



...ert Model
...rofile 30 INS-2

Profile Series Pellet Stoves Profile 20 FS and Profile 30 FS

WARNINGS

- **Hot! Do not touch!** The glass and surfaces of this appliance will be hot during operation and will retain heat for a while after shutting off the appliance. Severe burns may result.
- **Carefully supervise children** in the same room as appliance.



A French manual is available upon request. Order P/N 775,023CF.

Ce manuel d'installation est disponible en francais, simplement en faire la demande. Numéro de la pièce 775,023CF.

These appliances must be properly installed and operated in order to prevent possibility of a house fire. Please read this entire installation and operation manual before installing and using your pellet stove. Failure to follow these instructions could result in property damage, bodily injury or even death. Contact your local building or fire officials to obtain a permit and information on any installation requirements and inspection requirements in your area.

P/N 775,023M, Rev. E, 09/2006



IMPORTANT SAFETY AND WARNING INFORMATION

READ THIS MANUAL IN ITS ENTIRETY AND UNDERSTAND THESE RULES TO FOLLOW FOR SAFETY.

CAUTION

Read this manual thoroughly before starting installation. For your safety, follow the installation, operation and maintenance instructions exactly without deviation. Failure to follow these instructions may result in a possible fire hazard and will void the warranty. If this appliance is not properly installed, a house fire may result. Contact local building or fire officials about requirements and installation inspection in your area.

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service agency or the gas supplier.

WARNING

Do not attempt to alter or modify the construction of the appliance or its components. Any modification or alteration may void the warranty, certification and listings of this unit.

1. DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE CONNECTED TO ANOTHER APPLIANCE.
2. Do not connect this appliance to air ducts or any air distribution system.
3. Do not install a flue damper in the exhaust venting system of this appliance.
4. Do not use class B venting intended for gas appliances as a chimney or connector pipe on a pellet-fired appliance.

5. The minimum clearances must be maintained for all combustible surfaces and materials including; furniture, carpet, drapes, clothing, wood, papers, etc. Do not store firewood within this clearance space (see Clearances on Pages 6 and 7).
6. INSTALLATION DISCLAIMER - This stove's exhaust system works with negative combustion chamber pressure and a slightly positive chimney pressure. Therefore, it is imperative that the exhaust system be gas-tight (air-tight) and installed correctly. Since Lennox Hearth Products has no control over the installation of your stove, Lennox Hearth Products grants no warranty, implied or stated for the installation or maintenance of your stove, and assumes no responsibility for any consequential damage(s).
7. Burning any kind of fuel consumes oxygen. If outside air is not ducted to the appliance, ensure that there is an adequate source of fresh air available to the room where the appliance is installed.
8. The appliance will not operate using natural draft, nor without a power source for the blower and fuel feeding systems.
9. Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this heater. Keep all such liquids well away from the heater while it is in use.
10. CONTINUOUS OPERATION: When operated correctly, this appliance cannot be overfired. Continuous operation at a maximum burn can, however, shorten the life of the electrical components (blowers, motors, and electronic controls), and is not recommended. Typical approved operation would include running at the low to mid range setting with occasional running on the maximum setting during the coldest periods of the winter. The blower speed control should be turned to high when operating the stove on the high heat setting.
11. CAUTION: NEVER PUT FINGERS NEAR AUGER. Pellet fuel is fed to the UltraGrate™ by a screw auger. This auger is driven by a high torque motor. The auger is capable of doing serious harm to fingers. Keep pellets in the hopper at all times and keep fingers away from auger. The auger can start and stop automatically at any time while the stove is running.
12. CAUTION: HOT WHILE IN OPERATION. An appliance hot enough to warm your home can severely burn anyone touching it.

Keep children, clothing and furniture away. Contact may cause skin burns. Do not let children touch the appliance. Train them to stay a safe distance from the unit.

13. APPROVED FUEL: This appliance is designed specifically for use only with pelletized wood fuels only. With its advanced UltraGrate technology, this appliance is designed and approved for the burning of wood residue pellets with up to 3% ash content. This appliance is NOT approved to burn cardboard, nut hulls, cherry pits, corn, etc. regardless if it is in pellet form. Failure to comply with this restriction will void all warranties and the safety listing of the stove. Consult with your authorized Lennox Hearth Products dealer for more information on approved pellet fuels.
14. FLY ASH BUILD-UP: For all wood pellet fuel-burning heaters, the combustion gases will contain small particles of fly ash. This will vary due to the ash content of the fuel being burned. Over time, the fly ash will collect in the exhaust venting system and restrict the flow of the flue gases. The exhaust venting system should be inspected regularly and cleaned as necessary.
15. SOOT FORMATION: Incomplete combustion, such as occurs during startup, shutdown, or incorrect operation of the room heater will lead to some soot formation which will collect in the exhaust venting system. A precautionary inspection on a regular basis is advisable to determine the necessity of cleaning. The exhaust venting system should be inspected regularly and cleaned as necessary.
16. DISPOSING OF ASHES: Any ashes removed from the pellet stove must be deposited in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, outside of the dwelling 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 been thoroughly cooled.
17. These appliances are designed as supplemental heaters. Therefore, it is advisable to have an alternate heat source when installed in a dwelling.
18. SAVE THESE INSTRUCTIONS.
19. See the listing label on the appliance (or see Safety / Listing Labels on Pages 42 and 43).

CONGRATULATIONS!

When you purchased your new pellet stove, you joined the ranks of thousands of individuals whose answer to their home heating needs, aesthetics, efficiency and our environment. We extend our continued support to help you achieve the maximum benefit and enjoyment available from your new pellet stove.

It is our goal at Lennox Hearth Products to provide you, our valued customer, with an appliance that will ensure you years of trouble free warmth and pleasure.

Thank you for selecting a Whitfield® stove as the answer to your home heating needs.

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This installation and operation manual will help you obtain a safe, efficient, dependable installation for your appliance and vent system.

**PLEASE READ AND UNDERSTAND
THESE INSTRUCTIONS BEFORE
BEGINNING YOUR INSTALLATION**

PACKAGING LIST

The assembled pellet stove and fireplace insert models Profile® 20 FS-2, Profile 30 FS-2 and Profile 30 INS-2 are packaged with an accessory package which contains the following:

- One - Installation and operation instructions manual
- One - Warranty
- One - Power cord
- One - Control board – Profile 30 INS-2 only
- One - Screw, #8 x 1/2” TEK (for mounting control board) – Profile 30 INS-2 only
- One - Grate scraper
- One - Lower trim
- One - Wall thermostat w/ 20 foot roll of wire
- One - Allen Wrench
- Eleven - Screws, #8 (for hopper cover on insert only)
- One - Brush, Heat exchange tube – Profile 30 Series only
- Two - Leveling bolts, 1/4-20 x 3” – Insert only
- One - Fireplace Warning Label (insert only, see **Page 7**)

**Surround Kit (For Profile 30 INS-2 Only)
(Purchased separately, see **Page 41**)
Kit is packaged with:**

- One - Top surround panel
- One - Left surround panel
- One - Right surround panel with door
- One - Left side trim
- One - Right side trim
- One - Top trim
- Two - Corner keys (“L” shaped brackets)

LISTING / TESTING

Listing: The listing laboratory is ITS (Intertek Testing Services) and the listing mark is Warnock Hersey.

Testing: In accordance with the specifications and procedures listed in UL 1482 / ULC S627 and ASTM E1509 for solid fuel room heater, this appliance has been independently tested to UL, ULC and CSA standards. UL 1482 / ULC S627 states requirements for installations as a free-standing room heater, hearth insert for masonry fireplaces listed to UBC 37 or ULC S628, or factory built (zero clearance) fireplaces listed to UL 127 or ULC S610. The safety / listing label is located on an inside hopper surface of the pellet stove. Please read this safety label carefully. It contains important information about installation and operation of this appliance. This appliance is tested and listed for residential installation according to current national and local building codes as:

- A Free-Standing Room Heater – FS
- A (Fireplace) Insert Room Heater – INS
- A Manufactured Home Heater – FS & INS

EPA (Environmental Protection Agency)

Status: EPA Exempt - Pellet appliances that are designed with the combustion air supply exceeding the 35 to 1 (by weight) ratio are exempt from EPA regulations and are “non-affected facilities.”

USING THIS MANUAL

Please read and carefully follow all of the instructions found in this manual. Please pay special attention to the safety instructions provided in this manual. The homeowner's Care and Operation Instructions included here will assure you have many years of dependable and enjoyable service from your appliance.

**PRODUCT IS SUBJECT TO CHANGE
WITHOUT NOTICE**

PLANNING YOUR INSTALLATION

Questions To Ask Local Building Official

A correct installation is critical and imperative for reducing fire hazards and perilous conditions that can arise when wood pellet burning appliances are improperly installed. The installer must follow all of the manufacturers' instructions.

The installation of this appliance must conform to local codes and applicable state and federal requirements. Familiarity with these requirements before installation is essential. Important considerations to discuss with local building officials include:

1. **Applicable codes** (i.e. Uniform Mechanical Code, State or Regional Codes).

Electrical codes:

In USA, NEC, ANSI / NFPA 70 – Latest Edition

In Canada, CSA C22.1 – Latest Edition

Power Supply Requirements – The power cord must be plugged into a standard, 120 Volt, 60 Hz grounded electrical outlet. The approximate power requirement is 362 Watts, and will peak up to 736 Watts for approximately 6 minutes when the self-igniter is operating (it will turn off 2 minutes after flame detection). The power cord must be routed to avoid contact with any of the hot or sharp exterior surface areas of the stove. When installed into a manufactured home, the appliance must be electrically grounded to the steel chassis (see **Page 8, Manufactured Home Requirements**). These requirements must be met unless otherwise specified by state or local authorities.

! WARNING

Electrical grounding instructions: This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug. Do not route power cord under or in front of appliance.

2. Local amendments
3. Is a permit required - cost
You may wish to contact your insurance company to ask if they require this.
4. If outside combustion air is required
5. Rooms where the installation is not allowed

Smoke Detectors

Since there are always several potential sources of fire in any home, we recommend installing smoke detectors. If possible, install the smoke detector in a hallway adjacent to the room (to reduce the possibility of occasional false activation from the heat produced by these appliances). If your local code requires a smoke detector be installed within the same room, you must follow the requirements of your local code. Check with your local building department for requirements in your area.

Installation / Maintenance Standards

National Fire Protection Association – The primary NFPA standard that refers to installation and maintenance of pellet appliances and venting is NFPA 211 – Latest Edition: Chimneys, Fireplaces, Vents, and Solid Fuel appliances.

SELECTING A LOCATION

The design of your home and where you place your stove will determine its value as a source of heat. This type of appliance depends primarily on air circulation (convection) to disperse its heat, and therefore, a central location is often best. There are other practical considerations, which must be considered before a final selection of locations is made.

- Existing Chimneys
- Pellet Fuel Storage
- Aesthetic Considerations
- Roof Design (rafter locations and roof pitch)
- Room Traffic
- Proximity to Combustibles
- Electrical Wiring

The installation of these appliances will require some research. Once your options are determined, consult with your local building department who will be able to give you the necessary installation requirements for your area (Is a building permit required? Rooms where installation may not be allowed, etc.).

! CAUTION

These appliances are very heavy. The use of a heavy duty escalara (stair step hand truck) is recommended for lifting the appliance.

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

! WARNING

Check all local building and safety codes before installation. The installation instructions and appropriate code requirements must be followed exactly and without compromise. Alterations to the stove are not allowed. Do not connect the stove to a chimney system serving another stove, appliance, or any air distribution duct. Failure to follow these instructions will void the manufacturers warranty.

FLOOR PROTECTION

Floor Protection - Profile® 20 FS-2

This appliance requires noncombustible floor protection. If the floor protection is to be stone, tile, brick, etc., it must be mortared or grouted to form a continuous non-combustible surface. If a chimney connector extends horizontally over the floor, the protection must cover the floor under the connector and at least 2" to either side.

A noncombustible floor protector must fully cover the area beneath the appliance and extend 6" to the front, 6" to the sides, and up to 6" from the back as illustrated in **Figure 1**.

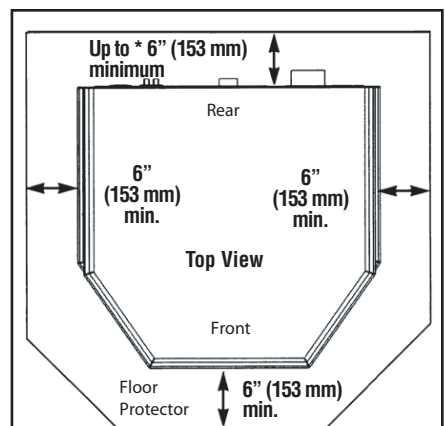


Figure 1 - Floor Protection, Freestanding

***Note:** When installed at clearances less than 6", the floor protection is only required to extend to the wall.

Floor Protection - Profile® 30 FS-2

The floor protector must meet or exceed the minimum thermal requirements as defined on this page (see *Floor Protection / Hearth Extension Using Alternate Material As Floor Protector*). If the floor protection is to be stone, tile, brick, etc., it must be mortared or grouted to form a continuous noncombustible surface. If a chimney connector extends horizontally over the floor, protection must also cover the floor under the connector and at least 2" (51 mm) to either side.

The floor protector must fully cover the area beneath the appliance and extend 6" to the front, 6" to the sides, and 6" from the back as shown in **Figure 1** (**Note:** When installed at clearances less than 6", the floor protection is only required to extend to the wall).

Floor Protection / Hearth Extension Using Alternate Material As Floor Protector - All Models

Note: Also see *Floor Protection* above for free-standing models and *Hearth Requirements*, **Page 7** for the fireplace insert model.

The hearth pad or alternate material used as a floor/hearth protector must be constructed of a durable noncombustible material having an equal or better thermal conductivity value (lower k value) of $k = .84$ BTU / IN FT² HR °F or a thermal resistance that equals or exceeds $r = 1.19$ HR °F FT² IN/BTU with a minimum thickness of 3/8". With these values, determine the minimum thickness of the alternate material required using the formula(s) and the table shown here (see **Table 1**).

Note: Any noncombustible material having a minimum thickness of 3/8" (10 mm) whose k value is less than .84 or whose r value is more than 1.19 is acceptable. If the alternate material used has a higher k value or lower r value will require a greater thickness of the material used. In some cases, if the k value is less or the r value higher, a thinner material may be used.

Methods of determining floor protection equivalents:

To determine the thickness required for the alternate material when either the "k" value or "r" value is known, use either the **k formula** or **r formula**.

Example: If Micore 300 is to be used for the floor protection, how thick must this material be?

k_M = k value per inch of **alternate** material

r_M = r value per inch of **alternate** material

T_M = minimum thickness required for **alternate** material

T_S = standard thickness of the **alternate** material

k_L = k value per inch of **listed** material

r_L = r value per inch of **listed** material

T_L = minimum thickness of **listed** material

Note: An asterisk "*" indicates, it is a value taken from **Table 1**.

Using the k formula:

**** If the hearth extension material(s) that is intended to be used is NOT listed on Table 1, the material can still be used if the material(s) is noncombustible. However, the manufacturer of the material must provide either the listed k-value per inch or r-value per inch with listed thickness so that the minimum thickness required for the hearth can be calculated (per instructions on this page and/or as specified in the NFI Certification Manuals).**

Note: Also see *NFI (National Fireplace Institute) Certification Manuals showing other acceptable calculation methods and acceptable alternate materials which can be used.*

$$\begin{aligned} \text{Minimum thickness of alternate material } (T_M) &= \frac{\text{k-value (per Inch) of alternate material } (k_M)}{\text{k-value (per inch) of listed material } (k_L)} \times \text{Specified min. thickness of listed material } (T_L) \\ T_M \text{ (inches)} &= \frac{k_M}{*.84} \times T_L \\ T_M \text{ (inches)} &= \frac{*.46}{*.84} \times .375" \\ .205 \text{ (inches)} &= .547 \times .375" \end{aligned}$$

Answer - The minimum required thickness of the Micore 300 is .205, "therefore round up to nearest standard thickness available which is 1/4."

Using the r formula:

$$\begin{aligned} \text{Minimum thickness of alternate material } (T_M) &= \frac{\text{r-value (per Inch) of listed material } (r_L)}{\text{r-value (per inch) of alternate material } (r_M)} \times \text{Specified min. thickness of listed material } (T_L) \\ T_M \text{ (inches)} &= \frac{r_L}{r_M} \times T_L \\ T_M \text{ (inches)} &= \frac{1.19}{*2.17} \times .375" \\ .205 \text{ (inches)} &= .548 \times .375" \end{aligned}$$

Answer - The minimum required thickness of the Micore 300 is .205, "therefore round up to nearest standard thickness available which is 1/4."

Listed Material			
	k (per inch)	r (per inch)	Listed Min. Thickness
Listed Material	.84 k_L	1.19 r_L	3/8" (.375") T_L
** Approved Alternate Materials for Floor/Hearth Protection			
Alternative Materials	Thermal Values		Minimum Thickness (rounded to nearest 1/8 inch)
	k (per inch) k_M	r (per inch) r_M	Min. Thickness T_M
Kaowool M Board	.47	2.13	.21" (1/4")
Micore 160™ U.S. Gypsum	.35	2.86	.16" (1/8")
Micore 300™ U.S. Gypsum	.46	2.17	.21" (1/4")
Durock™ Cement Board U.S. Gypsum	1.92	.52	.86" (7/8")
Hardibacker™	1.95	.513	.87" (7/8")
Hardibacker 500™	2.30	.435	1.03" (1")
Cultured Stone Hearth-stone™	2.82	.355	1.26" (1-1/4")
Wonderboard	3.23	.31	1.44" (1-1/2")
Super Firetemp M Johns-Manville	.61	1.64	.27" (1/4")
Super Firetemp L Johns-Manville	.54	1.85	.24" (1/4")
Face brick	9.00	.111	4.02" (4")
Common brick	5.00	.20	2.23" (2-1/4")
Cement mortar	5.00	.20	2.23" (2-1/4")
Ceramic tile	12.5	.08	5.58" (5-5/8")
Marble	~11	~.09	4.91" (4-7/8")

Table 1

CLEARANCES - FREE-STANDING MODELS

Models: Profile® 20 FS-2 and Profile 30 FS-2

Standard residential or manufactured home installation. These appliances require the following minimum clearances to combustibles:

Profile 20 FS-2	Horizontal Flue – Directly Through Wall	Interior Vertical Flue
A - Sidewall to unit	• 4" (102 mm)	• 4" (102 mm)
B - Backwall to unit	* 2" (51 mm)	9" (229 mm)
C - Sidewall to unit Corner	* 2" (51 mm)	* 2" (51 mm)
D - Max. Depth of Alcove	• 24" (610 mm)	• 24" (610 mm)
E - Flue to Wall	3" (77 mm)	3" (77 mm)

- Measured to fuel hopper lid in alcove.
- Minimum Alcove Measurements - Height 48" (1220 mm) x Width 31" (788 mm) x Maximum Depth 16" (406 mm)

Table 2 - Minimum Clearances To Combustibles

Profile 30 FS-2	Horizontal Flue – Directly Through Wall	Interior Vertical Flue
A - Sidewall to unit	• 6" (153 mm)	• 6" (153 mm)
B - Backwall to unit	* 2" (51 mm)	9" (229 mm)
C - Sidewall to unit Corner	* 2" (51 mm)	* 2" (51 mm)
D - Max. Depth of Alcove	• 16" (407 mm)	• 16" (407 mm)
E - Flue to Wall	3" (77 mm)	3" (77 mm)

- Measured to fuel hopper lid in alcove.
- Minimum Alcove Measurements - Height 48" (1220 mm) x Width 31" (788 mm) x Maximum Depth 16" (406 mm)

Table 3 - Minimum Clearances To Combustibles

IMPORTANT

- Minimum clearances specified may not allow for ease of operation and maintenance (please take this in to account when planning the installation). If installed to the minimum clearances, removal of the appliance may be necessary for servicing.
- Recommended clearance zone from the front of the appliance to combustibles is 4 feet minimum.
- The certified back wall clearance as shown on the listing label is 1" (see Safety / Listing Label) but for proper hopper lid operation in corner and parallel installations a 2" clearance is required.

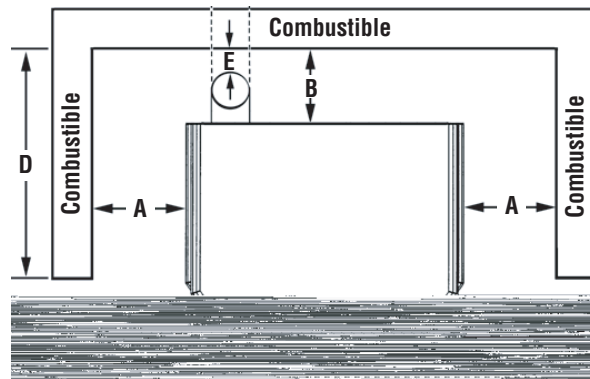


Figure 2 - Rear Wall or Alcove, Profile 20 FS-2 and Profile 30 FS-2

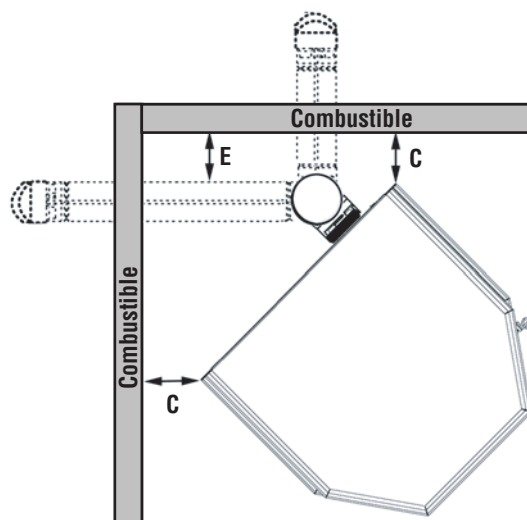


Figure 3 - Corner, Profile 20 FS-2

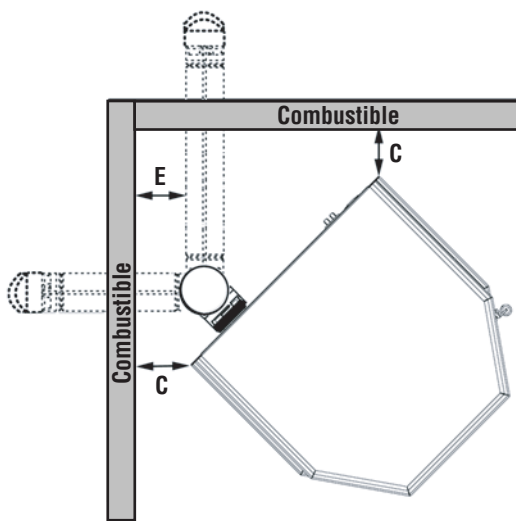


Figure 4 - Corner, Profile 30 FS-2

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

CLEARANCES AND HEARTH PROTECTION - INSERT

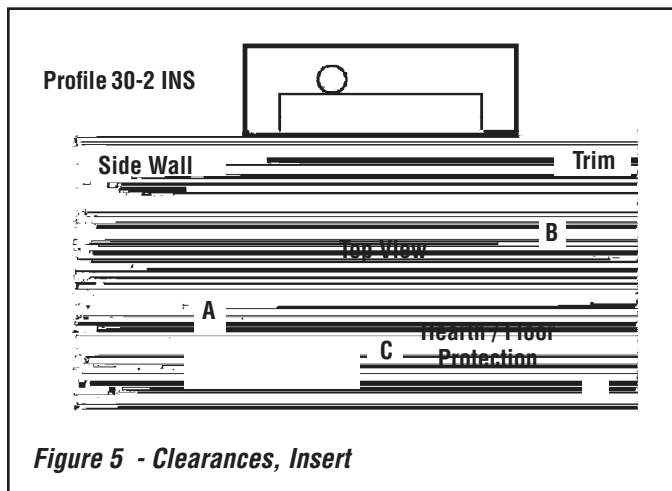
Model Profile® 30 INS-2

In the USA and Canada, the area below and directly in front of the Profile 30 INS-2 fireplace insert must be an approved fireplace hearth or protected by a non-combustible hearth / floor protector with a minimum thickness of 3/8" which has a thermal conductivity of k (per inch) = .84 or lower value (better thermal protection) or resistance of r (per inch) = 1.19 or higher value. See *Floor Protection / Hearth Extension Using Alternate Material As Floor Protector* on **Page 5** which explains minimum thermal protection requirements.

The protected area must extend 6" to the front of the face of the Profile 30 INS-2.

Profile 30 INS-2	
A - Insert to side wall	6" (153 mm)
B - Insert to side trim	1" (26 mm)
C - Hearth extension	6" (153 mm)
D - Insert to mantel	18" (458 mm)
E - Insert to top trim	1" (26 mm)

Table 4 - Minimum Clearances To Combustibles

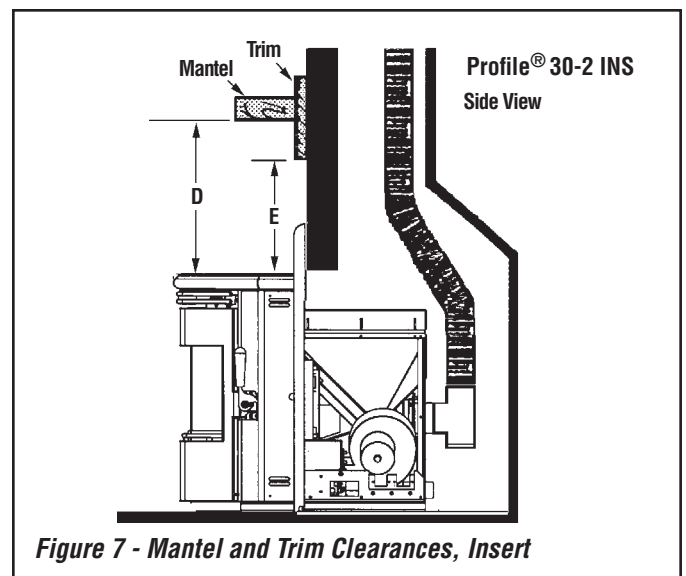
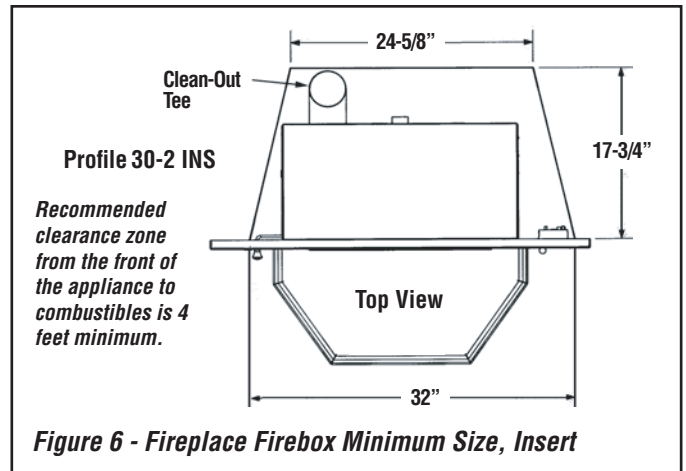


Masonry And Factory Built Fireplaces – Profile 30 INS-2

The model Profile 30 INS-2 is approved for installation into a solid fuel burning fireplace, either a masonry fireplace (built to UBC 37 or ULC S628 standards) or an approved factory-built / zero clearance fireplace (built to UL 127 or ULC S610 standards). See **Pages 17 and 18** for additional information on venting.

Minimum Fireplace Firebox Size

Height	20-1/8" (512 mm)
Width @ Front.....	32" (814 mm)
(extends back 1-1/2")	
Width @ back.....	24-5/8" (626 mm)
Depth	17-3/4" (452 mm)



FIREPLACE WARNING LABEL

(provided in accessory package)

When installing the Profile 30 INS-2 into a factory built fireplace or heatform, the air flow within and around the fireplace shall not be altered by the installation of the insert (i.e. **DO NOT BLOCK** louvers or cooling air inlet or outlet ports, circulating air chambers in a steel fireplace liner or metal heat circulator). The factory built firebox must accept the insert without modification other than removing bolted or screwed together pieces such as smoke shelf / deflectors, ash lips, screen or door tracks and damper assemblies. Any fireplace component, which is removed, must be retained so they can be reinstalled to restore the fireplace to its original operating condition. The removal of any part must not alter the integrity of the outer shell of the pre-engineered fireplace cabinet in any way. A Warning Label (provided with appliance) must be installed in the fireplace firebox so that it shall be visible upon removal of the fireplace insert (Warning Label shown in gray above). Use RTV high Temperature Silicone as an adhesive to affix the warning label.

IF THIS FIREPLACE INSERT IS BEING INSTALLED INTO A FACTORY BUILT FIREPLACE, THIS LABEL MUST BE PERMANENTLY ATTACHED TO THE FIREBOX OF THE FACTORY BUILT FIREPLACE.

WARNING

THIS FIREPLACE HAS BEEN ALTERED TO ACCOMMODATE A FIREPLACE INSERT AND SHOULD BE INSPECTED BY A QUALIFIED PERSON PRIOR TO RE-USE AS A CONVENTIONAL FIREPLACE.

CAUTION

The fireplace in which the Profile 30 INS-2 is to be installed must be thoroughly cleaned if it has been used to burn wood or synthetic logs. Have the chimney and all inside surfaces of the fireplace brushed and vacuumed so that no soot, embers, or loose combustion deposits can be drawn into the heat circulation blower and blown into the living area. If any portion of the chimney system shows signs of structural or mechanical weaknesses, such as: cracks, leaky joints, corroded or warped surfaces, the faulty portion must be repaired or replaced prior to installing this appliance.

MANUFACTURED HOME INSTALLATION

Free-Standing Models – Profile 20 FS-2 and Profile 30 FS-2

In addition to the standard installation instructions, the following instructions may be required by local, state or federal building codes:

- The stove must be permanently bolted to the floor.
- An outside air inlet must be provided for combustion and be unrestricted while unit is in use. Use a galvanized or stainless steel pipe for the duct (the outside air inlet on the stove is 1-5/8" diameter).
- Stove must be permanently electrically grounded to the steel chassis of the home. The location selected for ground attachment to the stove must be dedicated for this purpose. Grounding must comply with NFPA-70 standards, CSA C22.1 in Canada, as well as any local codes.
- See **Pages 10 through 16** for additional information on venting requirements.
- Do not install appliance in a sleeping room.
- The structural integrity of the manufactured home floor, walls, ceiling and roof must be maintained.

Manufactured Home Exhaust Vent Pipe Installation Guidelines

Use only "PL" pellet vent pipe listed to UL 641 and ULC S609. The pipe should extend at least 3 feet above the part of the roof through which it passes. The top of the pipe should be at least 2 feet above the highest required elevation of any part of the manufactured home within 10 feet of the pipe (see **Page 12, Manufactured Home Chimney Height Requirements**).

If the exhaust vent exits the manufactured home at a location other than the roof, and exits at a point 7 feet or less above the ground level on which the manufactured home is positioned, a guard or method of enclosing the pipe shall be provided at the point of exit for a height of up to 7 feet. The openings, if any, in this guard shall not allow a 3/4" rod to pass through. A 1/2" rod could pass through but should not be able to touch the pipe when inserted through the opening a distance of 4 inches.

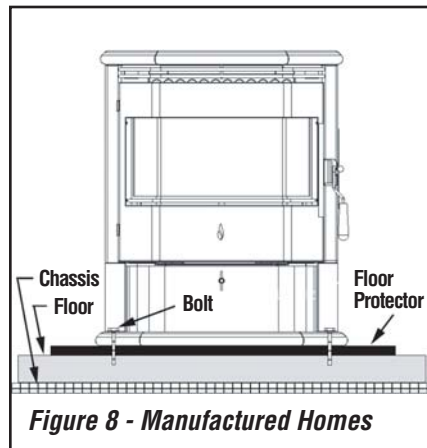
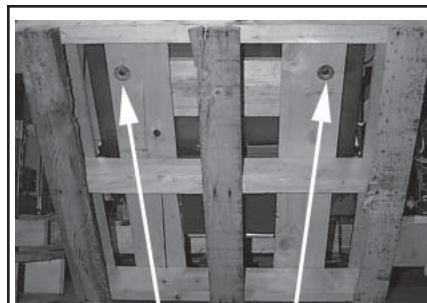


Figure 8 - Manufactured Homes

INSTALLATION

Removing Appliance From Pallet

1. After removing the packaging from the stove, lift the hopper lid, and remove all prepackaged items that were shipped in the hopper. Next, open the stove door and remove all prepackaged items.
2. Using a 7/16" socket or open end wrench, remove the bolts which secure stove to pallet. The bolts are located on the underside of the wooden pallet.



Remove the three bolts from underneath the pallet.

Figure 9 - Removing from Pallet

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

Installation Check List

It is strongly recommended that you have an authorized Lennox Hearth Products dealer install your stove. If you install your stove yourself, you should review your installation plan with an authorized Lennox Hearth Products dealer.

Check list:

Check off each item as you proceed with the installation process.

- Read the ENTIRE stove installation section first
- Read the *Insert* or *Free-Standing* section (whichever applies).
- Determine the appropriate measurements and locations for your installation.
- Follow the installation directions in this manual that are applicable to your model of free-standing stove or fireplace insert.
- Be sure to prefit all items before you install, fasten, or set up the appliance permanently.

Prior to lighting your appliance:

- Review the safety precautions section.
- Review the pellet *FUEL* section.
- Review and follow the Operating Instructions.
- Plug power cord connector into corresponding connector on the back of appliance (see **Figures 12 through 16** on **Page 10** showing connector locations).

Note: Profile 30 INS-2 – Route power cord behind side surround panel.

After you have begun operation of your appliance:

- Review the routine cleaning / maintenance information.
- Enjoy the warmth from your new Lennox Hearth Products pellet appliance!

It is important to level the appliance. When installing the insert model, in some installations such as a recessed firebox floor (if the existing fireplace floor is lower than the hearth), install the 2 leveling bolts (1/4-20 x 3" long) into the threaded holes at the rear base of the Profile 30 INS-2. Adjust bolts until appliance is level.

Installing Surround Assembly - Profile® 30 INS-2

(to be done after venting system is installed) This fireplace insert requires surround panels (a set of metal panels that enclose the fireplace opening when fitted together). There is also a trim assembly that frames the surround assembly to give it an attractive finished appearance. Put the surround assembly together according to the following instructions (ref. **Page 41**).

1. Remove panels and trim brackets from package. Be careful not to discard the "L" shaped trim brackets which are attached to the surround wrapping.
2. Open the hopper lid of the insert so it is out of the way for when panels are installed.
3. Install the control board onto the right side panel (with door) using the TEK screw (#8 x 1/2") provided.
4. Position the power cord so that it will be behind either the right or left side surround panel when they are installed.
5. Install right side surround panel onto right side of the insert body by sliding the 2 flanges on side of panel into corresponding slots on the insert.
6. Connect the wiring harness from the insert into corresponding connector on control board.
7. Locate damper rod on left side of the insert. Rotate angled arm of rod so it is pointing down. Remove damper knob and set aside.
8. Install the left-hand panel onto the left side of the insert body by sliding the 2 flanges on side of panel into corresponding slots on the insert.
9. Reach behind left surround panel and rotate damper arm so that end is inserted into the upper right hand slot of left surround panel (see **Figure 11**).
10. Reinstall damper knob by threading it onto end of damper rod.
11. Set the top surround panel in place over the two side panels. Position the 2 tabs on bottom of top surround panel so they slide into corresponding clips on the insert. Connect the top surround panel to the side panels by pressing pins from side panels into corresponding holes on top panel.
12. Remove the surround trim from its packaging. Assemble it together using the corner keys ("L" shaped brackets) provided. Slide assembled trim over the top surround panel and slide it down over the side panels.
13. Push the Profile 30 INS-2 back into place so the surround assembly is flush with the face of the hearth.

Damper Location, Installation And Adjustment

Damper Air Control Handle - Models: Profile 20 FS-2 and Profile 30 FS-2

(located on right side panel on model Profile 20 FS-2 and on the left side panel on Profile 30 FS-2)

Adjustment Procedure- Models: Profile 20 FS-2 and Profile 30 FS-2

Loosen setscrew on set collar (see **Figure 10**), then adjust in 1/4" increments until optimum combustion air flow is achieved. For less air push in and for more air pull out. After adjustment, position set collar against side panel and tighten setscrew.

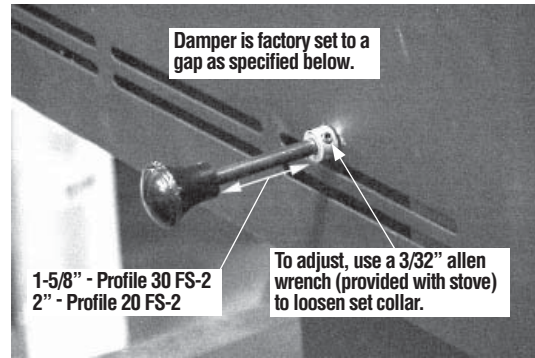


Figure 10 - Damper Adjustment, Free-Standing Models

Damper Installation - Model: Profile 30 INS-2

Install damper rod knob as illustrated (see **Figure 11**) and explained on this page (see *Installing Surround Assembly – Profile 30 INS-2*).

Adjustment Procedure - Model: Profile 30 INS-2

The damper knob should be positioned in the center of the oblong slot for the average installation (see **Figure 11**). If more or less air is needed, then adjust in 1/4" increments until optimum combustion air flow is achieved (see *Damper Adjustment Guidelines* on **Page 21**).

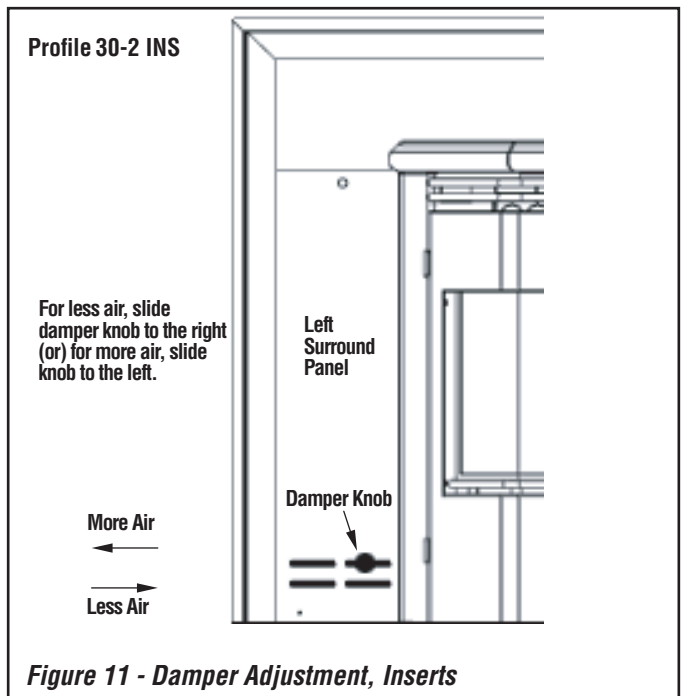


Figure 11 - Damper Adjustment, Inserts

Hopper Cover Installation Model: Profile 30 INS-2

Install the hopper cover over the hopper using the 11 screws provided as follows:

- 1) Align the 11 slots on the hopper cover with the corresponding 11 holes on the back and sides of the hopper.
- 2) Loosely install the 11 screws through the slots into the corresponding holes in hopper (screws are provided in the accessory package).
- 3) Position the hopper cover to the highest position that will allow for proper fit into the fireplace opening, then tighten screws.

Thermostat Installation:

Note: Always Disconnect Power Before Performing The Thermostat Installation.

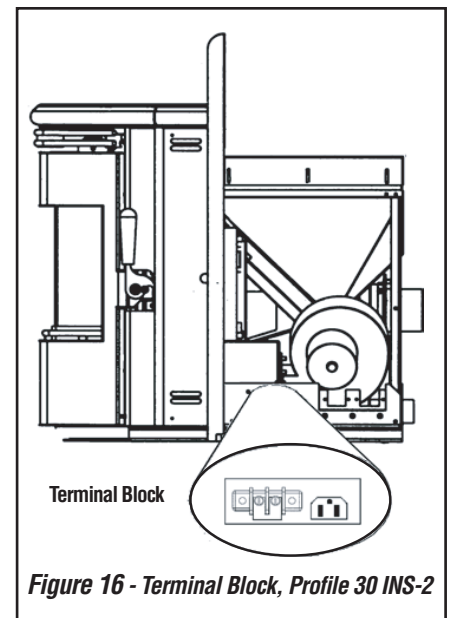
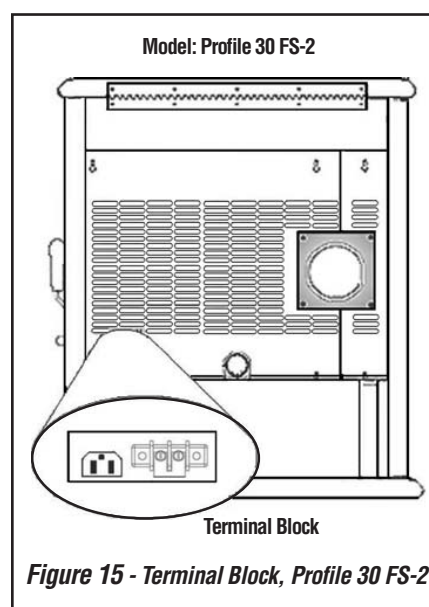
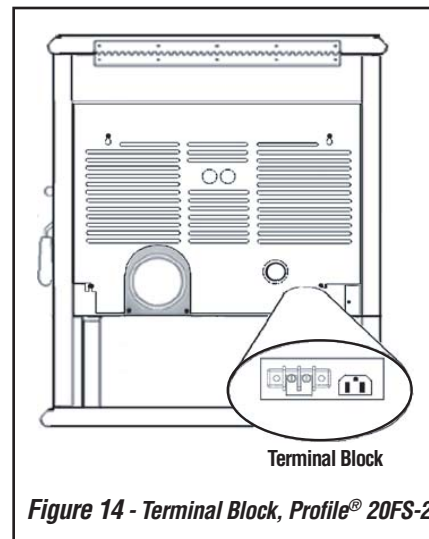
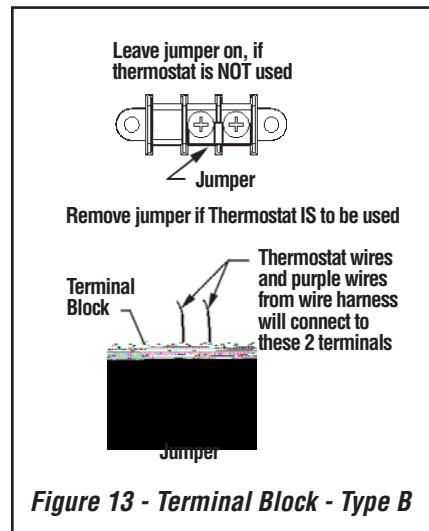
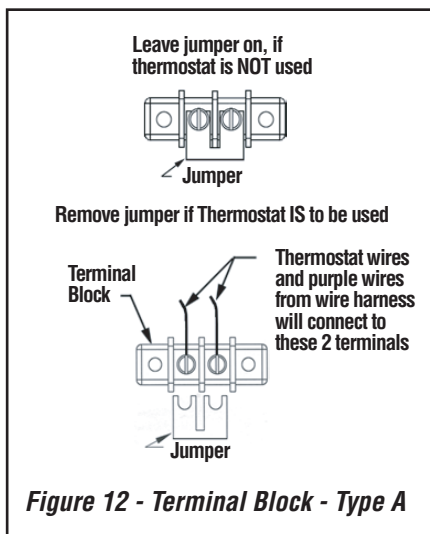
A 24 volt wall thermostat and 20 feet of 18-gage thermostat wire is included in the accessory package. It is recommended that the thermostat and thermostat wire be installed by an authorized Lennox Hearth Products dealer.

Installation Steps:

1. Unplug stove power cord from the wall outlet.
2. Locate the thermostat terminal block (see **Figures 12 through 16**).
3. Loosen the two terminal screws on the terminal block and remove the jumper.
4. Connect the two wires from your thermostat to the terminals (one per terminal). Ensure that the purple wires from the harness remain connected to the terminal block and tighten the terminal screws. Make sure the wires are firmly connected to the thermostat.
5. Plug in the stove and you are ready to operate with your thermostat!

Note: See Wiring Diagram on Page 32.

IMPORTANT: IF THE WALL THERMOSTAT PROVIDED IS NOT USED, THE JUMPER IS REQUIRED FOR THE STOVE TO OPERATE.



VENTING REQUIREMENTS

It is recommended that only an authorized dealer install your pellet stove. The specified installation requirements must be followed to ensure conformity with both the safety listing of the appliance and local building codes. All clearances, installation instructions and precautions specified by the vent manufacturer must be followed.

Selecting a Location (Free-Standing Models)

Review the appliance clearance requirements before installing the venting system (see **Page 6**). Position the appliance far enough away from walls to allow adequate room for servicing. Choose the appliance location with the least amount of interference with the house framing, plumbing, wiring, etc.

Preferred Vent Configuration

For the best performance, we recommend a vent run design which runs vertically and terminates above the roof line. This design will allow natural draft to improve the flow of flue gases and will aid in combustion and stove performance.

Type of Pipe

This stove requires type "PL" vent pipe (pellet vent pipe, sometimes referred to as "L-Vent pellet vent"), listed to UL 641 or ULCS609. Connect the pellet vent pipe or the "tee" to the flue collar using a minimum of three screws and seal as specified in "Pipe / Liner Joint Requirements" on **Page 11**. Do not use class B gas chimney or single wall chimney as a substitute.

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

Size of Pipe

These pellet appliances are approved for use with the following vent sizes: 3" (75 mm) standard, or 4" (100 mm), see **Page 13** - for determining correct size vent). When 4" pipe is used: for horizontal vent installations use a 3" (75 mm) to 4" (100 mm) adapter - available from vent manufacturer. For vertical installations use a 3" (75 mm) to 4" (100 mm) "tee" - available from vent manufacturer.

Offsets

In every installation, a single or double clean-out "tee" is recommended for every ninety-degree offset (this tee will help collect ash residue and will allow for routine cleaning without the need to disconnect sections of pipe).

Note: Offsets and horizontal runs accumulate fly ash and soot which reduces the exhaust flow and performance of the stove.

- **Total Offsets in venting system should not exceed 270° total in direction change.**
- **Horizontal Runs - The maximum total horizontal run must not exceed 10 feet (3.1 meters).**
- **Horizontal run of pipe requires 1/4" (7 mm) rise per foot.**

Pipe Clearances / Requirements

See pipe manufacturers instructions for installation of venting components and clearances. Follow pipe manufacturers installation precautions for passing pipe through a combustible wall or ceiling (i.e. use an approved thimble).

Note: Pellet vent pipe requires 3" (75 mm) clearance from outside of pipe unless otherwise specified by vent manufacturer - all diameters: 3" (75 mm) and 4" (100 mm). A support bracket must be installed every 4 feet (1.2 m) of pellet vent pipe on the exterior wall of the house unless otherwise specified by vent manufacturer.

Pipe / Liner Joint Requirements

All pipe joints must be secured with a minimum of 3 screws. ALL horizontal joints must be sealed gas-tight (air tight, sealed connection). Use RTV high temperature silicone or Interam to provide a complete seal at the flue collar and on all joints.

Connection to Masonry Chimney through a Wall (Free-Standing Models)

Be sure to verify the construction of a masonry chimney, as it may have combustible framing.

Approved liner when relining Masonry or Factory Built Fireplaces is 2100HT (degree F.) liner listed to UL 1777 or ULC S635.

Connection to an Existing Class A Chimney (Free-Standing Models)

A chimney adapter can be used to make the connection from 3" (75 mm) or 4" (100 mm) pellet vent pipe (listed to UL 641 or ULC S609) to existing UL chimney system. Verify with the pipe manufacturer that your pipe brands will interconnect.

Horizontal Vent Installations

On all horizontal vent installations (short, horizontal runs with no vertical pipe); care should be taken when choosing a location for terminating the vent. It is not recommended to directly vent the exhaust on the prevailing wind side of the house. It is recommended that when an appliance is vented directly through a wall, a minimum of 8 feet (2.5 m) of vertical pipe should be installed to create some natural draft. This will reduce the possibility of smoke or odor entering the dwelling during appliance shutdown or loss of power.

Vent Termination

Do not terminate vent in an enclosed or semienclosed area such as: carports, garage, attic, crawl space, under a deck, porch, narrow walkway, closely fenced area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway etc.

Vent surfaces can get hot enough to cause burns if touched. Adults should supervise children when they are in the area of a hot stove. Non-combustible shielding or guards may be required.

Termination Cap: The termination of the outside chimney of the pellet stove shall be located in accordance with the following:

- A. Higher than 3 feet (.92 meters) above any forced air inlet (air conditioner, etc.) located within 10 feet (3 meters).

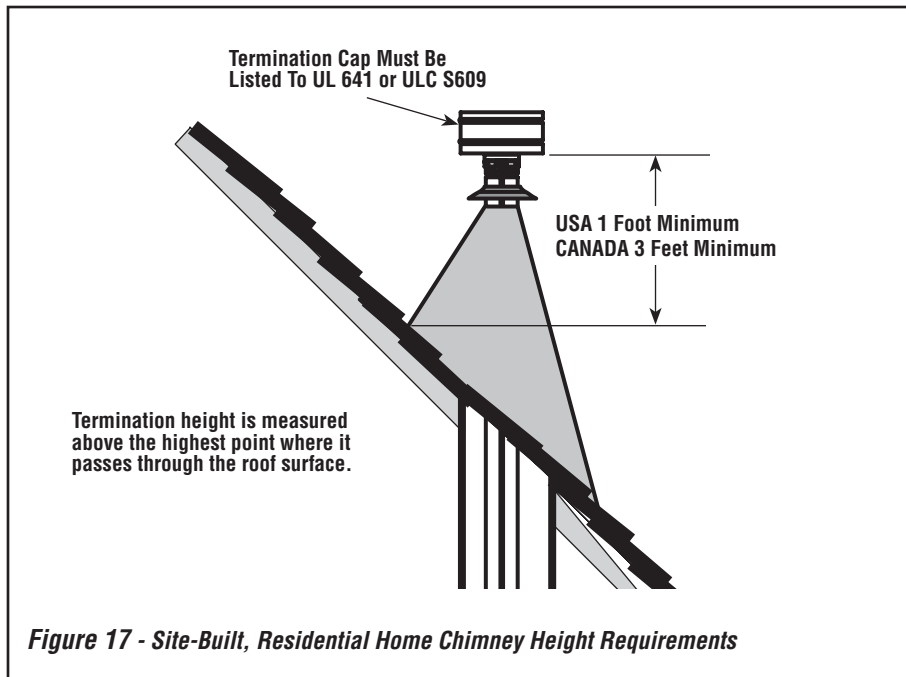
- B. Not less than 4 feet (1.2 meters) below, 4 feet (1.2 meters) horizontally from or 1 foot (3.1 meters) above any gravity air inlet (door, window, etc.) which flue gases could reenter the dwelling.
- C. Not less than 2 feet (.6 meters) from combustible materials such as an adjacent buildings, fences, protruding parts of the structure, roof overhang, plants and shrubs, etc. and not less than 7 feet (2.1 meters) above grade when located adjacent to the public sidewalks (access). The final termination of the exhaust system must be configured so that flue gases do not jeopardize the safety of people passing by, overheat combustible portions of nearby structures or enter the dwelling.
- D. Not less than 3 feet (.92 meters) below an eave (maximum overhang of 3 feet (.92 meters) or any construction that projects more than 2 inches (51 mm) from the plane of the wall.
- E. The distance from the bottom of termination to grade is 12 inches (305 mm) minimum. This is conditional upon plants and nature of grade surface: Be careful to choose a location for the vent termination which does not expose people or shrubs to high heat from the exhaust gases. The exhaust gases are not hot enough to ignite grass, plants and shrubs located in the vicinity of the termination although they should be a minimum of 3 feet (.92 meters) away. The grade surface under the termination must not be a lawn.
- F. Since sparks may escape from the exhaust pipe of any stove, use caution when positioning the vent pipe. Refer to pipe manufacturer's instructions when installing and terminating the exhaust. The vent pipe should be horizontal and never run the pipe in a downward direction (recommend a 1/4 inch [7 mm] rise per foot horizontal).

Notes:

- *It is not recommended to terminate exhaust vent on the prevailing wind side of the house.*
- *It is not recommended using a termination cap with a screen (fly ash can collect in a screen resulting in blockage).*

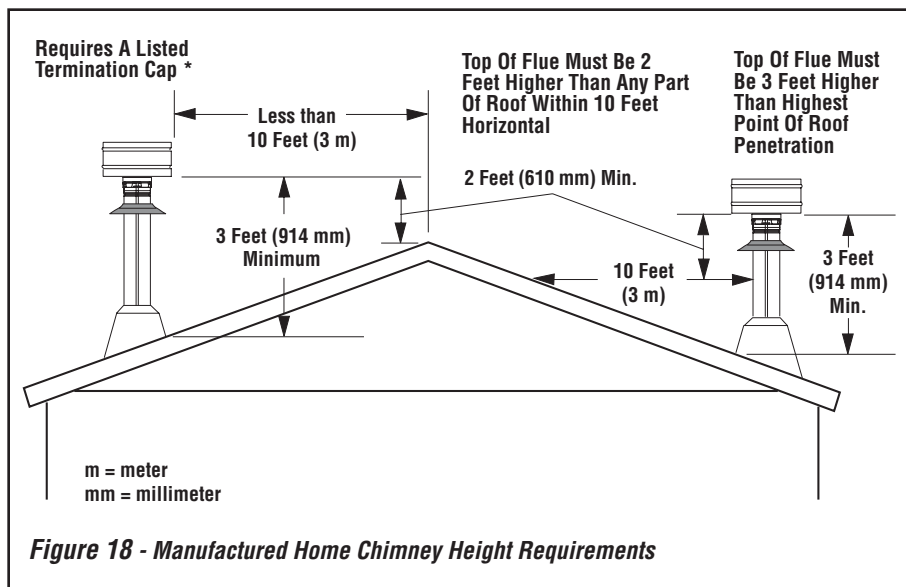
Chimney Height Requirements - Site-Built Residential Home

The vent termination height required is - **USA, 1-foot minimum; Canada, 3-foot minimum** above the roof penetration point as illustrated below (Ref. USA - National Standard, NFPA 211 and Canada National Standard CSA B365-01. Check with your local building official for additional requirements for your area.



Chimney Height Requirements - Manufactured Homes

The chimney must extend 3 feet (.92 meters) above the level of roof penetration and a minimum of 2 feet (.61 meters) higher than any roof surface within 10 feet (3 meters) (see below). Check with your local building officials for additional requirements for your area.



To pass inspection in nearly any jurisdiction, the chimney must meet both safety and exhaust flow requirements. The (3 feet by) 2 feet by 10 feet rule applies to both masonry and factory built chimneys

* Ref. NFPA 211, Vents installed with a listed cap shall terminate in accordance with the terms of the cap's listings.

Determining Size Of Pipe To Install

To determine what diameter pipe to use in an installation (3" or 4"), first find the "equivalent pipe length" using the following guidelines, then plot this Figure and the altitude on the chart.

Fill out the installation chart, and calculate your total equivalent pipe length. After you have the total equivalent pipe length, use the Pipe Selection Chart below to determine if your installation requires 3" or 4" exhaust pipe.

Installation Chart

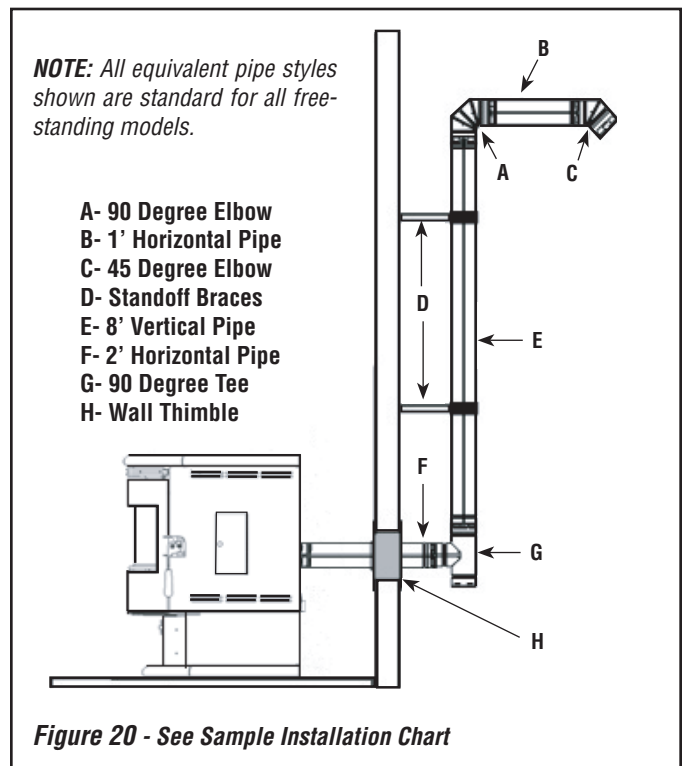
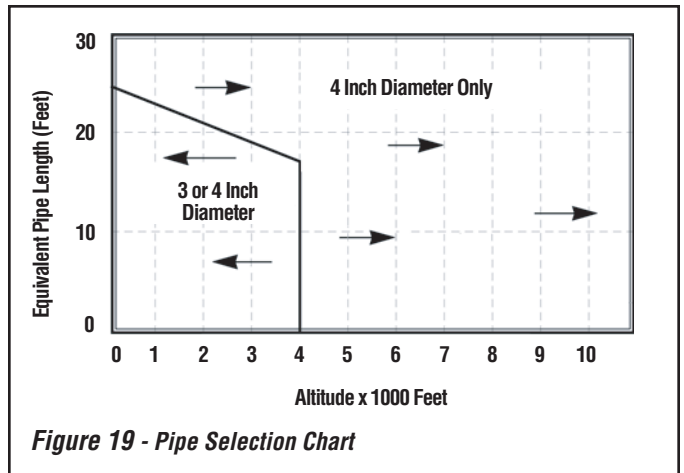
Type of Pipe	# of Elbows or Feet of pipe		Equivalent Feet	Total Equivalent Feet
90° Elbows / Tee (A & G)		x	5 Feet (1.5 meters)	
45° Elbows (C)		x	3 Feet (1 meters)	
Horizontal (B & F)		x	1 foot (.3 meters)	
Vertical(E)		x	.5 Feet (.15 meters)	

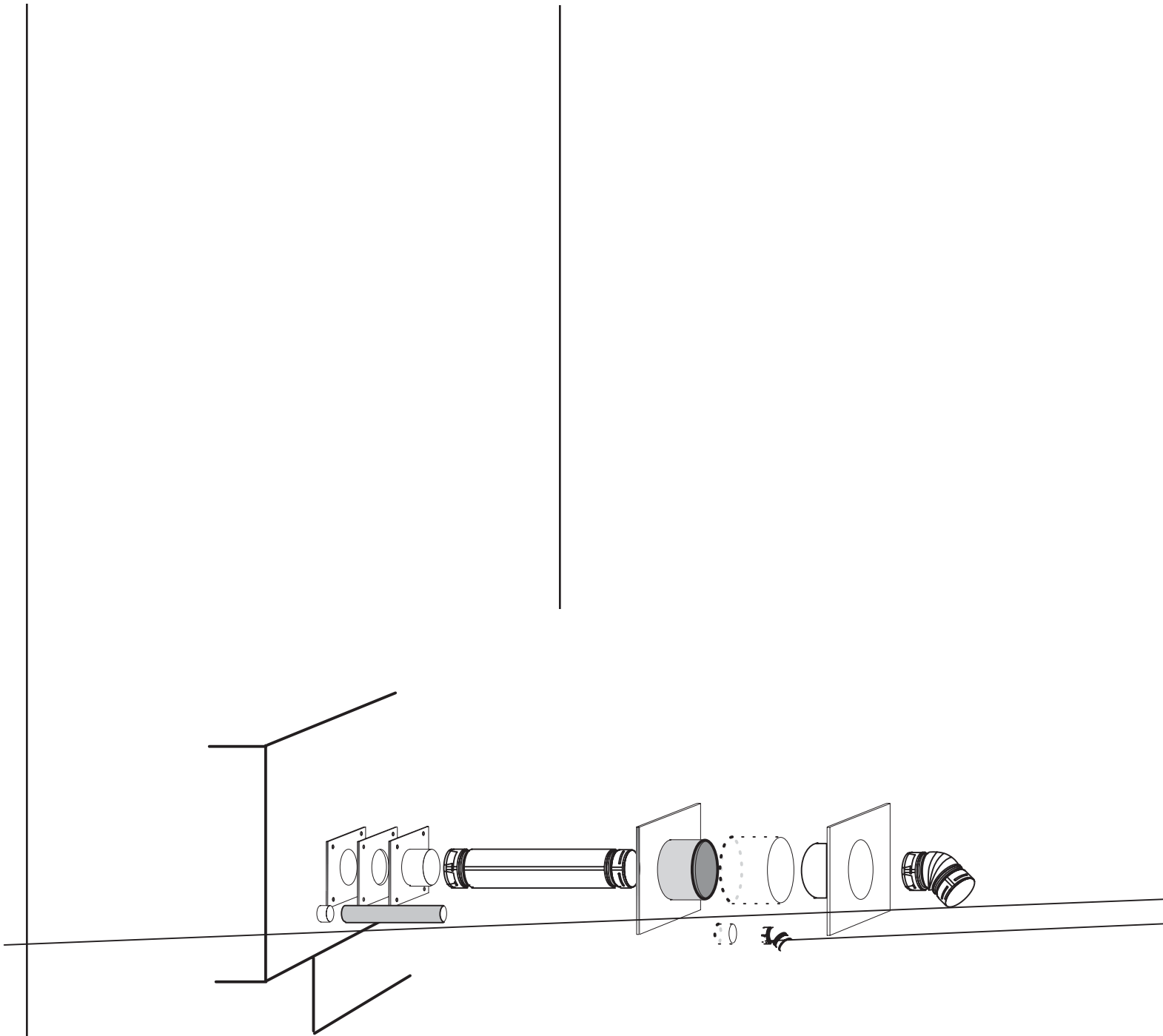
Table 5

Sample Installation Chart

Type of Pipe	# of Elbows or Feet of pipe		Equivalent Feet	Total Equivalent Feet
90° Elbows / Tee (A & G)	2	x	5 Feet (1.5 meters)	10 Feet (3 meters)
45° Elbows (C)	1	x	3 Feet (1 meter)	3 Feet (1 meters)
Horizontal (B & F)	3	x	1 foot (.3 meters)	3 Feet (1 meter)
Vertical(E)	8	x	.5 Feet (.15 meters)	4 Feet (1.2 meters)

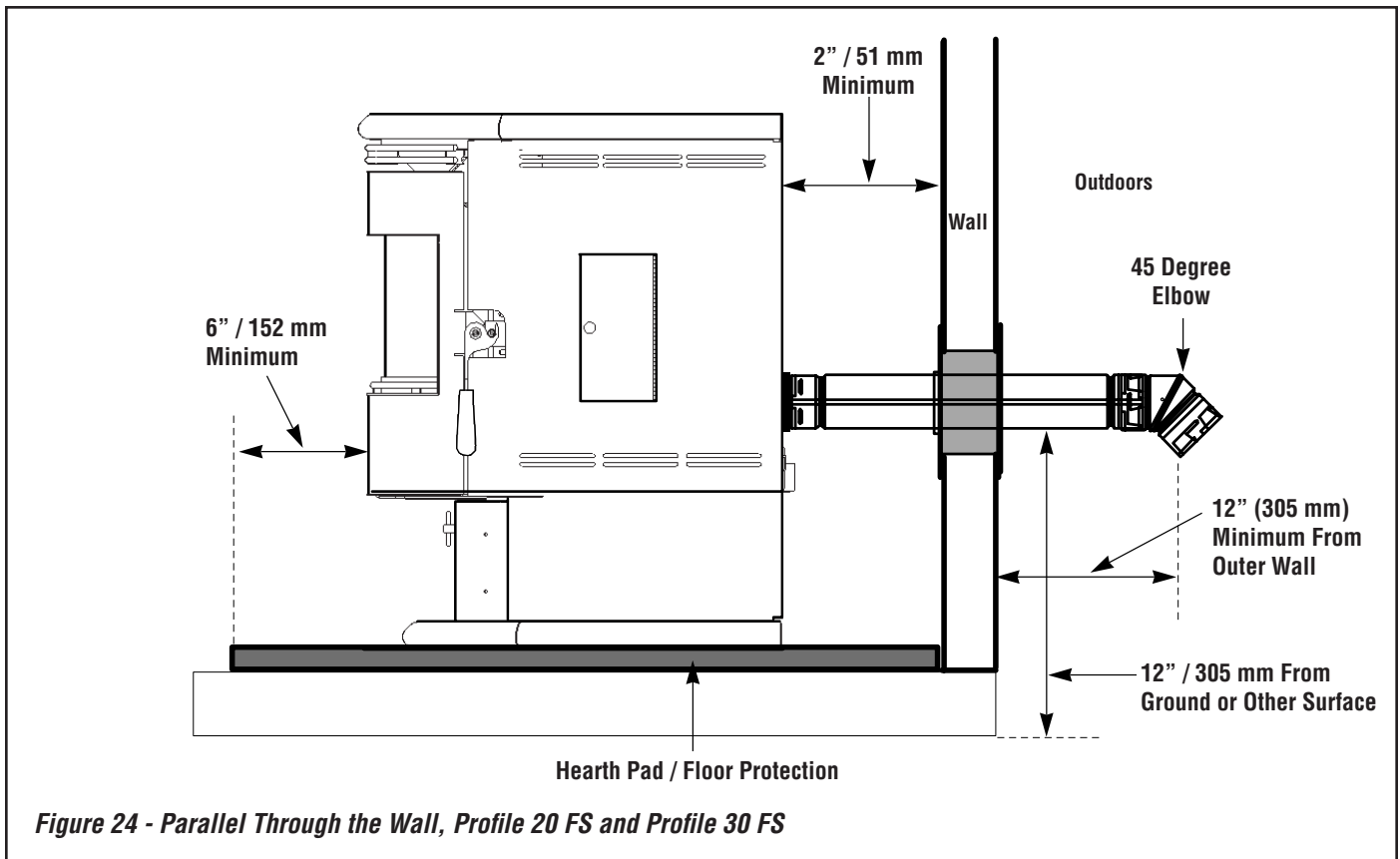
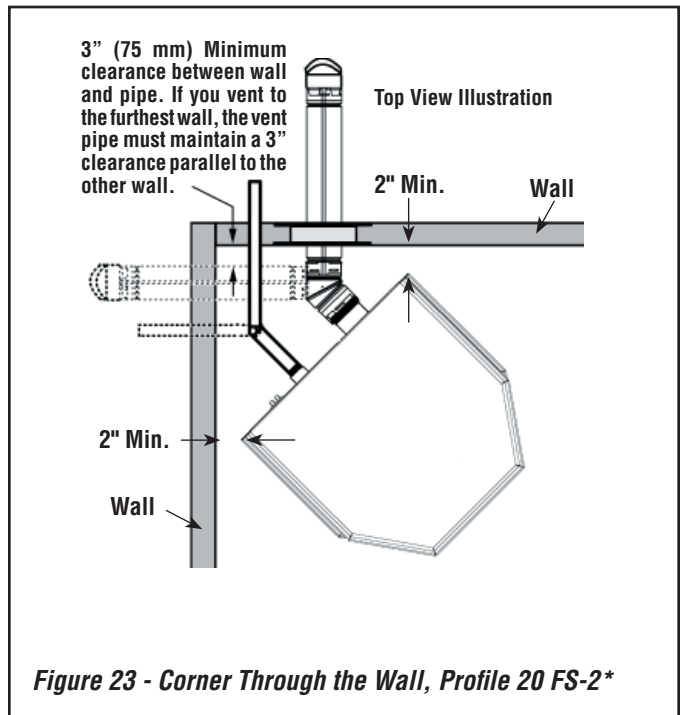
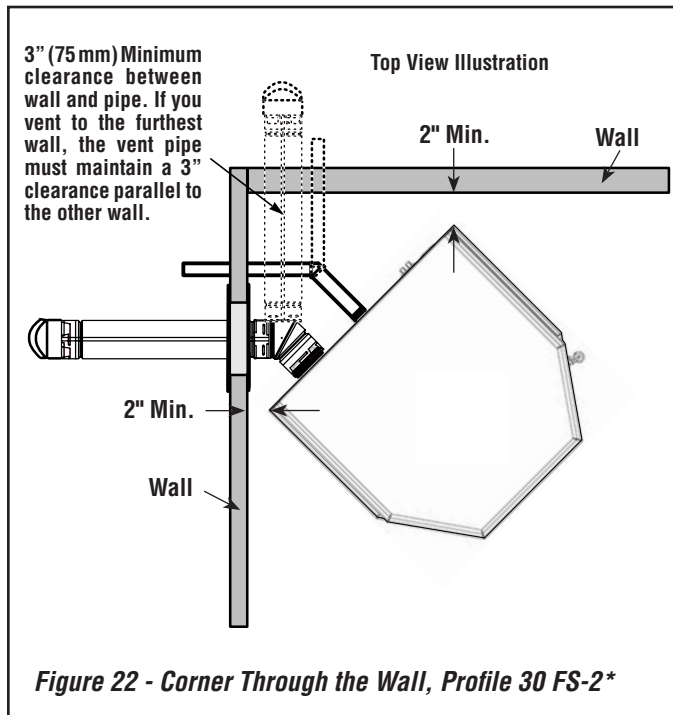
Table 6 - Sample Chart for Figure 16





NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

Standard Horizontal Installation Configurations
Profile® 20 FS-2 and Profile 30 FS-2

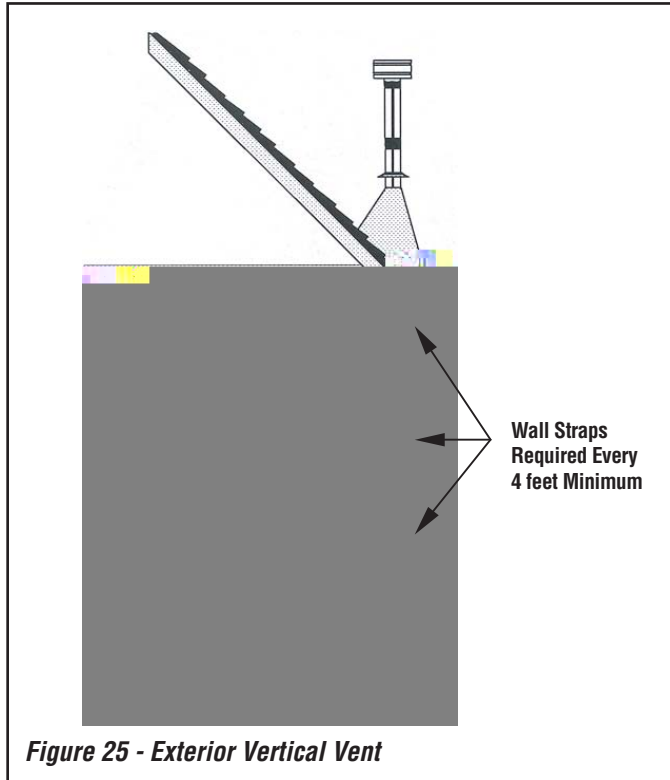


* **Note:** Horizontal run of pipe requires 1/4" (7 mm) rise per foot.

Standard Vertical Installation Configurations

Models: Profile® 20 FS-2 and Profile 30 FS-2

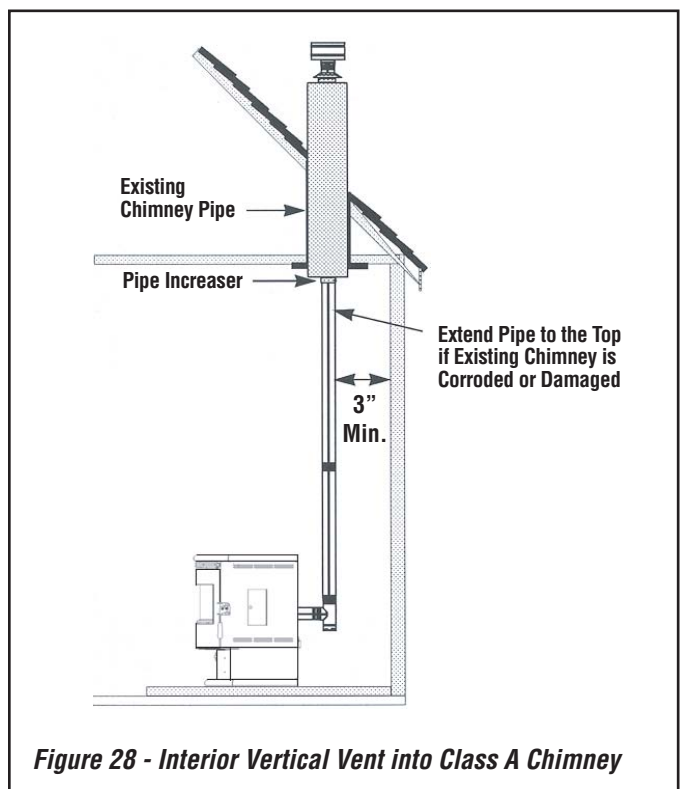
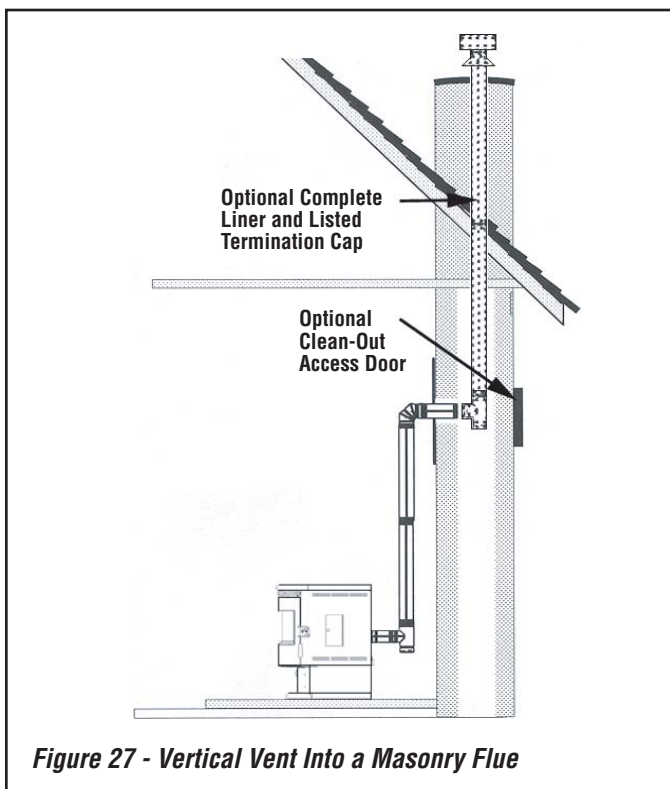
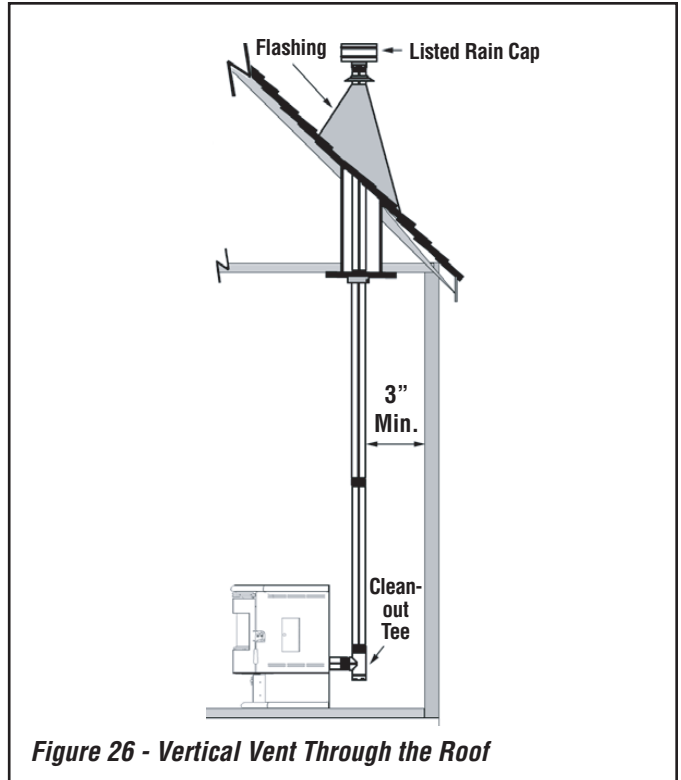
These free-standing models may be connected to an existing flue or by installing listed type "PL" vent pipe. If a liner is run all the way to the top of the existing chimney, the existing flue should be sealed with a steel plate. Start a vertical run with a Tee at the back of the stove. Other options are illustrated below.



Preferred Installation – Vertical Vent Through the Roof

This venting configuration allows for the best stove performance. The vertical pipe promotes natural draft and with the chimney inside the dwelling, the flue gases stay warm, thus rising at a consistent rate.

Note: See Page 12 for Vent Termination Requirements



Standard Installation Configurations Into an Existing Fireplace
Model: Profile® 30 INS-2

IMPORTANT - Make sure the chimney and firebox are clean and free of soot and ashes before installation begins. Failure to do so may result in the transfer of soot into the room by way of the room air blower.

(USA only) Venting Into an Masonry Fireplace

In the USA, as a minimum the vent connector from the insert flue outlet must extend a minimum of 18" above the damper and the damper area must be sealed to prevent dilution air from entering the chimney which will affect proper drafting of appliance. **In Canada, this appliance requires a full reline when installing into a masonry fireplace.**

This pellet insert may be installed into a masonry fireplace (built to UBC 37 or ULC S628 standards) as illustrated on this page. When installing into a masonry chimney, in the USA it is *recommended* that the exhaust vent be extended to the top of the chimney as shown on **Page 18** (in Canada, this is Required). However, in the USA, if the vent pipe does not extend to the top of the chimney, the vent must extend a minimum of 18" above the damper. You must seal the damper area so that the air / exhaust in the chimney cannot communicate with the air in the fireplace firebox (this is a positive flue connection. See the following instructions for one method of sealing flue).

(USA and Canada) Direct Connection / Positive Flue Connection

See the following instructions for Approved Methods of Achieving a Positive Flue Connection.

A qualified installer should evaluate the existing fireplace to determine the best method for achieving a positive flue connection between the vent pipe or liner and the existing fireplace chimney. The most common method for achieving a positive flue connection in masonry fireplaces is to secure a seal-off plate (i.e. 22-gage sheet steel) in the fireplace throat using masonry screws. Other acceptable methods include packing non-combustible material (i.e. rockwool) around the vent pipe or using a flue adapter. Whatever "seal off" method is used must effectively seal the area to prevent room air passage to the chimney cavity of the fireplace.

Model: Profile 30 INS-2

NOT ALLOWED IN CANADA

Positive Flue Connection into a Masonry Fireplace without a Full Reline

The Profile 30 INS-2 does not require a full reline (in USA only) when installing into a masonry fireplace, however, it is recommended to ensure proper drafting of the appliance. The vent connector from the insert must extend a minimum of 18" above the damper and the damper area must be sealed to prevent dilution air from entering the chimney which will affect proper drafting of appliance.

The vent pipe must extend a minimum of 18" above the damper. The chimney must not be corroded or damaged in any way for this type of installation to be permitted.

A non-combustible seal is required at the damper area (to prevent dilution air from entering the chimney). See Positive Flue Connection Methods on this page.

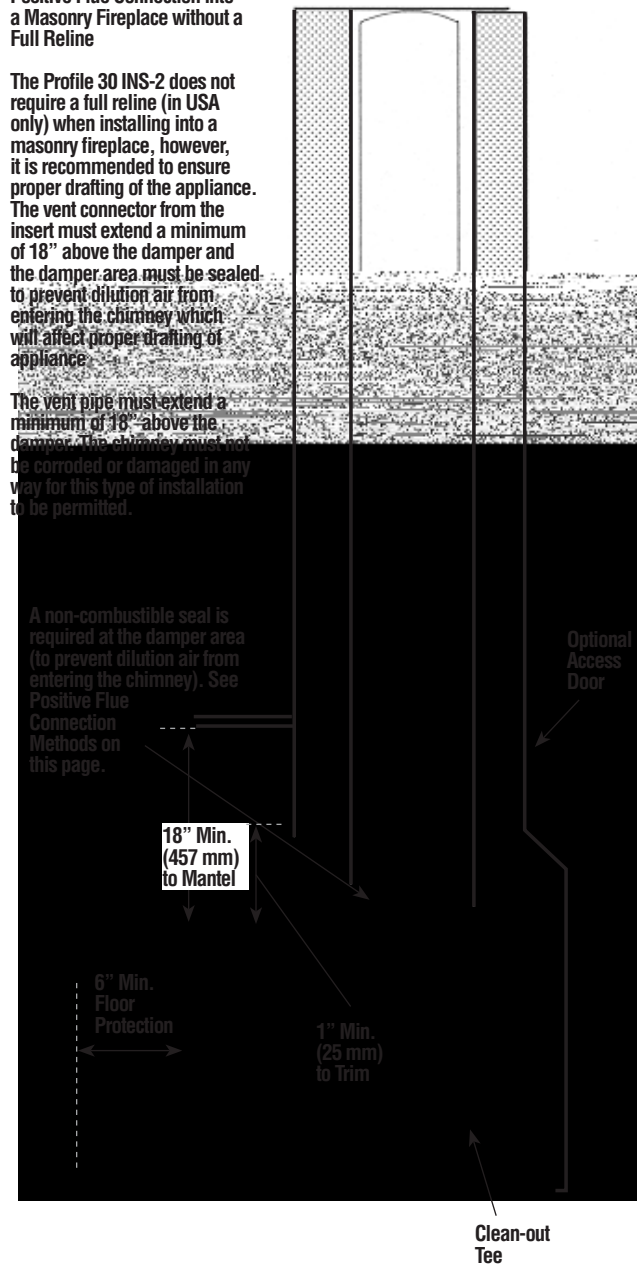
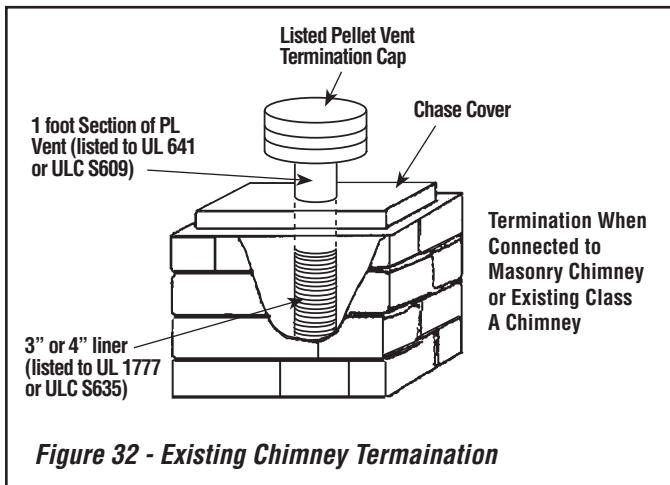
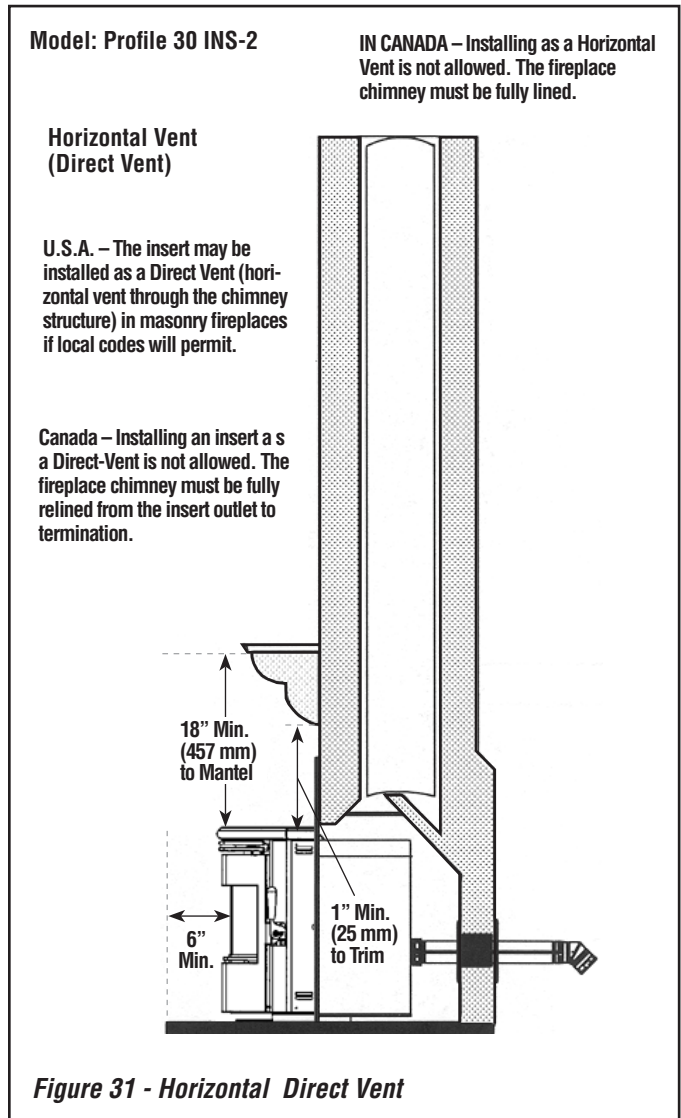
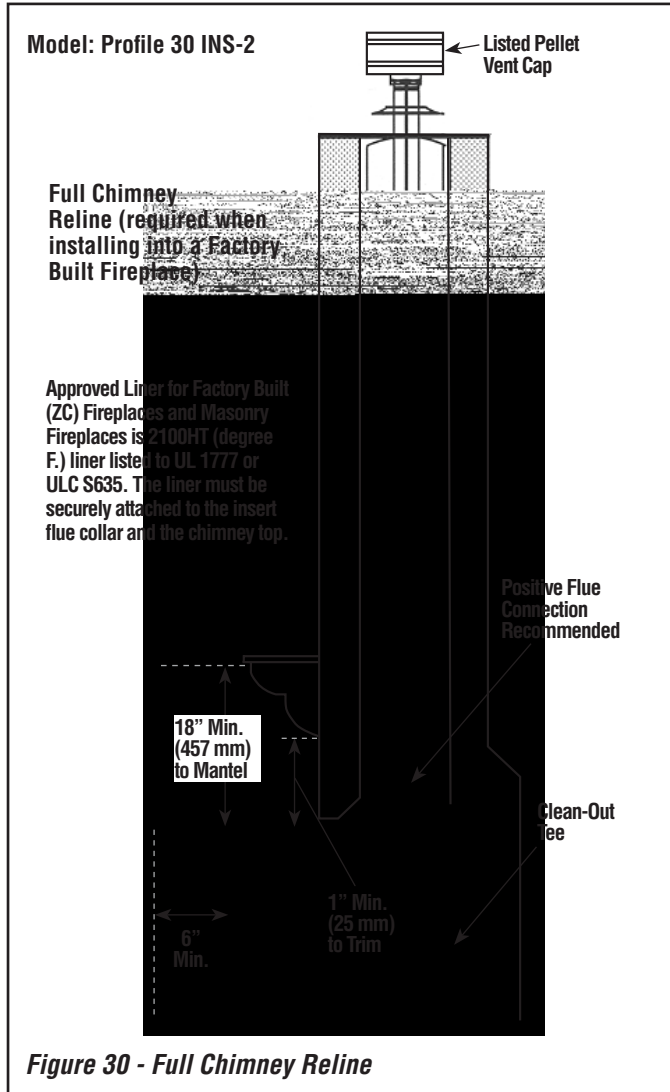


Figure 29 - Direct Connection In A Masonry Fireplace

! IMPORTANT

Make sure the chimney and firebox are clean and free of soot and ashes before installation begins. Failure to do so may result in the transfer of soot into the room by way of the room air blower.



IMPORTANT NOTES:

A flexible corrugated chimney liner has much greater resistance to the flow of flue gases than does a rigid liner. For this reason we recommend that a larger, 4" liner be used on vertical runs exceeding 15 feet or that rigid venting be used as illustrated on this page (see *Full Chimney Reline*).

If a flexible corrugated chimney liner is used, it must be fully extended to eliminate any sagging and to improve the exhaust flow.

Do not block opening at front of insert (below door).

CARE AND OPERATION

Control Board Operation

Stove ON/OFF Button – This button will turn your stove on or off while in Manual or Automatic mode (see **Page 20** for details). The green ON/OFF light at the top of control board will indicate the ON/OFF status.

Heat Select Button – The heat select button has three selection settings, Low, Medium and High. Pressing the button will scroll the red indicator lights from Low to High. The button controls the pellet feed and combustion airflow simultaneously. The control board is preset to provide the optimum ratio of fuel and air at each setting. Settings can be changed at any time but will only take affect after the start-up cycle is complete. Each press of the Heat Select Button will increase the heat output, and will scroll to the lowest setting after reaching the maximum setting.

Blower Select Button – The blower select button operates the room air blower. This will change the flow of hot air into the room. Three choices are available Low, Medium, and High. When the blower select button is pressed the yellow indicator light will scroll to Low, Medium, or High.

When running your stove on high (controlled with the heat select button), the control board will not allow you to select the low blower speed. This is a safety precaution to protect against overheating. Blower settings can be changed at any time, but will only take affect after the start-up cycle is complete.

Fault Mode – The control system automatically monitors the flame using a photoeye. If the appliance runs out of pellets the control board automatically goes into a “fault” status. The control board will initiate the shut down cycle and safely shut down the appliance leaving it in the “fault” mode. The ON/OFF indicator light near the top of the control board will flash rapidly when in this mode. After refilling the hopper with pellets, press the ON/OFF button. If a thermostat is not being used the stove will go into the start-up cycle. If a thermostat is being used the stove will go into the start-up cycle if the thermostat is in the demand mode. If the thermostat is in the stand-by mode when the fault is cleared, the stove will remain in the stand-by mode until it closes again.

Note: If the fuel feed trim or combustion air trim needs to be adjusted, contact an authorized Lennox Hearth Products Technician to calibrate internal software. It is recommended that the damper be used to fine-tune your stove to your particular fuel and installation configuration (see **Damper Adjustment on Page 9** and **Damper Adjustment Guideline on Page 21**).

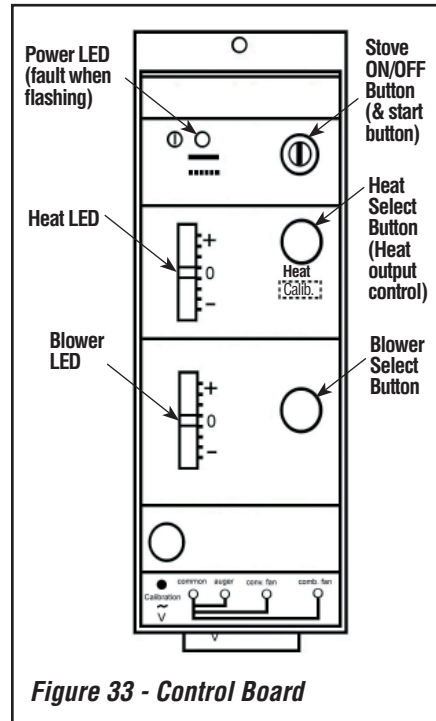


Figure 33 - Control Board

Note: The control board has an internal memory which recalls the last setting prior to loss of power. Because we individually check each stove prior to packaging, one of the two scenarios will appear when you first plug in your pellet appliance.

- 1). The Green LED at the top of the control board will illuminate and the blowers will be running. This is a standard cool down mode and will last no longer than five minutes. This happens during testing when the stove is turned off (which initiates cool down mode) and then is unplugged.
- 2). The Green LED at the top will illuminate and the red and yellow LED's will illuminate on the control board, indicating that the appliance is in the run mode. This happens during testing if the stove is unplugged without first turning the control board off (the control board remembers its last setting, which was the run mode).

If your appliance follows what is described in number 2, simply press the ON/OFF button once to turn the appliance off, this will initiate the cool down mode. The appliance can be restarted at any time during the cool down mode by pressing the ON/OFF button once.

Flame Detection Sequence of Events - This is what happens after flame has been detected.

- Happens within the Start-up Time Delay sequence.
- 0 to 1 minute no fuel feed.
- Flame settles.
- Bed of embers built.
- 1 minute mark: Fuel Feed rate 20% for 4 minutes 15 seconds (1 second on/4 seconds off).
- 2 minute mark: igniter turns OFF / room air blower = panel setting.
- 5 minute 15 seconds mark: exhaust blower = panel setting / LED indicator still active.

Start-up Time delay ends 14 minutes 15 seconds after pushing the start button!

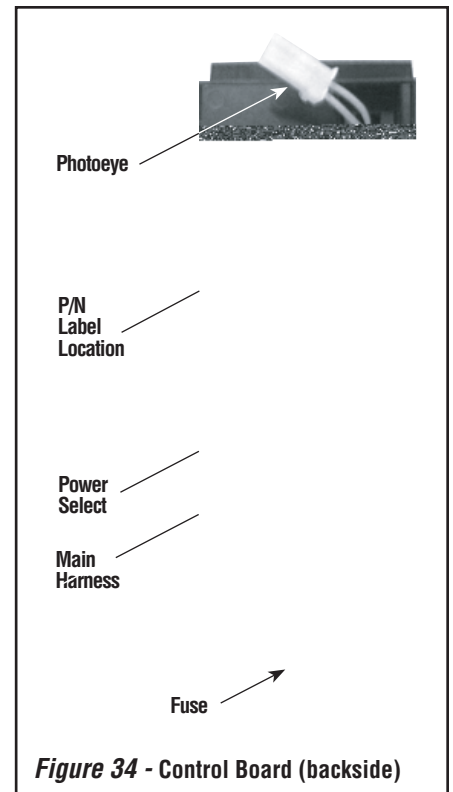


Figure 34 - Control Board (backside)

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

Fuel Delivery Rate

The heat select button manages the fuel delivery rate by controlling the amount of time the auger motor will run as follows:

Feed Rate Setting	Auger Motor ON/OFF Time (seconds)	* Lb.'s Per Hour Fuel Delivery	♦ Approximate BTU Per Hour Fuel Delivery	BurnTime (hours)
Low =	1 on/5.40 off	1.5 Lb.'s/hr.	13,000 BTU/hr	37
Med.=	1 on/3.30 off	2.5 Lb.'s/hr.	21,000 BTU/hr	22
High =	1 on/1.75 off	3.8 Lb.'s/hr.	32,000 BTU/hr	15
<i>Note: Maximum hopper capacity is 55 lb.'s</i>				
Table 7 - Fuel Delivery Rate, Profile® 20 FS-2				

Feed Rate Setting	Auger Motor ON/OFF Time (seconds)	* Lb.'s Per Hour Fuel Delivery	♦ Approximate BTU Per Hour Fuel Delivery	BurnTime (hours)
Low =	1 on/4.50 off	1.7 Lb.'s/hr	14,000 BTU/hr	41
Med.=	1 on/1.90 off	2.6 Lb.'s/hr.	22,000 BTU/hr	27
High =	1 on/1.15 off	4.5 Lb.'s/hr	38,000 BTU/hr	16
<i>Note: Maximum hopper capacity is 70 lb.'s</i>				
Table 8 - Fuel Delivery Rate, Profile 30 FS-2				

Feed Rate Setting	Auger Motor ON/OFF Time (seconds)	* Lb.'s Per Hour Fuel Delivery	♦ Approximate BTU Per Hour Fuel Delivery	BurnTime (hours)
Low =	1 on/4.50 off	1.7 Lb.'s/hr	14,000 BTU/hr	30
Med.=	1 on/1.90 off	2.6 Lb.'s/hr.	22,000 BTU/hr	20
High =	1 on/1.15 off	4.5 Lb.'s/hr	38,000 BTU/hr	11
<i>Note: Maximum hopper capacity is 50 lb.'s</i>				
Table 9 - Fuel Delivery Rate, Profile 30 INS-2				

* **Feed rates are approximations only. Actual feed rate will vary depending on size, quality and length of fuel used and variations in line voltage.**

♦ **Estimated heat input based on fuel value of 8400 BTU per lb. of fuel.**

Your pellet stove can be operated in either the manual or automatic mode. The manual mode is used when operating without a thermostat. The automatic mode is used when utilizing a wall thermostat. When utilizing the thermostat capability the burn time can be extended dramatically depending on thermostat setting. **Note: It is normal for some ash to build up on the inner glass surface at the lower burn settings.**

Initial Start-Up / Empty Hopper or Feed chute:

During an initial start-up, or in the case where the hopper has run out of fuel, it will be necessary to prime the auger feed system. The control board is set to deliver fuel for approximately 2-1/2 minutes during start-up, which, with a fully primed auger, will provide the appropriate amount of fuel for ignition.

When first starting your pellet appliance, it will be necessary to prime the auger. To prime the auger you need to first fill the hopper with pellets, and press the ON/OFF button on the control board. Wait approximately 2-1/2 minutes and turn the control board OFF and then back ON again. Wait an additional 2-1/2 minutes (if necessary) and continue this process until fuel begins to fall into the UltraGrate™. Remember, different brand fuels feed at different rates.

Once fuel starts to enter the UltraGrate™, turn the stove OFF and then back ON. The auger should now be primed and the stove should deliver enough fuel for proper ignition. It may be necessary to follow these procedures in the event that the hopper runs completely out of fuel.

Manual Operation:

Pressing the stove ON/OFF button initiates the start-up cycle. The green ON/OFF light, near the top of the control board, will light up to indicate the “on” status. The fan speeds and pellet feeds are fixed during this time to provide appropriate ignition. The Fastfire™ igniter system will light the pellets feeding to the UltraGrate™, after about 3 minutes. The start-up cycle is in effect for approximately 2 minutes after flame is detected in the UltraGrate™. A photoeye monitors the existence of flame. After the start-up cycle your stove will be in the run mode. At this point the stove will operate with the heat output (heat select button) and blower settings (blower select button) selected. These settings can be selected either during or after the start-up cycle. Pressing the stove ON/OFF button during the run mode will initiate the shut down cycle. The ON/OFF indicator light will turn off. The pellets will stop feeding and the blowers will run at a fixed speed for approximately 10 minutes. At this point your stove is safely shut down and can ONLY be restarted by pressing the stove ON/OFF button again.

Automatic Operation:

Your stove is capable of running in an automatic mode with the use of a wall thermostat.

For the thermostat to control the operation of the stove, the “ON” status must be active on the stove’s ON/OFF button. The thermostat will establish either a demand mode or a stand-by mode. The thermostat should be set for the desired room temperature. If the room temperature drops below the level on the thermostat the stove will automatically begin the start-up cycle, as explained above in the Manual Operation section. Once the start-up cycle is completed the stove will operate in whatever heat and blower setting you have selected. For best operation under thermostat control, the Medium or High settings recommended. When the desired room temperature is reached the stove will automatically go into the shut down cycle. The pellet feed will stop and the blowers will continue for a controlled time allowing safe shut down of your stove. All lights will remain on when the thermostat is open. The heat and blower settings can be changed at any time, but only take affect during the run mode. When the temperature in the room drops to the level set at the thermostat, the stove will again begin the start-up cycle and resume automatic operation in the demand mode.

Note: If the stove ON/OFF button is pressed while the thermostat is in the standby mode the stove will not restart until the thermostat closes.

Lighting Procedure Without Igniter

Your pellet appliance can be lit manually without using the automatic igniter by following the procedure below. If your stove is set up to run on a thermostat, the thermostat circuit needs to be closed (as if permanently in the demand mode). The thermostat wires should be removed from the rear of the stove and replaced with the jumper originally supplied with your appliance. If a jumper is not available the thermostat should be set to the highest setting. This will keep the stove in the demand mode. If your automatic ignition system should ever need troubleshooting, repair or replacement, please contact your authorized Lennox Hearth Products dealer.

1. Press the ON/OFF button on the control board.
2. Wait approximately 2-1/2 minutes while the pellets prime the UltraGrate™ (the pellets will stop feeding automatically).
3. Place a small amount of an approved (non-volatile) fire starter on top of the pellets in the UltraGrate™, (see your authorized Lennox Hearth Products dealer for appropriate fire starting products). **DO NOT USE FLAMMABLE LIQUIDS TO START YOUR STOVE!**
4. Light the “fire starter” with a match and close the door.
5. The photoeye will detect that a flame is present and will begin feeding pellets in approximately 2 minutes.
6. The control board will continue to go through the normal start-up cycle and the flame should be well established within 10 minutes from the time the ON/OFF button was initially pressed. Remember—you are now in manual mode and heat settings should be selected to the desired room heat level.

Turning Off Your Stove

Press the stove ON/OFF button to initiate the shut down cycle. The pellets will stop feeding and the blowers will continue to run on a timed cycle. The stove will shut down safely upon completion of the shut down cycle.

Damper Operation (All Models)

The damper assembly controls the amount of combustion air that is delivered to the firebox. With the damper adjusted all the way in, the airflow will be at its minimum. As the damper is moved outward, more air is delivered (see *Damper Location and Adjustment* on **Page 9**).

It will be necessary to monitor the appearance of the flame during the first 4-8 bags of pellets. If the flame is smoky red or orange with evidence of soot at the top of the flame, the damper will need to be adjusted to deliver more combustion air (see *Damper Location and Adjustment* on **Page 9**). If the flame is “short” at the higher burn rates, or if the pellets are burning up in the UltraGrate™ before new pellets are fed into the fire, the damper may need to be adjusted to deliver less combustion air.

After the damper is adjusted, re-evaluate the appearance of the flame. It may be necessary to continue adjusting the damper in increments until proper combustion is achieved (the flame should become yellow and begin to “dance”).

Once the damper has been properly set (and if the routine maintenance is performed as needed), the damper should not require re-adjustment unless you are changing from a premium grade pellet to a standard or high ash pellet, in which case the damper may need to be moved outward to help prevent the accumulation of ash in the UltraGrate™.

Damper Adjustment Guideline

Lack of Combustion Air: By opening the damper, this will increase combustion air delivery. Symptoms of insufficient combustion air include; unburned fuel, lazy smoky or red / orange flame, excessive ash or soot, excessive buildup on glass.

Contributing factors:

- High Altitude – Lack of oxygen
- Restrictive Venting (elbows, horizontal runs, cold external chimneys, etc.)
- Dirty / Poor Quality Fuel
- Lack of Maintenance

Note: Excessive amounts of fly ash built-up in the UltraGrate™, clinkers in the UltraGrate™ or leakage of air (if the grate is not properly seated) will starve the fire for air. See *Routine Maintenance*, on **Pages 22 to 28** for information on cleaning requirements.

Excessive Combustion Air: By adjusting the damper to a more closed position will reduce the combustion air delivery. Symptoms of excessive air include; fuel burns too quickly (results in smoking or smoldering pellets), white to yellow flame, etc. If the damper is open too far, the burning pellets will lift off the grate and fly up into the air much like popping corn does.

Contributing factor:

- Venting system providing excessive draft.

Correct Combustion Air / Proper Burn Characteristics:

When the damper is correctly set, the burning pellets should move (wiggle) around slightly and the flame should be bright yellow.

Automatic Safety Features

Power Outage:

During a power outage, the stove will shut down safely. The stove will automatically restart when power is resumed. The solid state control board has an internal memory that will retain heat output and blower speed settings through voltage interruptions.

A small amount of smoke may leak from the top of the window glass, the hopper and from the combustion air intake, if the stove is vented horizontally with no vertical pipe. This will not persist for more than 3 to 5 minutes and will not be safety hazard. It may set off your smoke alarm.

Note: If the area in which you live is prone to frequent power outages, it is recommended that a minimum of 8 feet (2-1/2 meters) of vertical vent pipe be included in a free-standing installation to induce a natural draft in the event of a power failure.

Overheating:

A high temperature thermal switch will automatically shut down the stove if it overheats. Allow up to 45 minutes cooling time before re-lighting. Keep enough convection air going through stove to keep it cooling properly (adjust room air blower speed to a higher setting), this will ensure long life of the stove. If the overheating continues, contact your authorized Lennox Hearth Products dealer for more information.

FUEL

Pellet Fuel Hopper - It is recommended to open the hopper lid by grasping it on the side as shown in *Figure 35*.

Open Hopper Lid by Grasping the Side
BE VERY CAREFUL NOT TO TOUCH
OTHER HOT AREAS ON STOVE!



Figure 35 - Hopper Lid, Profile 20 FS-2

Clinkering - Silica (or sand) in the fuel, along with other impurities, can cause clinkering. A clinker is a hard mass of silica formed in the burning process. Clinkering is a function of the fuel, (not the stove), but adversely affects the performance of the stove by blocking off the air passages in the grate. Even P.F.I. approved pellet fuel may tend to clinker. A clinker can be removed from the UltraGrate™ and placed in the ash pan with the use of the grate scraper / ash pan tool furnished with your stove. See *Routine Maintenance* (on *Pages 22 to 28*) for more information on cleaning.

Ash - The frequency of removal of the ash and maintenance performed on the stove is directly proportional to the ash content of the fuel and the operation duration of your pellet stove. Low ash fuel may allow longer intervals between cleaning, however, a stove burning high ash fuel may need to be cleaned as often as everyday.

PLEASE NOTE: Lennox Hearth Products has no control over the manufacturing of pellet fuel and will not be held responsible for poor stove performance or any damage caused by poor quality pellet fuels.

Fuel Feed Rates - Different brands of pellets will feed at varying rates due to their size and density (length and diameter). This may require a slight adjustment in the damper control (see *Page 9*) or the fuel feed trim to compensate (see note at the top of *Page 19*).

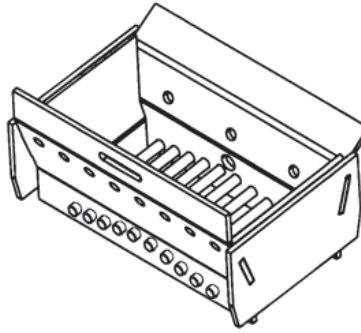


Figure 36 - UltraGrate™

Fuel Specifications - Using the UltraGrate burn system, this appliance has been designed to burn wood residue pellets with up to 3% ash content. Agricultural pellets (i.e. corn, alfalfa etc.) are not permitted to be burned in these appliances. Dirty fuel will adversely affect the performance of the stove.

CAUTION: THE USE OF UNAPPROVED, DIRTY, WET AND / OR HIGH SALT CONTENT FUEL WILL VOID THE WARRANTY!

Wood pellets manufactured to the pellet fuels institute (P.F.I.) certification standard are available in two grades, Standard and Premium. The primary difference between the two is the ash content of the pellets.

The P.F.I. specification for standard grade and premium grade residential pellet fuel is as follows:

- CHLORIDES (Salt): Less than 300 p.p.m.
- BULK DENSITY: 40 lb. / Cu. Feet minimum
- MOISTURE CONTENT: 8% maximum
- ASH CONTENT: < 3% maximum (standard grade) < 1% maximum (premium grade)
- FINES: 0.5% maximum through a 1/8" screen
- BTU CONTENT: Minimum 8200 BTU per pound.

Pellet Feed / Pellet Size - The pellet feed system is designed to handle a wide range of pellet sizes up to a maximum of 5/16" diameter. Different pellets may feed at considerably different rates. You may notice a difference in the burn if you change pellet fuel sizes. The longer the pellet, the slower it will feed and vice versa. If the stove will not stay burning at the minimum fuel feed setting, those particular pellets may not be feeding fast enough. If this happens, reduce the amount of combustion air by adjusting the damper. See *Page 9* before adjusting the damper.

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

Long Burn Time - When operated correctly, this appliance cannot be overfired. Continuous operation at a maximum burn can, however, shorten the life of the electrical components (blowers, motors, and electronic controls), and is not recommended. Typical approved operation would include running at the low to mid range setting with occasional running on the maximum setting during the coldest periods of the winter. The blower speed control should be turned to high when operating the stove on the high heat setting. A lower heat setting is recommended for overnight operation or when the room is vacated for long periods of time.

Note: See *Fuel Delivery Rate* on *Page 20* for burn times.

ROUTINE MAINTENANCE

Cleaning



IMPORTANT

Unplug and Ensure Stove is Cold Before Performing Any Maintenance Work.

The following areas need to be inspected and cleaned during routine cleaning:

- Heat Exchange Tubes / Tube Scraper
- Baffle Plates
- Window Wash
- Ash Clean-Out Ports
- UltraGrate (Burn Grate)
- Ash Slide Plate (free-standing models only)
- Ash Pan
- Exhaust Passages / Vent Pipe and Creosote Removal
- Gaskets
- Photoeye
- Paint Touch-up
- Cleaning Rear Stove Compartment

Heat Exchange Tubes (All Models)

Clean Heat Exchange Tubes Only When The Appliance is Cool.

Tube Scraper

Using the hole in the handle of the Grate Scraper Tool to "grab" onto the rod. Using the Grate Scraper Tool, pull the rod up and out towards the opening of the firebox. Continue pulling until the Tube Scraper reaches the top of the firebox. The rod is located on the outside, above the door. Pull the tube scraper out, then repeat 2-3 times to remove fly ash from the heat exchange tubes.

(Model Profile® 20 FS-2 only)

It may be easier to clean the tubes if the heat exchanger baffle plate is removed first (located in the firebox below exchange tubes). To remove, loosen the two screws holding the baffle in place (do not fully remove). The baffle plate contains keyhole slots, which allows the screws to remain in place while removing the baffle plate. Remove the baffle plate diagonally through door opening. The tube scraper rod can now be pulled in a more horizontal manner, which allows the scraper to move more freely.

Note: The baffle plate should be removed at least once a year to allow for a thorough cleaning.



Figure 37 - Tube Scraper Rod

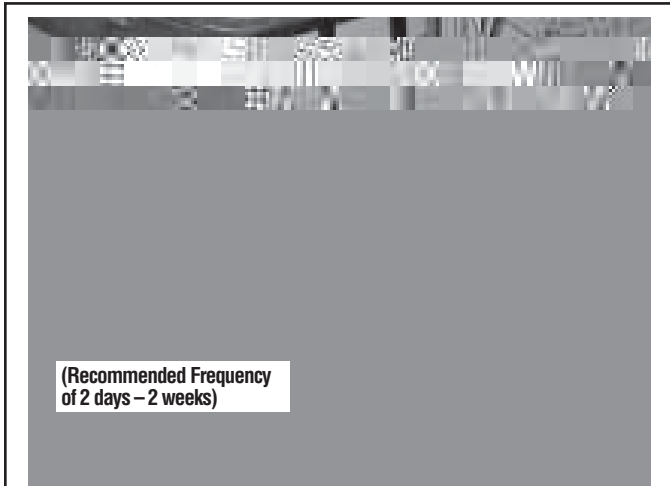


Figure 38 - Pulling Tube Scraper Rod

Cleaning Behind Tube Scraper (Profile 30-2 Series Only)

Clean between the heat exchange tubes using a cleaning brush as illustrated in the picture below.

! WARNING
DO NOT USE BRUSH ON HOT STOVE!

With tube scraper rod pulled out 2 to 3 inches, insert brush behind tube scraper and remove ash build-up. Clean to the left and right side of heat exchanger, between tubes and the top of the firebox.



Figure 39 - Clean Behind Tube Scraper

Window Wash

Periodically remove the five screws that secure the window wash bracket to the door frame, using a 5/16" socket (the Profile 30-2 Series has a window wash bracket at the top and bottom of the door frame). Lift out the window wash bracket, and set aside. Using a small brush, sweep out all debris buildup from behind the window wash bracket. After all debris has been removed re-attach the window wash bracket(s).

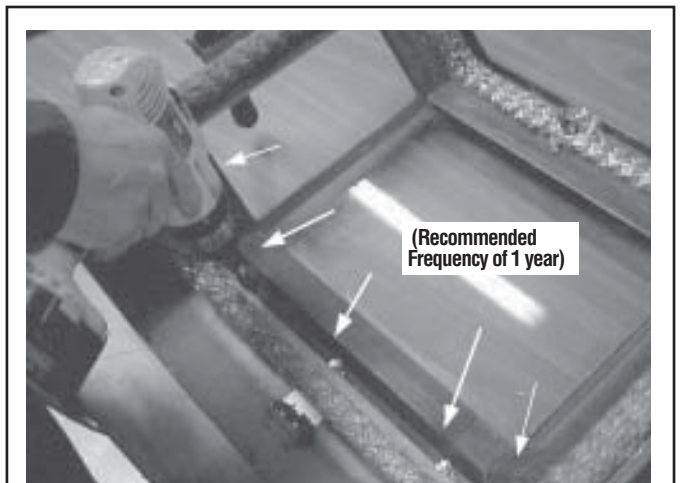


Figure 40 - Remove Window Wash Bracket (5 screws)

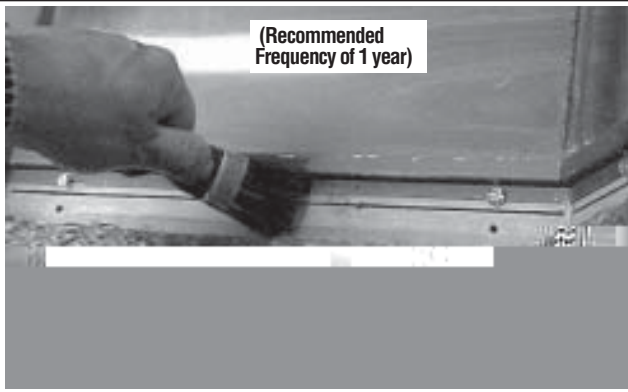


Figure 41 - Sweep Away Debris from Behind Window Wash Bracket

Ash Clean-out Ports

IMPORTANT

- Ensure appliance is cold before beginning.
- Firebrick panels must be installed before operating unit.
- Model profile® 30-2 series has a cover installed over each clean-out port. The covers must be reinstalled before operating the unit.
- Ash clean-out ports must be cleaned out as part of routine maintenance.

Accessing Ash Clean-Out Ports – Model: Profile 20 FS-2

- 1) Open firebox door.
- 2) Remove Firebrick Panels:
 - a. Remove the two firebrick retainer brackets using a 5/16" nut driver (located on the left and right side of the firebrick inside firebox). Loosen the screws (do not remove) until screw heads can be removed through the key hole slots in the brackets.
 - b. With the brick retainer brackets removed, lift firebrick panels up and out.
- 3) Using an approved ash vacuum (a brush can also be used), remove the ash build-up.
- 4) Reinstall firebrick panels.
- 5) Close firebox door.

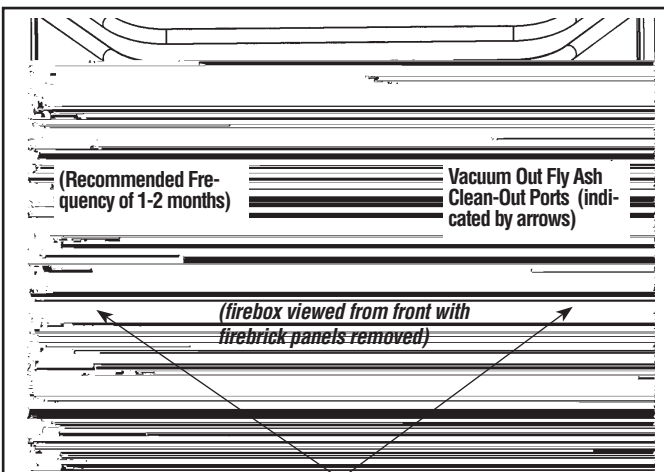


Figure 42 - Ash Clean-Out Ports, Profile 20 FS-2

Accessing Ash Clean-Out Ports – Model: Profile 30 FS-2 and Profile 30 INS-2

- 1) Open firebox door.
- 2) Using a 5/16" nut driver, loosen the screws on the two clean-out covers (until screw heads will release through the key hole slots). Remove covers.
- 3) Using an approved ash vacuum (a brush can also be used), remove the ash build-up.
- 4) After cleaning, reinstall the clean-out covers and tighten screws.
- 5) Close firebox door.

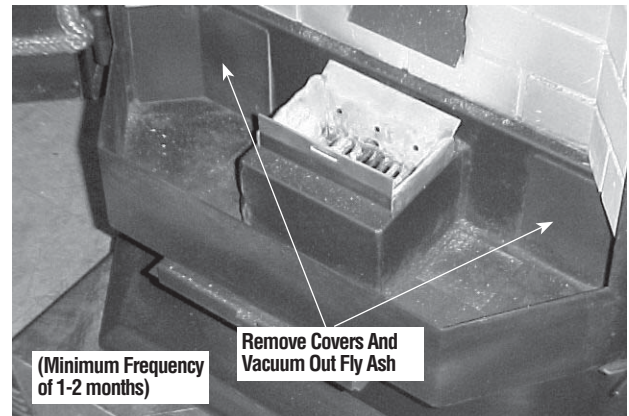


Figure 43 - Accessing Ash Clean-Out Ports – Profile 30 Series

UltraGrate™ (Burn Grate for All Models)

Inspect the UltraGrate periodically so that the air holes don't clog with ash or clinkers. The UltraGrate can easily be cleaned with the grate scraper / ash pan tool, or it can be removed for cleaning. It is very important to monitor the ash build up under the UltraGrate, as too much of ash will block combustion air from entering the grate, causing pellets to pile-up in the grate. The ash build-up under the grate is easily dumped into the ash pan by pulling out the ash slide weekly (see *Ash Slide Plate, Figure 45*). The grate cleaning procedure is the same for all models.

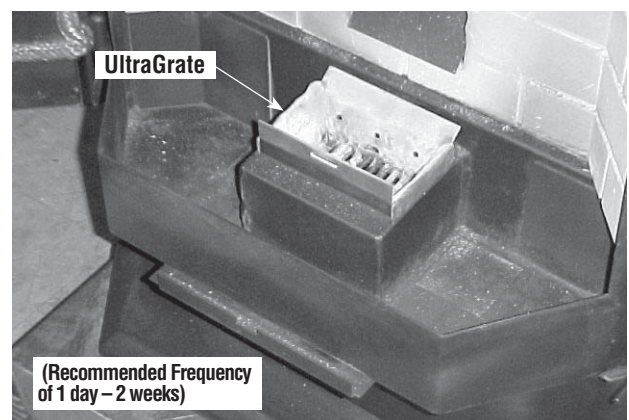


Figure 44 - Inspect UltraGrate and Clean if Necessary

Ash Slide Plate (Profile® 20 FS-2 and Profile 30 FS-2)

Ash that accumulates around the grate can be “dropped” into the ash pan as follows:

1. Open the firebox door.
2. Using the grate scraper tool, pull open the ash release slide plate (see **Figure 45**).
3. Using a brush, sweep the ashes from the firebox through openings to the ash pan.
4. Close the ash slide plate, then close the firebox door.

IMPORTANT NOTE: Make sure to fully close the ash slide plate when complete. Failure to close the ash release slide plate completely may cause the fuel to burn poorly (due to reduced air flow through the grate), which may then cause pellets to “pile up” in the grate. The ash slides must be fully closed for the firebox door to close.

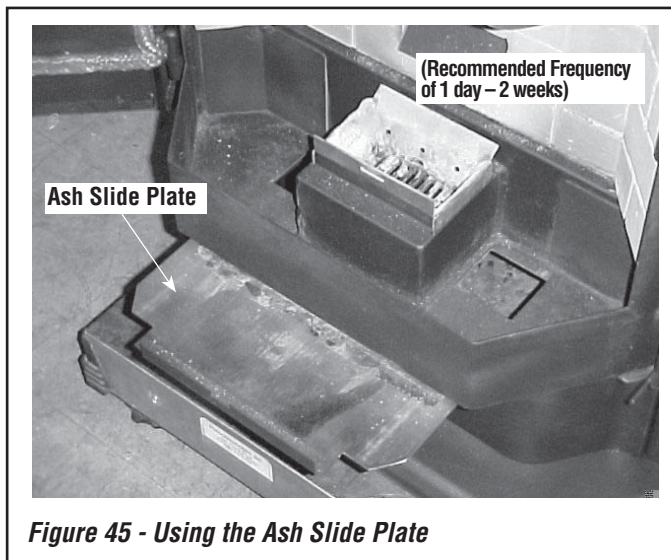


Figure 45 - Using the Ash Slide Plate

Ash Pan (Profile 20 FS-2 and Profile 30 FS-2)

The ash pan will have to be emptied periodically, depending on amount of fuel consumed. The ash pan is located in the pedestal on the Profile 20-2 and Profile 30 FS-2. It can be removed by turning the T-Bar latch fully counterclockwise.

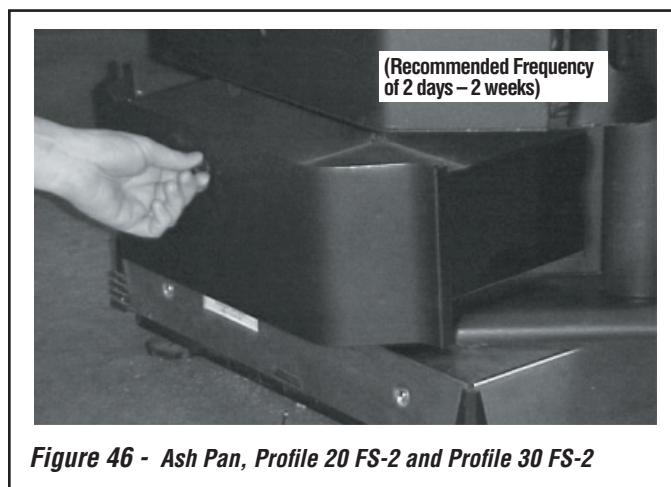


Figure 46 - Ash Pan, Profile 20 FS-2 and Profile 30 FS-2

Ash Pan (Profile 30 INS-2)

The Profile 30 INS-2 has three ash pans (left side, right side and lower center). The ash pans should be emptied whenever necessary. The ash pans can be accessed by opening the firebox door. Remove the left and right ash pans by lifting them out. The lower center ash pan can be removed by pulling it straight out using the grate scraper tool (see **Figure 47**). Be sure to dump ashes into a non-combustible container. All ash removal and cleaning should be done while the stove is cold.

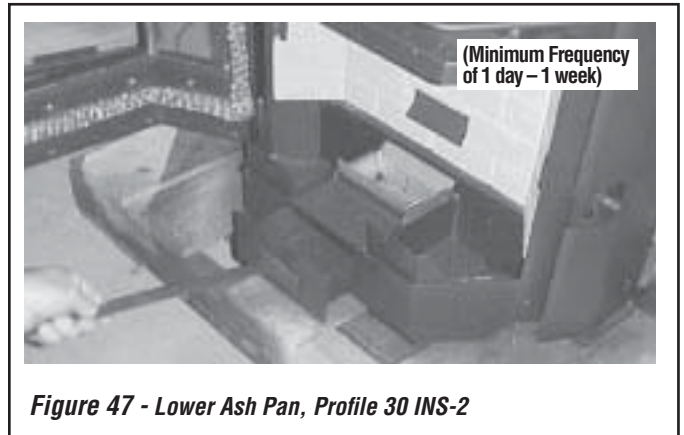


Figure 47 - Lower Ash Pan, Profile 30 INS-2

Creosote Removal (All Models)

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining.

When ignited this creosote makes an extremely hot fire. The chimney connector and chimney should be inspected at least once every two months during the heating season to determine if a creosote buildup has occurred.

If creosote has accumulated it should be removed to reduce the risk of a chimney fire.

Exhaust Passages And Vent Pipe (All Models)

Inspect frequently and clean when necessary. Fly ash will accumulate at all bends in the exhaust system.

Note: Large amounts of fly ash build-up will create a lack of combustion air. Removing the clean-out tee cap on vertical installations will allow an inspection of the ash build-up in the clean-out tee and will help you to decide how frequently more extensive cleaning must be performed.

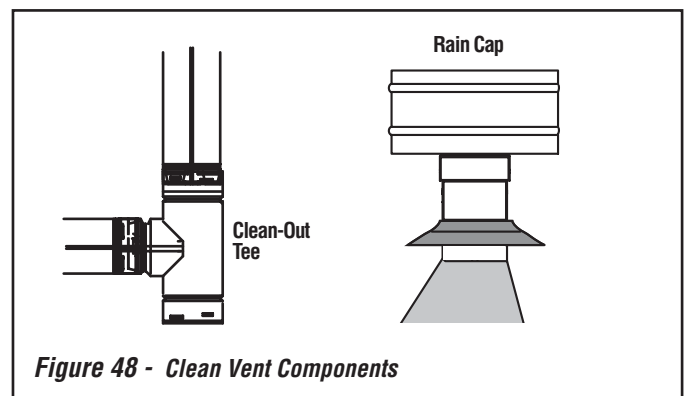
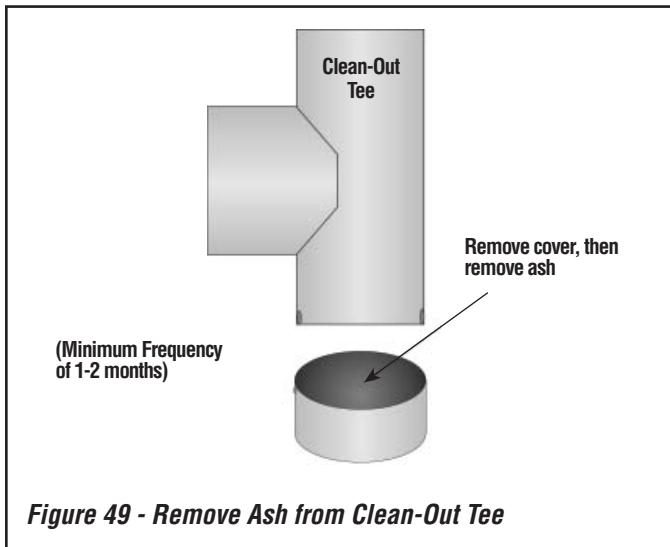
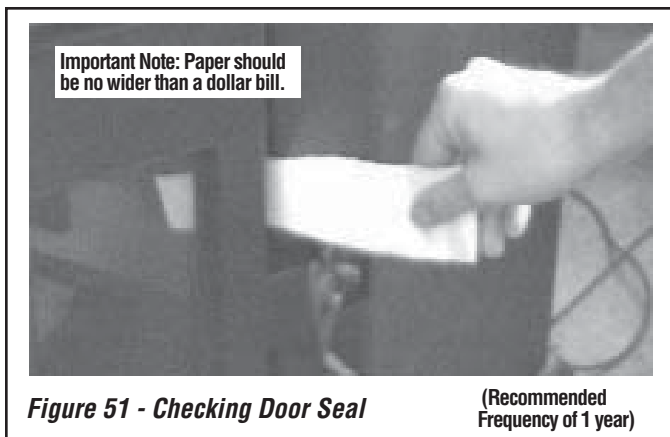
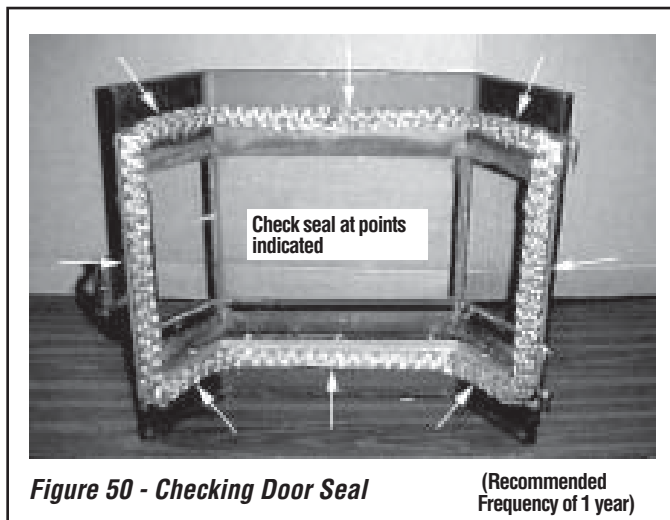


Figure 48 - Clean Vent Components



Door Rope Gasket (All Models)

The condition of the rope gasket around the door and windows should be checked periodically and replaced or repaired if necessary. A one-inch strip of paper may be used to perform a test of the integrity of the door seal. Close the door on the paper in at least eight points (see **Figures 50 and 51**). It is normal to feel only a slight amount of friction. The door gasket does not need to be "tight" in all areas, since a small amount of leakage is not hazardous or detrimental to the performance of your stove.



Photoeye (All Models)

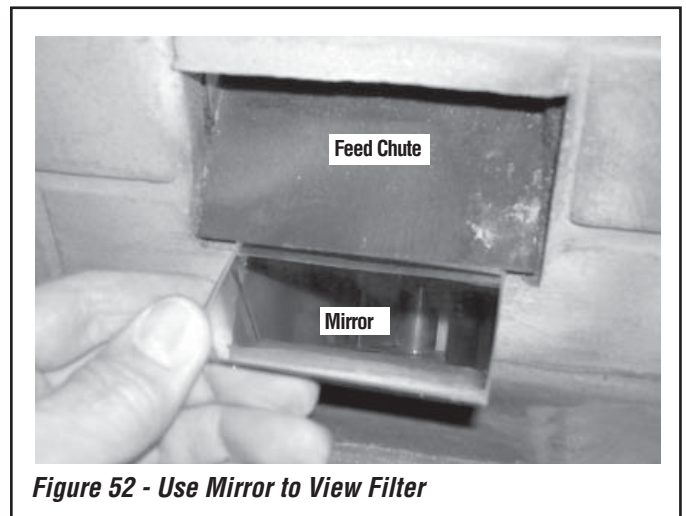
ENSURE APPLIANCE IS COLD BEFORE BEGINNING

As a part of normal maintenance, buildup of pellet debris (fines) must be periodically removed from the photoeye filter. This filter can be cleaned by following either procedure (A) or (B) on this page:

Note: The photoeye views the fire through a filter. The filter is located at the top of the feed chute near the hopper (on the left side for Profile® 20 FS-2, and on the right side for models Profile® 30 FS-2 and Profile 30 INS-2). This area should be cleaned periodically to prevent excessive build-up, which may cause the stove to go into "fault" mode.

(A) Cleaning Photoeye Filter Without Removing it:

1. Open the front door to access the feed chute.
2. Remove the buildup on the filter as explained in either "a" or "b" below (note: it may help to use a mirror and a flashlight to view the filter as shown in the following picture):



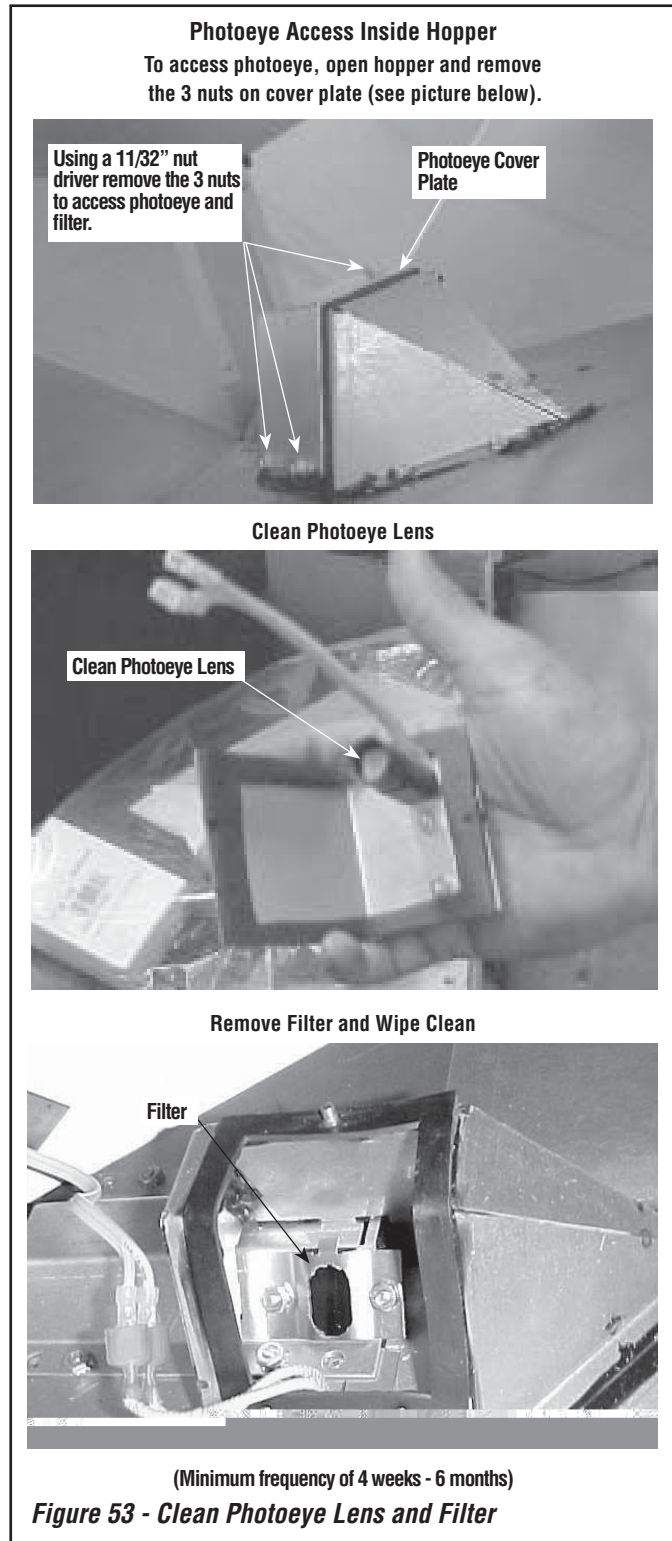
- a. Using a long soft bristled brush (i.e. artists brush), extend it deep into the feed chute and sweep away any pellet fines (left side Profile 20 FS-2, right side Profile 30-2 Series).
- b. Canned compressed air can also be used to remove pellet debris from the photoeye filter (use only canned compressed air such as what can be commonly purchased at a computer or office supply store and some drug stores). Read and follow the instructions on the spray can. Attach the tube (straw) to the nozzle of the canned air (a tube is commonly provided with compressed air. It is similar in use to the tube supplied with WD-40, Spray Lubricant). Spray the canned air deep into the feed chute until all "fines" are removed (direct it to the left side for model Profile 20 FS-2, and to the right side for the Profile 30-2 Series).

Note: The photoeye lens should be inspected annually and cleaned if necessary as shown in method (B).

(B) Removing Photoeye Filter for Cleaning:

1. Lift off cover plate and turn over (the photoeye is attached to the inside surface of cover). Wipe away any dust or debris from the photoeye lens (see **Figure 53**).

CAUTION: If the filter is not reinstalled, reflective light in the room may result in a fault, thus shutting down of the unit.



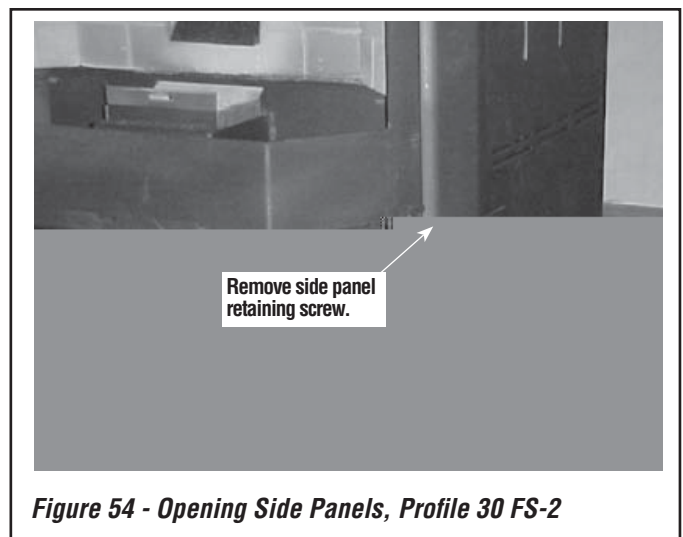
2. Clean Filter as follows: With the photoeye cover plate removed, look inside the opening. You will see an amber colored square glass filter secured in place by a bracket and 2 nuts. Using an 11/32" nut driver, remove the 2 nuts and lift off the bracket. Using your finger slide filter up and out.
3. Wipe away any dust or debris on filter, then reinstall filter, filter bracket and cover plate with photoeye.

IMPORTANT: When reinstalling photoeye and cover, be careful not to damage the wires. Pay special attention in positioning wires away from photoeye (which could obstruct it from sensing light).

Opening Side Panels

Profile® 30 FS-2:

- 1) Using a 1/4" nut driver, remove the screw from underneath the side panel at the front edge (see **Figure 54**).
- 2) Pull panel outward (on the upper portion of side panel) until the 2 ball studs on the inside of the panel releases. **Note:** The side panel will hinge open from the front.
- 3) **After maintenance is complete, reinstall the retaining screw to prevent the panel from being accidentally opened.**



Profile 20 FS-2:

- 1) Using a 1/4" nut driver remove the screw located at the front top of the panel (see **Figure 55**).
- 2) Pull panel outward (on lower portion of side panel) until the ball stud on the inside of the panel releases. **Note:** The side panel will hinge open from the front.
- 3) **After maintenance is complete, reinstall the retaining screw to prevent the panel from being accidentally opened.**

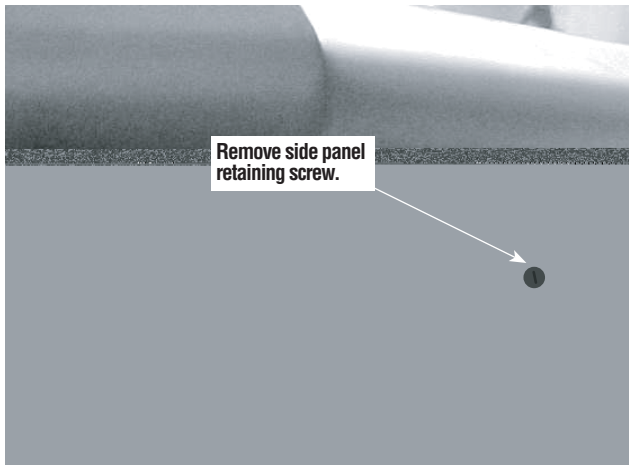


Figure 55 - Opening Side Panels, Profile® 20 FS-2

Motor Lubrication

The blowers are permanently lubricated by the manufacturer. Do not apply oil to any part of the blower, doing so may cause damage.

Rear Stove Compartment (All Models)

The rear stove compartment should be cleaned periodically (a minimum of once a year). **DISCONNECT ELECTRICAL CORD PRIOR TO CLEANING STOVE.** Any household dust, pet hair or sawdust should be vacuumed or wiped out of the rear compartment of the stove, room air blower, and combustion blower (paying special attention to vacuuming out the intakes of both blowers). The electrical components should be wiped clean.

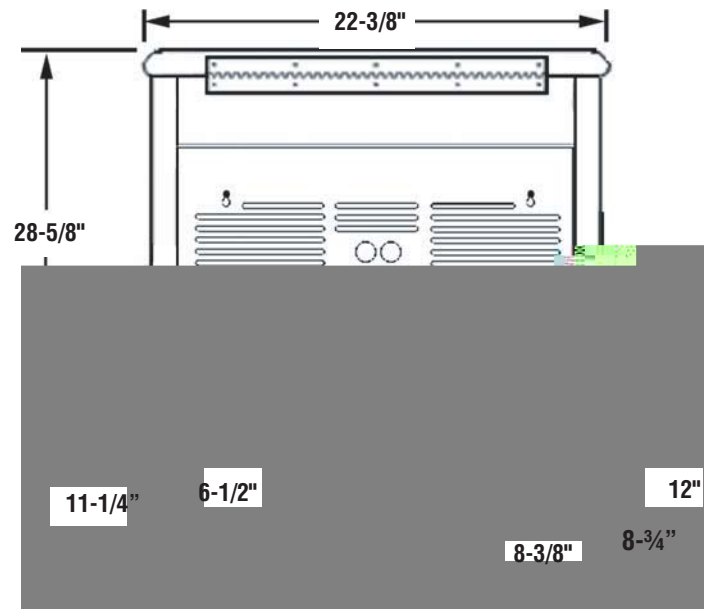
Small Area Paint Touch-up

The stove body is painted with a quality high-temperature stove paint. Use only model TSPK-B Stove Paint, Catalog # 70K99. Do not touch-up your stove with any other paint.

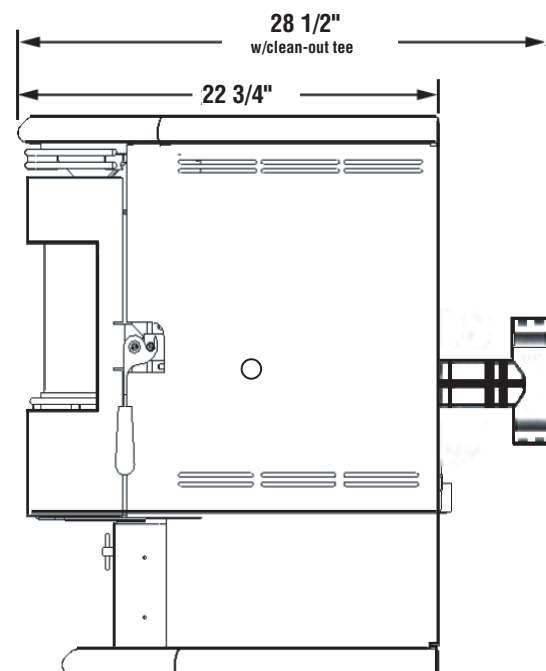
Using one small piece of 320 grit sand paper and lightly sand the blemish so that the edges are “feathered” or smooth to the touch between the painted and bare surfaces. Do not let the sand paper gum up with paint, as this will cause scratches on the metal surface. If there are any scratches, use 600 grit sandpaper instead. Mask off surfaces you do not want painted. Paint lightly over the bare surface first as this will act as an undercoat. Then paint over a larger area in smooth even strokes to blend.

SPECIFICATIONS - PROFILE® 20 FS-2

Cat. No. H0367	Model Profile 20 FS-2	Pellet Stove
Flue Size	3" (76 mm Rear)	
Width, Overall	22-3/8" (568 mm)	
Depth, Overall	22-3/4" (578 mm)	
Depth, Overall w / 3" tee	28-1/2" (724 mm)	
Height	28-5/8" (727 mm)	
Floor to Rear Flue Center	11-1/4" (286 mm)	
Facing back of unit, outside edge of left side to center of rear flue outlet center	6-1/2" (165 mm)	
Floor to Rear Outside Air Inlet	12" (305 mm)	
Facing back of Unit outside edge of right side to center of air inlet	8 3/8" (213 mm)	
Floor Protection Requirements	Front and Sides: 6" (152 mm) Back: Up to 6" (152 mm) ❶	
Standard Features	Fastfire™ Self Igniter Wall Thermostat (wire included)	
Hopper Capacity	55 lbs.	
Burn time	15 - 37 hours ❷	
Fuse, Control Board Fuse, Igniter	5 Amp, 250 volt, 3AG ❸ 6 Amp, 125 volt ❸	
Heat Input (BTU's per hour)	13,000 - 32,000 BTU / hr	
Overall Efficiency	75 - 81% ❷	
Emissions	0.4 gr / hr (varies w/size and type of fuel) EPA exempt ❷	
Shipping Weight	215 lbs.	
Room Air Blower	150 CFM; .8 Amps, 2175 rpm	
Exhaust Blower	95 CFM: 1.0 Amps, 3000 rpm	
Auger Motor	1.1 RPM; .4 Amps	
Options	Nickel or Gold Trim Kits 4" Quick Disconnect Log Set	



BACK VIEW



SIDE VIEW

Note: Dimensions shown are approximations only (+/- 1/4")

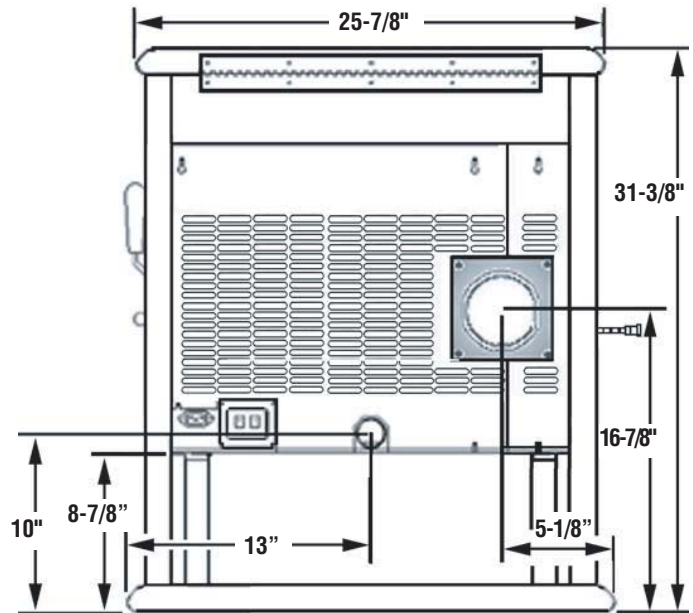
❶ Non-combustible floor protection is required (see *Floor Protection, Page 4*). When installed at clearances less than 6", the floor protector is only required to extend to the wall.

❷ Fuel delivery and burn times will vary depending on size and type of fuel used. Estimated heat input based on fuel value of 8400 BTU per lb.

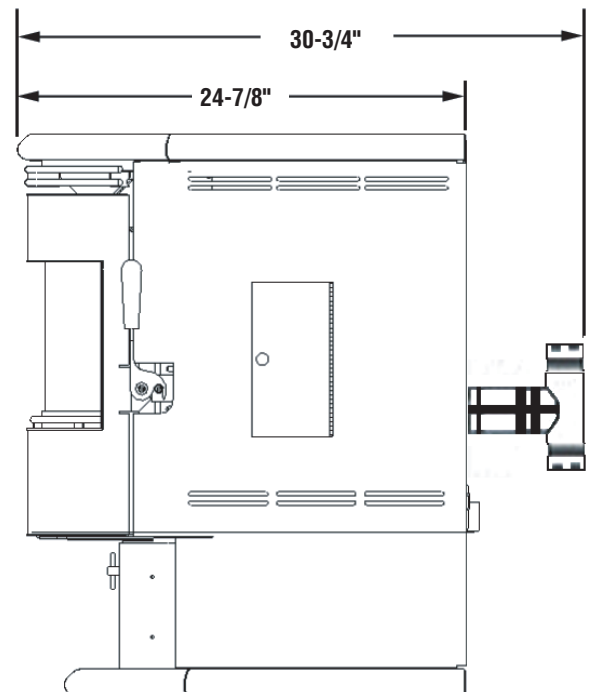
❸ Fuses are rated as fast blow

SPECIFICATIONS - PROFILE® 30 FS-2

Cat. No. H0368	Model Profile 30 FS-2	Pellet Stove
Flue Size	3" (76 mm) Rear	
Width, Overall	25-7/8" (657 mm)	
Depth, Overall	24-7/8" (632 mm)	
Depth, Overall w / 3" tee	30-3/4" (781 mm)	
Height	31-3/8" (797 mm)	
Floor to Rear Flue Center	16-7/8" (429 mm)	
Facing Back of Unit, outside edge on right to center of rear flue outlet	5-1/8" (129 mm)	
Floor to Rear Outside Air Inlet	10" (254 mm)	
Facing Back of Unit outside edge on left to center of air inlet	13" (330 mm)	
Floor Protection Requirements	Front and Side: 6" (152 mm) Back: 1" (25 mm) ❶	
Standard Features	Fastfire™ Self Igniter Wall Thermostat (wire included)	
Hopper Capacity	70 bs.	
Burn time	16 - 41 hours ❷	
Fuse, Control Board Fuse, Igniter	5 Amp, 250 volt, 3AG ❸ 6 Amp, 125 volt ❸	
Heat Input (Max.) Overall Efficiency	14,000 - 38,000 BTU / hr 81% ❷	
Emissions	1.9 gr / hr (varies w / size and type of fuel) EPA exempt ❷	
Ship Weight	270 lbs.	
Room Air Blower 2175 rpm	150 CFM; .8 Amps,	
Exhaust Blower 3000 rpm	95 CFM: 1.0 Amps,	
Auger Motor	1.1 RPM; .4 Amps	
Options	Nickel or Gold Trim Kits 4" Quick Disconnect Log Set	



BACK VIEW



SIDE VIEW

Note: Dimensions shown are approximations only (+/- 1/4")

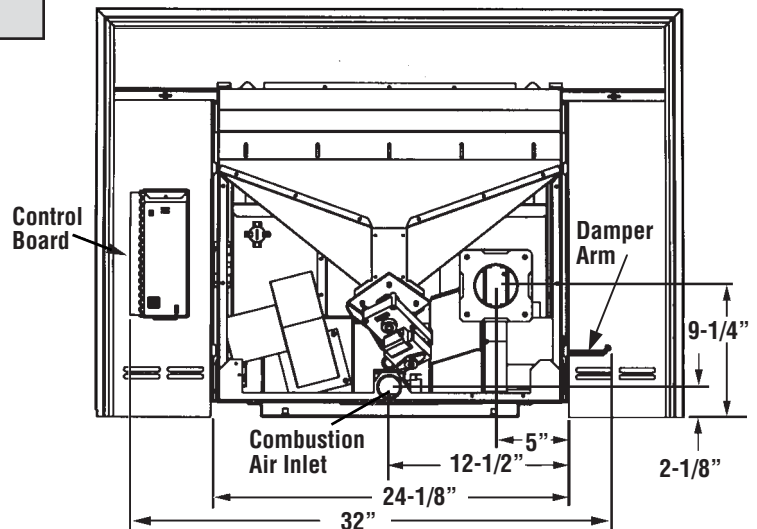
❶ Non-combustible floor protection must be used when installed on carpet (see Floor Protection, **Page 5**).

❷ Fuel delivery and burn times will vary depending on size and type of fuel used. Estimated heat input based on fuel value of 8400 BTU per lb.

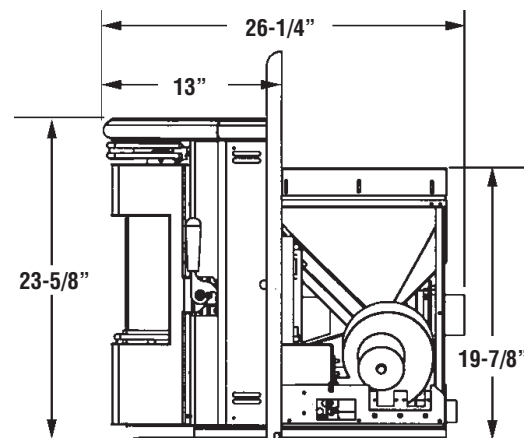
❸ Fuses are rated as fast blow.

SPECIFICATIONS - PROFILE® 30 INS-2

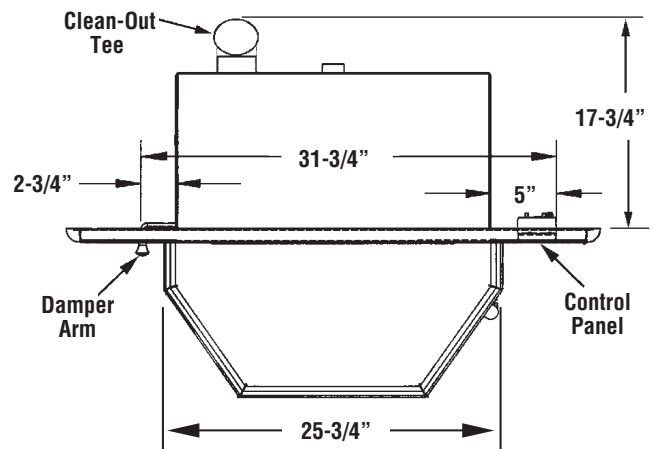
Cat. No. H0369	Model Profile 30 INS-2	Pellet Insert
Flue Size	3" (75 mm) Rear	
Width, Overall front (w/o surround)	26" (660 mm)	
Width, Overall back (w/o surround)	24-1/8" (613 mm)	
Depth, Overall (w/o surround)	26-1/4" (667 mm)	
Height, rear (w/o surround)	19-15/16" (506 mm)	
Height, front (w/o surround)	23-5/8" (600 mm)	
Floor to Rear Flue Center	9-1/4" (235 mm)	
Fireplace Face to Rear Flue Outlet Center (3" tee)	13-1/4" (337 mm)	
Dimensions into Fireplace		
Minimum Height	20-1/8" (511 mm)	
Minimum Width @ Front (extends back 1 1/2")	32" (813 mm)	
Minimum Width @ Back	24-5/8" (626 mm)	
Minimum Depth	17-3/4" (451 mm)	
Facing Back of Unit, Right Outside Edge of Unit to Center of Rear Flue Outlet	5" (127 mm)	
Floor to Rear Outside Air Inlet	2-1/8" (54 mm)	
Facing Back of Unit, Right Outside Edge of Unit to Center of Air Inlet	12-7/16" (316 mm)	
Floor Protection Requirements	Front: 6" (152 mm) ❶	
Standard Features	Fastfire™ Self Igniter Wall Thermostat (wire included)	
Hopper Capacity	50 lbs.	
Burn time	11 - 30 hours ❷	
Fuse, Control Board Fuse, Igniter	5 Amp, 250 volt, 3AG ❸ 6 Amp, 125 volt ❸	
Heat Input (Max.)	14,000 - 38,000 BTU / hr	
Overall Efficiency	81% ❷	
Emissions	1.9 gr / hr (varies w/size and type of fuel) EPA exempt ❷	
Ship Weight	230 lbs.	
Room Air Blower	150 CFM; .8 Amps, 2175 rpm	
Exhaust Blower	95 CFM: 1.0 Amps, 3000 rpm	
Auger Motor	1.1 RPM; .4 Amps	
Options	Nickel or Gold Trim Kits 4" Quick Disconnect Log Set	



BACK VIEW



SIDE VIEW



TOP VIEW

Note: Dimensions shown are approximations only (+/- 1/4")

❶ Non-combustible floor protection must be used when installed on carpet (see *Hearth Protection, Page 7*).

❷ Fuel delivery and burn times will vary depending on size and type of fuel used. Estimated heat input based on fuel value of 8400 BTU per lb.

❸ Fuses are rated as fast blow

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

COMPONENT DEFINITIONS

Air Wash

To inhibit buildup of soot on the door glass, air is delivered to the glass through an air wash system located in the doorframe surrounding the glass.

Auger

It transfers the fuel from the hopper to the feed chute to deliver pellets to the UltraGrate™.

Auger Motor

Drives the Auger. Motor specifications are: .4 Amp, 1.1 RPM (revolutions per minute).

Blower, Room Air (Convection)

The blower function is to transfer the heat from the appliance to heat the room air.

Blower, Exhaust (Draft Inducer/combustion)

It has a radial impeller to deliver more air to the UltraGrate™. It pulls air into the UltraGrate by creating a negative pressure. This is done by extracting the exhaust gases out of the firebox and pushing the exhaust downstream to the flue exit.

Thermal Switch, High Limit (L250-30F, N/C)

There are 2 of these thermal switches on this model. If a temperature reaches 250° F., the high limit auto reset will "trip" and stop the flow of electricity to the auger motor. The thermal switches will not automatically reset until it has cooled below 220° F).

Thermal Switch for Room Air Blower – This thermal switch is located on the room air blower jacket and is designed to detect an overfire condition.

Thermal Switch for Combustion Air Inlet – This thermal switch is located on the combustion air inlet and is designed to detect reversed flow. If negative pressure in the dwelling (i.e. An extremely tight house which may not supply adequate combustion and ventilation air) causes the exhaust to pull back from the combustion air inlet, the heat from the exhaust will result in heat activation of this thermal switch.

Door Switch (Profile® 30 FS-2 and Profile 30 INS-2)

If the door is opened during operation (on model Profile 30 FS-2 and Profile 30 INS-2), this switch disconnects power to the auger motor resulting in the unit shutting down.

Hopper

The hopper is where the pellets are stored.

Heat Select Button

This is the heat output control button. It controls power to the feed system - auger motor and exhaust blower. Use the heat select button to adjust to any of the three feed rate settings (which controls the burn rate).

Photoeye

The photoelectric eye that senses the flame, or lack of. It is designed to signal the control board to discontinue power to the auger motor if it flame is not sensed in the UltraGrate.

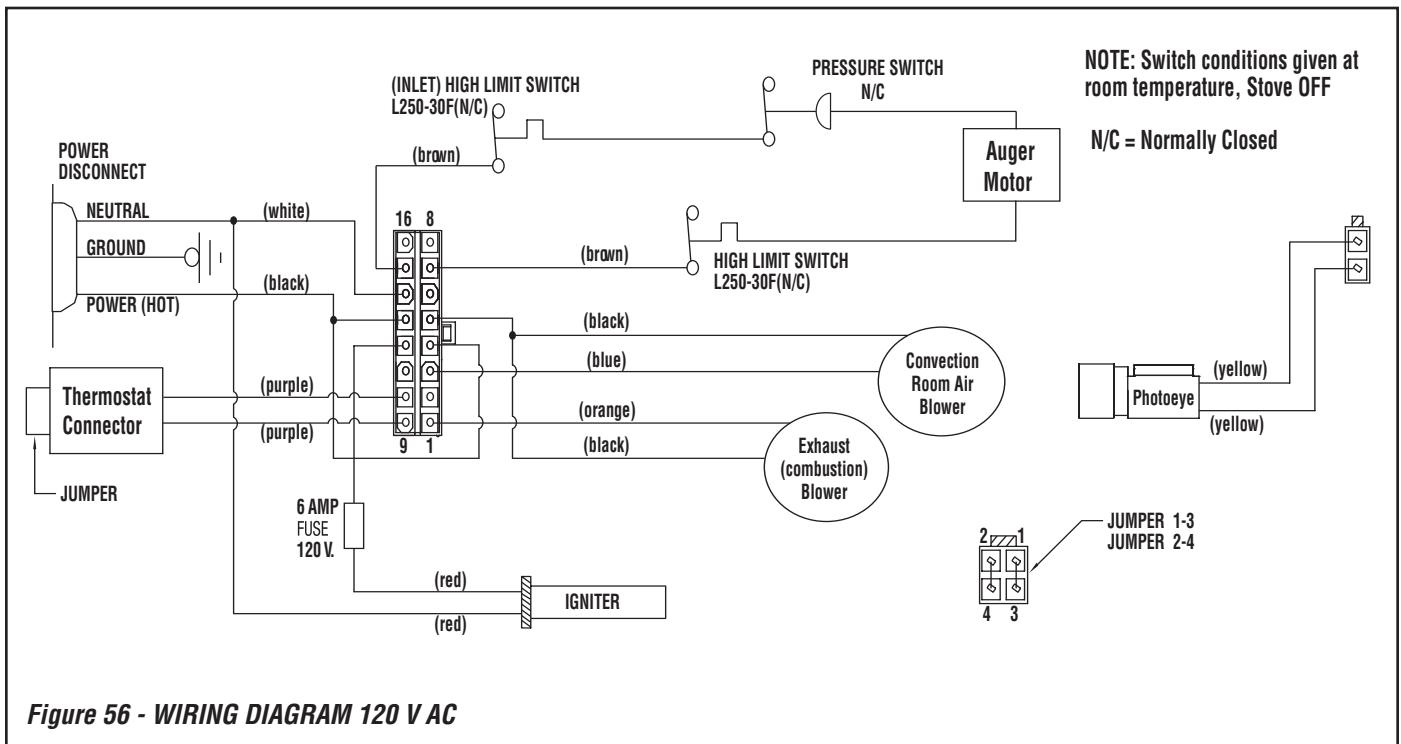
Pressure Switch

A safety device used to shut off the feed system (auger motor) if there is too much back pressure in venting system. Some possible causes are as follows:

- The venting system is obstructed.
- High altitude or other misc. environmental conditions affecting exhaust flow.
- Improper venting system.

UltraGrate (Burn Grate)

This is where combustion occurs and may be referred to as the "Burn Grate".



* N/C = Normally Closed Switch
N/O = Normally Open Switch

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

TROUBLESHOOTING

QUALIFIED TECHNICIANS ONLY

Unplug Appliance Before Performing Any Troubleshooting or Maintenance

PROBLEM	CAUSE(S)	SOLUTIONS
<p>1. Fire burns with a lazy orange flame. Pellets build up in the grate and there is excessive glass soot that is difficult to remove (Ash and soot are a product of combustion with any wood products, so some build-up on the glass is normal).</p>	<p>A) There is insufficient combustion air.</p>	<p>A₁) Lack of maintenance (clean UltraGrate™, clean-out ports, exhaust flow passages, venting system, exhaust blower intake, etc.)</p> <ul style="list-style-type: none"> • Remove any clinkers or ash from the bottom of the UltraGrate that might be obstructing the primary air holes. • Check that the heat exchange tubes are not coated with ash. • Clean internal exhaust ducts. • Check gasket seal around the door. Use a thin strip of paper, 1 in. wide. Open the door and close it on the paper strip. A slight friction should be felt when the paper strip is pulled. Repeat this process at various locations around the door gasket. Replace the door gasket if necessary. • Check for blockage in the air inlet tube or exhaust pipe. Clean as Necessary. • Inspect glass seal to ensure that it is in good condition and is properly seated to the door. <p>A₂) Fuel trim may need to be adjusted down for faster feeding fuels.</p> <p>A₃) Change to a better grade of fuel if necessary. Check that the damper has been opened enough for the amount of fuel fed.</p> <p>A₄) Have Your Authorized Lennox Hearth Products dealer check your exhaust blower for proper operation.</p> <p>A₅) The venting system design is too restrictive (call your authorized Lennox Hearth Products Technician to evaluate how the installation can be corrected to satisfy the exhaust flow requirements of the appliance).</p>
<p>2. Fire goes out or stove shuts down automatically</p>	<p>A) Stove has run out of fuel.</p> <p>B) Pellets are not feeding.</p> <p>C) The high limit temperature switch has tripped.</p> <p>D) There is too much combustion air for the amount of fuel.</p>	<p>A) Refill hopper.</p> <p>B) See (Pellets will not feed) this Page.</p> <p>C) Allow the appliance to cool for 1 hour, then re-light. If the stove has been operating at a medium to high burn rate with the room air blower adjusted to low, there may not be enough air flow to dissipate the heat. On higher feed rates, adjust the blower speed to a higher setting. If this problem persists (particularly at lower burn rates) then the high limit thermal switch may need to be replaced by your authorized dealer.</p> <p>D) Adjust the damper to reduce combustion air flow.</p>
<p>3. Pellets will not feed.</p>	<p>A) The hopper is empty.</p> <p>B) The auger motor or control board may be defective. The pressure switch tap or hose may be blocked.</p> <p>C) Back pressure in venting tripping pressure switch.</p> <p>D) Thermostat is in stand-by mode.</p> <p>E) Thermostat wires disconnected.</p> <p>F) High limit thermal switch may have been tripped.</p> <p>G) Door switch not engaged, stopping pellet feed (Profile® 30 FS-2 and Profile 30 INS-2).</p> <p>H) Self-aligning bearings in auger motor may be misaligned.</p>	<p>A). Refill hopper.</p> <p>B). Check to be sure that there is no blockage in the pressure tap or hose. Have your authorized Lennox Hearth Products dealer diagnose the problem and clean or replace any necessary parts.</p> <p>C). If new installation check for excessive 90° bends, long horizontal runs or excessive vertical run of 3" pipe. Possibly change to 4" pipe. If older installation check for excessive ash accumulation in pipe or other obstructions. Clean out pipe.</p> <p>D). Check to see if thermostat is set to low or if sun is shining directly on thermostat.</p> <p>E). Reinstall wires.</p> <p>F). Allow stove to cool. Increase room air blower setting.</p> <p>G). Have dealer check operation to determine if adjustment or replacement is necessary.</p> <p>H). Gently tap the auger motor.</p>

TROUBLESHOOTING

QUALIFIED TECHNICIANS ONLY

Unplug Appliance Before Performing Any Troubleshooting or Maintenance

PROBLEM	CAUSE(S)	SOLUTIONS
4. Blowers will not operate when the ON/OFF start button is depressed.	A) There is no power to the stove. B) There is no power to the control board.	A) Check that the stove is plugged in to the wall outlet. B ₁) Check if the house circuit breaker has tripped. B ₂) Check the wire connections on the high limit thermal switch and control board.
5. There is soot or fly ash in the house.	A) The window is being cleaned when the stove is operating. B) There is leakage at the joints between the exhaust blower, connection or exhaust pipe connections. This will be evidenced by dust on the impeller of the room air blower, and in the heat exchanger area. C) The vacuum cleaner is leaking.	A) Turn down the room air blower or turn off stove before cleaning to prevent dispersion of ash and soot into the room. B) Seal up any leaks in the exhaust system with room temperature vulcanizing high temperature silicone sealer (RTV). C) DO NOT use a standard household vacuum or "shop vac" as the filters will leak the fine particles of ash. Clean the stove with an approved ash vacuum ONLY.
6. Stove acts as if a fire is present when there is not a fire in the grate.	A) Excessive sun light may be shining directly into firebox from window.	A) Block excessive sunlight. Call authorized Lennox Hearth Products dealer if problem persists.
7. Stove will not light.	A) The igniter element may have failed. B) There is not enough pellets in the UltraGrate.	A) Check igniter element fuse in rear stove compartment. Call your authorized Lennox Hearth Products dealer. See <i>Lighting Procedure Without Igniter, Page 21</i> . B) Prime the feed system (see <i>Initial Start-Up, Page 20</i>).
8. Fault	A) Photoeye not detecting flame. B) Stove has run out of fuel. C) A disk has tripped / pressure switch. D) Door switch not engaged, stopping pellet feed (Profile® 30 FS-2 and Profile 30 INS-2).	A) Check connection at control board following yellow wires to all connectors. Inspect and clean photoeye filter, if necessary. B) Refill hopper. C) Blower intake, exhaust passages and / or venting system needs cleaning (follow routine and annual maintenance procedures). D ₁) Have dealer check operation to determine if adjustment or replacement is necessary. D ₂) If this does not correct the problem contact your local authorized Lennox Hearth Products dealer.
9. Blowers run continuously	A) Wire harness and/or control board has been damaged – unplug stove and contact dealer.	A) Contact your local authorized Lennox Hearth Products dealer.
10. All lights on control are on but nothing happens	A) When using a thermostat. Thermostat not calling for heat. B) If not using a thermostat - Check thermostat jumper	A) The lights on the control board remain on even when the thermostat is not demanding heat. When the thermostat demands heat the stove will begin to operate. B) Ensure that the thermostat jumper at terminal block is installed and making good contact.

REPLACEMENT PARTS LIST
DOOR PARTS AND BODY COMPONENTS

Item	Part No. / Cat. No.	Description	Stove Model
	13640075	Clip Kit, Glass Bottom	Profile® 20 FS-2
	13640086	Clip Kit, Glass Right and Left Side	Profile 20 FS-2
	14750264	Clip Kit, Glass Top Bottom (Doors w/ 3pc glass)	Profile 30 FS-2 & INS-2
	13640085	Clip Kit, Glass Top	Profile 20 FS-2
1	H3752	Door Assembly, Firebox (with 3 Piece Glass)	Profile 20 FS-2
2	H0297	Door Assembly, Firebox, DK-P30 (with 3 Piece Glass)	Profile 30 FS-2 & INS-2
	26M81	Gasket, Door, 3/4" Rope, (8 Feet)	Profile 20 FS-2
	61051000	Gasket, Door, 1" Rope, (7 Feet)	Profile 30 FS-2 & Profile 30 INS-2
	61057202	Gasket Kit, Glass (10 Feet)	All
	H0257	• Glass, Center	Profile 20 FS-2
	H0258	• Glass, Side (order 2 if set is needed)	Profile 20 FS-2
	H0254	• Glass, Center	Profile 30 FS-2 & Profile 30 INS-2
	H0255	• Glass, Side (order 2 if set is needed)	Profile 30 FS-2 & Profile 30 INS-2
3	17250095	Handle Assembly, Door	Profile 20 FS-2
4	17150095	Handle Assembly, Door	Profile 30 FS-2 & Profile 30 INS-2
5	14650047	Hinge Bracket, Door	Profile 20 FS-2
6	14750021	Hinge Bracket, Door	Profile 30 FS-2 & Profile 30 INS-2
	13740005	Bracket, Hopper Lid Support	Profile 30 FS-2
	11950068	Bracket, Hopper Lid Support	Profile 20 FS-2
7	14650003	Panel, Left Side	Profile 20 FS-2
8	14650004	Panel, Right Side	Profile 20 FS-2
9	14750070	Panel, Left Side	Profile 30 FS-2
10	14750075	Panel, Right Side	Profile 30 FS-2
11	14650048	Panel, Rear	Profile 20 FS-2
12	14750150	Panel, Rear (2 piece)	Profile 30 FS-2
13	14750340	Panel, Left Side	Profile 30 INS-2
14	14750345	Panel, Right Side	Profile 30 INS-2
15	14750300	Panel, Top	Profile 30 INS-2
16	14650012	Panel, Top	Profile 20 FS-2
16	14750060	Panel, Top	Profile 30 FS-2
17	14750186	Pedestal Assembly	Profile 30 FS-2
	14655000	Pedestal Assembly	Profile 20 FS-2
	12051409	Knob, Control Panel Door (6 per package w/studs)	All

• Includes gasket.

ELECTRICAL PARTS

Item	Part No. / Cat. No.	Description	Stove Model
18	12046300	Auger Motor	All
43	12050011	Blower, Exhaust (complete)	All
	12056011	Blower Motor Only, Exhaust	All
44	12146109	* Blower, Room Air, Hard Washer	All
19	16053941	Control Board	Profile 20 FS-2
19	16052112	Control Board	Profile 30 FS-2 & Profile 30 INS-2
20	12147705	Thermal Switch, High Limit, 250 DG (L250-30F,60T21) Set of 3	All

REPLACEMENT PARTS LIST
ELECTRICAL PARTS

Item	Part No. / Cat. No.	Description	Stove Model
	18150150	Fuse, Control Board, 5 Amp, 250 volt, Fast blow, 12pk.	All
21	12150213	Igniter Assembly, Replacement, 380 Watts, 3.3 Amp.'s, 1 each(includes fuse holder w/fuse)	All
22	14750404	Photoeye Kit, Replacement	All
24	12058820	Power Cord, 8 feet	All
26	16050001	Pressure Switch	All
28	13050002	Switch, Door (3 per pkg.)	Profile® 30 FS-2 & INS-2
25	16050205	Thermostat, Wall, Honeywell (Thermostat Wire, P/N H3457, is not included)	All
27	12050815	Wiring Harness	All
	H3457	Wire, Thermostat, 20' coil - 18 gage (16020204)	All

FIREBOX PARTS

Item	Part No. / Cat. No.	Description	Stove Model
	13650046	Baffle, Heat Exchange	Profile® 20 FS-2
29	13640028	Clips, Brick	Profile 20 FS-2
30	11750011	Clips, Brick	Profile 30 FS-2 & INS-2
31	14650011	Firebrick Set	Profile 20 FS-2
32	14750015	Firebrick Set	Profile 30 FS-2 & INS-2
33	12051263	UltraGrate	All

AUGER SYSTEM COMPONENTS

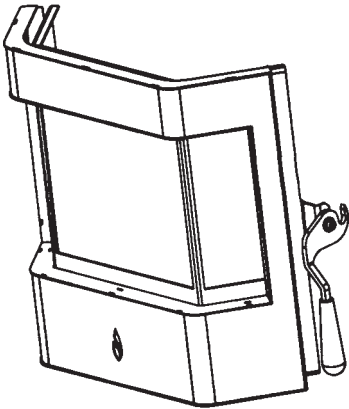
Item	Part No. / Cat. No.	Description	Stove Model
37	11756300	Auger Shaft Kit	All
35	12041300	Collar and Screw Set, Auger (3 per pkg.)	All
36	17250241	End Plate, Auger (flange) (w/nylatron bushing)	All

MISC.

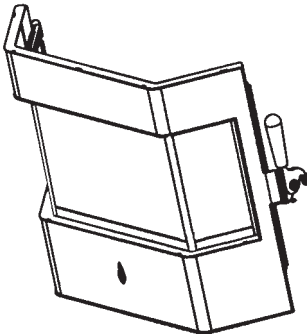
Item	Part No. / Cat. No.	Description	Stove Model
	14750306	Ashpan, Center, Left and Right, Profile 30 INS-2	Profile 30 INS-2
	14751189	Ashpan, Profile 30 FS-2	Profile 30 FS-2
38	12050004	Brush, Cleaning (for exchange tubes)	Profile 30 FS-2 & INS-2
	12021101	Bushing, Nylatron 1/2"	All
	12151306	Damper Rod Kit (includes 1/4" rod, handle and set collar)	Profile 20 FS-2 & Profile 30 FS-2
39	61050003	Gasket, Auger Flange, 5 per pkg..	All
40	61050005	Gasket, Exhaust Blower, Fan Mount, 5 per pkg.	All
41	61057203	Gasket, Room Air Blower, 5 per pkg.	All
	61050041	Gasket, Exhaust Blower, Tear Down, 5 per pkg.	All
42	61050016	Gasket, Quick Disconnect, 5 per pkg..	All
	13656003	Hose, Pressure Switch, 19" (may need to be cut to size) - 3 per pkg.	All
	17100034	Plate, Ash Clean-Out, Left	Profile 30 FS-2 & INS-2
	17100035	Plate, Ash Clean-Out, Right	Profile 30 FS-2 & INS-2
	14750014	Scraper Rod Kit, Replacement (Fits - Profile Series, Free-Standing and Insert)	All
	14650015	Trim Kit, Standard, Met. Black, Replacement (louvers)	Profile 20 FS-2
	14750055	Trim Kit, Standard, Met. Black, Replacement (louvers)	Profile 30 FS-2 & INS-2
45	12055500	Tool, Grate Scraper	All
46	12050093	Quick Disconnect 3" Vent Side	All

REPLACEMENT PARTS DIAGRAMS

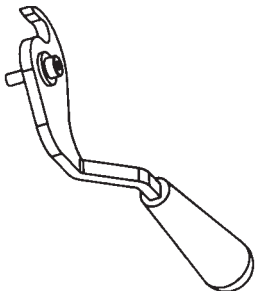
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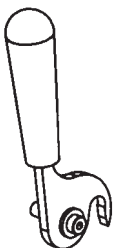
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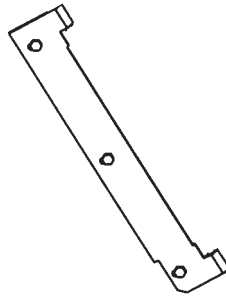
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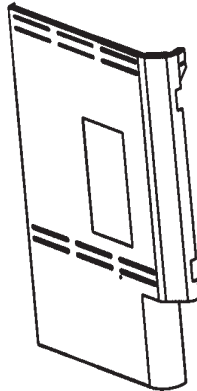
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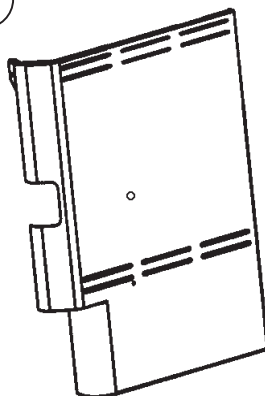
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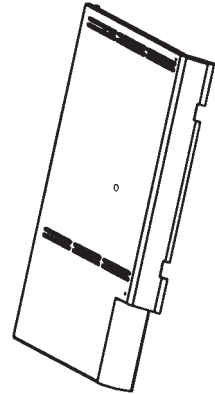
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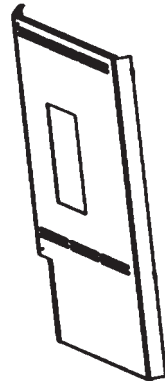
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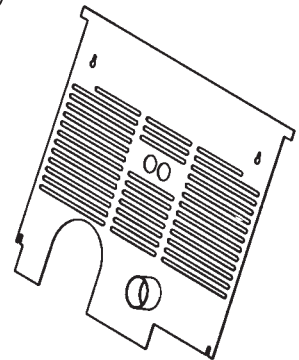
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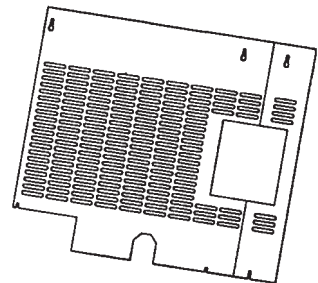
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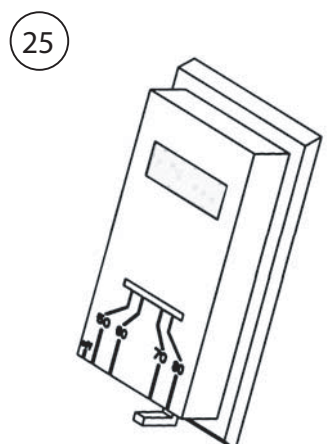
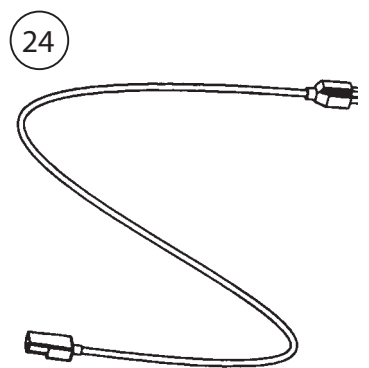
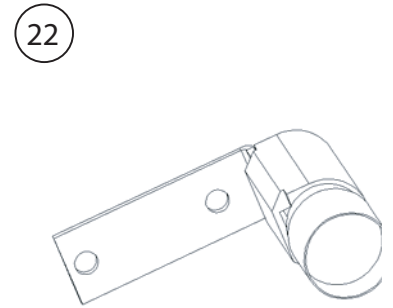
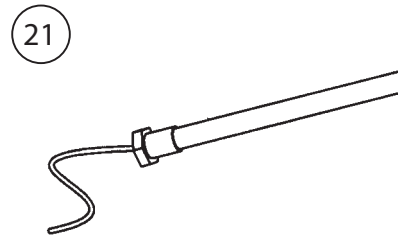
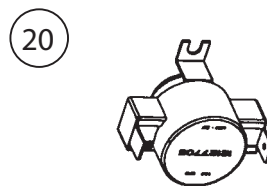
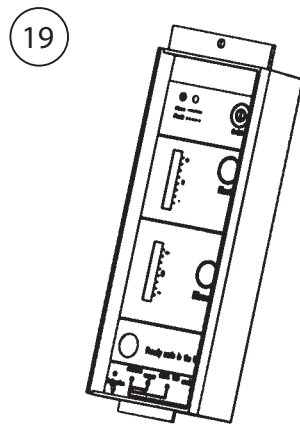
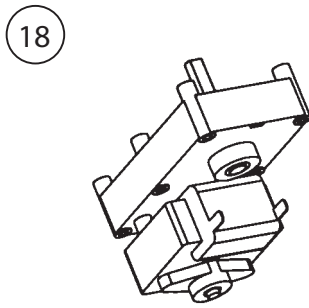
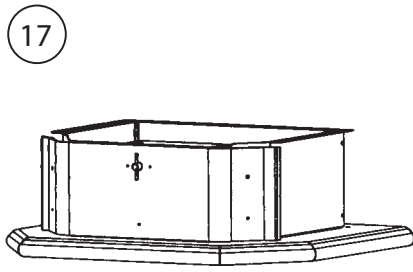
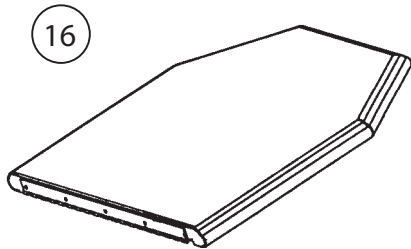
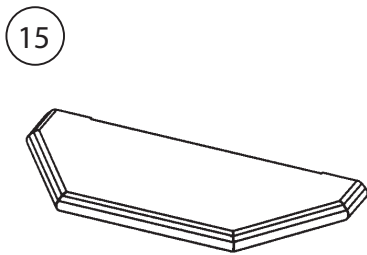
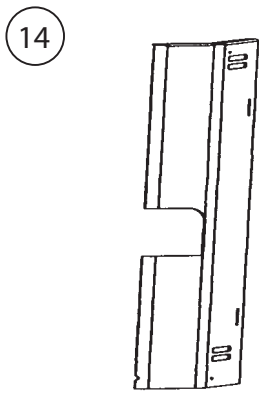
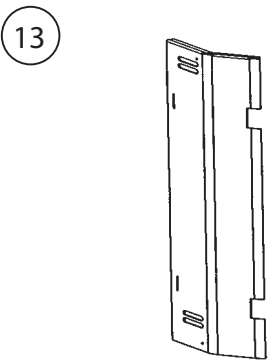


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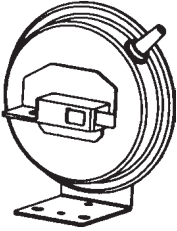
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REPLACEMENT PARTS DIAGRAMS

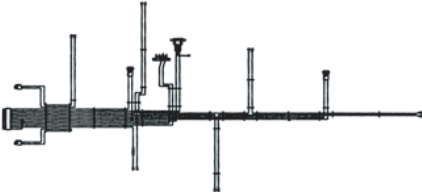


REPLACEMENT PARTS DIAGRAMS

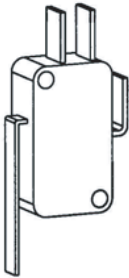
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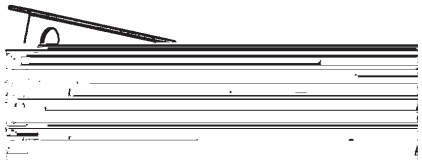
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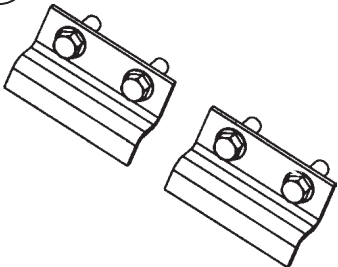
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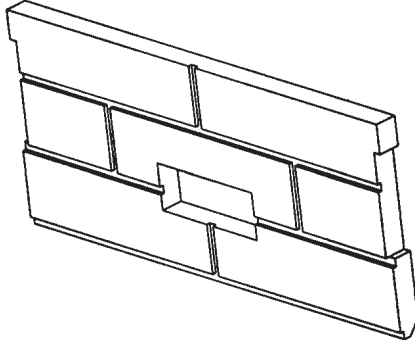
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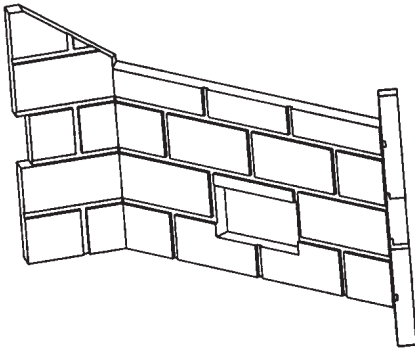
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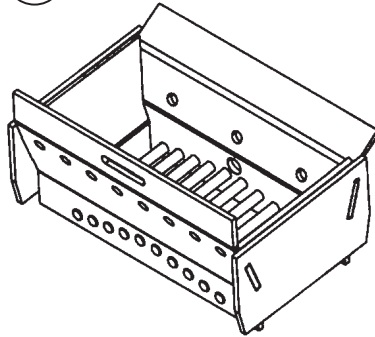
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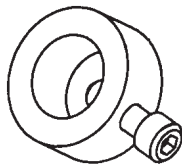
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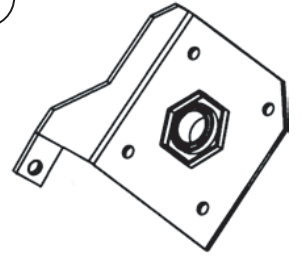
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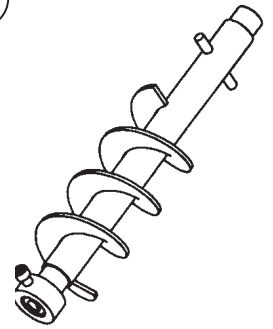
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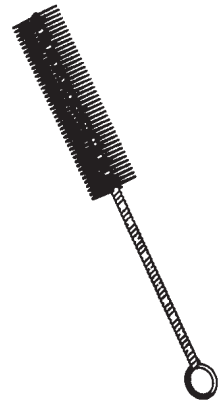
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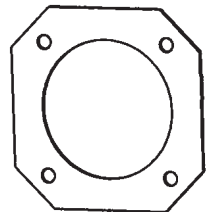
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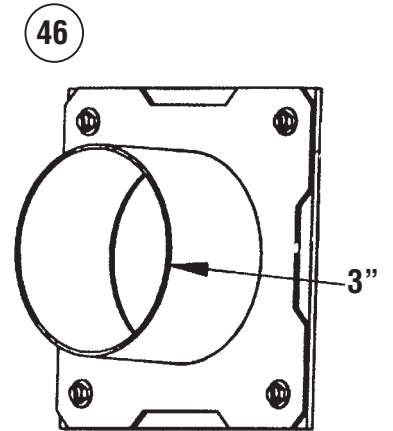
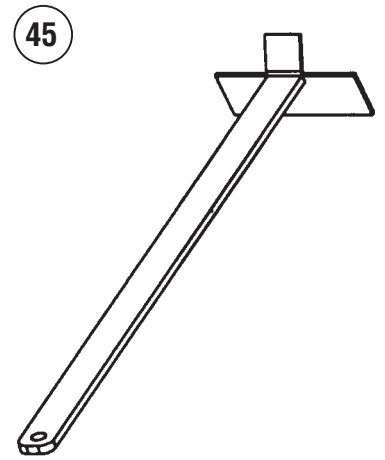
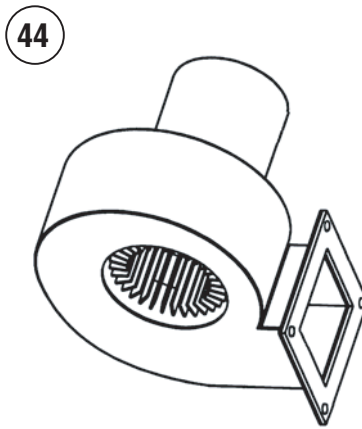
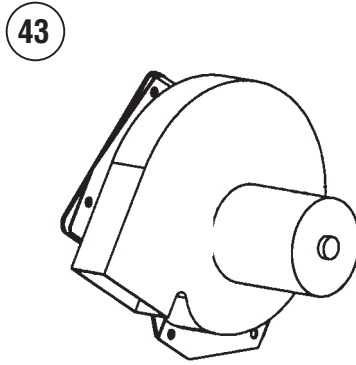
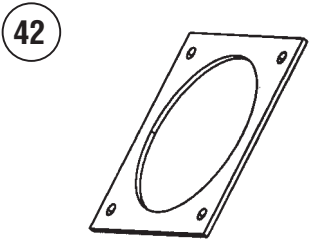
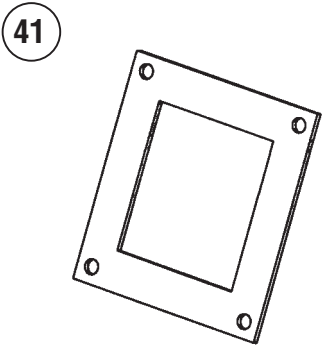
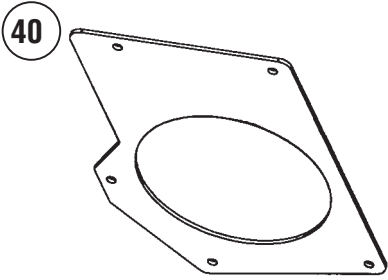


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REPLACEMENT PARTS DIAGRAMS

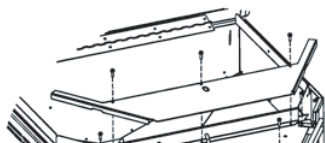


OPTIONAL ACCESSORIES

Item #	Part #	Model	Description	Stove Model
1	14 m46	TKP2-G	Trim Kit, Gold	Profile® 20 FS-2
1	14 m47	TKP2-N	Trim Kit, Nickel	Profile 20 FS-2
1	14 m49	TKP3-G	Trim Kit, Gold	Profile 30 FS-2 & INS-2
1	14 m50	TKP3-N	Trim Kit, Nickel	Profile 30 FS-2 & INS-2
2	14 m81	QDPC-4	Quick Disconnect Pipe Connector, 4" *	All
	70K99	TSPK-B	Touch-up Spray Paint Kit, Black	All
3	14 m52	SKSP3	Surround Kit, Small, 28-1/2" x 40-3/4", Black	Profile 30 INS-2
3	14 m53	SKMP3	Surround Kit, Medium, 32" x 44", Black	Profile 30 INS-2
3	14 m54	SKLP3	Surround Kit, Large, 36 x 48", Black	Profile 30 INS-2
4	14 m55	STKSP3-B	Surround Trim Kit, Small, 28-1/2" x 40-3/4", Brass	Profile 30 INS-2
4	14 m56	STKMP3-B	Surround Trim Kit, Medium, 32" x 44", Brass	Profile 30 INS-2
4	14 m57	STKLP3-B	Surround Trim Kit, Large, 36 x 48", Brass	Profile 30 INS-2
5	H0244	DLS-P20	Decorative Log Set	Profile 20 FS-2
6	H0464	DLS-A03	Decorative Log Set	Profile 30 FS-2 & INS-2
	H0416	ZCK-PI	Zero Clearance Kit (for installing insert as a built-in)	Profile 30 INS-2
	70K99	TSPK - B	Touch-up Spray Paint Kit, Black	All

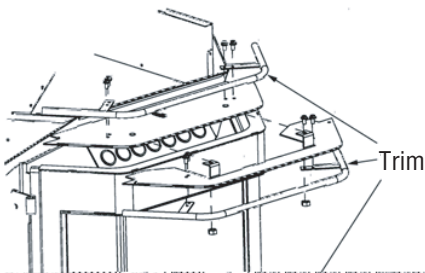
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Profile 30 FS-2 & Profile INS-2



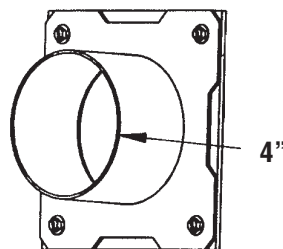
Trim

Profile 20 FS-2



2

Converts from standard 3" outlet to 4"



5

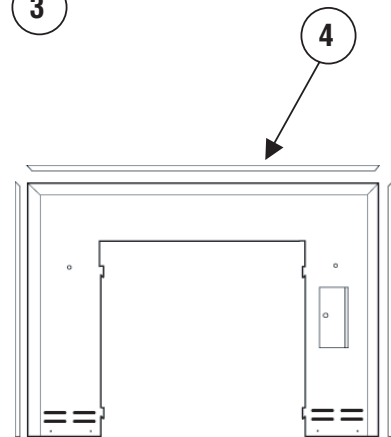


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3

4



Surround / Trim Sizes

Large:
36" (91.4cm) height
48" 121.9cm) width

Medium:
32" (81.3cm) height
44" (111.75cm) width

Small:
28 1/2" (72.4cm) height
40 3/4" (103.5cm) width

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE



CERTIFIED FOR U.S. AND CANADA. LISTED ROOM HEATER FOR USE WITH APFI/FFI APPROVED PELLETIZED WOOD FUEL ONLY. FOR USE IN MANUFACTURED (MOBILE) HOMES, AND AS AN INSERT FOR MASONRY AND FACTORY BUILT FIREPLACES. **MODEL: PROFILE 20-2** TESTED

TO ASTM E-1509 / UL 1482 / ULC-S627 / ULC-S628 REPORT NO. 6658 (JULY 1993).

INSTALL AND USE ONLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA. DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE. SEE LOCAL BUILDING CODE AND MANUFACTURER'S INSTRUCTIONS FOR PRECAUTIONS REQUIRED FOR PASSING A CHIMNEY THROUGH A COMBUSTIBLE WALL OR CEILING. THIS PELLET FIRED APPLIANCE HAS BEEN TESTED AND LISTED FOR USE IN MANUFACTURED HOMES IN ACCORDANCE WITH OREGON ADMINISTRATIVE RULES 814-23-900 THROUGH 814-23-909.

OPERATE ONLY WITH FIREBRICK IN PLACE. WARNING: OPERATE ONLY WITH VIEWING DOOR CLOSED. INSPECT FLUE FREQUENTLY TO PREVENT ACCUMULATION OF SOOT. THE HEATER AND FLUE MUST BE IN GOOD CONDITION. KEEP FURNISHINGS AND OTHER COMBUSTIBLE MATERIALS WELL AWAY FROM HEATER.

ROUTINE MAINTENANCE REMINDER

FREQUENCY OF CLEANING AND MAINTENANCE OF YOUR STOVE DEPENDS ON THE ASH CONTENT OF THE PELLETS YOU BURN. CHECK THE FOLLOWING PARTS OF YOUR STOVE WEEKLY FOR THE FIRST MONTH TO DETERMINE THE FREQUENCY OF CLEANING.

- A. BURN GRATE
- B. HEAT EXCHANGER TUBES
- C. ASH PAN AND EXHAUST PIPE

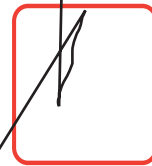
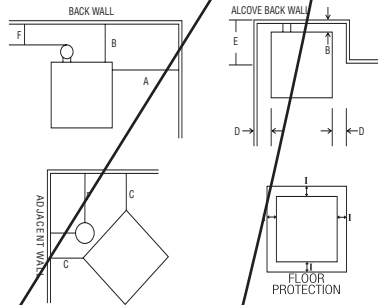
SEE YOUR MANUAL AND/OR DEALER FOR MORE INFORMATION.
 INPUT RATING RANGE: 1.5 TO 3.8 LBS./HOUR (NOMINAL)
 ELECTRICAL RATING: 60 HZ, 115 V, LESS THAN 10 AMP

DO NOT REMOVE THIS LABEL

WH-

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS

FREESTANDING STOVE INSTALLATION	MANUFACTURED (MOBILE) HOME OR RESIDENTIAL INSTALLATION	
	HORIZONTAL FLUE-DIRECTLY THROUGH WALL INSTALLATION	INTERIOR VERTICAL FLUE INSTALLATION
SIDEWALL TO UNIT	A* 4"/102MM	4"/102MM
BACKWALL TO UNIT	B 1"/26MM	9"/229MM
WALL TO UNIT CORNER	C 1"/26MM	1"/26MM
ALCOVE TO FUEL HOPPER	D 4"/102MM	4"/102MM
MAX. DEPTH OF ALCOVE	E 24"/610MM	24"/610MM
FLUE TO WALL	F 3"/77MM	3"/77MM
FRONT/REAR/SIDE TO FLOOR PROTECTION OUTSIDE EDGE	I 6"/153MM	6"/153MM



CAUTION: HOT SURFACES WHILE IN OPERATION. DO NOT TOUCH. CONTACT MAY CAUSE SKIN BURNS.

KEEP CHILDREN, COMBUSTIBLE MATERIAL AND FURNISHINGS A CONSIDERABLE DISTANCE AWAY. SEE NAMEPLATE AND INSTRUCTIONS. TYPE OF FUEL: PELLETIZED WOOD FUEL ONLY.

COMBUSTIBLE FLOOR MUST BE PROTECTED BY NON-COMBUSTIBLE MATERIAL EXTENDING BENEATH THE HEATER AND 6" TO THE FRONT, SIDES AND REAR AS INDICATED OR TO THE NEAREST PERMITTED COMBUSTIBLE MATERIAL.

USE 3" / 75mm or 4" / 100mm Type "PL" LISTED PELLET VENT AND COMPLETE COMPONENTS.

INSERT MODEL

MAY BE INSTALLED IN A MASONRY FIREPLACE THAT MEETS NATIONAL AND LOCAL BUILDING CODE REQUIREMENTS (UBC 37 OR ULC S628). DO NOT REMOVE BRICKS OR MORTAR. MAY BE INSTALLED IN A FACTORY BUILT ("ZERO CLEARANCE") FIREPLACE (UL 127 OR ULC S610). DO NOT ALTER OR MODIFY THE FIREPLACE STRUCTURE. REFER TO OWNER'S MANUAL FOR SPECIFIC INSTALLATION REQUIREMENTS.

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NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE

INSTALL AND USE ONLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA. DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER FIREPLACE. SEE LOCAL BUILDING CODE AND MANUFACTURER'S INSTRUCTIONS FOR PRECAUTIONS REQUIRED FOR PASSING A CHIMNEY THROUGH A COMBUSTIBLE WALL OR CEILING. THIS PELLET FIRED APPLIANCE HAS BEEN TESTED AND LISTED FOR USE IN MANUFACTURED (MOBILE) HOMES IN ACCORDANCE WITH OREGON ADMINISTRATIVE RULES 814-23-900 THROUGH 814-23-909.

OPERATE ONLY WITH FIREBRICKS IN PLACE. OPERATE ONLY WITH VIEWING DOOR AND ASH REMOVAL DOOR CLOSED. INSPECT FLUE FREQUENTLY. CLEAN HEAT EXCHANGER AND FLUE FREQUENTLY TO PREVENT ACCUMULATION OF SOOT. THE HEATER AND FLUE MUST BE IN GOOD CONDITION. REQUIRED COMPONENTS: DAMPER SEALING PLATE FOR INSERT INSTALLATIONS. USE 3" / 75MM OR 4" / 100MM MODEL PL CHIMNEY COMPONENTS. KEEP FURNISHINGS AND OTHER COMBUSTIBLE MATERIALS WELL AWAY FROM HEATER.

ELECTRICAL RATING: 115V 60Hz Less than 10 Amp
 FUEL INPUT RATING: 4.5 Lbs./Hr. Max.

ROUTINE MAINTENANCE REMINDER

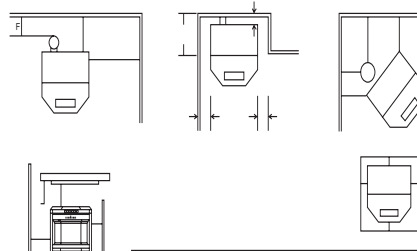
FREQUENCY OF CLEANING AND MAINTENANCE OF YOUR STOVE DEPENDS ON THE ASH CONTENT OF THE PELLETS YOU BURN. CHECK THE FOLLOWING PARTS OF YOUR STOVE WEEKLY FOR THE FIRST MONTH TO DETERMINE CLEANING:

- A. BURN GRATE
- B. HEAT EXCHANGER TUBES
- C. ASH TRAPS AND ASH PAN

SEE YOUR MANUAL AND/DEALER FOR MORE INFORMATION.

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS

INSTALLED AS FREESTANDING STOVE		MANUFACTURED (MOBILE) HOME OR RESIDENTIAL INSTALLATION	
		HORIZONTAL FLUE-DIRECTLY THROUGH WALL INSTALLATION	INTERIOR VERTICAL FLUE INSTALLATION
SIDEWALL TO UNIT	A*	6" / 153 MM	6" / 153 MM
BACKWALL TO UNIT	B	1" / 25 MM	9" / 228 MM
CORNER TO UNIT	C	1" / 25 MM	1" / 25 MM
ALCOVE TO FUEL HOPPER	D	6" / 153 MM	6" / 153 MM
DEPTH OF ALCOVE	E	18" / 458 MM	N/A
FLUE TO WALL	F	3" / 77 MM	3" / 77 MM



- G. SIDE WALL 6" / 153 MM
- H. SIDE TRIM 1" / 25 MM
- I. TOP TRIM 1" / 25 MM
- J. ADJACENT WALL 18" / 458 MM

INSTALLATION TIPS

**T300P-2 SERIES
CASCADE**

**ADVANTAGE II-T C
ADVANTAGE OPTIMA & PROFILE SERIES**

Pellet Stove Models:

INSTALLATION TIPS

Select Your Installation Type

Caution: Appliance/stove may not be installed in location facing direct sunlight (not applicable to Advantage II-T C & Cascade).



GOOD INSTALLATION:
Horizontal Installation
(Direct Vent - Outside Wall)
No natural draft. Wind pressures may affect operation

BETTER INSTALLATION:
Vertical & Horizontal Installation
(Up and Out)
Some natural draft aids venting. Wind pressures may still affect operation

BEST INSTALLATION:
Vertical Installation
(Straight Up)
Natural draft improves operation and negative effects from wind

VENTING TYPE
a: PL-Vent Pipe / Pellet Vent (w/stainless interliner)
b: Stainless Steel flex liner may be used inside existing flue or chimney (fireplace insert or woodstove replacement applications)
CAUTION: Do not use Type B-Vent Pipe

REQUIRES 3" DIAMETER STANDARD PL-VENT / PELLET PIPE
With listed termination kit. If installation requires in excess of 11' of pipe, it is recommended a 4" diameter pipe be used.

MANUFACTURED HOME
Requires outside air for combustion. Use a galvanized or stainless steel pipe for duct. Minimum duct size 1 5/8" dia.

CLEARANCES TO COMBUSTIBLES
Ensure all clearances are maintained in accordance to instructions contained on product safety label and in compliance with pipe/venting requirements.
Note: Leave sufficient clearance for routine cleaning and maintenance.

POWER SUPPLY
Must have proper polarity & be grounded.
Note: Use of an extension cord may adversely effect the performance of your unit

Seal all Venting Joints: Use RTV (high temp silicone)

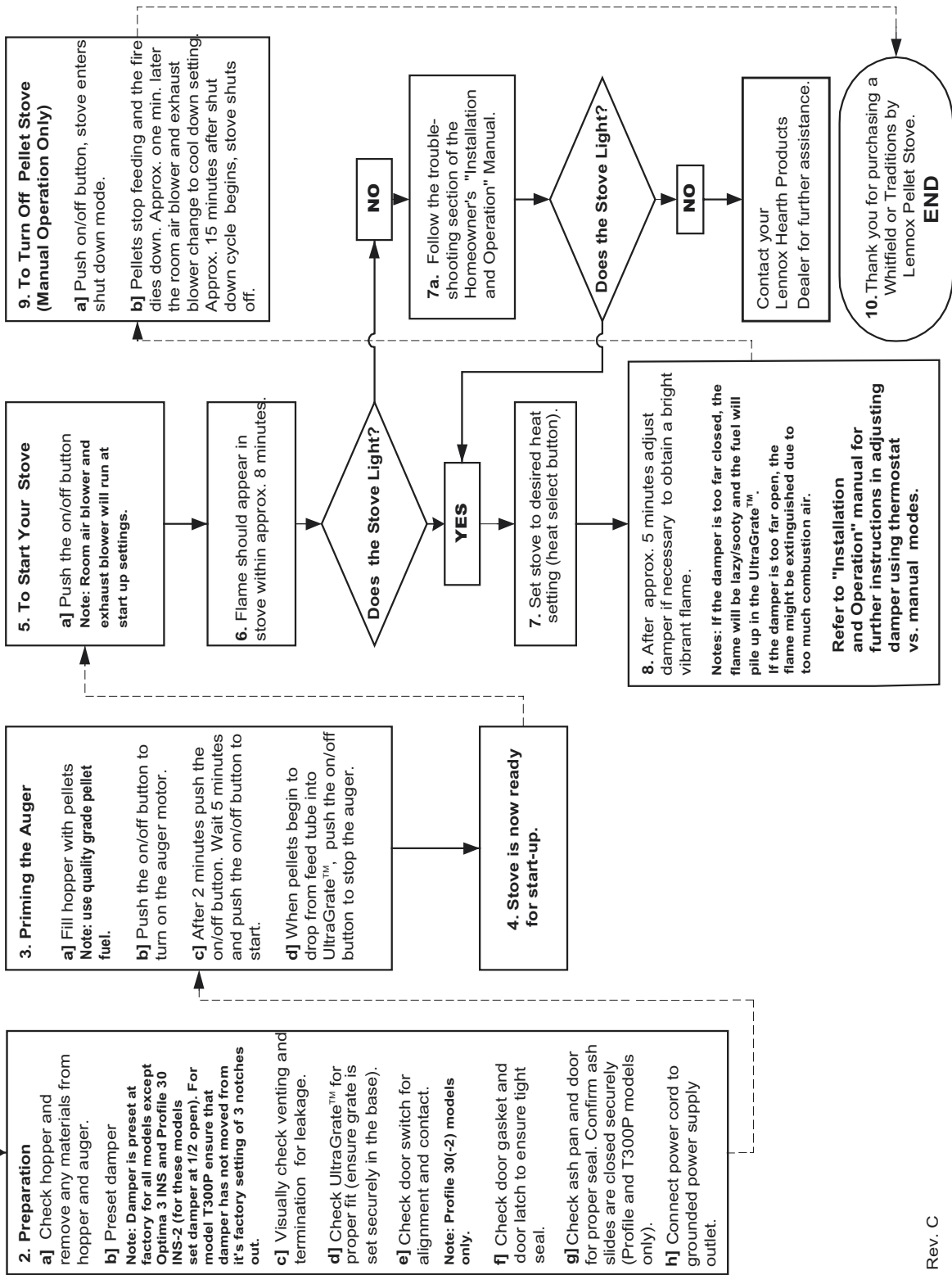
Please Review "Installation and Operation" Manual for Additional Instructions.

**ADVANTAGE OPTIMA AND PROFILE SERIES
TRADITIONS T300P-2 SERIES**

Pellet Stove Models:

SIMPLE OPERATING INSTRUCTIONS

1. Start



OWNERSHIP RECORDS

Dealer's Name:

Dealer's Address:

City:

State:

Zip Code:

Serial Number:

Date of Purchase:

Date Installed:

Notes:

SERVICE AND MAINTENANCE LOG

Service Date	Service Technician	Service Description
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NOTES

Lennox reserves the right to make changes at any time, without notice, in design, materials, specifications, prices and also to discontinue colors, styles and products. Consult your local distributor for fireplace code information.

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