

Heating Equipment And Technology Inc. d.b.a. HEAT, Inc.

A leader in alternative energy heating systems

SAVE THESE INSTRUCTIONS

Listed by OMNI-Test Laboratories (503) 643-3788
EPA Accreditation Cert # 003 American Association
for Laboratory Accreditation (A2LA) Cert # 758.01
Altair™ safety test report # 098-S-01-2 for the
following applications:

Safety label shown inside Owners Manual

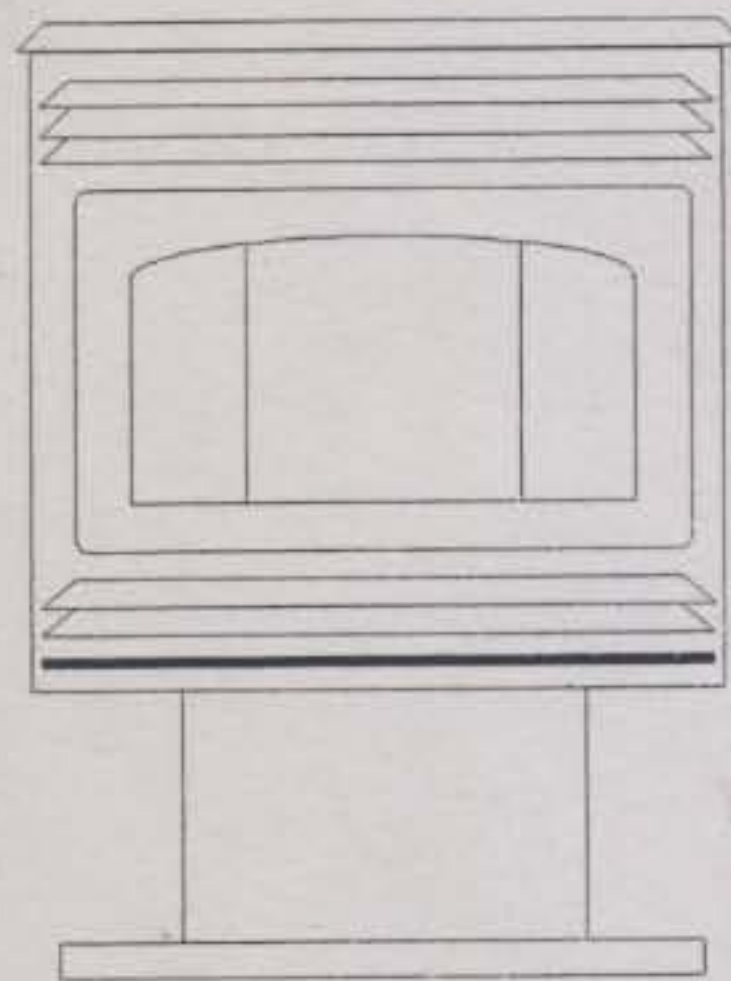
- The Altair™ Freestanding and insert models are listed for residential and mobile home use.
- The Altair™ insert is listed for masonry, zero-clearance and built-in construction applications.
- Tested to U.S. and Canadian Standards: ASTM 1509-95 UL 1482 UL 907 ULC/ORD C1482 M1990.
- All units listed to burn pelletized wood for fuel.
- All units have an electrical rating of 115VAC 60 HZ.
- Use of improper fuel, chemical cleaner, or improper electrical source may invalidate the warranty.

SAFETY NOTICE

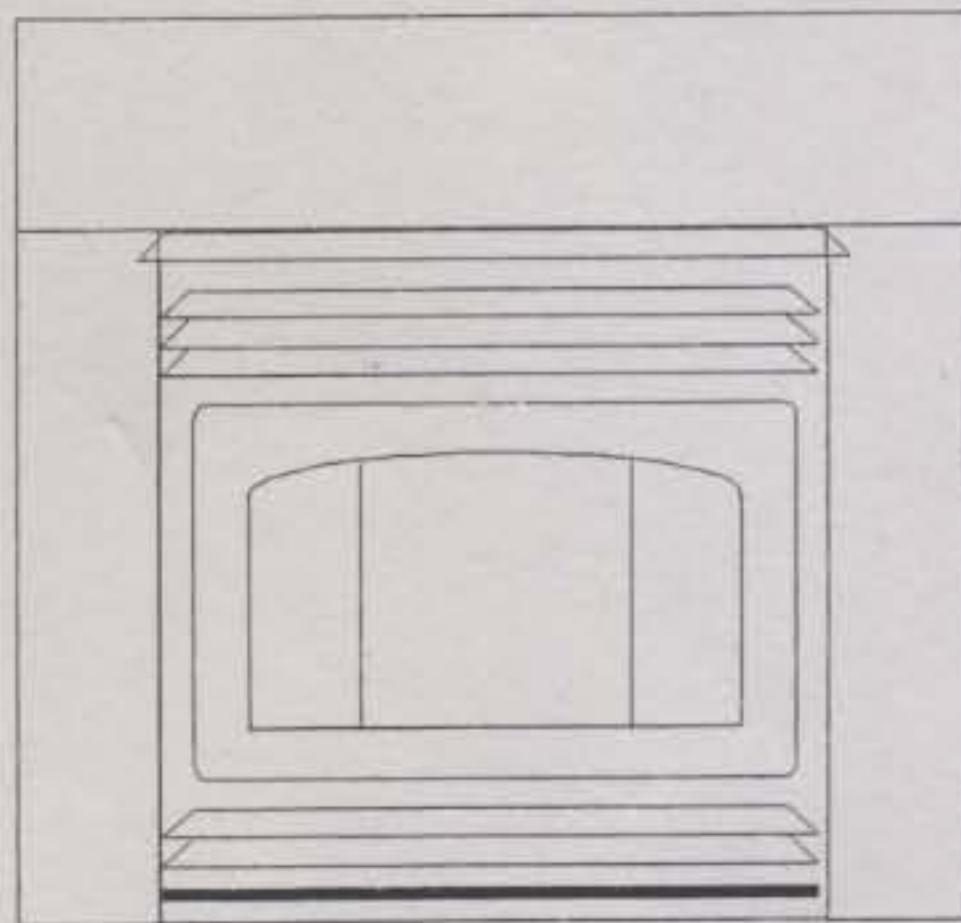
- THE PURPOSE OF THIS MANUAL IS TO SUPPORT AND SUPPLEMENT THE SAFE AND PROPER INSTALLATION OF THE Altair™ PELLET STOVE LINE.
- PLEASE READ THIS ENTIRE MANUAL BEFORE INSTALLATION AND USE OF THIS PELLET FUEL-BURNING ROOM HEATER.
- FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN PROPERTY DAMAGE, BODILY INJURY OR EVEN DEATH.
- ANY DEVIATION FROM THESE INSTRUCTIONS MAY INVALIDATE THE WARRANTY AND COULD CAUSE SERIOUS CONSEQUENCES.
- CONTACT LOCAL BUILDING OR FIRE OFFICIAL ABOUT RESTRICTION AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

Altair™

Pellet Stoves



Altair Pellet Stove Freestanding



Altair Pellet Stove Insert

2001-2002 Owners Manual

Edition: 01.1

Altair™ is a registered trademark of Harold C. Bitler

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Obtain the following information from the safety label located on the stove:

Model: _____

Serial Number: _____

Date of Manufacture: _____

Obtain the following information from your dealer bill of sale:

Purchase Date: _____

Dealer Name: _____

Dealer Phone Number: _____

Name of Installer: _____

Please attach your bill of sale to this page.

PROTECT YOUR ASSET

Mail in the warranty registration form on the back page within 10 days of purchase.

We wish you many happy and warm years heating with your
Altair™ pellet stove.

Most Importantly.....

We want to thank you for purchasing an Altair™ pellet stove. Welcome to the rapidly growing family of environmentally conscientious owners who enjoy the comfort of traditional wood heat yet appreciate the cleanliness and convenience of modern pellet technology. You should be applauded for your wise ecological decision to utilize waste material by converting this renewable energy source into clean and useful heat.

The Altair™ pellet stove has been designed and engineered to provide years of safe and dependable service when operated, maintained, and serviced correctly. All pellet stoves require some maintenance. However, we have endeavored to manufacture a user-friendly appliance that provides easy access to the clean-out areas. With your reasonable and prudent care, your Altair™ pellet stove will deliver years of remarkable clean burning efficiency, warmth, and comfort.

This Owner's Manual has been carefully written and contains valuable information necessary for a safe and successful installation. It is consistent with OMNI report #098-S-01-2. We urge you to read this manual carefully before starting the actual installation work.

To validate your warranty, complete the registration form on the back page and mail within 10 days of purchase. We recommend you retain your bill of sale and record the model, serial number, purchase date, and where purchased below.

IMPORTANT INFORMATION

The following information may be needed to more efficiently respond to any service inquiries:

Obtain the following information from the safety label located on the stove:

Model: _____

Serial Number: _____

Date of Manufacture: _____

Obtain the following information from your dealer bill of sale:

Purchase Date: _____

Dealer Name: _____

Dealer Phone Number: _____

Name of Installer: _____

Please attach your bill of sale to this page.

PROTECT YOUR ASSET.

Mail in the warranty registration form on the back page within 10 days of purchase.

**We wish you many happy and warm years heating with your
Altair™ pellet stove.**

Do's

- Do comply with federal, state and local codes.
- Do obtain a permit, if required in your area, to ensure a safe and legal installation.
- Do have your appliance installed by a licensed, bonded insured professional.
- Do install vent at the clearances specified by the vent manufacturer.
- Do follow the prestart checklist

Prestart Checklist

- Add fuel to the hopper as needed. Opening and closing the front hopper lid automatically cleans the heat exchanger tubes.
- Clean the combustion chamber.
- Clean and secure the burn pot.
- Clean door and glass. Note: Gold and nickel doors and louvers must be cleaned with mild (Windex etc.) glass cleaner prior to initial start up.
- Check overall condition

Don'ts: Safety Precautions

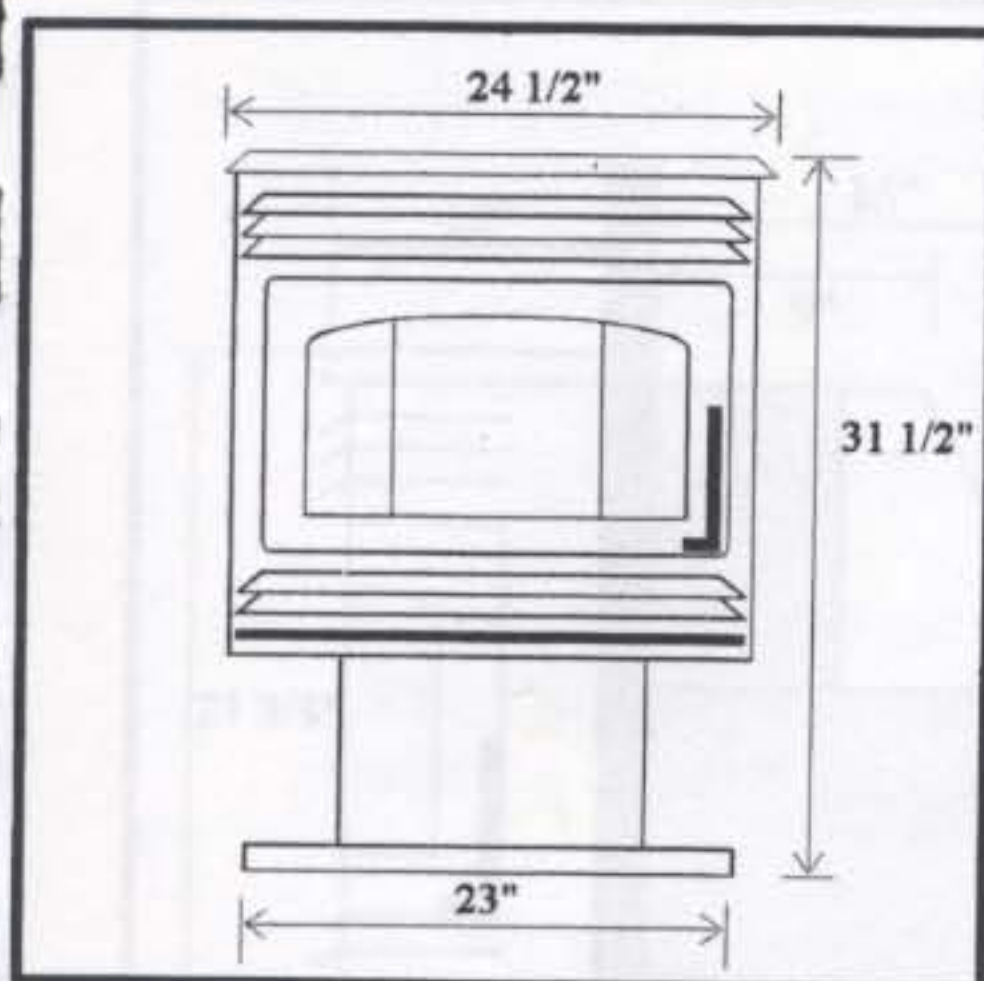
- DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.
- DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.
- FOR UNITS TO BE INSTALLED IN MANUFACTURED HOMES; DO NOT INSTALL IN A

SLEEPING ROOM. CAUTION: THE STRUCTURAL INTEGRITY OF THE MANUFACTURED HOME FLOOR, WALL, AND CEILING/ ROOF MUST BE MAINTAINED.

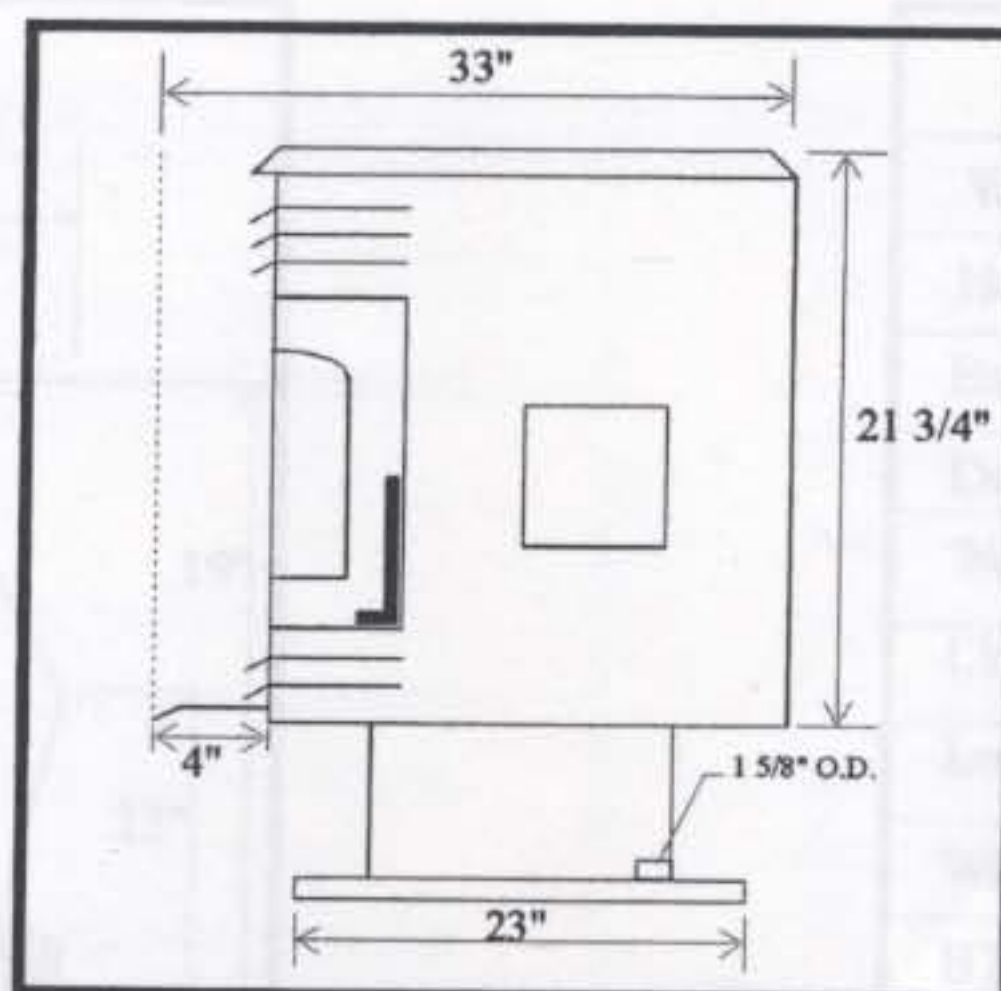
- NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS IN THIS HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE HEATER WHILE IT IS IN USE.
- CAUTION: MOVING PARTS MAY CAUSE INJURY. DO NOT OPERATE UNIT WITH THE SIDE PANELS/ SHROUD OPEN OR REMOVED.
- DANGER: RISK OF ELECTRICAL SHOCK. DISCONNECT POWER BEFORE SERVICING THE UNIT.
- SEVERAL SURFACES OF THIS STOVE ARE HOT WHEN IN USE. CARE IS REQUIRED TO AVOID SERIOUS BURNS.
- DO NOT OPEN DOOR WHEN APPLIANCE IS IN USE.

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SHUT DOWN PROCEDURE:
DO NOT UNPLUG STOVE.
Turn heat selector switch in "OFF"



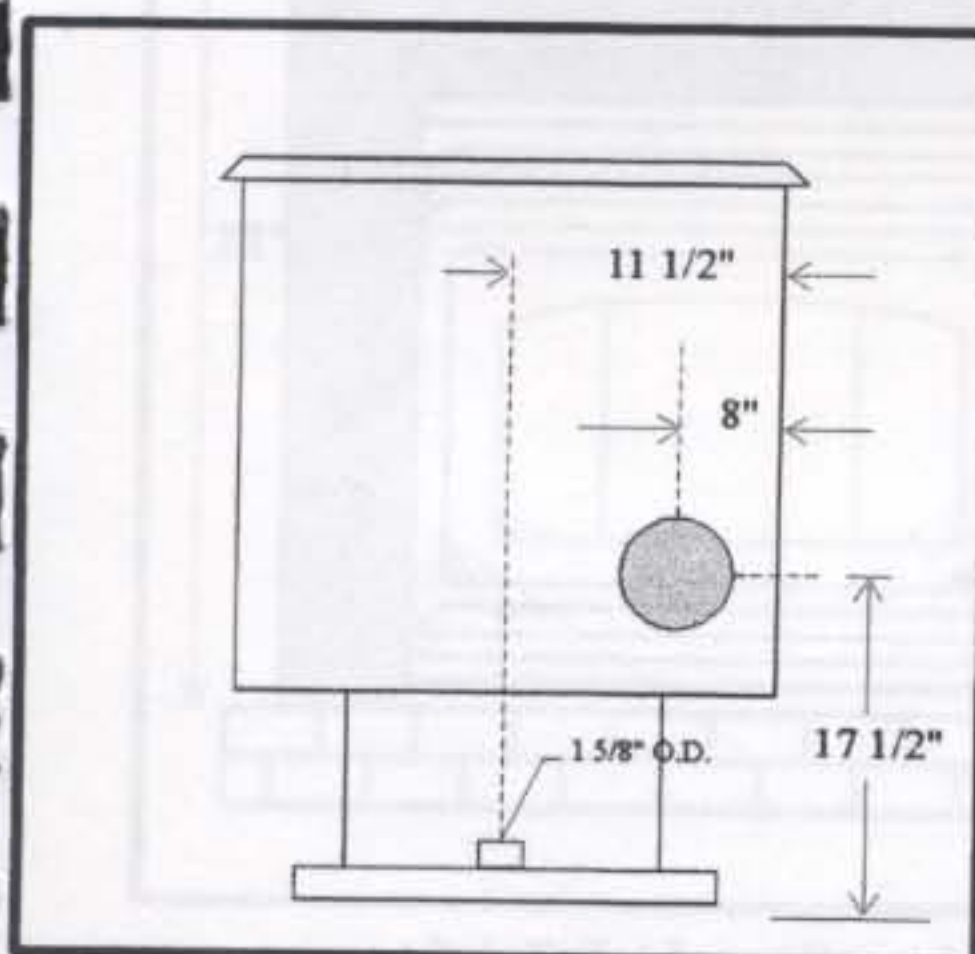
Altair Freestanding Front View



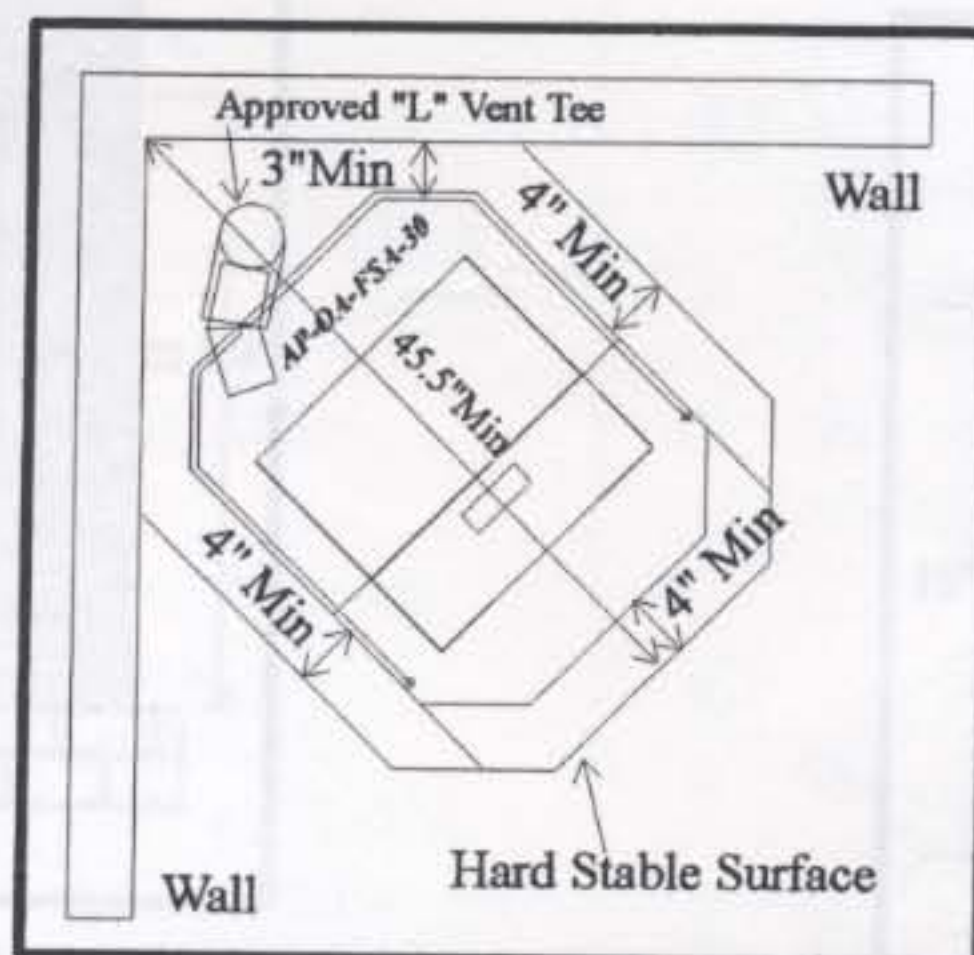
Altair Freestanding Side View

Table of Specifications	
Height	31 1/2"
Width	24 1/2"
Depth	33"
Weight (LBS)	345 LBS
Hopper Capacity	90 LBS
BTU Input (Max)	36,500
Approximate Pellet Usage	Low 1.25 LBS per Hour High 4.2 LBS per Hour

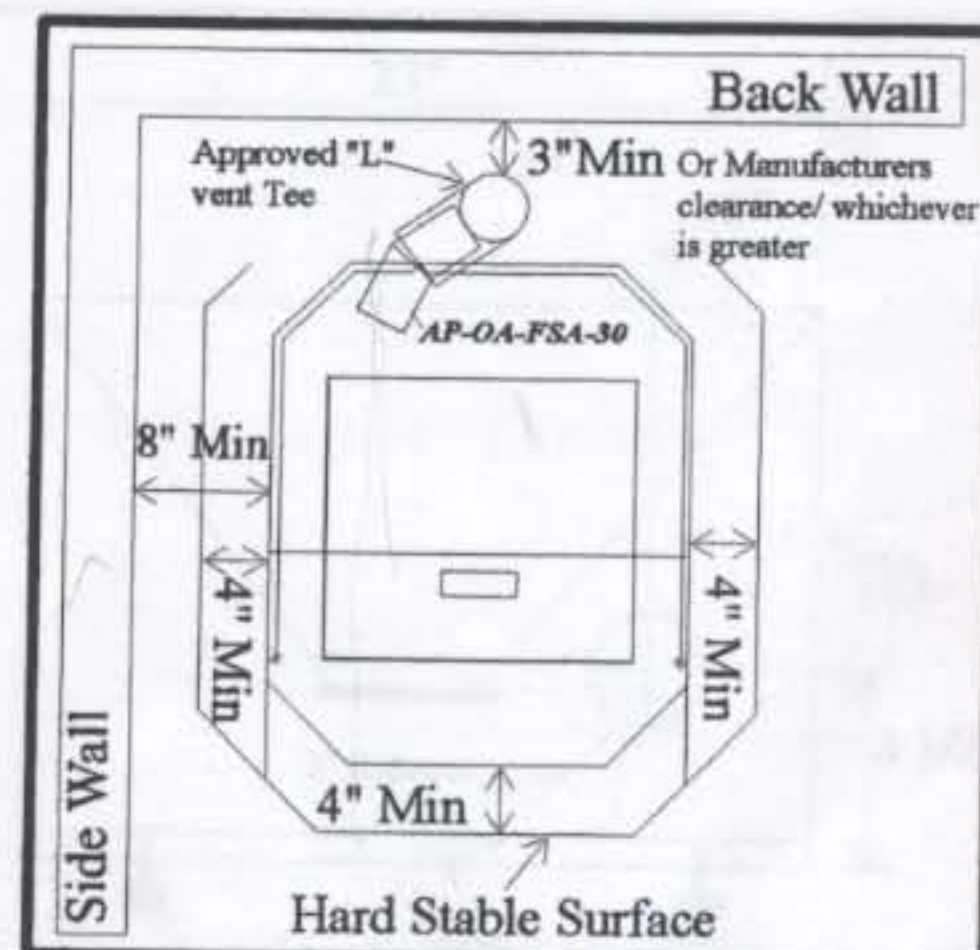
Note: HEAT Inc. manufactures 2 freestanding pipe adapters (AP-OA-FSA-15 15 dg. and AP-OA-FSA-30 30dg.). Each adapter is labeled for specific installs in the illustrations below. Pipe adapters are required to maintain minimum stove clearances. Installs may be done without pipe adapters, however greater clearances may be forced by "L" vent clearances.



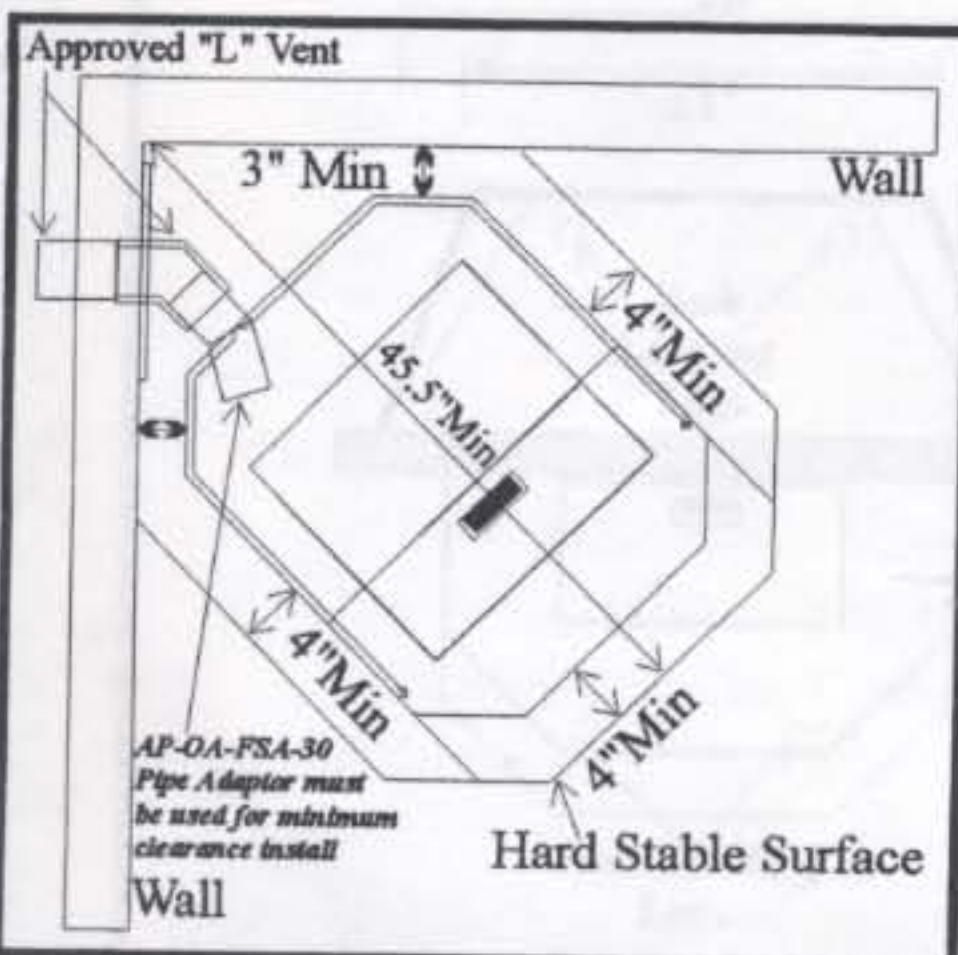
Altair Freestanding Back View



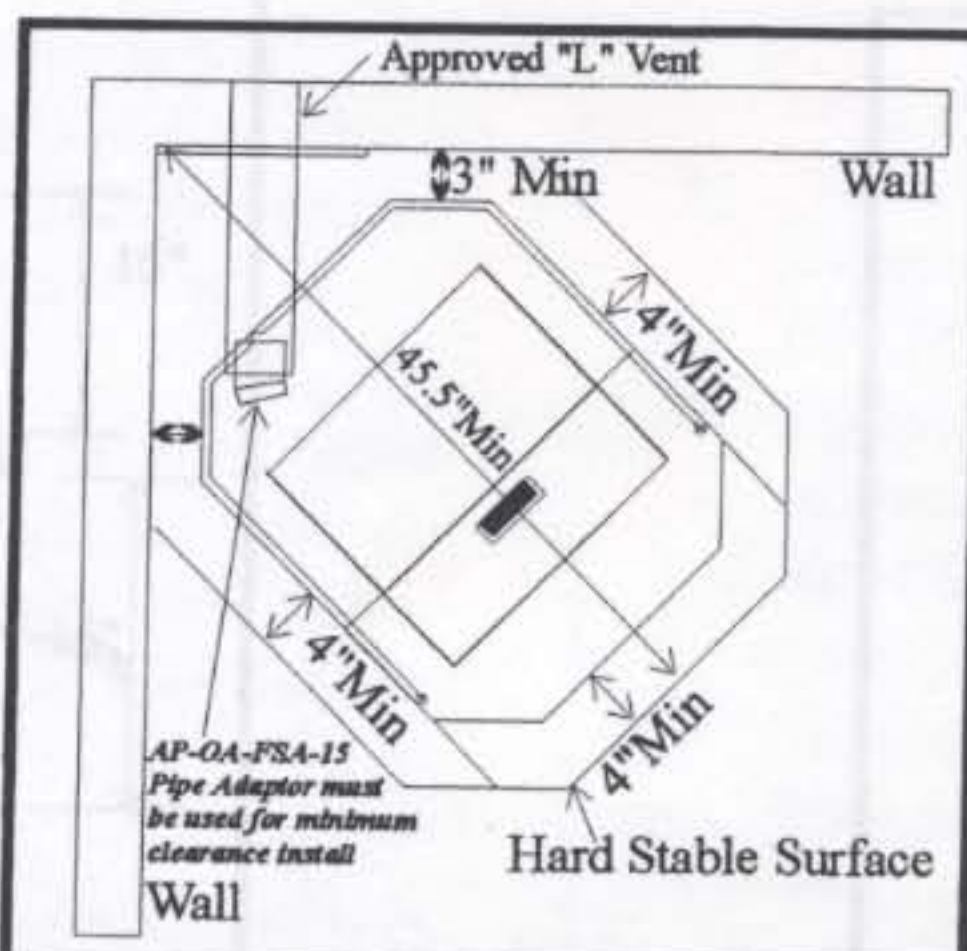
Altair Corner Vertical Installation



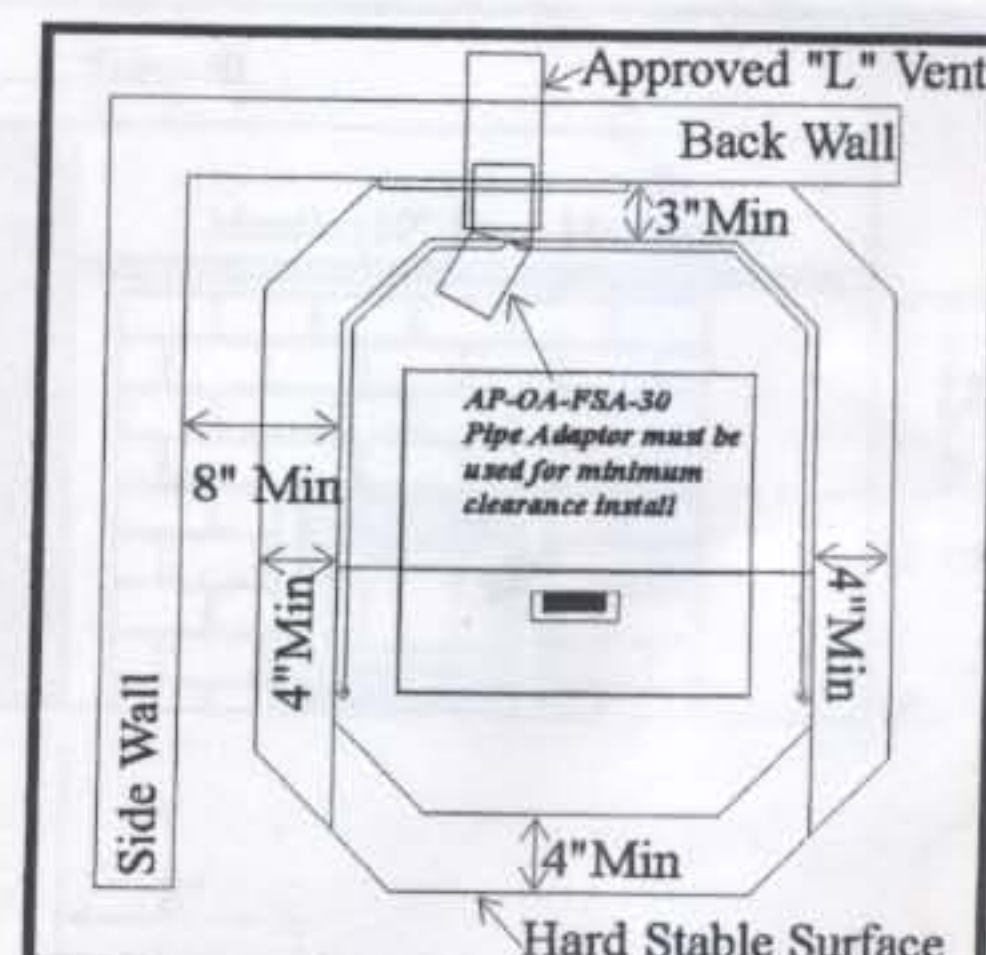
Altair Straight Vertical Installation



Altair Freestanding LH Corner Clearances Horizontal Installation



Altair Freestanding RH Corner Clearances Horizontal Installation



Altair Freestanding Sidewall and Backwall Clearances Horizontal Installation

Thermostat Installation

- Although your Altair™ is not supplied from the factory with a thermostat, it may be used with one. Any low voltage heat-only thermostat is acceptable, however, a bulb style thermostat is recommended for more accurate heat control.
- To install the thermostat, pick out a location for the thermostat to be mounted, preferably an inside wall. Mount the thermostat and run standard thermostat wire (2 wire) from the thermostat to the appliance.
- Check to ensure that the appliance is unplugged and that the heat selector knob is in the off position. On the back of the control board, locate a green wiring block with two small screws. It is located in the center of the control board near the bottom. It is visible without removing the control board from the control board jacket. You will notice two small slots underneath the screws in the wiring block. There should be a U shaped wire connecting these two slots. (See diagram E-4).
- Turn the screws counter clockwise to back them out. It is not necessary to remove the screws entirely. The U shaped wire between these slots should be removed prior to installing the thermostat wires. Insert the two wires from the thermostat, one into each slot, and tighten the screws.

Caution: When the appliance is plugged in and the heat selector knob is turned to a heat setting, the auto start system will engage whenever the thermostat calls for heat.

Pedestal Installation

- Locate the 4 threaded holes in the bottom of the appliance. Install 1/4-20 bolts in the rear 2 holes only. These bolts should only be turned in 3 or 4 turns at the most. Set

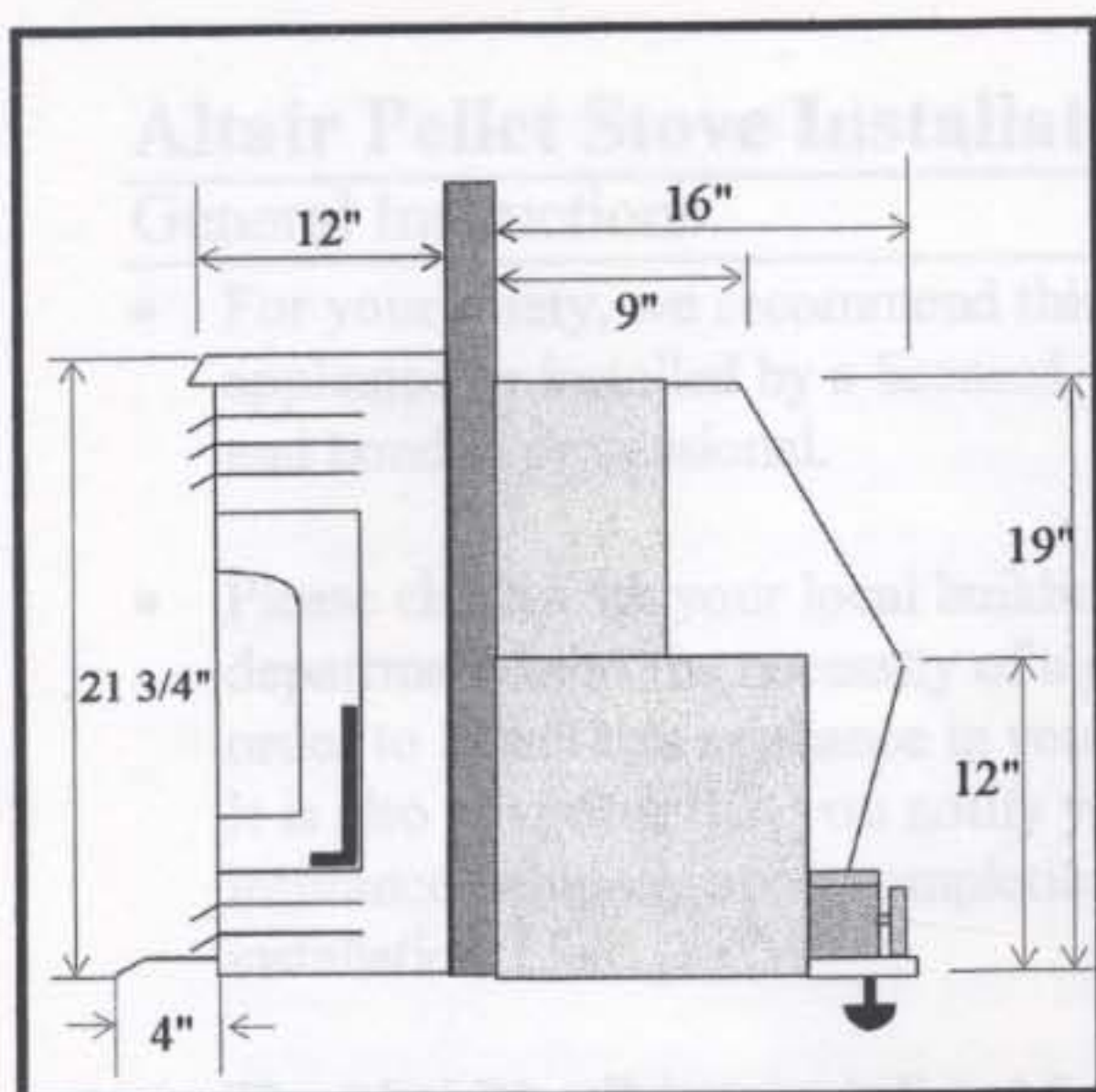
the appliance on the pedestal so that the bolts are behind the 2 rear notched tabs. (See diagram I-1)

- Gently slide the appliance forward until the 1/4-20 bolts engage into the notched openings of the pedestal. This should center the appliance on the pedestal. Some repositioning may be required to line up the front 2 threaded holes in the bottom of the appliance with the clearance holes in the front mounting tabs of the pedestal. (See diagram I-1).
- Once the holes are lined up, install remaining 2 1/4"-20 bolts in the front holes, but do not tighten.
- Check to ensure that the appliance and the pedestal are lined up correctly, then tighten the 4 bolts.

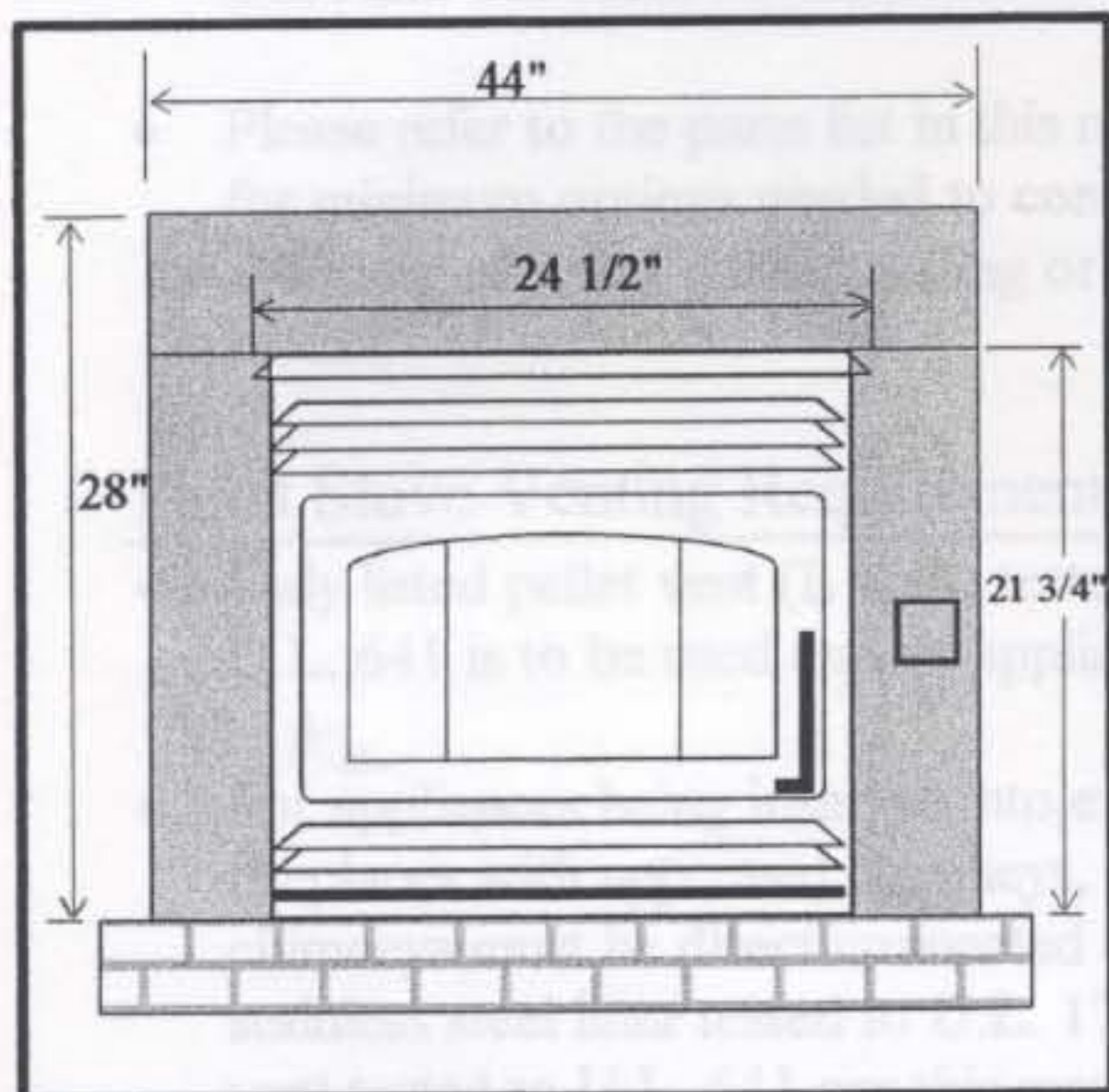
Freestanding Rear Top Installation

- Locate the rear top panel. This is a panel with a large hopper access door and two L shaped mounting brackets on its underside. (See diagram I-2).
- Attach the rear top to the appliance by lining up the two L brackets underneath the rear top panel with the 2 holes in the side wall of the appliance. Insert 1/4"-20 diameter bolts, but do not tighten. (See diagram I-4).
- The side braces are attached to the rear top at the factory. To attach the side brace to the bottom plate of the stove, rotate the side brace down until it lines up with the threaded hole in the side of the bottom plate. Install a 1/4-20-diameter bolt, but do not tighten. (See diagram I-3 for side brace identification I-4 for position.)

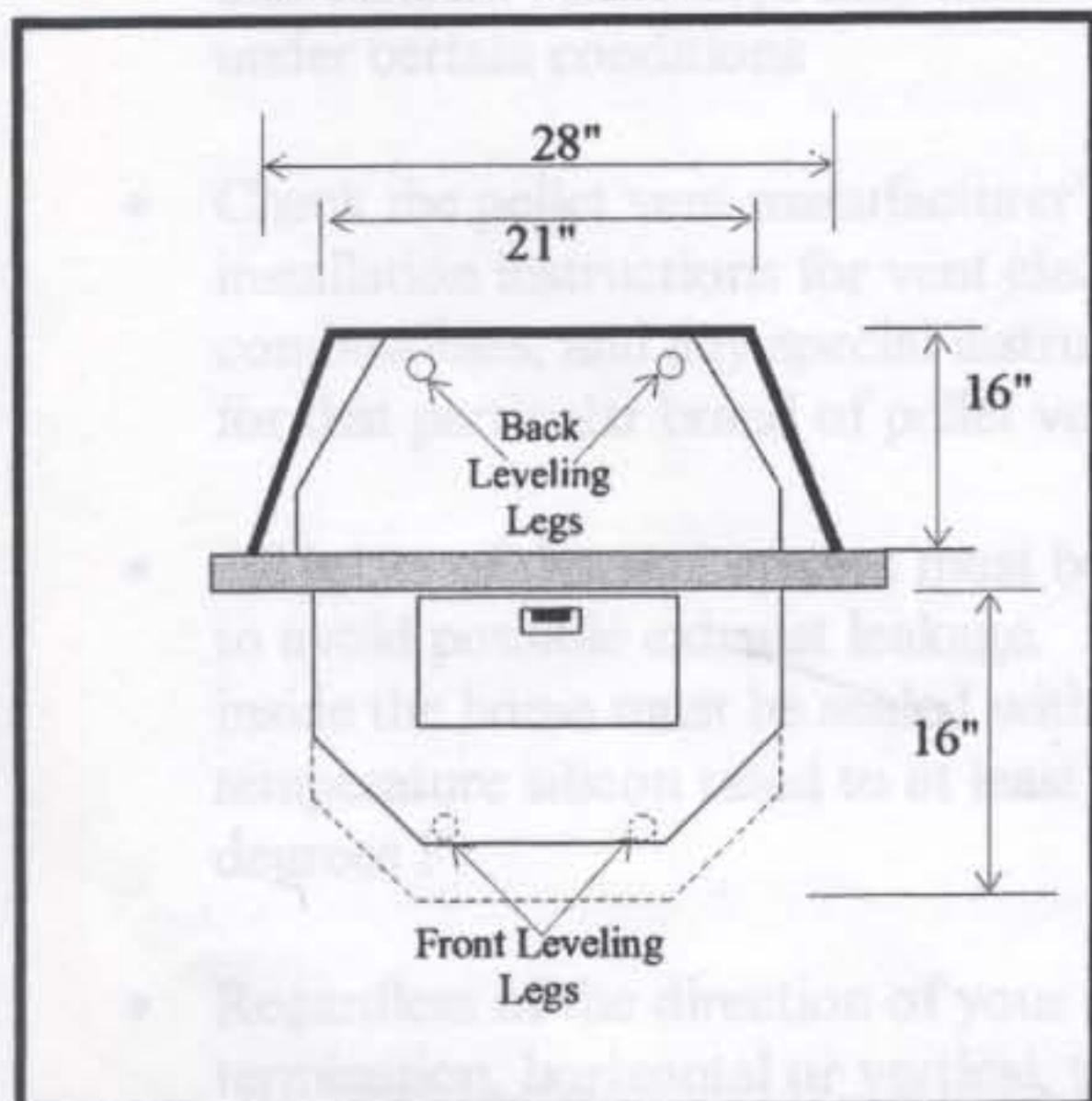
(Continued on next page.)



Altair Pellet Insert Side View



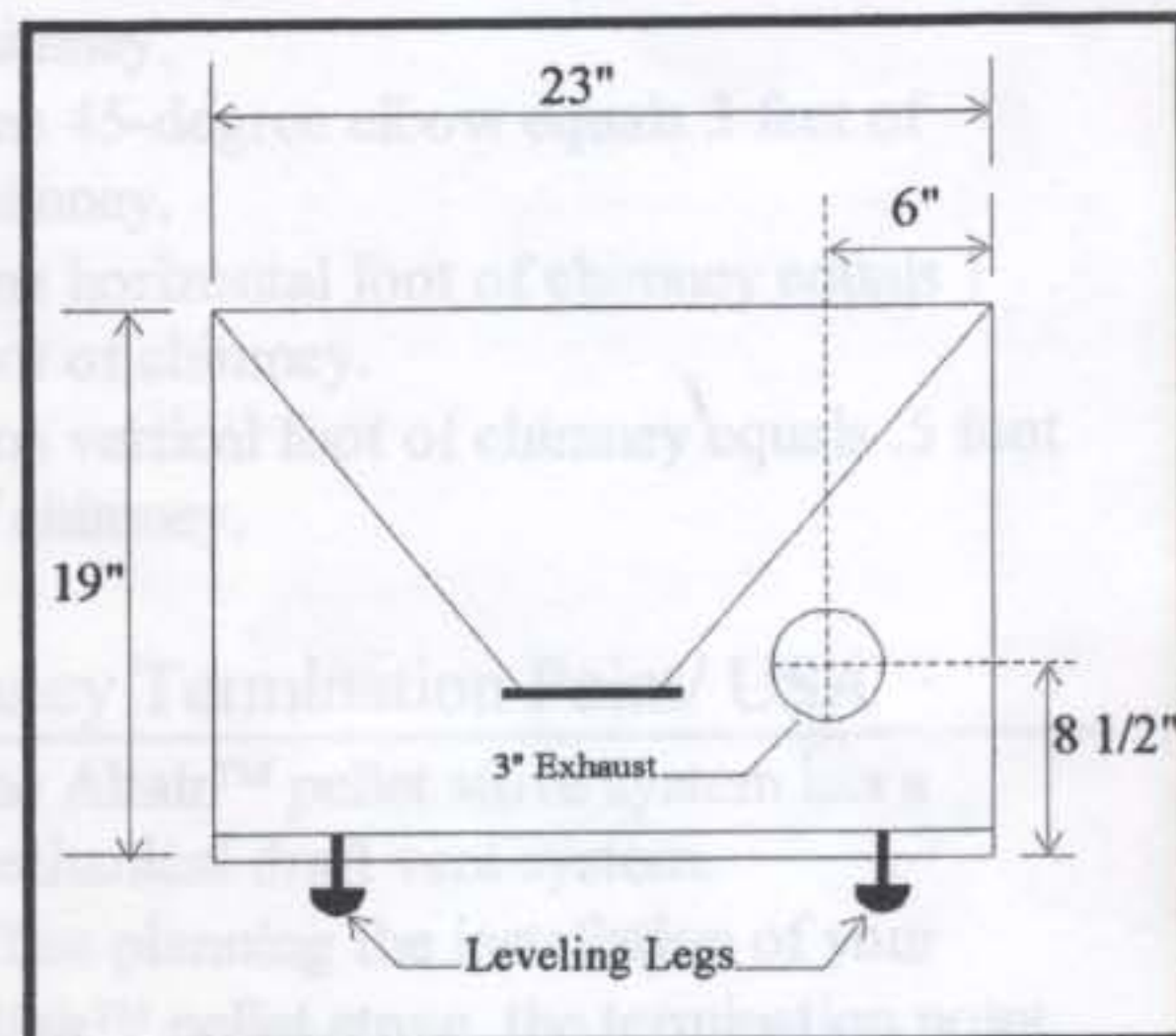
Altair Pellet Insert Front View



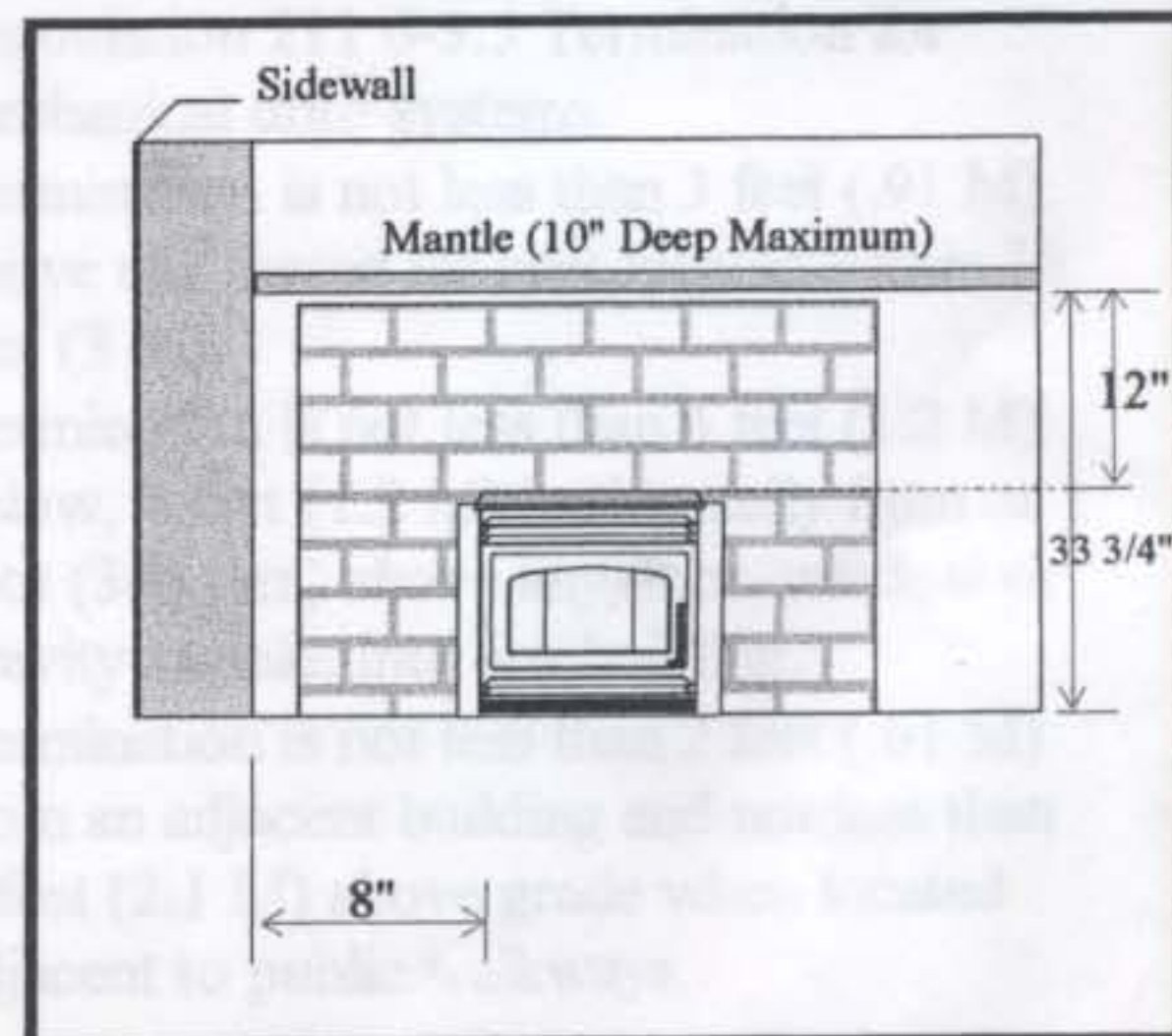
Altair Pellet Insert Top View/ Minimum Fireplace Dimensions

Table of Specifications

Width	24 1/2"
Height (on hearth)	21 3/4"
Extensions onto Hearth	12"
Depth into Fireplace	16"
Weight	275 LBS
Chimney Size	3"
Low Profile Hopper Top	51 LBS
With Hopper Extension	70 LBS
BTU Input (Max)	36,500
Approximate Pellet Input Usage per Hour	Low 1.25 LBS High 4.2 LBS
Min. Fireplace Height	19"
Min. Fireplace Depth	16"
Min. Fireplace Width Front	28"
Min. Fireplace Width Back	21"



Altair Pellet Insert Back View



Clearances to Combustibles

General Instructions

- For your safety, we recommend this appliance be installed by a licensed, insured and bonded professional.
- Please check with your local building department as to the necessity of a permit in order to install this appliance in your home. It is also advisable that you notify your insurance company upon completion of the installation.
- The Altair™ pellet stove is listed for both USA and Canadian installations.
- Please refer to the parts list in this manual for minimum options needed to complete assembly of either a freestanding or insert model.

Pellet Stove Venting Requirements/ USA

- Only listed pellet vent (L vent) tested to U.L. 641 is to be used on this appliance.
- For appliances being inserted into existing fireplaces with approved chimneys, chimneys must be direct connected with stainless steel liner tested to U.L. 1777 or L vent tested to U.L. 641 per this manual's illustrations. . Chimneys may need full reline under certain conditions
- Check the pellet vent manufacturer's installation instructions for vent clearance to combustibles, and any special instructions for that particular brand of pellet vent.
- All joints of the vent system must be sealed to avoid possible exhaust leakage. Joints inside the home must be sealed with high temperature silicon rated to at least 570 degrees F.
- Regardless of the direction of your chimney termination, horizontal or vertical, the vent

system must use an approved stainless steel vent termination cap.

- When installing the Altair™ pellet stove at altitudes above 3000 feet, or when vent configurations exceed 17 feet equivalent vent length, it may be necessary to increase the venting system from 3 inch to 4 inch in diameter.

Equivalent Vent Lengths

- When planning the installation of your Altair™ pellet stove, it is recommended that the following information be used as a guideline for figuring the total run of vent for the appliance.
- One 90-degree elbow equals 5 feet of chimney.
- One 45-degree elbow equals 3 feet of chimney.
- One horizontal foot of chimney equals 1 foot of chimney.
- One vertical foot of chimney equals .5 foot of chimney.

Chimney Termination Point/ USA

- The Altair™ pellet stove system has a mechanical draft vent system.
- When planning the installation of your Altair™ pellet stove, the termination point must comply with National Fire Protection Association 211 6-3.5 Termination for mechanical draft systems.
- Termination is not less than 3 feet (.91 M) above any forced air inlet located within 10 feet (3 M).
- Termination is not less than 4 feet (1.2 M) below, 4 feet (1.2 M) horizontally from or 1 foot (304 mm) above any door, window or gravity air inlet into any building.
- Termination is not less than 2 feet (.61 M) from an adjacent building and not less than 7 feet (2.1 M) above grade when located adjacent to public walkways.

Outside Combustion Air

- The Altair™ pellet stove is designed to draw most of its combustion and convection air through the cavity underneath the front ash lip. This area must never be obstructed.
- Although outside air is not a factory requirement for residential use, it is recommended in homes that are very air tight, vapor barrier wrapped, etc. In some building jurisdictions, outside air is required for any pellet-burning appliance. Consult your local building department concerning this.
- To install outside air to your appliance, locate the 1 5/8" diameter collar in the back of the stove. It is to the right of the auger motor, in the base plate of the stove. (See diagram I-7).
- For freestanding units, attach a 1 5/8" inside diameter metal flex pipe (available from your Altair™ dealer or any automotive parts supply). Secure the flex to the collar with a standard hose clamp.
- If the outside air source is being supplied from under the appliance, an outside air source must be supplied anywhere under the pedestal base. Run the flex through the rear opening in the side panels, then down under the unit to the pedestal. Attach the flex to the collar in the pedestal base.
- If the outside air source is being supplied through a wall, do not attach the flex pipe to the pedestal collar. Instead, run the flex pipe directly to the outside air source.
- For inserts, the outside air pipe may be run up the chimney, or to any other convenient outside air source, provided the structural integrity of both the fireplace and chimney

system are maintained. This may be done with a metal flex pipe, or a rigid metal pipe. It is not recommended that plastic pipe be used for the outside air pipe. (See diagram I-9).

- The termination point of the outside air source must not be less than 4 feet (1.2 M) above, 4 feet (1.2 M) horizontally or 1 foot (304 mm) below the exhaust vent termination.

Floor Protection

- The Altair™ pellet stove is approved to set directly on a hard and stable surface.

Electrical Source

- The electrical supply required for the Altair™ pellet stove is 120 volts AC 60 HZ plus or minus 6 volts.
- Total power consumption for the Altair™ pellet stove is approximately 150 watts at its highest setting. Lower heat settings use less power. (Auto start sequence requires an additional 1000 watts).
- The Altair™ pellet stove must be properly grounded to conform to code requirements and to insure correct performance.
- The only approved electrical receptacle for the Altair™ pellet stove is a 3 prong grounded receptacle. (See diagram E1).
- The receptacle should be confirmed to be wired correctly by use of an AC analyzer. This may be purchased at any hardware store, or may be obtained from your dealer.

- The Altair™ pellet stove may be used with a power generator, provided it supplies the correct 60 hertz sine wave, voltage and wattage to the appliance.
- It is recommend that a surge suppresser be installed at the electrical receptacle serving the appliance.
- **Use of an improper electrical source invalidates the Altair™ pellet stove warranty.**

Mobile Home Requirements

- The Altair™ pellet stove is approved for use in a mobile home. The following are special requirements for mobile home installation:
- Outside combustion air is required.
- The appliance must have means to be securely attached to the mobile home structure.
- The weight of the stove and vent system must be spread over an area not to exceed 40 pounds per square foot.
- The appliance shall not be installed in a sleeping room.
- The structural integrity of the mobile home floor, walls, ceiling and roof must be maintained.

Control Board Installation

- The Altair™ pellet stove control board comes from the factory installed in a steel jacket. It is recommended that you do not remove the control board from its jacket.

Note: Please check that the heat selector knob is in the off position and that the stove is unplugged before proceeding with the electrical hook up of the control board. (Refer to the operation instructions for identification of the heat selector knob).

- To install the control board, locate the right hand side panel with the square access door in it.
- Line up the notches in the flanges on the control board jacket with the 4 tab receivers located on the back side of the panel. (See diagram E-2).

Note: The control board jacket notches should move freely in the tab receivers. Do not force or pound the control board assembly on to the tab receivers, as you may damage the electrical components of the control board.

- See diagram E-3 for hook up of the wire harness to the control board.

Attach the rear top to the appliance by lining up the two L brackets underneath the rear top panel with the 2 holes in the side wall of the appliance. Insert 1/4"-20 diameter bolts, but do not tighten. (See diagram I-4).

The side brackets are attached at the rear top at the factory. To attach the side brace to the bottom plate of the stove, rotate the side brace down until it lines up with the threaded hole in the side of the bottom plate. Install a 1/4"-20-diameter bolt, but do not tighten. (See diagram I-3 for side brace identification I-4 for position.)

(Continued on next page.)

Altair Pellet Stove Installation Instructions: Rear Top/ Side Panel/ Hopper 10

Freestanding Rear Top Installation. (Continued)

- Repeat this procedure for the other side. Ensure that the rear top is level with the front top of the appliance and tighten all bolts.

Freestanding Side Panel Installation

- Locate the right hand side panel. This is the panel with the control board access door.
- Locate the side panel receivers. (See diagram I-5). Hold the side panel at a slight angle to the appliance and slide it down onto the lower receiver pin. Raise the panel just enough to clear the upper receiver pin. Rotate the panel into position and slide it down onto the upper receiver pin. The panel should drop into a seated position on both receiver pins.
- Secure the side panel in position by turning the 2 slotted head screws 3/4 of a turn clockwise. This will attach to the hook portion of the "J" on the rear top bracket.

Repeat procedure to install the left-hand side panel.

Insert Shroud Installation

- Locate the right hand side shroud panel. This is the panel with the control board access door.
- Locate the side panel receivers. (See diagram I-5). Hold the side panel at a slight angle to the stove and slide it onto the lower receiver pin. Raise the panel just enough to clear the upper receiver pin. Rotate the

panel into position and slide it onto the upper receiver pin. The panel should drop into a seated position on both receiver pins.

- Repeat procedure to install left hand side panel.
- Locate the top shroud panel. Slide the bottom of the top shroud panel down behind the hopper lid. Ensure that it has gone into the corresponding slots in the side wall of the stove.
- Swing the right hand panel closed and secure it to the top shroud by turning the slotted head screw 3/4 of a turn clockwise. Repeat procedure with left-hand panel.

Hopper Installation

- Remove the front top from the appliance by removing the (2) 1/4"-20 bolt from either side of the appliance and pulling up on the front top. (See diagram I-6).
- Fit the hopper between the sidewalls of the appliance so that the hopper flange sets into the gasketed opening of the pellet feed assembly and the (2) 1/4"-20 bolts in the heat shield come through the slots in the hopper. **Note: You should see (2) 1/4"-20 nuts already threaded onto the bolts. These act as a spacer and should not be removed.** Thread a 1/4"-20 nut onto each bolt and tighten. (See diagram I-6)
- Before the front top is reinstalled, open the front lid completely. Reinstall the front top. When the front lid is closed, this will engage the heat exchanger scraper system. (See diagram I-6)
- Latch the hopper into place with the latches located on each side of the pellet feed assembly. **Note: Do not operate the stove with the hopper unlatched.**

Zero-Clearance Skirt Installation

- For some fireplaces, it may be necessary to install a zero-clearance skirt. This may be necessary if the hearth extension is dropped down from the hearth floor. If needed, you can obtain a zero-clearance skirt kit from your authorized Altair™ dealer.
- Install the zero-clearance skirt kit as follows:
- Ensure that the side shrouds are removed from the appliance.
- Measure the distance between the bottom of the appliance and the surface of the hearth extension. From a local supply, purchase two (2) 1/2" dia. NC thread carriage bolts approximately 1/2" to 1" longer than the measured distance.
- Screw the two carriage bolts into the pre-tapped holes on the underside of the appliance. (See diagram I-10 Bottom view of stove.) You may want to screw the bolts in farther than distance between the hearth and the appliance, then set the appliance in position, and back the bolts out until they make contact with the hearth.

Note: If the hearth is an easily scratched surface (i.e.: Marble, tile, etc.) you may want to place a 1 1/2" square of 1/2" thick plywood under each of the bolt heads to protect the hearth and to more evenly distribute the weight of the appliance on the hearth.

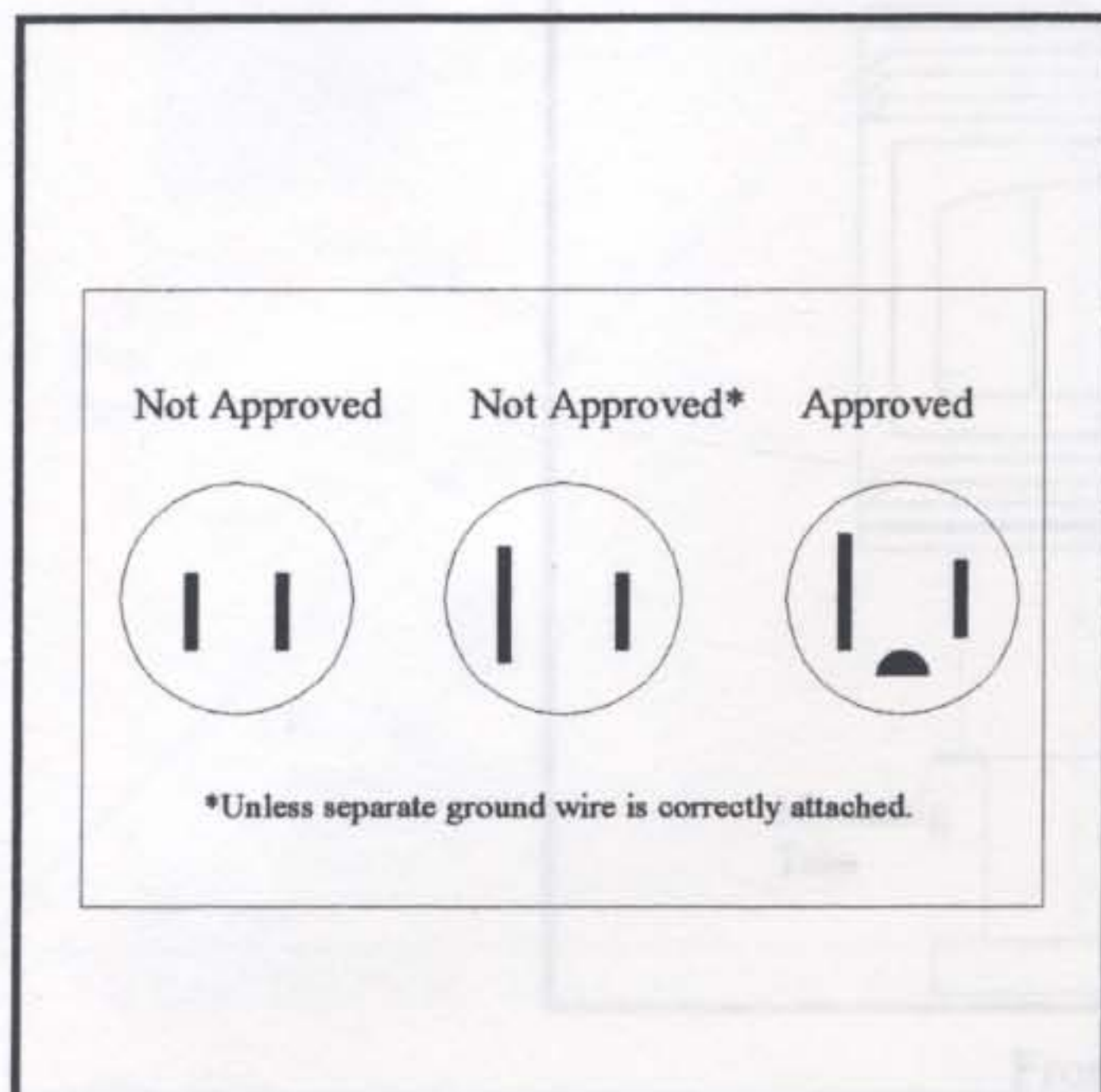
- Locate the zero-clearance skirt. (See diagram I-10 Bottom view of zero-clearance skirt.) Position the skirt under the front edge of the appliance, so that the mounting tabs line up with the pre-tapped 1/4"- 20 holes in the appliance. (See diagram I-10 Front view.)
- Insert the 1/4"-20 bolts supplied with the zero-clearance skirt, and tighten.
- Install the side shrouds and close them. (See instructions "Insert shroud installation.")
- Locate the 3/4 turn screw on the bottom of each side shroud and turn them clockwise to lock the side shroud to the zero-clearance skirt.
- Position the filler skirt so that it overlaps the zero-clearance skirt and is setting flush on the hearth.

Note: The minimum overlap of the filler skirt to the zero-clearance skirt is 1/2".

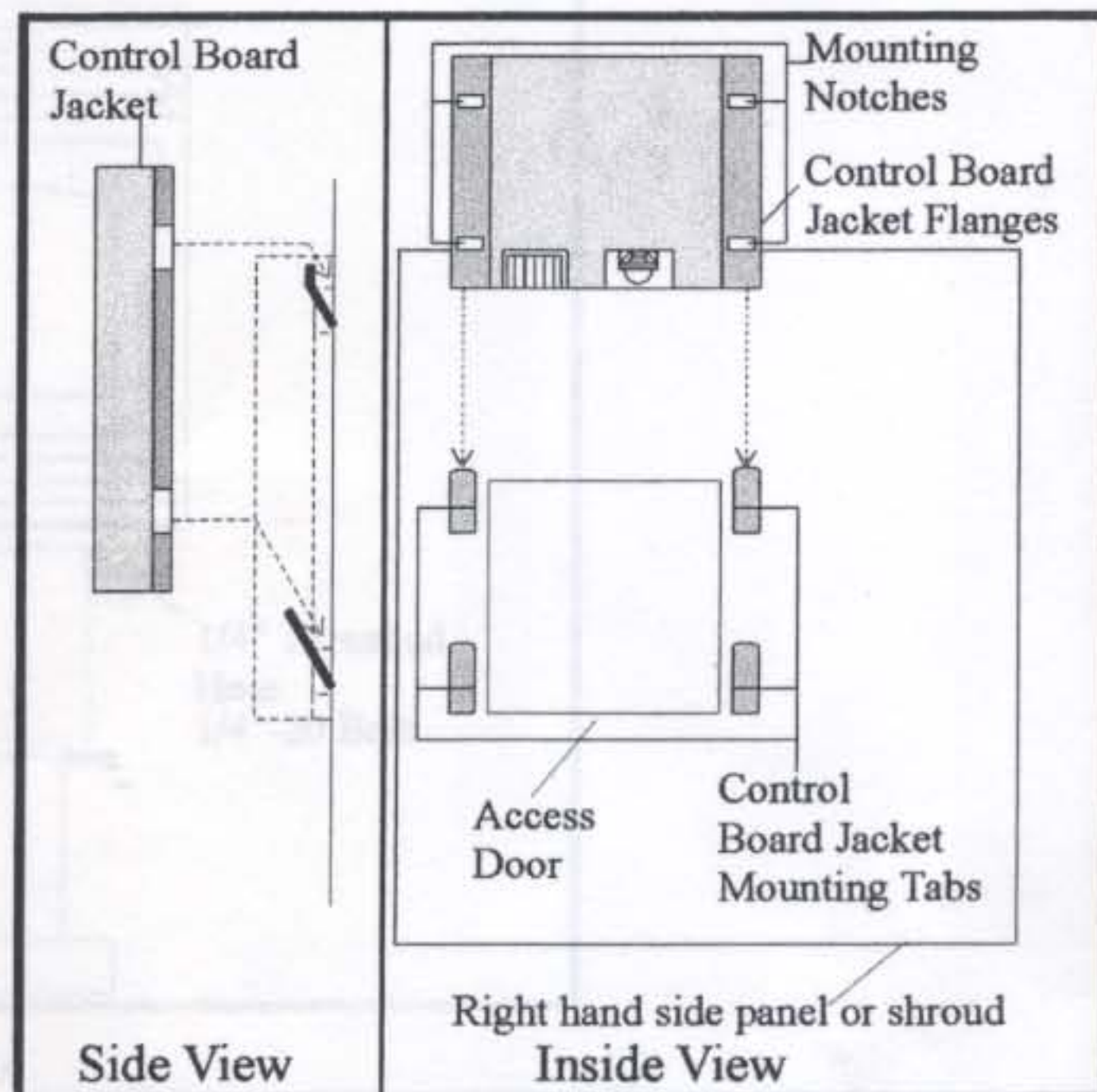
- Mark through the 5 attachment holes to locate the holes to be drilled in the zero-clearance skirt.
- Drill pilot holes for the attachment screws, re-position the filler skirt and attach it to the zero-clearance skirt.
- The standard zero-clearance skirt kit will accommodate from a 4" to 7" space between the bottom of the appliance and the hearth extension.

Altair Pellet Stove Installation Instructions:

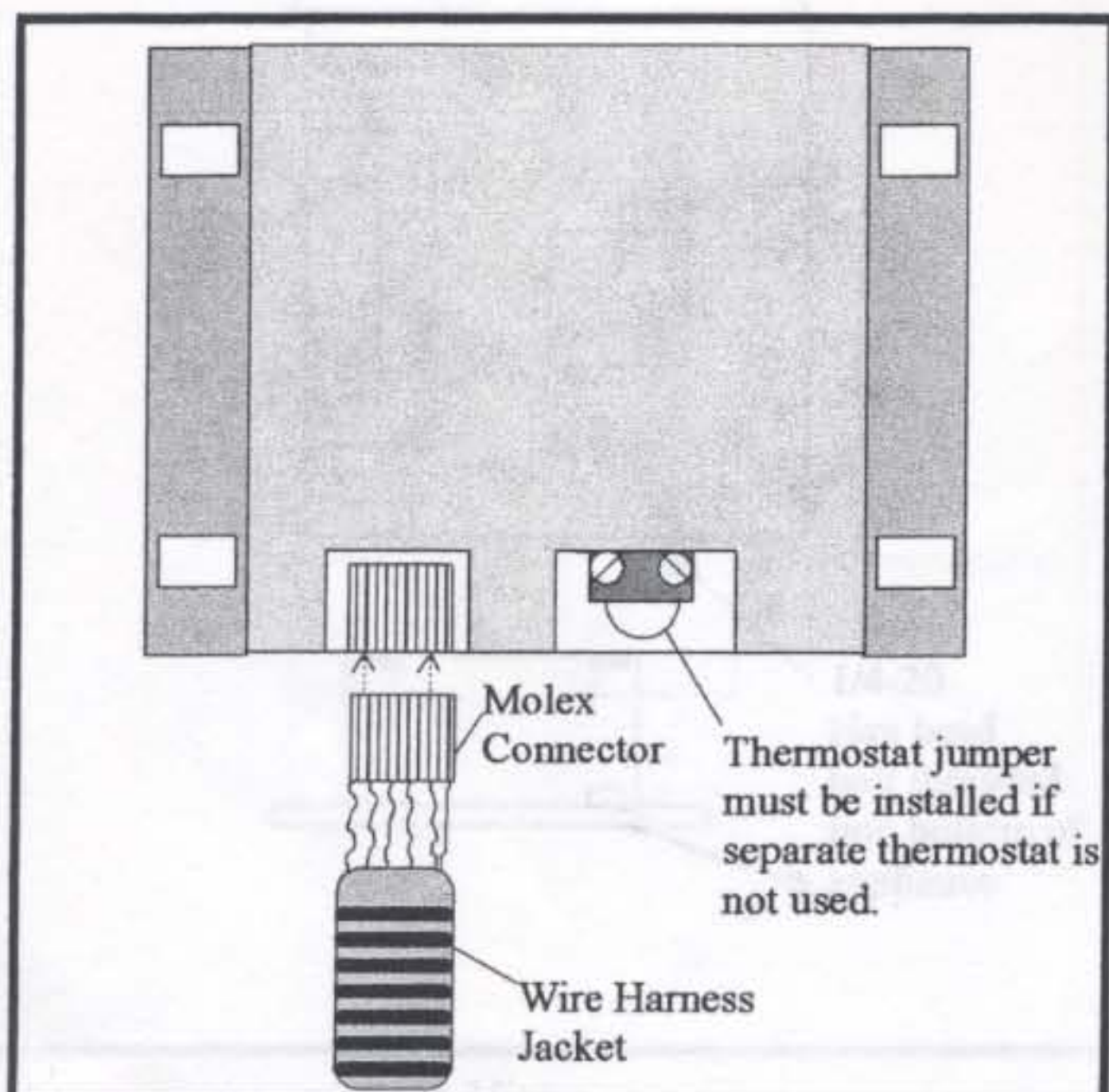
E-1 E-2 E-3 E-4
Circuit Board and Thermostat 12



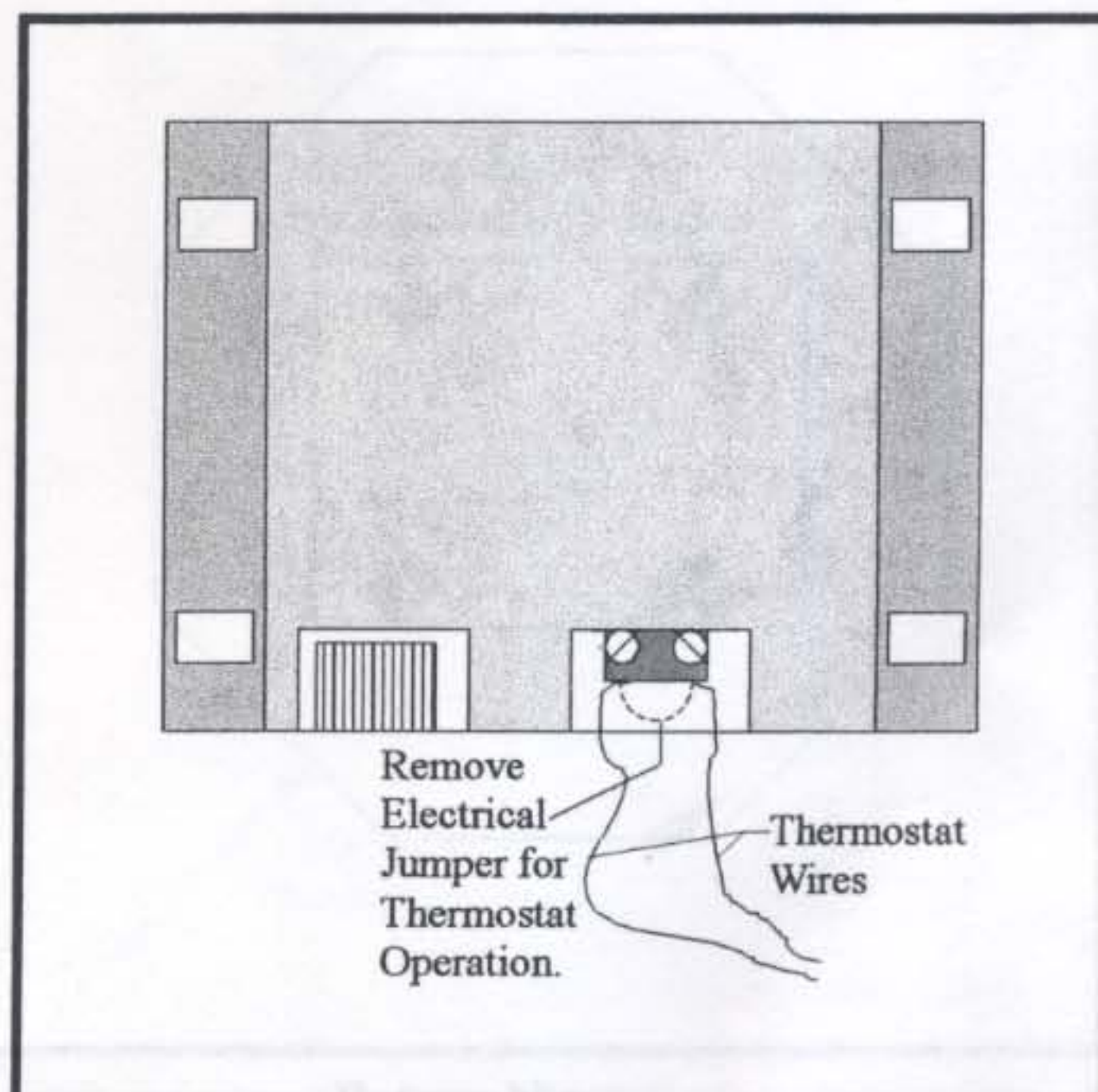
E-1 Approved Electrical Receptical



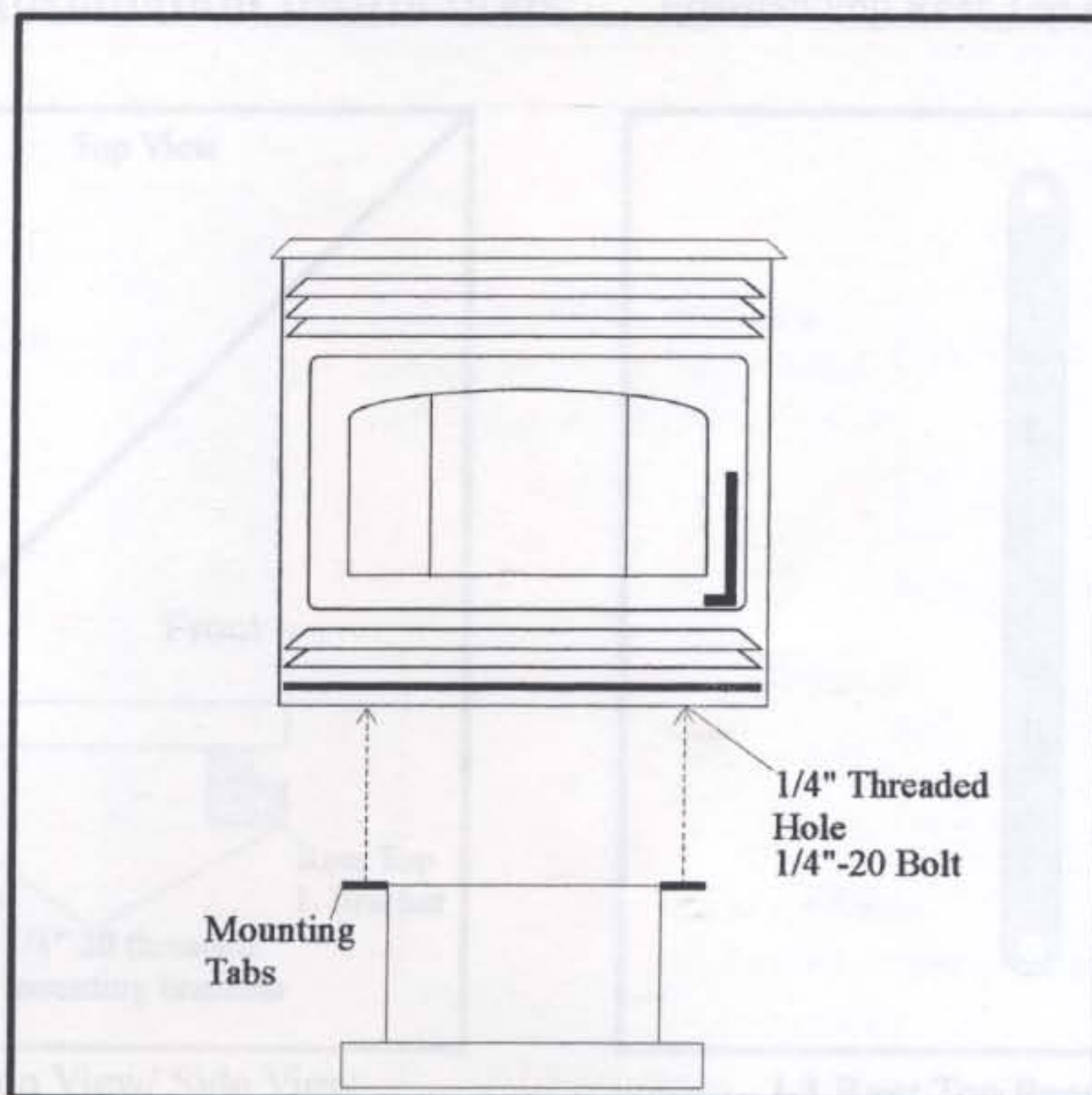
E-2 Control Board Mounting To Side Panel



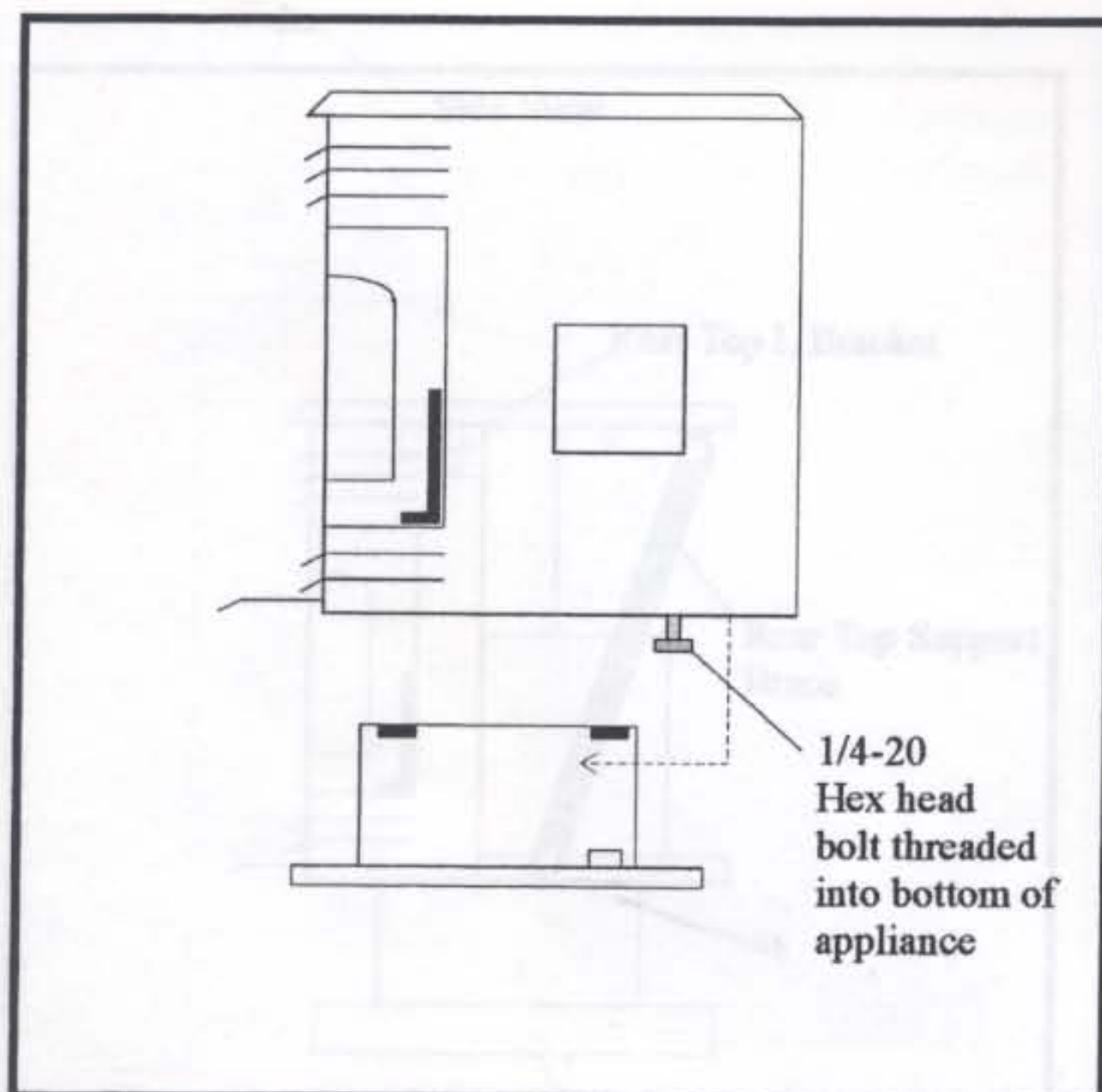
E-3 Electrical Connection Of Appliance to Control Board



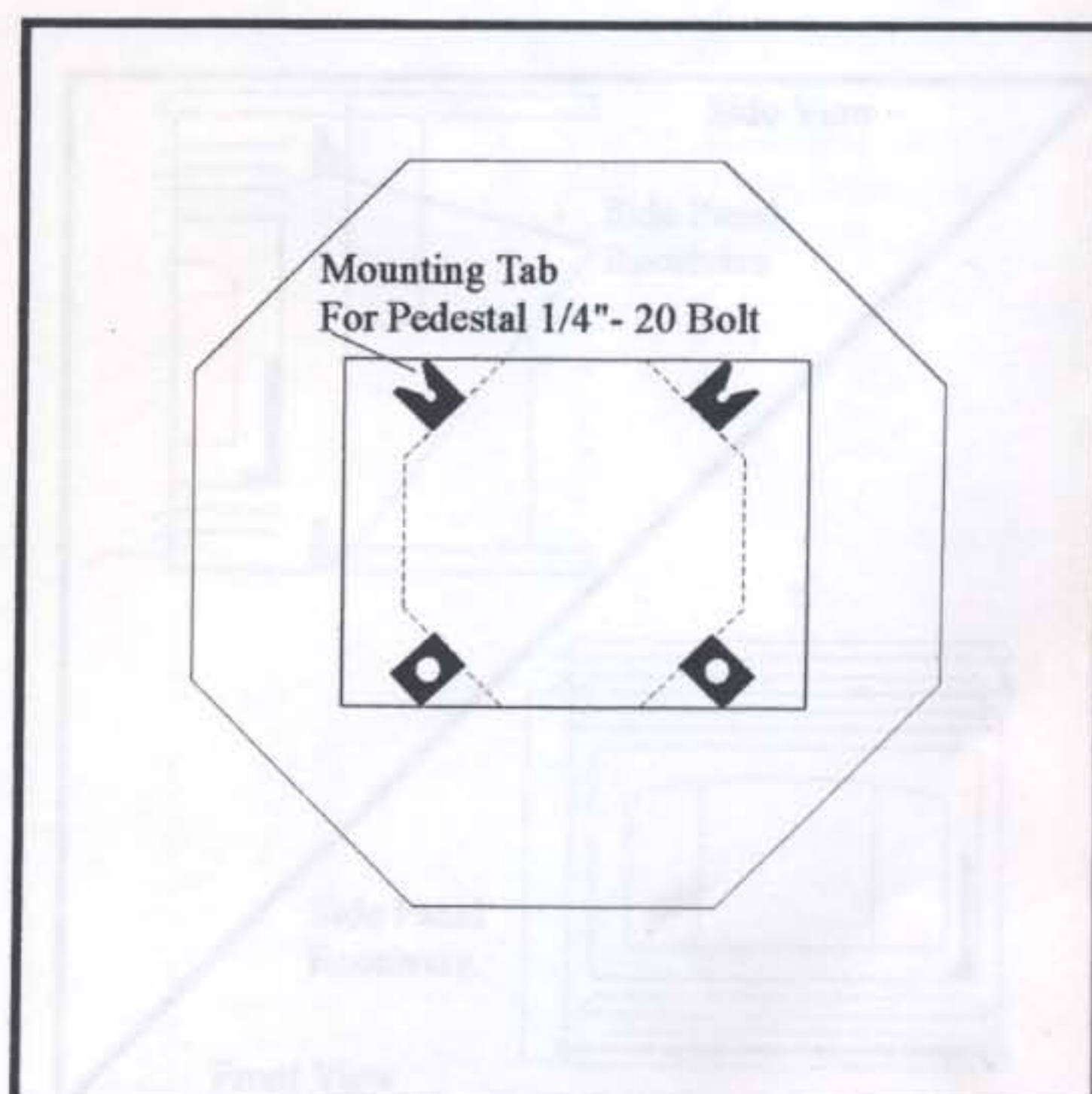
E-4 Thermostat Wire Hook Up & Jumper Removal



Front View

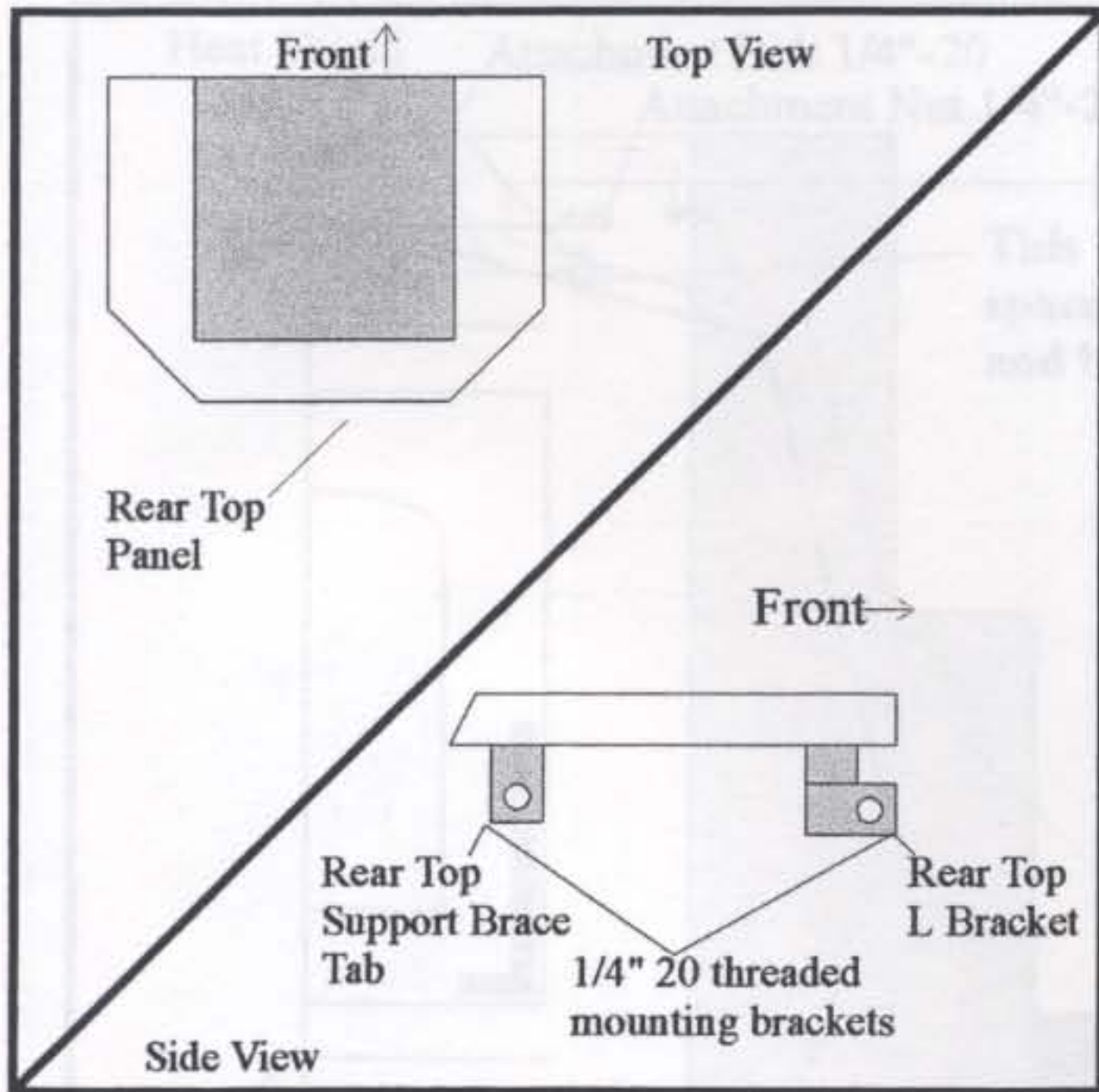


Side View

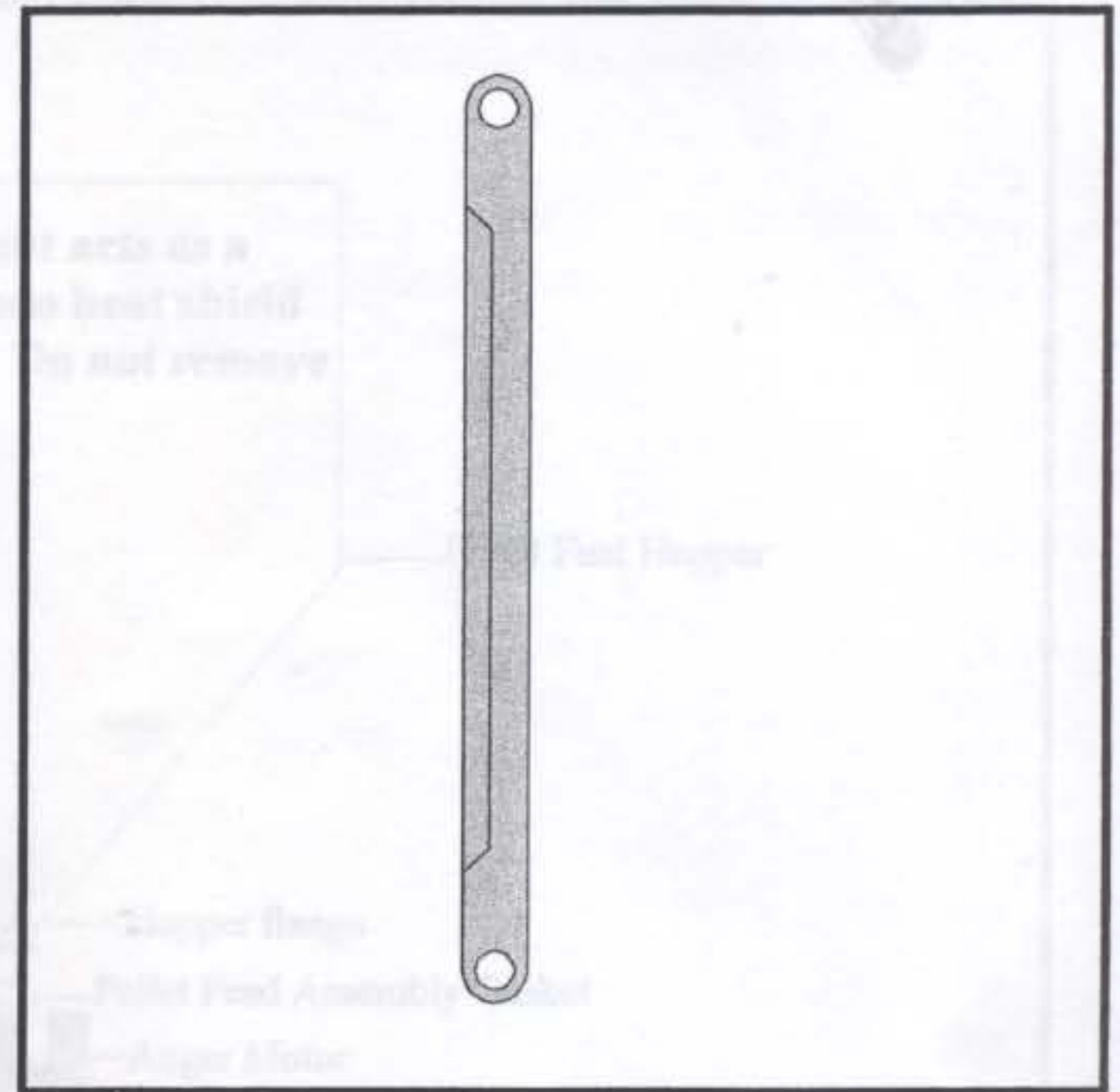


Bottom View

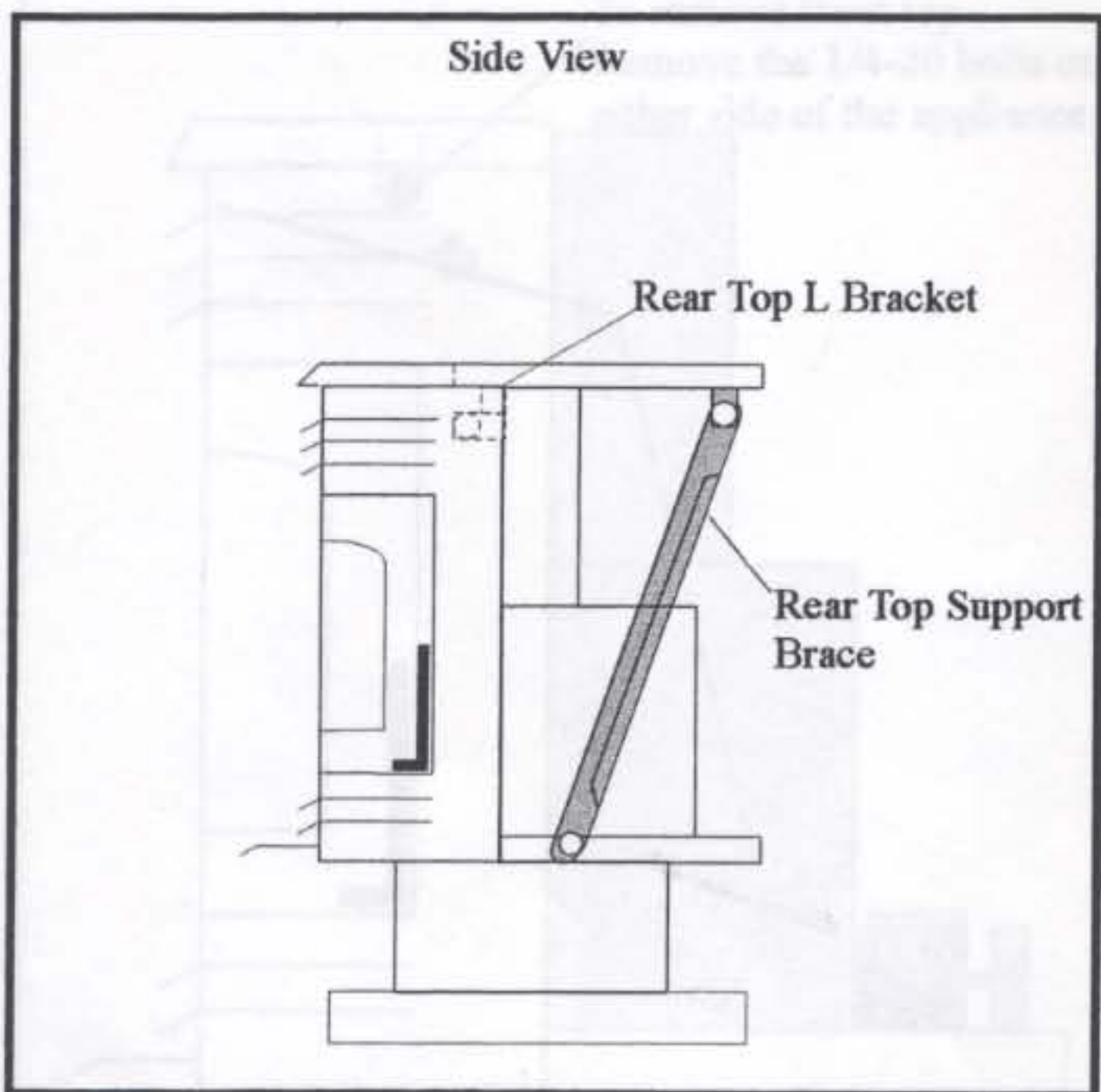
I-1 Mounting Pedestal to Appliance



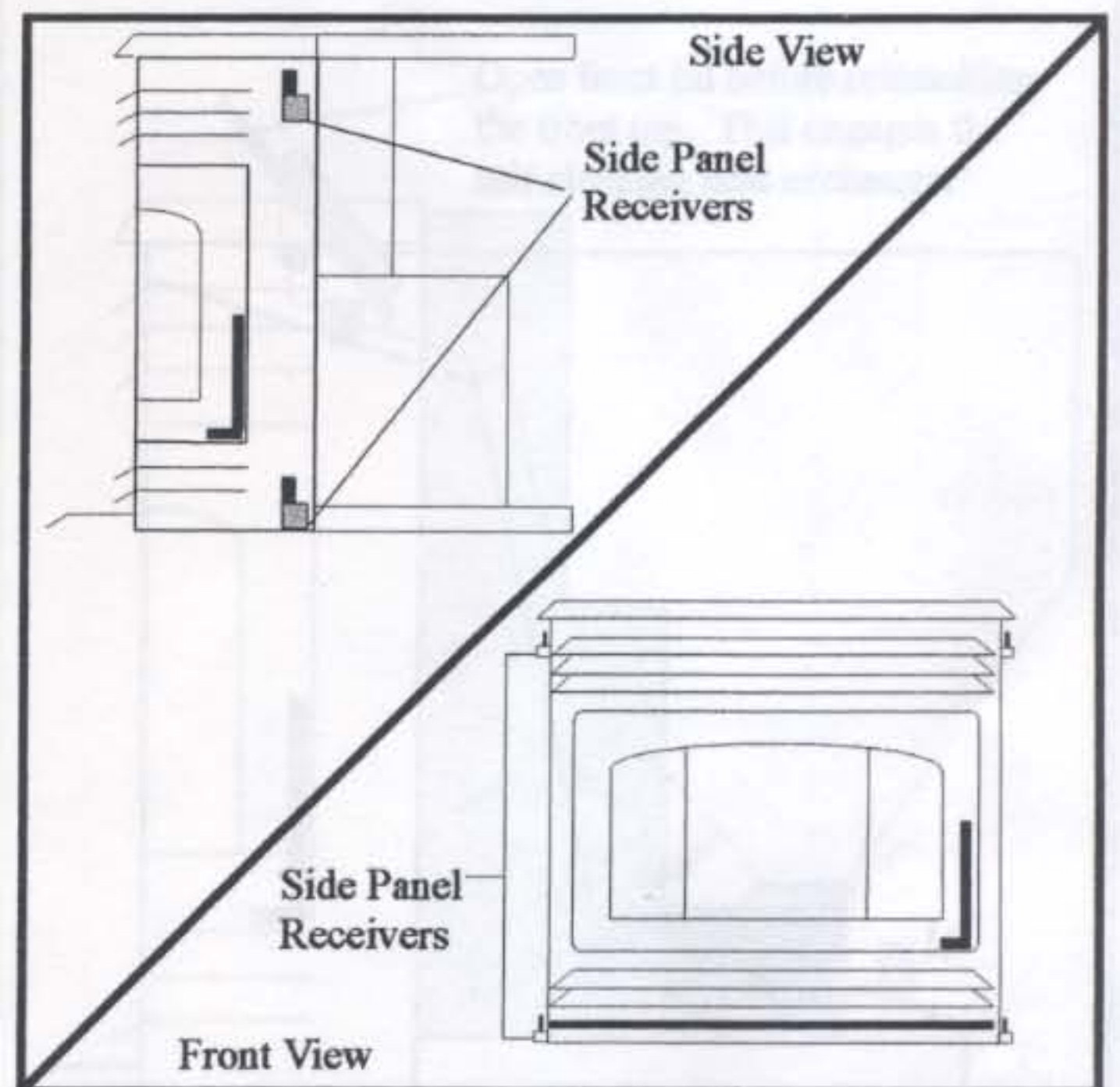
I-2 Rear Top Panel Top View/ Side View



I-3 Rear Top Panel Support Brace

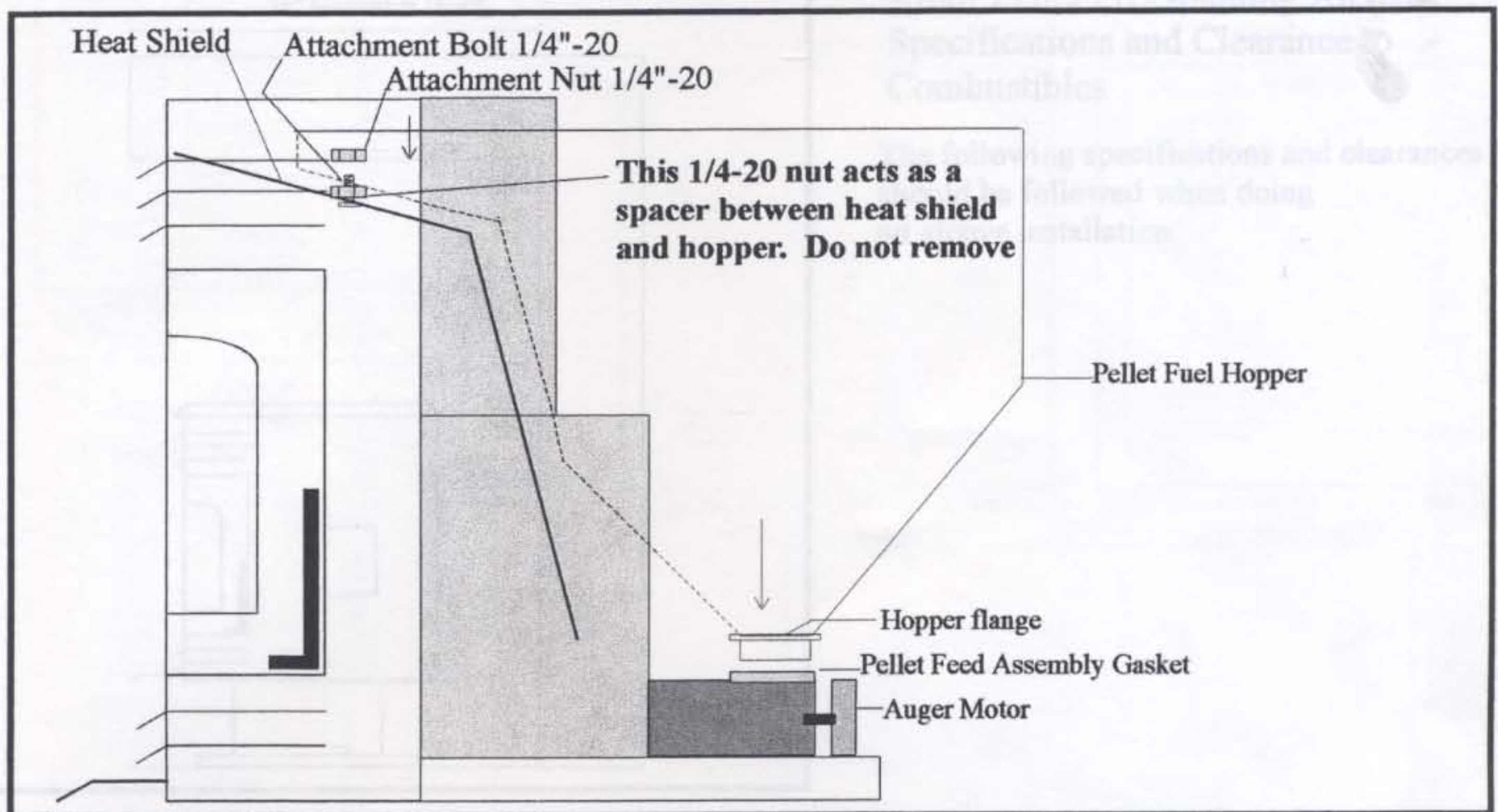


I-4 Rear Top Panel Installed With Support Brace In Place

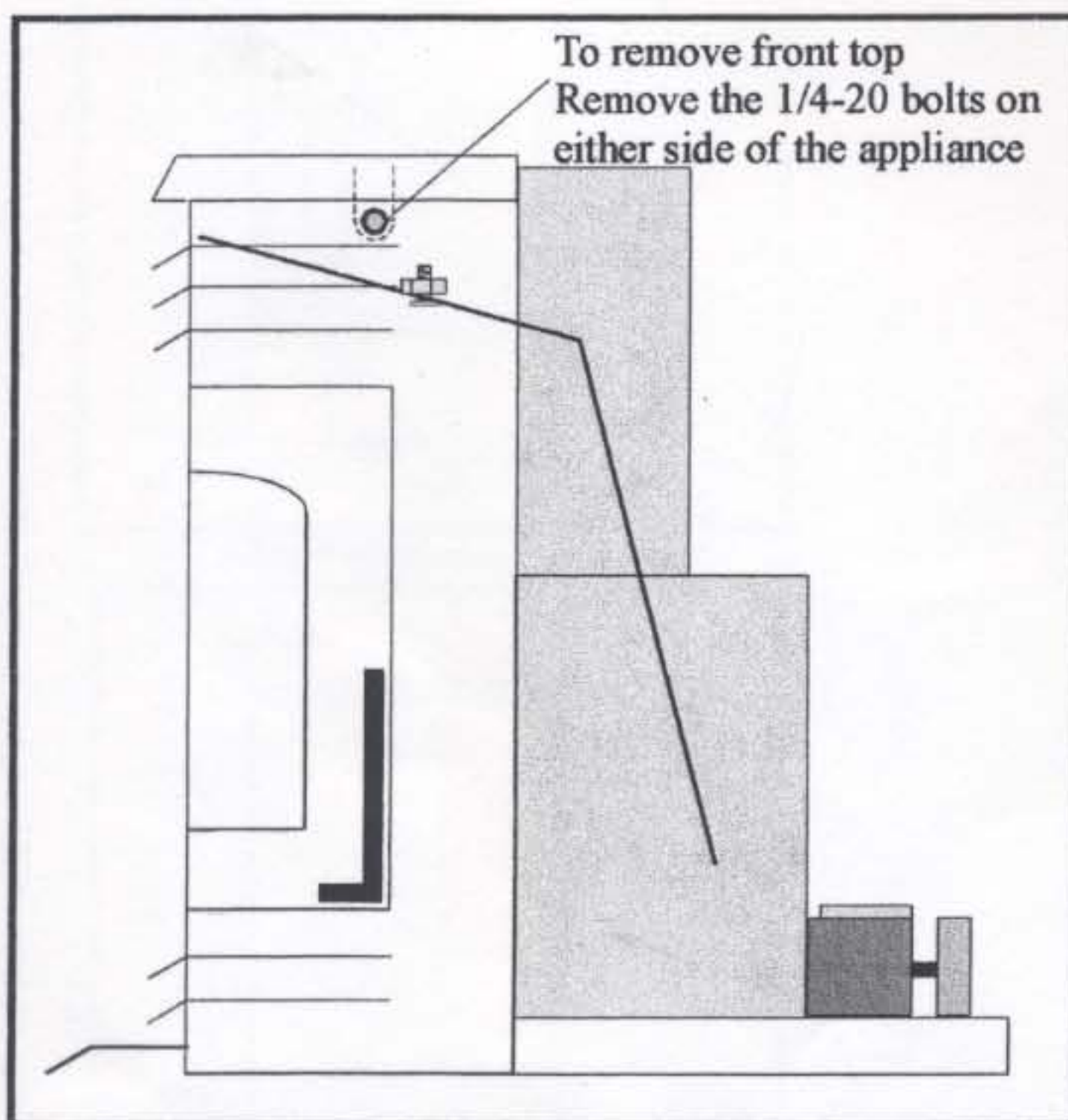


I-5 Side Panel Receivers Side View/ Front View

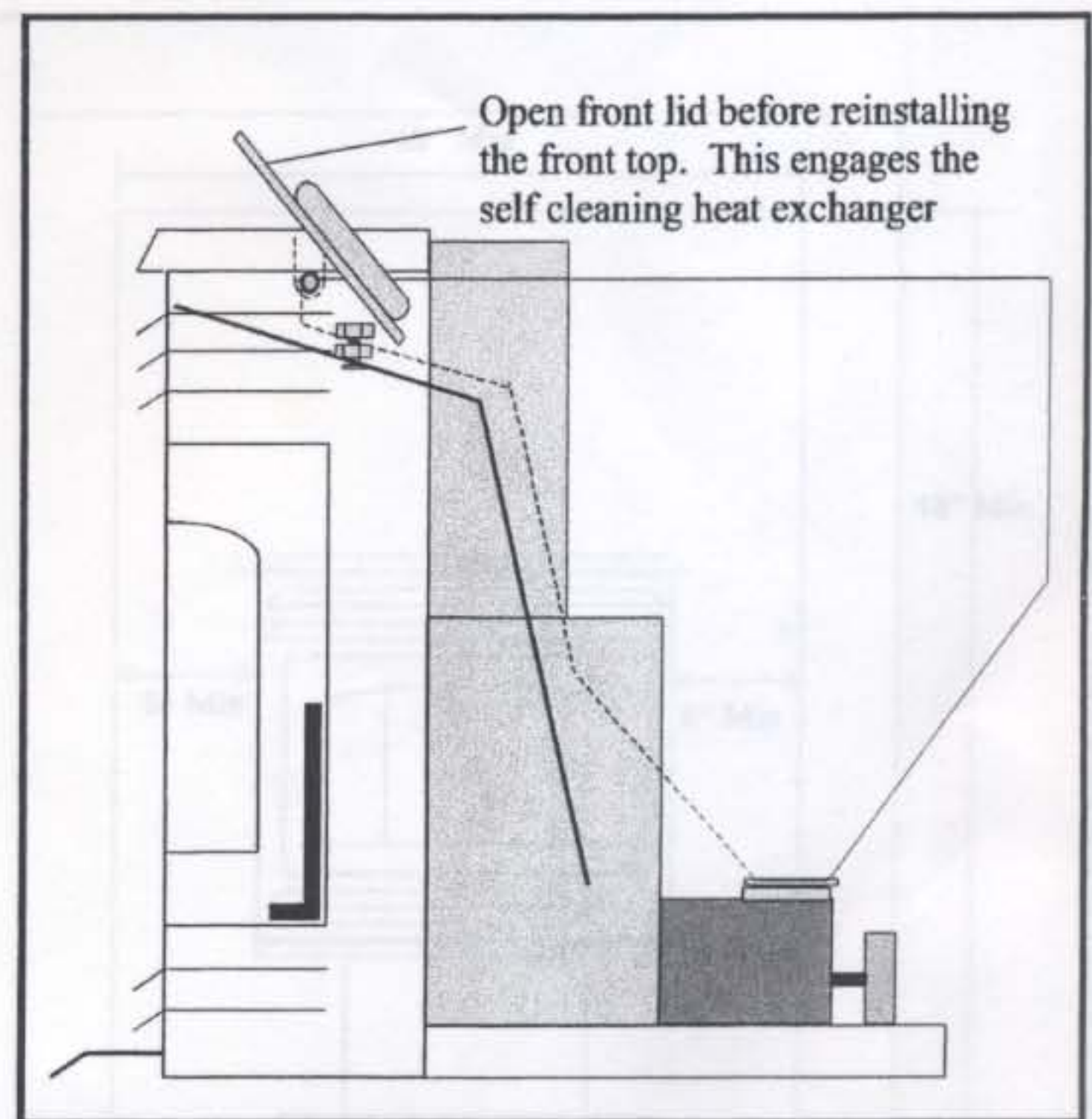
Altair Pellet Stove Installation Instructions:



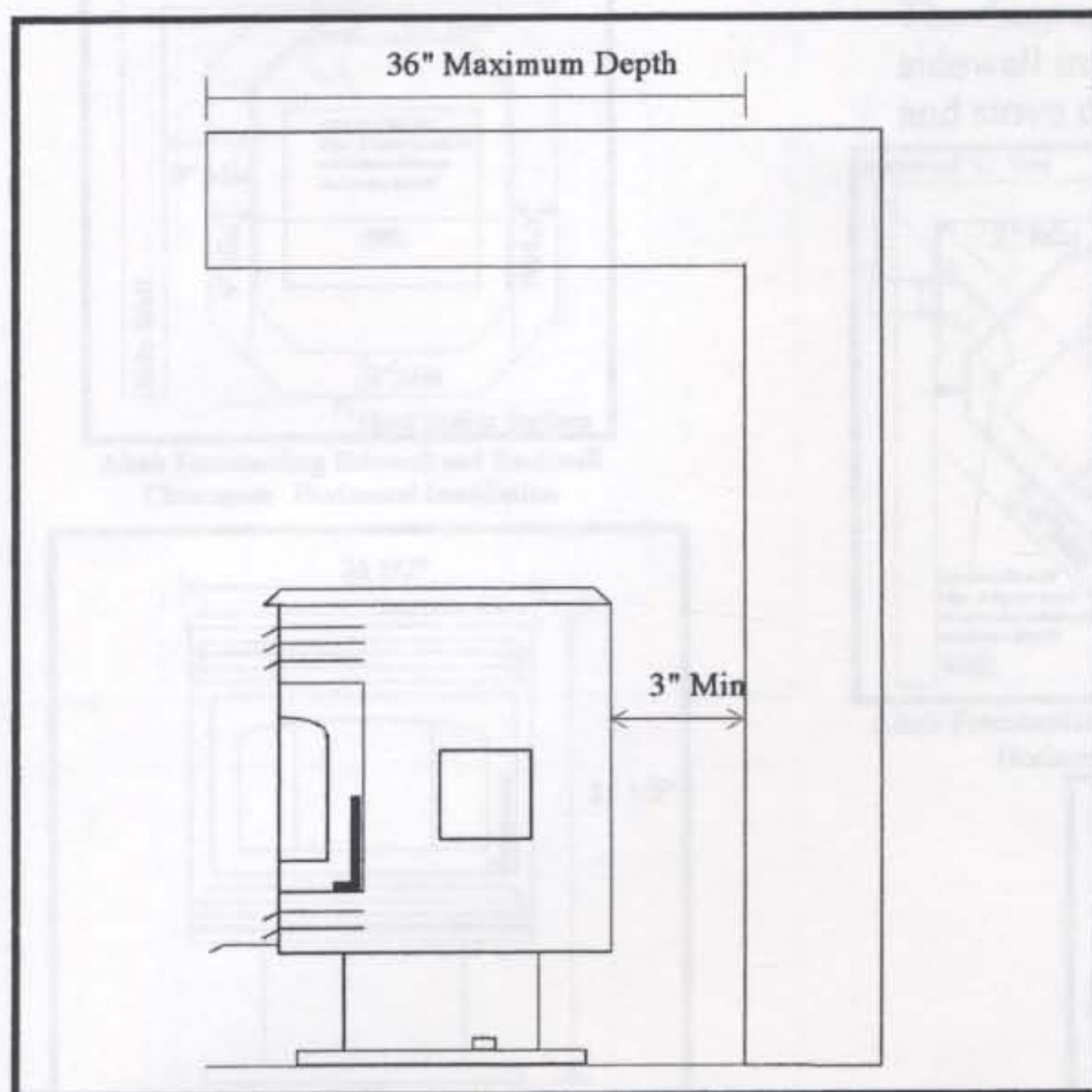
I-6 Pellet Fuel Hopper Installation Side View



Remove Front Top Side View



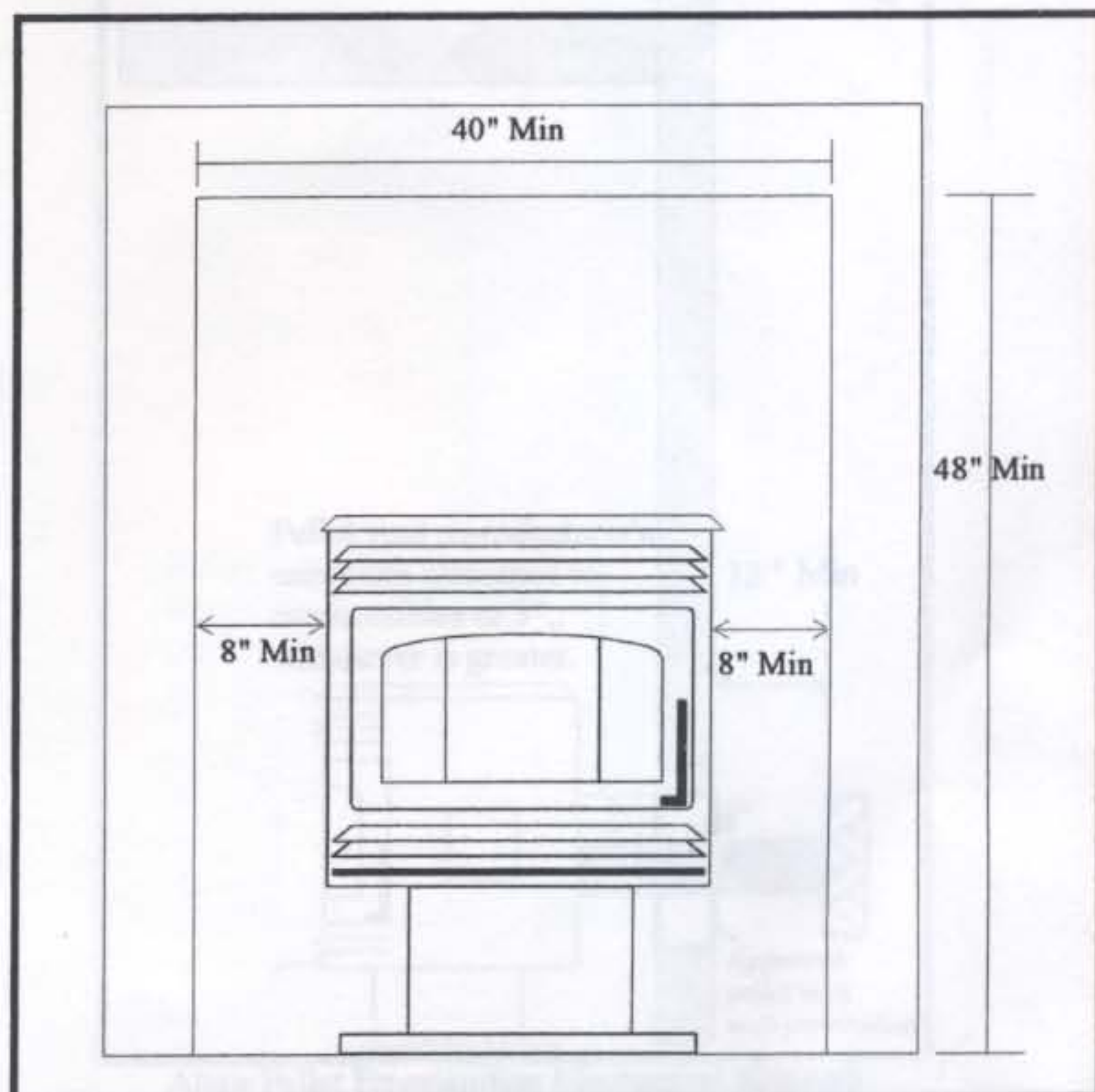
Reinstalling Front Top Side View



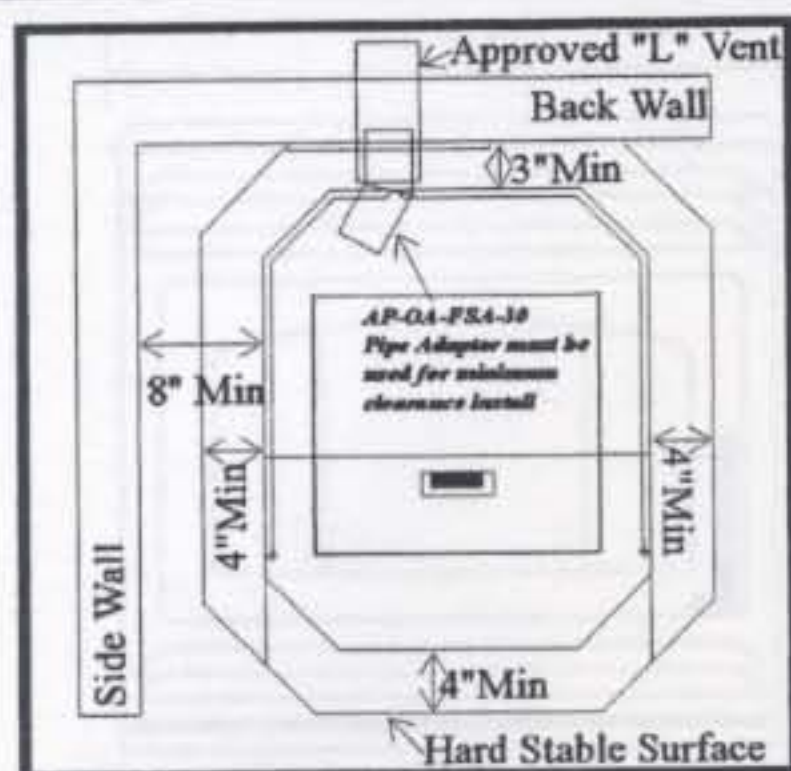
Altair Pellet Freestanding Alcove Side View

Altair Pellet Freestanding Alcove Specifications and Clearance to Combustibles

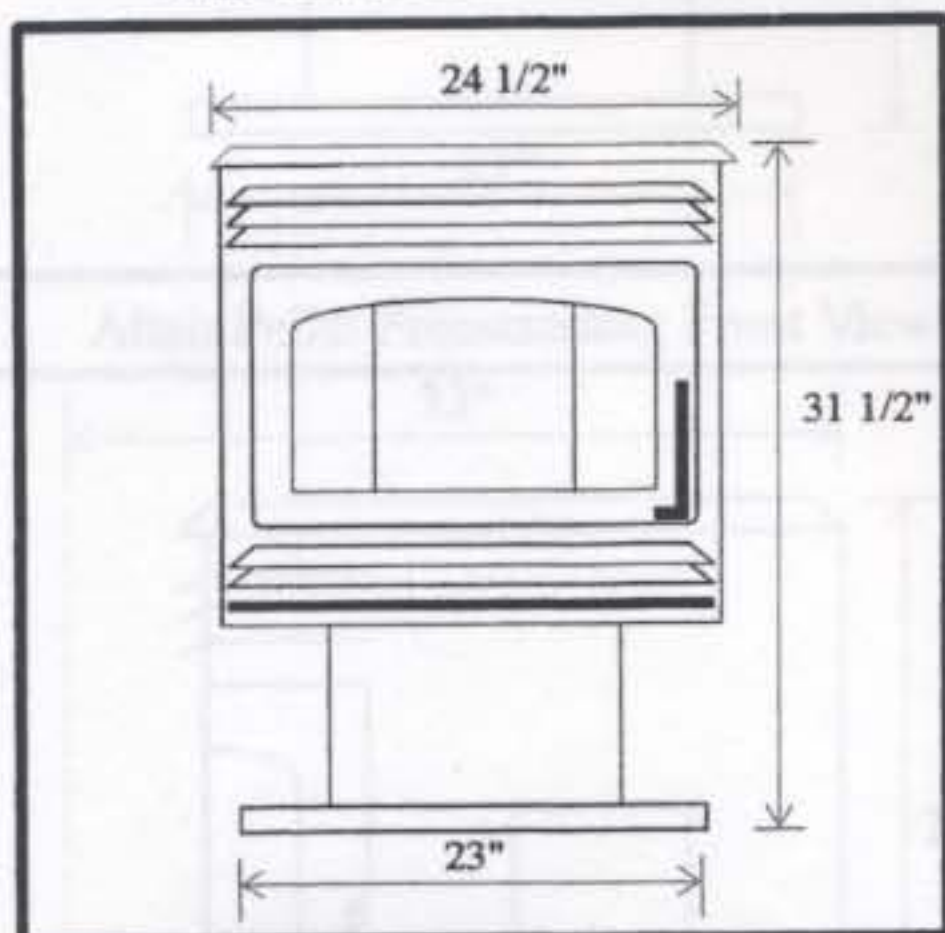
The following specifications and clearances should be followed when doing an alcove installation.



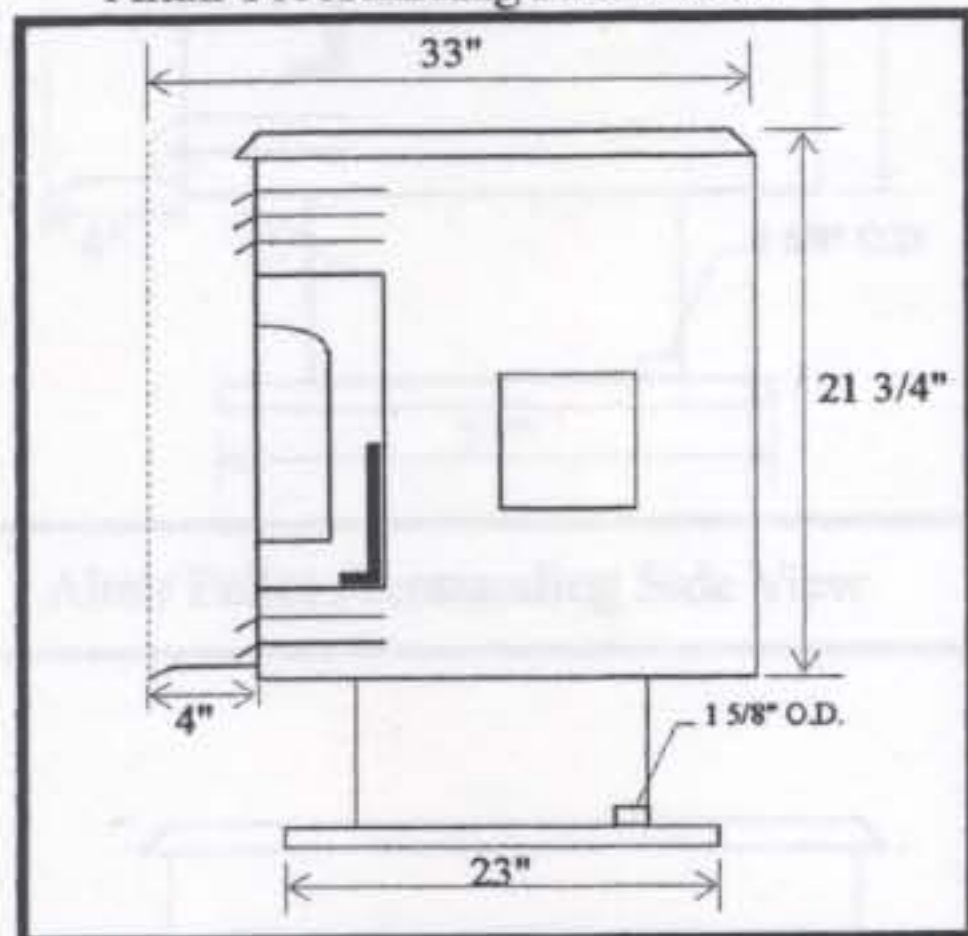
Altair Pellet Freestanding Alcove Front View



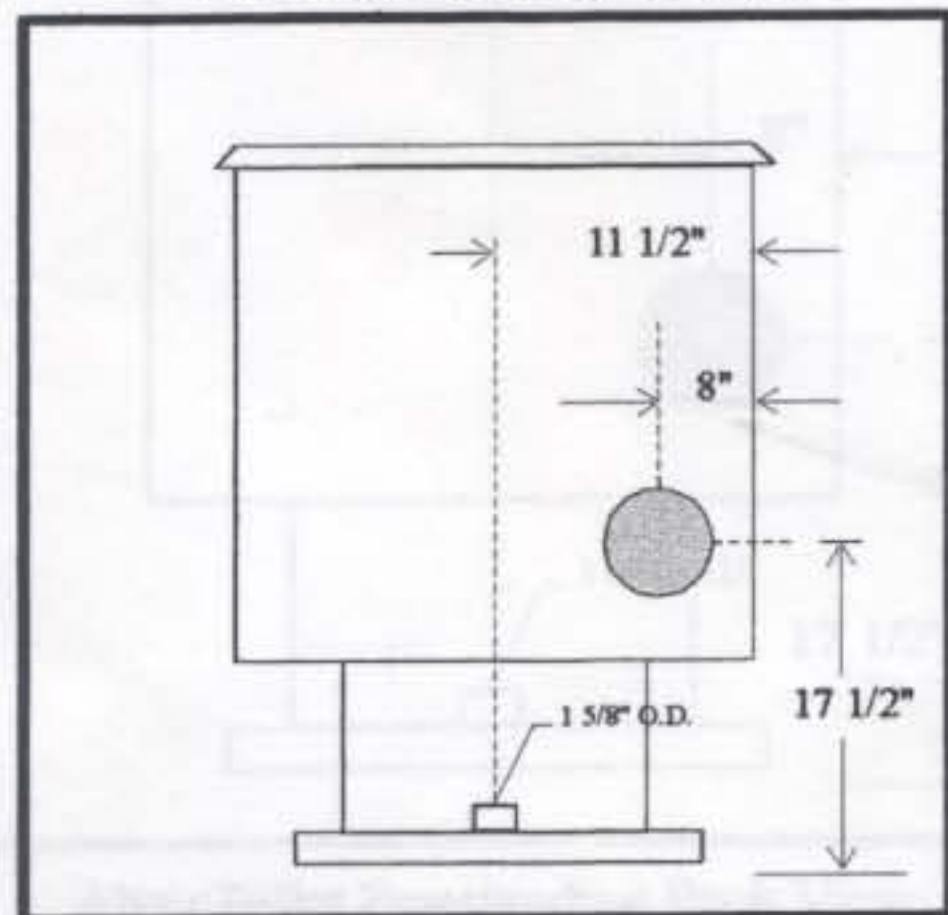
Altair Freestanding Sidewall and Backwall Clearances. Horizontal Installation



Altair Freestanding Front View



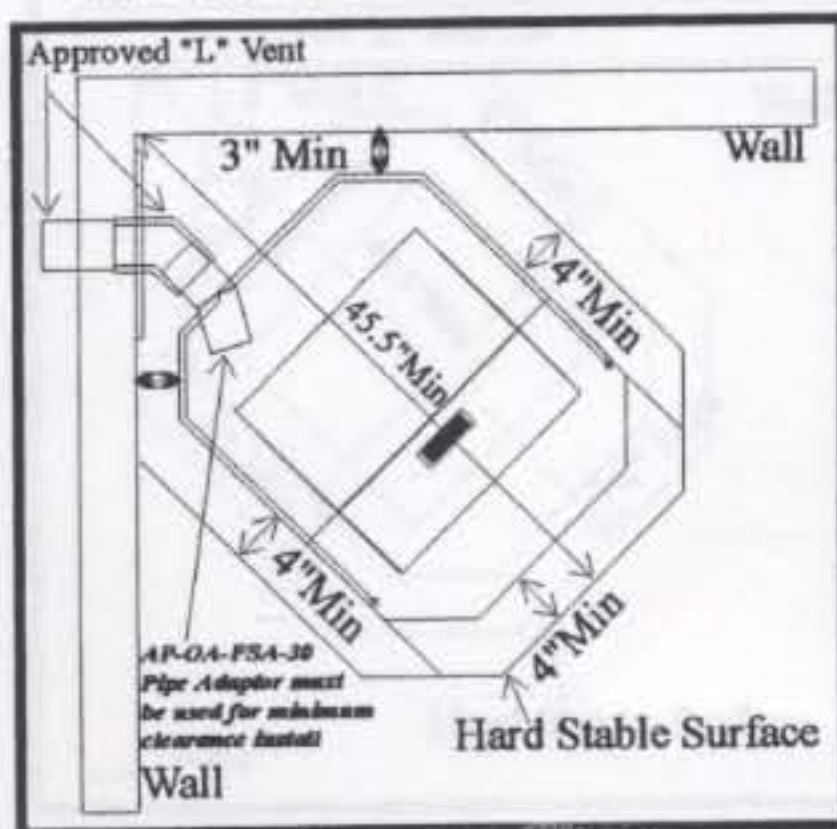
Altair Freestanding Side View



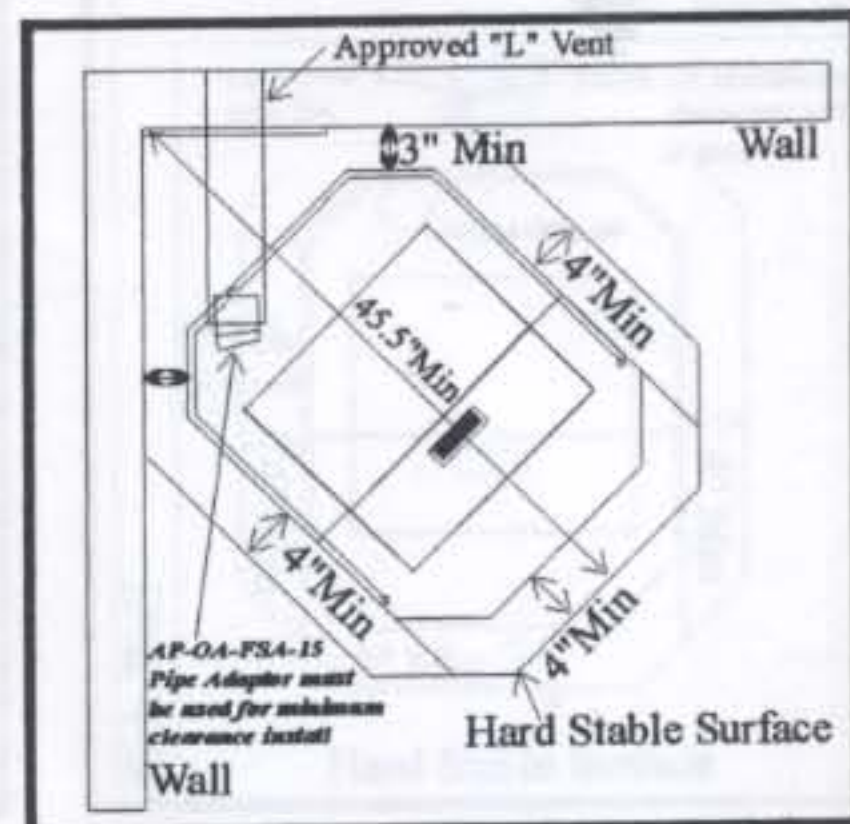
Altair Freestanding Back View

Altair Pellet Mechanical Sidewall Installation

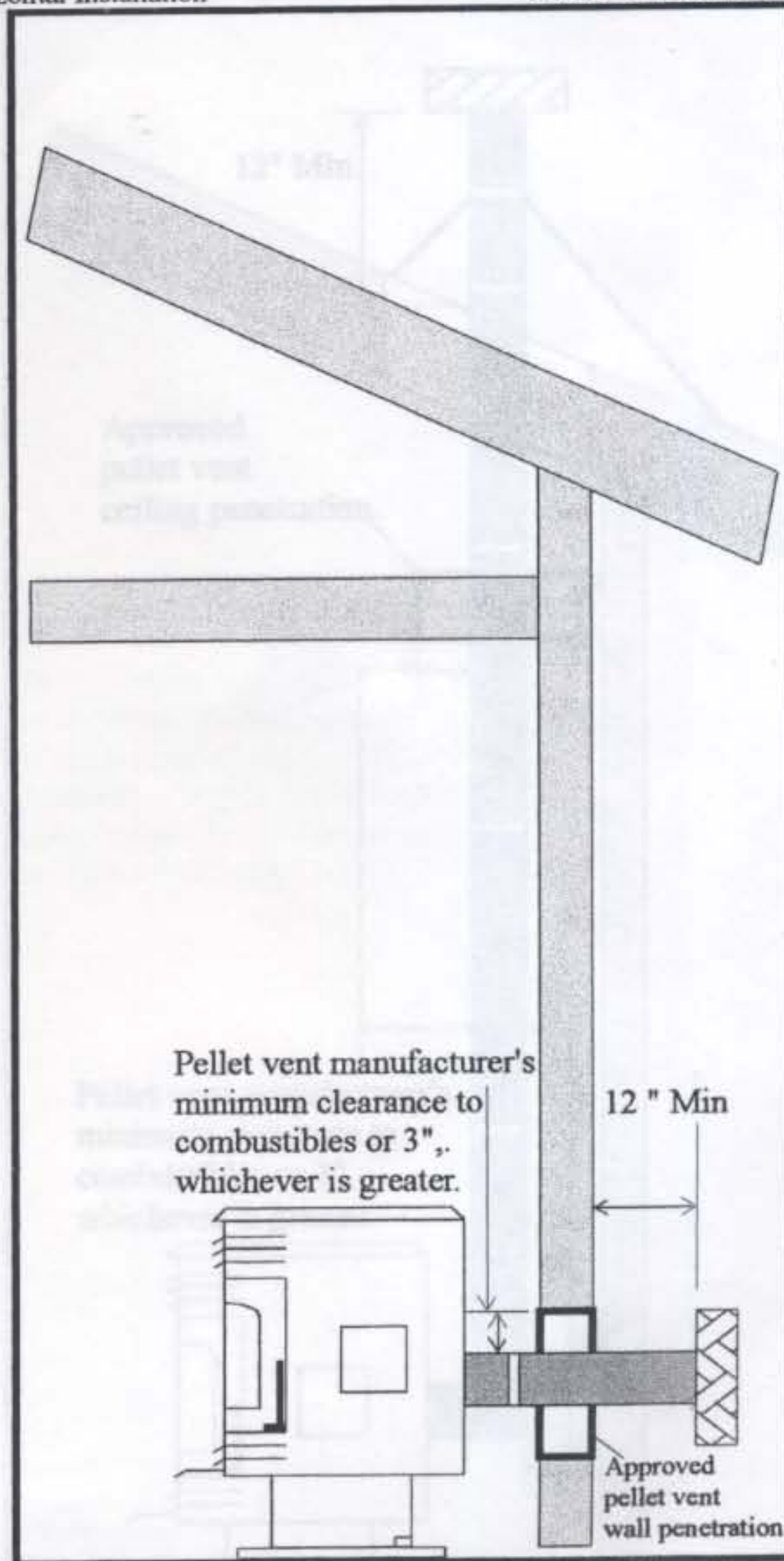
The diagrams on this page illustrate the proper mechanical sidewall installation. Also shown are clearances to combustibles and stove dimensions.



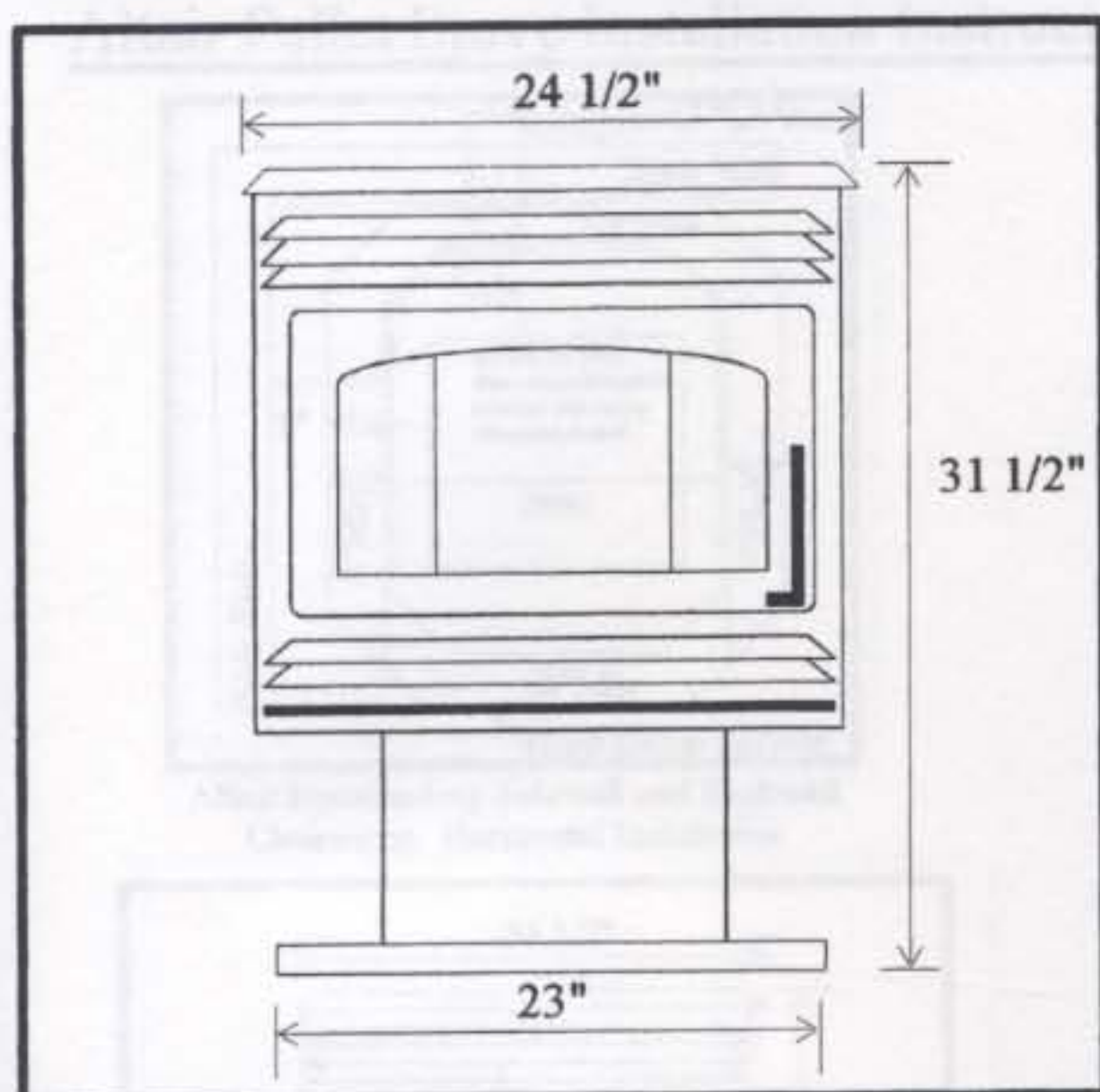
Altair Freestanding LH Corner Clearances Horizontal Installation



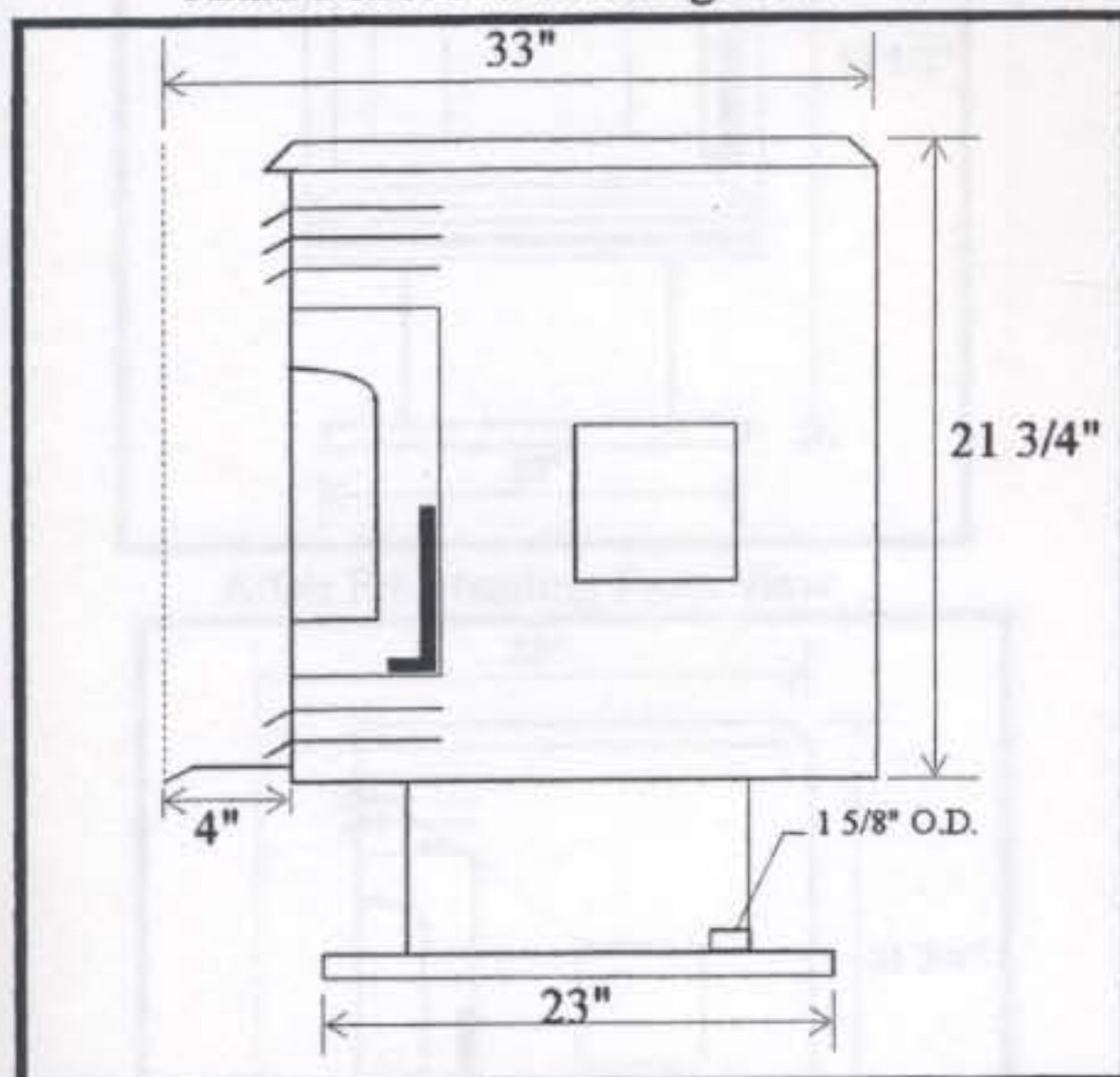
Altair Freestanding RH Corner Clearances Horizontal Installation



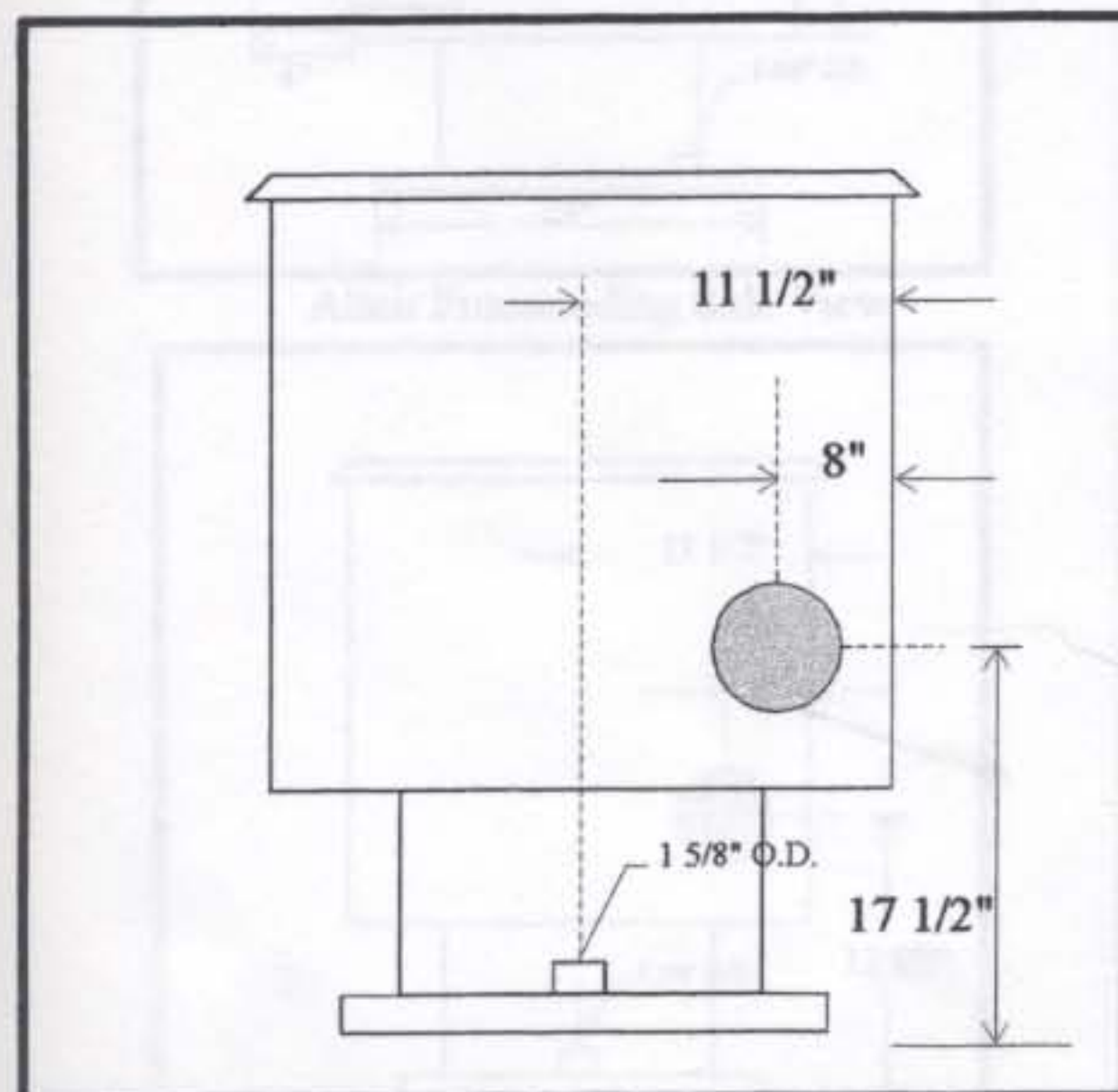
Altair Pellet Freestanding Mechanical Sidewall Installation



Altair Pellet Freestanding Front View



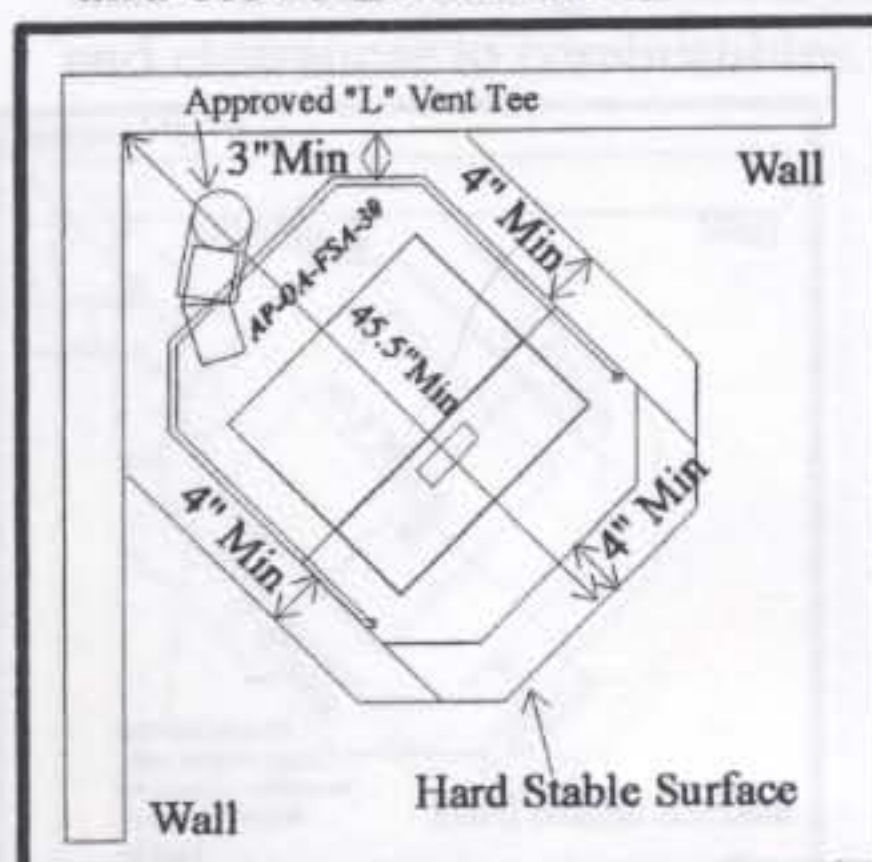
Altair Pellet Freestanding Side View



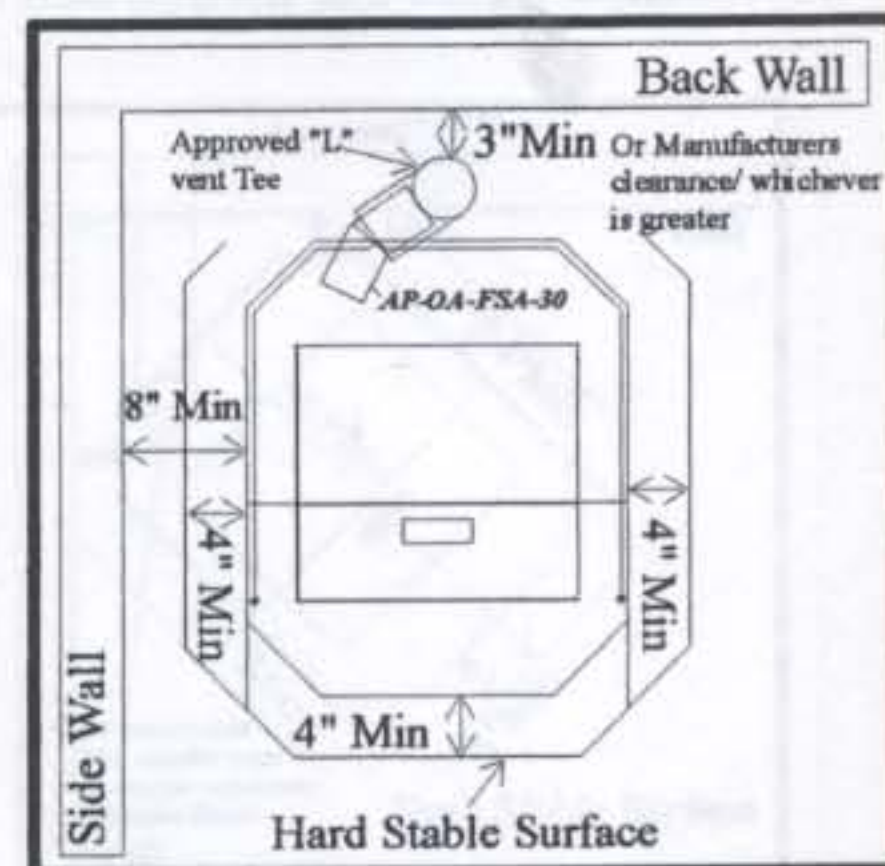
Altair Pellet Freestanding Back View

Altair Pellet Vertically Vented Installation

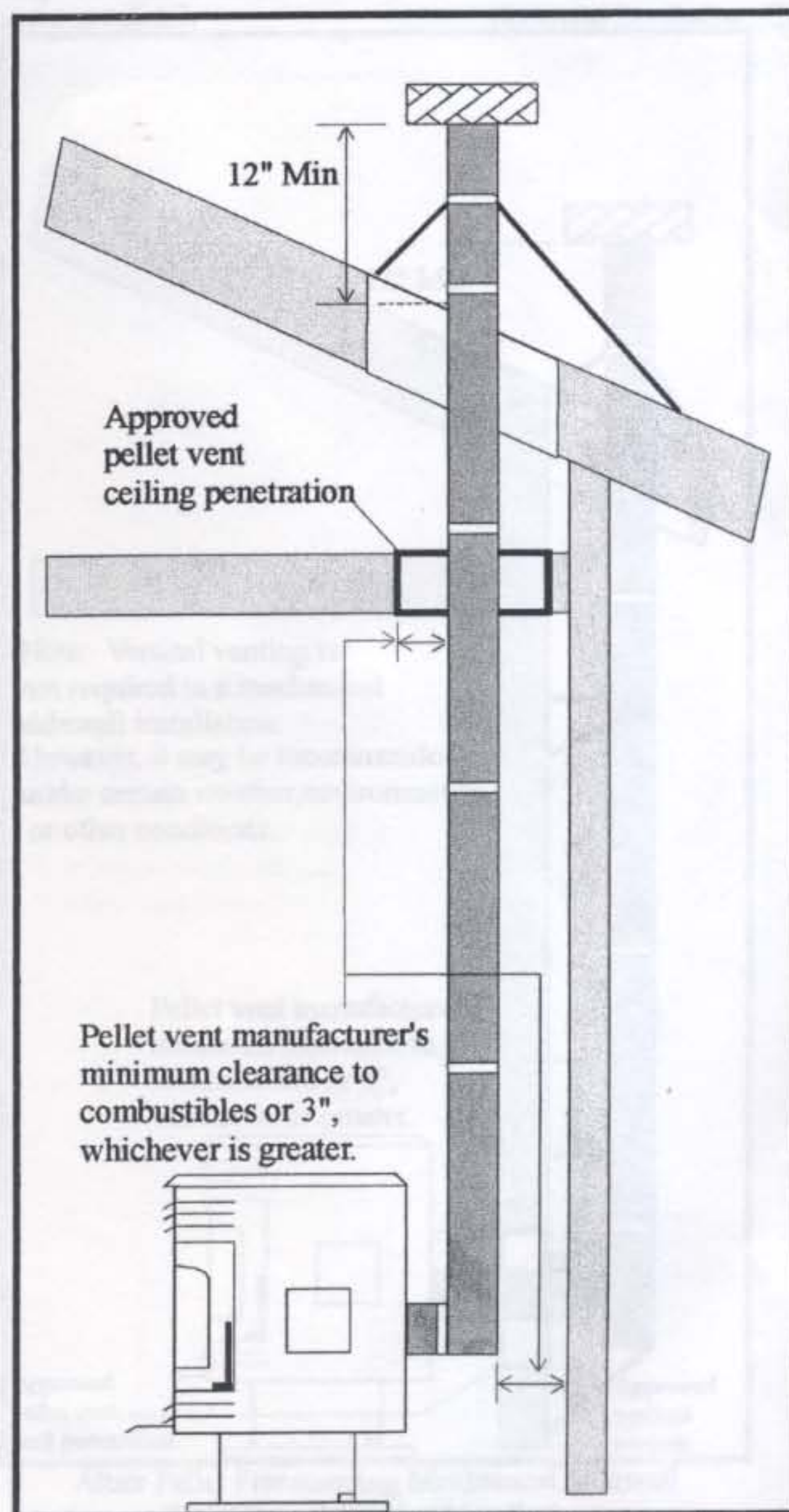
The diagrams on this page illustrate the proper vertically vented installation. Also shown are clearances to combustibles and stove dimensions.



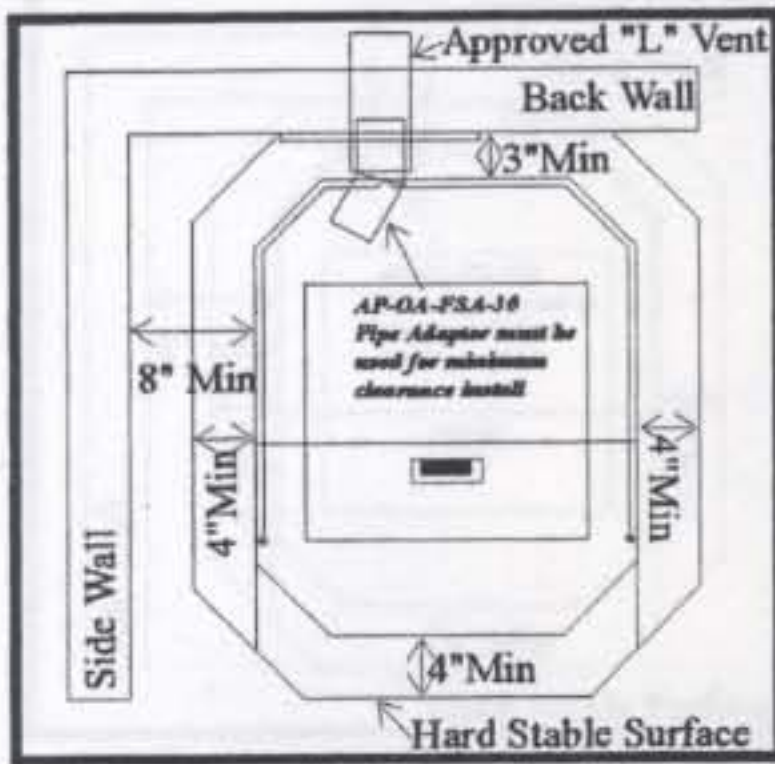
Altair Corner Vertical Installation



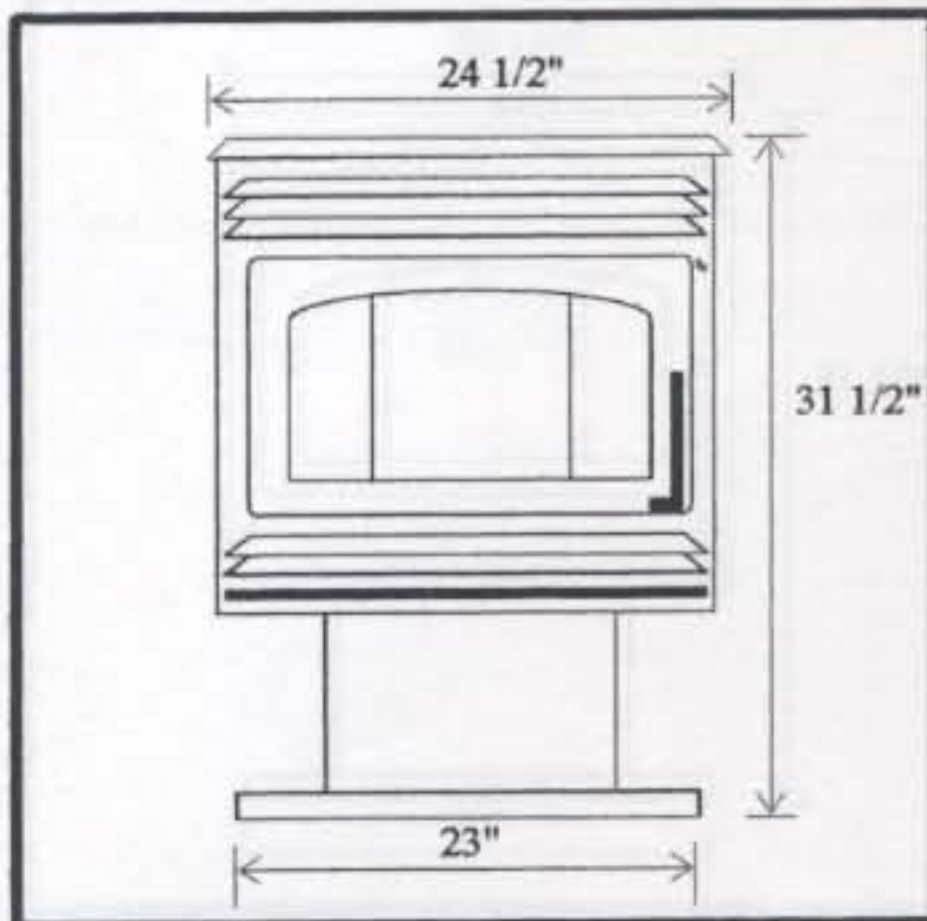
Altair Straight Vertical Installation



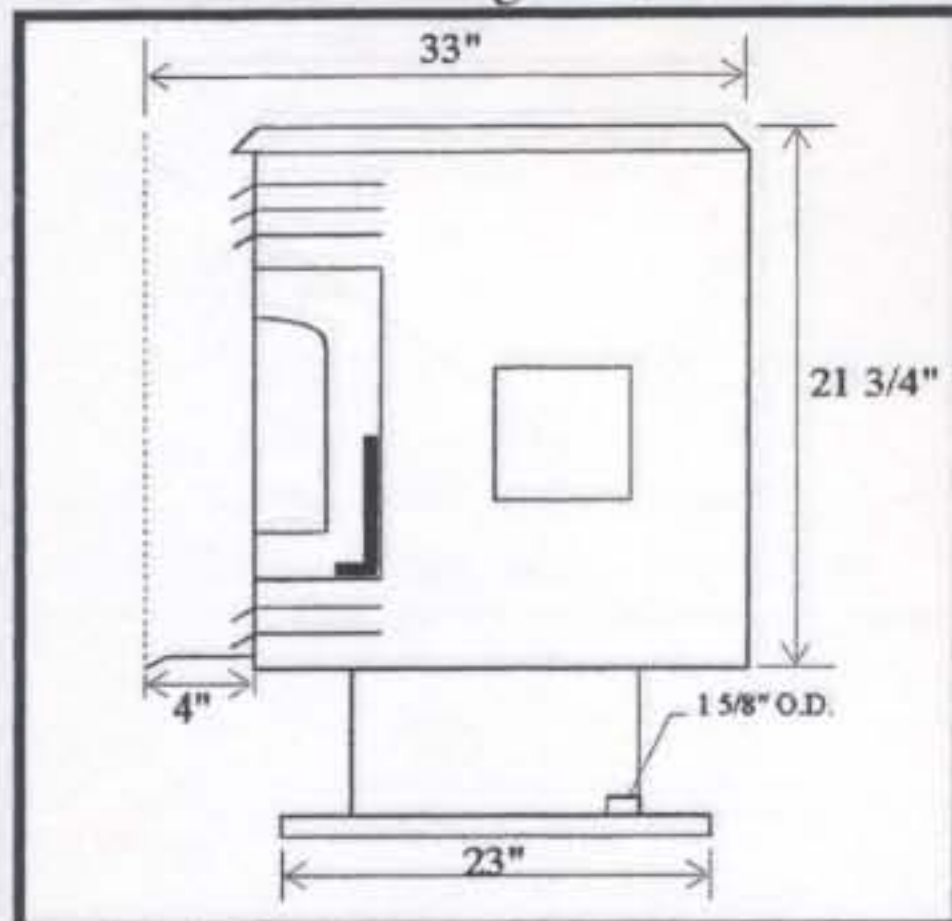
Altair Pellet Freestanding Vertically Vented Installation



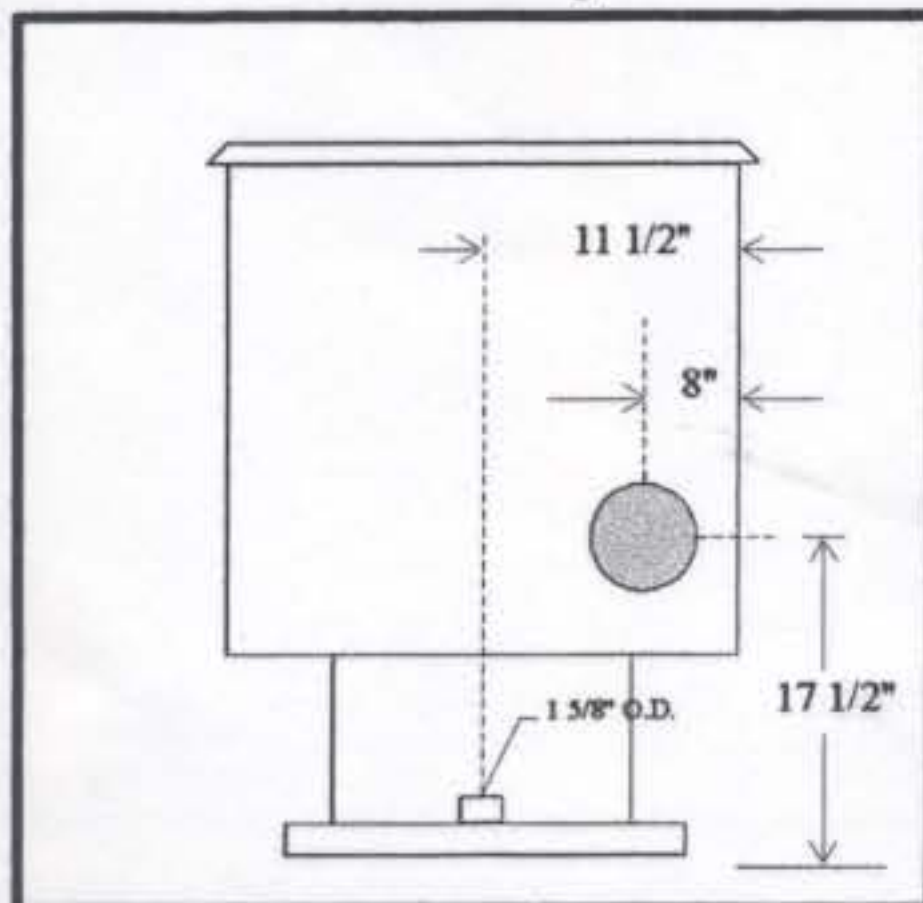
Altair Freestanding Sidewall and Backwall Clearances. Horizontal Installation



Altair Freestanding Front View



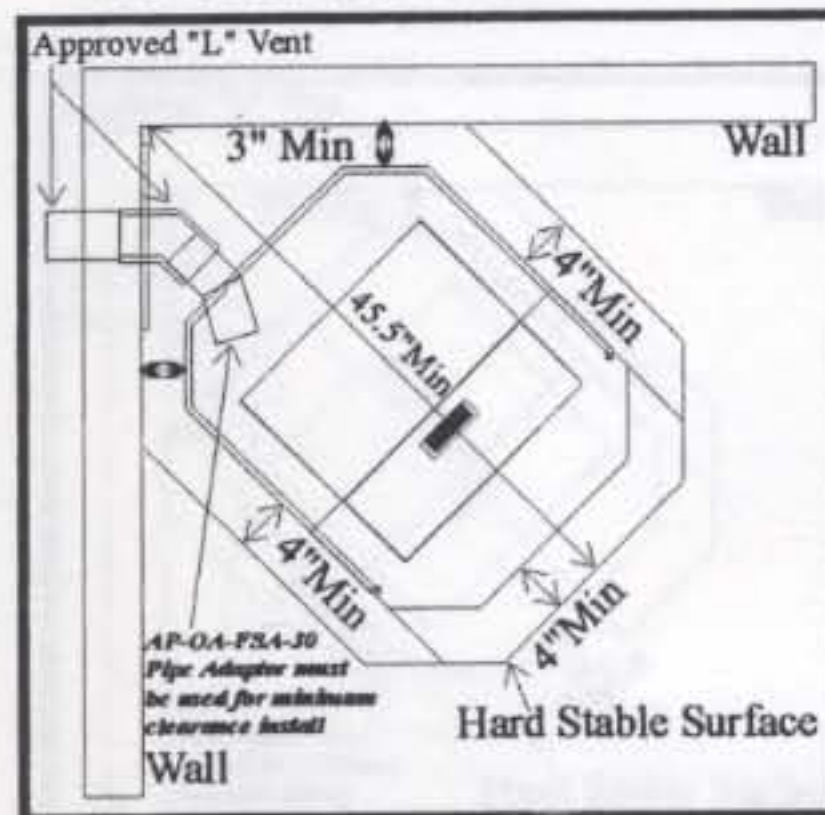
Altair Freestanding Side View



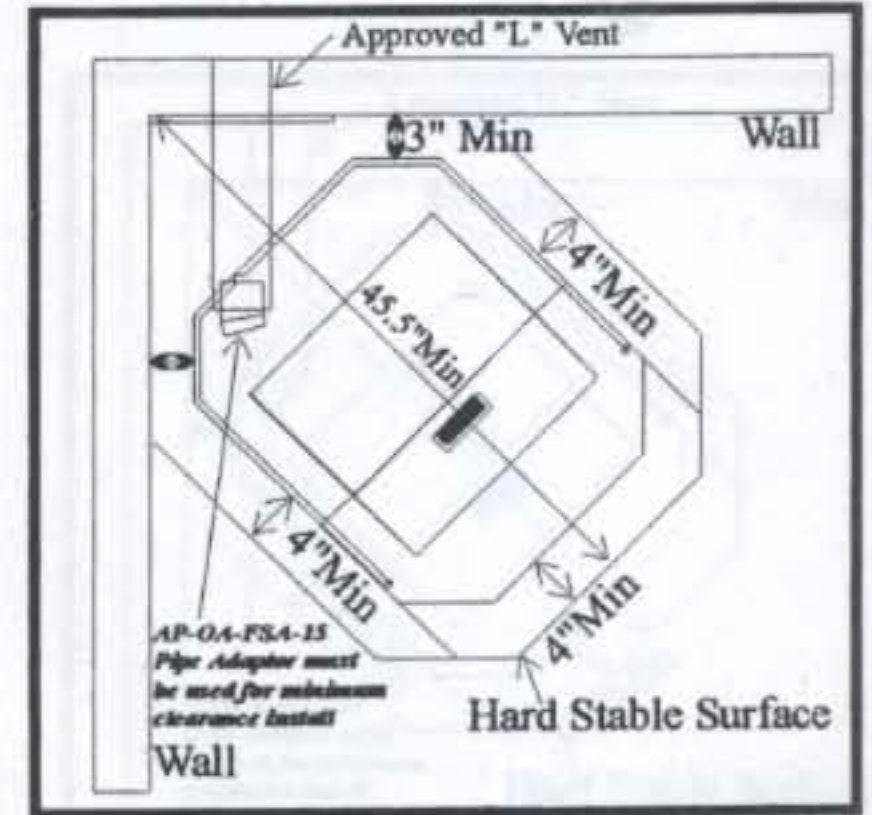
Altair Freestanding Back View

Altair Pellet Mechanical Sidewall with Vertical Venting

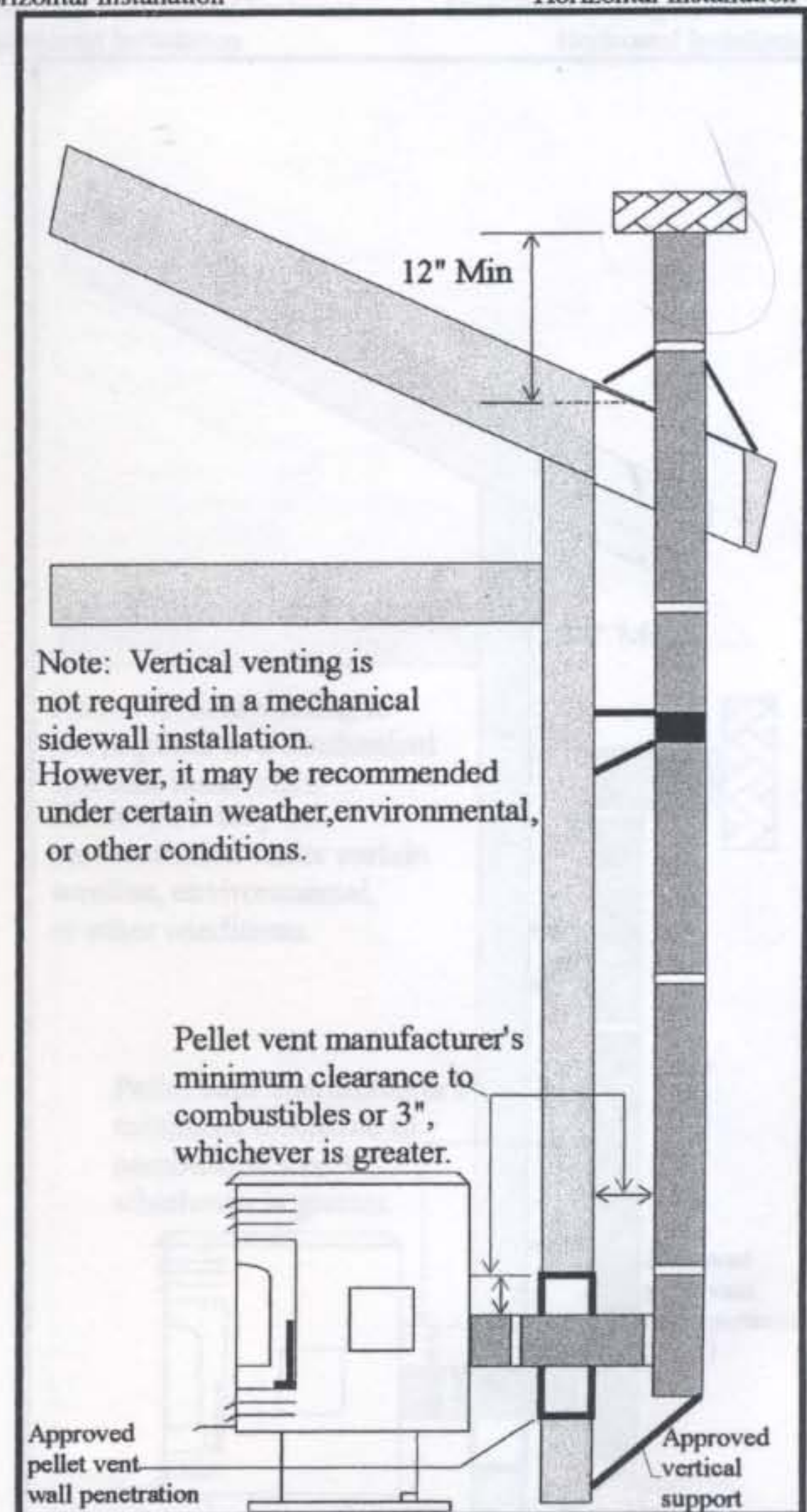
The diagrams on this page illustrate the proper mechanical sidewall with vertical venting installation. Also shown are stove dimensions and clearances to combustibles.



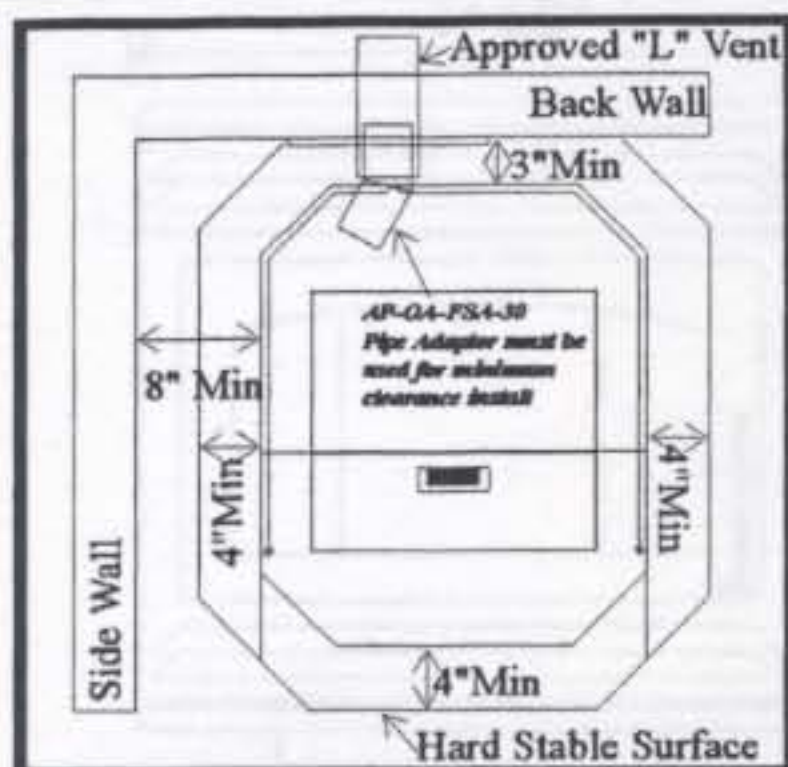
Altair Freestanding LH Corner Clearances Horizontal Installation



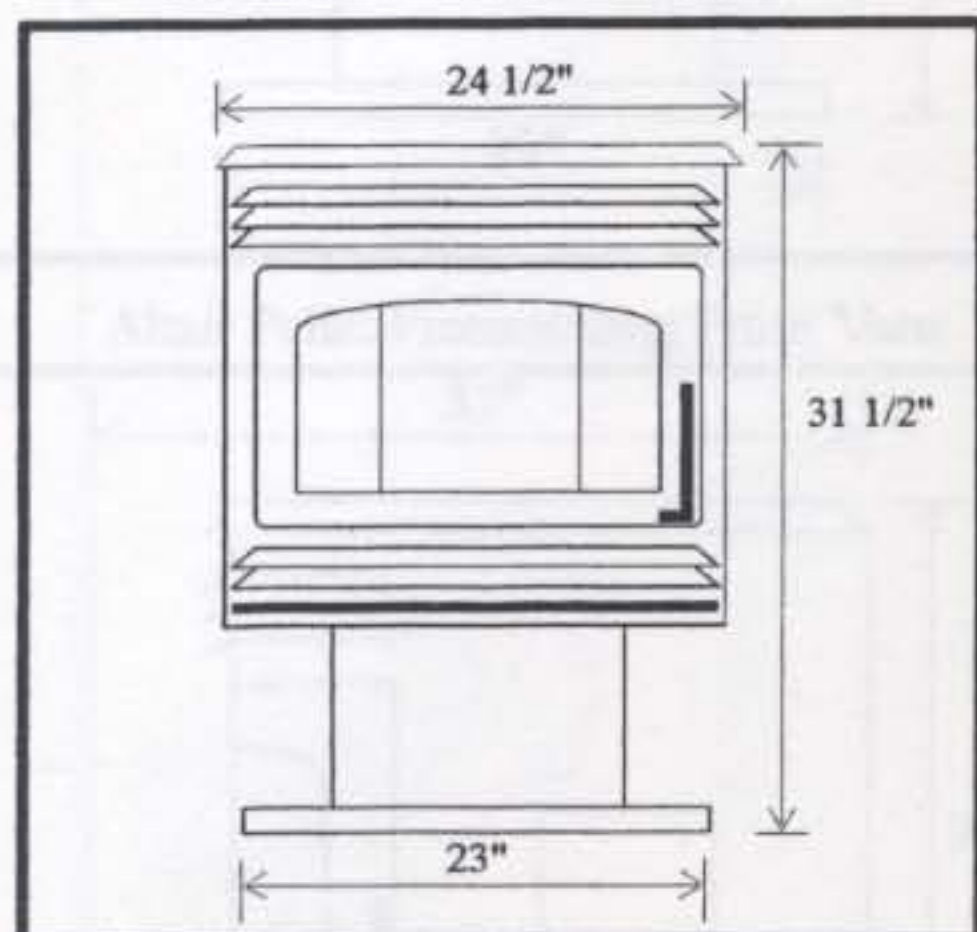
Altair Freestanding RH Corner Clearances Horizontal Installation



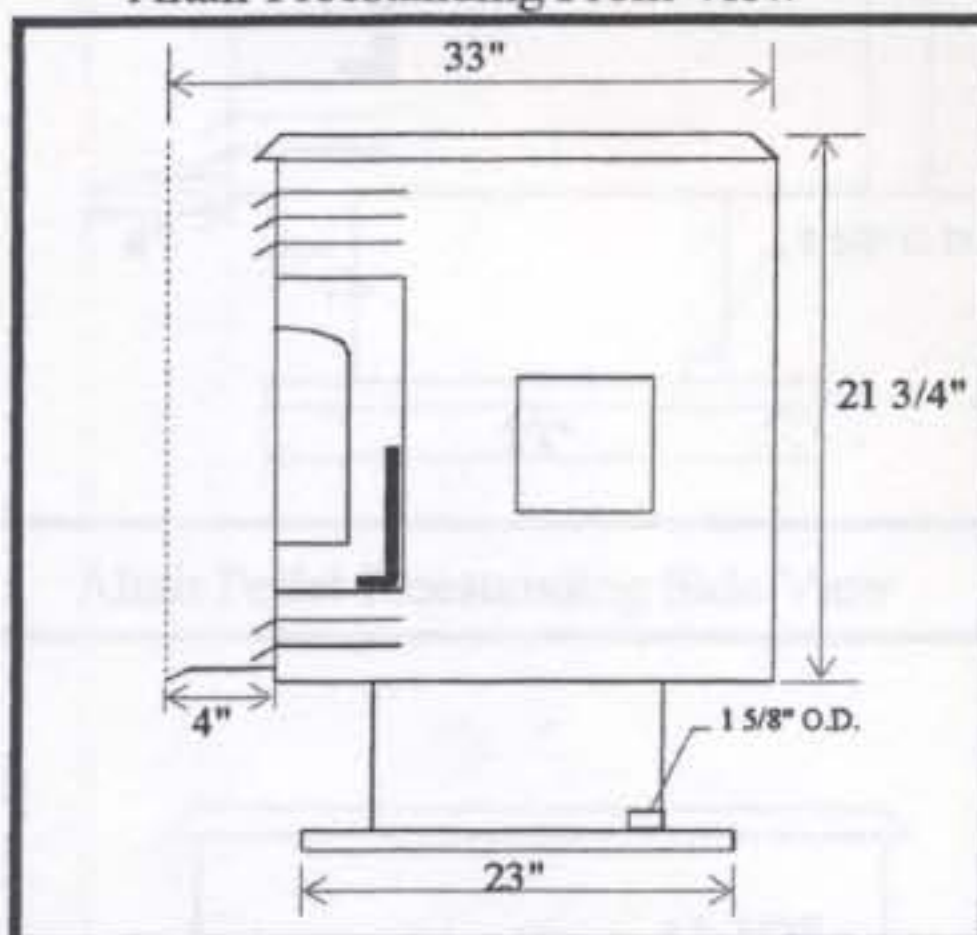
Altair Pellet Freestanding Mechanical Sidewall With Vertical Venting Installation



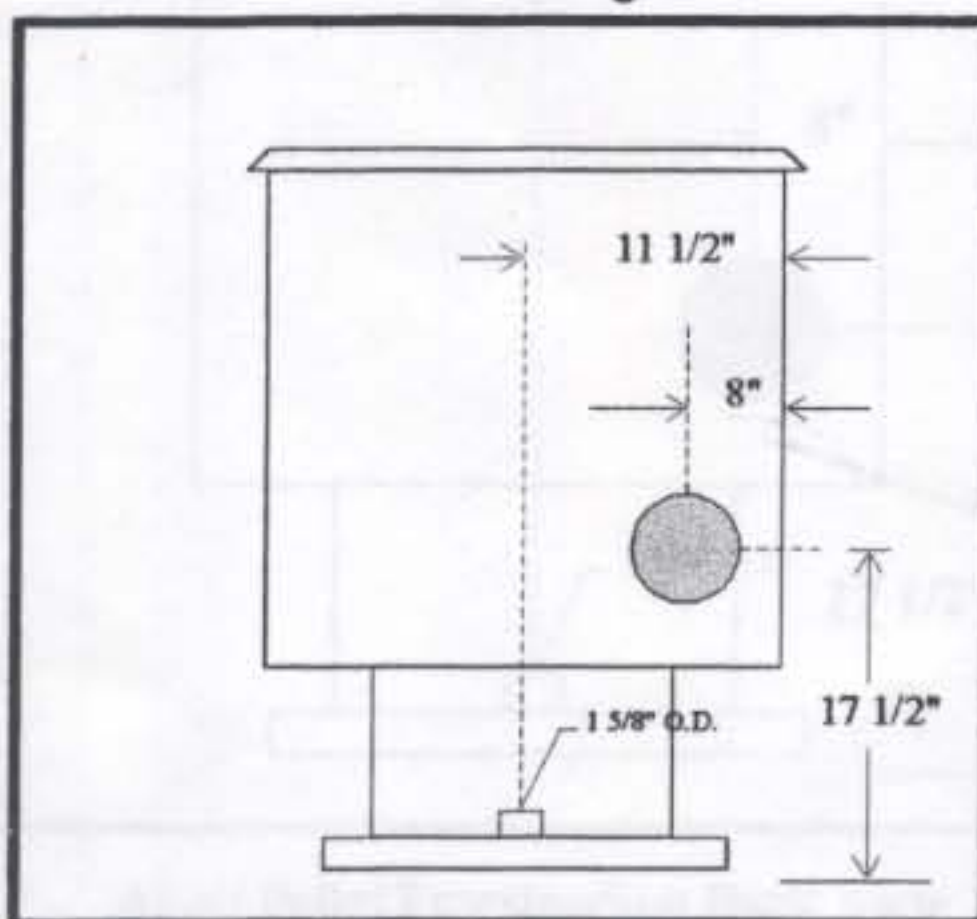
Altair Freestanding Sidewall and Backwall Clearances. Horizontal Installation



Altair Freestanding Front View



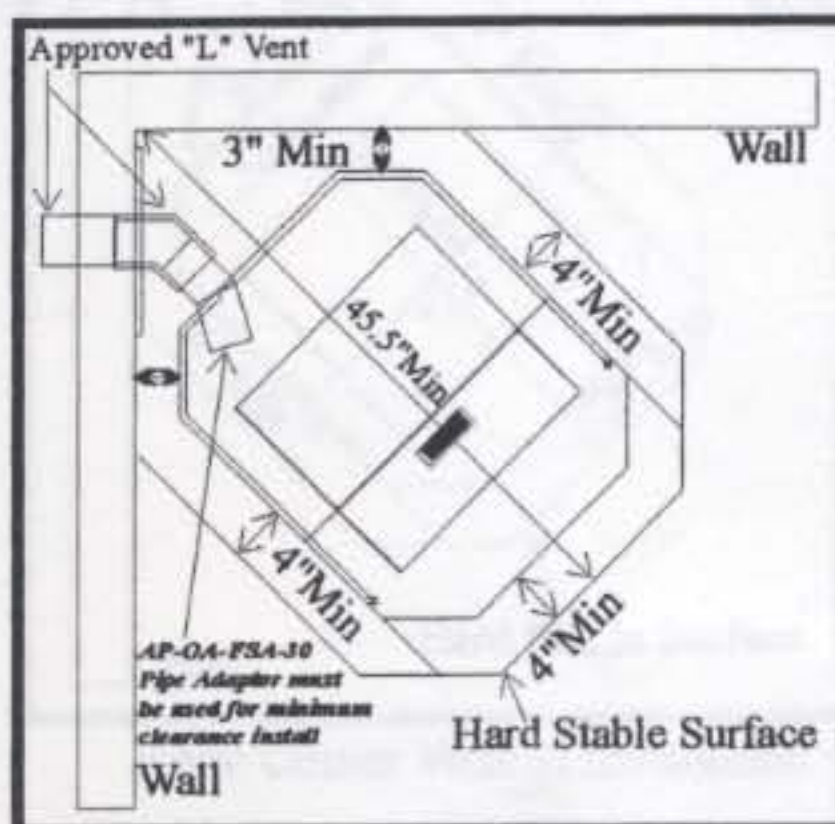
Altair Freestanding Side View



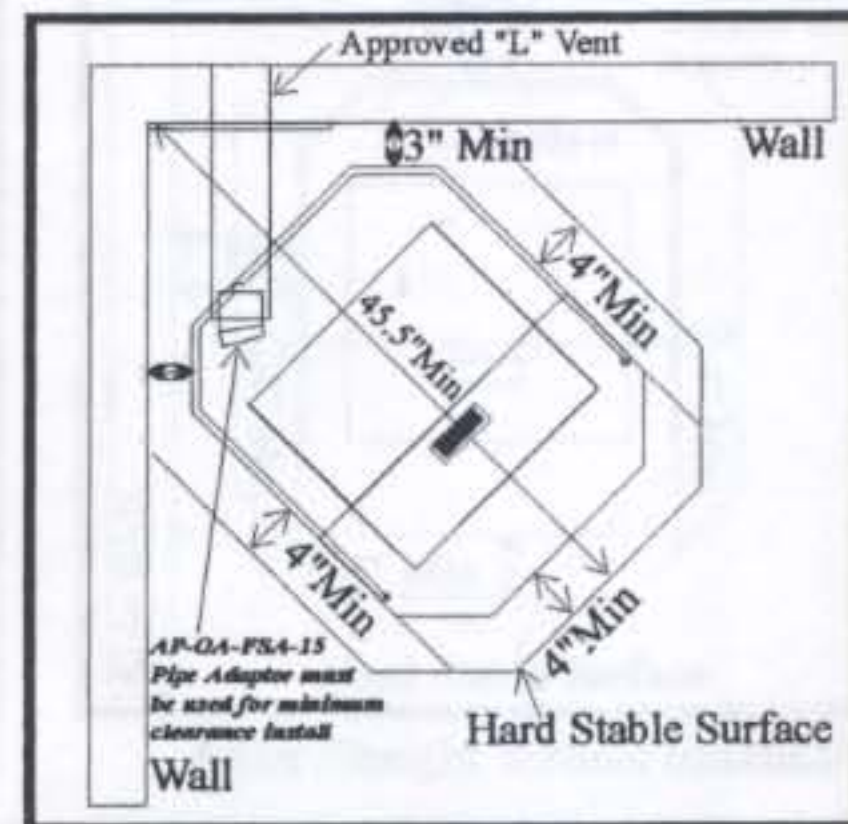
Altair Freestanding Back View

Altair Pellet Mechanical Sidewall With Vertical Vent and Horizontal Termination Installation

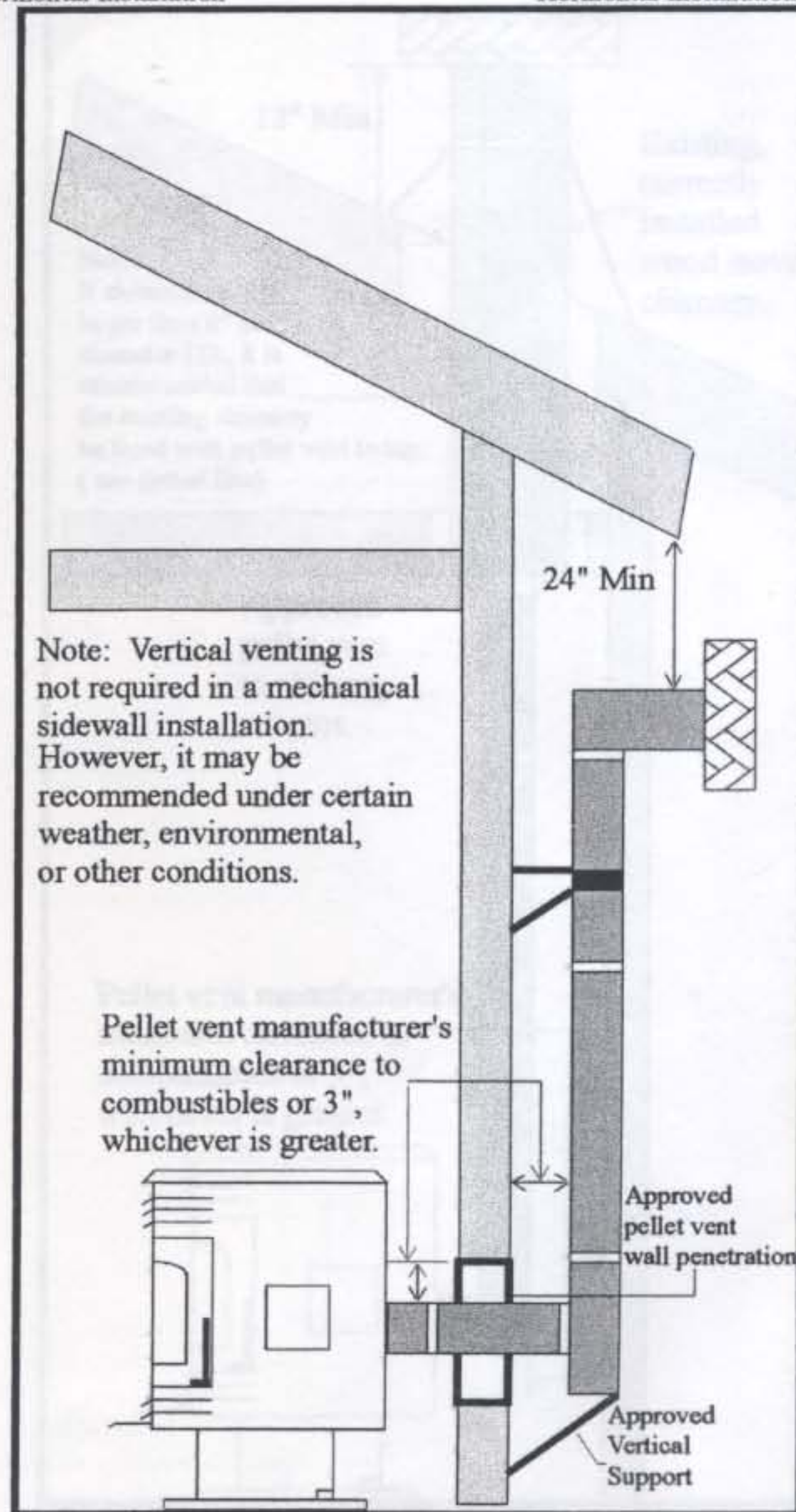
The diagrams on this page illustrate the proper mechanical sidewall with vertical vent and horizontal termination installation. Also shown are clearance to combustibles and stove dimensions.



Altair Freestanding LH Corner Clearances Horizontal Installation



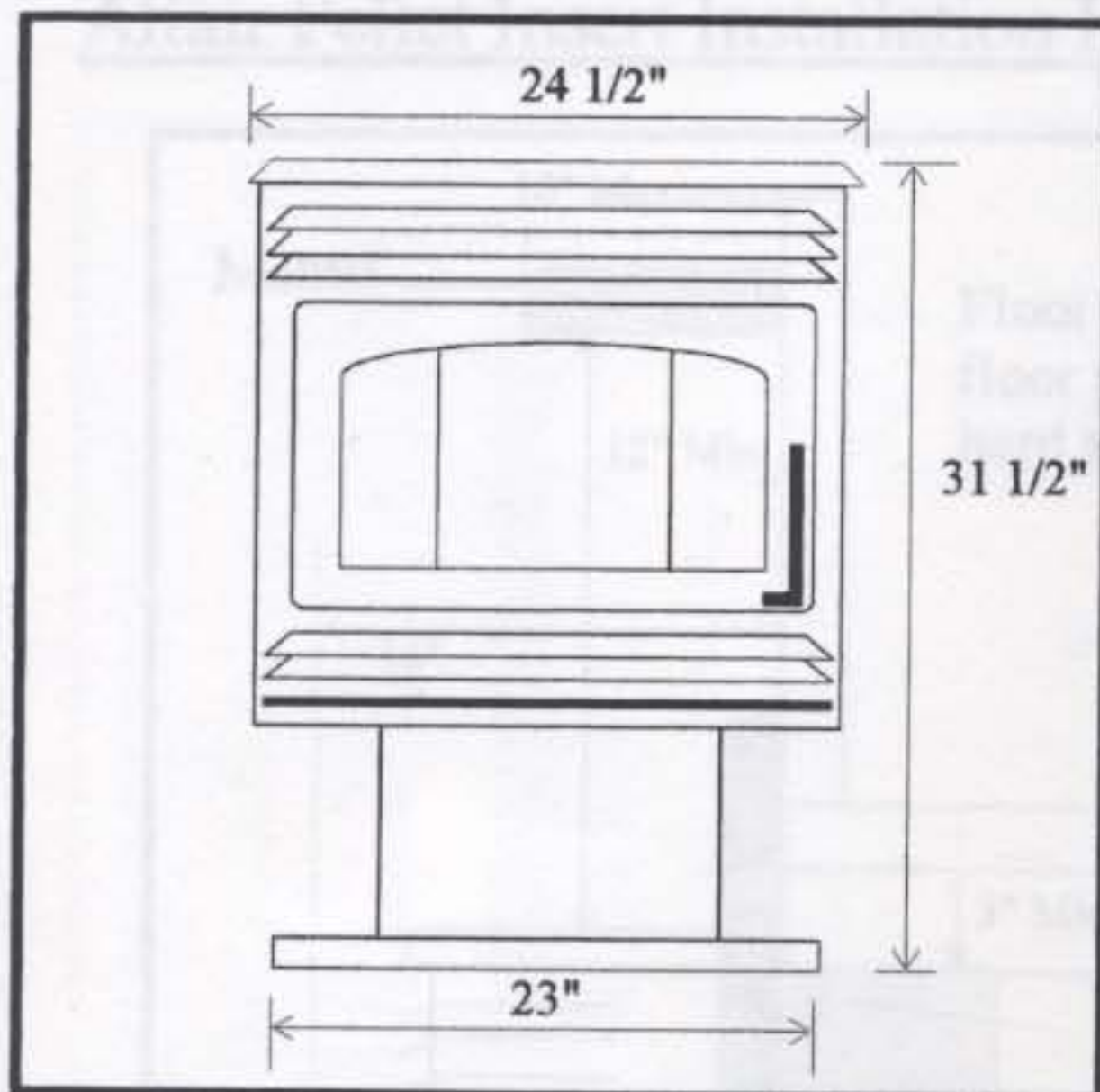
Altair Freestanding RH Corner Clearances Horizontal Installation



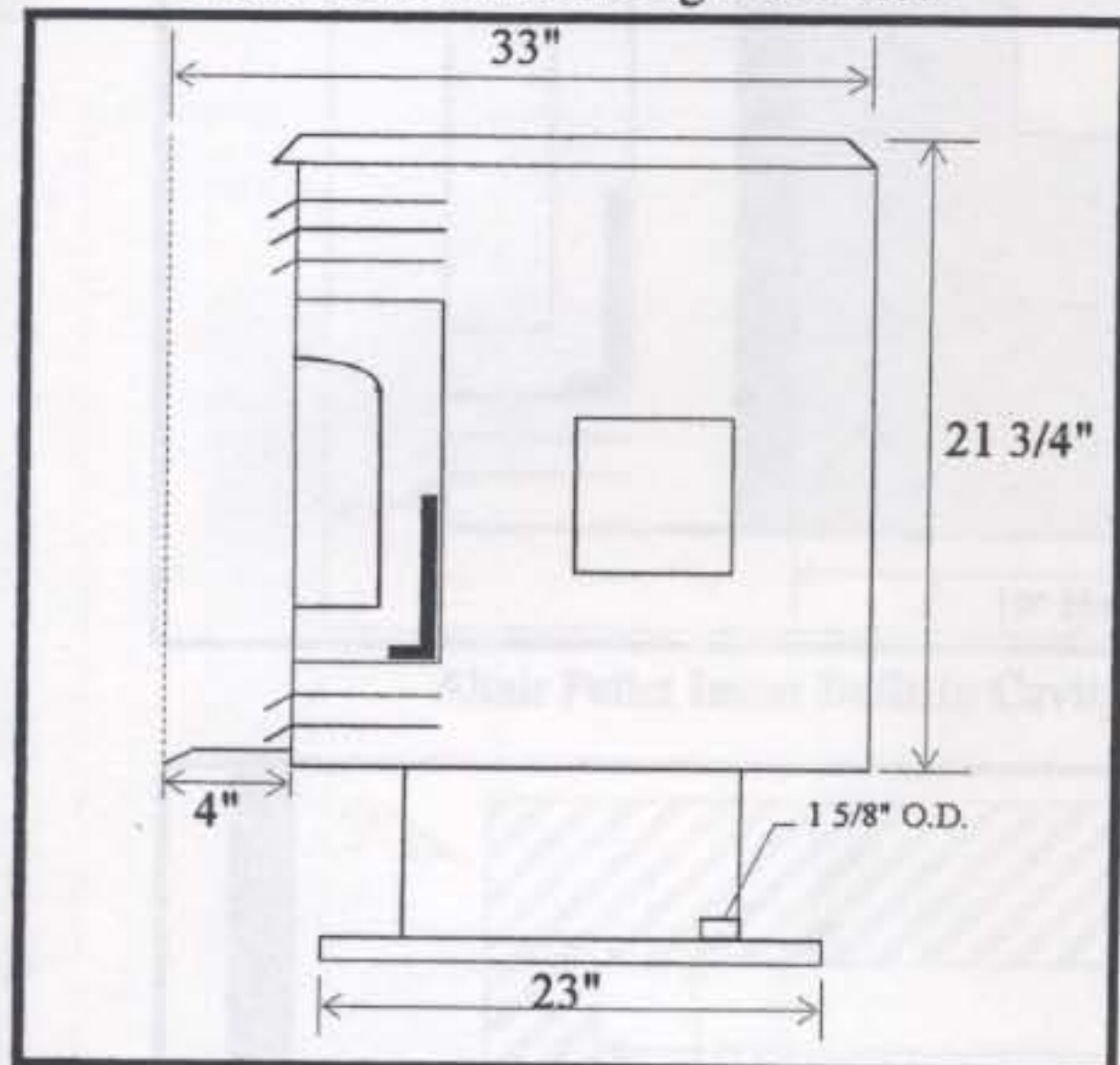
Altair Pellet Freestanding Mechanical Sidewall With Vertical Vent and Horizontal Termination Installation

Altair Pellet Venting into Existing Chimney Installation

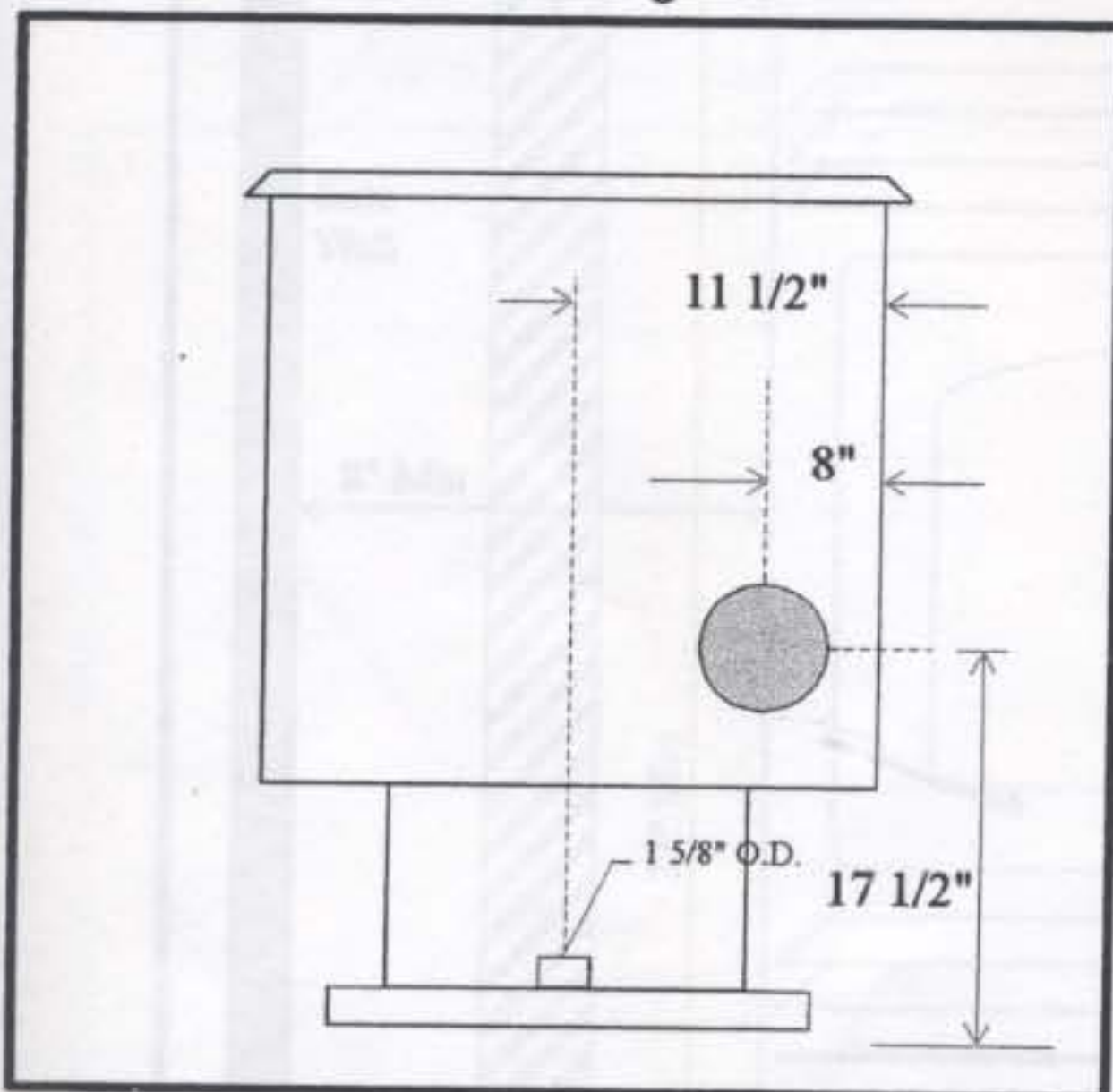
The diagrams on this page illustrate the proper utilization of an existing wood stove chimney. Also shown are clearances to combustibles and stove dimensions.



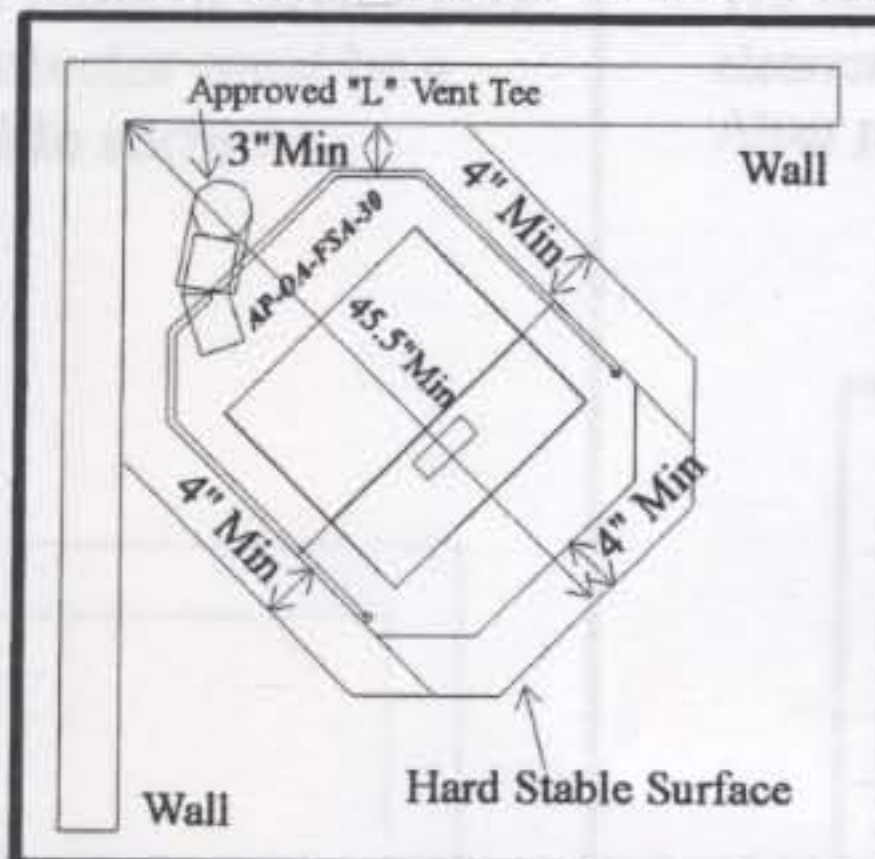
Altair Pellet Freestanding Front View



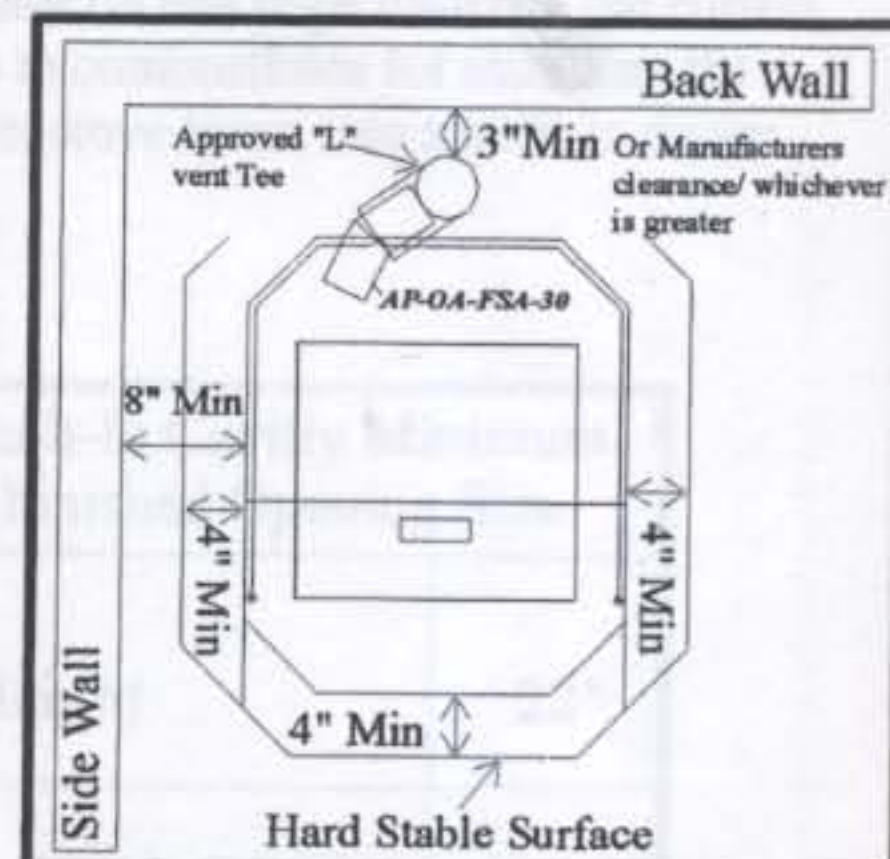
Altair Pellet Freestanding Side View



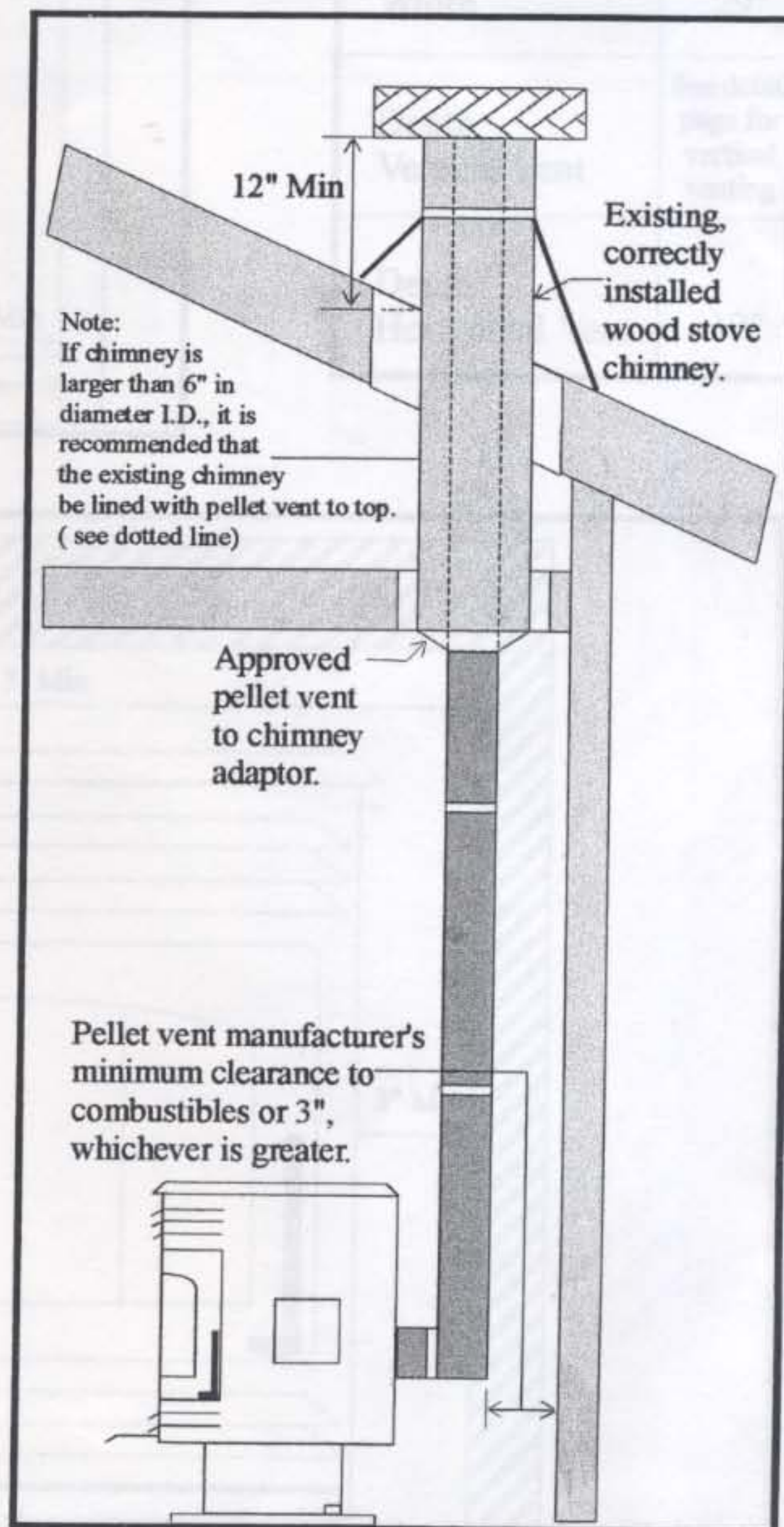
Altair Pellet Freestanding Back View



Altair Corner Vertical Installation



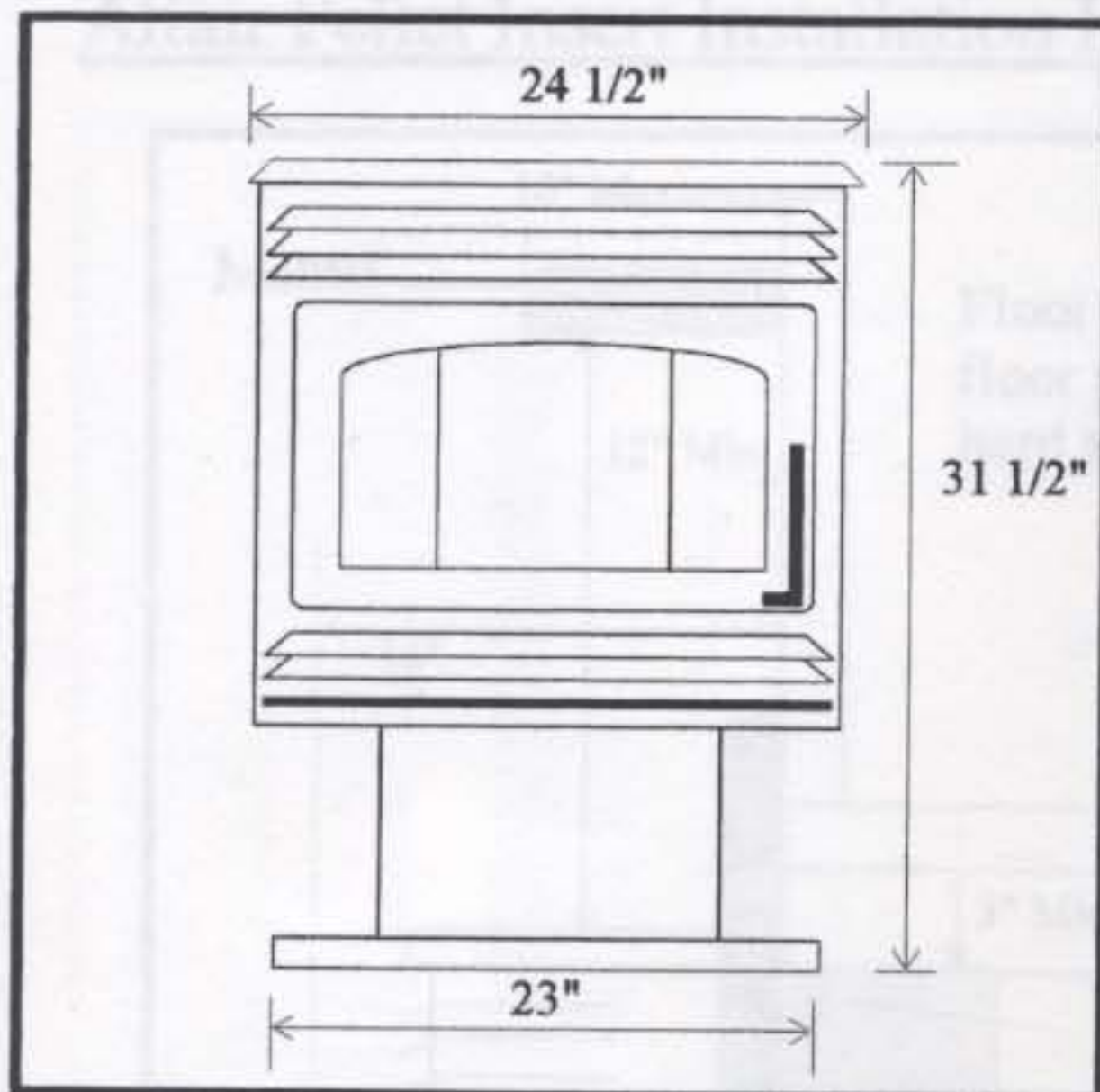
Altair Straight Vertical Installation



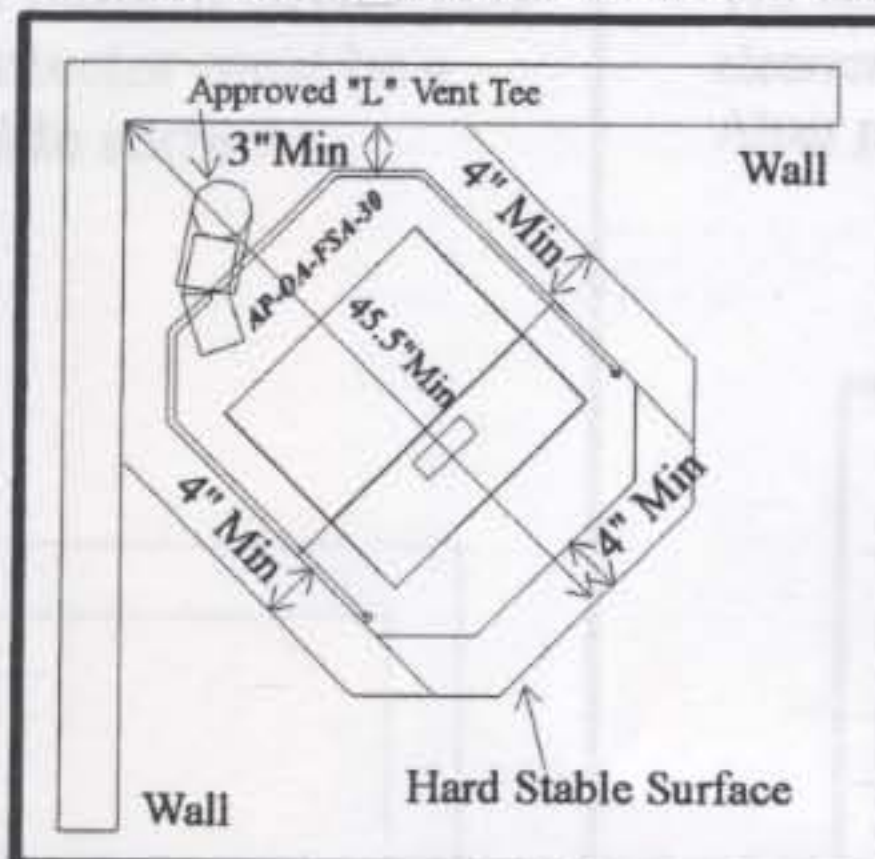
Altair Pellet Freestanding Vertical Installation Into an existing wood stove chimney

Altair Pellet Venting into Existing Chimney Installation

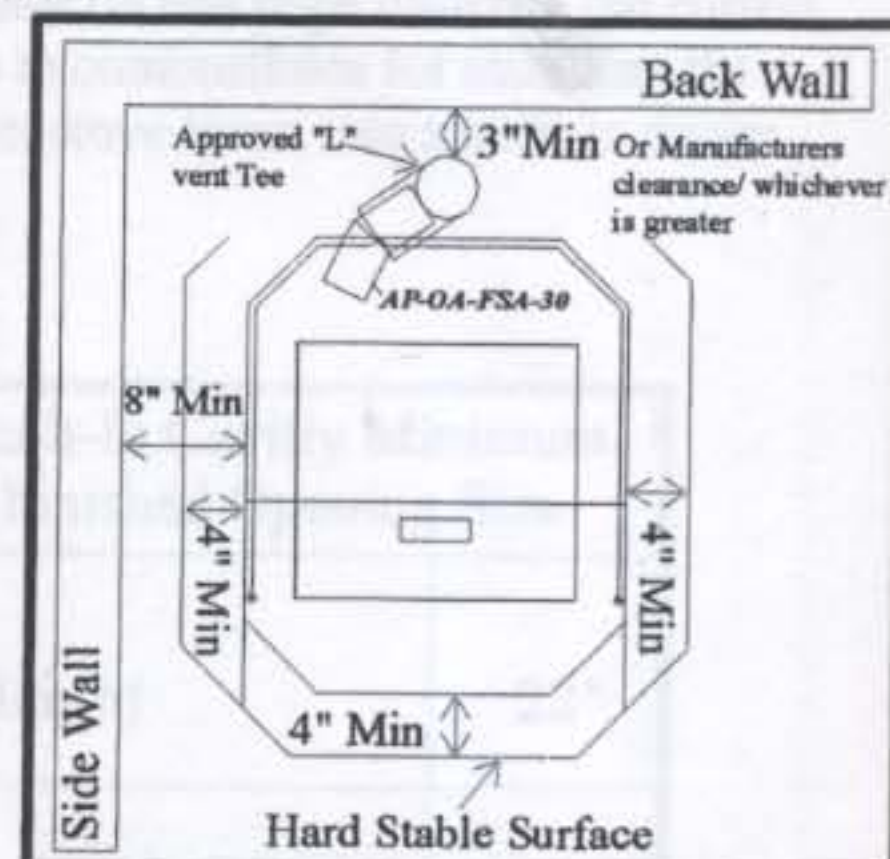
The diagrams on this page illustrate the proper utilization of an existing wood stove chimney. Also shown are clearances to combustibles and stove dimensions.



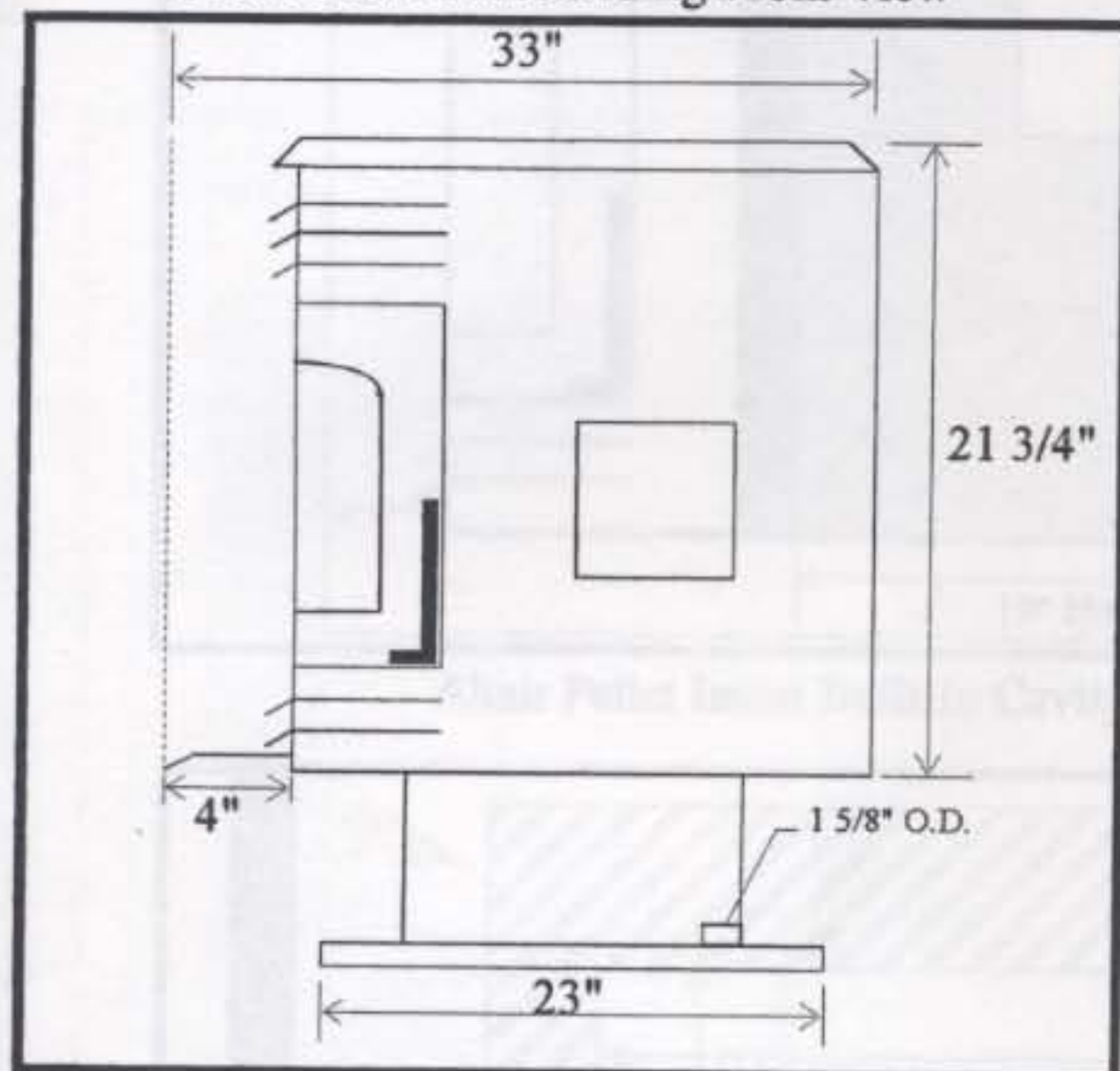
Altair Pellet Freestanding Front View



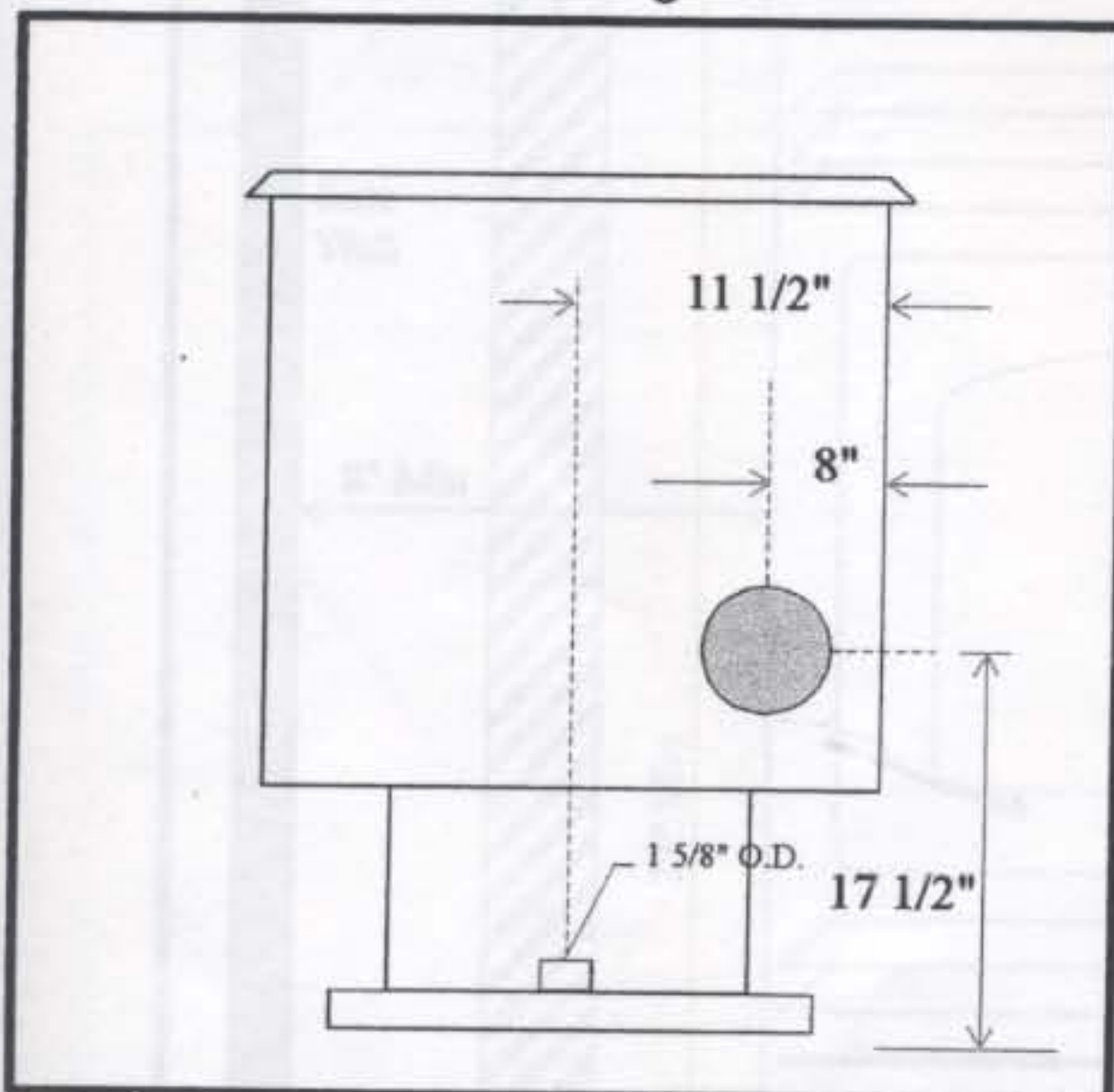
Altair Corner Vertical Installation



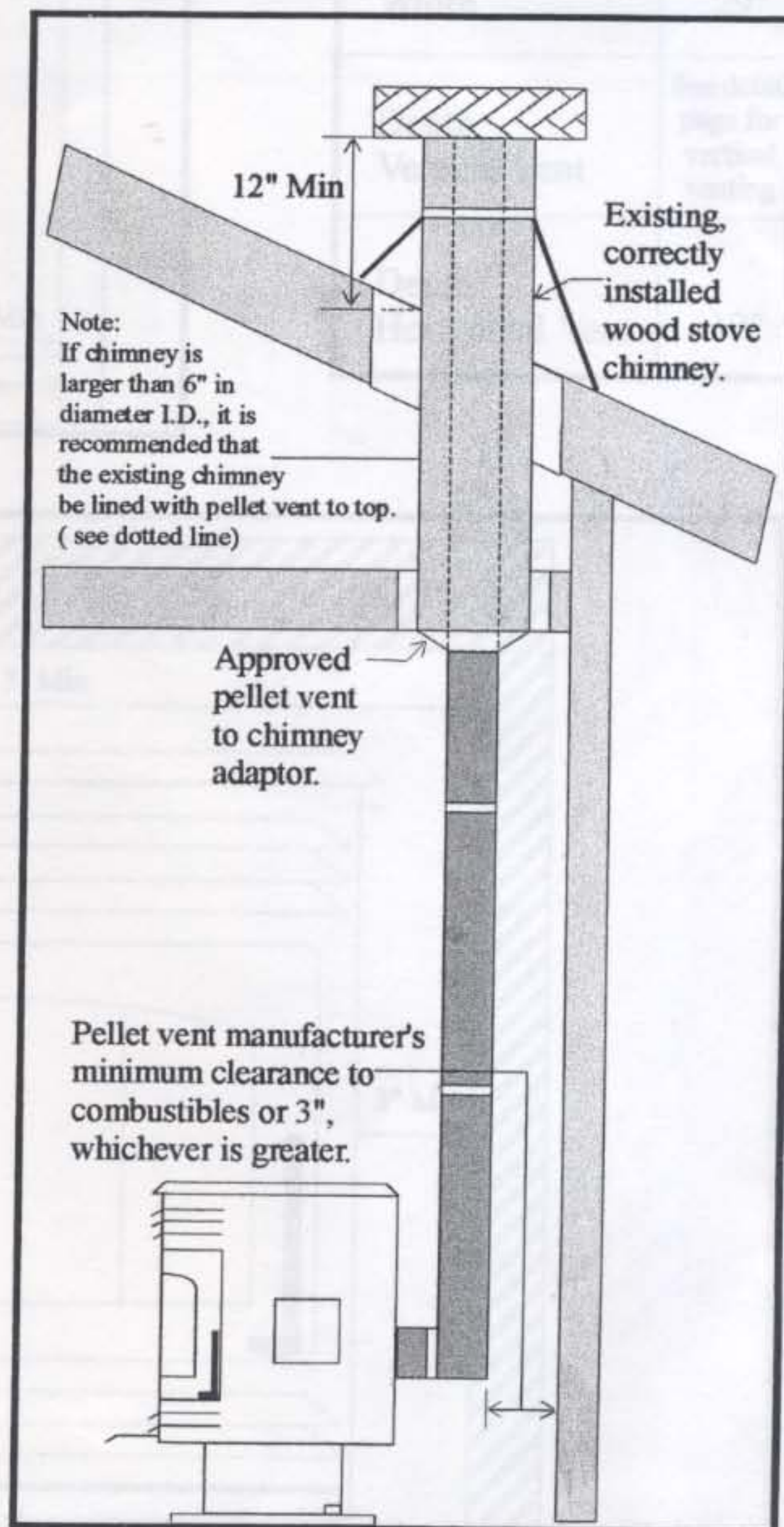
Altair Straight Vertical Installation



Altair Pellet Freestanding Side View



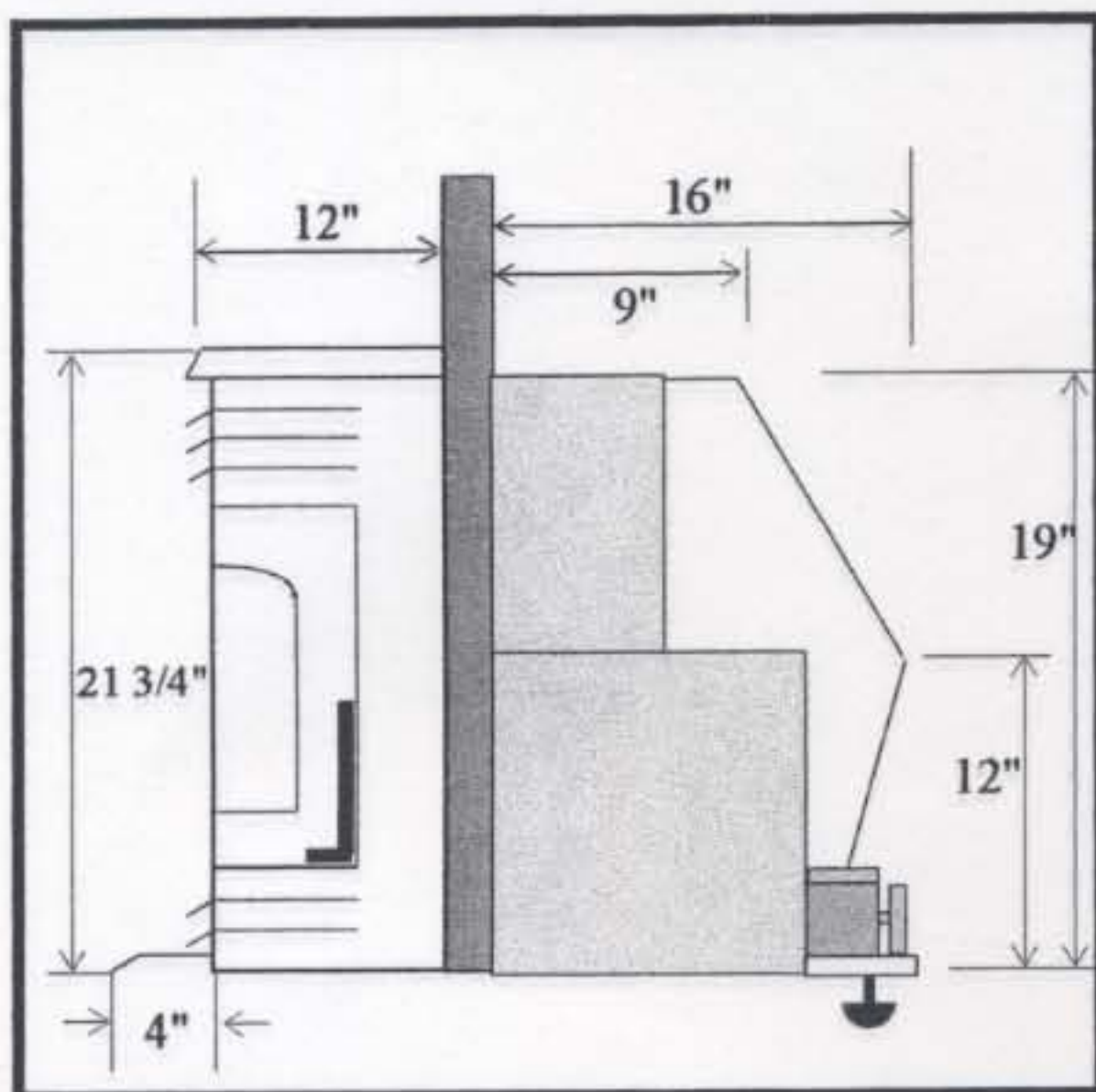
Altair Pellet Freestanding Back View



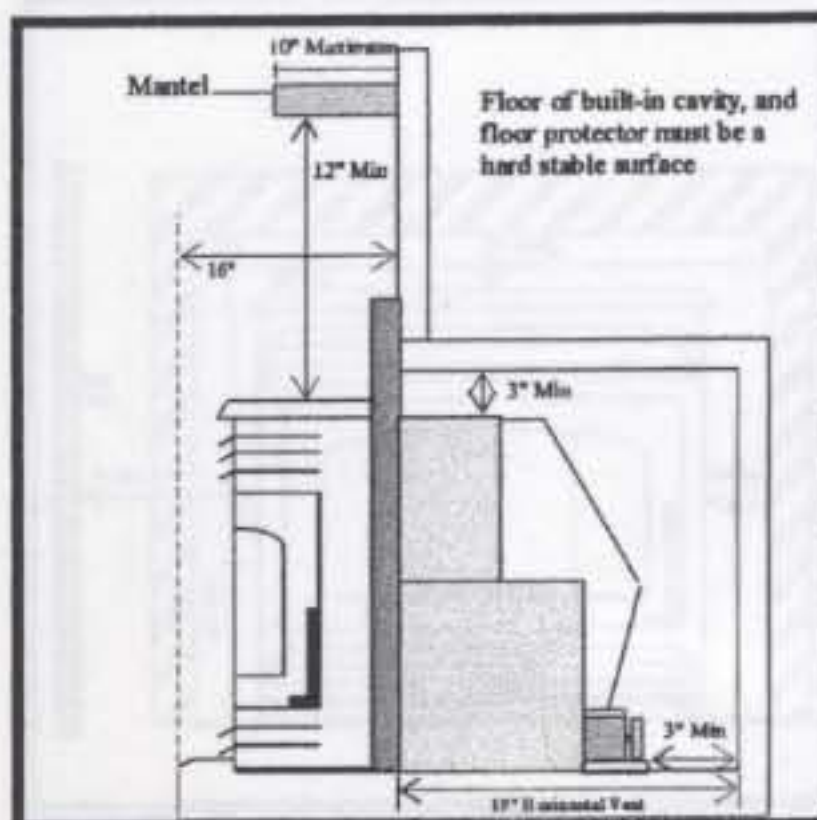
Altair Pellet Freestanding Vertical Installation Into an existing wood stove chimney

Altair Pellet Insert Built-In With Mechanical Sidewall Vent

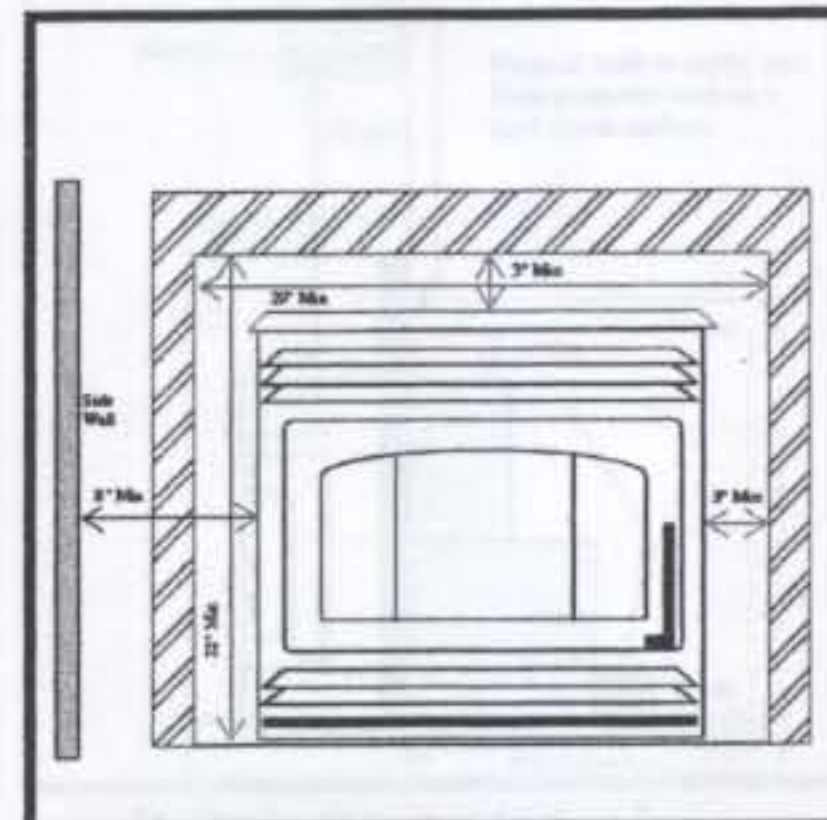
The diagrams on this page illustrate the correct installation of the Altair pellet stove into a combustible cavity. Also shown are stove dimensions and clearances to combustibles



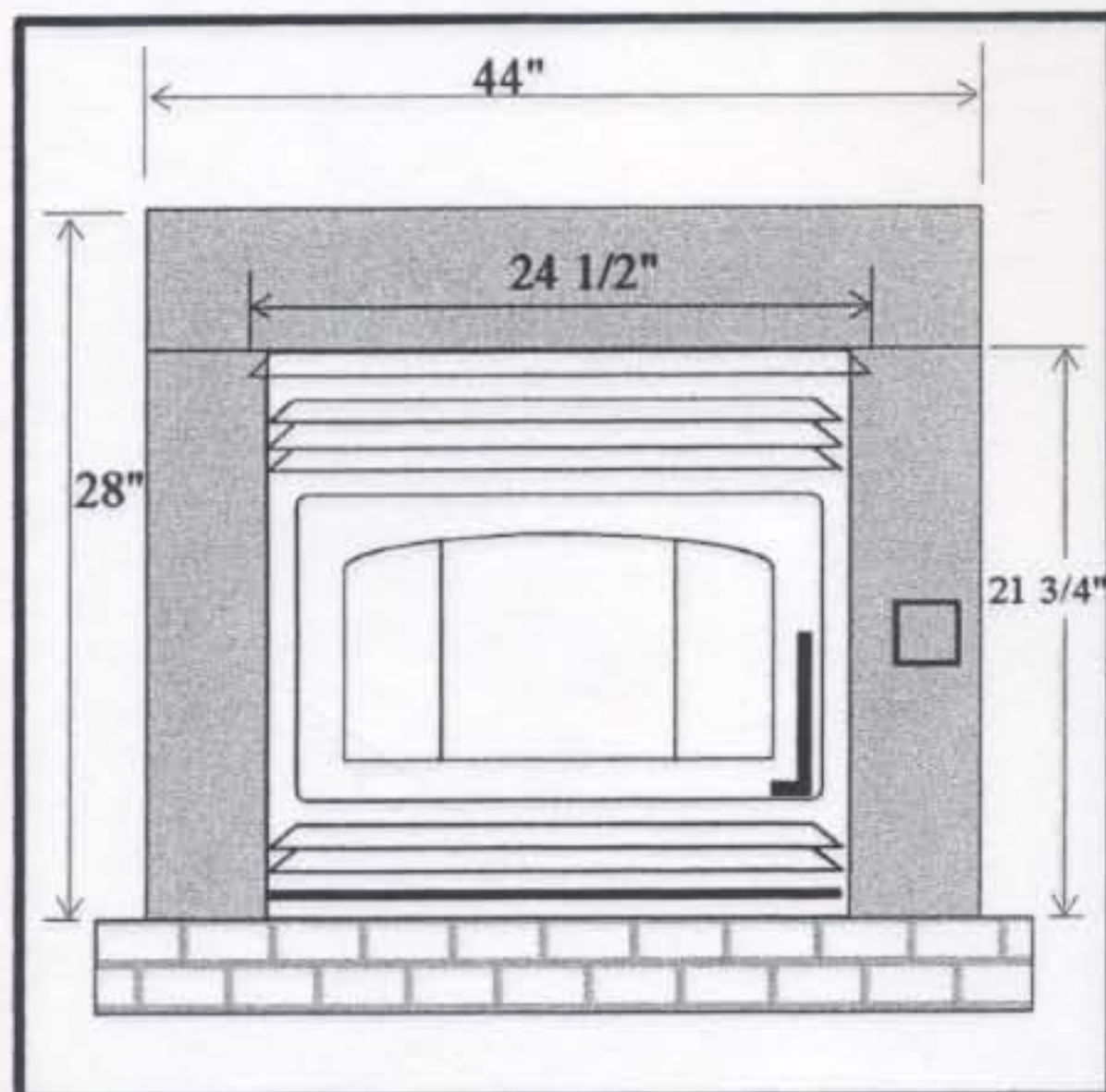
Altair Pellet Insert Side View



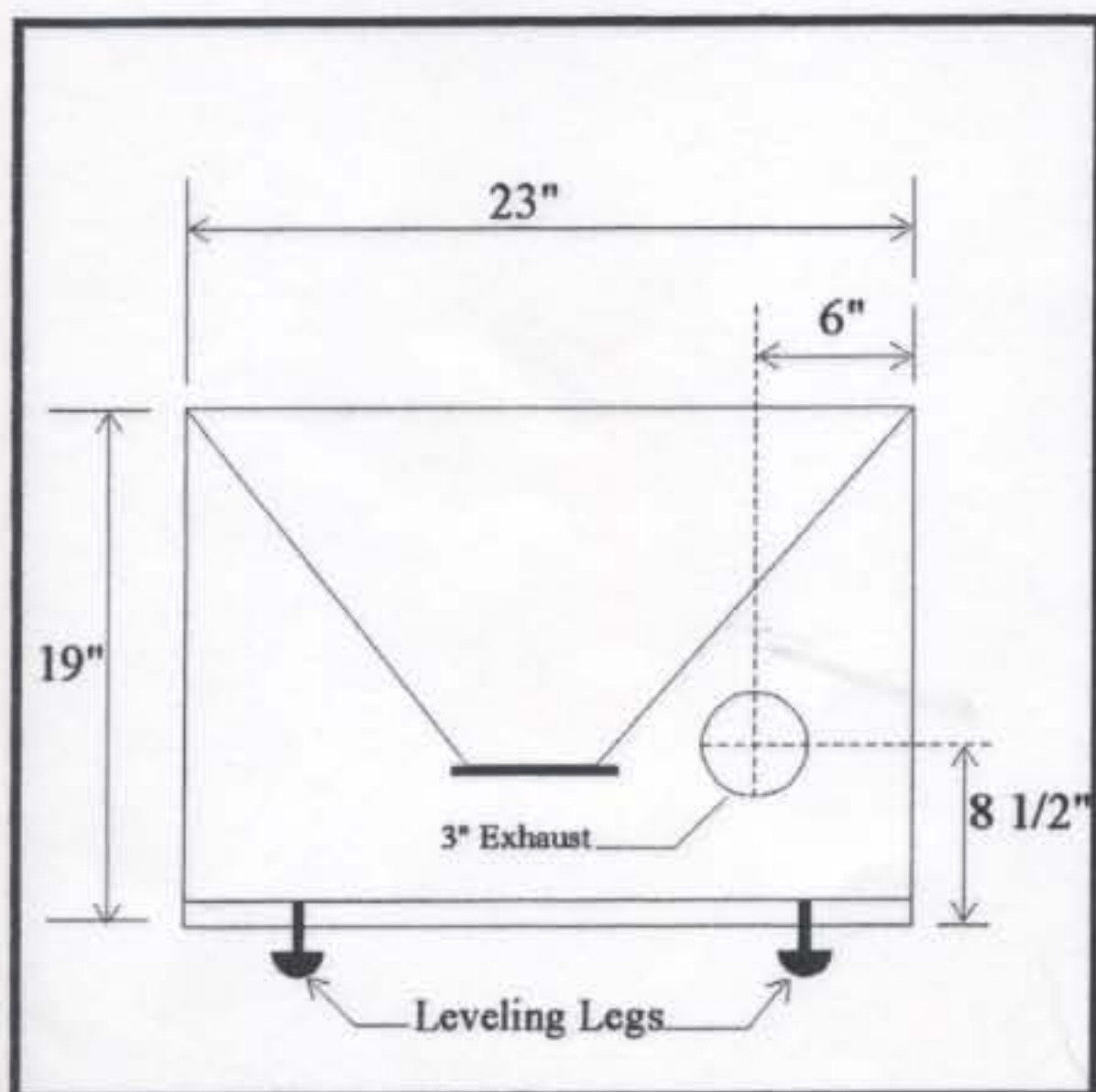
Built-In Cavity/ Side View



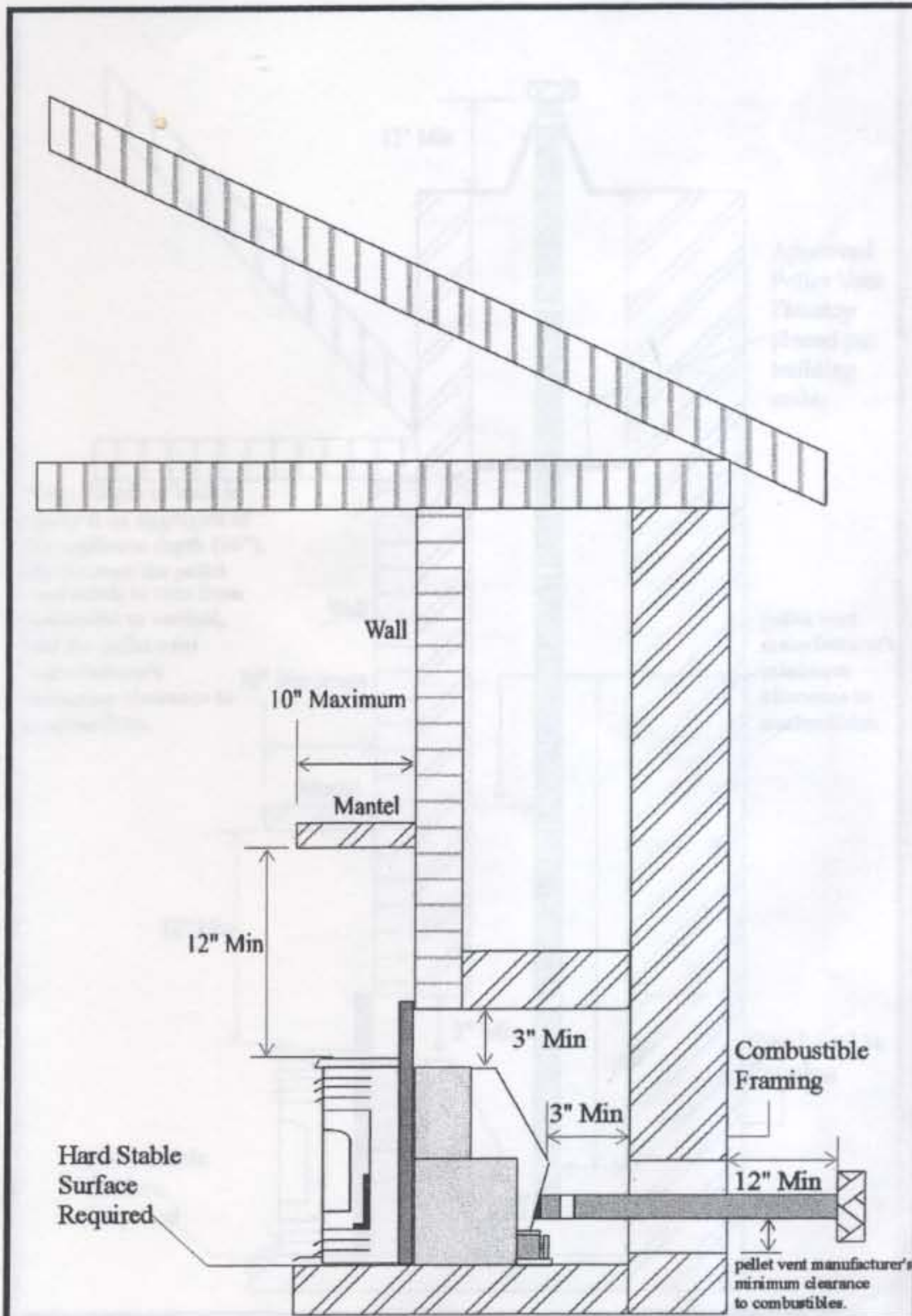
Built-In Cavity/ Front View



Altair Pellet Insert Front View



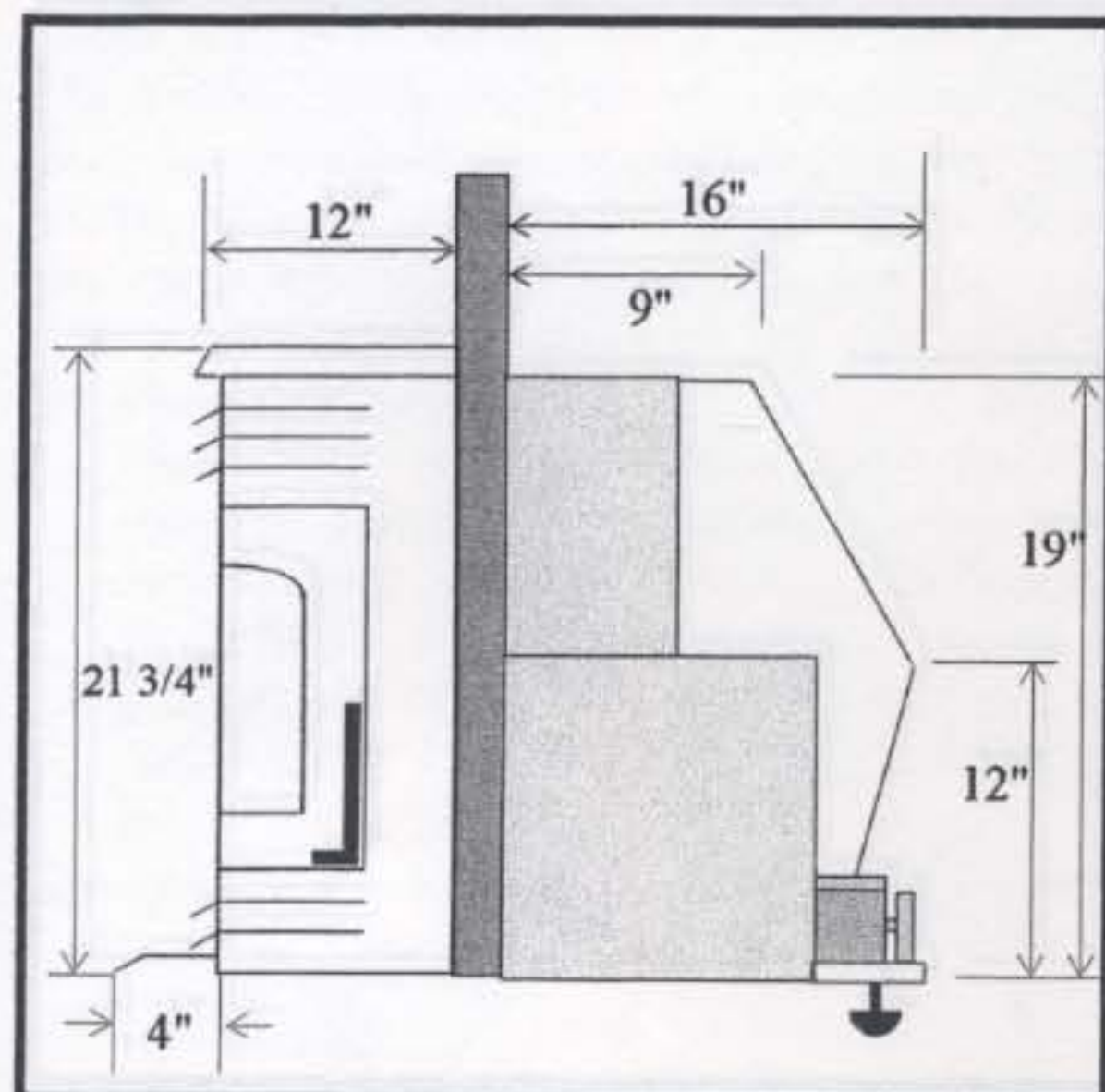
Altair Pellet Insert Back View



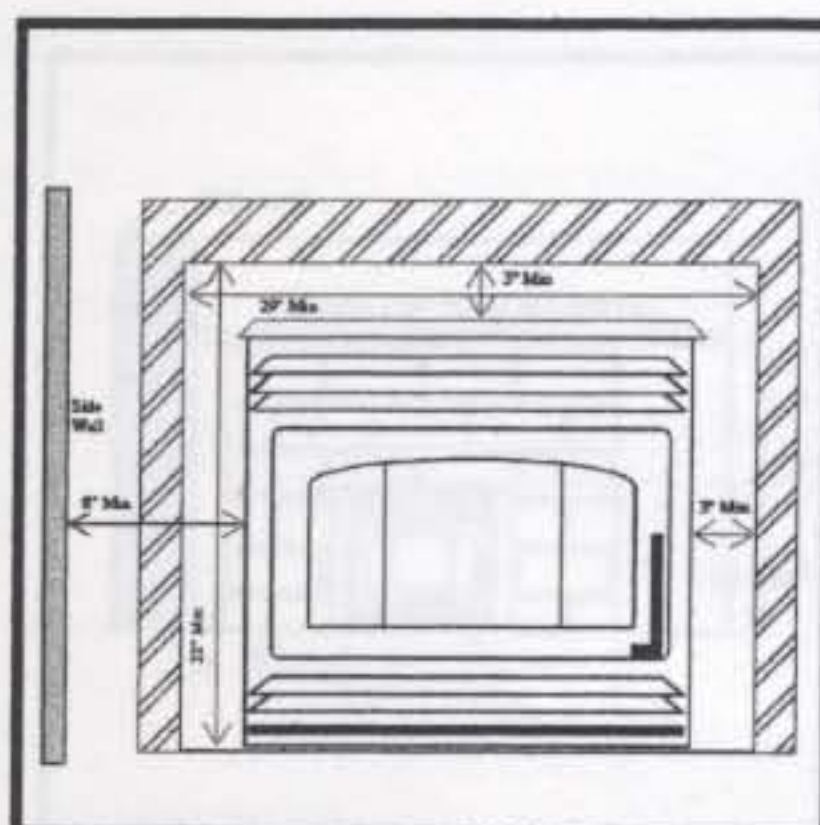
Built In Mechanical Sidewall Installation

Altair Pellet Insert Built-In With Vertical Vent

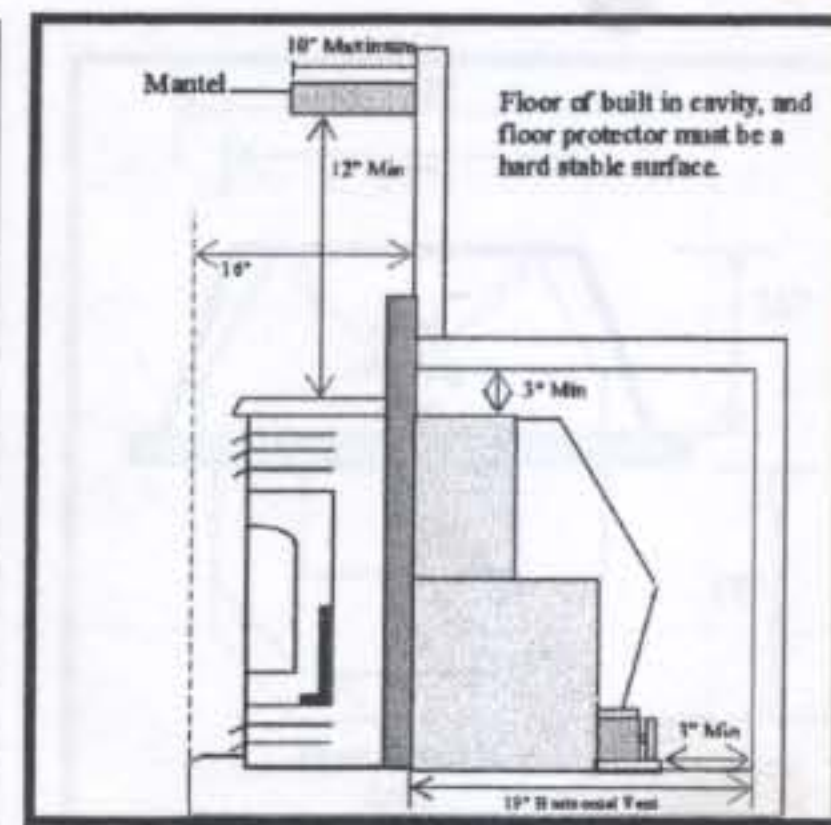
The diagrams on this page illustrate the correct installation of the Altair pellet stove into a combustible cavity. Also shown are stove dimensions and clearances to combustibles.



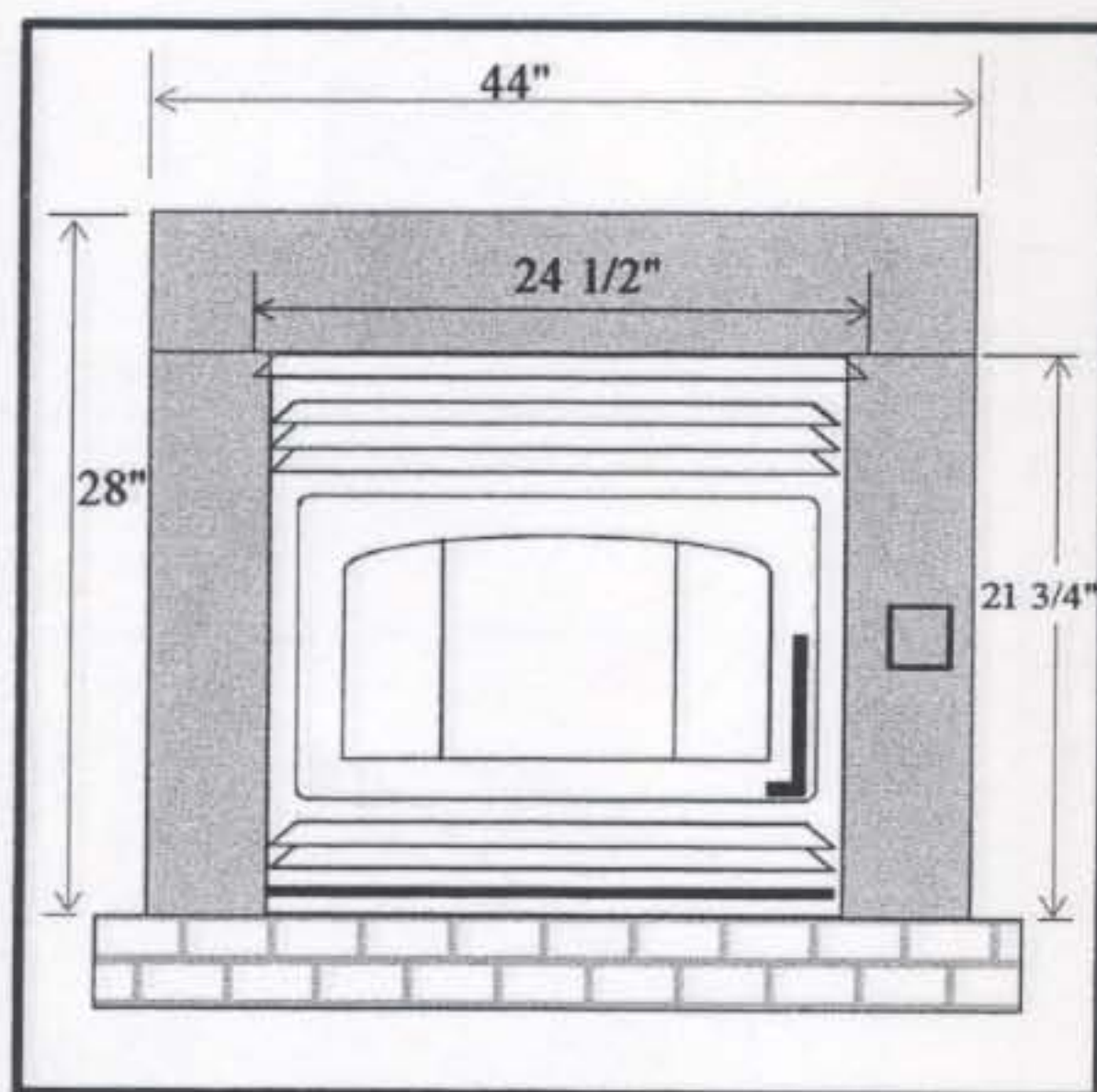
Altair Pellet Insert Side View



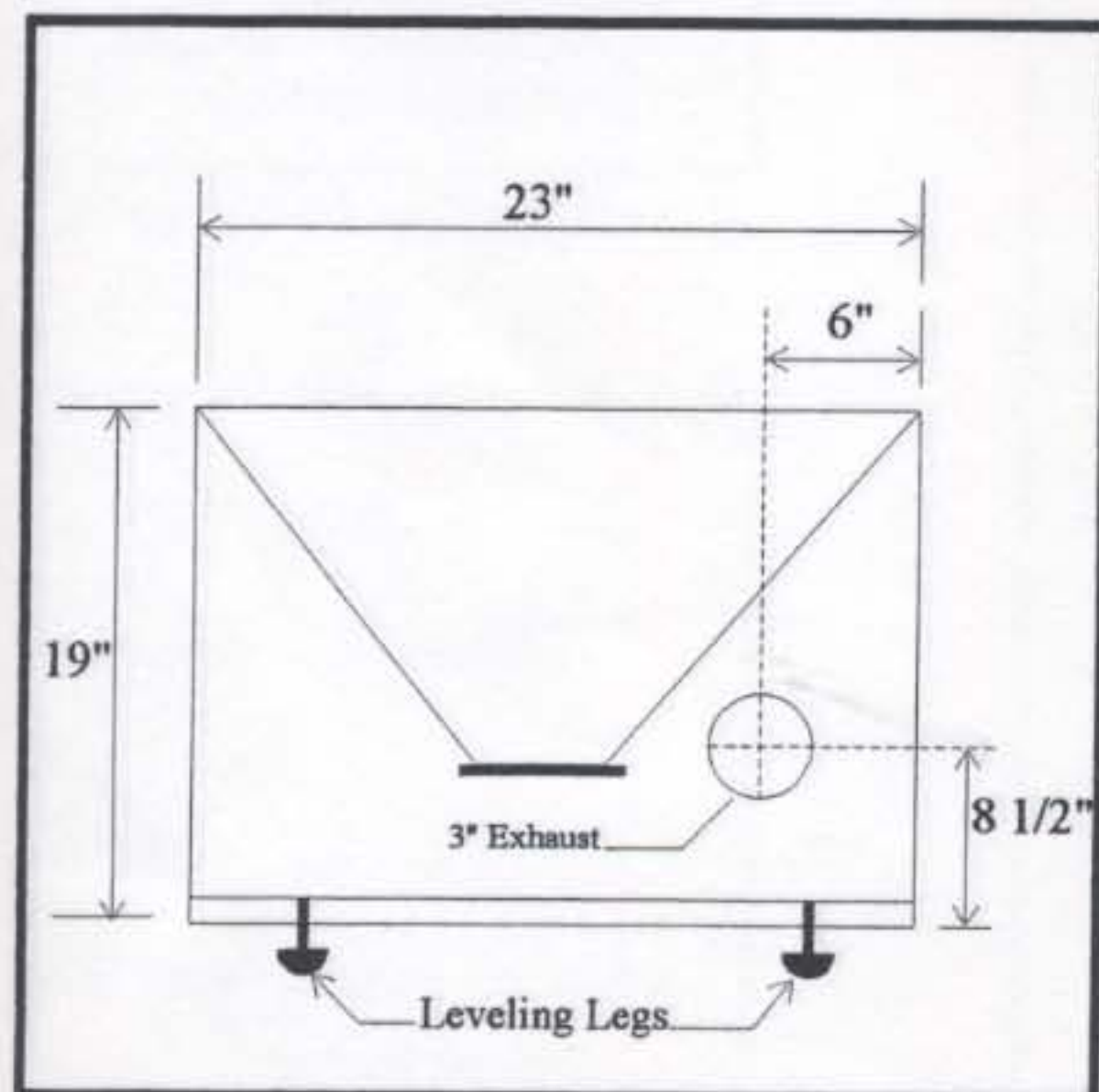
Built-In Cavity/ Front View



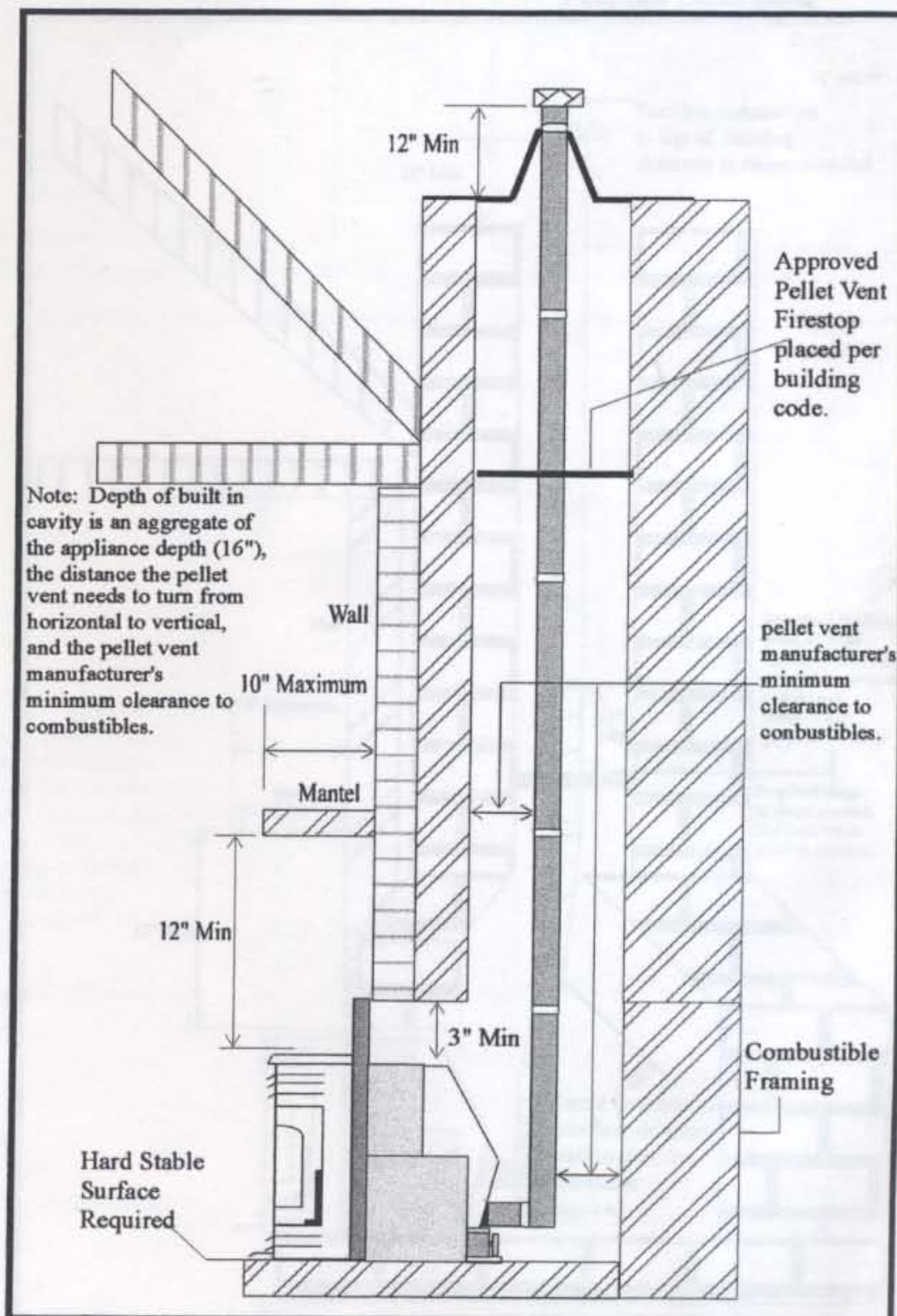
Built-In Cavity/ Side View



Altair Pellet Insert Front View



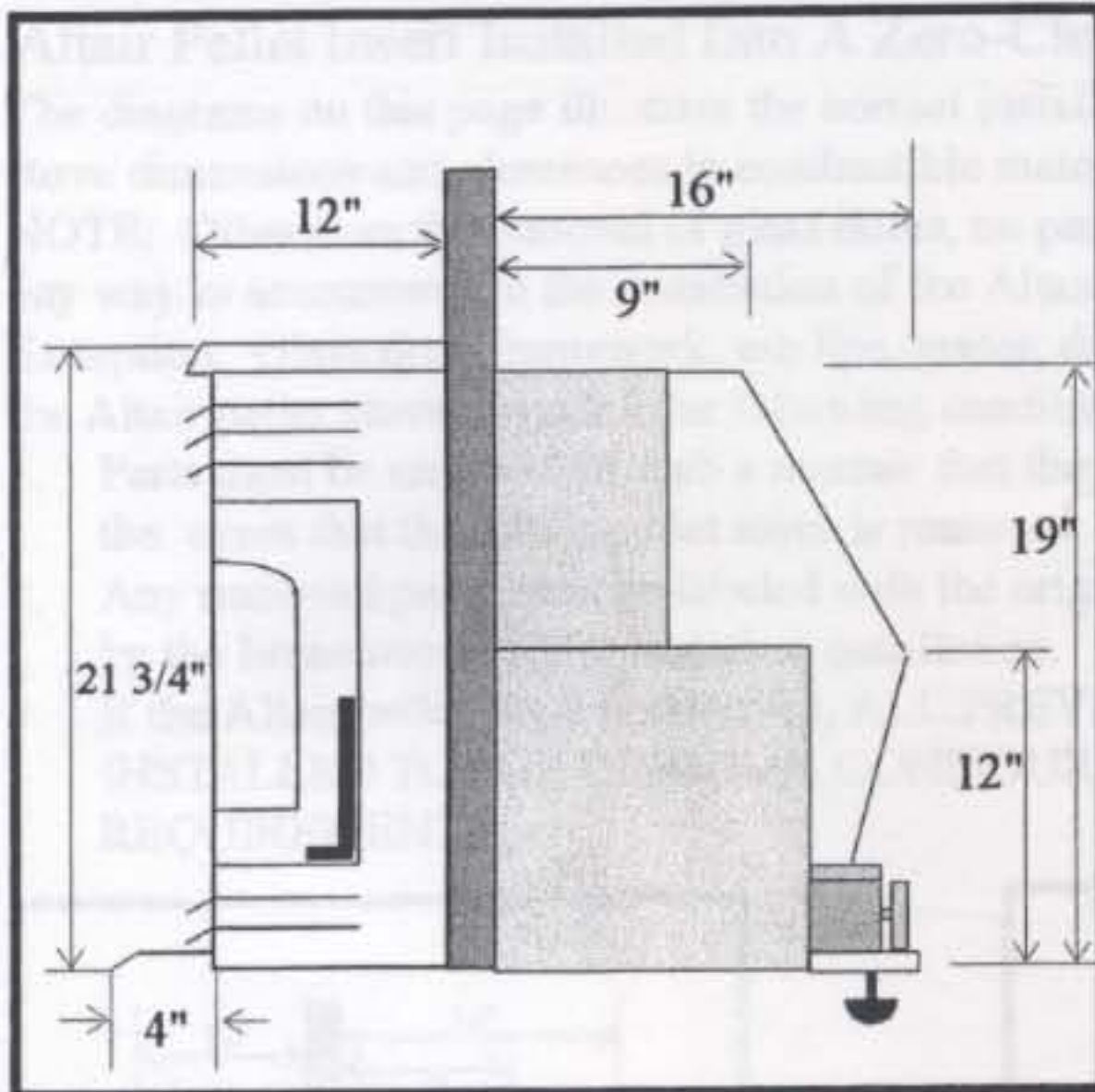
Altair Pellet Insert Back View



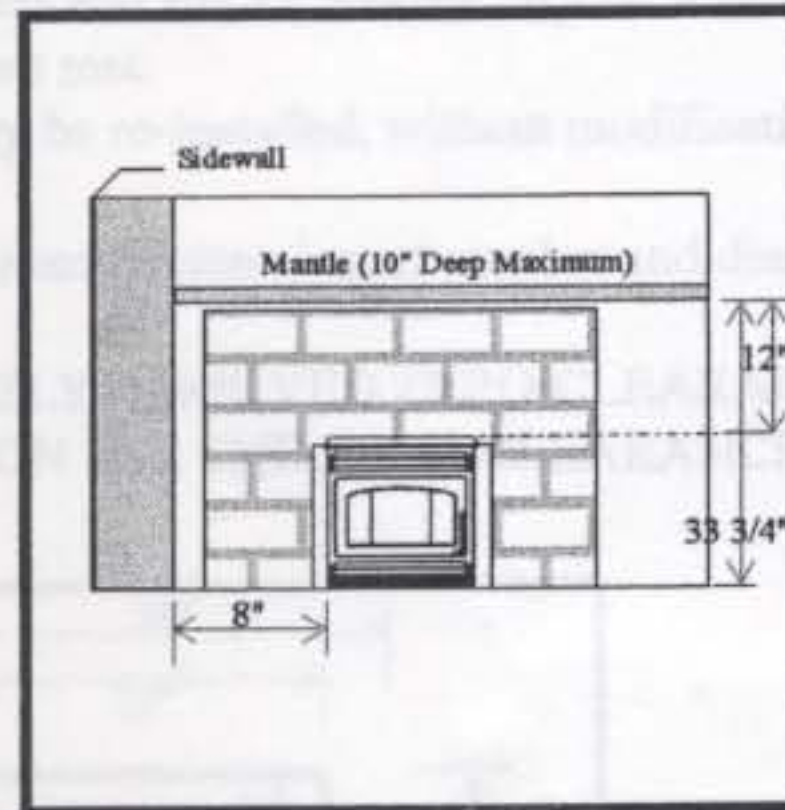
Built-In Vertically Vented Installation

Altair Pellet Insert Installed Into A Masonry Fireplace

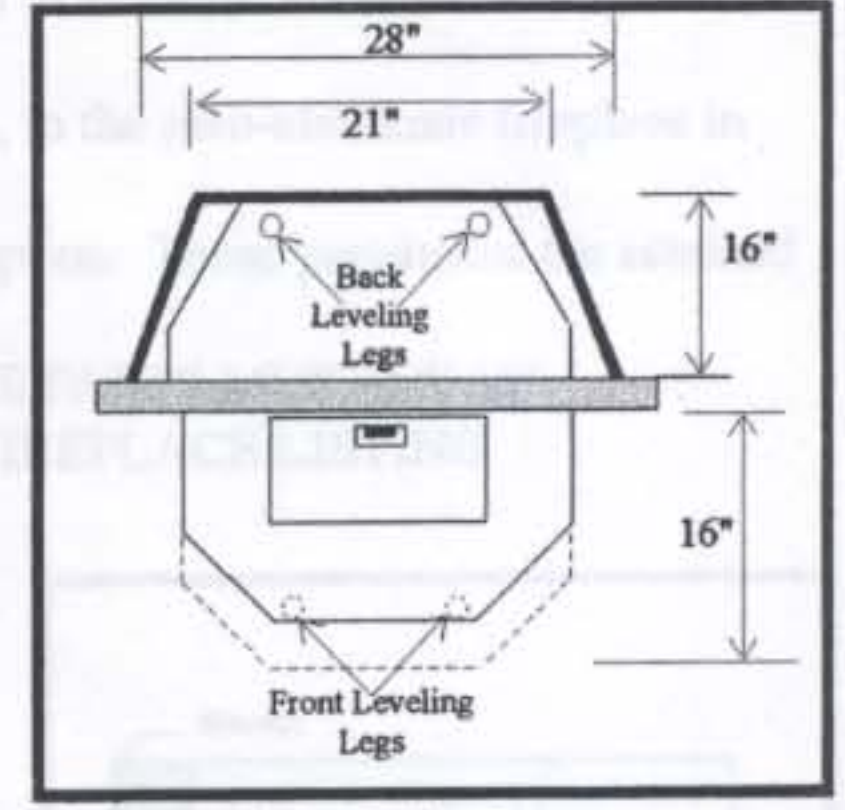
The diagrams on this page illustrate the correct installation of the Altair pellet stove into a masonry fireplace. Also shown are stove dimensions and clearance to combustibles.



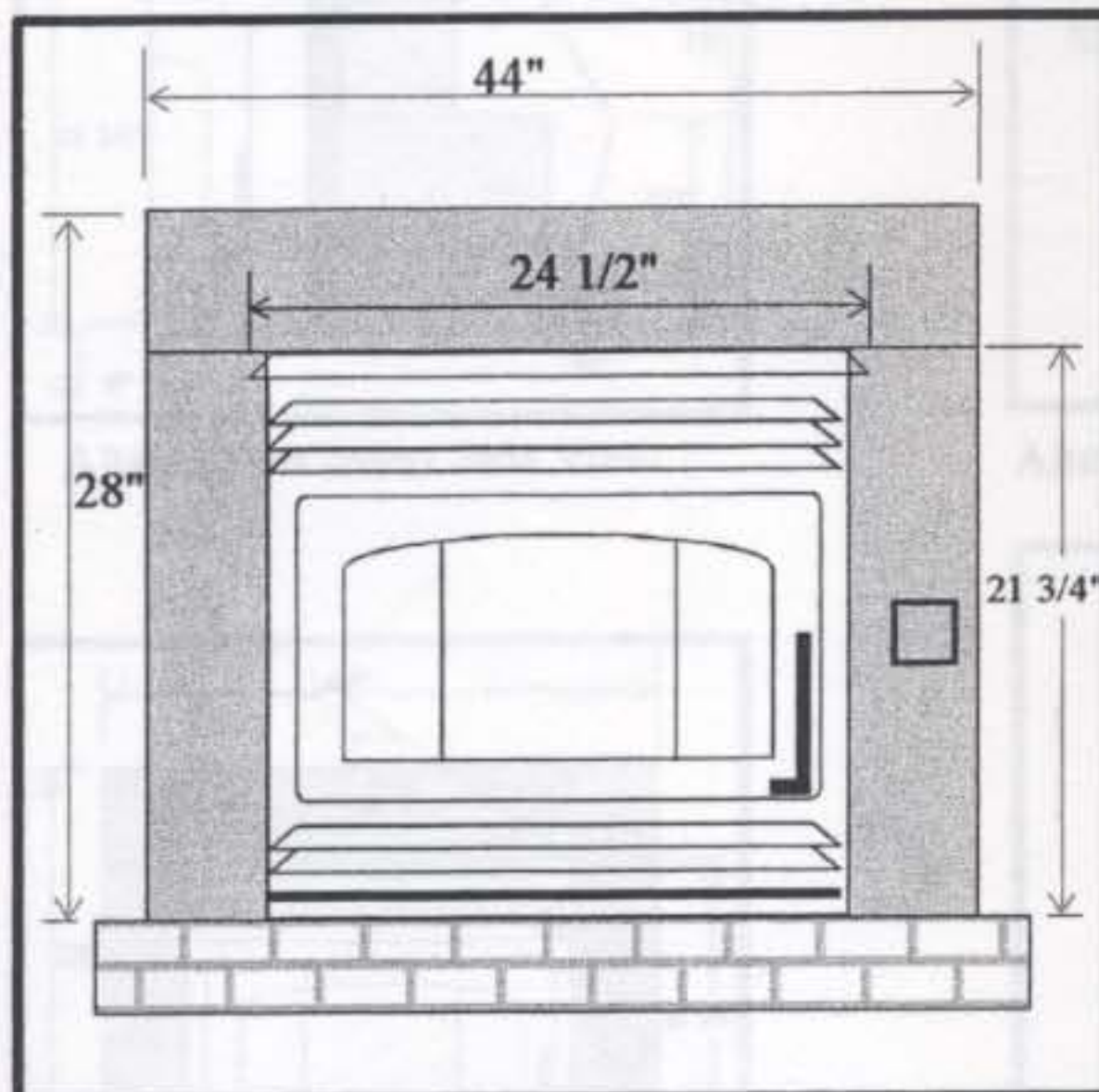
Altair Pellet Insert Side View



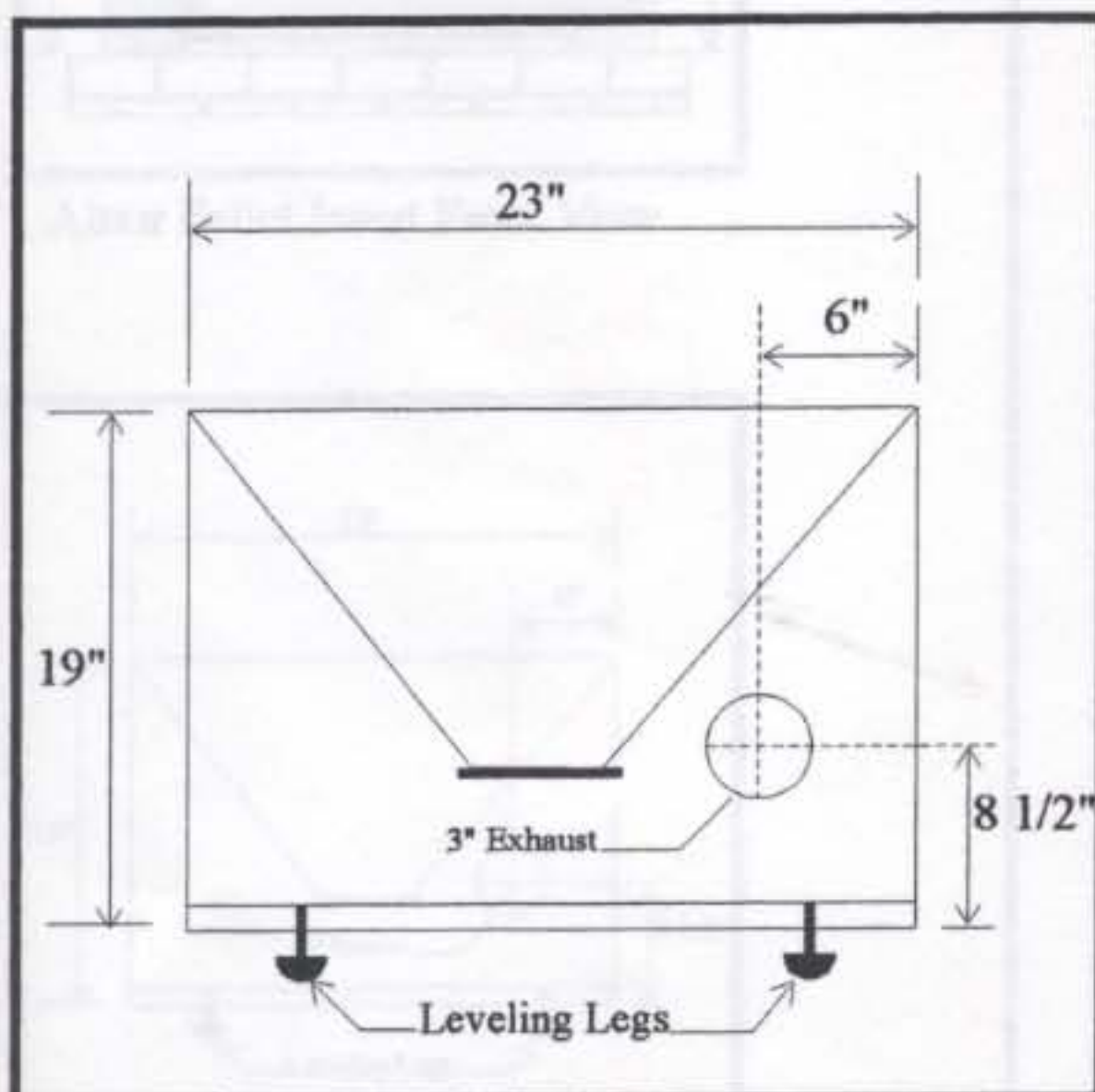
Clearances to Combustibles



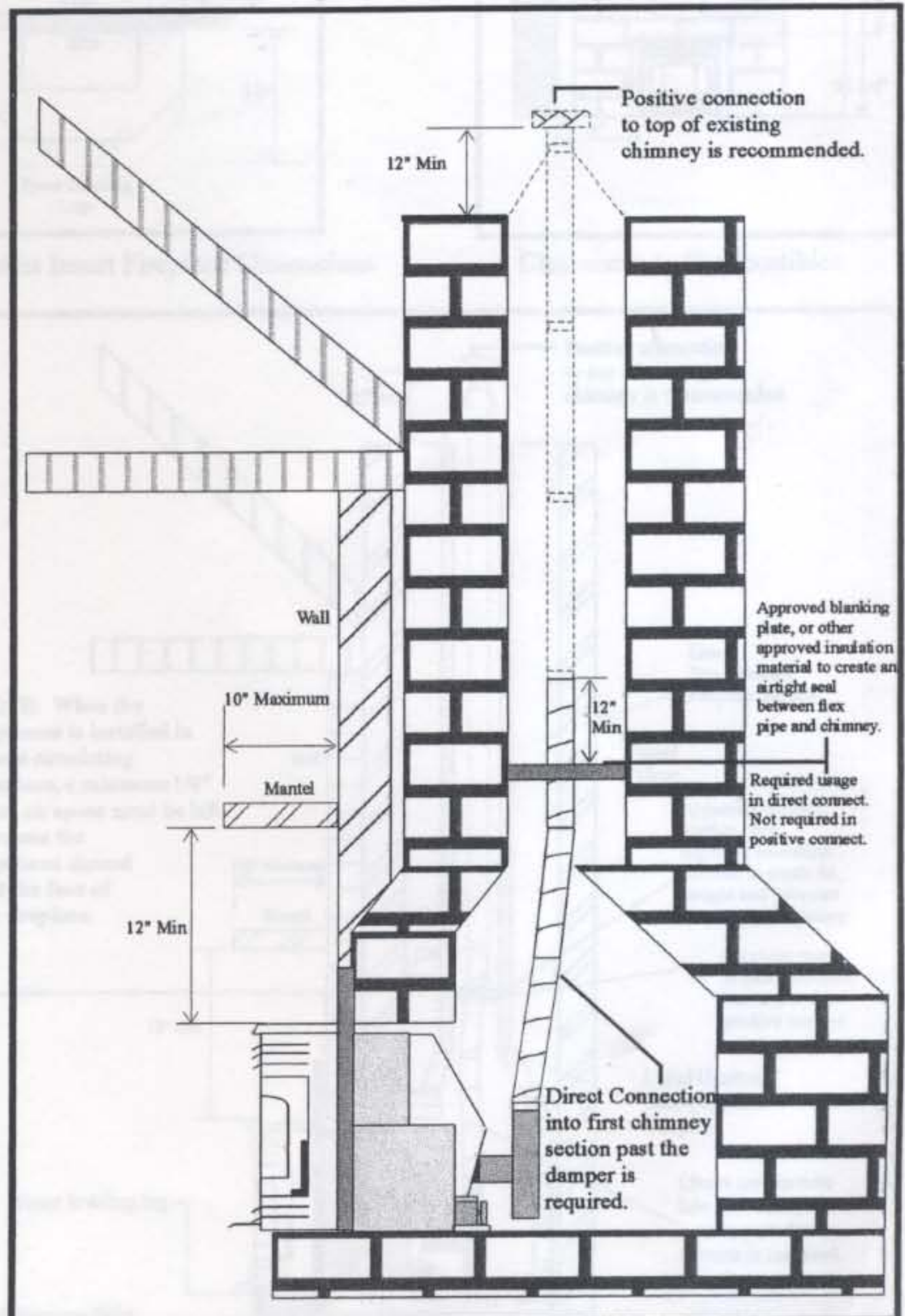
Altair Pellet Insert Fireplace Dimensions



Altair Pellet Insert Front View



Altair Pellet Insert Back View



Masonry Fireplace Installation

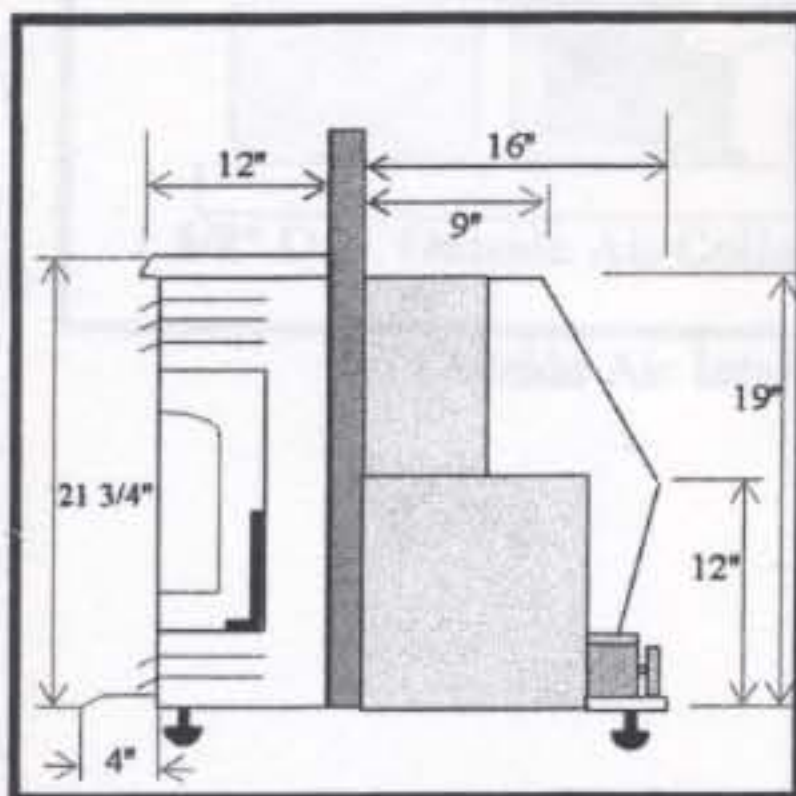
Altair Pellet Insert Installed Into A Zero-Clearance Fireplace:

The diagrams on this page illustrate the correct installation of the Altair pellet stove into a zero-clearance fireplace. Also shown are stove dimensions and clearances to combustible materials.

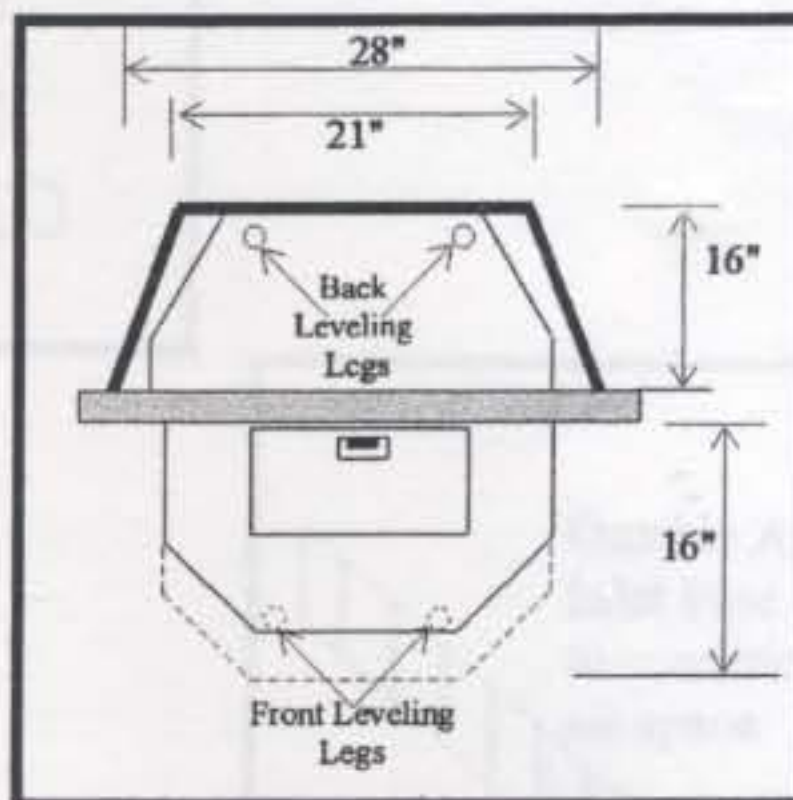
NOTE: Other than the removal of glass doors, no part or component of a zero-clearance fireplace shall be removed or modified in any way to accommodate the installation of the Altair pellet stove.

Exception: Glass door framework, ash lips, grates, dampers and smoke shelves may be removed to accommodate the installation of the Altair pellet stove provided the following conditions are met:

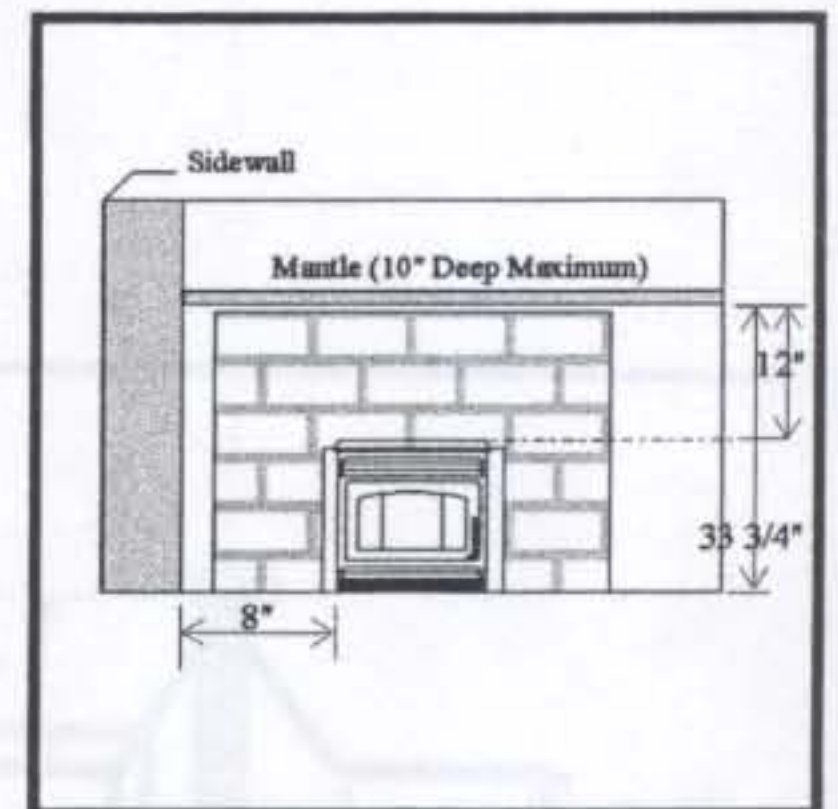
1. Parts must be removed in such a manner that they may be re-installed, without modification, in the zero-clearance fireplace in the event that the Altair pellet stove is removed.
2. Any removed parts must be labeled with the original manufacturer's part number and description. These parts must be retained by the home owner for potential re-installation.
3. If the Altair pellet stove is removed, ALL PREVIOUSLY REMOVED ZERO-CLEARANCE PARTS MUST BE RE-INSTALLED TO THE ORIGINAL CONFIGURATION PER THE ZERO-CLEARANCE FIREPLACE LISTING REQUIREMENTS.



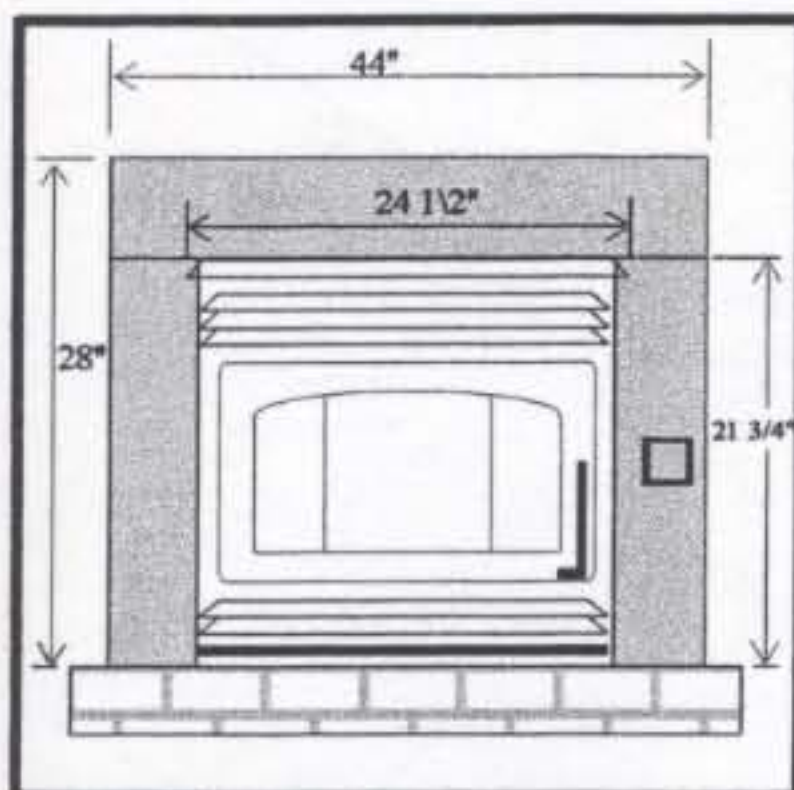
Altair Pellet Insert Side View



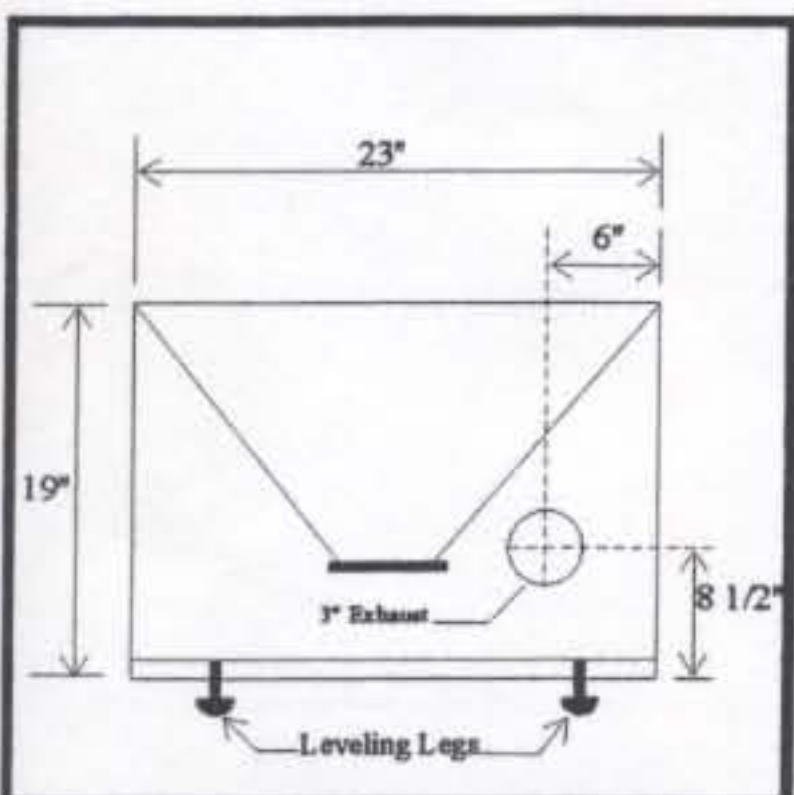
Altair Pellet Insert Fireplace Dimensions



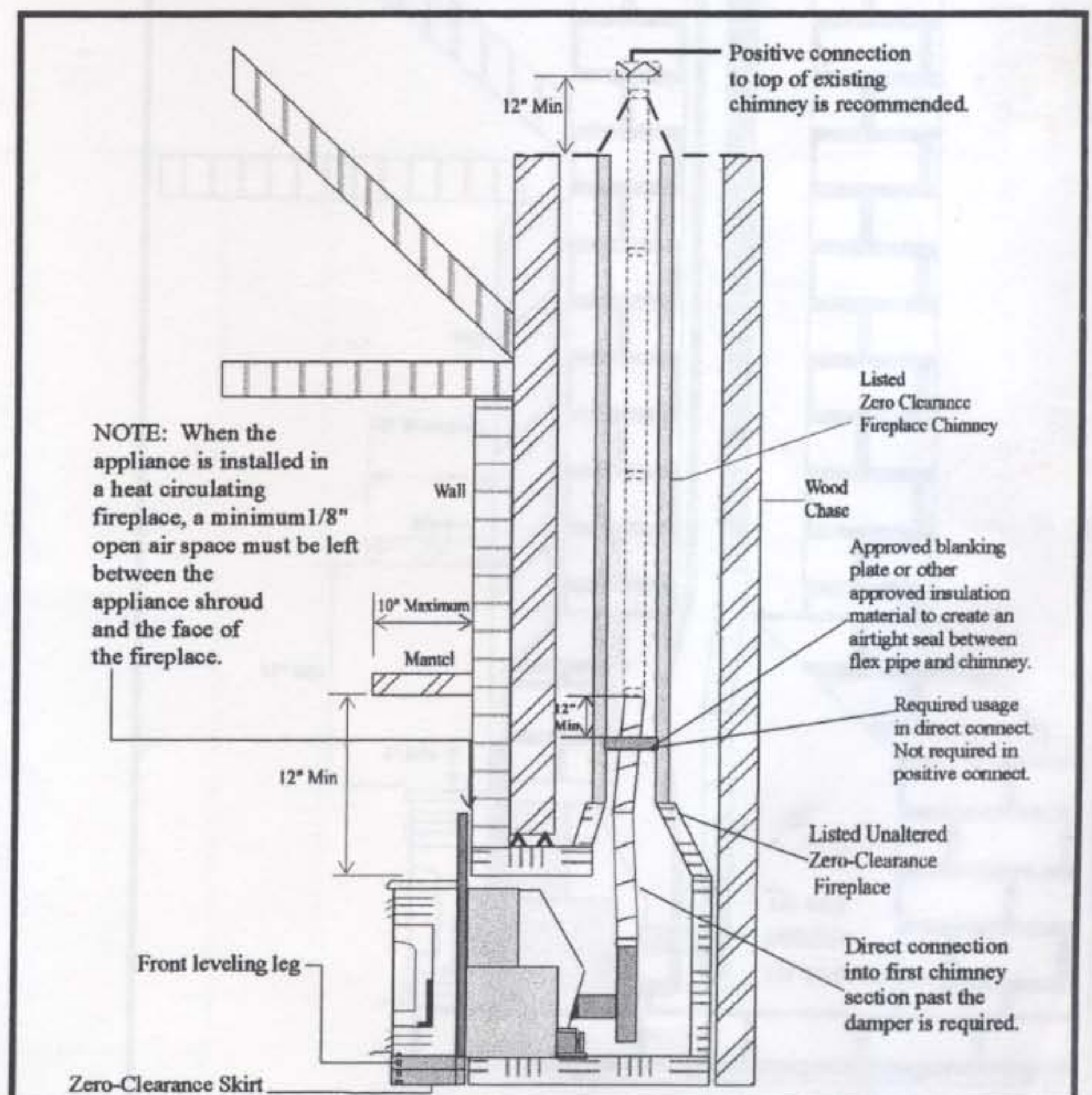
Clearances to Combustibles



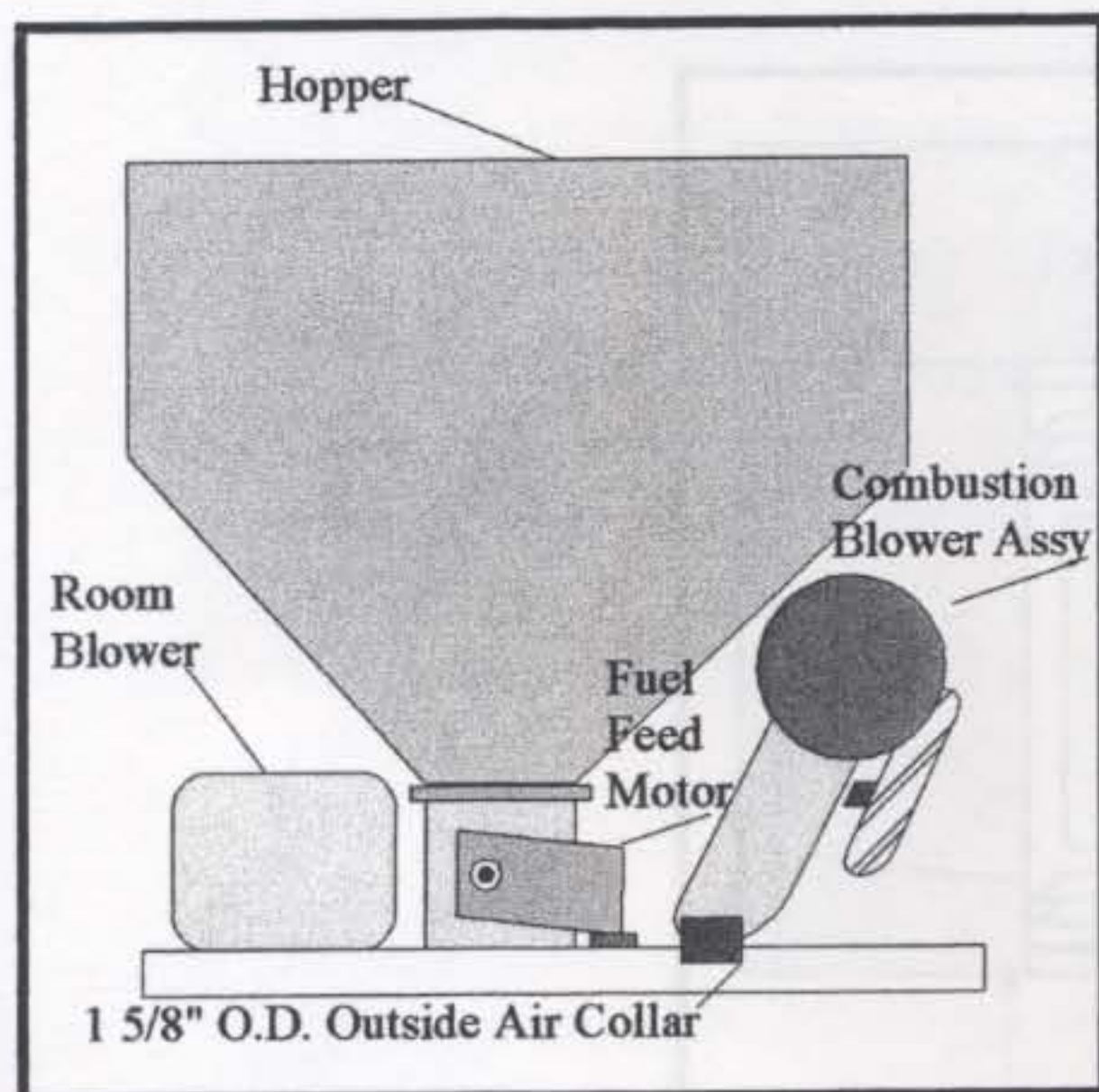
Altair Pellet Insert Front View



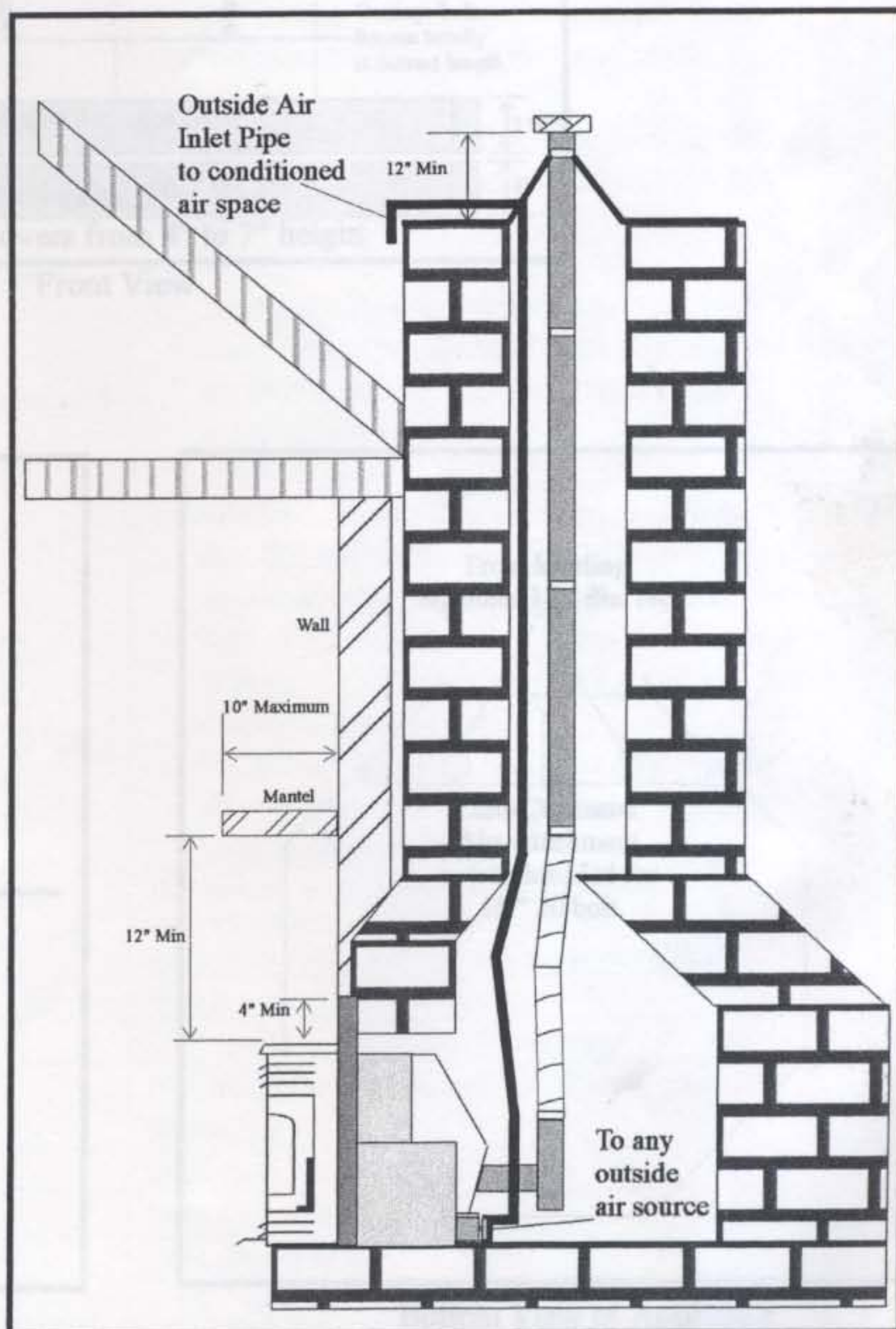
Altair Pellet Insert Back View



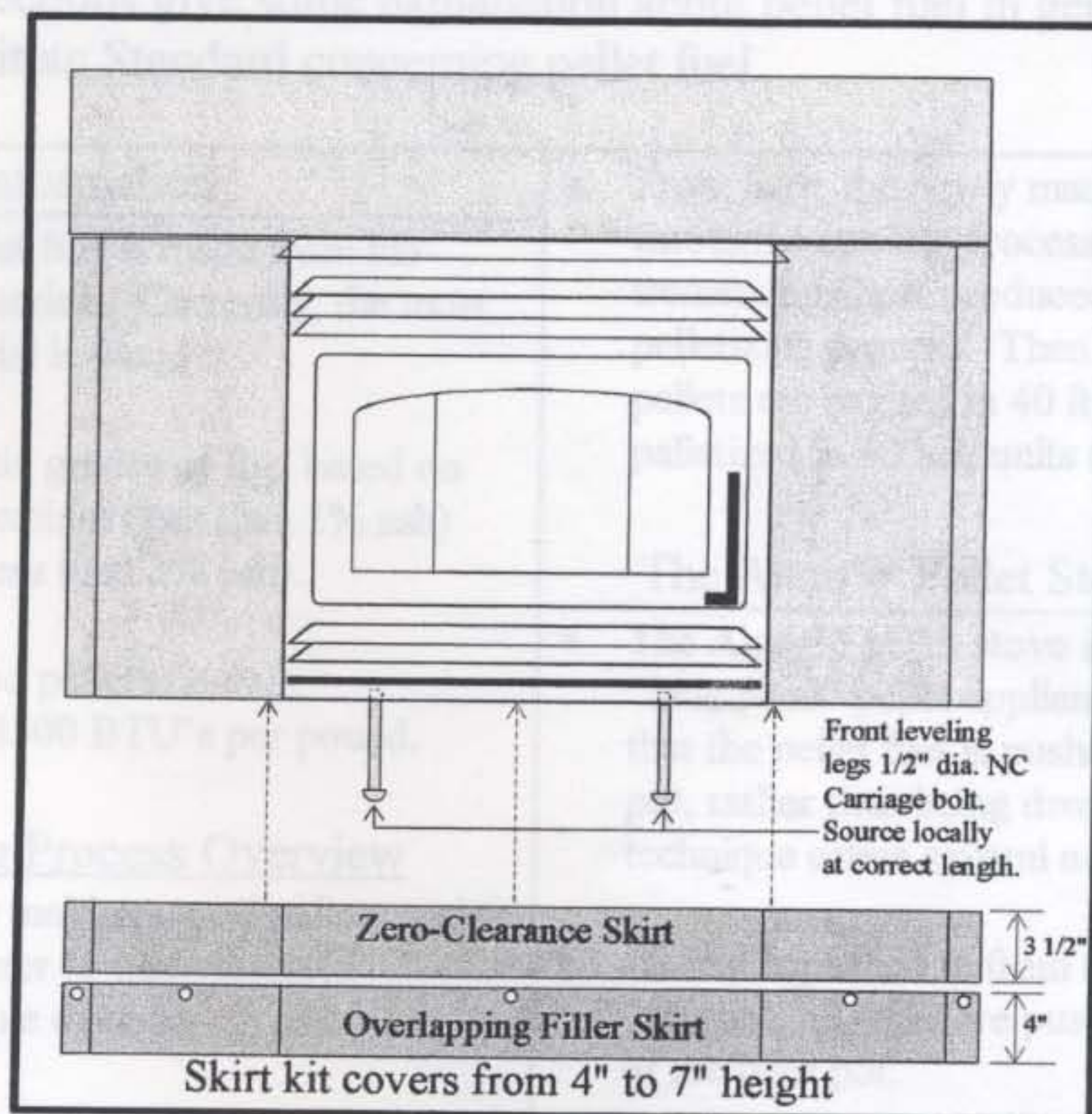
Zero-Clearance Fireplace Installation



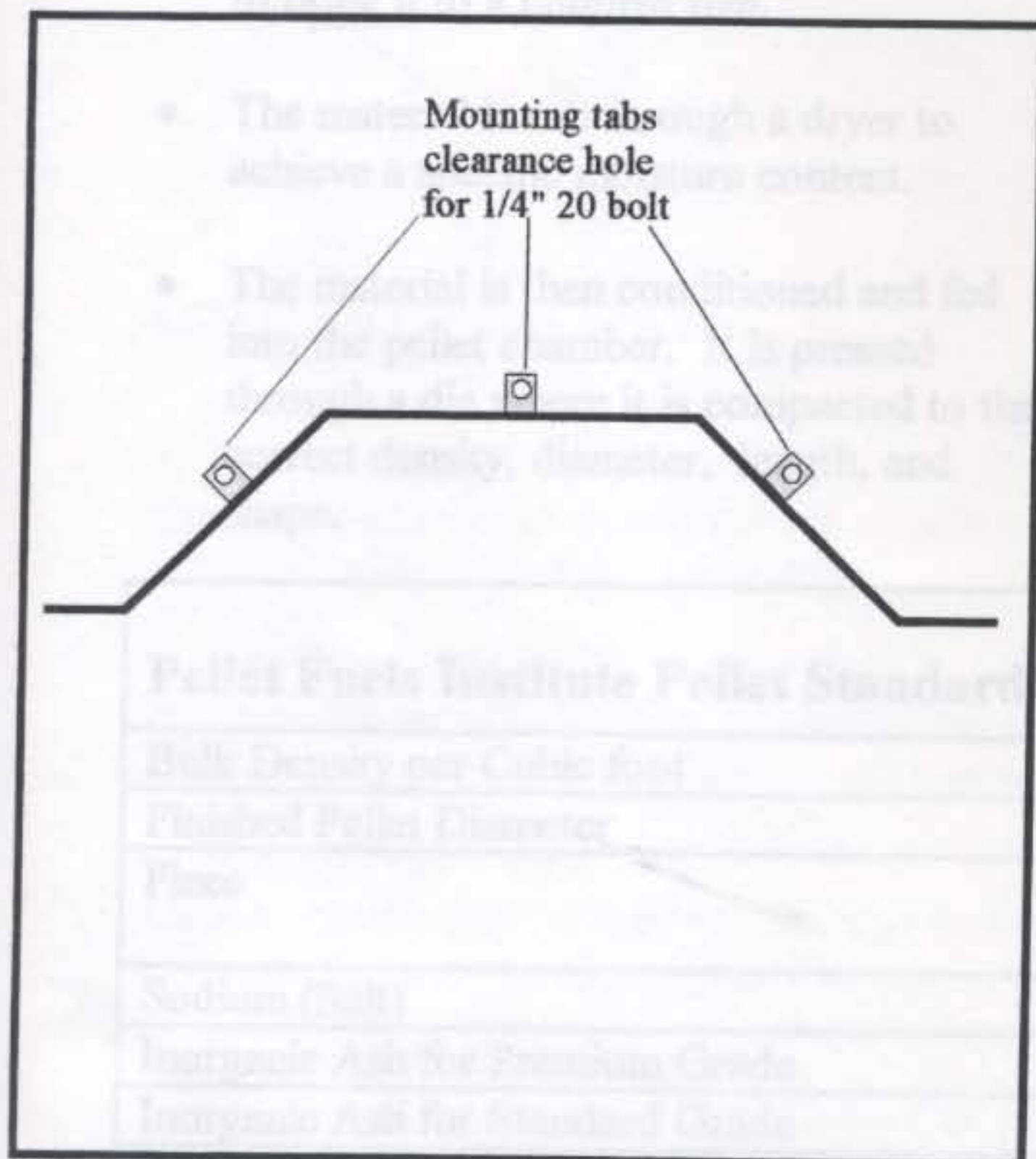
I-7 Outside Air Intake Collar



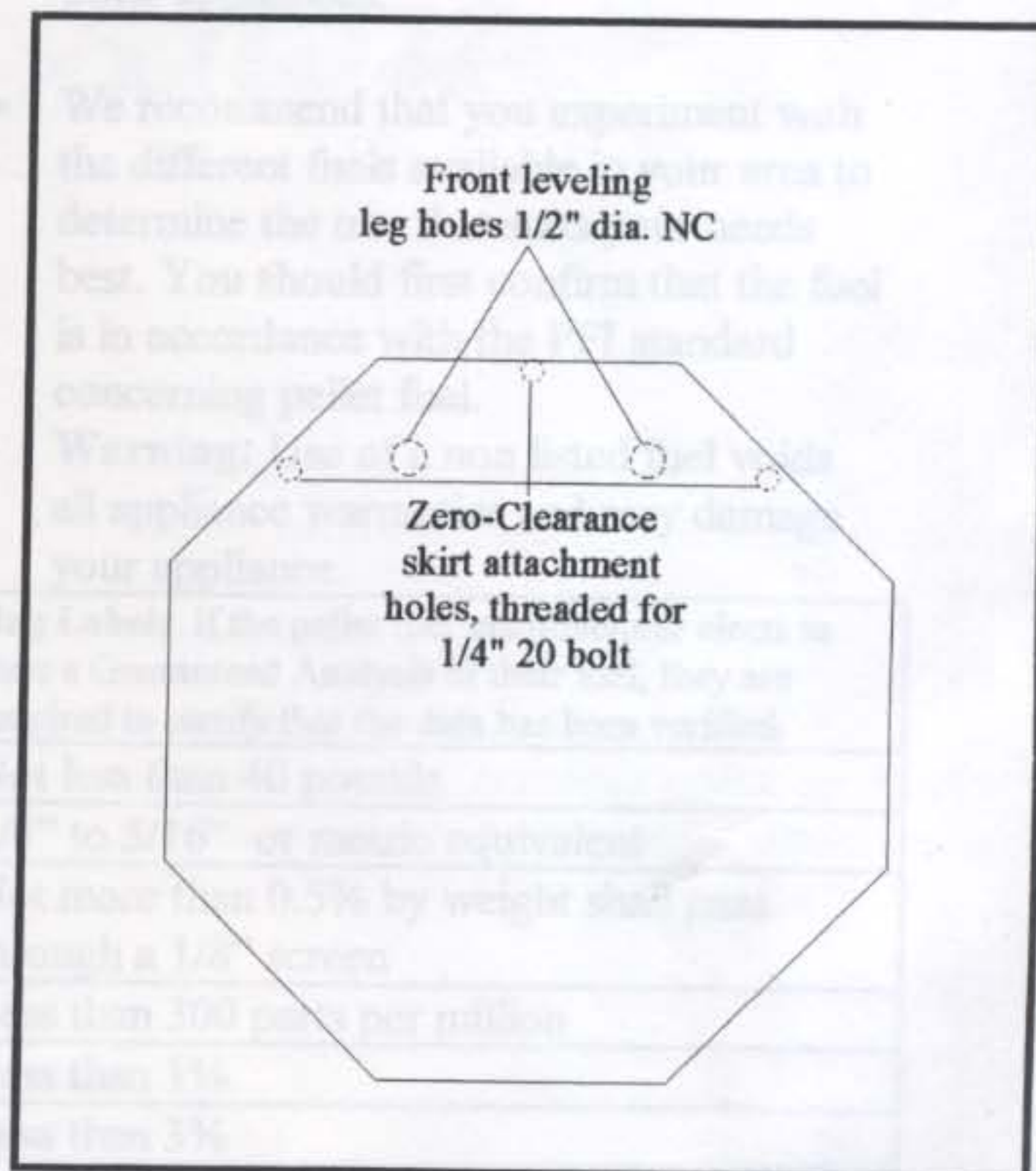
I-9 Outside Air on a Masonry Fireplace Insert Installation



Front View



Bottom View of Zero-Clearance Skirt



Bottom View of Appliance

The following sections give some explanation about pellet fuel in general, and the Pellet Fuels Institute Standard concerning pellet fuel.

General Pellet Information

- In general, pellet fuel is made from bio-mass waste materials. Currently, the most common material is wood.
- There are 2 basic grades of fuel based on ash content, premium (less than 1% ash) and standard (less than 3% ash).
- In general, wood pellets contain approximately 8500 BTU's per pound.

Pellet Making Process Overview

- The process for making wood pellets varies from manufacturer to manufacturer, however, a simple overview is offered here.
- Wood by-product is delivered to the pellet mill in bulk.
- The raw material is pulverized and screened to bring it to a uniform size.
- The material is run through a dryer to achieve a specific moisture content.
- The material is then conditioned and fed into the pellet chamber. It is pressed through a die where it is compacted to the correct density, diameter, length, and shape.

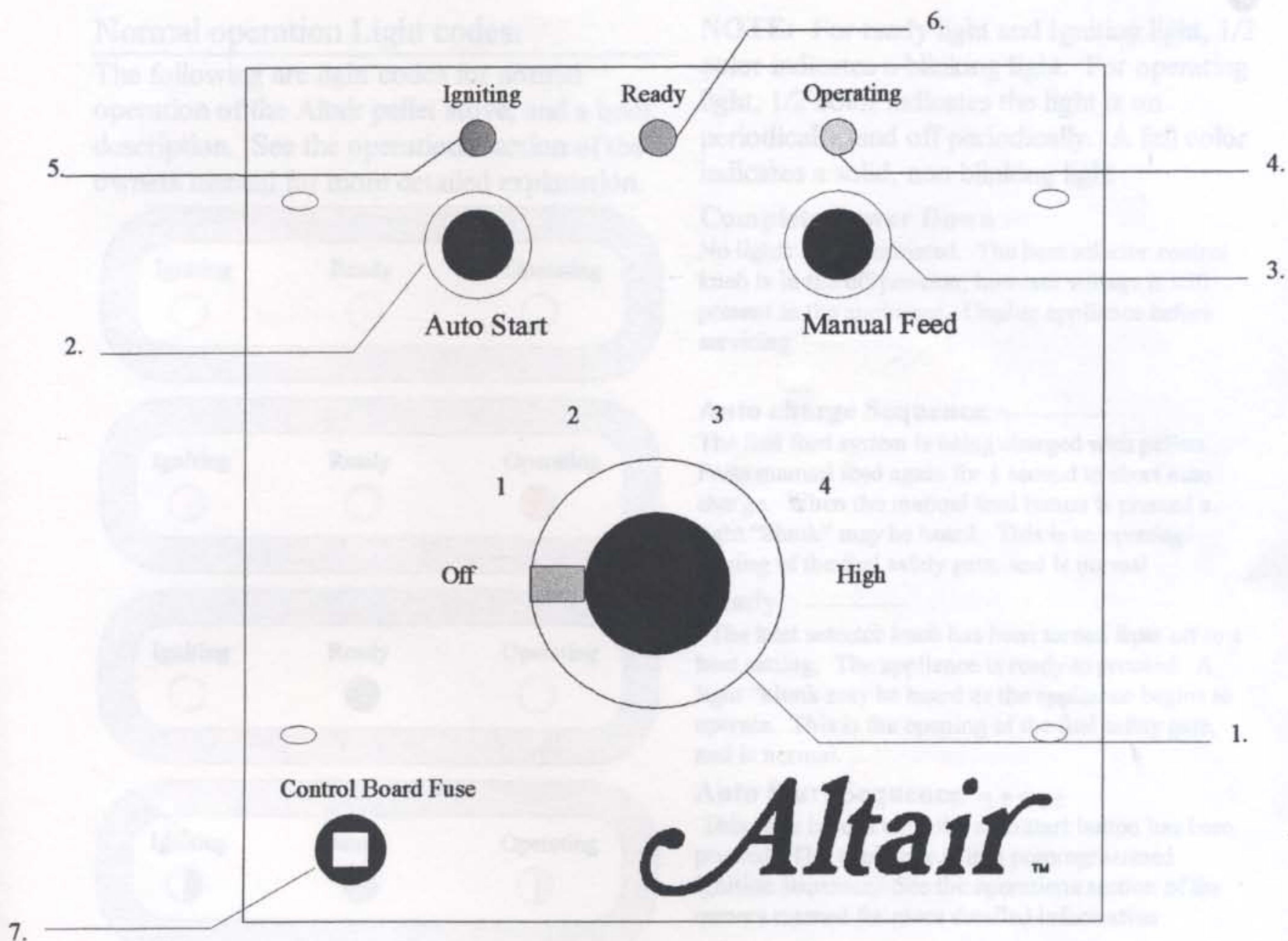
- From here, the newly made pellets are run through a cooling process, as there is tremendous heat produced in the pelletizing process. Then the hardened pellets are bagged in 40 lb. bags, and palletized in 50 bag units (1 ton).

The Altair™ Pellet Stove & Pellets

- The Altair™ pellet stove is considered a "Side Feed" pellet appliance. This means that the pellet fuel is pushed into the burn pot, rather than being dropped in. This technique offers several advantages.
- As fuel is pushed in from the back of the burn pot, residues are pushed out the front of the burn pot.
- This technique, combined with the Altair's unique burn pot design, helps to make the appliance less fuel sensitive than some other appliances.
- We recommend that you experiment with the different fuels available in your area to determine the one that suits your needs best. You should first confirm that the fuel is in accordance with the PFI standard concerning pellet fuel.

Warning: Use of a non listed fuel voids all appliance warranties and may damage your appliance.

Pellet Fuels Institute Pellet Standard	
Bulk Density per Cubic foot	Not less than 40 pounds
Finished Pellet Diameter	1/4" to 5/16" or metric equivalent
Fines	Not more than 0.5% by weight shall pass through a 1/8" screen
Sodium (Salt)	Less than 300 parts per million
Inorganic Ash for Premium Grade	Less than 1%
Inorganic Ash for Standard Grade	Less than 3%
Length of finished pellet (Maximum)	1 1/2" long or metric equivalent



LED means Light emitting diode

1. Heat Selector Control Knob

Controls heat settings during normal operation and is turned to off to shut appliance down.

2. Auto Start Button

Is pressed to activate ignition sequence after heat selector control knob is turned from off to a selection.

3. Manual Feed Button

Used to charge the fuel feed system, and to check if the fuel feed system is rotating.

4. Operating (Amber LED)

Lights up with an amber color when the fuel feed system is operating.

5. Igniting (Red/ Green LED)

Shows green when ignition sequence is operating. Is not lit during normal operation. Blinks red in a failed ignition.

6. Ready Light (Red/Green LED)

Shows green during normal operation. Blinks green during normal shutdown. Blinks red in lock-out mode situations.

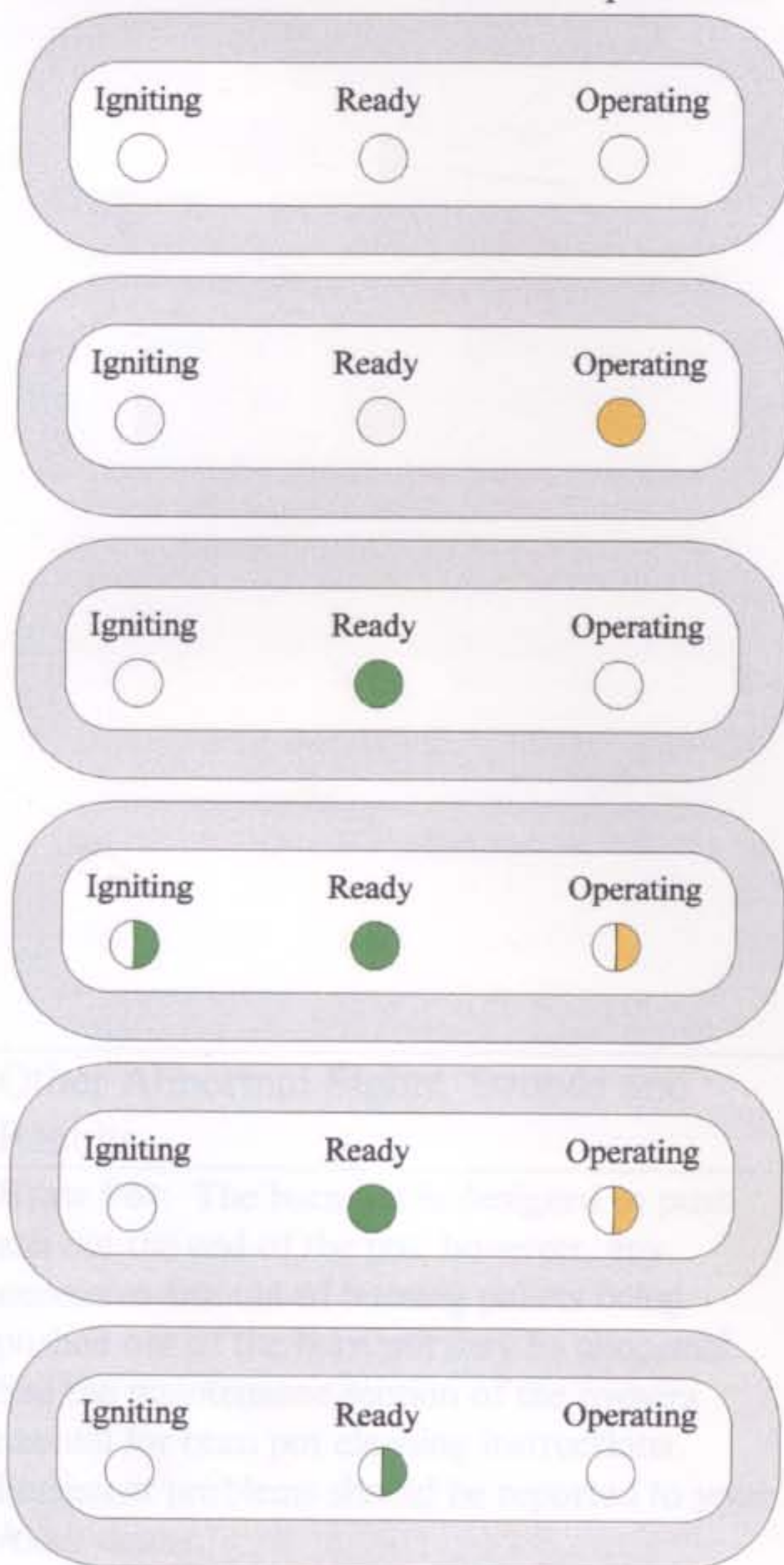
7. Control Board Fuse (Altair Part # AP-PE-CF)

Some protection for the electrical components against power surges, shorts, etc.

The following sections explain normal light codes, sights, sounds and results of burning the Altair pellet stove.

Normal operation Light codes:

The following are light codes for normal operation of the Altair pellet stove, and a brief description. See the operations section of the owners manual for more detailed explanation.



Glass: After some time, a gray/white haze may form on the glass. This is normal. This should be easily removed with a dry rag. Standard window cleaner (Windex etc.) may be used. See maintenance section of the owners manual for more detailed information concerning glass cleaning.

NOTE: For ready light and Igniting light, 1/2 color indicates a blinking light. For operating light, 1/2 color indicates the light is on periodically, and off periodically. A full color indicates a solid, non blinking light

Complete Power Down .

No lights are illuminated. The heat selector control knob is in the off position, however voltage is still present in the appliance. Unplug appliance before servicing

Auto charge Sequence. ———

The fuel feed system is being charged with pellets. Press manual feed again for 1 second to abort auto charge. When the manual feed button is pressed a light "klunk" may be heard. This is an opening/closing of the fuel safety gate, and is normal

Ready. ———

The heat selector knob has been turned from off to a heat setting. The appliance is ready to proceed. A light "klunk" may be heard as the appliance begins to operate. This is the opening of the fuel safety gate, and is normal.

Auto Start Sequence.

This code is seen once the auto start button has been pressed. The appliance is in a preprogrammed ignition sequence. See the operations section of the owners manual for more detailed information

Full Automatic. ———

This light code is seen during normal operation of the appliance. The unit has completed the auto start sequence. See the operations section of the owners manual for more detailed information.

Shutdown Sequence.

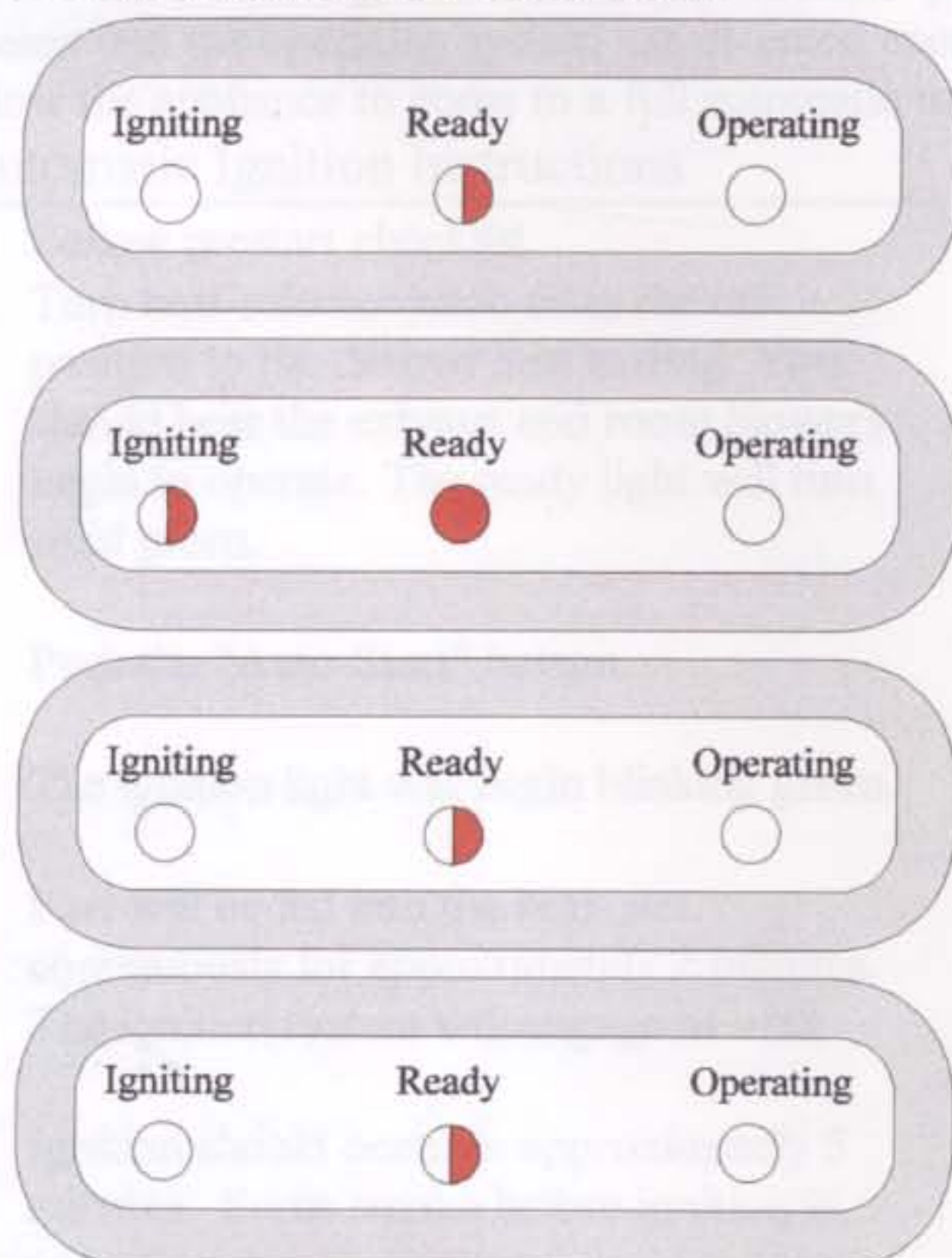
The heat selector knob has been turned to off or the thermostat has timed out. The appliance is in preprogrammed shutdown sequence. See the operations section of the owners manual for more detailed information. A light "klunk" may be heard at the end of the shut down sequence. This is the safety fuel gate closing, and is normal.

Burn Pot: Due to variations in pellet quality, you may find some "clinker" (hard solid residue) in the burn pot. This is normal and should be removed from the burn pot. See the maintenance section of the owners manual for more detailed information on burn pot cleaning.

The following sections explain some of the abnormal light codes, sights, sounds and results of burning the Altair pellet stove.

Abnormal Operation Light Codes:

The following are light codes for abnormal operation of the Altair pellet stove, and a brief description. See the trouble shooting section of the owners manual for more details.



NOTE: For ready light and Igniting light, 1/2 color indicates a blinking light. For operating light, 1/2 color indicates the light is on periodically, and off periodically. A full color indicates a solid, non blinking light

Proof of Fire Switch Open. ●● ●●

Light is blinking 2 short blinks, pause, 2 short blinks. Most common cause: The appliance has run out of pellets. See trouble shooting section of the owners manual for more causes and possible solutions.

Failed Ignition Scenario. ●● ●●

Igniting light is blinking 2 short blinks, pause, 2 short blinks. Ready light is solid red. Most common cause: Appliance has run out of pellets. See trouble shooting section of the owners manual for more causes and possible solutions

Vacuum Switch Failure. ● — ● —

Ready light is blinking 1 short blink, 1 long blink, pause, 1 short blink 1 long blink. Most common cause: The door was opened during operation. See trouble shooting section of the owners manual for more causes and possible solutions.

High Limit Switch Open. — — — —

Ready light is blinking 2 long blinks, pause, 2 long blinks. Most common cause: Appliance has overheated. See the trouble shooting section of the owners manual for more details.

Other Abnormal Sights, Sounds and Results.

Burn Pot: The burn pot is designed to push ash out the end of the pot, however, any excessive amount of burning pellets being pushed out of the burn pot may be abnormal. See the maintenance section of the owners manual for burn pot cleaning instructions. Persistent problems should be reported to your Altair dealer.

Glass: Any coating on the glass that is extremely difficult to remove, or rapid blackening of the glass may be abnormal. See the maintenance section (50 bag and 100 bag cleaning sections) of the owners manual for more detailed information. Ongoing problems should be reported to your Altair dealer.

Fuel Feed System: Any persistent squeaking during fuel delivery may be abnormal and should be reported to your Altair dealer.

Note: If this is the first time the appliance has been burned, or if it has run out of pellets, it is necessary to *charge* the fuel feed system. To do this, fill the hopper with pellets. Have the heat selector knob in the off position. Press the manual feed button for at least 3 seconds. This will engage an automatic sequence that will run the fuel feed in a continuous mode for approximately 5 minutes. This procedure may be aborted at any time by pressing the manual feed button again. Abort when you see fuel being dispensed into the burn pot.

Note: The following instructions use the term "proof of fire" several times through out. This term means that the operating system has detected enough heat and flame to sustain combustion, and will allow the appliance to come to a full automatic mode.

Automatic Ignition Instructions

- Follow prestart checklist
- Turn heat selector knob from the off position to the desired heat setting. You should hear the exhaust and room blowers begin to operate. The ready light will turn solid green.
- Push the "Auto Start" button.
- The ignition light will begin blinking green.
- Fuel will be fed into the burn pot continuously for approximately 2 minutes. The ignition system will engage as well.
- Ignition should occur in approximately 5 minutes. Some smoke before ignition is normal.
- After 6 minutes of elapsed time, you will notice pellets being dispensed for approximately 1 minute every other minute. This will continue until the appliance reaches the "proof of fire" temperature and comes to the "Full automatic mode".
- When proof of fire is achieved, the fuel feed system will begin feeding pellets approximately every 10 seconds and the blowers will adjust to the heat selector knob setting.

Note: If the appliance fails to ignite, or to reach proof of fire within 20 minutes, it will shut down, the ready light will be red and the ignition light will be blinking red. Turn the heat

selector knob to the off position and then back on to reset the system.

Manual Ignition Instructions

(To be used only if the automatic ignition system is inoperative)

- Follow prestart checklist.
 - Turn the heat selector knob from the off position to the #2 heat setting. You should hear the exhaust and room blowers begin to operate. The ready light will turn green.
 - Do *NOT* push the "Auto Start" button.
 - Fill the burn pot with approximately 1/2 cup of pellets.
 - Apply approved pellet fire starter, light the pellets, close and latch the door.
- Warning:** Use only an approved pellet stove fire starter. Never use gasoline, kerosene, or charcoal lighter fluid to light your appliance.
- After the pellets are burning well, it may be necessary to use the manual feed button to add more pellets to the burn pot. Continue to manually add pellets as needed until the stove achieves "proof of fire".

- When proof of fire is achieved, the fuel feed system will begin feeding pellets approximately every 10 seconds and the blowers will adjust to the heat selector knob setting.

Manual Operation

Once the stove has completed the ignition sequence and the proof of fire has engaged, the stove is in the normal operation or "Full automatic" mode. This is identified by the operating light illuminating every ten seconds for a period of time (1.8 to 6 seconds, depending on heat setting).

- This mode is controlled by setting the heat selector control knob to the desired heat setting. As this is done, you will hear the blowers increase or decrease in speed. You will also notice the rotation of the feed system will be more or less frequent, depending on the selection.

Thermostat Operation

Although your Altair™ pellet stove is not provided with a thermostat direct from the factory, it may be used with any low voltage heat only thermostat. A bulb style thermostat is recommended for more accurate heat control. A programmable thermostat may be used to further enhance your climate control capabilities.

Installation of the thermostat is covered in the installation section of this manual.

If a thermostat has been installed, use the following operation procedure.

- Set the heat selector control knob in the off position. Follow the prestart checklist.
- Turn the heat selector knob from the off position to the desired heat setting. To ignite the appliance, follow the ignition instructions in this manual.

Caution: When the stove is plugged in and the heat selector knob is turned to any heat setting, the auto start system will engage whenever the thermostat calls for heat.

- Adjust the thermostat to the desired temperature setting.

Note: When a thermostat is used, the stove will toggle between low burn and whatever setting the heat selector knob selection is. You will want to experiment with the heat settings to determine which setting best suits your heating requirements.

Normal operation for the thermostat mode

- The appliance will go into the auto ignition sequence when the thermostat calls for heat. Once the thermostat is satisfied, the appliance will go to the lowest heat setting. It will remain at the lowest setting until the thermostat calls for heat again, or for 3 hours. If the thermostat has not called for heat in 3 hours, the appliance will go into the shutdown sequence. The appliance will go into the auto ignition sequence again when the thermostat calls for heat.

Note: If the heat selector control knob is turned to the off position, when it is turned back to a heat selection setting, it will be necessary to push the "Auto Start" button to re-ignite the appliance.

Shutdown Procedure

To shut down your appliance, use the following procedure:

- Turn the heat selector knob to the OFF position. The fuel feed system will stop feeding fuel into the burn pot, the combustion blower will come to line voltage and the convection blower will slow down. The ready light will blink green.
- This will continue for 35 minutes. Then the system will completely power down. **Note:** During shutdown, pellets may burn into the first rotation of the auger flights. This is normal and is not a safety issue.

Power Outages

- If there is a momentary (less than 6 to 10 seconds) loss of power, your stove will continue to operate without interruption.
- If the power is interrupted for longer than 6 to 10 seconds, the following will occur in either the manual or thermostat mode.
- When the power is restored to the appliance, it will go into the auto ignition sequence, and resume normal operation.

Note: If the stove is in thermostat mode and the thermostat is not calling for heat, the stove will not ignite until the thermostat calls for heat.

Per 10 Bag Maintenance

- Turn the heat selector knob to the off position and allow the stove to complete its normal shutdown procedure.
- Open the front door to access the combustion chamber (the ash collection area around the burn pot) and, using heat-protecting gloves, remove the burn pot and clean. (See diagram 14-1). **Note:** Take care with the underside and back of the burn pot as the ignition elements and electrical connection are exposed when the burn pot is removed. Either could be damaged if the burn pot is handled roughly. Do not hang on the burn pot to remove debris. Use a soft wire brush.
- Scoop the fly ash from the combustion chamber. You may also vacuum this area, provided you are using an approved ash removal vacuum. Consult your Altair™ pellet stove dealer about obtaining a vacuum that has been designed for ash removal.

Caution: Ashes should be placed in a metal container with a tight fitting lid. Container should be placed on a non-combustible surface or on the ground, well away from all combustibles. Ashes should be allowed to cool completely before final disposal.

- After the door glass has cooled to room temperature, clean the inside and outside of the glass. Any "over the counter" glass cleaner is acceptable. For stubborn spots use 000 steel wool.

- All pellet stoves, like all cars, require some maintenance. However, your Altair™ pellet stove has been designed and engineered to reduce maintenance levels to a minimum. By following the maintenance schedule outlined here, you will help ensure that your Altair™ pellet stove will provide you with years of dependable and reliable service.
- It is important to understand that maintenance of a pellet stove is greatly affected by the quality of the fuel you are using. Just as there are different grades of gasoline for your car, there are different grades of pellets. Some will produce more fly ash, fines and clinker than others will. Some may appear to give more heat than others do. You may want to try different brands of pellets to determine the one that best suits your heating needs.
- Areas of maintenance: Glass, Burn Pot, Hopper, Combustion Chamber, Heat Exchanger, Convection Blower, Exhaust and Convection Passageways, and Chimney System.

Note: Because of the broad range of climates the Altair™ pellet stove is used in, the maintenance schedule is broken down by bag usage rather than weekly, monthly, etc.

Per 1 Bag Maintenance

- Opening the hopper lid to add pellets also operates a scraper that cleans most of the heat exchanger.

- *Optional:* Clean glass

Caution: Before performing this procedure, the stove should be run through the shutdown sequence, and be cool.

Per 10 Bag Maintenance

- Turn the heat selector knob to the off position and allow the stove to complete its normal shutdown procedure.
- Open the front door to access the combustion chamber (the ash collection area around the burn pot) and, using heat-protecting gloves, remove the burn pot and clean. (See diagram M-1). **Note:** Take care with the underside and back of the burn pot as the ignition elements and electrical connection are exposed when the burn pot is removed. Either could be damaged if the burn pot is handled roughly. Do not bang on the burn pot to remove debris. Use a soft wire brush.
- Scoop the fly ash from the combustion chamber. You may also vacuum this area, provided you are using an approved ash removal vacuum. Consult your Altair™ pellet stove dealer about obtaining a vacuum that has been designed for ash removal.

Caution: Ashes should be placed in a metal container with a tight fitting lid. Container should be placed on a non-combustible surface or on the ground, well away from all combustibles. Ashes should be allowed to cool completely before final disposal.

- After the door glass has cooled to room temperature, clean the inside and outside of the glass. Any "over the counter" glass cleaner is acceptable. For stubborn spots use 000 steel wool.

Per 50 Bag (1 ton) Maintenance

Additions

- Remove the ash cover plate, located in the back of the combustion chamber, just above the burn pot, and clean any fly ash from this area. (See diagram M-2).

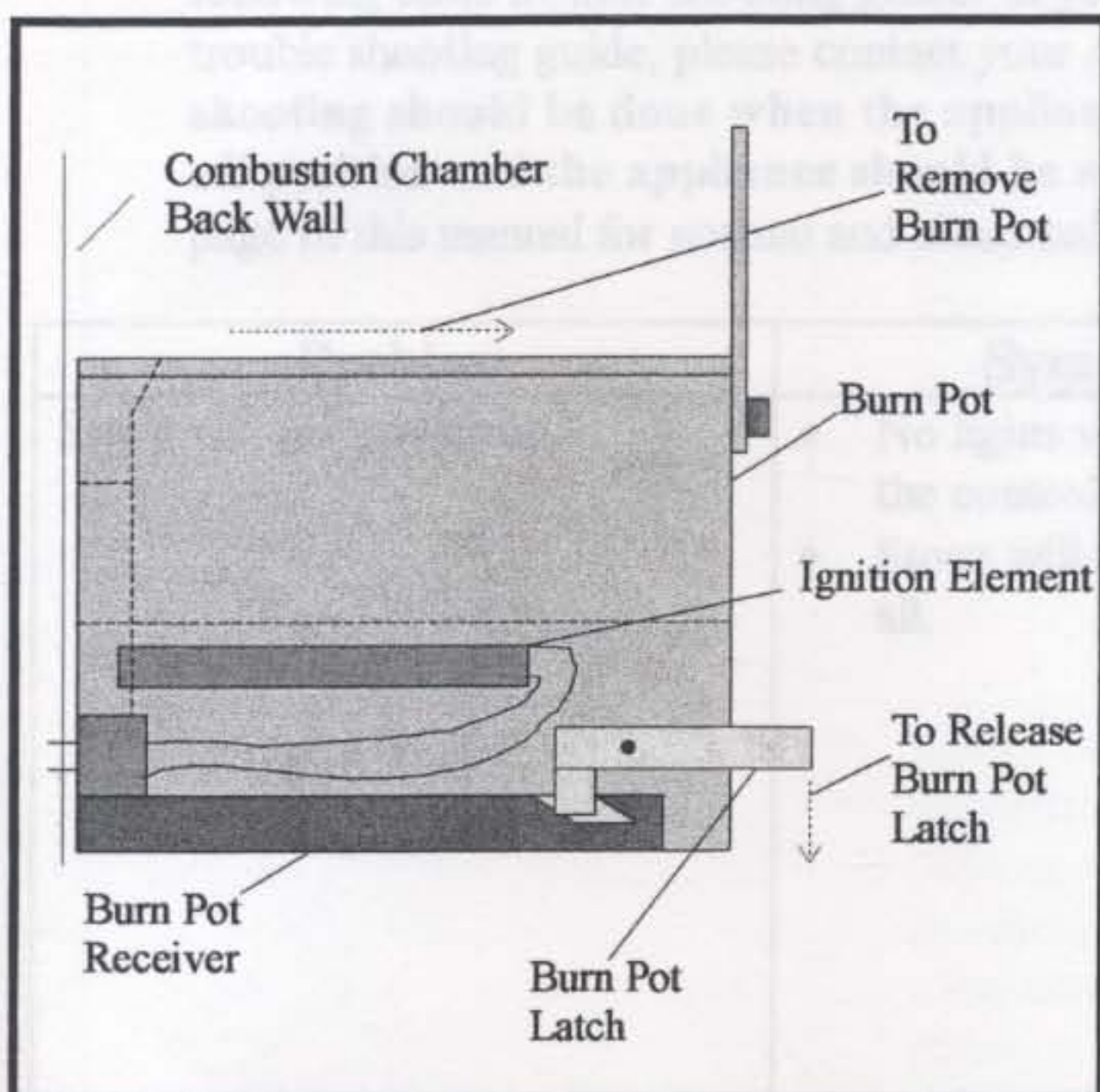
Per 100 Bag (and at the end of the burning season) Maintenance

Additions

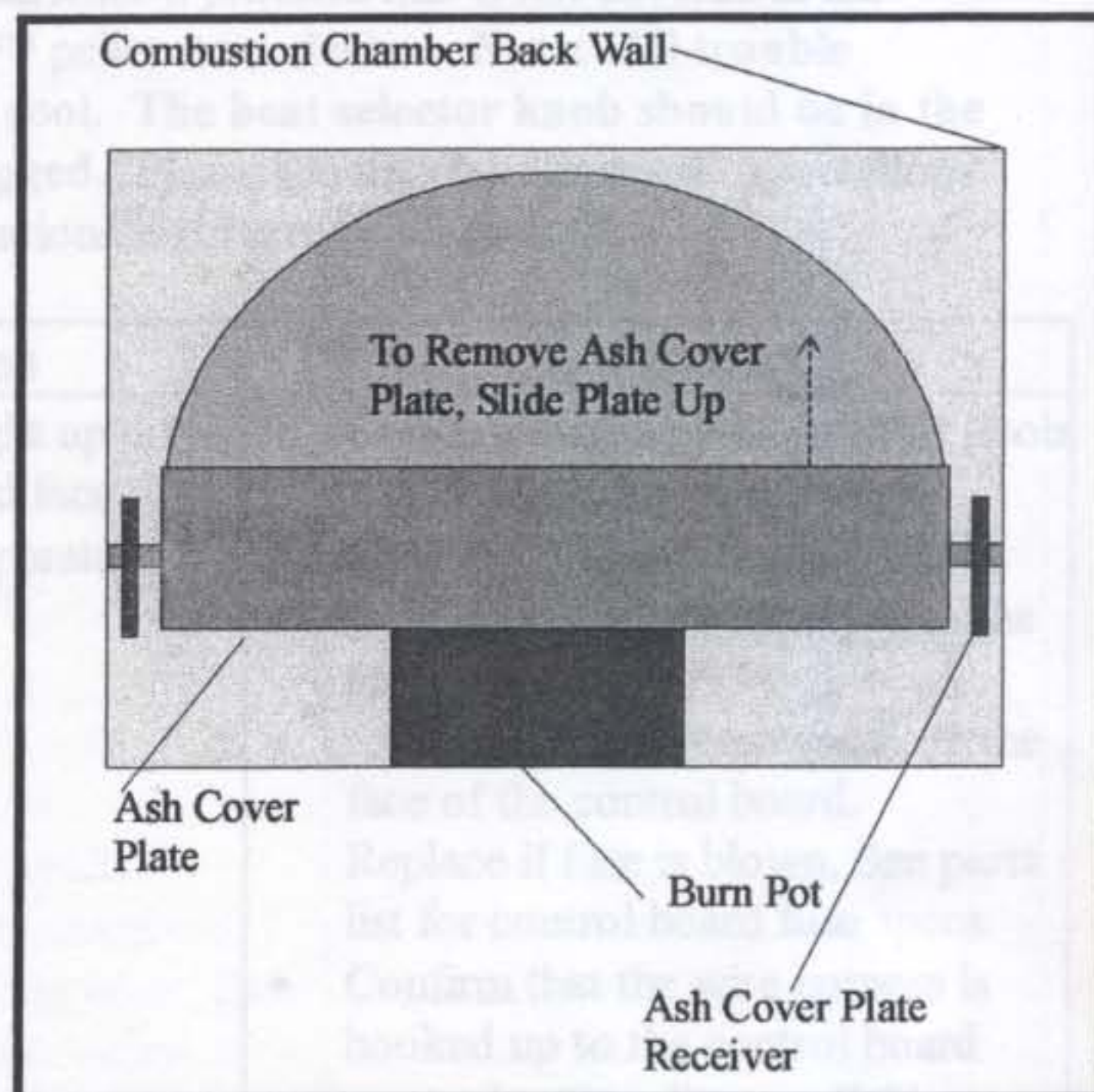
Warning: Before any maintenance is performed, the appliance should be cool, the heat selector knob should be in the off position and the appliance should be unplugged.

- Open the side panels. Remove the end caps, located on either side of the stove (See diagram M-3) and clean both passageways.
- Examine the end cap gaskets for deterioration and replace with approved gasket if necessary.
- Re-install the end caps. Do not over tighten the end cap bolts.
- On the right hand side of the stove, release the latch on the convection blower and remove it from the appliance. This is accomplished by releasing the quick disconnect latch on the blower housing, and tipping the blower up and out of the specially designed attachment flange.
- Clean the squirrel cage impeller and re-install. **Note:** The convection blower used in your Altair™ pellet stove is a sealed ball bearing type. No lubrication is necessary or recommended.

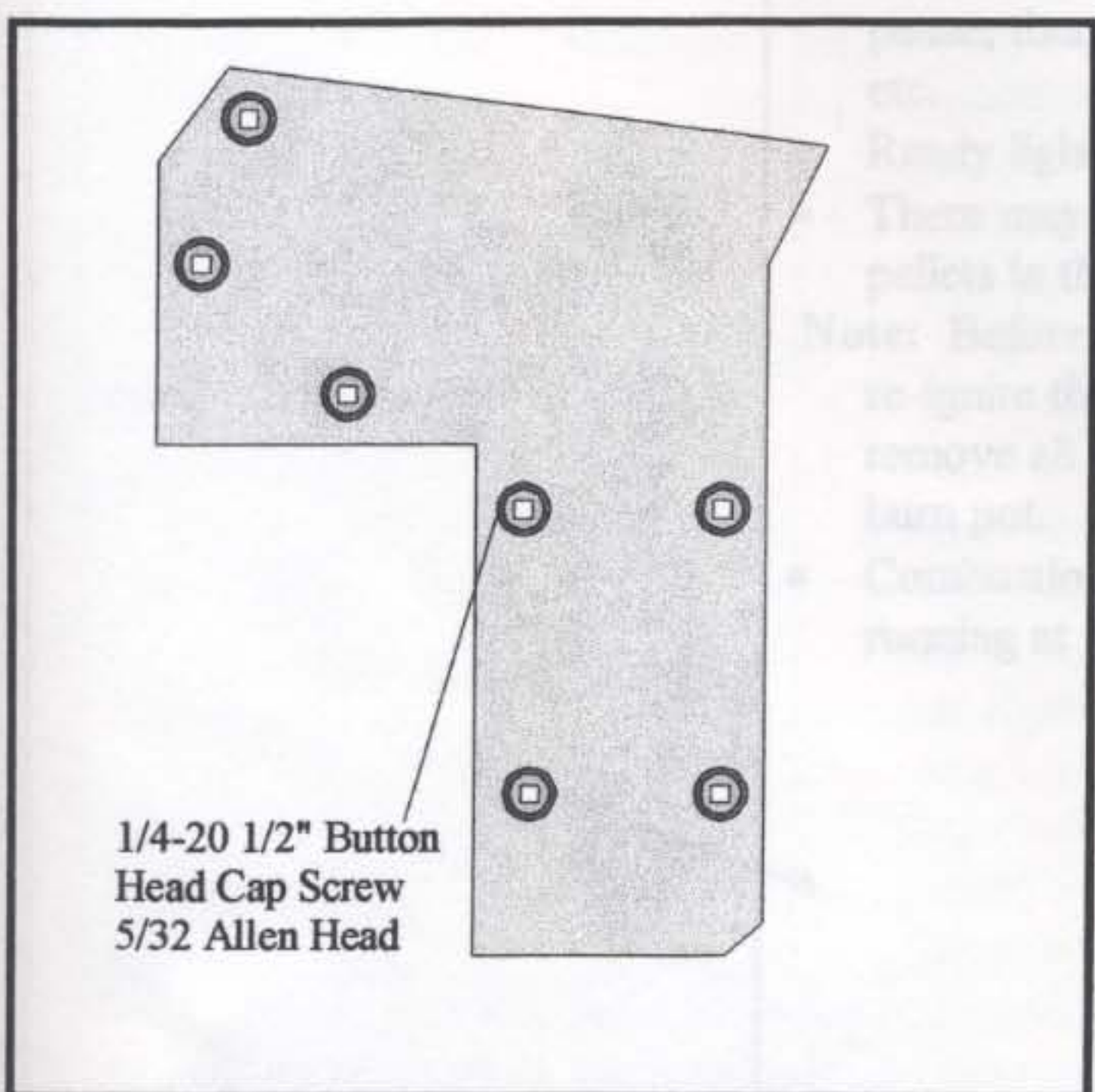
- On the left-hand side of the stove, remove the combustion blower from the aluminum casting. It is not necessary to remove the aluminum casting. (See diagram M-4.)
- Examine the combustion blower motor gasket for deterioration and replace with approved gasket if necessary. Clean out the inside of the combustion blower casting. Clean the impeller blades and re-install. **Note:** The combustion blower used in your Altair™ pellet stove is a sealed ball bearing type. No lubrication is necessary or recommended.
- Inspect the venting system for fly ash.
- If it is necessary to sweep the vent system, disconnect the vent system from the appliance using the quick disconnect located at the end of the combustion blower housing.
- Tie a garbage bag around the end of the venting system and sweep the system.
- Examine the quick disconnect gasket for deterioration and replace with approved gasket if necessary.
- Re-attach the venting system to the appliance.
- Examine the high temperature seal between the vent system and the appliance and repair if necessary.
- If this is the end of the season cleaning, remove all pellets from the appliance, ensure that the heat selector knob is in the off position and that the appliance is unplugged.



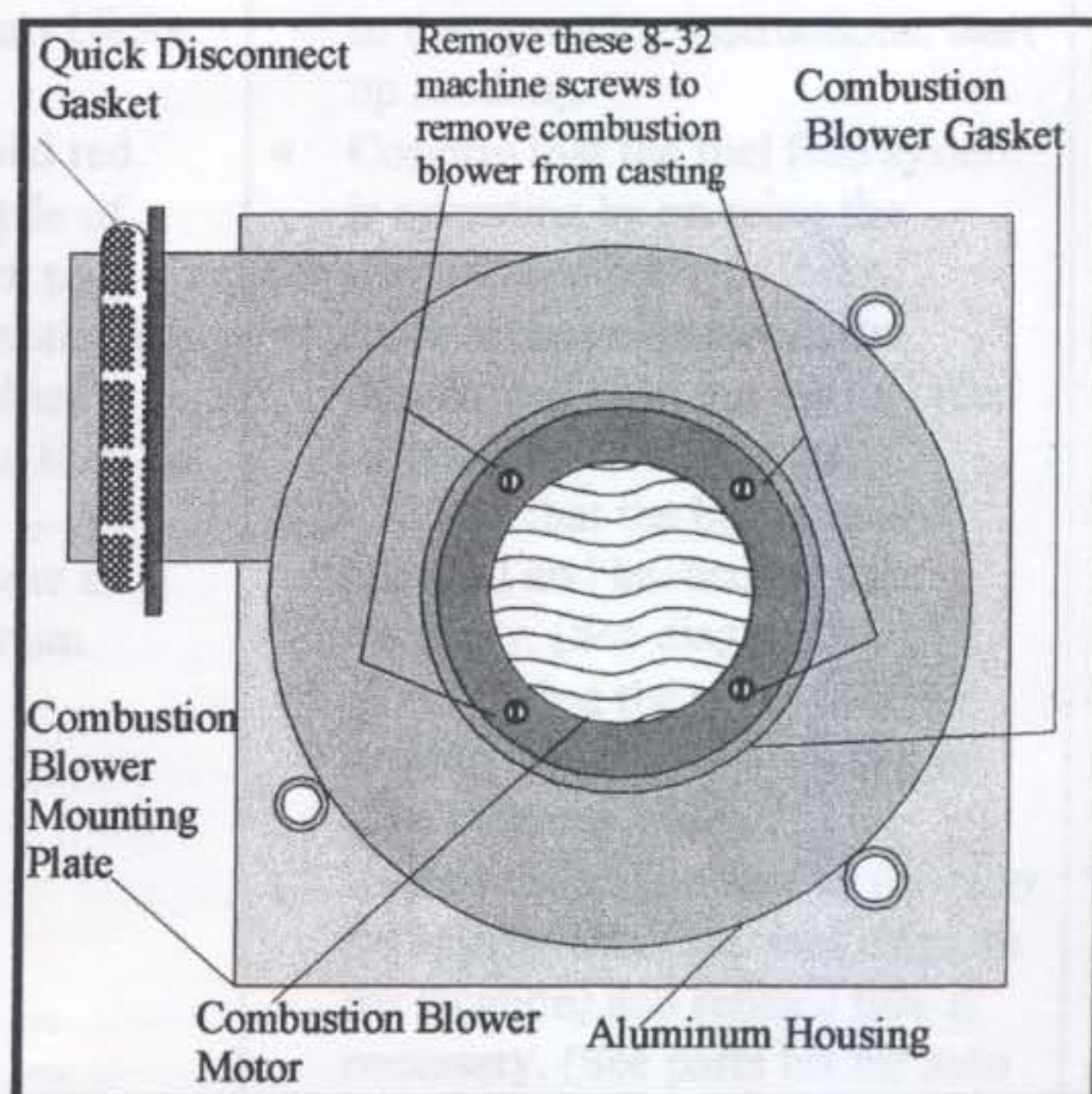
M-1 Removal of the Burn Pot/ Side View



M-2 Ash Cover Plate Removal/ Front View



M-3 End Cap Assembly/ Right Hand Side View



M-4 Combustion Blower Assembly

The Altair™ pellet stove has been designed and engineered to be as trouble free as possible. However, if you should experience a problem with your appliance, follow the instructions in the following basic trouble shooting guide. If you experience a problem that is not covered in the trouble shooting guide, please contact your Altair™ pellet stove dealer. **Note: All trouble shooting should be done when the appliance is cool. The heat selector knob should be in the off position and the appliance should be unplugged.** Please see the operation and expectations page of this manual for normal and abnormal operations, light error codes, etc.

Problem	Symptoms	Solutions
Stove will not power up.	<ul style="list-style-type: none"> No lights will light up on the control board face. Stove will not operate at all. 	<ul style="list-style-type: none"> Confirm that the heat selector knob is positioned at a heat setting. Confirm that stove is plugged in. Confirm that there is power to the receptacle. Check 3-amp fuse accessed on the face of the control board. Replace if fuse is blown. See parts list for control board fuse specs. Confirm that the wire harness is hooked up to the control board correctly. (See diagram E-3)
Stove has a failed ignition.	<ul style="list-style-type: none"> Stove has not ignited. Ignition light on the control board is blinking red, 2 short blinks, then pause, then 2 short blinks, etc. Ready light is solid red. There may be a pile of pellets in the burn pot. <p>Note: Before attempting to re-ignite the appliance, remove all pellets from the burn pot.</p> <ul style="list-style-type: none"> Combustion blower is running at maximum 	<ul style="list-style-type: none"> Confirm that there is fuel in the hopper. Confirm that the fuel feed system has been properly charged. (Refer to the operating instructions, start up section). Confirm that the fuel feed system is operating by pressing the manual feed button. If not, remove the pellets from the hopper and examine the fuel feed opening for obstructions. Confirm that the burn pot is installed and latched in place correctly. (See diagram M-1) Confirm that the wires to the heating elements are hooked up. (See diagram M-1) Inspect the in-line fuse to the auto ignition system (see wire diagram for location) and replace fuse if necessary. (See parts list for auto ignition fuse specs).

Altair Pellet Stove Trouble Shooting Guide:

Trouble Shooting

40

Problem	Symptoms	Solutions
Proof of Fire has opened.	<ul style="list-style-type: none"> Both blowers are off. Ready light on the control board is blinking red, 2 short blinks, then pause, then 2 short blinks, etc. There may be a pile of pellets in the burn pot. 	<ul style="list-style-type: none"> Confirm that there are pellets in the hopper. Confirm that the fuel feed system is working by pressing the manual feed button. If not, remove the pellets from the hopper and examine the fuel feed opening for obstructions. Confirm that the burn pot is installed and latched correctly. (See diagram M-1)
Vacuum Switch has opened.	<ul style="list-style-type: none"> Room blower is off. Combustion blower may be running at maximum. Ready light is blinking red, 1 short blink, 1 long blink, then pause, then 1 short blink, 1 long blink, etc. 	<ul style="list-style-type: none"> Confirm that the door is securely latched. Inspect door gasket and replace if necessary. Confirm that the venting system has not become blocked. Follow 100 bag maintenance instructions.
High heat sensor has opened.	<ul style="list-style-type: none"> Combustion blower running at maximum. Room blower may be running at maximum, or not running at all. Ready light is blinking red, 2 long blinks, then pause, then 2 long blinks, etc. 	<ul style="list-style-type: none"> Do not operate the appliance. Contact your Altair™ dealer.
Poor Quality Burn/ Dirty Glass.	<ul style="list-style-type: none"> Very lazy, smoky flame. Burning pellets being pushed out of the burn pot. Note: Your Altair™ pellet stove has been designed with a self-cleaning burn pot. When using higher ash fuels, you may observe ash being pushed out of the burn pot. This is normal. 	<ul style="list-style-type: none"> Confirm that the burn pot has been installed and latched correctly. (See diagram M-1) Inspect door gasket for deterioration and replace if necessary. Follow 100 bag maintenance instructions.

Note: For any light blinking red condition, the appliance will be in a lockout mode. This will be reset when the heat selector control knob is turned to the off position.

Altair™

Color code key for wire diagram.

J-10	J-9	J-8	J-7	J-6	J-1
J-5	J-4	J-3	J-2	J-1	

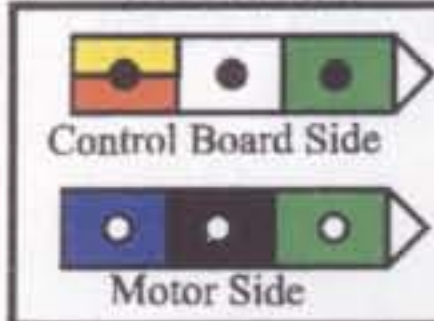
10 Pin Molex/ Front View

Ground Wire to Control Board Jacket

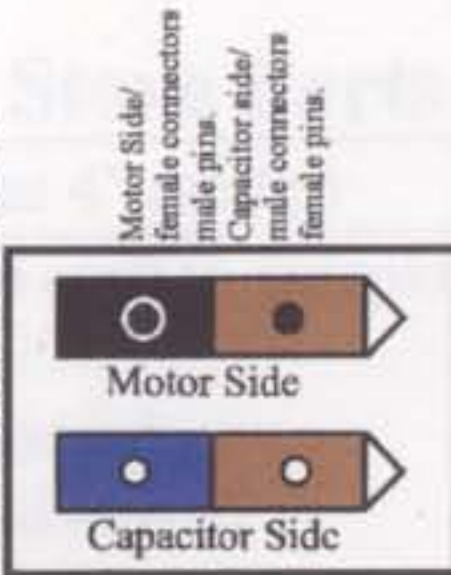
J-10	J-9	J-8	J-7	J-6	J-5	J-4	J-3	J-2	J-1
------	-----	-----	-----	-----	-----	-----	-----	-----	-----

- AC Common/ White J-8
- AC Hot/ Black J-4
- AC Ground/ Green
- Combustion/ Convection Motor Lead/ Blue
- Convection Blower Hot/ Yellow J-10
- Molex to High Limit Lead/ Red J-9
- Combustion/ Convection Motor Lead/ Brown

- Solenoid Hot Lead/ Blue J-7
- Combustion Blower Hot/ Orange J-5
- Proof of Fire Lead/ Brown J-2
- Solenoid Lead/ White/ Red J-1
- Ignition Hot Lead/ Violet
- Vacuum Switch Lead/ Pink J-3
- Safety Circuit Common/ Grey J-6

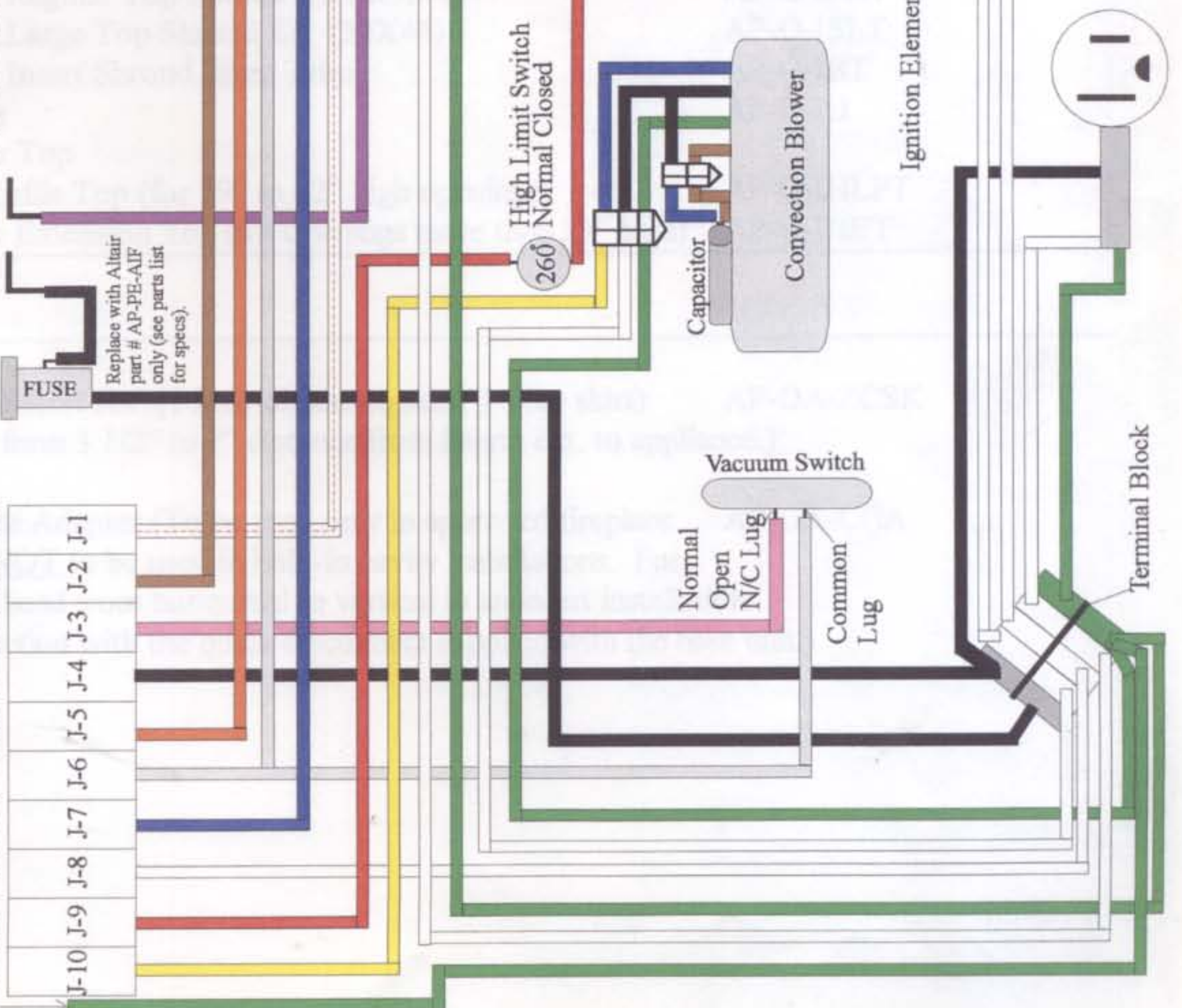
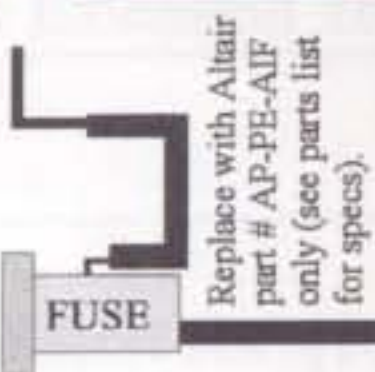


3 Pin Molex Connector



2 Pin Molex Connector

Control Board Ignition Element Spade Lugs



Altair Pellet Stove Parts List:

Parts List

42

Base Unit (includes 4" ash lip)

AP-B

Options (*pick one each to complete a base unit)

*Door

Standard

AP-O-SD

Gold

AP-O-GD

Nickel

AP-O-ND

*Louver Kit (3 upper and 2 lower)

Standard

AP-O-SLK

Gold

AP-O-GLK

Nickel

AP-O-NLK

Freestanding Options (*pick one each to complete the freestanding unit)

*Freestanding Hopper

AP-O-FSH

*Freestanding Pedestal

AP-O-FSP

*Freestanding Rear Top

AP-O-FSRT

*Freestanding Side Panels

AP-O-FSSP

Insert Options (*pick one each to complete the insert unit)

*Shroud Kit (A full shroud kit consist of 1 side shroud kit and either a regular or Large top shroud kit.)

Side Shroud Kit (1 LH and 1 RH side shroud)

AP-O-ISS

Regular Top Shroud Kit (28X44)

AP-O-ISRT

Large Top Shroud Kit (32X44)

AP-O-ISLT

Insert Shroud Brass Trim

AP-O-IBT

*Insert Hopper

AP-O-IH

*Insert Hopper Top

Low profile Top (for 19" to 22" high openings)

AP-O-IHLPT

Hopper Extension Top (for openings more than 22" high)

AP-O-IHET

Optional Accessories

Zero-Clearance Skirt Kit (1 zero-clearance skirt, 1 filler skirt)

AP-OA-ZCSK

(Covers space from 3 1/2" to 7" distance from hearth ext. to appliance.)

Close-Clearance Adapter (To be used only in approved fireplace Installations. NOT to be used in built-in cavity installations. For making a tight bend from horizontal to vertical in an insert installation. Used in conjunction with the quick disconnect supplied with the base unit.)

AP-OA-CCA

Altair Pellet Stove Parts List:

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Parts List

Electrical

Control Board	AP-PE-CB
Wire Harness	AP-PE-WH
Ignition Element	AP-PE-IE
Control Board Front Fuse- AGC (3AG) Fast Acting Glass Fuse 1/4 X 1 1/4" UL/CSA 248-14	AP-PE-CF
Auto Ignition Fuse- GBB 12 Buss (12 amp) Tron Rectifier Fuse (Located on the back of the control board jacket) Very Fast-Acting Ferrule Fuse 1/4 X 1 1/4" US Recognized 1-30, 125V DC/ 250V AC Guide # JFHR 2, File # E 56412 CSA Certified 1-10 125V DC/ 250V AC (Class 1422-01) File #53787	AP-PE-AIF

WARNING: Use of any other fuse will void the appliance warranty and could create a safety hazard

Auger

Auger Motor	AP-PA-AM
Auger Quick Release Pin	AP-PA-QRP
Low Limit (proof of fire) Snap Switch	AP-PA-SS

Convection

Convection Blower Assembly	AP-PCV-CBA
Convection Blower Run Capacitor Assy (4uf)	AP-PCV-CB

Combustion

Combustion Blower Motor	AP-PCM-CB
Combustion Blower Run Capacitor Assy (3uf)	AP-PCM-CC
Chimney Quick Disconnect Exhaust Port	AP-PCM-CQD

Safety Devices

Vacuum Switch	AP-PS-VS
Vacuum Hose	AP-PS-VH
High Limit Snap Switch	AP-PS-SS
Auger Gate Solenoid	AP-PS-GS

Front door

Door Side Glass	AP-PD-DSG
Door Front Glass	AP-PD-DFG

Altair Pellet Stove Parts List:

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Gaskets

Negative Pressure Check Valve Cover	AP-PNP-CG
Fuel System Hopper Attachment	AP-PFS-HAG
Fuel System Top Flange	AP-PFS-TFG
End Cap Solid Piece	AP-PHX-ECG
Auger Assembly Gasket (Bumper Stop)	AP-PA-AAG
Conv. Blower Flange Attachment Plate Gasket Kit	AP-PCV-AFGK
Conv. Blower Casting Cushion Gasket	AP-PCV-CCG
Combustion Motor Gasket	AP-PCM-MG
Combustion Housing Ceramic Gasket	AP-PCM-HG
Quick Disconnect O- Ring Gasket	AP-PCM-QDG
Close Clearance Adapter Ceramic Gasket	AP-OA-CCAG
Door Rope Gasket (1/2" Dia Firm)	AP-PD-DG
Glass to Door Frame Ribbon Gasket	AP-PD-RG

Parts Miscellaneous

Freestanding Rear Top Braces (1 set, 2 each)	AP-PM-RB
Freestanding Side Panel Left Side	AP-PM-FSL
Freestanding Side Panel Right Side	AP-PM-FSR
Burn Pot	AP-PM-BP
Altair Appliance Front Top	AP-PM-AFT
Owners Manual	AP-PM-OM

\$?

Heating Equipment And Technology Inc., Limited Warranty

THE FOLLOWING LIMITED WARRANTY EXTENDS ONLY TO THE ORIGINAL PURCHASER OF THIS PRODUCT.

Heating Equipment And Technology Inc. (D.B.A. and hereafter referred to as HEAT Inc.) warrants all steel parts, with the exception of the burn pot, against defects in material and workmanship for five (5) years from the date of purchase.

HEAT Inc. warrants all electrical components (except the auto ignition elements) to be free from defects to the extent of the warranty maintained by the original component manufacturer, usually two (2) years from date of purchase. Use of an improper electrical source, or fuel, as defined in the owners manual, invalidates the warranty.

HEAT Inc. makes no warranty, express or implied, on the following component parts: auto ignition elements, fiber or silicon seals, gaskets, glass windows, burn pot, paint or other coatings, plating such as gold, nickel, or brass, trims such as gold, nickel, or brass, or other exterior parts.

HEAT Inc. provides this warranty to cover defects in material and workmanship in covered components, provided the product has been installed, operated, and maintained in accordance with the manufacturer's printed instructions. This warranty does not cover damage or breakage caused by improper handling, misuse or unauthorized modification. Without limiting the foregoing, the use of fuels other than pelletized wood fuel will void all warranties and liabilities. Use of fuel that exceeds the Pellet Fuels Institute (PFI) sodium (salt) standard or chemical chimney cleaners invalidates the warranty.

If warranty service is needed during the warranty period, notify the nearest Authorized Altair™ pellet stove dealer. Please be prepared to provide the following information:

1. Your name, address and phone number.
2. Model number of your appliance.
3. Manufacture date of your appliance.
4. Serial number of your appliance.
5. Date of purchase.
6. Dealer's name, address and phone number.
7. Installer's name, address and phone number.
8. As much information as possible about the problem.

If required by the nature of the problem or defect, HEAT Inc. or it's authorized agent will, within a reasonable time, inspect your appliance as installed. If the inspection shows the defect was due to material or workmanship in covered components, and that the other terms and conditions of this warranty have been complied with, HEAT Inc.'s sole duty and liability under this warranty shall be limited to the replacement or repair, at HEAT Inc.'s option, of the defective unit, subassemblies, or part. The purchaser shall assume all installation costs and shipping costs to and from HEAT Inc. or it's authorized agent, and shall be responsible for all losses during shipment.

Neither HEAT Inc., nor the supplier to the purchaser, accepts responsibility, legal or otherwise, for incidental or consequential damage to property or persons resulting from the use of this product. Any warranty implied by law, including, but not limited to, implied warranties of merchantability or fitness, shall be limited to two (2) years from the date of purchase. Whether a claim is made against HEAT Inc. based on breach of this warranty or any other type of warranty, express or implied by law, HEAT Inc. shall in no event be liable for any special, indirect, consequential, or other damages of any nature whatsoever in excess of HEAT Inc.'s original wholesale price of this product. All warranties by HEAT Inc. are set forth herein and no claim shall be made against HEAT Inc. on any oral warranty of representation.

Some states do not allow the exclusion or limitation of consequential damages, or limitations of implied warranties, so the limitations or exclusions set forth in this warranty may not apply to you.

CAUTION: Changes to the design characteristics or operating parts are not authorized by HEAT Inc. and will void any and all warranties. Such changes may create hazardous conditions which may endanger the user and/or their property. HEAT Inc. reserves the right to make changes to this product, without notice, written or otherwise. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

It is very important that you register your Altair™ pellet stove with Heating Equipment And Technology Inc. Please fill out this form and mail it within 12 days of purchase to:

Heating Equipment And Technology Inc.
370 S. 69th Place
Springfield, OR. 97478

Name: _____ Dealer Name: _____

Address: _____ Address: _____

City, State, Zip: _____ City, State, Zip: _____

Phone #: (____) _____ Phone #: (____) _____

Date of Purchase: _____ Appliance Serial Number: _____

Appliance Model: Freestanding: _____ Insert: _____ Deluxe: _____ Standard: _____ Custom: _____

Who installed your appliance? Dealer: _____ Licensed Contractor: _____ Home Owner: _____

Will your appliance replace another heating source? Yes: _____ No: _____

If yes, what type? Name: _____ Fuel Source: _____

Which diagram in the owners manual best describes your installation? _____

What is the altitude of your installation? _____ Feet above sea level: _____

When was your home constructed? _____ Approximate square footage? _____

How much of the total square footage do you plan to heat with your Altair™ pellet stove? _____

Describe the airflow through your home. Open flow: _____ Some restrictions: _____ Restricted: _____

How many floors? 1 _____ 2 _____ 3 _____ Which floor is the appliance installed on? 1 _____ 2 _____ 3 _____

What other type of heat source does your home have? _____

Personal Section (This part is optional, but we would appreciate your cooperation)

Check which factors influenced your decision to purchase your Altair™ pellet stove.

Appearance: _____ Convenience: _____ Construction: _____ Features: _____ Clean Burning: _____

Price/ Value: _____ Dealer Advise: _____ Who noticed the stove first? Male: _____ Female: _____

What is that person's age? _____ Are you satisfied with the appliance? _____

What is your occupation? _____

What is the size of the area you live in? Large City: _____ Smaller City: _____ Small Town: _____ Rural: _____

What heating appliance would you have purchased if not an Altair™ pellet stove? _____

Please estimate your yearly income. \$25,000/ Less: _____ \$26-50,000: _____ \$51-90,000: _____ Higher: _____

Thank you for purchasing an Altair™ pellet stove!!!!

Notes

For your convenience, this page has been included for you to record any additional information concerning your appliance. It is recommended that you keep accurate records on any service, or maintenance done to your appliance.

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