

# HARMAN™

BUILT TO A STANDARD, NOT A PRICE

## Owner's Manual Installation and Operation

**Model:**  
**P35i**  
**Pellet/Biomass**  
**Fireplace Insert**  
**#1-70-774195**  
**#1-70-774235**



### NOTICE

#### DO NOT DISCARD THIS MANUAL



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

**Do Not  
Discard**



#### WARNING



**Please read this entire manual before installation and use of this fireplace insert room heater. Failure to follow these instructions could result in property damage, bodily injury or even 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 any external part starts to glow, you are overfiring. Reduce feed rate. Overfiring will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause a house fire.



#### WARNING



#### HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down.

#### Hot, will cause burns.

- Do not touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures.

#### High temperatures may ignite clothing or other flammable materials.

- Keep clothing, furniture, draperies and other flammable materials away.

#### CAUTION

Tested and approved for use with wood pellets and a mixture of shelled field corn and wood pellets only. Burning any other type of fuel will void your warranty.

#### CAUTION

Check building codes prior to installation.

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

Hearth & Home Technologies welcomes you to our tradition of excellence! By choosing a Harman appliance, you have become part of a long standing family committed to meeting the heating needs of consumers with the most distinctive, powerful and responsible home heating products available.

The P35i insert has brilliant features in an elegant package, giving you 0 to 35,000 BTU when you need it, automatically. Aside from the regular, simple cleaning process, you need only set your desired room temperature, keep the hopper full, and the ash pan empty. With the P35i, you will notice even heat throughout your zone and a level of convenience you never thought possible. The P35i takes advantage of Harman's 30+ years of stove design, technology and manufacturing. Output is managed by a microprocessor that senses the room temperature and the fire temperature with two thermistor probes and then determines the best feed rate for your heating demand. The platinum combination is Harman's Patented Pellet Pro<sup>TM</sup> Feeder system, and ESP Control which have been developed to their highest state. These features work together to allow amazing heat output with little regard for fuel quality.

We wish you and your family many years of enjoyment in the warmth and comfort of your hearth appliance.

Thank you for choosing Harman Home Heating.

**Harman**, A division of  
Hearth & Home Technologies, Inc.  
352 Mountain House Road  
Halifax, PA 17032  
www.harmanstoves.com

**When This Room Heater Is Not Properly Installed, a House Fire May Result. To Reduce The Risk Of Fire, Follow The Installation Instructions. Contact Local Building Or Fire Officials About Restrictions And Installation Inspection Requirements In Your Area.**

**This label is located on the inside of the hopper lid.  
Please record your serial number for future reference.**

Tested & Listed by **UL** UL Solutions  
OMNI-Test Laboratories, Inc.

Portland Oregon USA

Tested to Tests: ASTM E1509-04, UL C5629-93 and UL C1482-M1990

This pellet burning appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-900 through 814-23-909

**\*Prevent House Fires\***  
Install and use only in accordance with the manufacturer's installation and operation instructions. Contact local building or fire officials about restrictions and inspection in your area.

**WARNING: FOR MANUFACTURED HOMES:** Do not install appliance in a sleeping room. An outside combustion air inlet must be provided.

The structural integrity of the manufactured home floor, ceiling and walls must be maintained. Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a combustible wall or ceiling.

Inspect and clean exhaust venting system frequently in accordance with manufacturer's instructions. Use a 3/4" or 4" diameter type "I" or "PI" venting system, or if stainless steel flex as per manual.

Do not connect this unit to a chimney flue servicing another appliance.

**FOR USE WITH WOOD PELLET FUEL OR UP TO A 50% CORN AND PELLET MIXTURE ONLY.**  
Input Rating Max: 4.1 lb./hour.  
US Electrical Rating: 115 VAC, 60 Hz, Start 3.6 AMPS, Run 1.5 AMPS

**DANGER:** Risk of electrical shock. Disconnect power supply before servicing.

For further instruction refer to owner's manual.

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

Keep viewing and ash removal doors tightly closed during operation.

**DANGER:** Risque d'électrocution. Débrancher l'appareil avant toute intervention.

Pour une information plus complète, se reporter à la notice d'utilisation.

Ne remplacer la vitre qu'avec une vitre céramique 5 mm de même qualité disponible auprès de votre revendeur.

Tenir la porte frontale et le couvercle de la bûche hermétiquement clos durant le fonctionnement de l'appareil.

Serial No./N° de série: **008**

Model/Modèle: **P35I PELLET INSERT**  
Appareil de chauffage à granulés de bois

Room Heater, Pellet Fuel Burning Type.  
Also For Use In Mobile Homes.  
**DO NOT REMOVE THIS LABEL / NE PAS ENLEVER CETTE ÉTIQUETTE**

**MINIMUM CLEARANCES TO COMBUSTIBLE MATERIAL**  
**ÉCARTS MINIMUM DE SÉCURITÉ**

Location	Inches	Millimeters
A Insert to combustible sidewall	13	330
B Surround top to face trim	0	0
C Surround side to face trim	1	25.4
D Insert top to (max) 12" floor joist	12	304.8

Non-combustible floor protection: La protection de sol doit être en matériau incombustible

Location	Inches	Millimeters
A Non-combustible floor protection - USA	0	152
B Non-combustible floor protection - CAN	18	450
C Non-combustible floor protection - USA	0	152
D Non-combustible floor protection - CAN	0	200

**CAUTION: HOT WHILE IN OPERATION. KEEP CHILDREN AND CLOTHING AWAY. CONTACT MAY CAUSE SKIN BURNS. SEE NAMEPLATE AND INSTRUCTIONS. KEEP FURNISHINGS AND OTHER COMBUSTIBLE MATERIALS A CONSIDERABLE DISTANCE AWAY FROM THIS APPLIANCE. KEEP HOPPER LID CLOSED DURING OPERATION. FAILURE TO DO SO MAY RESULT IN EMISSION OF PRODUCTS OF COMBUSTION FROM THE HOPPER UNDER CERTAIN CONDITIONS. MAINTAIN HOPPER SEAL IN GOOD CONDITION. DO NOT OVERFILL THE HOPPER.**

**DANGER: CHAUD - NE PAS TOUCHER. TENIR LES ENFANTS ET LES VÊTEMENTS À L'ÉCART. RISQUE DE BRÛLURE. VOIR INSTRUCTIONS SUR LA PLAQUE. LAISSER UNE DISTANCE SUFFISANTE ENTRE L'APPAREIL ET LES MEUBLES OU AUTRES OBJETS À RISQUE. N'UTILISER CET APPAREIL QUE LORSQUE LE COUVERCLE DE LA TREMIE EST BIEN FERMÉ-IGNORER CETTE CONSIGNE PEUT ENTRAÎNER DES ÉMANATIONS DE PRODUITS ISSUS DE LA COMBUSTION À TRAVERS LA TREMIE DANS CERTAINES CONDITIONS - VEILLER AU BON ÉTAT DU JOINT DE LA TREMIE - NE PAS EXCÉDER LA CAPACITÉ DE LA TREMIE.**

**PREVENTION DES INCENDIES**  
Respecter les consignes de fonctionnement. Respecter les recommandations de sécurité en vigueur dans votre région.

Éviter l'installation pour MOBILE HOMES: Ne pas installer dans une chambre. Il est impératif de prévoir une prise d'air extérieur. L'intégrité structurelle du plancher, du plafond et des murs doit être soigneusement préservée.

Se reporter aux instructions du fabricant et aux réglementations locales concernant les précautions requises lors de la traversée d'un mur ou d'un plafond.

Consulter et nettoyer fréquemment tout le système d'évacuation des fumées conformément aux recommandations du constructeur.

Réaliser l'évacuation des fumées en utilisant des conduits « Spécial granulés » de Ø 125 mm ou de la gaine flexible inox double pose: Ø 125 mm à l'aide d'un adaptateur adéquat comme indiqué dans la notice d'utilisation.

Ne pas raccorder ce poêle à un conduit de cheminée déjà utilisé pour un autre appareil.

**FONCTIONNER EXCLUSIVEMENT AVEC DES GRANULES DE BOIS.**  
Consommation maximum: 2,27 kg/h

Caractéristiques électriques:  
115 VAC, 60 Hz - Intensité au démarrage 3,6 A  
Intensité fonctionnement normal 1,5 A  
Tenir le cordon d'alimentation à l'écart du poêle.

US Environmental Protection Agency  
This model is exempt from EPA Certification under 40 CFR 60.531 by definition (wood heater)(A) « Air-to-Fuel Ratio »

Agence Américaine pour la Protection de l'Environnement  
Ce modèle est dispensé par EPA certification d'après 40 CFR 60.531 par définition (Appareil à bois (A) « Ratio air/combustible »)

Date of Manufacture/Date de fabrication:  
2010 2011 2012 JAN FEB MAR APR MAY JUN JUL AUG SEPT OCT NOV DEC

Manufactured by/Fabriqué par:  
**HARMAN**<sup>TM</sup>  
HOME HEATING  
352 Mountain House Road Halifax PA 17032

**KEEP HOPPER LID CLOSED DURING OPERATION.**  
**DO NOT OPEN THE SPACE BENEATH THE HEATER.**

### Safety Alert Key:

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided could result in minor or moderate injury.
- **NOTICE:** Indicates practices which may cause damage to the appliance or to property.

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# 1 Listing and Code Approvals

## A. Appliance Certification

Model: P35i Insert  
 Laboratory: OMNI-Test Laboratories, Inc.  
 Report No. 135-S-25-6.2  
 Type: Solid Fuel Room Heater / Fireplace Insert.  
 Standard(s): ASTM E1509-04, ULC S628-93 and ULC/ORD C1482-M1990

**This appliance is also approved for installation in a shop.**

## B. Mobile Home Approved

This appliance is approved for Installation in mobile/ manufactured homes. 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, and must never be installed in a room designated for sleeping. The unit must have provisions for an outside air source when installed in a mobile home.

## C. Glass Specifications

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

## D. Electrical Rating

115 VAC, 60 Hz,  
 3.6 Amps (Start-up); avg. 1.5 Amps (Normal Run)

## E. BTU & Efficiency Specifications

Particulate Emissions Rating:	Exempt from EPA per 40 CFR, Method 28A
*BTU Input:	0 or 6,000 - 35,000 / hr
Heating Capacity:	1,500 sq. ft.
Hopper Capacity- #1-70-774195 (19½ ")	41 lbs.
Hopper Capacity- #1-70-774235 (23½ ")	62 lbs.
Fuel:	Wood pellets / Corn†
Shipping Weight:	289 lbs.

\* BTU input will vary, depending on the type of fuel you use in your stove. Moisture and ash content can affect performance.  
 † Corn is approved for burning only when mixed with wood pellets.

# 2

## Special Warnings and Notes

Carbon monoxide, referred to as CO, is a colorless, odorless gas that is produced during combustion of solid fuels. **CO is toxic and can be fatal.**

Even though this stove is designed to be as safe as possible, it is recommended that you **install a CO detector**. This is true for oil, gas, or wood burning products as well.

CO is not specifically heavier or lighter than air. Therefore, it is best to install the detector at table top level rather than on the ceiling like a smoke detector.

CO detectors are very sensitive and may sound an alarm for fumes other than CO or CO from sources other than the stove such as a car or lawn mower exhaust.

### **If the alarm sounds**

1. Increase house ventilation by opening windows or doors.
2. Make sure the stove doors and hopper lid are closed and latched.
3. Check stove for electrical power and normal operation.
4. Check vent for possible blockage or down-draft.
5. Check for false alarm.

Never 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.

### **SPECIAL NOTE:**

**DUE TO ASH BUILDUP, IT IS STRONGLY RECOMMENDED TO HAVE YOUR STOVE PROFESSIONALLY CLEANED AND SERVICED ANNUALLY. THIS INCLUDES ALL PARTS OF THE STOVE, AND THE VENTING SYSTEM.**

### **NEVER CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

**Installation and repair of this stove should be done by a competent and qualified professional. We recommend that the stove be inspected before use and at least annually by a qualified service person. Periodic cleaning is required throughout the heating season and at the end of each winter for the stove to work efficiently.**

### **DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.**



# 3 Getting Started

## A. Design, Installation & Location Considerations

### 1. Appliance Location

Consideration must be given to safety, convenience, traffic flow, and the fact that the appliance will need to be vented to the outside. **This appliance may only be installed into an existing masonry or manufactured wood-burning fireplace or using the optional zero-clearance cabinet to build into a newly constructed chase.** It is a good idea to plan your installation on paper. Use exact measurements for clearances and floor protection, before actually beginning the installation.


Maintain specified vent clearance to combustible requirements listed by the vent manufacturers instructions and all appliance clearances as listed in this manual.

Check with your local building code agency before you begin your installation. Local codes may supersede the test laboratories specifications. Always obtain any required permit(s) so that insurance protection benefits cannot be unexpectedly cancelled. If any assistance is required during installation, please contact your dealer.

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

### 2. Room Sensor Location

The room sensor's location will have some effect on the appliance's operation. When the sensor is located close to the appliance, it may require a higher setting to keep the rest of the house comfortable. If the sensor is located in an adjacent room, or farther away from the stove, you will notice higher temperatures near the appliance.




 <b>CAUTION</b>
<ul style="list-style-type: none"> <li>• Do NOT connect this unit to a chimney flue servicing another appliance.</li> <li>• Do NOT connect to any forced air distribution duct or system.</li> </ul>

## B. Fire Safety

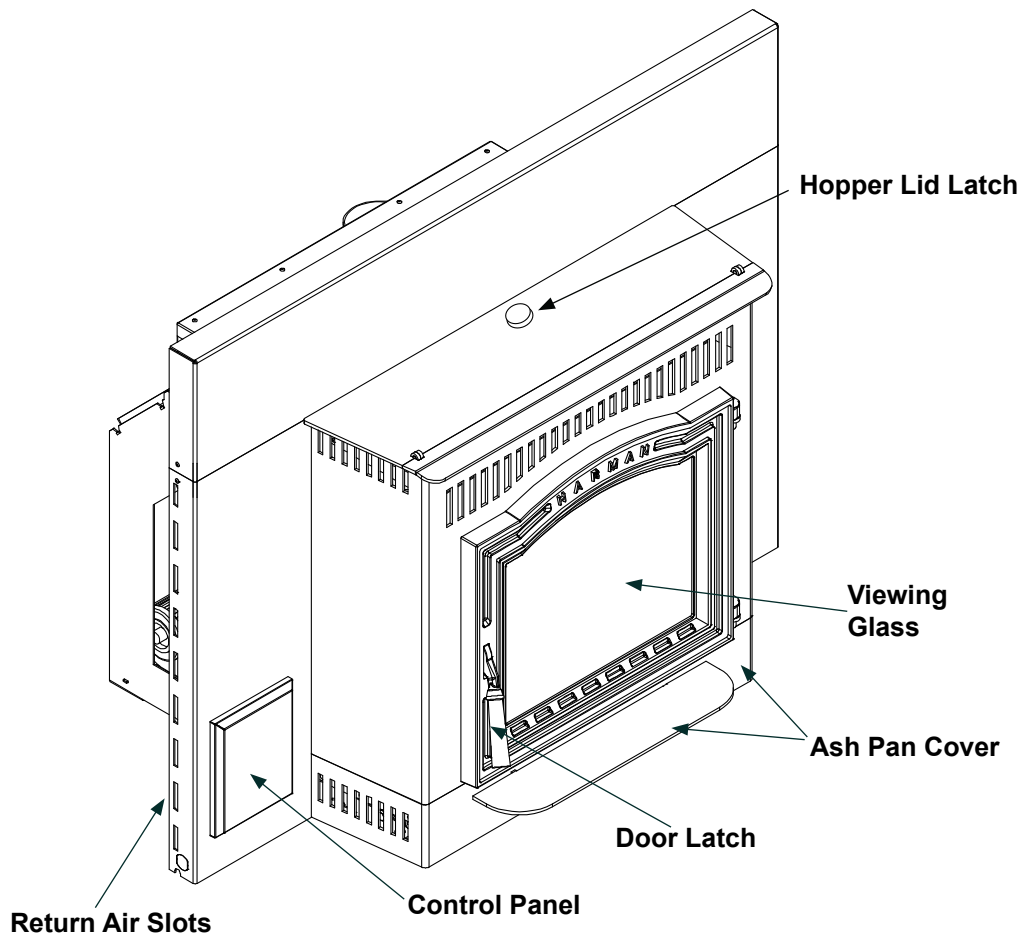
Maintain the designated clearances to combustibles. Insulation must not touch the chimney. You must maintain the designated air space around the chimney. This space around a chimney is necessary to allow natural heat removal from the area. Insulation in this space will cause a heat buildup, which may ignite wood framing. **NOTE: Clearances may only be reduced by means approved by the regulatory authority having jurisdiction.**

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

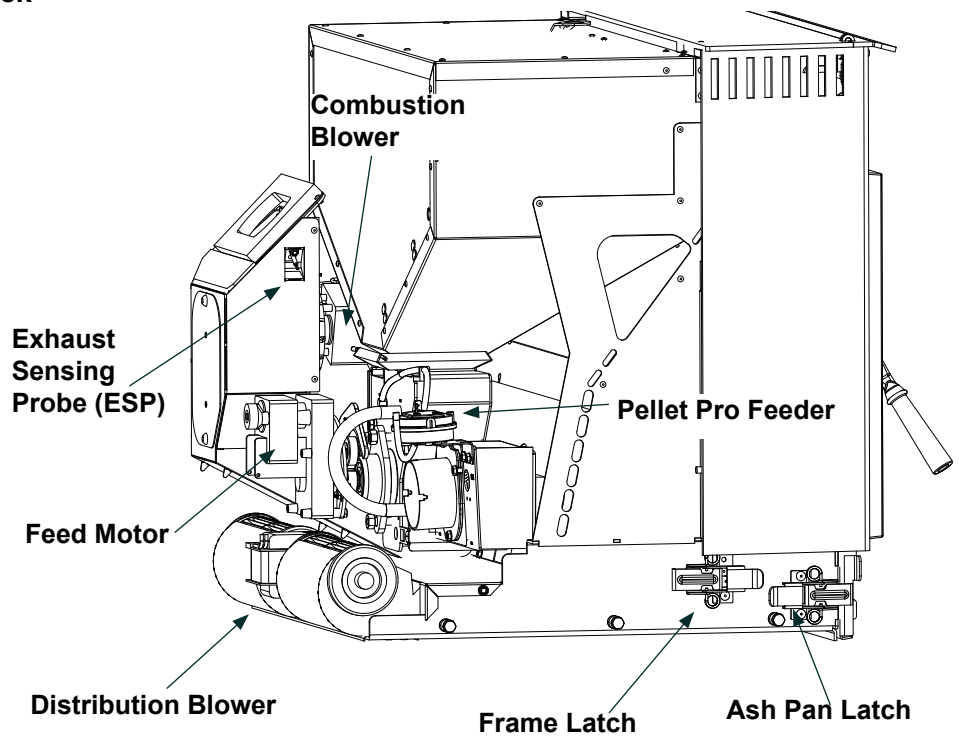
1. Install at least one smoke detector on each floor of your home. Detectors should be located away from the heating appliance and close to sleeping areas. Follow the smoke detector manufacturer's placement and installation instructions, and be sure to maintain regularly.
2. A conveniently located Class A fire extinguisher to contend with small fires resulting from burning embers.
3. A practiced evacuation plan, consisting of at least two escape routes.
4. A plan to deal with a hopper fire as follows:  
In the event of a hopper fire:
  - a. Turn appliance to "OFF".
  - b. **Be sure hopper lid is closed and latched.**
  - c. Notify Fire Department.
  - d. Do NOT pour water in the hopper.
  - e. **Never** pull the plug or otherwise disconnect the power supply to kill a fire.

 <b>WARNING</b>
<div style="display: flex; align-items: center;">  <div> <p>Fire Hazard</p> <ul style="list-style-type: none"> <li>• Do not operate appliance before reading and understanding the operating instructions.</li> <li>• Failure to operate properly may cause a house fire.</li> </ul> </div> </div>


## C. Component Locations





**Do Not allow finish materials to block the air flow through the return air slots.**



## D. Pre- Use Check List

1.	Place the appliance in a location near the final installation and follow the procedures below:
2.	Open the appliance and remove all articles packed inside. Inspect all items for shipping damage. Notify dealer of any missing or damaged goods.
3.	All safety warnings have been read and followed precisely.
4.	This Owner's Manual has been read in it's entirety.
5.	Floor protection requirements have been read and followed.
6.	The flue connector has been installed in accordance with the instructions herein.
7.	The proper clearances from the appliance and chimney connector to combustibles have been met.
8.	The masonry chimney has been cleaned and inspected by a professional, or the factory built metal chimney is installed according to the manufacturers instructions.
9.	The chimney meets the minimum height requirements.
10.	All labels and hang tags have been removed from the glass.
11.	All plated surfaces have been wiped clean, if applicable.
12.	The room sensor and any additional cable has been installed properly.
13.	A properly grounded electrical receptacle is available within reach of the unit's power cord.
14.	A good quality surge protector is highly recommended to protect the electronics.

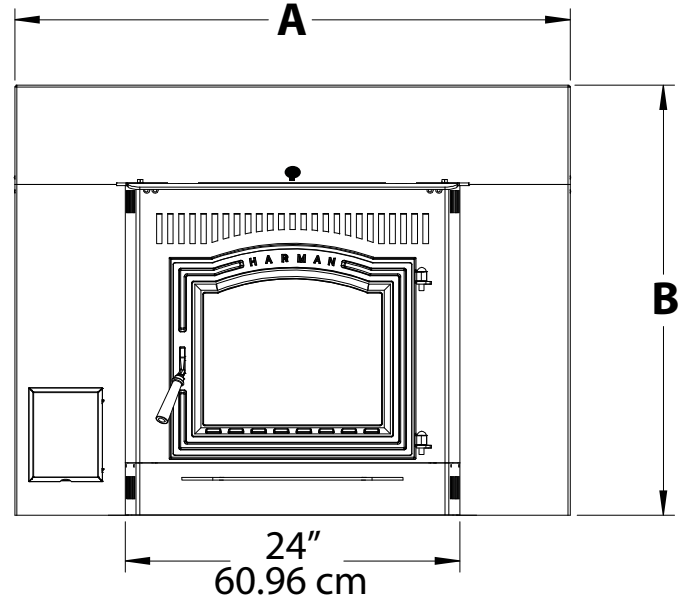
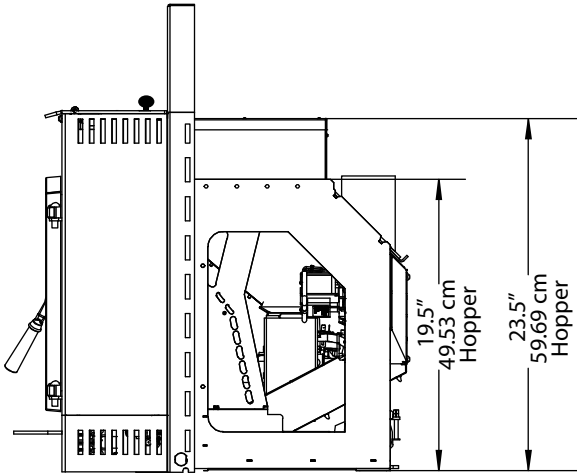
	<b>WARNING</b>
	<p>Inspect appliance and components for damage. Damaged parts may impair safe operation.</p> <ul style="list-style-type: none"> <li>• Do NOT install damaged components.</li> <li>• Do NOT install incomplete components.</li> <li>• Do NOT install substitute components.</li> </ul> <p>Report damaged parts to dealer.</p>

	<b>WARNING</b>
	<p><b>Fire Risk.</b></p> <p>Hearth &amp; Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:</p> <ul style="list-style-type: none"> <li>• Installation and use of any damaged appliance.</li> <li>• Modification of the appliance.</li> <li>• Installation other than as instructed by Hearth &amp; Home Technologies.</li> <li>• Installation of substitute materials or replacement parts not approved by Hearth &amp; Home Technologies</li> <li>• Operating appliance without fully assembling all components.</li> <li>• Do NOT Overfire.</li> </ul> <p><b>Or any such action that may cause a fire hazard.</b></p>



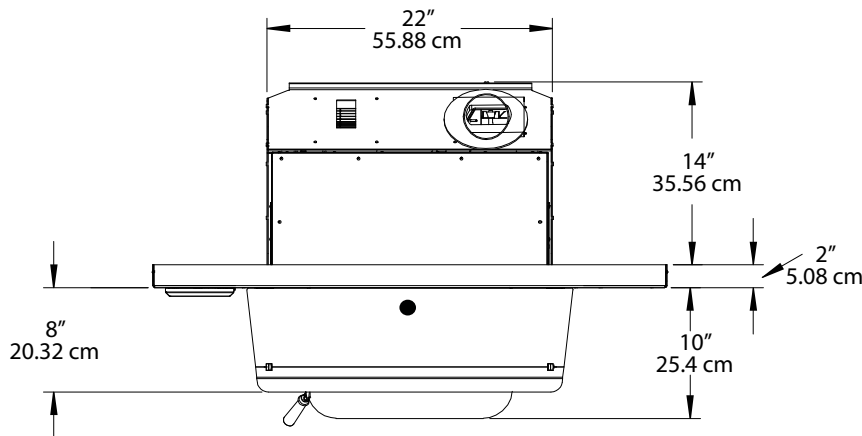
# 4 Dimensions & Clearances

## A. Appliance Dimensions



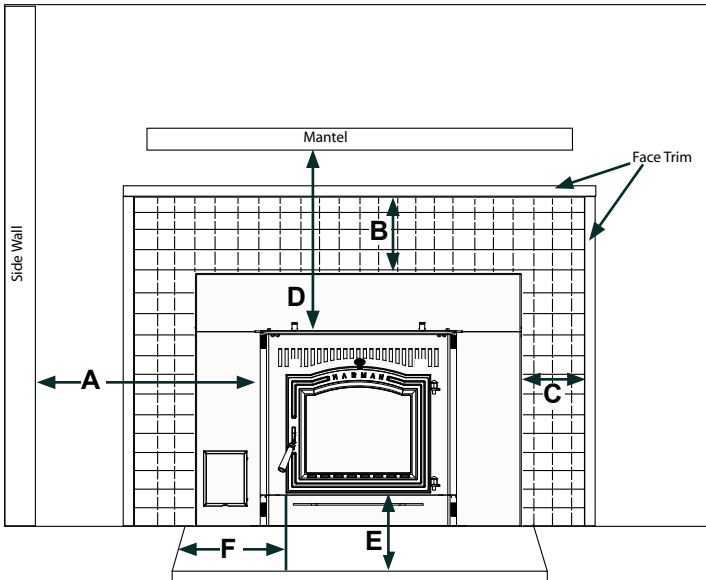
**Standard Surround**    **Oversize Surround**  
**# 1-00-774221**        **# 1-00-774250**

**A:**    **40" (101.6 cm)**        **46" (116.8 cm)**  
**B:**    **31" (78.74 cm)**         **34" (86.36 cm)**



## B. Clearances To Combustibles - Masonry or Manufactured Fireplace

**THE CLEARANCES SPECIFIED ARE FOR YOUR SAFETY! THESE CLEARANCES MAY ONLY BE REDUCED BY MEANS APPROVED BY THE REGULATORY AUTHORITY.**



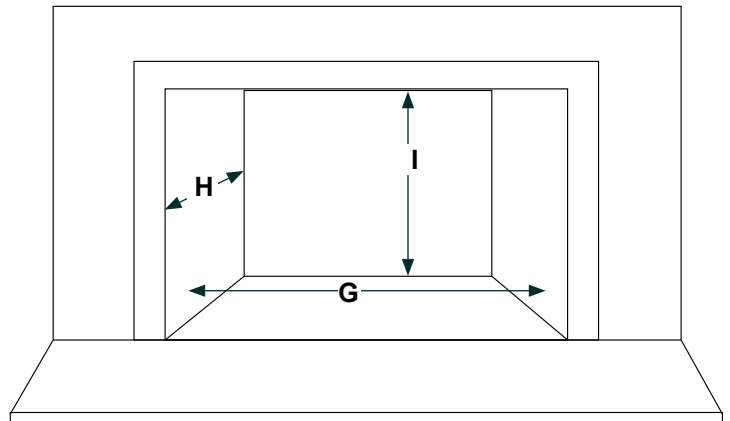
	Location	Inches	Millimeters
<b>A</b>	Insert to combustable sidewall	13	330
<b>B</b>	Surround top to face trim	0	0
<b>C</b>	Surround side to face trim	1	25.4
<b>D</b>	Insert top to (max) 12" mantel	12	305

## C. Floor Protection Requirements

	Location	Inches	Millimeters
<b>E</b>	Window opening to front	6	152
<b>F</b>	Window opening to side	6	152

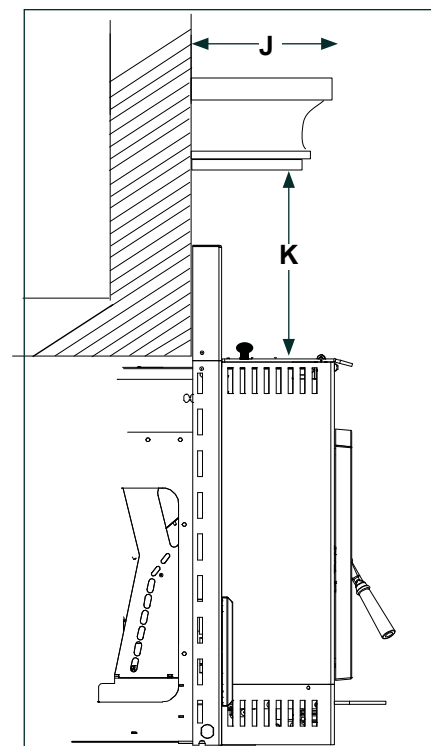
Hearth extension must be of a non-combustible material. It must extend beyond the appliance according to the measurements listed.  
Minimum Size Hearth Extension is 16" Deep By 32" Wide.

## D. Minimum Opening for Masonry and Manufactured Fireplaces



	Location	Inches	Millimeters
<b>G</b>	Minimum Width	24	609
<b>H</b>	Minimum Depth	14.5	368
<b>I</b>	Minimum Height #1-70-774235	23½	597
<b>I</b>	Minimum Height #1-70-774195	19½	495

## E. Mantel Projections



The Maximum mantel depth (J) is 12 inches (305 mm) with a minimum vertical height (K) of 12 inches (305 mm).

## F. Factory-Built Fireplace Installation

When installing the P35i Insert into a factory built wood burning fireplace, several things need to be taken into consideration.

The size of the fireplace opening. Will the unit fit into the opening? Some of the factory built fireplaces have metal smoke shields inside the top that can be removed to gain height. Keep in mind that anything removed from the factory built fireplace must be attached to the fireplace with a metal wire. Floor protection guidelines, as listed previously, must also be followed.

The manufactured fireplace may not be altered beyond the exceptions listed below. Never remove masonry bricks or mortar from an existing fireplace.

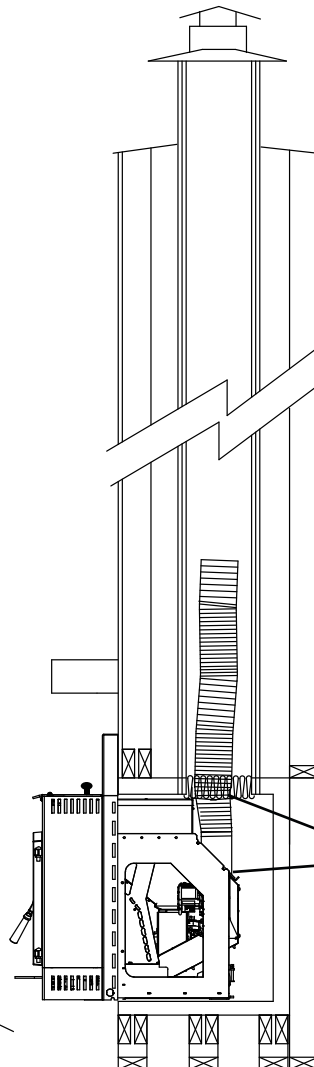
The following modifications are permissible:

- Removal of the damper or lock in open position
- Removal of smoke shelf or baffle
- Removal of andirons or ember catchers
- Removal of log grate
- Removal of view screen or curtain
- Removal of doors
- External trim pieces, that 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.
- If the hearth extension is lower than the fireplace opening, the portion of the insert extending onto the hearth must be supported.
- Final approval of this type of installation is contingent upon the authority having jurisdiction.

The factory built chimney must be listed per UL 127 (US) and meet type HT requirements of UL 103 (US). Factory Built fireplace chimneys tested to UL 127-98 may be, at the fireplace manufacturers option, tested to the same criteria as UL 103HT 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. Liner must meet high temperature (2100 F) per UL1777 (US). The liner must be securely attached to both the flue collar and the chimney cap. To prevent room air passage to the chimney cavity of the fireplace, seal the damper area around the chimney liner with fiberglass batting.

**IN CANADA:** This fireplace insert must be installed with a continuous chimney liner of a minimum 3" diameter extending from the 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.

Hearth must be constructed to the proper height and finished with a non-combustible material.



When using single-wall venting or flex, this section of venting must be wrapped with a non-combustible insulation to prevent excess temperatures within the fireplace and on the fuel hopper.

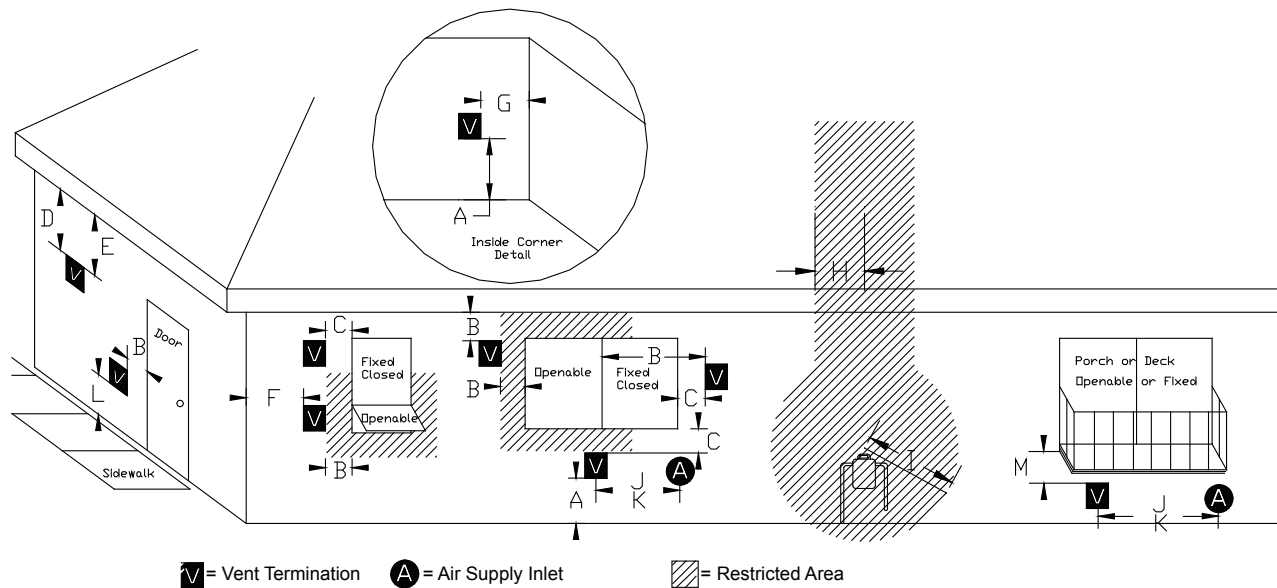
Note: If the Harman P35i Insert is installed into a factory built wood burning fireplace, this label (Harman part # 3-90-00675) **MUST** be attached to the altered fireplace.

**THIS FIREPLACE HAS BEEN ALTERED TO ACCOMODATE A FIREPLACE INSERT AND SHOULD BE INSPECTED BY A QUALIFIED PERSON PRIOR TO REUSE AS A CONVENTIONAL FIREPLACE.**

# 5 Vent Information

Chimney connector shall not pass through an attic or roof space, closet or similar concealed space, or a floor or ceiling.

## A. Vent Termination Requirements



**WARNING:** Venting terminals must not be recessed into a wall or siding.

**NOTE:** Only PL or L vent pipe wall pass-throughs and fire stops should be used when venting through combustible materials.

**NOTE:** Always take into consideration the affect the prevailing wind direction or other wind currents will cause with flyash and /or smoke when placing the termination.

**In addition, the following must be observed:**

A. The clearance above grade must be a minimum of 18".<sup>1</sup>

B. The clearance to a window or door that may be opened must be a minimum of 48" to the side and 48" below the window/door, and 12" above the window/door.<sup>1</sup>

**(with outside air installed, 18" to side and below)**

C. A 12" clearance to a permanently closed window is recommended to prevent condensation on the window.

D. The vertical clearance to a ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the center-line of the terminal must be a minimum of 18".

E. The clearance to an unventilated soffit must be a minimum of 12".

F. The clearance to an outside corner is 11" from center of pipe.

G. The clearance to an inside corner is 12".

H. A vent must not be installed within 3 feet (90 cm) above a gas meter/regulator assembly when measured from the horizontal center-line of the regulator.<sup>1</sup>

I. The clearance to service regulator vent outlet must be a minimum of 6 feet.<sup>1</sup>

J. The clearance to a non-mechanical air supply inlet to the building or the combustion air inlet to any other appliance must be a minimum of 48".<sup>1</sup>

K. The clearance to a mechanical air supply inlet must be a minimum of 10 feet.<sup>1</sup>

**(with outside air installed, 6 feet )**

L. The clearance above a paved sidewalk or a paved driveway located on public property must be a minimum of 7 feet.<sup>1,2</sup>

M. The clearance under a veranda, porch, deck or balcony must be a minimum of 12 inches.<sup>1,3</sup> **(B. also)**

**NOTE:** The clearance to vegetation and other exterior combustibles such as mulch is 36" as measured from the center of the outlet or cap. This 36" radius continues to grade or a minimum of 7 feet below the outlet.

<sup>1</sup>Certain Canadian and or Local codes or regulations may require different clearances.

<sup>2</sup>A vent shall not terminate directly above a side-walk or paved driveway which is located between two single family dwellings and serves both dwellings.

<sup>3</sup>Only permitted if veranda, porch, deck, or balcony is fully open on a minimum of 2 sides beneath the floor.

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

## B. Avoiding Smoke and Odors

### Negative Pressure, Shut-down, and Power Failure:

To reduce the probability of back-drafting or burn-back in the pellet burning appliance during power failure or shut-down conditions, the stove must be able to draft naturally without exhaust blower operation. Negative pressure in the house will resist this natural draft if not accounted for in the pellet appliance installation.

Heat rises in the house and leaks out at upper levels. This air must be replaced with cold air from outdoors, which flows into lower levels of the house. Vents and chimneys into basements and lower levels of the house can become the conduit for air supply, and reverse under these conditions.

### Outside Air:

**Harman Home Heating and Hearth & Home Technologies recommend attaching outside air in all installations, especially lower level and main floor locations.**

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

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

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

The outside air connection will supply the demands of the pellet appliance, but consideration must be given to the total house demand. House demand may consume some air needed for the stove, especially during a power failure. It may be necessary to add additional ventilation to the space in which the pellet appliance is located. Consult with your local HVAC professional to determine the ventilation demands for your house.

The outside air kit consists of a flue stub pipe, fiberglass gasket, silicone gasket, intake box and a section of flex pipe.

An adjustable chimney intake extension, part # 1-00-674104 is available to be used on masonry chimneys only.

To install outside air, use kit part number 1-00-774280. Follow the installation instructions provided with the kit.

### Vent Configurations:

To reduce probability of reverse drafting during shut-down conditions, Hearth & Home Technologies strongly recommends:

- Installing the pellet vent with a minimum vertical run of five feet, preferably terminating above the roof line.
- Installing the outside air intake at least four feet below the vent termination.

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

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

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

**Do not connect this unit to a chimney flue servicing another appliance.**

**NOTE:** The restriction of not venting more than one appliance to the same flue applies to the U.S. specifically. While it is not recommended that you use the same chimney for more than one appliance, in *Canada* certain exceptions may be made. Be sure to contact your building code inspection official to see if this option is allowed in your area, and to find out the specific requirements for such an installation.

**Do not connect this unit to any air distribution duct or system.**



## C. Venting Requirements and Restrictions

A combustion blower is used to extract the combustion gases from the firebox. This causes a negative pressure in the firebox and a positive pressure in the venting system. The longer the vent pipe and more elbows used in the system, the greater the flow resistance.

**The recommended maximum flue lengths for the P35i Insert are as follows:**

**3" or 4" Stainless Steel Flex:** 30 Lineal ft. Vertical\*

### **4" PL Vent Pipe:**

4" PL Vent Pipe: 30 Lineal ft. Vertical\*

4" PL Vent Pipe: 14 ft. Vertical w/1-90° and 12 lineal ft. horizontal\*

**If additional 4" PL Vent fittings are required, the overall length must be reduced by:**

Vertical 90° or T:	2.5'
Vertical 45°:	1.5'
Horizontal 90° or T:	5.0'
Horizontal 45°:	2.5'

### **3" PL Vent Pipe:**

20 Lineal ft. vertical\*

8 Lineal ft. vertical w/1-90° & 8 lineal ft. horizontal\*

**If additional 3" PL Vent fittings are required, the overall length must be reduced by:**

Vertical 90° or T:	2.0'
Vertical 45°:	1.0'
Horizontal 90° or T:	4.0'
Horizontal 45°:	2.0'

*\* Long runs of flex or PL vent pipe installed directly vertical from the flue stub may require more frequent cleaning due to fly ash falling off inside and collecting directly above the combustion blower outlet.*

*Any use of horizontal venting will require more frequent cleaning. It is the responsibility of the installer to make sure the entire flue configuration is accessible for cleaning.*

Stainless steel flex vent is only allowed for use in masonry fireplaces and chimneys or in factory built wood burning fireplace installations when used as a liner for a class A metal chimney. All pellet vent pipe must be secured together by means provided by pipe manufacturer. The vent pipe must be secured to the appliance flue collar with a minimum of three screws.

It is also recommended that you seal all vent pipe joints with high temperature silicone.

Use only the specified venting components. Use of any other components will void the product warranty and may pose a hazard.

**Do Not Install A Flue Damper In The Exhaust Venting System Of This Appliance.**

**DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

**NOTE: If burning a shelled corn and pellet mixture, you must use approved venting components that are specifically designed for corn burning.**

### ***WARNING! RISK OF FIRE!***

- Only LISTED type L or PL Pellet venting components may be used.
- NO OTHER type of venting materials or components may be used.
- Substitute or damaged vent components may impair safe operation.

### ***WARNING! RISK OF INJURY OR PROPERTY DAMAGE!***

- Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage.
- Read and Refer to your owner's manual.
- For assistance or additional information, consult a qualified installer, service agency or your dealer.

**IN CANADA: This fireplace insert must be installed with a continuous chimney liner of a minimum 3" diameter extending from the 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.**



## D. Existing Fireplace Installation:

If using a short run of venting, whether flex or rigid, through the damper and into the chimney flue; The Damper must be removed or locked in the open position and sealed with a plate constructed of steel or other non-combustible material.

Kaowool, mineral wool or other non-combustible insulation is recommended above the plate to reduce the possibility of condensation. You will also need to wrap the venting section between the insert frame and the damper sealing plate. This is to prevent overheating of the fireplace cavity, which may cause damage to the insert's motors and other electrical components. The connector pipe should extend through the sealing plate and smoke chamber and into, or beyond the first flue tile.

Be sure to design the venting so that it can be easily cleaned.

Check with your local authority having jurisdiction to determine if this venting method is acceptable. Some Provincial, State, or Local codes may require a full liner run to the top of the chimney. Be sure and check your local regulations before planning the installation. In this method, the proper flashing and rain cap are also required.



### WARNING

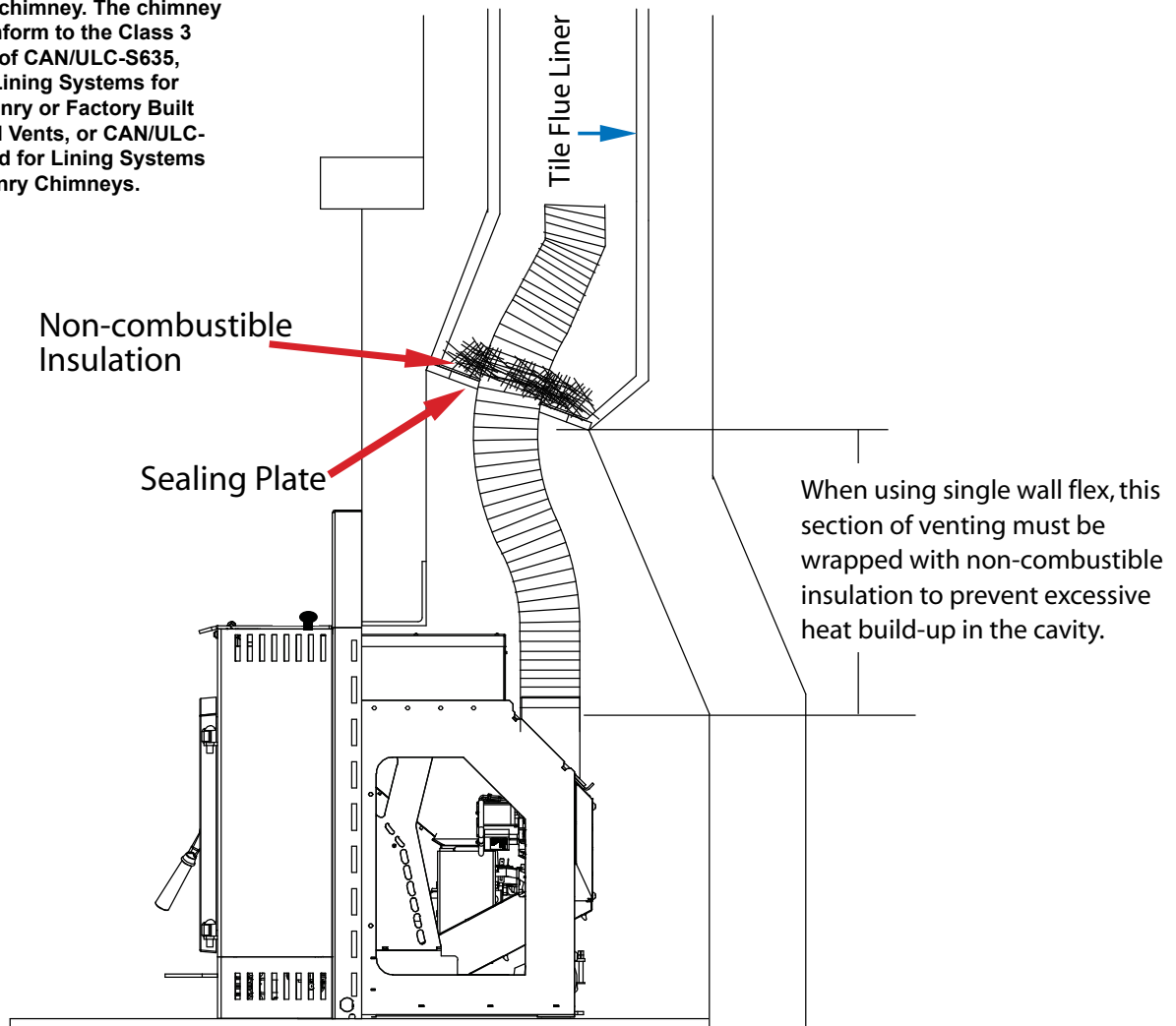


**Fire Risk.  
Inspect Chimney**

- Masonry chimney must be in good condition
- Meets minimum of NFPA 211 standard
- Factory-built chimney must meet requirements of UL103 HT

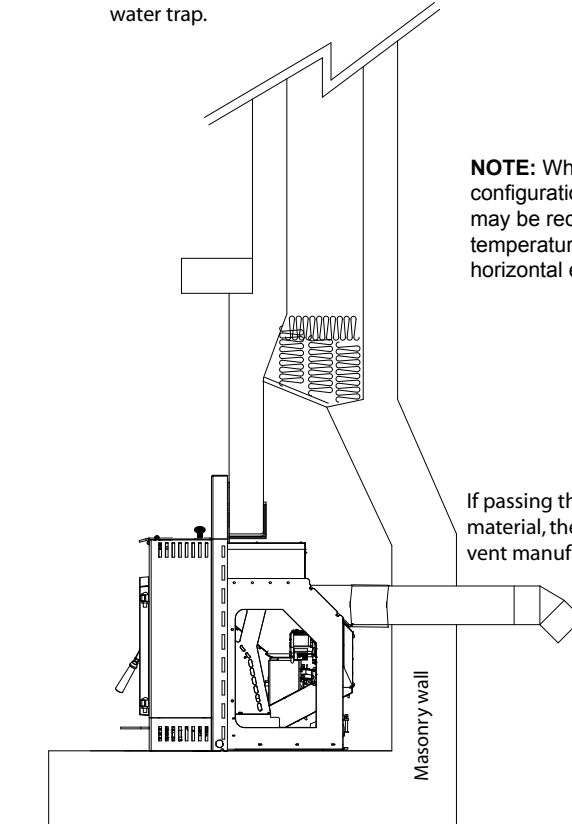
**IN CANADA:** This fireplace insert must be installed with a continuous chimney liner of a minimum 3" diameter extending from the insert to the top of the chimney. The chimney liner must conform to the Class 3 requirements of CAN/ULC-S635, Standard for Lining Systems for Existing Masonry or Factory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

*When venting in this configuration, a rain cap and proper flashing must be installed on the top of the chimney to prevent flooding and damage.*



**E. Existing Fireplace, Rear Vent:**

The top of the chimney must also be sealed. Otherwise, it can become a nesting area or a water trap.



**NOTE:** When installed in a rear vent configuration, the maximum BTU may be reduced due to elevated ESP temperatures associated with the horizontal exhaust stream.

If passing through combustible material, the proper thimble from the vent manufacturer must be used.

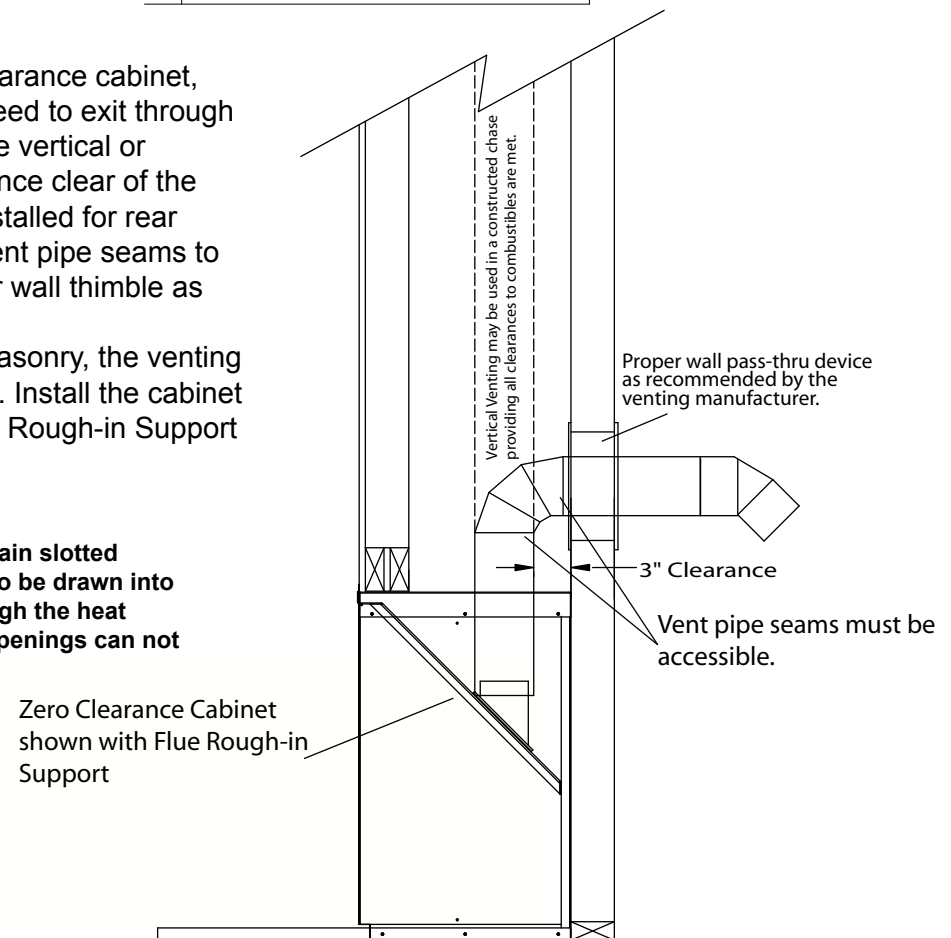
**F. Optional Zero Clearance Cabinet Installation:**

If installing using the optional zero clearance cabinet, Item #1-00-774257, the venting will need to exit through the top of the cabinet. The vent can be vertical or horizontal after leaving the cabinet. Once clear of the cabinet, a 90 degree elbow can be installed for rear termination as shown. Do not allow vent pipe seams to fall within the cabinet wall. Use proper wall thimble as supplied by the venting manufacturer.

If finishing the interior with stone or masonry, the venting can be installed without the appliance. Install the cabinet and secure the venting using the Flue Rough-in Support #1-00-774283.

Notice the side edges of the surround contain slotted openings. These openings allow room air to be drawn into the rear of the cabinet and circulated through the heat exchange and back into the room. These openings can not be blocked. If finishing with stone or masonry keep the masonry a minimum of one inch from the sides of the surround. Mortar can be used to give a more finished look.

Zero Clearance Cabinet shown with Flue Rough-in Support



Proper wall pass-thru device as recommended by the venting manufacturer.

Vertical Venting may be used in a constructed chase providing all clearances to combustibles are met.

3" Clearance

Vent pipe seams must be accessible.

# 6 Mobile Home

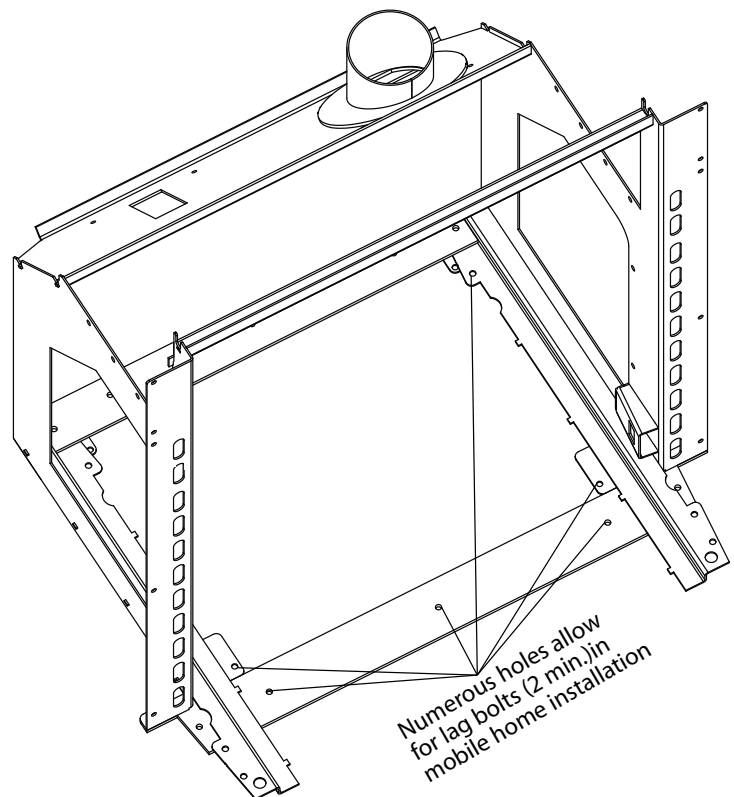
## A. Mobile Home Installation

**Outside Air Kit #1-00-774280 Must be used for installation in a mobile home.**


1. An outside air inlet must be provided for combustion air, and must remain clear of leaves, debris, ice, and/or snow. The outside air path must be unrestricted while the appliance is in operation.
2. The combustion air intake system must be of metal construction. It must permit zero-clearance to combustible materials, and contain a rodent screen.
3. The appliance must be secured to the mobile home structure by bolting it to the floor. Use the correct length lag-bolts through the same holes that secured the appliance to the shipping pallet.
4. The appliance must be grounded to the metal framing of the mobile home.
5. All clearances to combustibles and floor protection requirements must be followed.
6. Follow the vent manufacturer's instructions when installing in a mobile home. Use silicone or equivalent to create an effective vapor barrier where the chimney or other component penetrates to the exterior of the mobile home.
7. Installation shall be in accordance with the Manufactured Home and Safety Standard (HUD) CFR 3280, Part 24
8. The appliance must never be installed in a room designated for sleeping.
9. The space heater must be connected to a factory built chimney conforming to CAN/ULC-S629. Maximum 8 inch diameter. Chimney must be removable to allow transport of mobile home.

<b>CAUTION</b>
<p><b>Maintain structural integrity of mobile home:</b></p> <ul style="list-style-type: none"> <li>• Floor, wall, ceiling and/or roof.</li> </ul> <p>Do <b>NOT</b> cut through:</p> <ul style="list-style-type: none"> <li>• Floor joist, wall studs, or ceiling trusses.</li> <li>• Any supporting material that would affect the structural integrity.</li> </ul>

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



There are a few holes in the bottom of the insert mounting frame which can be used for lag bolts. Use at least two of these holes for securing the appliance to the fireplace floor in a mobile home installation. The installer will need to determine and obtain the properly sized lag bolts and masonry anchors.

 <b>WARNING</b>
Installation must comply with Manufactured Home and Safety Standard (HUD), CFR 3280, Part 24.

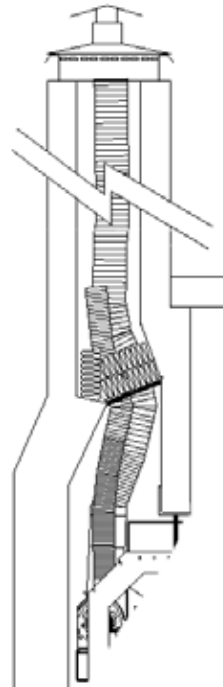
 <b>WARNING</b>
<b>Never install in a room intended for sleeping.</b>

# 7 Appliance Set-Up

## A. Outside Air Attachment

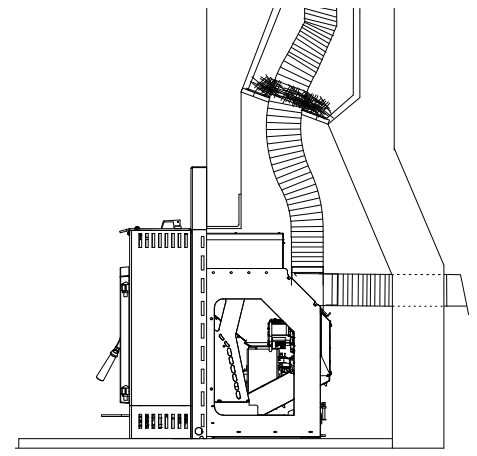
Outside Air Kit #1-00-774280 (sold separately) must be used for attaching outside air to the insert. This kit contains a 3" stub and gasket to mount to the frame, and the outside air adapter which secures to the insert body. The outside air intake connection will seal to the mounting frame, just like the exhaust does. Follow the instructions included in the kit to ensure proper installation.

1. Make a determination of where you want to draw the outside air from. Here are a few options.
  - a. Punch a hole through the rear of the fireplace and exterior wall. Rigid pipe or flex pipe could be used.
  - b. Use the chimney or chase as a conduit for outside air. The exhaust liner must be run the full length of the flue. When creating your steel plate to seal the damper area, Make another 3 inch hole for the outside air pipe. Install a short run of pipe from the mounting frame through the sealing plate. Then install the chimney top extension kit, item #1-00-674104 at the top of the chimney. This is slotted to allow fresh air into the chimney or chase.
2. Secure the outside air supply pipe to the stub on the mounting frame using a minimum of two fasteners.
3. If running the supply pipe direct, install the outside air cover weldment #1-10-09542 to keep birds or rodents from entering the supply pipe.
4. Keep the intake a minimum of 4 feet (1.2 m) below the exhaust termination.

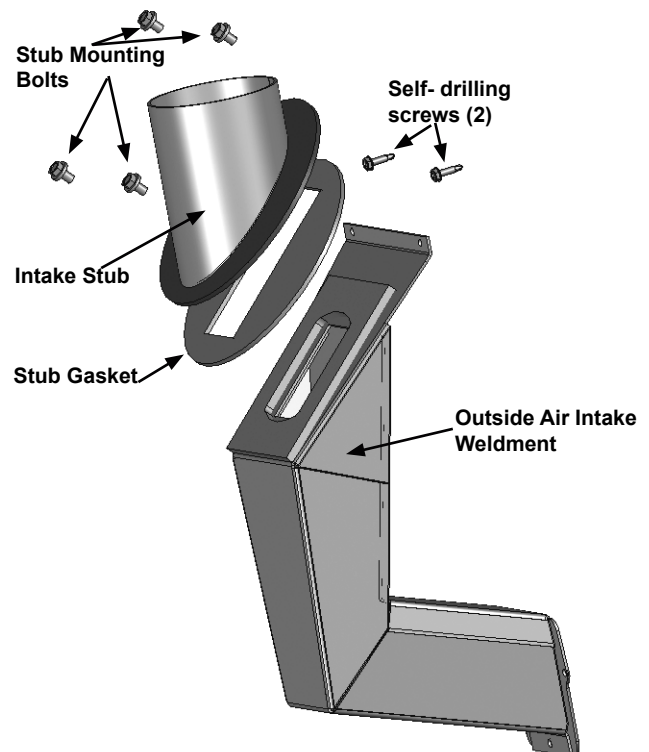


The image at left shows the use of the chimney for outside air supply. Also shown is the Chimney intake extension on the top of the chimney. It is slotted to allow fresh air into the flue. Be sure to use the proper flashing and vent cap to prevent rain from entering the chimney flue.

The image below demonstrates bringing the outside air in through a hole cut through the rear of the fireplace and external wall. With this method, a screen is necessary to prevent birds or rodents from entering.



### Contents of Outside Air Kit



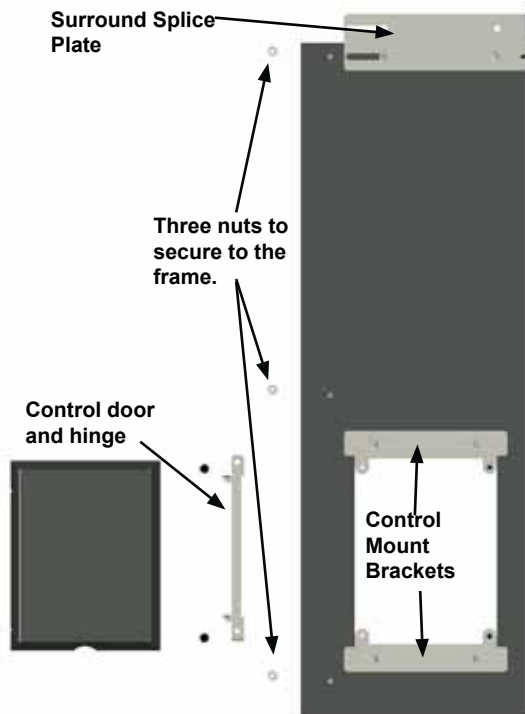
### CAUTION!

- Never draw outside combustion air from:
- Wall, floor or ceiling cavity.
  - Enclosed space such as an attic or garage

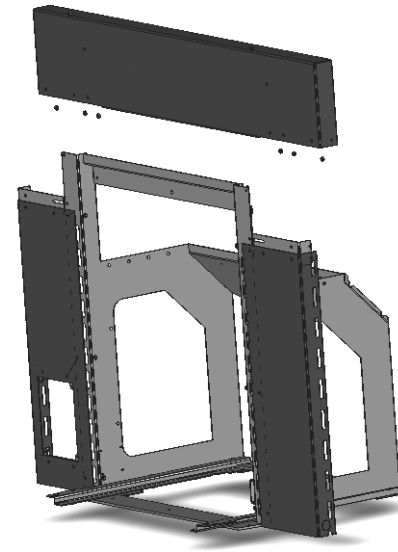
## B. Installing the Surround

The surround consists of three panels, the top and two sides. Follow these steps for installation:

1. Remove the insert body from the mounting frame;
2. Start your leveling bolts into the floor of the frame and adjust to slightly raise the height.(see next section) This will allow some clearance to assemble the surround.
3. Prepare the side panels by removing three nuts each. The left side panel is the one with the control board opening. If mounting the control door, the hinge bracket will attach using the control panel mounting screws.



4. Attach the side panels to the mounting frame by guiding the threaded studs through the holes in the mounting frame. Slip the power cord ground wire terminal over the bottom stud on the left side. Install the nuts onto the studs, finger tighten only.
5. Install the top panel, making sure to close the gap with the side panels first. Tighten the nuts on the splice brackets securely.
6. Set the mounting frame into position in the fireplace opening. Be sure the surround panel is raised slightly so that it is not supporting any of the weight of the mounting frame.
7. When pleased with the alignment, tighten all of the nuts securely.
8. There are two more holes in the splice brackets to align the outer sides of the surround panel joints. If desired, install the supplied black pop-rivets here.



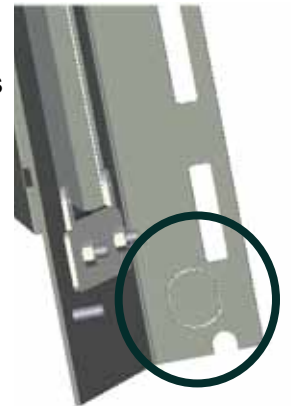
## C. Routing the Power Cord

When choosing an electrical supply outlet, be sure the polarity is correct, and that the supplied voltage is within the range of 117 to 123 Volts. Surge protection is also recommended to protect the control board software in the event of a surge or spike.

Once the outlet location is decided, you'll need to install and route the power cord.

At the bottom of each of the side surround panels is a knockout for the cord retainer. Remove the appropriate knockout and feed the loose wire end of the cord into the hole. If your cord needs to exit from the right side, route the cord up the side and over the top of the mounting frame and back down the left side.

Attach the ground wire ring terminal to the bottom stud on the left, and use the two hooks on the top corners of the mounting frame to secure the cord. Slip the cord clamp onto the cord right in front of the opening in the side panel. Using a pliers, compress the cord clamp and push it into the hole.



### WARNING

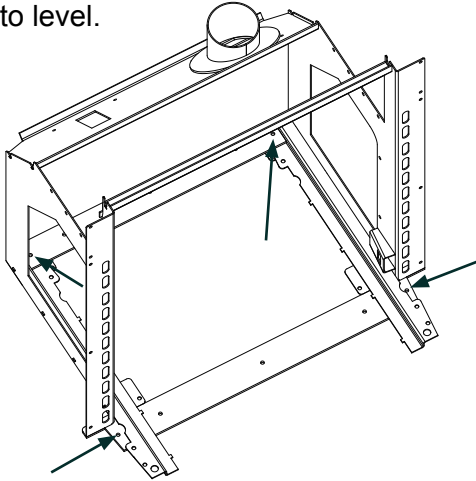
**ROUTE POWER CORD AWAY FROM THE APPLIANCE. DO NOT RUN THE CORD UNDER OR IN FRONT OF THE APPLIANCE.**



## D. Securing the Mounting Frame

The mounting frame is the anchor for the appliance. If the frame is not secured properly, shifting will occur when sliding the insert in or out.

There are four (4) holes located as shown, that are threaded for 5/16 - 18 bolts. Thread the bolts down through the holes to raise the frame corners as needed, to level.



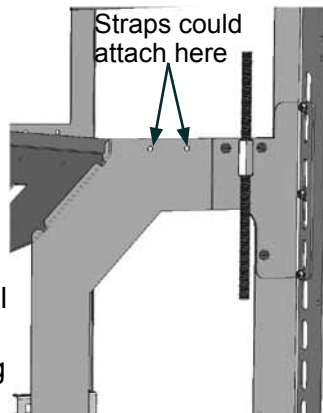
The mounting frame is the anchor for the appliance. If the frame is not secured properly, shifting will occur when sliding the insert in or out.

Most importantly, the frame must be level. Again, be certain that the surround is not supporting the weight. Turn the leveling screws in until there is a slight gap beneath the surround panels.

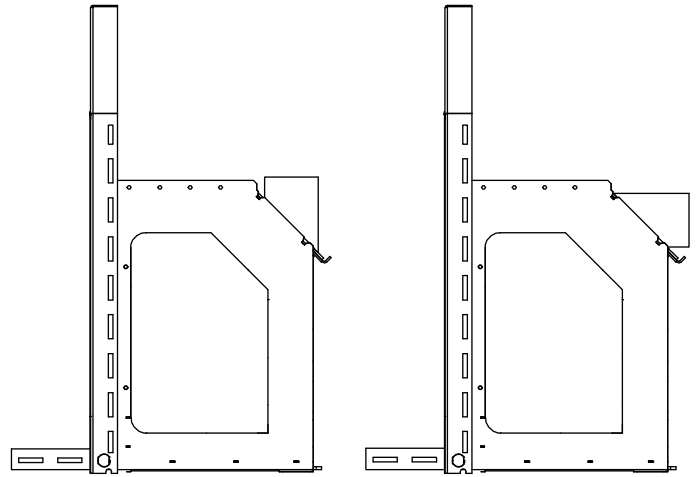
Here are a few different ways to anchor the mounting frame.

On the sides of the frame, there are a few holes which can be used to attach metal straps. These straps

can be anchored into the fireplace using masonry anchors. You could also use any of the unused holes in the bottom of the frame to install anchors and lag bolts. Another option involves using kit # 1-00-774279. Here, you will mount plates to the frame. These plates have coupling nuts welded to them. The kit also includes two pieces of 1/2" all thread, which threads into the coupling nuts. These can be used to tighten upward against the lintel until the unit is secure.



## E. Attaching the Venting



**NOTE:** When installed in a rear vent configuration, the maximum BTU may be reduced due to elevated ESP temperatures associated with the horizontal exhaust stream.

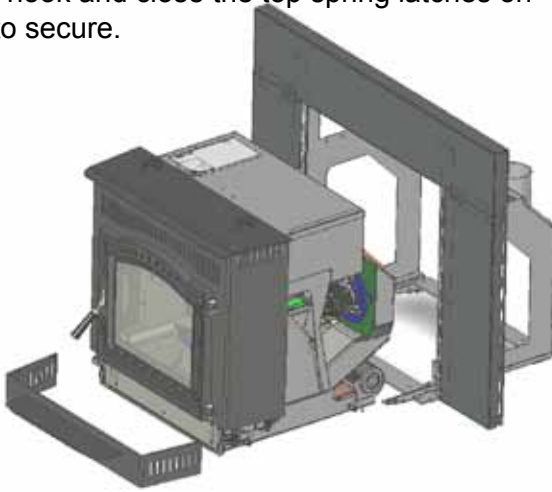
The flue collar on the rear of the mounting frame is designed to pivot. Loosen the four mounting bolts and adjust the angle of the collar as needed. Shown above is the vertical position and the horizontal position. Be sure the fiber gasket remains in place between the collar and the mounting frame, and secure the bolts. Secure the first section of venting to the collar with a minimum of two fasteners. Self-drilling screws will work well for this. Once the venting is secured and the seams are sealed, it is recommended that you wrap the vent pipe with a non-combustible insulation to prevent overheating of the motors and other appliance components. This is required (and supplied) when using the optional Zero Clearance Cabinet.





## F. Installing the Body into the Mounting Frame

The rollers on the sides of the insert body will ride on the rails of the mounting frame. Once the body is all the way in, hook and close the top spring latches on each side to secure.



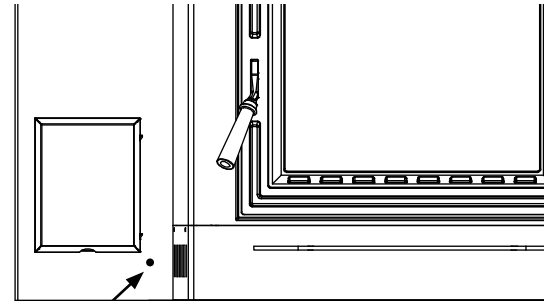
## G. Control Board Installation

The control board is packaged in a static resistant bag. Use care when handling, hold the circuit board only by the edges. In a large fireplace opening, you may have plenty of space for the circuit board to remain attached. For a smaller fireplace opening, you'll likely need to remove the wiring from the circuit board to route it through the side of the mounting frame and out through the control opening. Follow these steps;

- Disconnect the 11 pin harness plug.
- Disconnect the red twisted ESP wire.
- Feed the harness wires and the ESP wire through the opening in the mounting frame and out through the control opening in the surround panel.
- Holding the control board outside the opening in the surround panel, re-attach the harness plug and the ESP wire.
- After determining the location of the Room Sensor (See next Section), Attach it to the two male spade terminals near the top of the circuit board.

**NOTE:** These connections are not polarity specific.

- From the power cord, attach the green ground wire to the grounding post located on the feeder air intake snout.
- The black wire from the power cord gets attached to the short brown wire from the control harness
- The white wire from the power cord will attach to the short white wire on the control harness.
- Install the control panel into the surround; Right side first, then tilt in the left side.
- Secure using the four black machine screws included with the surround.



Room sensor placed here gives an accurate measure of return air. Push the pre-cut hole inward, and feed the sensor from the back side. Allow the bulb of the sensor to extend approximately 1½ inches into the room. Use a wire tie on the push-in tab to secure the sensor wire.

## H. Room Sensor Installation

Although not required, it is recommended that the room sensor be connected in every installation. Using a minimum size 18 gauge wire, you may splice in an additional length, to extend the room sensor. The following are typical locations for the room sensor;

- On an interior wall next to or in place of a typical wall thermostat.
- On the leg of a coffee table or end table in your favorite sitting location.
- Sticking out through the punched hole at the lower right corner of the control panel.

**Note: When installing the room sensor externally, limit the distance from the stove to 25 feet or less.**

Once the location has been decided, run the wiring to the control panel. You'll need to remove the two terminals from the end of the sensor cable and replace them with the two smaller terminals from the hardware bag. Plug the terminals into the circuit board. These connections are not polarity specific.

**Note: If the room sensor is located too close to the appliance, or in a direct path of the distribution air, You may need to elevate the temperature setting to maintain a comfortable temperature level throughout the heated space.**

**See Draft Test Procedure on Page 26.**

## I. Optional Log Kit

Ceramic log #3-40-674099

Log Bracket Kit #1-00-774401

Remove the two bolts from the air manifold below the glass opening. Install the log bracket using the same two bolts. Place the log onto the bracket with the smaller twigs pointing back toward the burn pot.

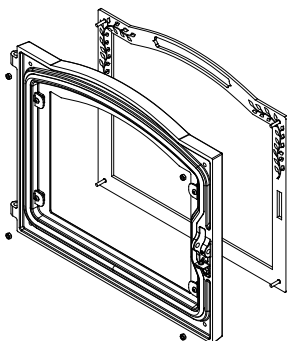
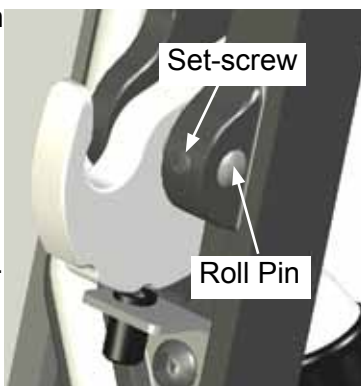


Please Note; The decorative log is fragile and must be handled with care. The abrasive nature of pellet ash may cause the log to deteriorate. Therefore, the log is not covered under the appliance warranty.

## J. Optional Trim Kit- #1-00-00775-\*

The trim kit option includes a door frame and an ash lip trim. To install the ash lip trim, simply slide it over the ash lip from the front. You can secure it with a few dabs of high temperature silicone, if desired. To install the door trim, follow these steps.

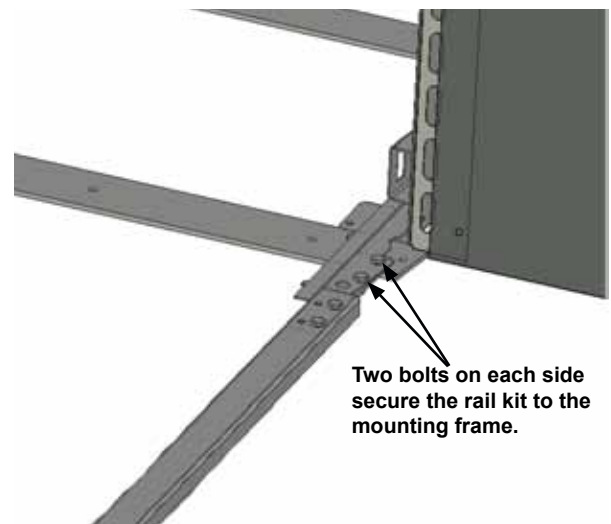
- Remove the door latch by loosening the small set-screw and tapping out the roll pin.
- Remove the door by lifting it off of the hinges. Lay it, face down on a flat surface.
- Locate and drill the dimpled holes in each corner of the door, using the provided drill bit.
- Install the trim frame with the threaded studs through the holes in the door, and secure it with the four nuts provided in the kit.



\* Trim finish suffix; 4=Gold, 7=Brushed Stainless, 8=Bright Nickel

## K. Service Rail Kit- #1-00-774125

The Service Rail Kit is used to support the insert body while it is pulled out of the mounting frame for cleaning or service. Used only with a raised hearth installation, it is easily adjustable to a height range of 4" to 14". Assemble the rail kit using the provided instructions. After removing the Ash Pan cover, the rails attach to the mounting frame with four bolts. There are even stop bolts on the rails to prevent accidental roll-off.



# 8 Operating Instructions

## A. Fire Safety

You can never be too cautious when it comes to fire safety. Please give serious consideration to the following:

- Install at least one smoke detector and CO detector on each level of the home.
- Locate detectors away from the appliance and close to the sleeping quarters.
- Follow the manufacturer's guidelines on placement and installation as well as maintaining regularly.
- Place a Class A fire extinguisher nearby to contend with small fires.
- In the event of a fuel hopper fire:
  - Evacuate the house immediately.
  - Notify the Fire Department.

## B. Fuel and Fuel Storage

Pellet fuel quality can fluctuate. This appliance is designed to burn a wide variety of pellet fuel, giving you the freedom to choose the most economical fuel in your area.

Hearth & Home Technologies strongly recommends that you choose a fuel that is recognized by the Pellet Fuels Institute (PFI)

Pellet fuels are made from sawdust, or other wood fibers. The source material determines the ash and heat content. Higher ash content fuel, or Standard Grade, may contain bark, leaves, stems, or other by-products. Higher ash may not mean more or less heat value, but it will require more maintenance and cleaning. Low ash content fuel, or Premium Grade, is made from only the cleanest sawdust. Cleaning and maintenance are greatly reduced while typically higher heat value is experienced.

### APPROVED FUELS

- Wood Pellets- Any grade of wood or biomass pelletized fuel. Pellets should be either 1/4 inch or 5/16 inch (6 - 8mm) in diameter, and no more than 1 1/2" (38mm) in length.

- Shelled Field Corn- Corn is approved for use as a fuel ONLY when mixed with pellets. The tested mixture is up to 50% corn. Since corn is grown as a feed source, and not as a fuel, there are many possible inconsistencies with regards to burning. Because of this, you may not be successful with the maximum mixture, and may need to reduce the percentage of corn in the mix. Corn should have a moisture content of 15% or less. Corn for burning should be clean and free of debris, stalks and pieces of cob.

**CAUTION! Do not burn fuel that contains an additive; (such as soybean oil)**

- May cause hopper fire
- Damage to product may result

Read the list of ingredients on the packaging. If you are buying field corn, the only ingredient listed should be field corn.

**CAUTION! Risk of Chemical Poisoning!**

Do **NOT** burn treated seed corn

- Exhaust gases are toxic
- Chemicals used to treat are harmful or fatal if ingested.
- Burning seed corn will void the product warranty.

### STORAGE

Fuel should be stored in a dry area, preferably indoors, and well away from the appliance clearance area.

Corn, for mixture, should be stored in a sealed container to prevent mold growth and to deter pests. Remember, corn is a food source and will attract rodents and other pests.

### CAUTION

Tested and approved for use with wood pellets and a mixture of shelled field corn and wood pellets ONLY. Burning of any other fuel will void your warranty.

### NOTICE

Hearth & Home Technologies is not responsible for stove performance or extra maintenance required as a result of using fuel with higher ash or mineral content.

### WARNING

**"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 IN USE".**

## C. General Operating Information

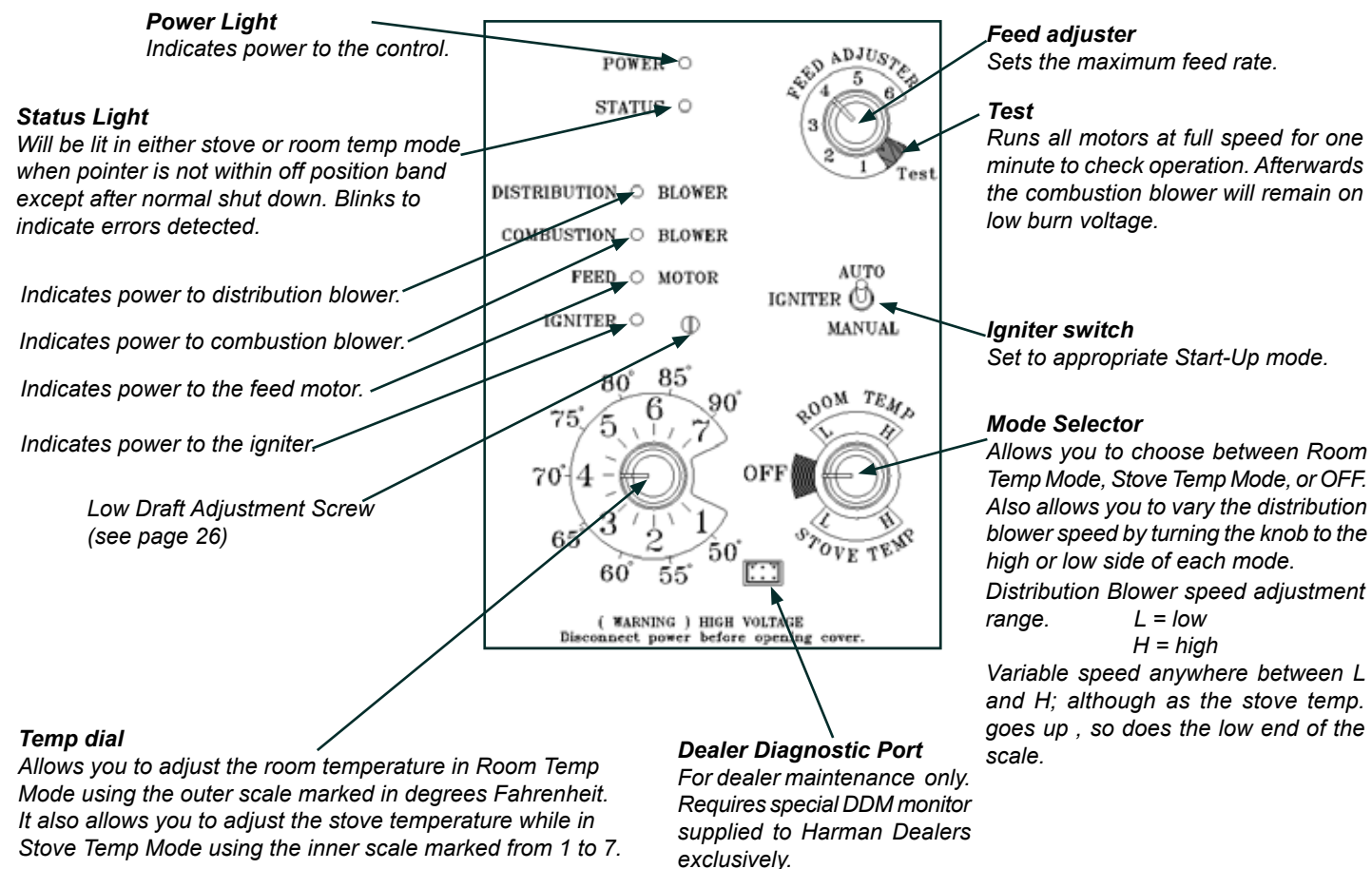
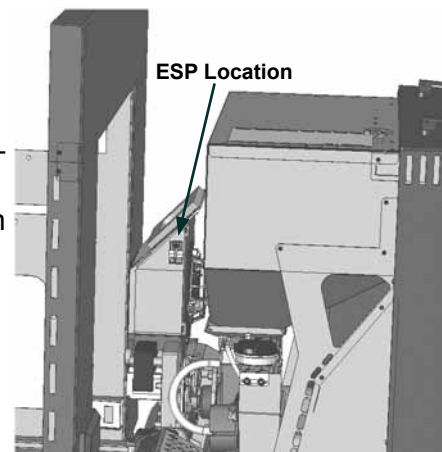
The P35i's ESP control will maintain an output level to fit your temperature demands. There are two modes of operation; "Stove Temp" mode, where the control will maintain a specified constant temperature, regardless of the surrounding environment temperature conditions, Or "Room Temp" mode, where the control will adjust the rate of burn to meet a specified room temperature setting. You also have the choice of Automatic or Manual ignition. Regardless of the mode selected, operation is controlled by both, exhaust temperature- being reported by the ESP (Exhaust Sensing Probe), and the microprocessor circuit board. We'll discuss these control devices and their functions now.

### 1. ESP (Exhaust Sensing Probe)

The ESP is a tiny thermistor located in the exhaust stream. The probe changes it's thermal resistance based on minute changes in temperature, which is monitored by the circuit board and used to determine the need for changes in the burn rate to meet the temperature demand.

### 2. Circuit Board

As stated previously, the circuit board is a microprocessor, which means it has the ability to "think" and adjust itself based on both, reported temperatures and demand temperature. The circuit board will also flash a code sequence on the Status light if an error is detected.





### a. Feed Rate Adjustment

The Circuit board runs on a one minute timer cycle. Each minute, the board is thinking ahead to what it needs to do for the next minute to maintain or achieve the demanded temperature. What you are setting on the feed adjuster dial is the maximum amount of feed time, per minute, that you'll allow.

The circuit board will make its own determination of how long to run the feeder, **UP TO** the maximum, as set on the dial. For instance, a number 4 setting on the feed adjuster will allow a maximum of 40 seconds per minute of feed. If the room temperature is satisfied, with only feeding 20 seconds, then that is all the circuit board will run the feeder. When heating a large area, the number 4 setting is usually adequate, however, fuel quality may dictate a higher or lower setting. If you see un-burned or burning fuel being pushed off of the grate during a high demand period, the feed rate is set too high. Ideally, you'll want to see about an inch of ashes in front of the burning fuel during a peak demand period. When the appliance is located in a smaller room or area, the feed adjuster may need to be kept at a lower setting of #2 or #3, to maintain a fire with less frequent shut-down and ignition cycles. Always allow a minimum of fifteen minutes between making any adjustments to the feed rate.

**Note: Since the circuit board is feeding as needed, only adjust the feed rate while maximum demand is occurring. (Stove Temp Mode, with a temp dial setting of #7 will create maximum demand.)**

### b. Mode Selection

Room-Temp mode is the ideal mode of operation if you wish to maintain a comfortable temperature in the room. As the outdoor temperature fluctuates, the control will adjust the feed rate to maintain the desired temperature setting in the room. For best results, be sure the room sensor is located away from drafty areas and not positioned on the floor or near an exterior wall.

Stove-Temp mode is more of a manual method of operation. The stove will run at a constant heat output, regardless of surrounding air temperature. Note that on the coldest days, your indoor heated space will be cooler than on the warmer days. The only real benefit to this mode of operation is that you'll be able to know exactly how long a hopper full of fuel will last, because the consumption is going to stay relatively the same.

### c. Temperature Dial

The temperature dial is a dual purpose dial. In Room-Temp mode, you select the room temperature you want the stove to maintain at the room sensor probe. This is marked in Fahrenheit scale from 50 to 90 degrees. In Stove-Temp mode, you select a temperature setting based on the #1 - 7 with 1 being a minimum burn and 7 being a maximum burn rate.

### d. Blower Speed Adjustment

The mode selector is also marked with a L to H scale in each mode. This is a variable speed control for the distribution blower. **L** is the low setting, and **H** is the high setting. It is important to note that the blower will not come on until the ESP reaches a specific temperature, to ensure that cold air is not being blown out into the room. Also, the speed of the blower, when set on lower speeds, will automatically increase as the temperature of the stove increases.

### e. Igniter Mode Switch

The toggle switch for the igniter is a two position switch. Select from either **AUTOMATIC** or **MANUAL**.

**AUTOMATIC-** Will automatically start the fire in either **STOVE TEMP** or **ROOM TEMP** mode.

**STOVE TEMP:** The ignition mode will start the fire one time only. Since **STOVE TEMP** maintains a constant output, the fire will never go out to need re-ignited.

**ROOM TEMP:** The ignition mode will start the first fire. Then, if the room temperature is satisfied, the fire will go out. Once the room cools, the ignition mode will start another fire, and so on. This mode provides fully automatic temperature control.

**MANUAL-** The fire must be started manually using starting gel or other manufactured fire starter.

**MANUAL-** With the igniter switch in the **MANUAL** position, the igniter is disabled.

**STOVE TEMP:** The fire would need to be started manually, and will maintain a constant output based on the temperature setting.

**ROOM TEMP:** The fire would need to be started manually. The control will adjust output to maintain a constant room temperature, however it will not allow the fire to go out. If the room temperature is satisfied, the control will adjust to the minimum burn rate and hold there until the room temperature decreases.

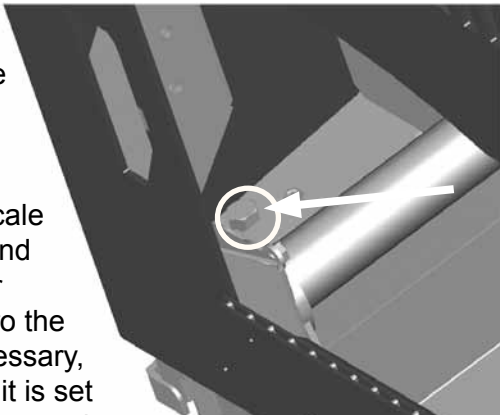
## D. Before Your First Fire

- Be sure the appliance is installed properly and that all safety requirements have been met. Pay particular attention to the clearances to combustibles, floor protection and the venting instructions.
- Test your smoke detector(s) and CO detector(s) to the specifications of the manufacturer.
- Double check that the ash pan and internal firebox are empty.
- Be sure to read this entire manual.

## E. Draft Test Procedure

- Using a 9/16" wrench, remove the draft test port plug bolt, located to the left inside the firebox. This bolt threads downward through the outside of the body. Externally, the opened hole is located above the ash pan spring latch on the left.

- Insert the draft meter hose into the test port.
- Be sure the meter is capable of a scale between 0 and 1 inch Water Column. Zero the meter if necessary, and be sure it is set up to read in negative pressure.



- Be sure the ash pan, door, and hopper lid are all closed and latched.
- Turn the feed adjuster to "Test" mode.
- During the first minute of test, the combustion blower will be on high. Record the high draft reading here \_\_\_\_\_-W.C. The high draft should be above -0.5" W.C. but no higher than -1" W.C.
- After a minute, the combustion blower will go to low speed. Here you want to see a reading between -0.30" and -0.35". If necessary, adjust the draft voltage using the low draft adjustment screw on the circuit board (See Page 24). Clockwise will increase the draft and counter-clockwise will decrease it.
- Once set, record the low draft reading here: \_\_\_\_\_-W.C.
- Be sure and turn off of "Test" mode. Disconnect the meter and return the plug bolt to the test port.

## F. Starting a Fire - "MANUAL"

1. With the mode selector in the "OFF" position, and the Feed Adjuster **NOT** on "Test", plug the power cord into a properly grounded receptacle.
2. Fill the hopper with DRY fuel.
3. Turn the FEED ADJUSTER dial to "Test". This will run the feed motor for one minute. If you begin to see fuel entering the burn pot, you can stop the test cycle. Return to #4 or #5 to start out.
4. Turn the mode selector dial to the desired mode. This will start the combustion blower operating. **If Room Temp is selected, be sure to turn the temperature dial above the current room temperature.**
5. Fill the burn pot with a mixture of wood pellets and starting gel.
6. Light the starting gel with a match, and close the door.
7. Only after the ESP temperature increases, will the feeder start operating to increase the fire size.

**NEVER APPLY STARTING GEL TO THE FUEL IN THE BURN POT WITHOUT THE COMBUSTION BLOWER OPERATING.**

### WARNING

**TESTED AND APPROVED FOR USE WITH WOOD PELLETS OR A MIXTURE OF SHELLED CORN AND PELLETS ONLY. USE OF ANY OTHER TYPE OF FUEL WILL VOID THE APPLIANCE WARRANTY.**

### WARNING



**"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 IN USE".**

**The optimal method of operation is in Room Temp mode, with the Ignition switch set to Automatic.**



## G. Starting a Fire - "AUTOMATIC"

1. With the mode selector in the "OFF" position, and the Feed Adjuster **NOT** on "Test", plug the power cord into a properly grounded receptacle.
2. Fill the hopper with DRY fuel.
3. Turn the FEED ADJUSTER dial to "Test". This will run the feed motor for one minute. If you begin to see fuel entering the burn pot, you can stop the test cycle. Return to #4 or #5 to start out.
4. Position the Igniter switch to AUTOMATIC.
5. Turn the mode selector dial to the desired mode. This will start the combustion blower, feeder, and igniter operating. **If Room Temp is selected, be sure to turn the temperature dial above the current room temperature.**
6. After the initial feed cycle is typically when you'll begin to see sparks, smoke, or flames.

**Keep Hopper Lid, Ash Pan, and Fire viewing doors closed while in operation. Maintain all door seals and gaskets in good condition. Replace gaskets when necessary using parts obtained through your Harman dealer.**

## H. Maintaining the Fire

Once the Distribution Blower begins operation, your fire is well established. Now, you can make any desired adjustments to the temperature dial. Remember, in STOVE TEMP, the temperature dial uses the inner portion of the scale (#1 thru 7). In ROOM TEMP, select the desired temperature in Fahrenheit from 50 to 90 degrees.

The flames should appear brisk and bright. If you see deep orange and lazy flames, it is usually an indication that the burn pot needs to be cleaned. Refer to the Maintenance Section of this manual.

**WARNING! RISK OF FIRE!** Keep combustible materials, gasoline, and other flammable vapors or liquids clear of this appliance.

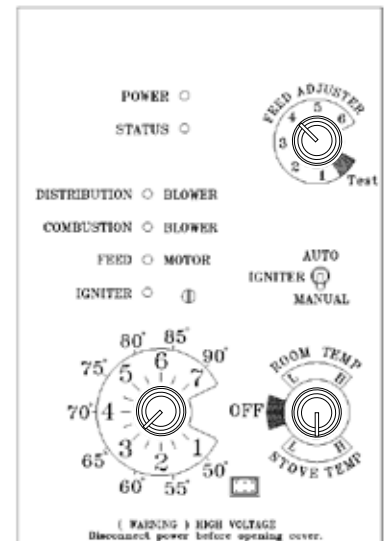
- Do **NOT** store flammable materials in the vicinity of this appliance.
- DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.
- DO NOT USE CHEMICALS OR FLUIDS TO START A FIRE.

*Keep all such liquids well away from the heater while it is in use, combustible materials may ignite!*

## I. Relaxation Mode

An added feature for those times when you'd like to unwind watching a fire but yet do not want all the heat.

With the igniter switch in the "MANUAL" position and the mode selector in "STOVE TEMP", your temperature dial can be set up to a #3 and the distribution blower will be disabled. As you turn up the temperature dial and the fire begins to burn hotter, the distribution blower will begin to operate.



## J. Shut-Down

During operation in ROOM TEMP/ AUTOMATIC mode, the appliance will shut down naturally when demand is met or exceeded. In other modes of operation, the unit will shut-down only if or when it runs out of fuel.

To kill or stop a fire, turn the mode selector dial to "OFF". The shut down cycle will slow or stop the feeder to gradually cool the fire and ensure that all of the exhaust gases are safely expelled before stopping the combustion blower. This not only ensures removal of all smoke and gases, it also keeps the fire from attempting to travel into the fuel storage hopper. For this reason; Hearth & Home Technologies recommends installing a battery back-up in areas where frequent power outages are experienced. (Also see page13)

**NEVER ATTEMPT TO KILL A FIRE BY PULLING THE PLUG OR OTHERWISE DISCONNECTING THE ELECTRICITY SUPPLY.**

*The best way to kill a fire, especially at the end of the heating season, is to simply allow it to run out of fuel.*

# 9 Troubleshooting

With proper installation, operation, and maintenance, your appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in proper diagnosis and repair. This guide is intended for qualified service technician use only.

<b>Error Message</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
3-Blinks; Poor ESP signal.	Broken probe, wire or connection.  Exhaust temperature has gone out of range multiple times.	Check connection / Replace Probe  Clean exhaust- possible soot or creosote accumulation near probe.
4-Blinks; Poor Room Sensor signal.	Broken sensor, wire or connection.	Check connection / Replace sensor
5-Blinks; Failed ignition	No fuel in hopper  Door, hopper lid, or ash pan open  Poor draft / weak combustion blower  Fuel feed restriction  Blocked airflow / Igniter failure	Load fuel  Close all doors and check seals  Perform draft test, clean exhaust, replace blower if necessary. Check operation in "Test" mode. Clear obstruction  Open burn pot cleanout to access igniter- clean. Check igniter, replace if necessary
6-Blinks; Poor combustion	No fuel in hopper  Door, hopper lid, or ash pan open  Poor draft / weak combustion blower  Fuel feed restriction	Load fuel  Close all doors and check seals  Perform draft test, clean exhaust, replace blower if necessary. Check operation in "Test" mode. Clear obstruction
<b>Symptom</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
Low volume or no fuel feed	No fuel in hopper  Door, hopper lid, or ash pan open  Poor draft / weak combustion blower  Fuel feed restriction  Failed feed motor	Load fuel  Close all doors and check seals  Perform draft test, clean exhaust, replace blower if necessary. Check operation in "Test" mode. Clear obstruction  Replace motor if necessary
No Distribution Blower	Fire isn't hot enough for blower operation  MANUAL / STOVE TEMP  Failed motor or connections- "Test" mode	Increase temperature setting  When operating in manual ignite / stove temp mode, the blower will not run below a #3 setting on the temperature dial. Increase temperature setting.  Check connections / Replace blower
Low heat output, or room temperature doesn't match thermometer or other readings	Feed rate too low  Room sensor location different than thermometer location  Excessive ash buildup on heat exchanger or in the exhaust	Set feed adjuster at #4 or higher  Room sensor reports the room air temperature to the circuit board. Move sensor location or adjust set point accordingly  Clean exhaust, firebox, and heat exchanger thoroughly.

# 10 Service & Maintenance

## A. Shut-down Procedure

The best way to shut down the appliance is to simply let it run out of fuel, and shut down naturally as the temperature cools. This method is highly recommended for the end of season shut-down.

To shut-down otherwise, turn the mode selector to "OFF" verify by ensuring that the Status light goes out. The shut-down protocol of the circuit board will safely allow the fire to go out. All motors will stop when cool, and only the POWER light will remain lit. It is now safe to un-plug the electrical supply.

**CAUTION! SHOCK AND SMOKE HAZARD!**  
Proper Shut-down procedure must be followed.

- Smoke spillage may occur if shut-down is not complete
- Risk of shock if appliance is not disconnected from the supply power prior to servicing.

## B. Quick Reference Maintenance Chart

*Follow the detailed instructions found in this section for each point listed in the chart below.*

NOTICE: For recommendation purposes only - More frequent cleaning is necessary if heavy buildup is encountered at the recommended intervals, or if you see soot coming from the vent. **Failure to clean your appliance on a regular basis will void the product warranty.**

Cleaning or Inspection	Frequency		Daily	Weekly	Monthly	Yearly
Area beneath burn pot grate / Igniter	After each ton of fuel burned	OR			X	
Ash removal	Depending on fuel quality	OR		X	X	
Burn pot grate surface	Depending on fuel quality	OR	X			
Combustion blower / paddle fan	After each ton of fuel burned	OR			X	
Distribution blower	More frequently depending on surroundings	OR				X
Door latch inspection	Prior to heating season	OR			X	
Feeder body / Fines collection area	Depending on fuel quality	OR				X
Firebox / thorough cleaning	After each ton of fuel burned	OR			X	
Glass	When view of fire becomes obstructed	OR		X		
Heat exchanger	After each ton of fuel burned	OR			X	
Hopper	Whenever adding fuel	OR				X
Venting system	More frequently depending on fuel quality and quantity	OR			X	

## Soot- Formation and Need For Removal-

When wood is burned, the products of combustion combine with moisture to form a soot residue which accumulates on the flue lining. When ignited, this soot makes an extremely hot fire. The entire venting system should be inspected at least once every two months during the heating season to determine if a soot buildup has occurred. If soot has accumulated, it should be removed to reduce the risk of a chimney fire.

**If you experience a chimney fire;** Turn the control to "Off". Keep appliance doors and hopper lid closed and latched. Notify the fire department. Do not operate the appliance until the chimney and connector have been inspected and approved by a chimney professional.

## C. General Maintenance Procedures

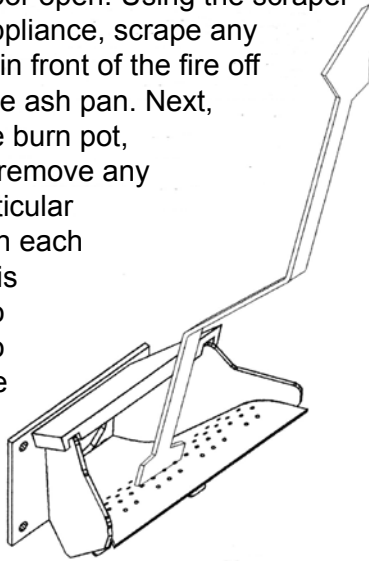
### 1. Burn Pot Grate Cleaning

- **Frequency:** Daily to Weekly \*
- **By:** User

#### **Wear Leather Gloves To Prevent Skin Burns!**

This procedure can be done with a fire burning. It is recommended that you turn the temperature dial down approximately one half hour before to allow some cooling of the fire.

Open the front door by lifting upward on the latch handle, then swing the door open. Using the scraper tool provided with your appliance, scrape any cool or spent ashes from in front of the fire off the front of the grate to the ash pan. Next, scrape downward into the burn pot, under the burning fuel to remove any carbon deposits. Pay particular attention to the corners on each side of the auger, as this is generally the first place to see accumulation. You do not want to scrape the fire out of the pot, you just want to clean the holed surface underneath the fire. Any loosened material will be pushed off of the grate into the ash pan as burning resumes. Close the door when finished, and return your temperature dial to the desired setting.



\* Depending on fuel quality and the quantity of fuel consumed, the interval between scraping will vary. If you see orange and lazy flames, it is a good indicator of the need for scraping.

### 2. Ash Removal From Firebox

- **Frequency:** Weekly / depending on fuel and/or ash buildup.
- **By:** User

#### **Wear Gloves To Perform**

The fire MUST be out and cool for safe ash removal. The scraper tool can be used to knock any ash accumulation into the ash pan.

Frequent cleaning of ash from the firebox will help to slow the accumulation of ash in the exhaust and venting system.



### 3. Emptying the Ash Pan

- **Frequency:** Bi-Weekly / as needed
- **By:** User

#### **Wear Gloves To Perform**

The fire MUST be out and cool for safe ash removal.

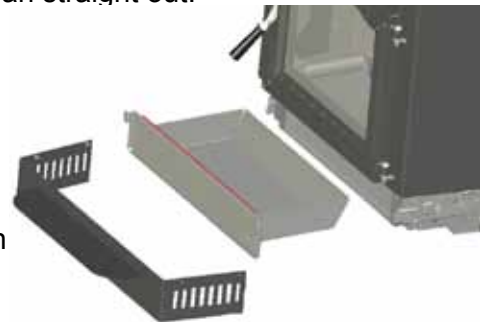
a. Remove the ash pan cover by grasping the ash lip and slide forward.

b. Open the lower spring latch on each side to release the ash pan.

c. Slide the ash pan straight out.

d. Empty into a non-combustible container and slide the ash pan straight into the stove.

e. Secure the ash pan by hooking and closing the spring latches.



### 4. Disposal of Ashes

- **Frequency:** As needed
- **By:** User

Ashes must 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. **Do not use the ash container for other debris or yard waste.**



**WARNING! RISK OF FIRE!** Keep combustible materials, gasoline and other flammable vapors and liquids clear of the appliance.

- Do **NOT** store flammable materials in the vicinity of the appliance.
- Do **NOT** use gasoline, lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or "freshen up" a fire in this appliance.

Keep all such liquids well away from the heater while it is in use, as combustible materials may ignite.

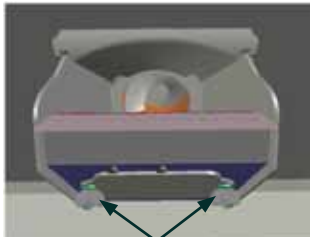
**WARNING! RISK OF FIRE!**

Do **NOT** store fuel:

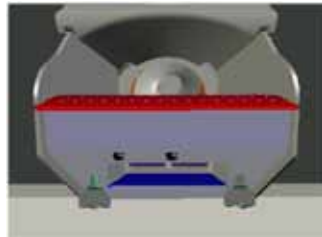
- Within the required clearance areas of the appliance.
- Within the space required for fueling or ash removal.

**5. Cleaning Area Beneath Burn Pot Grate**

- **Frequency:** Monthly or more frequently depending on fuel quality and/or ash buildup.
- **By:** User



Loosen the two wingscrews on the front of the burn pot.



Lift the cover off of the wingscrews.

- Loosen the two wingscrews located on the front of the burn pot housing.
- Lift the cover off of the wingscrews and set aside.
- Using your ash-vac, remove any ashes or debris from the air chamber.
- You can tap on the igniter, located above the cleanout hole. This will help to remove any accumulation on the igniter element.
- Re-install the cleanout cover and tighten the wingscrews. Be sure that the cover is completely covering the hole, as air leakage here may lead to incomplete combustion or poor ignition.

**5. Cleaning Heat Exchanger & Exhaust**

- **Frequency:** Monthly or after each ton of fuel is burned.
- **By:** User

It is recommended that you use a vacuum that is designed for ash, as ashes may block conventional vacuum filters.

NOTICE: For optimal performance of your pellet burning appliance, you must perform regular cleaning and maintenance as directed in this manual. Not doing so will result in:

- Poor performance
- Smoke spillage into the room
- Overheating of components

Failure to perform regular cleaning on your pellet burning appliance will void the warranty.

- Make sure the fire is out and cool. Disconnect power cord prior to servicing.

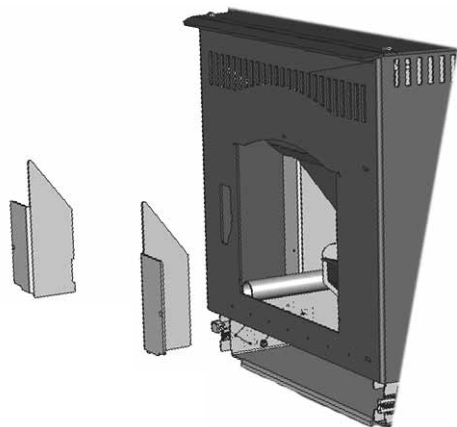


- Scrape the majority of ashes into the ash pan. Begin with the back and roof above the burn pot.
- Scrape the ashes from both sides, into the ash pan.



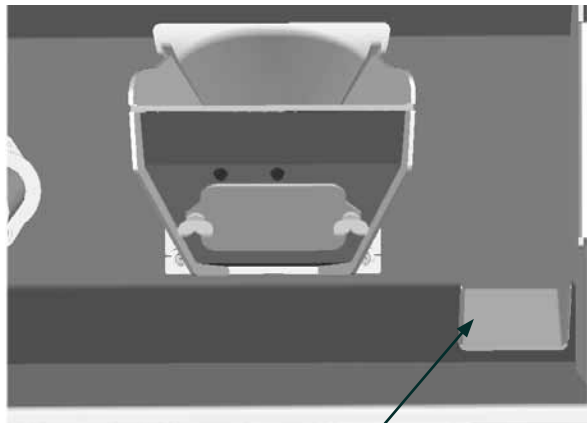
d. Un-latch and remove the ash pan. Dispose of the ashes in a metal container with a tight fitting lid.

e. Remove the two (2) corner cleanout covers by removing the wing-screws (one per).



f. Brush or vacuum the remaining ash from the fire-box.

g. Guide the vacuum hose upward into the exhaust passage in the right rear corner of the firebox.



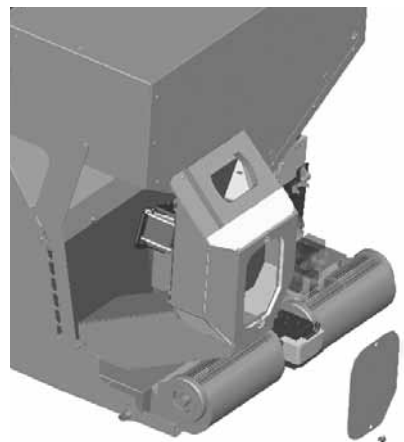
Vacuum or brush exhaust passage

h. You can now return all pieces inside the firebox and close the door.

i. Release the spring latches and slide the insert body out onto the hearth or onto the service rail kit, if purchased.

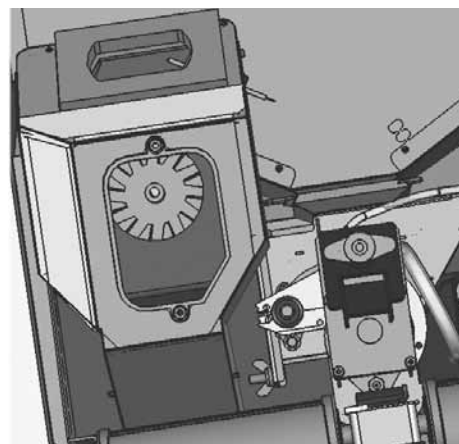
j. Remove the exhaust chamber access cover on the right rear of the insert.

k. With this cover removed, you can vacuum the



paddle fan and the inside of the chamber. Be careful not to bend the blades on the paddle fan.

l. Before reinstalling the access cover, make sure the



insulation between the two layers is in tact.

## 6. Inspect / Clean Hopper

- **Frequency:** Whenever run to empty
- **By:** User

Whenever the hopper is empty, inspect and remove any large amounts of sawdust or fines. Although this finer material will mostly feed through with the fuel, large quantities of sawdust may restrict feeder flow.



### 7. Cleaning the Door Glass

- **Frequency:** As needed / Weekly
- **By:** User

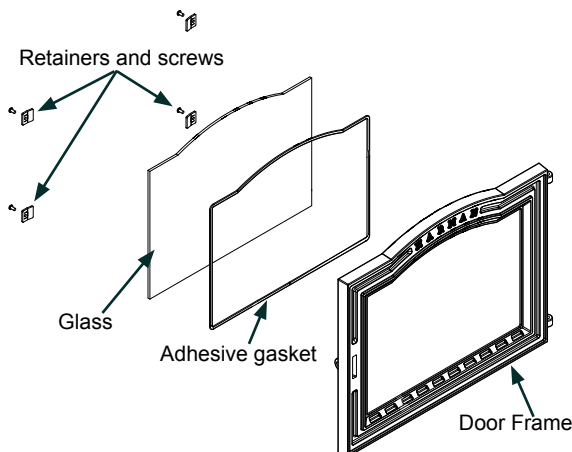
Whenever the view of the fire is obstructed, or weekly, clean the glass using a soft cloth dampened with standard household glass cleaner.

**Never spray glass cleaner directly onto hot glass. Apply the cleaner to the cloth then wipe the glass.**

Inspect the glass and sealing gasket. Replace gasket as needed. Do not operate the stove with a broken glass. Replacement glass, which is ceramic glass, should be obtained through your Harman dealer.

To replace a broken glass; first be sure to carefully remove the broken glass and any remaining shards or pieces. With the door laying on a flat surface, lay the gasketed glass panel onto the door and be sure it is properly fitted into the channel. Lay the glass retainer clips in place near each corner, and secure them using the 3/8" screws. Be sure to tighten each screw equally so you don't create a pressure point on the glass.

**NEVER OPERATE THIS APPLIANCE WITH THE GLASS DOOR REMOVED, CRACKED, BROKEN, OR SCRATCHED.**



### CAUTION

Handle glass with care.

**When cleaning door glass;**

- Avoid striking, scratching, or slamming glass.
- Do NOT Clean Glass When Hot.
- Do NOT use abrasive cleaners.
- Inspect gasket, replace if necessary.

### 8. Venting and Chimney System

- **Frequency:** Yearly or more frequently depending on ash build-up.
- **By:** Service Technician / Chimney Sweep

#### Soot and Fly Ash: Formation & Need for Removal

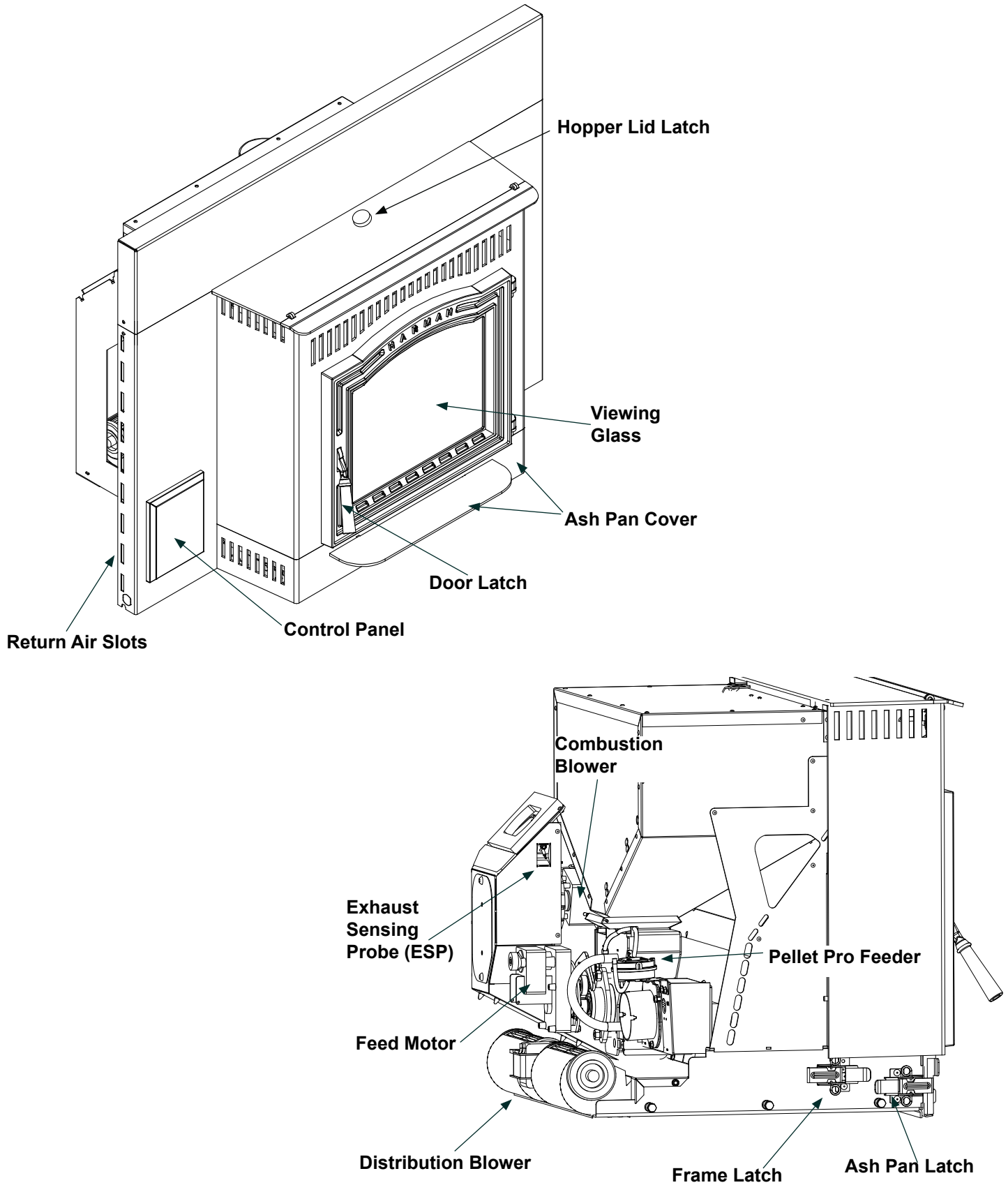
The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and restrict the flow of exhaust gases.

During periods of incomplete combustion, which may occur during start-up, shut down, or when operated incorrectly, the fly ash may actually lead to soot formation in the venting system.

The venting system will need to be cleaned at least once per year, or more often depending on the quality of the fuel being used. Horizontal sections of vent pipe are especially prone to soot formation, as ash will accumulate more quickly.

***The chimney and venting system should be inspected periodically throughout the heating season to determine if a creosote buildup has occurred. If a significant layer of creosote has accumulated (3mm or more) it should be removed to reduce the risk of a chimney fire.***

## D. Motors and Components

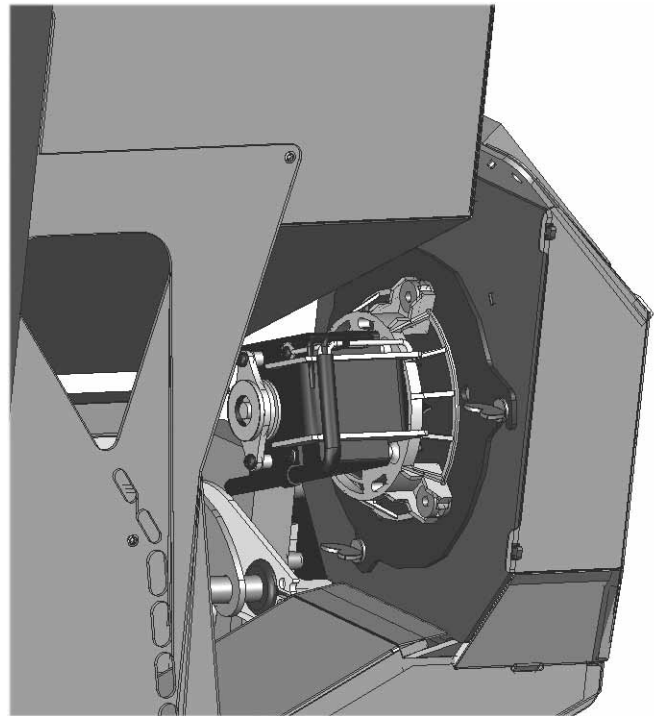
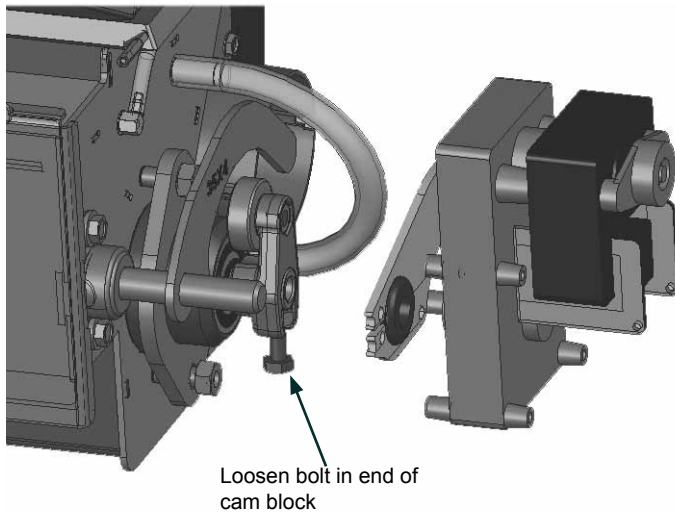


### 1. Feed Motor

Requires no lubrication.  
Keep the motor windings free of dust. Can be wiped clean or vacuumed.

To remove feed motor;

- Slide the insert body out of the mounting frame.
- Between the feed motor and the feeder body, you'll see the cam block with a bearing that actuates the pusher arm.
- With a 7/16" wrench, loosen the hex-head bolt in the end of the cam.
- With the bolt loosened, the feed motor and its mounting bracket will pull straight out of the auger shaft.



### 3. ESP- (Exhaust Sensing Probe)

Remove and wipe clean with a soft cloth and glass cleaner or alcohol.

To remove the probe;

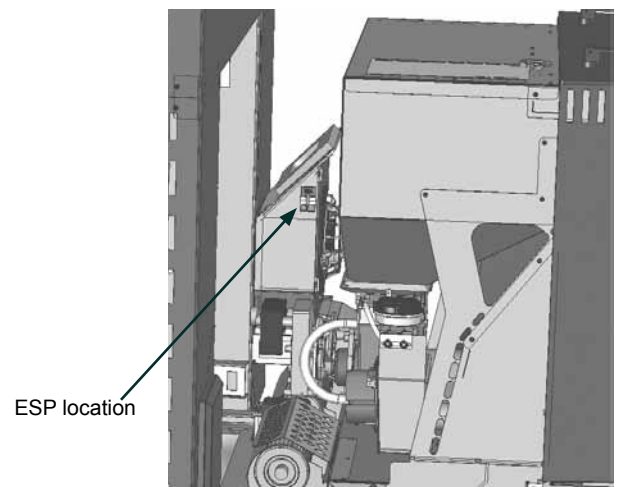
- Slide the insert body out of the mounting frame.
- The probe is installed on the side of the exhaust chamber.
- With a 1/4" socket or driver, remove the screw that attaches the probe.
- Pull the probe out of it's mounting hole.

### 2. Combustion Blower

Requires no lubrication.  
Keep the motor windings free of dust. Can be wiped clean or vacuumed.

To remove combustion blower;

- Slide the insert body out of the mounting frame.
- Locate the combustion blower motor in the back right corner.
- Loosen 3 wing screws and turn the blower and mounting plate 1/4 turn.
- Lower the motor and paddle fan out of the blower housing.



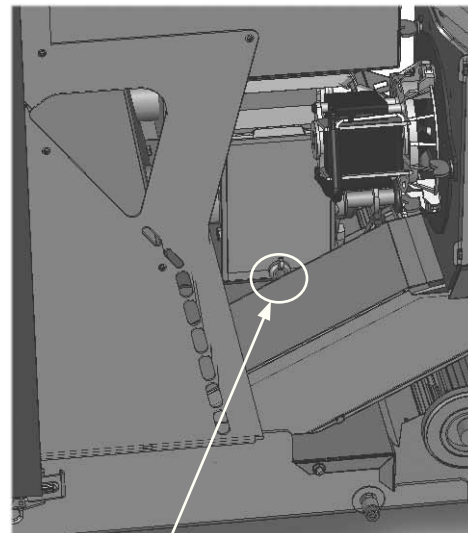
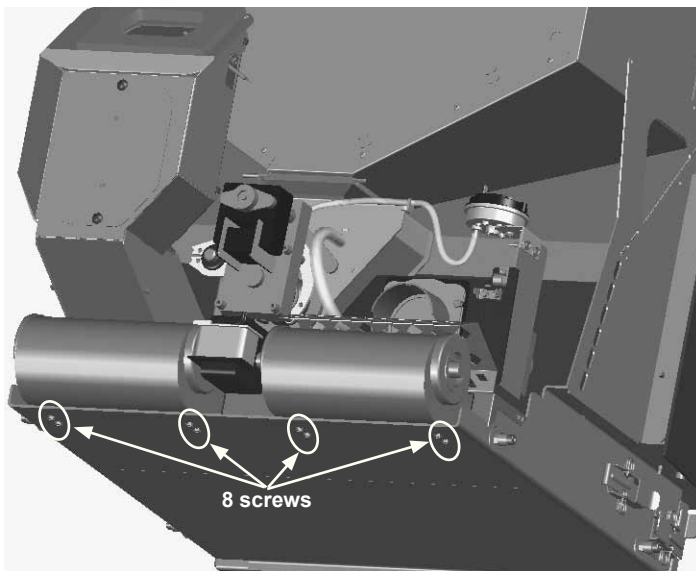
#### **4. Distribution Blower**

Requires no lubrication.

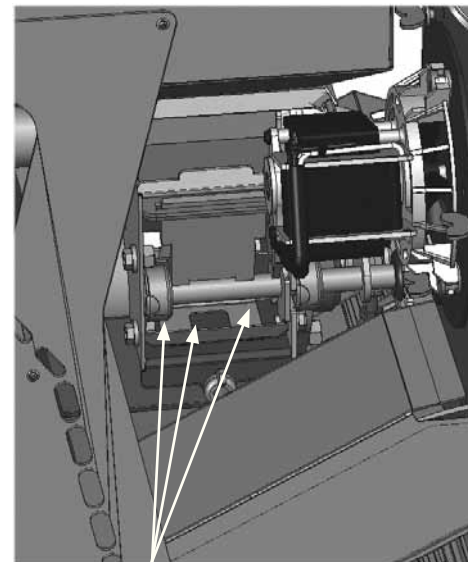
Keep the motor windings and squirrel cage fan free of dust. Can be wiped clean or vacuumed.

To remove distribution blower;

- Slide the insert body out of the mounting frame.
- Locate the blower in the back of the unit. You'll need to tilt the unit forward for easy access.
- Remove 8 tek screws using a 5/16" driver or wrench.



**Loosen wing nut to remove cover**



**Vacuum fines from this area**

#### **5. Feeder Body**

Wipe or vacuum to clean.

Use a vacuum to remove fines and sawdust.

To access feeder cleanout;

- Slide the insert body out of the mounting frame.
- Locate the feeder cover from the right side of the unit.
- Loosen the wing nut approximately 3/4 of the way out on the stud.
- Pull out on the bottom of the cover then lift upward to remove.
- Notice the deflector shield is sitting loose in the feeder. It can be removed by rolling it from under the pusher arm shaft. Just be sure it is repositioned properly.
- When re-installing cover, tighten the wing nut hand tight only.

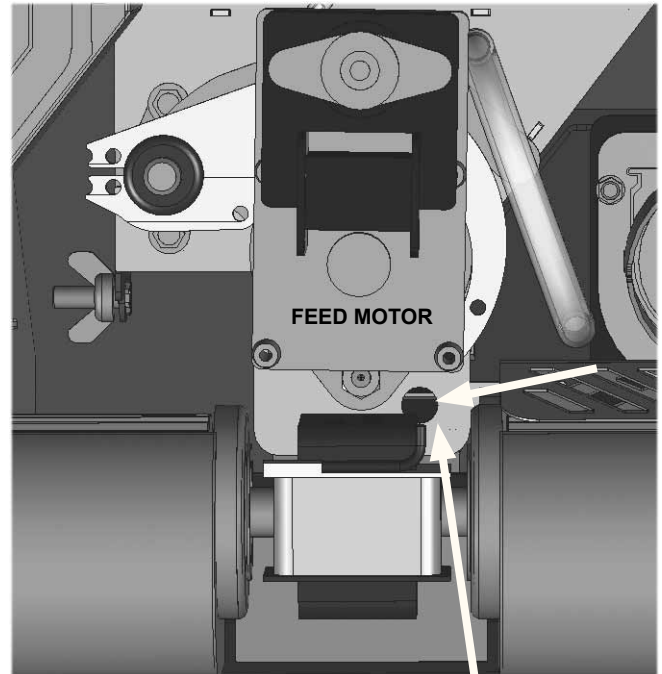
## 6. Igniter

Vacuum to clean.

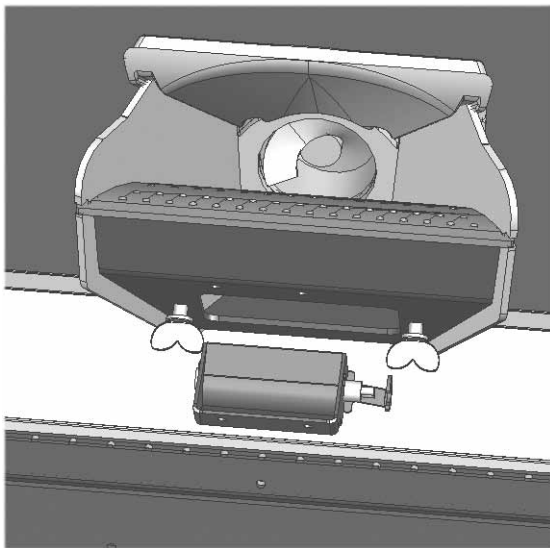
Whenever cleaning burn pot air chamber.

To remove igniter;

- Loosen wing screws and remove cover on front of burn pot.
- Using a 5/16" wrench, remove the two black screws above the cleanout. The igniter and bracket are now free.
- Slide the insert body out of the mounting frame.
- Locate the pale blue and yellow wires entering at the bottom of the feeder body.
- Remove wire ties as needed to loosen the igniter wires.
- Pull the igniter and bracket out from the front until the wire disconnects are accessible.
- When installing igniter, reverse these steps and be sure that the plastic coated wires are pulled all the way to the rear of the feeder.
- Re- tie all wires clear of all hot or moving parts.



This hole in the feeder body is where the igniter wires pass through to the burn pot.

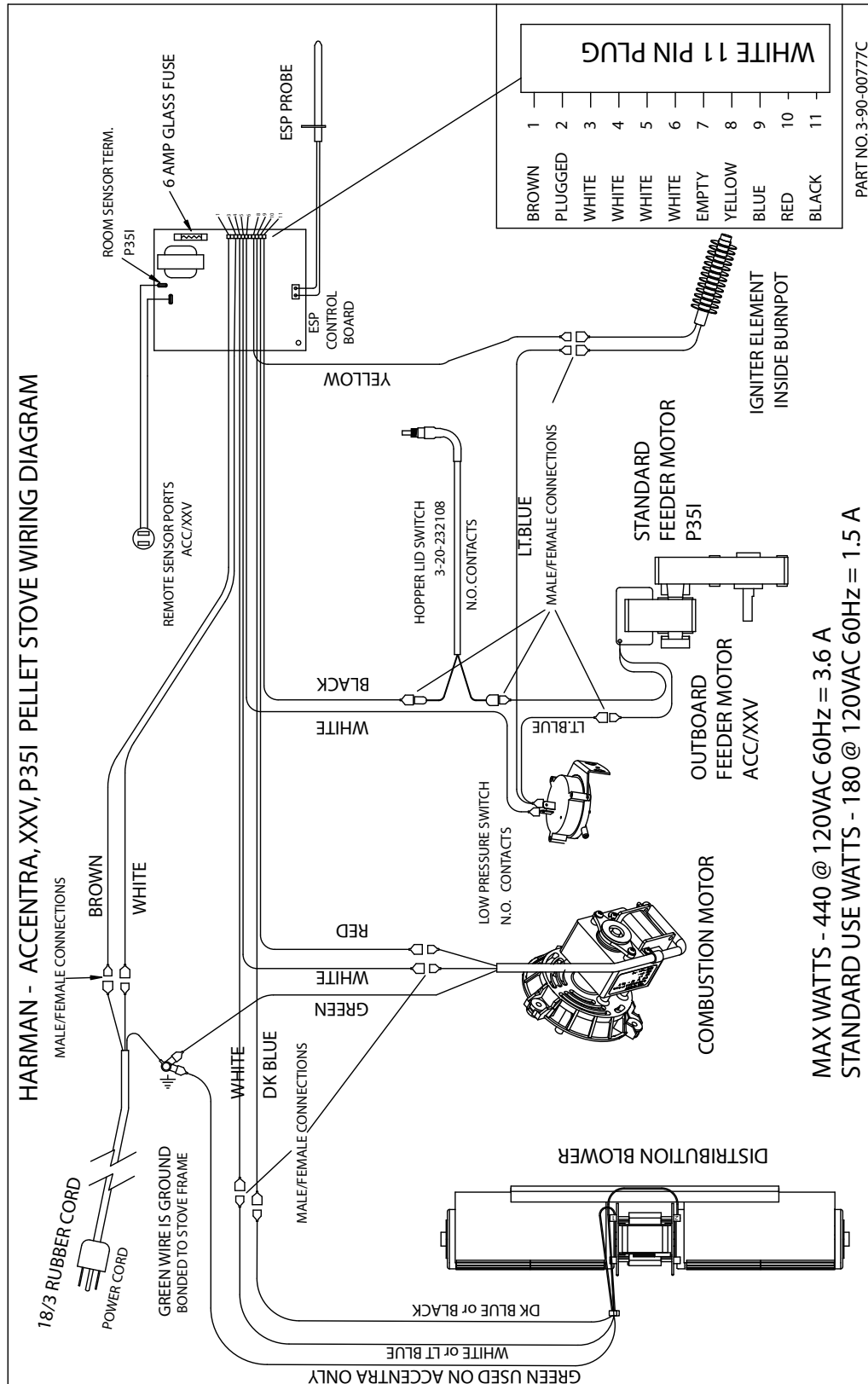


This shows the igniter and bracket removed from the burn pot. Missing in the illustration is the wires from the igniter which run through the burn pot air chamber. Only the first few inches of the wires are insulated for high temperatures. These insulated wires are all that can be inside the feeder or burn pot.



# 11

## Reference Materials



## Addendum

### Minimizing Smoke During Loss of Power Using Battery Back-up

Harman™ strongly recommends installing battery back-up to minimize entry of smoke into the room in the event of power loss.

Your pellet/biomass burning appliance relies on a combustion blower to remove exhaust. A power failure will cause the combustion blower to stop. This may lead to exhaust seeping into the room. Vertical rise in the venting may provide natural draft. It is, however, no guarantee against leakage.

There are two Harman™ approved battery back-up options for your appliance:

**Uninterruptible Power Supply (UPS)** UPS battery back-ups are available online or at computer and office equipment stores. Your Harman™ appliance with Rev E or later software available beginning in November 2010 may be plugged directly into a Harman™ approved UPS:

- The APC (American Power Conversion) model #BE750G and the TrippLite model INTERNET750U are tested and approved. Other brands or models may not be compatible.

When power is lost, a fully charged UPS will power a safe, combustion blower only shut-down. Your appliance will pulse the blower every few seconds to clear exhaust until the fire is out. **NOTE: The UPS provides safe shut-down only. It is not intended for continued operation.**

Your appliance will recognize when power is restored. What happens depends on ESP temperature and whether it is equipped with automatic ignition:

- In “Automatic” setting, units equipped with automatic ignition will respond to the set point and ESP temperature and resume normal operation.
- In “Manual” setting or for units without automatic ignition:
  - If the ESP is cool, the appliance will remain shut down.
  - If the fire is out and the ESP is still warm, the feeder may restart. Since the fire is out, the ESP temperature will not rise. The unit will then shut-down, and may flash a six-blink status error. (See ESP error codes)
  - If the fire is still burning, it will resume normal operation.

Contact your dealer if you have questions about UPS compatibility with your appliance.

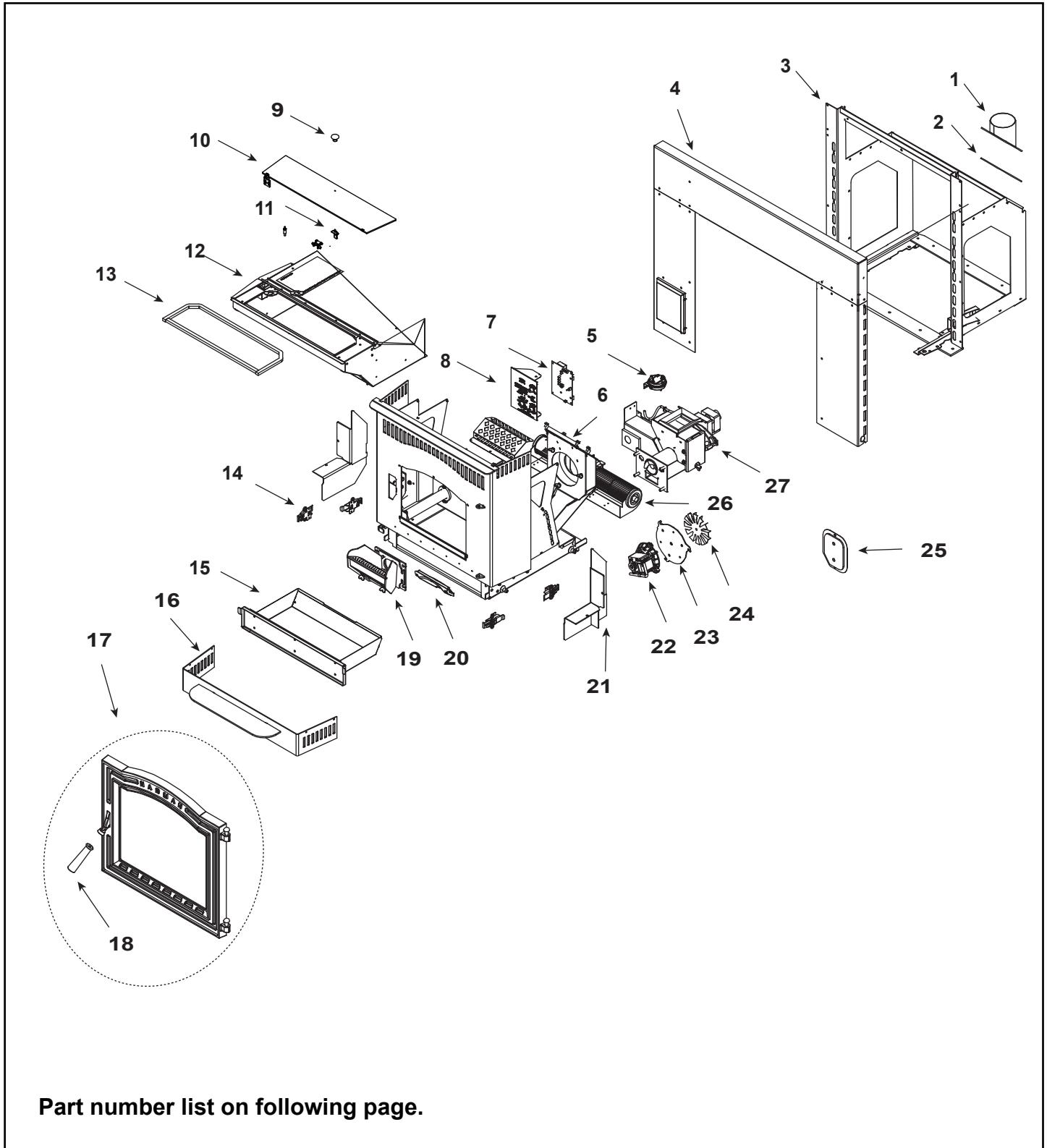
**Harman Surefire 512H Battery Back-up** The 512H connects to a 12 volt deep cycle battery that will run your appliance for up to eight (8) hours. It includes a trickle charge feature that keeps your battery charged when power is available. **NOTE: If the power is out for longer than battery life, smoke leakage may still occur unless your stove has been safely shut down.**

**CAUTION! Always keep appliance doors and hopper lid closed and latched during operation and during power failures to minimize risk of smoke or burn-back.**

**CAUTION! Use only Harman™ approved battery back-up devices. Other products may not operate properly, can create unsafe conditions or damage your appliance.**

(23.5 in)1-70-774235-1 (Black), (19.5 in)1-70-774195-1 (Black),

Ending Manufacturing Date: June 2011  
(23.5 in) 1-70-774235-2 (Charcoal), 1-70-774235-3 (Goldenfire)  
(19.5 in) 1-70-774195-2 (Charcoal), 1-70-774195-3 (Goldenfire)



Part number list on following page.

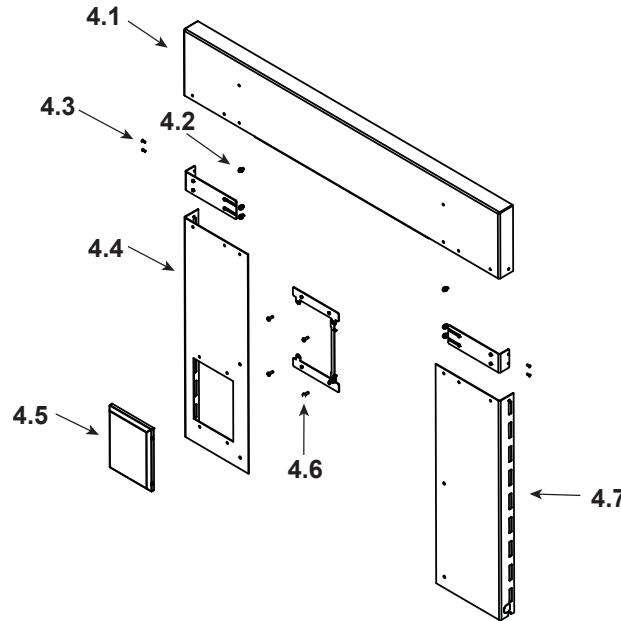
IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.



**Stocked  
at Depot**

ITEM	Description	COMMENTS	PART NUMBER	
1	Pipe Stub/4 in Flex w/gasket		1-00-674040	
2	Gasket Set, Burnpot/Pipe Stub	Set of 5	1-00-07384	Y
3	Mounting Frame Assembly		1-10-774235A	

### #4 Surround Assembly



4	Wing Assembly	Oversize-Black	1-00-774250-1	
		<b>No longer available</b>	1-00-774250-2	
		<b>No longer available</b>	1-00-774250-3	
		Custom	1-00-774221-SPL	
4.1	Surround Top	Standard	1-10-774222	
		Oversize	1-10-774250	
4.2	Machine Screw Nut10-32	Pkg of 100	3-30-8003-100	Y
4.3	Pop Rivet 1/8 X 1/8 Black	Pkg of 50	3-30-9004-50	
4.4	Surround Left	Standard	1-10-774220	
		Oversize	1-10-774248	
4.5	Control Door w/Hinge		1-00-774310	
4.6	Screw, PHM 8 X 1/2 Black	Pkg of 100	3-30-5000-100	Y
4.7	Surround Right	Standard	1-10-774221	
		Oversize	1-10-774249	
5	Differential Switch		3-20-6866	Y
6	Docking Gasket		3-44-06108	Y
7	4 Output Circuit Board w/Knobs & Shafts		1-00-05886	Y
8	Circuit Board Plate		1-10-774114A	Y
9	Black Knob		3-43-02000-1	

Additional service parts on following page.

IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.



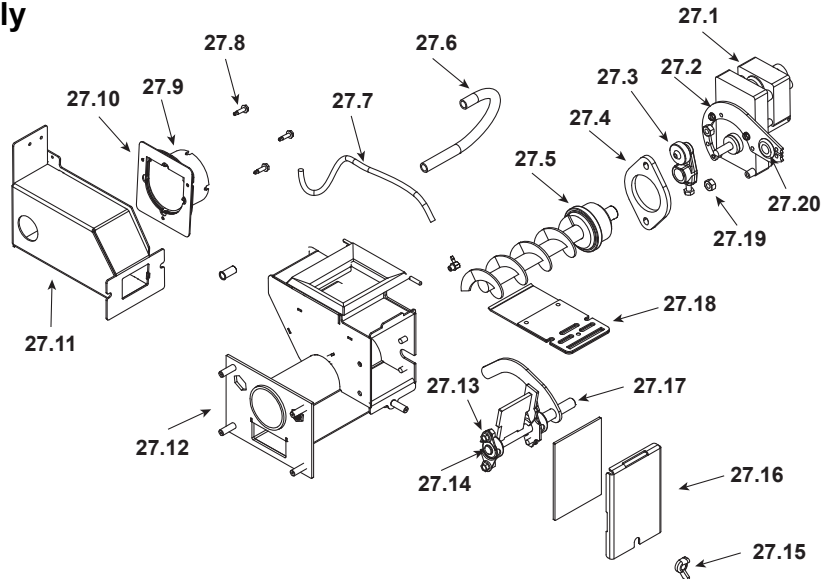
**Stocked at Depot**

ITEM	Description	COMMENTS	PART NUMBER	
10	Top Assembly		1-10-774223A	Y
11	Hopper Latch	2 Sets	1-00-0669697	Y
12	23.5 in Hopper	Pre 008651553	1-10-774050A	Y
		Post 008651553	1-10-774150A	Y
	19.5 in Hopper	Pre 008651553	1-10-774028A	Y
		Post 008651553	1-10-774128A	Y
	Switch, Hopper Lid, 48 in		3-20-232108	Y
13	3/8X1/2 Silicone PSA-20FT For hopper top		1-00-375501	Y
14	Spring Latch	Qty 4 req	3-31-00927	Y
15	Ash Pan W/Gasket		1-10-774207	Y
	Ash Pan Gasket		3-44-774211	Y
16	Ash Pan Cover Assembly		1-10-774205A	
17	Load Door	Painted Only	4-00-06800P	
	Door glass		3-40-00774	Y
	1/4 Rd Black PSA For glass	15 Ft Length	1-00-2312	Y
	Glass Clips & Hdwr		1-00-249140	Y
	Latch Kit		1-00-73553	Y
	Cast Front Door Latch		3-00-249119	Y
	3/8 4 Strand White-30 Ft	30 Ft Length	1-00-00888	Y
18	Wood Handle w/Bolt		1-00-00247	Y
19	Burnpot w/Cleanout		1-10-774286	Y
20	Flame Guide		3-00-03000	Y
21	Cleanout Cover Set	Left & Right	1-00-774213	
22	Combustion Blower		3-21-08639	Y
23	Combustion Blower Mount		1-10-677006	
24	4-3/4 Single Paddle Blade		3-21-00661	Y
25	Combustion Cleanout		1-10-774167A	Y
26	Distribution Blower		3-21-29045	Y
27	UL Feeder Assembly		See following page	
	14 Ft Power cord		3-20-674200	Y
	306W/120V Igniter 15 Fin		3-20-677200	Y
	ESP-RED/RED		3-20-00844	Y
	Pipe Insulation		3-44-774282	Y
	Roller Hardware	4 Sets	1-00-05232	Y
	Room Sensor		3-20-00906	Y
	Touch up Paint, Black	12 oz Can	3-42-1990	
	Wiring Harness		3-20-08727	Y

Additional service parts on following page.



### #27 Feeder Assembly



IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.

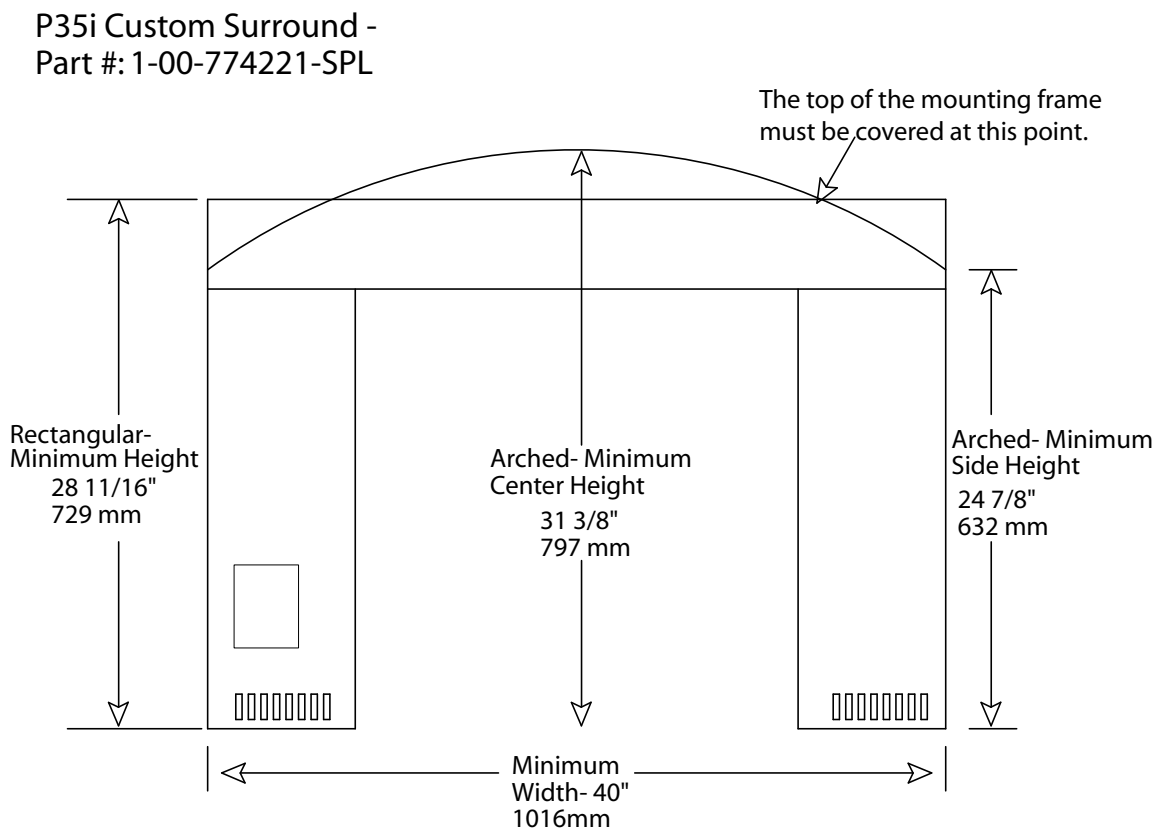


**Stocked  
at Depot**

ITEM	Description	COMMENTS	PART NUMBER	
27	UL Feeder Assembly		1-10-774000A	Y
27.1	Pellet Feeder CW Motor-4 RPM		3-20-60906	Y
27.2	Feeder Motor Bracket w/ Grommet		1-00-247406	Y
27.3	Bearing 3/8 ID X 1-1/8 OD		3-31-3014	Y
	Cast Cam Block		3-00-677154	Y
27.4	Pellet Feeder Bearing RETNR w/Bolts		1-00-04035	Y
27.5	Pellet Feeder Auger		3-50-00565	Y
27.6	Feeder Air Crossover Kit		1-00-67900	Y
	9MM X 13MM Tubing Kit	5 Ft Length	1-00-511427	Y
27.7	1/8 Silicone Tubing	5 Ft Length	1-00-5113574	Y
27.8	Screws-HWH TEKS 10 X 3/4	Pkg of 100	3-30-5004-100	Y
27.9	Pellet Air Intake w/Gasket		1-10-06810A	
27.10	Gasket, Feeder Air Intake	Pkg of 6	3-44-72224-6	Y
27.11	Snout Weldment w/Gasket		1-10-774143A	
27.12	Pellet Feeder Weldment		1-10-724132	Y
27.13	Flange 1/4-20 X 3/8	Pkg of 50	3-30-2000-50	Y
27.14	Pillow Block-1/2 in	Pkg of 4	3-31-3614087-4	Y
27.15	Wing Nut, 5/16-18	Pkg of 25	3-30-8012-25	Y
27.16	Short Feed CVR & Gasket		1-00-677122	Y
27.17	Pusher Arm Assembly		1-10-774354W	Y
27.18	Slide Plate		1-10-677121A	Y
27.19	Nut, FHN 5/16-18 Z 5	Pkg of 100	3-30-8005-100	Y
27.20	Grommet-1/2 in ID-Thick	Pkg of 12	3-31-2761-12	
	Gasket Hopper Throat		3-44-677185	Y

## D. Custom Size Surround

This diagram shows the minimum dimensions of a custom fit surround panel, part number 1-00-774221-SPL. Note that arched surrounds can only be made flat. Therefore, the intake air slots, normally in the sides of the surround, are moved to the face. Rectangular surrounds can be made flat if desired, and they will also have the intake slots in the face.



## 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 original purchase. 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, light bulbs, batteries 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.





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