

# QUADRA-FIRE®

## 3100-I ACT WOOD INSERT Advanced Combustion Technology (ACT)

### OWNER'S MANUAL Installation and Operation

Model:  
830-0381



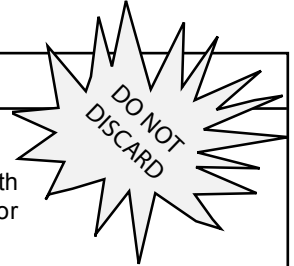
Tested and  
Listed by  Beaverton  
Oregon USA  
OMNI-Test Laboratories, Inc.

### 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.



### 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 the 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 combustibles away.



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.

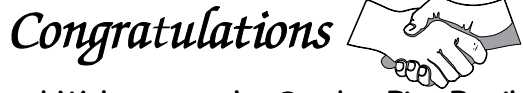


### WARNING



#### Fire Risk.

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




**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 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.

**SAMPLE OF SERIAL NUMBER / SAFETY LABEL**  
**LOCATION: On right side of insert as face the appliance**



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

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

**Model / Modèle:**  
3100-I ACT INSERT

**Serial No / Numéro De Série**  
007

**Tested and Listed by:** C-UL Research, Inc. / OMNI-Test Laboratories, Inc. Report #061-S-34-2. Tested to / Testé à: UL 1482, ULC S628

**Model / Modèle:** 3100-I ACT INSERT

**Serial No / Numéro De Série** 007

**LISTED ROOM HEATER, SOLID FUEL TYPE.** "For Use with Solid Wood Fuel Only." Also for use in Mobile Home. **PREVENT HOUSE FIRES**

**APPAREIL DE CHAUFFAGE DE PIÈCE, DE TYPE DE COMBUSTIBLE SOLIDE. Bois Solide Seulement! PRÉVENTION DES FEUX DE MAISON**

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 for details. **When used as a masonry insert stove, install only in a masonry fireplace built to UBC Chapter 37. 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 (USA only).**

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. **Écrivez-vous aux instructions du fabricant et des codes locaux pour les précautions requises pour passer une cheminée et évitez d'enlever des briques ou du mortier pour accommoder la pièce insérée.** Lorsque vous utilisez un poêle inséré fabriqué en briques, installez un foyer en briques fabriqué selon UBC Chapitre 37. Ne pas enlever des briques ou du mortier pour accommoder la pièce insérée. L'installation demande un tuyau allant de la cheminée existante avec un couveret hermétique. **Installez seulement sur un foyer existant en brique et se conformant aux spécifications minimum de chambre de feu (États-Unis seulement).** Les pièces exigées pour un tuyau positif direct pour connexion de l'assemblée ou la doublure du tuyau enregistré. Au Canada, un tuyau doublé de protection est exigé par le code ULC S628.

**US Patents 4,766,876; 5,113,843; 5,341,794**  
**Brevet US 4,766,876; 5,113,843; 5,341,794**

**Minimum Clearances To Combustible Material**  
**Espaces Libres Minimum Des Matériaux Combustibles**

|  | USA/États-Unis and CANADA |               |                     |
|--|---------------------------|---------------|---------------------|
|  | A                         | D             | F                   |
| Masonry, Hearth, Chimney & Zero Clearance<br>Espaces, Circuits, Cheminée & d'espace libre*   | 16"/406mm                 | 6"/152mm      | 8"/203mm            |
| *Zero Clearance Instructions USA Only<br>*Instructions d'espace libre - États-Unis seulement |                           |               |                     |
| <b>MANTEL CLEARANCES / Espace Libre Manteau de Cheminée</b>                                  | <b>USA/États-Unis</b>     | <b>CANADA</b> |                     |
| with Mantel Shield   | 33"                       | 30"           | 34"/867mm 30"/762mm |
| with 27mm (1 1/8") Mantel Deflector  | 27"                       | 23"           | 24"/610mm 21"/533mm |
| with 8" (203mm) Mantel Deflector   | 17"                       | 16"           | 16"/406mm 14"/356mm |
| with Mantel Shield Only  | 24"                       | 22"           | 18"/457mm 14"/356mm |
| with 5" (127mm) Deflector & Mantel Shield  | 23"                       | 15"           | 15"/381mm 14"/356mm |
| with 8" (203mm) Deflector & Mantel Shield  | 15"                       | 12"           | 15"/381mm 14"/356mm |

**FLOOR PROTECTION / PROTECTION DU PLANCHER**

|  | E   | E         | Thermal Protection USA & Canada<br>Protection Thermique États-Unis & Canada |
|--|-----|-----------|---|
| Floor height 0" to 8" (0mm-203mm) below Insert Base<br>Hauteur du sol de 0" à 8" (0 mm à 203 mm) sous la base de l'insert  | 18" | 18"/457mm | 1 inch (25mm) of k=0.84   |
| Floor height greater than 8" (203mm) below Insert Base<br>Hauteur de sol supérieure à 8" (203 mm) sous la base de l'insert | 16" | 18"/457mm | 1/2 inch (13mm) of k=0.84   |

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

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

2005 2006 2007 Jan Feb Mar Apr May June July Aug Sept Oct. Nov. Dec.

Made in U.S.A. / Fait Aux États-Unis DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ÉTIQUETTE 250-6392

Serial Number

Model Name

Test Lab & Report No.

Manufactured Date

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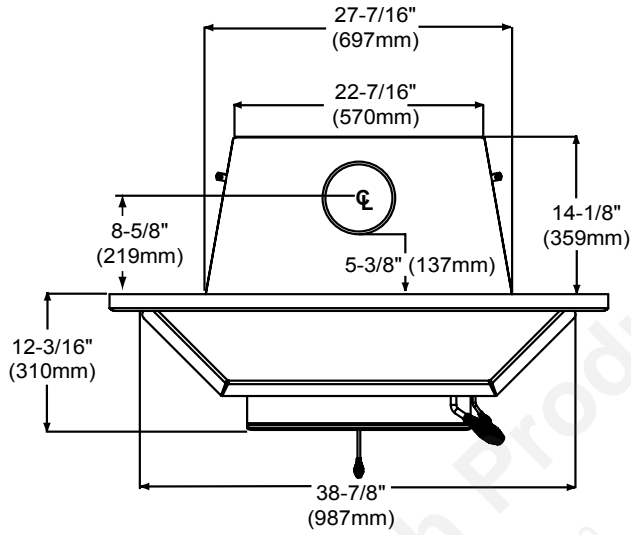
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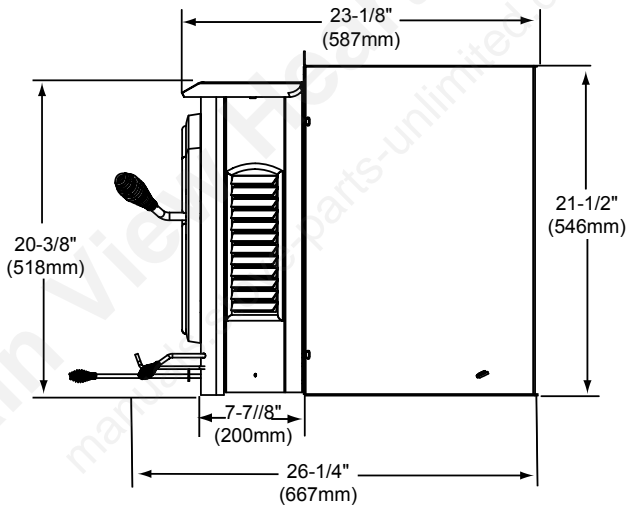
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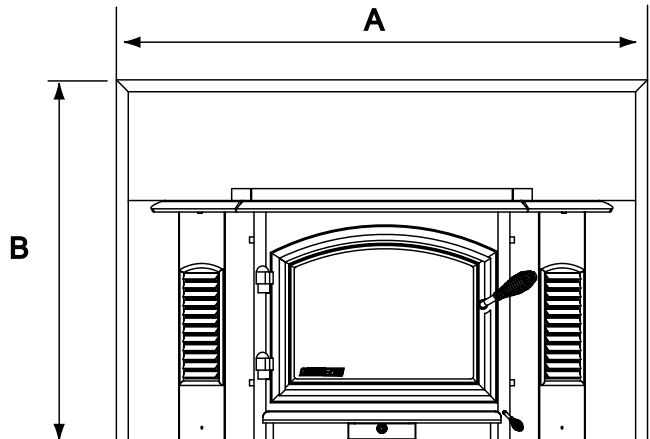
**TOP VIEW**



**SIDE VIEW**

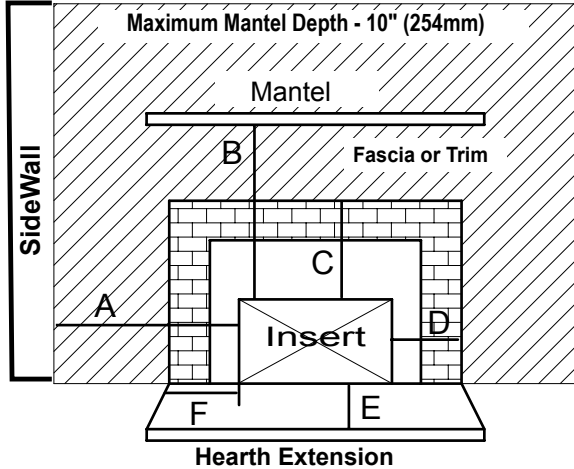


**FRONT VIEW**



| Panel Size | A       | B       |
|------------|---------|---------|
| STD        | 44-5/8" | 30-1/2" |
| Large      | 50-1/2" | 34-1/2" |

**CLEARANCES TO COMBUSTIBLES**  
United States and Canada



**\*Zero Clearance Installations USA Only**

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

**NOTE:** When installing into a masonry fireplace, the fireplace must be built to UBC Chapter 37 standards. Do not remove brick or mortar from masonry fireplace to accommodate insert. The permanent metal warning plate provided must be attached to the back of the fireplace stating the fireplace may have been altered to accommodate the insert and must be returned to original condition for use as a conventional fireplace.

|                                    | <u>USA</u> | <u>CANADA</u> |
|------------------------------------|------------|---------------|
| <b>A Sidewall to Stove</b>         | 16"        | 16" (406mm)   |
| <b>B Mantel Clearances</b>         |            |               |
| *No Mantel Shield                  | 33"        | 34" (864mm)   |
| with 5" Mantel Deflector           | 27"        | 24" (610mm)   |
| with 8" Mantel Deflector           | 17"        | 16"(406mm)    |
| with Mantel Shield Only            | 24"        | 18"(457mm)    |
| 5" Deflector & Mantel Shield       | 23"        | 15"(381mm)    |
| 8" Deflector & Mantel Shield       | 15"        | 15"(381mm)    |
| <b>C Top Trim to Stove</b>         |            |               |
| *No Mantel Shield                  | 30"        | 30" (762mm)   |
| with 5" Mantel Deflector           | 23"        | 21" (533mm)   |
| with 8" Mantel Deflector           | 16"        | 14"(356mm)    |
| with Mantel Shield Only            | 22"        | 14"(356mm)    |
| 5" Deflector & Mantel Shield       | 15"        | 14"(356mm)    |
| 8" Deflector & Mantel Shield       | 12"        | 14"(356mm)    |
| <b>D Side Trim to Stove</b>        | 6"         | 6" (152mm)    |
| <b>E Hearth Extension-Front</b>    |            |               |
| Floor height 0" to 8" below Insert | 18"        | 18" (457mm)   |
| Floor height greater than 8"       | 16"        | 18"(457mm)    |
| <b>F Hearth Extension-Side</b>     | 8"         | 8" (203mm)    |

**Thermal Protection USA & Canada**

|   |                               |
|---|-------------------------------|
| Thermal protection must be ("k" value = 0.84) or equivalent material* |                               |
| Floor height 0" to 8" below Insert                                    | 1 Inch (12.7mm) of "k" = 0.84 |
| Floor height greater than 8"  | 1/2 inch (25mm) of "k" = 0.84 |

\*See Alternative Floor Protection Worksheet on **page 7**.

**The Mantel Shield must be comprised of a non-combustible material located a minimum of 1" (25mm) from mantel's under side extending to the full width of the mantel. The Mantel Deflector's are available from your dealer.**

**LISTINGS**

These installation instructions describe the installation and operation of the Quadra-Fire 3100-I ACT Wood Insert. This insert meets the U.S. Environmental Protection Agency's 1990 particulate emission standards. The 3100-I ACT is listed by OMNI-Test Laboratories, Inc. to UL Safety Standard 1482, and ULC S628, and (UM) 84-HUD.

Check with your local building code agency before you begin your installation to ensure compliance with local codes, including the need for permits and follow-up inspections. Be sure local building codes do not supersede UL specifications and always obtain a building permit so that insurance protection benefits cannot be unexpectedly cancelled. If any assistance is required during installation, please contact your local dealer.

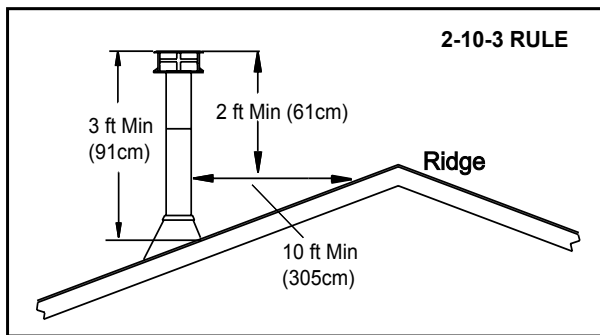
**CHIMNEY HEIGHT/DRAFT**

To be sure that your Quadra-Fire insert burns properly, the chimney draft (static pressure) should be approximately  $-0.10''$  water column (W.C.) during a high burn and  $-0.04''$  W.C. during a low burn, measured 6" (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.

Your Quadra-Fire insert was designed for and tested on a 6" (152mm) chimney, 12 ft-14 ft (360-420cm) high, measured from the base of the insert. The further your stack height or diameter varies from this configuration, the possibility of performance problems increases. In addition, exterior conditions such as roof line, surrounding trees, prevailing winds and nearby hills can influence insert's performance.

A masonry chimney or a listed factory-built UL103 HT Class "A" chimney must be the required height above the roof and any other nearby obstructions. The chimney must be at least 3 ft (91cm) higher than the highest point where it passes through the roof and at least 2 ft (61cm) higher than the highest part of the roof or structure that is within 10 ft (305cm) of the chimney, measured horizontally. **See 2-10-3 Rule (Figure 6A). These are safety requirements and are not meant to assure proper flue draft.**



**Figure 6A**

**CHIMNEY HEIGHT/DRAFT (CONT'D)**

**AVOID FIRE:** To ensure that insulation or any other combustible material does not contact the chimney, a chimney inside the house must have at least 2 inches (51mm) of air space clearance around the chimney. A chimney outside the house must have at least 1 inch (25mm) clearance to the combustible structure. Noncombustible fire stops must be installed at the spaces where the chimney passes through floors and/or ceilings. **Refer to Figures 8A & 8B on page 8. Canadian installations require a full relining of the chimney**

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

**WE RECOMMEND** that a qualified building inspector and your insurance company representative review your plans before installation.

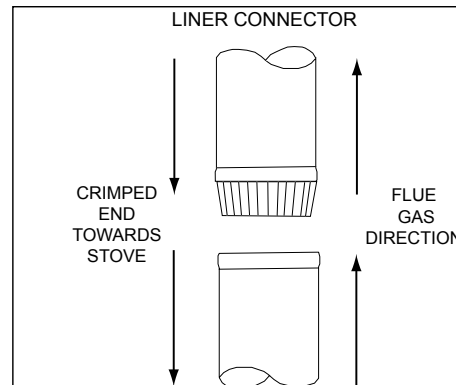
**INSTALLATION RECOMMENDATIONS**

The Quadra-Fire 3100-I ACT insert has met and surpassed the most stringent emissions standards in the United States. The sophistication of the interior firebox design requires that a proper draft be supplied by the chimney, therefore adherence to the following factors will enable your insert to operate at its optimum capability.

**REQUIRED:** A minimum starter pipe reaching to the base of the existing code approved masonry chimney and an airtight face seal, but a full chimney liner for factory-built fireplaces is recommended for USA and is required in Canada.

**BETTER:** Direct connection to the first flue liner in accordance with the requirements of the NFPA 211.

**BEST:** A complete relining of the chimney system with a 6 inch (152mm) diameter listed, stainless liner. Required for factory-built fireplace installations in Canada, recommended in USA. The sections must be attached to the insert and to each other with the crimped (male) end pointing toward the insert. See **Figure 6B**. All joints, including the connection at the flue collar, should be secured with three sheet metal screws. Make sure to follow the minimum clearances to combustibles as set out on **Page 5** of the manual.



**Figure 6B**

**GENERAL INSTALLATION PROCEDURE**

- **DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**
- Install liner, if required, for your chosen installation.
- Attach metal warning plate to the back of the fireplace with screws or nails.
- Set appliance on the hearth (See Hearth Requirements **page 5** and Support Kit information on **page 14**).
- Complete the vent connection required for your installation type.
- Install optional blower, if purchased, (**page 13**), then the panel set and finally the trim (**page 12**).
- Position unit into fireplace leaving width enough for fiberglass batting to be inserted around face seal.
- Work unit securely into the fireplace using sheet metal shims if leveling bolts are needed (**page 11**).
- Remove all labels from glass prior to building first fire.
- Ensure that plated surfaces are cleaned prior to building first fire (**page 18**).
- Read Operation Instructions found on **pages 15 and 16**.

**IF INSTALLING THIS MODEL TO A MASONRY CHIMNEY, ALWAYS BE SURE THE CHIMNEY IS IN GOOD CONDITION AND THAT IT MEETS THE MINIMUM STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARD 211. A FACTORY BUILT CHIMNEY MUST BE 6 INCH (152mm) UL 103 HT AND ULC S629.**

**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 OR ELBOWS AT ALTITUDES ABOVE 4000 FEET ABOVE SEA LEVEL OR WHEN THERE ARE OTHER FACTORS THAT AFFECT FLUE DRAFT. SEE PAGE 6.**

**CAUTION: THIS APPLIANCE IS HOT WHILE IN OPERATION AND MAY REMAIN SO UP TO 40 MINUTES AFTER THERE IS NO FUEL IN THE FIREBOX. IF THIS APPLIANCE IS IN A HIGH TRAFFIC AREA OR CHILDREN MAY BE NEAR, IT IS RECOMMENDED THAT YOU PURCHASE A DECORATIVE BARRIER TO GO IN FRONT OF THE APPLIANCE.**

**ALTERNATE FLOOR PROTECTION WORKSHEET**

How to determine if alternate floor protection materials are acceptable:

All floor protection must be non-combustible (i.e., metals, brick, stone, mineral fiber boards, etc.). Any organic materials (i.e., plastics, wood paper products, etc.) are combustible and must not be used. The floor protection specified includes some form of thermal designation such as R-value (thermal resistance) or k-factor (thermal conductivity).

**PROCEDURE:**

1. Convert specification to R-value:

|   |   |
|---|---|
| R-value given - no conversion needed.   | K-factor is given with a required thickness (T) in inches: $R = \frac{1}{K \times 12} \times T$ |
| k-factor is given with a required thickness (T) in inches: $R = \frac{1}{k} \times T$ | r-factor is given with a required thickness (T) in inches: $R =$                                |

2. Determine the R-value of the proposed alternate floor protector.

- i. Use the formula in step (1) to convert values not expressed as "R".
- ii. For multiple layers, add R-values of each layer to determine overall R-value.

3. If the overall R-value of the system is greater than the R-value of the specified floor protector, the alternate is acceptable.

**EXAMPLE:** The specified floor protector should be 3/4 inch thick material with a k-factor of 0.84. The proposed alternate is 4" brick with an r-factor of 0.2 over 1/8" mineral board with a k-factor of 0.29.

Step (a): Use formula above to convert specification to R-value.  $R = \frac{1}{k} \times T = \frac{1}{.84} \times 0.75 = 0.893$

Step (b): Calculate R of proposed system. 4" brick of R = 0.2, therefore:  $R_{brick} = 0.2 \times 4 = 0.8$  1/8" mineral board of k = 0.29, therefore:  $R_{mineral\ board} = \frac{1}{0.29} \times 0.125 = 0.431$

$R_{total} = R_{brick} + R_{mineral\ board} = 0.8 + 0.431 = 1.231$

Step (c): Compare proposed system  $R_{total}$  of 1.231 to specified R of 0.893. Since proposed system  $R_{total}$  is greater than required, the system is acceptable.

$$R = \frac{(ft^2)(hr)(^{\circ}F)}{Btu} \quad k = \frac{Btu(in)}{ft^2(hr)(^{\circ}F)} = K \times 12 \quad K = \frac{Btu(ft)}{ft^2(hr)(^{\circ}F)} \quad r = \frac{(ft^2)(hr)(^{\circ}F)}{(Btu)(in)} = \frac{1}{k}$$

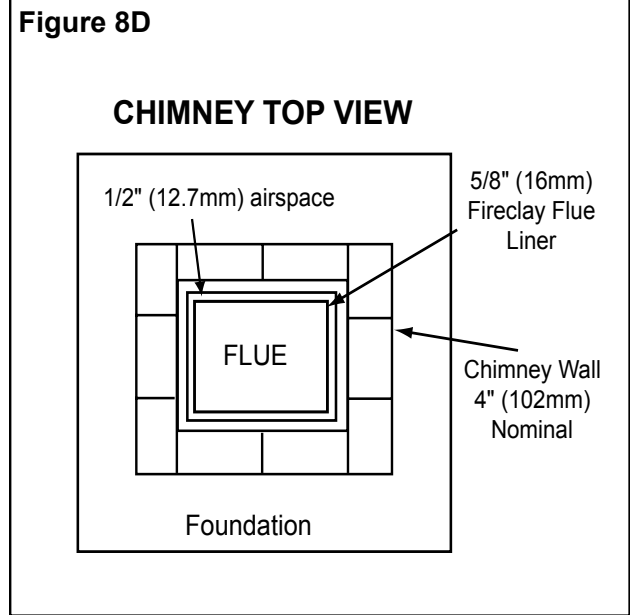
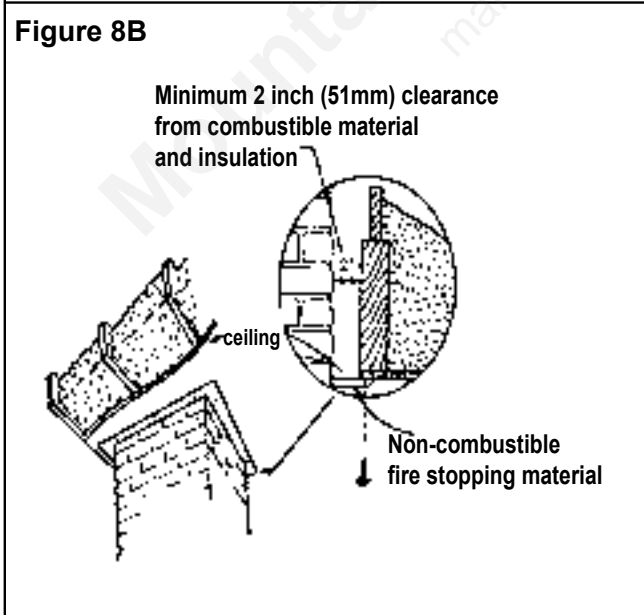
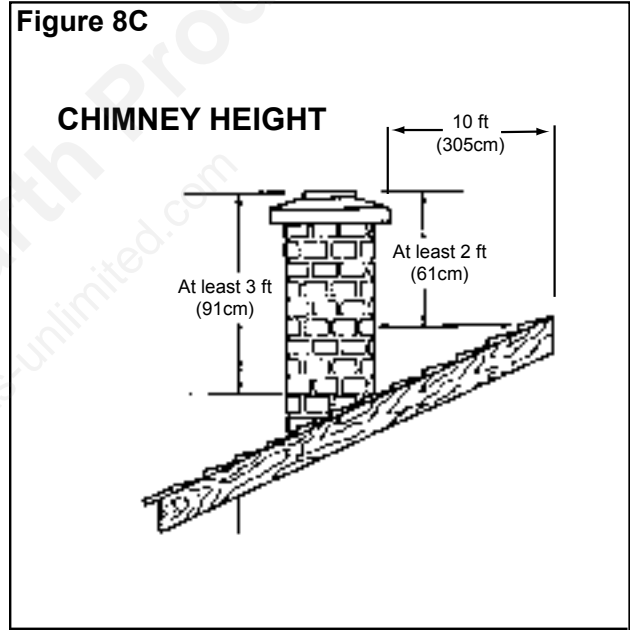
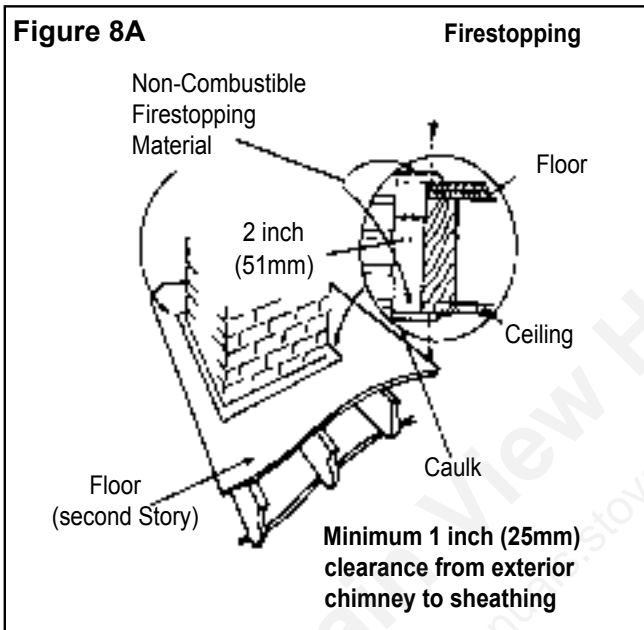
**CHIMNEY REQUIREMENTS**

A chimney must be the required height above the roof or other obstruction for safety and for proper draft operation. The requirement is that the chimney must be at least 3 feet (91cm) higher than the highest point where it passes through the roof, and at least 2 feet (61cm) higher than the highest part of the roof or structure that is within 10 feet (305cm) of the chimney, measured horizontally. Refer to Figure 8C.

**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.



## INSTALLATION OPTIONS

Refer to: Clearances to Combustibles on page 5, Canadian Installation requirements on page 11, Hearth Requirements on page 5 and Zero Clearance Adjustable Support Kit on page 14.

### MASONRY FIREPLACE USING DIRECT-CONNECT METHOD

The Quadra-Fire 3100-I ACT Insert conforms with the UL Standard for Safety 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 No. 211, with or without a direct flue collar connection. A starter pipe is required to reach to the bottom of the existing flue.

1. Secure the fireplace damper in the open position. If this cannot be accomplished, it will be necessary to remove the damper.

2. Seal the damper area around the chimney liner with a high temperature sealant.

3. The chimney should be examined for cracks, loose mortar, and other signs of deterioration and blockage. The insert should not be installed until it is determined that the chimney is safe for use. Since an oversized flue contributes to the accumulation of creosote, the size of the flue should be checked to determine that it is not too large for the insert. The chimney should also be checked to ensure it meets the minimum standard of the National Fire Protection Association (NFPA) Standard 211. The following bullets list the more critical requirements for a properly constructed chimney:

- 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

- The chimney must have a fire clay flue liner (or equivalent) with a minimum thickness of 5/8" (16mm) and must be installed with refractory mortar. An equivalent liner must be a listed chimney liner system or other approved material.

- A chimney inside the house must have at least 2 inches (51mm) of clearance to the combustible structure. A chimney outside the house must have at least 1 inch (25mm) clearance to the combustible structure. Non-combustible fire stops must be installed at the spaces where the chimney passes through floors and/or ceiling (See Figure 8A and 8B on page 8).

**NOTE:** In Canada, a full reline is required.

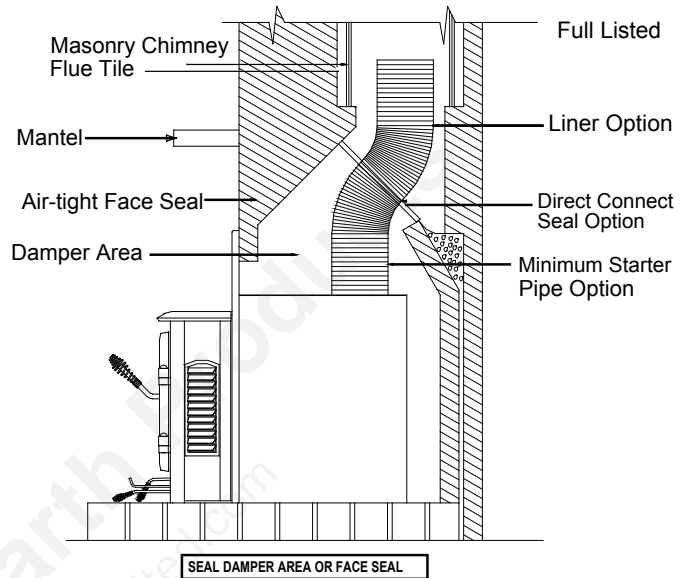


Figure 9A - Installation Into Masonry Fireplace

### METAL HEAT CIRCULATING MASONRY

The Quadra-Fire 3100-I 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 No. 211, with or without a direct flue collar connection. A starter pipe is required into existing chimney.

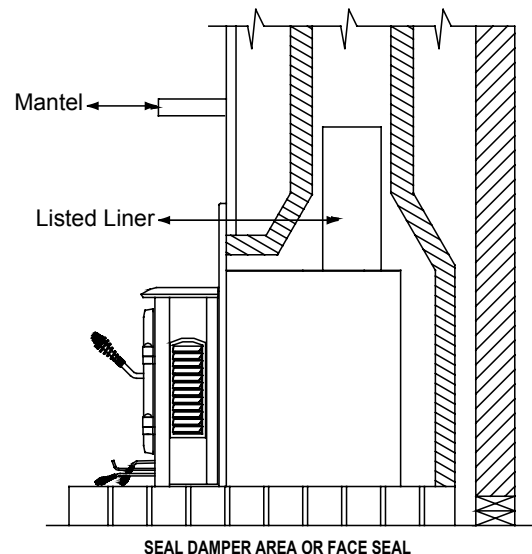


Figure 9B - Installation Into Metal Heat Circulating Showing Use Of Starter Pipe

**FACTORY BUILT ZERO CLEARANCE FIREPLACE  
(USA INSTALLATIONS ONLY)**

The Quadra-Fire 3100-I ACT Wood Stove Insert is listed to UL 1482 Standard and 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 H.T. requirements (2100°F) per UL 1777. 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.

**NOTE: Refer to chimney liner manufacturer for recommendations on supporting the liner.**

|                                   |        |
|-----------------------------------|--------|
| Minimum Width of cavity opening:  | 32 in. |
| Minimum Height:                   | 23 in. |
| Minimum Depth from front to rear: | 16 in. |

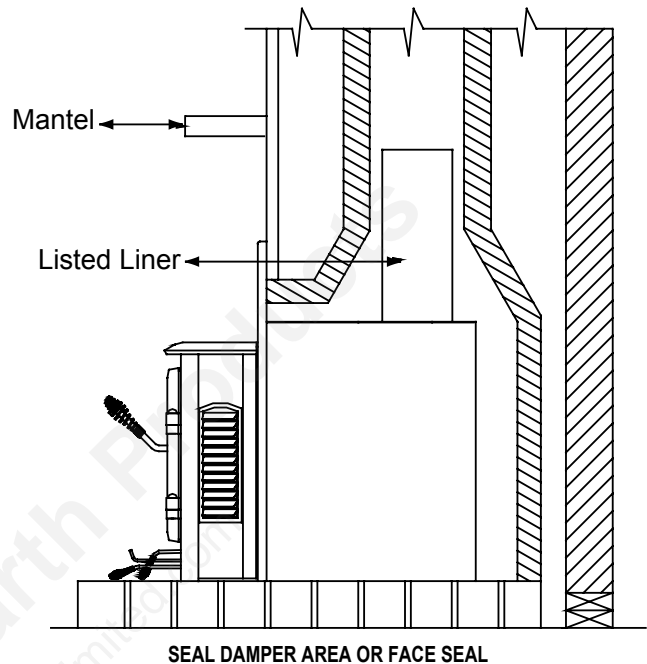
The following modifications of factory built fireplaces are permissible: 1) removal of damper; 2) removal of smoke shelf or baffle; 3) removal of ember catches; 4) removal of fire grate; 5) removal of viewing screen/curtain; and, 6) removal of doors.

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

The factory built chimney must be listed per UL 127 and meet the type HT requirements of UL 103. Factory built fireplace chimneys tested to UL 127-1998, may be at the fireplace manufacturer's option, tested to the same criteria as UL 103 HT requirements. 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 meet type HT requirements (2100°F) per UL 1777.

The liner must be securely attached to the insert flue collar and the chimney top. To prevent room air passage to the chimney cavity of the fireplace, seal either the damper area around the chimney liner with high temperature sealant or the fireplace front with fiberglass batting.

The fireplace must not be altered, except that the damper may be removed to accommodate a direct-connect starter pipe or chimney liner, and 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.



**Figure 10A - Installation into a Factory Built Zero Clearance Fireplace**

The permanent metal warning label provided must be attached to the back of the fireplace, with screws or nails, stating that the fireplace may have been altered to accommodate the insert, and must be returned to original condition for use as a conventional fireplace.

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. **(See page 14).**

Final approval of this installation type is contingent upon the authority having jurisdiction.

**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

## INSTALLATION IN CANADA MASONRY and HEAT-CIRCULATING

*(INSTALLATIONS INTO FACTORY-BUILT FIREPLACES ARE PROHIBITED IN CANADA)*

Whether installed in a masonry or heat-circulating fireplace, this fireplace insert must be installed with a continuous chimney liner of 6" (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.

- Do not remove bricks or mortar from fireplace to accommodate insert.
- The face of the fireplace must be sealed to prevent room air passage into the chimney cavity.
- The permanent metal warning label provided must be affixed to the back of the fireplace with screws or nails to the fireplace, in a location readily visible should the fireplace insert be removed, 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.

**NOTE:**

In Canada when using a factory-built chimney it must be safety listed, Type UL 103 HT CLASS "A" or conforming to CAN/ULC-S629, STANDARD FOR 650°C FACTORY-BUILT CHIMNEYS.

### USE OF LEVELING BOLTS

*Two leveling bolts, 3/8" x 4" are shipped inside the component pack found inside the firebox.*

NOTE: Not all installations will require the use of the leveling bolts. If the leveling bolts are necessary, you will also need sheetmetal guides placed under the leveling bolts to slide insert into position.

1. Remove the bolts from the component pack.
2. Locate the cage nuts welded to each side of the insert bottom and insert bolts.
3. Position insert on hearth with rear of insert extending into fireplace opening.
4. Extend leveling bolts downward to level insert.

### SECURING LINER TO CHIMNEY RING

There are two options to secure the liner to the chimney ring: (See Figure 11A).

Option One: If there is enough room on the top of the insert to work, hand bend the two tabs upward 90°. Secure the liner with the supplied hex head bolts 1/4-20-3/4.

Option Two: Remove the manifold tubes, fiberboard baffle and ceramic blanket. From inside the firebox, pull liner down through the chimney ring below the outer skin. There are two pre-drilled holes in the chimney ring 180° apart. Secure the liner with the supplied hex head bolts 1/4-20-3/4.

**NOTE:** Tabs are shipped from factory in a flat position. Bend upwards 90 degrees.

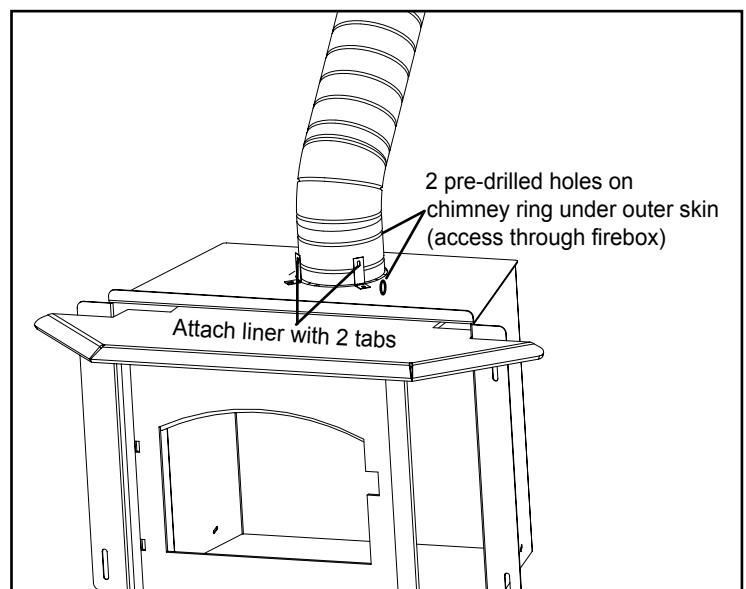


Figure 11A

**INSTALLATION OF PANEL SET AND TRIM**

| <u>Part No.</u> | <u>Description</u> | <u>Size</u>       | <u>Part No.</u> | <u>Description</u> | <u>Size</u>       |
|-----------------|--------------------|-------------------|-----------------|--------------------|-------------------|
| 831-0862        | Large, Gold        | 50-1/2" x 34-1/2" | SP-31S-NL       | Std, Nickel        | 44-5/8" x 30-1/2" |
|                 |                    |                   | SP-31L-NL       | Large, Nickel      | 50-1/2" x 34-1/2" |

**Kit Includes:** (2) Side Panels, left & right; (1) Panel Top & Fastener package; (2) Side Trim, left & right; (1) Trim Top & Fastener package.

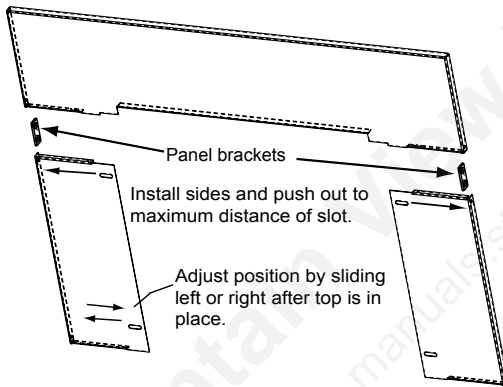
**Tools Needed:** Powered Phillips head screw driver.

**Attaching Panels to the Insert**

1. Install the 2 side panels on the insert first, using the cage nuts already attached to the stove, pushing panels away from the insert to the maximum distance of the slot. **See Figure 12A.** (Note: The sides are interchangeable).
2. Put on the top panel and push straight back. Attach the top panel to the sides using the screws and the panel brackets found in the fasteners package. Now move the side panels inwards (toward insert) into position and tighten screws.

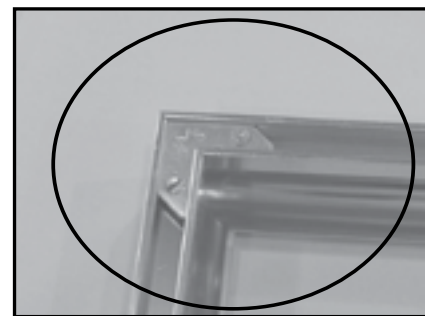
**Assembling Trim**

1. Place protective covering on surface to be used to assemble the trim pieces. Lay the trim face down.
2. Attach the 2 side trim pieces to the top trim at each corner using the "L" bracket included in fasteners package. Slide assembled trim over panel set. **See Figure 12B.**



**Figure 12A**

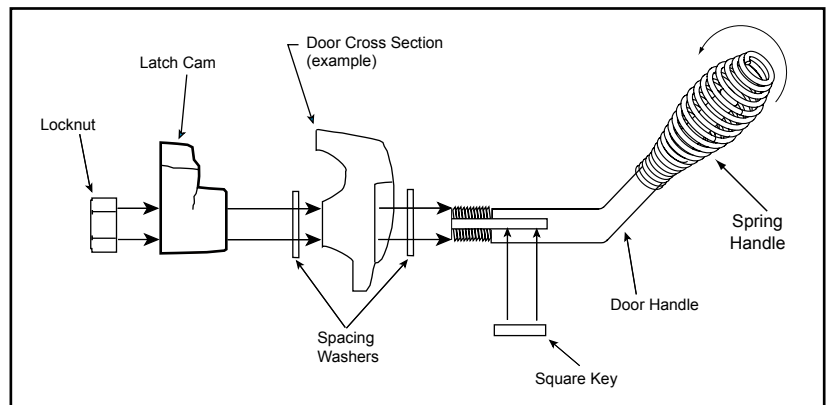
**View of "L" Bracket Installed**



**Figure 12B**

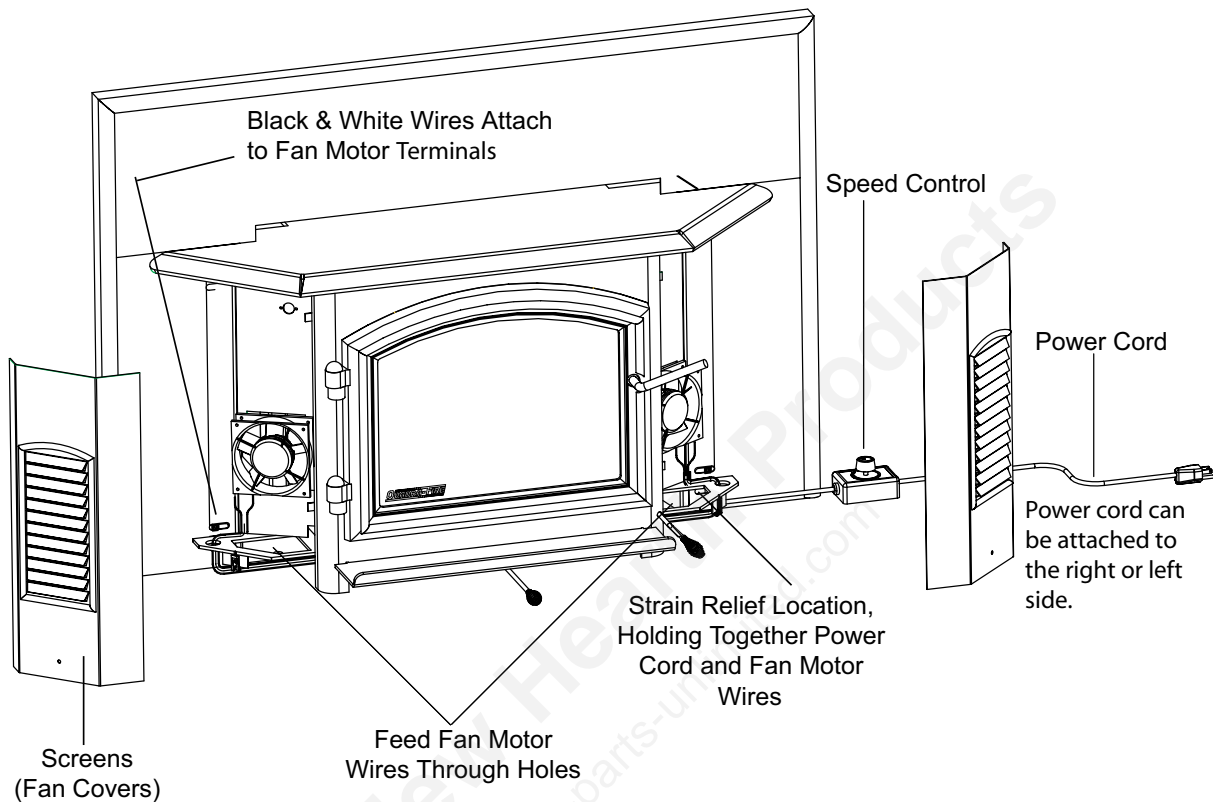
**DOOR HANDLE ASSEMBLY**

1. Install washer on door handle shaft.
2. Slide door handle through door.
3. Install second washer(s) as shown.
4. Install key in groove.
5. Align groove in latch cam with key; slide latch cam over shaft.
6. Install locknut. **Caution! Do not overtighten locknut. Door handle needs to move smoothly.**
7. Install spring handle turning counter-clockwise to desired location on handle.



## FAN (BLOWER) INSTALLATION INSTRUCTIONS

Part No. 831-1101



**Included in Kit:** (2) Fan mounts & fan assemblies; (1) Speed Control, Power Cord/wire assembly; (1 set) Fan Connector wires, must be high temperature wire; and (1) Strain relief.

**Tools Needed:** Large Phillips screwdriver, pliers

1. Remove Screens (fan covers).
2. Install fan mounts to outer wall with panel mounting screws.
3. Feed fan and motor wires up through large hole in floor.

**NOTE:** Power cord can be mounted on left or right side.

4. Connect white and black wires to fan motor terminals and the green ground wire to ground terminal
5. Feed fan motor wires through holes in bottom and across to the other fan motor.
6. Install strain relief onto power cord.
7. Using a pair of pliers, squeeze strain relief and push through hole.
8. Plug in and test blower operation.
9. Replace Screens.
10. Route power cord away from the unit. **DO NOT route power under or in front of unit.**

### FAN SPEED CONTROL ADJUSTMENT, IF NECESSARY\*

*\*The fan Speed Control for this unit is adjusted at the factory, and normally does not require further adjustment.*

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

1. With the unit plugged in, turn the Speed Control Knob to slow. (Full clockwise.)
2. Use a small screwdriver to adjust the fan speed by turning the adjustment mechanism through the hole on the side of the Speed Control.
3. Adjust the speed so the fan runs slowly but does not stop. Turn clockwise to slow the fan and counter-clockwise to increase the speed.

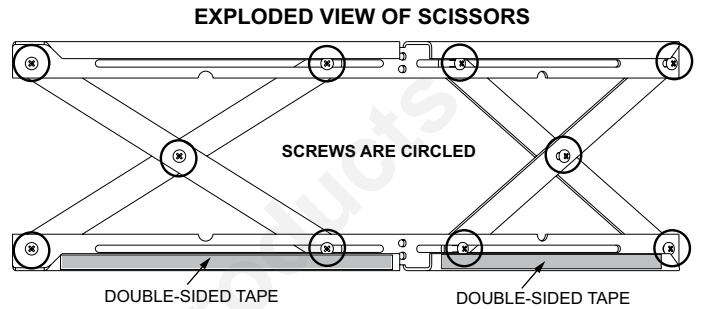
**ZERO CLEARANCE ADJUSTABLE TRIM SUPPORT, 2" to 10"**  
**Part No. 841-0990, size 9" x 45" and Part No. ADJSPT-12, size 12" x 50"**

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

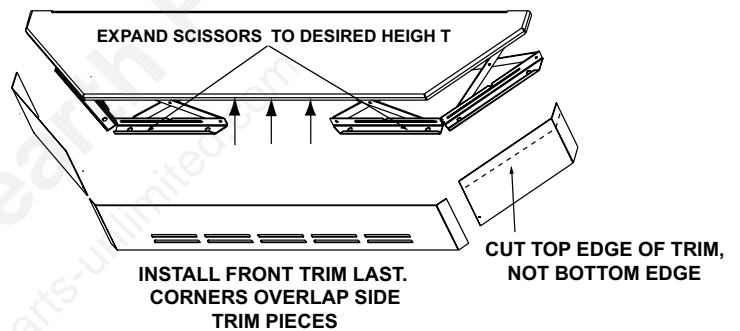
**Tools Needed:** Phillips Head Screwdriver, Sheet Metal Shears, Measuring Tape, Gloves

1. The 10 screws on each set of scissors will already be loose when shipped. **See Figure 14A.**
2. Expand scissors to desired height. Tighten screws to hold in place using Phillips Head screwdriver. **See Figure 14B.**
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. **See Figure 14B.**
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, sheet-rock, etc.

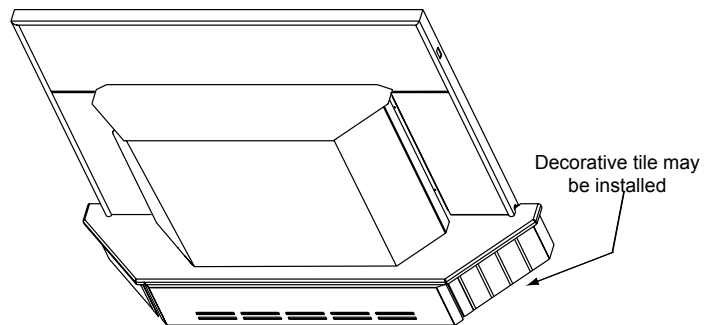
**NOTE:** 3/8" (9.5mm) thick tile or like material can be cut to size and fit under lip of top trim edge for a decorative touch. **See Figure 14C.**



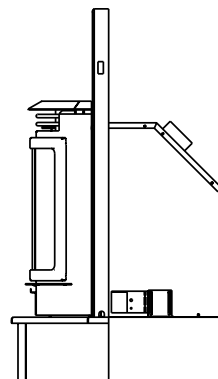
**Figure 14A**



**Figure 14B**



**Figure 14C**



**Figure 14D**

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# OPERATION

## WOOD SELECTION AND STORAGE

Burn only dry seasoned wood. Dry, well-seasoned wood will not only minimize the chance of creosote formation but will give you the most efficient heat output. Even dry wood contains at least 15% moisture by weight and should be burned hot enough to keep the chimney hot enough to maintain particulate (smoke) burning. Burning unseasoned wood of any variety defeats the stoves' efficiency.

Dead wood lying on the forest floor should be considered wet, and requires full seasoning time. Standing wood can be considered to be about two-thirds seasoned. Wood is dry enough to burn if the ends of the logs have cracks radiating in all directions from the center. If your wood sizzles in the fire, even though the surface is dry, it may not be fully cured.

Drying time can be reduced by splitting wood prior to storage. Since the majority of drying occurs through the cut ends rather than the sides, stack the wood so both ends of each piece are exposed to air. Store wood under cover, such as in a shed, or covered with a tarp, plastic, tarpaper, sheets of scrap plywood, etc.

## OVERFIRING

Do not overfire. Overfiring can result in crazing, an effect causing a white, non-removable film to be deposited on the inside of the glass. Using flammable liquids or too much wood, or burning trash in the insert, may result in overfiring. If the chimney connector or insert glows red, or worse, white, the insert is overfired. This condition may ignite creosote in the chimney, possibly causing a house fire. If any part of the insert starts to glow, you are in an overfire situation. If you overfire, immediately close the insert dampers and door, if open, to reduce the air supply to the fire. **Overfiring your insert voids your warranty.**

## BUILDING A FIRE

**NOTE: Remove all labels from glass front prior to lighting the first fire.**

Before lighting your first fire in the insert, make certain that the baffle is correctly positioned. It should be resting against the rear support. Also refer to care and cleaning of plated surfaces on **page 18** before lighting your first fire.

**CAUTION: Never use gasoline, gasoline-type 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.**

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. Place several wads of crushed paper on the firebox floor. *Heating flue with slightly crumpled newspaper before adding kindling keeps smoke to a minimum.*
2. Place several wads of crushed paper on the firebox floor.
3. Open Start-Up Air Control (right side) and Primary Air Control (under ashcatcher) fully. **See Figure 17A on page 17.**
4. Ensure that no matches or other combustibles are in the immediate area of the insert, that the room is adequately ventilated, and the flue is unobstructed.
5. Light the paper in the insert. NEVER light or rekindle insert 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" (76mm) or 4" (102mm) in diameter. Be careful not to smother the fire. Stack the pieces of wood carefully: near enough to keep each other hot, but far enough away from each other to allow adequate air flow between them.
7. When ready to reload the insert, add more logs. Large logs burn slowly, holding a fire longer. Small logs burn fast and hot, giving quick heat.
8. Adjust the Start-Up Air Control and Primary Air Control, maintaining flames above the fuel. The more you close down the Primary Control, the lower and slower the fire will burn. The more you open the Primary Control the more heat will be produced. The Start-Up Air Control (right side) is only used for the first 5 to 15 minutes.

As long as there are hot coals, repeating steps 7 and 8 will maintain a continuous fire.

**NOTE: The special high temperature finish paint applied to the insert will cure as your insert heats. You will notice an odor and perhaps see some vapor rise from the insert surface, this is normal. We recommend that you open a window until the odor dissipates and the paint is cured.**

**OPERATING TIPS**

For maximum operating efficiency with the lowest emissions, follow these operating procedures:

1. Regardless of desired heat output, when loading your insert, burn your Quadra-Fire with both air controls wide open for a minimum of 5 to 15 minutes.
2. Regulate burn rate (heat output) by using the Primary Control (located under the ashlip). The Start-Up Air Control (right side) is mainly for initial start-up and reloading.
3. Heat output settings: Follow Burn Rate Instructions listed below.
4. **Burn only dry, well-seasoned wood.**

**WARNING:** Do not operate with Start-Up Air Control in the open position in excess of 15 minutes! Risk of extreme temperatures! Prolonged operation of this stove with the Start-Up Air Control in the open position may cause the combustible materials around the stove to exceed safe temperature limits.

| <b>BTU / Hr</b> | <b>Start-Up Air Control</b>  | <b>Primary Control</b> |
|-----------------|------------------------------|------------------------|
| Below 10,000    | Closed after 5 to 15 minutes | Pull to Stop           |
| 10,000 - 15,000 | Closed after 5 to 15 minutes | 1" - 1-1/4" open       |
| 15,000 - 30,000 | Closed after 5 to 15 minutes | 1-1/4" - 2-1/2" open   |
| Maximum Heat    | Closed after 5 to 15 minutes | Fully open             |

*These are approximate settings, and will vary with type of wood or chimney draft.*

**BURN RATES**

**STARTING FIRE:** Open both controls (push in) completely. After a wood load has been burning on high for 5 to 15 minutes or longer for very large pieces, close the Start-Up Air Control (right side) by pulling it out.

**HIGH:** Leave the Primary Air Control fully open (immediately under the ashcather). It is especially important to fully open both controls when reloading the insert as failure to do so could result in excessive emissions, also referred to as 'opacity'.

**After a wood load has been burning for 5 to 15 minutes on High to achieve the following burn rates set the controls as listed below:**

**MEDIUM HIGH:** Close the Primary Air Control to 1-1/4" to 2-1/2" (32mm to 64mm) open. Start-Up Air is closed.

**MEDIUM:** Close the Primary Air Control to 1" to 1-1/4" (25mm to 32mm) open. Start-Up Air is closed.

**LOW:** Gradually close down the Primary Air Control by pulling out making sure to maintain flames in the insert. (Start-Up Air is closed). It is very important to maintain flames in your insert during the first few hours of a low burn to avoid excessive air pollution.

**OPACITY**

Opacity is the measure of how clean your insert is burning and is measured in percentages. An opacity of 100% in the smoke column from a chimney will totally obscure an object. Whereas 0% opacity means that no smoke column can be seen. A periodic check of the opacity emitted from your chimney will enable you to burn your insert as smoke free as possible.

**FAN OPERATING INSTRUCTIONS**

1. **Initial (cold) startup:** Leave fan off until your insert is hot and a good coal bed is established, approximately 30 minutes after fuel is lit.
2. **High Burn Setting:** The fan may be left on throughout the burn.
3. **Medium or Medium High Burn Setting:** The fan should be left off until a good burn is established, then turned on a medium or high rate.
4. **Low Burn Setting:** The fan tends to cool the insert. Leave fan off until the burn is well established; then, if you wish, turn the fan on at a low rate.
5. The fan is equipped with a rheostat (speed control). The highest fan speed is obtained by turning the rheostat on, then adjusting back towards "OFF" as far as possible without turning the fan off. For a low fan speed, turn the control knob clockwise as far as possible.

**ASH REMOVAL**

Remove cold ashes (not hot) from the insert at regular intervals, depending on your usage. Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible 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. Always treat ashes as if they contain hot coals.

## AIR QUALITY AND YOUR QUADRA-FIRE INSERT

In recent years there has been an increasing concern about the quality of our air. Much of the blame for poor air quality has been placed on the burning of wood for home heating. In order to improve this situation we at Quadra-Fire have developed cleaner burning inserts that surpass the stringent requirements for emissions established by our governing agencies. Your 3100-I ACT, like any other appliance, must be properly operated in order to insure that they perform the way they are designed to perform. Improper operation and maintenance may cause any wood burning unit to release more particulate, adversely affecting the environment.

### *The story of the Three Burning Stages . . .*

It helps to know a little about the actual burn process, which entails three discernible burning stages. The first stage is called the kindling stage. During this stage the fuel reaches the boiling temperature of water, 212°F, evaporating the moisture found to some degree in all wood.

Because the process takes heat from the insert during this initial drying stage, each new load of wood reduces the chances for a good, clean burn. For this reason it is always best to burn dry, seasoned firewood, and operate the controls properly. The control on the right side of your insert is called the Start-Up Air Control and is used primarily during this first kindling stage of burning.

During the secondary stage, the wood gives off flammable gases which burn above the fuel with bright flames. These flames above the fuel must be maintained until the third stage to insure proper burning. During this stage you may adjust your insert for a low burn rate. To achieve a low burn rate it is necessary to close down the air while still maintaining some flames. If the flames tend to go out, the setting is too low. The Primary Control, located in the center of the insert beneath the ashcatcher, will assist you in adjusting the insert for a low burn rate.

The third stage of burning is the charcoal stage. This happens when the flammable gases have been burned and the charcoal remains. The coals burning with hot blue flames is a naturally clean portion of the burn. It is very important to reload your insert while enough lively hot coals remain in order to provide the amount of heat needed to dry and rekindle the next load of wood. Open up both controls for a short while before reloading to liven up the coal bed. You should also break up any large chunks and distribute the coals so the new wood is laid on hot coals. Leave both controls open until the new wood load is burning well enough to maintain the secondary stage of burning and then set controls to your desired heat output setting.

### **START-UP AIR SYSTEM**

The combustion air enters at the rear of the firebox through the rear air tubes. This air supply is controlled by the Start-Up Air Control.

### **PRIMARY AIR SYSTEM**

The primary air 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 secondary, tertiary and quaternary combustion. This air is regulated by the Primary Air Control. For more primary air (more heat), push rod in. For less primary air (less heat), pull rod out.

### *In other words . . .*

Pulling either control towards you closes off the air available to the insert in that area. Pushing either control opens it, allowing air circulation to the area. A good analogy to remember for this procedure is the gas pedal on your car. Pushing in the gas pedal makes the engine run faster. Letting off (pulling the control back) makes the car run slower.

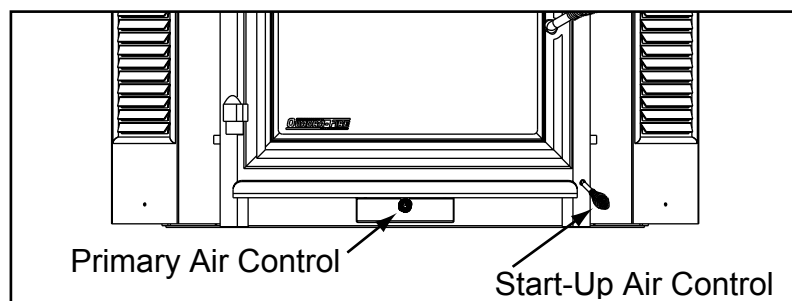


Figure 17A

**OPEN - PUSH IN**

**CLOSE - PULL OUT**

## MAINTENANCE

### CARE AND CLEANING OF PLATED SURFACES

**IMPORTANT:** You must clean all the fingerprints and oils from the plated surfaces before firing the insert for the first time. Use warm soapy water and a soft rag, glass cleaner and a paper towel, or vinegar and a paper towel to remove the oils. **DO NOT** use abrasive cleaners! If not cleaned properly prior to lighting the first fire, the oils can cause permanent stains. The plating will be cured upon firing of the insert and oils will no longer affect the finish. Subsequently, little maintenance is then required. Wipe clean as needed with a soft towel.

### CARE AND CLEANING OF GLASS

**NOTE:** Remove all labels from glass prior to lighting the first fire.

Quadra-Fire inserts are equipped with super heat resistant ceramic glass which can only be broken by impact or misuse. Clean glass with any non-abrasive glass cleaner. Abrasive cleaners may scratch and cause glass to crack. Inspect glass regularly. If you find a crack or break, immediately put the fire out and return the door to your authorized dealer for replacement of glass before further use. Do not substitute materials for glass replacement.

**WARNING! DO NOT SLAM INSERT DOOR OR IMPACT THE GLASS WHEN CLOSING THE DOOR, MAKE SURE THAT LOGS DO NOT PROTRUDE AGAINST THE GLASS.**

**WARNING! DO NOT OPERATE WITH BROKEN GLASS.**

**WARNING! DO NOT CLEAN GLASS WHEN HOT.**

### GLASS REPLACEMENT INSTRUCTIONS

**Replace with 5mm ceramic glass only**

1. Remove door from insert and lay on a padded flat surface.
2. Remove glass retainer screws using a Phillips screwdriver.
3. Lift glass out of the door frame.
4. Lay new glass with fiberglass tape around it into door frame.
5. Place glass retainers over the fiberglass tape on the edges of the glass and re-install screws. Be sure glass is centered in the opening (i.e. same space top and bottom, left and right).
6. Tighten screws enough to hold frame and glass in place.
7. Check again for centering of glass in door frame and give all screws a final tightening.

### CREOSOTE FORMATION AND NEED FOR REMOVAL

When wood is burned slowly it produces tar and other organic vapors which combine with expelled moisture, and, in turn forms creosote. These creosote vapors condense in the relatively cool chimney flue when a fire is newly started, or from a slowly burning fire, and accumulate on the flue lining of the chimney.

A build up of creosote can then be ignited by sparks rising up the chimney. When ignited, this situation makes an extremely hot fire which may damage the chimney and even destroy your home. The chimney connector and chimney should be inspected at least once every two months during the heating season to determine if a creosote buildup has occurred. It is extremely important that this residue is removed at regular intervals, usually once a year depending on your burning habits, to prevent the occurrence of a chimney fire. It is highly recommended that you contact a professional chimney cleaner for this area of maintenance.

### CHIMNEY

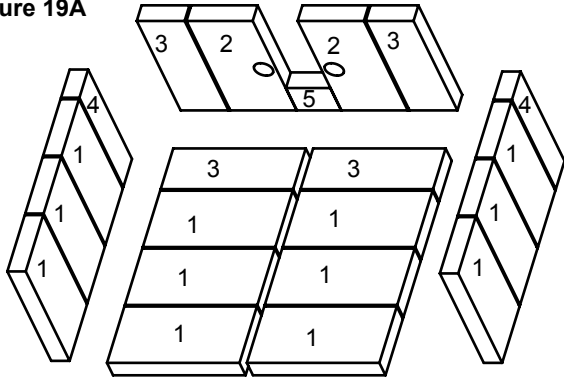
If your type of installation involves a full reline of the chimney, it will be necessary to either remove the baffle from the insert, or remove the insert from the fireplace and disconnect the vent prior to cleaning the chimney. Refer to **page 19** in this manual for instructions on Baffle Removal.

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 can either be caught in a large garbage bag secured to the pipe or swept and vacuumed out of the fireplace. Reconnect the pipe and reinstall the insert following installation instructions in this manual on **page 9**.

## BRICK REPLACEMENT INSTRUCTIONS

The firebox of your Quadra-Fire 3100-I ACT Insert is lined with high quality firebrick which has exceptional insulating properties. There is no need for a grate, simply build a fire on the firebox of your insert.

Figure 19A



**Brick Set Part Number: 831-1830**

1. Remove all old brick and ash from unit.
2. Remove new brick set from box and lay out to diagram as shown in **Figure 19A**.
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 brick 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.

| Nbr | Brick Size       | Qty in Set |
|-----|------------------|------------|
| 1   | 9 x 4.5 x 1.25"  | 12         |
| 2   | 9 x 4.5 x 1.25"  | 2          |
| 3   | 9 x 3.25 x 1.25" | 4          |
| 4   | 9 x 2.25 x 1.25" | 2          |
| 5   | 3 x 2.25 x 1.25" | 1          |

Use Part Number 832-0550 when ordering individual brick and provide the brick dimensions or copy this page and mark desired brick and take it your authorized dealer.

## BAFFLE REMOVAL & INSTALLATION

**NOTE:** The baffle in the 3100-I ACT Insert is 2700° Fiber Board. Removing hardware exposed to combustion processes can be frustrating. If your reason for removing the baffle is simply to clean the chimney, you have alternatives which will save time and effort. Call a qualified chimney sweep or an authorized Quadra-Fire dealer for details.

1. Remove all ash from the firebox, and extinguish all hot embers before disposal into a metal container.
2. Remove the ceramic blanket from above the baffle.
3. With a 3/16" allen wrench, remove the 2 front manifold tube retainer bolts on the air channel under the end of the front tubes.  
**NOTE:** Soak the bolts with penetrating oil for at least 15 minutes before trying to remove them. **See Figure 19B.**
4. To remove the manifold tubes, slide the tube to one side until one end is out of its hole. Then, while lifting that end of the fiber board, pull the tube up over the air channel and out of the hole at the other end. **NOTE:** When replacing the manifold tubes, be sure the tube with the larger holes is placed in the front for your insert to operate properly.
5. Slide fiber board forward to front of stove, tilt down and slide to the door. Tilt to one side and slide through door. **See Figure 19C.**
6. Keep the fiber board baffle tilted as you lift it out of the door.
7. To install the fiber board baffle, repeat steps 2 through 4 in reverse. Be sure that the fiber board and ceramic blanket are pushed back fully.

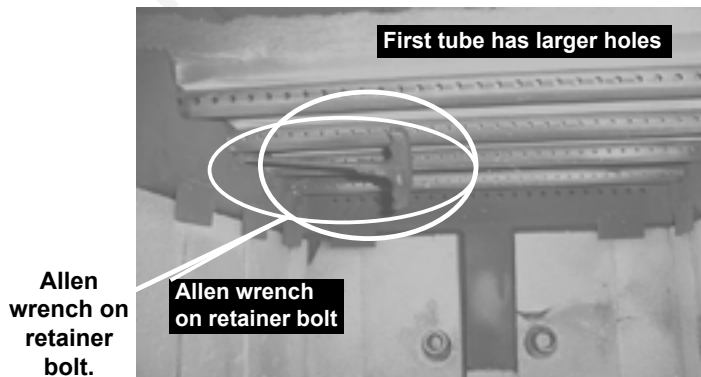


Figure 19B

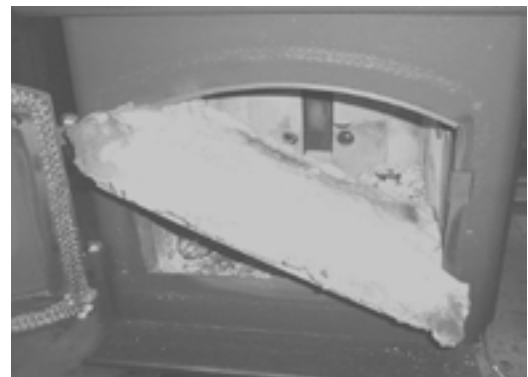
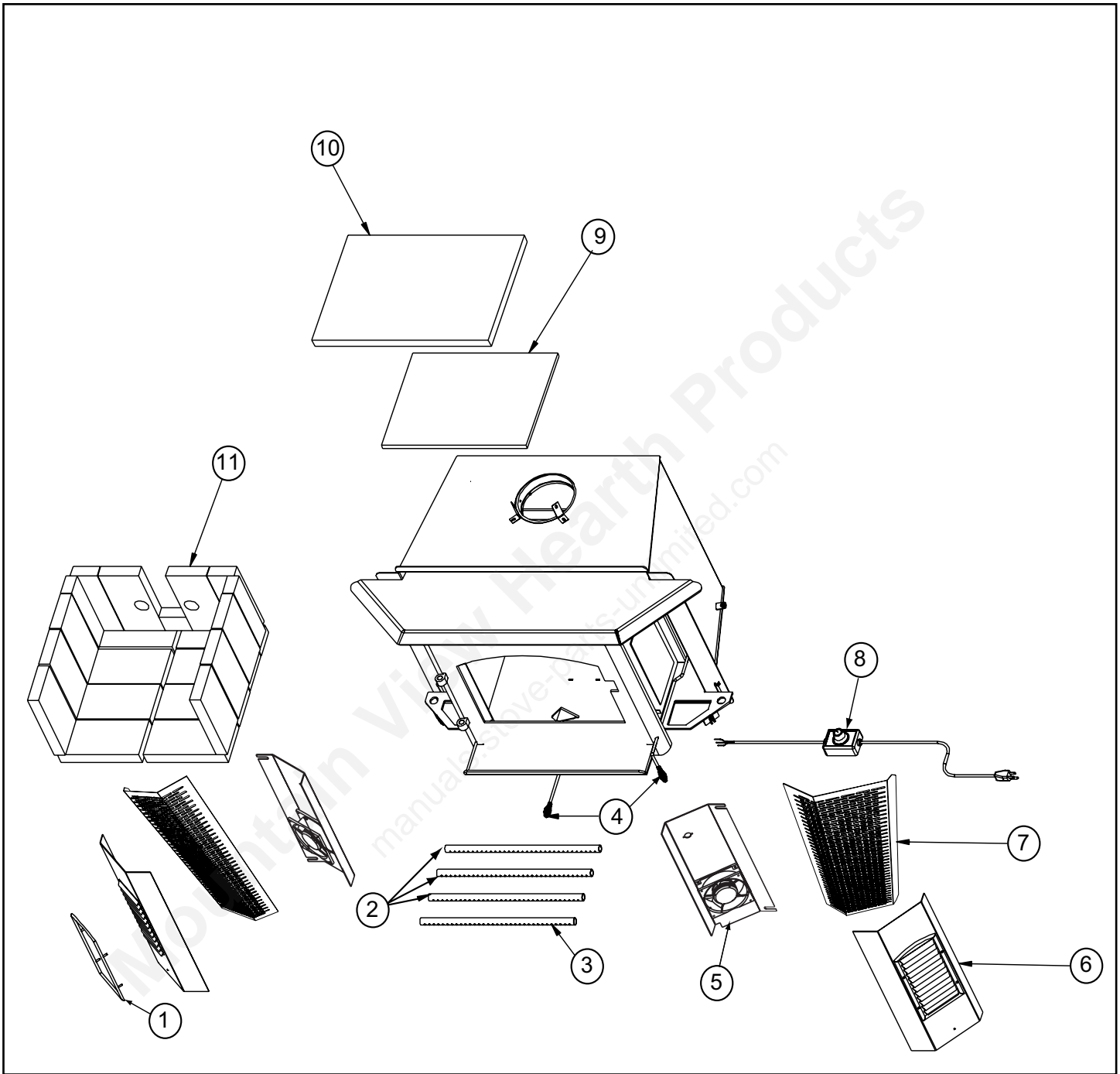


Figure 19C

**EXPLODED VIEW**

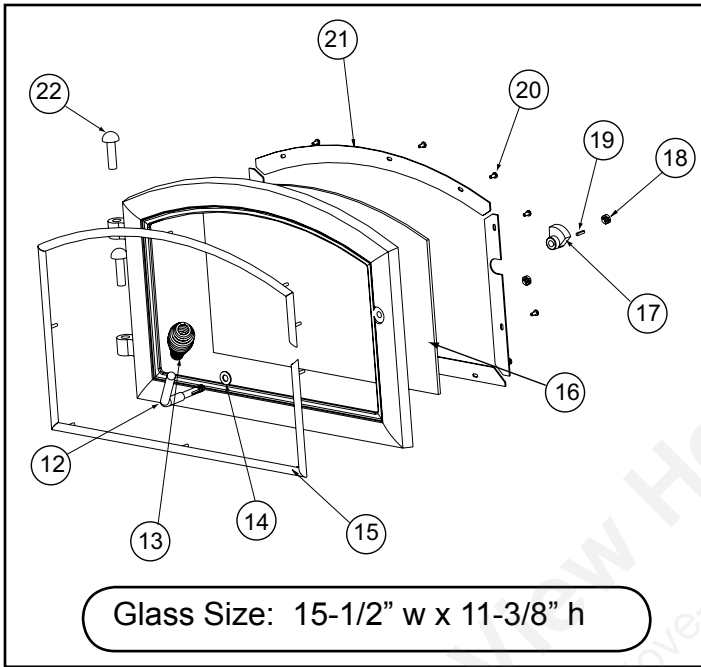


| Item | Description              | Item | Description                          |
|------|--------------------------|------|--------------------------------------|
| 1    | Trim Ring, Louver        | 7    | Screen, Left/Right (interchangeable) |
| 2    | Manifold Tubes, Back (3) | 8    | Speed Control                        |
| 3    | Manifold Tube, Front (1) | 9    | Baffle, Fiberboard                   |
| 4    | Spring Handle, 1/4" (2)  | 10   | Blanket, Ceramic                     |
| 5    | Blower Assembly          | 11   | Brick, Set                           |
| 6    | Louver Assembly          |      |                                      |

**SERVICE PARTS**

| Item # | Part Description<br>Alphabetical Order   | SKU           |
|--------|--|---------------|
| 9      | Baffle, Fiberboard   | 831-1800      |
| 10     | Blanket, Ceramic, 1 inch thick   | 832-3401      |
|        | Blower Assembly, with Wire Harness   | 831-1101      |
|        | Blower Cord with Speed Control & Wire Harness  | 832-1400      |
| 5      | Blower Assembly  | 831-1101      |
|        | Blower Replacement (1)   | 832-3190      |
| 11     | Brick Set  | 831-1830      |
|        | Brick with Hole  | SRV436-0380   |
|        | Brick, Single, Uncut   | 832-0550      |
|        | Brick, Uncut, Set of 6   | 832-3040      |
|        | Component Pack (Includes Owner's Manual, Touch-Up Paint, Leveling Bolts, EPA & Sales Efficiency Card, Warranty Card, Consumer View Card, Permanent Label ( If Fireplace Altered")) | 436-5300      |
| 17     | Cam Latch (Door Handle)  | 430-1141      |
|        | Door Assembly, Black   | 832-1092      |
|        | Door Assembly, Gold Trim   | 832-1912      |
|        | Door Assembly, Nickel Trim   | DR-31/43NL    |
| 10     | Door Handle  | 430-1131      |
|        | Door Handle Assembly   | 832-0540      |
|        | Gasket (Rope), Door 3/4" x 84"   | 832-1680      |
|        | Gasket (Tape), Glass   | 832-0460      |
| 16     | Glass Assembly   | 7000-012      |
| 21     | Glass Frame, Set   | 832-0350      |
| 22     | Hinge Pins, Gold (2)   | 832-0250      |
| 22     | Hinge Pins, Nickel (2)   | 430-5320      |
| 19     | Key, Cam Latch (Door Handle)   | 430-1151      |
|        | Leveling Bolts   | 220-0080      |
|        | Manifold Clip with Screws (4)  | 832-0661      |
| 2 & 3  | Manifold Tubes, Set (4)  | 831-1810      |
| 18     | Nut, Locking (Door Handle)   | 226-0100      |
|        | Rivnut Repair Kit  | REPAIR-RIVNUT |
| 6      | Screen Assembly, Louver, Gold  | 831-0870      |
| 6      | Screen Assembly, Louver, Nickel  | LVR-31-NL     |
| 7      | Screen Assembly, Black   | 831-0920      |
| 20     | Screws, Glass Frame (10)   | 832-0860      |
| 8      | Speed Control Only   | 842-0370      |
| 4      | Spring Handle, Air Control, 1/4", Gold (2)   | 832-0630      |
| 4      | Spring Handle, Air Control, 1/4, Nickel  | 250-8340      |
| 13     | Spring Handle, Door, 1/2", Gold  | 832-0620      |
| 13     | Spring Handle, Door, 1/2", Nickel  | 250-8330      |
| 15     | Trim Ring for Door, Gold   | 430-2682      |
| 15     | Trim Ring for Door, Nickel   | 430-5340      |

| Item # | Part Description<br>Alphabetical Order  | SKU      |
|--------|---|----------|
| 1      | Trim Ring for Louver, Gold              | 430-2691 |
| 1      | Trim Ring for Louver, Nickel            | 430-5430 |
|        | Upgrade Kit to Nickel, Door             | UK-DRNL  |
| 14     | Washer, Spacing SAE 3/8 for Door Handle | 220-0010 |



| Item | Description                                    | Part No.                           |
|------|--|------------------------------------|
| 12   | Door Handle                                    | 430-1131                           |
| 13   | Spring Handle, 1/2 inch                        | Gold: 832-0620<br>Nickel: 250-8330 |
| 14   | Washer, Spacing SAE 3/8 for Door Handle        | 222-0010                           |
| 15   | Trim Ring for Door (Trim Door Assemblies only) | Gold: 430-2682<br>Nickel: 430-5340 |
| 16   | Glass Assembly                                 | 7000-012                           |
| 17   | Cam Latch                                      | 430-1141                           |
| 18   | Nut, Locking                                   | 226-0100                           |
| 19   | Key, Cam Latch                                 | 430-1151                           |
| 20   | Screws, Glass Frame (10)                       | 832-0860                           |
| 21   | Glass Frame, Set                               | 832-0350                           |
| 22   | Hinge Pins                                     | Gold: 832-0250<br>Nickel: 430-5320 |

**ACCESSORIES**

| Part Description<br>Alphabetical Order                         | SKU        |
|--|------------|
| Mantel Deflector, 8"   | 831-1880   |
| Offset Adapter   | 831-0182   |
| Panel Set, Large, Gold, 34-1/2"h x 50-1/2"w                    | 831-0862   |
| Panel Set, Std., Nickel, 30-7/16"h x 44-5/8"w                  | SP-31S-NL  |
| Panel Set, Large, Nickel, 34-1/2"h x 50-1/2"w                  | SP-31S-NL  |
| Zero Clearance Adjustable Trim Support, 9" x 45", 2"-10" high  | 841-0990   |
| Zero Clearance Adjustable Trim Support, 12" x 50", 2"-10" high | ADJSPST-12 |





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**Homeowner's Notes**

Mountain View Hearth Products  
manuals.stove-parts-unlimited.com

**Warranty Policy**

**Hearth & Home Technologies LIMITED WARRANTY**

Hearth & Home Technologies (“HHT”) and its respective brands extends the following warranty for HHT gas, wood, pellet and electric appliances purchased from an authorized HHT dealer and installed in the United States of America or Canada. Warranty starts with date of purchase by the original owner (End User) except as noted for replacement parts.

| Warranty Period                              |         | HHT Manufactured Appliances and Venting |      |        |          |          |         | Components Covered  |
|--|---------|---|------|--------|----------|----------|---------|---|
| Parts  | Labor   | Gas                                     | Wood | Pellet | EPA Wood | Electric | Venting |   |
| 1 Year                                       |         | X                                       | X    | X      | X        | X        | X       | All Parts and Material Except as covered by Conditions, Exclusion, and Limitations listed |
| 2 years                                      |         |   |      | X      | X        |          |         | Igniters, Electronic Components, and Glass  |
|  |         | X                                       | X    | X      | X        |          |         | Blowers   |
|  |         |   | X    |        |          |          |         | Molded Refractory Panels  |
| 3 years                                      |         |   |      | X      |          |          |         | Firepots  |
| 5 years                                      | 3 years |   |      | X      | X        |          |         | Castings & Baffles  |
| 7 years                                      | 3 years |   | X    | X      | X        |          |         | Firebox, HHT Chimney, Termination & Heat Exchanger  |
| 10 years                                     | 1 year  | X                                       |      |        |          |          |         | Burners, Logs & Refractory  |
| Limited Lifetime                             | 1 year  | X                                       |      |        |          |          |         | Firebox & Heat Exchanger  |
| 90 Days                                      |         | X                                       | X    | X      | X        | X        | X       | All Replacement Parts   |
| See Conditions, Exclusions, and limitations. |         |   |      |        |          |          | 9-01-08 |   |

**CONDITIONS, EXCLUSIONS & LIMITATION OF LIABILITY**

- This warranty applies to the original owner and is transferable up to two years from date of purchase to the new homeowner, provided the purchase was made through an authorized dealer or distributor of HHT, and the appliance remains in its original place of installation.
- The maximum amount recoverable under this warranty is limited to the purchase price of the product.
- In no event shall HHT be liable for any incidental or consequential damages caused by defects in the product.
- Adjustments, regular maintenance, cleaning and temporary repairs, or the failure to duplicate the problem in the home is not covered under this warranty.
- This limited warranty does not extend to or include surface finish on the appliance or terminations, door gasketing, glass gasketing, glass discoloration, firebrick, pellet logs, kaowool or other ceramic insulating materials. Rust and/or corrosion on any of the metal surfaces, cast iron components, baffles, firepots, doors, or firebox area are not covered by this warranty.
- Noise resulting from minor expansion, contraction, or movement of certain parts is normal and complaints related to this noise are not covered by this warranty.

4021-645A 09-01-08

**Hearth & Home Technologies LIMITED WARRANTY (Cont'd)**

- HHT's obligation under this warranty does not extend to damages resulting from: (1) installation, operation or maintenance of the appliance not in accordance with the installation instructions; operating instructions and the listing agent identification label furnished with the appliance; (2) installation which does not comply with local building codes; (3) shipping, improper handling, improper operation, abuse, misuse, accident or unworkmanlike repairs; (4) environmental conditions, inadequate ventilation or drafting caused by tight sealing construction of the structure or handling devices such as exhaust fans or forced air furnaces or other such causes; (5) use of fuels other than those specified in the operating instructions; (6) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; and/or (7) modification of the appliance not expressly authorized and approved by HHT in writing.
- This warranty does not apply to non-HHT venting components, hearth components or other accessories used in conjunction with the installation of this product.
- This warranty is void if the appliance has been over-fired or operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals the appliance is subject to prolonged periods of dampness or condensation, or 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.
- HHT's liability under this warranty is limited to the replacement and repair of defective components or workmanship during the applicable period. HHT may fully discharge all of its obligations under such warranties by repairing the defective component(s) at HHT's discretion. Shipping costs are not covered under this warranty.
- Some states do not allow exclusions or limitation of incidental or consequential damages, so those 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 WARRANTY SPECIFIED ABOVE.

*This Limited Warranty is effective on all HHT appliances sold after September 01, 2008 and supersedes any and all warranties currently in existence.*

If warranty service is needed, you should contact your installing dealer. If the installing dealer is unable to provide necessary parts or components, contact the nearest authorized HHT dealer or supplier.

# 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](http://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.



## Your Records for Model: 3100-I ACT Wood Insert

|                 | DEALERSHIP        | WHERE | PURCHASED: |
|-----------------|-------------------|-------|------------|
| SERIAL NUMBER:  | _____             | _____ | _____      |
| DATE PURCHASED: | _____             | _____ | _____      |
| DATE INSTALLED: | _____             | _____ | _____      |
|                 | DEALER TELEPHONE: | _____ | _____      |

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, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408; or other U.S. and foreign patents pending.

