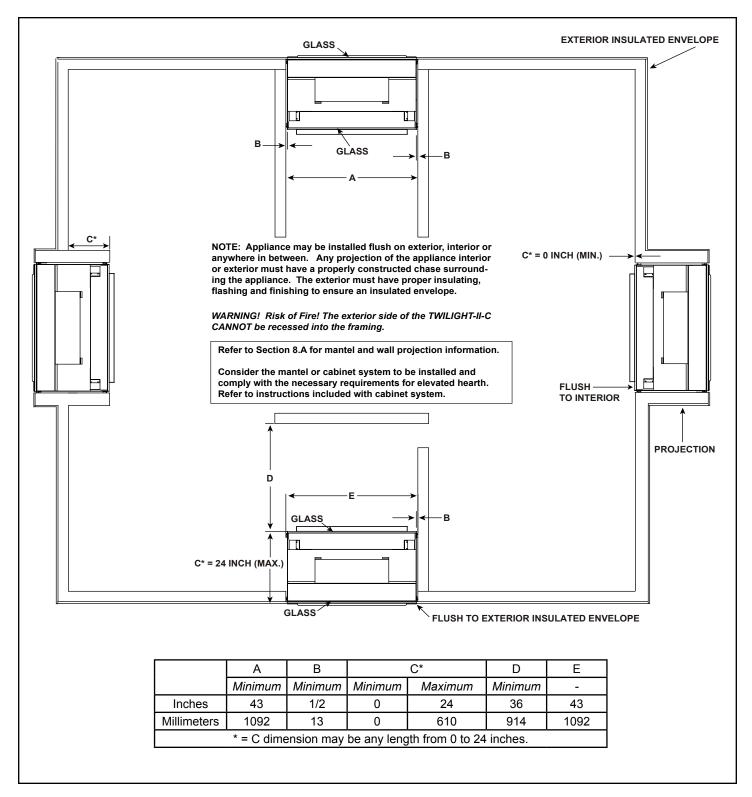


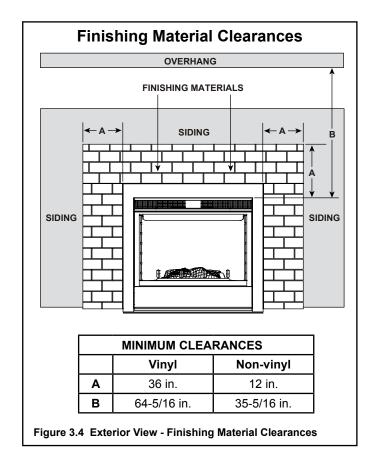
Figure 3.2 Appliance Locations

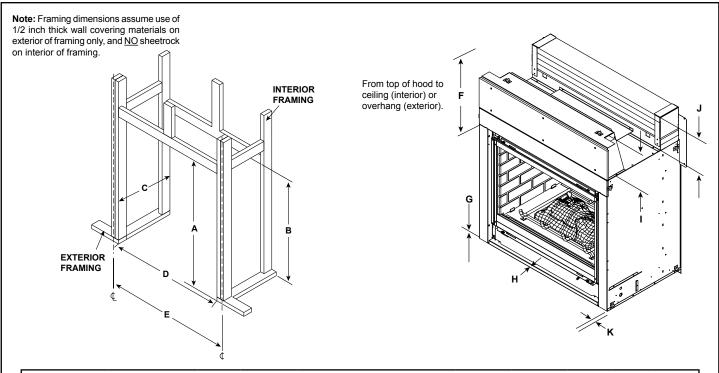
**NOTICE:** Install appliance on hard metal or wood surfaces extending full width and depth. **DO NOT** install directly on carpeting, vinyl, tile or any combustible material other than wood.

**WARNING!** Risk of Fire! Do not install appliance against vapor barriers or exposed insulation. Prevent contact with sagging or loose insulation.

- Locate and install appliance to all clearance specifications in manual.
- The chase must be properly blocked to prevent blown insulation or other combustibles from entering and making contact with fireplace.
- Failure to maintain airspace may cause overheating and a fire
- Reference Figure 3.2, Figure 3.3, and Figure 3.4 for clearance specifications.

**Note:** Verify that tabs on insulation bracket are in an upright position.



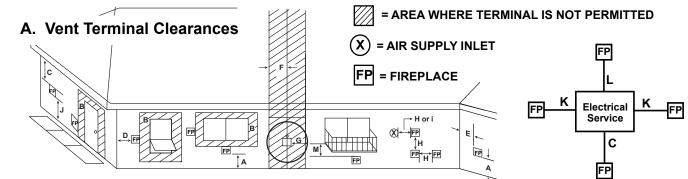


	CLEARANCES TO COMBUSTIBLES:												
	Α	В	С	D	Е	F			G	Н	I	J	K
	Exterior Rough Opening	Interior Rough Opening	Rough Opening	Rough Opening	Framing for non- combustible	Clearance to Ceiling	Clearance to (EXTER		Combustible Floor	Combustible Flooring	Height	Standoff Height	Sides of Appliance
	(Height)	(Height)	(Depth)	(Width)	material	(INTERIOR)	Non-Vinyl	Vinyl			Interior	Exterior	, ppaoo
Inches	47-5/8	47-5/8	23	44	46-1/8	35-3/4	35-5/16	64-5/16	0	0	9-1/2	9-1/2	1/2
mm	1210	1210	584	1118	1172	908	897	1634	0	0	241	241	13

Figure 3.3 Clearances to Combustibles



## **Termination Location and Vent Information**



**U.S.A.** Installations: In accordance with the current ANSI Z223.1/NFPA 54, National Fuel Gas Code. Canadian Installations: In accordance with the current CSA B149.1, Natural Gas and Propane Installation Code.

Vertic	al distances measured from top of hood. Horizontal distances measured from side of hood.	U.S.A.	CANADA				
Α	Clearance above grade, veranda, porch, deck, or balcony	0 in. (0 mm)	0 in. (0 mm)				
В	B Clearance to window or door that may be opened, or to permanently closed window U.S.A.: = 9 in. min. (305 mm min.) CANADA: = 12 in. min. (305 mm min.)						
	clearance below unventilated soffit	35-5/16 in. (897 mm)	35-5/16 in. (897 mm)				
С	clearance below ventilated soffit	35-5/16 in. (897 mm)	35-5/16 in. (897 mm)				
	clearance below any vinyl soffits and electrical service	64-5/16 in. (1.6 m)	64-5/16 in. (1.6 m)				
D	clearance to outside corner	9 in. (229 mm)	9 in. (152 mm)				
E	clearance to inside corner	12 in. (305 mm)	12 in. (305 mm)				
F	not to be installed above a gas meter/regulator assembly within 3 feet horizontally from the center-line of the regulator	3 ft (914 mm)	3 ft (914 mm)				
G	clearance to gas service regulator vent outlet	3 ft (914 mm)	3 ft (914 mm)				
н	clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance termination (mechanical or non-mechanical)	9 in. min. (229 mm min.)	12 in. min. (305 mm min.)				
I	clearance to a mechanical (powered) air supply inlet  ***(All mechanical air intakes within 10 feet of a horizontal termination cap must be a minimum of 3 feet below termination.)	3 ft (914 mm)***	6 ft (1.8 m)				
	On <u>public</u> property: clearance above paved sidewalk or a paved driveway.	54 in. (1.3 m)	54 in. (1.3 m)**				
**(A vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings.)							
K	clearance from sides of electrical service	6 in. (152 mm)	6 in. (152 mm)				
,	Location of the vent termination must not interfere with access to the electrical service						
	clearance above electrical service	12 in. (305 mm)	12 in. (305 mm)				
L	Location of the vent termination must not interfere with access to the electrical service.						
М	clearance under veranda, porch, deck, balcony or overhang *(Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.) Note: See Section 2.A "Design and Installation Considerations.	36 in. (914 mm)	36 in. (914 mm)*				
	vinyl or composite overhang	64-5/16 in. (1.6 m)	64-5/16 in. (1.6 m)				

Figure 4.1 Minimum Clearances for Termination

## 5

## **Appliance Preparation**

## A. Removing Non-combustible Facing Material Assembly

The non-combustible assembly is located on right-hand side of appliance (when looking from outdoor side of appliance).

**NOTICE:** Handle non-combustible pieces with care.

- Non-combustible pieces may chip or crack if dropped or impacted.
- Avoid damaging protruding edges on outdoor side of appliance.
- 1. Hold non-combustible pieces in place.
- 2. Remove and save two screws from upper bracket.
- 3. Remove non-combustible pieces.
- 4. Remove and save three screws from lower bracket.
- 5. Discard brackets.
- 6. Replace screws in holes where brackets were attached to appliance.

## B. Securing and Leveling the Appliance

## **WARNING**

Fire Risk.

- Prevent contact with sagging, loose insulation.
- Do NOT install against vapor barriers or exposed insulation.

### **Placing Metal Hearth Strip**

The metal hearth strip (approximately 46 inches x 4 inches) is used to provide added protection where appliance and outer structure meet. See Figure 5.1.

- Trim metal hearth strip to fit rough opening width. Reference dimension "D" in Figure 3.3.
- Place a generous bead of silicone caulk into the corner of the protective hearth strip.
- Place the metal strip onto the structure where the outer edge of the appliance will sit. It should overlap building paper to prevent water infiltration.

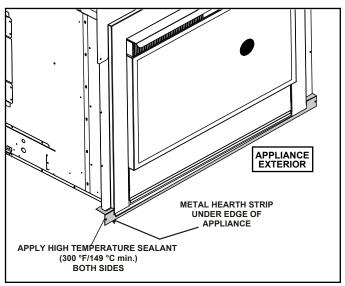


Figure 5.1 Positioning the Metal Hearth Strip

## **Placing Insulation in Framing**

Insulation material is shipped with this appliance. It is packaged and placed on top of the appliance.

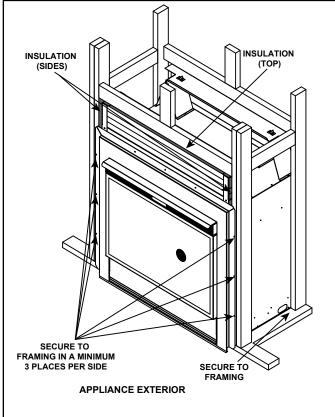
- · Split the insulation material into four pieces.
- Place the insulation material on the top (two pieces) and sides (one piece per side) of the appliance, between the appliance and the framing studs. See Figure 5.2.

### **Placing and Securing Appliance**

Place the appliance into position. Make sure flashing edges on the outdoor surround fit up tight to the framing.

The diagram shows how to properly position, level, and secure the appliance. See Figure 5.2. Nailing tabs are provided to secure the appliance to the framing members.

- Caulk behind flanges before securing to framing.
- 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.
- Keep nailing tabs flush with the framing.
- Secure the appliance to the framing by using nails or screws through the nailing tabs.



**NOTE:** The exterior side of the appliance can protrude outward. It **MUST NOT** be recessed into the framing. Caulk behind all flanges before securing to the exterior.

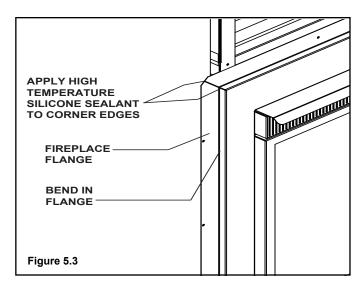
Figure 5.2 Proper Positioning, Leveling and Securing of an Appliance

## **CAUTION**

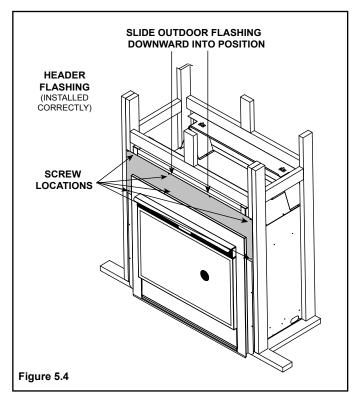
Do NOT notch into the framing around the appliance spacers.

## **Placing Flashing and Sheathing**

Apply high temperature silicone sealant to corner edges of fireplace flange. See Figure 5.3).



Install outdoor flashing header (sheet metal piece removed from shipping pallet). Place over upper portion of shroud flange. Line up holes on shroud sides. See Figure 5.4.

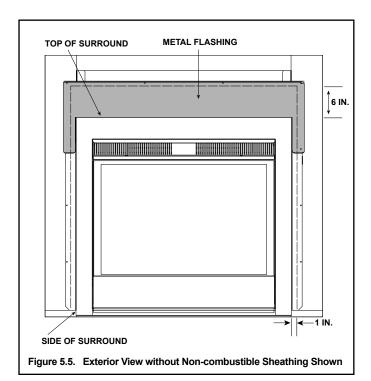


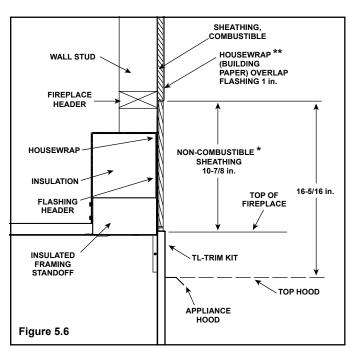
Seal flashing to exterior of building using high temperature silicone sealant. Attach to building using holes provided on the top of the left and right sides of outdoor flashing. See Figure 5.4.

### Apply housewrap or building paper

For placement of combustible housewrap or building paper and non-combustible sheathing for the exterior wall see Figures 5.5 and 5.6.

Special care should be taken when choosing building materials for weather proofing (i.e. building wraps, seal-ant tapes, liquid sealants, rubberized flashings, etc.). All sealant materials or building wraps installed within 6 inches of the top and 1 inch on the sides of the fireplace surround must be approved to a minimum temperature of 225 °F continuous exposure. Consult the material's manufacturer to ensure product compliance.

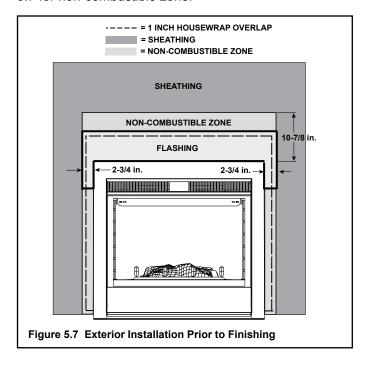




- \* NOTE: All finishing materials on top of exterior sheathing must be non-combustible for a minimum of 10-7/8 inches above and 2-3/4 inches on both sides of the exterior face of the appliance. This non-combustible finishing material can be up to a maximum of 6 inches thick (6 inches maximum horizontal overhang) to allow for brick and stone alcoves (see Figure 5.5).
- \*\* NOTE: Combustible house wrap or building paper MUST NOT extend over the outside of non-combustible sheathing, and MAY extend over the flashing behind non-combustible sheathing a maximum of 1 inch. Use high temp silicone or sealant recommended by the manufacturer of the housewrap to seal between combustible sheathing house wrap and non-combustible sheathing. The sealant material used within 6 inches of the top and 1 inch on the sides of the fireplace surround must be approved to a minimum temperature of 225 °F continuous exposure.

Once the appliance is in place use enough high temperature silicone sealant or manufacturer specified sealant (approved to a minimum of 225 °F) to make a water tight seal between outdoor surround and exterior sheathing.

Face the perimeter of the appliance with non-combustible sheathing over shroud flanges and flashing. See Figure 5.7 for non-combustible zone.





## WARNING

#### Risk of Fire

- Non-combustible clearances must be maintained
- Sheetrock, wood or other combustibles must NOT be used as sheathing or facing in the non-combustible zone.
- See Sections 3 and 8 for proper clearances.
- See **Section 1** for combustible /non-combustible definitions.

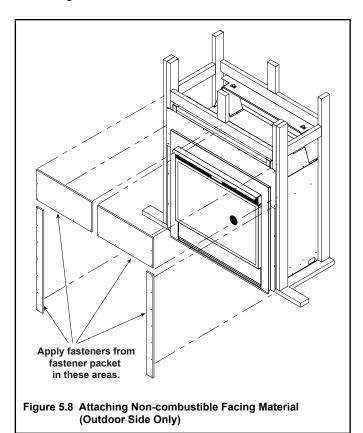
## C. Installing Non-combustible Facing Material (Outdoor Side)

## **A** WARNING

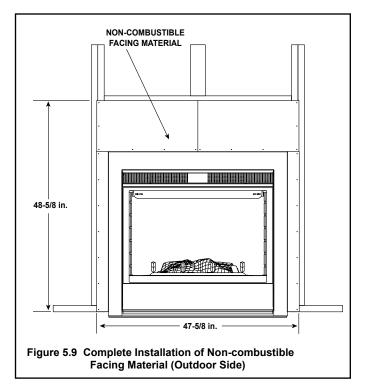
Fire Risk.



- · Follow these instructions exactly.
- Facing materials must be installed properly to prevent fire.
- No materials may be substituted without authorization by Hearth & Home Technologies.
- Center and attach two top boards (the two shorter pieces) to the framing members. See Figure 5.8.
- Use fasteners from fastener packet (in manual bag) in shaded areas (see Figure 5.8).
- · Use regular sheetrock screws in non-shaded areas.



 Attach the left and right side pieces to the framing members. (See Figure 5.9).



- Use a wet or dry towel or soft brush to remove dust or dirt from facing material.
- Apply a non-combustible adhesive to attach tile, stone or other non-combustible finishing materials per manufacturer's instructions.

## 6

## **Electrical Information**

## A. General Information

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

**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 unswitched 110/120 VAC. This is required for proper operation of the appliance (Intellifire ignition).
- 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 110/120 VAC voltage cannot be shared within the same wall box.

#### Junction Box Installation

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

- Install the Romex<sup>™</sup> connector (not included with appliance) in the side wrap.
- Loosen two screws on the Romex connector, feed the necessary length of wire through the connector and tighten the screws.
- · Make all necessary wire connections.

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

- Remove the screw attaching the junction box to the outer shell, rotate the junction box inward to disengage it from the outer shell (see Figure 6.1).
- Pull the electrical wires from outside the appliance through this opening into the valve compartment.

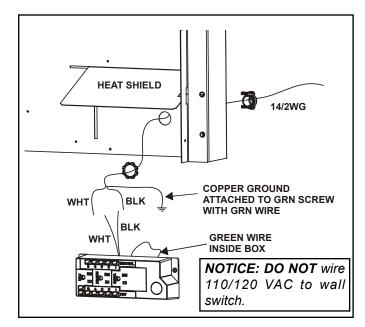


Figure 6.1 Junction Box Detail

- Loosen the two screws on the Romex connector, feed the necessary length of wire through the connector and tighten the screws.
- Make all necessary wire connections to the receptacle and assemble the receptacle and cover to the junction box.

## **Optional Accessories**

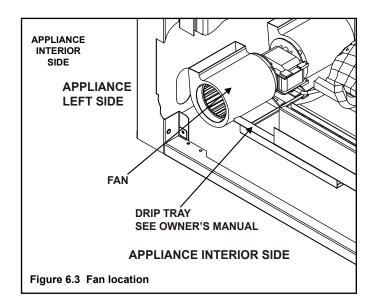
Optional fan and remote control kits require that 110/120 VAC be wired to the factory installed junction box before the appliance is permanently installed (see Figure 6.2).

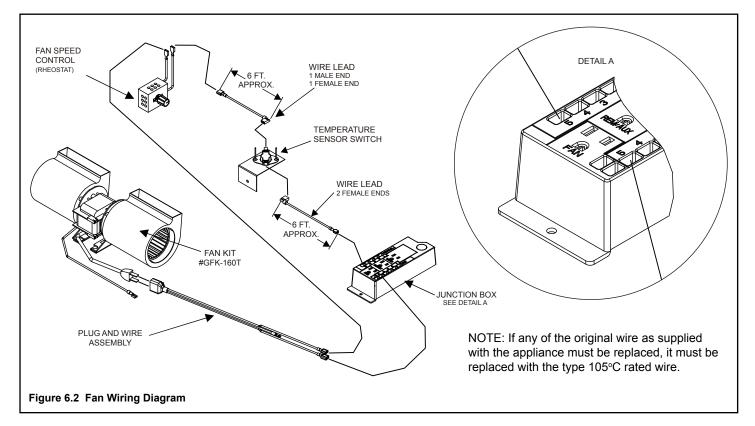
### Fan Installation

To provide best airflow, we recommend positioning fan on the left side (as viewed from appliance interior side (see Figure 6.3). **NOTE:** It is recommended fan be installed prior to gas line installation for ease of installation.

#### Wall Switch

Position the wall switch in the desired position on a wall. Run a maximum of 25 feet (7.8 m) or less length of 18 A.W.G. minimum wire and connect it to the appliance ON/ OFF switch pigtails.





## **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.

## **B. Wiring Requirements**

## **Intellifire Ignition System Wiring**

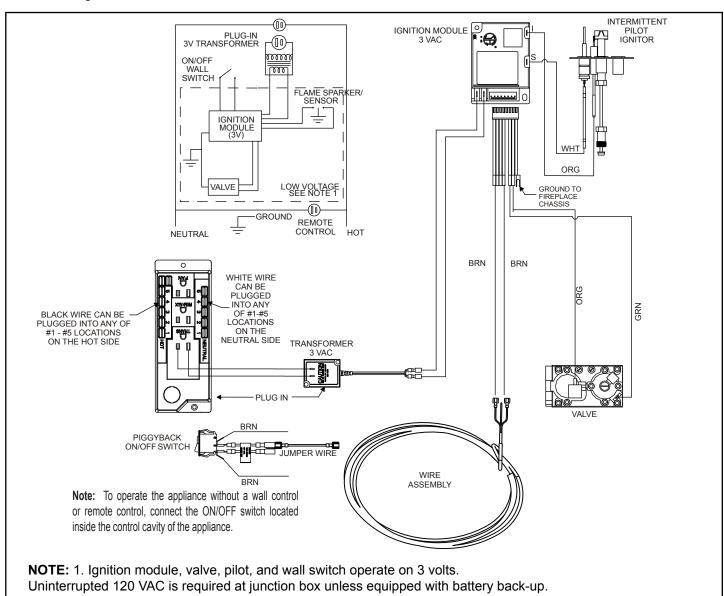
 Wire the appliance junction box to 110/120 VAC for proper operation of the appliance.

WARNING! Risk of Shock or Explosion! DO NOT wire IPI controlled appliance junction box to a switched circuit. Incorrect wiring will override IPI safety lockout.

- Refer to Figure 6.4, Intellifire Pilot Ignition (IPI) Wiring Diagram.
- This appliance is equipped with an Intellifire control valve which operates on a 3 volt system.
- Plug the 3-volt AC transformer into the appliance junction box to supply power to the unit OR install two D cell batteries (not included) into the battery pack before use.

**NOTICE:** Batteries should not be placed in the battery pack while using the transformer. Remove batteries before using the transformer, and unplug the transformer before installing the batteries. Battery polarity must be correct or module damage will occur.

Figure 6.4 Intellifire Pilot Ignition (IPI) Wiring Diagram



## **Connecting to the Appliance**



## **A** WARNING

Wire 110V to electrical junction box.

Do NOT wire 110/120 VAC to valve.

Do NOT wire 110/120 VAC to wall switch.

- · Incorrect wiring will damage millivolt valves.
- Incorrect wiring will override IPI safety lockout and may cause explosion.
- This appliance may be used with a wall switch or a remote control.

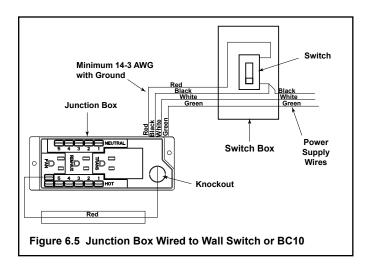
**Note:** To operate the appliance without a wall control or remote control, connect the ON/OFF switch located inside the control cavity of the appliance. See Figure 6.4.

- Keep wire lengths short as possible by removing any excess wire length.
- Low voltage and 110/120 VAC voltage cannot be shared within the same wall box.

## Wall Switch Installation for Fan (Optional)

If the box is being wired to a wall mounted switch for use with a fan (See Figure 6.5):

- The power supply for the appliance must be brought into a switch box.
- The power can then be supplied from the switch box to the appliance using a minimum of 14-3 with ground wire.
- At the switch box connect the black (hot) wire and red (switch leg) wire to the wall switch as shown.
- At the appliance connect the black (hot), white (neutral) and green (ground) wires to the junction box as shown.
- Add a 1/4 in. insulated female connector to the red (switch leg) wire, route it through the knockout in the face of the junction box, and connect to the top fan switch connector (1/4 in. male) as shown.



## **Gas Information**

## 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:

Gas Pressure	Natural Gas	Propane
Minimum inlet pressure	5.0 in. w.c.	11.0 in. w.c.
Maximum inlet pressure	10.0 in. w.c.	13.0 in. w.c.
Manifold pressure	3.5 in. w.c.	10.0 in. w.c.

**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.

## **A** WARNING



Fire Risk.

Explosion Hazard.

High pressure will damage valve.



pressure testing gas line at test pressures above 1/2 psig.

Close the manual shutoff valve BEFORE

Disconnect gas supply piping BEFORE

 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 Z223.1. 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 Figure 3.1 for location of gas line access in appliance.
- Gas line may be run through knockout(s) provided.
- 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 noncombustible, 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.

**Note:** If installing optional fan, use factory-supplied flex ball valve assembly to connect gas line to valve. Hard-pipe connected directly to valve will not leave the amount of space required for proper fan installation.

• 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.

## E. Air Shutter Setting

Air shutter settings should be adjusted by a qualified service technician at the time of installation. The air shutter is set at the factory.

**NOTICE:** If sooting occurs, provide more air by opening the air shutter.

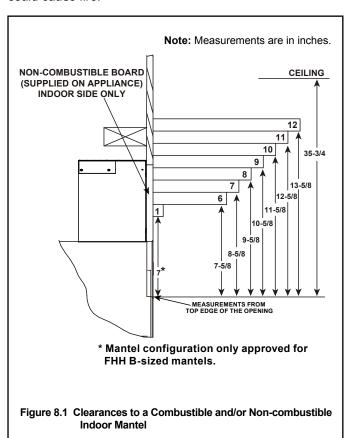
## **Air Shutter Settings**

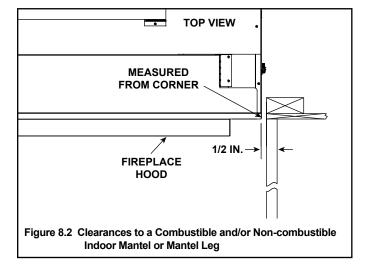
Twilight-II-C (NG)	3/8 in.
Twilight-II-C (Propane)	Full Open

## **8** Finishing

## 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 noncombustible materials (i.e., steel studs, concrete board, etc.) Failure to comply could cause fire.





The TWI-MOD decorative front will overlap the appliance. See Figure 8.3.

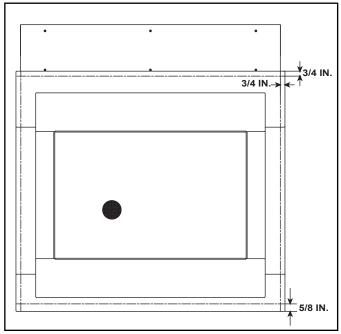


Figure 8.3 Decorative Front Overlaps Surround

## **B.** Decorative Front Selection

Only decorative fronts certified for use with this appliance model may be used. Contact your dealer for a list of decorative fronts that may be used. The TWI-MOD decorative front can not be used if the appliance is installed directly on the floor. See Figure 8.4 and 8.5.

## **FS-TWI Decorative Front Application**

If the appliance is installed on the floor or level with an elevated hearth, the FS-TWI decorative front **MUST** be used. The TWI-MOD decorative front is not compatible with this type of installation as a minimum elevation of 3/4 inch is required on the bottom of the appliance.

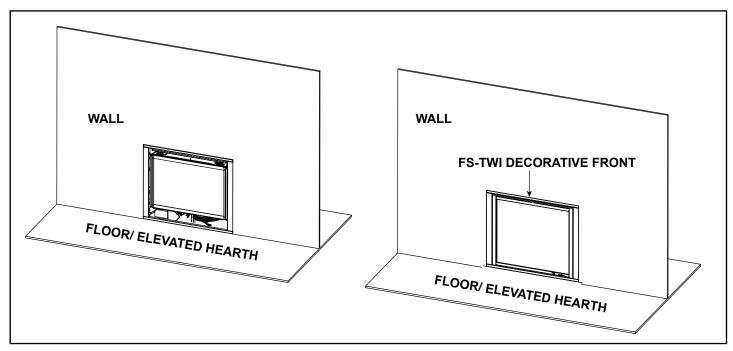


Figure 8.4 Appliance Installed on Floor or Elevated Hearth

## **TWI-MOD Decorative Front Application**

If the appliance is installed at a minimum of 3/4 inch above the floor, the TWI-MOD decorative front can be used. The TWI-MOD decorative front OVERLAPS the sides, top and bottom of the appliance surround. See Figure 8.6 for dimensions.

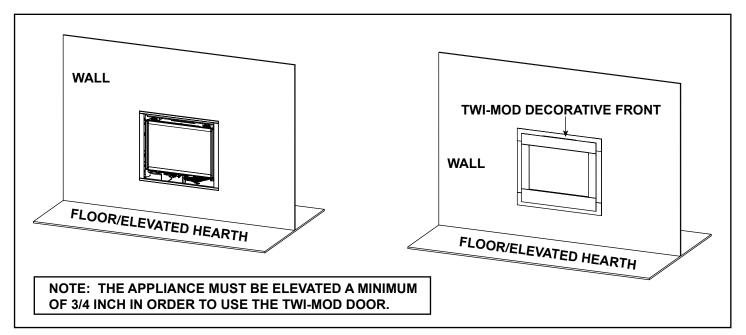


Figure 8.5 Appliance Installed Off the Floor

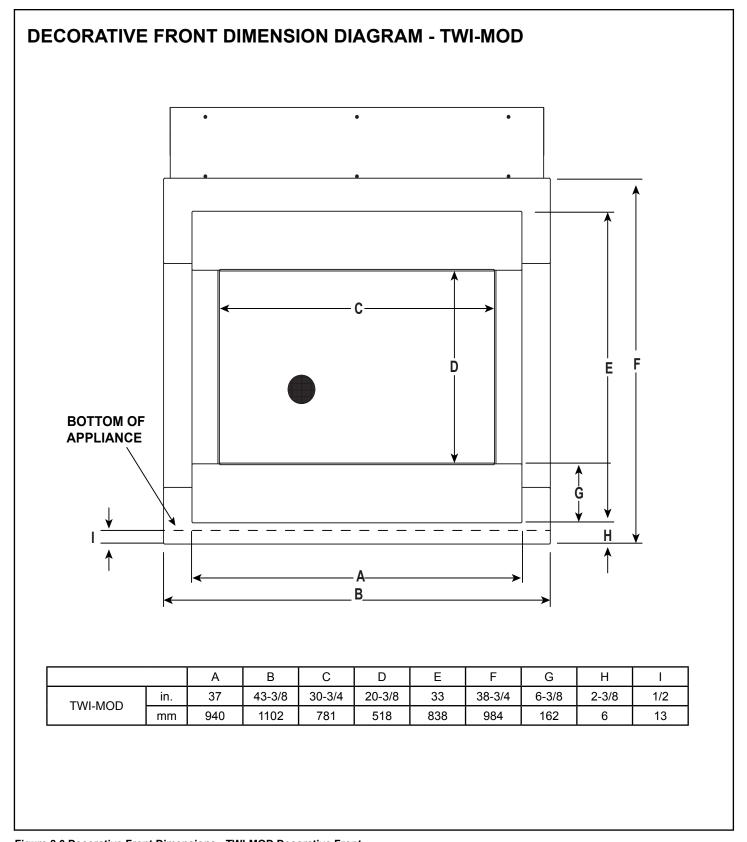


Figure 8.6 Decorative Front Dimensions - TWI-MOD Decorative Front

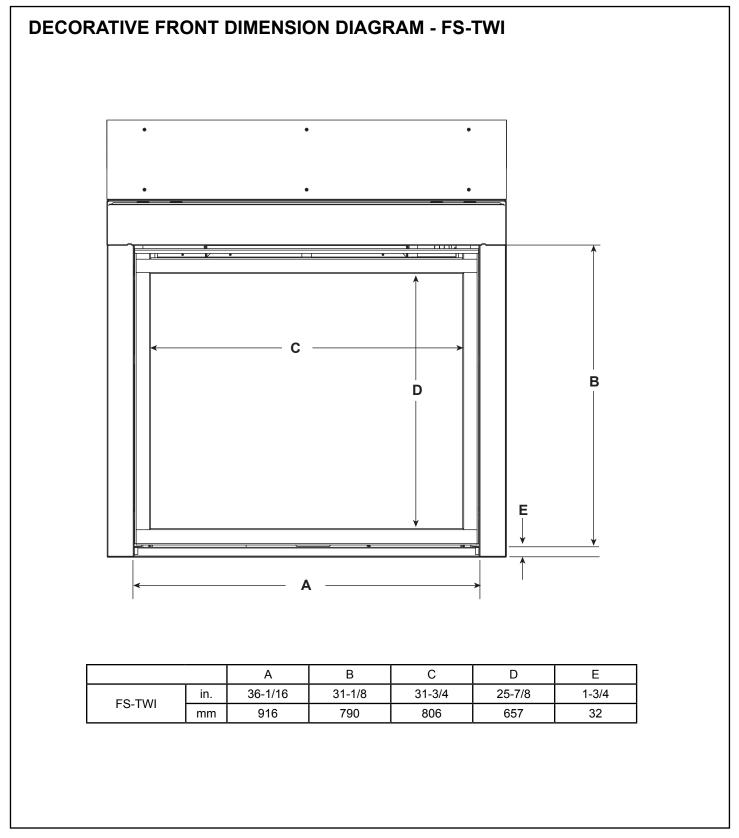


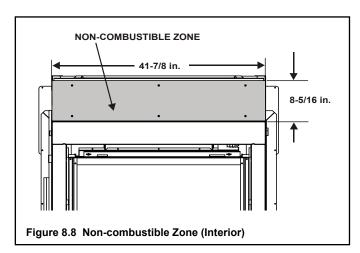
Figure 8.7 Decorative Front Dimensions - FS-TWI Decorative Front

## C. Facing Material

## **Inside Facing Material**

- May install combustible materials up to specified clearances on top, front and sides of appliance.
- Seal joints between finished wall and appliance top and sides with 300 °F (140 °C) minimum sealant.
- Leave space so bottom grille can be lowered for trim door removal.

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.



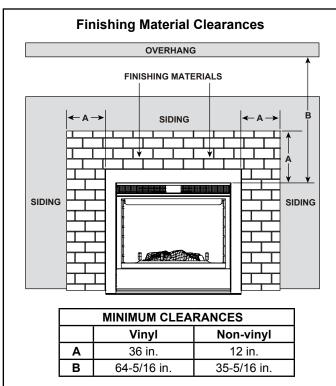


Figure 8.9 Exterior View - Finishing Material Clearances

**A** WARNING



### Risk of Fire

- Non-combustible clearances must be maintained.
- Sheetrock, wood or other combustibles must NOT be used as sheathing or facing in the noncombustible zone.
- · See Sections 3 & 8 for proper clearances.
- See Section 1 for combustible/noncombustible definitions.

May install non-combustible materials to cover gap between facing material and appliance (see Figure 8.10).





Fire Risk.

Water Intrusion Risk.

Hood is required.



- Flashing and non-combustible sheathing must be installed before facing materials.
- Facing must be non-combustible and seal tight to fireplace front.

## **WARNING**

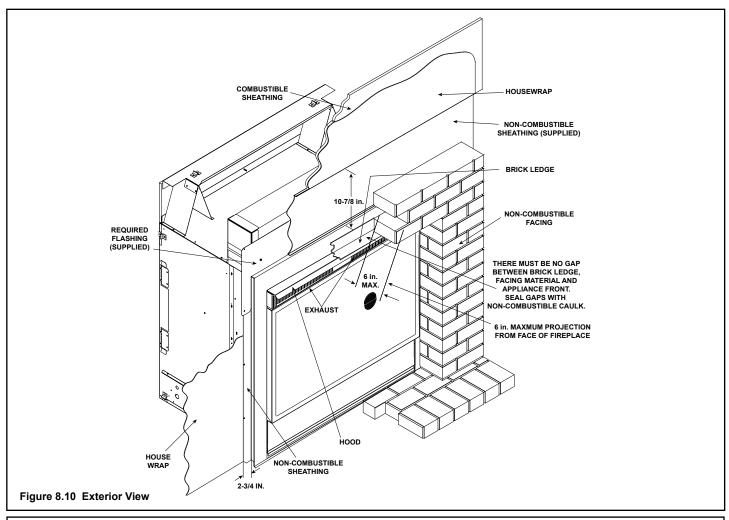


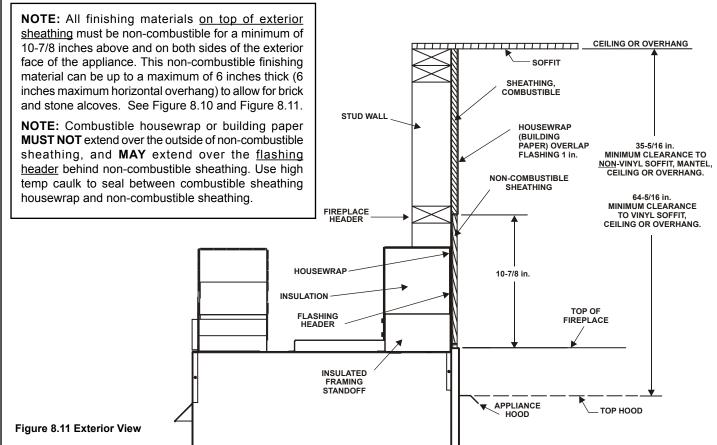
Fire Risk.

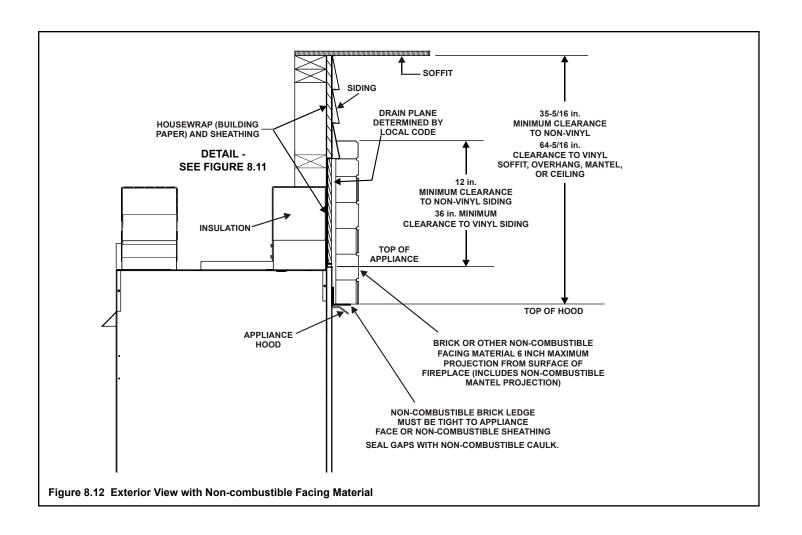
Finish all edges and fronts to clearances and specifications listed in manual.

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

**NOTICE:** If using an acid-based wash to clean finishing material, cover the face of the fireplace with plastic sheet to protect the paint. Remove plastic before operation of fireplace.







## 9 Appliar

## **Appliance Setup**

## A. 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.

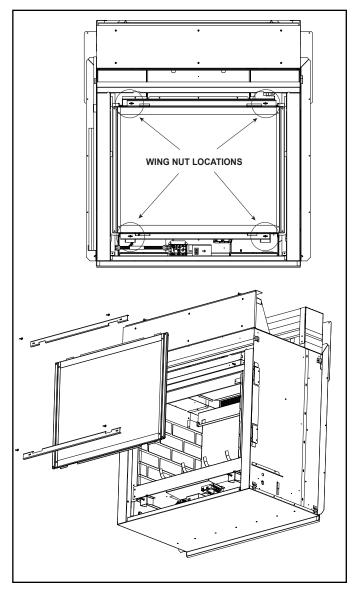
- DO NOT strike, slam or scratch glass.
- **DO NOT** operate fireplace with glass removed, cracked, broken or scratched.
- · Replace as a complete assembly.

## **Removing Fixed Glass Assembly-Interior**

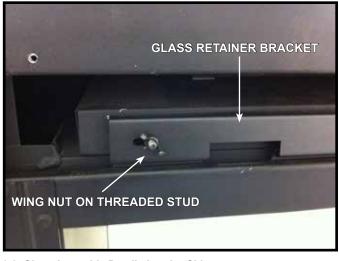
- · Loosen two wing nuts on bottom glass retainer bracket.
- Loosen and remove two wing nuts on top glass retainer bracket. Remove glass retainer bracket. See Figure 9.1
- · Lift glass assembly off of glass retainer bracket.

## **Replacing Fixed Glass Assembly - Interior**

- Position glass assembly on bottom glass retainer bracket.
   Tighten wing nuts on bottom glass retainer bracket.
- Position top of glass assembly, position top glass retainer bracket and secure with two wing nuts.



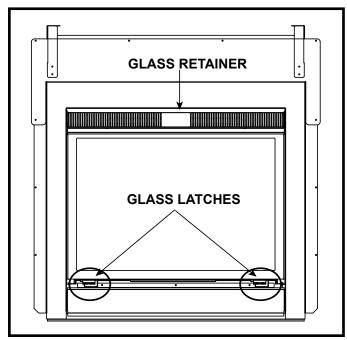
9.1 Glass Assembly - Interior Side



9.2 Glass Assembly Detail - Interior Side

#### Removing Fixed Glass Assembly- Exterior

- Remove vanity panel from appliance to expose glass latches.
- Pull glass latch out to release. Grasp glass assembly on sides and pull bottom toward you. Slide glass assembly down and out from under glass retainer.



9.3 Glass Latch Locations - Exterior Side



9.4 Glass Assembly - Exterior Side

#### Replacing Fixed Glass Assembly - Exterior

- Slide top of glass assembly into position under glass retainer. Position bottom of glass assembly and secure glass clips.
- · Replace vanity panel.

## **B. Remove the Shipping Materials**

Remove shipping materials from inside or underneath the firebox.

## C. Clean the Appliance

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

## D. Lava Rock and Ember Placement

**WARNING!** Risk of Explosion! Follow ember placement instructions in manual. DO NOT place embers directly over burner ports. Replace ember material annually. Improperly placed embers interfere with proper burner operation.

## **Placing Lava Rock**

Place lava rock on refractory support pan. Cover entire support pan surface (see Figure 9.5).



Figure 9.5 Placement of Lava Rock

### **Placing the Ember Material**

Ember material is shipped with this gas appliance. To place the ember material:

- · Embers CANNOT be placed directly over ports.
- When placing Glowing Embers<sup>®</sup> onto the burner care should be taken so that the ports are not covered. Place the dime-size ember pieces just in front of the port trail, but not on or in between the ports (see Figure 9.6). Failure to follow this procedure will likely cause lighting and sooting problems.

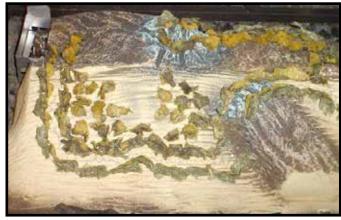
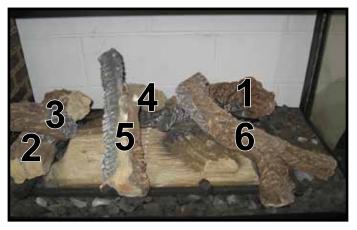


Figure 9.6 Placement of Ember Materials

 Save the remaining ember materials for use during appliance servicing. The embers provided should be enough for 3 to 5 applications.

## E. Install the Log Assembly

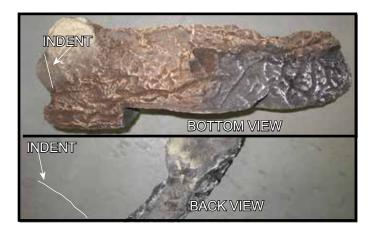
## Log Set Assembly: LOGS-MSR

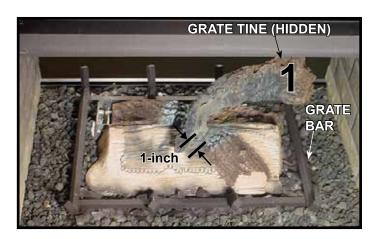


**CAUTION:** Logs are fragile! Carefully remove the logs from the packaging. Remove the cardboard support from inside of fireplace.

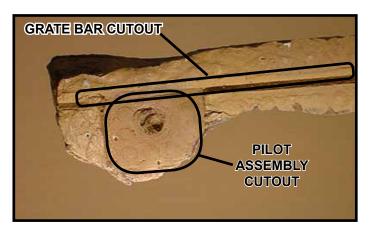


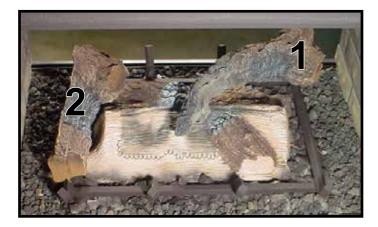
STEP 1. Before positioning the logs, refer to the installation manual for electric ember set-up and ember placement.





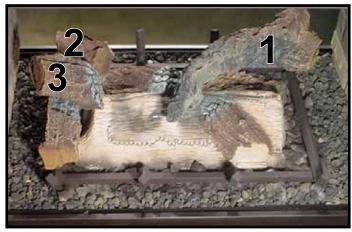
STEP 2. LOG #1 (SRV2005-701): Use the indent on the bottom side of the log to position the large end of the log onto the grate bar as shown. Slide the log back until the indent engages the grate tine as shown above. Position the thin end of log #1 one inch from port pattern as shown.



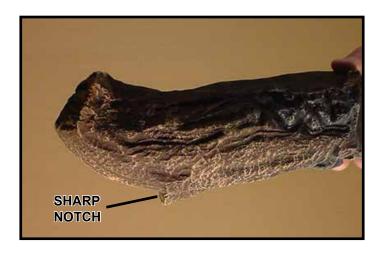


STEP 3. LOG #2 (SRV2005-700): Position log #2 on the left grate bar and the pilot assembly. Use the cut out notches on the log to position it as shown.





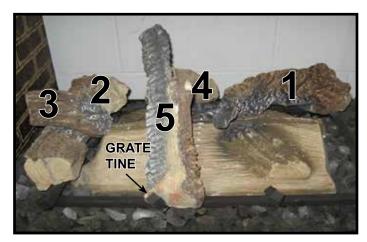
STEP 4. LOG #3 (SRV2005-702): Position log #3 as shown by leaning it against log # 2 and resting the other end on the peak of the burner. **DO NOT** cover any port holes.





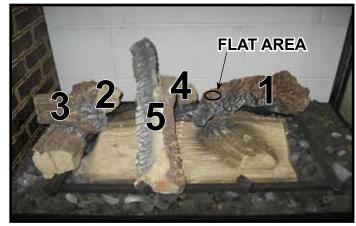
STEP 5. LOG #4 (SRV2005-703): Locate the sharp notch on log #4 against the grate tine as shown. The smooth cutout on the bottom of log #4 should rest on the burner surface. The side of Log #4 must be 3/4 inch from the nearest port hole on the right side of log #4. **DO NOT** cover any port holes.





STEP 6. LOG #5 (SRV2005-704): Using the sharp notch on the heavy end of log #5, align it on the grate tine and set it on the flat area of log #4 as shown.





STEP 7. LOG #6 (SRV2005-705): Locate the notch on log #6 and place it against the front right grate tine. Set the other end of the log so it rests on the flat area of log #1. The orientation of log #6 in relation to the grate tine is shown below.



Log Assembly Installed.

2005-937G

## F. Appliance Start Up

After appliance is completely set up, replace glass assembly (assemblies). Start the appliance and perform a leak check using a commercially available, noncorrosive leak check solution. Be sure to rinse off all leak check solution following testing. Extinguish the pilot and turn the appliance off.

## G. Install Trim and/or Surround

- Install optional trim kits and/or surrounds using the instructions included with the accessory.
- Use non-combustible materials to cover the gap between the sheet rock and the appliance (when applicable to the model).

## **10** Reference Materials

#### A. 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.

# Remote Controls, Wall Controls and Wall Switches (Optional)

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.

## **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.

## **Optional Fan**

If desired, a fan kit may be added. Contact your dealer to order the correct fan kit. Follow the instructions supplied with the fan kit to operate your fan. See your dealer if you have questions.

Please contact your Hearth & Home Technologies dealer with any questions or concerns. For the location of your nearest Hearth & Home Technologies dealer, please visit www.hearthnhome.com.

Hearth & Home Technologies 7571 215th St, Lakeville, MN 55044

Printed in U.S.A. - Copyright 2019