

Installation Manual

Installation & Appliance Set-Up

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

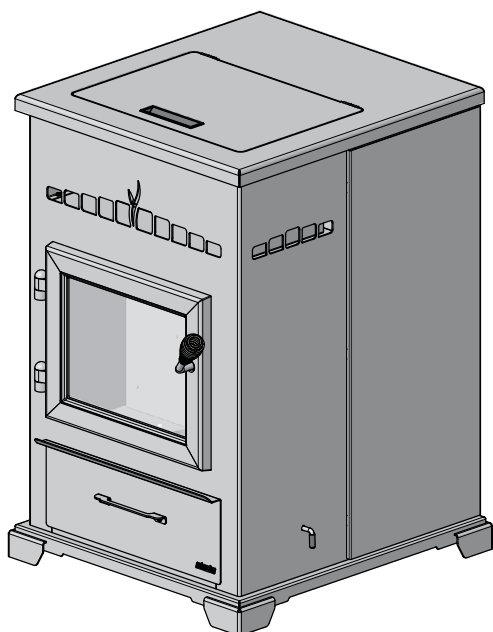
OWNER: Retain this manual for future reference.

NOTICE: DO NOT DISCARD THIS MANUAL

QUADRA-FIRE®

PELLET BURNING APPLIANCE

**MODEL NUMBER:
CAB50-C**



CAUTION

Tested and approved for wood pellets, Burning of any other type of fuel voids your warranty.

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

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.

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

REMARQUE : 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.

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→ = Contains updated information

1 Important Safety Information

A. Appliance Certification

Model	CAB50-C
Laboratory	Intertek
Report No.	100358108PRT-005
Type	Solid Fuel Room Appliance/Pellet Fuel Burning Type
Standard	ASTM E1509-04 and ULC S627-00 Room Appliance Pellet Fuel Burning type and (UM) 84-HUD, Mobile Home Approved.

B. Appliance Emissions Certification

Model	CAB50-C
Laboratory	OMNI Test Laboratories, Inc.
Report No.	0061PS085E
Standard	Method 28R, ASTM E1509-04 and ASTM E2779
Can be found at: www.quadrafire.com/about-us/epa-certification	

C. BTU & Efficiency Specifications

EPA Certification Number:	Number: N/A
EPA Certified Emissions:	1.0 grams per hour
*LHV Tested Efficiency:	69.5%
**HHV Tested Efficiency:	65.1%
***EPA BTU Output:	7,500 to 36,600 per hr
****BTU Input:	13,100 to 49,900 per hr
Vent Size:	3" or 4" Type "L" or "PL"
Hopper Capacity:	120 lbs.
Fuel	Premium Wood Pellets
* Weighted average LHV (Low Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
** Weighted average HHV (High Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
*** A range of BTU outputs calculated using HHV efficiency and the burn rates from the 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.	

The CAB50-C is Certified to comply with 2020 particulate emission standards.



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

NOTICE: This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-04, ULC S627-00 and (UM) 84-HUD.**

D. Glass Specifications

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

E. Electrical Rating (on high)

115 VAC, 60 Hz, Start 5.1 Amps, Run 3.0 Amps

F. 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, and use only listed double-wall connector pipe.
- Outside Air Kit, part 811-0872 or OAK-3 must be installed in a mobile home installation.
- Appliance must be secured to mobile home structure.

G. Non-Combustible Materials

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

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

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

H. Combustible Materials

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

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

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

I. Sleeping Room

When installed in a sleeping room it is recommended that 3ft of vertical be installed prior to horizontally exiting the room and a smoke/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, outside air must be installed.

J. Stove Composition

These pellet burning stoves are made of steel, cast iron or a combination of both with a ceramic viewing glass. These stoves incorporate a self-feeding system including a fuel storage hopper and a mechanical feed system which is controlled by a micro-processing control board. Each model contains a variable speed distribution blower to circulate room air through the heat exchanger and out to the room and a combustion blower which forces the exhaust out of the stove.

K. 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.

Install Guide

2 Getting Started

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.

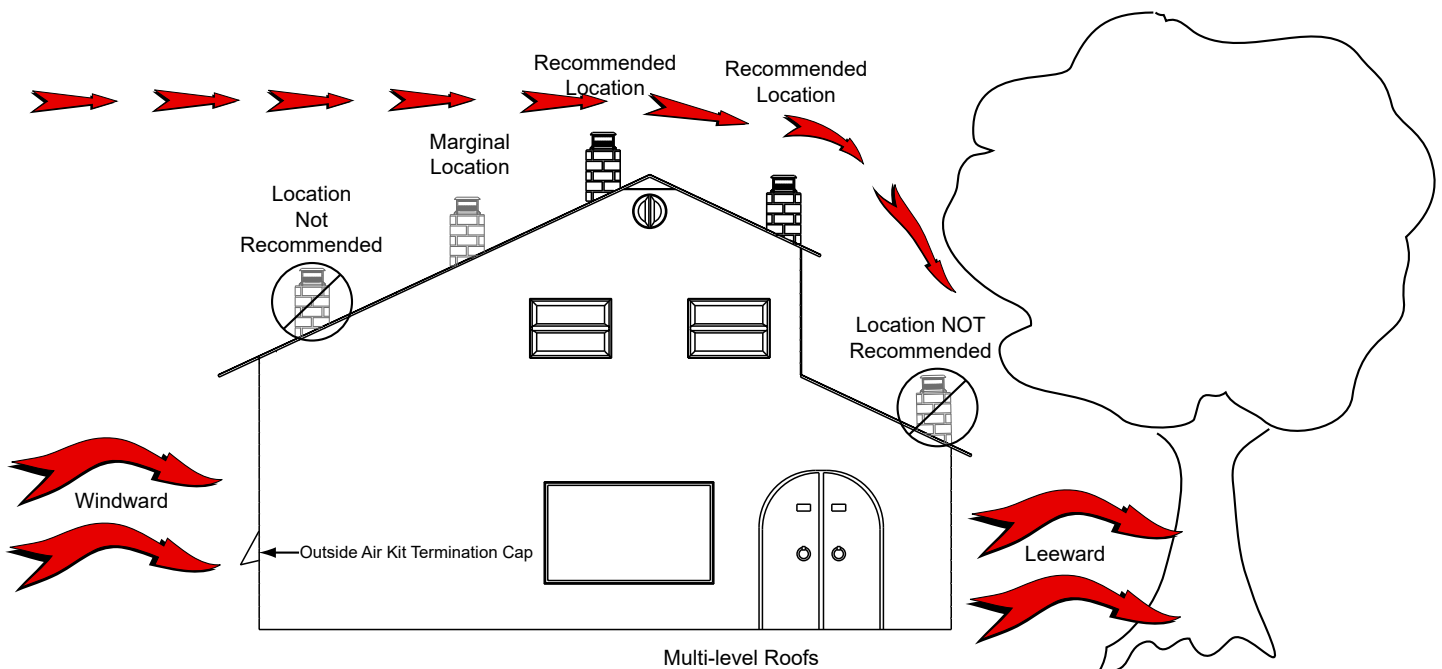


Figure 5.1

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 240 lbs.



WARNING

Risk of Fire.

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

B. Thermostat Wall Control Location

The thermostat wall control's location will have some effect 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.

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

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.**

	WARNING
	Risk of Fire! <ul style="list-style-type: none">• Damaged parts could impair safe operation.• Do NOT install damaged, incomplete or substitute components.

	WARNING
	Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions: <ul style="list-style-type: none">• 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).• <u>Do NOT Over fire!</u> Or any such action that may cause a fire hazard.

E. Install 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: _____
 Date Installed: _____
 Lot/Address: _____
 Location of Appliance: _____
 Installer: _____
 Dealer/Distributor Phone Number: _____
 Serial Number: _____
 Model Name: _____



WARNING! Risk of Fire or Explosion! Failure to install appliance to these instructions can lead to a fire or explosion.

Appliance Install

Verified clearance to combustibles.
 Appliance is leveled and connector is secured to appliance.
 Hearth extension size/height decided.
 Outside air kit installed.
 Floor protection requirements have been met.
 If appliance is connected to a masonry chimney, it should be cleaned and inspected by a professional. If installed to a factory built metal chimney, the chimney must be installed according to the manufacturer's instructions and clearances.

YES

IF NO, WHY?

Venting/Chimney

Chimney configuration complies with diagrams.
 Chimney installed, locked and secured in place with proper clearance.
 Chimney meets recommended height requirements (5 feet minimum vertical).
 Roof flashing installed and sealed.
 Terminations installed and sealed.

Electrical

120 VAC unswitched power provided to the appliance.
 Check outlet with multi-meter for proper polarity and voltage (115-120 VAC).
 Record voltage reading: _____

Clearances

Verified all clearances meet installation manual requirements.
 Mantels and wall projections comply with installation manual requirements.
 Floor protection and heart extensions installed per manual requirements.

Appliance Setup

All protective materials removed.
 All labels have been removed from the door.
 All packaging materials are removed from inside/under appliance.
 Manual bag and all of its contents are removed from inside/under the appliance and given to the party responsible for use and operation.
 Started appliance and verified that all motors and blowers operate as they should.
 Checked draft using a Manometer. Record readings: _____
 Checked vacuum using a Manometer. Record readings: _____

Hearth & Home Technologies recommends the following:

Photographing the installation and copying this checklist for your file.
 That this checklist remain visible at all times on the appliance until the installation is complete.

Comments: Further description of the issues, who is responsible (Installer/Builder/Other Trades, ets.) and corrective action needed:
 Comments communicated to party responsible _____ by _____ on _____
 (Builder/Gen. Contractor) (Installer) (Date)

3 Dimensions and Clearances

A. Appliance Dimensions

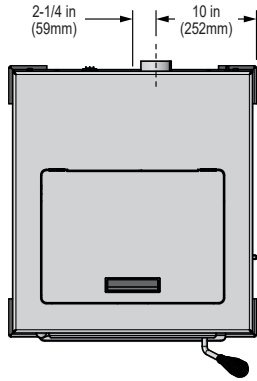


Figure 8.1 - Top View

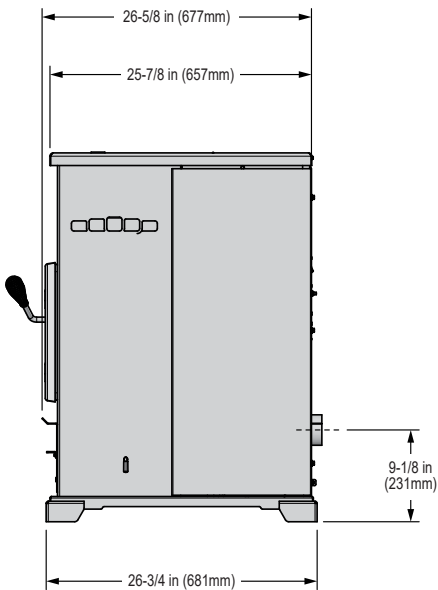


Figure 8.2 - Side View

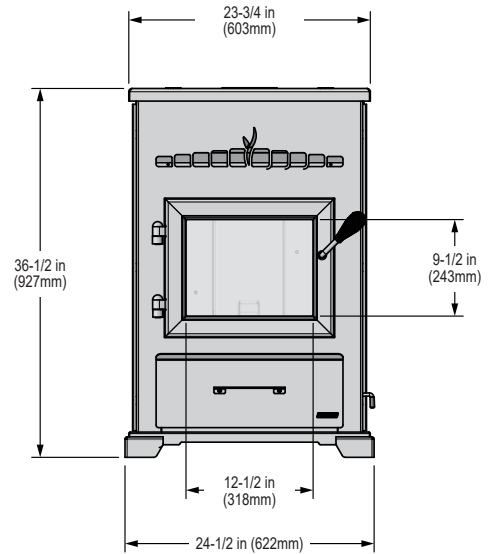


Figure 8.3 - Front View

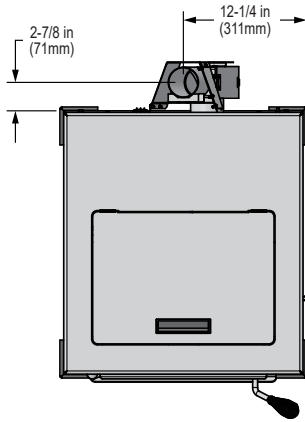


Figure 9.1 - Top View w/ Top Vent Adapter (TPVNT-5)

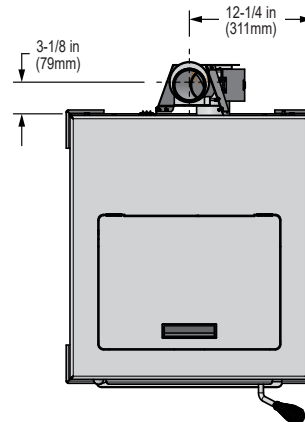


Figure 9.3 - Top View w/ Top Vent Adapter (TPVNT-5) & 3 to 4 inch Offset Adapter (811-0720)

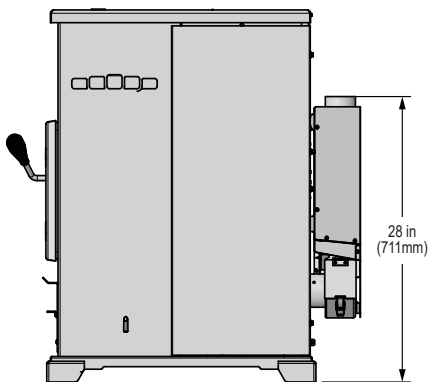


Figure 9.2 - Side View w/ Top Vent Adapter (TPVNT-5)

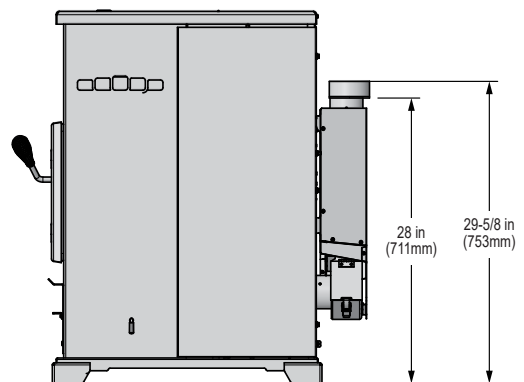


Figure 9.4 - Side View w/ Top Vent Adapter (TPVNT-5) & 3 to 4 inch Offset Adapter (811-0720)

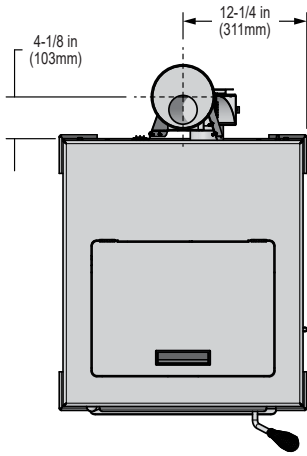


Figure 10.1 - Top View w/ Top Vent Adapter (TPVNT-5) & 3 to 6 inch Offset Adapter (812-3570)

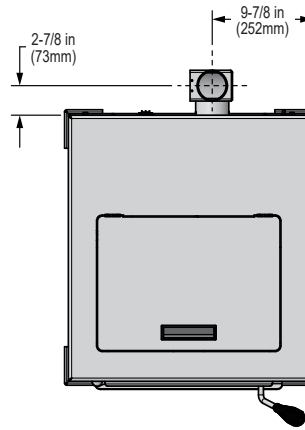


Figure 10.3 - Top View w/ Top Vent Adapter (TPVNT-6)

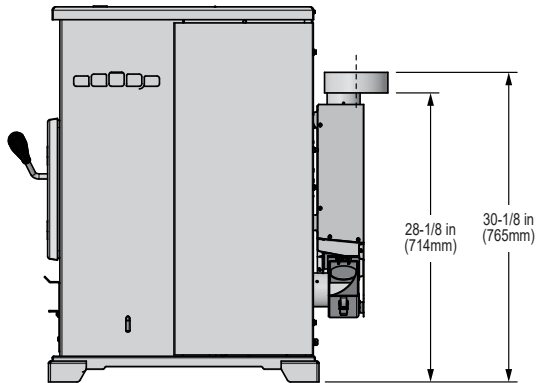


Figure 10.2 - Side View w/ Top Vent Adapter (TPVNT-5) & 3 to 6 inch Offset Adapter (812-3570)

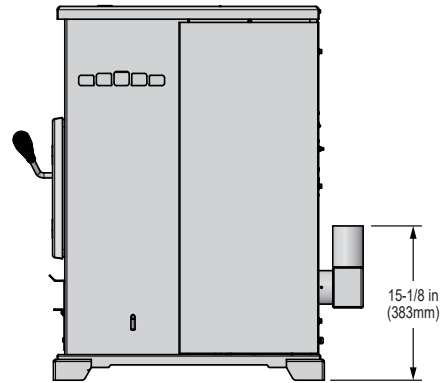


Figure 10.4 - Side View w/ Top Vent Adapter (TPVNT-6)

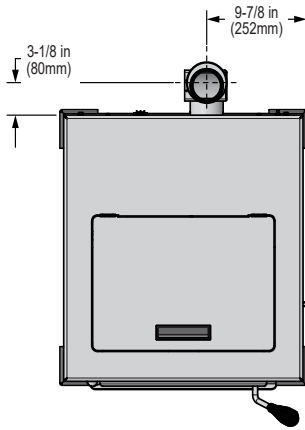


Figure 11.1 - Top View w/ Top Vent Adapter (TPVNT-6) & 3 to 4 inch Offset Adapter (811-0720)

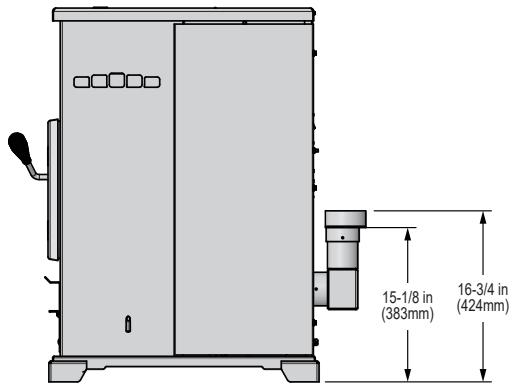
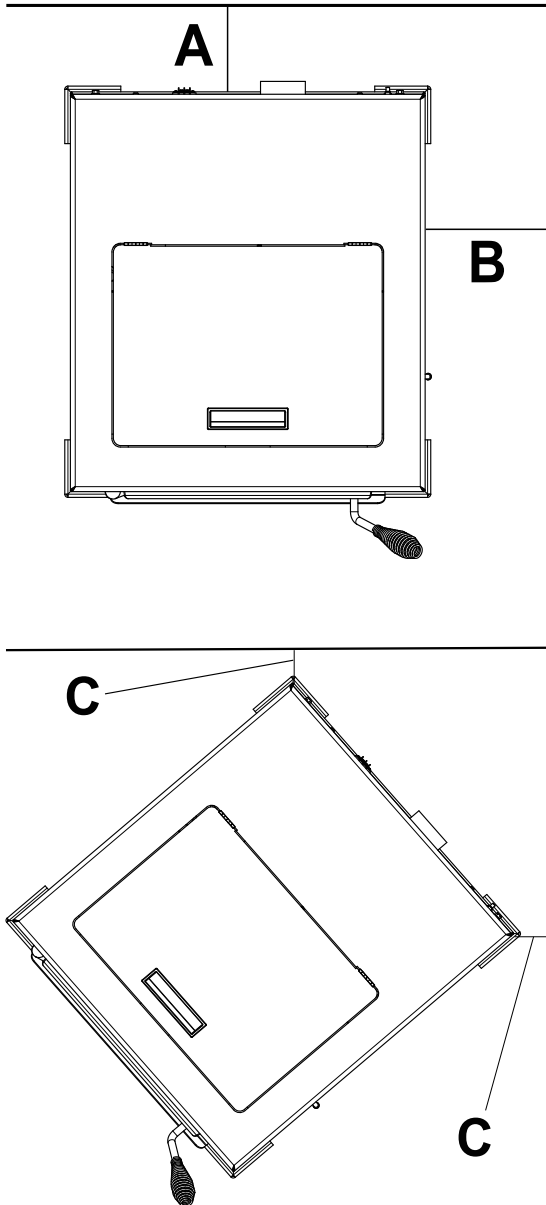


Figure 11.2 - Side View w/ Top Vent Adapter (TPVNT-6) & 3 to 4 inch Offset Adapter (811-0720)

B. Clearances to Combustibles (UL and ULC)



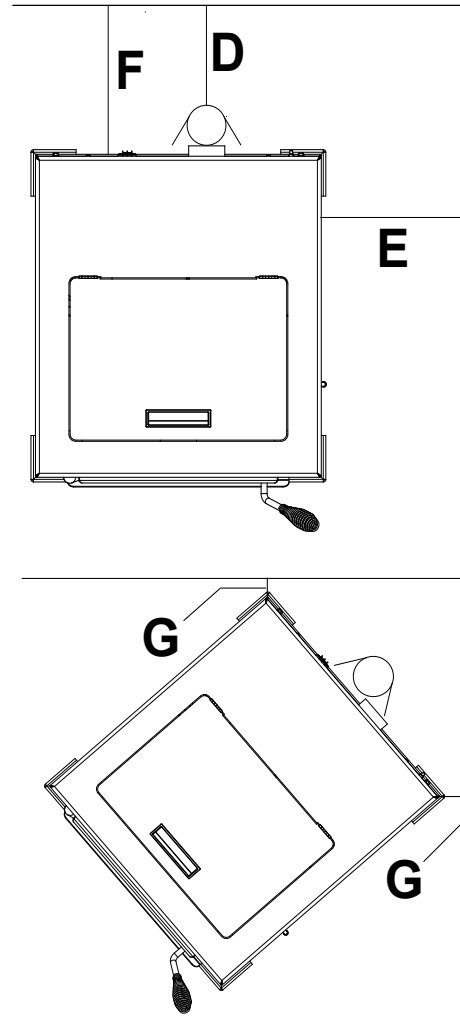
Straight Back Against Wall		Inches	Millimeters
A	Back Wall to Appliance	2	51
B	Side Wall to Appliance	14	356

Corner Installation		Inches	Millimeters
C	Walls to Appliance	2	51

Table 12.1

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.



Installations with 3 to 3 inch Top Vent Adapter

Vertical Installation		Inches	Millimeters
D	Back Wall to Adapter	1	25
E	Side Wall to Appliance	14	356
F	Back Wall to Appliance	6-1/4	159

Corner Installation		Inches	Millimeters
G	Walls to Appliance	2	51

Table 12.2

Installations with 3 to 6 inch Offset Adapter

Vertical Installation		Inches	Millimeters
D	Back Wall to Adapter	3	76
E	Side Wall to Appliance	14	356
F	Back Wall to Appliance	10-3/4	274

Corner Installation		Inches	Millimeters
G	Walls to Appliance	2	51

Table 12.3

C. Hearth Pad Requirements (UL and ULC)



CAUTION

Hearth and Home Technologies does not recommend adhesive based vinyl flooring due to thermal expansion. Floating-style flooring (LVP - luxury vinyl plank or LVT - luxury vinyl tile) can be used, but it will reach temperatures up to 110 °F in a room with ambient temperature of 70 °F. Consult flooring specifications to ensure compatibility.

When using LVP/LVT flooring, pellet stove and inserts require 29 inches of alternative flooring in front of the stove or insert before using LVP/LVT (luxury vinyl plank/tile flooring). Whether the stove or insert sits flush on the floor or is elevated on a raised hearth, 29 inches of alternative flooring is required in front of the stove or insert.

For all other flooring, continue to follow clearance to combustible requirements in the installation manual.

NOTICE: Clearances that do not meet the minimum guidelines could result in damage or buckling to the vinyl flooring and is done at the installer's risk.

EMBER PROTECTION: It is necessary to install a Type I floor protector.

Floor protector must be non-combustible material, extending beneath appliance with a minimum of 6 inches (152mm) in front of glass and 6 inches (152mm) to both sides of the fuel loading door. Open the door and measure 6 inches (152mm) from the side edge of the opening in the face of the appliance. ***See exception.**

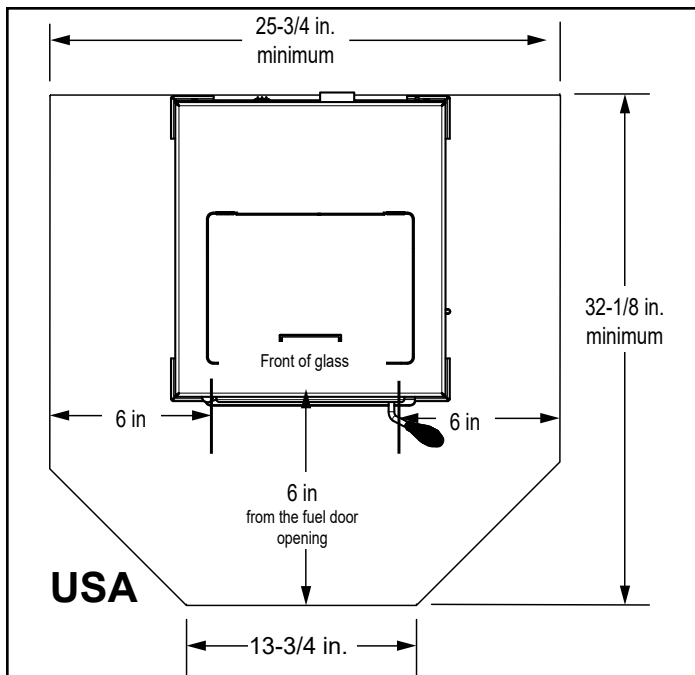


Figure 13.1

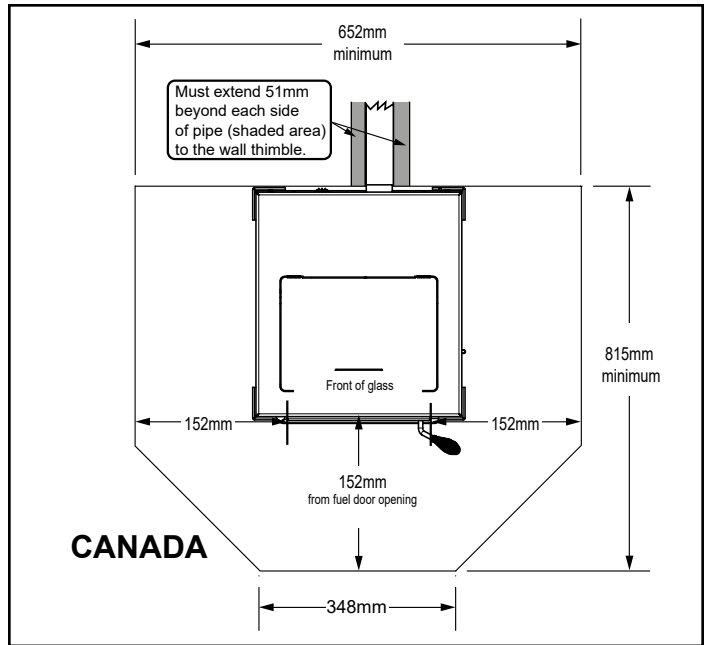


Figure 13.2

USA INSTALLATIONS: A non-combustible floor protection is recommended extending beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation.

CANADA INSTALLATIONS: A non-combustible floor protection extending beneath the flue pipe is **required** with horizontal venting or under the Top Vent Adapter with vertical installation.



WARNING



Fire Risk

Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.

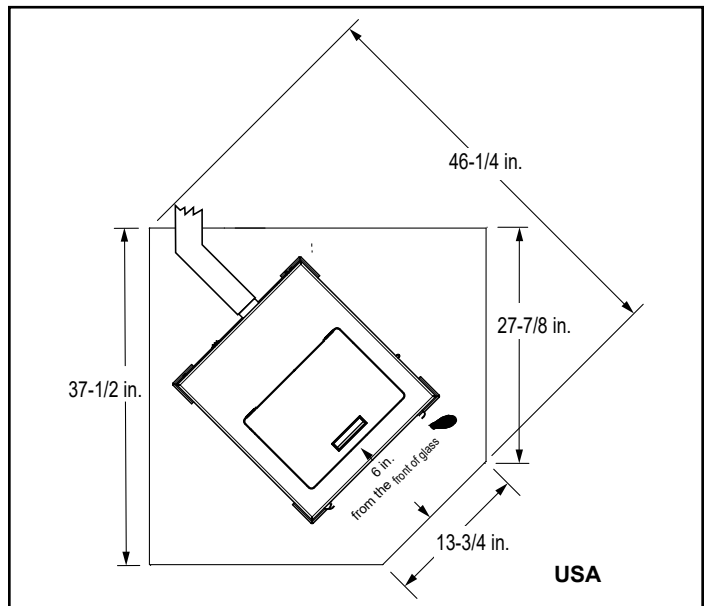


Figure 13.3

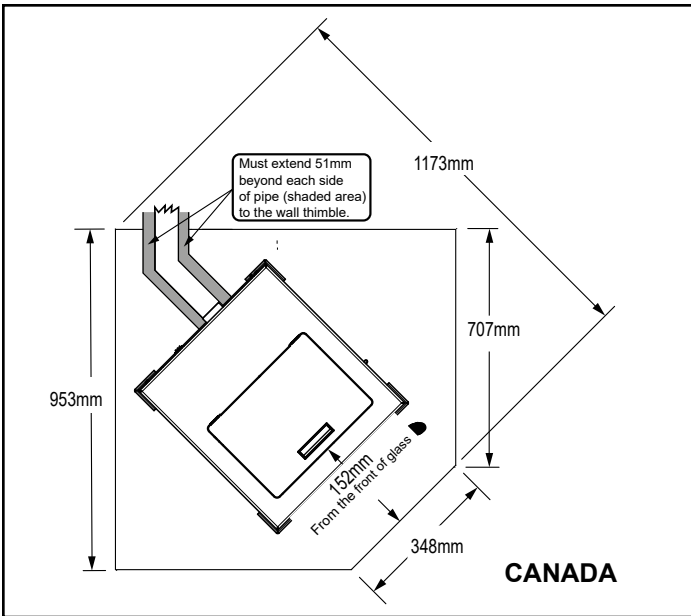


Figure 14.1

D. Alcove

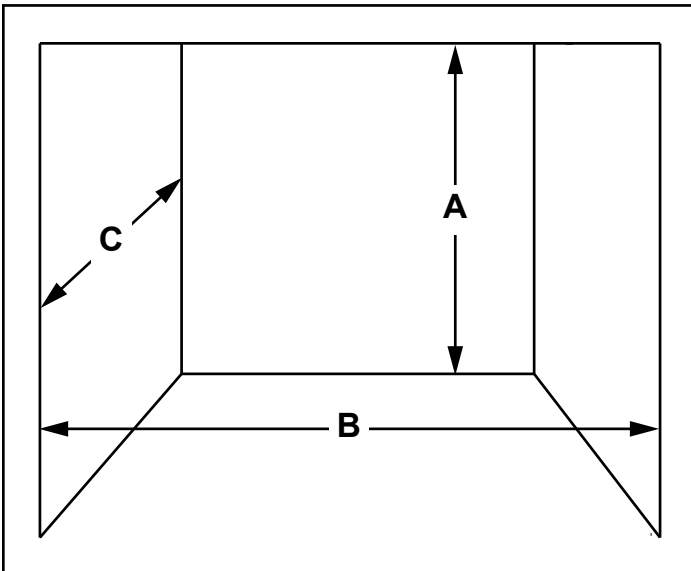


Figure 14.2

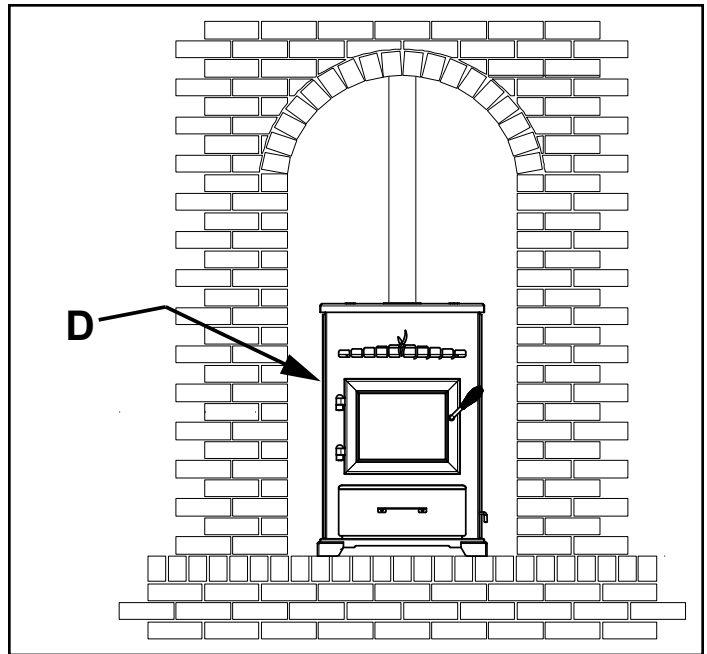


Figure 14.3

		Minimum*		Maximum	
		Inches	Millimeters	Inches	Millimeters
A	Height	56-3/4	1441	n/a	n/a
B	Width	53	1346	n/a	n/a
C	Depth	n/a	n/a	48	1219
D	To Side Wall	14	356	n/a	n/a

* All minimums listed are to a combustible surface.

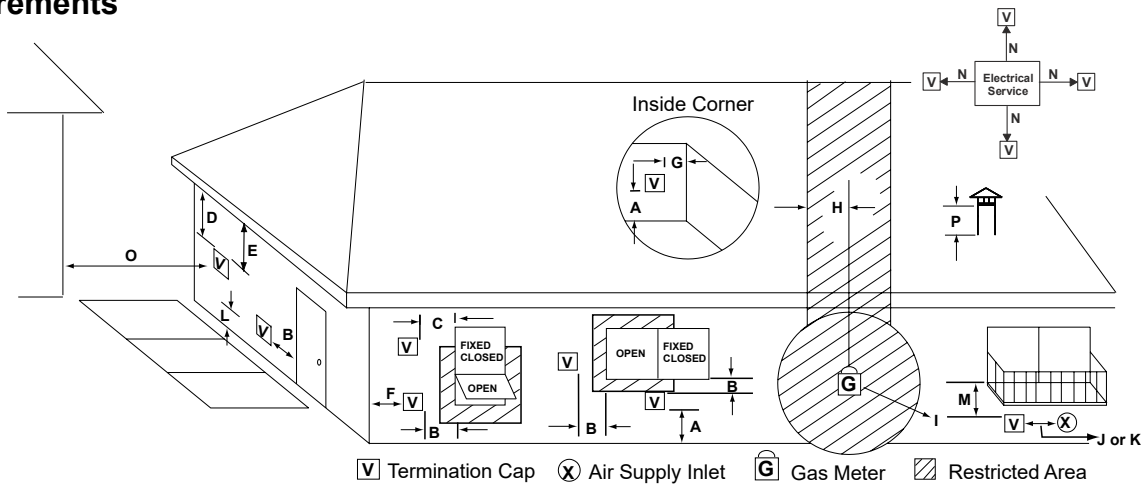
Table 14.1

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.

4 Vent Information

A. Venting Termination Minimum Requirements



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: 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.

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.

***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.

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. Minimum Vacuum Requirements

.075 inches W.C.

F. 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. Seal exhaust venting system to the unit with High Temp 500°F RTV silicone sealant. Secure the venting system to the unit with at least (3) screws. All pellet vent pipe must be secured together either by means provided by the pipe manufacturer or by (3) screws at 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: Follow venting manufacturers recommendations for sealing pipe joints.

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 18.1).

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

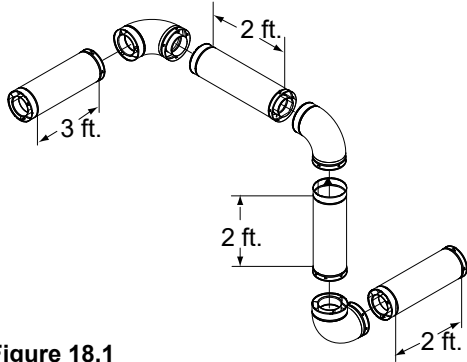


Figure 18.1

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

Table 18.1

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 18.2).

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.

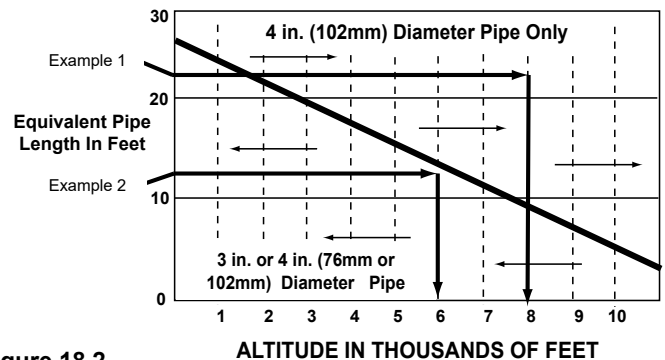


Figure 18.2

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.

- **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.

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. Through The Wall

Horizontal termination cap must be a minimum of 6 inches. (152mm) from the wall. Approved for mobile home installations. Must use 3 or 4 inch (76-102mm) "L" or "PL" listed pellet venting or Listed double wall pipe and an authorized Outside Air Kit in mobile homes.

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

CAUTION

We strongly recommend that you **DO NOT DOWNWARD VENT**.
The following may occur:

- The appliance will not vent properly
- Smoke spillage in the house
- Excessive sooting

NOTICE: Please note that while the minimum clearance for the termination cap is 6 inches (152mm) there is the possibility of soot build-up around the termination area. If this occurs we suggest to move the termination further away from the house to prevent it.

Straight Out

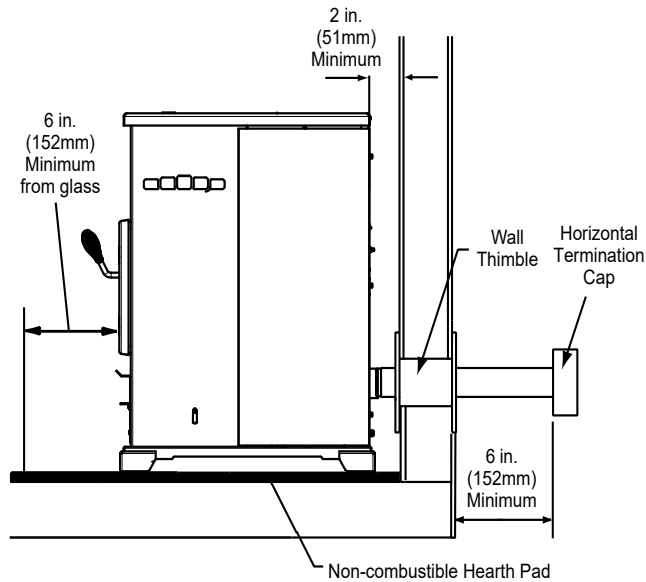


Figure 19.1

45 Degree

Illustration shows venting going in both directions. Choose which one is best for your installation.

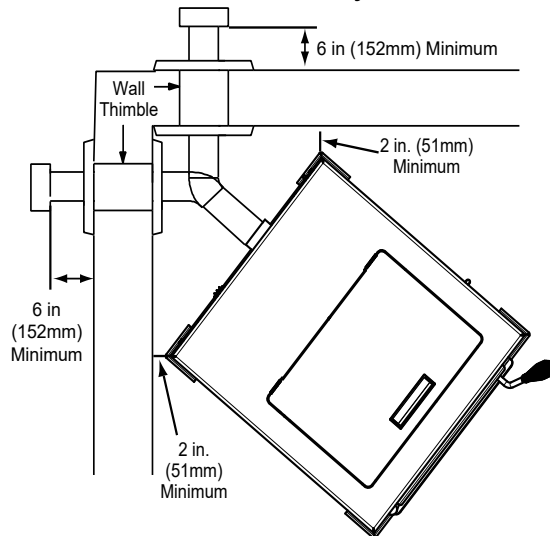


Figure 19.2

B. Vertical into Existing Class A Chimney

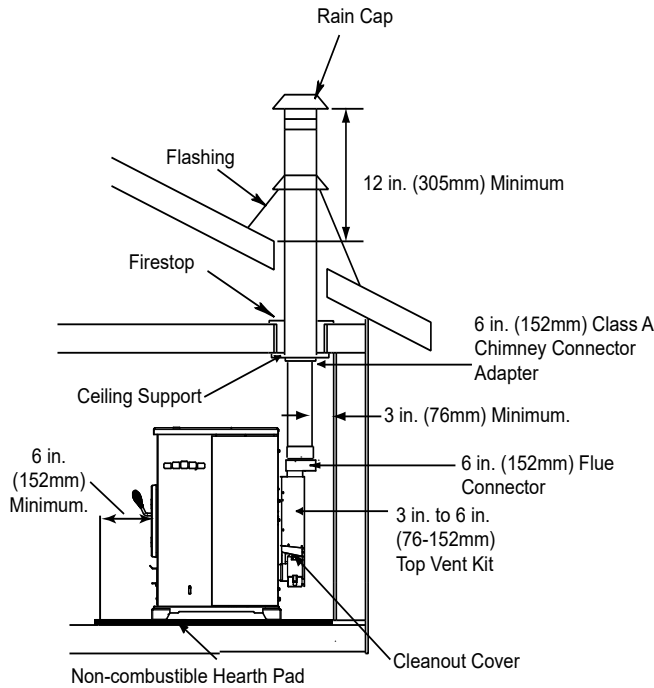


Figure 20.1

We strongly recommend a minimum of 60 inches (1.5m) vertical, however above the eave is preferred.

Both installations are approved for mobile home installations. Must use 3 or 4 inch (76 to 102mm) “L” or “PL” Listed pellet venting or Listed double wall pipe and authorized Outside Air Kit in mobile homes. Single wall pipe is approved for residential installations only.

Air Clearance to Pipe:

This appliance was tested with standard 3 inch (76mm) Listed pellet vent.

Pellet pipe manufactures Listed reduce clearance pipe may be use for reduce clearance from 3 inch (76mm) air clearance to no less than 1 inch (25mm) air clearance to combustibles for approved Listed pellet pipe.

Follow pipe manufactures listed air clearances to combustibles and installation instructions for all reduced air clearances installations.

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

C. Vertical - Interior - Typical Installation PREFERRED METHOD #1

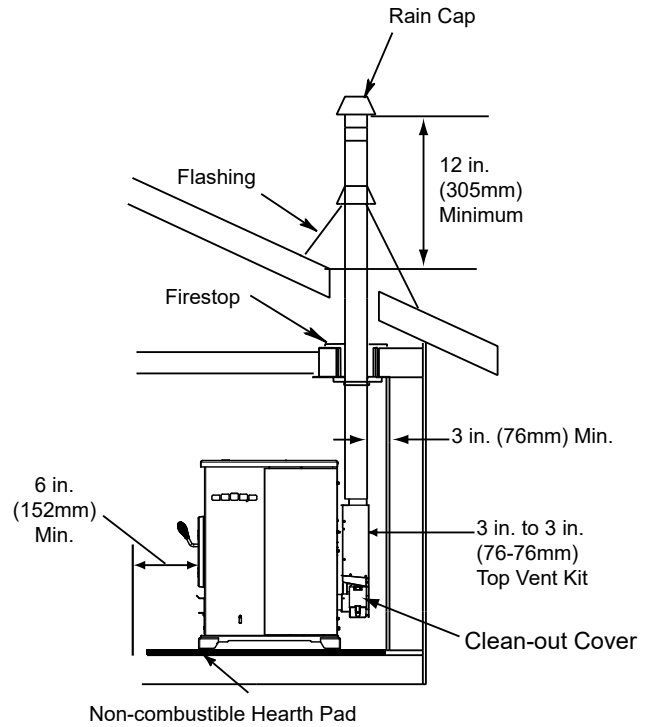


Figure 20.2

D. Through The Wall & Vertical - External PREFERRED METHOD #2

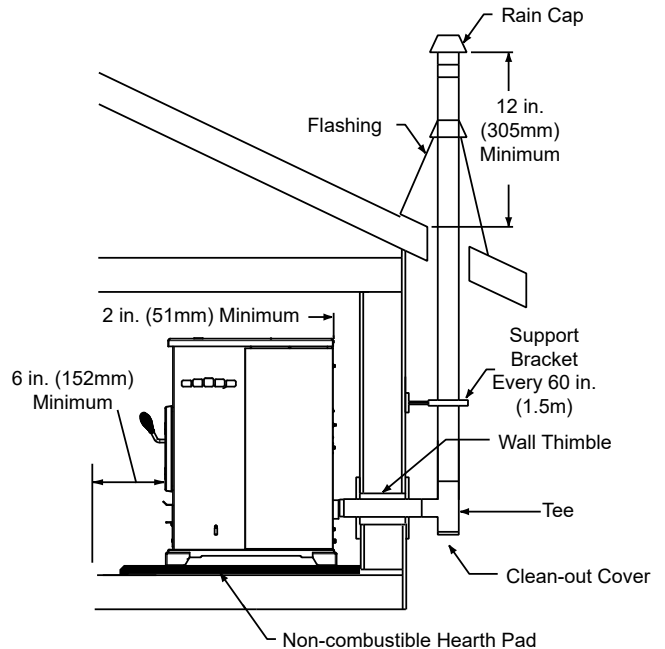



Figure 20.3

! WARNING	
	Fire Risk Inspection of Chimney:
	<ul style="list-style-type: none"> • 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.

E. Masonry

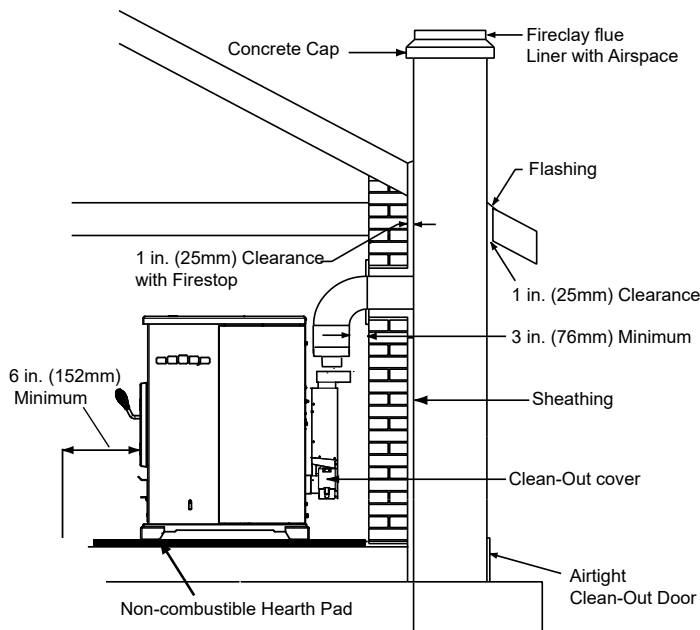


Figure 21.1

F. Alternate Masonry

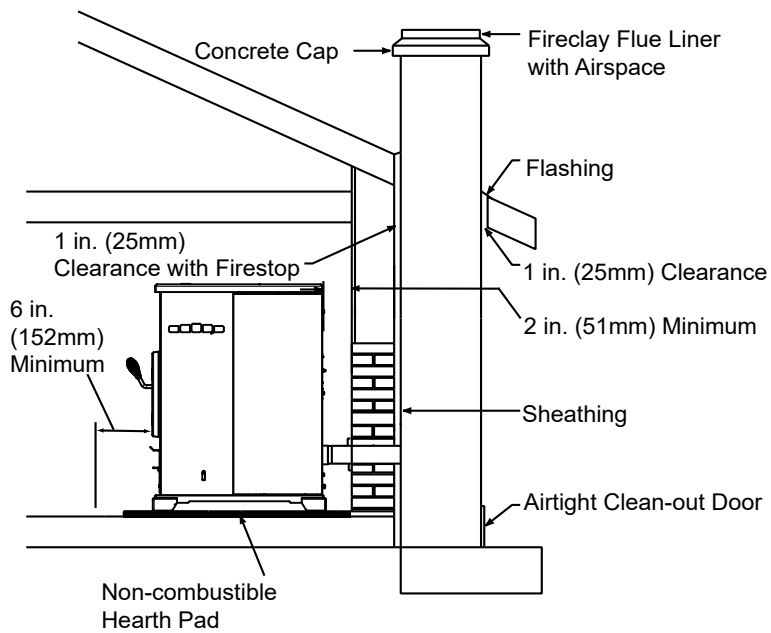


Figure 21.2

6 Appliance Set-Up

A. Outside Air Kit

There are two Outside Air Kits available for purchase with this appliance. Kit 811-0872 uses a 2 inch flex hose (which is included in the kit) and uses hose clamps to secure the hose.

Parts Included in 2 inch Kit 811-0872:

1 piece of 2 inch x 3 ft. flex hose, 2 hose clamps, 1 collar assembly, 1 termination cap assembly, trim ring, 1 intake air channel, fasteners (Discard the air intake channel, it is not needed for this appliance, **Figure 22.2**).

Tools Needed:

Phillips Head screw driver; wire cutters; and hole saw or jig saw.

1. Measure distance from floor to air vent opening in appliance and mark location on wall.
2. Use a saw to cut opening in wall:
 - **2 inch kit:** Cut a 2-1/2 to 3 inch opening on inside wall and a 3 to 3-1/2 inch opening on outside of house.
3. Use wire tie or hose clamp depending on the Outside Air Kit to secure flex pipe to collar assembly.
4. Slide trim ring over flex pipe and run pipe through wall.
5. Attach flex pipe to outside termination cap with second wire tie or hose clamp.
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

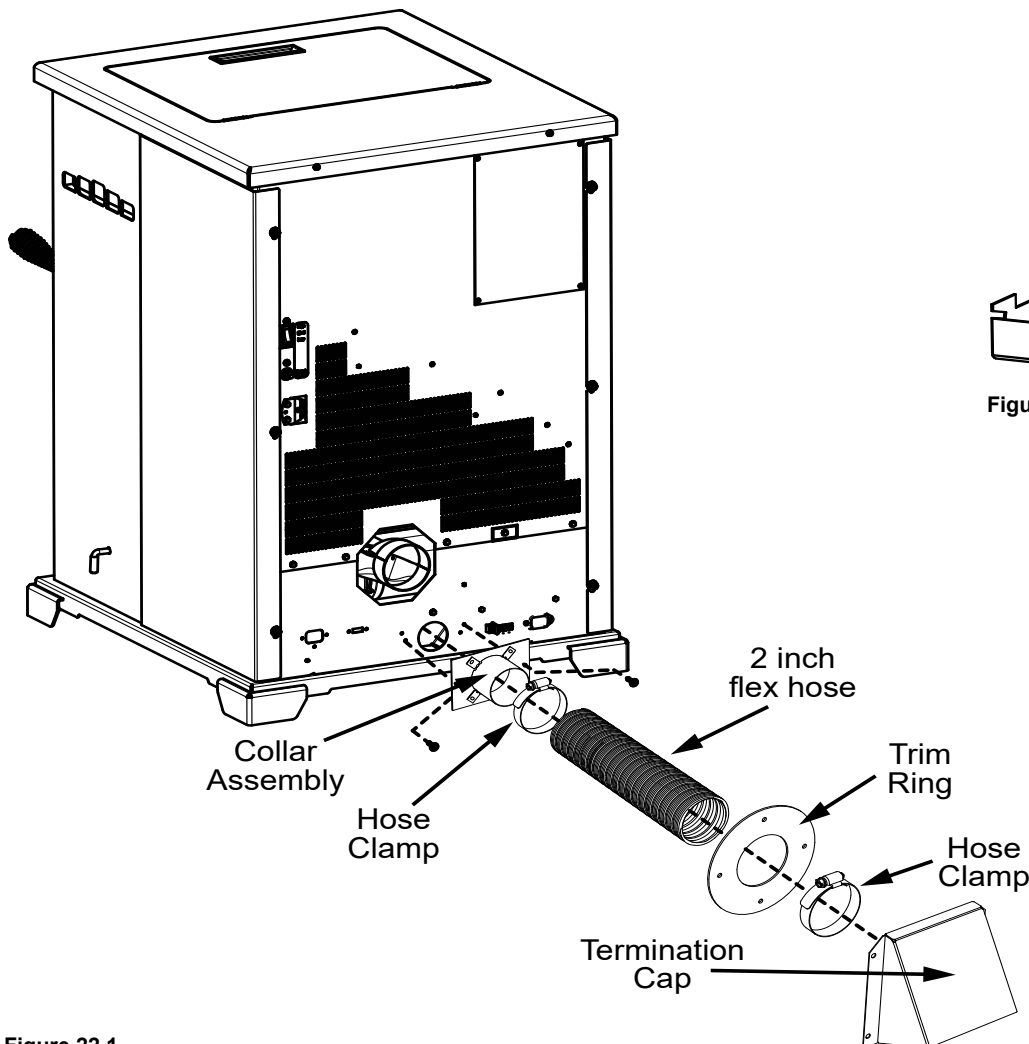


Figure 22.1

Air Intake Channel
(Discard)

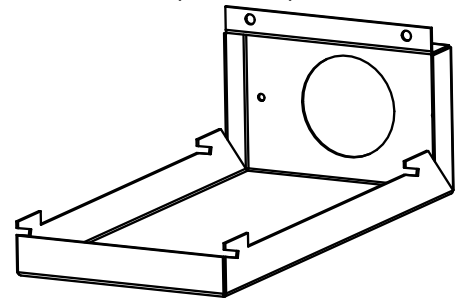


Figure 22.2

B. Top Vent Adapter Installation

3 to 3 inch Top Vent Adapter 3 to 6 inch Top Vent Offset Adapter

1. Put a layer of high temperature silicone on the 3 inch (76mm) exhaust outlet. Do not put silicone inside of pipe (**Figure 23.1**).
2. Slide the top vent adapter onto the rear exhaust outlet and adjust the assembly to a vertical position (**Figure 23.1**).
3. Drill 4 holes with #26 drill bit (provided) into the back of the appliance using the outer shield as a pattern (make sure the assembly is vertical) (**Figure 23.1**).
4. Install the 4 mounting screws.
5. Drill 2 holes with #26 drill bit through the rear exhaust outlet using the 2 holes already in the short horizontal pipe in the top vent adapter as a guide. Install the 2 screws (**Figure 23.1**).
6. Install the vent pipe into the top vent adapter.
7. To clean the top vent adapter open the clean-out cover (**Figure 23.1**).

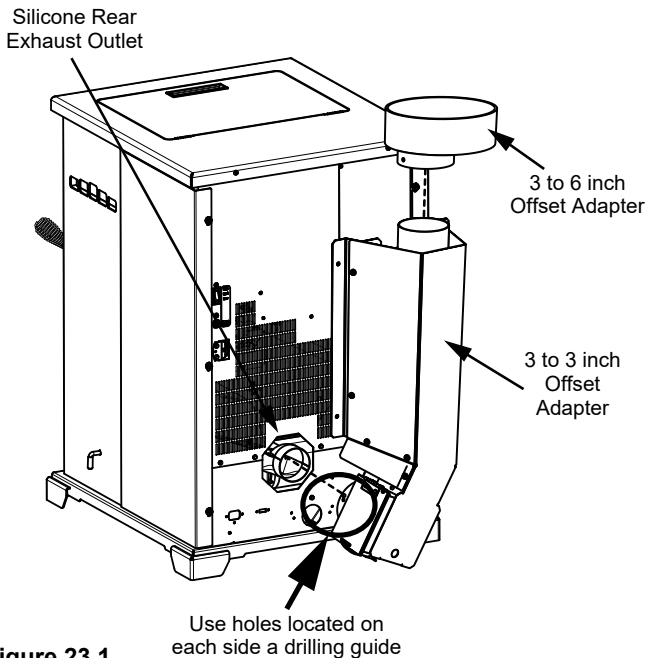


Figure 23.1

C. Rear Vent Adapter Installations

1. Put a layer of high temperature silicone on the 3 inch (76mm) exhaust outlet. Do not put silicone inside of pipe (**Figure 23.1**).
2. Slide the adapter onto the rear exhaust outlet and adjust the assembly to the appropriate position.
3. Install the vent pipe into the adapter.

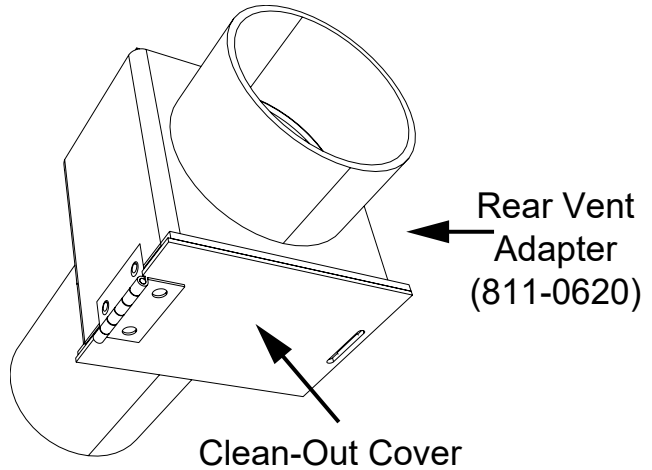


Figure 23.2 - Rear Vent Adapter (811-0620)

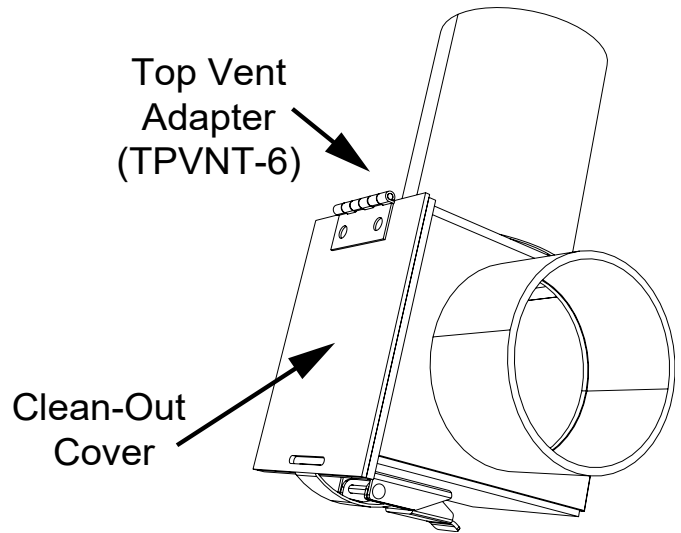


Figure 23.3 - 90° Rear to Top Vent Adapter (TPVNT-6)

D. Thermostat Installation

1. A low voltage thermostat is required to operate this pellet appliance. You may use the included wall mount thermostat (**Figure 24.1**) or purchase an optional programmable thermostat or remote control. It is equipped with an adjustable heat anticipator. The current rating is .05 amps. The anticipator needs to be adjusted to the lowest setting available.
2. The appliance comes standard with a wall thermostat and 25 feet of wire. If you need to run more than 25 feet make sure you use a continuous strand of 18 to 22 gauge thermostat wire.
3. When mounting the thermostat to the wall, be sure to follow your thermostat installation instructions carefully:
 - a. There is a four (4) screw terminal block located on the back lower left corner of the stove directly to the side of the power cord inlet. The center two (2) screws are for the thermostat wires; attach thermostat wire to these two screws (**Figure 24.2**).
 - b. Separate the body of the thermostat from the mounting plate by gently pulling the two pieces apart.
 - c. Slide thermostat wires through the back of the mounting plate (**Figure 24.3**).
 - d. Connect your thermostat wire to the terminals (**Figure 24.4**).
 - e. Using the hardware included in the box with the thermostat, screw the backer plate to the wall (**Figure 24.5**).

NOTE: Thermostat must be mounted level for accurate readings. The thermostat should be mounted on an inside wall approximately five (5) feet up from the floor and not in direct line with the appliance convection air.

NOTE: If the 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.

- f. Snap the thermostat to the cover plate to the backer plate (**Figure 24.1**).

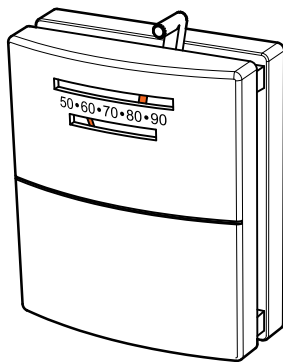


Figure 24.1

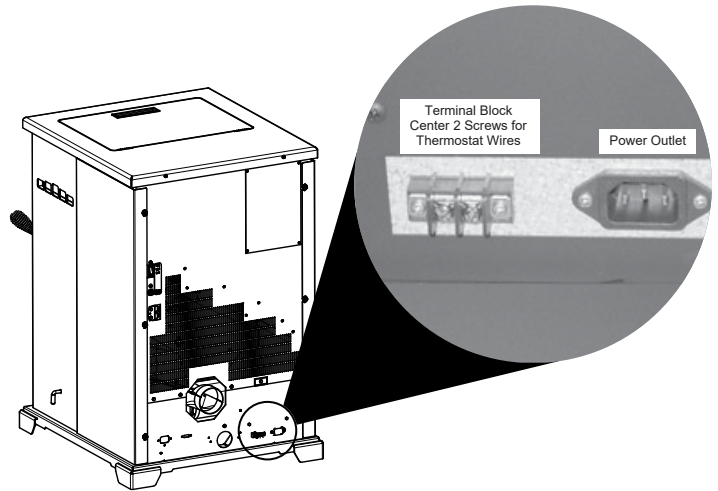


Figure 24.2

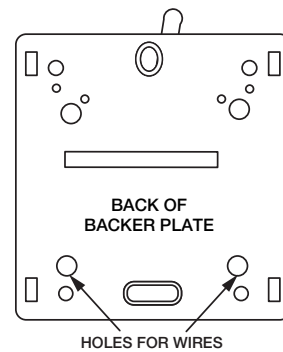


Figure 24.3

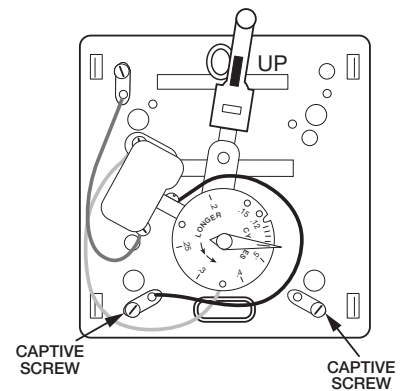


Figure 24.4

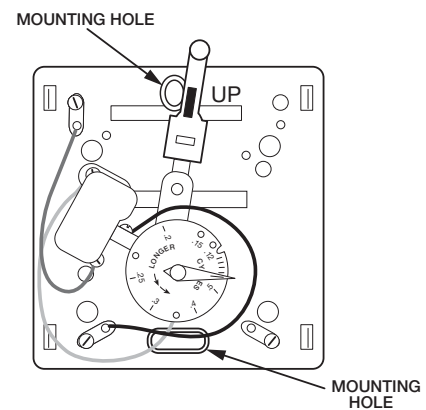



Figure 24.5


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 12](#) 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 Numbers: 811-0872
OAK-3

 WARNING
<p>Products of combustion generate carbon monoxide and different fuels generate different levels.</p> <p>Carbon monoxide:</p> <ul style="list-style-type: none"> • 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. <p>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.</p>

 CAUTION
<p>THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED</p> <p><u>Do NOT cut through:</u></p> <ul style="list-style-type: none"> • Floor joist, wall, studs or ceiling trusses. • Any supporting material that would affect the structural integrity. <p>This appliance is to be connected to a factory-built chimney conforming to CAN/ULC-S629, Standard for 650°C Factory-Built Chimneys.</p> <p>For removal of the chimney for mobile home transportation, contact the proper transportation officials.</p>

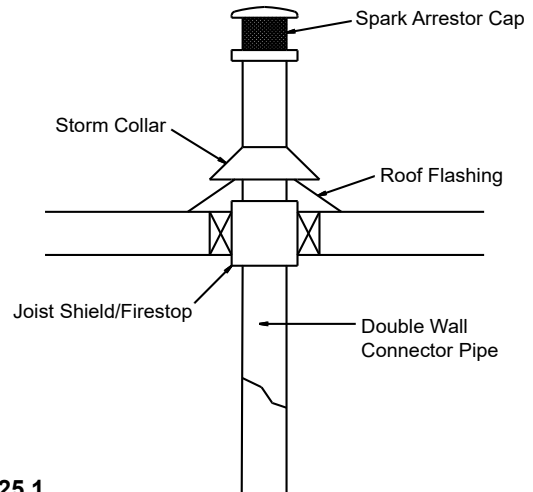




Figure 25.1

 CAUTION
<p>Never draw outside combustion air from:</p> <ul style="list-style-type: none"> • Wall, floor or ceiling cavity • Enclosed space such as an attic or garage

 WARNING
<p>It is critical to have a working smoke detector installed in the home of appliance operation.</p> <ul style="list-style-type: none"> • 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.

 WARNING
<p>NEVER INSTALL IN A SLEEPING ROOM.</p>

8 Reference Materials

A. Service & Maintenance Log

Date of Service	Performed By	Description of Service

Date of Service	Performed By	Description of Service

Date of Service	Performed By	Description of Service

Date of Service	Performed By	Description of Service

B. Accessory List

QUADRA-FIRE® Service Parts

CAB50-C

Beginning Manufacturing Date: Mar 2019
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	
	Hose Barb Assembly		SRV229-0920	
	Damper, 4 Inch		PEL-DAMP4	
	Outside Air Kit, 3"		OAK-3	
	Outside Air Kit, 2"		811-0872	
	Hose, Alum Flex, 2 Inch X 3 Ft	3 Ft	SRV200-0860	
	Outside Air Cap Assembly		7001-044	
	Outside Air Collar Assembly		SRV7001-045	
	Trim Plate, Outside Air Kit		412-7100	
	Pull Rod Handle		PULLROD-HNDL	
	Reset Button Assembly		SRV7000-040	
	Smart-Batt II	No longer available	SMARTBATT-B	
	Smart-Stat II		SMART-STAT-HHT	
	Thermostat, Programmable		811-0520	
	Top Vent Adapter		TPVNT-5	
	Component Pack, TPNVT		SRV7058-054	
	Vent Adapter, 3-4"		811-0720	
	Vent Adapter, 3"-6"		812-3570	
	Baffle Center Back		SRV7058-166	

Additional Service Parts on following page.

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	
Fastener Packs				
	Rivnut Repair Kit		RIVNUT-REPAIR	Y
	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
	Guide Pin Sleeve	Pkg of 25	31120/25	Y
	Hurricane Screw	Pkg of 40	SRV2005-861/40	
	Nut, 2-Wy Side-Lock Jam 3	Pkg of 24	226-0100/24	Y
	Nut, Lock 1/4-20	Pkg of 25	226-0090/25	Y
	Nut, Ser Flange Small 1/4-20	Pkg of 24	226-0130/24	Y
	Screw 8 - 32x3/8 HWH BK	Pkg of 40	SRV060-883/40	
	Screw Hwh Ms 1/4-20 X 3/4 Ns	Pkg of 25	220-0080/25	Y
	Screw, Sheet Metal #8 X 1/2 S-Grip	Pkg of 40	12460/40	Y
	Thumbscrew, 1/4-20 X 3/4	Pkg of 10	844-5070	
	Washer, 1/4 Sae	Pkg of 24	28758/24	Y
	Washer, Sae	Pkg of 25	227-0080/25	Y
	Wing Thumb Screw 8-32X1/2	Pkg of 24	7000-223/24	Y

QUADRA-FIRE®

NOTHING BURNS LIKE A QUAD

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 of this appliance.



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.


HEARTH & HOME
technologies™