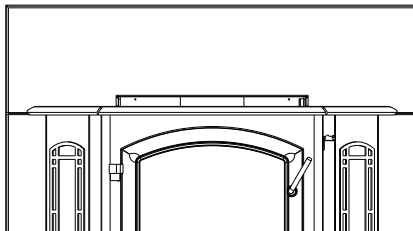


QUADRA-FIRE®

3100-I ACC WOOD INSERT Automatic Combustion Control (ACC)

OWNER'S MANUAL Installation and Operation

Model:
31I-ACC



**Service parts list has been removed from this manual.
Refer to Owner's Manual or individual service parts list.**

CAUTION



DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read entire manual, understand and follow these instructions before installation and operation.
- Leave this manual with party responsible for use and operation.



WARNING



If the information in these instructions is not followed exactly, a fire may 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 overfire - If heater or chimney connector glows, you are overfiring. Overfiring 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.

WARNING



Fire Risk.

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



Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends NFI certified professionals, or technicians supervised by an NFI certified professional.



Congratulations



and Welcome to the Quadra-Fire Family!

Hearth & Home Technologies welcomes you to our tradition of excellence! In choosing a Quadra-Fire appliance, you have our assurance of commitment to quality, durability, and performance.

This commitment begins with our research of the market, including 'Voice of the Customer' contacts, ensuring we make products that will satisfy your needs. Our Research and Development facility then employs the world's most advanced technology to achieve the optimum operation

of our stoves, inserts and fireplaces. And yet we are old-fashioned when it comes to craftsmanship. Each unit is meticulously fabricated and gold and nickel surfaces are hand-finished for lasting beauty and enjoyment. Our pledge to quality is completed as each model undergoes a quality control inspection.

We wish you and your family many years of enjoyment in the warmth and comfort of your hearth appliance. Thank you for choosing Quadra-Fire.

NOTE: Clearances may only be reduced by means approved by the regulatory authority having jurisdiction

SAMPLE OF SERIAL NUMBER / SAFETY LABEL
LOCATION: UNDER ASHLIP ON PULL-OUT PLATE



OMNI-Test Laboratories, Inc.
Report #061-S-74-2

Tested to / Testé à:
UL 1482-96, ULC S628-93

QUADRA-FIRE

Model / Modèle:
3100-I ACC INSERT

Serial No / Numéro De Série
007

LISTED ROOM HEATER, SOLID FUEL TYPE. "For Use with Solid Wood Fuel Only."

PREVENT HOUSE FIRES

Install and use only in accordance with manufacturer's installation, venting and operating instructions.
CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.
Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a combustible wall or ceiling.
When used as a masonry insert stove, install only in a masonry fireplace built to national and/or local codes. Do not remove brick or mortar to accommodate insert. Installation requires minimum of a starter pipe into existing chimney with airtight face seal.

Install only on a non-combustible hearth. Approved for installation and use in factory built zero-clearance fireplaces conforming to minimum fire chamber specifications, follow instructions in the owner's manual.
Components required for installation: positive or direct flue connection assembly or listed vent liner.
In Canada a full length 6 inch (152mm) S635 flue liner is required as per ULC S628-93.

WARNING - Inspect and clean chimney frequently. Under certain conditions of use, creosote buildup may occur rapidly.

Do not connect this unit to a chimney serving another appliance.

DANGER: Risk of electrical shock. Disconnect power supply before servicing. Route power cord away from unit. Do not route cord under or in front of appliance.

Electrical Rating: 115 VAC, .63 AMPS, 60 Hz

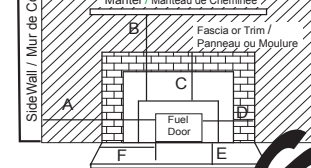
Do not use grate or elevate fire. Build wood fire directly on firebrick.

Do not overfire. If heater or chimney connector glows, you are overfiring.

Operate only with doors closed. Open only to add fuel to the fire.

Replace glass only with 5mm ceramic available from your dealer.

OPTIONAL COMPONENTS: Mantel Deflector, Part 7044-214



Non-combustible floor protector must extend 8 inches (203mm) to the sides. See chart for thermal protection requirements and clearances for front hearth extensions. Minimum of 1 inch (25mm) thermal protection, "K" value = 0.49, R value = 2.04, required under insert base on all zero-clearance can installations. Minimum of 1-1/2 inch (38mm) thermal protection, "K" value = 0.49, R value = 3.06, required under base of factory or site made zero-clearance adjustable trim support for all heights.

La protection de sol non-combustible doit être étendue à 8 inches (203 mm) de chaque côté. Se référer aux tableaux des exigences de protection thermique et distances minimales des extensions de la protection sol frontale. Minimum d'un pouce de protection thermique, valeur "K" = .49, valeur "R" = 2.04 requise sous la base de l'appareil pour toute installation sans dégagement. Minimum de 1-1/2 pouce de protection thermique, valeur "K" = .49, valeur "R" = 3.06 requise sous la base de tout support décorative ajustable pour tout appareil sans dégagement qu'il soit fabriqué en usine ou qu'il soit fabriqué sur place.

Manufactured by / Fabriqué par:
HEARTH & HOME
1445 N. Highway, Colville, WA 99114
www.quadrafire.com

U.S. ENVIRONMENTAL PROTECTION AGENCY - Certified to comply with July 1990 particulate emission standards.

2011 2012 2013 Jan Feb Mar Apr May June July Aug Sept Oct. Nov. Dec.

DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ÉTIQUETTE

Made in U.S.A. of US and imported parts.

Fabrique aux États-Unis d'Amérique par des pièces d'origine américaine et pièces importées.

7044-141C

CAUTION:

HOT WHILE IN OPERATION - DO NOT TOUCH - KEEP CHILDREN CLOTHING AWAY - CONTACT MAY CAUSE SKIN BURNS. SEE NAMEPLATE AND INSTRUCTIONS. KEEP FURNISHINGS AND OTHER COMBUSTIBLE MATERIALS FAR AWAY FROM THE APPLIANCE.

ATTENTION:

CHAUD LORS DE L'OPÉRATION. NE PAS TOUCHER. GARDEZ LES ENFANTS ET LES VÊTEMENTS LOIN DE L'ESPACE DÉSIGNÉ DE L'INSTALLATION. LE CONTACT PEUT CAUSER DES BRÛLURES À LA PEAU. GARDEZ LES MEUBLES ET LES MATÉRIEAUX COMBUSTIBLES LOIN DE L'ESPACE DÉSIGNÉ DE L'APPAREIL. VOIR L'ÉTIQUETTE ET LES INSTRUCTIONS.

APPAREIL DE CHAUFFAGE DE PIÈCE, DE TYPE DE COMBUSTIBLE SOLIDE.

PRÉVENTION DES FEUX DE MAISON

Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. Contactez le bureau de la construction ou le bureau des incendies au sujet des restrictions et des inspections d'installation dans votre voisinage.

Référez vous aux instructions du fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un mur ou un plafond combustibles, et les compensations maximales. Lorsque vous utilisez un poêle inséré fabriqué en briques, installez un foyer en briques fabriqué selon des codes nationaux et/ou locaux. Ne pas enlever de la brique ou du mortier pour accommoder la pièce insérée. L'installation demande un tuyau allant de la cheminée existante avec un couvent hermétique.

Installez seulement sur un foyer incombustible. Approuvé pour l'installation et l'usage dans les cheminées avec espace libre de zéro, fabriquées en usine et se conformant aux spécifications minimum de chambre de feu.

Les pièces exigées pour l'installation: tuyau positif ou direct pour connexion de l'assemblage ou la doublure du tuyau enregistré.

Au Canada un tuyau double de diamètre 6" (152mm) S635 est exigé par le code ULC S628-93.

ATTENTION! Inspectez et nettoyez la cheminée fréquemment. Sous certaines conditions, il se peut que la croûte s'accumule rapidement.

Ne pas connecter cet appareil à un système servant un autre appareil.

DANGER: Il y a risque de décharge électrique. Déconnectez le fil électrique de la prise de contact avant le service.

Éloignez le fil électrique de l'appareil, ne pas faire passer le fil électrique au dessus ou en dessous de l'appareil.

Puissance Électrique: 115 VAC, .63 ampères, 60 Hz.

N'élève pas le feu directement sur le bois directement sur l'âtre.

Ne pas surchauffer. Si l'âtre ou le foyer de la cheminée rouissent, vous surchauffez.

Opérez l'appareil seulement lorsque la porte de chargement est fermée. Ouvrez la porte seulement lorsque vous devez ajouter des combustibles dans le feu.

Remplacez le verre seulement avec une vitre céramique de 5 mm disponible chez votre fournisseur.

PIÈCES OPTIONNELLES: Défecteur de cheminée d Pièce 7044-214

Minimum Clearances To Combustible Material

Minimum Des Distances Libres Des Matériaux Combustibles

MINIMUM CLEARANCES								
Space between Mantel and Chimney Avec Mantel Deflector Espace entre la protection de cheminée avec un déflecteur de cheminée	n/a	31"	22"	n/a	n/a	31"(787)	22"(559)	n/a
with Mantel Deflector avec un déflecteur de cheminée	n/a	21"	21"	n/a	n/a	21" (533)	21" (533)	n/a
FLOOR PROTECTION / PROTECTION DU PLANCHER					USA/États-Unis		CANADA	
	E	F			E	F		
Floor height 0" to 6-1/2" (0 to 165 below Insert Base Hauteur du sol de 0" à 6-1/2" (0 à 165) sous la base de l'insert	18"	8"			18" (457)	12" (305)		
Floor height greater than 6-1/2" (165) below Insert Base Hauteur de sol supérieure à 6-1/2" (165) sous la base de l'insert	16"	8"			18" (457)	12" (305)		
THERMAL PROTECTION / Protection Thermique					USA/États-Unis & Canada			
Floor height 0" to 6-1/2" (0 to 165) below Insert Base Hauteur du sol de 0" à 6-1/2" (0 à 165) sous la base de l'insert						1-1/2 inch (38) of k=0.49, R = 3.06		
Floor height greater than 6-1/2" (165) below Insert Base Hauteur de sol supérieure à 6-1/2" (165) sous la base de l'insert						1 inch (25) of k=0.49, R = 2.04		



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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Warranty Policy

**Hearth & Home Technologies Inc.
LIMITED LIFETIME WARRANTY**

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

WARRANTY COVERAGE:

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

WARRANTY PERIOD:

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

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

Warranty Period		HHT Manufactured Appliances and Venting							Components Covered
Parts	Labor	Gas	Wood	Pellet	EPA Wood	Coal	Electric	Venting	
1 Year		X	X	X	X	X	X	X	All parts and material except as covered by Conditions, Exclusions, and Limitations listed
2 years				X	X	X			Igniters, electronic components, and glass
		X	X	X	X	X			Factory-installed blowers
			X						Molded refractory panels
3 years				X					Firepots and burnpots
5 years	1 year			X	X				Castings and baffles
7 years	3 years		X	X	X				Manifold tubes, HHT chimney and termination
10 years	1 year	X							Burners, logs and refractory
Limited Lifetime	3 years	X	X	X	X	X			Firebox and heat exchanger
90 Days		X	X	X	X	X	X	X	All replacement parts beyond warranty period

See conditions, exclusions, and limitations on next page.

WARRANTY CONDITIONS:

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

WARRANTY EXCLUSIONS:

This warranty does not cover the following:

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

This warranty is void if:

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

LIMITATIONS OF LIABILITY:

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

1 Listing and Code Approvals

A. Appliance Certification

Model:	3100-I (ACC) Insert
Laboratory:	OMNI Test Laboratories, Inc.
Report No:	061-S-74-6.2
Type:	Solid Fuel Type, Listed Room Heater
Standard:	UL1482 and ULC S628-93 and (UM) 84-HUD, Mobile Home Approved.

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 S628-93 and CAN/CSA-B365 Installation Codes in Canada.

The Quadra-Fire 3100 Wood Insert (ACC) meets the U.S. Environmental Protection Agency's 1990 particulate emission standards.

B. 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 OAK-ACC must be installed in a mobile home installation.

C. Glass Specifications

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

D. BTU & Efficiency Specifications

EPA Certified:	2.0 grams per hour
Efficiency:	up to 79.8%
BTU Output:	11,800 to 32,000
Heating Capacity:	up to 1800 sq ft depending on climate zone
Vent Size:	6 inches
Firebox Size:	2 cubic feet
Max Wood Length:	18 inches
Fuel:	Cord Wood
Shipping Weight:	345 lbs



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 unit).
- Do NOT Overfire - If appliance or chimney connector glows, you are overfiring.

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.

Quadra-Fire is a registered trademark of Hearth & Home Technologies.

User Guide

2 Operating Instructions

⚠ 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 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.

If you expect that children may come into contact with this appliance, we recommend a barrier such as a decorative screen. See your dealer for suggestions.

A. Your Wood Appliance

WARNING! DO NOT install or operate appliance before reading entire manual and understanding operating instructions. Failure to operate appliance according to operating instructions could cause fire or injury.

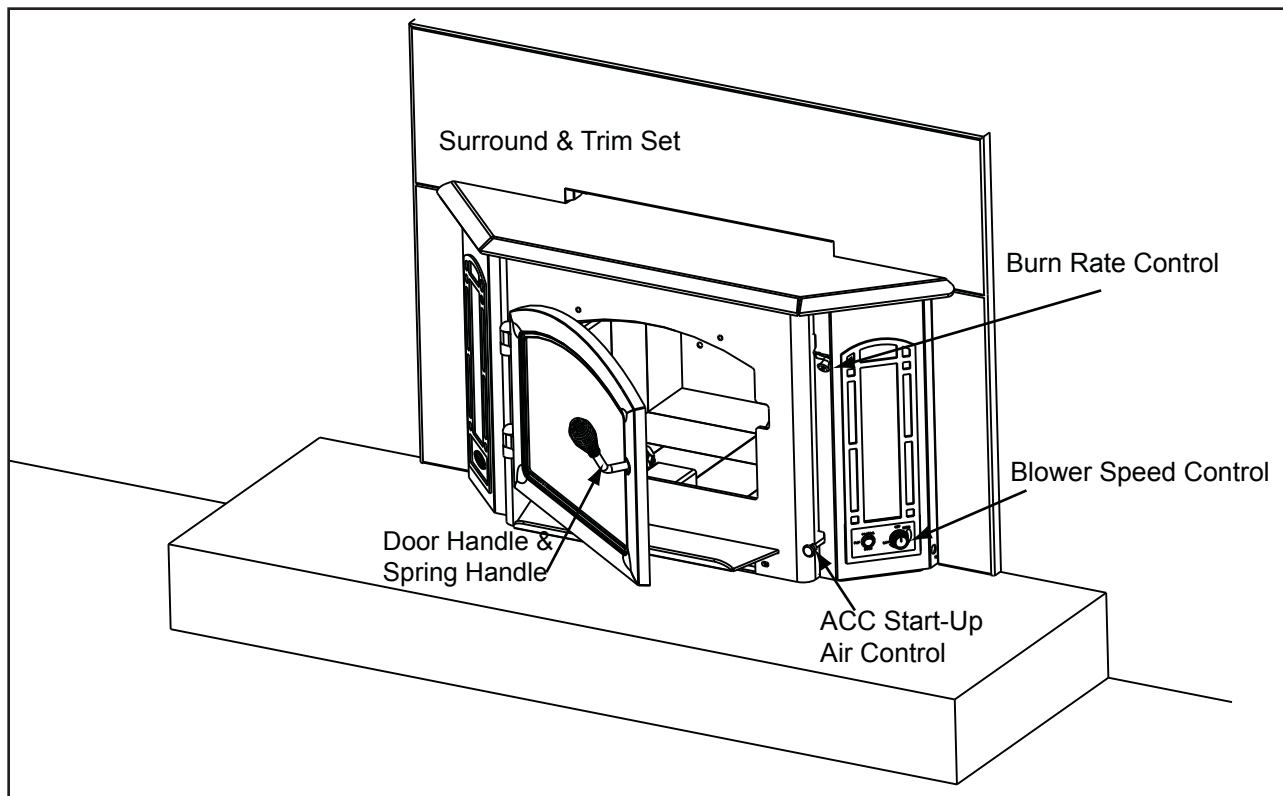


Figure 7.1 General Operating Parts

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.
3. A practiced evacuation plan, consisting of at least two escape routes.
4. In the event of a chimney fire:
 - a. Prepare occupants for immediate evacuation
 - b. Notify fire department

C. Overfiring

 WARNING
Fire Risk Do not over-fire. Over-firing may ignite creosote or will damage the stove and chimney. To prevent over-firing your stove, DO NOT: • Use flammable liquids • Overload with wood • Burn trash or large amounts of scrap lumber • Permit too much air to the fire • Use of processed solid fuel fire logs

1. Symptoms of Over-Firing

Symptoms of over-firing may include one or more of the following:

- Chimney connector or appliance glowing
- Roaring, rumbling noises
- Loud cracking or banging sounds
- Metal warping
- Chimney fire

2. What To Do if Your Stove is Over-Firing

- Immediately close the door and air controls to reduce air supply to the fire.
- If you suspect a chimney fire, call the fire department and evacuate your house.
- Contact your local chimney professional and have your stove and stove pipe inspected for any damage.
- Do not use your stove until the chimney professional informs you it is safe to do so.

Hearth & Home Technologies WILL NOT warranty stoves 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

D. Combustible/Non-combustible Materials

• Combustible Material

Material made of or surfaced with wood, compressed paper, plant fibers, plastics, or any material capable of igniting and burning, whether flame-proofed or not, plastered or unplastered.

• Non-combustible Material

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

• Non-combustible Sealant Material

Sealants which will not ignite and burn: Rutland, Inc. Fireplace Mortar #63, Rutland 76R, Nuflex 304, GE RTV106 or GE RTB116 (or equivalent).

E. Seasoned Wood

Burn only dry seasoned wood.

- Store wood under cover, out of the rain and snow.
- Dry and well-seasoned wood will not only minimize the chance of creosote formation, but will give you the most efficient fire.
- Even dry wood contains at least 15% moisture by weight, and should be burned hot enough to keep the chimney hot for as long as it takes to dry the wood out - about one hour.
- It is a waste of energy to burn unseasoned wood of any kind.

Dead wood lying on the forest floor should be considered wet, and requires full seasoning time.

- Standing dead wood can be considered to be about 2/3 seasoned.
- To tell if wood is dry enough to burn, check the ends of the logs.
- If there are cracks radiating in all directions from the center, it is dry.
- If your wood sizzles in the fire, even though the surface is dry, it may not be fully cured.

F. Burning Process

In recent years there has been an increasing concern about air quality. Much of the blame for poor air quality has been placed on the burning of wood for home heating.

In order to improve the situation, we at Quadra-Fire have developed cleaner-burning wood appliances that surpass the requirements for emissions established by our governing agencies.

These wood appliances must be properly operated in order to ensure that they perform the way they are designed to perform.

NOTICE: Improper operation can turn any wood appliance into a smoldering environmental hazard.

1. Kindling or First Stage

It helps to know a little about the actual process of burning in order to understand what goes on inside the appliance. The first stage of burning is called the kindling stage.

In this stage:

- Wood is heated to a temperature high enough to evaporate the moisture present in all wood.
- Wood will reach the boiling point of water (212°F) and will not get any hotter until the water is evaporated.

This process takes heat from the coals and tends to cool the appliance.

Fire requires three things to burn:

- Fuel
- Air
- Heat

If heat is robbed from the appliance during the drying stage, the new load of wood has reduced the chances for a good clean burn.

It is always best to burn dry, seasoned firewood. When the wood isn't dry, you must open the air controls and burn at a high burn setting for a longer time to start it burning.

The heat generated from the fire should be warming your home and establishing the flue draft, not evaporating the moisture out of wet, unseasoned wood, resulting in wasted heat.

2. Second Stage

In the secondary stage wood gives off flammable gases which burn above the fuel with bright flames.

During this stage of burning:

- The flames must be maintained and not allowed to go out to ensure the cleanest possible fire.
- If the flames tend to go out, it is set too low for your burning conditions.

The air control located at the upper right hand corner is used to adjust for burn rates. This is called the Burn Rate Air Control. **Figure 10.1 on page 10.**

3. Final Stage

The final stage of burning is the charcoal stage. This occurs when the flammable gases have been mostly burned and only charcoal remains. This is a naturally clean portion of the burn. The coals burn with hot blue flames.

- It is very important to reload your appliance while enough lively hot coals remain in order to provide the amount of heat needed to dry and rekindle the next load of wood.
- It is best to open the Burn Rate Air and Start-Up Air Controls **before reloading**. This livens up the coalbed and reduces excessive emissions (opacity/smoke).
- Open door slowly so that ash or smoke does not exit appliance through opening.
- Break up any large chunks and distribute the coals so that the new wood is laid on hot coals.

Air quality is important to all of us, and if we choose to use wood to heat our homes we should do so responsibly.

We need to learn to burn in the cleanest way possible allowing us to continue using our wood appliances for many years to come.

G. Automatic Combustion Control (ACC)

Typically, when you build a fire, you open the air controls fully and monitor the fire to prevent it from going into an overfire situation and/or burning your wood up too quickly before you shut down the air controls to the desired burn rate.

When using the Automatic Combustion Control (ACC) system, you do not have to continually monitor the fire. Once you set the ACC system it will control the fire for you. Follow the instructions below to learn how to operate your stove with ease.

H. Air Controls

1. Start-Up Air Control

The Start-Up Air Control has two primary functions.

The first function is to activate the Automatic Combustion Control system (ACC).

- Push the Start-Up Air Control all the way back until it stops and then pull forward to the front of the appliance until it stops. **Figure 10.1.**
- The front air channel opens and allows air to enter the front of the appliance for approximately 20-24 minutes.
- The front air channel gradually shuts down until it is completely closed at the end of the 20-24 minutes.
- The fire is now controlled by the air supplied by the Burn Rate Air Control. **Figure 10.1.**
- This function should be performed each time you reload the appliance.

The second function of the Start-Up Air Control is operation of the rear air system.

- Push the Start-Up Air Control 3/8 inch (9.5mm) back to allow rear air to enter the firebox. **Figure 10.1.**
- The rear air is used primarily during a High Burn Rate.
- In some instances rear air is desired during normal operation to help with combustion of fuel towards the back of the firebox particularly when burning hardwoods.
- The rear air is controlled independently from the ACC system

2. Manual Timer Over-Ride

If you need to shut the ACC system off before it shuts itself off after 25 minutes (i.e. overfire situation), lift up on the Start-up Air Control and pull out from the appliance. **Figure 10.2.**

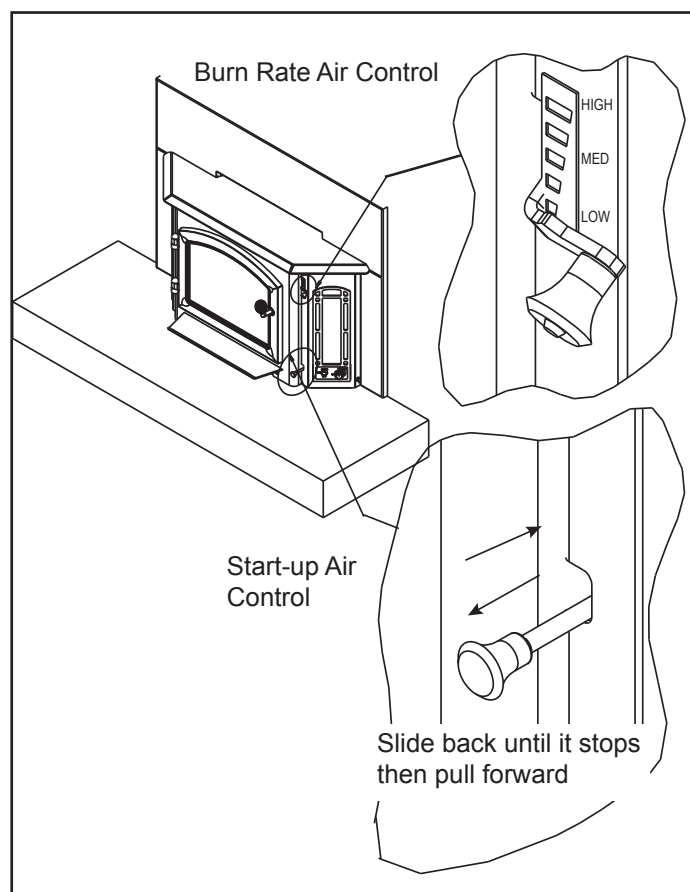


Figure 10.1 Start-up and Burn Rate Air Controls

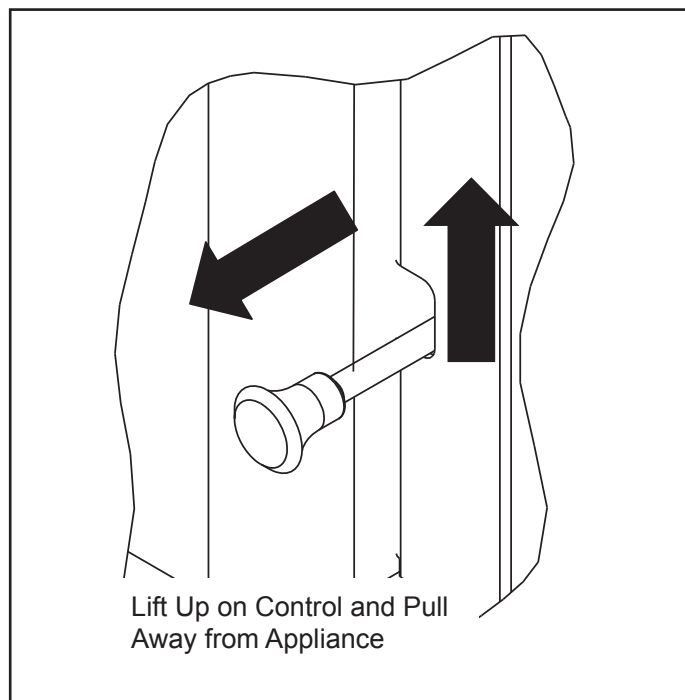


Figure 10.2 Manual Timer Over-Ride

3. Burn Rate Air Control

- The air supply enters at the upper front of the firebox, near the top of the glass door.
- This preheated air supplies the necessary fresh oxygen to mix with the unburned gases, helping to create the second, third and fourth combustion process.
- This air is regulated by the Burn Rate Air Control.
- There are four settings High, Medium-High, Medium-Low and Low.
- When the control is raised all the way up it is on the High setting and when pushed all the way down it is on the Low setting. **Figure 11.1.**

- Push the Start-Up Air Control until it stops.
- This activates the timer system (ACC).

5. Low Burn Rate - Below 10,000 BTU/hr*

- Leave the Burn Rate Air Control at the bottom marker.
- Push the Start-Up Air Control all the way back until it stops and then pull forward until it stops.
- This activates the timer system (ACC).

***NOTE:** These are approximate settings, and will vary with type of wood or chimney draft. Due to altitude and other environmental circumstances, this operational information is a guideline only.

I. Burn Rates and Operating Efficiency

For maximum operating efficiency

1. This appliance has a timer system (ACC) that operates the appliance at its maximum efficiency removing any guess work for the homeowner. Follow the instructions below for each burn rate for the Start-Up Air Control and Burn Rate Air Control. **Figure 11.1.**
2. Burn dry, well-seasoned wood.

Burn Rates

1. Starting a Fire and Reloading

- Open both controls fully by raising the Burn Rate Air Control all the way up until it stops and push the Start-up Air Control back until it stops.
- The blower tends to cool the appliance. Leave the blower off until the burn is well established, i.e., 30 minutes.
- After loading the appliance with wood and starting the fire, set both controls to the desired setting by following the burn rate instructions below.

2. High Burn Rate - Maximum Heat*

- Raise the Burn Rate Air Control all the way up until it stops (top marker) to a fully open position.
- Push the Start-Up Air Control all the way back until it stops and leave it there.
- This setting over-rides the timer system (ACC) so you must monitor the fire closely while in this setting.

3. Medium-High Burn Rate - 15,000 to 30,000 BTU/hr*

- Raise the Burn Rate Air Control all the way up until it stops (top marker) to a fully open position.
- Push the Start-Up Air Control all the way back until it stops and then pull forward until it stops.
- This activates the timer system (ACC).

4. Medium-Low Burn Rate - 10,000 to 15,000 BTU/hr*

- Raise the Burn Rate Air Control up to the bottom of the middle marker and stop.

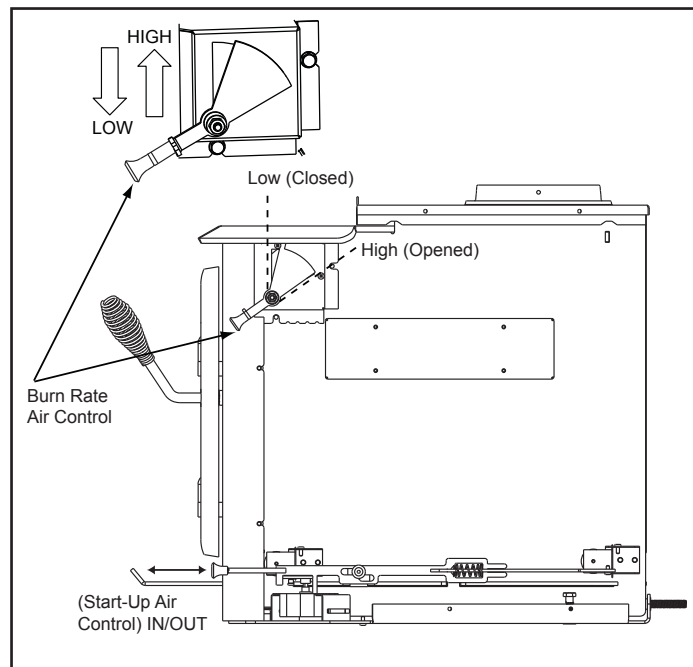
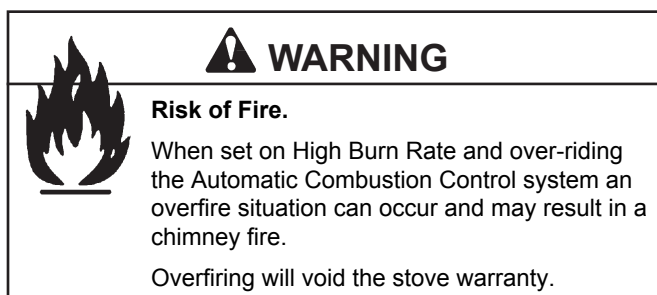


Figure 11.1 Activating Timer

After activating the timer (ACC), if the control is placed within 3/8 inch (9.5mm) inward from the full OUT position it will allow rear air to enter the firebox. This will not interfere with the timer gradually closing the front air channel in 20-24 minutes. If control is set full inward on "HI" it over-rides the timer (ACC).

J. Correct Baffle & Blanket Placement



WARNING

Fire Risk
Firebox damage due to improper baffle placement is not covered by warranty. Operate the wood burning appliance with the baffle in the correct position only. Not doing so could result in:

- Reduced efficiency
- Overheating the chimney
- Overheating the rear of the firebox
- Poor performance

Ensure correct baffle placement and replace baffle components if damaged or missing.

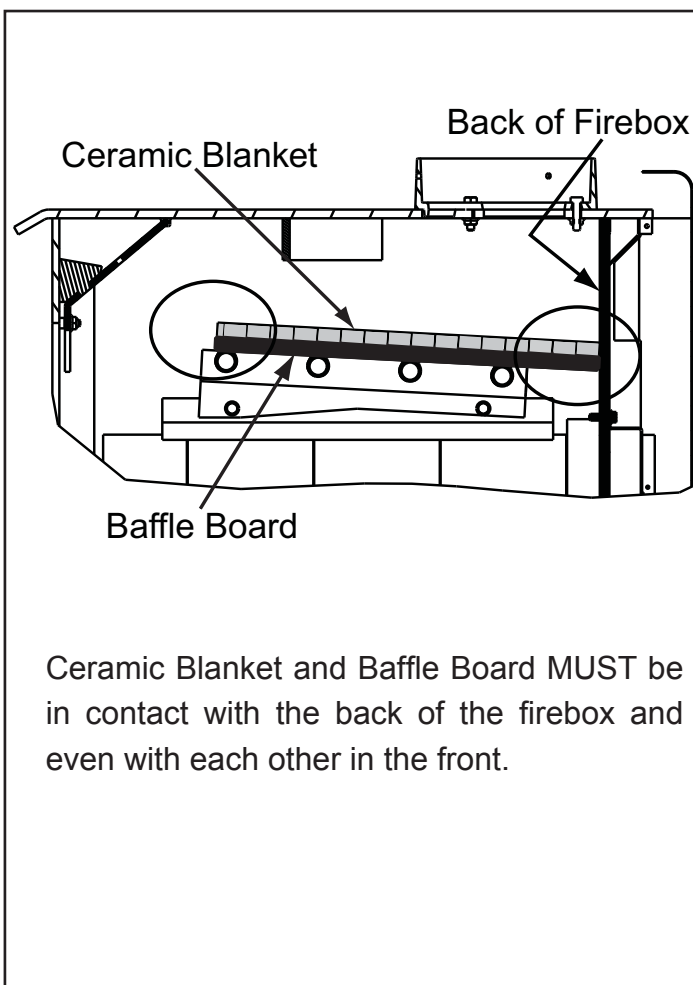
CORRECT POSITION

Figure 12.1 - Correct Baffle and Blanket Positions

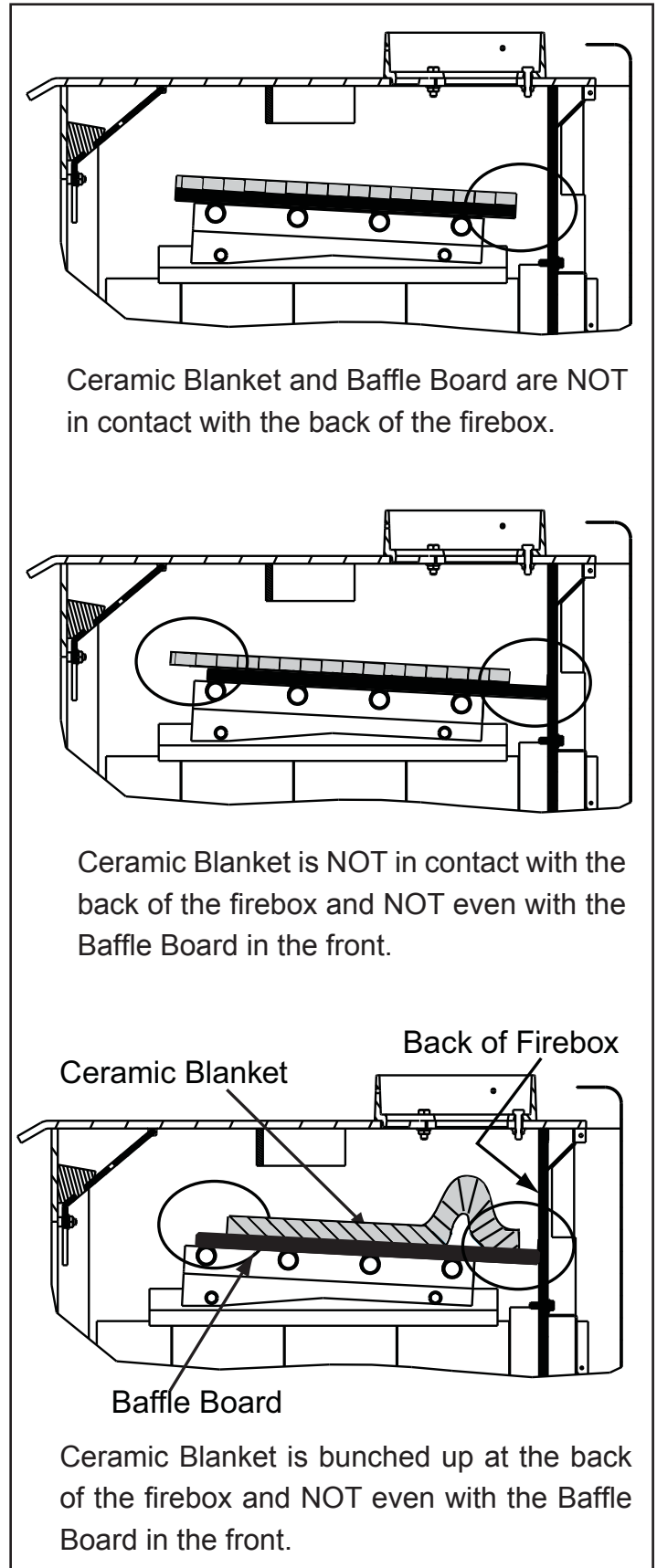
INCORRECT POSITIONS

Figure 12.2 - Incorrect Baffle and Blanket Positions

K. Building A Fire

	WARNING Fire Risk. Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance. • Do NOT store flammable materials in the appliance's vicinity. • DO NOT USE GASOLINE, LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS HEATER. • Keep all such liquids well away from the heater while it is in use. • Combustible materials may ignite.
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- Open door slowly so that ash or smoke does not exit appliance through opening.
 - Large logs burn slowly, holding a fire longer.
 - Small logs burn fast and hot, giving quick heat.
9. As long as there are hot coals, repeating steps 6 through 8 will maintain a continuous fire.

NOTE:

- Build fire on brick firebox floor.
 - Do NOT use grates, andirons or other methods to support fuel.
- It will adversely affect emissions.

Before lighting your first fire in the appliance:

1. Confirm the baffle and ceramic blanket are correctly positioned. They should be even with the front tube and resting on all tubes. **See page 12.**
2. Remove all labels from glass.

There are many ways to build a fire. The basic principle is to light easily-ignitable tinder or paper, which ignites the fast burning kindling, which in turn ignites the slow-burning firewood. Here is one method that works well:

1. Open the Burn Rate Air and Start-Up Air Controls fully.
2. Place several wads of crushed paper on the firebox floor. Heating the flue with slightly crumpled newspaper before adding kindling keeps smoke to a minimum.
3. Lay small dry sticks of kindling on top of the paper.
4. Make sure that no matches or other combustibles are in the immediate area of the appliance. Be sure the room is ventilated and the flue unobstructed.
5. Light the paper in the appliance. NEVER light or rekindle fire with kerosene, gasoline, or charcoal lighter fluid; the results can be fatal.
6. Once the kindling is burning quickly, add several full-length logs 3 to 4 inches (76 - 102mm) in diameter. Be careful not to smother the fire. Stack the pieces of wood 1/2 to 1 inch apart (13-25mm); near enough to keep each other hot, but far enough away from each other to allow air flow between them.
7. Set the Burn Rate Air Control and activate the timer system (ACC).
8. When ready to reload, It is best to fully open both the Burn Rate Air and Start-up Air Controls **before reloading**.
 - This livens up the coalbed and reduces excessive emissions (opacity/smoke).

CAUTION

- Odors and vapors released during initial operation.
- Curing of high temperature paint.
 - Open windows for air circulation.

Odors may be irritating to sensitive individuals.

L. Wood Fuel

WARNING

Fire Risk.

- DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.
- DO NOT USE CHEMICALS OR FLUIDS TO START A FIRE.
- Do NOT burn treated wood or wood with salt (driftwood).
- May generate carbon monoxide if burn material other than wood.

May result in illness or possible death.

Hardwood vs Softwood

Your appliance performance depends on the quality of the firewood you use.

- Seasoned wood contains about 8,000 BTUs per pound .
- Hard woods are more dense than soft woods.
- Hard woods contain 60% more BTUs than soft woods.
- Hard woods require more time to season, burn slower and are harder to ignite.
- Soft woods require less time to dry, burn faster and are easier to ignite.
- Start the fire with softwood to bring the appliance up to operating temperature and to establish draft.
- Add hardwood for slow, even heat and longer burn time.

Soft woods	Hard woods
- Douglas Fir - Pine - Spruce - Cedar - Poplar - Aspen - Alder	- Oak - Maple - Apple - Birch

Processed Solid Fuel Fire Logs

- NOT permitted for use in this appliance

Moisture

WARNING

Fire Risk.

- Do NOT burn wet or green wood.
- Store wood in dry location.
- Stack wood so both ends are exposed to air.

Wet, unseasoned wood can cause accumulation of creosote.

The majority of the problems appliance owners experience are caused by trying to burn wet, unseasoned wood.

- Wet, unseasoned wood requires energy to evaporate the water instead of heating your home, and
- Causes evaporating moisture which cools your chimney, accelerating formation of creosote.

Seasoned Wood

- Cut logs to size
- Split to 6 inches (152 mm) or less in diameter
- Air dry to a moisture content of not more than 20%
 - Soft wood - about nine months to dry
 - Hard wood - about eighteen months to dry

NOTICE: Seasoning time may vary depending on drying conditions.

Storing Wood

Steps to ensure properly seasoned wood:

- Stack wood to allow air to circulate freely around and through woodpile.
- Elevate wood pile off ground to allow air circulation underneath.
- Smaller pieces of wood dry faster. Any piece over 6 in. (152 mm) in diameter should be split.
- Wood (whole or split) should be stacked so both ends of each piece are exposed to air. More drying occurs through the cut ends than the sides.
- Store wood under cover to prevent water absorption from rain or snow. Avoid covering the sides and ends completely.

WARNING

Fire Risk

Do NOT store wood:

- In front of the appliance.
- In space required for loading or ash removal.

M. Operating the Blower Control Box with Snap Disc

1. The blower will turn on/off automatically when set to AUTO. **Figure 15.1.**
2. When set to MANUAL, the fan will turn on/off only when you turn it on or off. This setting over-rides the internal snap disc.
3. Adjust the speed of the fan by turning the HIGH/LOW knob to the desired setting.

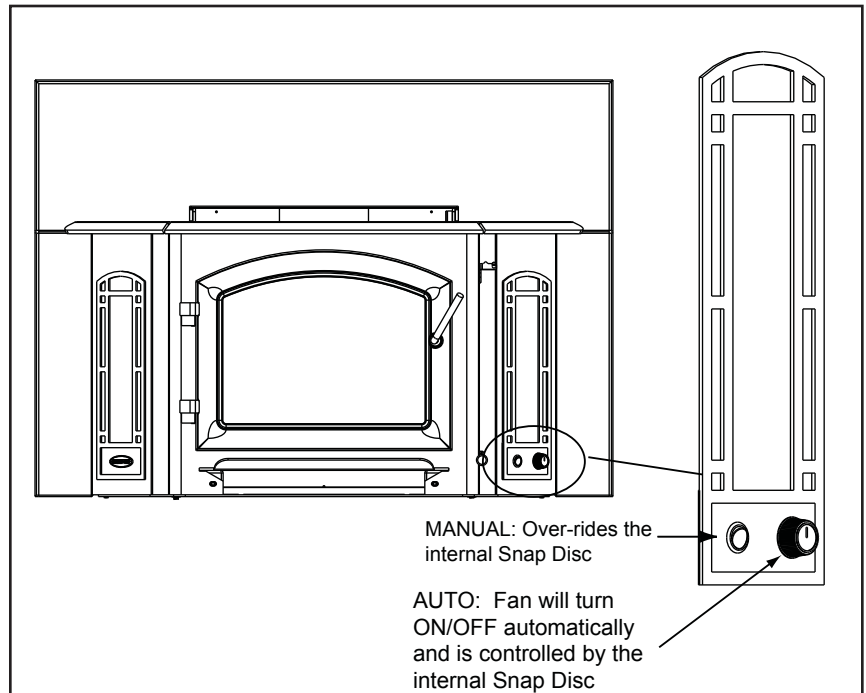


Figure 15.1

N. Blower Operating Instructions

1. **Initial (cold) startup:** Open both controls fully by raising the Burn Rate Air Control all the way up until it stops and push the Start-up Air Control back until it stops. The blower tends to cool the appliance. Leave the blower off until the burn is well established, i.e., 30 minutes.
2. **High Burn Setting:** Both controls are open. Burn Rate Air Control is pulled up and the Start-up Air Control is fully pushed in. Blower may remain on.
3. **Medium High Burn Setting*:** Burn Rate Air Control is closed then opened to 1 inch (pull up) to fully open. Blower may remain on.
4. **Medium Low Burn Setting*:** Burn Rate Air Control is closed then opened to 1/4 inch to 1/2 inch. Leave the blower off until the burn is well established, i.e., 30 minutes.
5. **Low Burn Setting*:** Burn Rate Air Control is closed. Leave the blower off until the burn is well established, i.e., 30 minutes.

***NOTE:** For burn settings 3 to 5 the Start-up Air Control needs to be pushed in (Open) then pulled forward to activate the Automatic Combustion Control (ACC).

NOTE: For maximum efficiency and lowest emissions, when operating the blower in either the automatic or manual setting for the low and medium low burn settings leave the blower off until the burn is well established, i.e., 30 minutes.

6. The blower is equipped with a rheostat (speed control). The highest blower speed is obtained by turning the rheostat on, then adjusting back towards "OFF" as far as possible without turning the blower off. For a low blower speed, turn the control knob clockwise as far as possible

NOTICE!

Do NOT operate a circulating fan within close proximity, approximately 4 ft (1.2m), of appliance

- Can reverse air flow, blowing hot air into appliance cavity.
- Can damage appliance blower due to overheating.

O. Clear Space

- Do NOT place combustible objects within 4 ft (1.2 m) of the front of fireplace. **Figure 16.1.**

WARNING

Fire Risk.

- Do NOT place combustible objects within 48 inches in front of the appliance.
- High temperatures may ignite clothing, furniture or draperies.

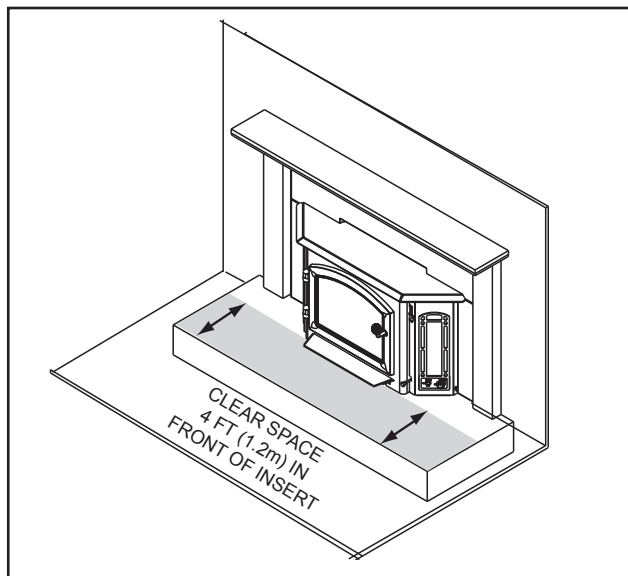


Figure 16.1 - Clear Space

NOTICE!

Do NOT operate a circulating fan within close proximity, approximately 4 ft (1.2m), of appliance

- Can reverse air flow, blowing hot air into appliance cavity.
- Can damage appliance blower due to overheating.

Q. Opacity (Smoke)

Opacity is the measure of how cleanly your appliance is burning.

Opacity is measured in percent:

- 100% opacity is when an object is totally obscured by the smoke column from a chimney, and
- 0% opacity means that no smoke column can be seen.

As you become familiar with your appliance, you should periodically check the opacity. This will allow you to know how to burn as nearly smoke-free as possible (goal of 0% opacity).

R. Door Closing

To operate this unit the way it was designed by the manufacturer, the door must be sealed. To seal the unit, the front door needs to remain closed during operation.

- Grasp metal spring on front door and push door closed.
- With your hand on the handle of the door, rotate the handle clockwise, until it will no longer rotate in that direction.
- This will ensure that the door is properly closed, and will not allow for any air leakage.



WARNING

DO NOT operate this unit with the firebox door open for a continuous period of time.

This appliance was tested to manufacturers specifications and operating this unit in a matter other than specified by the manufacturer will effect the efficiency of this unit.

P. Frequently Asked Questions

ISSUES	SOLUTIONS
Odor from appliance	When first operated, this appliance may release an odor for the first several hours. This is caused by the curing of the paint and the burning off of any oils remaining from manufacturing.
Metallic noise	Noise is caused by metal expanding and contracting as it heats up and cools down, similar to the sound produced by a furnace or heating duct. This noise does not affect the operation or longevity of the appliance.
Whirring sound	The blower may produce a whirring sound which increases in volume as the speed is increased.

3 Maintenance and Service

A. Disposal of Ashes

- **Frequency:** When ash is within 1-3/4 inch (44mm) of firebox lip. Leave 1/4 to 1/2 inch (6-13mm) of ash in the bottom of the firebox.
- **By:** Homeowner

WARNING! Risk of Fire! Ashes could contain hot embers.

- Place ashes in a metal container with a tight-fitting lid.
- The closed container should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal.
- If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled

B. Chimney and Chimney Connector Inspection/Cleaning

- **Frequency:** Every 2 months during heating season or as recommended by a certified chimney sweep; more frequently if chimney exceeds or is under 14-16 feet (4.3 to 4.8m) measured from bottom of appliance.
- **By:** Certified chimney sweep
- Remove all ash from the firebox and extinguish all hot embers before disposal.
- Allow the appliance to cool completely.
- If your type of installation involves a full reline of the chimney, it will be necessary to either remove the baffle from the insert, or remove the insert from the fireplace and disconnect the vent prior to cleaning the chimney. Refer to **page 22** in this manual for instructions on Baffle Removal.
- If your type of installation is direct connect within a masonry chimney, the insert will need to be pulled out from the fireplace and disconnected from the flue prior to cleaning the chimney.
- The creosote or soot should be removed with a brush specifically designed for the type of chimney in use.
- Clean out fallen ashes from the firebox.
- It is also recommended that before each heating season the entire system be professionally inspected, cleaned and repaired if necessary.

WARNING! Risk of Fire!

Do not use chimney cleaners or flame colorants in your appliance. It will corrode your pipe.

Creosote - Formation and Need for Removal

- When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote.
- The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire.
- As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire.
- The chimney and chimney connector shall be inspected every two months during the heating season to determine when a creosote buildup has occurred.
- When creosote has accumulated it shall be removed to reduce the risk of a chimney fire.

C. Appliance Inspection - Routine

- **Frequency:** Every 2 months at the same time the chimney and chimney connector are inspected.
- **By:** Homeowner

Check for:

- Cracks in glass
- Door handle - smooth cam operation
- Baffle and ceramic blanket correct placement
- Baffle for warpage
- Firebrick for cracks, broken or crumbly
- Door gasket. (Dollar bill test). Place a dollar bill between the stove and the door and then shut the door. If you can pull the dollar bill out, replace the door gasket.
- Glass frame for loose screws

D. Cleaning Plated Surfaces

- **Frequency:** As desired
- **By:** Homeowner
- Clean all the fingerprints and oils from plated surfaces **BEFORE** firing the appliance for the first time.
- If not cleaned properly before lighting your first fire, the oils can cause permanent markings on the plating.
- After the plating is cured, the oils will not affect the finish and little maintenance is required.
- Wipe clean as needed.

CAUTION! Do not use polishes with abrasives. It will scratch plated surfaces.

E. Glass Cleaning

- **Frequency:** As desired
- **By:** Homeowner
- Clean glass with a non-abrasive glass cleaner. Abrasive cleaners may scratch and cause glass to crack.
- If the deposits on the glass are not very heavy, normal glass cleaners work well. Heavier deposits may be removed by using a damp cloth dipped in wood ashes or by using a commercially available oven cleaner.
- After using an oven cleaner, it is advisable to remove any residue with a glass cleaner or soap and water. Oven cleaner left on during the next firing can permanently stain the glass and damage the finish on plated metal surfaces.
- A portion of the combustion air entering the firebox is deflected down over the inside of the door glass.
- This air flow “washes” the glass, helping to keep smoke from adhering to its surface.
- When operated at a low burn rate, less air will be flowing over the glass and the smoky, relatively cool condition of a low fire will cause the glass to become coated.
- Operating the appliance with the Burn Rate Air Control and Start-Up Air Control all the way open for 15-20 minutes should remove the built up coating.

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

- Avoid striking, scratching or slamming glass
- Avoid abrasive cleaners
- Do not clean glass while it is hot

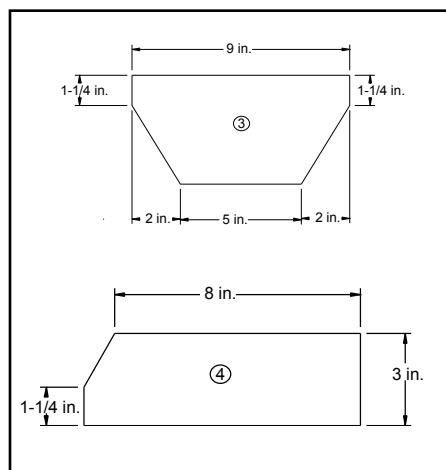


Figure 18.1

F. Inspect Firebrick

- **Frequency:** After each ash removal
- **By:** Homeowner

Replace the firebrick if they become crumbly and/or if there is a 1/4 inch (6.35mm) gap between the bricks.

The firebox is lined with firebrick, which has exceptional insulating properties. Do not use a grate; simply build a fire on the firebox floor. Do not operate appliance without firebrick.

1. After the coals have completely cooled, remove all old brick and ash from unit and vacuum firebox.
2. Remove new brick set from box and lay out to diagram shown.
3. Lay bottom bricks in unit.
4. Install rear bricks on the top of the bottom bricks. Slide top of bricks under clip on back of firebox wall and push bottom of bricks back.
5. Install side bricks. Slide top of brick under clips on side of firebox and push the bottom of the brick until it is flush with the side of the unit.

Use Part 832-0550 when ordering individual brick. Provide brick dimension or copy this page, mark the desired brick and take it to your authorized dealer.

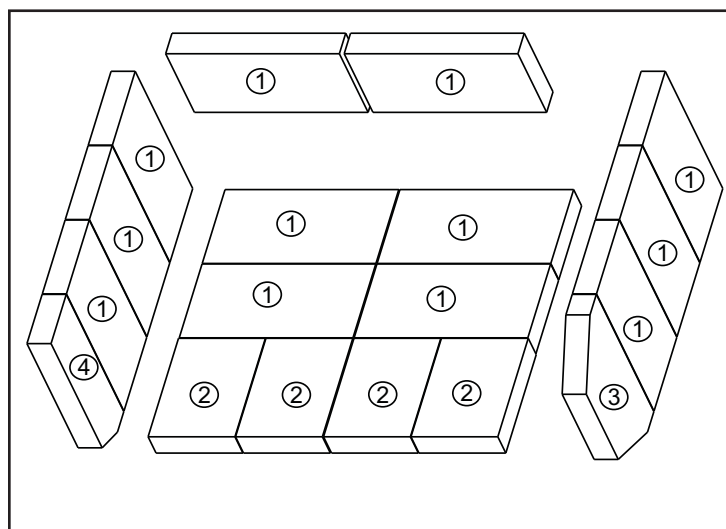
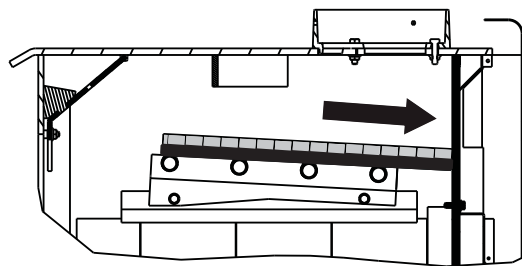


Figure 18.2

No.	Brick Size	Qty
1	9 x 4-1/2 x 1-1/4	12
2	6 x 4-1/2	4
3	9 x 4-1/2 w/angle	1
4	9 x 3 w/angle	1

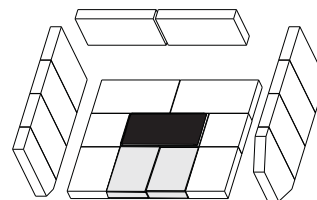
G. Quick Reference Maintenance Guide

BAFFLE & BLANKET PLACEMENT



Baffle and blanket placement is critical to heat output, efficiency and overall life of the unit. Make sure the baffle is pushed all of the way to the back of the firebox and the blanket is laying flat.

**INSPECT FIREBRICKS & ASH COVER
(AFTER EACH CLEANING)**



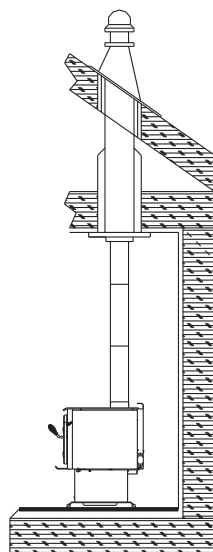
Step Top Models Only

Firebrick is designed to protect your firebox. Replace firebricks that are crumbling, cracked or broken. If you have an optional ash door, check to make sure the door is closing properly.

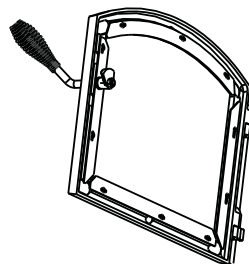
CHIMNEY & CAP INSPECTION

The chimney and chimney cap must be inspected for soot and creosote during the burn season. This will prevent pipe blockage, poor draft, and chimney fires.

Always burn dry wood to help prevent cap blockage and creosote build-up.

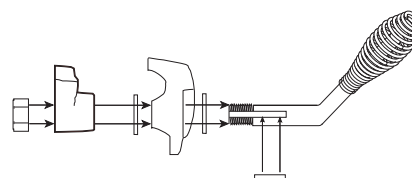


DOOR & LATCH CHECK



Keeping the door and glass gasket in good shape will maintain good burn times on a low burn setting.

Check the glass frame for loose screws to prevent air leakage.



Check the door latch for proper adjustment. This is very important especially after the door rope has formed to the stove face.

Start the first inspection of your unit after the first 2 months of use, or if performance changes, and adjust your schedule accordingly.

Maintenance is required for safe operation and must be performed to maintain your warranty.

NOTE: These are generic drawings and may not represent your actual model.

4 Troubleshooting Guide

With proper installation, operation, and maintenance your woodstove will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist you or a qualified service person in the diagnosis of a problem and the corrective action to be taken.

Start Fire Problems	Possible Cause	Solution
Can not get fire started Excessive smoke or spillage Burns too slowly Not enough heat output	Not enough kindling/paper or no kindling/paper	Use dry kindling, more paper. Arrange kindling & wood for air movement.
	Not enough air for fire to ignite	Check for restricted termination cap
		Check for blockage of outside air kit (if installed).
		Check for flue blockage.
		Pre-warm flue before starting fire (refer to Building a Fire Section).
		Check for adequate vent height (refer to Chimney Height Section).
		Open window below the appliance towards the wind.
	Wood condition is too wet, too large	Use dry, seasoned wood (refer to Seasoned Wood Section).
	Bed of coals not established before adding wood	Start with paper & kindling to establish bed of coals (refer to Building a Fire Section).
	Flue blockage such as birds' nests or leaves in termination cap	Have chimney inspected for creosote and cleaned by a certified chimney sweep.
Fire burns too fast	Down draft or negative pressure Competition with exhaust devices	Do not use exhaust fans during start-up (refer to Negative Pressure Section).
		Open window below the appliance towards the wind.
	Extremely dry or soft wood	Mix in hardwood.
		Mix in less seasoned wood after fire is established (refer to Wood Fuel Section).
		Check for correct vent height; too much vertical height creates overdrafting.
	Overdrafting	Check location of vent termination (refer to Chimney Termination Requirement Section).

5 Service Parts Replacement

A. Glass Replacement

(Replace with 5mm ceramic glass only)

1. Ensure that the fire is out and the appliance is cool to the touch.
2. Protect a table or counter top with padding or towels. Protect your hands and wear gloves to prevent injury.
3. Remove the door with the broken glass by lifting the door up and off of the hinges.
4. Lay door face down on a table or counter making sure the handle hangs over the edge so the door lays flat, on a soft surface.
5. Remove the screws from each glass retainer and remove the glass. (If screws are difficult to remove, soak with penetrating oil first).
6. Center the glass with edges evenly overlapping the opening in the door, (i.e. same space top and bottom, left and right sides).
7. Replace the glass retainers. Be careful not to cross thread the screws.
8. Tighten each retainer just a few turns until each is secured. Check again for centering of glass in door frame. Continue to tighten each retainer alternately, a few turns at a time, until the glass is secure. DO NOT OVERTIGHTEN - can cause glass to break.
9. Replace the door on the appliance.

WARNING! Risk of Fire or Injury!

Use only glass that is specified in the manual, **DO NOT** replace with any other material. Glass breakage will occur.

CAUTION!

Handle glass with care.

- Inspect the gasket to ensure it is undamaged.
- Do NOT strike, slam or scratch glass.
- Do NOT operate appliance with glass & door assembly removed.
- Do NOT operate with glass cracked, broken or scratched.

Quadra-Fire appliances are equipped with ceramic super heat-resistant glass, which can only be broken by impact or misuse.

B. Snap Disc Replacement

1. Locate the snap disc bracket assembly at the bottom left rear corner of the appliance. **Figure 21.1**
2. A magnet holds the bracket to the appliance. Pull the bracket down away from the appliance to expose the snap disc.
3. Pull the snap disc and spade connectors up and out of bracket as shown in **Figure 21.2**.
4. Using a Phillips head screw driver, remove the 2 screws from the snap disc and then remove the snap disc from the spade connectors. Replace with new snap disc and re-connect to spade connectors.
5. Push the snap disc and spade connectors back inside bracket and re-attach the bracket to the appliance.

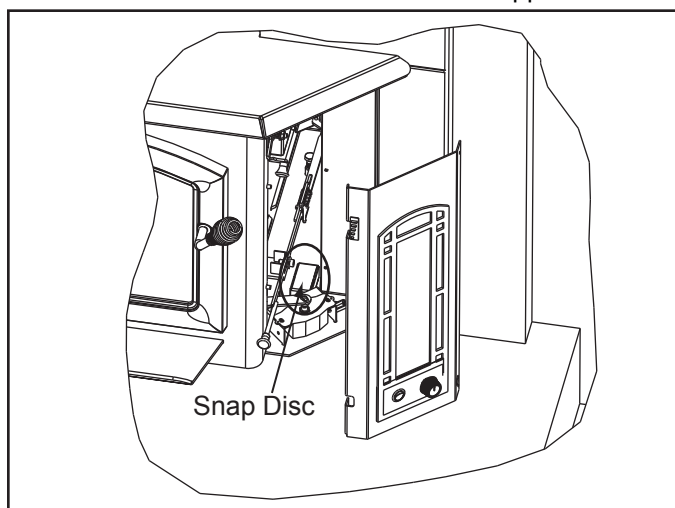


Figure 21.1 Snap Disc Location

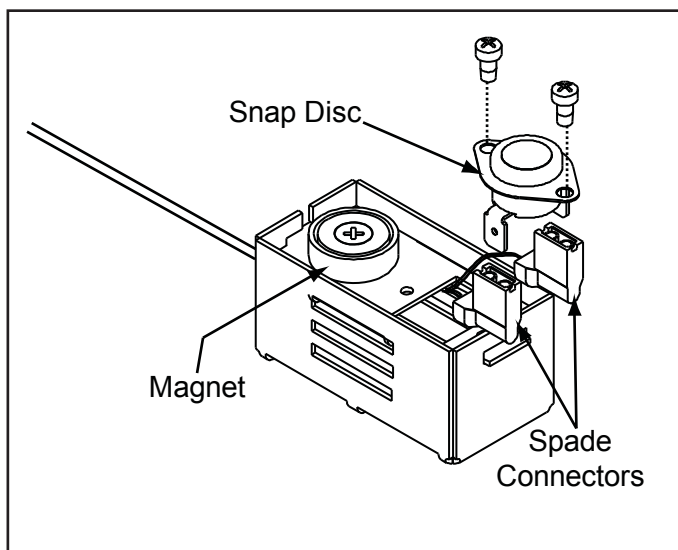


Figure 21.2

C. Baffle Removal

1. Remove all ash from the firebox, and extinguish all hot embers before disposal into a metal container.
2. The baffle board has 2 pieces. With the ceramic blanket still in place, slide one baffle piece over the top of other one but still keep it all components inside the firebox. **Figure 22.1.**
3. It is easier to remove both baffle boards and ceramic blanket after the tube channel assembly has been partially disassembled. Follow steps 1 through 4 on **page 23** for removal of the tube channel assembly. It is not necessary to completely remove the tube channel assembly.
4. Re-install in reverse order. Be sure the baffle boards and ceramic blanket are in their proper positions. **Figure 22.2.**

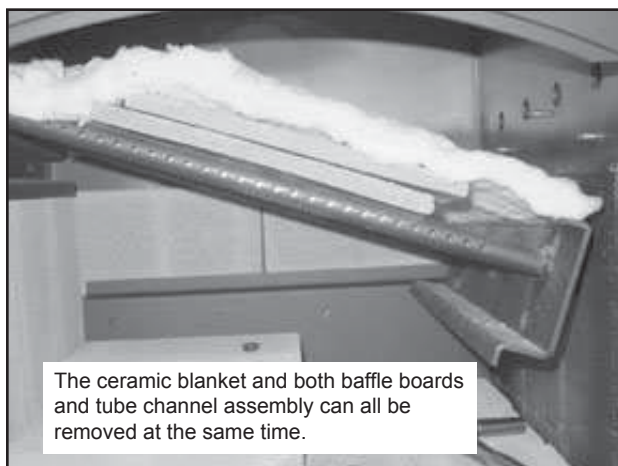


Figure 22.1

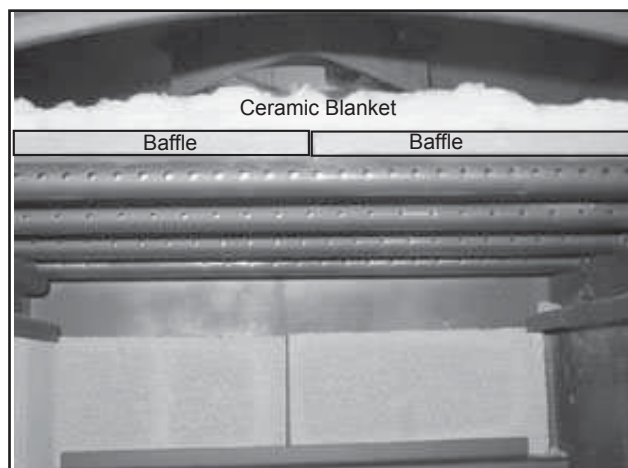


Figure 22.2

D. Door Handle Assembly

1. Install washer on door handle shaft.
2. Slide door handle through door.
3. Install second washer(s) as shown in **Figure 22.3.**
4. Install key in groove.
5. Align groove in latch cam with key; slide latch cam over shaft
6. Install locknut but do not overtighten, the handle needs to move smoothly.
7. Install handle turning in a counter-clockwise motion to desired location on door handle rod. **Figure 22.3.**

CAUTION! Do not overtighten lock nut. The door handle needs to move smoothly.

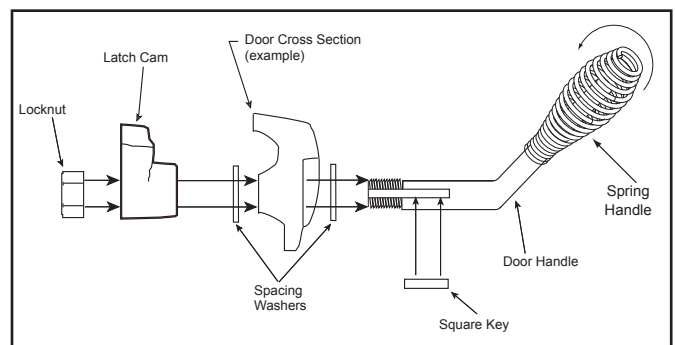


Figure 22.3 - Door Handle for Arched Door

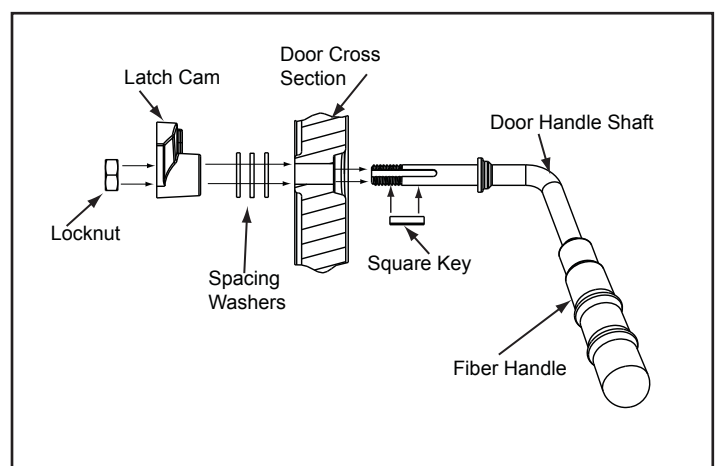


Figure 22.4 - Door Handle for Rectangular Door

E. Tube Channel Assembly Replacement

Removing Tube Channel Assembly

1. Remove the right side bricks (4 pieces).
2. Remove the baffle protection channel by rolling forward and out of the firebox.
3. Locate the 2 channel nuts and 1 bolt inside of chamber and remove using a 7/16 socket wrench.

NOTE: Soak the bolts with penetrating oil for at least 15 minutes before trying to remove them.

4. Slide the tube channel assembly all the way to left until it is off the threads. Drop the right side down, then slide the assembly back to right.
5. The ceramic blanket and both baffle boards can be removed at the same time you remove the tube channel assembly.
6. When the tube channel assembly is free of the left side support, rotate clockwise and pull assembly, blanket and baffles out through the front opening.
7. Re-install in reverse order.

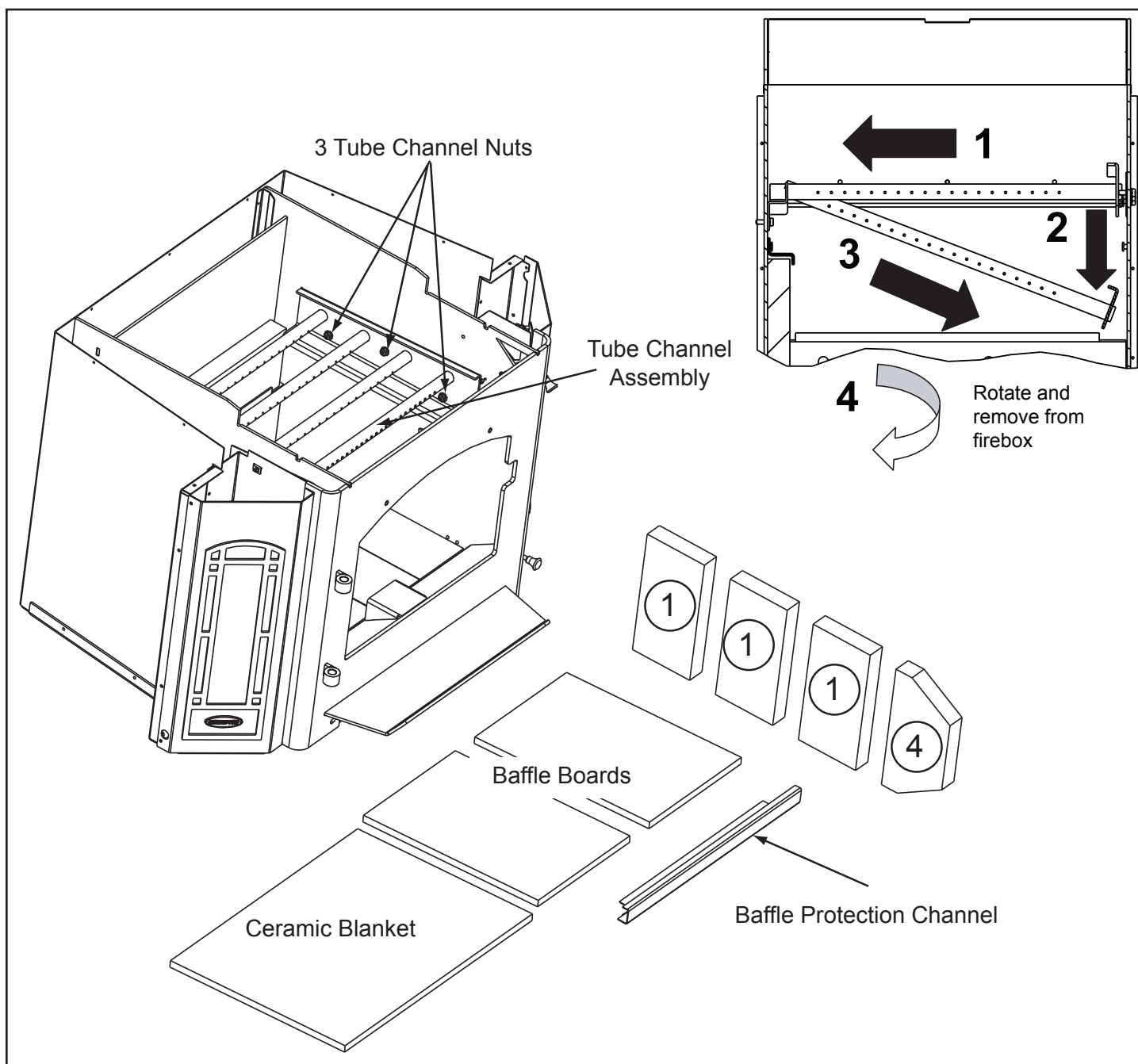


Figure 23.1

Installer's Guide

6 Getting Started

A. Design and Installation Considerations

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.

Before installing, determine the following:

- Type of chimney connector to be used
 - single wall, 6 inch (152mm) diameter, stainless steel, or
 - double wall, 6 inch (152mm) diameter, stainless steel
- Must be installed meeting type HT (2100°F) requirements per UL 1777 (USA) or ULC S635
- Consult page 28 for clearances to combustibles
 - Power outlet located close by for optional blower

B. Draft

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

Considerations for successful draft include:

- Preventing negative pressure
- Location of appliance and chimney

To be sure that your appliance burns properly:

- During a low burn, the chimney draft (static pressure) should be approximately -.04 inch water column (W.C.)
- During a high burn the chimney draft should be approximately -.10 inch (W.C.)
- Measure the W.C at 6 inches (152mm) above the top of the appliance after one hour of operation at each burn setting.



WARNING

Asphyxiation Risk.

- DO NOT CONNECT THIS UNIT 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.



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 unit).
- Do NOT Overfire - If appliance or chimney connector glows, you are overfiring.

Any such action that may cause a fire hazard.

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

- Inadequate draft due to environmental conditions
- Downdrafts
- Tight sealing construction of the structure
- Mechanical exhausting devices
- Overdrafting 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.

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 heaters 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
- Basement installations should be avoided

D. Locating Your Stove & Chimney

Location of the appliance and chimney will affect performance. As shown in **Figure 26.1** 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.

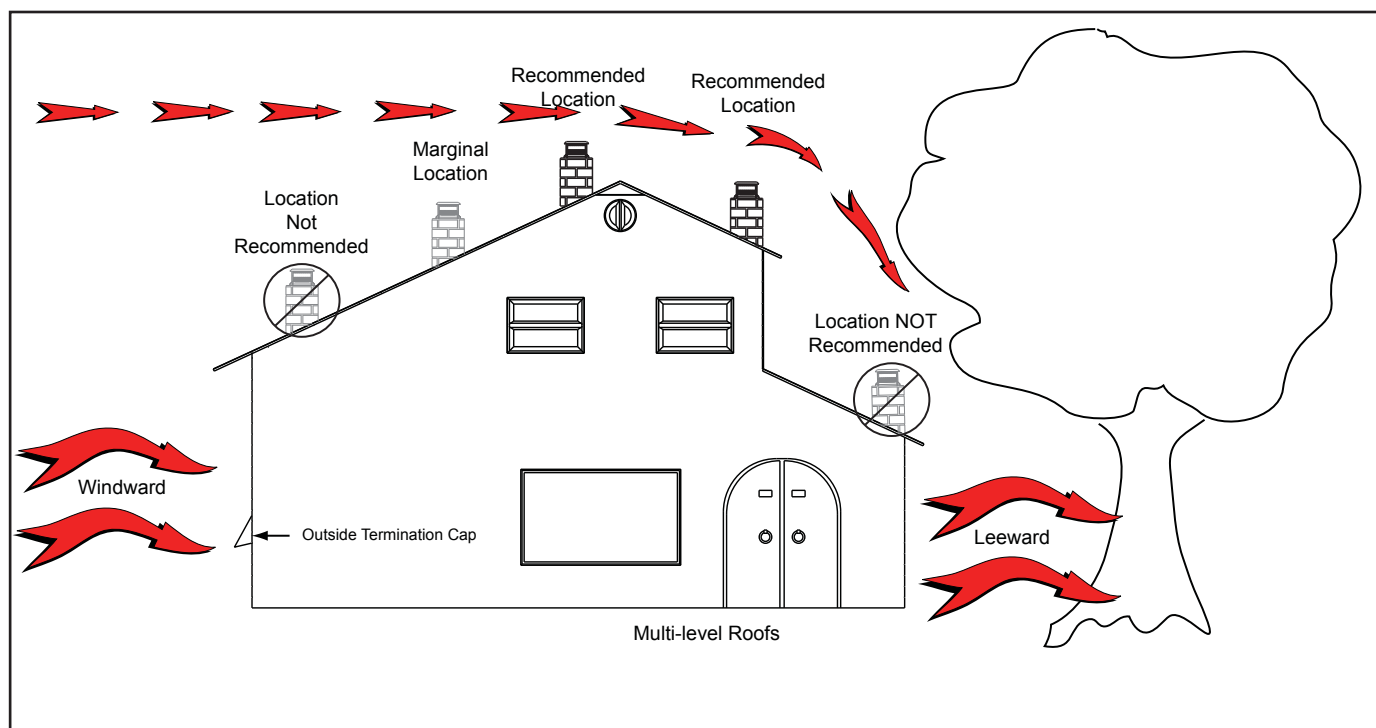


Figure 26.1

E. Chimney Termination Requirements

Follow manufacturer's instructions for clearance, securing flashing and terminating the chimney.

- 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: 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

NOTICE:

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

F. 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 unit.

- 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.

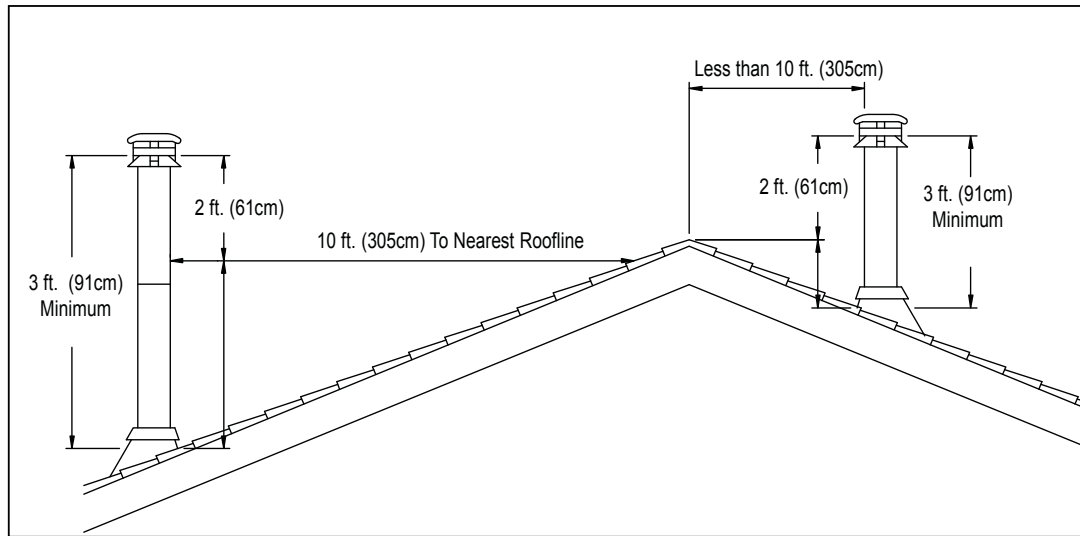


Figure 27.1

Pitched Roof

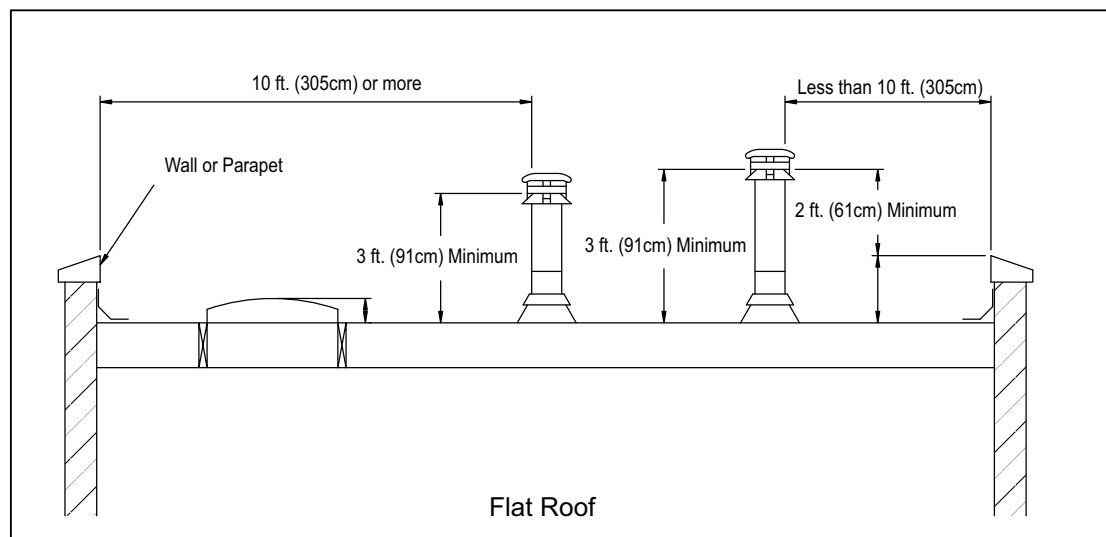


Figure 27.2

Flat Roof

G. Tools And Supplies Needed

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

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

H. 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.

Pre-Use Check List

1.	Place the appliance in a location near the final installation area and follow the procedures below:
2.	Open the appliance and remove all the parts and articles packed inside the Component Pack. Inspect all the parts and glass for shipping damage. Contact your dealer if any irregularities are noticed.
3.	All safety warnings have been read and followed.
4.	This Owner's Manual has been read.
5.	Floor protection requirements have been met.
6.	Venting is properly installed per vent manufacturing instructions.
7.	The proper clearances from the appliance and chimney to combustible materials have been met.
8.	The masonry chimney is inspected by a professional and is clean, or the factory built metal chimney is installed according to the manufacturer's instructions and clearances.
9.	The chimney meets the required minimum height.
10.	All labels have been removed from the glass door.
11.	Plated surfaces have been wiped clean, if applicable.
12.	A power outlet is available nearby for use of the blower assembly.

I. Inspect Appliance and Components

- Remove appliance and components from packaging and inspect for damage.
- Vent system components and doors are shipped in separate packages.
- 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.**

	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.

7 Dimensions and Clearances

A. Appliance Dimensions

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

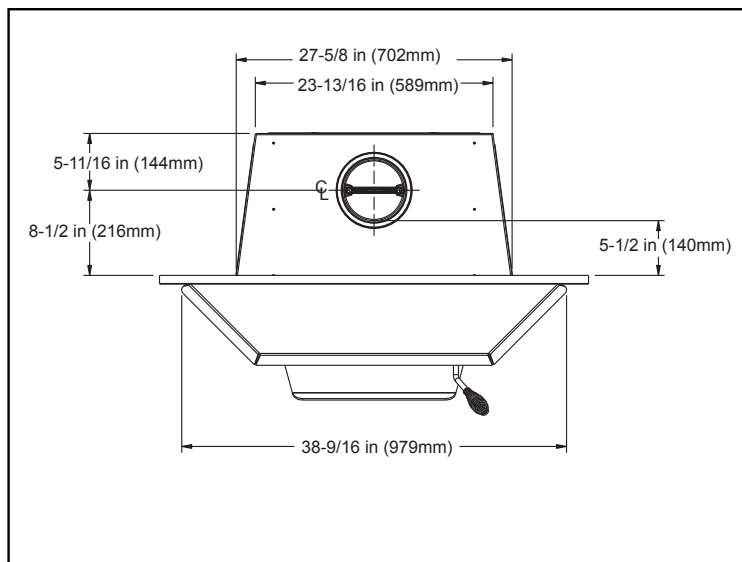


Figure 29.1 Top View

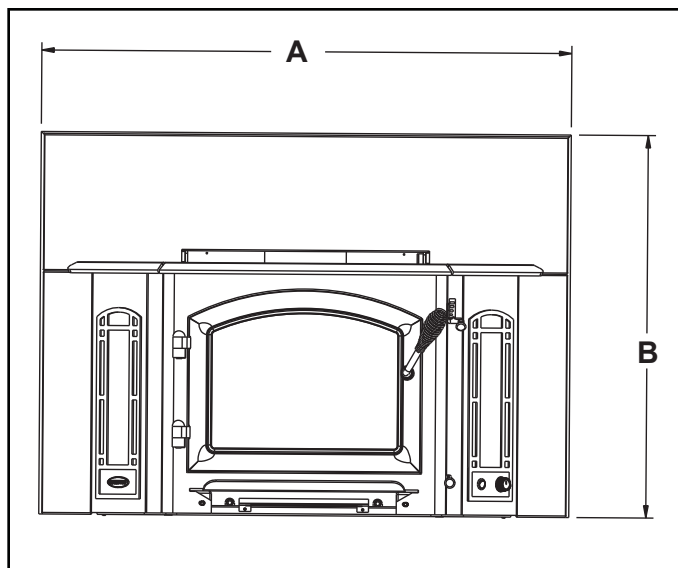


Figure 29.2 Front View

Surround Sizes	A	B
Standard	43 in. (1092mm)	31 in. (787mm)
Large	51 in. (1295mm)	34 in. (864mm)

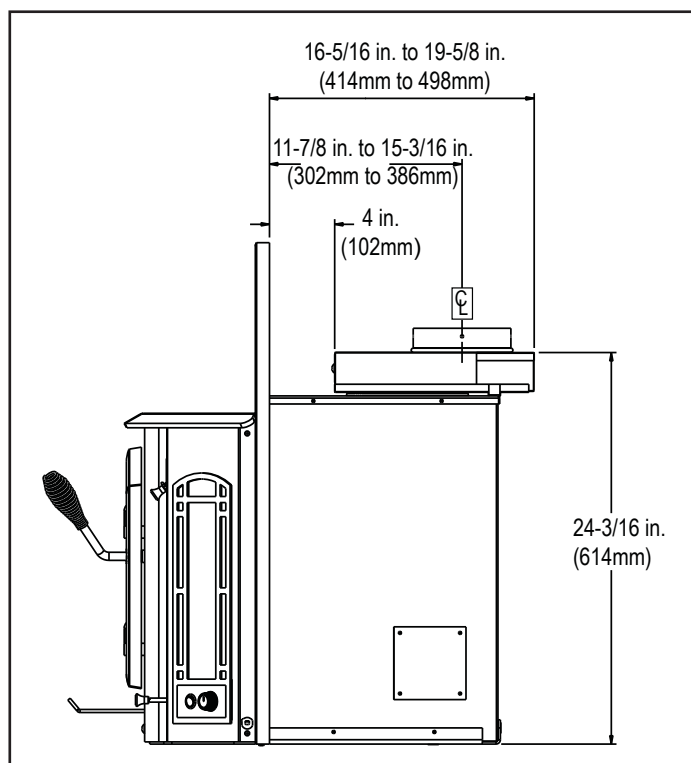


Figure 29.3 - Side View With Optional Offset Adapter

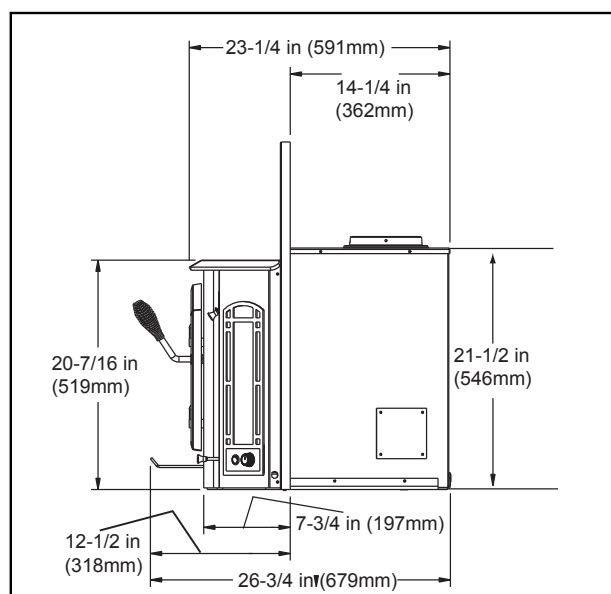
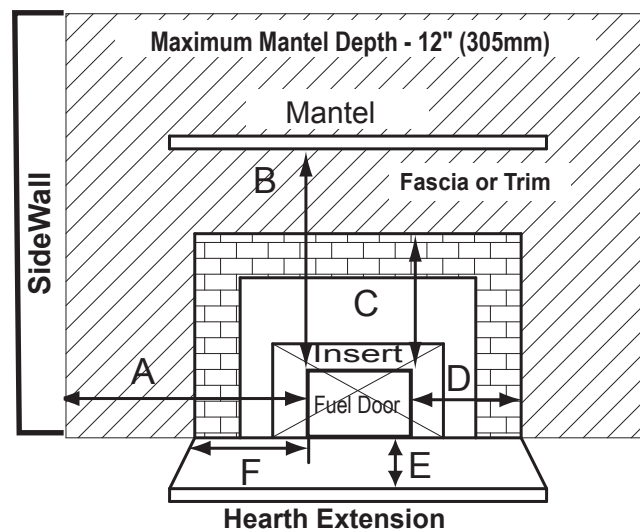


Figure 29.4 - Side View Without Optional Offset Adapter

B. Clearances to Combustibles, United States and Canada (UL and ULC)

Minimum Clearances to Combustible Material				
USA and Canada				
	A	B	C	D
Masonry, Heat Exchanger & Zero Clearance	21.5" (546)	n/a	n/a	15" (381)
MANTEL CLEARANCES				
No Mantel Deflector	n/a	31" (787)	22" (559)	n/a
with Mantel Deflector (Figure 30.1)	n/a	21" (533)	21" (533)	n/a
FLOOR PROTECTION				
	USA		Canada	
Floor height 0" to 6-1/2"	E	F	E	F
(6 to 165mm) below Insert Base	18"	8"	18" (457)	12" (305)
Floor height greater than 6-1/2"				
(165mm) below Insert Base	16"	8"	18" (457)	12" (305)
THERMAL PROTECTION				
	USA and Canada			
Floor height 0" to 6-1/2"	See Figure 31.1			
(6 to 165mm) below Insert Base	1-1/2 inch (38) of k = 0.49, R = 3.06			
Floor height greater than 6-1/2"	See Figure 31.2			
(165mm) below Insert Base	1 inch (25) of k = 0.49, R = 2.04			



In Canada a full length 6 inch (152mm) S635 flue liner required as per ULC S628.

In USA a minimum 5 ft length (1.82m), 6 inch (152mm) diameter flue liner is required as per UL 1482.

*See Alternative Floor Protection Worksheet on **page 31**

WARNING

Fire Risk.

- Do NOT operate appliance with the Mantel Heat Deflector removed when used for clearance reduction.
- Failure to comply may cause house fire.

WARNING

Fire Risk.

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

NOTE: Clearances may only be reduced by means approved by the regulatory authority having jurisdiction

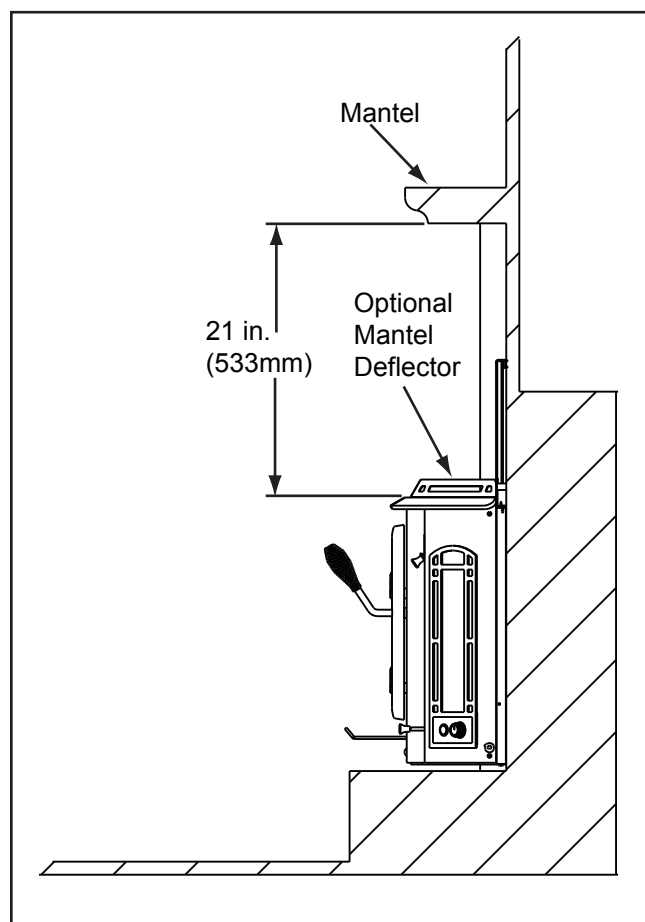


Figure 30.1

Zero Clearance Floor Thermal Protection

C. Calculating Alternate Floor Protection

Material

Thermal Conductivity: k value

The k value indicates the amount of heat (in BTU's) that will flow in 1 hour through 1 square foot of a uniform material 1 inch thick for each degree (F) of temperature difference from one side of the material to the other.

The LOWER the k factor means less heat is being conducted through the non-combustible material to the combustible material beneath it.

The k value of a material must be equal or smaller then the required k value to be acceptable.

$$\frac{(\text{BTU}) (\text{inch})}{(\text{foot}^2 (\text{hour}) (^\circ\text{F}))}$$

Thermal Resistance: R value

The R value is a measure of a material's resistance to heat transfer.

R value is convenient when more than one material is used since you can add the R values together, whereas you can not do this for k value.

The HIGHER the R factor means less heat is being conducted through the non-combustible material to the combustible material beneath it.

The R value of a material must be equal or larger then the required R value to be acceptable.

Converting k to R:

Divide 1 by k and multiply the results times the thickness in inches of the material.

$$R = 1/k \times \text{inches of thickness}$$

Converting R to k:

Divide the inches of thickness by R.

$$k = \text{inches of thickness}/R$$

Calcalatons:

Example: Floor protection requires k value of 0.84 and 3/4 inch thick.

Alternative material has a k value of 0.6 and is 3/4 inch thick.

Divide 0.6 by .75 = k value of 0.80. This k value is smaller than 0.84 and therefore is acceptable.

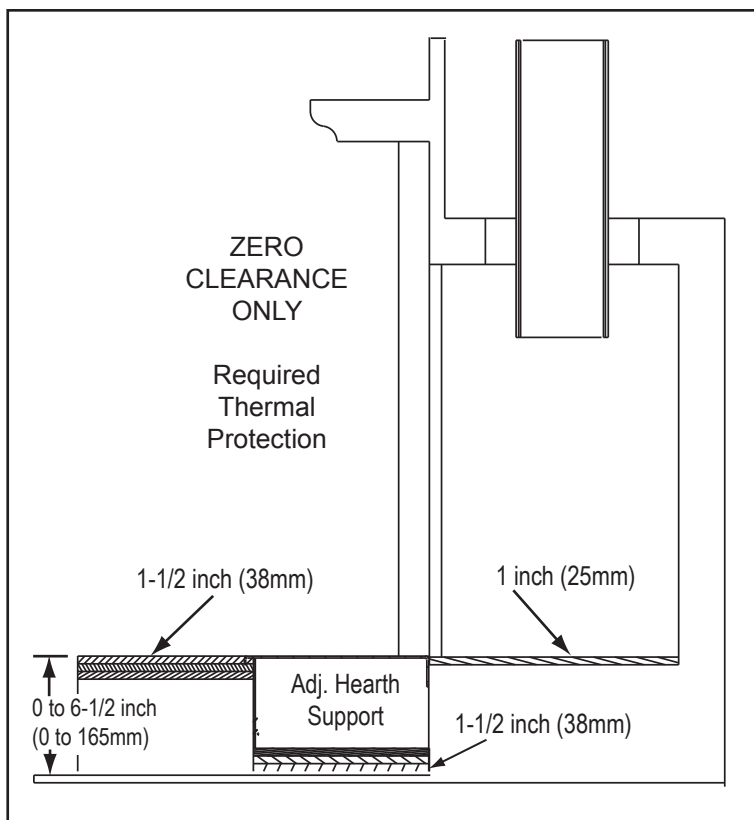


Figure 31.1

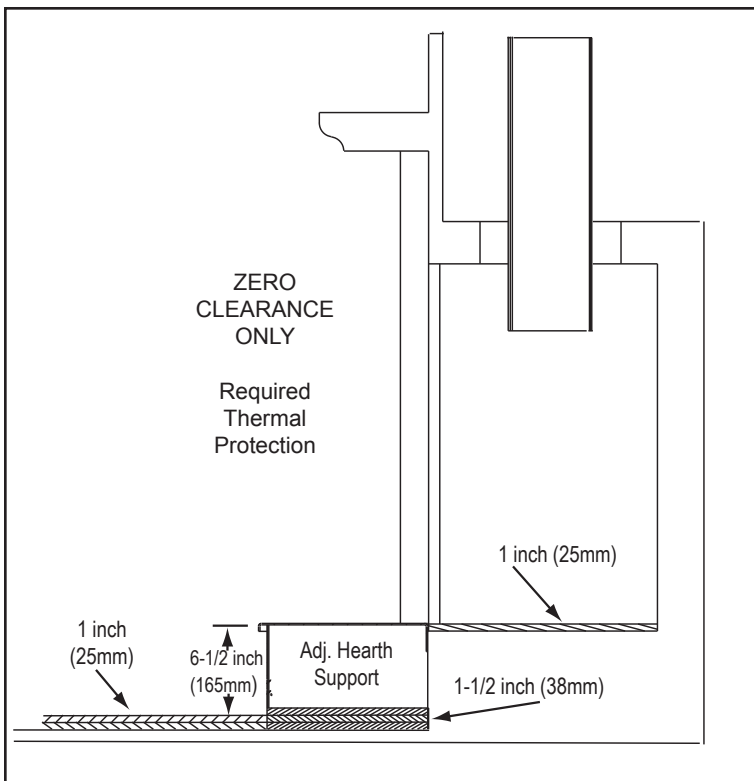


Figure 31.2

8 Chimney Systems

A. Venting Systems

Chimney Connector:

It is also known as flue pipe or stove pipe. It must be 6 inches (152mm) minimum diameter stainless steel connector pipe and must be installed meeting type HT (2100°F) requirements per UL 1777 (USA) or ULC S635.

Chimney:

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

WARNING! Risk of Fire!

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

B. Inspections

Existing chimneys should be inspected and cleaned by a qualified professional prior to installation. The chimney must not have cracks, loose mortar or other signs of deterioration and blockage. Hearth & Home recommends a NFI or CSIA certified professional or a technician, under the direction of a certified professional, conduct a Level II inspection per NFPA 211.

	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.
---	---

C. Larger Chimneys

It is recommended that chimneys with larger diameters than 6 inches (152mm) be relined. An oversized flue can affect draft and impair performance and will allow increased build-up of creosote.

NOTICE: Check with your local building authorities and/or consult the National Fire Protection Association (NFPA 211).

NOTE: This wood unit must be connected to a code-approved masonry chimney with flue liner.

D. Masonry Chimney

- Must meet minimum standards of NFPA 211.
- Must have at least 5/8 inch (16mm) fireclay lining joined with refractory cement. (Installations into a clay flue without a stainless steel liner may reduce draw which affects performance, will cause the glass to darken and produce excessive creosote).
- The masonry wall of the chimney, if brick or modular block, must be a minimum of 4 inches (102mm) nominal thickness.
- A chimney of rubble stone must be at least 12 inches (305mm) thick.
- Cross-sectional area shall conform to NFPA 211-2006 Section 12.4.5.1.
- Should be lined with a 6 inch (152mm) stainless steel flue liner to improve performance and reduce creosote build-up.
- An equivalent liner must be a listed chimney liner system or other approved material.
- No dilution air is allowed to enter the chimney.
 1. Secure the fireplace damper in the open position. If this cannot be accomplished, it will be necessary to remove the damper
 2. Seal damper area of chimney around chimney connector with a high temperature sealant or seal insert against the face of the fireplace.
 3. Both methods must be removable and replaceable for cleaning and re-installation.
- When possible, install an airtight clean-out door to the rear of the smoke shelf.

NOTE

- In Canada a full length 6 inch (152mm) S635 flue liner required as per ULC S628.
- In USA a minimum 5 ft length (1.82m), 6 inch (152mm) diameter flue liner is required as per UL 1482.

NOTE: In Canada, this fireplace insert must be installed with a continuous chimney liner of a 6 inch (152mm) diameter extending from the fireplace insert to the top of the chimney. The chimney liner must conform to the Class 3 requirements of CAN/ULC-S635, Standard for Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents, or CAN/ULC-S640, Standard for Lining Systems for New Masonry Chimneys.

Masonry Chimney (Cont'd)

This insert conforms with the UL 1482 and ULC S628 (Canada) in all respects, and is approved to UL & ULC safety standards for installation and use within a fireplace with a masonry chimney in accordance with NFPA 211 and CAN/CSA-B365-01.

NOTE

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

NOTE: Installation into fireplaces without a permit will void the listing.

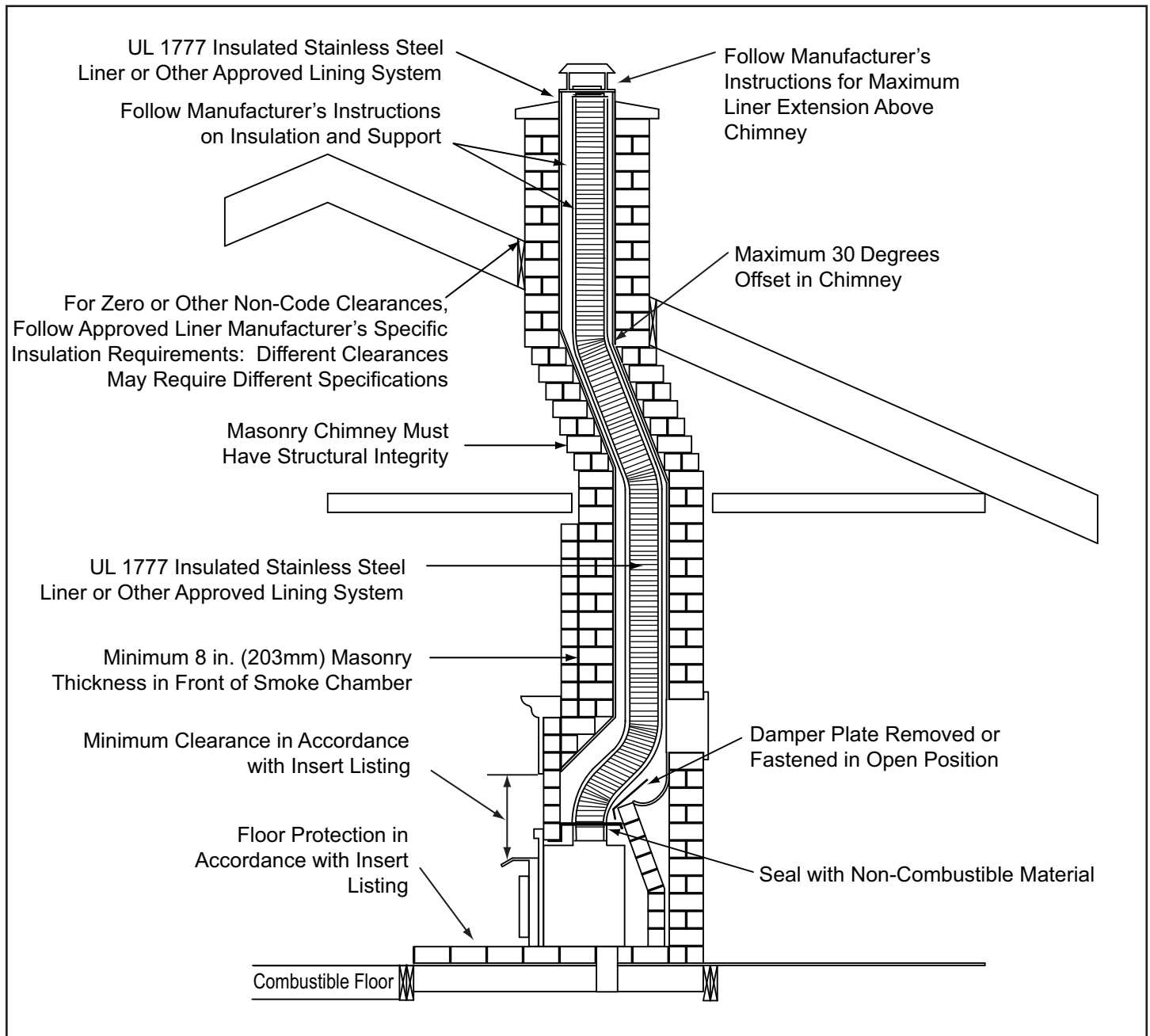


Figure 33.1

Generic Insert Model Shown in Illustration

E. Metal Heat Circulating Masonry

This insert conforms with the safety standard UL-1482 and ULC S628 (Canada) in all respects and is approved to UL & ULC safety standards for installation and use within a fireplace with masonry chimney, in accordance with NFPA 211, with a direct flue collar connection.

F. Prefabricated Metal Chimney

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

- Must be minimum 6 inch (152mm) inside diameter of high temperature chimney listed to UL 103 HT (2100°F) or ULC S628.
- Must use components required by the manufacturer for installation.
- Must maintain clearances required by the manufacturer for installation.
- Refer to manufacturers instructions for installation
- This insert is listed to UL 1482 Standard and is approved for installation into listed factory-built zero clearance fireplaces listed to UL 127 conforming to the following specifications and instructions:

- The original factory-built clearance fireplace chimney cap must be re-installed after installing the approved chimney liner meeting type UL 103 HT requirements (2100°F) per UL 1777.
- If the chimney is not listed as meeting HT requirements, or if the factory built fireplace was tested prior to 1998, a full height listed chimney liner must be installed from the appliance flue collar to the chimney top.
- The liner must be securely attached to the insert flue collar and the chimney top.
- The air flow of the factory-built zero-clearance fireplace system must not be altered. The flue liner top support attachment must not reduce the air flow for the existing air-cooled chimney system.
- No dilution air is allowed to enter the chimney.
 1. Secure the fireplace damper in the open position. If this cannot be accomplished, it will be necessary to remove the damper
 2. Seal damper area of chimney around chimney connector with a high temperature sealant or seal insert against the face of the fireplace.
 3. Both methods must be removable and replaceable for cleaning and re-installation.

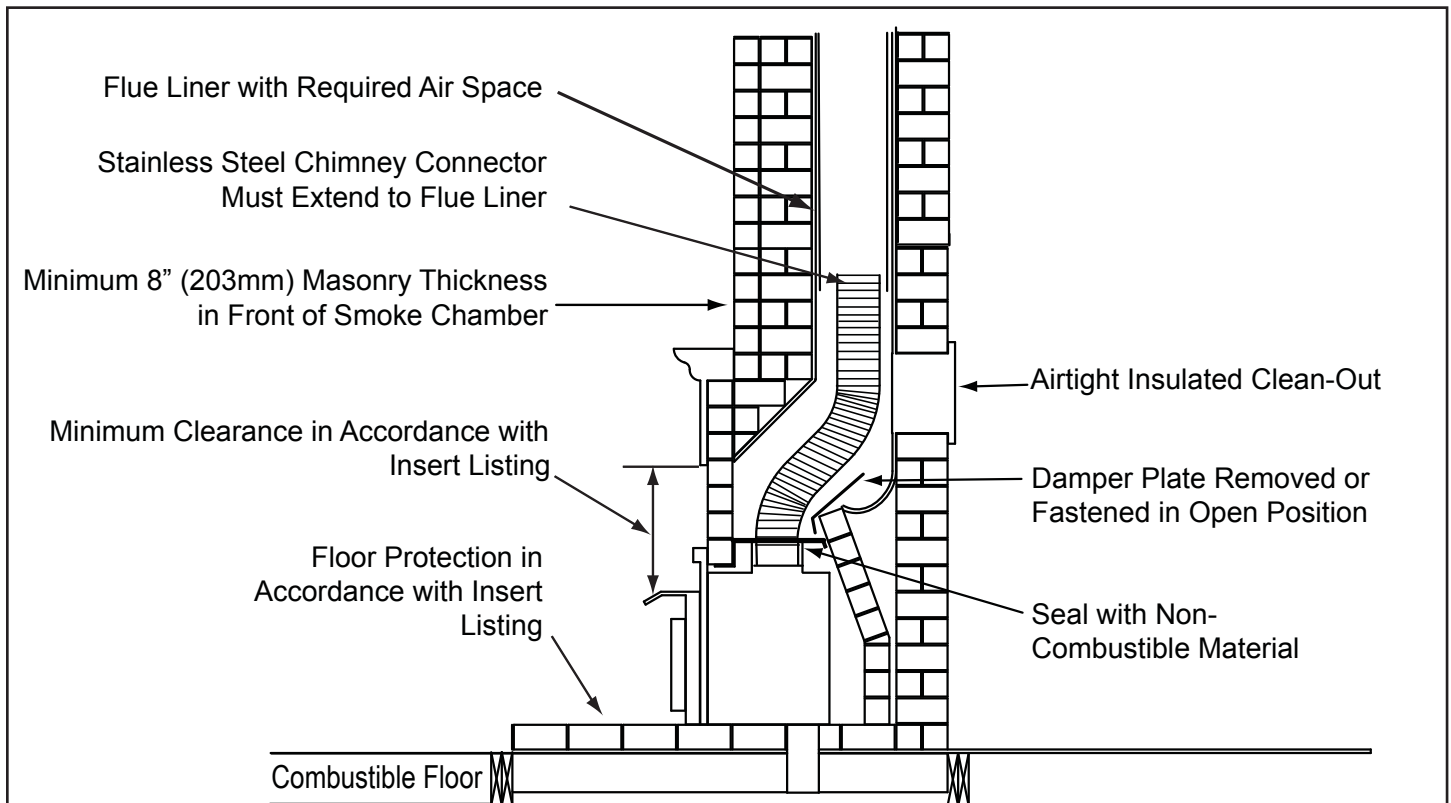


Figure 34.1

Generic Insert Model Shown in Illustration

Prefabricated Metal Chimney (Cont'd)

	Inches	Millimeters
Minimum Width of Cavity Opening - Front	28	711
Minimum Width of Cavity Opening - Rear	24	610
Minimum Height	22-1/2	572
Minimum Depth from Front to Rear	14-1/2	368

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

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

WARNING

Fire Risk.

When lining air-cooled factory-built chimneys:

- Run chimney liner approved to UL 1777 Type HT requirements (2100 degrees F)
- Re-install original factory built chimney cap **ONLY**
- DO NOT block cooling air openings in chimney
- Blocking cooling air will overheat the chimney

G. Securing Chimney Components

All joints should be secured with 3 sheet metal screws or rivets per pipe manufacturers instructions. The sections must be attached to the insert and to each other with the crimped (male) end pointing toward the insert. **Figure 35.1.**

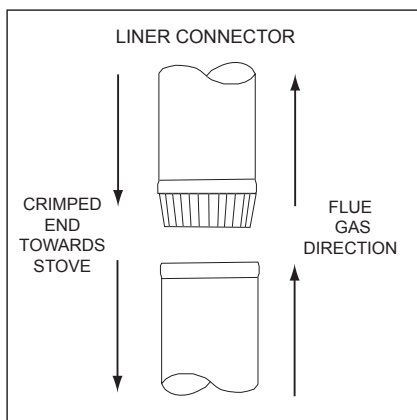


Figure 35.1

H. Altering the Fireplace

The following modifications of factory-built fireplaces are permissible:

The following parts may be removed:

Damper	Smoke Shelf or Baffle
Ember Catches	Fire Grate
Viewing Screen/Curtain	Doors

- The fireplace must not be altered, except that the damper may be removed to accommodate a direct-connect starter pipe or chimney liner,
- External trim pieces which do not affect the operation of the fireplace may be removed providing they can be stored on or within the fireplace for reassembly if the insert is removed.
- The permanent metal warning label provided in the component pack must be attached to the back of the fireplace, with screws or nails, stating that the fireplace may have been altered to accommodate the insert, and must be returned to original condition for use as a conventional fireplace. This warning plate needs to be placed in a readily visible location, should the fireplace insert be removed. **Figure 35.2.**
- If the hearth extension is lower than the fireplace opening, the portion of the insert extending onto the hearth must be supported.
- Manufacturer designed adjustable support kit can be ordered from your dealer.
- Final approval of this installation type is contingent upon the authority having jurisdiction.

WARNING

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

250-2061

Figure 35.2

WARNING! Risk of Fire!

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

I. Zero-Clearance Fireplace

Zero Clearance Fireplaces are factory-built insulated metal fireplaces that are usually framed into the wall and attached to combustible framing wood lumber. The term, "Zero Clearance" refers to the fact that wood framing material can be in contact with the outer shell of the metal ZC fireplace or zero air space required to combustibles.

The factory-built chimney must be listed per UL 127 or ULC 610-M87 for all installations. Install thermal protection per this appliance listing requirements.

A permit is required for all installations, final approval is contingent of the authority having local jurisdiction. Inspect the existing fireplace and chimney for any damage or flaws such as burnouts, metal or refractory warping.

The base and hearth floor of the zero clearance fireplace must be able to appropriately support the weight of the wood insert and attached chimney liner.

Make all necessary repairs prior to installing the new wood insert into the factory built fireplace. The factory Zero Clearance Fireplace must be structurally sound for proper insert support and proper operation and continued use of the wood insert.

A full height 6 inch diameter stainless steel full height listed chimney liner must be installed meeting type HT (2100°F) requirements per UL 1777 (USA) or ULC S635 with "0" clearance to masonry (Canada). The full liner must be attached to the insert flue collar and to the top of the existing chimney.

The flue liner top support attachment must not reduce the air flow for the existing air-cooled chimney system. Re-install original factory-built chimney cap only.

To prevent room air passage to the chimney cavity of the fireplace, seal either the damper area around the chimney liner or the insert surround. Circulating air chamber (i.e. in a steel fireplace liner or metal heart circulator) may not be blocked. The air flow within and around the fireplace shall not be altered, blocked by the installation of the insert. (i.e. no louvers or cooing air inlet or outlet ports may be blocked by the insert or the insert surround.

See **Page 35** "Altering the Fireplace" for modifications allowed for factory-built fireplaces.

WARNING! Risk of Asphyxiation!

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

This may allow flue gases to enter the house.

J. Ovalizing Round Stainless Steel Liners

Ovalizing round stainless steel liners to accommodate the liner passing through the damper region of a fireplace is an allowable and acceptable practice.

Ensure that the ovalization is minimized to the extent required to fit through the damper.

K. Chimney Height / Rise and Run

To be sure that your Quadra-Fire insert 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.

NOTE: These are guidelines only, and may vary somewhat for individual installations.

- This product was designed for and tested on a 6 inch (152mm) chimney, 14 to 16 feet (4.27-4.87m) high, (includes appliance height) measured from the base of the appliance.
- The further your stack height or diameter varies from this configuration, the possibility of performance problems exists.
- Chimney height may need to be increased by 2 - 3% per each 1000 feet (304.8m) above sea level.
- It is not recommended to use offsets or elbows at altitudes above 4000 feet (1219.2m) above sea level or when there are other factors that affect flue draft.



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.



WARNING

Fire Risk.

This appliance relies upon natural draft to operate properly.

- Chimney heights exceeding 25 feet (7.62m) from base of appliance may create an over-draft situation.
- Overdraft condition may create over-firing.

Over-firing may ignite creosote and/or damage appliance and chimney

9 Appliance Set-up

A. 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.

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

Option One - Installation Instructions

The rectangular outside air cover comes packaged with the side panels. It is necessary to remove the right side panel and block off the room air with the rectangular outside air cover.

1. Remove the outside air cover plate on outer can and discard and reuse the 4 screws.
2. Install optional flex adapter to outer can with the same screws. Do not use plastic wire ties that come with the kit as they will melt. NOTE: You may need to install the flex pipe into the firebox first depending on installation. Attach flex to adapter with at least 2 screws.
3. Ensure existing access hole in fireplace is sufficient to feed the 4 inch flex.
4. After sliding can into fireplace, feed flex into cut opening to obtain outside combustion air.
5. Level outer can and install appliance. See **page 40**.
6. Remove 2 screws from right side panel and remove panel.
7. Remove 6 nuts securing metal screen to back of panel.
8. Attach rectangular outside air cover over the metal screen using the same 6 nuts.
9. Ensure all wires are properly attached and then re-install side panel.

Option Two - Installation Instructions

1. Remove the outside air cover plate on outer can and discard and reuse the 4 screws
2. Ensure existing access hole in fireplace will not be covered by the outer can. Existing outside air intake hole may be under at the rear or side of outer can. Outside air may also enter down existing chimney chase in some situations.
3. Repeat steps 5 through 9 above with one exception. After installing the appliance in the outer can, seal the fireplace opening and trim package with insulation to prevent air leakage into the room.



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, ice or other debris
- Block may cause combustion air starvation

Smoke spillage may set off alarms or irritate sensitive individuals.



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.

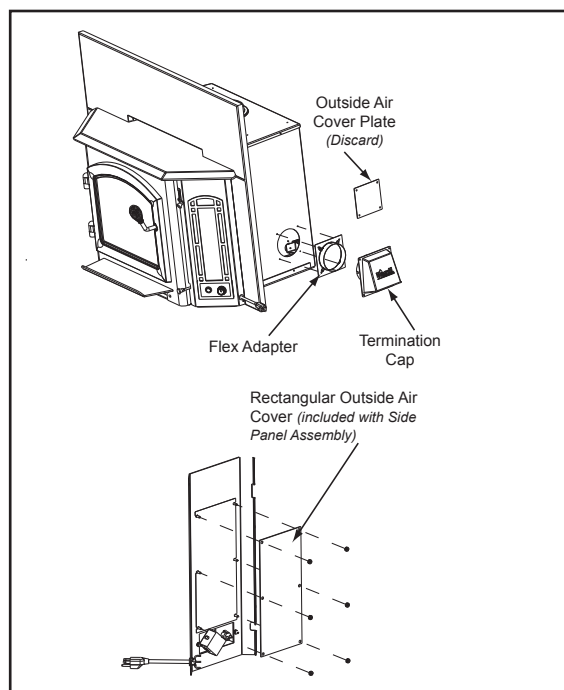


Figure 37.1

B. Disassemble Firebox and Outer Can

For easier field installation the outer can is installed without the firebox so connecting to the flue has greater access. The firebox slides into the outer can once the flue collar is attached to the stove pipe/liner and optional outside air flex pipe is installed.

1. Remove the flue collar by cutting the wire ties. Set the flue collar and attachment bar aside.
2. Remove the 2 screws holding the timer assembly in place and remove the timer. **Figure 38.1.**
3. Remove the 2 Phillips head bolts underneath the ashlip which holds the firebox in place.
4. Slide the firebox out of the outer can.
5. Remove the 2 pallet lag bolts.

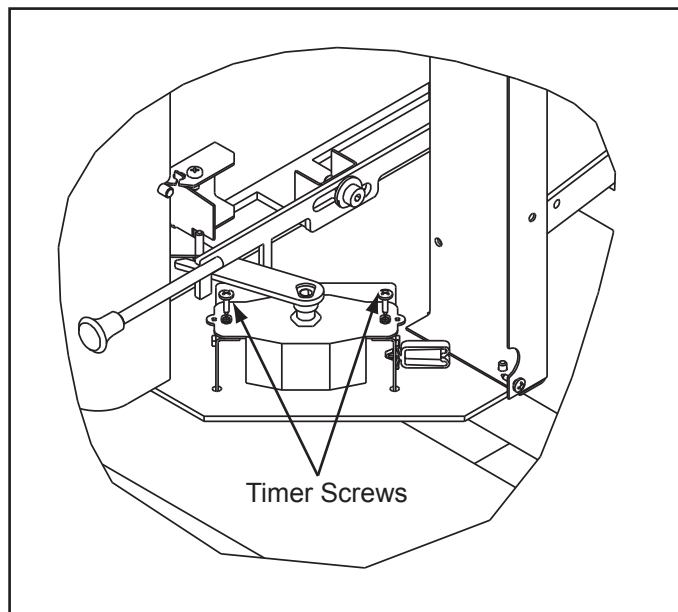


Figure 38.1

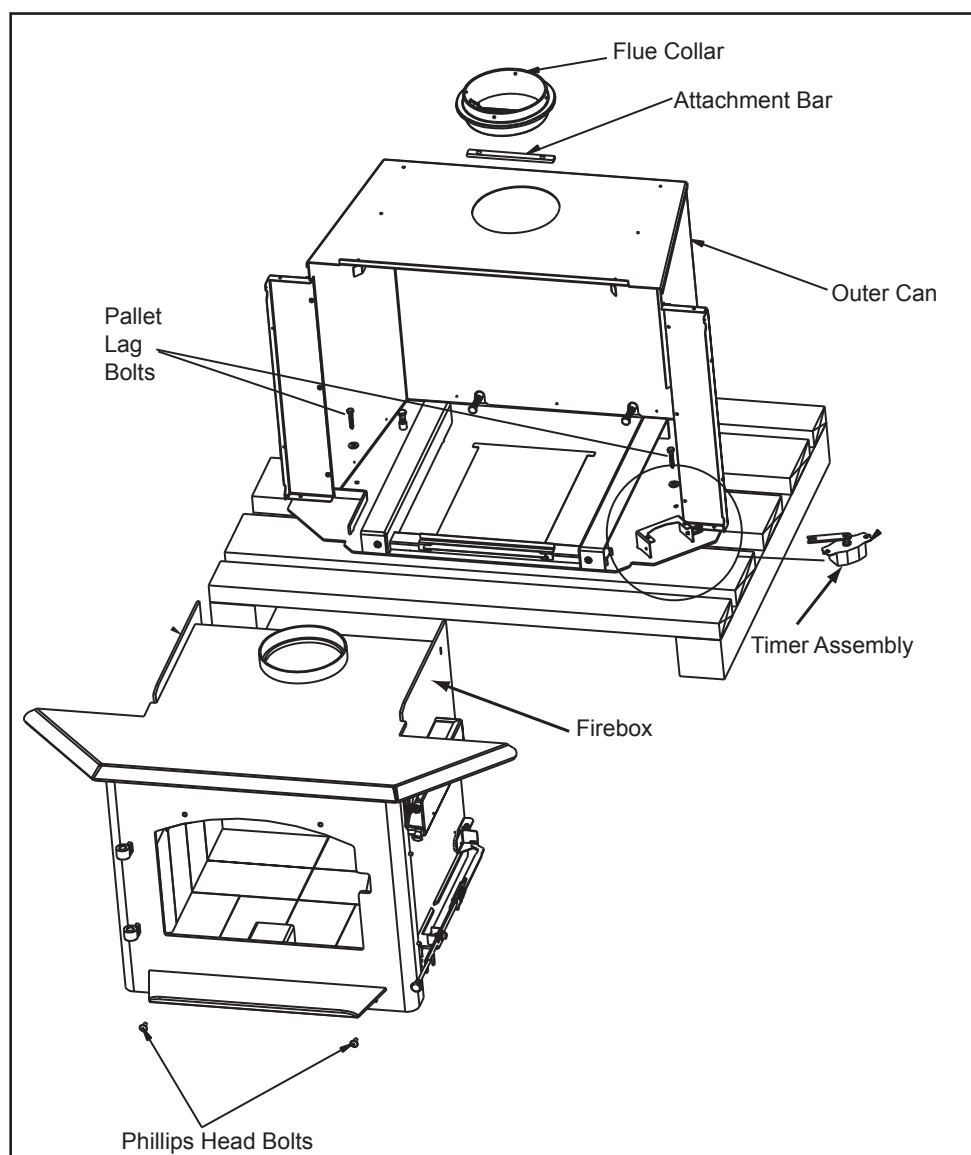


Figure 38.2

C. Securing Stove Pipe/Liner to Flue Collar

1. There are 4 pre-drilled holes in the flue collar 90 degrees apart. Attach the flue collar to the stove pipe/liner. If the seal is questionable use stove mastic **Figure 39.1**.
2. Attach gasket to bottom side of flue collar with a thin coat of silicone.

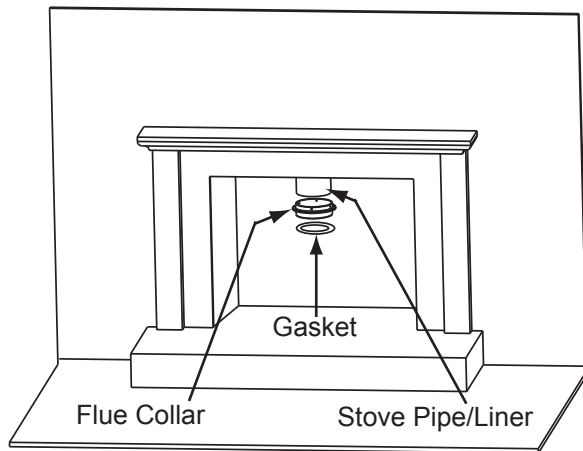


Figure 39.1

D. Optional Offset Adapter Installation

In some installations the flue collar and stove pipe/liner do not always align properly. This situation may be remedied by using the optional offset adapter. See Appliance Dimensions page for the amount of distance this accessory can telescope between the flue collar and stove pipe/liner.

1. Remove the cast iron flue collar from the appliance and flip it upside down. Using the larger #7 drill bit supplied, drill through all 8 countersunk locations. **Figure 39.2**.
2. Slide the gasket over the the flue collar and attach it to the offset adapter using the 8-32 flathead screws provided. **Figure 39.3**.
3. Adjust the offset adapter to desired distance. Drill holes through the lower chamber as shown in **Figure 39.4** using the small drill bit #26 provided.
4. Cut the gasket to the proper length and slide in between the upper and lower chambers centered on the screw holes. Attach the upper and lower chambers with screws provided. **Figure 39.5**.
5. Repeat the process on the bottom side.

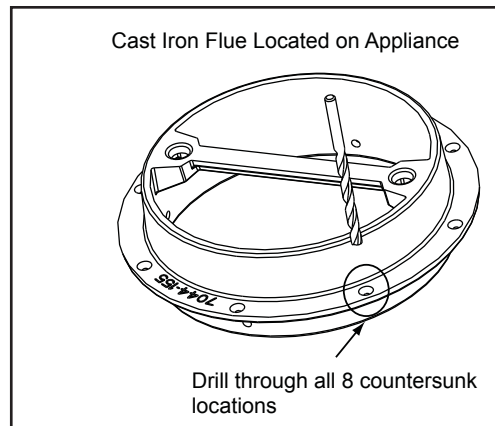


Figure 39.2

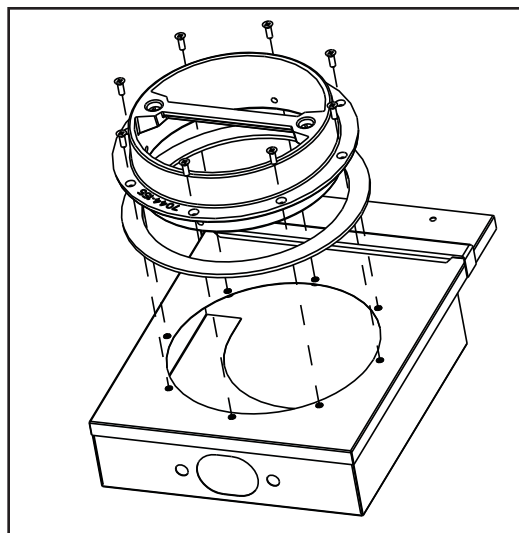


Figure 39.3

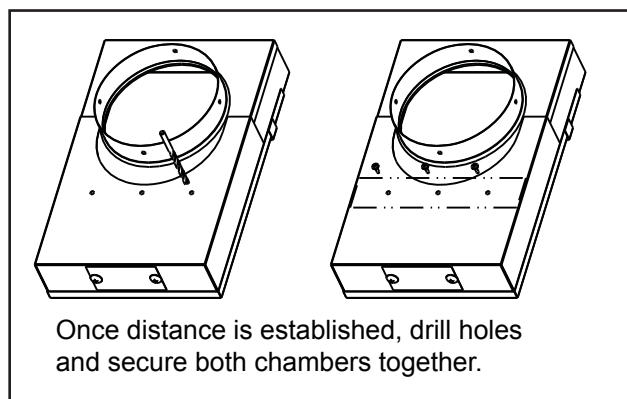


Figure 39.4

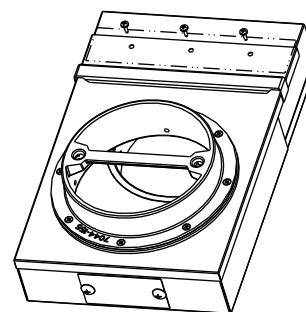


Figure 39.5

E. Installing Outer Can & Leveling Bolts

1. Align the back of surface of outer can side panels to the front wall surface for proper placement. **Figure 40.1.** Use the leveling bolts to level the outer can. **Figure 40.1.**
3. Thread the horizontal support bolts in until they hit the back wall of the fireplace to help secure in place. **Figure 40.3.**
4. It is recommended that you use the pallet mounting holes to lag the outer can into the fireplace floor for extra support, however it is not required.

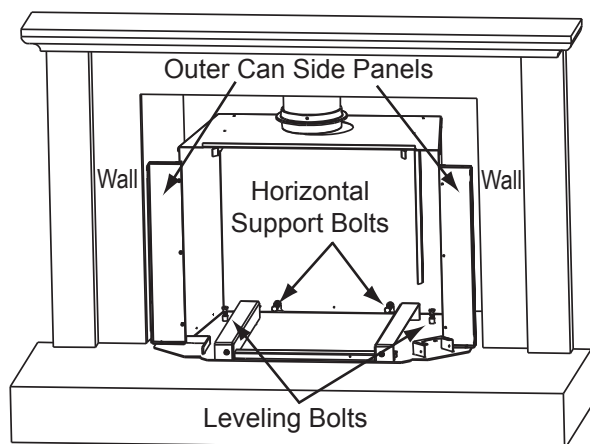


Figure 40.1

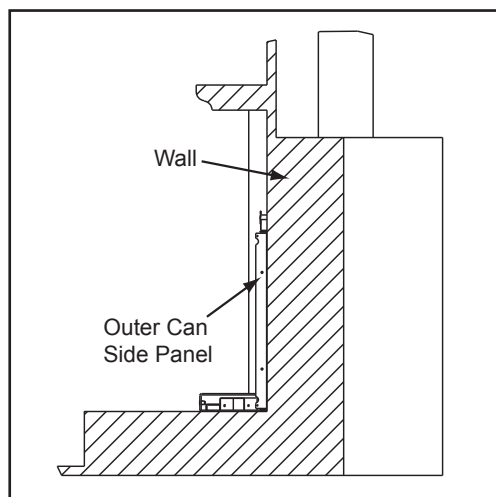


Figure 40.2

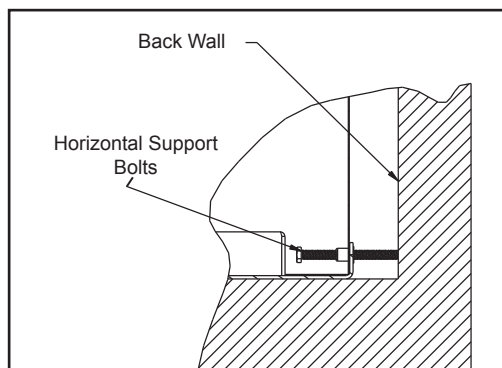


Figure 40.3

F. Surround & Trim Kit Installation

1. Lay surround face down on a protected surface to prevent scratching.
2. Using a Phillips head screw driver attach the side surrounds to the top surround using 2 #8 sheet metal screws provided with the kit. **Figure 40.4.**
3. Lay the trim face down and place the corner brackets into position.
4. Using a standard flat screw driver tighten the corner brackets. **Figure 40.5.**
5. Slide the trim over the surround set.
6. Install the surround set and trim set to the outer can. Secure the top and side surrounds as shown in **Figure 40.6**

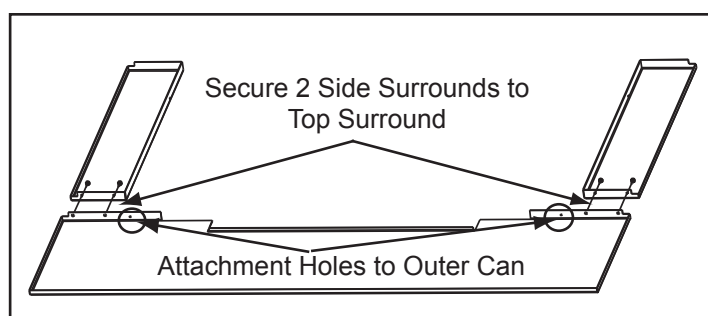


Figure 40.4

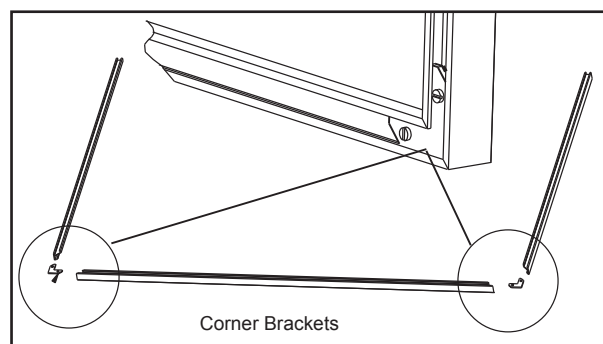


Figure 40.5

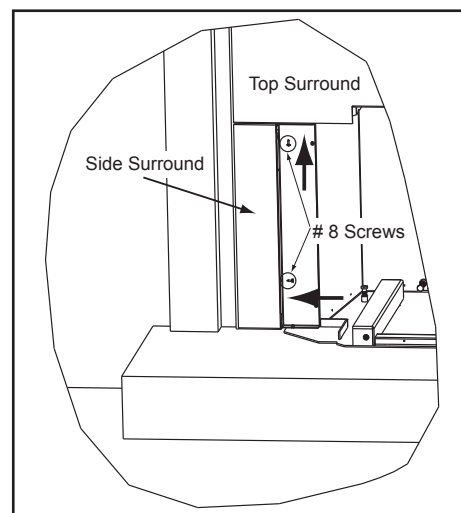


Figure 40.6

G. Installing Firebox into Outer Can

For easier installation, remove the baffle protection channel, tube channel assembly, baffle board and ceramic blanket from the appliance before installing into the outer can. See **pages 22-23** for instructions.

1. Slide the appliance into the outer can. Secure with Phillips head bolts previously removed from under the ashlip. **Figure 41.1.**
2. Re-install the timer assembly. The timer arm must be between the first and second control arm tabs. **Figure 41.2.**
3. Attach the timer arm to the timer door.
4. Test the controls to ensure the timer operates correctly.

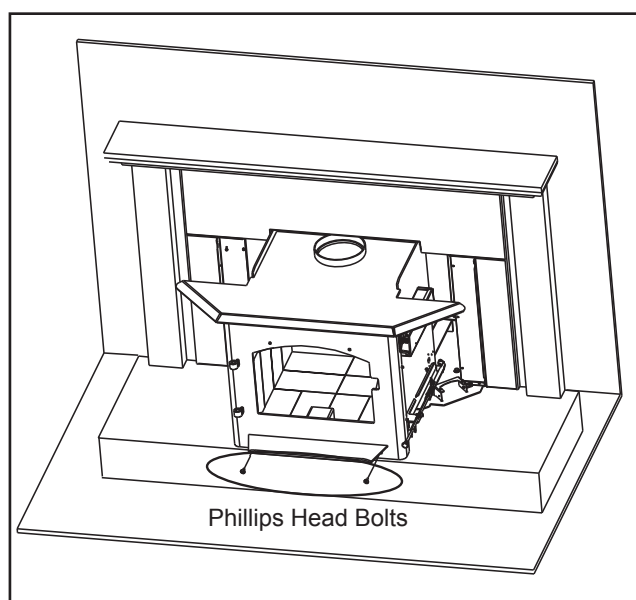


Figure 41.1

H. Securing Appliance to Stove Pipe/Liner

1. Once you have the appliance in place and secured, reach up through the flue opening and grab the attachment bar and pull down inside flue opening. **Figure 41.3.**
2. Insert the 5/16 bolts inside the cast flue and through the chimney mounting bar. Securely tighten the nuts. Fasteners are provided.
3. Re-install the tube channel assembly, baffle board, ceramic blanket and baffle protection channel.

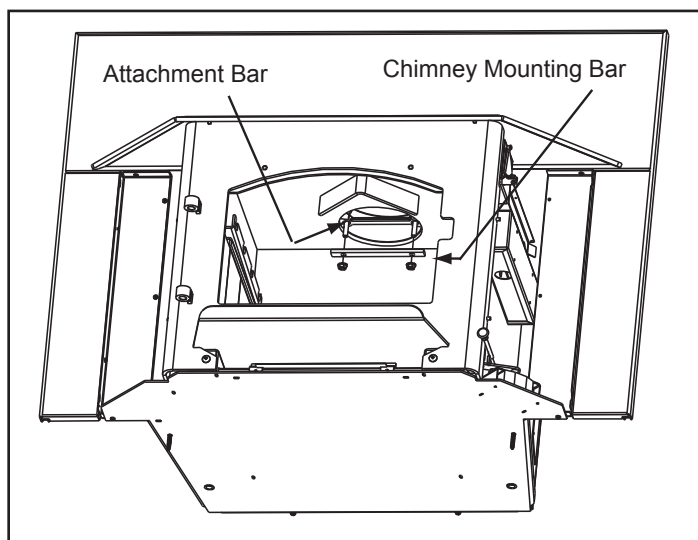


Figure 41.3

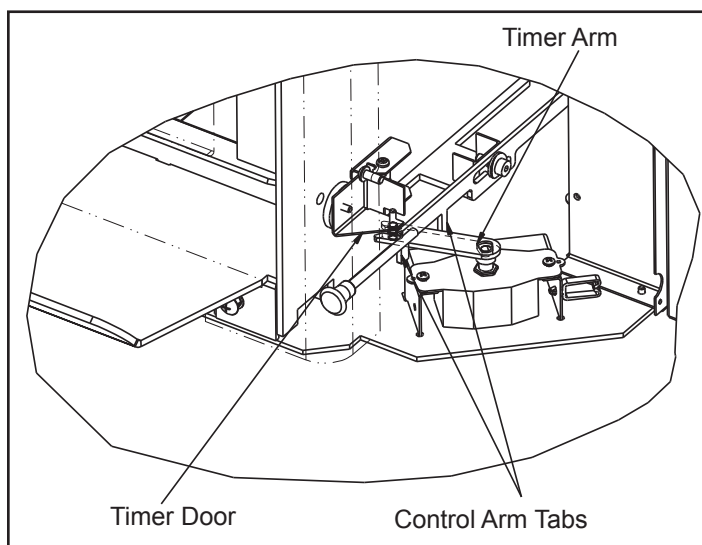


Figure 41.2

I. Snap Disc and Side Panel Installation

1. Place snap disc box in location shown in **Figure 42.1**.
2. Secure the wires through the wire clip to keep in place.
3. Route the blower wires underneath appliance through the wire channel to the other side of the appliance.
4. Tilt the side panel forward under the top and push the panel onto the pegs on the face.
5. Attach the side panel to the appliance with 2 screws, 1 at the top and 1 at the bottom on the right side of panel.
6. Repeat for other side once the blower has been installed.

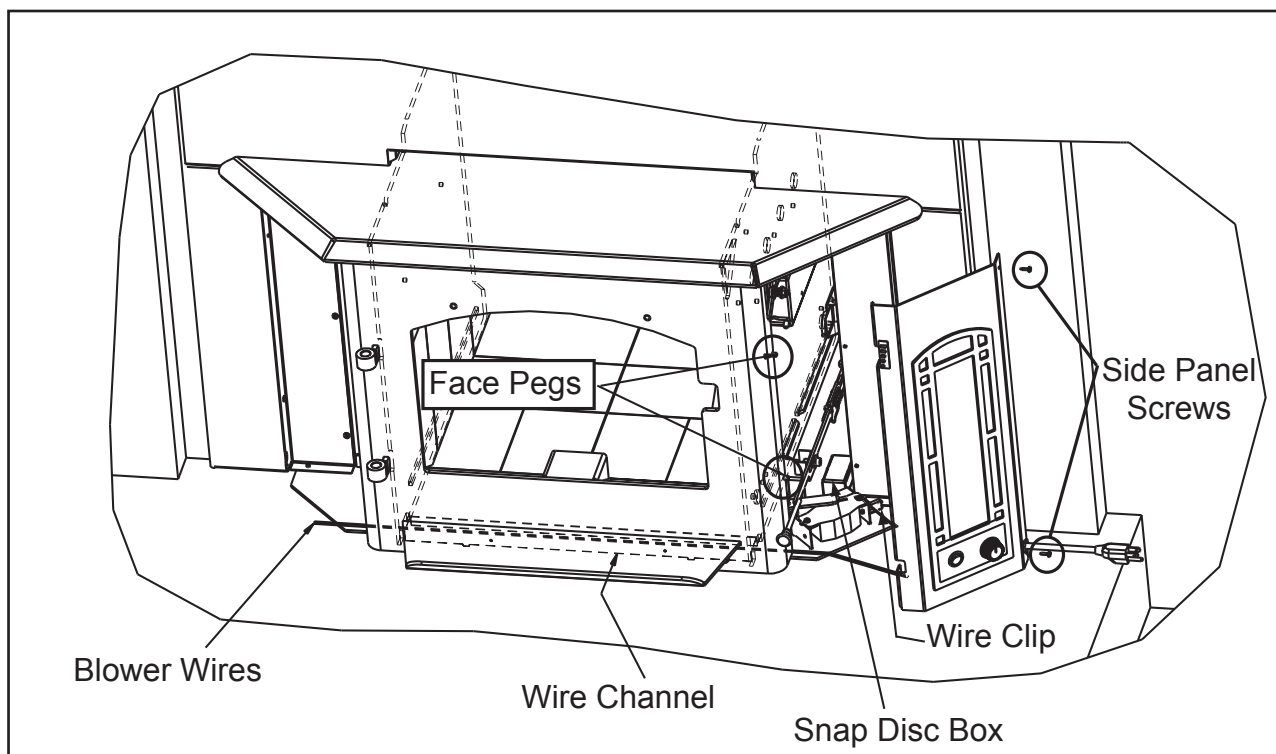


Figure 42.1

J. Blower Installation

1. Remove top and bottom screw from inner panel.
2. Slide blower mount with blower attached behind the face and secure with 5 screws provided, 3 on the right side and 2 on the left. **Figure 42.2**.
3. Connect the blower to the wire harness and secure through the wire clip.
4. Install left side panel.



CAUTION

Shock Risk.

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

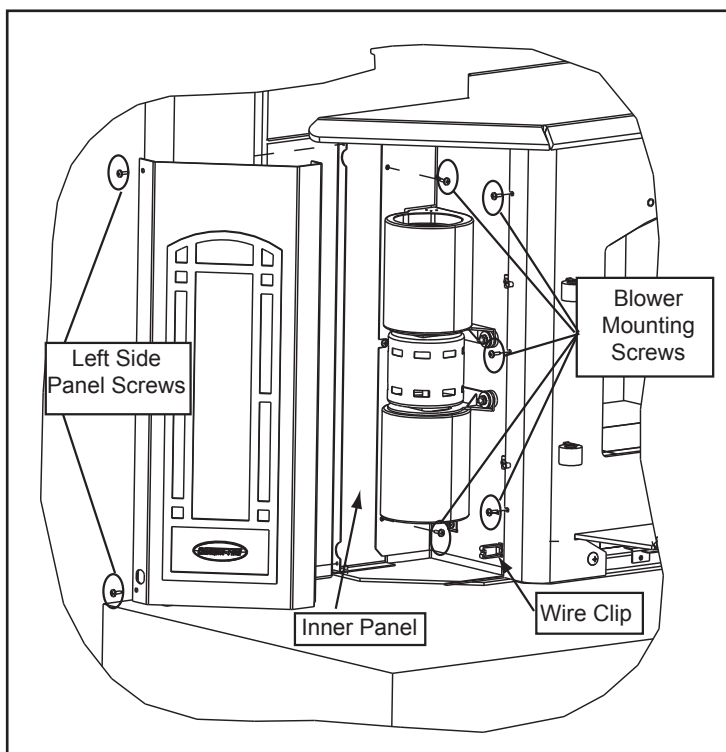


Figure 42.2

K. Blower Cord Installation on Left Side

The blower cord is shipped to be installed on the right side of the appliance. You may relocate the cord so it is on the left side. You will need to remove the wires, flip them over and remove and reverse the male and female terminals and re-install the wires. The wire harness and components are located on the back side of the right side panel.

Relocating Blower Cord to Left Side

1. Remove the green ground terminal from the stud and unhook the neutral (white) and line power wires from the rest of the harness. **Figure 43.1.**
2. Re-install the nut on the stud after removal of the ground terminal.
3. Remove the strain relief from the side panel by gently pressing in the tabs using needle nose pliers on the wire harness side portion the strain relief.
4. Identify the wire with the male spade terminal (this was originally connected to the white (neutral) lead on the power cord) and carefully clip the three small zip ties that connect it to the rest of the harness. **Figure 43.2**
5. Once this wire is removed from the harness reverse the wire so that the female spade terminal is pointing towards the rest of the harness.
6. Re-attach this wire using the small zip ties supplied in roughly the same locations that you removed earlier. Leave the male spade terminal 5 inches (127mm) longer than the female spade terminal that is already attached to the harness. **Figure 43.3.**
7. Attach the female spade terminal to the black wire that comes out of the speed control. **Figure 43.4.**
8. Route the long lead wires from the right side of the unit in the wire channel that is under the unit.
9. Install the blower. See **page 42** for details.
10. On the left side panel attach the power cord strain relief into the hole that is located on the lower left. Attach the ground terminal to the stud that is located nearest the power cord. **Figure 43.5.**
11. Attach the white lead (neutral) directly to one of the leads coming off the blower. Attach the other blower lead to the female spade connector to the harness that is routed under the unit. Attach the male spade connector on the harness to the black power wire (line). Route the wires into the wire clip that is located on the blower mount plate. **Figure 43.5.**
12. Attach the left and right side panels.

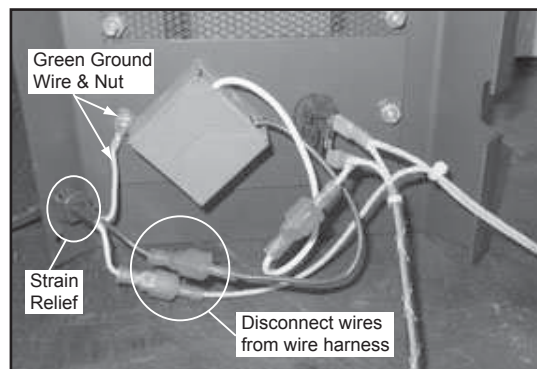


Figure 43.1

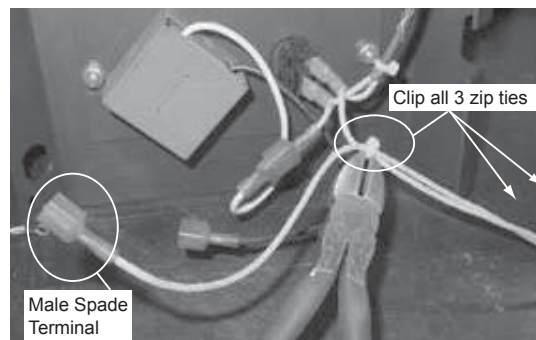


Figure 43.2

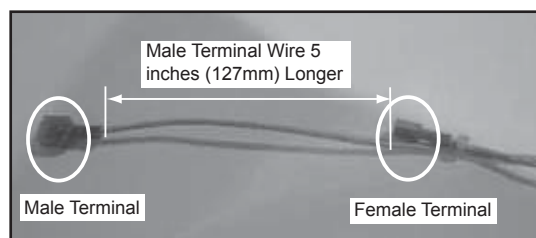


Figure 43.3

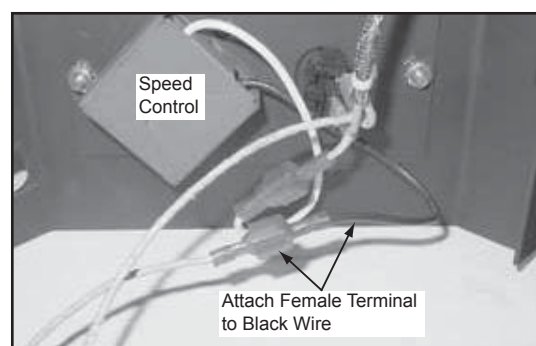


Figure 43.4

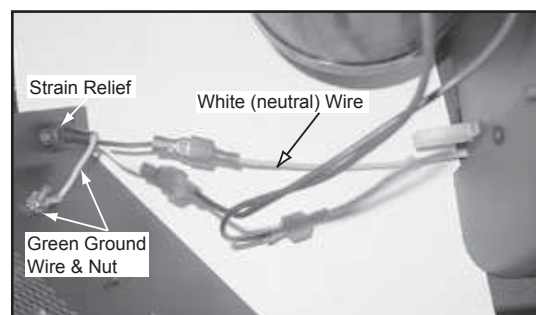


Figure 43.5

L. Zero Clearance Adjustable Trim Support, 2" to 10"

Part No. 841-0990, size 9" x 45" and
Part No. ADJSPT-12, size 12" x 50"

Included in Kit: (1) Trim Top, (1) Trim Front, (2) Trim Sides, Double-Sided Tape (already installed)

Tools Needed: Phillips Head Screwdriver, Sheet Metal Shears, Measuring Tape, Gloves

1. The 10 screws on each set of scissors will already be loose when shipped. **Figure 44.1.**
2. Expand scissors to desired height. Tighten screws to hold in place using Phillips Head screwdriver. **See Figure 44.2.**
3. Measure front and side trims to required height to cover scissors and mark pieces for cutting. Cut excess material from top of trim's edge, not bottom. This edge will be sharp; wear gloves to prevent injury to your hands. **Figure 44.2.**
4. Using sheet metal shears, cut trim along the marked edge. The cut edge fits under lip of top trim, so it allows for some variance in your straight edge.
5. The double-sided tape that holds front and side trims to scissors has a particularly powerful bonding adhesive. Adjustments are extremely difficult once trim has adhered to tape. Do a dry run first without removing paper from tape.
6. Place cut edge of trim under top lip and into position on scissors. Place side pieces on first and then front piece. The front piece overlaps side pieces. **NOTE:** The trim in the Flush Mount Kit is one piece.
7. Once you are satisfied with the positioning, remove trim and set aside.
8. Remove the paper from double-sided tape that is to accept trim side. Align side and then press hard against tape to secure side piece. Repeat for other side. Install front trim piece last.
9. There are 3 holes in the back flange of the top to secure it to the wall if necessary. Use the appropriate fastener for the type of wall material, i.e., brick, sheetrock, etc.
NOTE: 3/8" (9.5mm) thick tile or like material can be cut to size and fit under lip of top trim edge for a decorative touch. **Figure 44.3.**
10. Thermal protection of 1-1/2 inches (38mm), "k" value of 0.49 and R value of 3.06 under the zero-clearance trim support. **Figure 44.4.**

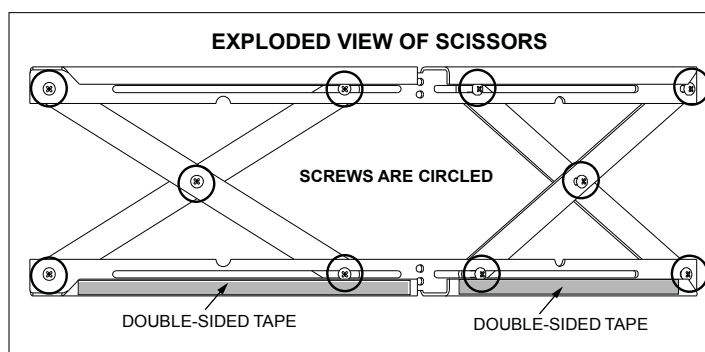


Figure 43.1

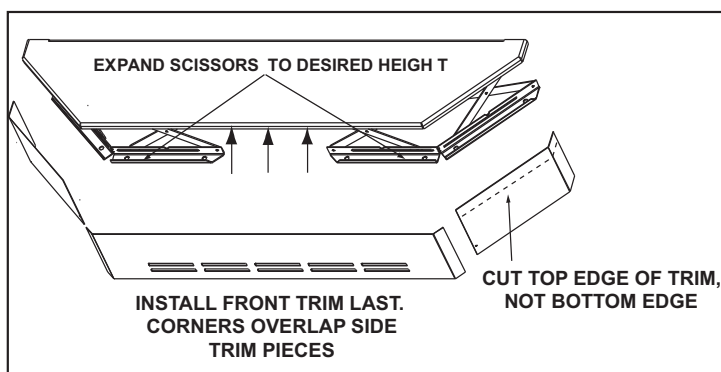


Figure 44.2

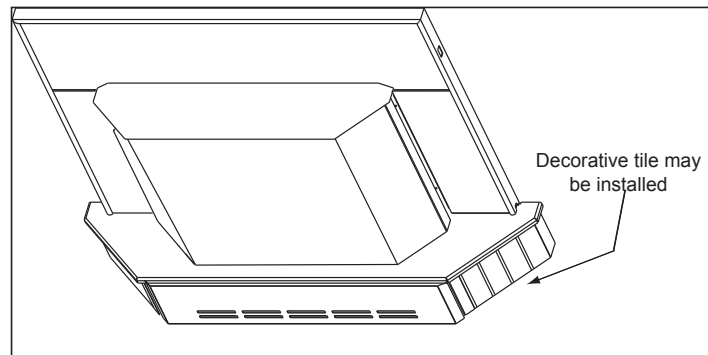


Figure 44.3

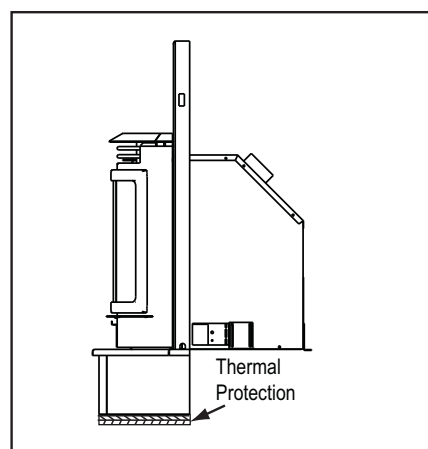


Figure 44.4

10 Mobile Home Installation

1. An outside air inlet must be provided for combustion and must remain clear of leaves, debris, ice and/or snow. It must be unrestricted while unit is in use to prevent room air starvation which can cause smoke spillage and an inability to maintain a fire. Smoke spillage can also set off smoke alarms.
2. Unit must be secured to the mobile home structure at two attachment points. Remove bolts from each side of insert and use plumbers tape to secure to structure (a washer may be required). Re-install bolts.
3. Unit must be grounded with #8 solid copper grounding wire or equivalent and terminated at each end with N.E.C. approved grounding device.
4. The factory-built fireplace must meet (UM)84-HUD requirements for outside combustion air supply to the fireplace fire chamber and the chimney must be listed to UL103 HT or a listed UL-1777 full length six inch (152mm) diameter liner must be used. It must be equipped with a spark arrestor cap and the outside air must be installed on the insert.
5. Refer to **page 30** of this manual for clearance to combustibles and floor protections requirements. All clearances must be followed precisely.
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 and chimney connector manufacturer's instructions when installing the flue system for use in a mobile home.

10. Burn wood only. Other types of fuels may generate poisonous gases (e.g., carbon monoxide).
11. If unit 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.

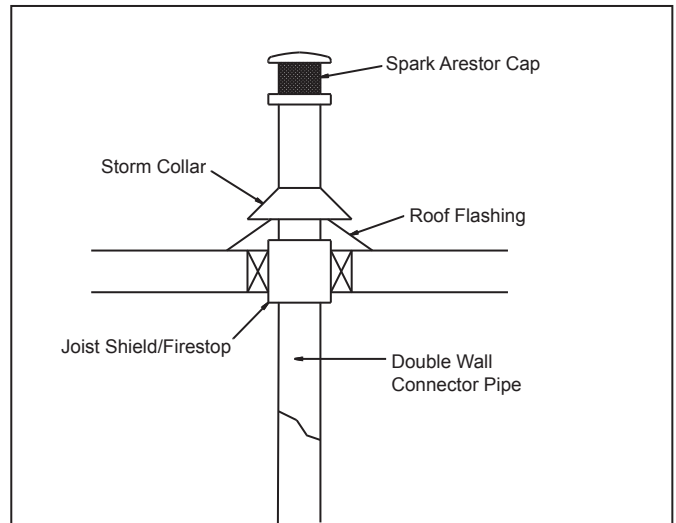


Figure 45.1

NOTICE:

- 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.

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



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.

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

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.

QUADRA-FIRE®

CONTACT INFORMATION:

Hearth & Home Technologies
1445 North Highway
Colville, WA 99114
Division of HNI INDUSTRIES

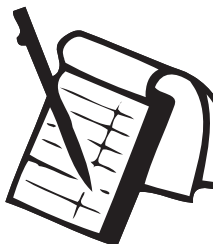
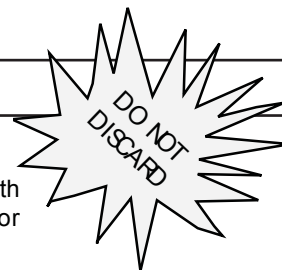
Please contact your Quadra-Fire dealer with any questions or concerns.
For the number of your nearest Quadra-Fire dealer,
log onto www.quadrafire.com

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.



We recommend that you record the following pertinent information for your 3100-I Wood Insert (ACC)

Date purchased/installed: _____

Serial Number: _____ Location on appliance: _____

Dealership purchased from: _____ Dealer phone: _____

Notes: _____

This product may be covered by one or more of the following patents: (United States) 4593510, 4686807, 4766876, 4793322, 4811534, 5000162, 5016609, 5076254, 5113843, 5191877, 5218953, 5263471, 5328356, 5341794, 5347983, 5429495, 5452708, 5542407, 5601073, 5613487, 5647340, 5688568, 5762062, 5775408, 5890485, 5931661, 5941237, 5947112, 5996575, 6006743, 6019099, 6048195, 6053165, 6145502, 6170481, 6237588, 6296474, 6374822, 6413079, 6439226, 6484712, 6543698, 6550687, 6601579, 6672860, 6688302B2, 6715724B2, 6729551, 6736133, 6748940, 6748942, 6769426, 6774802, 6796302, 6840261, 6848441, 6863064, 6866205, 6869278, 6875012, 6880275, 6908039, 6919884, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408, 2313972; (Australia) 780250, 780403, 1418504 or other U.S. and foreign patents pending.

