



Quest

PELLET STOVE

OWNER'S
MANUAL
AND
OPERATING
INSTRUCTIONS

Freestanding and Insert Models
...



Proudly
Manufactured in the U.S.A. by
Pyro Industries, Inc. Burlington, WA 98233



Congratulations on the purchase of your Whitfield Quest Pellet Stove!

When you purchased your Whitfield stove, you joined the ranks of thousands of concerned individuals whose answer to their home heating system reflects their concern for aesthetics, efficiency and our environment.

We extend our continued support to help you achieve the maximum benefit and enjoyment available from your pellet stove.

This manual covers, in detail, the steps required to assemble and install your Whitfield pellet stove safely. Please familiarize yourself with this Owner's Manual before installing your Whitfield stove.

We at Pyro Industries, Inc., manufacturer of the “Original Pellet Stove”, thank you for selecting a Whitfield as the answer to your home heating needs.

Sincerely,

All of us at Pyro Industries, Inc.

NOTE TO THE INSTALLER:

Do not throw these instructions away. These instructions must be left with the homeowner.

NOTE TO THE STOVE OWNER:

Please view the “Operation & Maintenance” video included with the stove.

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PLEASE NOTE:

The drawings in this manual are not drawn to architectural scale and should be used for reference only. Actual dimensions as printed in the text, pictures and drawings of this manual are accurate. Refer to this manual for detailed installation dimensions, instructions, specifications and other requirements.

Safety Information

SAFETY NOTICE

This stove must be installed and operated properly in order to prevent the possibility of a house fire. **Please read this entire Owner's Manual BEFORE installing and using your Whitfield 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 restrictions and inspection requirements in your area.

STOVE SAFETY LABEL

A copy of the safety label for a Quest pellet stove is shown in Figure 1 below. The safety label is located on the underside of the hopper lid on all Quest stoves. This label contains important information about the installation and operation of your stove. In addition, your stove's serial number is located on this label (preceded by "WH-Q"). This manual is provided as a supplement to the information on the safety label. Please read the safety label carefully.

(Figure 1) Quest Safety Label

SAFETY PRECAUTIONS

Fuel - With advanced UltraGrate technology, the Whitfield Quest is designed and approved for the burning of wood residue pellets with up to 3% ash content. The burning of agricultural residues (such as corn and alfalfa), waste paper, or cardboard in pellet form is not permitted. Failure to comply with this restriction will void all warranties and the safety listing of the stove. Confer with your dealer for more information on approved pellet fuels.

Continuous Operation - When operated correctly, the Whitfield Quest cannot be over-fired. Continuous operation at a maximum burn can, however, shorten the life of the electrical components (fans, auger motor, and electronic controls) and is not recommended.

Liquid Flammables - Gasoline or other flammable liquids must never be used to start or "freshen up" the fire. Keep all such liquids well away from the stove at all times.

Ashes - Any ashes removed from the Whitfield Quest must be deposited in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible surface or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

Power - The appliance is provided with a grounded electrical cord. This cord should be connected to a standard, 115 volt, 60 Hz grounded electrical outlet. The approximate continuous power requirement is 200 Watts. The power supply cord must be routed to avoid contact with any of the hot or sharp exterior surface areas of the stove. The stove will not operate without a power source for the fans and fuel feed system.

Auger - Pellet fuel is fed to the burn grate by an 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 the auger. The auger can start and stop automatically at any time while the stove is running.

Soot Formation - Burning with insufficient combustion air will result in the formation of soot. This soot may be deposited on the windows, in the flue, and in the heat exchangers. If the appliance has been vented through the wall and terminated, this soot may stain the outside of the house. This is a hazardous situation, in addition to being an inefficient use of pellet fuel. Check your stove frequently, and adjust combustion air as required.

Cleaning - There will be some build-up of dust and smaller quantities of soot or creosote in the exhaust system over the burn season. This will vary due to the ash content of the fuel being burned. Conduct frequent inspections, initially, to determine appropriate cleaning intervals.

Safety Information (cont.)

SAFETY PRECAUTIONS-continued

Smoke Detector - Depending on your local codes, a smoke detector may be required in the room where the stove is installed. We recommend that smoke detectors be installed in all homes and maintained in an operational condition at all times, no matter whether you are using a heating appliance or not.

Exhaust Pipe - The appliance is provided with an exhaust connector for a listed 3-inch, type "L", double-wall pellet vent pipe with a stainless steel inner liner. Single wall, stainless steel pipe (rigid or flexible) is acceptable for insert installations.

Mobile Home Installation - Any Whitfield Quest stove installed in a mobile home must be connected to a source of outside air, electrically grounded to the steel chassis, and bolted to the floor (unless otherwise specified by state or local authorities) to meet H.U.D. requirements.

SAFETY TESTING

Whitfield Pellet Stoves and Fireplace Inserts are safety tested and listed by Warnock Hersey Professional Services, Ltd., an accredited testing laboratory. Tests were conducted in accordance with the specifications and procedures listed in ASTM E-1509 for Pellet Heaters and UL 1482 for solid fuel room heaters, as well as CSA and ULC standards. UL 1482 states requirements for installation as a Freestanding room heater, or hearth insert for masonry or metal (zero clearance) fireplaces. This appliance is designed specifically for use with approved pelletized fuels. It is tested and listed for residential installation, according to current national and local building codes, as either:

- **Freestanding Room Heater**
- **A Hearth Insert (when installed into a masonry or factory built fireplace)**
- **A Mobile Home Heater**

PLEASE NOTE:

This stove is not intended for use in commercial installations, other than the dealership where the stove is being sold, without prior written approval from Pyro Industries, Inc.

AUTOMATIC SAFETY FEATURES

Power Outage - During a power outage, the stove will shut down safely. It will not automatically restart when the power is restored. However, a momentary power interruption may not shut your stove down. A small amount of smoke will likely leak from the top of the window glass, the hopper and from the combustion air intake, if the stove is vented horizontally. This will not persist for more than 3 to 5 minutes and will not be a safety hazard. *Your smoke alarm could be activated.*

To re-light the stove, follow the normal procedure for starting your stove.

IMPORTANT: If the area in which you live is prone to frequent power outages, it is recommended that a minimum of 8 feet (2.5 m) of vertical vent pipe be included in a freestanding installation. In the event of a power failure, this will create a natural draft and minimize any spillage of exhaust gases into the room.

Overheating - A high temperature switch will automatically shut down the stove if it overheats. The stove will need to be manually re-lit. Allow up to 45 minutes cooling time before re-lighting. If the overheating continues, contact your dealer for more information.

Safe Shut Down - **While the stove is operating** press the *auger "on" button* on the control board to turn the fuel feed off. Pellets will stop feeding and the red *auger "on" light* will stop blinking. Both fans will continue to operate. The fans will automatically turn off after 15 to 40 minutes. The low temperature switch will also shut the stove down safely if it runs out of fuel.

Pellet Fuel Information

GENERAL INFORMATION

The Whitfield Quest, with its UltraGrate burn system, has been designed to burn wood residue pellets with up to 3% ash content. Only Pellet Fuel Institute (P.F.I.) approved fuels should be used in this stove. Wood Pellets manufactured to the P.F.I. Certification Standards are available in two grades: STANDARD and PREMIUM. The premium grade pellets have a lower ash content than the standard grade. The P.F.I. specification for standard and premium grade residential pellet fuel follows:

CHLORIDES (Salt):	Less than 300 p.p.m.
BULK DENSITY:	40 lb./ cu. ft. minimum
MOISTURE CONTENT:	8% maximum
ASH CONTENT:	3% maximum(Standard Grade) 1% maximum (Premium Grade)
FINES:	0.5% maximum through a 1/8" screen

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), and adversely affects the performance of the stove by blocking off the air passages in the grate. Even a P.F.I. approved pellet fuel may tend to clinker. A clinker can be removed from the burn grate and placed in the ash pan with the use of the grate scraper/ash pan tool furnished with your stove. See Routine Cleaning & Maintenance for more information.

ASH

The frequency of ash removal and other maintenance performed on the stove is directly proportional to the ash content of the fuel and how frequently you use your Whitfield stove. Low ash fuel may allow longer intervals between cleaning, however, a stove burning high ash fuel may need to be cleaned everyday.

PLEASE NOTE: Pyro Industries, Inc., has no control over the manufacturing of pellet fuel and will not be held responsible for poor stove performance or any damage caused by inferior pellet fuels.

FUEL FEED RATES

Different brands of pellets will feed at varying rates due to their size (length and diameter), and density. This may require a slight adjustment in the damper control or the pellet feed control to compensate (see **Stove Operation** which begins on page 7).

CAUTION: This product is not designed to burn agricultural pellets (such as corn and alfalfa) or pelletized fuels from waste paper, cardboard, etc. The use of unapproved, dirty, wet and/or high salt content fuel will void the stove's warranty!

Contact your authorized Whitfield dealer for more information, if needed.

Stove Operation

CONTROL BOARD FEATURES

"Start" Button - The push-button **"Start" button** activates the convection fan and the combustion (exhaust) fan. If the exhaust does not reach proper operating temperature within 30 minutes, the stove will automatically shut down. The fans can be restarted by pushing the **"Start" button** again after the 30 minute cycle.

"Auger On" Button - The push-button **"Auger On" button** activates the fuel feed (auger) motor only. The start button must be activated first to send power to the auger "on" button. If the auger "on" button is pushed again, the fuel feed will stop and the fans will continue to operate until the stove has cooled down sufficiently (this may take up to 45 minutes); then both of the fans will automatically turn off.

"Auger On" Light - The red **"Auger On" light** (L.E.D.) on the control panel indicates when there is power to the auger motor. When the auger motor is activated, this light will blink as the auger motor cycles on and off.

"Pellet Feed" Knob - The **"Pellet Feed" knob** allows you adjust the heat output of your stove by controlling the rate at which pellets are fed to the burn grate. Turning this knob counter clockwise lowers the fuel feed rate; turning the knob clockwise increases the fuel feed rate.

"Damper Control" Knob - This knob allows you to adjust the damper, which controls the amount of combustion air that reaches the burn grate. For an efficient flame, the damper control knob should be adjusted whenever the **"Pellet Feed" knob** setting (fuel feed rate) is changed. This knob is located on the upper third of the control board (see Figure2). When the damper has been correctly adjusted, you will observe a brisk, yellow-to-whitish flame (refer to video for proper flame appearance).

NOTE: The proper air settings will vary from stove to stove due to installation altitude, and the fuel being burned. The LOW, MEDIUM, and HIGH marks should be used only as a guide for matching pellet feed settings to damper settings. Choose a setting that does not allow fuel to "pile up" in the grate. Adjust damper to get an active, bright yellow-white flame.

"Fan High/Low" Button - The **"Fan High/Low" button** sets the speed of the convection fan motor to either a high or low setting. Choose the high setting to extract the most heat from your stove; choose the low setting when feeding pellets at lower rates.



(Figure 2)
Stove Control Board

PRELIGHTING INSTRUCTIONS

When lighting your Whitfield stove for the first time, the auger feed tube must be "primed" (filled with pellets). Also, if the stove ever runs completely out of fuel, the auger system will need to be primed again. To prime the auger feed tube:

1. Fill the hopper with an approved pellet fuel and plug the stove into the wall outlet.
2. Press the "**START**" button on the control panel to activate both fans. Push the "**Auger On**" button on the control panel (this starts the auger motor). Next, turn the "**Pellet Feed**" knob to "**HIGH**" (the maximum feed rate).
3. Look through the stove's window. The auger is fully primed when you can see the first pellets dropping into the grate. This will take 10 to 15 minutes.
4. Once the auger is primed, unplug the powercord and wait for a minimum of 30 seconds to turn off the fans and auger. [Note: This step is followed only when priming the auger and will not need to be performed every time you start the stove, if fuel is in the hopper.] Once the stove has shut down, plug the powercord back into the wall outlet.

LIGHTING STOVE WITH THE OPTIONAL FASTFIRE™ SELF-IGNITER

If you have purchased the optional FASTFIRE™ Self-Igniter from your dealer, you will need to perform the following start-up procedure:

1. Make sure the auger is primed (see Pre-Lighting Instructions above), then simply push the "**START**" button on the control board to activate the igniter.
2. Set the "**Damper Control**" knob in the "MEDIUM" range to obtain: proper air flow for combustion.
3. Set the "**Pellet Feed**" control knob to the desired position.
4. Push the "**Auger On**" button to supply power to the auger motor. Pellets will start feeding into the grate and should begin to ignite within three to seven minutes. The self-igniter will automatically shut off after 15 minutes.
5. It may be necessary to adjust the damper control knob after pellets have ignited and the stove has had a few minutes to warm up.

Stove Operation (cont.)

LIGHTING STOVE WITHOUT THE OPTIONAL FASTFIRE™ SELF-IGNITER

1. If lighting your stove for first time, first follow **Pre-lighting Instructions** on page 8. Place a recommended fire starter (see your dealer for an appropriate fire starter) in the burn grate and put a handful of pellets on top of the starter (if using a gel starter, put the pellets in the grate first).

**WARNING: DO NOT USE FLAMMABLE LIQUIDS TO START YOUR STOVE.
WARNING: DO NOT OPERATE STOVE WITHOUT BURN GRATE IN PLACE**

2. Light the fire starter in the burn grate with a match, and close the door. Turn the pellet feed knob to the "MEDIUM" setting.

3. Turn the "**Damper Control**" knob to the "MEDIUM" setting .

4. After approximately 10 seconds, press the "**Start**" button. You will notice that the fire will become active, and air will flow out of the heat exchanger tubes.

5. Once the pellets in the grate are burning sufficiently (red hot coals), press the "**Auger On**" button to activate the auger motor. If the auger is "primed" (see **Pre-Lighting Instructions** on page 8), pellets will now begin to feed into the burn grate.

6. After the fire is burning well, adjust the "**Pellet Feed**" knob to the desired setting. The red "**Auger On**" light will blink on and off. Adjust the damper control knob into the same range as the pellet feed knob, or as necessary for proper combustion. Look for an active, bright yellow-white flame.

7. Push the "**Fan High/Low**" button to set the convection fan to the "HIGH" (or "LOW") setting. Each time the button is pushed, the convection fan speed switches to the alternate setting. The stove can be safely operated at either the "HIGH" or "LOW" convection air setting for any fuel feed rate.

TURNING OFF THE STOVE

To turn off the stove, simply push the "**Auger On**" button once, which will turn off the auger motor, and stop the fuel feed. Both fans will run until the stove has cooled down sufficiently. At this point, a low-limit snap switch will activate to automatically shut off the stove.

GENERAL OPERATING INFORMATION

Proper Burn Characteristics - The flame in your stove should be bright yellow during normal operation. If the flame becomes lazy with a reddish/orange color, the damper control knob will need to be turned clockwise (set higher) to provide more combustion air.

Excessive amounts of fly-ash built up in the grate, clinkers in the grate, or leakage of air (if the grate is not properly seated) will starve the fire for air and pellets will pile up in the grate. Follow the grate cleaning procedure outlined in the **Routine Cleaning & Maintenance** section. If the grate blockage problem persists review the trouble-shooting section at the end of this manual.

***NOTE:** If the flame is smoky red/orange with evidence of soot at the top of the flame, your stove needs more combustion air; adjust the damper until the flame begins to 'dance'. If the flame is 'short' at the higher burn rates or if the pellets are burning up in the grate before new pellets are fed into the fire, adjust the damper for slightly less combustion air. The damper position will probably need to be changed whenever the pellet feed setting is changed. The damper setting should be increased slightly when switching from a premium grade pellet to a standard grade or other higher ash pellet.*

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. You may notice a difference in the burn if you change pellet fuel sizes. Different pellets may feed at considerably different rates. 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, that pellet type may not be feeding fast enough. If this happens, reduce the amount of combustion air using the "**Damper Control**" knob, or increase the fuel feed rate by using the "**Fuel Feed**" knob .

Long Burn Time - The stove may be safely operated on a continuous basis. A 40 pound bag of pellets should last approximately 12 hours on the "HIGH" fuel feed setting and up to 40 hours on "LOW," depending on the pellet fuel burned.

Ash Release Slide Plates - See boxed statement below:

IMPORTANT: When operating the freestanding stove, it is important to make sure that the ash release slide plates are completely closed. Air leakage around even partially open plates will negatively affect the stove's performance and may cause pellets to pile up in the grate.

Routine Cleaning & Maintenance

ROUTINE CLEANING & MAINTENANCE

The following areas need to be routinely inspected for ash build-up, and cleaned when necessary:

- 1 Burn Grate (“UltraGrate™”)**
- 2 Heat Exchanger Tubes**
- 3 Heat Exchanger Baffle**
- 4 Ash Pan(s)**
- 5 Exhaust Vent**
- 6 Rope Gasket (around door, ash pan, and window areas)**
- 7 Fan Motors - Combustion and Convection**

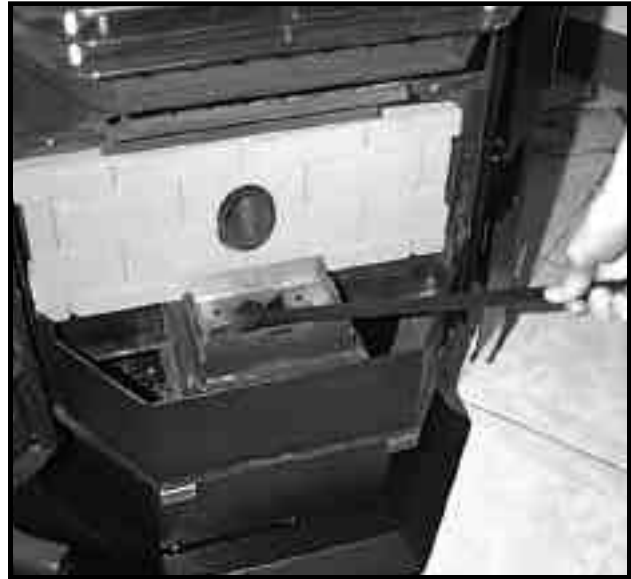
The amount of ash build-up in your stove is directly proportional to the ash content of the fuel you are burning (see **Pellet Fuel Information**, page 5). After a period of time (a week, or so) inspect the burn grate and heat exchanger tubes, heat exchanger baffle, ash pan and exhaust vent areas. Set an appropriate maintenance schedule for each area based on the amount of ash you find. Your stove’s performance will be affected if enough ash accumulates to restrict air flow in any area. These items should also be checked periodically, and may require cleaning and/or maintenance:

The seven topics listed above are discussed in more detail on the following pages. In addition, windows and plated accessories may be cleaned, once cool, using a soft cloth and an appropriate commercial all-purpose cleaner suitable for glass. Do not use products that may leave a flammable residue.

NOTE: The stove will need to be shut off and cooled down before routine cleaning is performed. ALWAYS DISCONNECT POWER before doing any routine cleaning or repair work on the stove.

BURN GRATE

The burn grate should be inspected periodically to ensure that the airflow has not become blocked with ash or clinkers. The burn grate can easily be cleaned with the grate scraper/ash pan tool (see Figure 3), or it can be removed for more extensive cleaning. When burning "Standard" grade pellets, it will be necessary to clean the ash pan more often than when burning "premium" grade pellets. **On the insert model**, it is very important to monitor the ash build-up under the burn grate, to prevent restriction of combustion air flow through the burn grate. Check the center ash pan regularly. Empty before the ash builds up to the bottom of the grate.

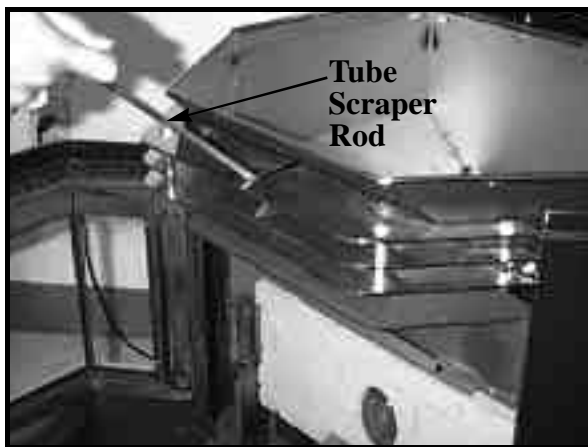


(Figure 3) - Cleaning Burn Grate

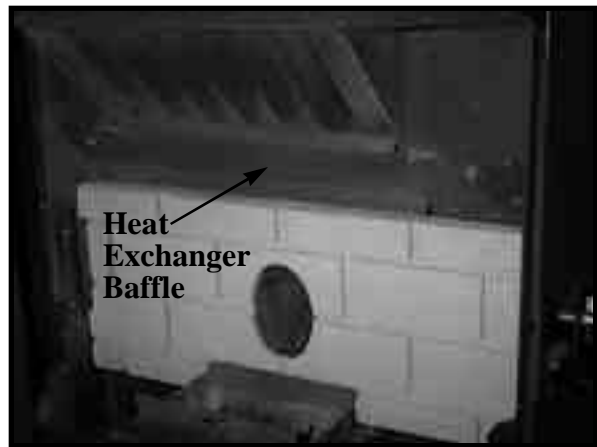
HEAT EXCHANGER TUBES

A rod located above the convection air louvers is used for cleaning the heat exchanger tubes. Be sure the door is closed while you are scraping these tubes. By pulling this rod up and down a few times, you will clean the fly ash off the heat exchanger tubes (see Figure 4). A hole is provided in the handle of your grate scraper tool for pulling this rod.

NOTE: If your stove was recently turned off, the rod will still be hot.



(Figure 4) Cleaning Heat Exchanger Tubes



(Figure 5) Heat Exchanger Baffle Installed

Routine Cleaning & Maintenance (cont.)

ASH PAN(S)

Freestanding Model - The ash pan will have to be emptied periodically. The ash pan on the free-standing model is located in the pedestal tower. It can be removed by turning the T-Bar latch fully counter-clockwise. Then pull ash pan away from stove. Ash that accumulates around the grate can be “dropped” into the ash pan without opening the firebox door. Simply pull open the ash release slide plates (shown in Figures 6 and 7) using the grate scraper tool provided. Remove the ash pan as shown in (Figure 8). **NOTE: Make sure to fully close the plates when finished. Failure to close the ash release slide plates 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).**



(Figure 6) - Locating Ash Release Slide Plates



(Figure 7) - Opening Ash Release Slide Plates



(Figure 8) - Emptying Ash Pan on Freestanding Stove

Insert Model - There are two separate ash pans to empty on the insert model: (1) a small pan directly beneath the burn grate, and (2) a larger pan that covers the left and right sides of the firebox. Open the firebox door to access the ash pans. Scrape the accumulated ash into the ash pans using the grate scraper tool, pay special attention to the grate itself. Next, remove the center, smaller pan using the grate scraper tool (see Figure 9). Be sure to dump the ashes into a non-combustible container. Return the small ash pan to the stove. Repeat this procedure for the larger ash pan (see Figure 10). Close the firebox door and latch it.

Note: Dispose of the ash in accordance with the instructions found on page 2 of this manual!



(Figure 9) - Emptying Small Ash Pan on Insert Stove



(Figure 10) - Emptying upper Ash Pan on Insert Stove

EXHAUST DUCTS

Inspect the exhaust ducts periodically and clean when necessary. Fly ash will accumulate at all bends in the exhaust system. Based on this inspection, determine how often, and to what extent, the exhaust system will need to be cleaned. **Note: Large amounts of fly ash build-up will restrict combustion air flow and reduce the stove's efficiency.**

On insert models, To access the *clean out cup*, open the right-hand shroud panel (when the stove is cold), and remove the tee clean-out cup (shown in Figure 11) to inspect the ash build-up in the exhaust system. Twist the clean-out cup to the left to release it.



(Figure 11)
Clean-Out Cup Connected to Tee

Routine Cleaning & Maintenance (cont.)

ROPE GASKET

The rope gasket should be checked periodically and replaced or repaired if necessary. This gasket is located around the firebox door and windows (plus the ash pan on freestanding models).

A one-inch strip of paper may be used to test the integrity of the door seal. Close the door on the paper in several different locations and pull. A slight amount of friction is normal. The door gasket does not need to be "tight" in all areas, since a small amount of air drawn into the stove around the gasket is not hazardous or detrimental to the stove's performance.

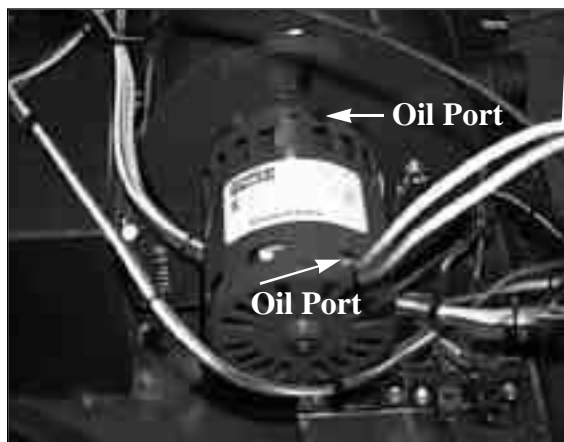
FAN MOTORS: COMBUSTION AND CONVECTION

The two fan motors require lubrication annually with **not more than two drops** of a high quality, non-detergent oil (your dealer can make a recommendation) at the lubrication points shown below. **Do not over-oil the motors! Too much oil can shorten motor life.**

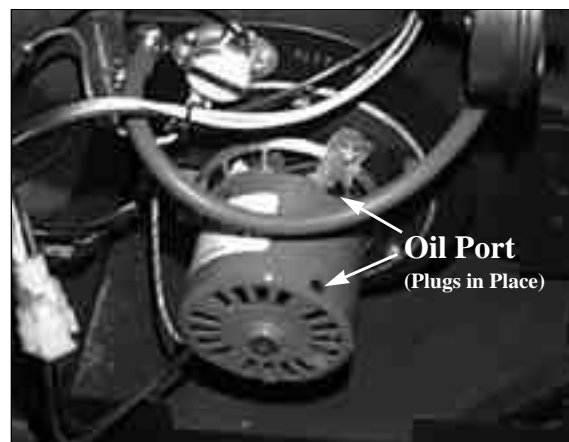
The *combustion fan*, (exhaust Fan) located on the right side of the stove, has two black rubber plugs that must be removed. To access the exhaust fan, the *right side panel* may be opened by removing the top screw (between the louvers) and popping open the "bulb" latch at the bottom.

To gain access to the *convection fan*, open the *left side panel* (follow the above procedure for opening the right side panel). On the convection fan, the oiling ports are the "half-moon" openings in the motor housing.

Note: The orientation of the motors may vary from fan to fan. The oiling ports, therefore, may not be in exactly the same location as shown in these photos.



(Figure 13) - Convection Fan Oiling Ports



(Failure 14) - Combustion Fan Oiling Ports

STOVE PREPARATION

Remove any external packaging from the stove. Lift the hopper lid and remove any pre-packaged items that were shipped in the hopper. Also open the firebox door and remove any pre-packaged items. Use a 7/16" socket or open end wrench, to remove the two bolts that secure the stove to the wood shipping pallet (see Figure 16)

Freestanding Model:

1. Remove the pedestal from its box and place it beside the stove.
2. With a helper, lift the stove onto its pedestal base. The stud on the front of the stove must fit into the front mounting hole on the pedestal.
3. Place one 1/4" nut over the front stud and two 1/4" bolts into the two holes at the rear, where the stove was originally secured to the pallet (see Figure 17).
4. The rear panel of the pedestal must be secured to the bottom plate of the stove with the other two 1/4" bolts.
5. Tighten all five fasteners with a properly sized wrench or socket.

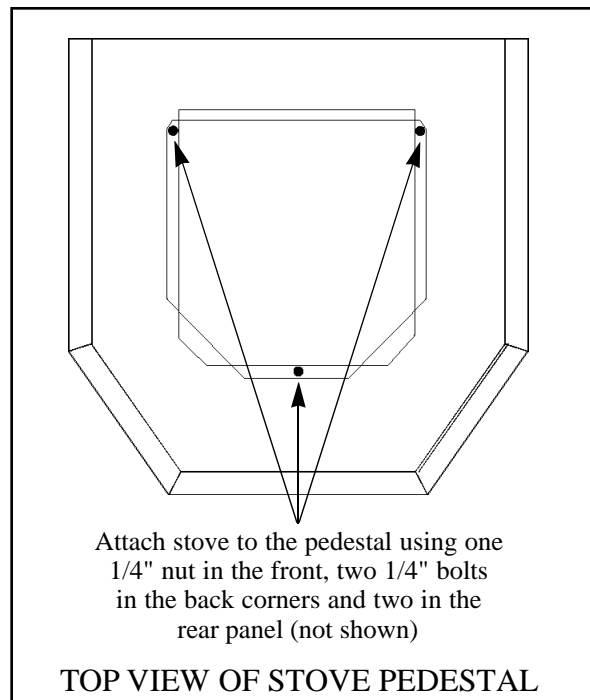
NOTE: *Ensure that the stove sits evenly on the pedestal. Excessive air leakage will cause poor stove performance.*



Remove the two 1/4" bolts from the underside of the pallet

BOTTOM VIEW OF PALLET

(Figure 16) Removing Pallet Bolts



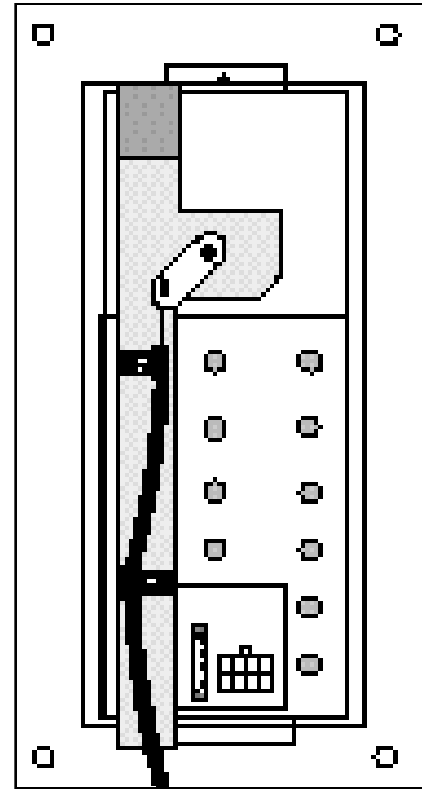
(Figure 17) Pedestal Mounting

Stove & Hearth Preparation (cont.)

STOVE PREPARATION continued

Insert Model:

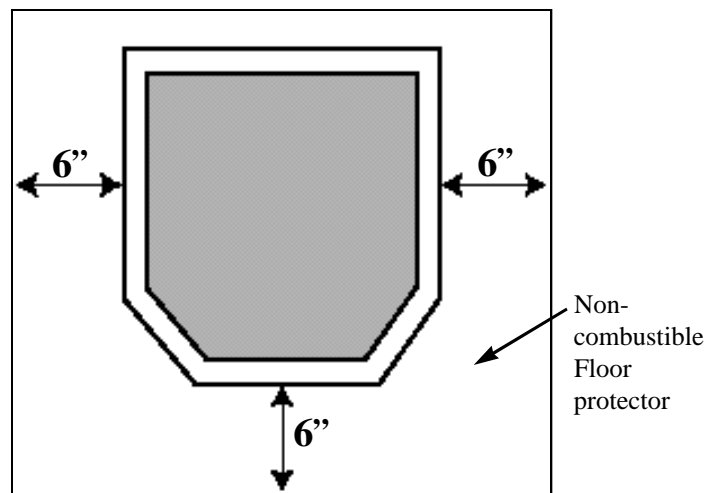
1. Refer to the shroud installation instructions included in the shroud box.
2. **Installing the control board-** the damper adjustment is controlled by a cable mechanism. On insert stoves, the control board assembly (see Figures 2 and 18) will need to be removed from the side of the stove and attached to the back of the shroud side panel. After attaching the left side shroud panel to the stove, follow this procedure:
 - a) Remove the four lock-nuts from the back of the shroud left panel and set them close by.
 - b) Use a 1/4" nut driver or socket to remove the two screws that hold the control board assembly to the bottom side of the stove. Without turning the control board assembly, slip it over the four studs on the back of the left side panel (see Figure 18).
 - c) Place the four lock-nuts back on the studs, and tighten them with a 3/8" socket or nut driver.
 - d) With the damper control knob set to the lowest position of the "LOW" Range (damper fully closed), look under the auger tube, and verify that the cable is still hooked into the damper control arm. Turn the Damper Control knob through its full range to check for proper function.



(Figure 18)
Control board on Shroud Panel

FLOOR PROTECTION

Your Whitfield pellet stove must be installed on a non-combustible protective floor pad (3/8" minimum thickness material), or on a masonry hearth. The hearth or floor pad must extend a minimum of 6" from the front and both sides of the stove (as shown in Figure 19), or to the nearest permitted non-combustible material if less than 6".



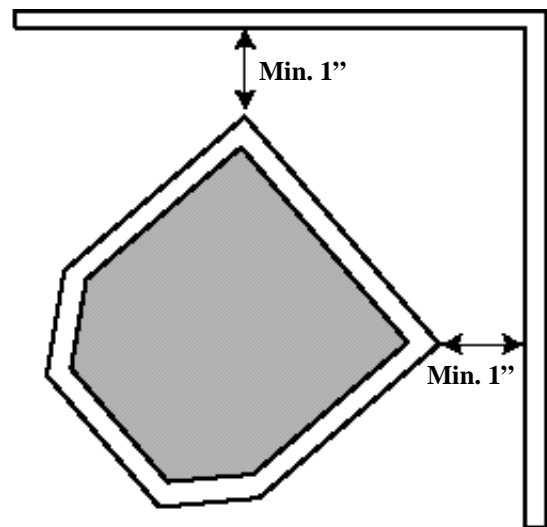
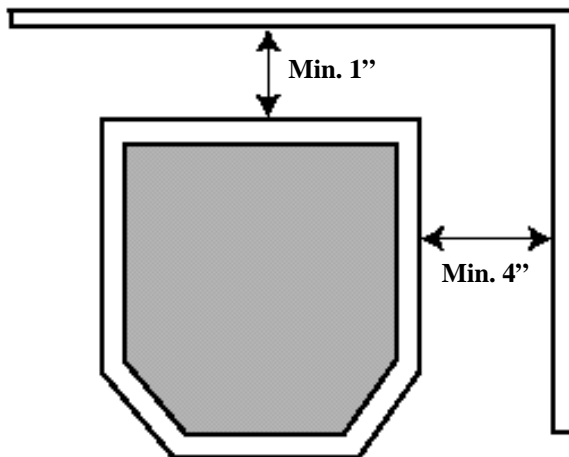
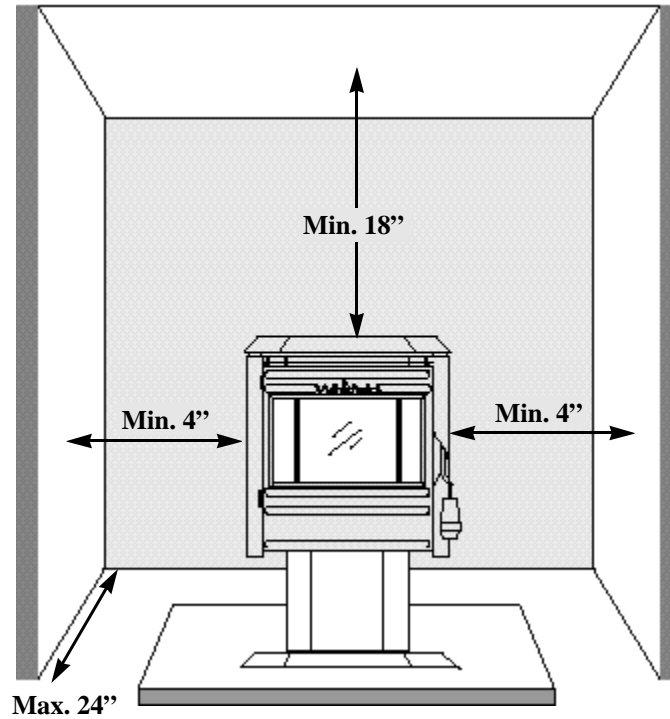
TOP VIEW OF STOVE ON FLOOR PAD

Floor protector must extend at least 6" from the front and sides of the stove.

(Figure 19)
Floor Protection Requirements

CLEARANCES TO COMBUSTIBLES

Figure 20 shows the minimum clearances to combustible materials that must be maintained. Keep all combustibles at least 18" away (measured horizontally) from the glass windows. Maximum alcove depth allowed is 24", minimum alcove height allowed is 47-1/2".



(Figure 20) - Clearances to Combustible Materials

Installation Guidelines

Your Whitfield Quest may be installed as:

- A freestanding stove with a pedestal placed on a non-combustible floor pad.
- A mobile home heater placed on a non-combustible floor pad, provided with a source of outside air, bolted down and electrically grounded to the chassis of the home (see page 31) .
- A fireplace insert set into a masonry or factory built fireplace.

INSTALLATIONDISCLAIMER

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 and installed correctly. Since Pyro Industries, Inc., has no control over the installation of your stove, Pyro Industries grants no warranty, implied or stated, for the installation or maintenance of your stove, and assumes no responsibility for any consequential damage(s).

It is strongly recommended that you have an Authorized Whitfield Dealer install your stove. If you install the stove yourself, you should review your installation plan with the Authorized Whitfield Dealership that sold you the stove.

STOVE INSTALLATION CHECKLIST

The following check list should be used when your Quest stove is installed. Check off each item as it is completed.

- If you haven't done so already, read the **Stove & Hearth Preparation** section, and follow the instructions outlined there.
- Determine the appropriate measurements and location for your installation.
- Read this entire **Installation Guidelines** section.
- Read the appropriate **Venting Requirements** sub-section: **Insert** or **Freestanding**.
- Refer to either **Typical Installations - Freestanding** or **Typical Installation - Insert Stove** (depending on your stove type) to find the appropriate installation.
- Pre-fit all items before you install, fasten, cut holes or set up the stove permanently.
- Prior to lighting your stove read the entire Safety Information Pellet Fuel Information, and Stove Operation** sections.
- Follow the **Pre-Lighting Instructions** outlined in the **Stove Operation** section.
- Follow the appropriate lighting instructions section:** see **Lighting the Stove With** (or **Without**) **FASTFIRE™ Self-Igniter** (located on pages 8 and 9).
- After you have begun operation of your stove, review the **Routine Cleaning & Maintenance** section.

Enjoy the warmth from your new Whitfield Quest Pellet Stove!

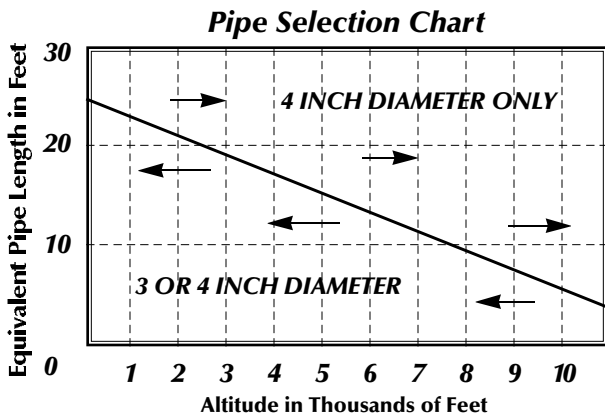
Installation Guidelines (cont.)

DETERMINING EQUIVALENT PIPE LENGTH

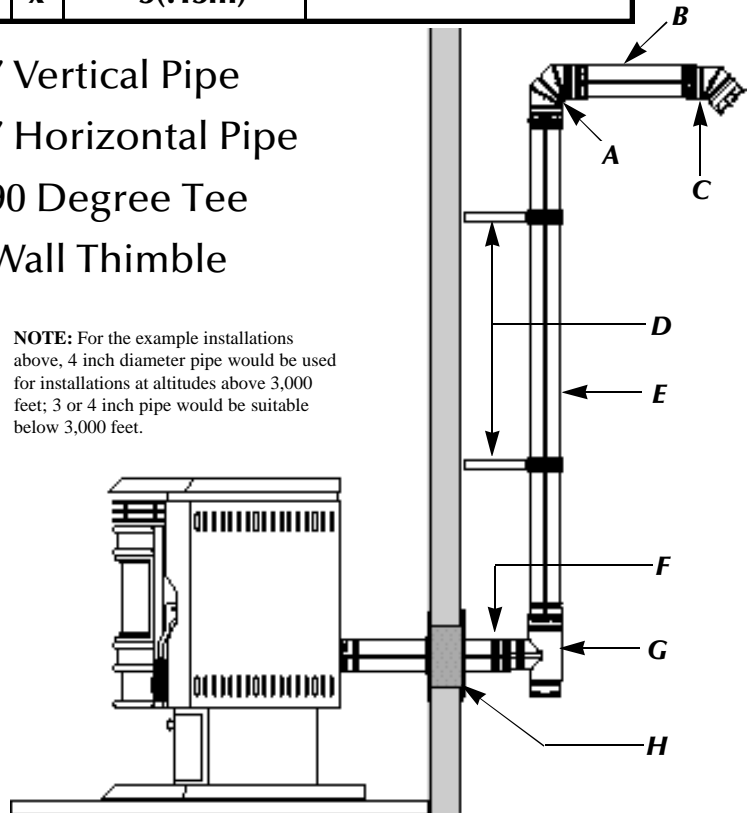
To determine whether a 3" or 4" exhaust system is required for your installation, review the sample installation below. Fill out the top chart, and calculate your total equivalent pipe length. After you have the total equivalent pipe length, use the chart at the bottom of the page to determine if your installation requires 3" or 4" exhaust pipe.

Type of Pipe	# of Elbows or Feet of pipe		Equivalent Feet	Total Equivalent Feet
90°	Elbows	x	5(1.5m)	
45°	Elbows	x	3(1m)	
Horizontal	Pipe	x	1(.3m)	
Vertical	Pipe	x	5(.15m)	

- | | |
|--|--|
| <p>A- 90 Deg. Elbow</p> <p>B- 1' Horizontal Pipe</p> <p>C- 45 Degree Elbow</p> <p>D- Standoff Braces</p> | <p>E- 8' Vertical Pipe</p> <p>F- 2' Horizontal Pipe</p> <p>G- 90 Degree Tee</p> <p>H- Wall Thimble</p> |
|--|--|



NOTE: For the example installations above, 4 inch diameter pipe would be used for installations at altitudes above 3,000 feet; 3 or 4 inch pipe would be suitable below 3,000 feet.



(Figure 21)-Sample Pipe Configuration

(Figure 22)-Equivalent Length versus Altitude Chart

Sample Installation Chart

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

Venting Requirements

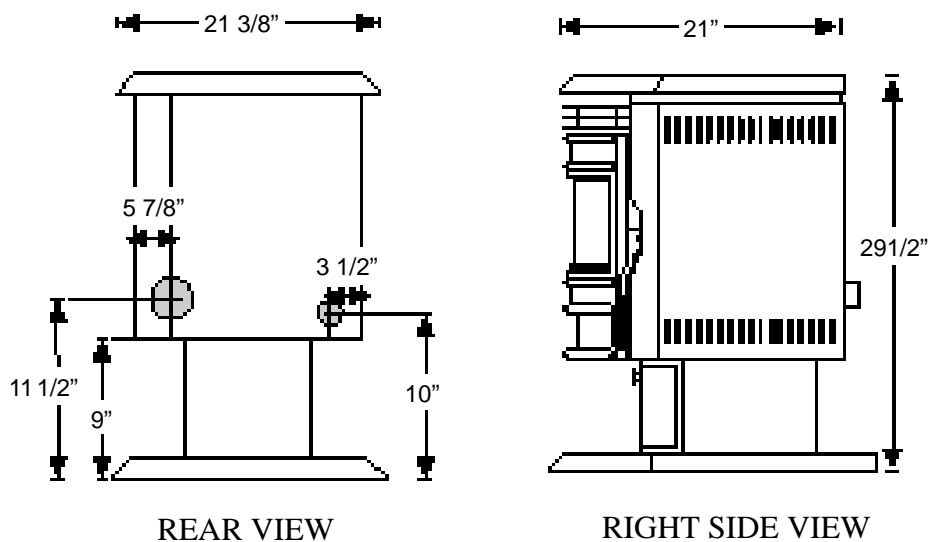
IMPORTANT: It is recommended that only an authorized dealer install your pellet stove. The following installation guidelines must be followed to ensure conformity with both the safety listing of the stove and local building codes.

WARNING: Do not vent into a flue serving another appliance. Do not install a damper in the exhaust pipe.

CAUTION: On all direct vent installations (short, horizontal runs), care should be taken when choosing a location for terminating the vent. It is not recommended to directly vent the exhaust pipe on the prevailing wind side of the house.

FREESTANDING STOVE VENTING

A listed 3 or 4 inch type "L" pellet vent exhaust system must be used for freestanding installations and attached (and sealed) to the pipe connector provided on the back of the stove. Use a 3-to-4 inch adapter or a 3-to-4 inch "tee" in order to run 4 inch pipe. The vent termination must be located no less than 48" (1.2m) from any opening through which flue gases could re-enter the building (such as windows and doors), not less than 24" (0.6m) from an adjacent building, and not less than 7' (2.2m) above grade when located near public walk-ways. 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 building. Keep brush, plants and shrubs at least 36" (0.9m) away from the vent termination. Since sparks may escape from the exhaust pipe of any stove, always use caution when positioning the vent pipe. **NOTE: Refer to the pipe manufacturer's instructions when installing and terminating the exhaust.**



Dimensional Tolerance +/-1/4"
Pipe Locations measured to Centerline

(Figure 23)
Freestanding Stove Dimensions

FREESTANDING STOVE VENTING continued

Ninety-degree elbows accumulate fly ash and soot, reducing the exhaust flow and lowering the performance of the stove. Horizontal runs of pipe will collect fly ash as well. It is recommended that a *single or double clean-out tee* be installed at every 90 degree turn so that fly ash can accumulate at the bottom of the tee. Total length of horizontal vent must not exceed 25 feet (7.7m; see **Determining Equivalent Pipe Length** on page 20).

If a 90 degree turn connects a vertical run of pipe to a horizontal run (as you follow the exhaust away from the stove), a tee is not required. At any other 90 degree turn, installation of a clean-out tee is recommended to permit periodic cleaning of both the horizontal and vertical runs of pipe.

INSERT STOVE VENTING

A 3" single-wall, stainless steel flexible or rigid exhaust pipe may be used for insert installations in place of double-wall, type "L" vent. The pipe should be connected to the supplied clean-out tee. *High-temperature silicone sealant* should be used at the vent pipe connections to ensure a "gas-tight" seal.

When venting through an existing chimney (masonry or factory built) the chimney must be cleaned. All creosote, dust and ash must be removed (see page 32 for more information on preparing the fireplace for the insert installation).

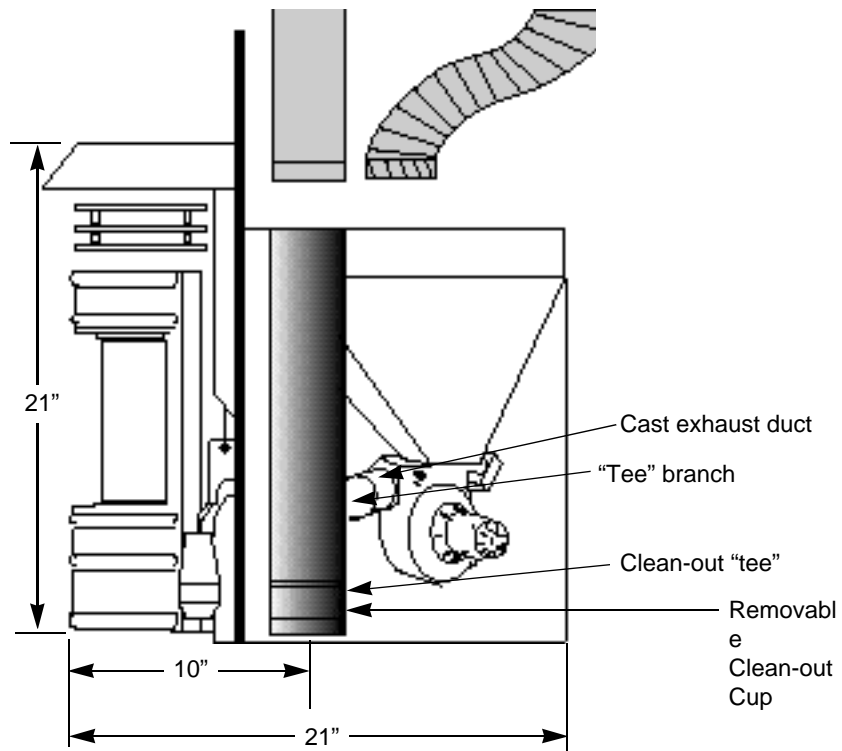
The "L" vent or single wall stainless exhaust system **must be installed so as to be gas-tight!** The vent manufacturer's installation procedures must be followed. In addition, pipe connections, joints and all pipe seams within the home should be sealed with high-temperature, vulcanized silicone sealer (RTV).

If an insert is to be installed into an unlined masonry chimney, the 3" or 4" rigid or flex pipe **must be extended to the top of the existing chimney. All insert installations must be lined to the top of the chimney (10 feet minimum length above the stove) with stainless flex pipe or a pellet vent system.**

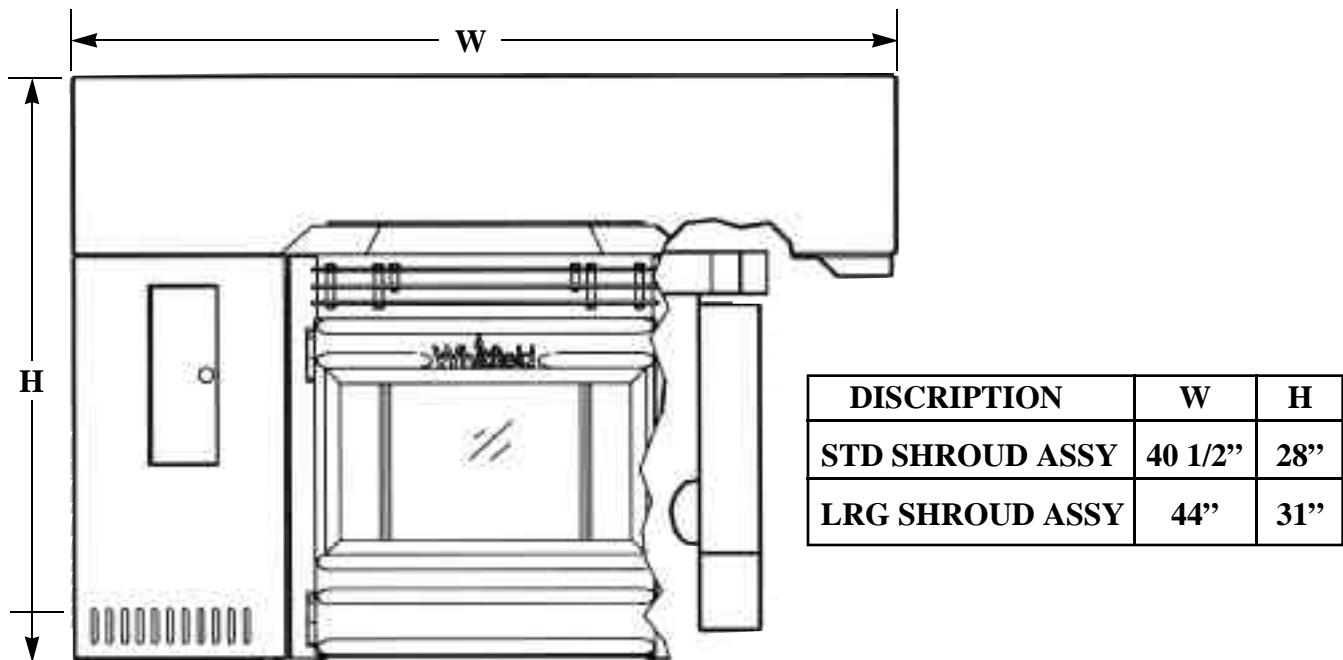
After the chimney has been lined to the top of the existing flue, any opening between the existing chimney and the pipe/vent liner should be sealed with a metal plate. Use a clamp or other fixture above the sealing plate to support the weight of the vent system.

Venting Requirements (cont.)

INSERT STOVE VENTING - continued



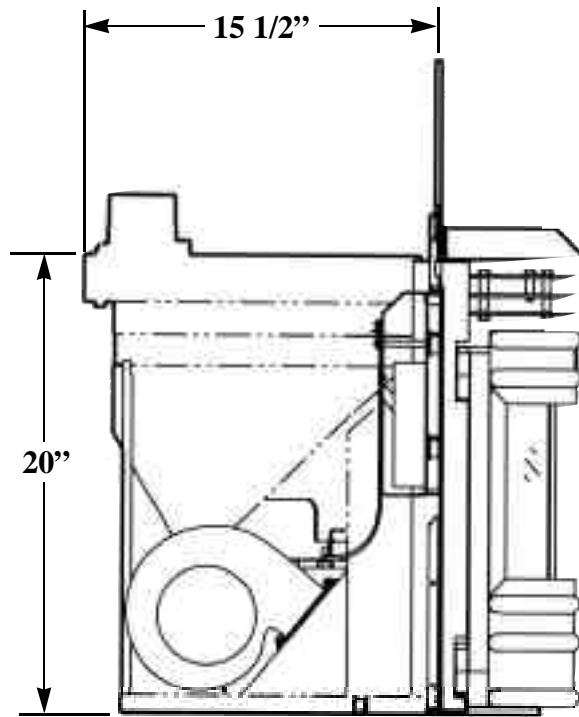
(Figure 24)-Insert Pipe Adapter Connection



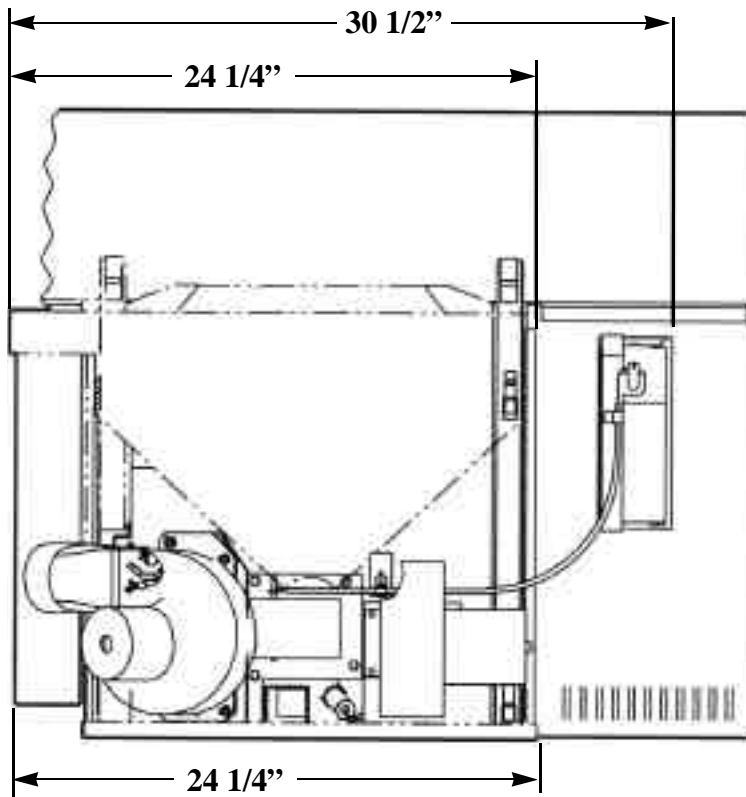
(Figure 25)-Front View of Insert

Contact your dealer for further assistance or information on installing your Whitfield Quest Insert.

INSERT STOVE VENTING - continued



(Figure 26)
Left Side View of Insert

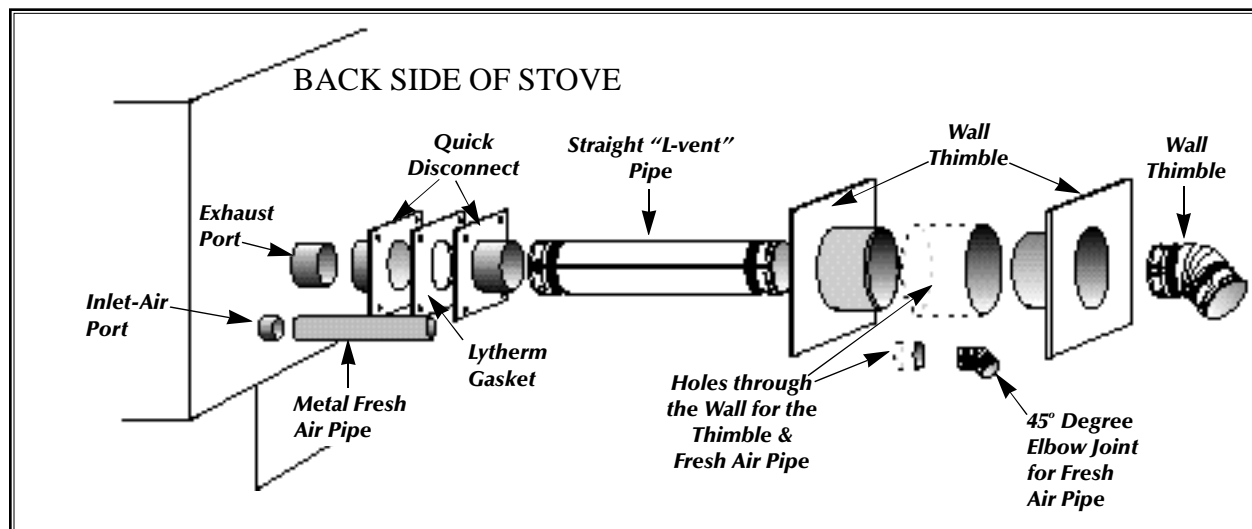


(Figure 27)
Back View of Insert

Typical Installations – Freestanding Stove

STANDARD HORIZONTAL EXHAUST

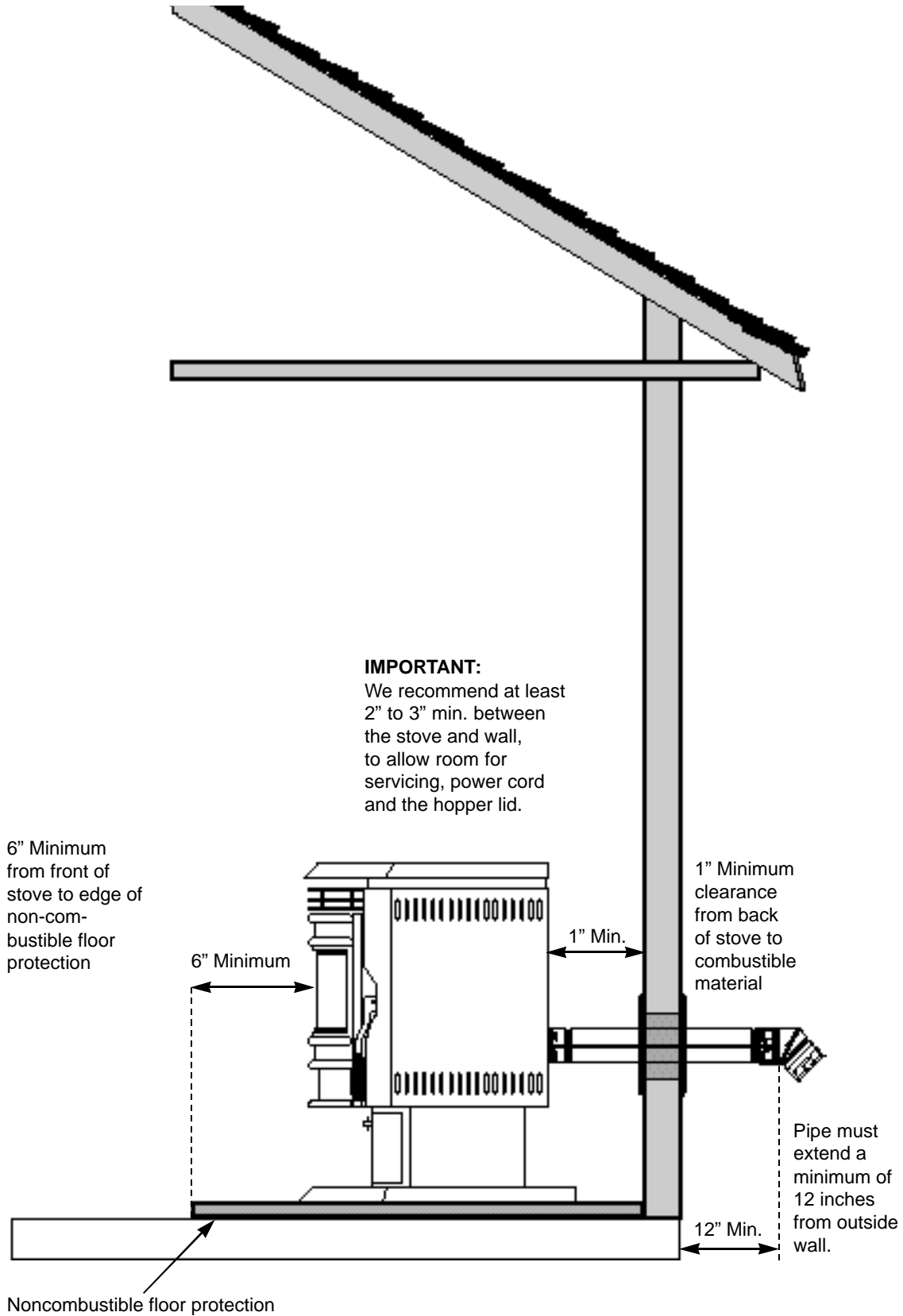
1. Locate the proper position for the type "L" **Wall Thimble** (refer to Figure 28 for types of pipes mentioned in this section). Avoid cutting wall studs when installing your pipe. Use a saber saw or key hole saw to cut the proper diameter hole through the wall to accommodate the **Wall Thimble**. Use extreme caution to avoid cutting into power lines within the wall of the home. The hole size will depend on the brand of pellet vent that you are using. Install the **Wall Thimble** in the hole according to the pipe manufacturer's instructions. A standard horizontal installation is shown in (Figure 29).
2. Position the stove approximately 12" (0.3m) from the wall on the floor pad. Push type "**L-vent**" pipe through **Wall Thimble**. Squeeze a bead of RTV high-temperature silicone sealer around the end of the machined portion of the 3" (76 mm) pipe connector on the back of the stove. Firmly push on a section of type "**L-vent**" pipe until the inner pipe liner pushes into the RTV bead.
3. Push the stove (with pipe attached) towards wall. The pipe will go through the **Wall Thimble**. Do not position the back of the stove closer than 1" (25 mm) from the wall. **Note: 6 to 8 inches of back clearance will provide easier access for servicing the stove, however, a larger hearth pad may be required.**
4. Install type "**L-vent**" 45 degree elbow with rodent screen or cap (optional) on outside end of pipe. The rodent screen should be no less than 1/2" (13 mm) mesh and may clog with soot and ash if left unattended during the burn season. **NOTE: The end of the exhaust pipe must extend a minimum of 12" (0.3m) from the outside wall of the building.**
5. If the installation requires a source of outside combustion air; cut a separate hole through the wall for the fresh air tube. This tube should be 1-5/8" (42mm) minimum diameter non-combustible pipe. Connect outside air pipe to air inlet on stove. This tube must be terminated with a 90 degree elbow or hood. **NOTE: Air may also be drawn from a crawl space under the home.**



(Figure 28) - Horizontal Installation Components

Typical Installations – Freestanding Stove

STANDARD HORIZONTAL EXHAUST - continued

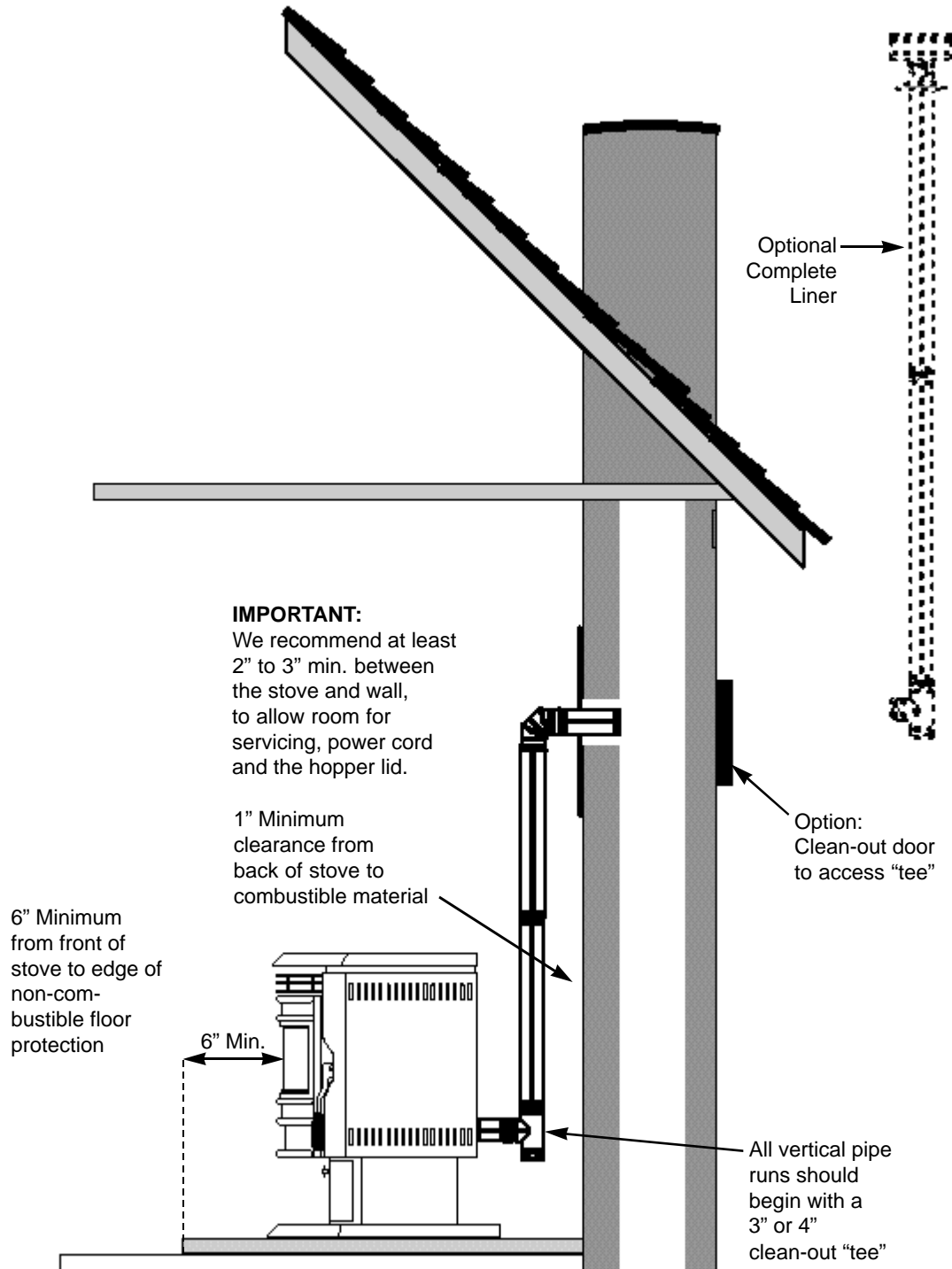


(Figure 29)
Standard Horizontal Installation

Typical Installations – Freestanding Stove (cont.)

VENTED INTO MASONRY CHIMNEY

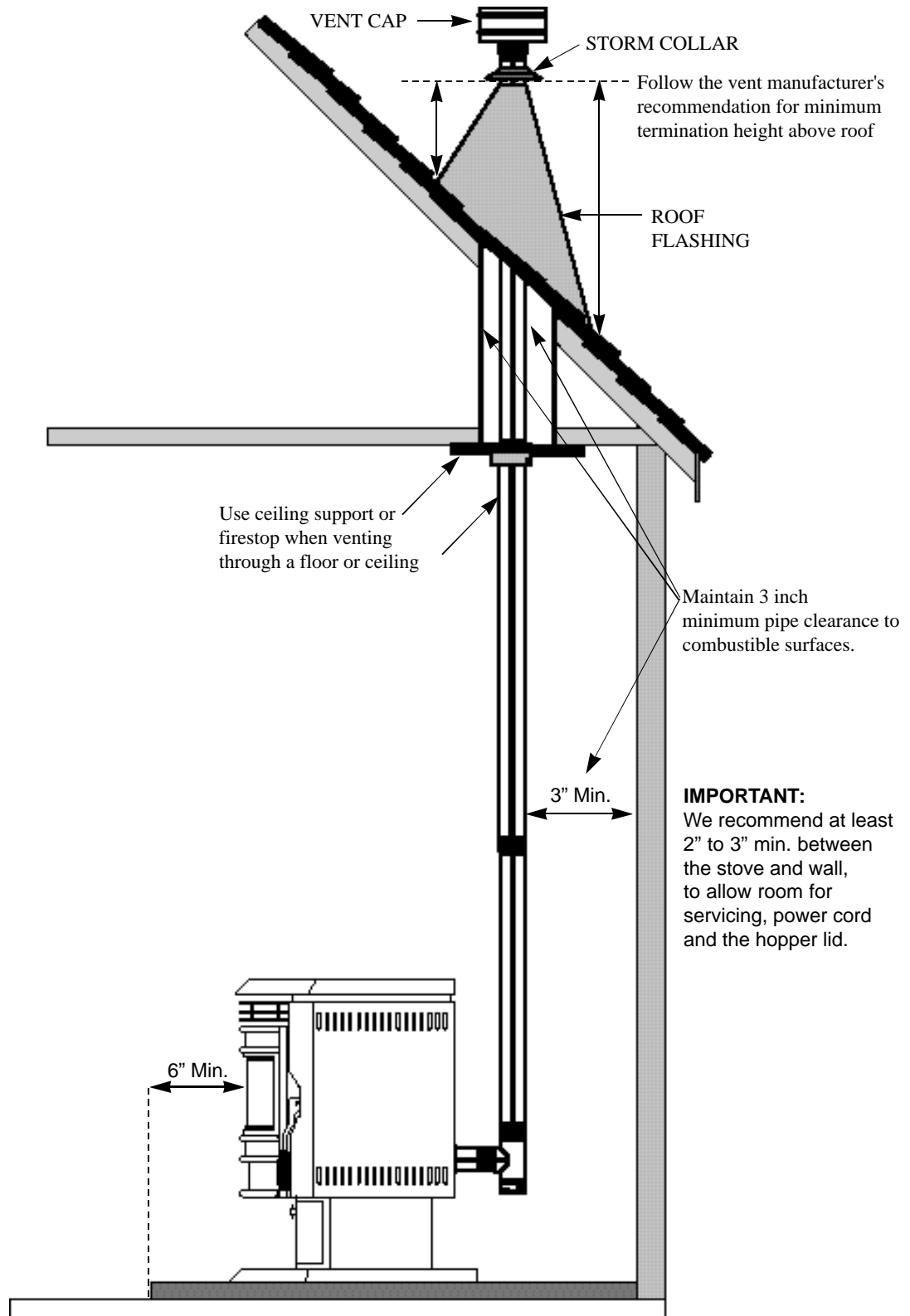
A freestanding Quest may be vented into an existing flue. If a liner is run all the way to the top of the existing chimney, the top should be sealed with a metal plate (aluminum, or galvanized or stainless steel). Start the vertical run with a "tee" at the back of the stove. Other options are



(Figure 30)
Freestanding Vented Into Masonry Chimney

Typical Installations – Freestanding Stove (cont.)

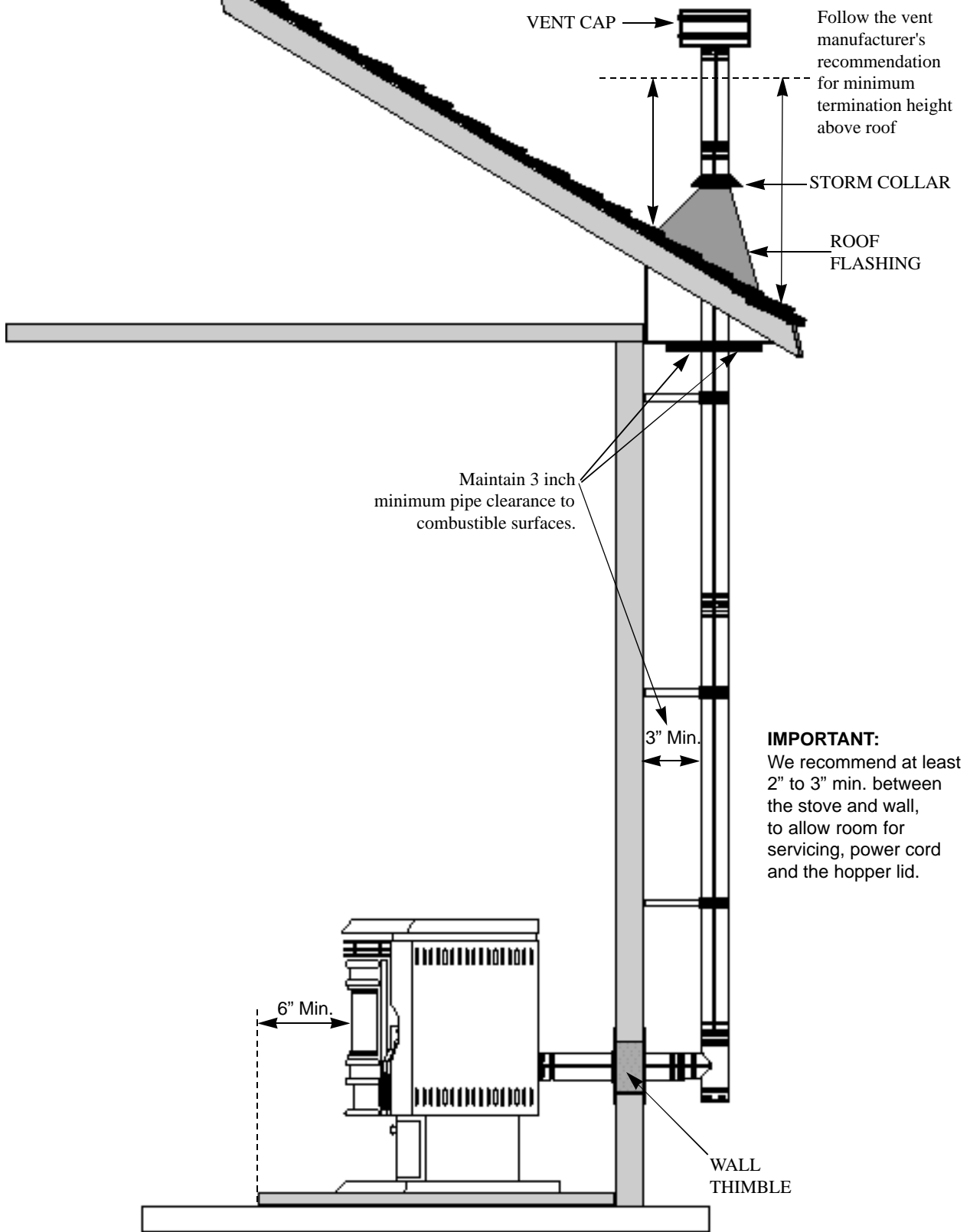
VERTICALLY VENTED THROUGH CEILING & ROOF



(Figure 31)
Vertically Vented Through Ceiling & Roof

Typical Installations – Freestanding Stove cont.)

VERTICALLY VENTED THROUGH CEILING & ROOF

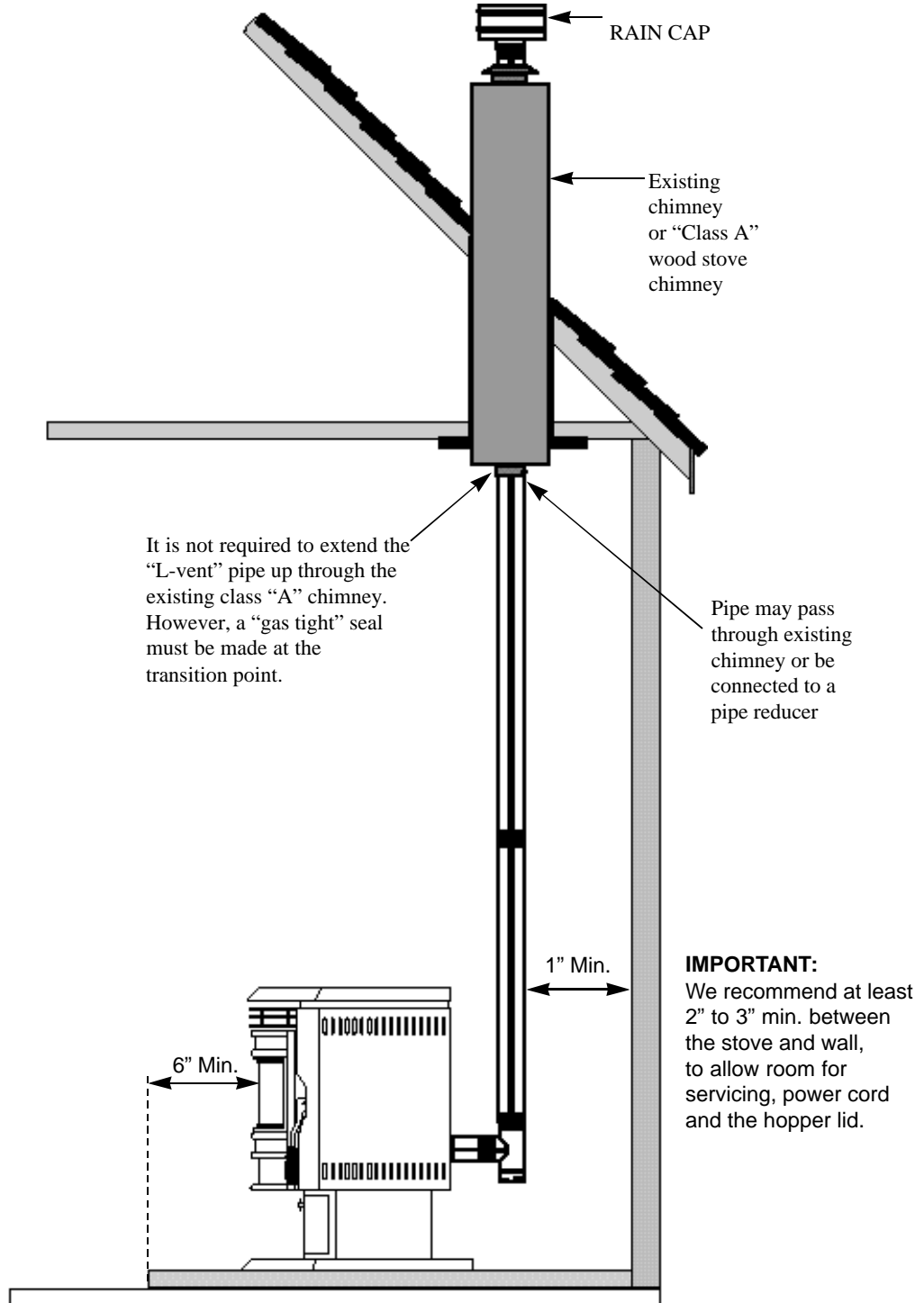


(Figure 32)
Vented Out Through Wall & Up Through Roof

Typical Installations – Freestanding Stove (cont.)

VENTED OUT THROUGH EXTERIOR WALL & UP THROUGH ROOF CONNECTED TO A METAL (CLASS 'A') CHIMNEY

An existing metal (Class 'A') chimney (used for wood stoves) may be used to terminate a vertically vented stove. The pellet vent may be directly connected to the chimney or run all the way



(Figure 33)
Connected to a Class 'A' Chimney

Typical Installations – Freestanding Stove (cont.)

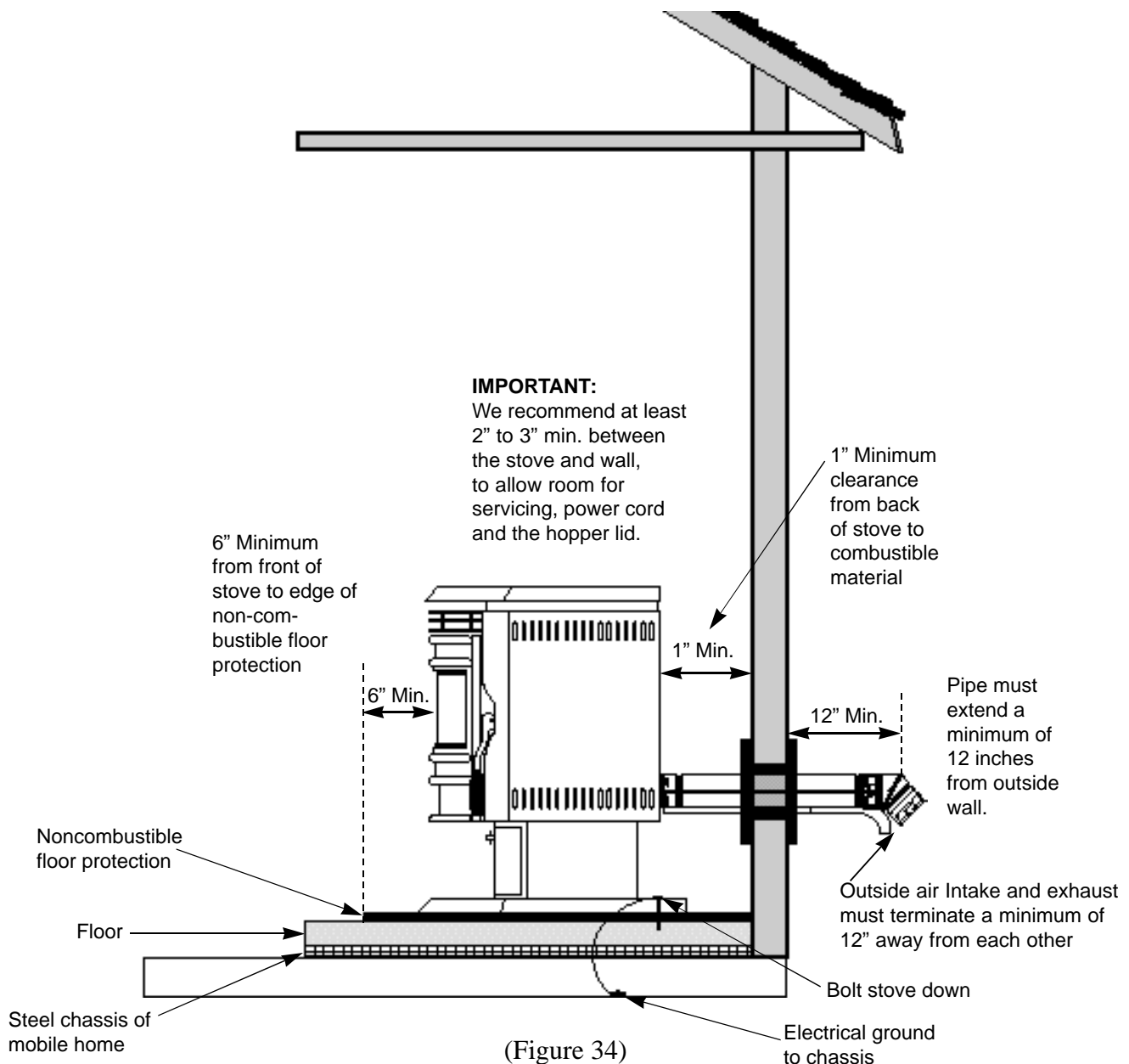
through. It is a good idea to extend the vertical pellet vent to the top of an oversized chimney.

MOBILE HOME INSTALLATION

For mobile home installations, the following items are recommended and may be required (in addition to the standard installation instructions) by local, state or federal building codes:

- Stove must be permanently bolted to the floor
- Stove must have a permanent outside air source
- Stove must be permanently electrically grounded to the steel chassis of the home

CAUTION: The structural integrity of the manufactured home floor, wall and ceiling/roof must be maintained.



(Figure 34)

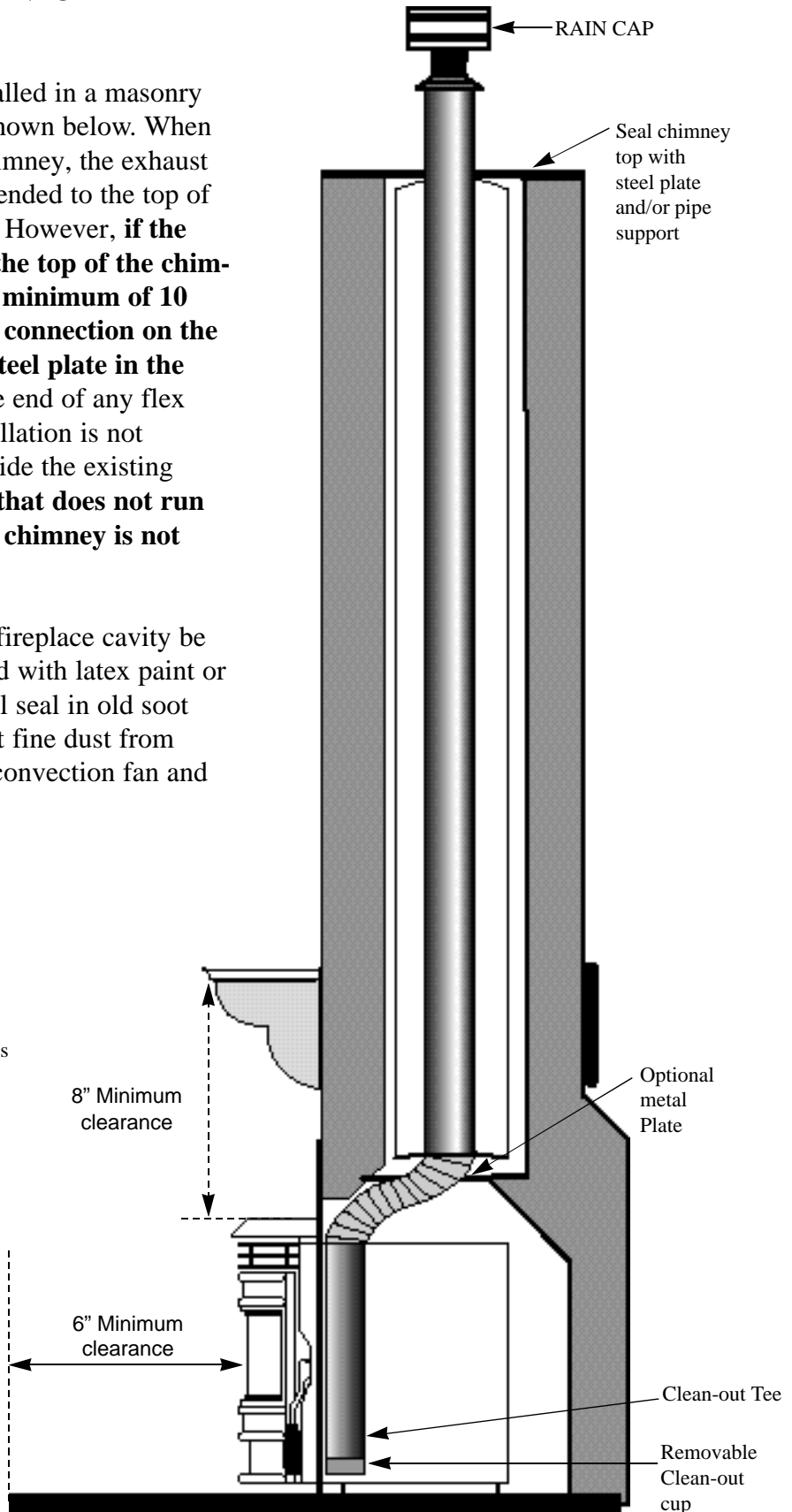
Standard Mobile Home Installation

INSERT STOVE VENTED INTO EXISTING CHIMNEY

The Quest insert may be installed in a masonry or factory built fireplace as shown below. When installing into the existing chimney, the exhaust venting system should be extended to the top of the chimney as shown below. However, **if the vent pipe cannot be run to the top of the chimney, the pipe must extend a minimum of 10 feet (3m) above the exhaust connection on the stove and be sealed with a steel plate in the damper area.** Ensure that the end of any flex pipe used in this type of installation is not blocked, when terminated inside the existing flue. **Note: Any installation that does not run all the way to the top of the chimney is not recommended.**

We also recommend that the fireplace cavity be thoroughly cleaned and sealed with latex paint or masonry sealer. The paint will seal in old soot and creosote and help prevent fine dust from being pulled into the stove's convection fan and blown into the house.

IMPORTANT NOTE:
Make sure the chimney and fireplace 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.



Trouble Shooting

WARNING: Unplug stove from wall outlet before performing service work!

PROBLEM	CAUSE(S)	SOLUTIONS
<p>Fire burns with a lazy orange flame. Pellets build up in the grate and soot forms on the window.</p>	<p>There is insufficient combustion air.</p>	<p>Remove any clinkers or ash from the bottom of the grate that might be obstructing the primary air passages (between the rods).</p> <p>Change to a better grade of fuel if necessary.</p> <p>Check that the damper has been opened enough for the amount of fuel feed.</p> <p>Check that the heat exchange tubes are not coated with ash.</p> <p>Clean internal exhaust ducts.</p> <p>Check gasket seal around the firebox door (and ash pan areas on the free-standing stove). 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.</p> <p>Check for blockage in the air inlet duct or exhaust pipe. Clean as necessary; empty the ash pan.</p> <p>Close ash slide plates.</p> <p>Have your Whitfield dealer check your combustion blower.</p>
<p>Fire goes out or stove shuts down automatically</p>	<p>The hopper is empty</p>	<p>Refill hopper.</p>
	<p>Pellets are not feeding.</p>	<p>See (Pellets will not feed) below.</p>
	<p>The high limit temperature switch has tripped.</p>	<p>Allow stove to cool for 1 hour and re-light. If the stove has been operating at a medium to high burn rate and the convection fan has been turned down "LOW" then the fan should be</p>

Trouble Shooting (cont.)

PROBLEM	CAUSE(S)	SOLUTIONS
Fire goes out or stove shuts down automatically	The high limit temperature switch has tripped.	turned up higher. If this problem persists (particularly at lower burn rates) then the high-limit snap switch should be replaced by your certified Whitfield dealer.
	There is too much combustion air for the amount of fuel.	Adjust the damper to reduce combustion air flow.
Pellets will not feed.	The hopper is empty.	Refill hopper.
	The auger motor or circuit board may be defective. The pressure switch tap or hose may be blocked.	Check to be sure that there is no blockage in the pressure tap or hose. Have your certified Whitfield dealer diagnose the problem and clean or replace any necessary parts.
	Auger jam	Check hopper or feed tube for foreign object. Gently rock the auger motor back and forth to release jammed pellets
Stove runs for 30 minutes then shuts down.	The exhaust gases are not up to temperature.	Press start switch and re-light stove if necessary.
	The low limit snap switch is not operating correctly.	Have your certified Whitfield dealer replace the low limit snap switch.
	The wires to the low limit snap switch are loose or disconnected.	Check wires between the snap switch and the wiring harness. Make sure that there are good connections between the wires and their terminals.
Fans will not shut off after fuel has been switched off and the stove has cooled down.	The low limit snap switch has failed in the closed position.	Have your certified Whitfield dealer replace the low limit snap switch.
Fans will not operate when the start switch is depressed.	There is no power to the stove.	Check that the stove is plugged in to the wall outlet.
		Check to see if your circuit breaker has tripped.

Trouble Shooting (cont.)

PROBLEM	CAUSE(S)	SOLUTIONS
Fans will not operate when the start switch is depressed.	There is no power to the control board.	Check the connections between the high-limit snap switch and the harness. Call your Whitfield Dealer for a diagnosis.
There is soot or fly ash in the house.	The window is being cleaned when the stove is operating.	Turn down the convection fan or turn off stove before cleaning to prevent dispersion of ash and soot into the room.
	There is leakage at the joints between the combustion fan, exhaust pipe, and “L” vent. This will be evidenced by dust on the impeller of the convection fan, and inside the heat exchanger tubes.	Seal up any leaks in the exhaust system with room temperature vulcanizing silicone sealer (RTV).
	For a fireplace insert installation, if existing fireplace opening was not thoroughly cleaned and sealed (painted) before the insert was installed, the convection fan may be picking up dust, soot or ash and blowing it into the house.	Pull the insert away from the fireplace opening. Thoroughly clean the opening and paint the inside opening with latex paint or masonry sealer to hold down the finer particles of dust.
	The stove is being cleaned with an unapproved vacuum.	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.
With optional FASTFIRE™ Self-Igniter, pellets do not ignite within 15 minute timer cycle; igniter <u>probe glows red</u> .	No fuel supply.	Check to see that hopper contains fuel and that auger is primed (full of fuel), and fuel is feeding into the burn grate (auger “on” light is blinking).
	Insufficient combustion air flow.	Check to see that burn grate is firmly in place, and that firebox door and ash release slide plates are completely closed. <i>On freestanding model</i> , ash door must be latched. Fuel feed rate and damper knobs should be set to the “MEDIUM” and “HIGH” ranges.

Trouble Shooting (cont.)

PROBLEM	CAUSE(S)	SOLUTIONS
With optional FASTFIRE™ Self-Igniter, pellets do not ignite within 15 minute timer cycle; igniter probe glows red.	Ash or pellet dust is blocking the end of the igniter tube.	Clean igniter tube.
Stove has optional FASTFIRE™ Self-Igniter, but igniter probe does not heat up (glow red) and ignite pellets.	No power to probe.	Check to see that the power cord is plugged in. Contact your authorized whitfield dealer if this is not the source of the problem.

Optional Accessories

- **SHROUDS AND MAGNETIC SHROUD TRIM** - Two sizes of shrouds and magnetic shroud trim are available for the Quest insert stove:
Small: 28 1/2 inches(72.4 cm) high by 40 3/4 inches(103.5 cm) wide
Large: 32 inches(81.3 cm) high by 44 inches(111.75 cm) wide
- **INSERT PEDESTAL SUPPORT KIT** - A pedestal support kit is available to provide support for the front of the Quest insert. This kit is often used when the fireplace hearth extension is lower than the floor of the firebox. The insert pedestal support attaches to and supports the bottom front of the insert stove.
- **GOLD-PLATED LOUVERS** - are available to replace the standard painted louvers, which cover the convection air outlet on factory model Quest stoves.
- **INSERT CENTERING ADAPTER** - An adapter for centering exhaust pipe on insert installations.
- **LOG SET** - A two piece decorative log set is available.
- **FASTFIRE™ SELF-IGNITER** kits are available. This option allows you to light pellets with push-button ease.

TO ORDER: Complete kits (including installation instructions) for any of the optional accessories listed above may be ordered from your authorized Whitfield Pellet Stove dealer.



Pyro Industries, Inc.
Whitfield Quest Owner's Manual
WP4PYROG97 Part No. 13627518
Serial Number 12140+

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