

Installation Manual

Installation & Appliance Set-Up

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

OWNER: Retain this manual for future reference.

NOTICE: DO NOT DISCARD THIS MANUAL

QUADRA-FIRE®

MT VERNON PELLET INSERT

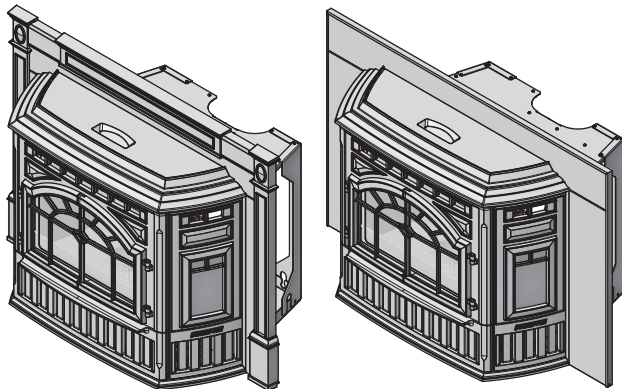
ADVANCED ENERGY (AE)

MODEL(S):

MTVERNINSAE-MBK

MTVERNINSAE-PMH

MTVERNINSAE-CSB



! CAUTION

Check building codes prior to installation:

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

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



! WARNING



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

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not over fire - If appliance or chimney connector glows, you are over firing. Over firing will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.

! WARNING



HOT SURFACES!

Glass and other surfaces are hot during operation **AND** cool down.
Hot glass will cause burns.

- Do not touch glass until it is 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.**
- Keep clothing, furniture, draperies and other flammable materials away.

! CAUTION

Tested and approved for wood pellets, shelled field corn, wheat and black oil sunflower seeds. Burning of any other type of fuel voids your warranty.

NOTE

To obtain a French translation of this manual, please contact your dealer or visit www.quadrafire.com

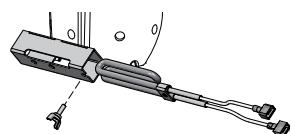
Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez www.quadrafire.com

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:** Indicates practices which may cause damage to the appliance or to property.

TABLE OF CONTENTS

1 Important Safety Information.....	3	4 Vent Information.....	13
A. Appliance Certification.....	3	A. Venting Termination Minimum Requirements.....	13
B. BTU & Efficiency Specifications.....	3	B. Avoiding Smoke and Odors.....	14
C. Glass Specifications.....	4	C. Negative Pressure.....	15
D. Electrical Rating.....	4	D. Draft.....	15
E. Mobile Home Approved.....	4	E. Chimney and Exhaust Connection.....	15
F. Non-Combustible Materials.....	4	F. Venting Termination Requirements.....	16
G. Combustible Materials.....	4	G. Equivalent Feet of Pipe.....	17
H. Sleeping Room.....	4	H. Pipe Selection Chart.....	17
I. California - Prop65.....	4	5 Venting Systems.....	18
2 Getting Started.....	5	A. Full Reline With Outside Air - Horizontal.....	18
A. Design, Installation & Location Considerations.....	5	B. Full Reline With Outside Air - Vertical.....	19
B. Thermostat Wall Control Location.....	6	6 Appliance Set-Up.....	20
C. Tools And Supplies Needed.....	6	A. Leveling System.....	20
D. Inspect Appliance and Components.....	6	B. Outside Air Kit Instructions.....	20
E. Install Checklist.....	7	C. Hearth Support.....	21
3 Dimensions and Clearances.....	8	D. Removal of Cast Sides.....	21
A. Appliance Dimensions.....	8	E. Surround and Trim Set - Cast.....	22
B. Clearances to Combustibles (UL and ULC).....	9	F. Surround & Trim Set, Basic.....	22
C. Minimum Opening for Masonry & ZC Fireplaces.....	10	G. Optional Log Set Placement Instructions.....	23
D. Hearth Extension.....	10	H. Wall Control Thermostat Installation.....	23
E. Floor Protection.....	10	7 Mobile Home Installation.....	24
F. Installation into a Factory-Built Fireplace.....	11	8 Accessory List.....	25
G. Installation into a Masonry Fireplace.....	12		
H. Prefabricated Metal Chimney.....	12		



A 300 Watt Igniter comes installed in a brand new Mt. Vernon AE and are for use with pellet fuel only. The 380 Watt Igniter is required for burning multi-grain fuels and is included in the component pack. Multi-fuels include, corn, sunflower seeds, and wheat.

1 Important Safety Information

A. Appliance Certification

Model	Mt. Vernon Pellet Insert AE
Laboratory	OMNI Test Laboratories, Inc.
Report No.	061-S-69-6
Type	Solid Fuel Room Appliance/Pellet Type Insert
Standard	ASTM E1509-04, ULC S628-93 and ULC/ORD-C1482-M1990 Room Appliance Pellet Fuel Burning type and (UM) 84-HUD, Mobile Home Approved.
FCC	Complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

B. BTU & Efficiency Specifications

EPA Certification #:	970-14
EPA Certified Emissions:	1.7 grams per hour
*LHV Tested Efficiency:	76.9 %
**HHV Tested Efficiency:	71.2 %
***EPA BTU Output:	12,500 to 40,200 / hr.
****BTU Input:	16,800 to 53,300 / hr.
Vent Size:	3 or 4 inches, "L" or "PL"
Hopper Capacity:	52 lbs.
Fuel	Wood Pellets
* Weighted average LHV efficiency using data collected during EPA emissions test.	
**Weighted average HHV efficiency using data collected during EPA emissions test.	
***A range of BTU outputs based on EPA Default Efficiency and the burn rates from the low and high EPA tests.	
****Based on the maximum feed rate per hour multiplied by approximately 8600 BTU's which is the average BTU's from a pound of pellets.	

NOTICE: This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-04, ULC S628-93, (UM) 84-HUD and ULC/ORD-C-1482-M1990.**

The Quadra-Fire Mt. Vernon AE Pellet Insert meets the U.S. Environmental Protection Agency's emission limits for pellet inserts sold after May 15, 2015.

This pellet appliance needs periodic inspection and repair for proper operation. It is against federal regulations to operate this pellet appliance in a manner inconsistent with operating instructions in this manual.

C. Glass Specifications

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

D. Electrical Rating

115 VAC, 60 Hz, Start 5 Amps, Run 1.25 Amps

E. Mobile Home Approved

- This appliance is approved for mobile home installations; when not installed in a sleeping room and when an outside combustion air inlet is provided.
- The structural integrity of the mobile home floor, ceiling, and walls must be maintained.
- The appliance must be properly grounded to the frame of the mobile home with #8 copper ground wire.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

F. Non-Combustible Materials

Material which will not ignite and burn, composed of any combination of the following:

- | | |
|-----------|------------|
| - Steel | - Concrete |
| - Plaster | - Tile |
| - Brick | - Glass |
| - Iron | - Slate |

Materials reported as passing ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace of 750° C.

G. Combustible Materials

Material made of/or surfaced with any of the following materials:

- | | |
|--------------------|------------------------|
| - Wood | - Plastic |
| - Compressed Paper | - Plywood/OSB |
| - Plant Fibers | - Sheet Rock (drywall) |

Any material that can ignite and burn: flame proofed or not, plastered or non-plastered.

H. Sleeping Room

When installed in a sleeping room it is recommended that a smoke and/or CO alarm be installed in the bedroom. The size of the room must be at least 50ft³ per 1,000 Btu/hr stove input, if the stove exceeds the room size, out air must be installed.

I. California - Prop65



WARNING

This product and the fuels used to operate this product (wood), and the products of combustion of such fuels, can expose you to chemicals including carbon black, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: WWW.P65Warnings.ca.gov



WARNING



Fire Risk.

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

- Installation and use of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by Hearth & Home Technologies.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.
- Operating appliance without fully assembling all components.
- Operating appliance without legs attached (if supplied with appliance).
- Do NOT Over fire - If appliance or chimney connector glows, you are over firing.

Any such action that may cause a fire hazard.

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

NOTE: Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.

2

Getting Started

Install Guide

A. Design, Installation & Location Considerations

1. Appliance Location

NOTICE: Check building codes prior to installation.

- 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.

It is a good idea to plan your installation on paper, using exact measurements for clearances and floor protection, before actually beginning the installation. Location of the appliance and chimney will affect performance.

Consideration must be given to:

- Safety, convenience, traffic flow
- Placement of the chimney and chimney connector and to minimize the use of chimney offsets.
- Place the appliance where there will be a clear passage for a Listed chimney through the ceiling and roof (vertical) or through exterior wall (horizontal).
- Installing the required outside air kit will affect the location of the vent termination.

When locating vent and venting termination, the ideal location is to vent above roof line when possible. This minimizes the affects of wind loading.

Since pellet exhaust can contain ash, soot or sparks, you must consider the location of:

- Windows
- Air Intakes
- Air Conditioner
- Overhang, soffits, porch roofs, adjacent walls
- Landscaping, vegetation
- Horizontal or vertical vent termination

2. Floor Support

The supporting floor under the appliance must be able to handle the weight of the appliance, fuel load and the weight of the chimney.

Ensure that your floor will support these weights prior to installation. Add sufficient additional support to meet this weight requirement prior to installation. The weight of the appliance is 429 lbs.



WARNING

Risk of Fire.

Damaged parts could impair safe operation. Do NOT install damaged, incomplete or substitute components.



CAUTION

If burning shelled field corn, you must use approved venting specifically designed for corn to prevent corrosion or degradation. Follow the instructions from the venting manufacturer.

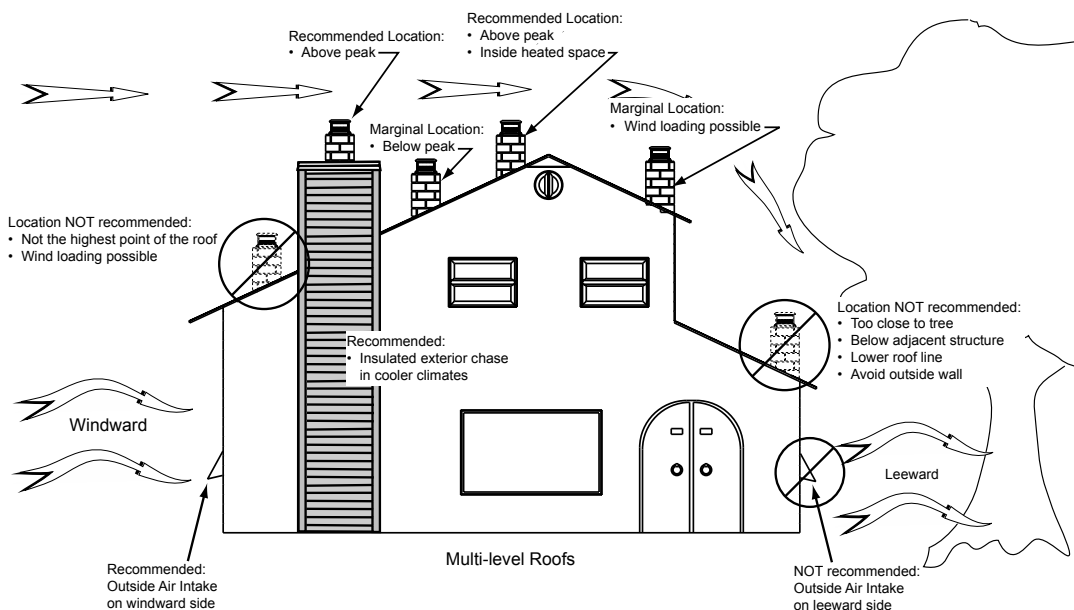


Figure 5.1

B. Thermostat Wall Control Location

The thermostat wall control's location will have some affect on the appliance's operation.

- Maximum wire length from appliance is 100 feet (30.48m) continuous non-spliced wire. Recommended 20 gauge wire, solid copper .
- When located close to the appliance, it may require a slightly higher temperature setting to keep the rest of the house comfortable.
- When located in an adjacent room or on a different floor level, you will notice higher temperatures near the appliance.



CAUTION

The wall control is an integral part of the appliance. No other wall control or thermostat can be substituted.



WARNING



Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided

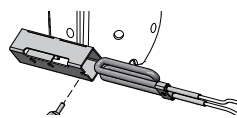
by, the following actions:

- Installation and use of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by Hearth & Home Technologies.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.
- Operating appliance without fully assembling all components.
- Operating appliance without legs attached (if supplied with appliance).
- Do NOT Over fire

Or any such action that may cause a fire hazard.

D. Inspect Appliance and Components

- Open the appliance and remove all the parts and articles packed inside the Component Pack. Inspect all the parts and glass for shipping damage.
- Report to your dealer any parts damaged in shipment.
- All labels have been removed from the glass door.
- Plated surfaces have been wiped clean with a soft cloth, if applicable.
- **Read all the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.**
- **Follow pipe manufacturer instructions for installation and air clearance requirements.**



A 300 Watt Igniter comes installed in a brand new Mt. Vernon AE and are for use with pellet fuel only. The 380 Watt Igniter is required for burning multi-grain fuels and is included in the component pack. Multi-fuels include, corn, sunflower seeds, and wheat.

C. Tools And Supplies Needed

Tools and building supplies normally required for installation, unless installing into an existing masonry fireplace:

Reciprocating Saw	Channel Locks
Hammer	Phillips Screwdriver
Tape Measure	Plumb Line
1/4" Self-Tapping Screws	Framing Material
Hi-temp Caulking Material	Gloves
Safety Glasses	Framing Square
Electric Drill & Bits (1/4")	Level

May also need:

Vent Support Straps	Venting Paint
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3 Dimensions and Clearances

A. Appliance Dimensions

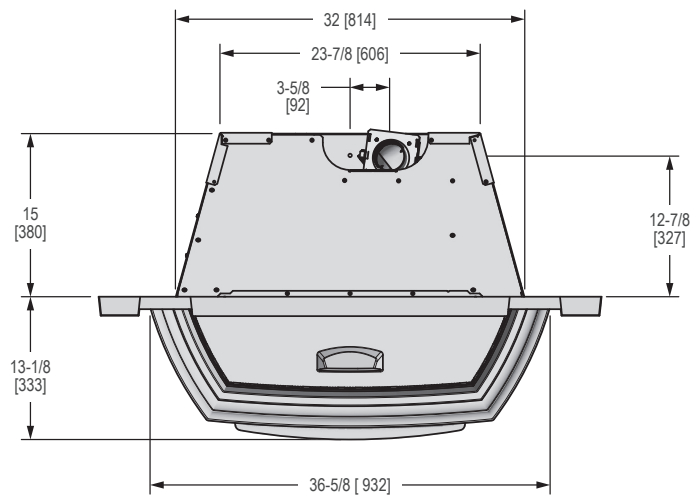


Figure 8.1 - Top View with Cast Panel Set

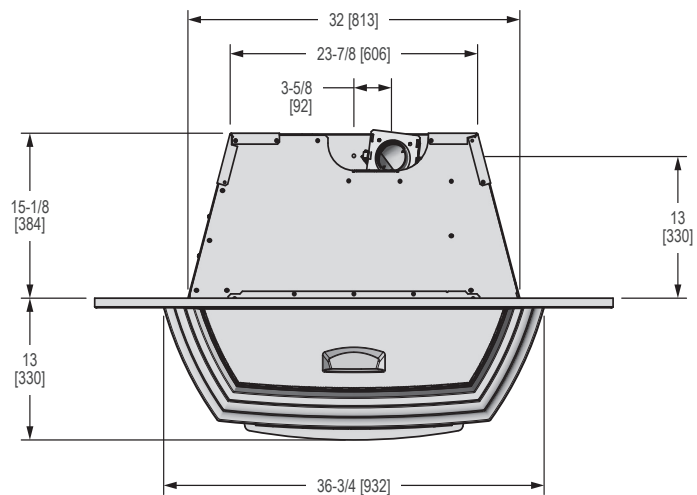


Figure 8.4 - Top View with Basic Surround Panel Set

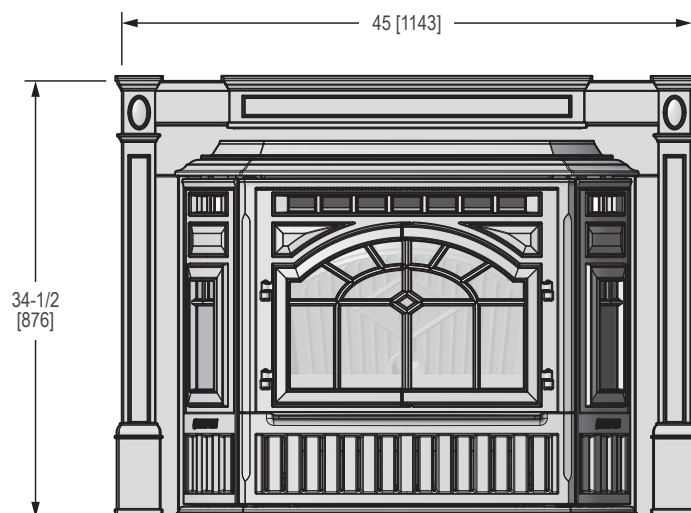


Figure 8.2 - Front View with Cast Panel Set

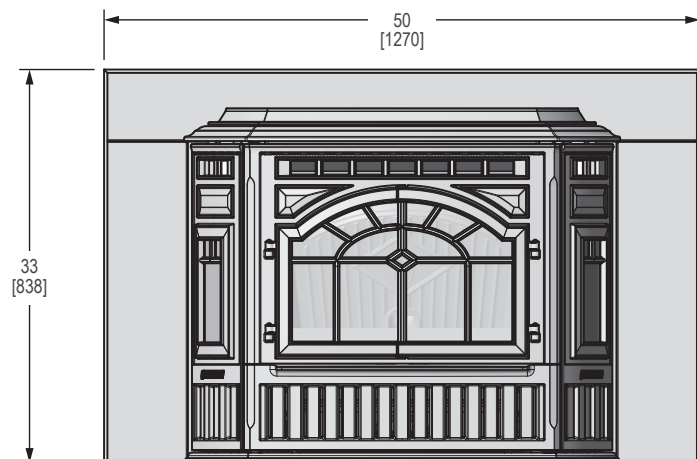


Figure 8.5 - Front View with Basic Surround Set

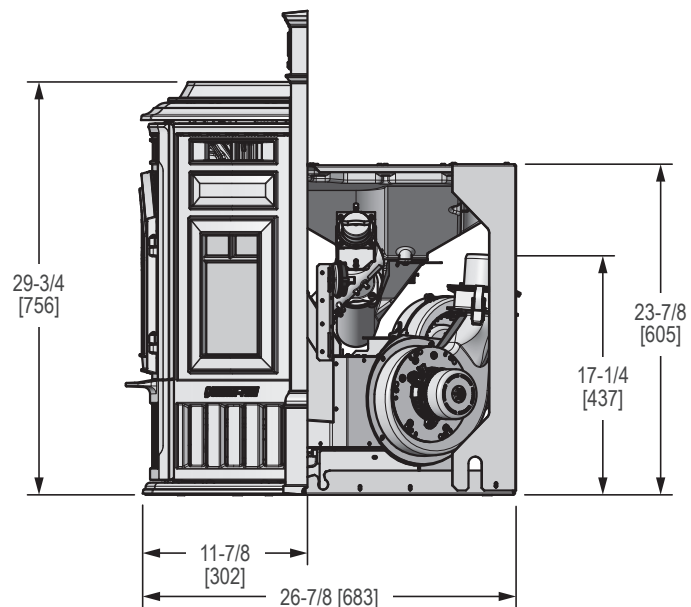


Figure 8.3 - Side View with Cast Panel Set

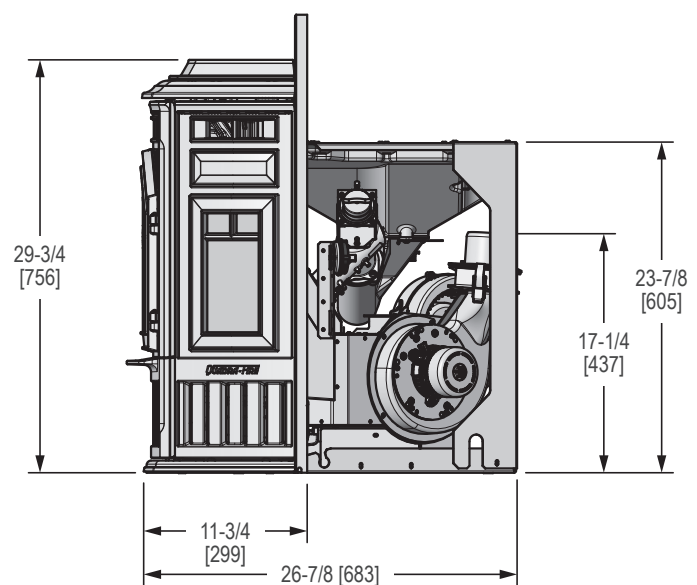


Figure 8.6 - Side View with Basic Surround Set

B. Clearances to Combustibles (UL and ULC)

Built-in Appliance - Framing Dimensions

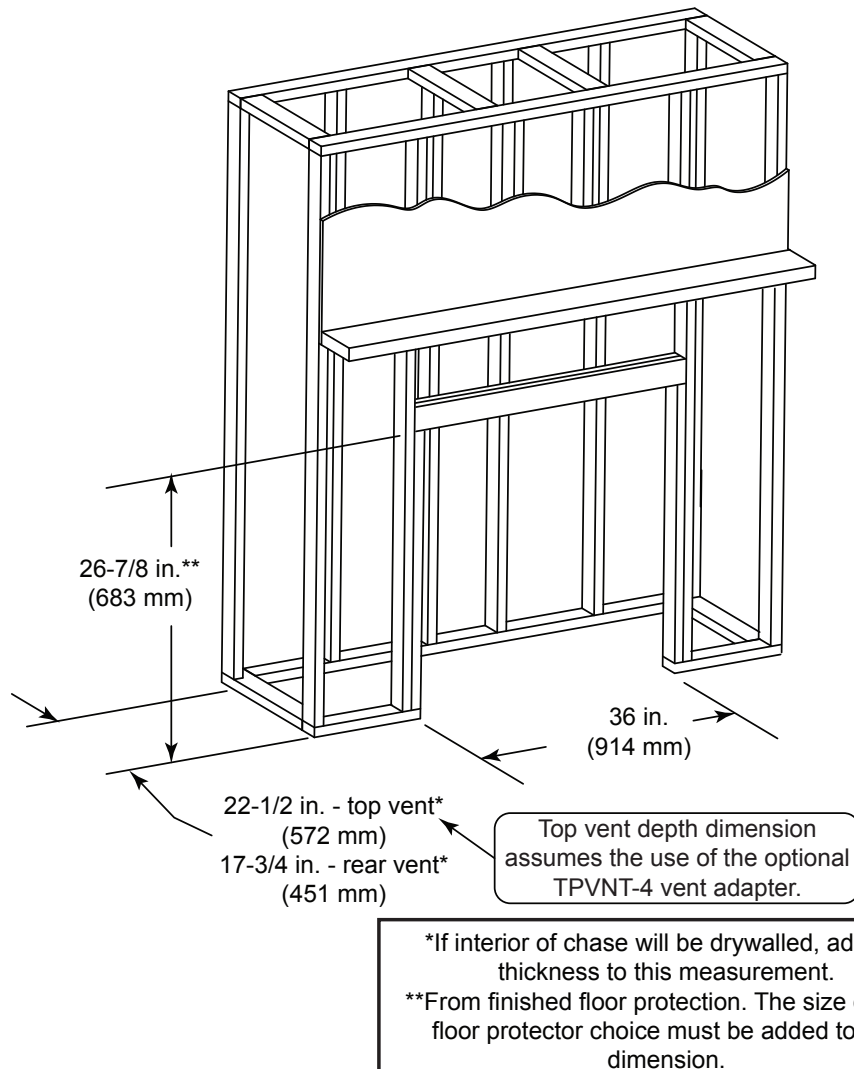


Figure 9.1



WARNING



Fire Risk

Comply with all minimum clearances to combustibles as specified.

Failure to comply may cause house fire.

NOTE:

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

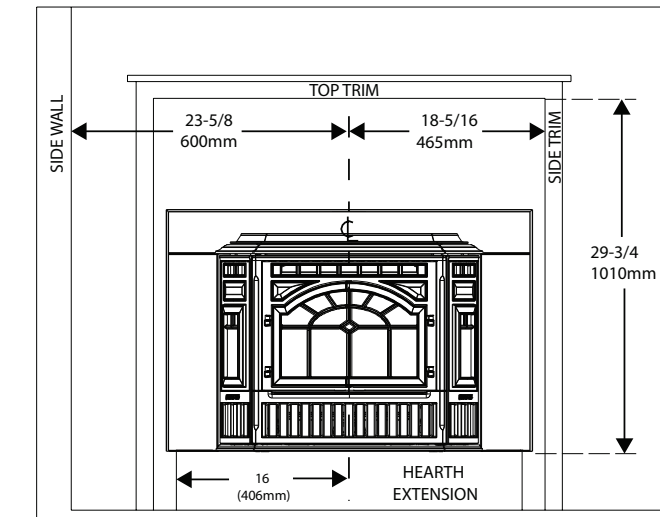


Figure 10.1

NOTE: If trim measurement is over 3/4 in (19mm) in depth use mantle or side clearances to combustibles.

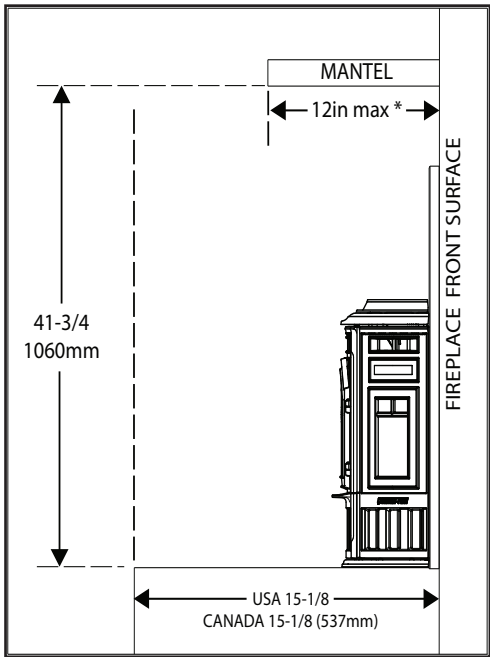


Figure 10.2

*If mantel depth is 10 inches or less, than the height from the hearth to the bottom of the mantel is 39-3/4 inches.

NOTE
It is necessary to permanently seal any opening between the masonry of the fireplace and the facing masonry.

C. Minimum Opening for Masonry & ZC Fireplaces

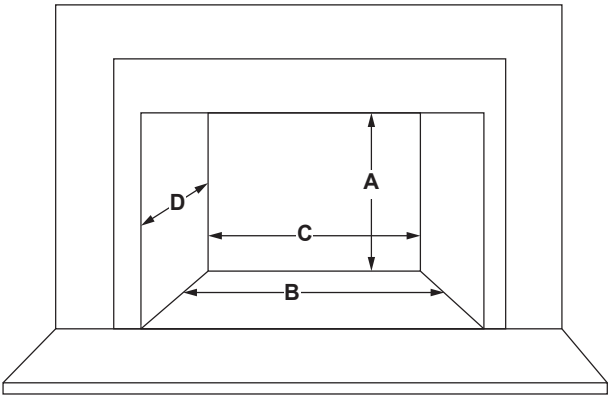


Figure 10.3

Minimum Opening Dimensions		Inches	Millimeters
A	Height	24-1/8	613
B	Front Width (<i>Steel Panel Set</i>)	32-1/4	819
	Front Width (<i>Cast Panel Set</i>)	32-1/4	819
C	Back Width	24-1/8	613
D	Depth (<i>Steel Panel Set</i>)	15-3/8	391
	Depth (<i>Cast Panel Set</i>)	15-1/4	387

NOTE: Minimum opening dimensions include a 1/4" (6mm) clearance around unit.

D. Hearth Extension

Use a non-combustible ember floor protector, extending beneath the appliance and to the front, and to the sides as indicated in sub-section E. Floor Protection.

E. Floor Protection

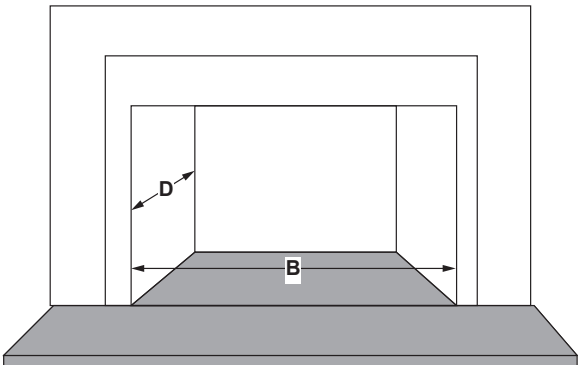


Figure 10.4

F. Installation into a Factory-Built Fireplace

The following modifications are permissible:

- Removal of damper or locked in open position
- Removal of smoke shelf or baffle
- Removal of ember catches
- Removal of fire grate
- Removal of view screen/curtain
- Removal of doors
- Removal of factory-built fireplace floor
- External trim pieces which do not affect the operation of the fireplace may be removed providing they can be stored on or within the fireplace for reassembly if the insert is removed.
- The permanent metal warning label provided must be attached to the back of the fireplace, with screws or nails, stating that the fireplace may have been altered to accommodate the insert, and must be returned to original condition for use as a conventional fireplace.

Figure 11.1

WARNING

- THIS FIREPLACE MAY HAVE BEEN ALTERED TO ACCOMMODATE AN INSERT. IT MUST BE RETURNED TO ITS ORIGINAL CONDITION BEFORE USE AS A SOLID FUEL BURNING FIREPLACE.

250-2061

Figure 11.1

- If the hearth extension is lower than the fireplace opening, the portion of the insert extending onto the hearth must be supported.
- Manufacturer designed adjustable support kit can be ordered from your dealer.

NOTE: Refer to chimney liner manufacturer for recommendations on supporting the liner. Installation into fireplaces without a permit will void the listing.

- The firebrick (refractory), glass doors, screen rails, screen mesh and log grates can be removed from a factory-built firebox in order to gain minimum insert opening requirements.
- Any smoke shelves, shields and baffles may be removed from a factory-built firebox if attached with mechanical fasteners.
- The metal floor of the factory-built firebox may be removed to facilitate the installation of the insert only when a 1 inch (25mm) airspace is provided between the insert and the floor of outer wrap.

The following is only one example as there are many different models of factory-built fireplaces.

NOTE: This example is for reference only. Any modifications must not compromise the structural integrity or reduce the protection for combustible materials.

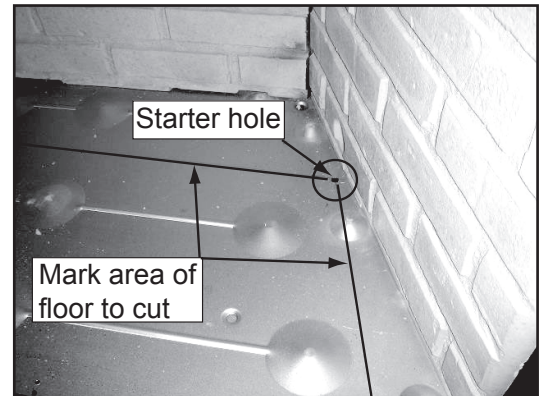


Figure 11.2

Measure and mark the metal floor for cutting. With a drill, make a starter hole in each corner.

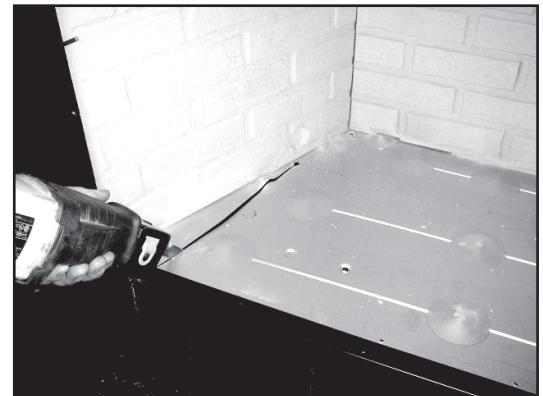


Figure 11.3

Using a saws-all, cut out the floor.

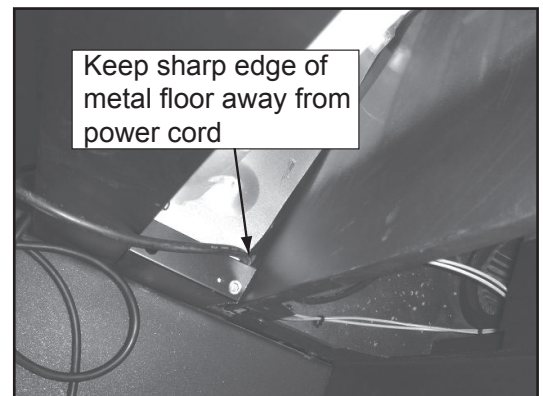


Figure 11.4

Place the insert into the factory-built firebox. Ensure that the power cord can not be damaged by the sharp metal edge. You may need to cut out a notch to accommodate the cord.

G. Installation into a Masonry Fireplace

All modifications that can be made to a Factory Built Fireplace can be made to a Masonry Fireplace.

In addition **DO NOT** remove any brick or mortar from the existing fireplace.



WARNING

- Removing floor of fireplace must not weaken structure of firebox or reduce protection for combustible materials.
- Final approval of this installation type is contingent upon the appropriate local authority having jurisdiction.

H. Prefabricated Metal Chimney

The chimney can be new or existing, masonry or prefabricated and must meet the following minimum requirements:

- Must be minimum 6 inch (152mm) inside diameter of high temperature chimney listed to UL 103 HT (2100°F) or ULC-S628.
- Must use components required by the manufacturer for installation.
- Must maintain clearances required by the manufacturer for installation.
- Refer to manufacturers instructions for installation
- This insert is listed to ASTM E 1509-12 Standard and is approved for installation into listed factory-built zero clearance fireplaces listed to UL 127 conforming to the following specifications and instructions:
- The original factory-built clearance fireplace chimney cap must be re-installed after installing the approved chimney liner meeting type UL 103 HT requirements (2100°F) per UL 1777.
- If the chimney is not listed as meeting HT requirements, or if the factory built fireplace was tested prior to 1998, a full height listed chimney liner must be installed from the appliance flue collar to the chimney top.
- The liner must be securely attached to the insert flue collar and the chimney top.
- The air flow of the factory-built zero-clearance fireplace system must not be altered. The flue liner top support attachment must not reduce the air flow for the existing air-cooled chimney system.
- No dilution air is allowed to enter the chimney.
 1. Secure the fireplace damper in the open position. If this cannot be accomplished, it will be necessary to remove the damper
 2. Seal damper area of chimney around chimney connector with a high temperature sealant or seal insert against the face of the fireplace.
 3. Both methods must be removable and replaceable for cleaning and re-installation.



WARNING



Risk of Fire!

Follow venting manufacturer's clearances and instructions when installing venting system.

NOTICE: In Canada when using a factory-built chimney it must be safety listed, **Type UL103 HT (2100oF) [1149oC] CLASS "A" or conforming to CAN/ULC-S629M, STANDARD FOR 650oC FACTORY-BUILT CHIMNEYS.**

4 Vent Information

A. Venting Termination Minimum Requirements

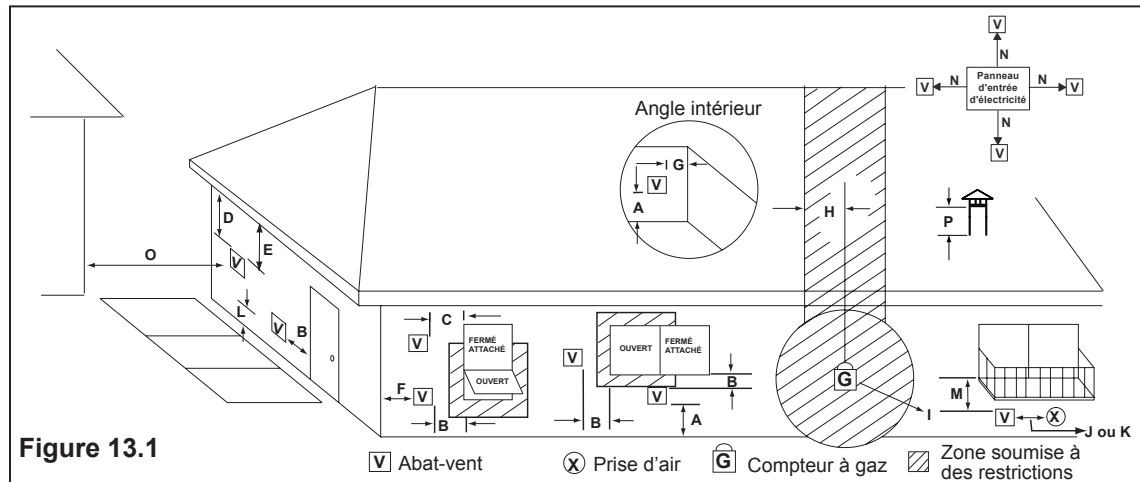


Figure 13.1

All minimum clearances are listed with an Outside Air Kit (OAK) installed, unless otherwise noted in table below.

A	12 in.	Above Finish Grade (the grade surface must be a non-combustible material)
B	12 in. 48 in. no OAK	Open door or window: below or to the side
B	12 in.	Open door or window: above
C	6 in.	Permanently closed window: above, below or to the side
D	18 in. 36 in. no OAK	Vertical clearance to a ventilated soffit located above the terminal within a horizontal distance of 2 ft from the center-line of the terminal
E	12 in.	Clearance to unventilated soffit
F	12 in.	Clearance to outside corner
G	12 in.	Clearance to inside corner
H	36 in.	Above gas meter/regulator measured from horizontal center-line of regulator
I	36 in. USA 72 in. Canada	Clearance to service regulator vent outlet
J	12 in. 48 in. no OAK	Clearance to non-mechanical air supply inlet to the building or the combustions air inlet to any other appliance
K	10 ft horizontal 3 ft vertical	Clearance to mechanical air supply
L	7 ft.	Above paved sidewalk, paved driveway located on public property
M	12 in.	Under an open veranda, porch, deck or balcony
N	See Note below*	Electric service: above, below or to the side (location must not obstruct or interfere with access)
O	24 in.	Adjacent building, fences and protruding parts of the structure
P	12 in.	Clearance above roof line for vertical terminations

24 in.	Above grass, top of plants, wood or any other combustible
12 in. 36 in. no OAK	Clearance from any forced air intake of other appliance
12 in.	Clearance horizontally from combustible wall
15 in.	Vented directly through a wall, minimum length of horizontal pipe
6 in. horizontal 12 in. vertical	Minimum horizontal or vertical terminations must protrude from wall



NOTICE

Do NOT Terminate Vent:

- In any location that will allow flue gases or soot from entering or staining the building
- In any location which could create a nuisance or hazard
- In any enclosed or semi-enclosed area such as a carport, garage, attic, crawl space, under a sun deck or porch, narrow walkway
- Closely fenced area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway, etc.



NOTICE

Termination must exhaust above air inlet elevation.

- It is recommended that at least 60 inches (1.52m) of vertical pipe be installed when appliance is vented directly through a wall. This will create a natural draft, which will help prevent the possibility of smoke or odor venting into the home during a power outage.
- It will also keep exhaust from causing a nuisance or hazard by exposing people or shrubs to high temperatures.
- The safest and preferred venting method is to extend the vent vertically through the roof or above the roof.

***NOTE:** Consult local building, fire officials or authorities having jurisdiction. Local codes or regulations may require different clearances.

B. Avoiding Smoke and Odors

Negative Pressure, Shut-Down and Electrical Power Failure

To reduce the probability of back-drafting or burn-back in the pellet appliance during power failure or shut down conditions, it must be able to draft naturally without exhaust blower operation.

Negative pressure in the house will resist this natural draft if not accounted for in the pellet appliance installation.

Heat rises in the house and leaks out at upper levels. This air must be replaced with cold air from outdoors which flows into lower levels of the house.

Vents and chimneys into basements and lower levels of the house can become the conduit for air supply and reverse under these conditions.

Outside Air

An outside air kit is recommended in all installations. The Outside Air Kit must be ordered separately.

Per national building codes, consideration must be given to combustion air supply to all combustion appliances. Failure to supply adequate combustion air for all appliance demands may lead to back-drafting of those and other appliances.

When the appliance is roof vented (strongly recommended):
The air intake is best located on the exterior wall oriented towards the prevailing wind direction during the heating season.

When the appliance is side-wall vented:
The air intake is best located on the same exterior wall as the exhaust vent outlet and located lower on the wall than the exhaust vent outlet.

The outside air supply kit can supply most of the demands of the pellet appliance, but consideration must be given to the total house demand.

House demand may consume the air needed for the appliance. It may be necessary to add additional ventilation to the space in which the pellet appliance is located.

Consult with your local HVAC professional to determine the ventilation demands for your house.

Vent Configurations

When installing a pellet appliance with a horizontal vent configuration the frequency of power outages should be considered:

- Power outages during operation will cause the appliance to immediately turn off and may create conditions where smoke will back draft into the house. In order to reduce the likelihood of smoke back drafting into the house during a power outage, Hearth and Home Technologies strongly suggests:
 - Installing the pellet venting with a minimum vertical run of 5 feet (1.52m).
 - Installing the outside air kit at least 4 feet (1.22m) below the vent termination.

To prevent soot damage to exterior walls of the house and to prevent re-entry of soot or ash into the house:

- Maintain specified clearances to windows, doors and air inlets, including air conditioners.
- Vents should not be placed below ventilated soffits. Run the vent above the roof.
- Avoid venting into alcove locations.
- Vents should not terminate under overhangs, decks or onto covered porches.
- Maintain minimum clearance of 12 inches (305mm) from the vent termination to the exterior wall. If you see deposits developing on the wall, you may need to extend this distance to accommodate your installation conditions.



CAUTION

- DO NOT CONNECT THIS Appliance TO A CHIMNEY FLUE SERVICING ANOTHER APPLIANCE.
- DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.

Hearth & Home Technologies assumes no responsibility for, nor does the warranty extend to, smoke damage caused by reverse drafting of pellet appliances under shut down or power failure conditions.

Optional Battery Back-Up

Hearth & Home Technologies supplies an optional battery back-up system that operates the appliance during power failure conditions to prevent smoking. In shutdown mode, the battery back-up will not prevent smoking.

Hearth & Home Technologies assumes no responsibility for, nor does the warranty extend to, smoke damage caused by reverse drafting of pellet appliances under shut down or power failure conditions.

C. Negative Pressure

Negative pressure results from the imbalance of air available for the appliance to operate properly. It can be strongest in lower levels of the house.

Causes include:

- Exhaust fans (kitchen, bath, etc.)
- Range hoods
- Combustion air requirements for furnaces, water appliances and other combustion appliances
- Clothes dryers
- Location of return-air vents to furnace or air conditioning
- Imbalances of the HVAC air handling system
- Upper level air leaks such as:
 - Recessed lighting
 - Attic hatch
 - Duct leaks

To minimize the effects of negative air pressure:

- Install the outside air kit with the intake facing prevailing winds during the heating season
- Ensure adequate outdoor air for all combustion appliances and exhaust equipment
- Ensure furnace and air conditioning return vents are not located in the immediate vicinity of the appliance
- Avoid installing the appliance near doors, walkways or small isolated spaces
- Recessed lighting should be a “sealed can” design
- Attic hatches weather stripped or sealed
- Attic mounted duct work and air handler joints and seams taped or sealed



WARNING

Risk of Asphyxiation!

Negative pressure can cause spillage of combustion fumes and soot.

D. Draft

Draft is the pressure difference needed to vent an appliance successfully. When an appliance is drafting successfully, all combustion byproducts are exiting the home through the chimney.

Install through the warm airspace enclosed by the building envelope. This helps to produce more draft, especially during lighting and die-down of the fire.

Considerations for successful draft include:

- Preventing negative pressure
- Location of appliance and chimney



NOTICE

Hearth & Home Technologies assumes no responsibility for the improper performance of the chimney system caused by:

- Inadequate draft due to environmental conditions
- Down drafts
- Tight sealing construction of the structure
- Mechanical exhausting devices

E. Chimney and Exhaust Connection

1. **Chimney & Connector:** Use 3 or 4 inch (76-102mm) diameter type “L” or “PL” venting system. It can be vented vertically or horizontally.
2. **Mobile Home:** Approved for all Listed pellet vent. If using the 3 inch (76mm) vertical Top Vent Adapter Kit or the 3 to 6 inch (76-152mm) Top Vent Offset Adapter, use Listed double wall flue connector. A Quadra-Fire Outside Air Kit must be used with manufactured home installations.
3. **Residential:** The 3 inch (76mm) vertical Top Vent Adapter Kit and the 3 to 6 inch (76-152mm) Top Vent Offset Adapter are tested to use 24 gauge single wall flue connector or Listed double wall flue connector to Class A Listed metal chimneys, or masonry chimneys meeting International Residential Code standards for solid fuel appliances.
4. **INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.**
5. Secure exhaust venting system to the appliance with at least 3 screws. Also secure all connector pipe joints with at least 3 screws through each joint.
6. **DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS Appliance.**
7. **DO NOT CONNECT THIS Appliance TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

NOTE: All pipe must be welded seam pipe whenever possible. Seal pipe joints with high temperature silicone (500°F [260°C] minimum rated only).

NOTE: If burning shelled field corn, you must use approved venting specifically designed for corn. Follow the instructions from the venting manufacturer.

F. Venting Termination Requirements

1. Termination must exhaust above air inlet elevation.
2. Distance from doors and opening windows, or gravity or ventilation air inlets into building:
 - a. Not less than 48 inches (1.2m) below;
 - b. Not less than 48 inches (1.2m) horizontally from;
 - c. Not less than 12 inches (305mm) above.
3. Distance from permanently closed windows;
 - a. Not less than 12 inches (305mm) below; horizontally from or above.
4. Distance between bottom of termination and grade should be 12 inches (305mm) minimum. This is conditional upon plants in the area, and nature of grade surface. The grade surface must be a non-combustible material (i.e., rock, dirt). The grade surface must not be lawn. Distance between bottom of termination and public walkway should be 7 feet (2.13m) minimum.
5. Distance to combustible materials must be 24 inches (610mm) minimum. This includes adjacent buildings, fences, protruding parts of the structure, roof overhang, plants and shrubs, etc.
6. Termination Cap Location (Home Electrical Service)
 - Side-to-side clearance is to be the same as minimum clearance to vinyl inside corners.
 - Clearance of a termination cap below electrical service shall be the same as minimum clearance to vinyl soffits.
 - Clearance of a termination cap above electrical service will be 12 inches (305mm) minimum.
 - Location of the vent termination must not obstruct or interfere with access to the electrical service.



CAUTION

DO NOT terminate vent in any enclosed or semi-enclosed area such as a carport, garage, attic, crawl space, under a sun deck or porch, narrow walkway or closely fenced area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway, etc.

G. Equivalent Feet of Pipe

The table below can help you calculate the equivalent feet of pipe which is a method used to determine pellet vent size (Figure 17.1).



WARNING



Vent surfaces get HOT, can cause burns if touched. Non-combustible shielding or guards may be required.

Example of 3 Elbow-Rear Vent Termination Calculation

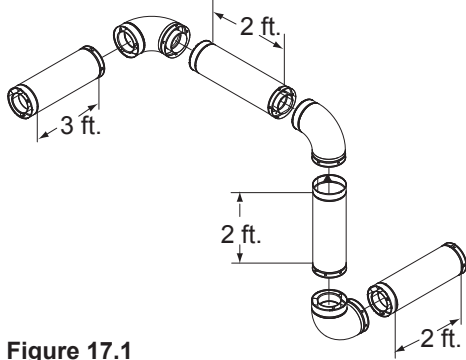


Figure 17.1

Pellet Venting Component	# of Elbows	Feet of Pipe	Multiplied By	Equivalent Feet	Components Equivalent Feet
90° Elbow or Tee	3		X	5	15
45° Elbow			X	3	
Horizontal Pipe		7	X	1	7
Vertical Pipe		2	X	0.5	1
Total Equivalent Feet					23

NOTE: This is a generic example and is not intended to represent any specific fuel type.

H. Pipe Selection Chart

The chart will help you in determining proper venting size according to the equivalent feet of pipe calculated previously and the altitude above sea level of this installation (Figure 17.2).

1. Locate the calculated equivalent feet of pipe on the vertical left side of the chart.
2. Move to the right horizontally on the chart until you reach your altitude above sea level.
3. If you fall below the diagonal line, 3 or 4 inch (76 to 102mm) pipe may be used.
4. If it is anywhere above the diagonal line, a 4 inch (102mm) diameter pipe is required.

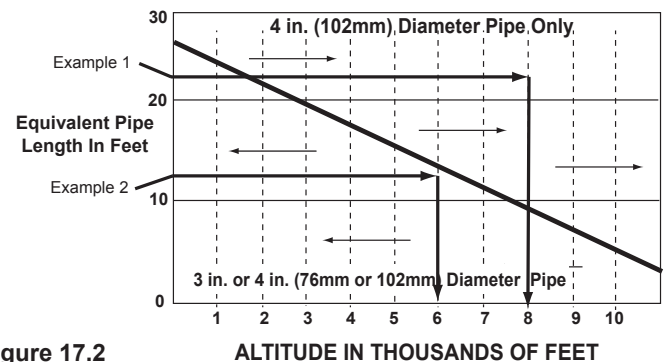


Figure 17.2

- **Example 1:** If the equivalent length of pipe is 23 feet (7m) with altitude of 8,000 feet (2438m) you must use 4 inch (102mm) diameter type "L" or "PL" vent.
- **Example 2:** If the equivalent length of pipe is 12 feet (3.7m) with altitude of 6,000 feet (1829m) you may use 3 or 4 inch (76 to 102mm) diameter type "L" or "PL" vent.



NOTICE!

- A 90° elbow is 5 times as restrictive to the flow of exhaust gases under positive pressure as 1 foot (305mm) of horizontal pipe.
- A foot of horizontal pipe is twice as restrictive as a foot of vertical pipe.



WARNING



Risk of Fire!

- Only LISTED venting components may be used.
- NO OTHER vent components may be used.
- Substitute or damaged vent components may impair safe operation.



WARNING



Risk of Injury or Property Damage.

- 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 your dealer.

5 Venting Systems

A. Full Reline With Outside Air - Horizontal

CAUTION

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage



WARNING



Fire Risk.

Inspection of Chimney:

- Masonry chimney must be in good condition.
- Meets minimum standard of NFPA 211
- Factory-built chimney must be a minimum 6 inch (152mm) UL103 HT.

NOTE; Use metal plate around exhaust vent pipe and seal all edges with non-flammable insulation such as fiberglass, mineral wool or ceramic.

Do not use high temperature caulking materials to seal any edge to prevent future serviceability.

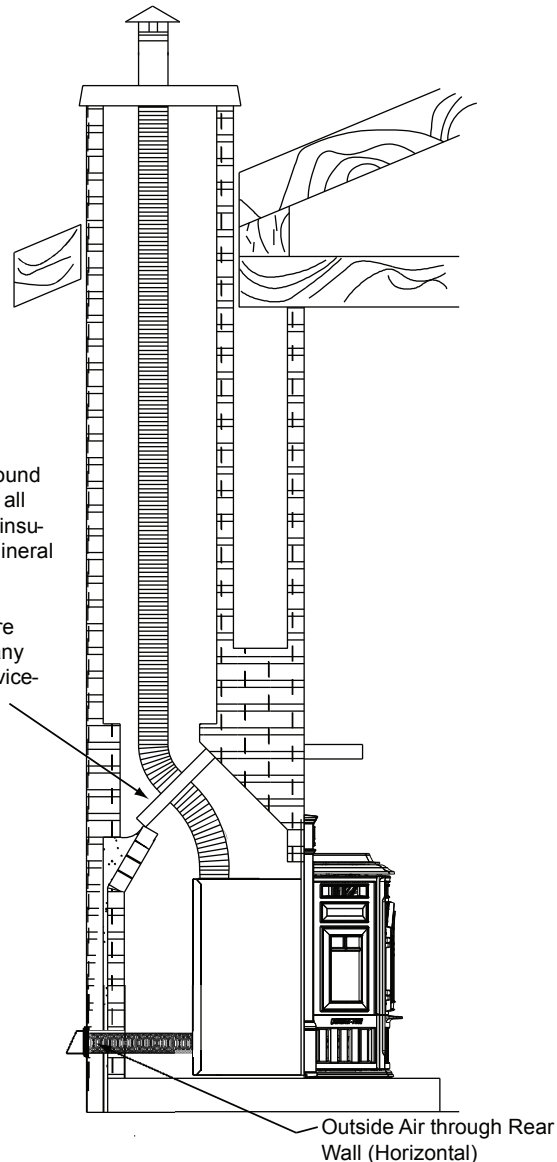


Figure 18.1

NOTE: In Canada, where passage through a wall or partition of combustible construction is desired, the installation shall conform to **CAN/CSA-B365**.

NOTE:

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

B. Full Reline With Outside Air - Vertical

NOTE: Check clearances carefully for this type of installation to ensure adequate room for outside air venting.

NOTE: In Canada only a full reline is allowed per **ULC S628, ORD ULC C1482-M1990**.

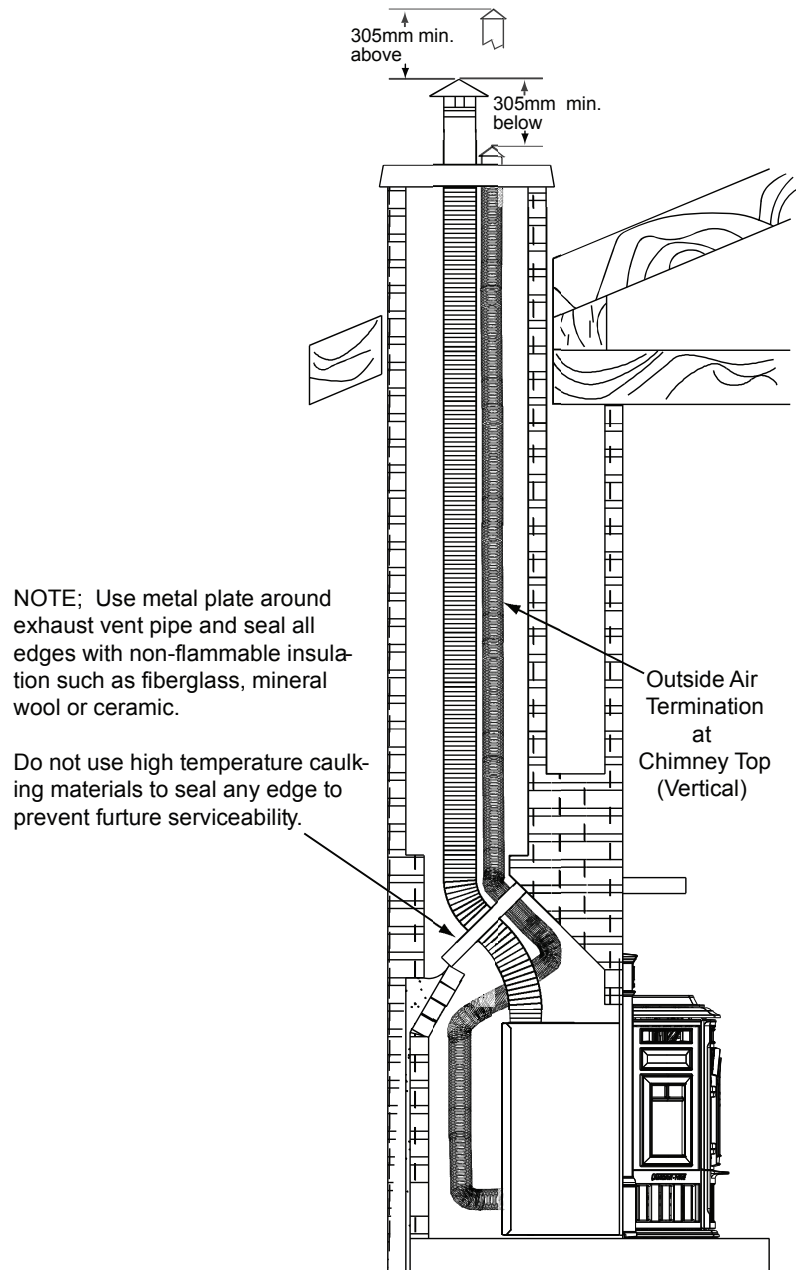


Figure 19.1

NOTE: In Canada this fireplace insert must be installed with a continuous chimney liner extending from the fireplace insert to the top of the chimney. The chimney liner must conform to the Class 3 requirements of **CAN/ULC-S635**, Standard for Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents, or **CAN/ULC-S640**, Standard for Lining Systems for New Masonry Chimneys.



CAUTION

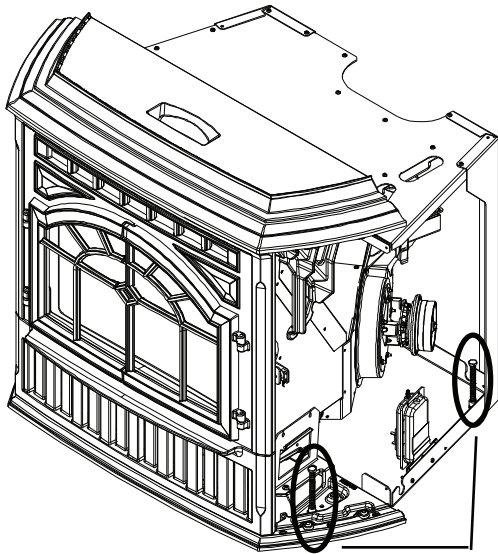
Check building codes prior to installation.

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

6 Appliance Set-Up

A. Leveling System

The leveling bolts are located on the sides of the appliance, front and rear. To access the bolts, remove the front access panels. Reach in and turn the bolt to the desired height to level the appliance.



Leveling Bolts - 2 on each side

Figure 20.1

B. Outside Air Kit Instructions

Included in Kit: 2 wire ties, 1 collar assembly, 1 termination cap assembly, 1 trim ring, fasteners.

NOTE: 3 INCH (76mm) ALUMINUM FLEX PIPE NOT INCLUDED.

Tools Needed: Phillips head screw driver; wire cutters; hole saw or jig saw.

1. Measure distance from floor to air vent opening in appliance and mark location on wall.
2. Use saw to cut opening in wall. Cut a 3-1/2 to 4 inch (89-102mm) opening on inside wall and a 4 to 4-1/2 inch (102-114mm) opening on outside of house.
3. Use wire ties to secure flex pipe to collar assembly.
4. Slide trim ring over flex pipe and run pipe through wall.
5. Attach flex pipe (not included) to outside termination cap with second wire tie.
6. Secure termination cap to outside surface.
7. Secure trim ring to interior wall.



CAUTION

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage

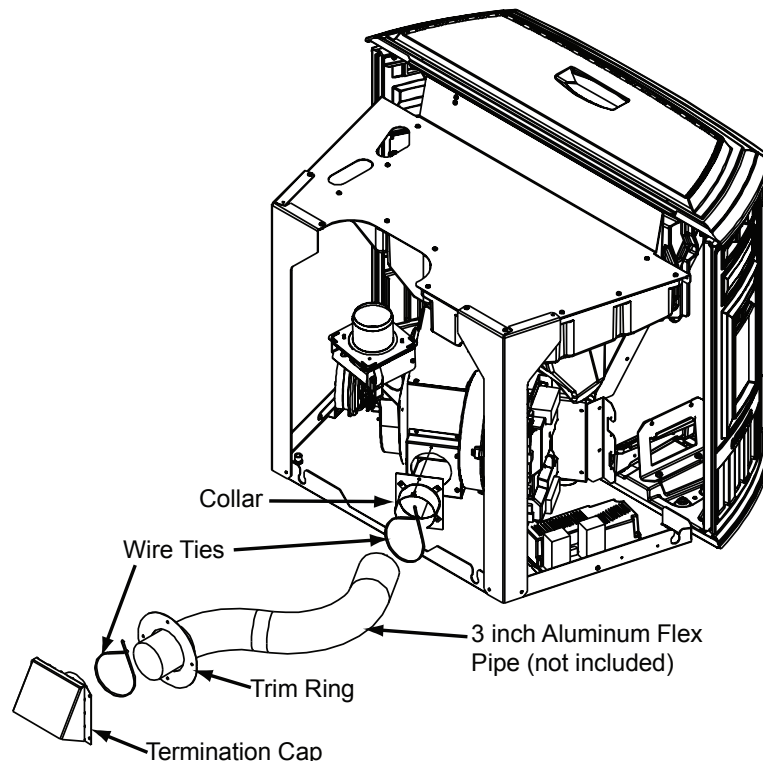


Figure 20.2

C. Hearth Support

Included in Kit: (1) bottom, (1) trim front, (2) trim sides, (2) trim extensions

Tools Needed: Phillips head screw driver, measuring tape, gloves

1. Remove contents from box and lay on protective surface to avoid scratching the paint.
2. Lay front and sides face down. Bend the tabs down toward the inside (**Figure 21.1**).
3. The side pieces are shipped flat. It is must easier to flex the sides into a bowed position before installing.
4. Lay the cast bottom face up. Attach the 2 sides FIRST and then the front piece (**Figure 21.2**).
5. Turn the cast bottom right side up and attach the panel extensions. Note the alignment hole.
6. Attach the appropriate footers depending on the panels & trim set you are installing. The footers come in 2 sizes, 3 and 5 inches. Discard the footers not used.

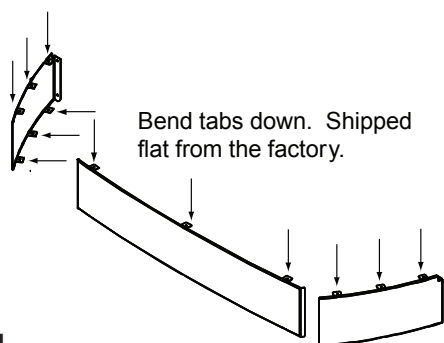


Figure 21.1

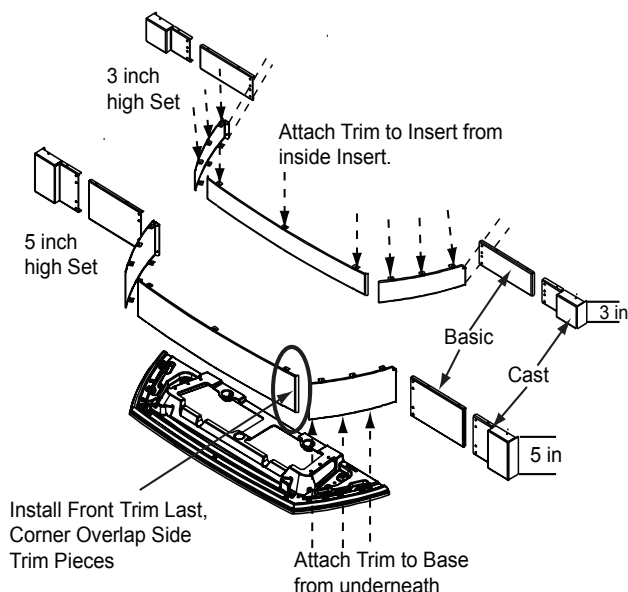


Figure 21.2

7. Place the assembled hearth support under the insert. Lower the leveling bolts if necessary to keep the insert level.
8. Open the door and attach the hearth support to the insert. There are 9 attachment holes (**Figure 21.3**).

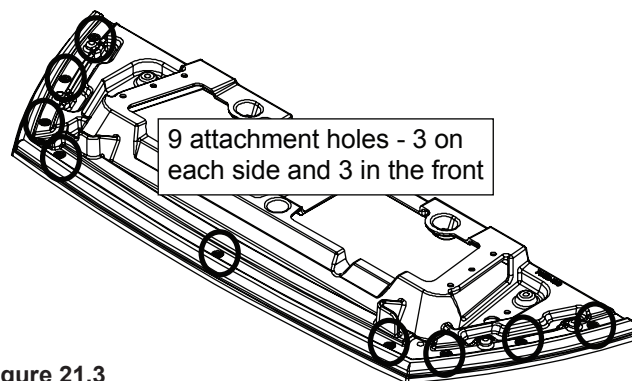


Figure 21.3

D. Removal of Cast Sides

You will need to remove the cast sides in order to install the panel and trim set.

1. There is a latch on the back side of the cast side in the middle of the top opening of the cast side as indicated in **Figure 21.4**.
2. Place your fingers inside the opening and squeeze the latch. The side can now be pulled toward you and removed. Place on a protective surface so as not to damage the finish.
3. To replace the side, set the bottom in first. Squeeze the latch in an open position. Place the cast side into position and then release the latch. The latch hooks onto a bracket to hold the side in place.

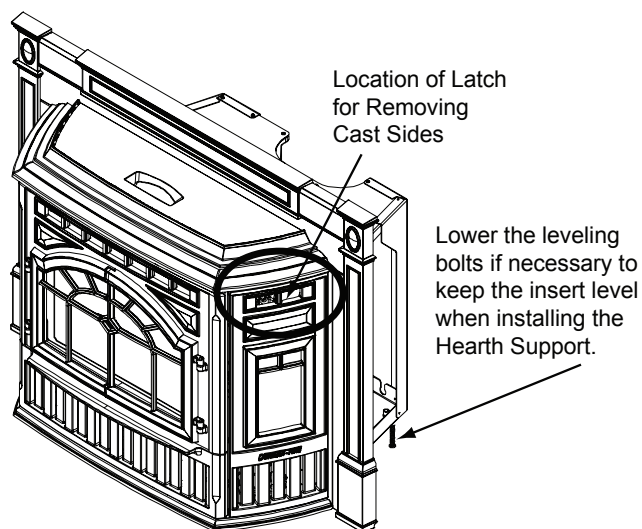


Figure 21.4 - Shown with Cast Panel Set

E. Surround and Trim Set - Cast

Included in Surround Kit: (2) side panels, left and right; (1) panel top; (1) fastener package.

Included in Cast Trim Kit: (2) cast trim legs, left and right; (1) cast trim header; (2) cast trim footers, left and right; (1) fastener package.

Tools Needed: Powered Phillips head screw driver

1. Remove contents from box being careful not to scratch or damage the cast trim pieces.
2. Lay the surround set face down on protective covering to prevent scratching the painted surface.
3. Secure the surround legs to top panel with the screws provided.
4. Now bend the tabs down toward the backside of the panel set, 5 on top and 2 on each leg. Leave the panel set face down (**Figure 22.1**).
5. Place the corresponding cast trim pieces (2 cast trim legs and 1 cast trim header) underneath the panel set, also face down.
6. Place washer provided over tab and secure the trim and panel together with screw. Continue for all tabs.
7. Secure cast footers with screws.
8. Remove both left and right cast sides from insert (**Figure 22.5**).
9. Carefully slide surround and trim over the top of the insert into place matching the mounting holes on the panel with the mounting holes on the insert. Secure with screws provided (**Figure 22.5**).

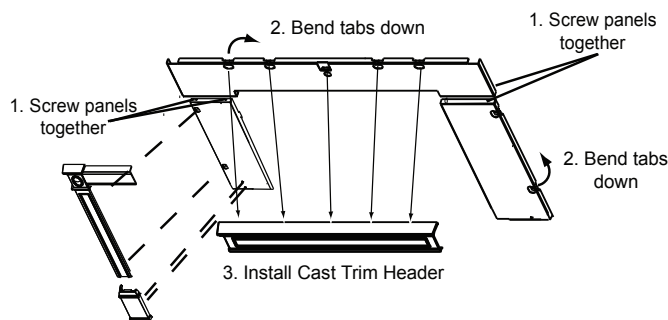


Figure 22.1

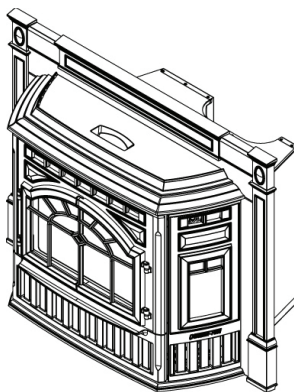


Figure 22.2- Completed View

F. Surround & Trim Set, Basic

Included in Surround & Trim Kit: (2) corner brackets and set screws; (1) trim set, 3 piece; (2) side panels; (1) top panel; (4) screws.

Tools Needed: Powered Phillips head screw driver

1. Secure the top panel to the surround sides with the screws provided (**Figure 20.3**).
2. Assemble the trim with the (2) corner brackets provided (**Figure 22.4**).
3. Remove the 2 cast sides and slide the assembled trim over the assembled surround set (**Figure 22.5**).
4. Carefully slide surround and trim over the top of the insert into place matching the mounting holes on the panel with the mounting holes on the insert. Secure with screws provided (**Figure 22.5**).

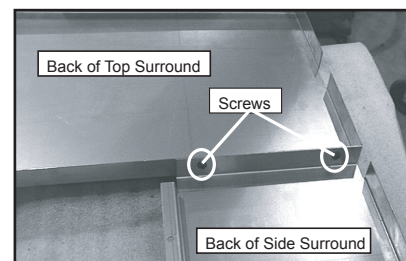


Figure 22.3

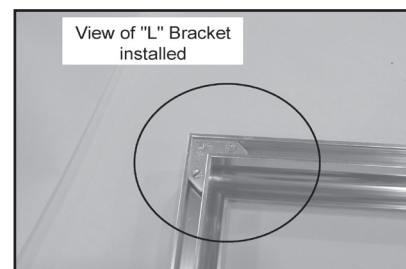


Figure 22.4

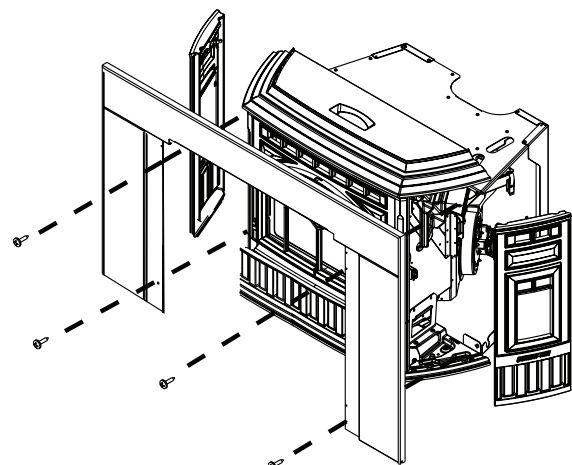


Figure 22.5

Shown with Trim Installed on Surround Set

G. Optional Log Set Placement Instructions

2 PIECE LOG SET INSTALLATION

1. Place the left log as shown. There are 2 indentations in the bottom of the log to fit over the screw heads in the firebox (**Figures 23.1 and 23.2**).
2. Place the right log in front of the 2 screw heads in the firebox (**Figures 23.3 and 23.4**).

CAUTION

Logs are FRAGILE. Use extreme care when handling or cleaning logs.

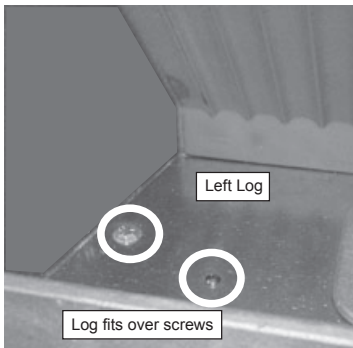


Figure 23.1

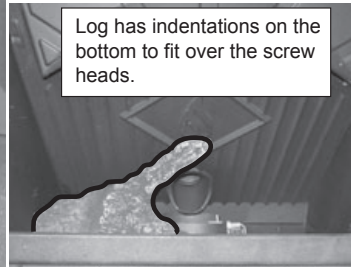


Figure 23.2

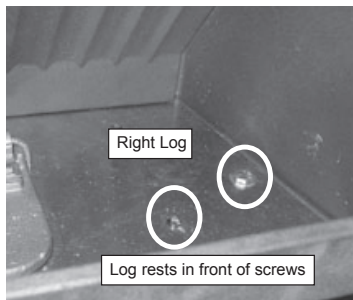


Figure 23.3

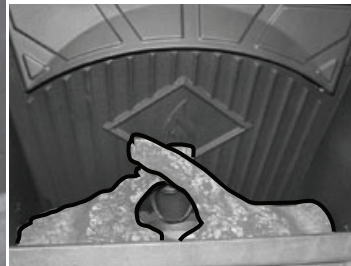


Figure 23.4

NOTICE: Due to the abrasive nature of a pellet appliance fire, the logs are not covered under warranty. Any placement variation other than shown here can cause excessive heat and shall void the appliance warranty.

H. Wall Control Thermostat Installation

1. When mounting the wall control thermostat on the wall, be sure to follow your wall control's installation instructions carefully.

NOTE: If the wall control thermostat is located too close to the appliance, you may need to set the temperature setting slightly higher to maintain the desired temperature in your home.

NOTE: The wall control thermostat should be mounted on an inside wall and not in direct line with the appliance convection air.

2. There is a 5 screw terminal block located at the lower left of the appliance, behind the cast side.

The center 3 screws are for the wall control thermostat wires and the 2 outer screws are mounting screw and should not have wires attached to them.

The thermostat wires are color coded. The green wire is on the top, the white in the middle and the red on the bottom (**Figure 23.5**).

There are colored dots corresponding with the same colored wire on the right side which are easily seen by the installer. If by chance it is put in upside down the dots will be on the left side and will not be visible.

CAUTION



Shock hazard.

- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

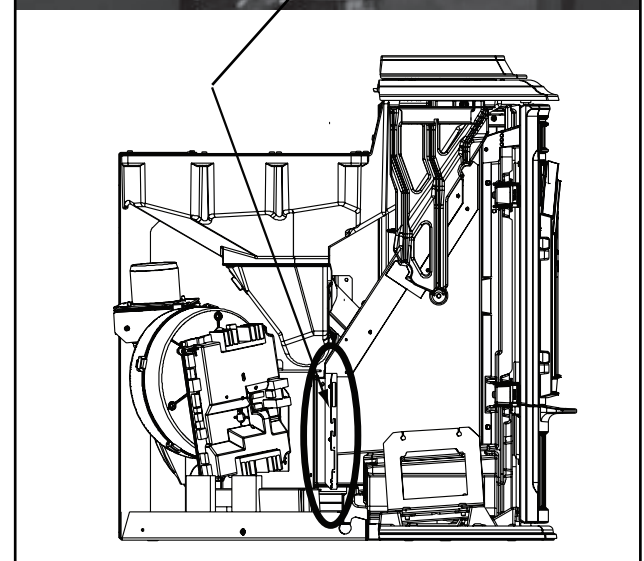
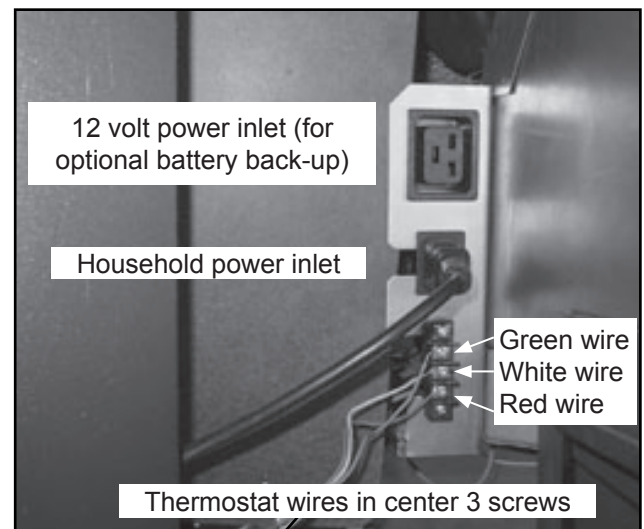


Figure 23.5

7 Mobile Home Installation

You must use a Quadra-Fire Outside Air Kit for installation in a mobile home.

1. An outside air inlet must be provided for the combustion air and must remain clear of leaves, debris, ice and/or snow. It must be unrestricted while the appliance is in use to prevent room air starvation which causes smoke spillage. Smoke spillage can also set off smoke alarms.
2. The combustion air duct system must be made of metal. It must permit zero clearance to combustible construction and prevent material from dropping into the inlet or into the area beneath the dwelling and contain a rodent screen.
3. The appliance must be secured to the mobile home structure by bolting it to the floor (using lag bolts). Use the same holes that secured the appliance to the shipping pallet.
4. The appliance must be grounded with #8 solid copper grounding wire or equivalent, terminated at each end with an NEC approved grounding device.
5. Refer to Clearances to Combustibles and floor protection requirements on **page 8** for listings to combustibles and appropriate chimney systems.
6. Use silicone to create an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.
7. Follow the chimney manufacturer's instructions when installing the vent system for use in a mobile home.
8. Installation shall be in accordance with the Manufacturers Home & Safety Standard (HUD) CFR 3280, Part 24.

Part Number: OAK-3



CAUTION

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage



WARNING

It is critical to have a working smoke detector installed in the home of appliance operation.

- Smoke alarms that are properly installed and maintained play a vital role in reducing fire deaths and injuries. Having a working smoke alarm reduces the chance of fire related injuries.



CAUTION

THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED

Do NOT cut through:

- Floor joist, wall, studs or ceiling trusses.
- Any supporting material that would affect the structural integrity.

This appliance is to be connected to a factory-built chimney conforming to **CAN/ULC-S629**, Standard for 650°C Factory-Built Chimneys.

For removal of the chimney for mobile home transportation, contact the proper transportation officials.

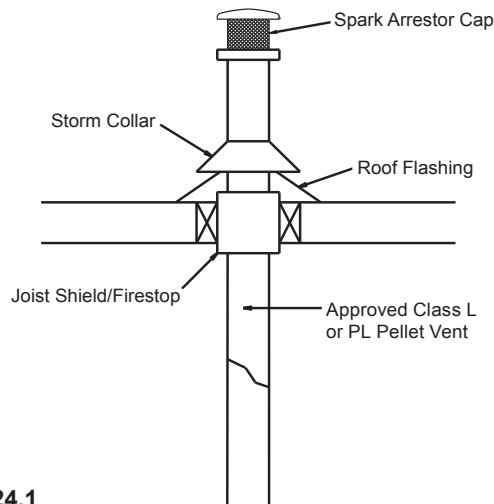


Figure 24.1



WARNING

Products of combustion generate carbon monoxide and different fuels generate different levels. Carbon monoxide:

- Only use approved fuels in this appliance.
- Always keep door shut during operation. Operating this appliance with doors open can allow CO to leak into the home.

CO can kill you before you are aware it is in your home. At lower levels of exposure, CO causes mild effects that are often mistaken for the flu. These symptoms include headaches, dizziness, disorientation, nausea and fatigue. The effects of CO exposure can vary greatly from person to person depending on age, overall health and the concentration and length of exposure.



WARNING

NEVER INSTALL IN A SLEEPING ROOM.

8 Accessory List

QUADRA-FIRE® Service Parts

MT VERNON INSERT-AE

 Beginning Manufacturing Date: Sept. 2006
 Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.


**Stocked
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	12 Volt Power Cord		12VCORD-AE	Y
	Brackets for Trim Insulation		SRV7022-503G	
	Damper, 3 Inch - Tall Vertical Installs Only		PEL-DAMP3	Y
	Damper, 4 Inch - Tall Vertical Installs Only		PEL-DAMP4	
	Firescreen	No Longer Available	SCR-7005	
	Hearth Support	No Longer Available	ZCSPT-MVI	
	Log Set (2 Pc)	Sold as set only	LOGS-60-AE-B	Y
	Outside Air Kit		OAK-3	
	Surround, Std, Panel, For Cast Trim		SP-MTVS-CST	
	Component Pack		7036-041	
	Surround, Std, Panel, w/Gold Trim	No Longer Available	SP-MTVS-GD	
	Component Pack		7036-042	
	Trim, Panel Set, Gold		SRV250-4660	
	Surround, Std, Panel w/Nickel Black Trim		SP-MTVS-NB	
	Component Pack		7036-042	
	Trim Set, Black Nickel		7019-027	
	Trim Cast	Matte Black	811-0930	
		Sienna Bronze	TR-CAST-CSB	
		No longer available	TR-CAST-CWL	
		Mahogany	811-0960	
	Footer, Left	Matte Black	414-7090MBK	
		Sienna Bronze	414-7090CSB	
		No longer available	414-7090CWL	
		Mahogany	414-7090PMH	
	Footer, Right	Matte Black	414-7100MBK	
		Sienna Bronze	414-7100CSB	
		No longer available	414-7100CWL	
		Mahogany	414-7100PMH	
	Header	Matte Black	414-7110MBK	
		Sienna Bronze	414-7110CSB	
		No longer available	414-7110CWL	
		Mahogany	414-7110PMH	
	Trim Leg, Left	Matte Black	414-7120MBK	
		Sienna Bronze	414-7120CSB	
		No longer available	414-7120CWL	
		Mahogany	414-7120PMH	
	Trim Leg, Right	Matte Black	414-7130MBK	
		Sienna Bronze	414-7130CSB	
		No longer available	414-7130CWL	
		Mahogany	414-7130PMH	



CONTACT INFORMATION

Hearth & Home Technologies
352 Mountain House Road
Halifax, PA 17032
Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.
For the number of your nearest Quadra-Fire dealer
log onto www.quadrafire.com

CAUTION



DO NOT DISCARD THIS MANUAL

Important operating and maintenance instructions included.

- Read, understand and follow these instructions for safe installation and operation.

- Leave this manual with party responsible for use and operation.

**DO NOT
DISCARD**

We recommend that you record the following pertinent information for your heating appliance.

Date purchased/installed: _____

Serial Number: _____ Location on appliance: _____

Dealership purchased from: _____ Dealer phone: 1(____)____ - _____

Notes: _____

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.

