

Installation Manual

Installation & Appliance Set-Up

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

OWNER: Retain this manual for future reference.

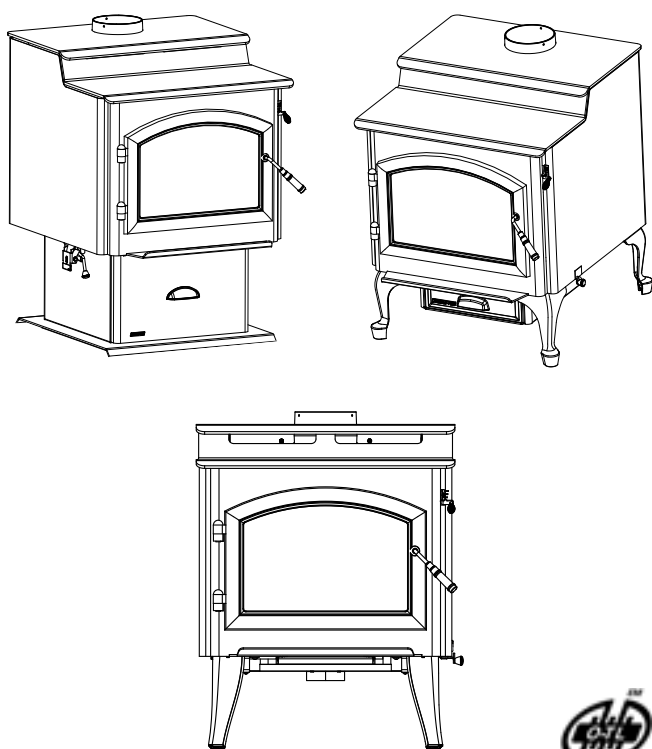
NOTICE: DO NOT DISCARD THIS MANUAL

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FORGE & FLAME

5700 Step Top Wood Burning Stove

**MODELS:
Quadra-Fire 57ST-ACC-C**



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

hearthED
FACTORY TRAINING
Fuel Your Fire

NFI NATIONAL
FIREPLACE
INSTITUTE
A CERTIFICATION AGENCY



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 and appliance will cause burns.

- Do not touch glass until it is cooled
- Use leather gloves when reloading fuel
- NEVER allow children to touch glass
- Keep children away
- CAREFULLY SUPERVISE children in same room as appliance.
- 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.



WARNING



Fire Risk.

For use with solid wood fuel only.
Other fuels may over-fire and generate poisonous gases (i.e. carbon monoxide).

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

REMARQUE : Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez www.forgenflame.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 may result in death or serious injury.
 - **CAUTION!** Indicates a hazardous situation which, if not avoided, may 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:	5700 Step Top ACC Wood Appliance
Laboratory:	OMNI Test Laboratories, Inc.
Report No:	0061WS092S
Type:	Listed Room Appliance, Solid Fuel Type
Standard:	UL1482, ULC S627-00 and (UM) 84-HUD

This 5700 Step Top is Certified to comply with 2020 crib wood particulate emission standards.



This wood 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 wood heater in a manner inconsistent with the operating instructions in the owner's manual.

NOTE: This installation must conform with local codes. In the absence of local codes you must comply with the UL1482, (UM) 84-HUD and NPFA211 in the U.S.A. and the ULC S627-00 and CAN/CSA-B365 Installation Codes in Canada. NOT APPROVED FOR MOBILE HOME INSTALLATIONS IN CANADA!

B. BTU & Efficiency Specifications

Emissions Certification Number:	0061WS092E
EPA Certification Number:	99-17
EPA Certified Emissions:	1.8 grams per hour
*LHV Tested Efficiency:	80.0%
**HHV Tested Efficiency:	74.0%
***EPA BTU Output:	12,800 to 38,300 / hr
****Peak BTU/Hour Output:	72,100
Vent Size:	6 inches
Firebox Size:	2.92 cubic feet
Recommended Log Length:	22 inches
Fuel Orientation:	Front-to-Back
Fuel	Seasoned Cordwood (20% moisture)
*Weighted average LHV (Low Heating Value) efficiency using Douglas Fir dimensional lumber and data collected during EPA emission tests. LHV assumes the moisture is already in a vapor state so there is no loss in energy to vaporize.	
**Weighted average HHV (High Heating Value) efficiency using Douglas Fir dimensional lumber and data collected during EPA emission tests. HHV includes the energy required to vaporize the water in the fuel.	
***A range of BTU outputs calculated using HHV Efficiency and the burn rates from the EPA tests, using Douglas Fir dimensional lumber.	
****A peak BTU out of the appliance calculated using the maximum first hour burn rate from the High EPA Test and BTU content of seasoned cordwood (8600) times the efficiency.	

C. Mobile Home Approved (USA only)

- 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.

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. 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.

F. 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.

G. 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.

H. 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.

Hearth & Home Technologies WILL NOT warranty appliances that exhibit evidence of over-firing. Evidence of over-firing includes, but is not limited to:

- Warped air tube
- Deteriorated refractory brick retainers
- Deteriorated baffle and other interior components

2 Getting Started

A. Design and Installation Considerations

Consideration must be given to:

- Safety
- Convenience
- Traffic flow
- Chimney and chimney connector required

It is a good idea to plan your installation on paper, using exact measurements for clearances and floor protection, before actually beginning the installation. If you are not using an existing chimney, place the appliance where there will be a clear passage for a factory-built listed chimney through the ceiling and roof.

We recommend that a qualified building inspector and your insurance company representative review your plans before and after installation.

If this appliance is in an area where children may be near it is recommended that you purchase a decorative barrier to go in front of the appliance. Remember to always keep children away while it is operating and do not let anyone operate this appliance unless they are familiar with these operating instructions.



CAUTION

Check building codes prior to installation.

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



WARNING



Asphyxiation Risk.

- Do NOT connect this appliance to a chimney flue servicing another appliance.
- Do NOT connect to any air distribution duct or system.

May allow flue gases to enter the house.

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

- Inadequate draft due to environmental conditions
- Down drafts
- Tight sealing construction of the structure
- Mechanical exhausting devices
- Over drafting caused by excessive chimney heights
- Ideal performance is with height of chimney between 14-16 feet (4.26-4.88m) measured from the base of the appliance.

B. Fire Safety

To provide reasonable fire safety, the following should be given serious consideration:

1. Install at least one smoke detector on each floor of your home to ensure your safety. They should be located away from the heating appliance and close to the sleeping areas. Follow the smoke detector manufacturer's placement and installation instructions, and be sure to maintain regularly.
2. A conveniently located Class A fire extinguisher to contend with small fires resulting from burning embers.
3. A CO detector should be installed in the room with the appliance.
4. A practiced evacuation plan, consisting of at least two escape routes.
5. A plan to deal with a chimney fire as follows:
In the event of a chimney fire:
 - a. Evacuate the house immediately
 - b. Notify fire department.

C. Negative Pressure



WARNING



Asphyxiation Risk.

- Negative pressure can cause spillage of combustion fumes, soot and carbon monoxide.
- Appliance needs to draft properly for safety.

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 optional 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
- Basement installations should be avoided



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.

D. Tools And Supplies Needed

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

Reciprocating saw	Flat blade screwdriver
Framing material	Electric drill and bits
Pliers	Plumb line
High temp caulking material	Safety glasses
Hammer	Level
Gloves	Tape measure
Phillips screwdriver	Misc. screws and nails
Framing square	7/16 socket or wrench
1/2-3/4 in. length, #6 or #8 self-drilling screws	

E. Inspection of Appliance and Components

- Remove appliance and components from packaging and inspect for damage.
- Report to your dealer any parts damaged in shipment.
- **Read all the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.**

F. Removal of Appliance from Shipping Materials

1. Remove box and 2x4 structural boards being careful not to damage product.
2. Using 7/16 socket or wrench remove two bolted bands that are located on each side of the appliance.
3. Carefully pull appliance off of pallet and lay appliance on back side on a protective surface.
4. Reference Section 5 **Appliance Set-Up** on page 18 for ash removal system, leg or pedestal attachment options.

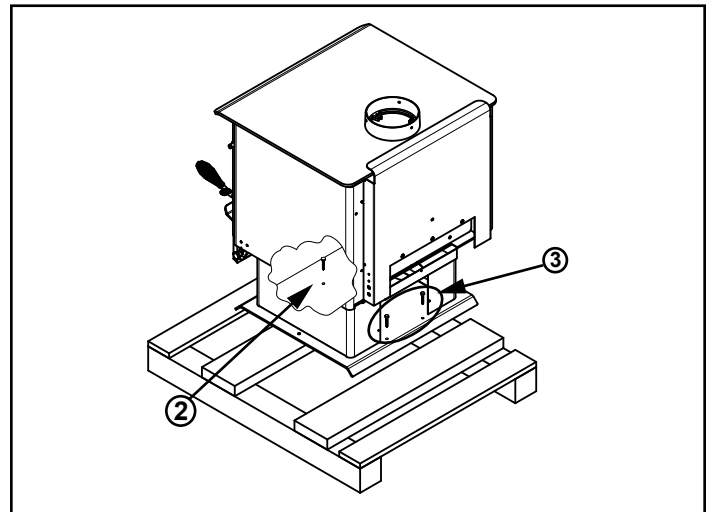


Figure 6.1



WARNING



Fire Risk.

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

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

Report damaged parts to dealer.

G. 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 #: _____
Serial #: _____
Model: _____

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

Appliance Install

Verified clearances 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?**

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Chimney

Chimney configuration complies with diagrams.
Chimney installed, locked and secured in place with proper clearance.
Chimney meets recommended height requirements (14-16 feet).
Roof flashing installed and sealed.
Terminations installed and sealed.

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Clearances

Combustible materials not installed in non-combustible areas.
Verified all clearances meet installation manual requirements.
Mantels and wall projections comply with installation manual requirements.
Protective hearth strips and hearth extension installed per manual requirements.

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Appliance Setup

All packaging and protective materials removed.
Firebrick, baffle and ceramic blanket installed correctly.
All labels have been removed from the door.
All packaging materials are removed from inside/under the 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.

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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, etc.) and corrective action needed:
Comments communicated to party responsible _____ by _____ on _____
(Builder / Gen. Contractor) (Installer) (Date)

3 Dimensions and Clearances

A. Appliance Dimensions

NOTE: Flue Collar size is 6 inch (152mm) diameter (ID)

5700 Step Top Pedestal Model

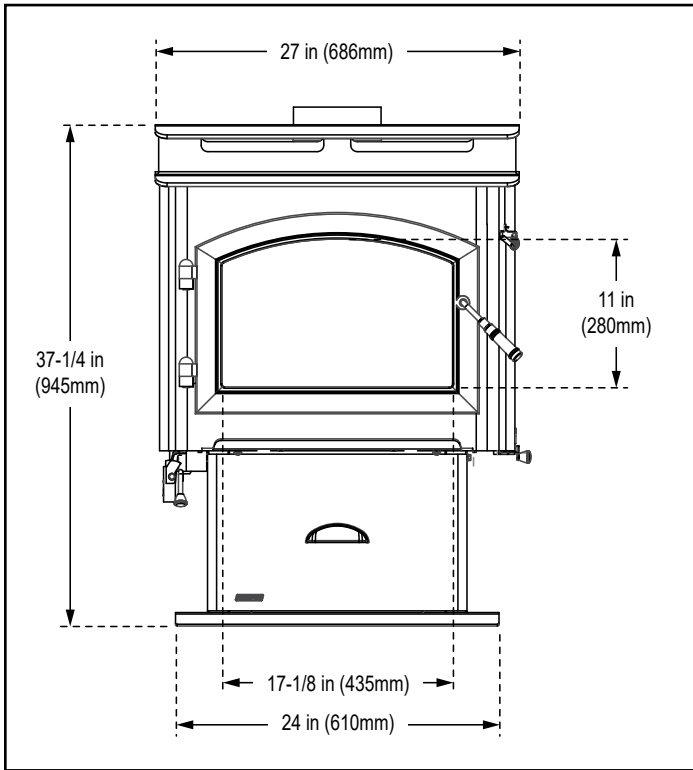


Figure 8.1 - Front View

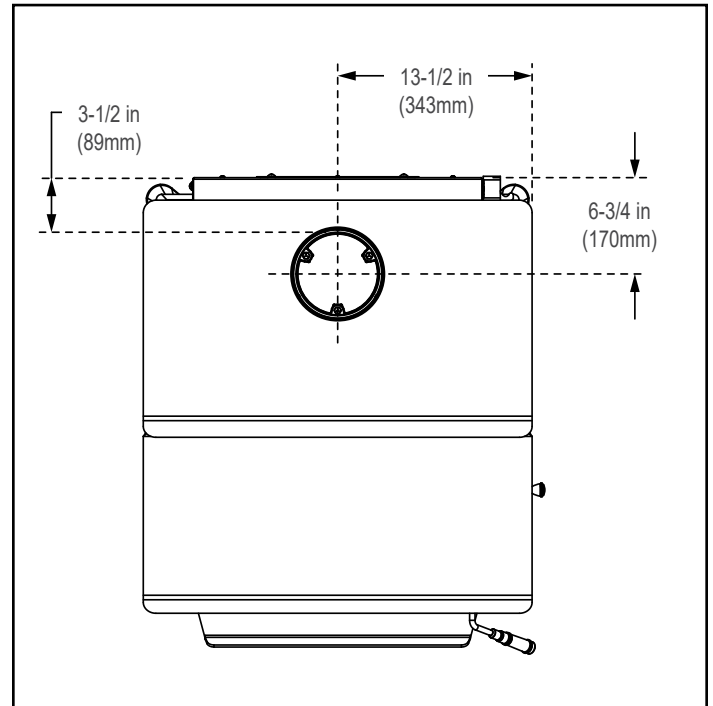


Figure 8.3 - Top View

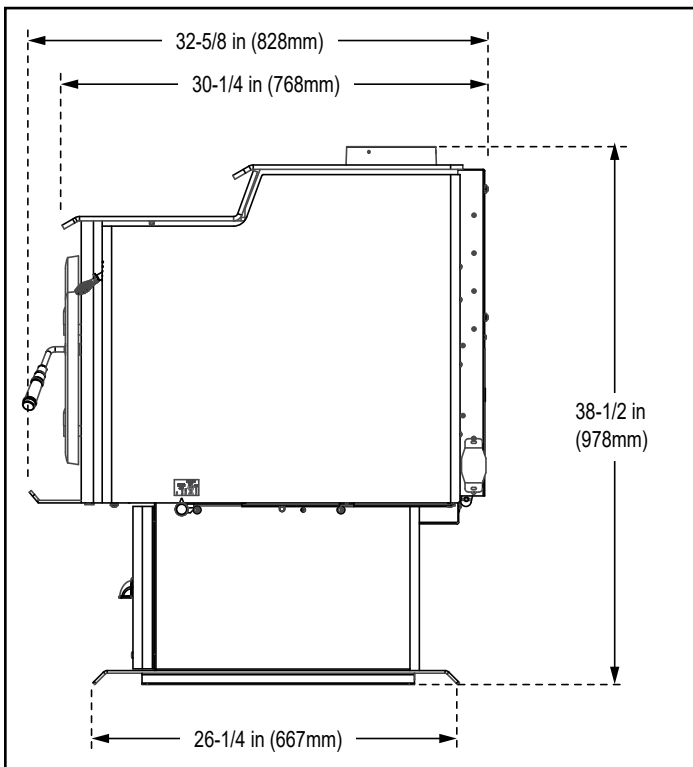


Figure 8.2 - Side View

5700 Step Top Queen Anne Leg Model

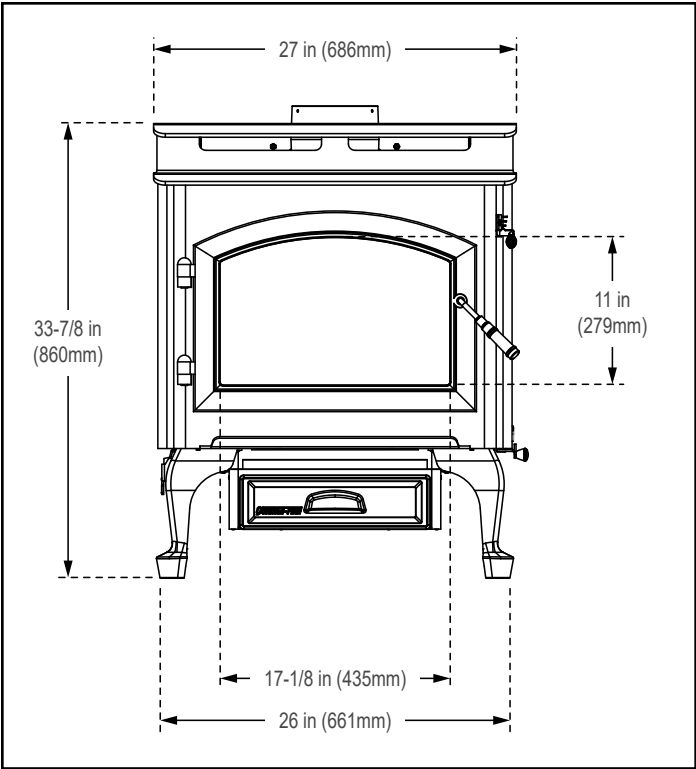


Figure 9.1 - Front View

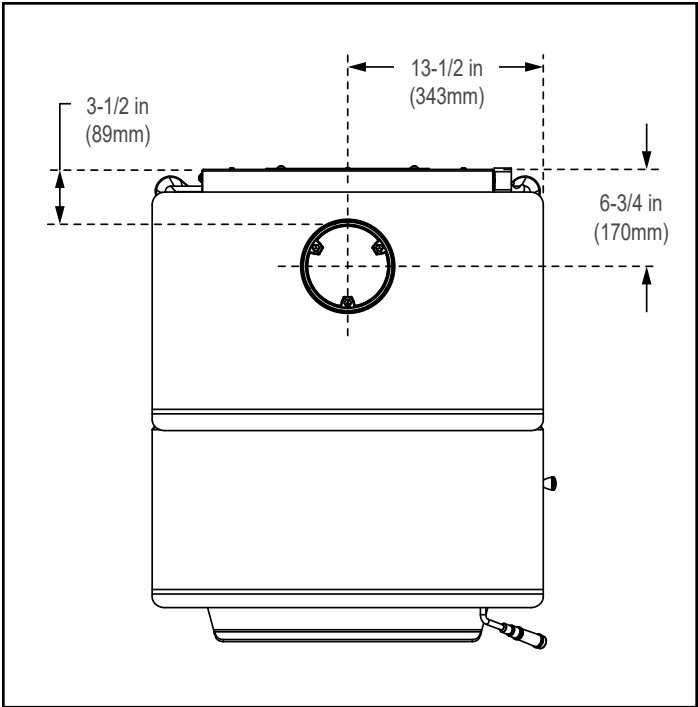


Figure 9.3 - Top View

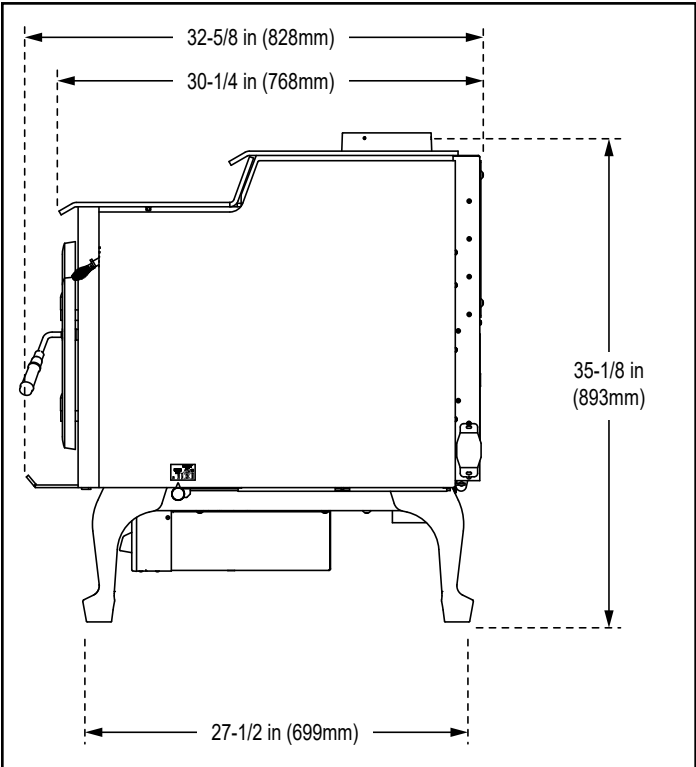


Figure 9.2 - Side View

5700 Step Top Traditional Leg Model

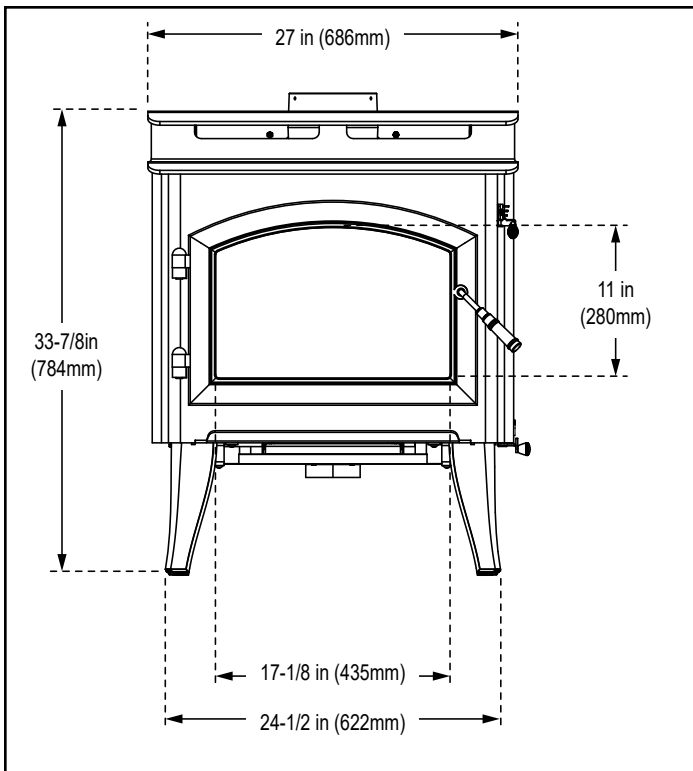


Figure 10.1 - Front View

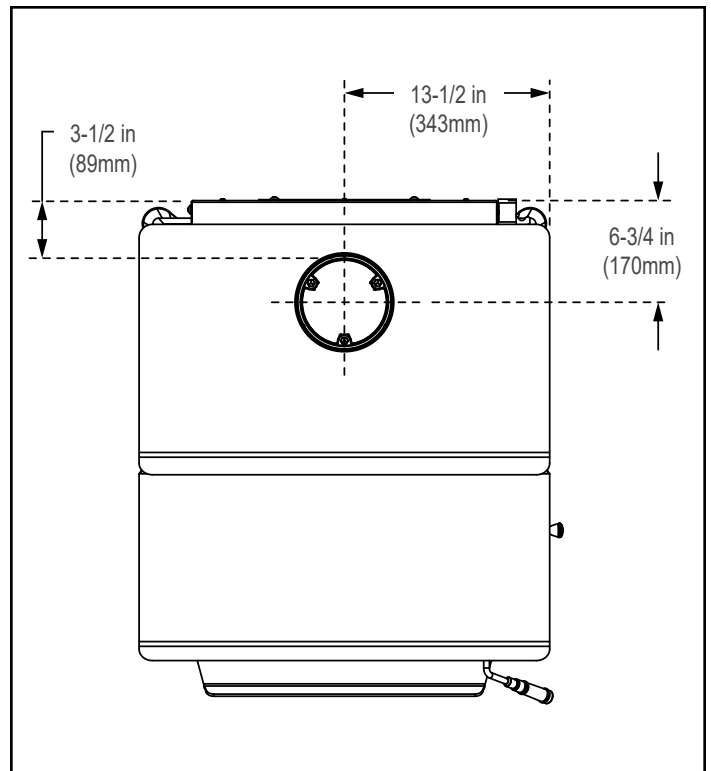


Figure 10.3 Top View

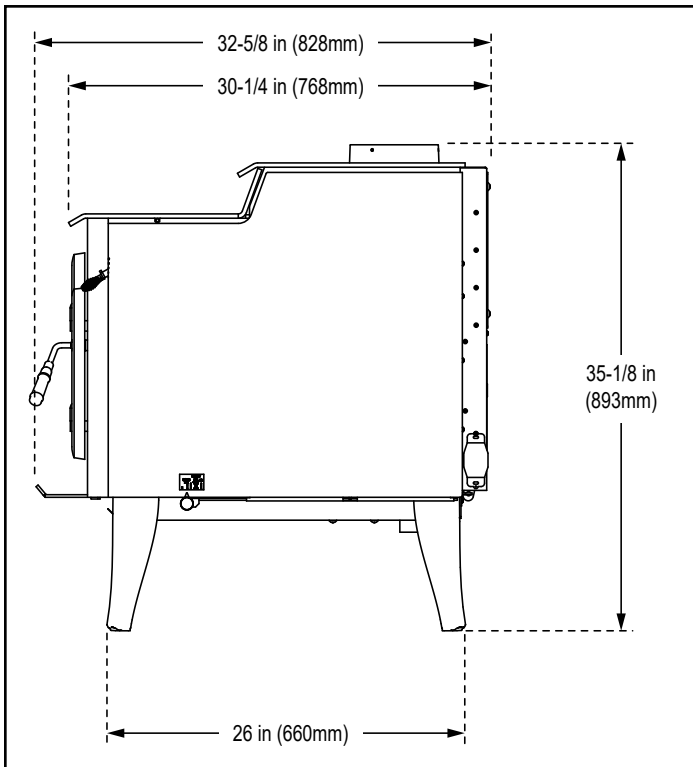


Figure 10.2 - Side View

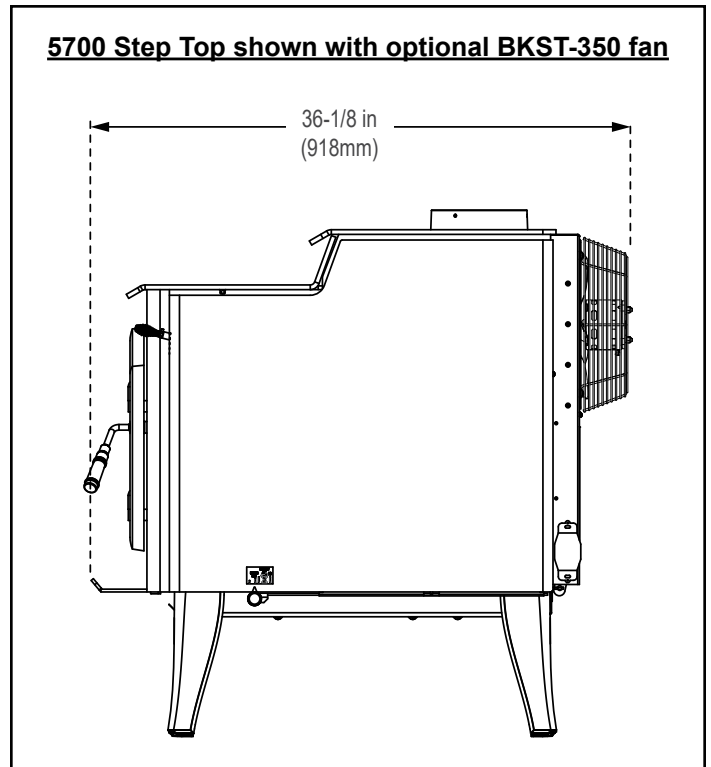


Figure 10.4 - Side view with TRAD-LEG and BKST-350 blower option

B. Hearth Protection Requirements

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 16 inches (406mm) in front of glass and 8 inches (203mm) to both sides of the fuel loading door. Open the door and measure 8 inches (203mm) from the side edge of the opening in the face of the appliance. ***See exception.**

In Canada, similar floor protection must be provided 18 inches (457mm) in front and 8 inches (203mm) from the sides and rear of the appliance unless the hearth pad is placed against the wall (**Figure 11.2**). Then the clearance may be reduced using double wall pipe and the **Clearance to Combustibles** table listed on page 12.

***Exception:** Non-combustible floor protector must extend beneath the flue pipe when installed with horizontal venting and extend 2 inches (51mm) beyond each side; **See Figure 11.2**

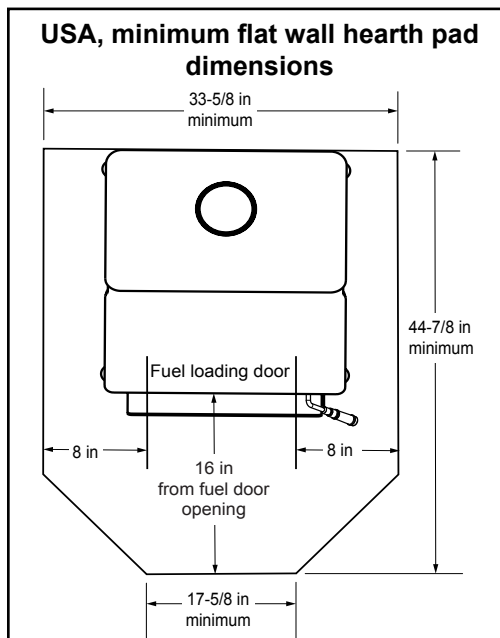


Figure 11.1

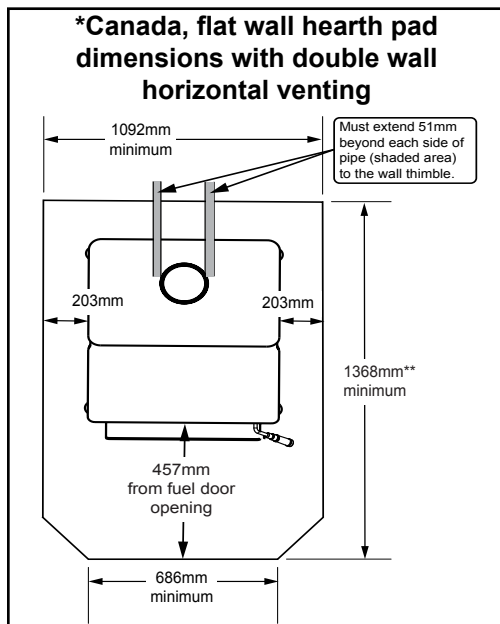


Figure 11.2 - **this dimension will vary depending installation.



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.

HHT recommends wood stoves and inserts have 57 inches of alternative flooring in front of the stove before using LVP/LVT regardless if they sit flush on the floor or are elevated on a raised hearth.

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 or homeowner's risk.



WARNING



Fire Risk.

Hearth pads must be installed exactly as specified. High temperatures or hot embers may ignite concealed combustibles.

Corner hearth pad dimensions with single wall pipe

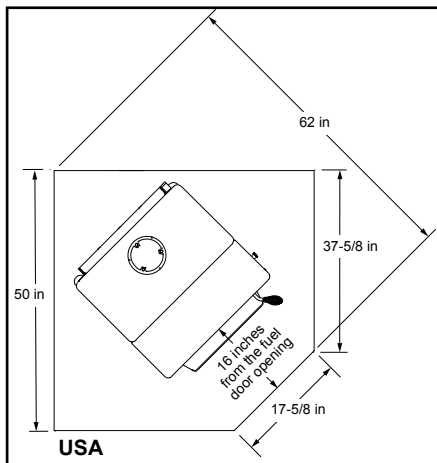


Figure 11.3

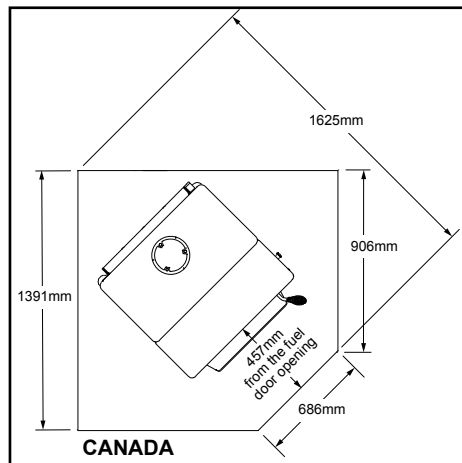


Figure 11.5

Corner hearth pad dimensions with double wall pipe

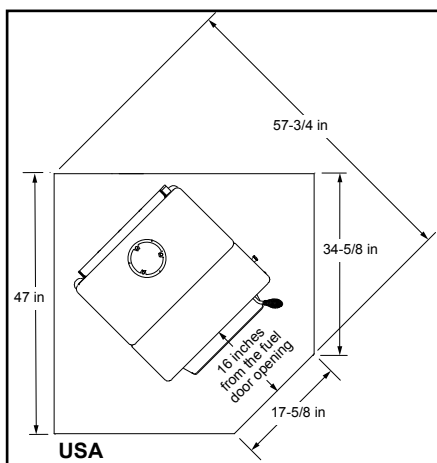


Figure 11.4

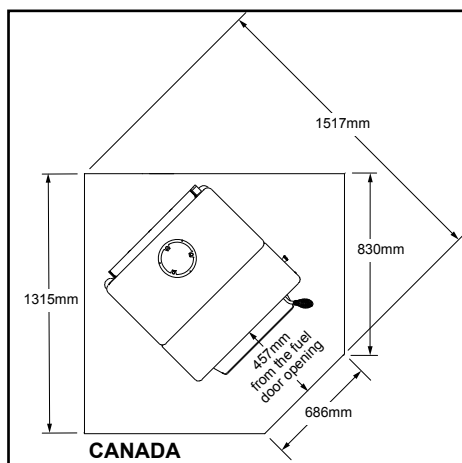


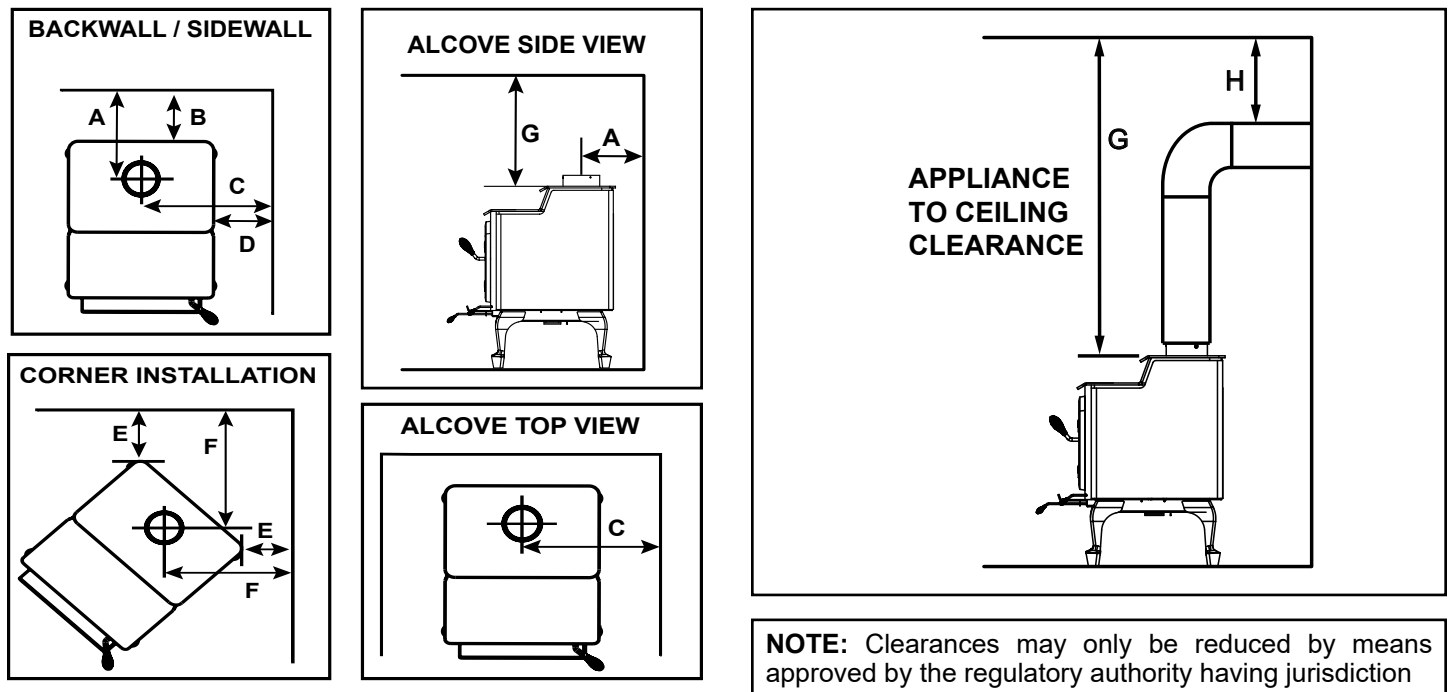
Figure 11.6

C. Clearances to Combustibles

Note: If mantle clearance specifications are not listed or to reduce mantle clearances you can follow NFPA211 regulations to assure safe installation of this product. Please consult with your local building inspector before attempting any clearance reductions.

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS in inches (Millimeters) Note: A, C, and F Dimensions are to the center of the flue collar								
57ST-ACC-C								
INSTALLATION: FULL VERTICAL								
	A	B	C	D	E	F	G	H
SINGLE WALL PIPE	15-3/4 (400)	9 (229)	25-1/2 (648)	12 (305)	4 (102)	16-7/8 (429)	49 (1245)	N/A
DOUBLE WALL PIPE	13-3/4 (349)	7 (178)	25-1/2 (648)	12 (305)	1 (25)	13-7/8 (352)	49 (1245)	N/A
INSTALLATION: HORIZONTAL WITH MINIMUM 2 FOOT VERTICAL OFF APPLIANCE TOP								
SINGLE WALL PIPE	16-3/4 (318)	10 (191)	25-1/2 (648)	12 (305)	4 (102)	16-7/8 (429)	49 (1245)	18 (457)
DOUBLE WALL PIPE	13-3/4 (349)	7 (178)	25-1/2 (648)	12 (305)	1 (25)	13-7/8 (352)	49 (1245)	13 (304)
INSTALLATION: 90 DEGREE ELBOW OFF TOP OF STOVE THROUGH BACKWALL								
SINGLE WALL PIPE	16-3/4 (318)	10 (191)	25-1/2 (648)	12 (305)	4 (102)	16-7/8 (429)	49 (1245)	N/A
INSTALLATION: ALCOVE								
DOUBLE WALL PIPE	13-3/4 (349)	7 (178)	25-1/2 (648)	12 (305)	N/A	N/A	49 (1245)	N/A
For alcove only: Six inch diameter listed Double wall air insulated connector pipe with UL103 HT listed factory built Class A chimney or masonry chimney. Maximum depth of Alcove shall be no more than 48 inches (1219mm) and the referenced alcove clearances. Canada must comply with CAN/ULC-S269 M87 for the 650° factory built chimney.								

Table 12.1



WARNING



Fire Risk.

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

4 Chimney Systems

A. Locating Your Appliance & Chimney

Location of the appliance and chimney will affect performance. As shown in **Figure 13.1** the chimney should:

- Install through the warm space enclosed by the building envelope. This helps to produce more draft, especially during lighting and die down of the fire.
- Penetrate the highest part of the roof. This minimizes the affects of wind turbulence and down drafts.

- Consider the appliance location in order to avoid floor and ceiling attic joists and rafters.
- Locate termination cap away from trees, adjacent structures, uneven roof lines and other obstructions.

Your local dealer is the expert in your geographic area and can usually make suggestions or discover solutions that will easily correct your flue problem.

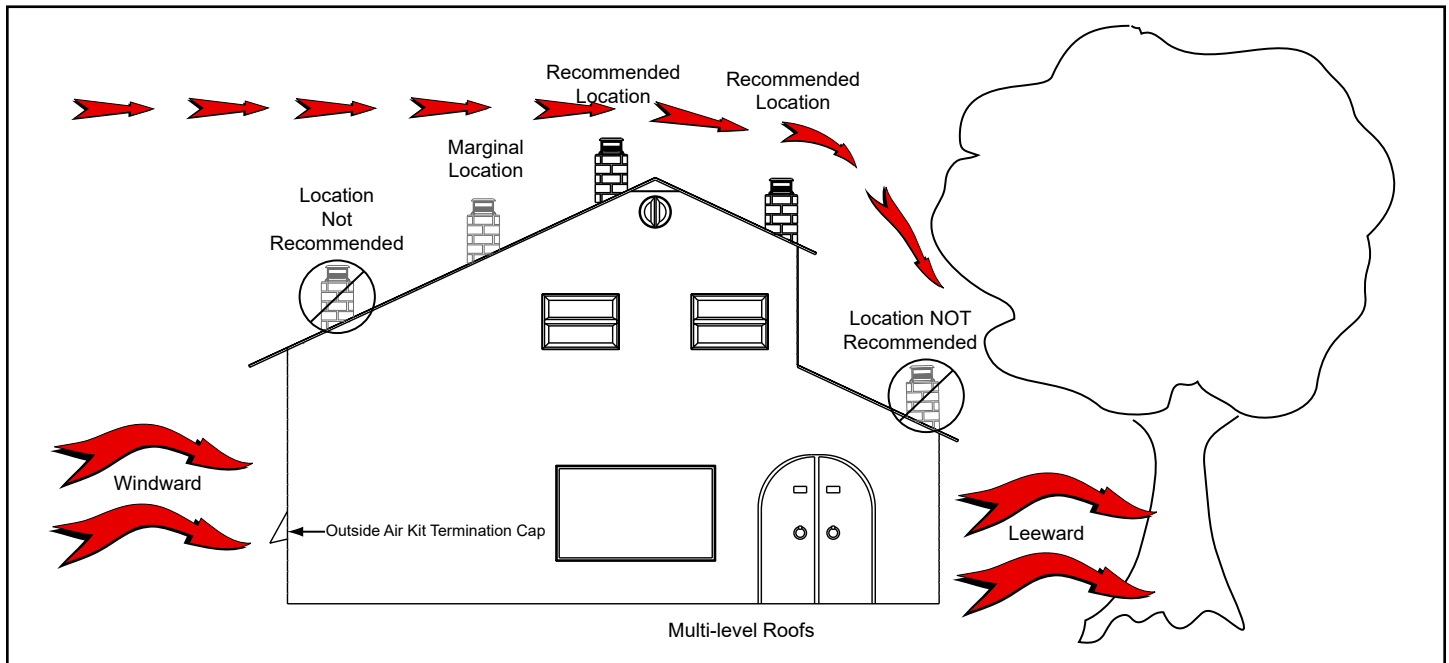


Figure 13.1

B. Chimney Termination Requirements

Follow manufacturer's instructions for clearance, securing flashing and terminating the chimney (**Figure 14.1 & 14.2**).

- Must have an approved and Listed cap
- Must not be located where it will become plugged by snow or other material
- Must terminate at least 3 feet (91cm) above the roof and at least 2 feet (61cm) above any portion of the roof within 10 feet (305cm).
- Must be located away from trees or other structures

NOTICE:

- Chimney performance may vary.
- Trees, buildings, roof lines and wind conditions affect performance.
- Chimney height may need adjustment if smoking or overdraft occurs.

NOTICE: Locating the appliance in a basement or in a location of considerable air movement can cause intermittent smoke spillage from appliance. Do not locate appliance near

- Frequently open doors
- Central heat outlets or returns

C. 2-10-3 Rule

These are safety requirements and are not meant to assure proper flue draft.

This appliance is made with a 6 inch (152mm) diameter chimney connector as the flue collar on the appliance.

- Changing the diameter of the chimney can affect draft and cause poor performance.
- It is not recommended to use offsets and elbows at altitudes above 4000 feet above sea level and or when there are other factors that affect flue draft.

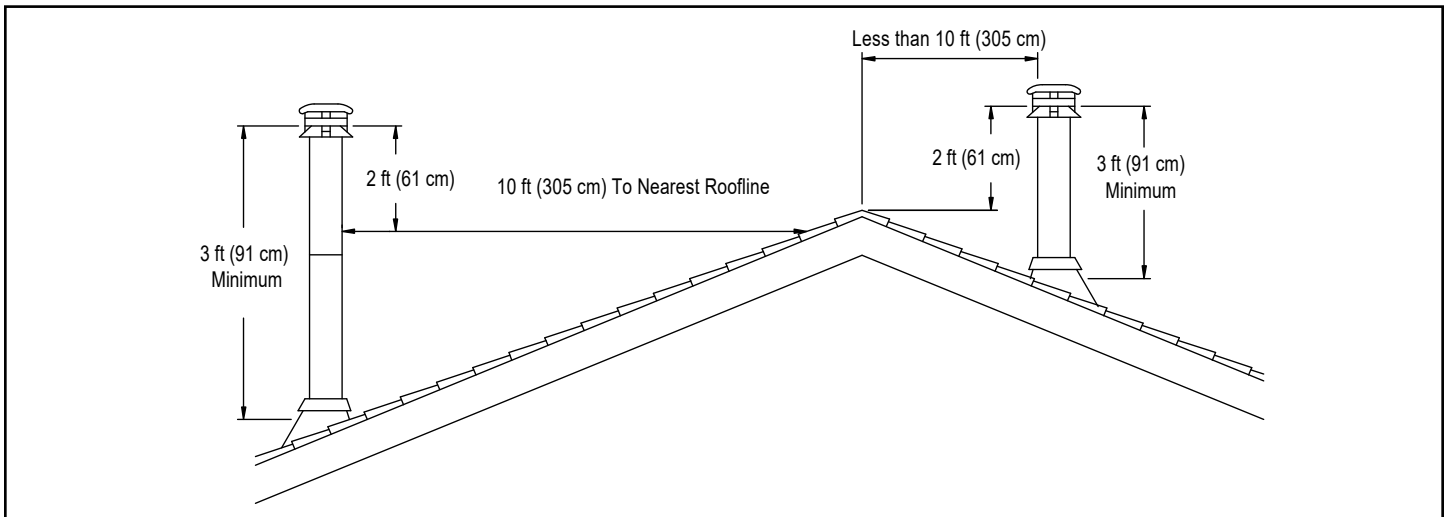


Figure 14.1

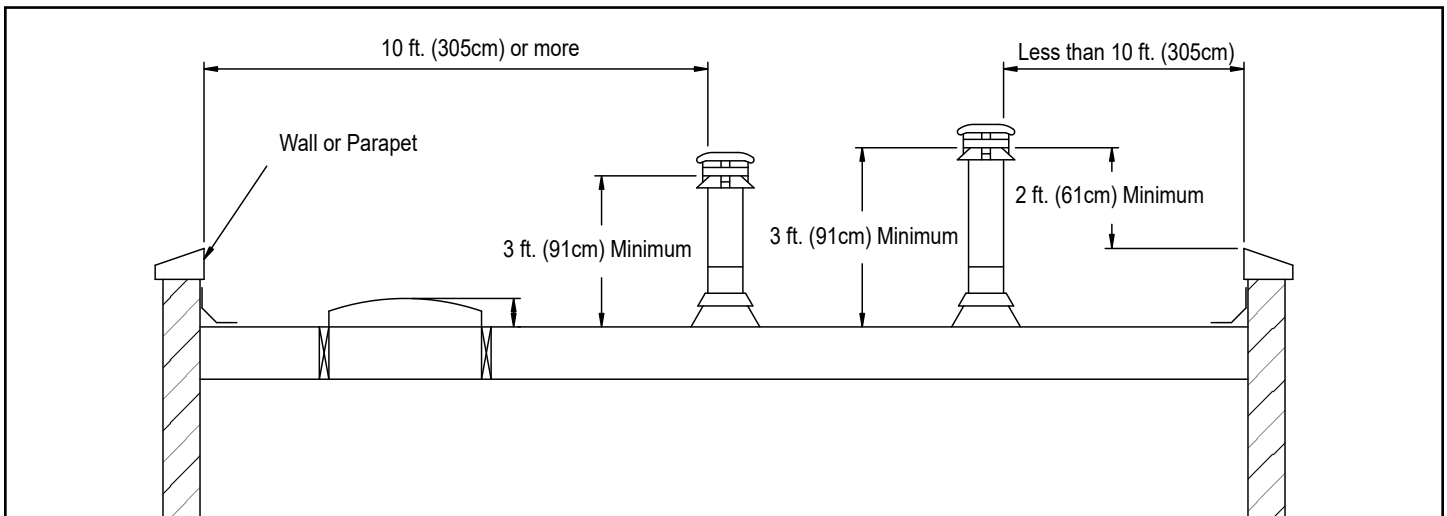


Figure 14.2

D. Chimney Height / Rise and Run

This product was designed for and tested on a 6 inch (152mm) chimney, 14 to 16 feet (420-480cm) high, (includes appliance height) measured from the base of the appliance. The further your stack height or diameter varies from this configuration, the greater the likelihood it may affect performance.

Chimney height may need to be increased by 2 - 3% per each 1000 feet above sea level. It is not recommended to use offsets or elbows at altitudes above 4000 feet above sea level or when there are other factors that affect flue draft.



WARNING



Fire Risk. Inspection of Chimney:

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



WARNING



Asphyxiation Risk.

- DO NOT CONNECT THIS Appliance TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.
 - DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.
- May allow flue gases to enter the house.



WARNING

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

E. Venting Components

Chimney Connector: It is also known as flue pipe or appliance pipe. The chimney connector joins the appliance to the chimney. It must be a 6 inch (152mm) minimum diameter 24 gauge mild steel black or 26 gauge blued steel, or an approved air-insulated double wall venting pipe.

Thimble: A manufactured or site-constructed device installed in combustible walls through which the chimney connector passes to the chimney. It is intended to keep the walls from igniting. Site constructed thimbles must meet NFPA 211 Standards. Prefabricated must be suitable for use with selected chimney and meet UL103 Type HT Standards. Follow instructions provided by the manufacturer for manufactured thimbles for masonry chimney and prefabricated chimneys.

Chimney:

The chimney can be new or existing, masonry or prefabricated and must meet the following minimum requirements and as specified in Section 4F.

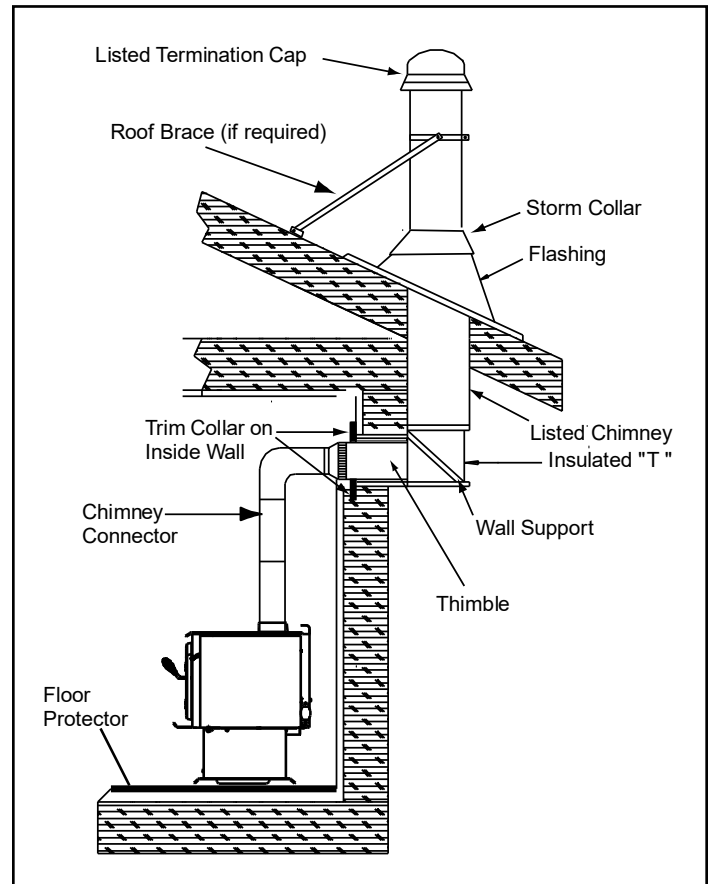


Figure 15.1 - Prefabricated Exterior Chimney

F. Chimney Systems

Prefabricated Metal Chimney

- Must be minimum 6 inch (152mm) diameter (ID) high temperature chimney listed to UL 103 HT (2100°F) or ULC S629M.
- Must use components required by the manufacturer for installation.
- Must maintain clearances required by the manufacturer for installation.
- Refer to manufacturers instructions for installation.

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

Thimble

Site constructed for masonry chimney installation:

Components

A minimum length of 12 inches [305mm] (longer for thicker walls) of solid insulated factory-built chimney length constructed to UL 103 Type HT 6 inch (152mm) inside diameter. Chimney needs to extend a minimum of 2 inches (51mm) from the interior wall and a minimum of 1 inch (25mm) from the exterior wall.

Wall spacer, trim collar and wall band to fit solid pack chimney selected.

Minimum 8 inch (203mm) diameter clay liner section (if not already present in chimney) and refractory mortar.

When jurisdiction requires install approved chimney liner in masonry chimney.

Air Clearances

- Masonry chimney clearance must meet NFPA 211 minimum requirement of 2 inches (51mm) to sheet metal supports and combustibles.
- Minimum of 1 inch (25mm) clearance around the chimney connector.
- Top of wall opening is a minimum of 13-1/2 inches (343mm) from ceiling or 4-1/2 inches (114mm) below minimum clearance specified by chimney connector manufacturer. NFPA 211 minimum vertical clearance of 18 inches (457mm) from chimney connector and ceiling or minimum recommended by chimney connector manufacturer (**Figure 16.2**).

Instructions:

1. Open inside wall at proper height for the chimney connector to entry the masonry chimney (**Figure 18.2**).
2. Entry hole to masonry chimney must be lined with an 8 inch (203mm) minimum diameter clay liner, or equivalent, secured with refractory mortar.
3. Construct a 17 inch x 17 inch (432mm x 432mm) outside dimension frame from 2 x 2 framing lumber to fit into wall opening. Inside opening of frame should be no less than 14 inch x 14 inch (356mm x 356mm) (**Figure 16.2**).
4. Attach the wall spacer to the chimney side of the frame.
5. Nail the frame into the wall opening. The spacer should be on the chimney side.
6. Insert the section of the solid insulated chimney into the outer wall of the masonry chimney.
7. Tightly secure the length of the solid insulated chimney with the wall band to the masonry chimney.
8. Insert a section of chimney connector into the chimney. Make sure it does not protrude past the edge of the clay chimney liner inside the chimney.
9. Seal the end of the chimney connector to the clay liner with refractory mortar.
10. Install trim collar around the sold pack chimney section.

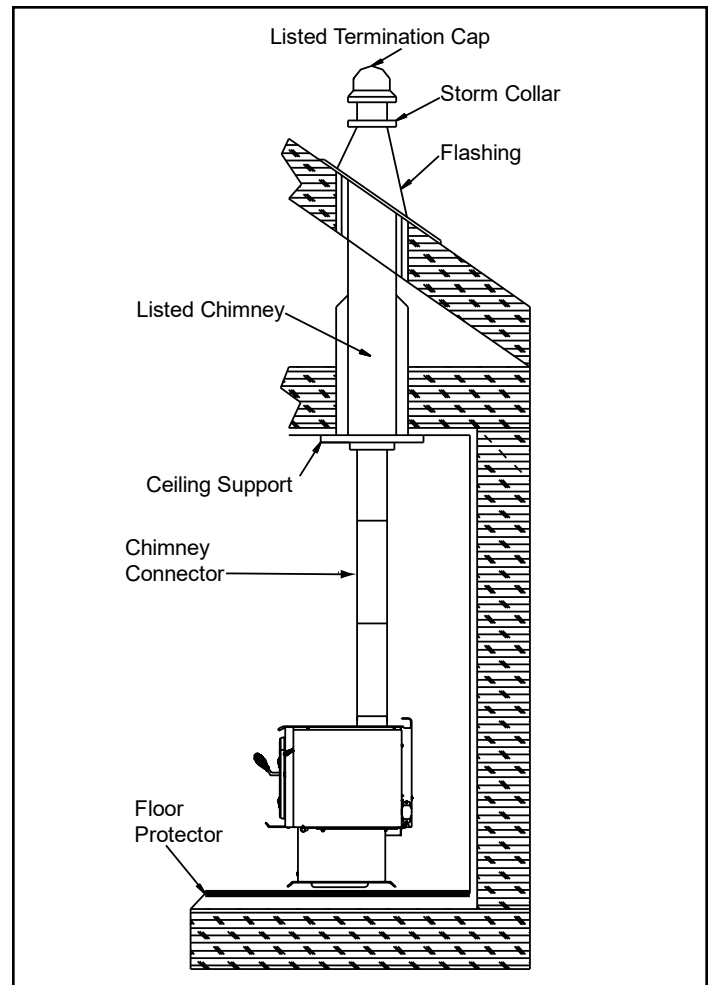


Figure 16.1 - Prefabricated Interior Chimney

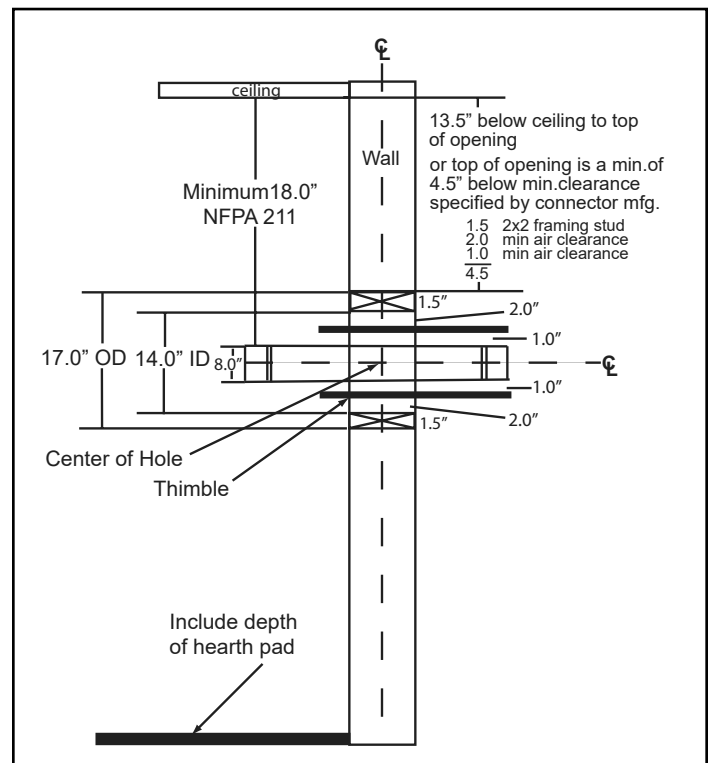


Figure 16.2

Solid Pack Chimney with Metal Supports as a Thimble

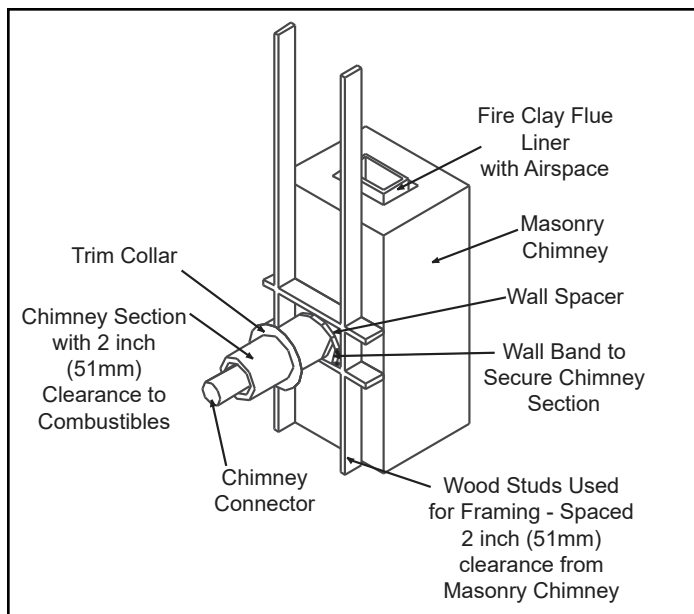


Figure 17.1



WARNING



Fire Risk.

Do NOT pack insulation or other combustibles between spacers.

- ALWAYS maintain specified clearances around venting and spacers.
- Install spacers as specified.

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

Solid Pack Chimney with Metal Supports as a Thimble (Cont'd)

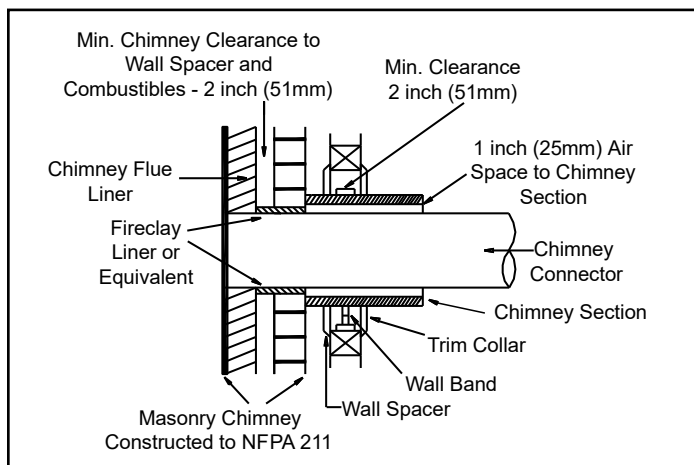


Figure 17.2

G. Installing Chimney Components

Chimney Connector

Single wall connector or appliance pipe.

This must be at least 24 gauge mild steel or 26 gauge blue steel. The sections must be attached to the appliance and to each other with the crimped (male) end pointing toward the appliance. All joints, including the connection at the flue collar, should be secured with 3 sheet metal screws. Make sure to follow the minimum clearances to combustibles. Where passage through the wall, or partition of combustible construction is desired in Canada, the installation shall conform to CAN/CSA-B365.

Factory-built listed chimney connector (vented).

A listed connector (vented) must be used when installing this appliance in a mobile home. The listed connectors must conform to each other to ensure a proper fit and seal.

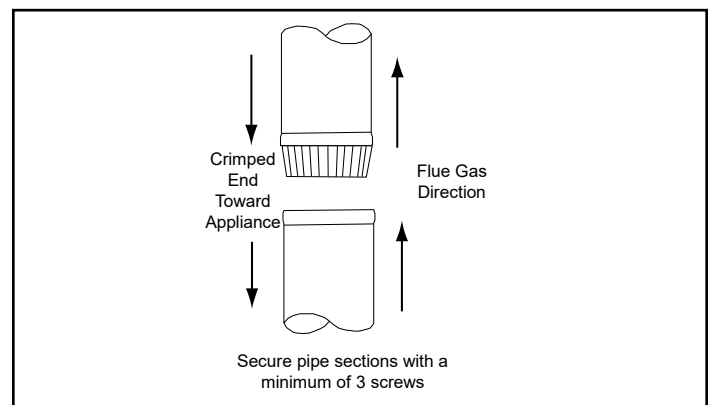


Figure 17.3 - Chimney Connector (Appliance Pipe)



WARNING



Fire Risk.

Follow Chimney Connector Manufacturer's Instructions for Proper Installation.

ONLY use connector:

- Within the room, between appliance and ceiling or wall.

Connector shall NOT pass through:

- Attic or roof space
- Closet or similar concealed space
- Floor or ceiling

Maintain minimum clearances to combustibles

H. Proper Draft

To be sure that your appliance burns properly, the chimney draft (static pressure) should be approximately -0.10 inches water column (W.C.) during a high burn and -0.04 inches W.C. during a low burn, measured 6 inches (152mm) above the top of the insert after one hour of operation at each burn setting.

5 Appliance Set-Up

A. Pedestal Assembly & ARS Installation

NOTE: The Ash Removal System, must be installed first before installing the pedestal.

Begin installing the ARS System:

1. Remove leg mount brackets packaged inside of firebox and discard.
2. Remove the 2 bricks in the front most part of the firebox (**Figure 18.1**).
3. Lay appliance on its back on a protective pad or pallet (**Figure 18.2**).
4. Remove heat shield by loosening the four bolts using 3/8 open end wrench (**Figure 18.2**).
5. Remove 8 nuts that hold the cover plate on using a 7/16 socket wrench; discard cover plate (**Figure 18.2**).
6. Remove knock out from bottom of firebox by using a hammer (**Figure 18.2**).



WARNING

CHECK GASKET!

- Verify that the gasket is present and that the glossy side is away from firebox bottom.
- It is important that the gasket is put in correctly for sealing capabilities.

7. Install ash door assembly by sliding the rod at an angle into the slot on the left side (**Figure 18.3**).
8. Slide the ash door over the 8 screws protruding from the bottom of the appliance. Secure with nuts and washers using 7/16 socket wrench (**Figure 18.3**).
9. Install ARS latch by sliding latch assembly over 2 threaded studs protruding from the bottom on the left hand side of the appliance. Secure by using two nuts use 7/16 socket wrench (**Figure 19.1 on page 19**).
10. Add knob to handle rod (**Figure 19.2 on page 19**).
11. Using two bolts and two flange nuts to secure ARS channel using 3/8 open end wrench and 7/16 socket wrench (**Figure 19.3 on page 19**).



WARNING



Do **NOT** operate before fully assembling components.
Burning your appliance without a pedestal or leg kit attached:

- Will void your warranty.
- May result in property damage or personal injury.

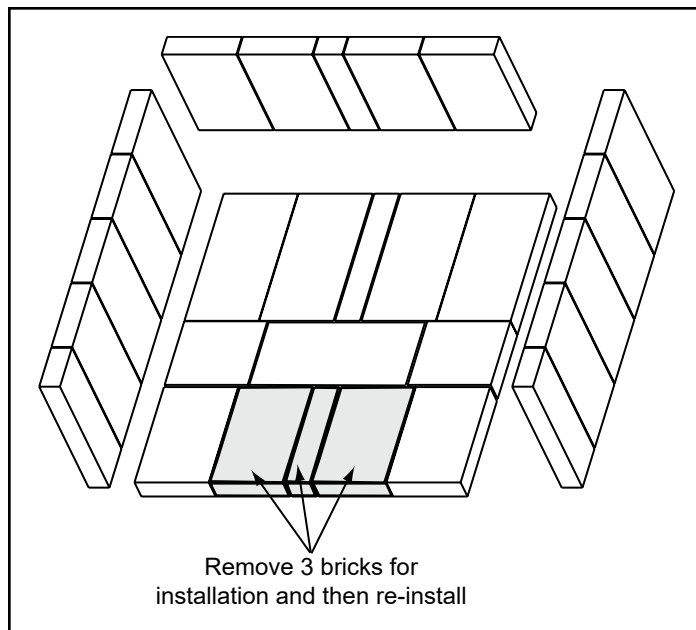


Figure 18.1

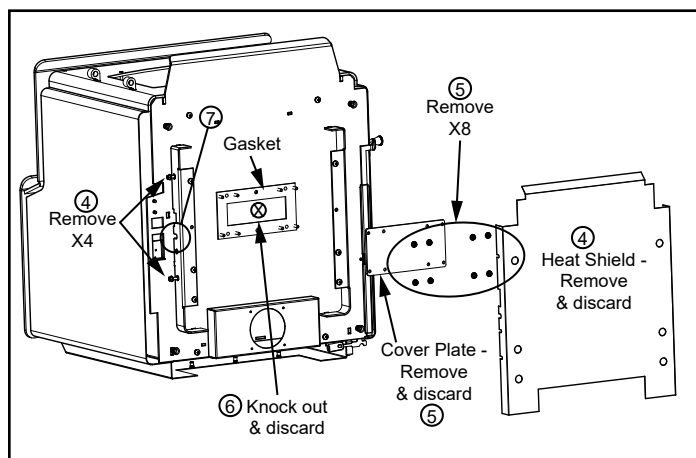


Figure 18.2

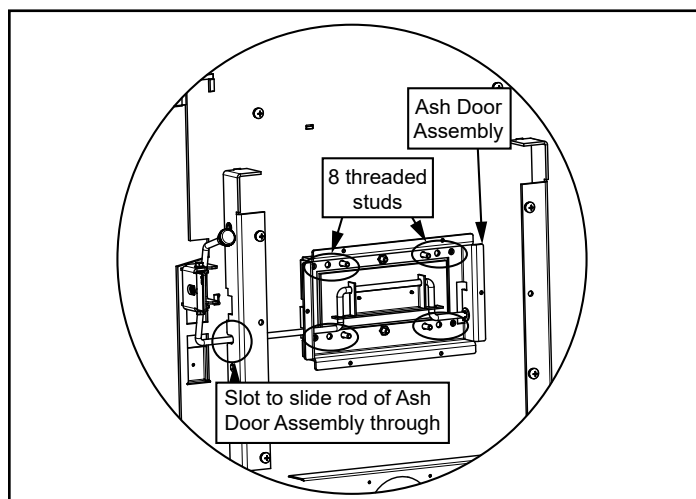


Figure 18.3

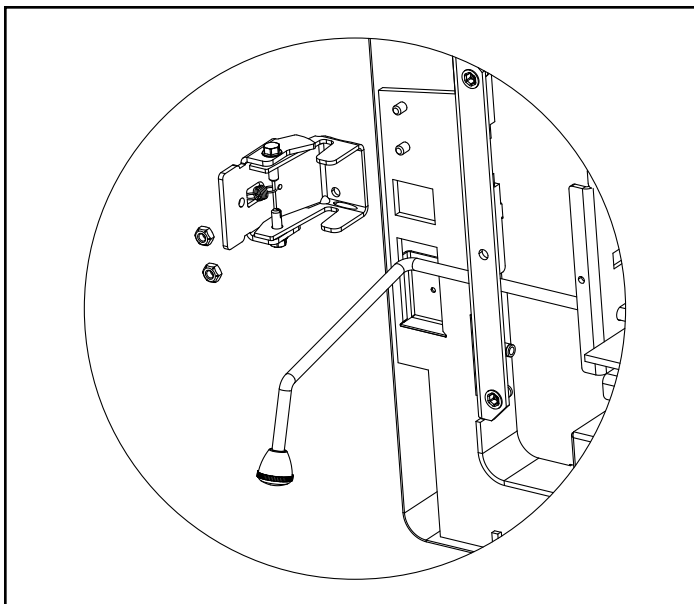


Figure 19.1

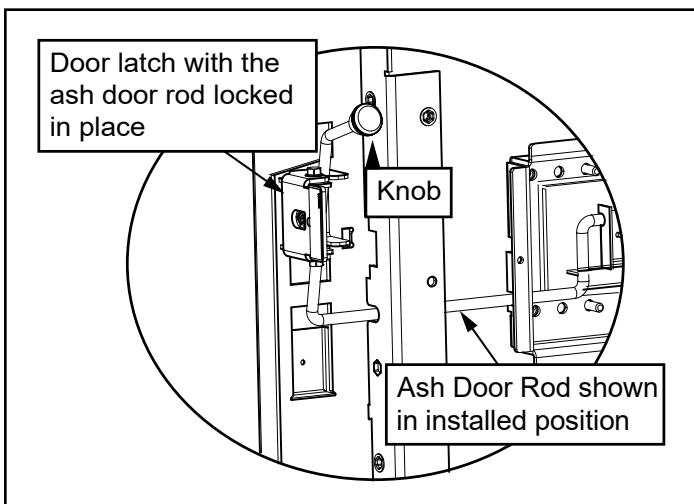


Figure 19.2

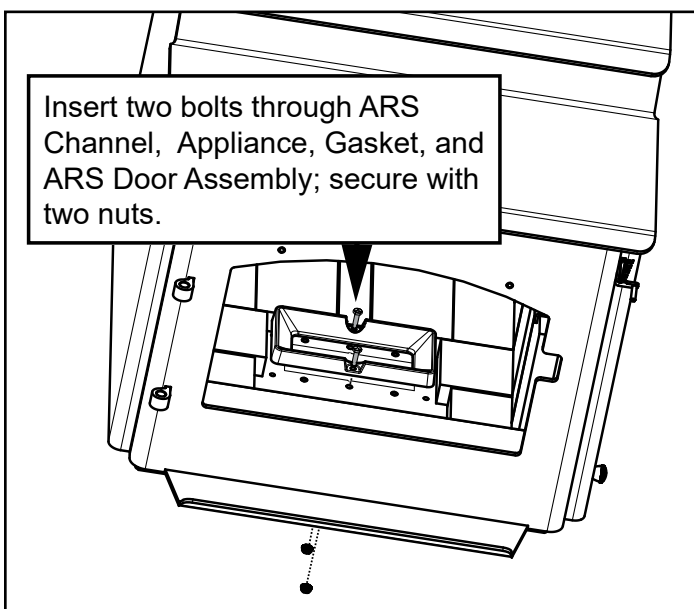


Figure 19.3

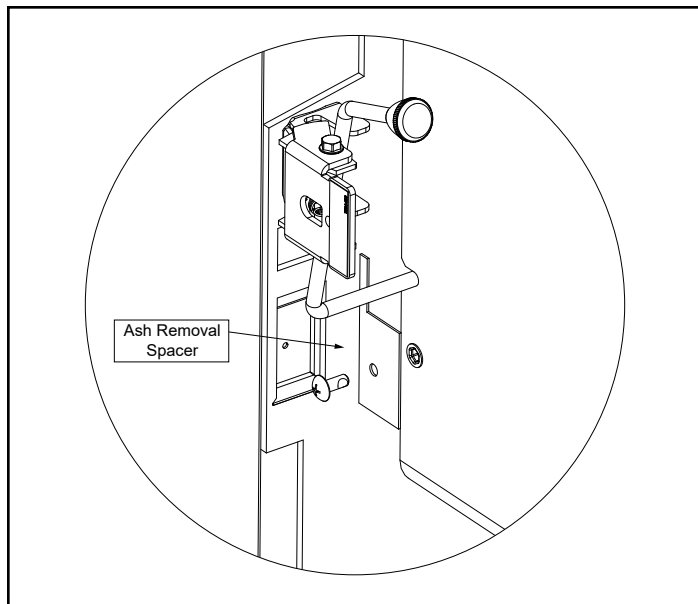


Figure 19.4

Ped Kit and Ash Removal System (Cont'd)

Installing Ped Kit

1. Follow **Begin installing the ARS System** instructions provided on page 18
2. Slide pedestal over adapter on bottom of appliance and secure with bolts from heat shield (**Figure 20.1 on page 20**).
3. Install ARS Spacer on left hand side with one bolt using Phillips head screwdriver (**Figure 19.4**).
4. Carefully stand appliance up and place in desired location.

Finishing the ARS Installation

1. Replace front bricks that were removed in step 1 of **Begin installing the ARS System** on page 18 (**Figure 20.2 on page 20**).
2. Install the ash drawer to pedestal base.
3. Install ARS access cover inside of ARS Channel that is located inside the firebox (**Figure 20.2 on page 20**).



CAUTION

CHECK BAFFLE BOARDS & CERAMIC BLANKET!

- Verify that the baffle boards and ceramic blanket are in their proper locations.
- It is important that the baffle boards and ceramic blanket are correctly installed for proper burn safety.

NOTE: If installing a floor installation of an outside air kit on a Step Top model with a pedestal assembly you must attach the enclosed cover plate with 4 screws to the back of the appliance. Other wise you may discard this piece (**Figure 20.3 on page 20**).

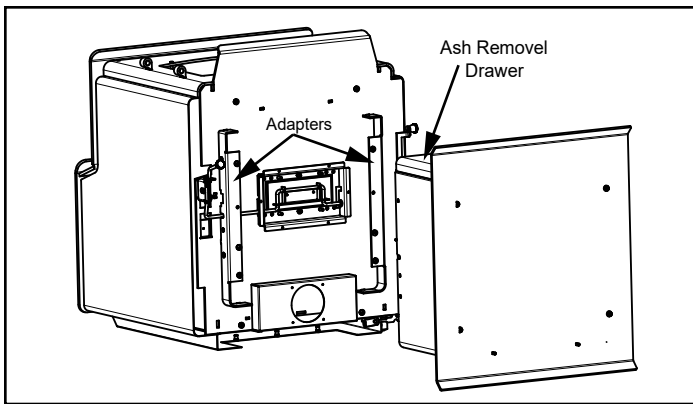


Figure 20.1

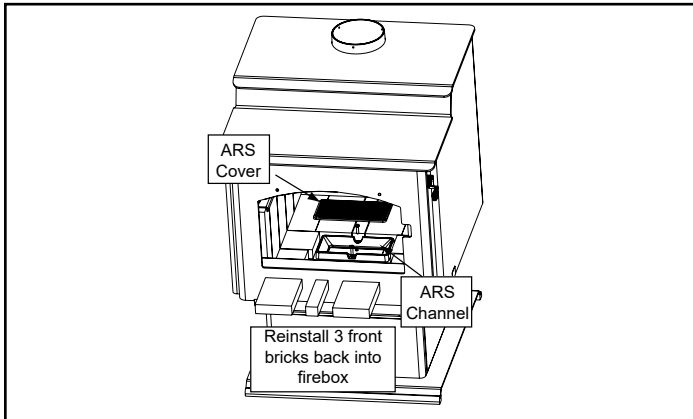


Figure 20.2

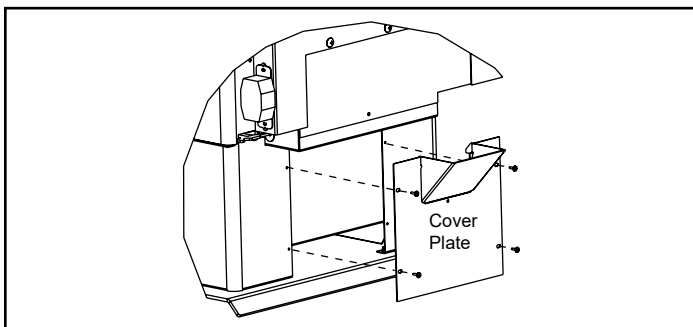


Figure 20.3

B. Access Cover Handle

Insert Access Cover Handle handle into slot of ARS Cover to remove ARS Cover for cleaning ash out of firebox (Figure 20.4).

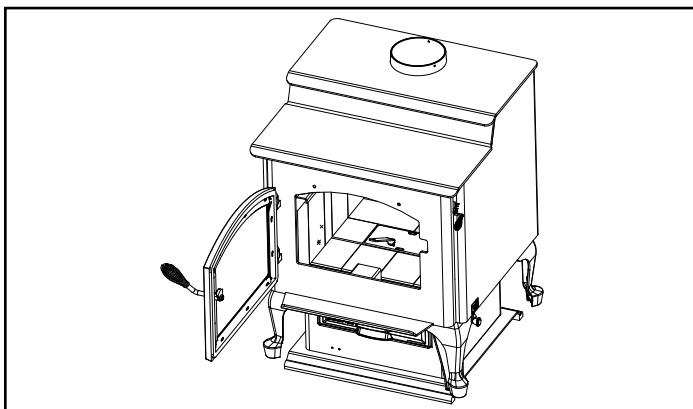


Figure 20.4

C. Leg Kit & ARS Installation

NOTE: The Ash Removal System, must be installed first before installing the legs.

Begin installing the ARS System.

1. Remove leg mount brackets packaged inside of firebox and set aside.
2. Remove the 2 bricks in the front most part of the firebox (Figure 18.1 on page 18).
3. Lay appliance on its back on a protective pad or pallet (Figure 18.2 on page 18).
4. Remove heat shield by loosening the four bolts using 3/8 open end wrench (Figure 18.2 on page 18).
5. Remove 8 nuts that hold the cover plate on using a 7/16 socket wrench; discard cover plate (Figure 18.2 on page 18).



WARNING

CHECK GASKET!

- Verify that the gasket is present and that the glossy side is away from firebox bottom.
- It is important that the gasket is put in correctly for sealing capabilities.

6. Remove knock out from bottom of firebox by using a hammer (Figure 18.2 on page 18).
7. Install ash door assembly by sliding the rod at an angle into the slot on the left side (Figure 18.3 on page 18).
8. Slide the ash door over the 8 screws protruding from the bottom of the appliance. Secure with nuts and washers using 7/16 socket wrench (Figure 18.3 on page 18).
9. Install ARS latch by sliding latch assembly over 2 threaded studs protruding from the bottom on the left hand side of the appliance. Secure by using two nuts use 7/16 socket wrench (Figure 19.1 on page 19).
10. Add knob to handle rod (Figure 19.2 on page 19).
11. Use 2 bolts and two flange nuts to secure ARS channel using 3/8 open end wrench and 7/16 socket wrench (Figure 19.3 on page 19).

Installing Queen Anne Leg ARS Kit

1. Follow **Beginning installing the ARS system** instructions provided on page 18.
2. Install ARS Spacer on left hand side with one bolt using Phillips head screwdriver (**Figure 19.4 on page 19**).
3. Install leg brackets and ash drawer using four screws using Phillips head screwdriver.
 - a. Start bottom two bolts through ash drawer, leg brackets and into the bottom of the appliance (**Figure 21.1**).
 - b. Align top holes and repeat; secure all four bolts.
4. Install legs onto leg brackets making sure the legs are up against the bracket and secure with bolts and washers using a 3/8 open end wrench (**Figure 21.2**).
5. Install leveling bolts into 2 legs; these leveling legs should be in opposite corners (**Figure 21.2 and Figure 21.3**).
6. Carefully stand appliance up and place in desired location.
7. Use leveling bolts on legs to stabilize and level appliance (**Figure 21.3**).

Finishing the ARS Installation

1. Replace 2 front bricks that were removed (**Figure 21.4**).
2. Install the ash drawer to ASH Removal receiver.
3. Install ARS access cover inside of ARS Channel that is located inside the firebox (**Figure 21.4**).



CAUTION

CHECK BAFFLE BOARDS & CERAMIC BLANKET!

- Verify that the baffle boards and ceramic blanket are in their proper locations.
- It is important that the baffle boards and ceramic blanket are correctly installed for proper burn safety.

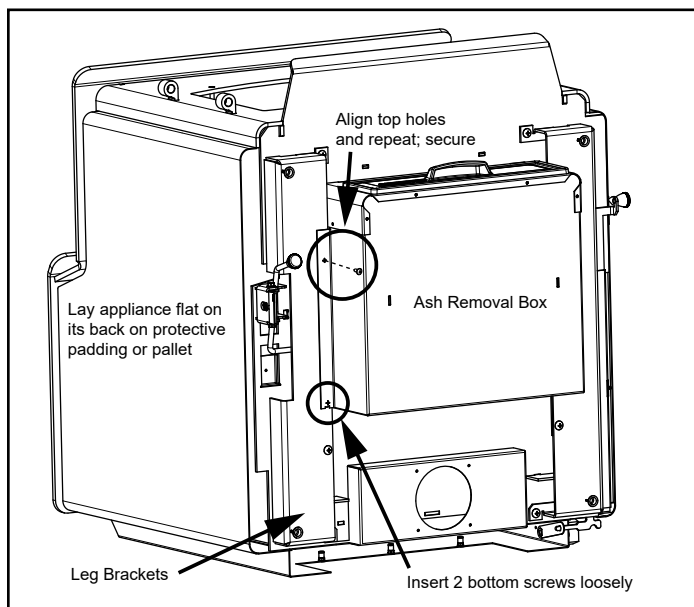


Figure 21.1

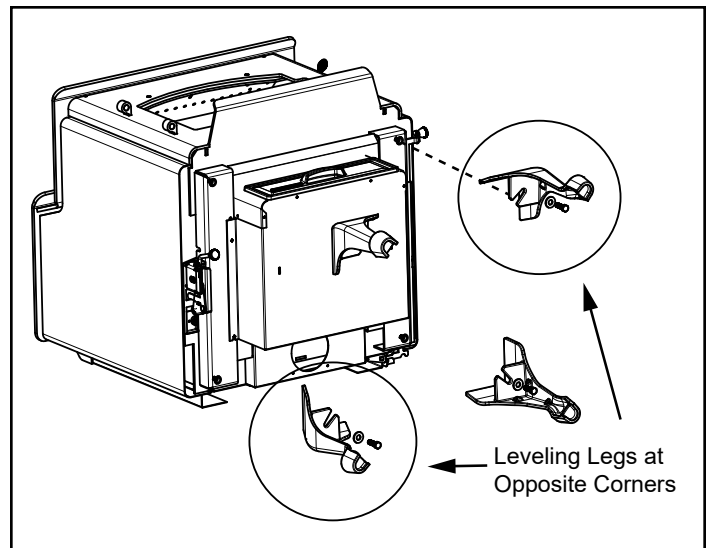


Figure 21.2

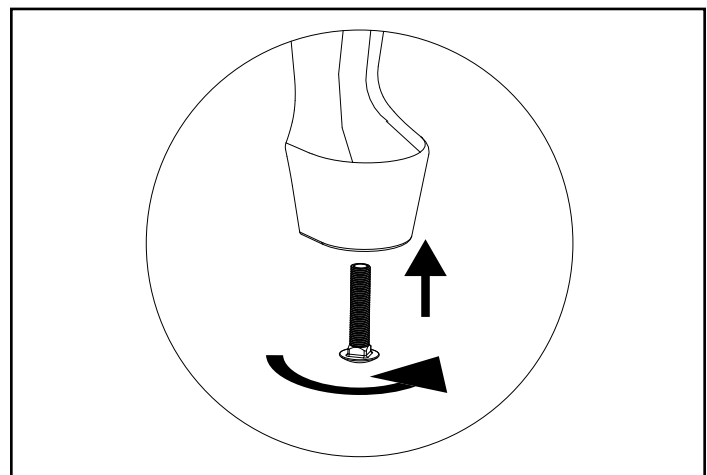


Figure 21.3

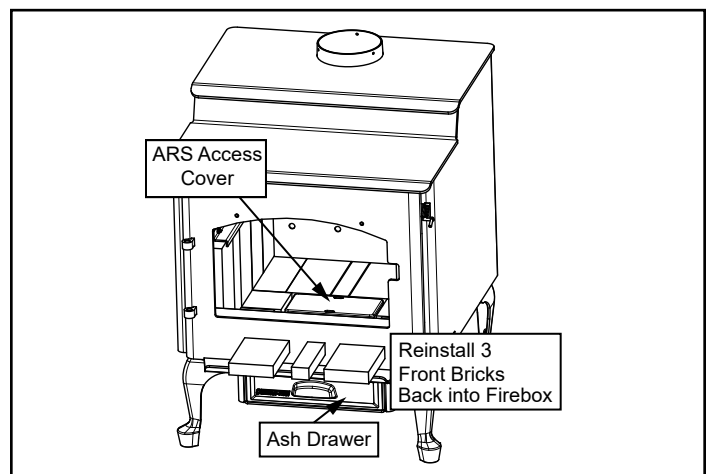


Figure 21.4

D. Traditional Leg Installation

Installing your traditional legs to your appliance:

1. Remove leg brackets from inside of firebox of appliance.
2. Lay body of appliance on its back on a protective pad or pallet.
3. Remove four screws from bottom of appliance (Figure 22.1).
4. Install leg brackets to bottom of appliance using the four just removed screws in step 3.

NOTE: There is a right and a left of the leg brackets (Figure 22.1).

5. Install six screws to the bottom of the leg brackets (Figure 22.1).
6. Attach legs onto leg brackets and secure with bolts and washers.



CAUTION

Do **NOT** tilt the appliance on the cast iron legs.

- Tilting could lead to property damage.
- Lift the appliance upright and place it into position on the floor protector.

7. Carefully stand appliance up and place in desired location.
8. Thread Allen bolts through nuts until flush (Figure 22.2)
9. Slide Allen bolt/nut assemblies into slots of two of the legs with the nuts on the bottom (Figure 22.3).

NOTE: Legs with leveling bolts need to be on opposite sides of the appliance - one in the front and one in the back (Figure 22.1)

10. Use Allen wrench to adjust legs up and down to desired level (Figure 22.4).

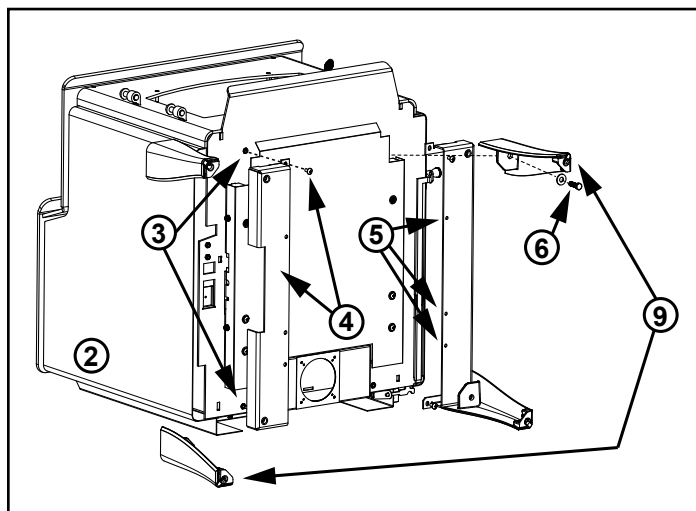


Figure 22.1



CAUTION

CHECK BAFFLE BOARDS & CERAMIC BLANKET!

- Verify that the baffle boards and ceramic blanket are in their proper locations.
- It is important that the baffle boards and ceramic blanket are correctly installed for proper burn safety.

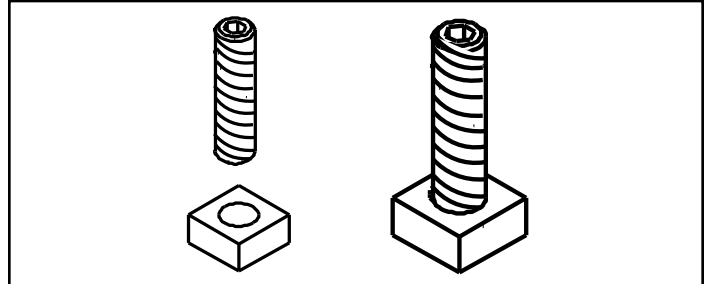


Figure 22.2

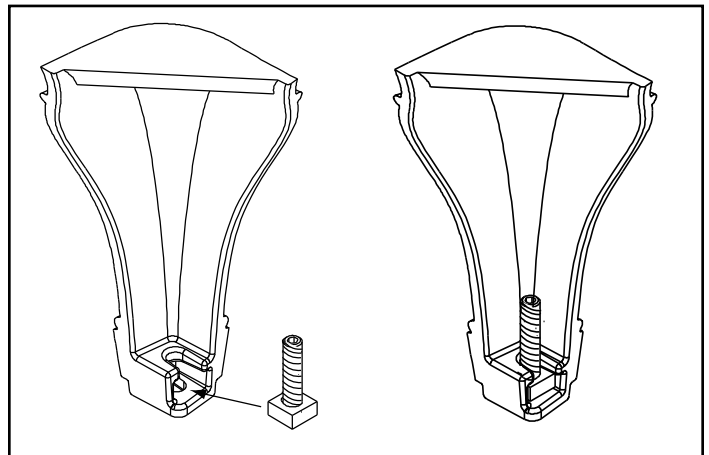


Figure 22.3

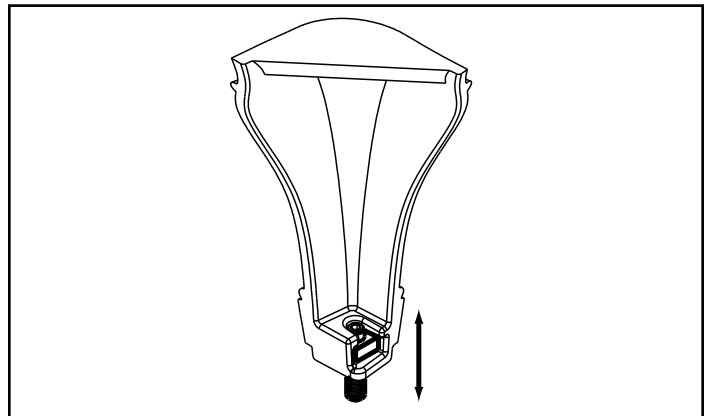


Figure 22.4

E. Door Handle Assembly

Installation of Door Handle:

1. Slide door handle shaft through hole on door.
2. Add up to three 3/8 washers on the inside of the door.

NOTE: The quantity of washers added will change how the door seals. You may need to tear down the handle assembly a few times to gain the correct seal.

3. Add square key to door handle shaft; may need to use a rubber mallet to ensure key sits firmly into groove of door handle shaft.
4. Slide cast iron cam latch over door handle shaft and locking key.



CAUTION

DO NOT over tighten locking nut; door handle needs to move smoothly!

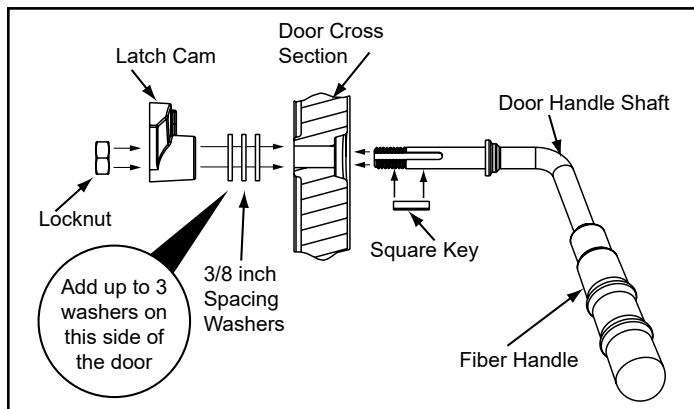


Figure 23.1

F. Outside Air Kit Installation

A source of air (oxygen) is necessary in order for combustion to take place. Whatever combustion air is consumed by the fire must be replaced. Air is replaced via air leakage around windows and under doors. In homes that have tightly sealed doors and windows, an outside air source is needed. An optional Outside Air Kit is available.

Optional OAK-ACC includes:

Termination cap, (2) wire ties, flex adapter, and fasteners

Items Needed for Installation (not supplied):

- 4 inch flex aluminum pipe, or if using alternate material, then it shall be made from durable, non-combustible, heat resistant material up to 350°F. Cut the pipe to the required length for your installation.
- Phillips head screw driver
- Silicone sealant
- Drills and saws necessary for cutting holes through the wall or flooring in your home.

Installation Instructions:

1. Remove all materials from packing box.
2. **Floor & Rear Installation:**

Cut a 4 inch (102mm) hole in outside wall or floor to accommodate outside air piping. Use 4 inch (102mm) aluminum metal flex or rigid piping to directly connect outside air to appliance intake. Use the supplied termination cap with a rodent screen. Seal between the wall (or floor) and the pipe with silicone to prevent moisture penetration.



WARNING

Asphyxiation Risk.

Length of outside air supply duct shall NOT exceed the length of the vertical height of the exhaust flue.

- Fire will not burn properly
- Smoke spillage occurs when door is opened due to air starvation

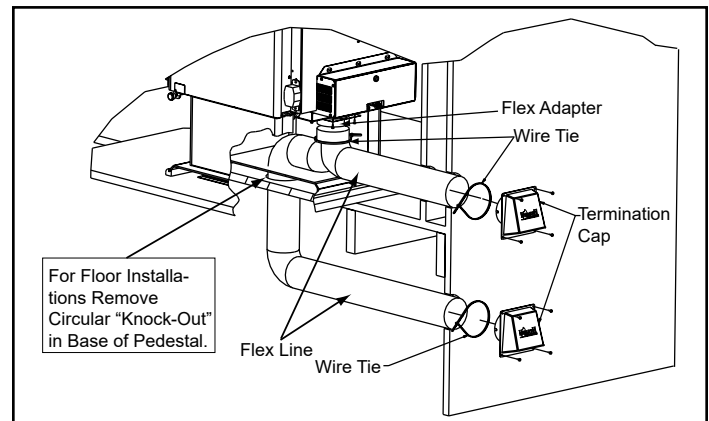


Figure 23.2



WARNING

Fire Risk. Asphyxiation Risk.

Do not draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage
- Close proximity to exhaust vents or chimneys

Fumes or odor may result



WARNING

Asphyxiation Risk.

Outside air inlet must be located to prevent blockage from:

- Leaves
- Snow or ice
- Other debris

Block may cause combustion air starvation

Smoke spillage may set off alarms or irritate sensitive individuals.



G. BKST-350 Blower Kit (Optional)

1. Using #2 Phillips head screwdriver remove 4x screws from back plate of appliance; discard plate.
2. Locate 4x screws supplied with the blower kit.
3. Align mounting flange x4 of blower with screw holes on back of appliance.

NOTE: Blower wire should be positioned towards the bottom as shown in **Figure 24.1**

4. Using #2 Phillips head screwdriver and 4x screws secure blower to appliance (**Figure 24.1**).
5. Locate 1x screw supplied with blower kit.
6. Install junction box to the bottom right back of the appliance shown in **Figure 24.1** by inserting tab into slot and aligning flange; secure with 1x screw by using #2 Phillips head screwdriver.
7. Place the bracket containing the snap disc and magnet lower right side of the appliance as shown is **Figure 24.1**.
8. Install blower cord with rectangle plug into junction box.
9. Plug in power cord to electrical outlet.

See **Owner's Manual** for detailed operating instructions for the blower and snap disc.

H. Adjusting The Blower Speed Control

The blower speed control for this appliance is adjusted at the factory, and normally does not require further adjustment.

1. With the appliance plugged in, turn the speed control knob to slow (full clockwise).
2. With a small screwdriver, adjust the blower speed by turning the adjustment mechanism through the hole on the side of the speed control.
3. Adjust the speed so the blower runs slowly, but does not stop. Turn clockwise to slow the blower and counterclockwise to increase the speed.

NOTE: When the speed control is turned clockwise, it will click on to high speed. Continue to turn the speed control clockwise to decrease the speed. At full clockwise, the blower should blow gently, but should not stop.



CAUTION



Shock Risk.

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

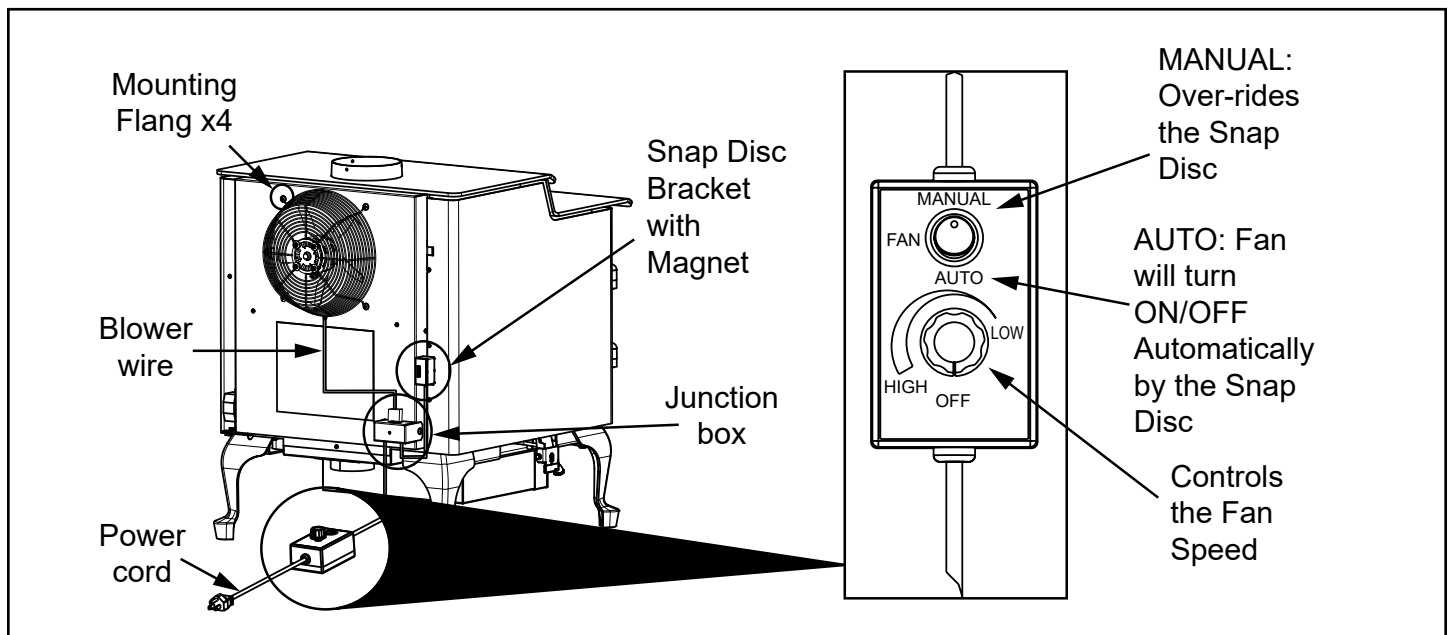


Figure 24.1

6 Mobile Home Installation Approved for USA Installation only!

You must use a Forge & Flame Outside Air Kit Part OAK-ACC; which is available from you dealer, for installation in a mobile home.

1. An outside air inlet must be provided for combustion.
2. Appliance must be secured to the mobile home structure by bolting the legs to the floor.
3. Appliance must be grounded with #8 solid copper grounding wire or equivalent and terminated at each end with N.E.C. approved grounding device.
4. Appliance must be installed with an approved UL103 HT ventilated chimney connector, UL103 HT chimney, and terminal cap with spark arrestor. Never use a single wall connector (appliance pipe) in a mobile home installation. Use only double-wall connector pipe, Dura-Vent DVL, Selkirk Metalbestos DS or Security DL double-wall connector or any listed double-wall connector pipe.
5. In Canada, this appliance must be connected to a 6 inch (152mm) factory-built chimney conforming to CAN/ULC-629M, STANDARD FOR FACTORY BUILT CHIMNEYS.
6. Follow the chimney and chimney connector manufacturer's instructions when installing the flue system for use in a mobile home.
7. Maintain clearance to combustibles.
8. Floor protection requirements must be followed precisely.
9. Use silicone to create an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.

NOTE: Offsets from the vertical, not exceeding 45°, are allowed per Section 905(a) of the Uniform Mechanical Code (UMC). Offsets greater than 45° are considered horizontal and are also allowed, providing the horizontal run does not exceed 75% of the vertical height of the vent. Construction, clearance and termination must be in compliance with the UMC Table 9C. This installation must also comply with NFPA 211.

NOTE: Top sections of chimney must be removable to allow maximum clearance of 13.5 feet (411cm) from ground level for transportation purposes.

10. Burn seasoned cord wood only. Other types of fuels may generate poisonous gases (e.g., carbon monoxide).
11. If appliance burns poorly while an exhaust blower is on in home, (i.e., range hood), increase combustion air.
12. Installation shall be in accordance with the Manufacturers Home & Safety Standard (HUD) CFR 3280, Part 24.



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.



WARNING



Asphyxiation Risk.

NEVER INSTALL IN A SLEEPING ROOM.
Consumes oxygen in the room.

7

Reference Materials

A. Service and Maintenance Log

[illegible]

FORGE & FLAME

CONTACT INFORMATION

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

**Please contact your Forge & Flame dealer with any questions or concerns.
For the number of your nearest Forge & Flame dealer
log onto www.forgenflame.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.