TRAVIS QUALITY

14-12 Gauge Steel Firebox - Travis Industries uses a heavier gauge steel than other manufacturers in the construction of the firebox on all of their gas appliances. The heavier gauge steel is less likely to warp and make objectionable noises as the steel heats and cools. While Travis uses a 12-14 gauge steel many other manufacturers use a thinner 18-20 gauge steel.

Silica Coated Neo-Ceram® Glass - Travis Industries uses high temperature Neo-Ceram glass which provides strength, durability and excellent heat radiation through the glass into the living space. The glass is coated with silica (both sides) to seal the pores present at the surface of the glass. Sealing the pores allows for easier cleaning of the glass. Often a white residue will result from the burning of gas and or the condensation which will often form on the glass until the appliance warms up. Without the coating the white residue gets baked into the glass pores and permanently damages the glass.

THE TRAVIS INDUSTRIES DIFFERENCE

TRAVIS INDUSTRIES
HOUSE OF FIRE

TRAVIS QUALITY

Patented Burner Technology (Ember-Fyre™) which provides the beauty and realism of a wood fire with the convenience of gas.

Synchronized Intake & Exhaust Restrictor to provide ease of adjustment and a balanced air flow to accommodate the variety of venting configurations.

Self-Balancing Flue System to automatically balance the air flow to minimize the effect on the appearance of the flame due to abnormal atmospheric conditions around the termination.

Platform Technology (to be discussed in detail later) allows for a single stocking unit while providing distinct different looks with the installation of different faces and fireback options.

Unibody Construction provides wrap around construction technology, eliminating multiple unsightly weld seams while increasing the durability and strength of the stove.

LP Conversion Kit & Touch Up Paint Shipped With Each Unit to make the installation and set-up of the gas appliance as simple and convenient as possible.

Multiple Face, Material, & Texture Options provide the perfect atmosphere the client is trying to create for their home by adding a gas appliance.

Factory Quality Tested gas valves, snap disks, fans, orifices, burners, and pilots which ensure trouble-free installation and start-up.

TRAVIS QUALITY

SAFETY is provided through a tried and proven 30 second thermocouple safety system. If the pilot light ever goes out (for any reason) the gas is shut off in less than 30 seconds.

In addition to a safety shut off, the Travis gas appliances have spring loaded glass catches and pressure relief doors built into each appliance. These devices provide pressure relief to the firebox in the event of a delayed ignition.

Reliability/Durability
Non-Electricity Dependent

Through the use of tried and proven gas technology, the thermocouple and thermopile provide reliability even when there is a power outage. Durability is supported with a “Real World” Seven Year Warranty on all Travis gas gppliances.

GAS PRODUCT OVERVIEW

TRAVIS INDUSTRIES
HOUSE OF FIRE

Gas Zero Clearance Fireplaces

Freestanding Gas Stoves

Fireplace Gas Inserts

Avalon Zero Clearance Gas Fireplaces

A self-contained gas appliance that is framed in or chased around and is vented through the wall or through the ceiling.

DV 21 TRV - Avalon Hideaway

564 Space Saver - Avalon Seattle

864TRV - Avalon Winthrop TRV

864 Home Heater - Avalon Winthrop HH

864 See-Thru - - Avalon Winthrop See-Thru

1080CF - Avalon Whidbey

Freestanding Gas Stoves

A self-contained gas appliance that sits out in the open space of the room and is vented through the wall or ceiling.

Avalon **Cedar**
Prairie
Tree of Life

Avalon Fireplace Gas Inserts

A gas appliance which must be inserted into an existing masonry or factory-built metal fireplace. Fireplace inserts must be vented through the exiting fireplace chimney. Inserts require surround panels to seal off area between insert and fireplace opening.

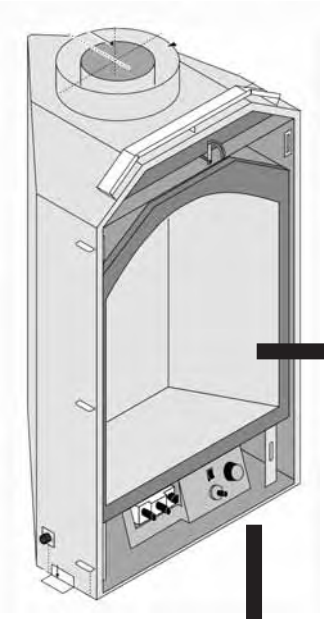
DVS - Direct Vent Small

DVL - Direct Vent Large

2007 - 21 DV TRV (Hideaway)

- Replaces 21 DV Top Vent and 21 RV Rear Vent
- Top vent or rear vent option on one unit
- New improved Ember-Fyre burner
- Larger turn-down rate - Adjustable Heat System: 16,500 to 3,100 Btu's/Hr (NG) adjusted using a simple lever control.
- Glass Area: 300 sq. in. glass area - 15" wide x 20" high
- Steady State Efficiency - 82.2% (NG) 79.5% (LP)
- Heating Capacity: Up To 650 sq. ft.
- Sheetrock right up to the face
- 90 CFM Blower now optional
- Now available with Accent Light

21 TRV - Avalon Hideaway



Interior Liners

Rumford Herringbone Brick

Ceramic

Rock Creek

Cast Iron

Accent Lights

Body

Applewood logs and painted brick liner standard

Faces

Victorian Lace

Black Painted

Victorian Lace

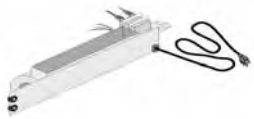
Black Nickel Plated with Bruch Nickel Accents

Bungalow

Black Painted Hammered Texture

Tree of Life

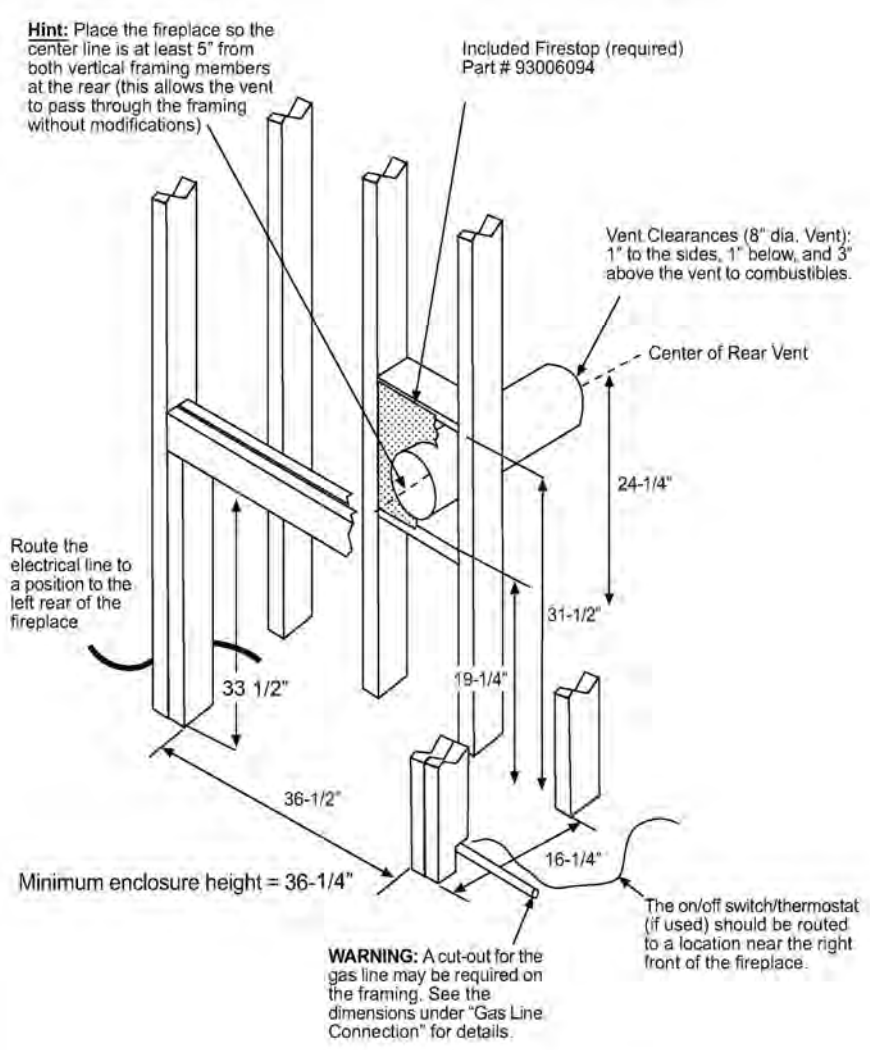
Black Painted Cast Iron



Convection Fan

564 Space Saver

- This new model replaces the DVS and DVL gas fireplace
- 22,500 Btu's on high (input)
- 4,250 Btu's on low
- Unit will have Comfort Control valve
- Framing: 36.25" W X 33.5" H X 16.5"
- Glass Size: 564 SQ.IN.
- Glass is Tempered Glass
- Firescreen is standard and can be removed



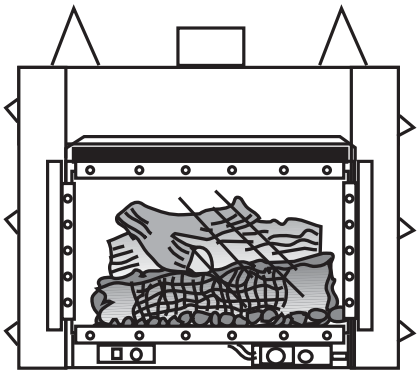
Seattle Space Saver

- Two-stage burner - Steel pan burner in front and tube-style back burner
- Back burner can be shut off independently from the front burner via the Comfort Control valve
- Uses 8” x 5” vent (Duravent) (Selkirk and American Metal Products approvals pending)
- Top termination can be reduced from 8” to 6 5/8” vent with the Travis Flue Adapter (Part # 98900165)
- Cardboard dust cover protects fireplace front during installation

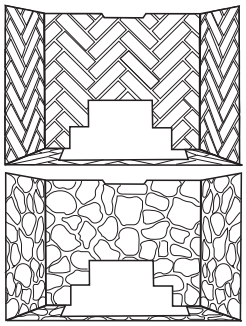
UNIVERSAL OPTIONS

- 180 CFM variable speed, thermostatically controlled convection fan
- Accent Light (Same kit as used on the 864 TRV and 864 HH)
- Wall Thermostat (Part # 99300650)
- Remote Control (Part # 99300653) for use without optional fan)
- Remote Control (Part # 99300677) for use with optional fan)
- **NEW** Modulating Remote Control - Thermostatic control, Modulates fan, flame and accent light. (Part # 99300679 for NG - Part # 99300678 for LP)

Avalon Seattle Space Saver



Body



Cast Straight Brick/Herringbone Fireback

Rock Creek Fireback

Faces

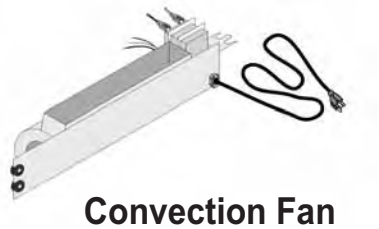
Basic Black Grill

Victorian Lace

Black
Painted

Tree of Life

Black
Painted
Double Door



Convection Fan

Accent Lights

Andirons will be available at a later date

Winthrop TRV

FEATURES:

- Can be installed as top or rear vent.
- Uses all the same faces, andirons and firebacks as the Winthrop HH.
- 864 square inches of glass to view fire!
- 2-Stage Pan Burner.
- Beautiful, realistic fire with huge flames.
- One power heat duct add heat to one additional room.
- Add a remote control to manage the fire wirelessly.
- Uses 8” gas vent.
- Has same restrictor air adjustment features found on the Winthrop HH.
- Sheetrock right to the unit
- Tempered Glass (Screen is standard, but removable)

SPECIFICATIONS:

- Heating Capacity: Up to 1,400 Sq. Ft.
- Adjustable heat output ranges from 6,700 btu’s on low to 31,000 btu’s on high (NG).
- Steady State Efficiency: Up to 77.2% (NG) 78.4% (LP).
- 864 sq. inch viewing glass is 36” wide x 24” high.
- Same framing dimensions as most common fireplaces on market.

Winthrop HH Home Heater

FEATURES:

- High Heat version of the WinthropTRV.
- Can be installed as top or rear vent.
- Uses all the same faces, andirons and firebacks as the WinthropTRV.
- 864 square inches of glass to view fire!
- Ember-Fyre™ Burner.
- Beautiful, realistic fire with huge flames.
- Two power heat ducts add heat to one or two additional rooms.
- Add a remote control to manage the fire wirelessly.
- Uses 8” gas vent.
- Has same restrictor air adjustment features found on the WinthropTRV.
- Requires 2” cement board installed above unit
- Ceramic Glass (No screen required).

SPECIFICATIONS:

- Heating Capacity: Up to 2,250 Sq. Ft.
- Adjustable heat output ranges from 23,000 btu’s on low to 40,000 btu’s on high (NG).
- Steady State Efficiency: Up to 81% (NG) 82% (LP).
- 864 sq. inch viewing glass is 36” wide x 24” high.
- Same framing dimensions as most common fireplaces on market.

Winthrop See-Thru

See-Through version of our extremely popular Winthrop TRV fireplace

Adjustable Heat System: 37,500 to 8,000 Btu's/Hr

Total Glass Area: 1728 sq. in. (36" wide x 24" high each side)

Heating Capacity: 1,500 sq. ft.

Realistic 8 Piece log set

Uses 8" x 5" direct vent chimney - side or top vent configurations

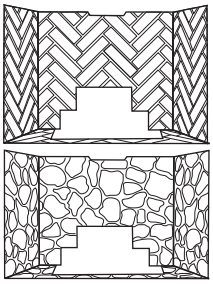
Top vent can be reduced to 6 & 5/8" direct vent chimney

OPTIONS:

- Choice of four firebox liner designs
- Choice of three different andirons
- Up to two Power Heat Duct Kits direct heat to an additional rooms
- Adjustable, dual accent light adds warmth to the fireplace even when its turned off
- Quiet 180 CFM convection fan

Winthrop TRV, HH & See-Thru - Avalon

Firebacks



Herringbone

River Rock

Body

Basic unit comes with standard black grills

Upgrade Faces

864TRV requires Upgrade Face Kit to attach the faces listed below.

Victorian Lace

Black Painted

Victorian Lace

Black Nickel Plated Plated with Brushed Nickel Accents

Bungalow

Textured Power Coated Black

Tree of Life

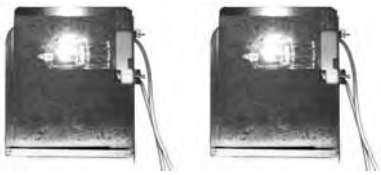
Black Painted Double Door

Andirons

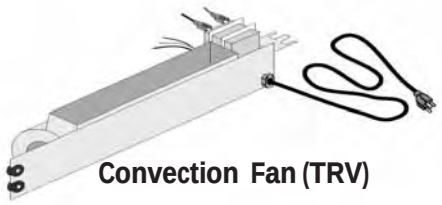
Colonial

Arabesque

Wrought Iron



Accent Lights



Convection Fan (TRV)

Whidbey Clean Face

Value priced builder Clean Face Gas Fireplace features rectangular design, no louvers and no face plates. This design features minimal glass framing

Adjustable Heat System: 36,000 to 11,160 Btu's/Hr

Glass Area: 1080 sq. in.

Thermostatic remote control with modulating flame height

Wireless wall mount control

Uses 8 5/8" x 6" Direct Vent chimney

OPTIONS:

- Choice of three andiron options

- Choice of four trim options

- Choice of firescreen

- Choice of two ceramic firebacks:
  Reversible: Weathered Brick or Herringbone Brick

Avalon

- Tree of Life
- Cedar
- Prairie

Tree of Life - Avalon

31,000 BTU Heater

Available In::

Black Paint

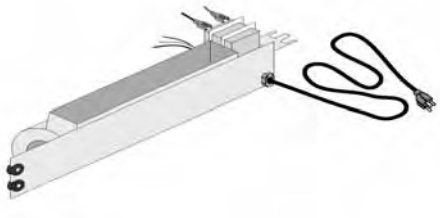
Cashmere Enameled Finish

Majolica Brown Enameled Finish

Antique Willow Enameled Finish

Fireback
(Rear only)

Light Kit

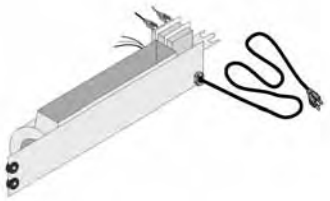


Convection Fan

Cedar - Avalon

Standard Black Door and Grill

31,000 BTU Heater

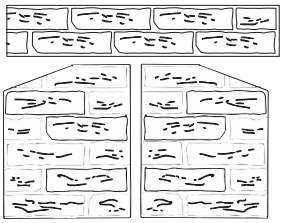


Convection Fan

Door & Grill Upgrades

24 Karat Gold

Brushed Nickel Plated

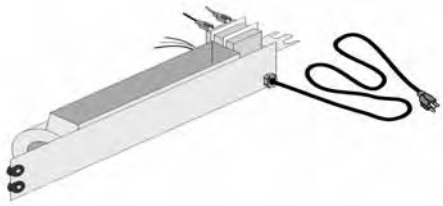


Cast Brick Fireback

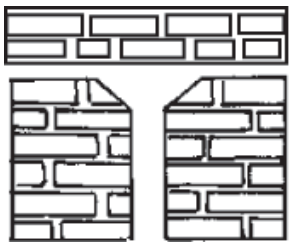
Prairie - Avalon

Painted Metallic Brown with
hammered nickel accents

31,000 BTU Heater



Convection Fan



Fireback

GAS INSERTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

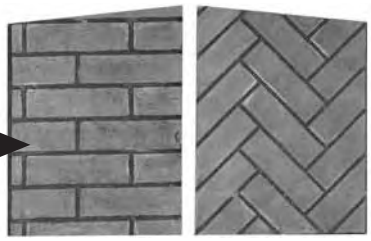
Sizes:

DVS - Direct Vent Small - 31,000 Btu

DVL - Direct Vent Large - 40,000 Btu

DVS - Avalon

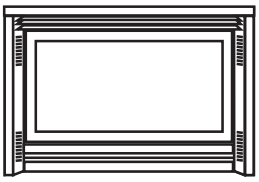
Body



Ceramic Reversible Fireback

Accent Light

Faces



Rosario

Black Painted Door

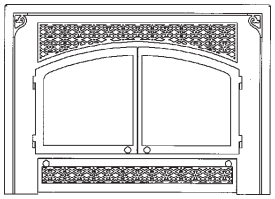
UPGRADE DOORS

Brushed Nickel

24 Karat Gold Plated

Craftsmen

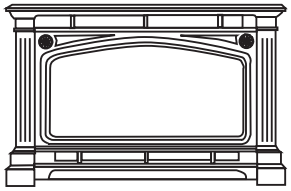
Hand-Hammered Brown Metallic Paint Finish



Victorian Lace

Black Painted

Black Nickel Plated with Brushed Nickel Accents

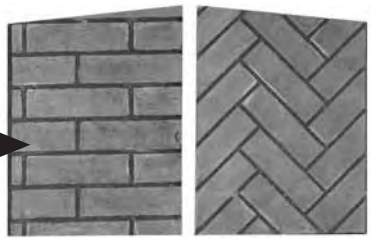


Cambridge

Cast Black Painted

DVL - AVALON

Body



Ceramic Reversible Fireback

Accent Light

Faces

Rosario

Black Painted Door

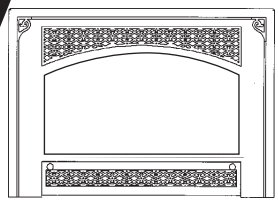
UPGRADE DOORS

Brushed Nickel

24 Karat Gold Plated

Craftsmen

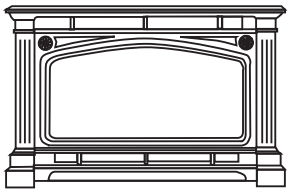
Hand-Hammered Brown Metallic Paint Finish



Victorian Lace

Black Painted

Black Nickel Plated with Brushed Nickel Accents



Cambridge

Cast Black Painted

Bungalow

Textured Black Powder Coated

EMBER-FYRE BURNER

TRAVIS INDUSTRIES
HOUSE OF FIRE

Features

Construction

How It Works

EMBER-FYRE BURNER

TRAVIS INDUSTRIES
HOUSE OF FIRE

- Featured in all Travis gas products except the Seattle, Whidbey, Winthrop TRV and Winthrop See-Thru fireplaces
- Top 100 new product recognition by Popular Science for achievement in science and technology
- Look and feel of a REAL WOOD FIRE
- Large dancing flames
- Glowing wood-like embers and charred logs
- Variable turn down rate of about 50%
- High Efficiency - Up to 86.5%
- Maximum to minimum ember glow adjusted by the consumer

EMBER-FYRE BURNER

TRAVIS INDUSTRIES
HOUSE OF FIRE

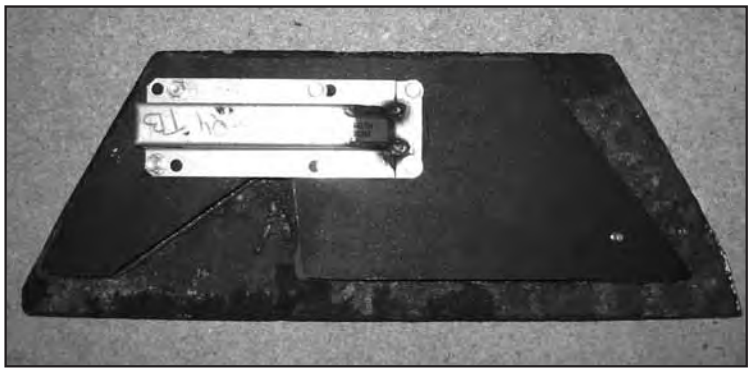
- Burner is constructed of ceramic material
- Ceramic burner glows to deep red of 1200˚ F
- Primary and secondary air flow design provides for a wide range of flame appearance
- The metal pan under the ceramic burner has baffles which control the flow of fuel to the burner
- Hollow cavity in ceramic burner carries gas to precisely placed gas ports
- Pilot placement is such that it is less likely to be disturbed by air flow

EMBER-FYRE BURNER

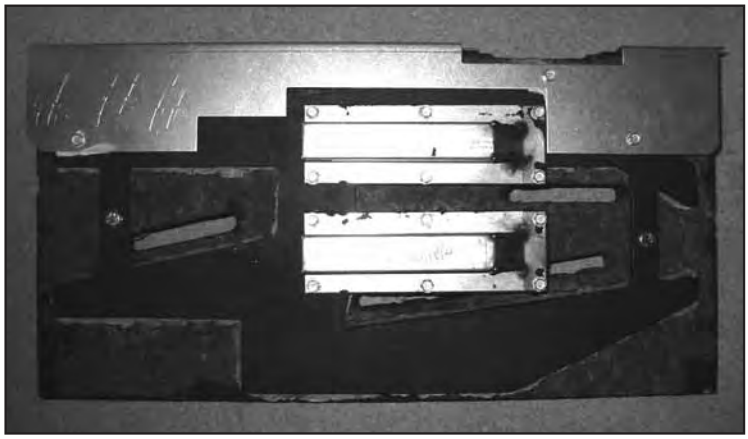
TRAVIS INDUSTRIES
HOUSE OF FIRE

Ember-Fyre Burner (Top View)

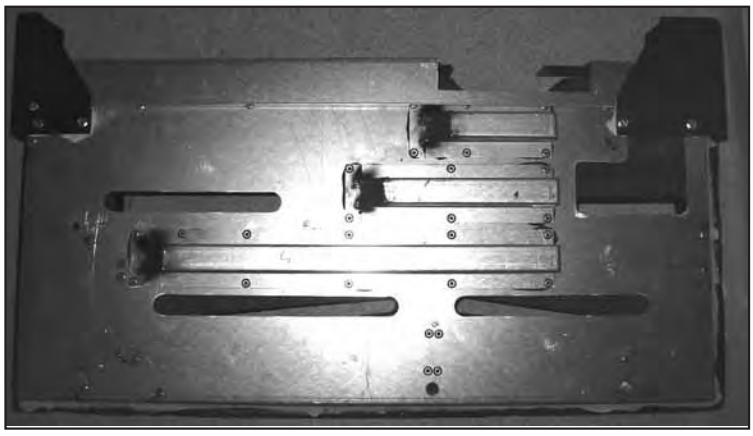
Ember-Fyre Burner - Single Burner Orifice (Bottom View)



Ember-Fyre Burner - Double Burner Orifice (Bottom View)



Ember-Fyre Burner - Triple Burner Orifice (Bottom View)



EMBER-FYRE BURNER

TRAVIS INDUSTRIES
HOUSE OF FIRE

Our patented Ember-Fyre™ gas burner produces a fire so realistic it's often mistaken for a wood fire! Can you tell the difference?

How it works:

(1.) Natural gas or propane is piped to a sophisticated SIT gas valve, controlled by the reliable Piezo ignition system. This gas burner is designed to provide reliable, continuous operation even if the power goes out in your home.

(2.) The low-pressure gas from the gas valve is introduced to the mixing tube via a precisely engineered burner orifice.

(4.) The gas/air mixture flows through a unique array of burner ports in the ceramic base, where it ignites and burns with a warm enchanting glow.

(5.) As the Ember-Fyre heats to a deep red 1200˚F, it mimics the look of glowing wood embers and charred logs. Dancing yellow flames further enhance the look and feel of a wood fire.

(3.) A mixing tube combines the gas with outside combustion air. (The standard mix of air to fuel is set by the installer to compensate for variations in altitude, fuel type, and line pressure.

(6.) For hands-free operation the optional remote control or wall thermostat allows for convenient ON/OFF functions was well as thermostat settings to maintain the comfort level of your home.

GAS VENTING

TRAVIS INDUSTRIES
HOUSE OF FIRE

Two Factors In Venting Draft/Flow

General Venting Principles

Direct Vent

Direct Vent Fireplaces

Direct Vent Stoves

Venting

Measuring Pipe Lengths

Termination

Venting Configurations

Direct Vent Appliances

Direct vented gas appliances work well with new home construction. Today's homes are extremely air tight and indoor air quality has become an important issue.

Direct vent appliances address these major concerns and therefore, all of Travis Industries gas appliances are now direct vent only.

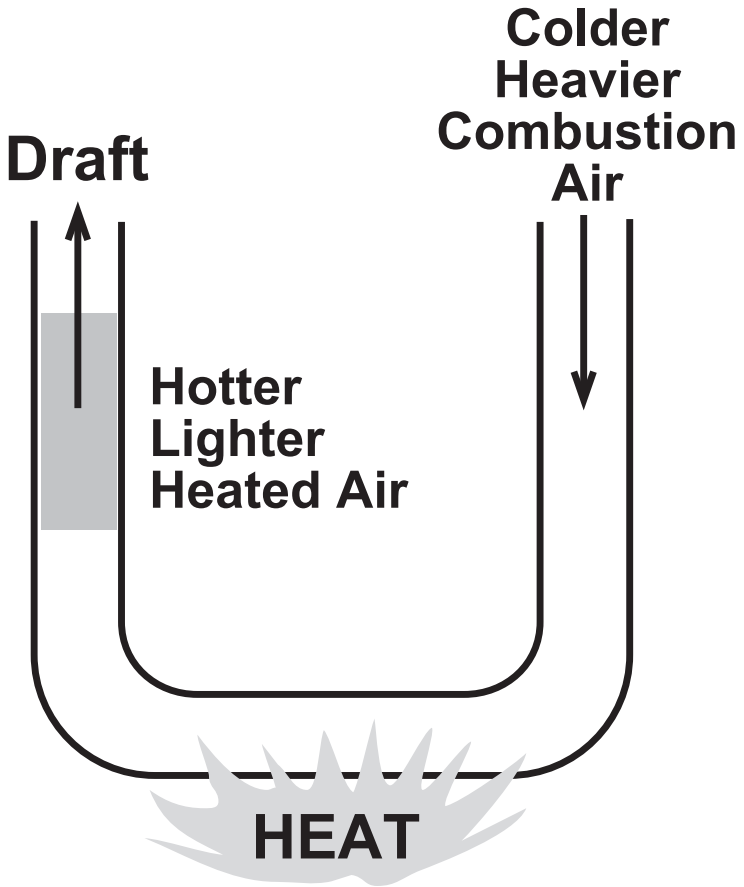
- Sealed combustion chamber.
- No interaction with house.
- Exhaust goes to outside and combustion air comes from the outside.
- Terminates either vertical or horizontal.
- Co-axial and Co-linear venting used.
- Balanced system - exhaust out/air in.
- Operates well in a home with negative pressure up to 25 Pa (pascal).

(1 Pascal =.004" of W.C. or 250 Pa = 1" W.C.).

Venting
1st Factor of Venting

DRAFT: The pressure difference that is available to drive the flow of air and/or combustion gases through an appliance and its venting system.

Draft is created in a venting system by the temperature difference between the air and/or combustion gases in the venting system and the outdoor air. The greater the temperature difference, the greater the draft.



Poor Draft

- **Outside of Travis Venting Parameters**
- **Improper Territory Setting**
- **Cooling Vent Gases**
- **Flow restriction**

FLOW: The volume of gases that move through the vent

Venting Flow Restrictions

- **Vent Size**
- **Number of Turns in Vent (Elbows)**
- **"Down Hill" Horizontal Vent Sections**
- **Outside of Travis Venting Parameters**

General Vent Principles

- Follow vent parameters as spelled out in Travis Industries installation directions.

- Keep vents as straight as possible.
  - Minimize offsets and turns
  - Minimize horizontal runs
  - Slope upward not downward 1/4" rise per foot of run
  - Have some rise before elbowing

- Use listed terminations only.

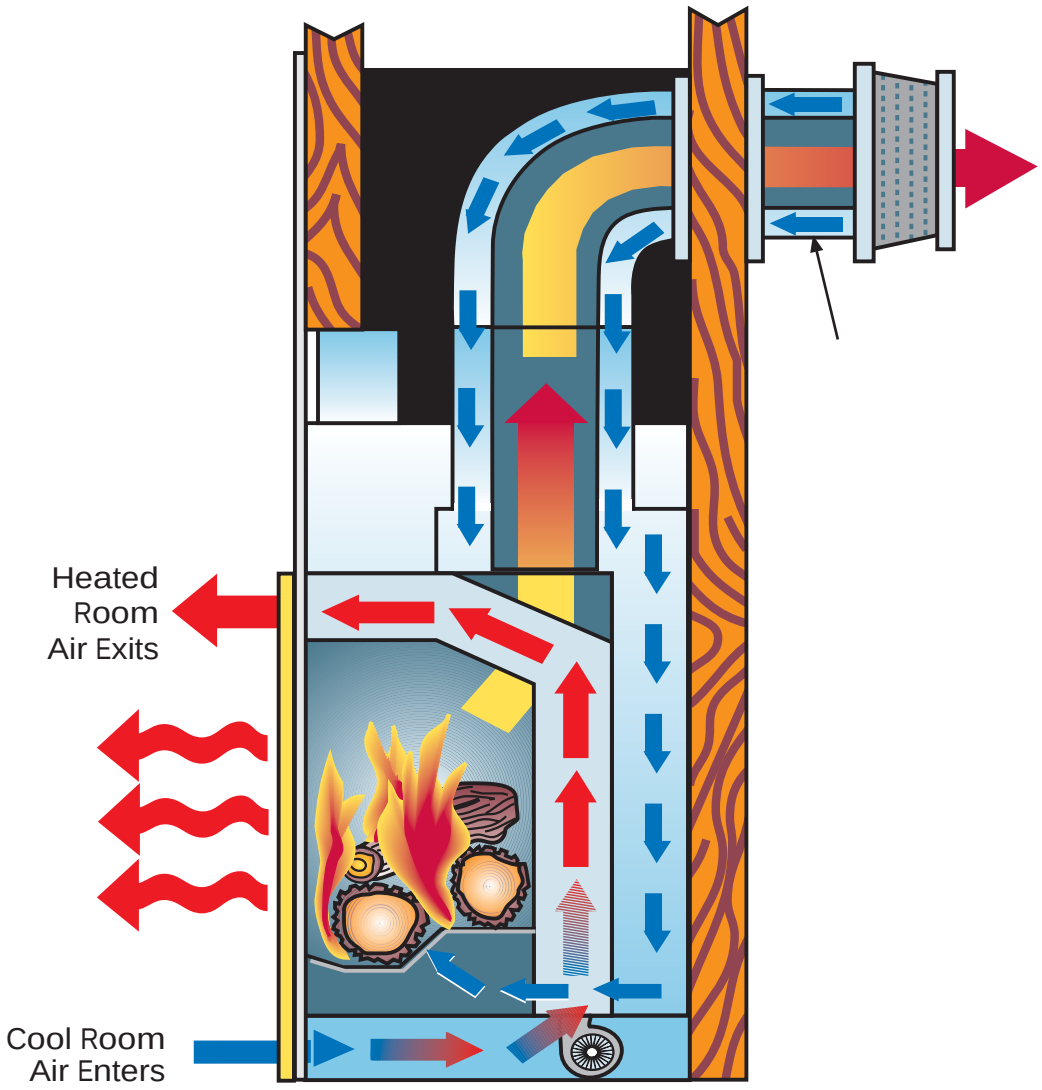
- Hearth gas appliances must be individually vented and should never connect to an active solid fuel burning appliance chimney or other gas appliance.

- Follow Travis Industries termination heights and clearances for proper vent termination.

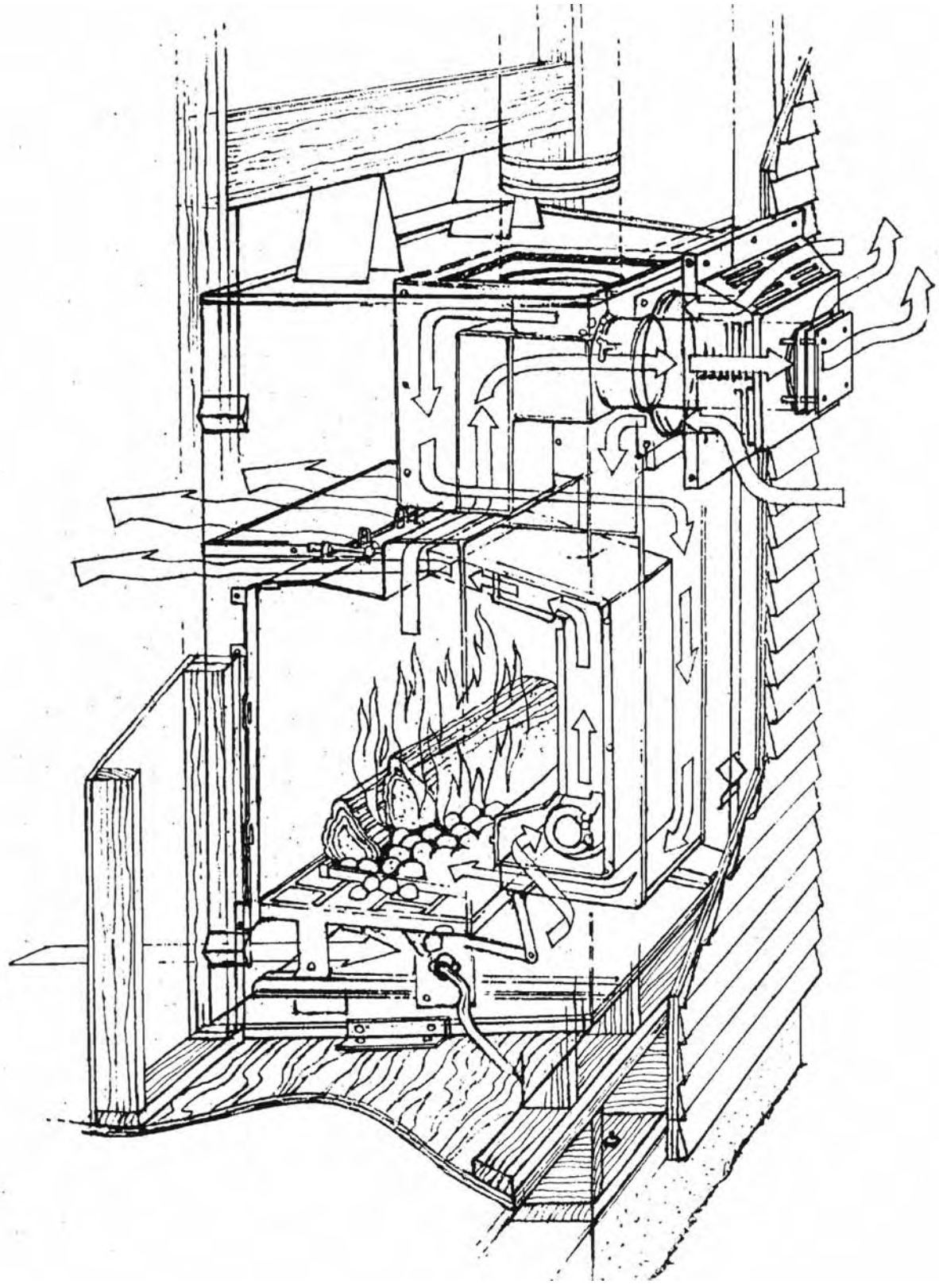
- Keep vents in heated, warm areas.

Direct Vent Appliances

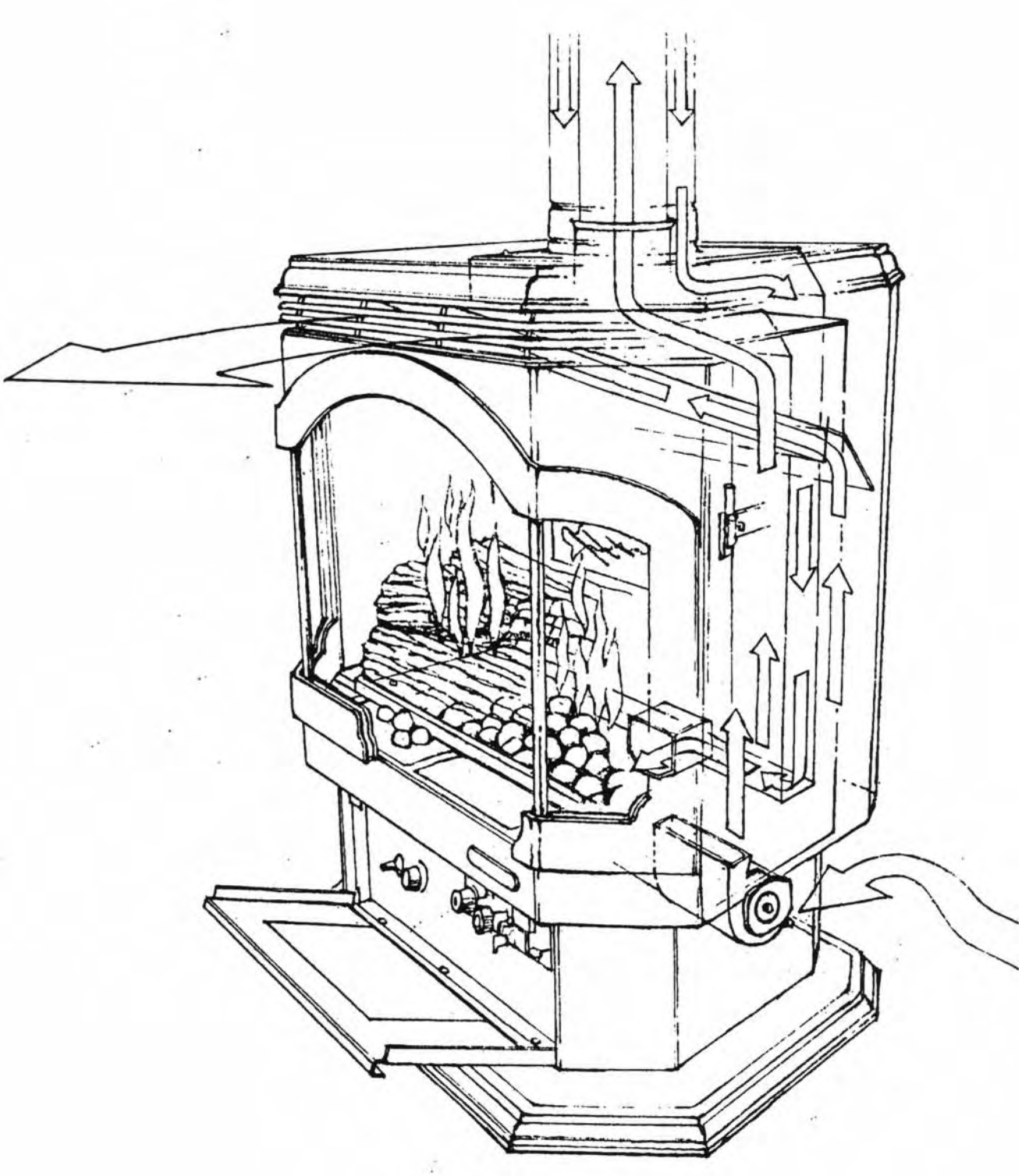
- All combustion air comes from outside the home



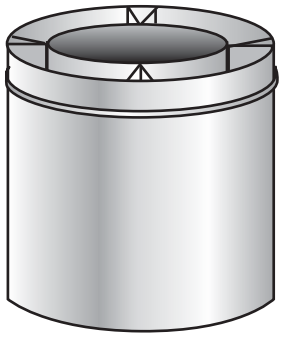
Direct Vent Fireplace Cutaway



Direct Vent Stove Cutaway



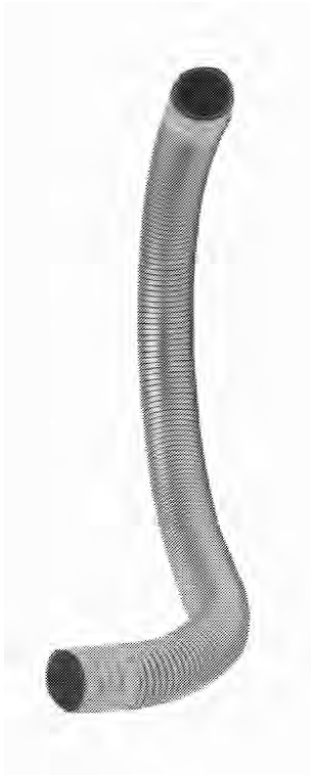
Direct Vent Appliances



CO-AXIAL VENT (Fireplaces)

Inner - Exhaust
Outer - Intake (combustion air)

6 5/8” or 8” Duravent
8 5/8” with 6” inner pipe
8” x 5”
8 5/8” x 6”



Flex Liner Label Flow Arrow

CO-LINEAR VENT (Inserts)

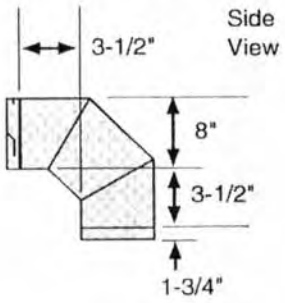
Exhaust - Vent
Intake - Vent (combustion air)

DVS Insert
- 3” Intake
- 3” Exhaust

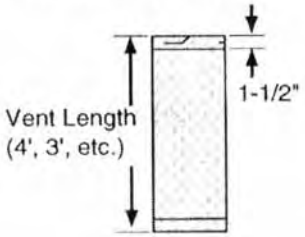
DVL Insert
- 3” Intake
- 4” Exhaust

Measuring Vent Lengths

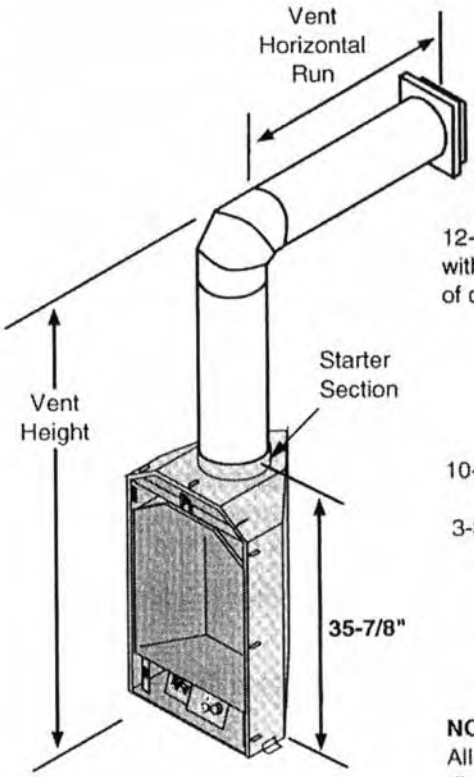
Elbows add 3-1/2" to the length of the vent system.

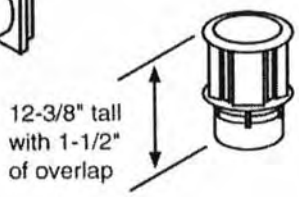


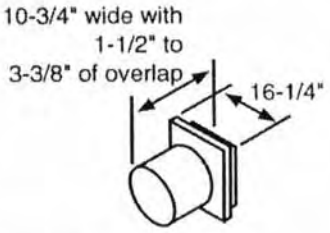
Vent sections overlap each other by 1-1/2"



EXAMPLE:
Two 4' lengths are 7' 10-1/2" long, but when attached to the vent system add 7' 9" to the vent height.







NOTE:
All measurements are for 8" diameter vent.

Direct Vent Gas Stove Venting

- Twist Lock connection.
- Air space clearance as required by individual application installations.
- Vertical and horizontal terminations allowed.
- High-temperature silicone must be used to seal the inner and outer flue (1/8" bead).
- 1/4" rise per foot of run is required.
- See installation directions for:
  - # of Elbows allowed
  - Restrictor Positioning
  - Exhaust Hood Clearances To Door and Window Openings
  - Vertical Termination Requirements
  - Max. and Min. Termination Height
  - Maximum System Offset
- Each GS Vent has a 1 - 1/2" overlap.

Gas Stove Venting

- Direct vented stoves must exit to the outside of the building and never be connected to a solid fuel burning chimney or another gas appliance vent. Each direct vent gas appliance must use its own separate vent system.

- Horizontal sections require non-combustible support every 3' (i.e. Plumber’s strap).

Termination Requirements

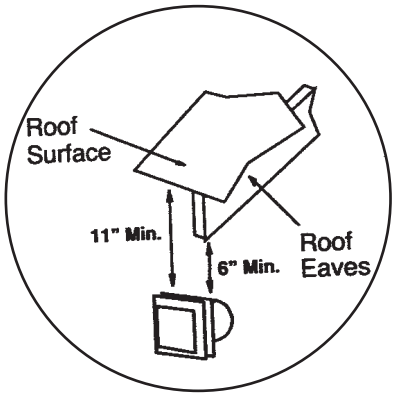
A - Minimum 9” clearance from any door or window

B - Minimum 12” above any grade, veranda, porch, deck or balcony

C - Minimum 12” from outside corner walls

D - Minimum 12” from inside corner walls

E - Minimum 11” clearance below unventilated soffits or roof surfaces
Minimum 18” clearance below vented soffits
Minimum 6” clearance from roof eaves
NOTE: Vinyl surfaces require 24”



F - Minimum 18” clearance below a veranda, porch, deck or balcony (must have two open sides)

G - Minimum 48” clearance from any adjacent building

H - Minimum 84” clearance above any grade when adjacent to public walkways or driveways
NOTE: May not be used over a walkway or driveway shared by an adjacent building

I - Minimum 48” clearance from any mechanical air supply inlet

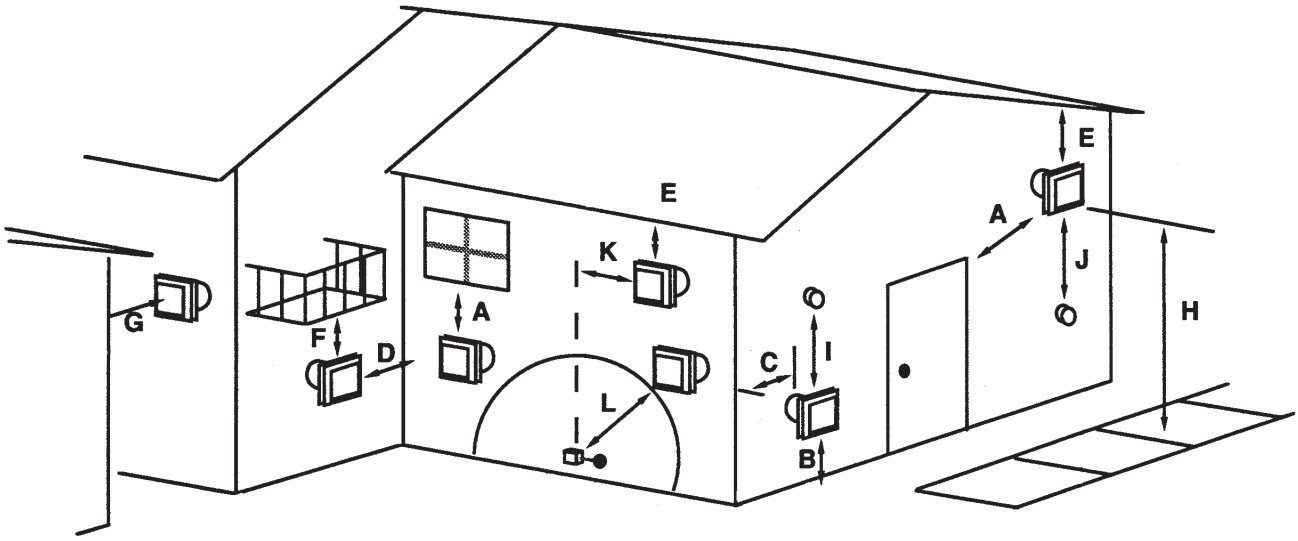
J - Minimum 36” clearance above and 48” below and to the sides of non-mechanical air supply inlet

K - Minimum 36” from the area above the meter/regulator (vent outlet)

L - Minimum 36: from the meter/regulator (vent outlet)

M - Minimum 12” above the roof line (for vertical terminations)

N - Minimum 24” horizontal clearance to any surface (such as an exterior wall) - for vertical terminations



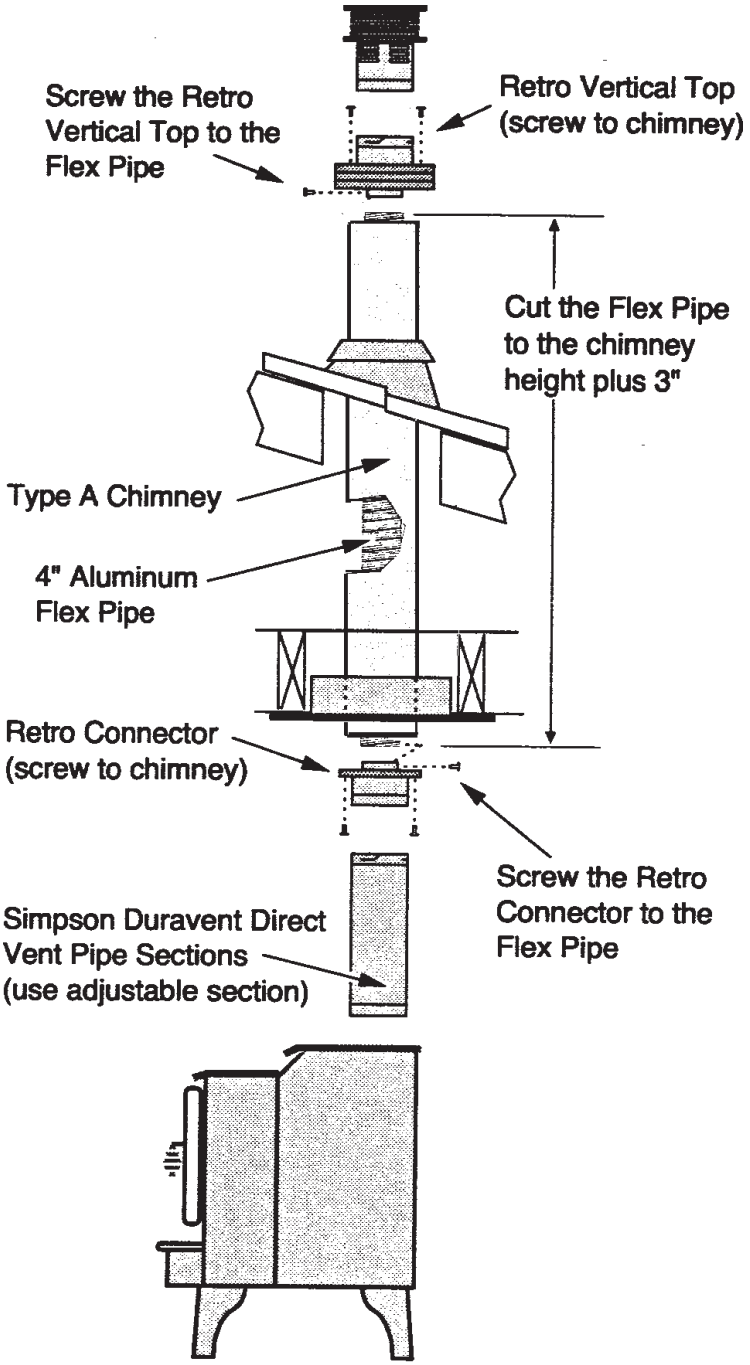
NOTE: Measure clearances to the nearest edge off the exhaust hood

* Use the vinyl siding standoff (#950) when installing on an exterior with vinyl

• Vent termination must be located where it will become plugged by snow or other material

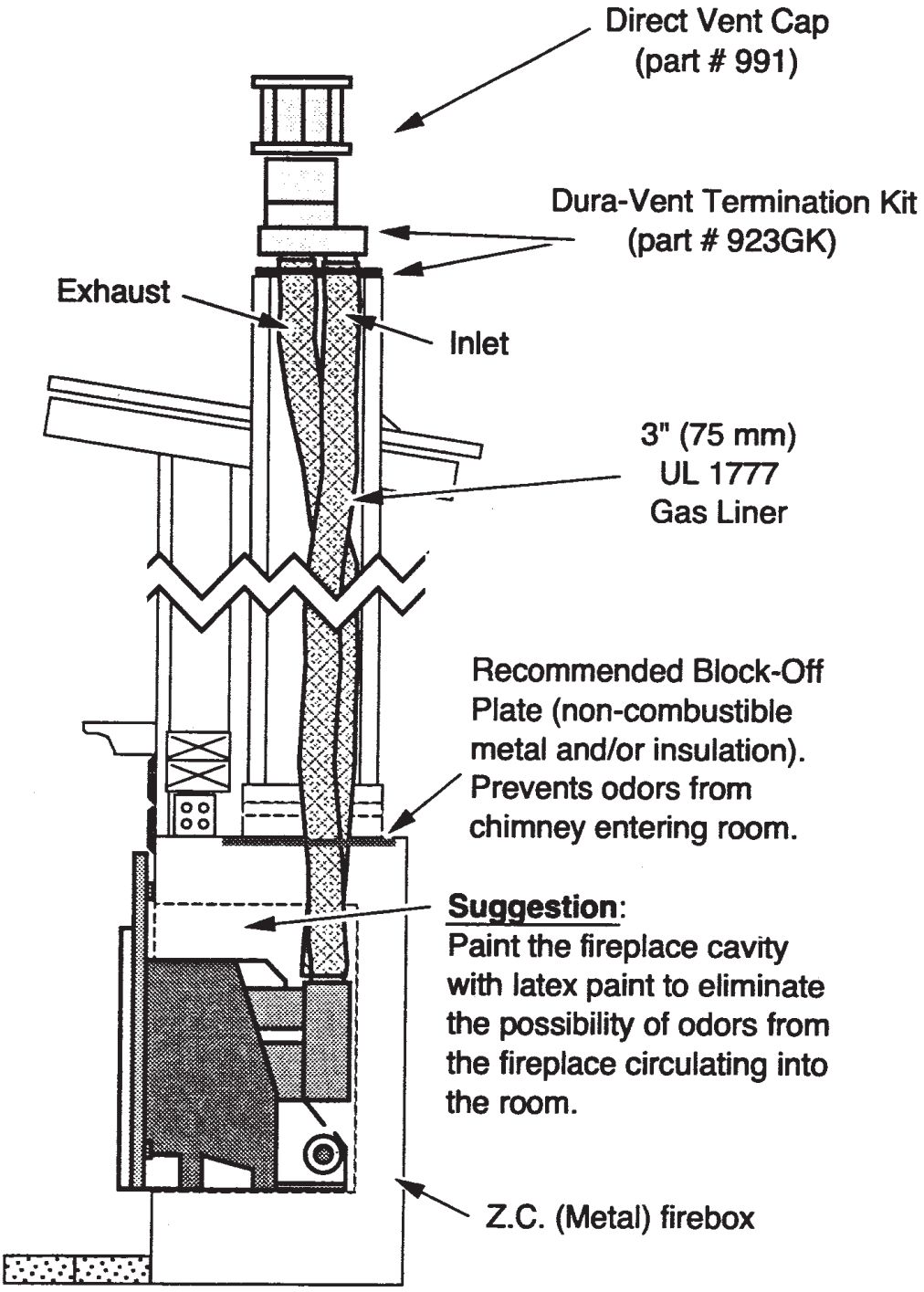
• These clearances meet UMC-1994 and the CNA/CGA-B149 code standards

Direct Vent Into Class "A" Chimney



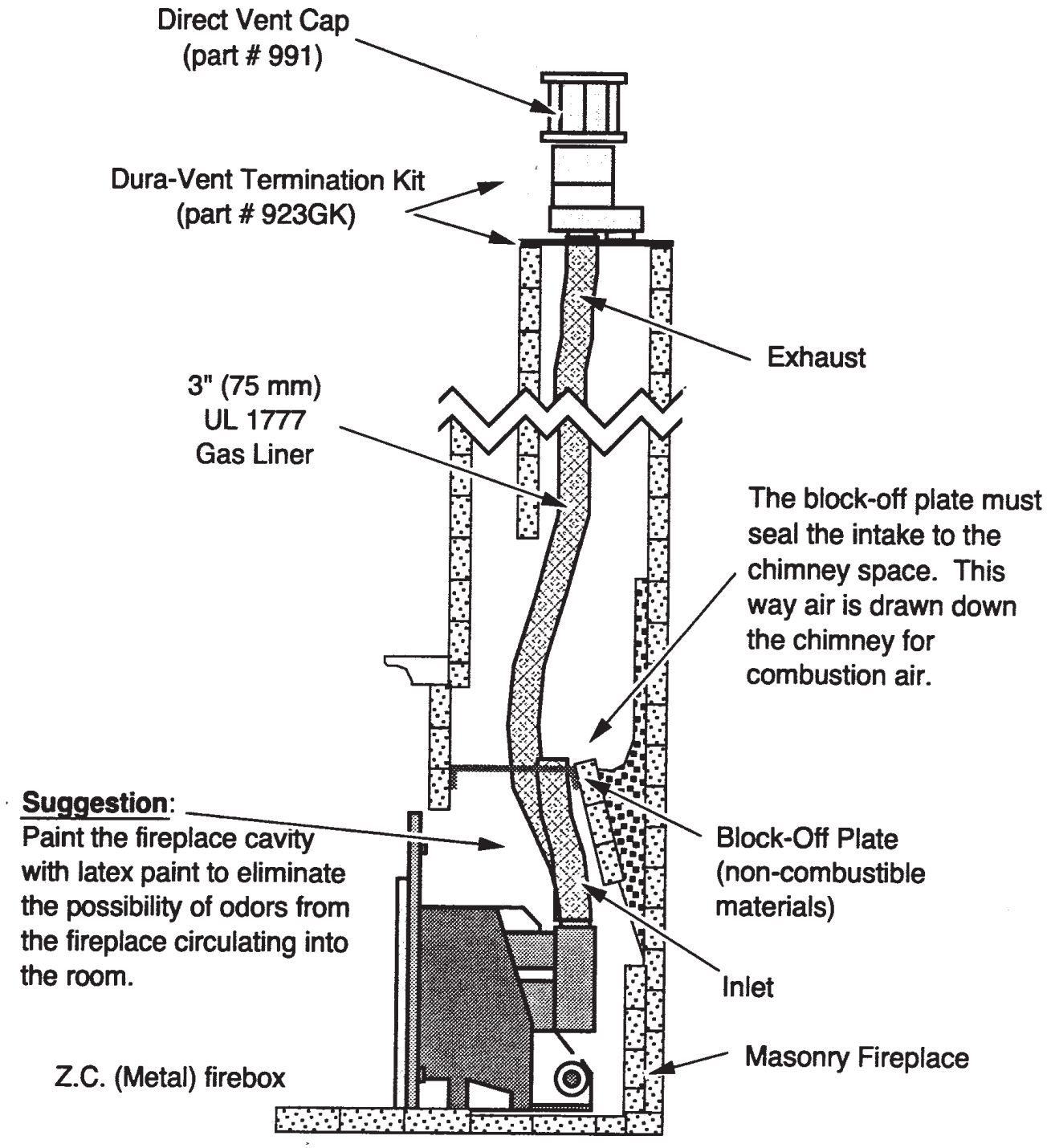
Insert Direct Vent Options

Inlet & Exhaust Re-Line



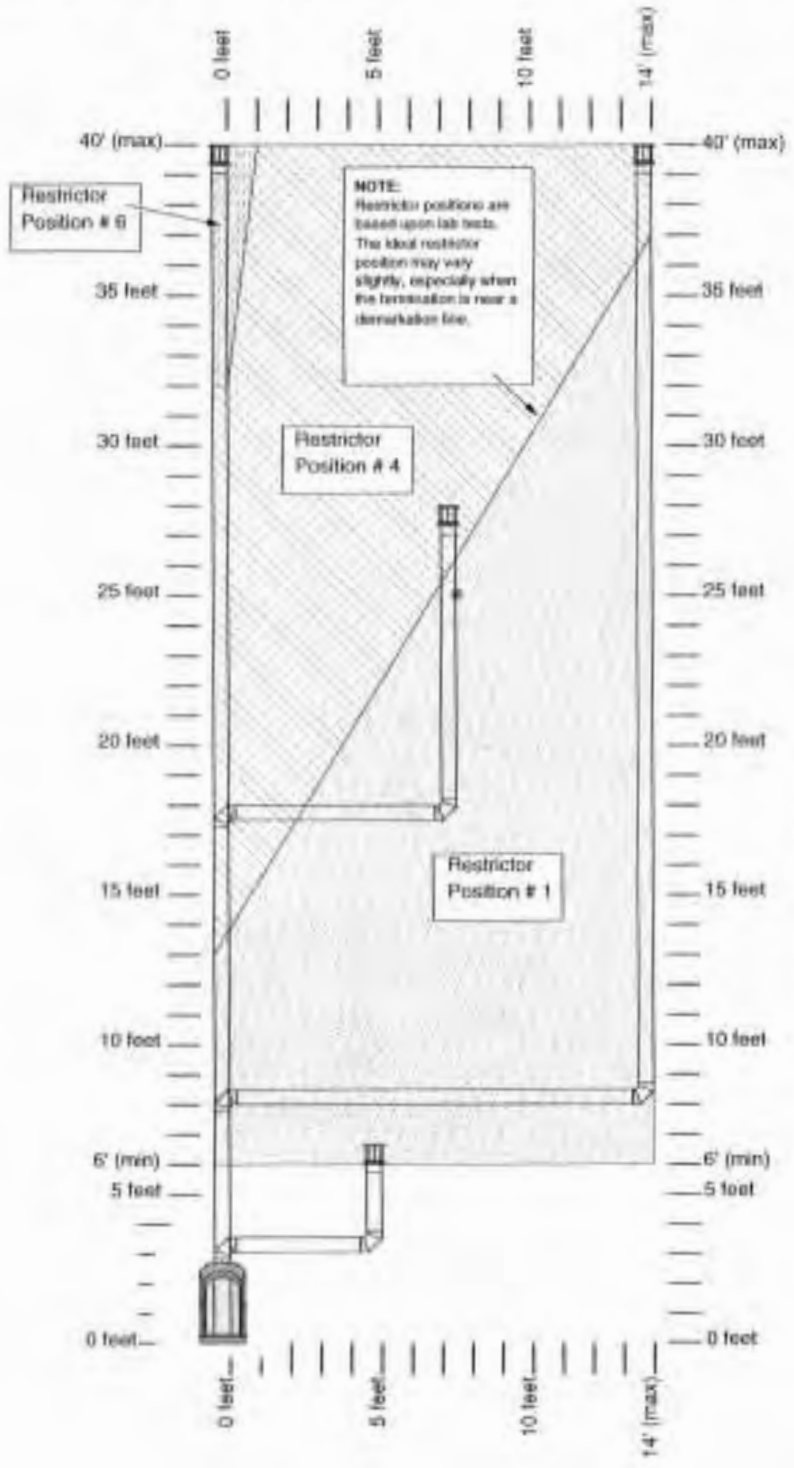
Insert Direct Vent Options

Exhaust Only Re-Line



Vent Configuration with Vertical Vent Termination

- The termination must fall within the shaded area shown in the chart. Use the indicated restrictor po
- A maximum of 3 elbows may be used.

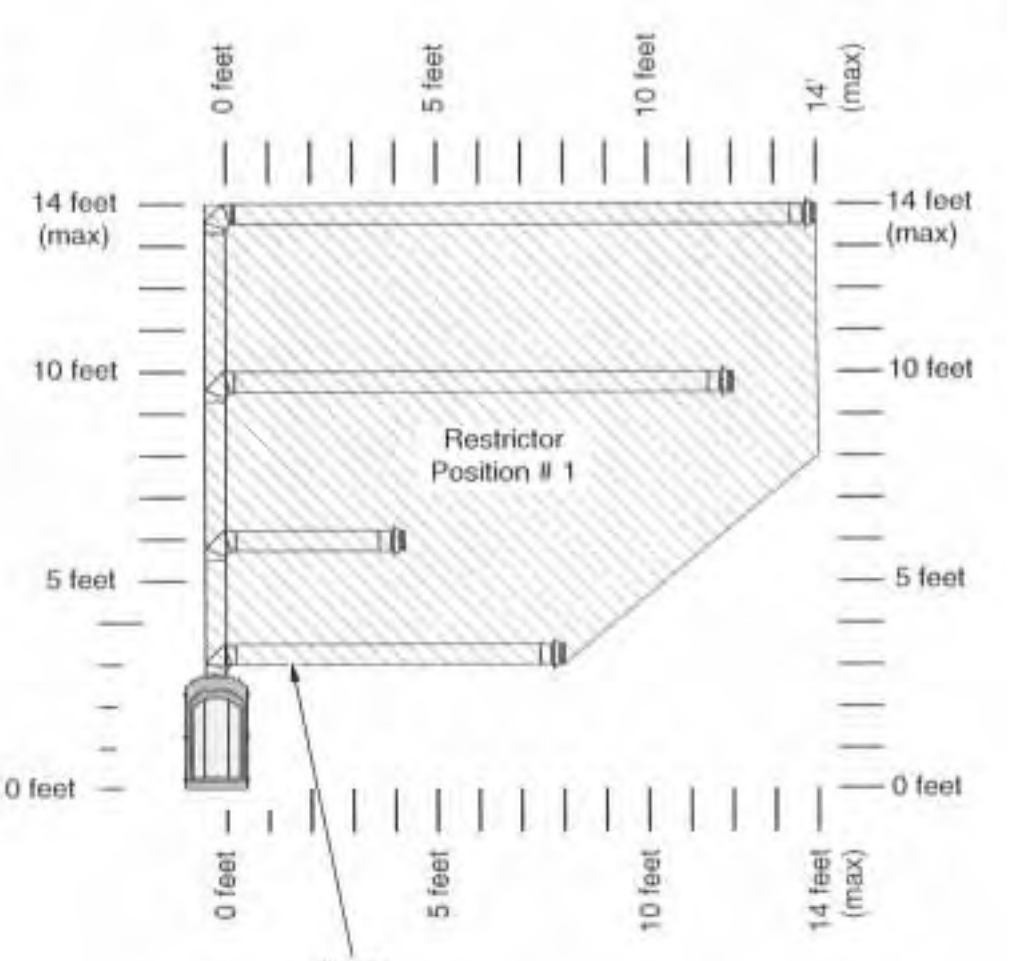


TRAVIS INDUSTRIES
HOUSE OF FIRE

Horizontal Termination

Use a single 90° elbow (NOTE: an additional 45° elbow may be used on the horizontal run).

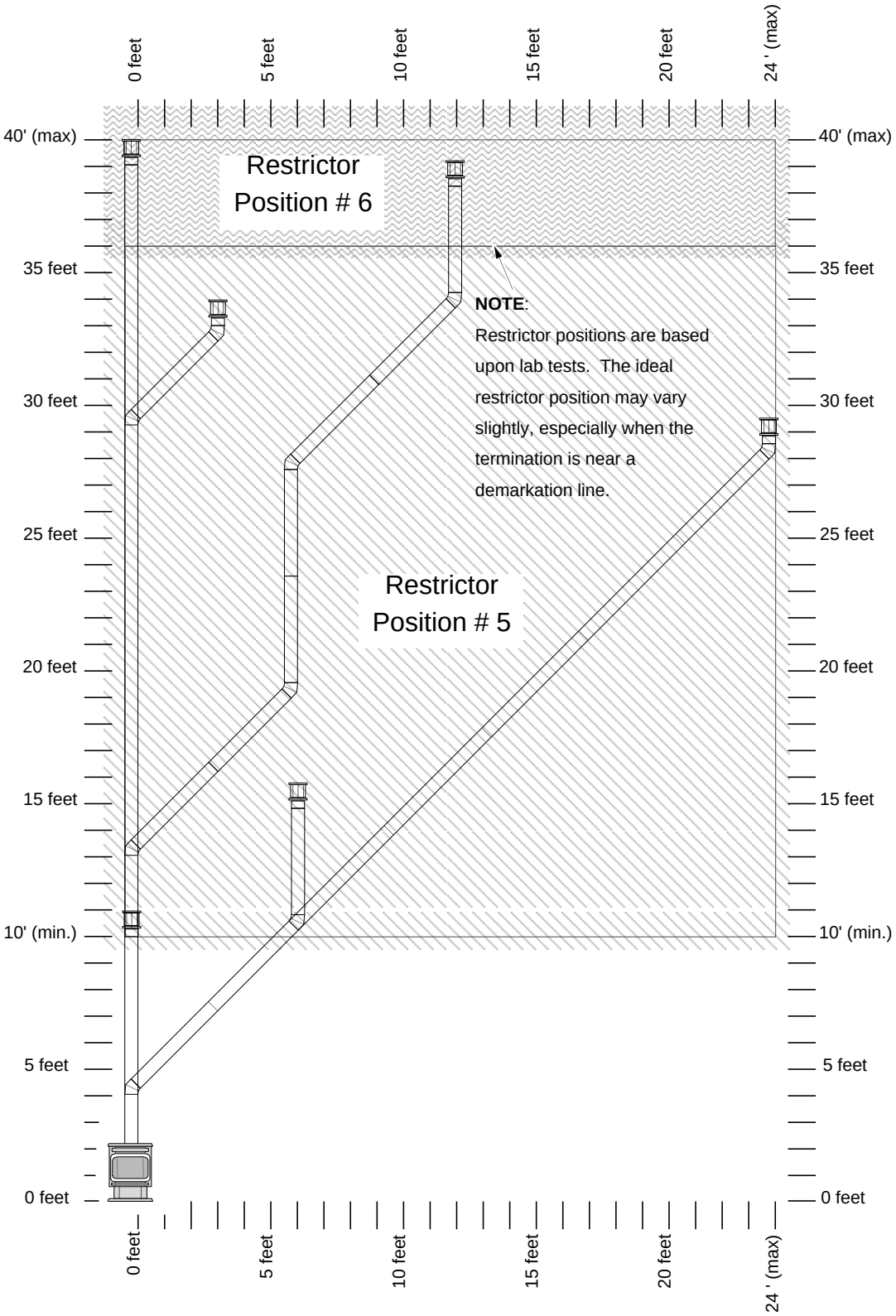
The termination must fall within the shaded area shown in the chart. Use the indicated restrictor position.



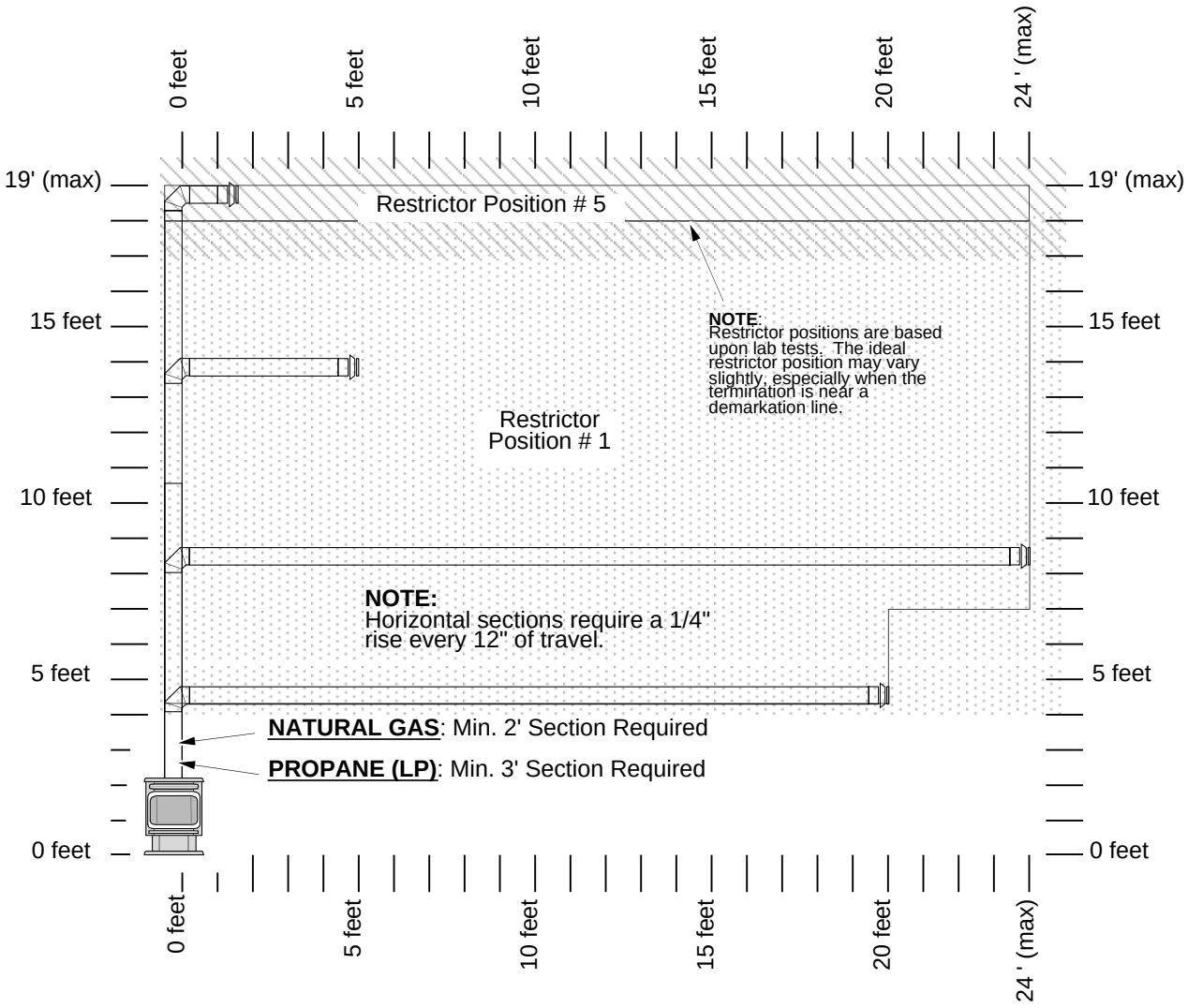
NOTE:
Horizontal sections require a 1/4" rise every 12" of travel.

NOTE:
Restrictor positions are based upon lab tests. The ideal restrictor position may vary slightly.

Vertical Terminations with 0, 2, or 4 - 45˚ Offsets

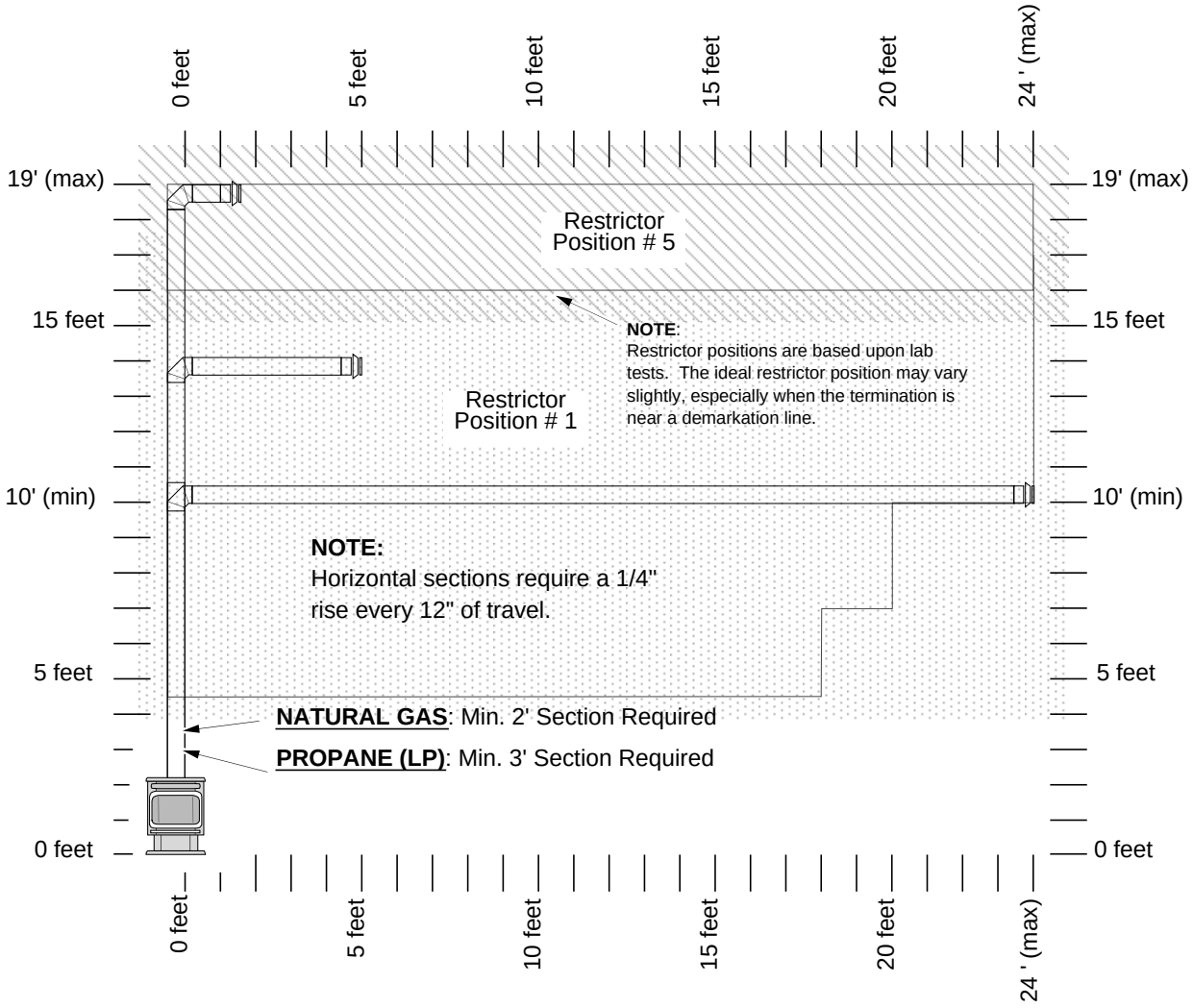


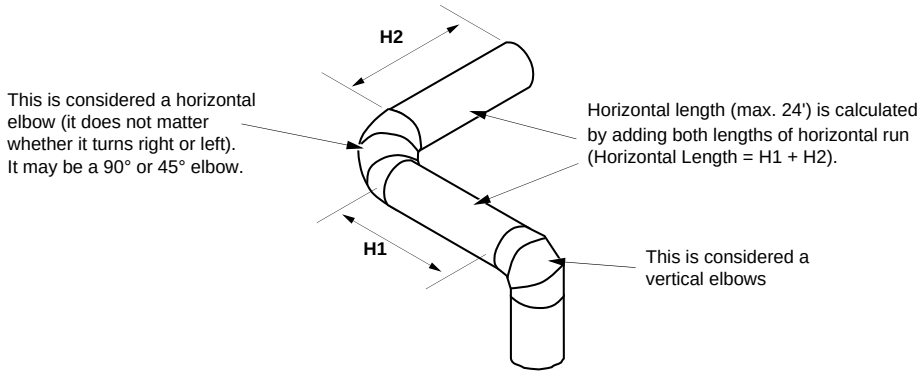
Horizontal Terminations with One 90˚ Offsets



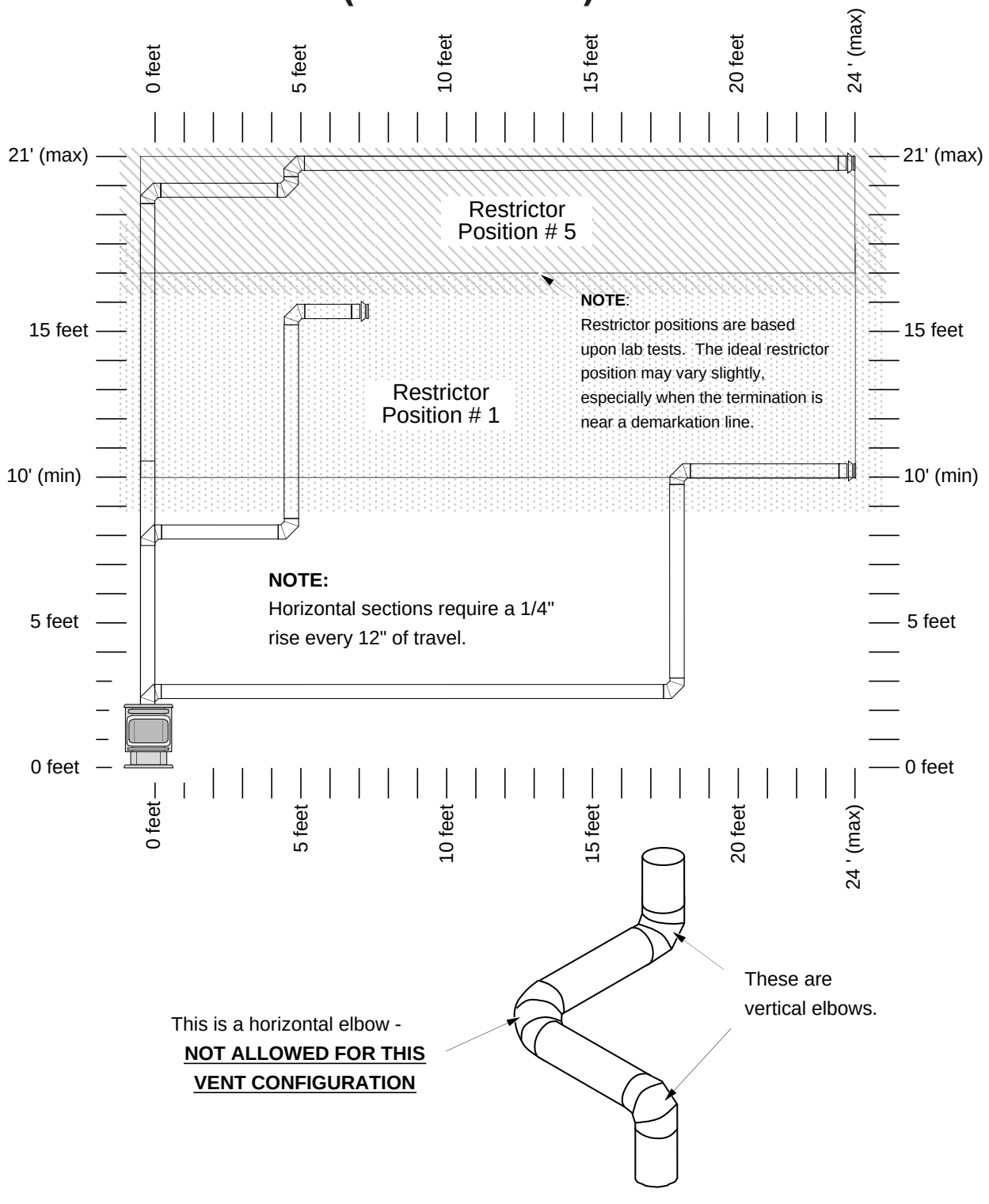
Approved Venting Configurations with a Horizontal Termination and Two Elbows

(one 90˚ vertical or 45˚ horizontal elbow)

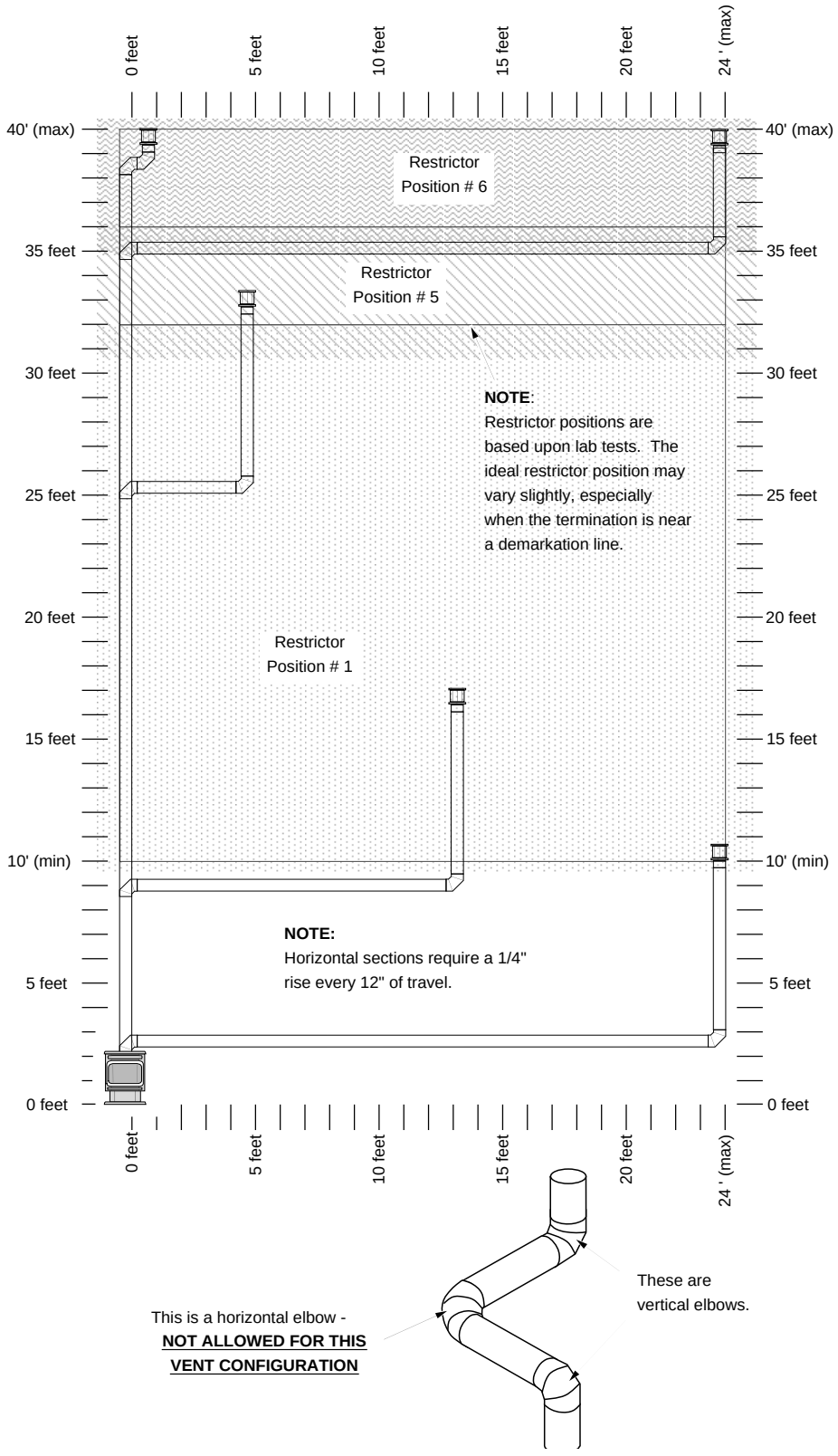




Approved Venting Configurations with a Horizontal Termination and Three 90˚Elbows (all vertical)

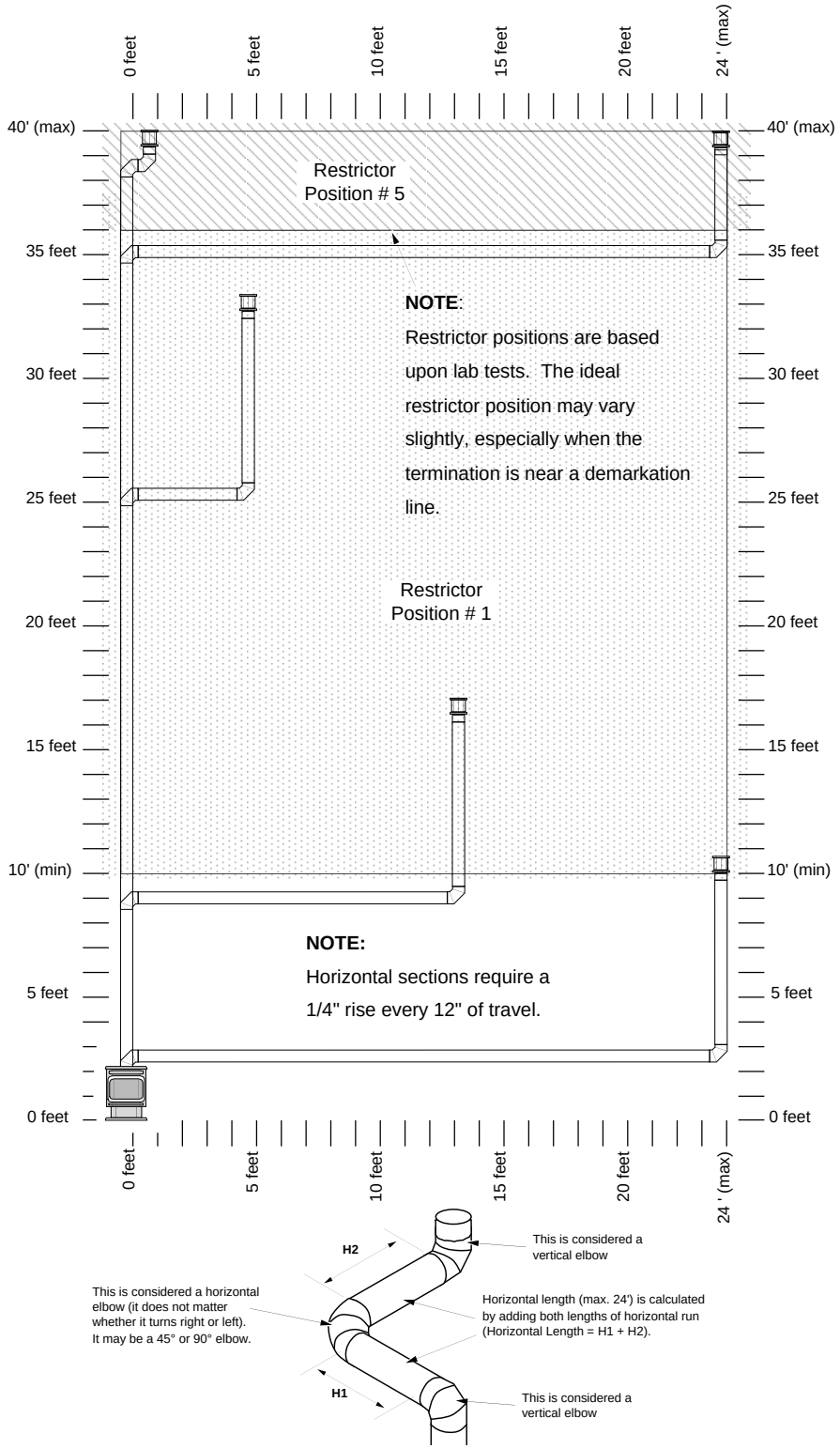


Vertical Venting Configurations with Two 90˚ Elbows



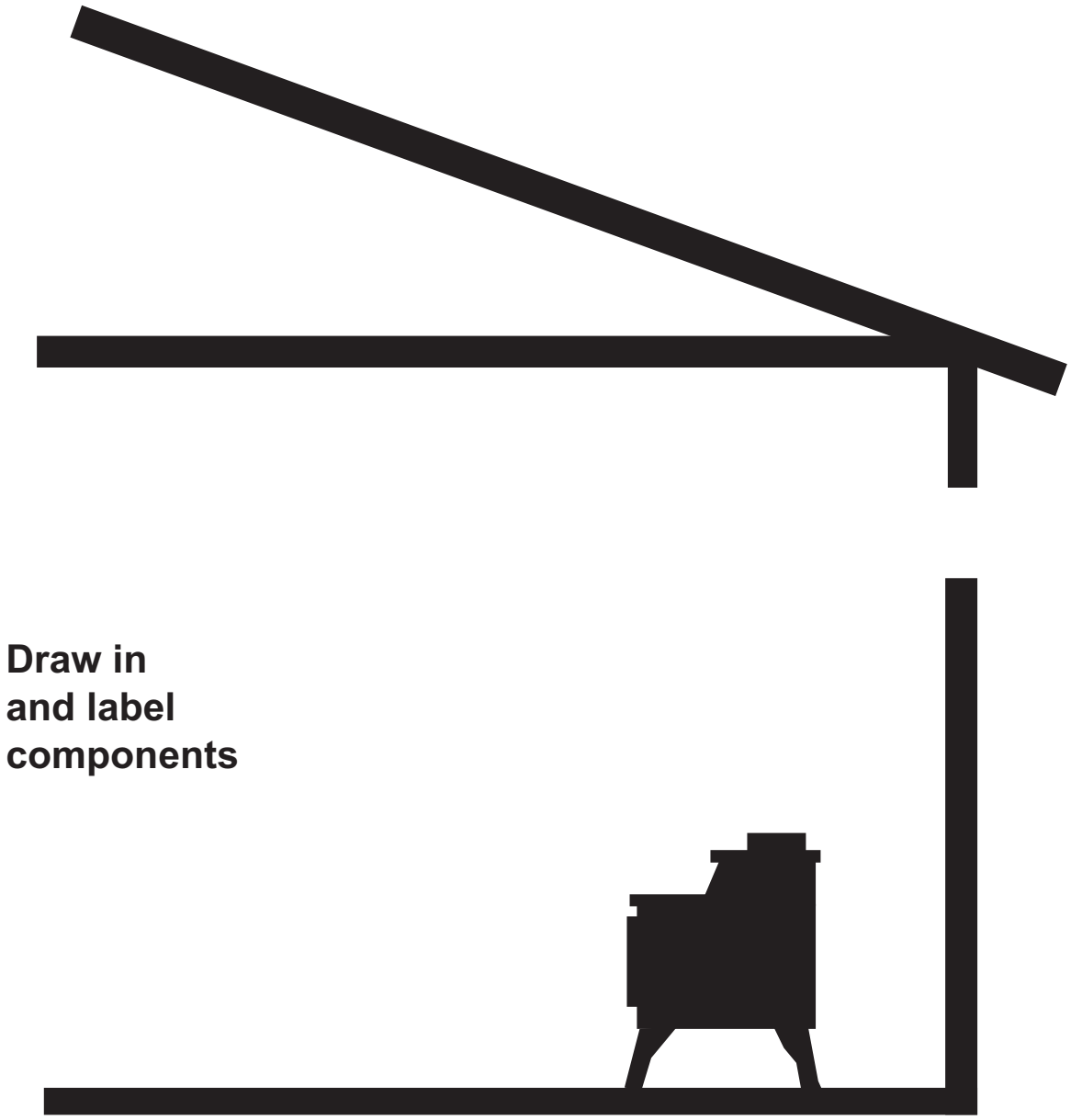
Approved Venting Configuration for Vertical Termination with Three 90˚ Elbows

(Two 90 vertical and one 45˚ or 90˚ horizontal elbow)



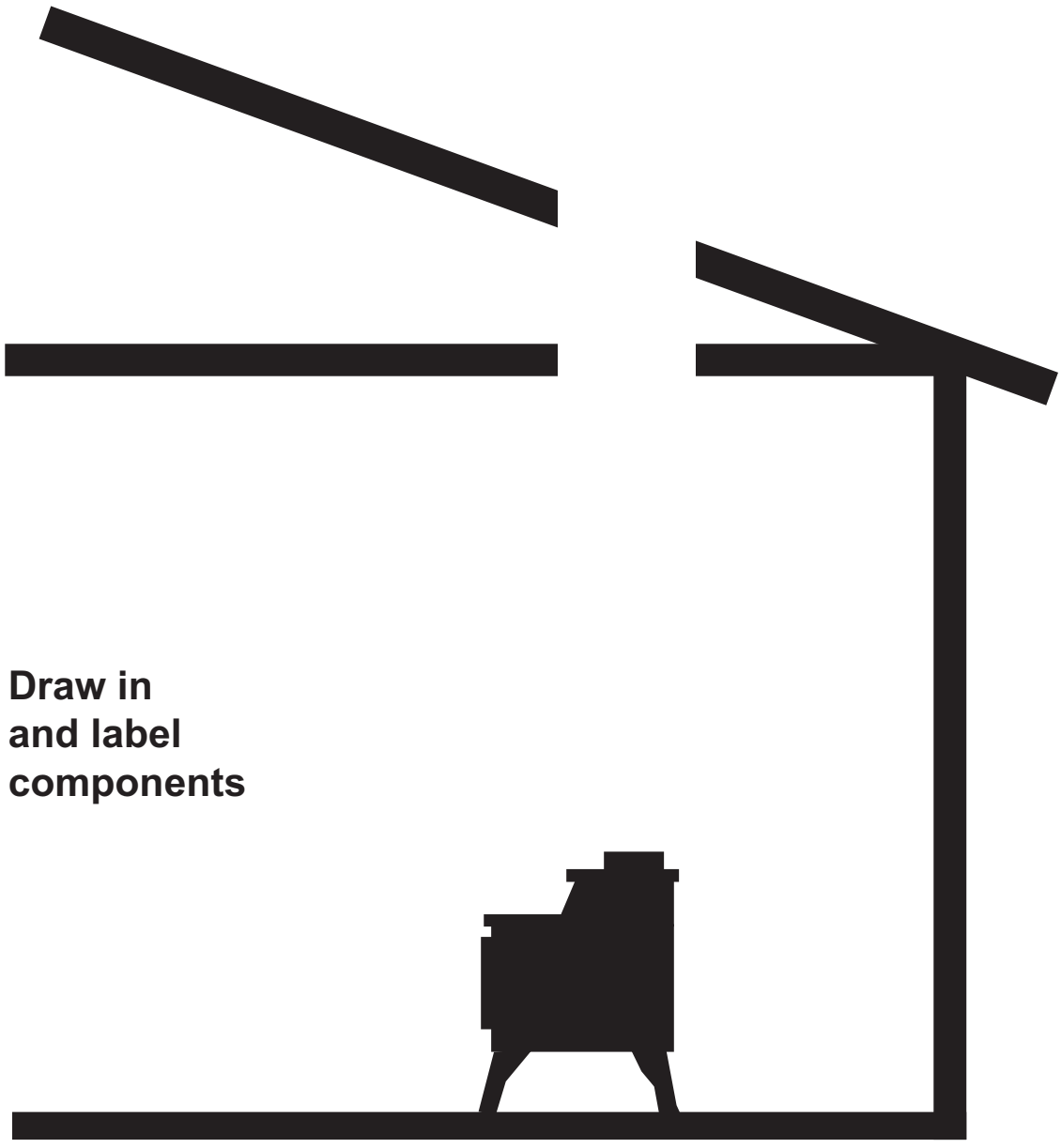
TRAVIS INDUSTRIES
HOUSE OF FIRE

Direct Vent Horizontal Thru-The-Wall Penetration

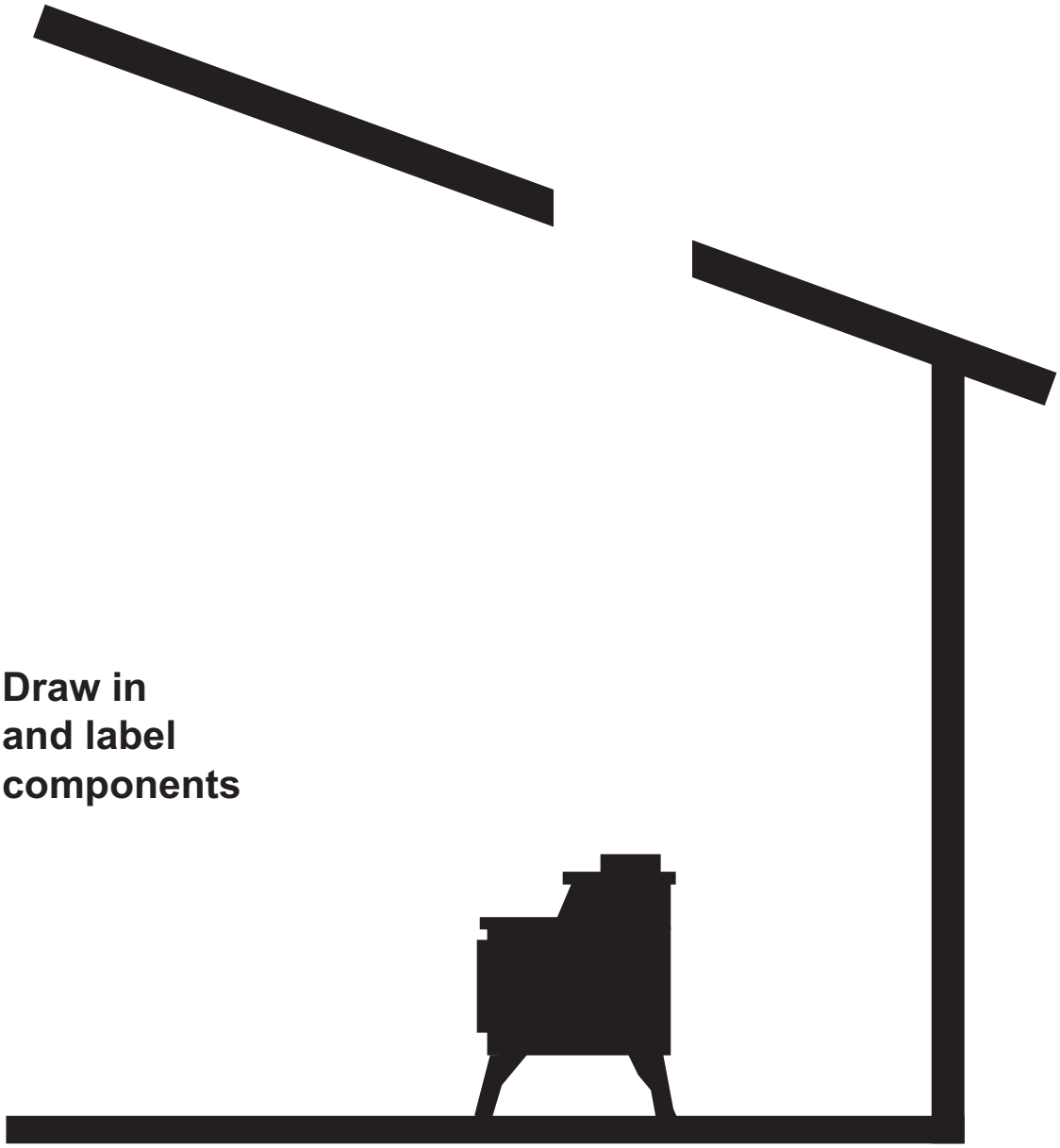


Draw in and label components

Direct Vent
Ceiling Penetration



Direct Vent Cathedral Ceiling Penetration



MILLIVOLT SYSTEMS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Millivolt Systems & Thermoelectric Energy

Millivolt Systems Advantages & Disadvantages

Function

Gas Valves

Gas Control Valve Operational Sequence

MILLIVOLT SYSTEMS

TRAVIS INDUSTRIES
HOUSE OF FIRE

- Millivolt systems control the operation of all gas appliances produced by Travis Industries.

- The flow of the fuel gas and safety shut-off are all controlled through the use of gas control valves. These gas control devices utilize thermoelectric energy to open and close the gas flow at the appropriate times during normal operation of the gas appliance.

- This thermoelectric energy is measured in millivolts. (1/1000 volt DC)

- Travis Industries uses the SIT gas control millivolt valve.

- Note: Older appliances used RobertShaw gas control valves

MILLIVOLT SYSTEMS

TRAVIS INDUSTRIES
HOUSE OF FIRE

- A standing pilot or millivolt system utilizes thermal-electric energy to operate all functions of the gas valve.

- Millivolt systems utilize a pilot light to function as a safety monitor - if the pilot goes out, the safety system closes all gas flow to the gas valve.

- The pilot light is also used to safely light the main burner.

- Millivolt systems require no outside electrical source for operation (110V household current).

MILLIVOLT SYSTEMS

TRAVIS INDUSTRIES
HOUSE OF FIRE

ADVANTAGES +	DISADVANTAGES -
• Works when electricity is off • Tried and long term proven ignition system • Repair costs are very minimal	• Electrical resistance problems can cause performance concerns • Not understood by many non-hearth gas service people or other tradespeople ie. Gas Co., HVAC Electricians, Etc.

Functions of the Millivolt Gas Control Valve

- Controls Gas Flow
- Maintains A Standing Pilot
- Turns ON the Burner When Called For
- Powered By:

    Thermocouple - Powers Safety Pilot (EPU - Electromagnetic Power Unit)

    Thermopile - Powers Burner Operation

RobertShaw Gas Control Valve

Used on all older gas appliances and some new appliances

SIT Gas Control Valve

Used on most new gas appliances

Gas Valves

- Gas valves used in residential applications have a maximum inlet pressure of 1/2 PSI or 14 inches of water column.

- Higher pressure created by air pressure leakage test or high gas pressure will cause permanent valve damage.

- Make sure the gas valve is segregated from any piping systems undergoing an air pressure leakage test.

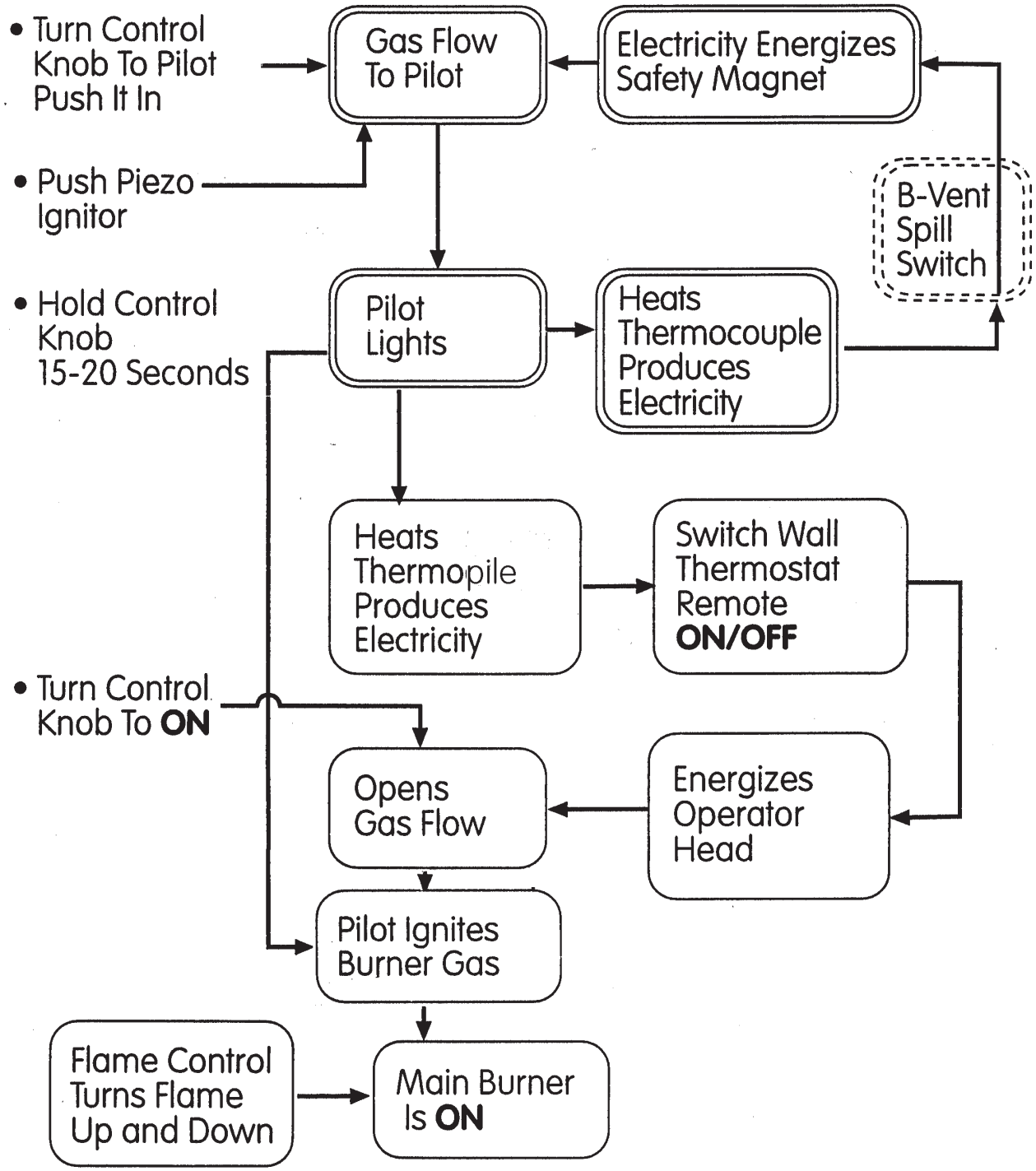
- Gas valves seldom become defective, yet they are the most commonly replaced component by technicians.

- The gas valve will continue to work unless it has been exposed to one of the following highs:

HIGH PRESSURE
HIGH VOLTAGE
HIGH WATER (Flooded)
HIGH TEMPERATURE

- Always replace defective gas valves with complete new valves of the same kind.

Gas Control Valve Operational Sequence



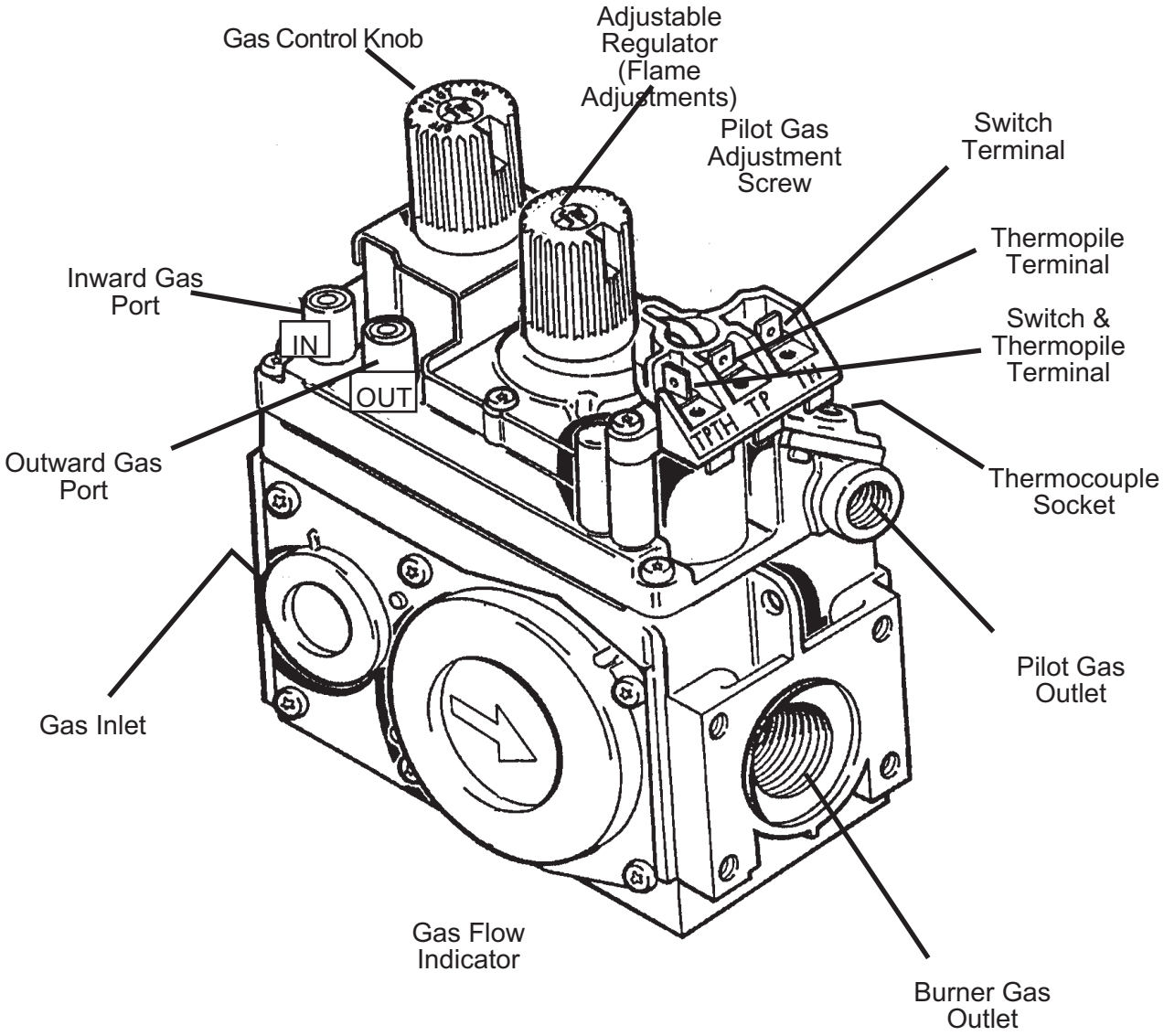
MILLIVOLT SYSTEMS COMPONENTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Gas Valve
- SIT

Pilot Assembly
- Piezo Igniter
- Thermocouple
- Thermopile
- Snap Disc
- Burner Orifice
- Pilot Orifice
- Pressure Regulator

SIT Gas Control Valve



SIT Gas Control Valve

820 NOVA Gas Control DATA

225˚ F Temperature (MAX)

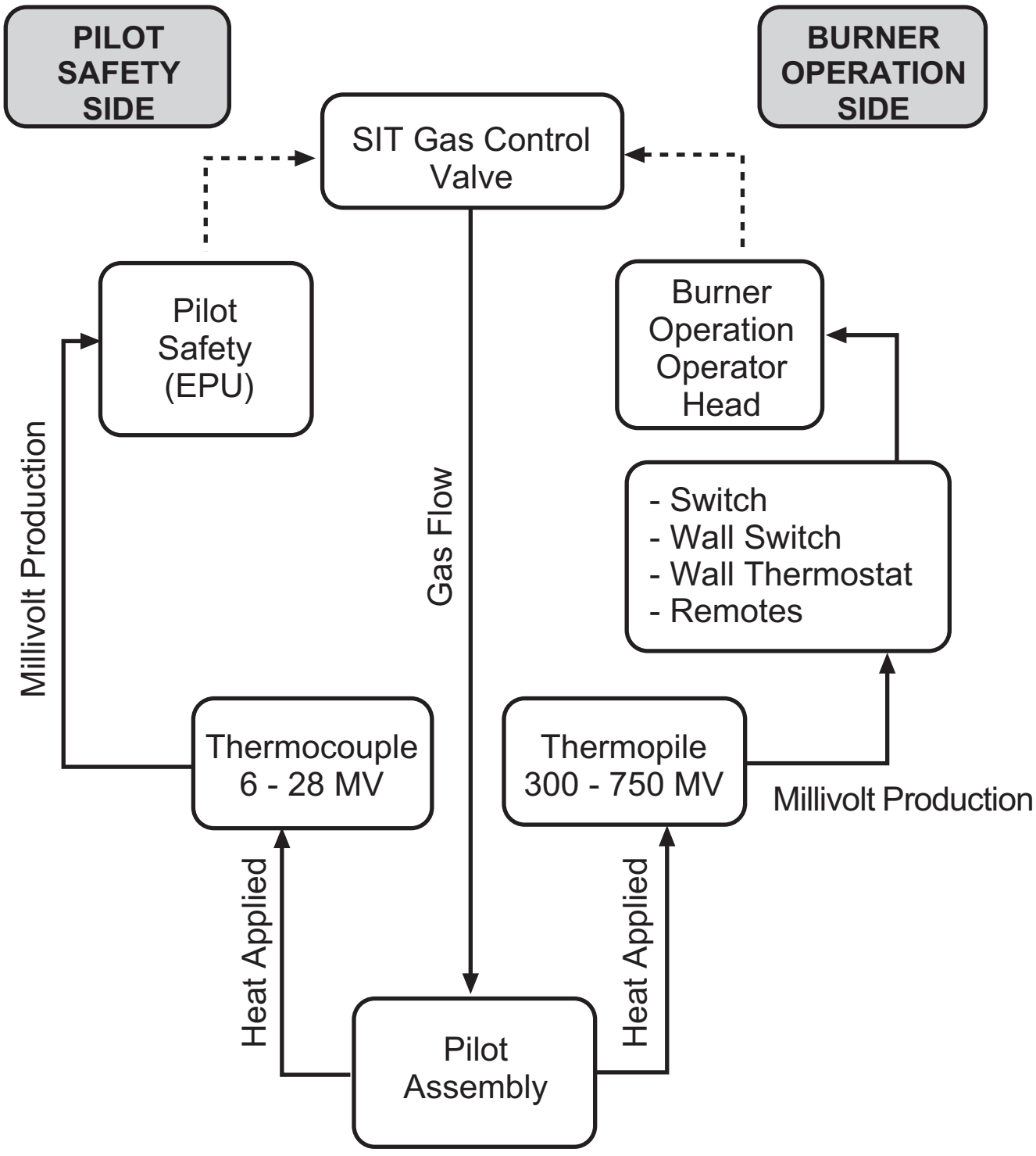
• Main Operator		• Safety Magnet	
Minimum Voltage 145 MV		Hold-In Current Drop Out Current	Less Than 285 MA Greater Then 125 MA
Coil Resistance	2.25 OHMS ± 0.5 OHMS	Coil Resistance	.018 OHMS + .003 OHMS

• Thermocouple Hand Tighten then 1/4 Turn with Wrench	Engaged circuit voltage less than 6 MV - Replace

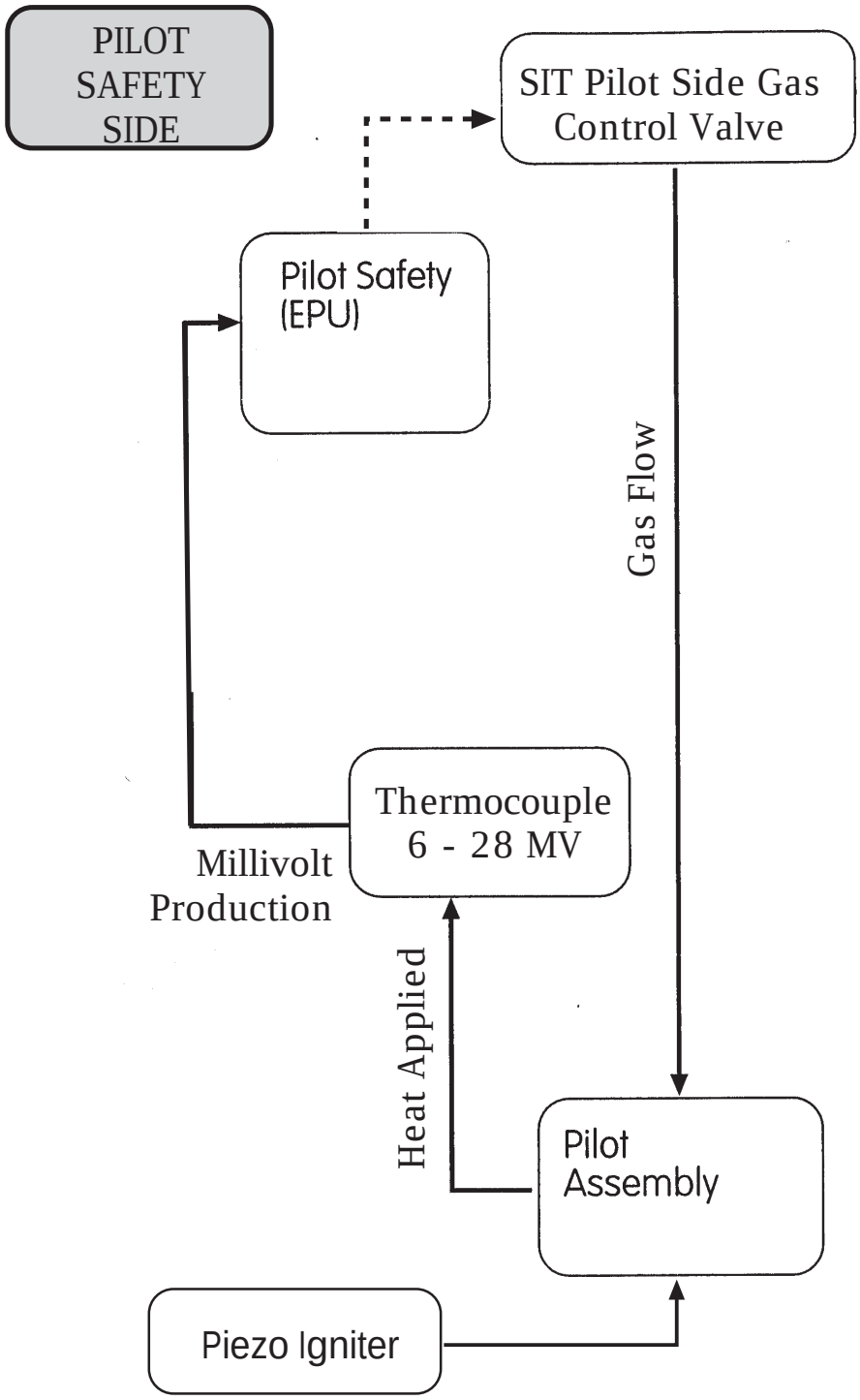
SIT Gas Control/Pilot Assembly

FEATURE	ADVANTAGE	BENEFIT
Gas Pressure Ports	Easy access for service technician	• Purge air from incoming gas • Test incoming and out going gas pressure
NOTE: Use proper sized screw driver - 3/16" straight		
Front Mount Thermocouple Port	Easy access for thermocouple testing or replacement	• Time saving • Ease of access
Pilot Gas Adjustment	No cover cap screw Uses double "O" ring	• No screw to loosen • No gas leaks
NOTE: Use proper sized screw driver - 3/16" straight		
Multiple Operator Head Terminals 6 - Spade Terminals 3 - Screw Terminals	Multiple choices for wire connections	• Direct connection of remotes and thermostats
Safety Lock Out	Prevents accidental Gas Flow Until Safety Disengages	• Total Safety
Replaceable Spark Electrode	Spark Electrode is Replaceable	• Time Saving • Ease of Replacement
Pop Top Pilot Hood	Easy Pilot Orifice Changeover	• Time Saving • Ease of Gas Conversion

SIT Control Divided Into Two Sides

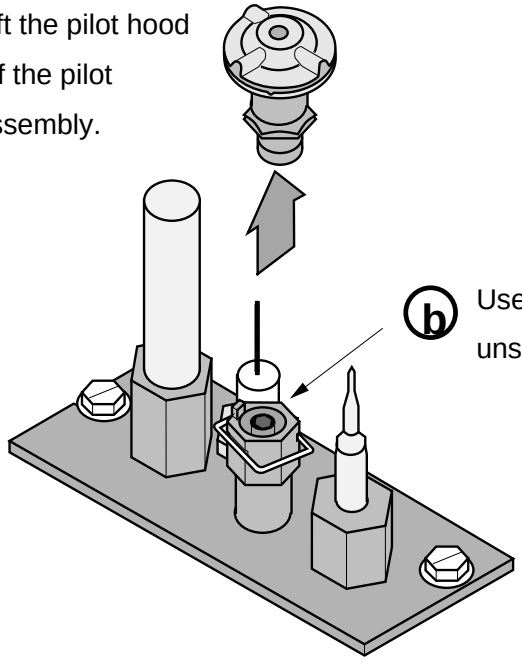


Pilot Side Components of a Gas Control Valve



SIT Pilot Assembly

ⓐ Lift the pilot hood off the pilot assembly.



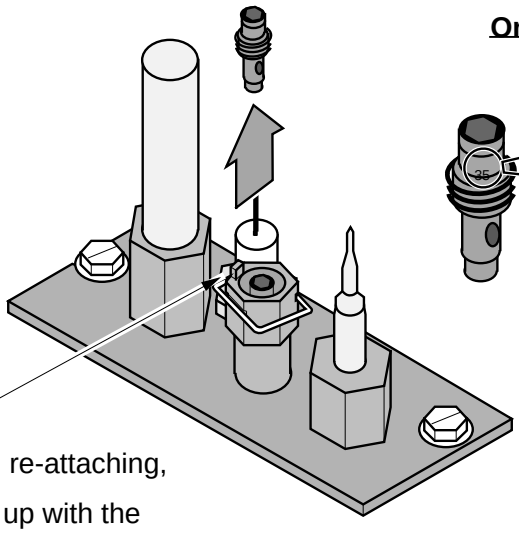
ⓑ Use a hex wrench to unscrew the orifice.

5/32" Hex

c R o

NOTE: this pin notch in nch to ifice.

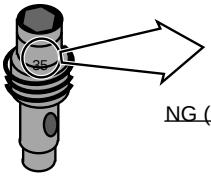
ⓒ Remove the orifice and replace with the LP orifice. Screw the orifice all the way in and replace the pilot assembly.



Orifice Identification:

LP (Propane) Orifice

35



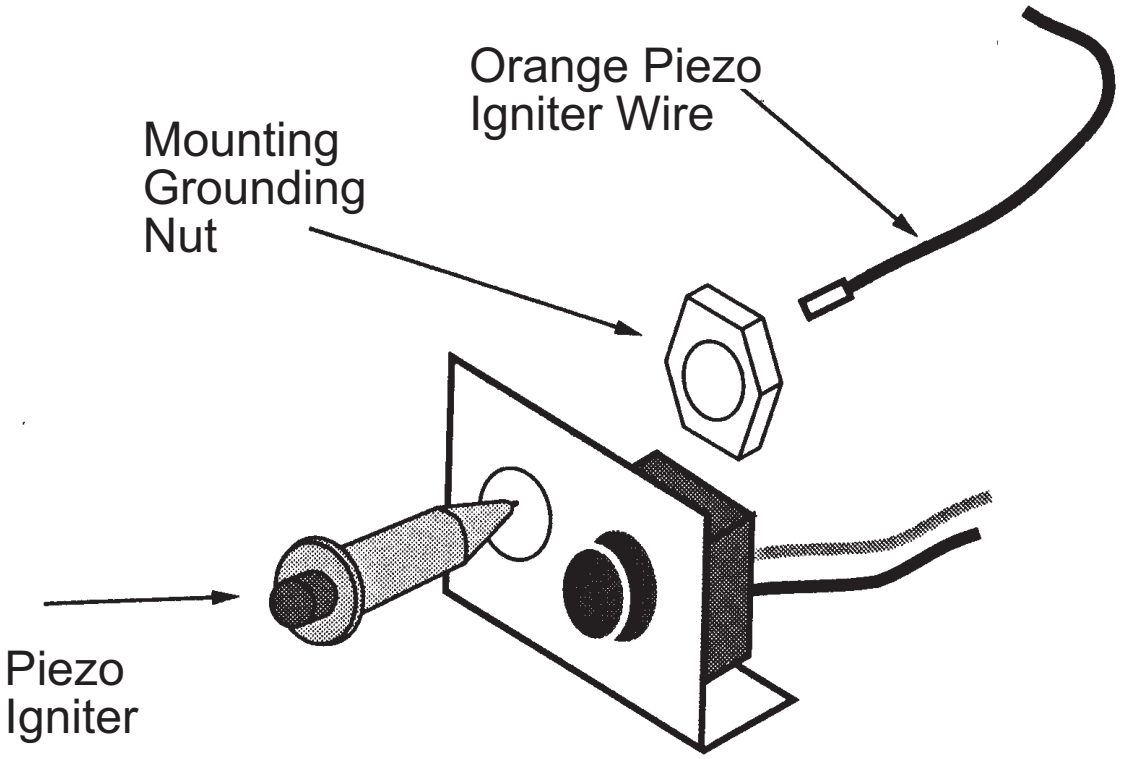
NG (Natural Gas) Orifice

62

NOTE: when re-attaching, this pin lines up with the notch in the pilot hood.

Piezo Igniter

- Used to light the pilot flame
- Spark (BLUE) produces a temperature of 1700˚ F



Piezo Igniter

- A Piezo Igniter is used to light the pilot.

- The Piezo Igniter, also used on many barbecue grills, is named after its inventor, Piezo. Mr. Piezo discovered when pressure was exerted on a crystal, it would produce electricity.

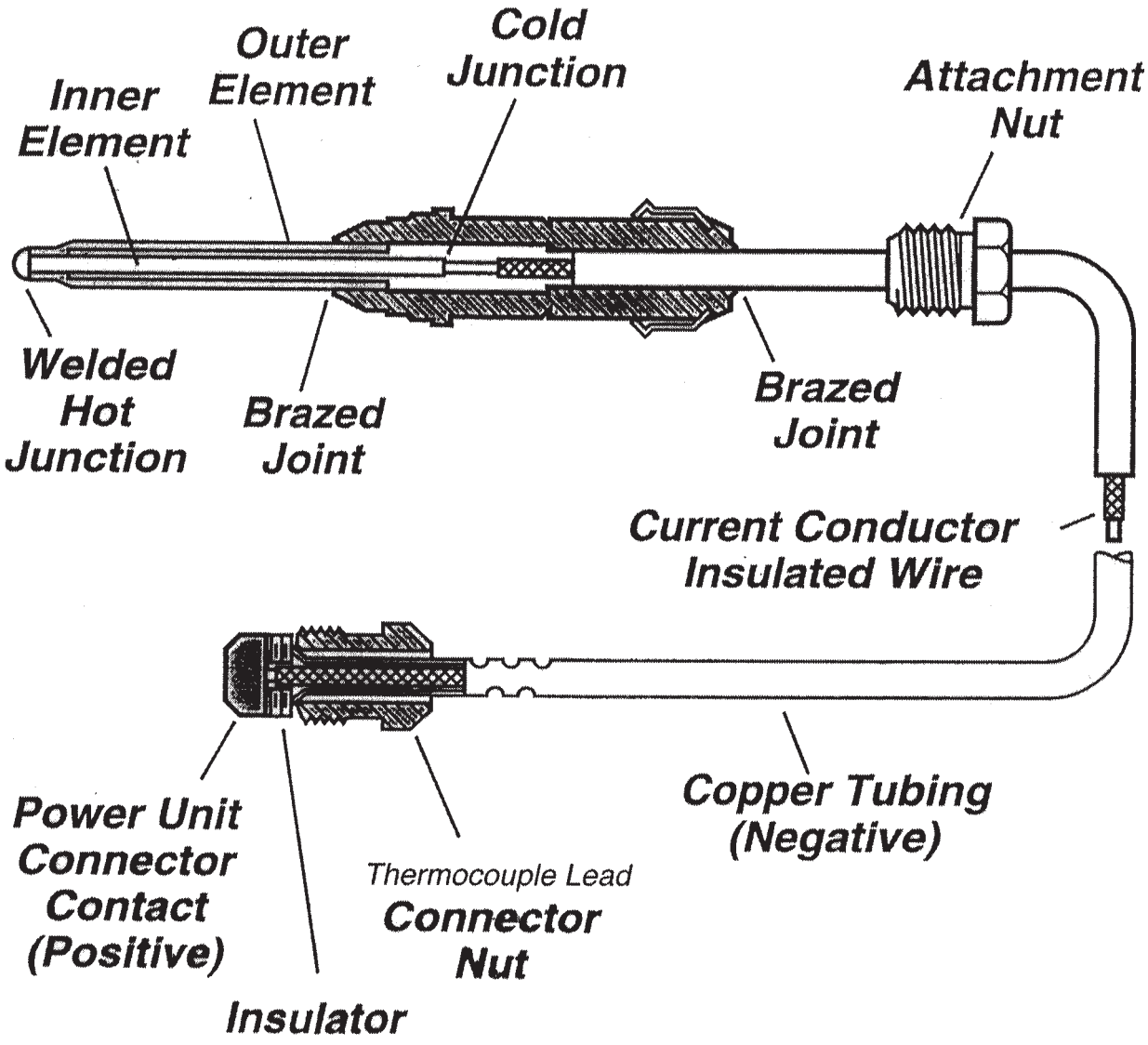
- The crystal in the Piezo Igniter is a man-made crystal which has been soaked in oil, charged with high electrical voltage, and then baked under high temperature.

Piezo Igniter

- With each push of the igniter, 25,000 volts (no amperage) is released to create a heat source at the pilot assembly. The high voltage travels to an electrode, then jumps across (as a heavy blue spark) to the grounded pilot assembly. The voltage then returns to the man-made crystal through the common ground system of the gas appliance. The heavy blue spark produces a temperature of 1700˚ F.

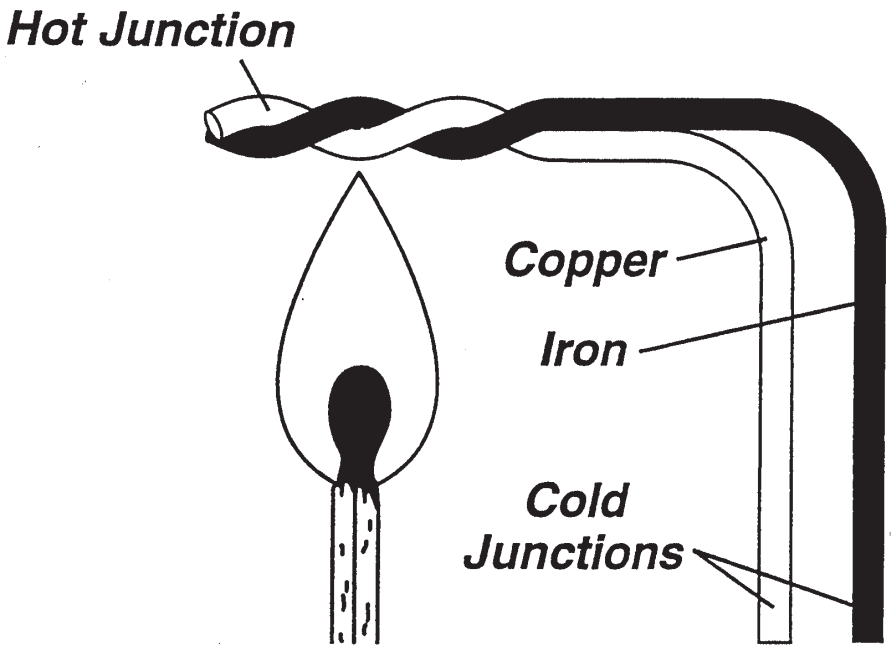
- Should you receive a shock while touching the appliance when pushing the Piezo Igniter, you have become the ground or return path for electricity. This indicates a poorly grounded Piezo Igniter.

Thermocouple



- Millivolt Output = 25-30 Millivolts (no load). Not connected to gas control valve EPU

Thermocouple/Thermopile Principles



- In the late 1800's Thomas J. Seebeck, a German physicist, discovered the principles of thermocouple. Therefore, it is often known as the Seebeck effect.
- Two dissimilar metals, when heated, produce electricity
- Thermo electric energy
- Produces millivolts (1/1000 VDC)

Thermocouple/Thermopile

Operation

- Pilot heats hot junction
- 400˚F is the ideal heat difference between hot and cold junctions (this will produce maximum voltage potential).

Mounting Brackets Provide Heat Sink

This allows heat at the base to properly dissipate during operation and cool down

Over-heating Causes No or Low Voltage Production

This is caused by:

- Improper pilot flame location

And results in:

- Heat transfer to cold junction

Which:

- Produces low or no voltage

Important Information About Thermocouples

- Typical voltage production up to 25-30 millivolts (no load - not connected to the gas control valve).
- Produces DC voltage measured in millivolts.
- Millivolt = 1/1000 of a volt D.C. voltage.
- Used with safety pilot system side of the gas control.
- 6 MV (SIT) production minimum required (with pilot on - in use - connected to the gas control valve EPU). A thermocouple adapter is required to measure millivolts if you can not access the solder joint on the back of the valve.
- Dropout time of 30 seconds - within 30 seconds after pilot flame is extinguished the safety system shuts off the total gas supply to the unit.

NEVER - substitute a “universal” thermocouple for original equipment as its shutdown time may be as much as **2 MINUTES.**

Thermocouples

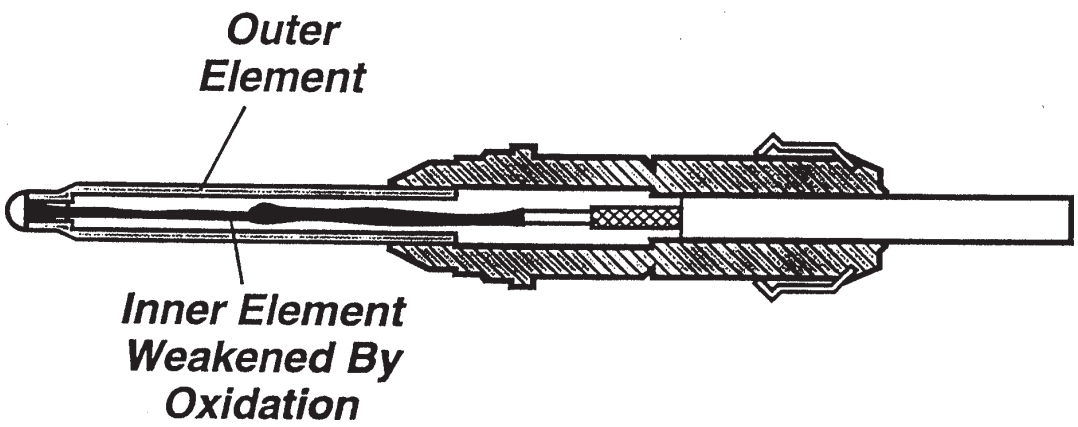
Failure Causes:

- Oxidation of inner elements - you have no control over this.

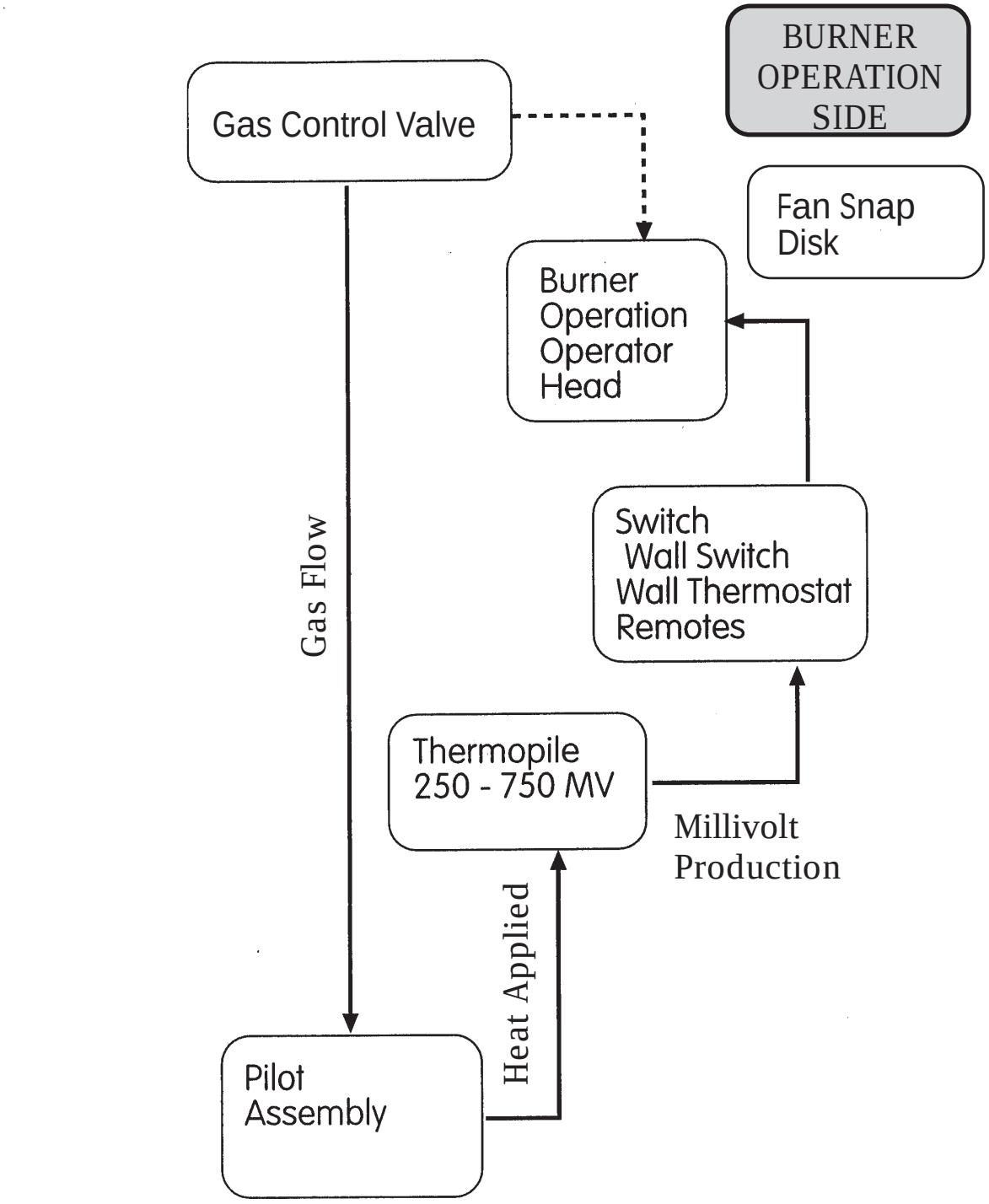
- Over-firing - Each 100˚F increase of 400˚ difference reduces life by 1/2.

  - Caused by oversized a pilot flame.

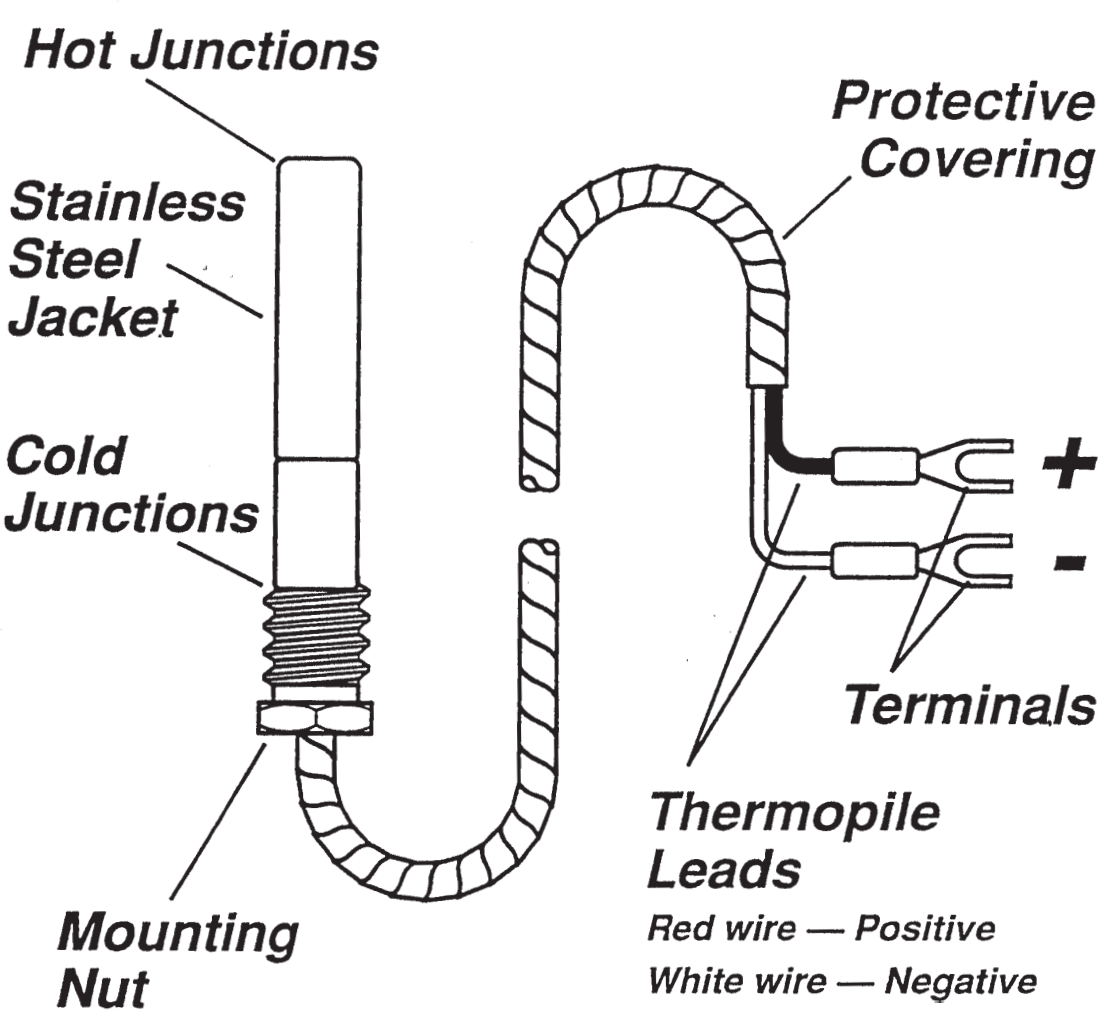
  - Caused by super heating with a propane torch to quickly heat up the system.



Gas Control Burner Side Components



Thermopiles

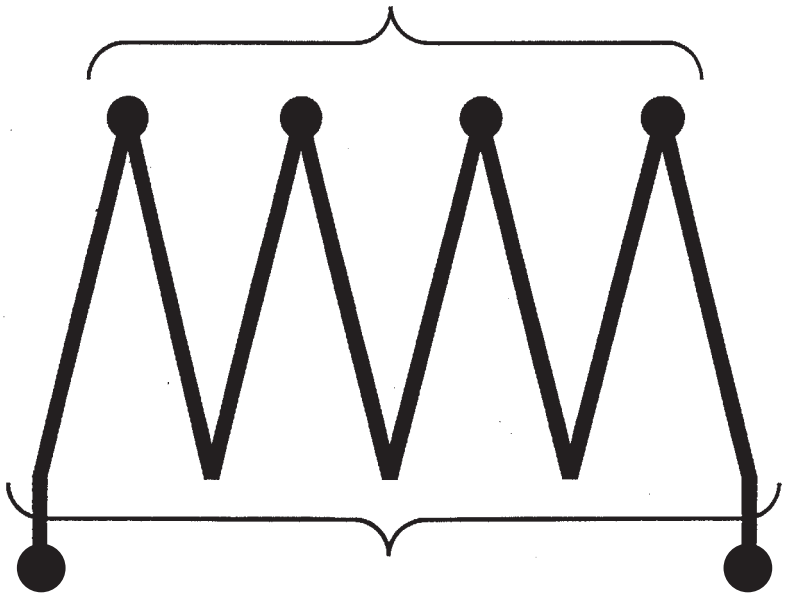


- Millivolt Output: 250 to 750 Millivolts

- Our older original gas appliances used only a thermopile. They did not use the thermocouple/thermopile.

Thermopiles

HOT JUNCTION



Voltage measured across two open ends

Voltage measured

COLD JUNCTION

Thermocouples Connected in Series

- Each pair of wires is a thermocouple.
- Up to 25 thermocouples connected together.
- Voltage in a series circuit is additive thus producing a capability up to 750 MV.

Thermopiles

Voltage Production:

• 250 millivolts - 750 millivolts

Used with Automatic Valves - Robertshaw and SIT gas control valves.

• Wall switches
• Wall thermostats
• Unit mounted switches
• Remote controls

Minimum Voltage

• 250-300 millivolts pilot ON only - System Engaged (No burner ON).

Cool Down

• May take up to three minutes to cool down (safety standard allows up to three minutes).

NOTE - On old units using only a thermocouple, you might have up to 3 minutes of pilot gas leakage before the safety will shut off the gas supply.

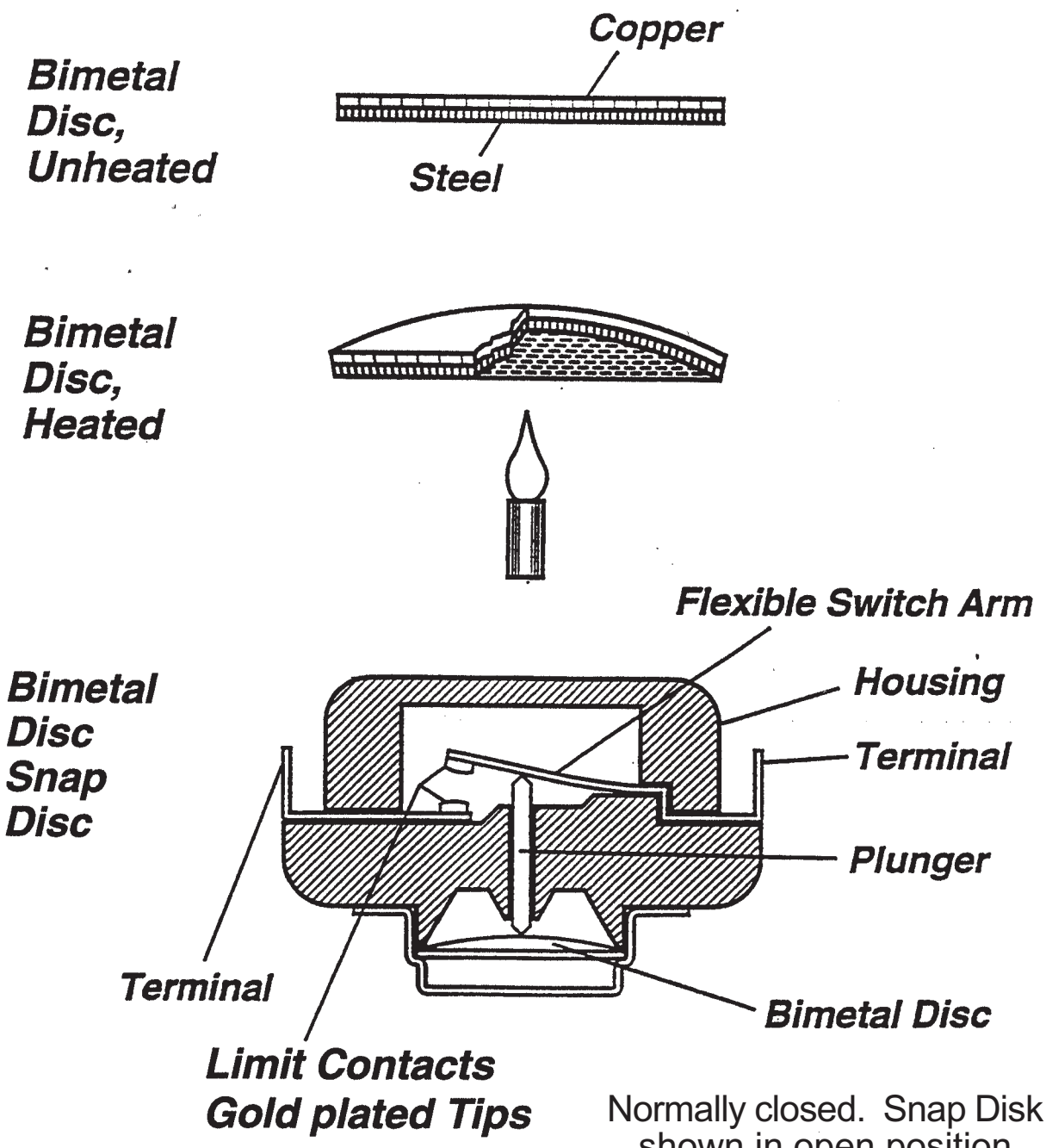
Important Information About Thermocouples

- Typical voltage production up to 25-30 millivolts (no load - not connected to the gas control valve).
- Produces DC voltage measured in millivolts.
- Millivolt = 1/1000 of a volt D.C. voltage.
- Used with safety pilot system side of the gas control.
- 13 MV (RobertShaw) production minimum required (with pilot on - in use - connected to the gas control valve EPU) A thermocouple adapter is required to measure millivolts.
- Dropout time of 30 seconds - within 30 seconds after pilot flame is extinguished the safety system shuts off the total gas supply to the unit.

NEVER - substitute a “universal” thermocouple for original equipment as its shutdown time may be as much as **2 MINUTES.**

Principles of Snap Disc

Used with our fan operation.



Normally closed. Snap Disk shown in open position

Snap Disc

Recognizes rise in temperature

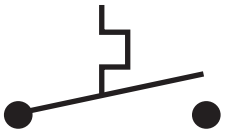
and closes electrical flow

Usage

Fan control (N.O.) - Closes with heat rise

Wired in series

N.O. (Normally Open)



(Fan Snap Disc)

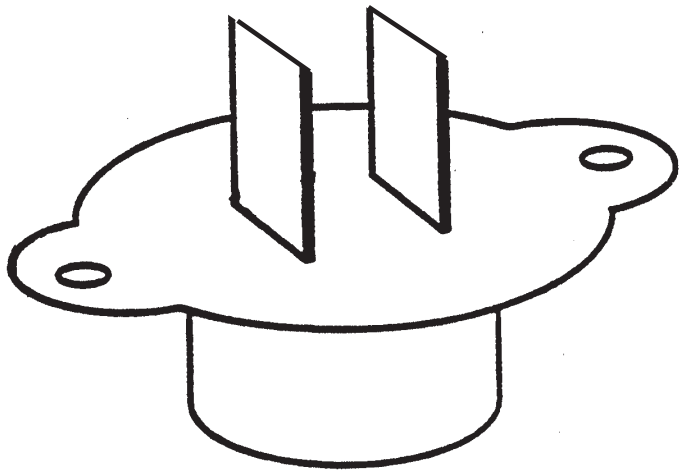
Electrical symbol

Snap Disc

- Fan N.O. - 120˚F - Set point at which it closes turning fan on.

  Marked on disc as F-120 (F = Fan Control)

- Travis Industries quality checks incoming disc for proper operation.



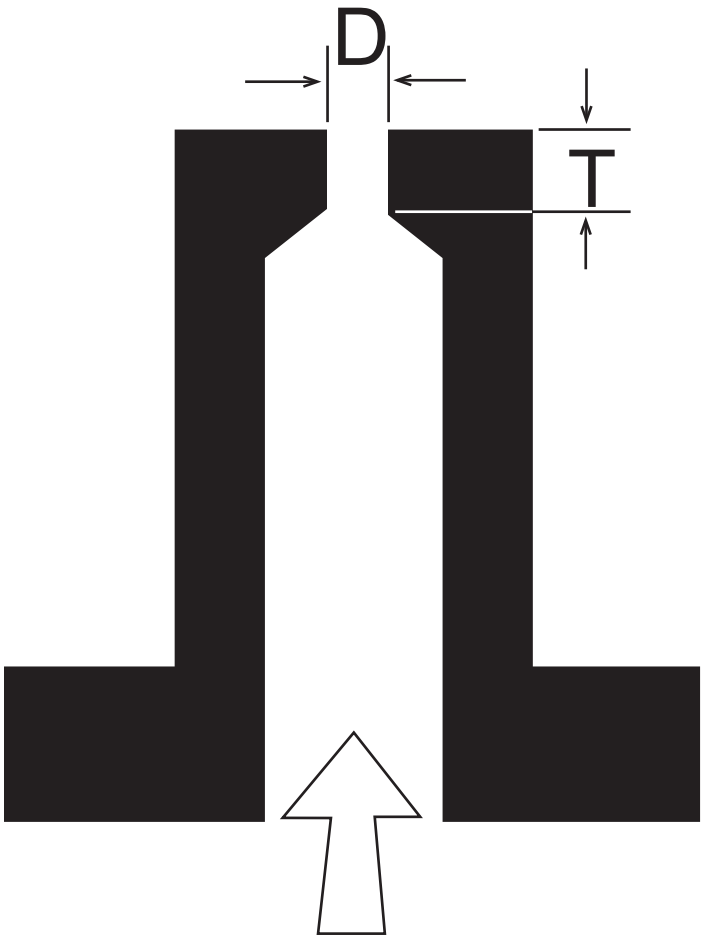
Automatic Reset Snap Disc

NOTE: Colored Dot Who/When Tested

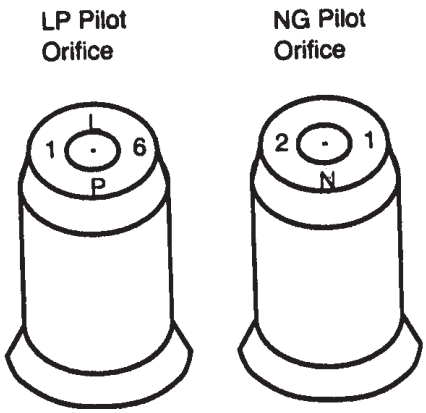
Orifices

Travis Industries deburs (polishes) 100% of our orifices

D = Diameter (Fuel Flow)
T = Thickness



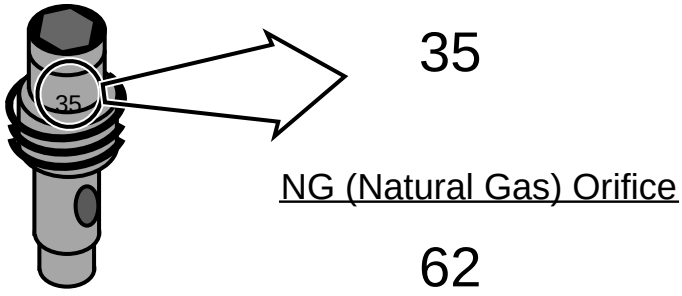
Orifices



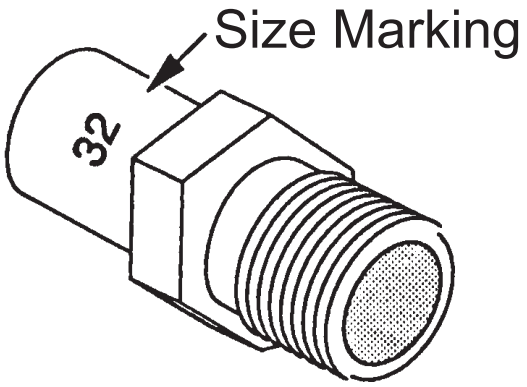
- **Pilot Orifice Markings**
  - 3 Markings for Natural (NG) Gas
  - 4 Markings for Propane (LP) Gas

SIT Pilot Orifices

Orifice Identification:



Burner Orifices



- **Burner Orifice Markings**

  Older orifices used a number plus a letter # Drill Size Plus

  Older orfices used a number plus a letter (N-Natural L-Propane), while new orifices use a number only.

Orifices

Orifice Types

- Burner
- Pilot

Purpose

- Control amount of gas flow
- Put gas into straight stream

Pressure Regulators Have Two Purposes

- Reduce incoming gas pressure.
- Compensate for gas pressure fluctuation.

There Are Two Types of Pressure Regulators

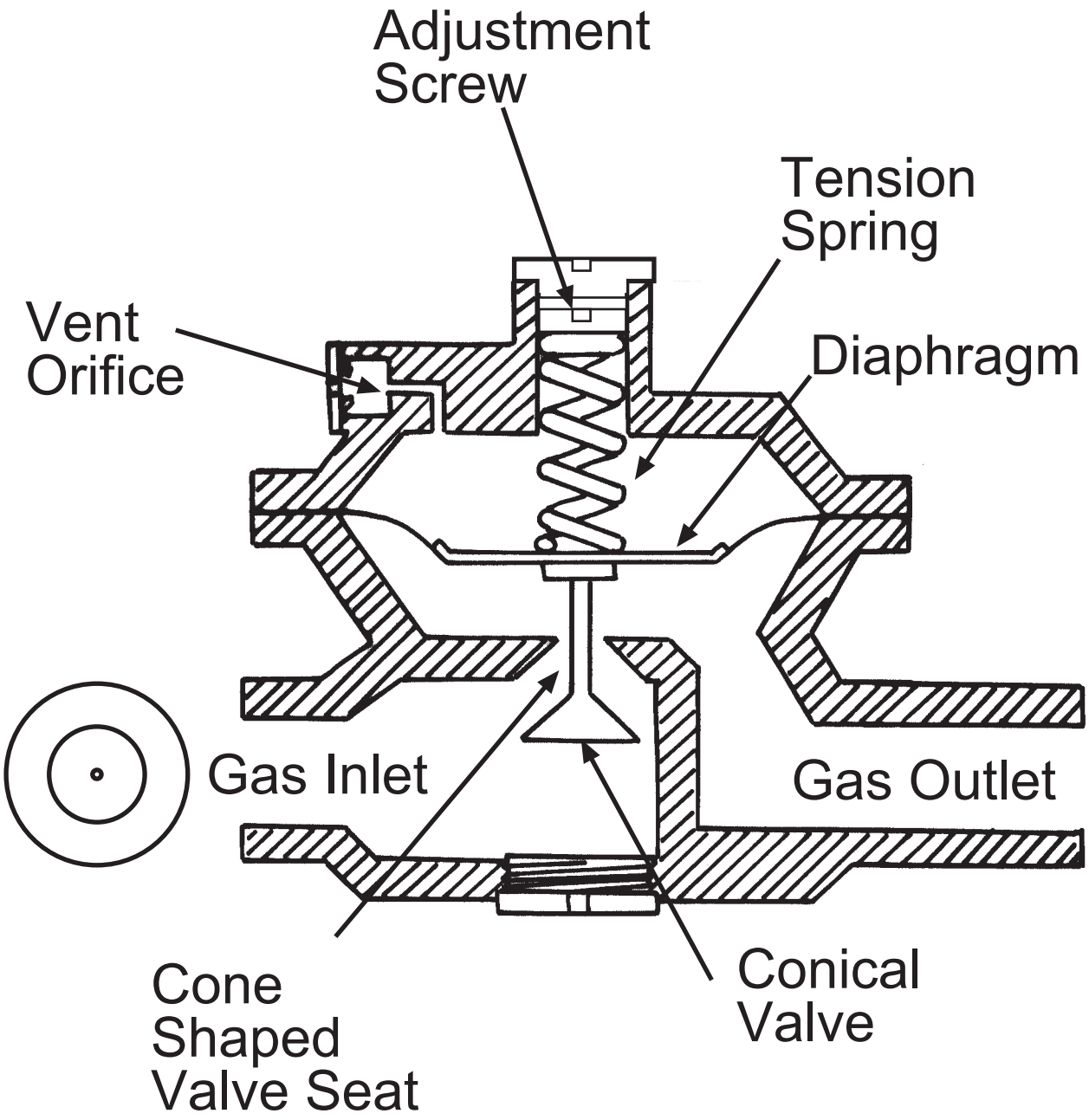
SERVICE REGULATORS

- **This is the regulator outside of the dwelling.** It reduces incoming gas from PSI (pounds per square inch) to inches of water column.
- Compensate for gas pressure fluctuation
- Service regulators are the property of the gas supplier and should not be adjusted, serviced or replaced by (you) the technician.
- Service regulators seldom, if ever, fail. Therefore, they are not of high suspect when troubleshooting hearth appliances.

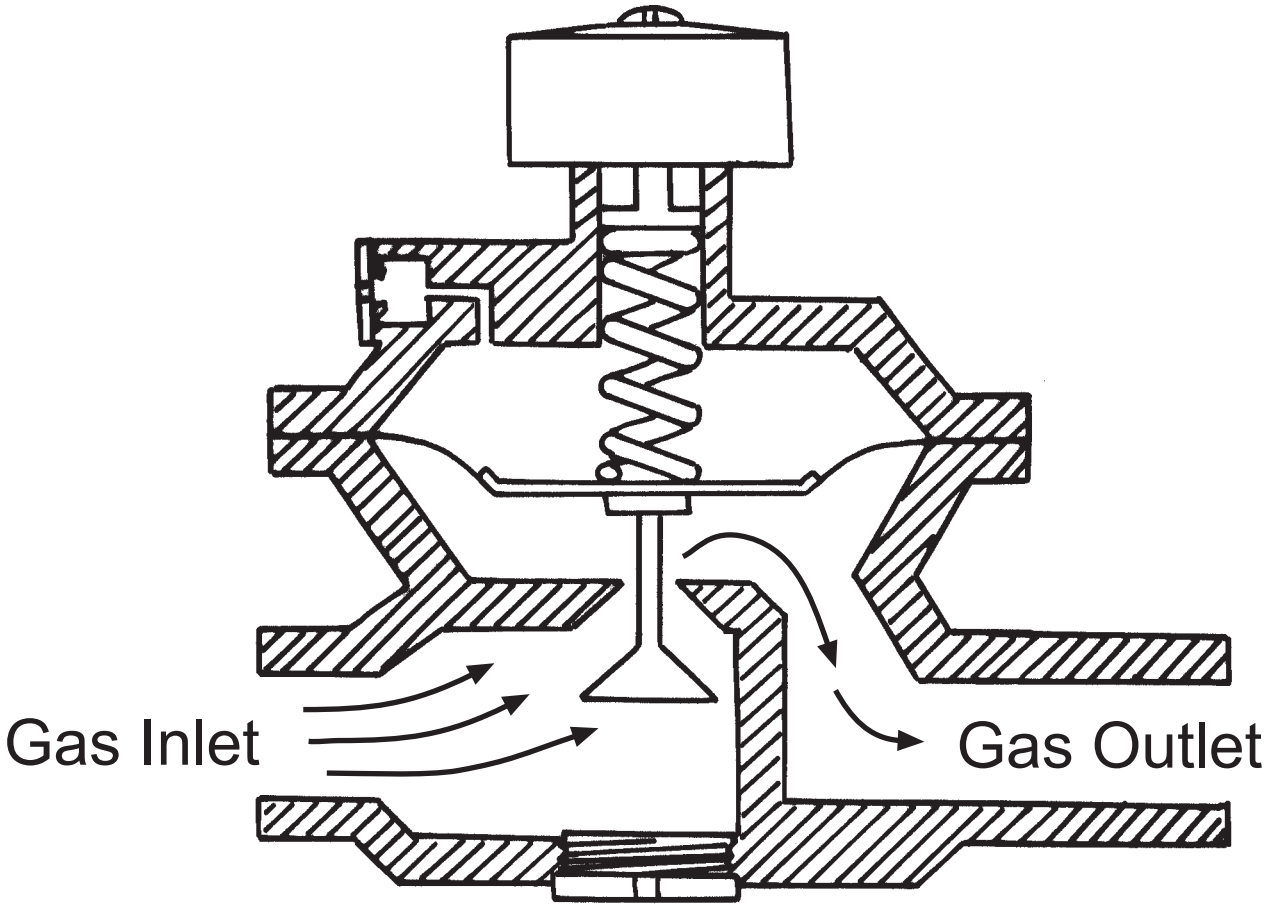
Appliance Regulator

- The appliance regulator is incorporated into the gas valve.
- It controls burner pressure by reducing incoming gas pressure (inches of W.C.) to the appropriate rating for the appliance.
- Appliance regulators have a low failure rate. Therefore, they are low suspects in troubleshooting of gas appliances.
- Adjustments and conversions should only be made by trained technicians using proper gas pressure-measuring equipment.

Parts of a Regulator

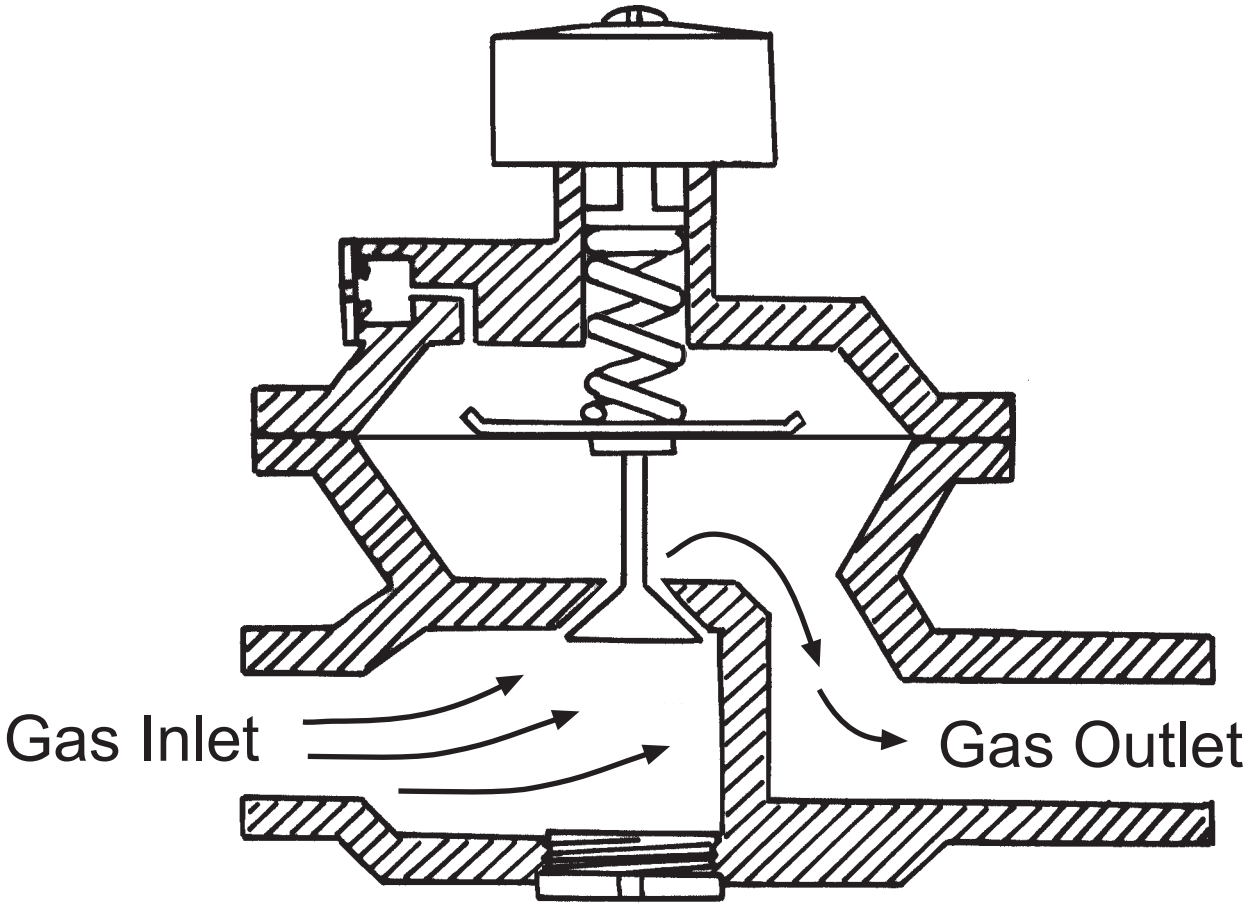


Lower Inlet Pressure



Valve opens through to allow more gas to flow

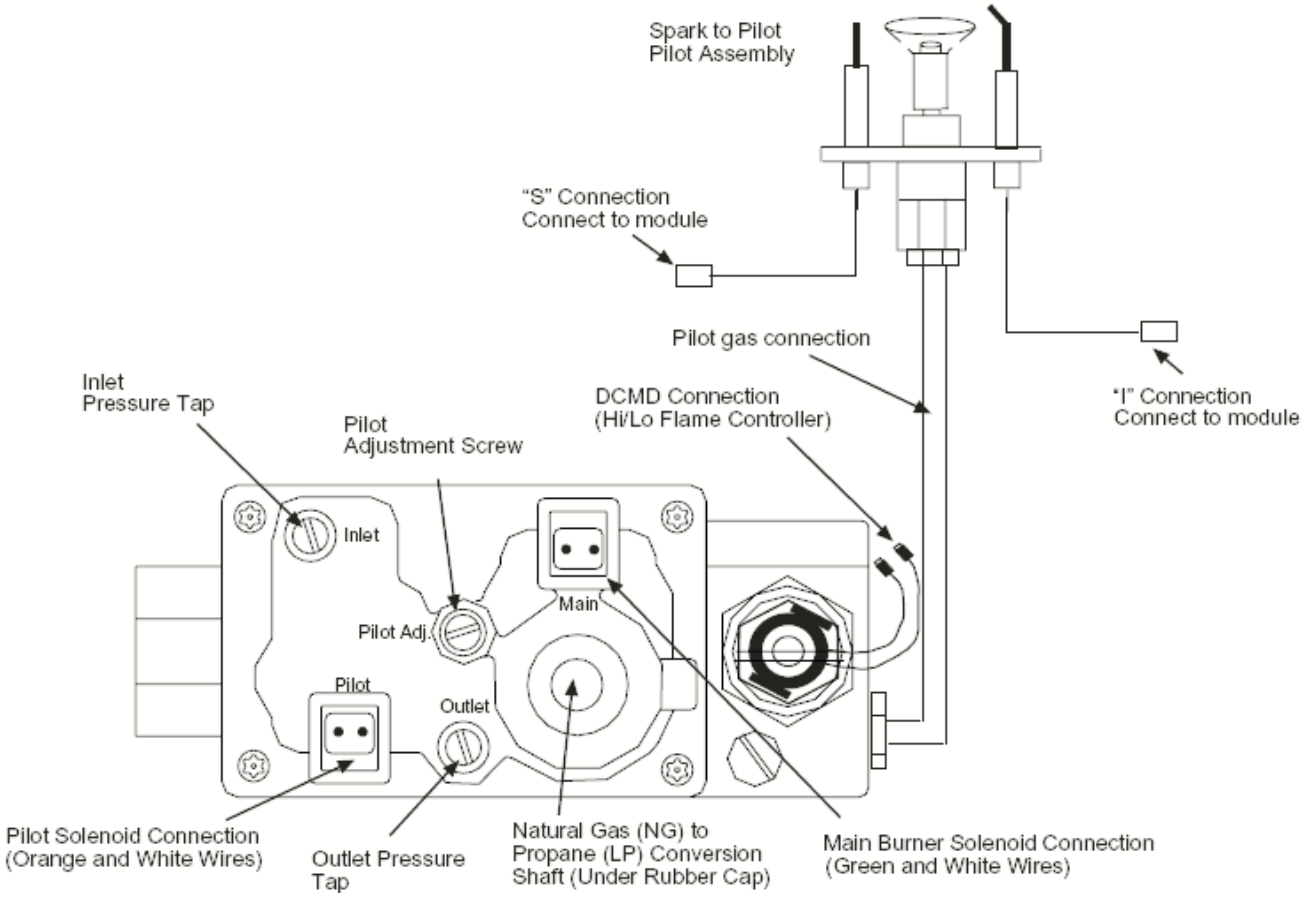
High Inlet Pressure



Valve closes through to allow less gas to flow

Gas Control Valve

IPI Electric Ignition System



LP Conversion

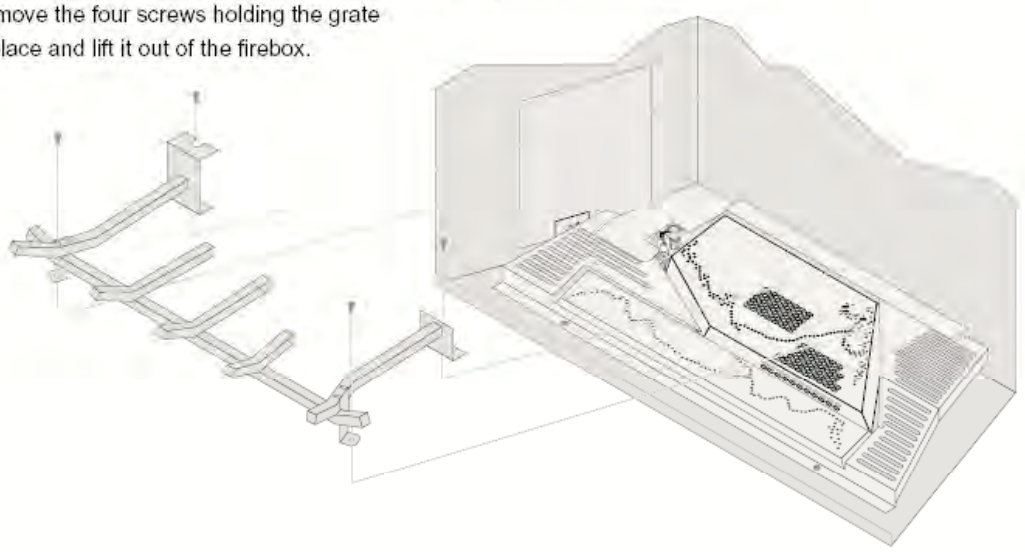
LP Conversion Instructions

Install the conversion kit prior to installing the gas line to ensure proper gas use.

1 Remove the glass (see page 35). Remove the logs and coals (if installed - page 38)

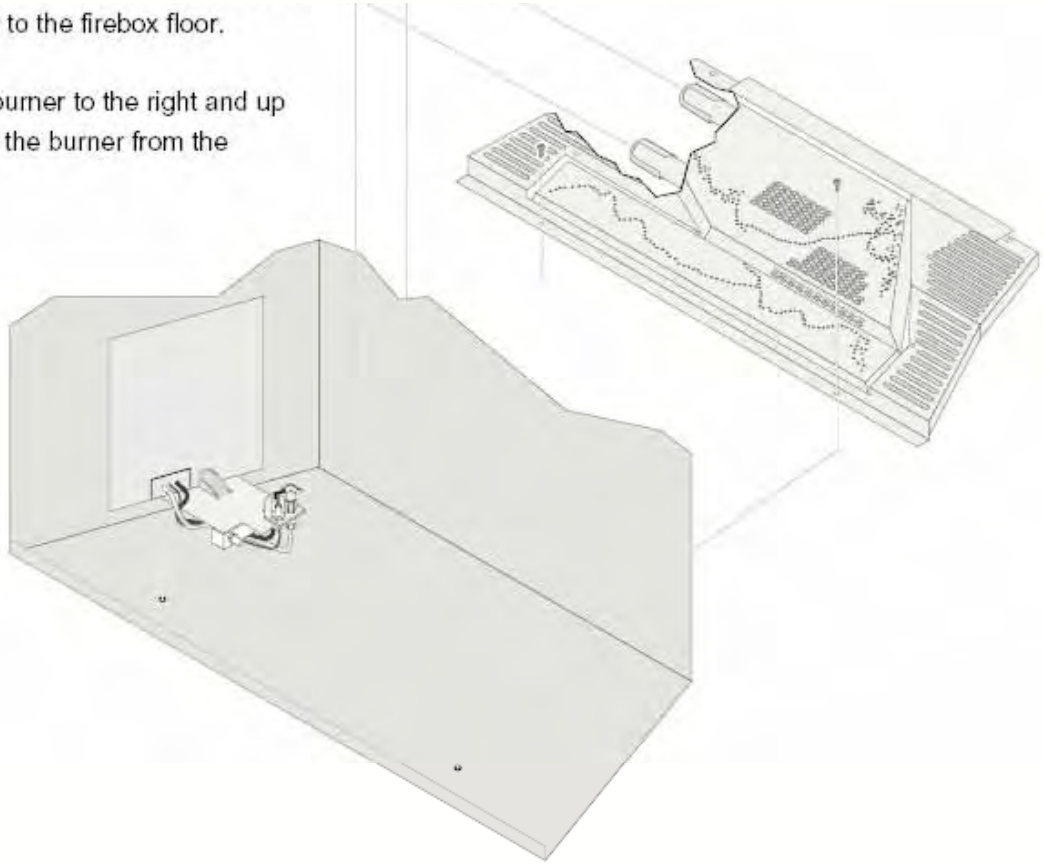
2 Remove the burner (see the illustration below).

Remove the four screws holding the grate in place and lift it out of the firebox.



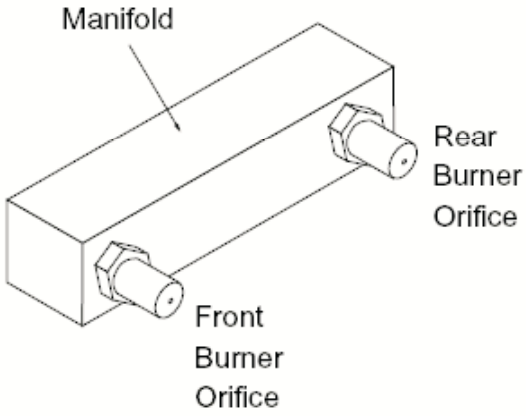
the burner to the firebox floor.

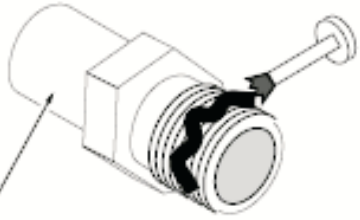
Slide the burner to the right and up to remove the burner from the firebox.



LP Conversior

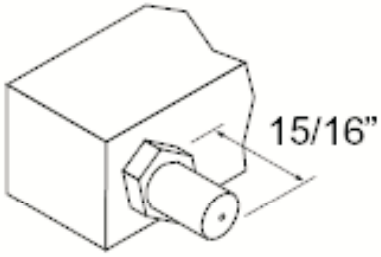
1/2" Wrench





Look here for the orifice identification

	NG	LP
Front	#53	#60
Rear	#31	1.8mm

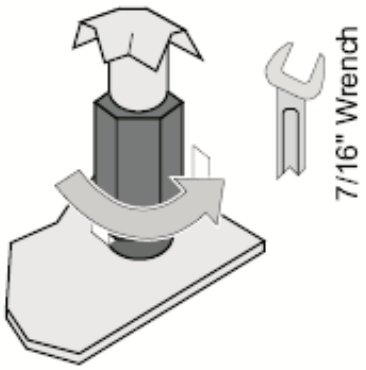


© Screw each LP orifice in so the orifice protrudes 15/16” (indicating full insertion).

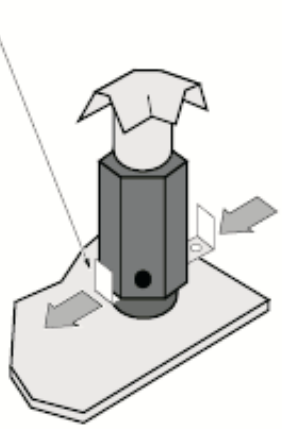
LP Conversion

Switch the pilot hood to the “LP”

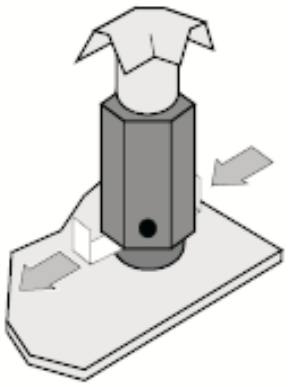
Un-screw the pilot hoot 1/4 turn.



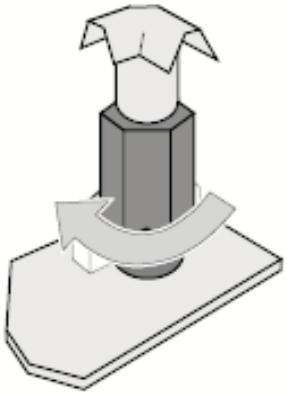
Slide this silver tab out.



When in the LP position the pilot hood will look like this.



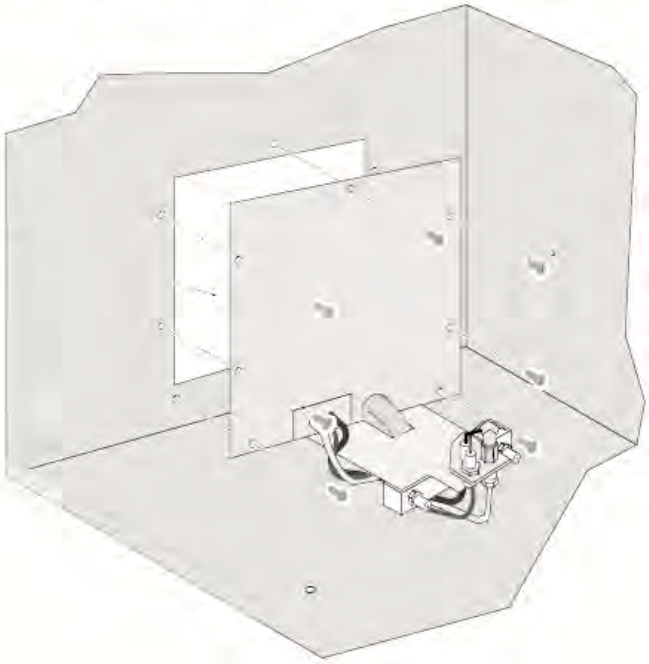
Tighten the pilot hood until it is fully secure.



LP Conversion

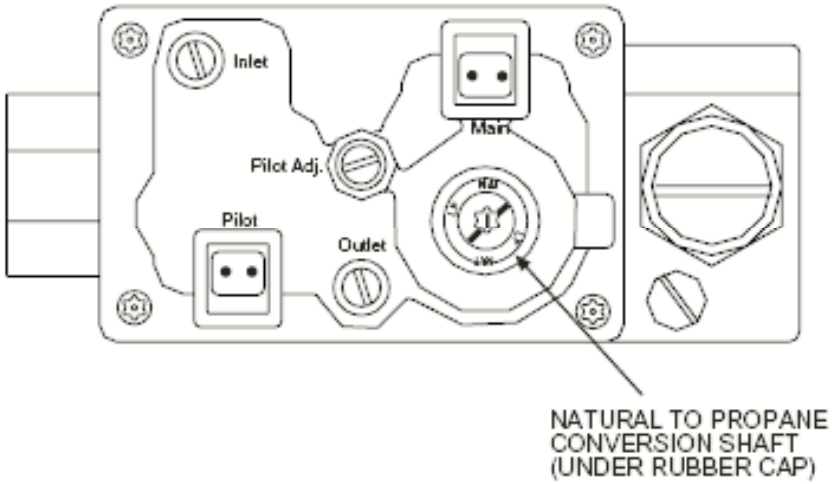
5 Disconnect the burner tray and place it on the firebox floor (see Figure 36).

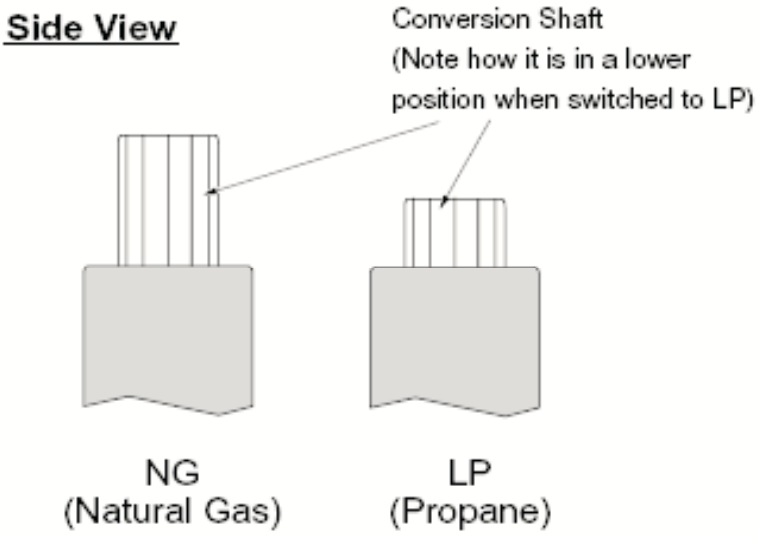
The gas control valve and receiver module are found on the back side of this plate.



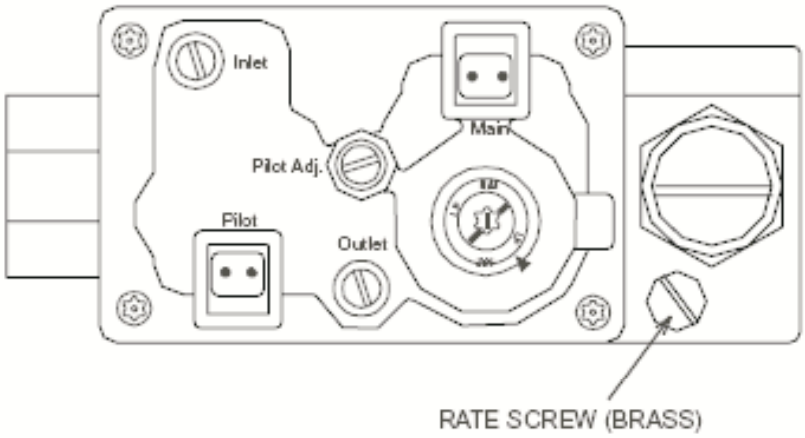
The burner tray is held in place with 7 screws. Remove the burner tray and place it on the firebox floor.

LP Conversion





LP Conversion

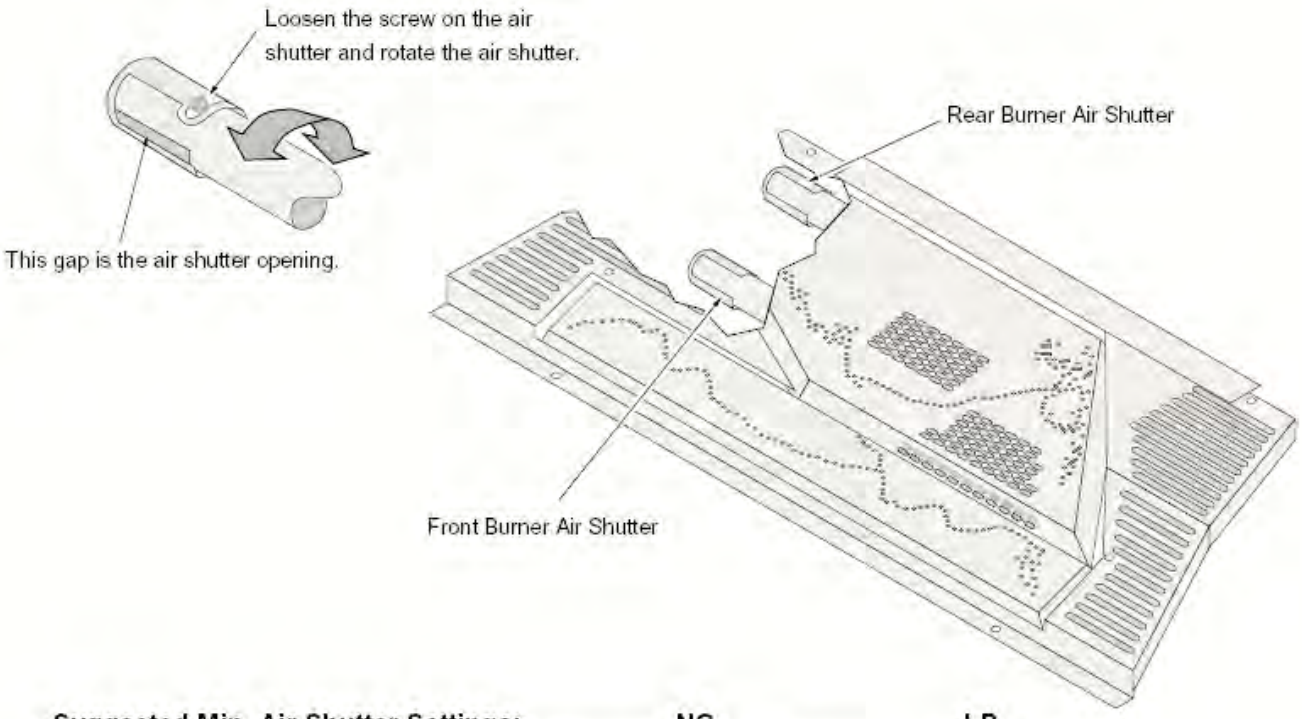


Rate Screws

NG (Natural Gas)

LP (Propane)

LP Conversion



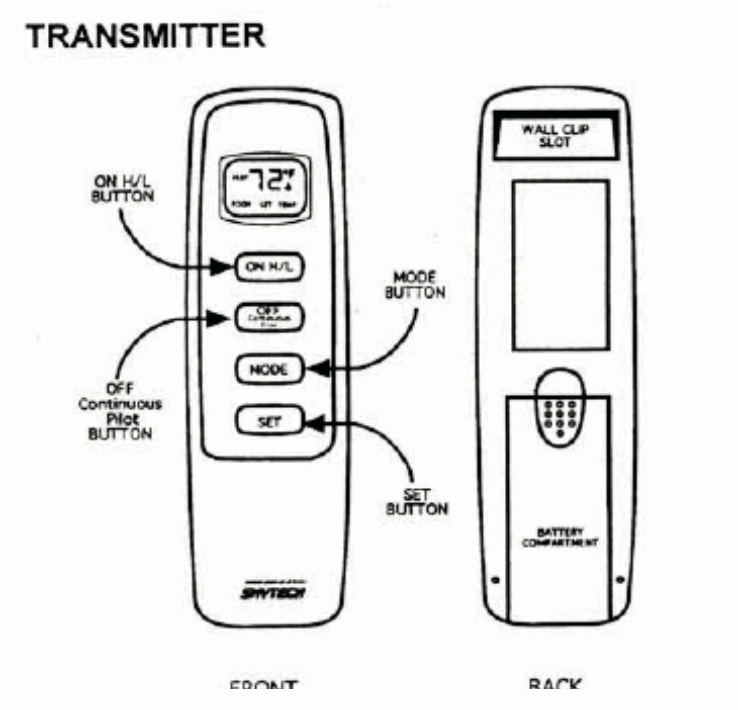
Suggested Min. Air Shutter Settings:	NG	LP
Front Burner	1/6 Open	1/3 Open
Front Burner	1/2 Open	2/3 Open

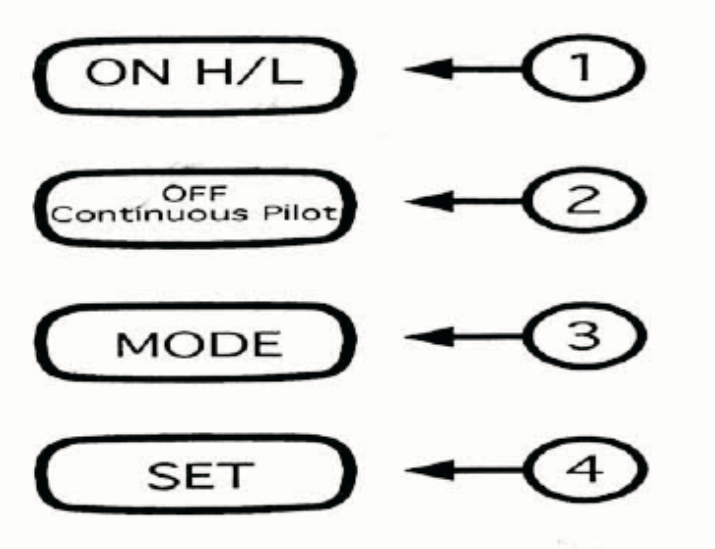
Whidbey CF

Hand-Held Remote

Modulating Wall Switch

Whidbey CF



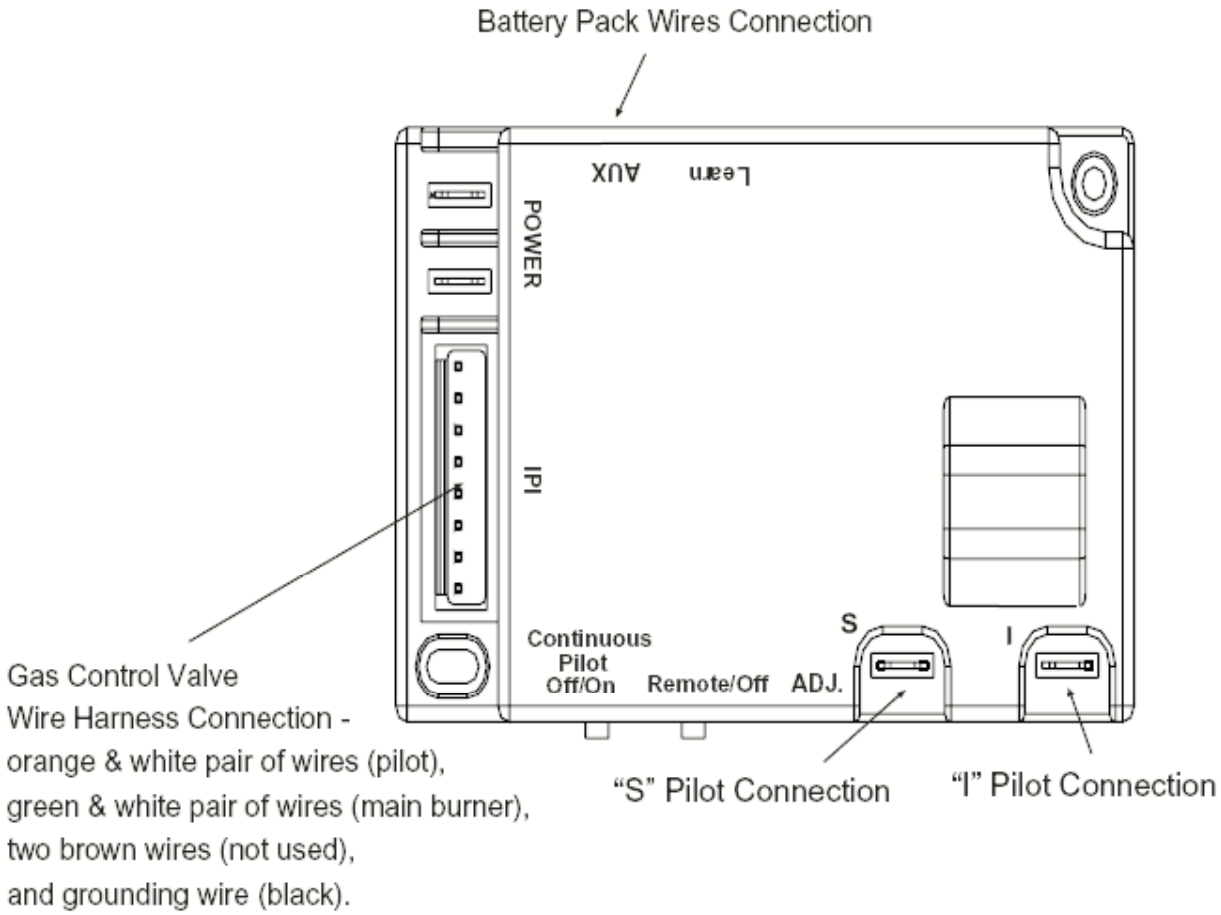


KEY SETINGS

- ON H/L - Operates unit to on position, Manually ON.
- OFF - Operates unit to off position, Manually OFF.
- MODE - Changes unit from manual mode to thermo mode.
- SET - Sets temperature in thermo mode.

Whidbey CF

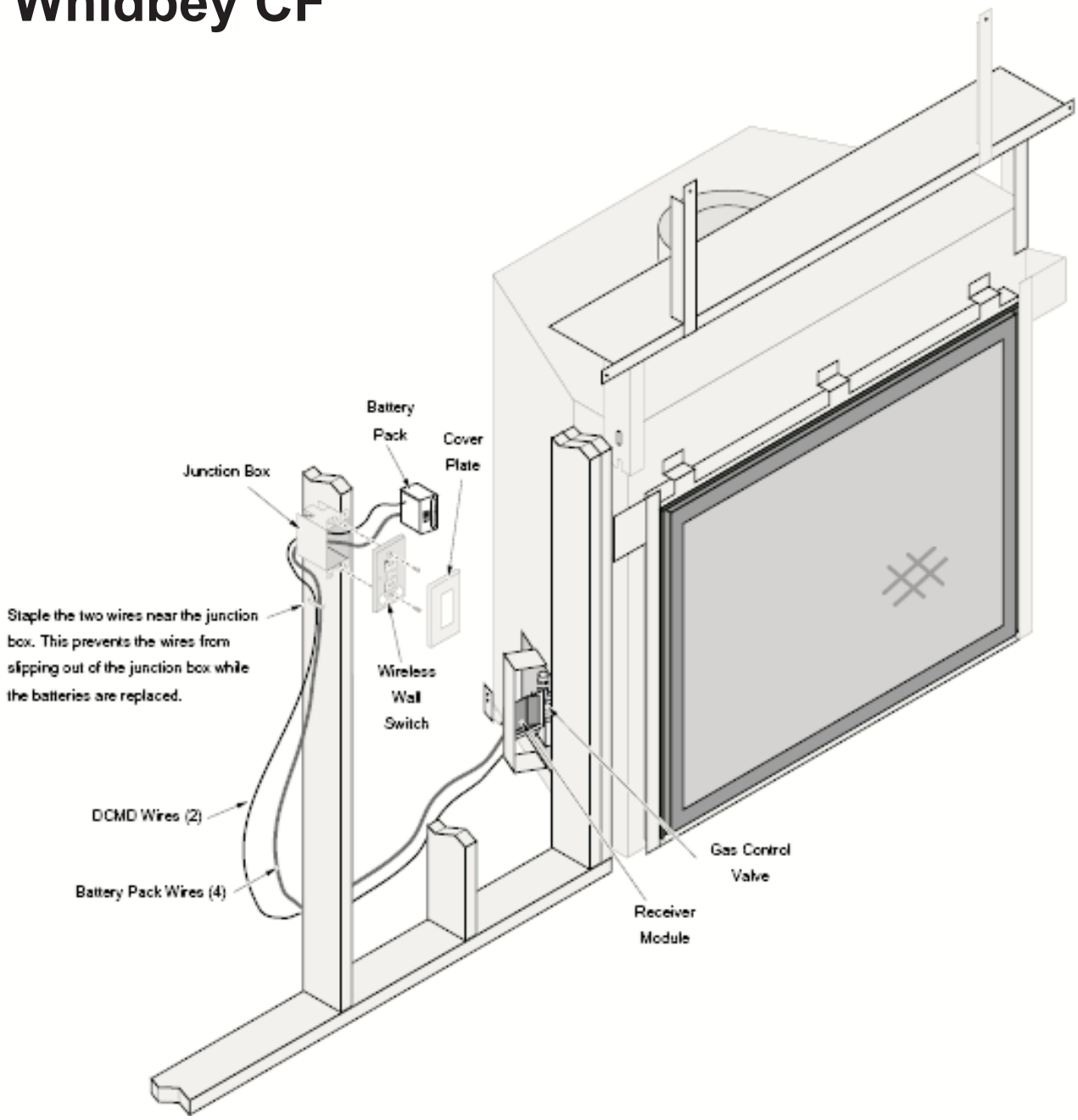
Controls



KEY SETINGS

- ON H/L - Operates unit to on position, Manually ON.
- OFF - Operates unit to off position, Manually OFF.
- MODE - Changes unit from manual mode to thermo mode.
- SET - Sets temperature in thermo mode.

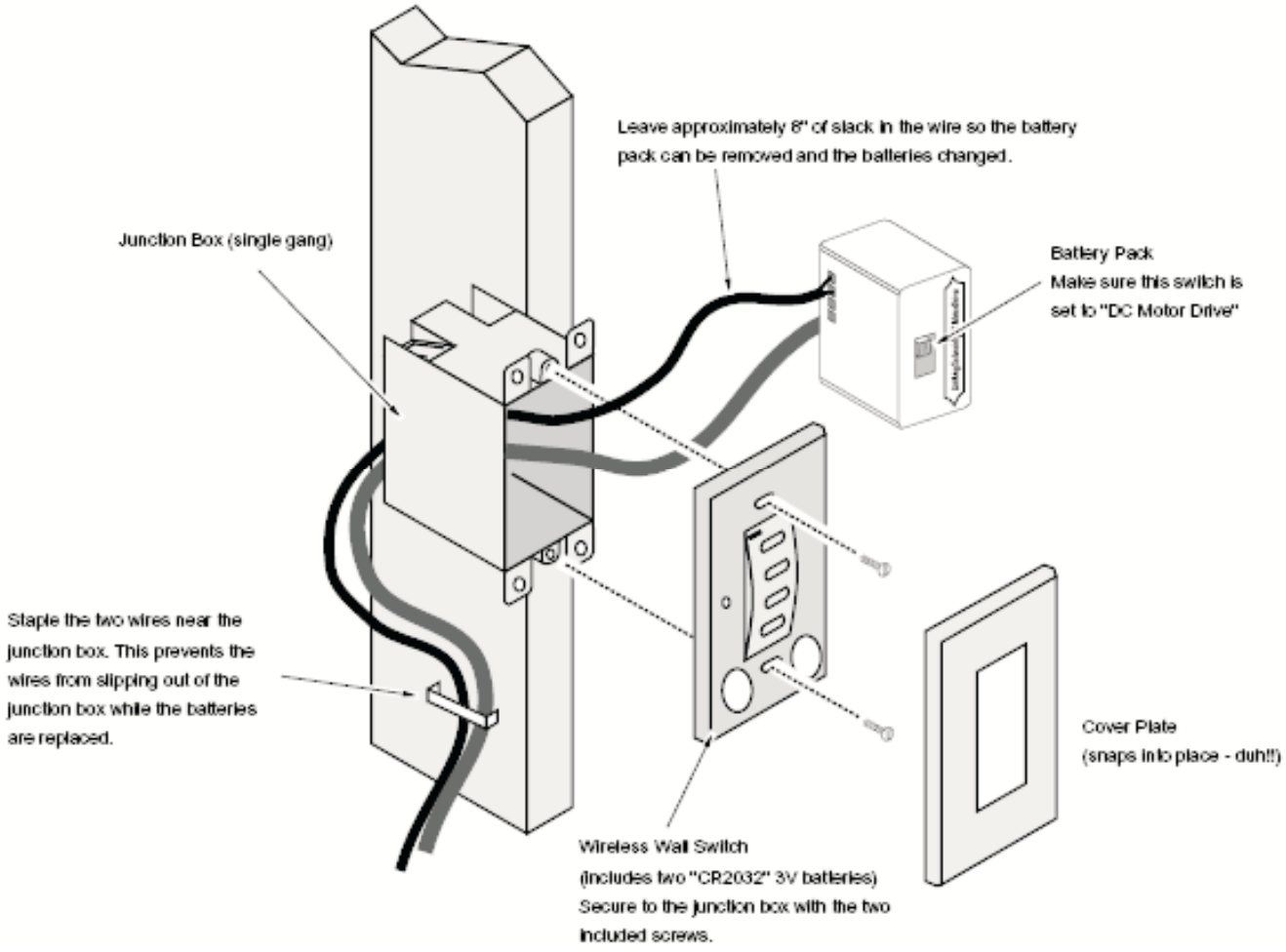
Whidbey CF



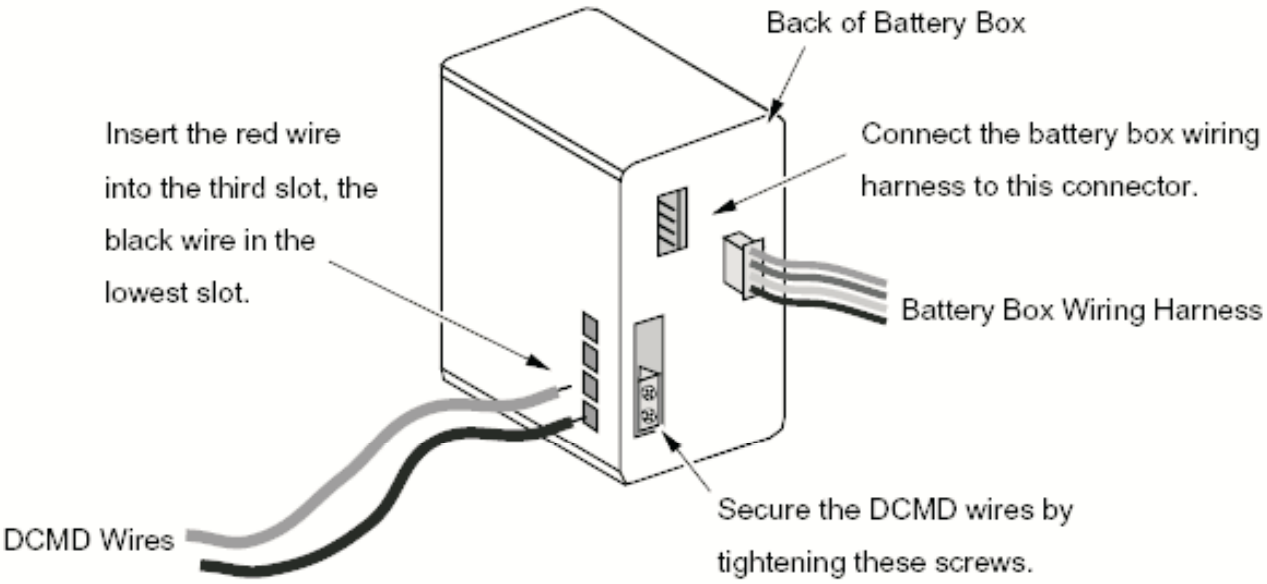
KEY SETINGS

- ON H/L - Operates unit to on position, Manually ON.
- OFF - Operates unit to off position, Manually OFF.
- MODE - Changes unit from manual mode to thermo mode.
- SET - Sets temperature in thermo mode.

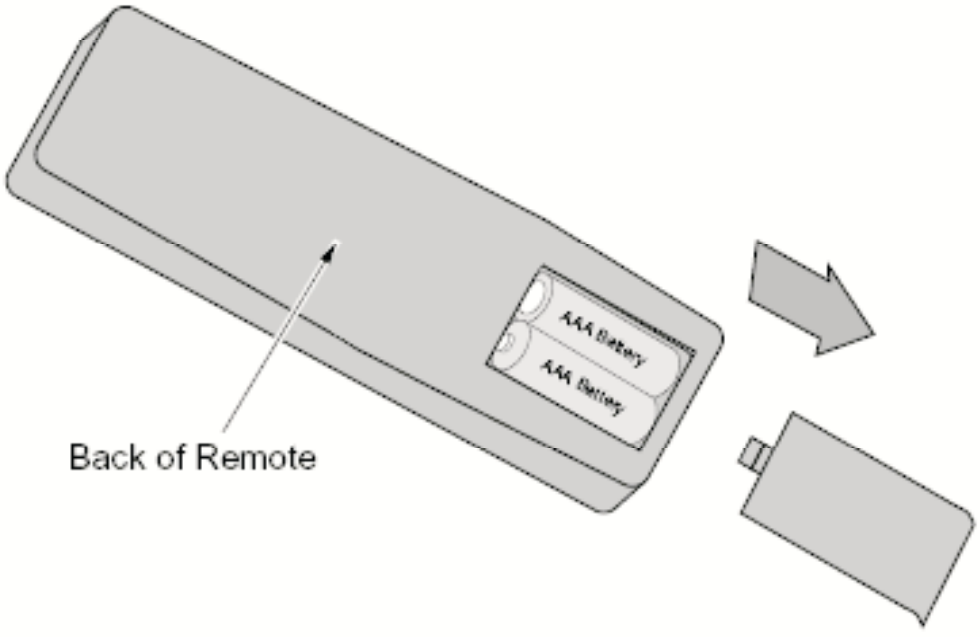
Whidbey CF



Whidbey CF

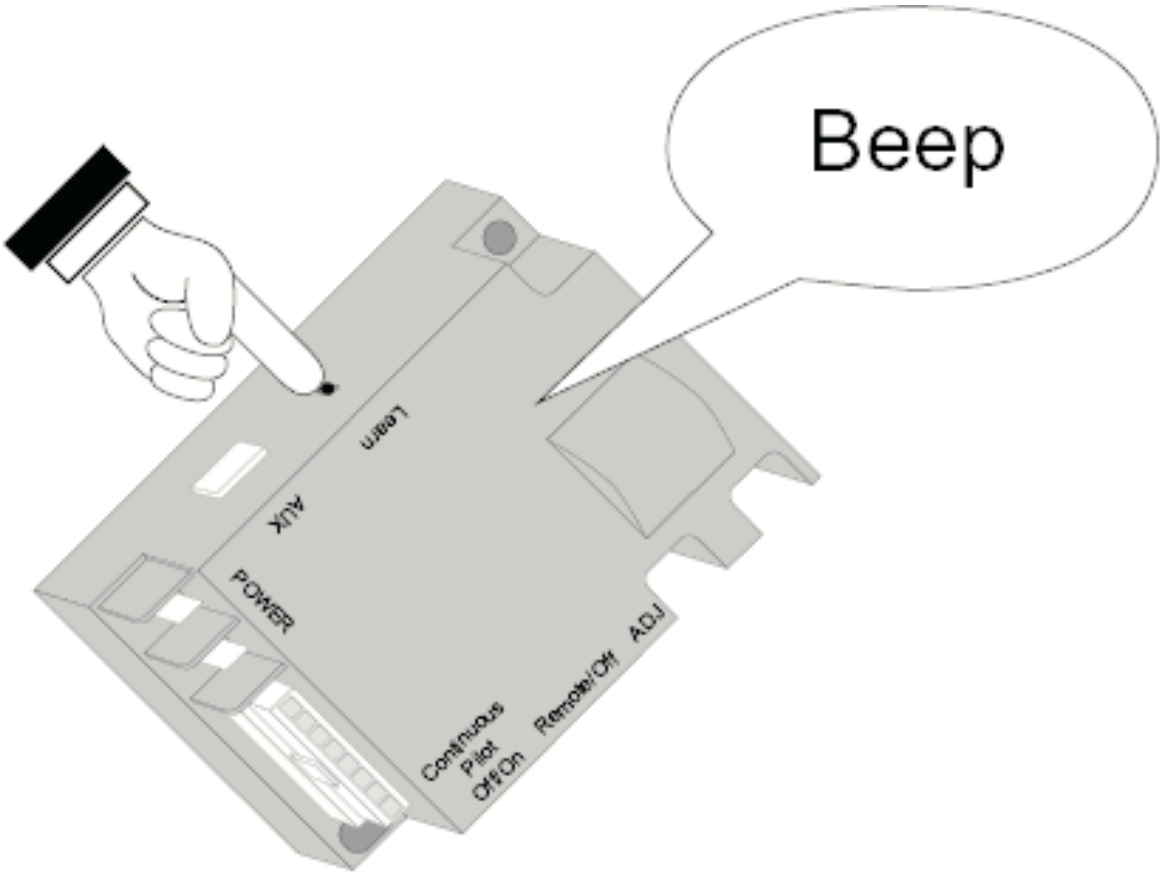


The Remote requires two (2) AAA batteries (included)



Whidbey CF

Press the "Learn" button on the receiver module until it beeps once (you may wish to use a pen or other device to depress this button).

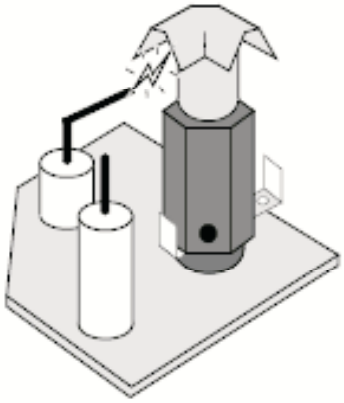


Whidbey CF

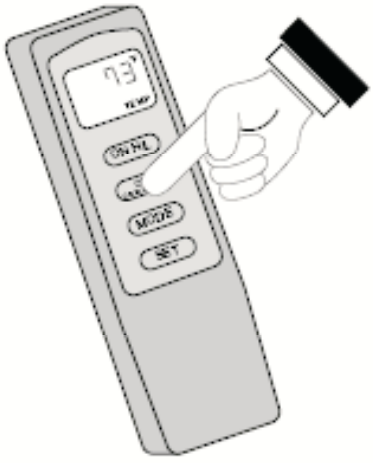
(a) Shut the gas off to the appliance.

(b) Press the "ON" button on the remote.

The spark electrode on the pilot assembly will start to spark*.



(c) Press the "OFF" button on the remote.



Whidbey CF

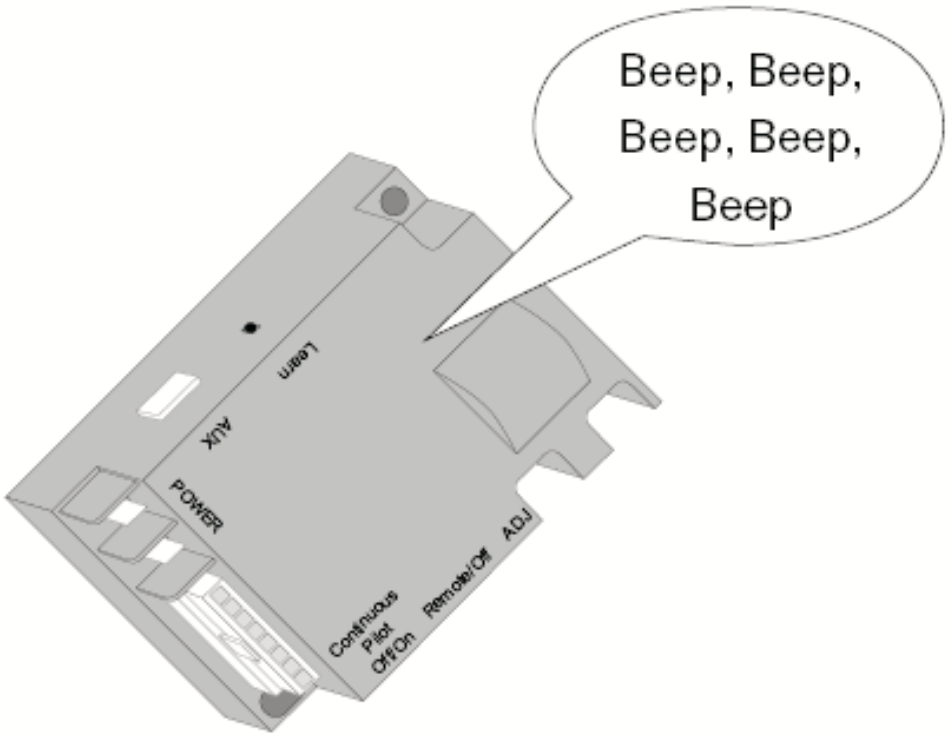
ⓓ Press the "ON" button on the wall switch.

The spark electrode on the pilot assembly will start to spark*.

ⓔ Press the "OFF" button on the wall switch.

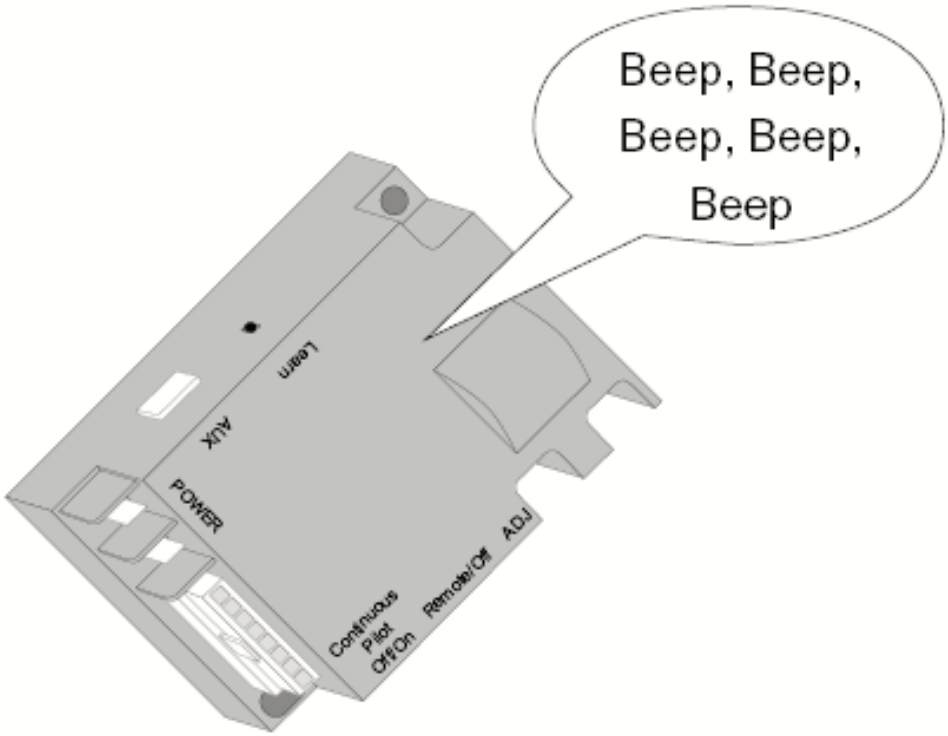
Whidbey CF

The receiver will acknowledge the signal by beeping 5 times.



Whidbey CF

The receiver will acknowledge the signal by beeping 5 times.



NOTE: Re-setting the Receiver Module

- If the receiver module fails to synchronize with the remote or wall switch after two attempts, you should re-set the receiver module. To do this, hold down the LEARN button on the receiver for approximately 10 seconds until the receiver beeps 3 times.

- This indicates the receiver has been re-set and can be synchronized.

FUEL CONVERSION

TRAVIS INDUSTRIES
HOUSE OF FIRE

5 Step Process

Ember-Fyre™ Burners

Tube Burners

Fuel Conversion

- **This entire section is very important to the safety and proper operation of Travis gas products.**

- **All Travis gas appliances are shipped set-up for natural gas. For your convenience an LP conversion kit is included in each unit.**

- Because propane gas has more BTU's per cubic foot and is heavier than air, a conversion must take place.

5 Step
Conversion Process

1. Burner orifice
2. Pilot orifice
3. Adjustable regulator body
4. Air shutter opening
5. Conversion label

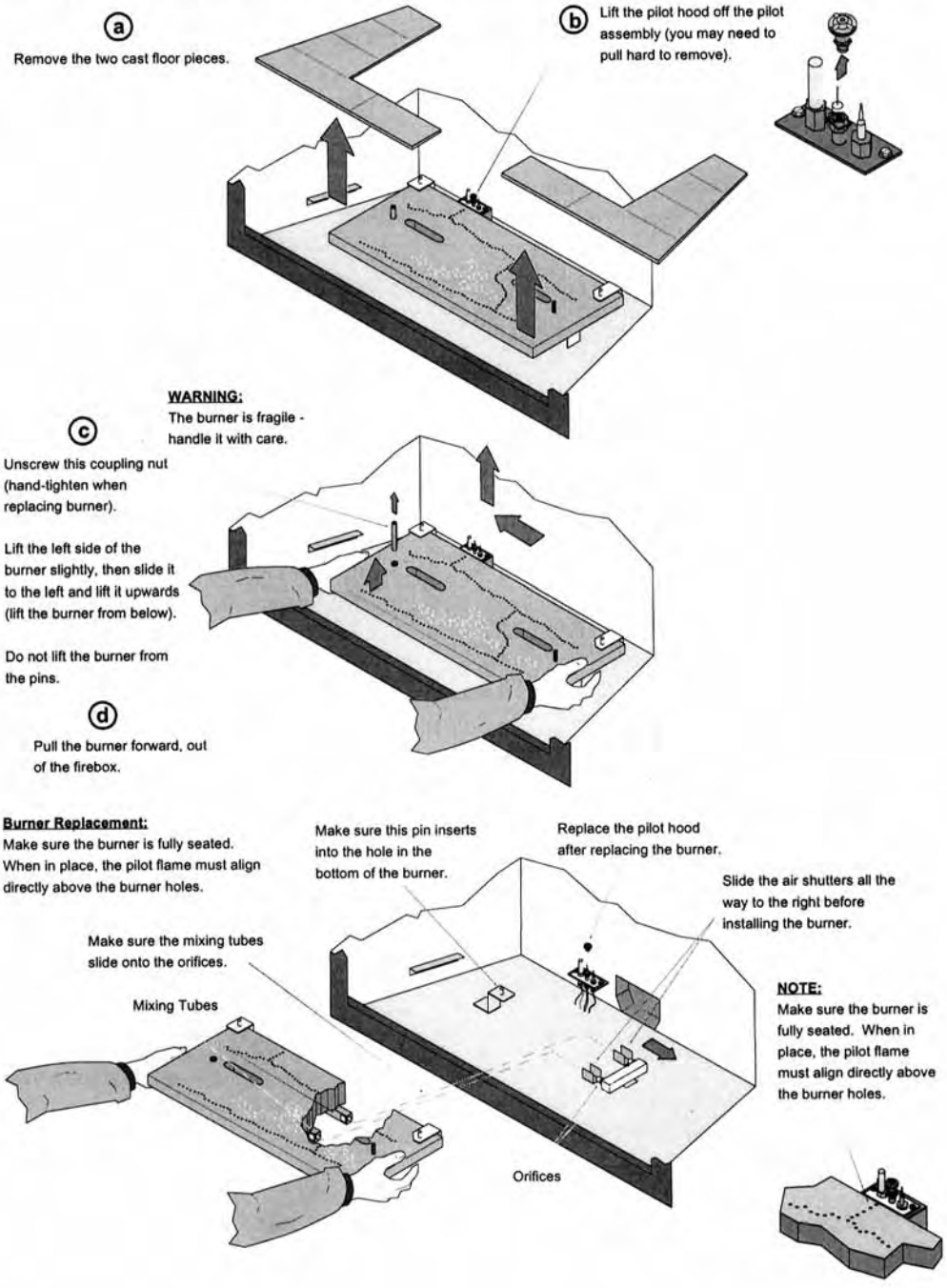
Ember-Fyre™ Burner

LP Conversion Instructions

Install the conversion kit prior to installing the gas line to ensure proper gas use.

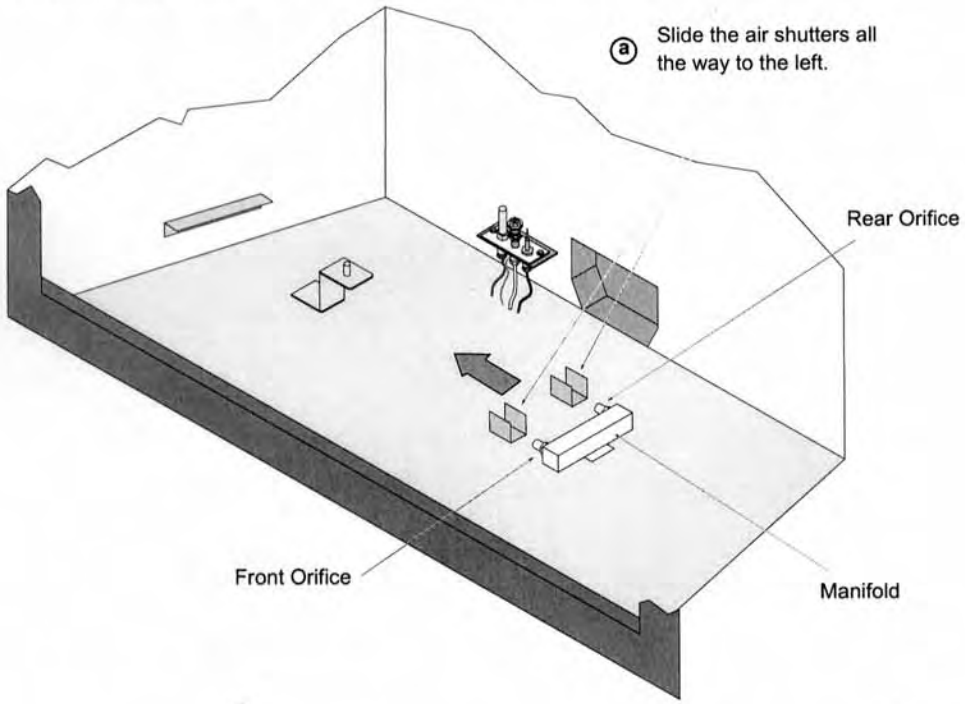
1 Remove the glass (see page 26). Remove the logs and coals (if installed - page 27)

2 Remove the burner (see illustration below).



Ember-Fyre™ Burner

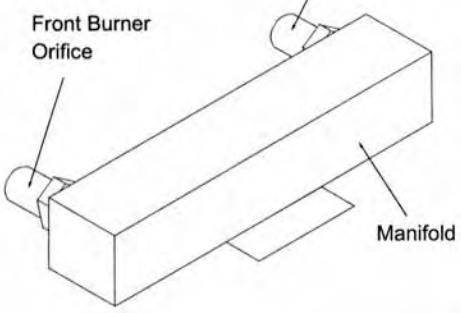
3 Follow the directions below to replace the orifices.



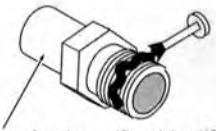
ⓐ Slide the air shutters all the way to the left.

ⓑ Use a 1/2" open end wrench to unscrew both orifices.

1/2" Wrench

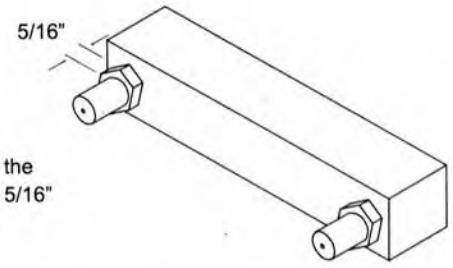


ⓒ Apply thread sealant to the LP orifices prior to installation. Use the chart below to identify the correct orifices.



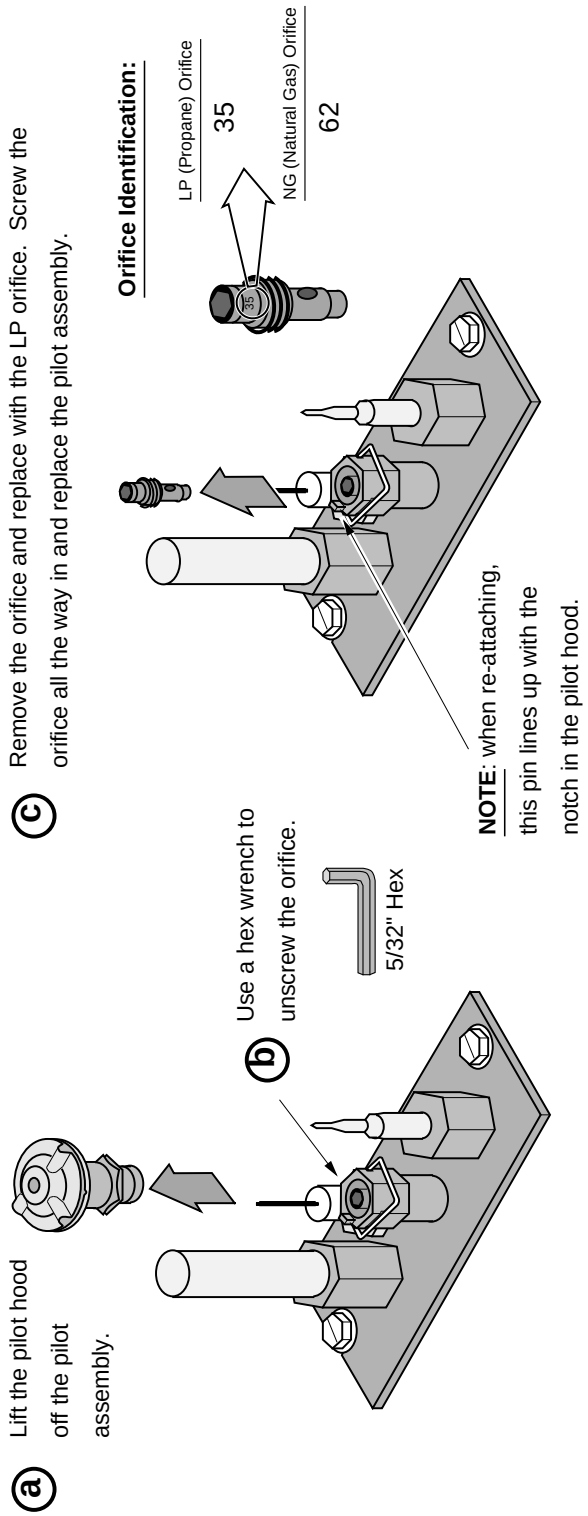
Look here for the orifice identification

	LP	NG
Front	#55	#46
Rear	#54	#43



ⓓ Screw the LP orifice in so the orifice shoulder protrudes 5/16" (indicating full insertion).

Fuel Conversion SIT Pilot Orifice

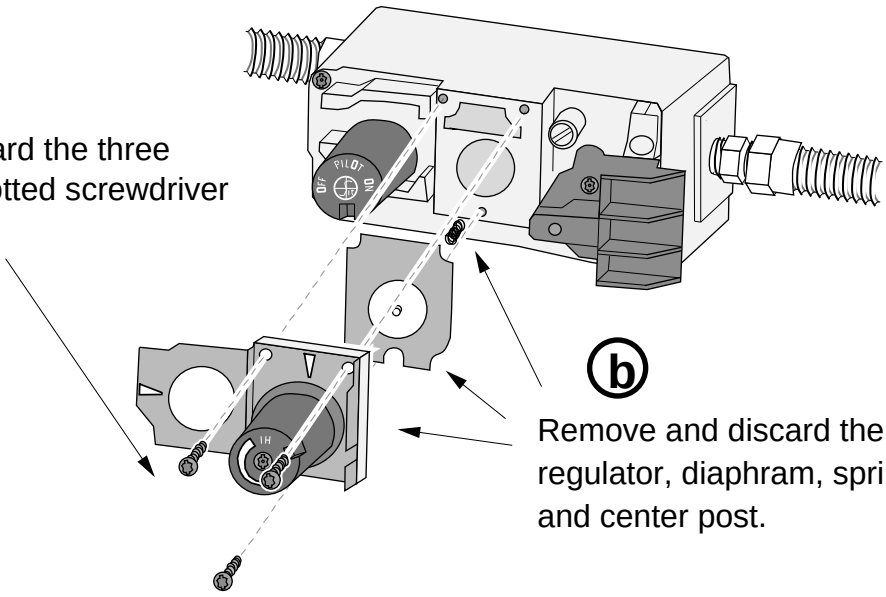


Fuel Conversion SIT Pilot Orifice

ⓐ

Remove and discard the three screws using a slotted screwdriver of Torx T-20.

Slotted
Screwdriver
(or T-20 Torx)



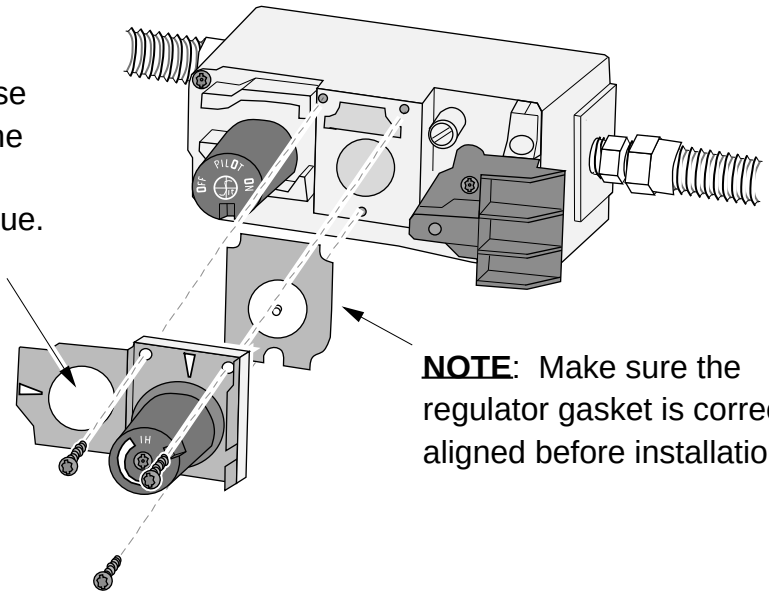
ⓑ

Remove and discard the regulator, diaphram, spring and center post.

ⓒ

Install the LP regulator. Use the screws included with the LP regulator. Tighten to approximately 25 Lbs. torque.

Slotted
Screwdriver
(or T-20 Torx)



NOTE: Make sure the regulator gasket is correctly aligned before installation.

Tube Style Burners

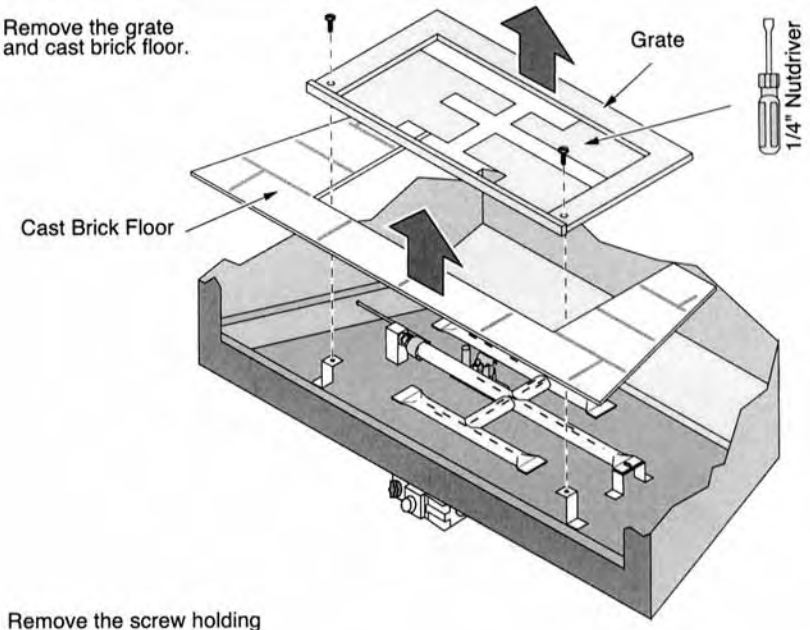
LP Conversion Instructions

Install the conversion kit prior to installing the gas line to ensure proper gas use.

1 Remove the glass (see page 32). Remove the logs and rock wool (if installed - page 33)

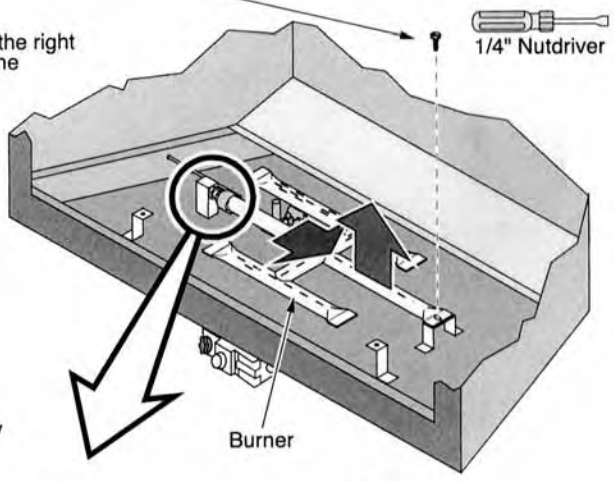
2 Remove the burner (see illustration to the right).

(a) Remove the grate and cast brick floor.

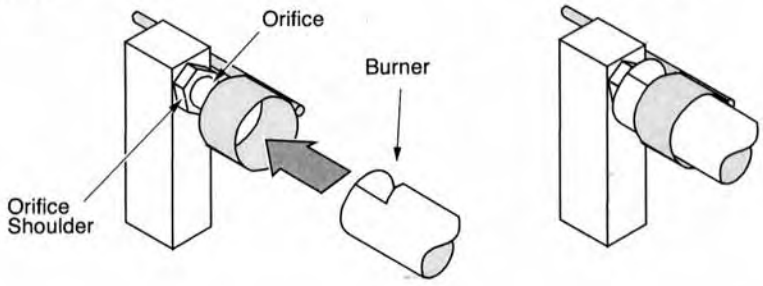


(b) Remove the screw holding the burner in place.

(c) Slide the burner to the right and up to remove the burner.



NOTE:
When replacing the burner, make sure the burner inserts all the way up against the orifice shoulder.



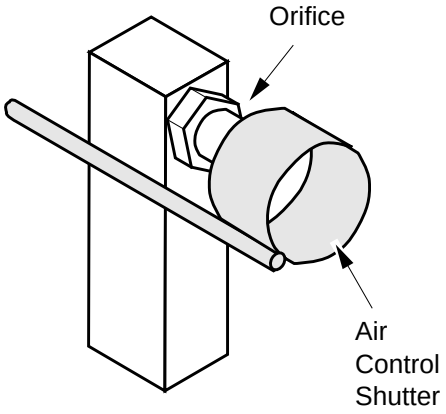
Tube Style Burner Fuel Conversion

TUBE BURNER

Follow the directions below to replace the orifice with the appropriate orifice. When replacing the burner pan, make sure to guide the air control shutter over the burner pan

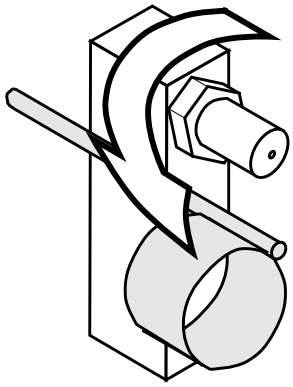
(a)

Loosen the air shutter control (see page 14).



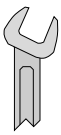
(b)

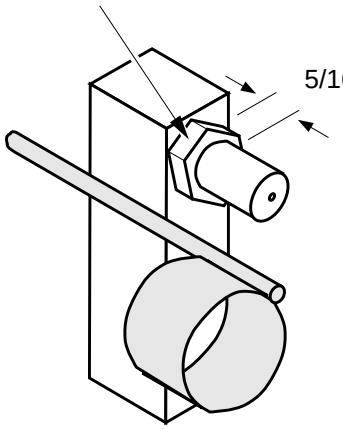
Rotate the air control shutter away from the orifice.



(c)

Use a 1/2” open end wrench to unscrew the orifice.

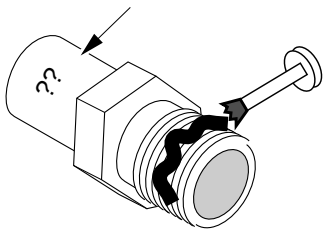




NOTE:
Screw the LP orifice in so the orifice shoulder protrudes 5/16” (indicating full insertion).

(d)

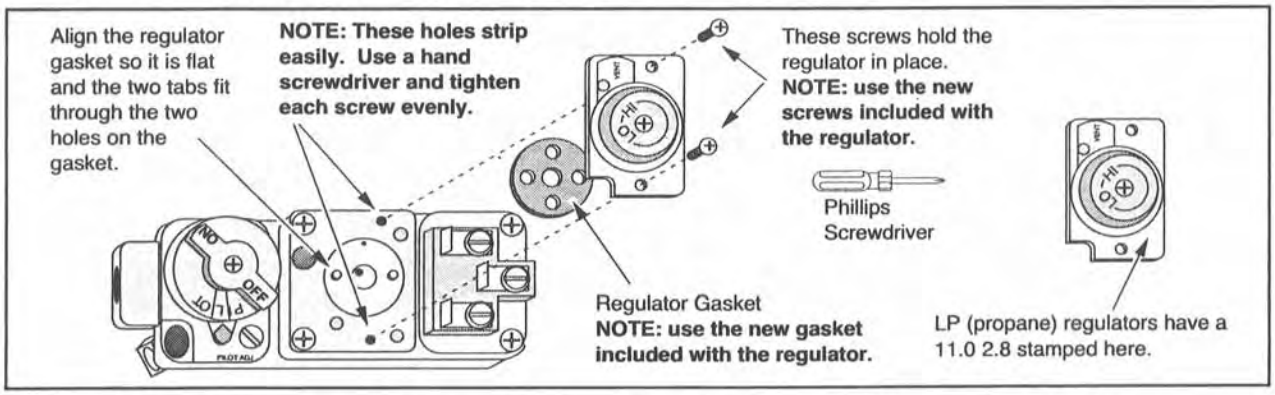
Make sure you are using the correct orifice (see chart below)



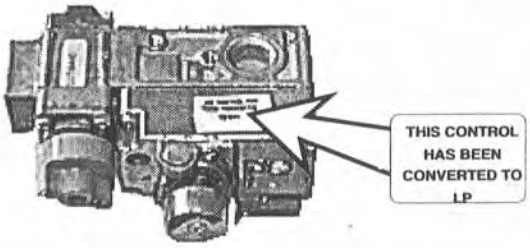
Apply thread sealant to the new orifice prior to installation.

Fuel Conversion
RobertShaw Gas Control

Remove the regulator from the front of the gas control valve. Replace with the propane regulator, using the new gasket and screws included with the regulator. **NOTE: Leak test this area after the heater is installed, gas is connected, and the main burner is lit.**



Place the included propane label over the natural gas label on top of the gas control valve.



SWITCHING DEVICES

TRAVIS INDUSTRIES
HOUSE OF FIRE

Rocker Switch

Wall Thermostat

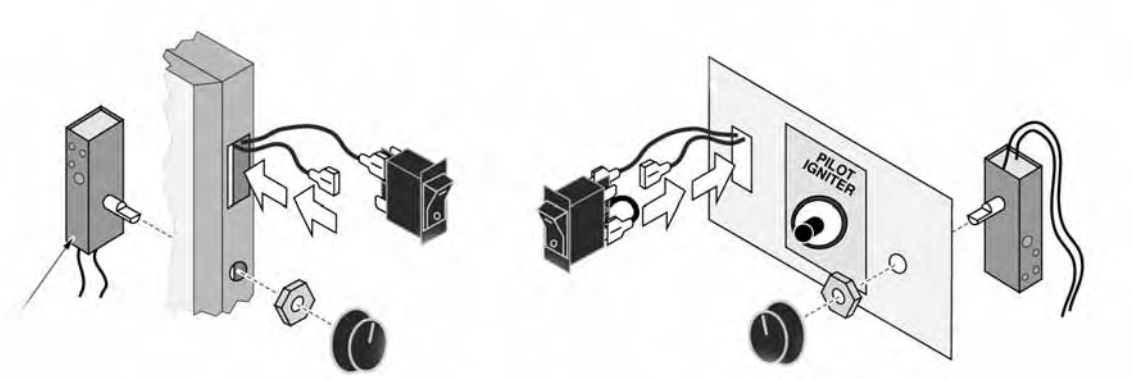
Remote Thermostat Control

Remote Fireplace Thermostat Control

Rocker Switch

Travis Industries gas appliances are designed to be used with multiple on/off burner switching devices.

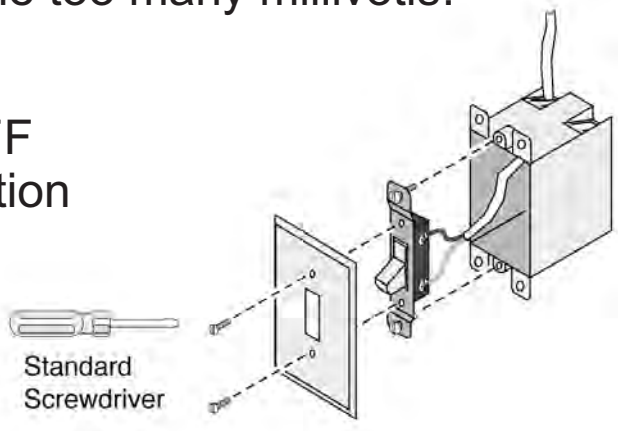
All units come with a convenient rocker switch to turn the main burner ON or OFF.



- Burner ON/OFF
- Rocker switch (Standard in all units)

Another option is a wall switch and is often used in a fireplace application. Care must be taken to not exceed the recommended wire size and length. Do not install a three way switch (Two switches - two points of control) as it will consume too many millivotls.

- Burner ON/OFF
- Wall switch option
- (Fireplace)



Wall Thermostat

For customers who want total room comfort, a wall thermostat should be considered.

Placement of the thermostat is important to provide proper operation.

Thermostat Placement	
DO	DON'T
Install about 5 foot from floor	Install over other heat source or heat ducts
Install on inside wall	Install over a TV or lamp causing false heat sensing
Place in a central area of the room for best control	Exceed 20 feet of #18 gauge wire

- Burner ON/OFF
  Wall thermostat option
  (Used with all units
  20 foot of #18 wire)

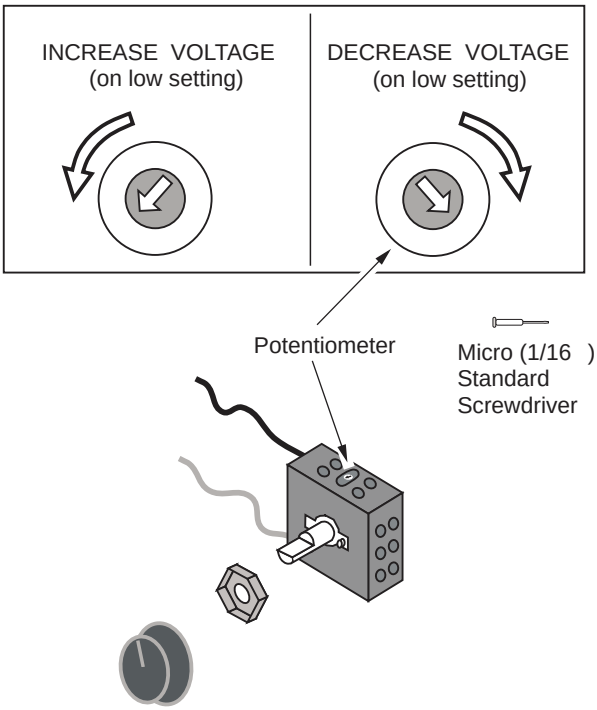
Remote Options

Remote Thermostat	- Personal Thermostat - ON/OFF Function - Timed OFF (up to 2 hours) - Sender uses 3 AA batteries - Receiver operates on 110 volts - Has four operational frequency settings - Has unlimited operational frequency settings - 6 hour, no charge shut off
Remote Fireplace Thermostat	- Personal Thermostat - ON/OFF Function - Timed OFF (up to 2 hours) - Sender uses 3 AAA batteries - Receiver uses 4 AA batteries - ON/OFF manual switch - Receiver is mounted in the wall - 6 hour, no charge shut off

The Positive and Negatives of Switching Devices

DEVICE	POSITIVE	NEGATIVE
ON/OFF Rocker Switch	• Simple to use	• Consumer must get up to turn unit ON/OFF
Wall Thermostat	• Set it and forget it • Best for total room comfort control • Millivolt set back thermostats may be used	• More difficult to install
Remote Thermostat	• Finger tip ON/OFF control • Personal thermostat	• Some consumers will NEVER learn how to use • Batteries will need occasional replacement • Can not be used when electricity goes out - must use manual rocker switch • Temperature control is determined by placement of the hand-held sender
Remote Fireplace Thermostat	• Fingertip ON/OFF control • Personal thermostat • Works without electricity	• Some consumers will NEVER learn how to use • Batteries will need occasional replacement • Temperature control is determined by placement of the hand-held sender • Requires installation into wall

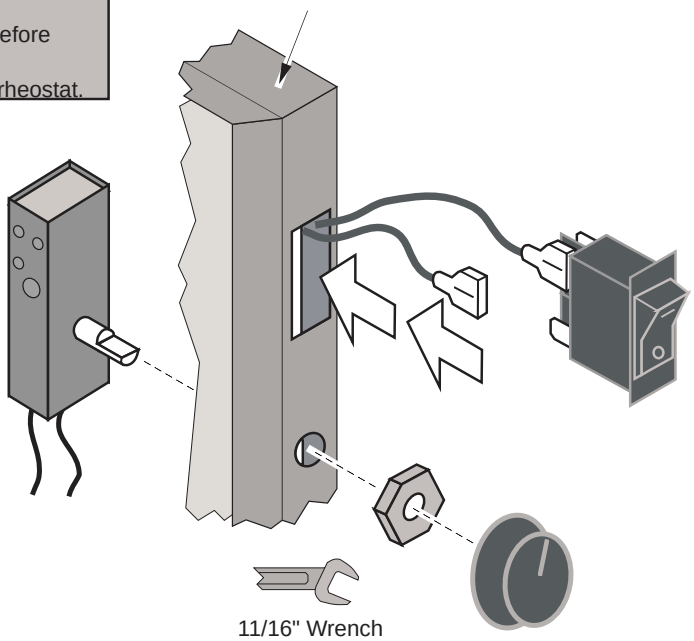
Rheostats



WARNING:

Make sure the heater is unpluged before installing the rheostat.

Upper Right of Trim



Remote Controls

- Burner on/off

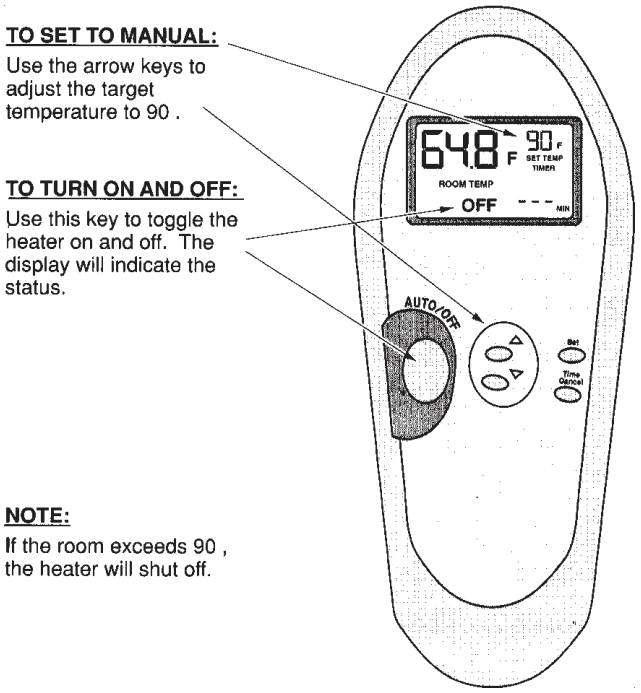
  Remote option (insert and freestanding units)

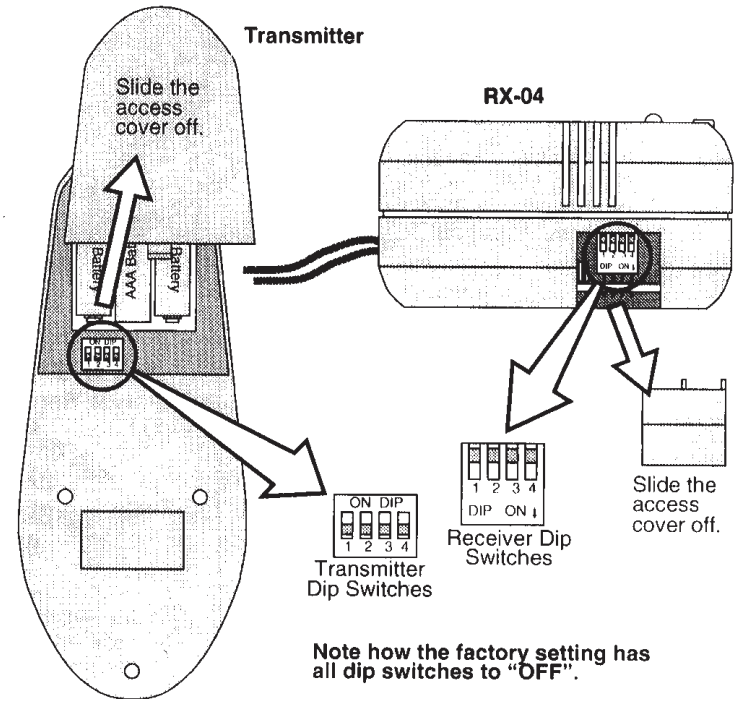
  Remote on/off

  Remote thermostat

  Timed off remote

  Requires 3 AAA batteries 110 Volt

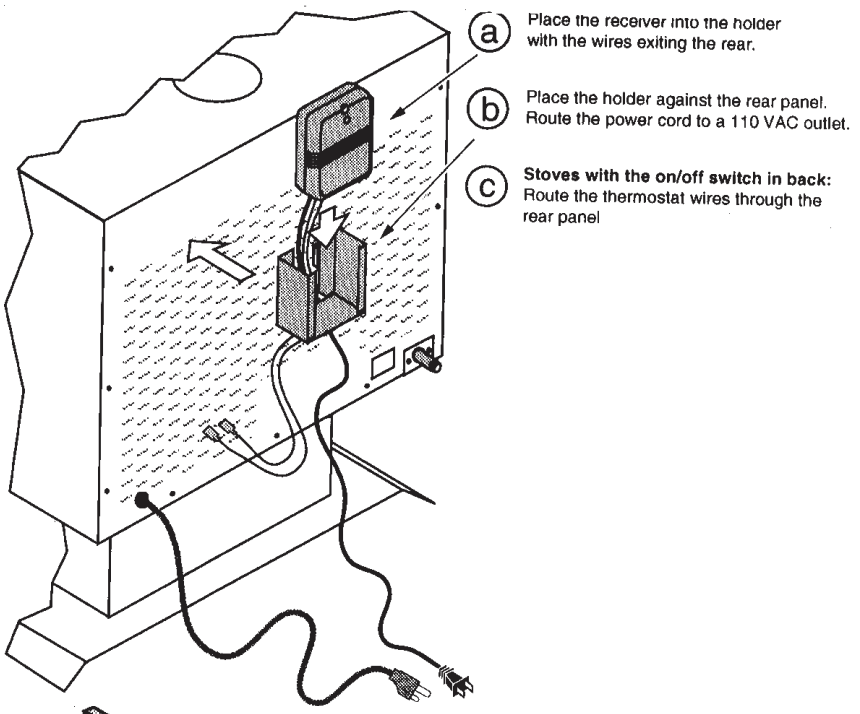




Remote Controls

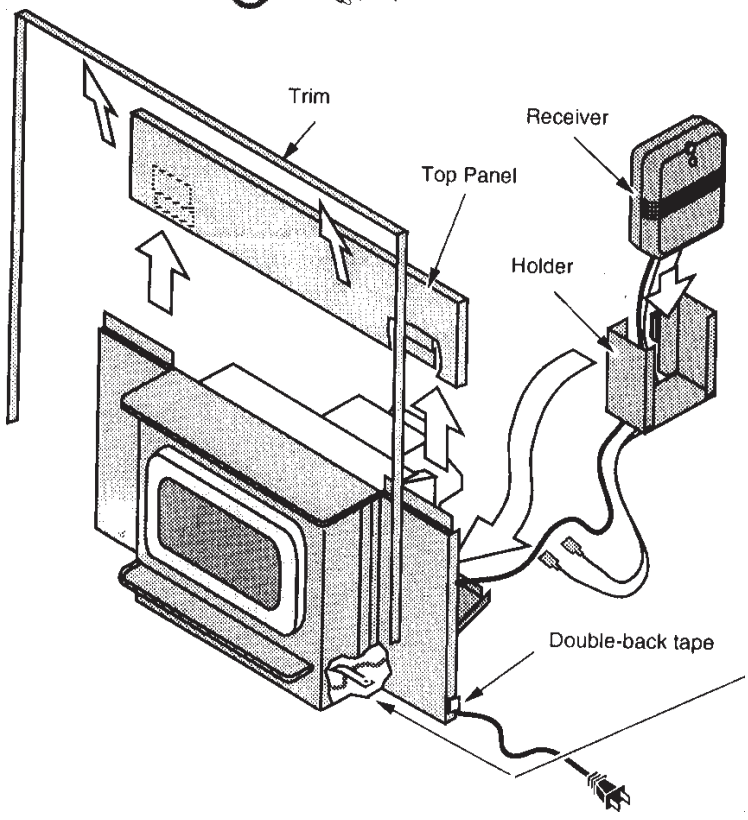
- Remote Control

  Freestanding Stove Installation



- Remote Control

  Fireplace Insert Stove Installation



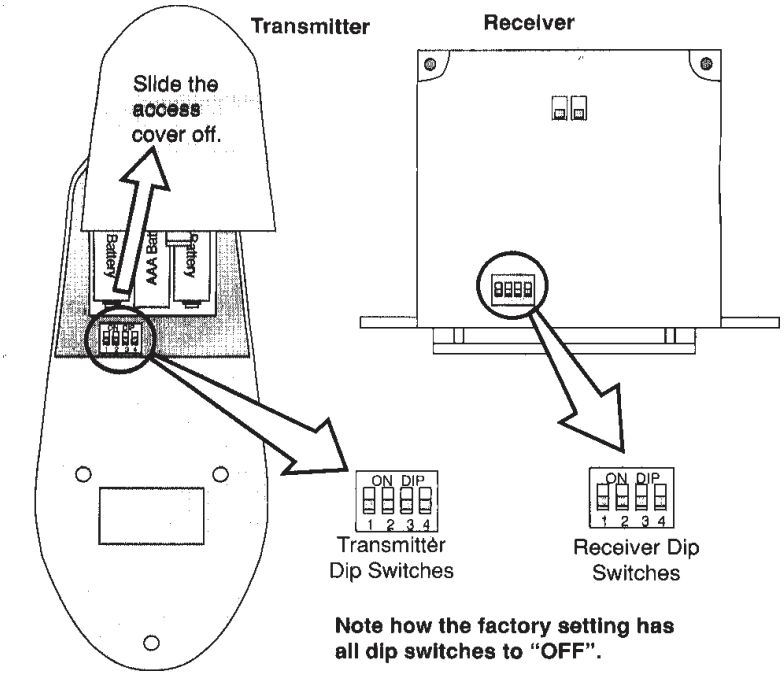
Fireplace Remote Controls

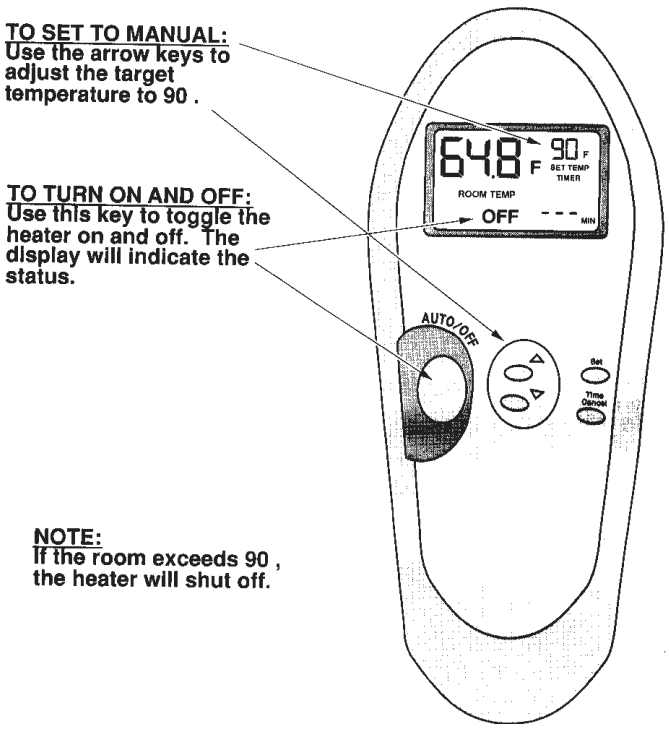
- Burner ON/OFF

- Remote Option (Fireplace)
- Remote ON/OFF
- Remote Thermostat
- Timed OFF Remote

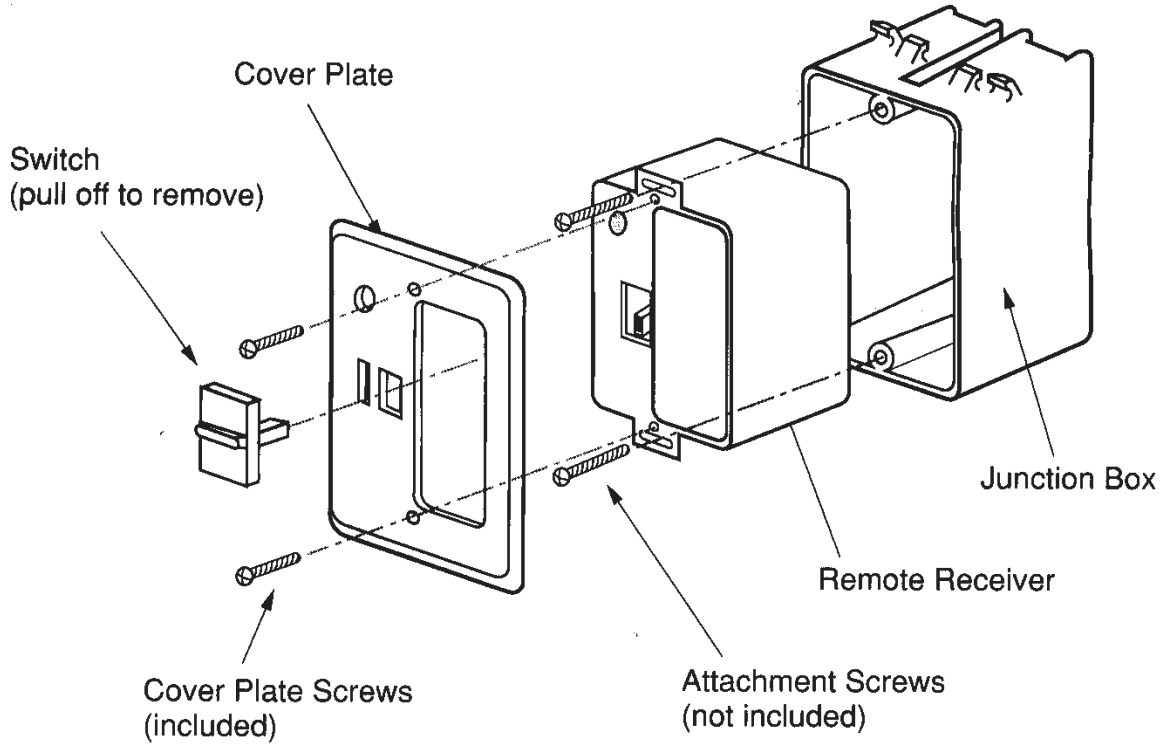
- Child Proof Code (UD DUD)

- Requires
  3 AAA Batteries
  4 AA Batteries

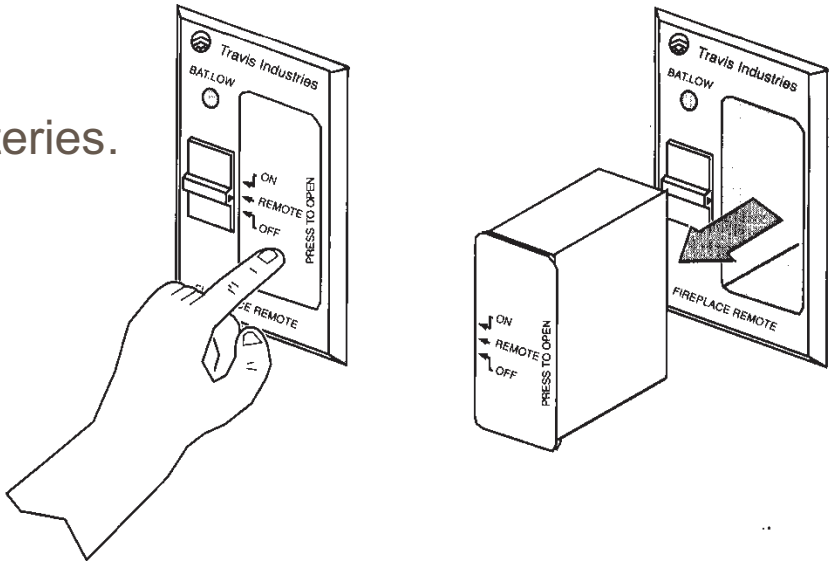




Fireplace Remote Controls



Requires
4 AA batteries.



SETTING OF AIR SHUTTERS & RESTRICTORS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Restrictor Purpose

Restrictor Configuration

Air Shutter Configuration

Self-Balancing Flue

Setting Restrictors

Adjusting Air Shutters

TRAVIS INDUSTRIES
HOUSE OF FIRE

Restrictors

- In order to balance the air flow through the gas appliance, restrictors are commonly used throughout the industry.

- Other manufacturers may have you add restricting rings to the intake of the vent pipe in an effort to balance the air flow.

- While this does the job, you must climb to the top of the vent and add the rings immediately below the chimney cap.

- Travis Industries has built the restrictor system into the gas appliance. This makes for simple and easy restrictor adjustment.

- Restrictor setting is an important element of the appliance set-up and must be done by a PROFESSIONAL! Improper restrictor setting may cause poor flame appearance, frequent pilot outages or create dangerous delayed ignitions. Restrictor setting will be discussed in full detail later in this section.

Restrictors Purpose

- **Direct Vent Gas Applications** - Depend upon a very balanced relationship between incoming combustion air and exhausting of the burnt flue gases.

- Incoming combustion air must be in combustion process, but not so strong as to disrupt the pilot or burner flame.

- The exhaust gases must exit the system at a set rate in order to draw in the air.

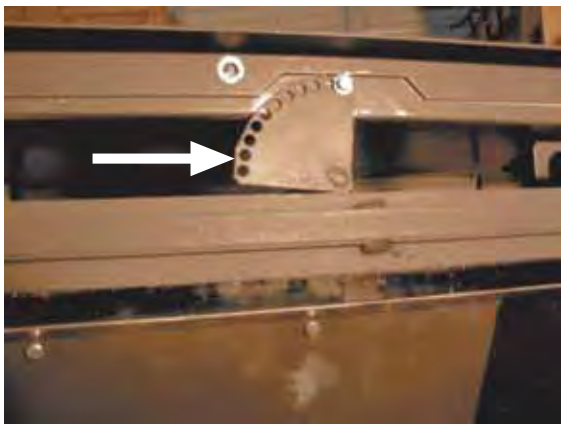
TRAVIS INDUSTRIES
HOUSE OF FIRE

Restrictors Configuration

• Most of our newer units use a combination restrictor or syncronized intake and exhaust restrictor.

Freestanding Stoves

New DVS/ DVL Inserts

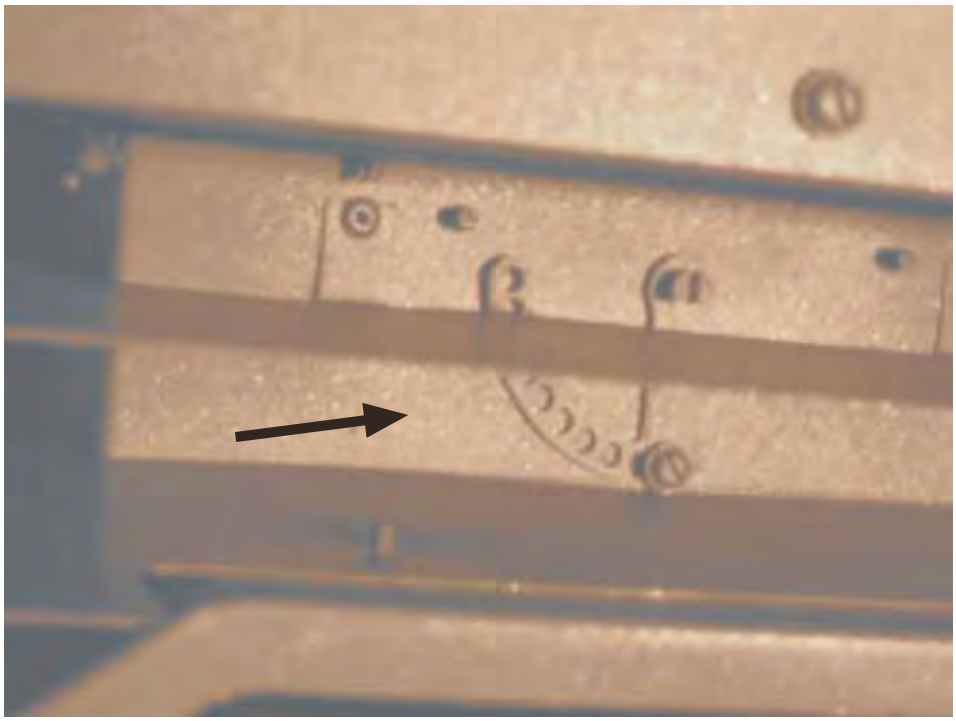


Restrictor Adjustment

Restrictor Plates

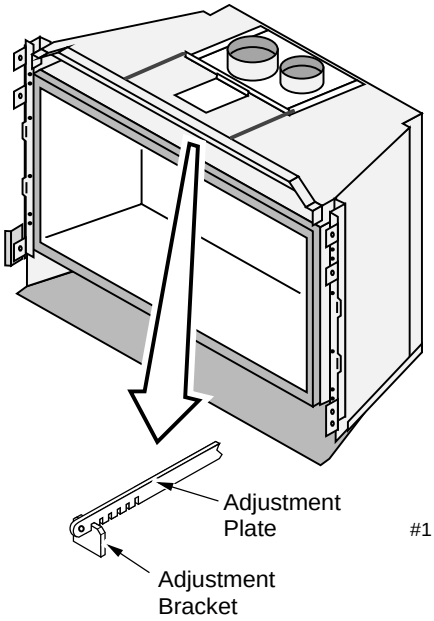
Restrictors Configuration

21 DV FP



Restrictors Configuration

New DVS Insert



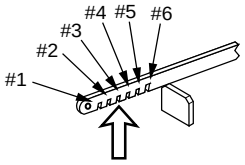
To Access the Restrictor:

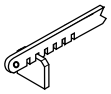
Remove the face.

WARNING: Use a glove to protect your hand from burns.

To Adjust the Restrictor:

1. Determine a restrictor position. Start low (move the restrictor a maximum two positions at a time) and thoroughly test the heater before adjusting further.
2. Lift up the adjustment plate and move it so the correct notch falls into the slot on the adjustment bracket.



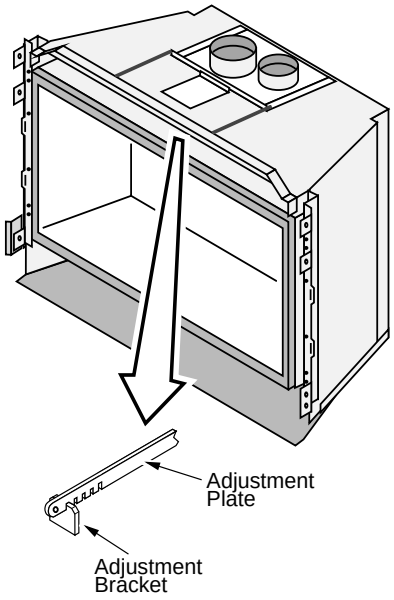


This restrictor is in position 1 (factory setting).

To adjust, lift up on the adjustment plate and push it back (use pliers if necessary).

This restrictor is in position 2.

New DVL Insert



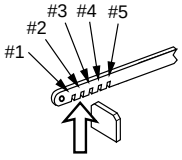
To Access the Restrictor:

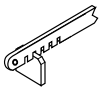
Remove the face.

WARNING: Use a glove to protect your hand from burns.

To Adjust the Restrictor:

1. Determine a restrictor position. Start low (move the restrictor a maximum two positions at a time) and thoroughly test the heater before adjusting further.
2. Lift up the adjustment plate and move it so the correct notch falls into the slot on the adjustment bracket.





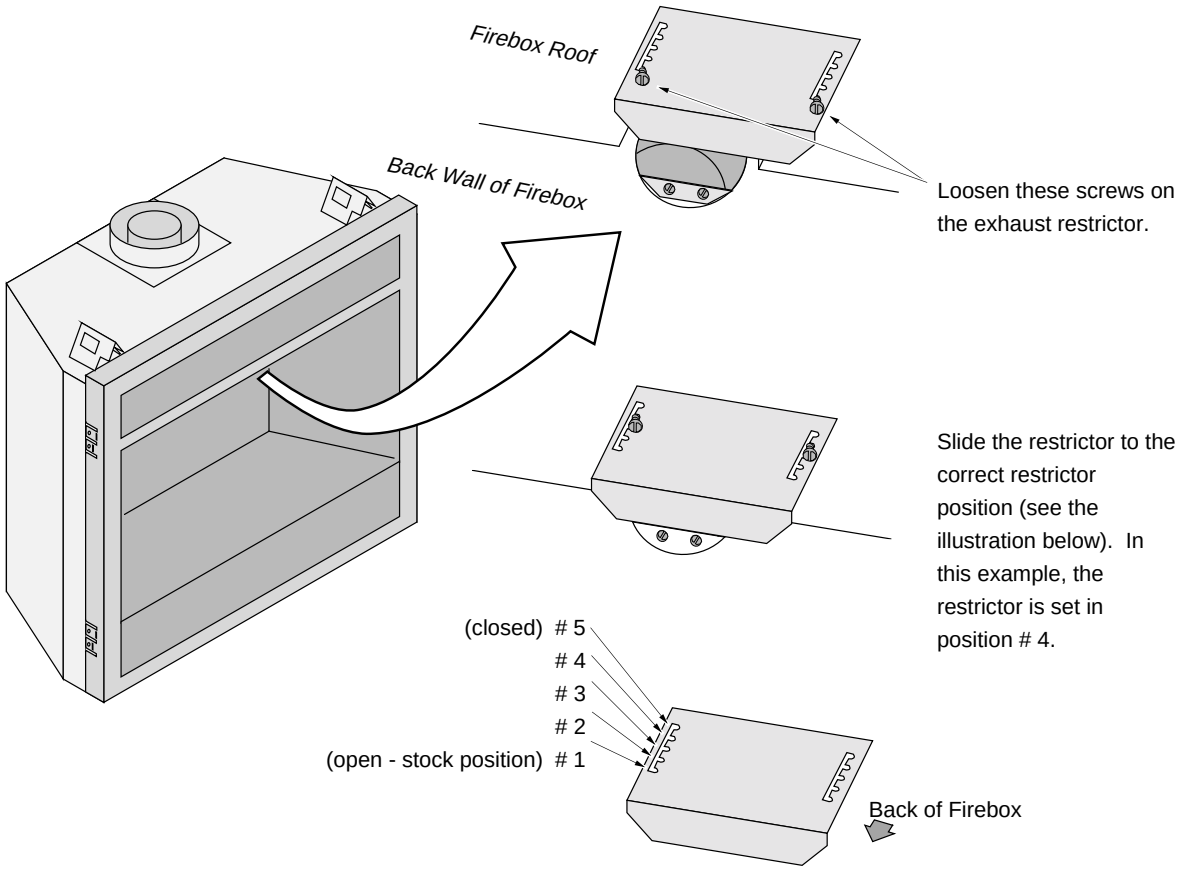
This restrictor is in position 1 (factory setting).

To adjust, lift up on the adjustment plate and push it back (use pliers if necessary).

This restrictor is in position 2.

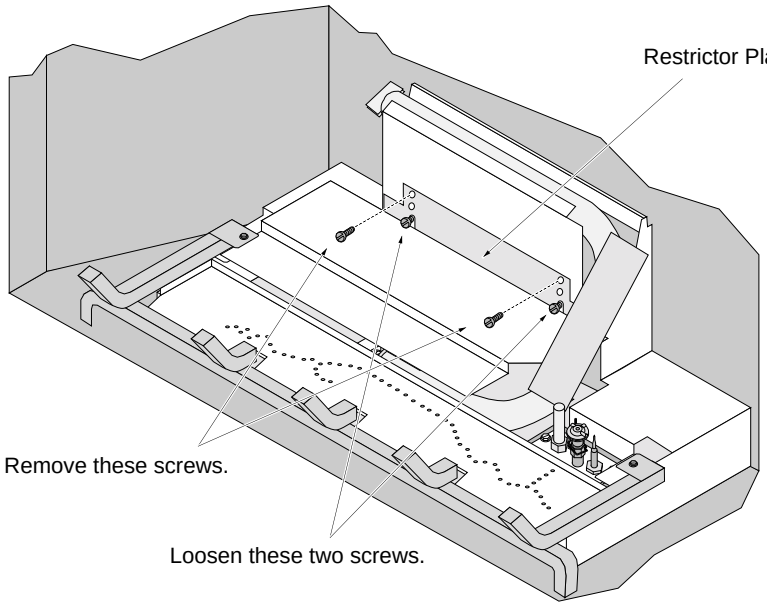
Restrictors Configuration

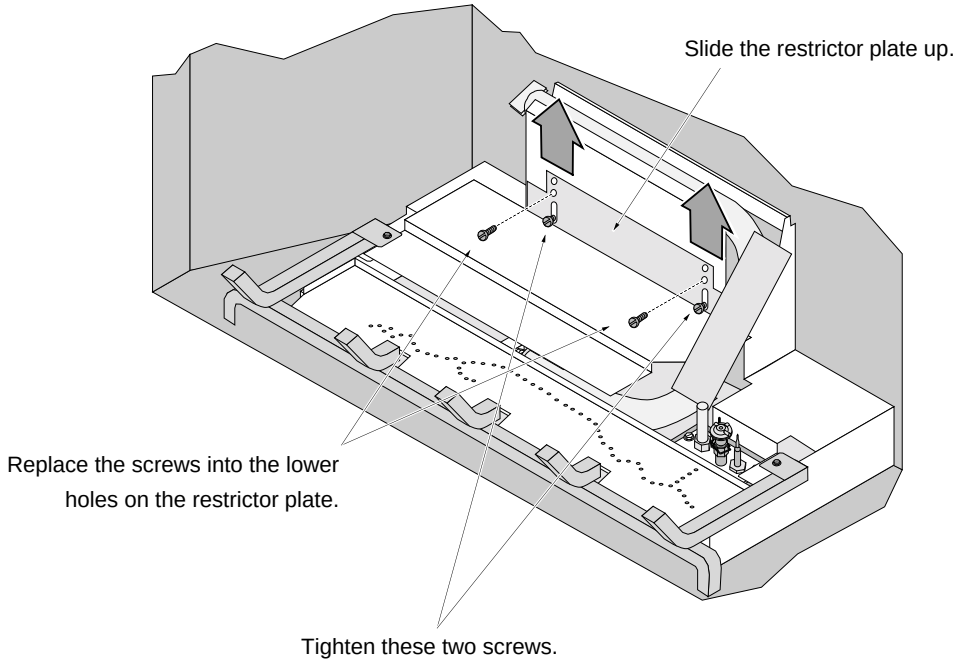
Winthrop TRV & HH



Restrictors Configuration

Winthrop TRV

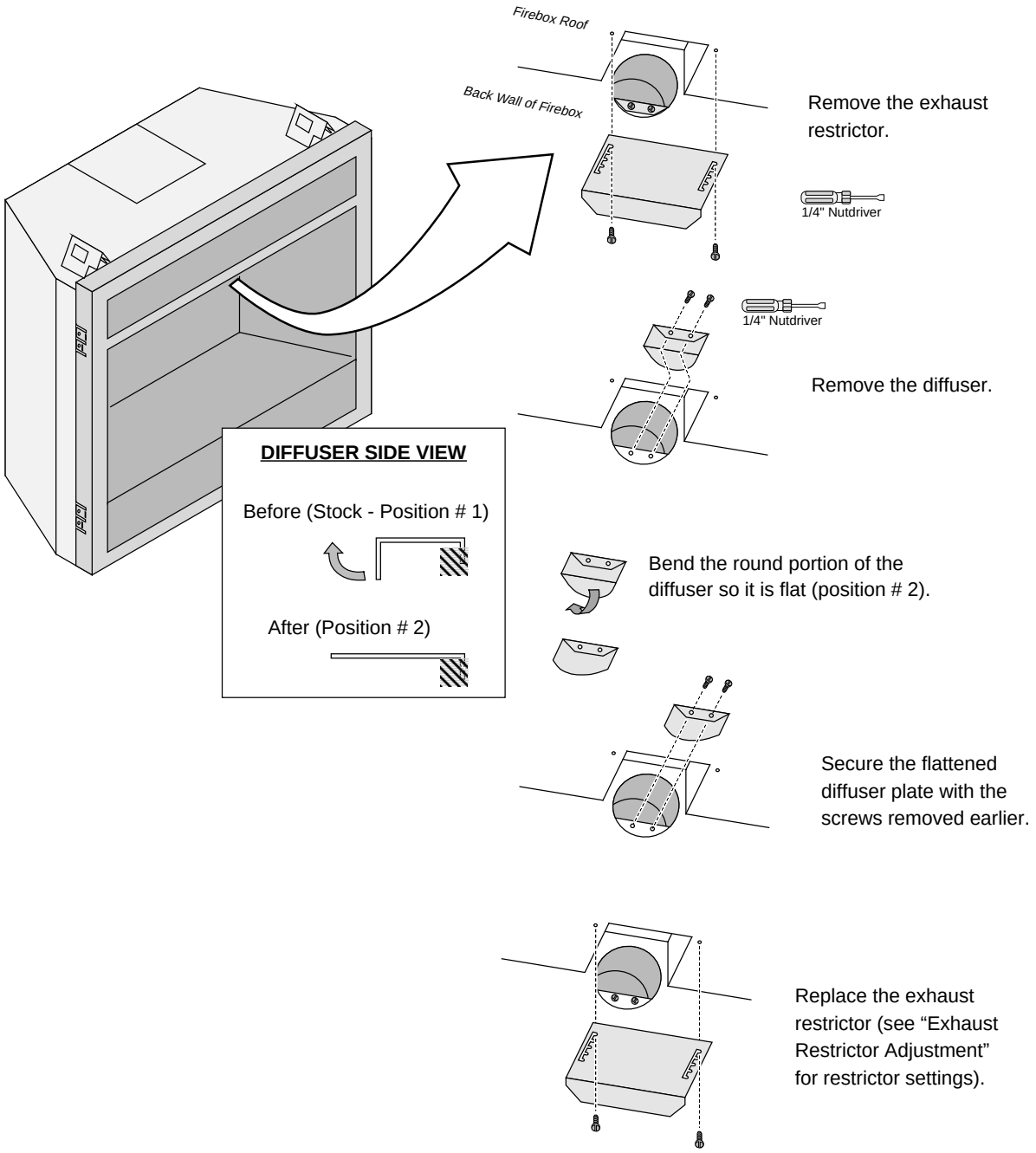




TRAVIS INDUSTRIES
HOUSE OF FIRE

Restrictors Configuration

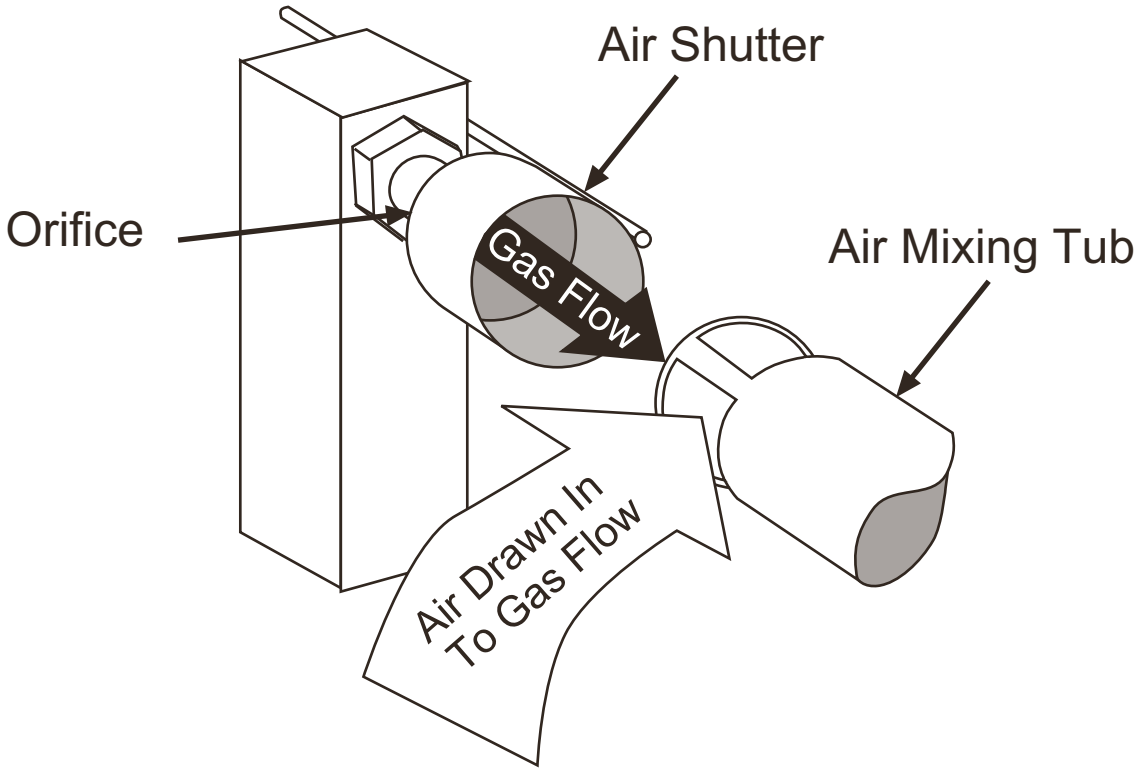
WinthropTRV & HH



TRAVIS INDUSTRIES
HOUSE OF FIRE

Air Shutter Purpose

- Once the combustion air has entered the appliance the air shutter controls the amount of the primary air that will mix with the fuel gas.



Tube Burner Air Shutter Shown

Air Shutters

Blue Flame vs. Yellow Flame

- Our gas appliances achieve a realistic looking fire by using a yellow flame
- This is achieved by depriving primary air (point where air and gas are mixed) and using secondary air (fire area) to complete the combustion process
- The primary air is regulated by the air shutter:
  - More open - blue flame
  - More closed - yellow flame

  Note: Closing the air shutter beyond the designated minimum will create incomplete combustion and possibly dangerous carbon monoxide
- While a yellow flame appliance is not as clean-burning as a blue flame appliance, it is within ANSI Standards (American National Standards Institute)
- Many gas Companies or HVAC people are not familiar with today's yellow flame technology. Therefore, they adjust the appliance to burn blue as they have been trained to do on traditional appliances.

TRAVIS INDUSTRIES
HOUSE OF FIRE

Air Shutters

AIR SHUTTER

- OPEN
  - Short Blue Flame
  - Hottest Flame
  - Produces Heavy Ember Glow On Logs & Burner

AIR SHUTTER

- CLOSED
  - Taller, More Yellow Flame
  - Cooler Flame
  - Lower Ember Glow On Logs & Burner

Air Shutter Configurations

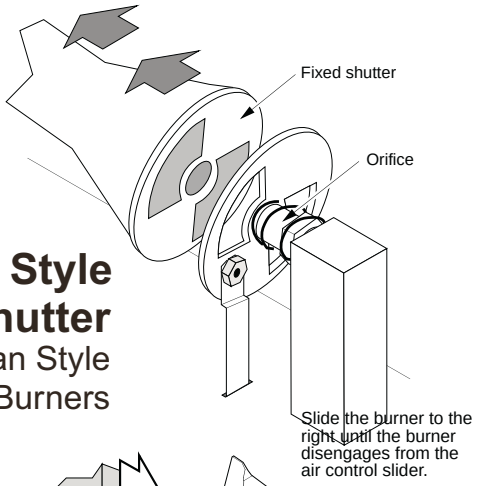
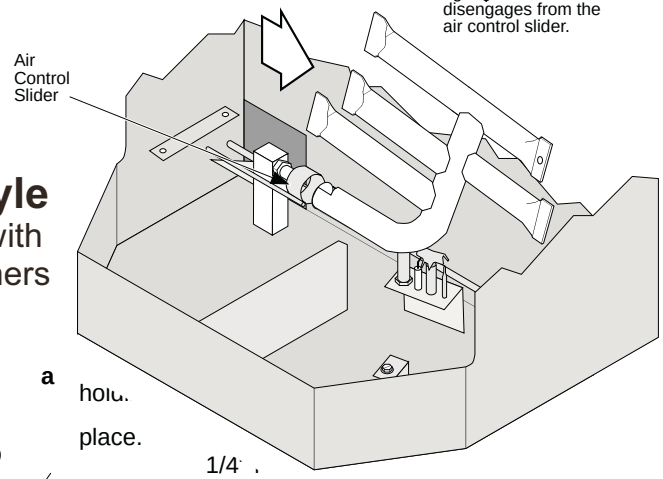


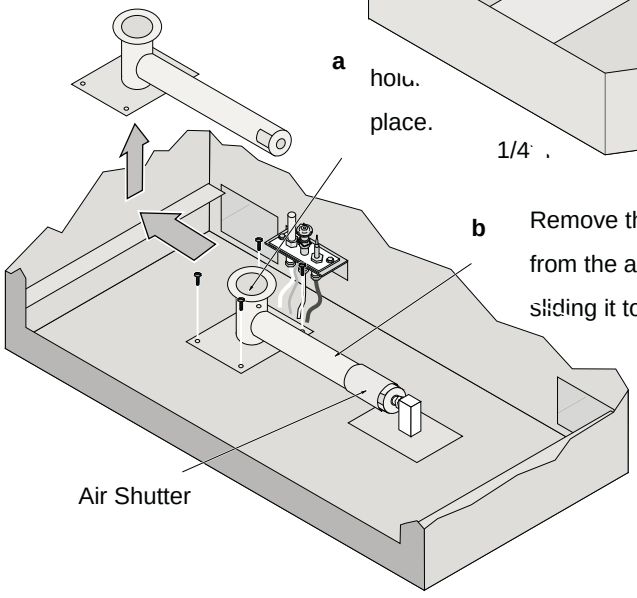
Plate Style Shutter
Used with Pan Style Burners

Slide the burner to the right until the burner disengages from the air control slider.



Tube Style
Used with Tube Burners

a hold
place.
1/4" .



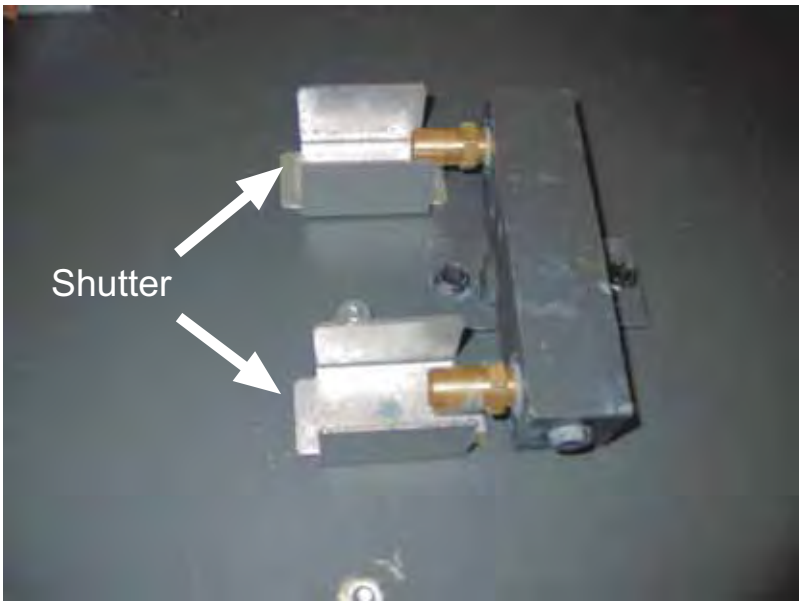
b Remove the
from the air s
sliding it to th

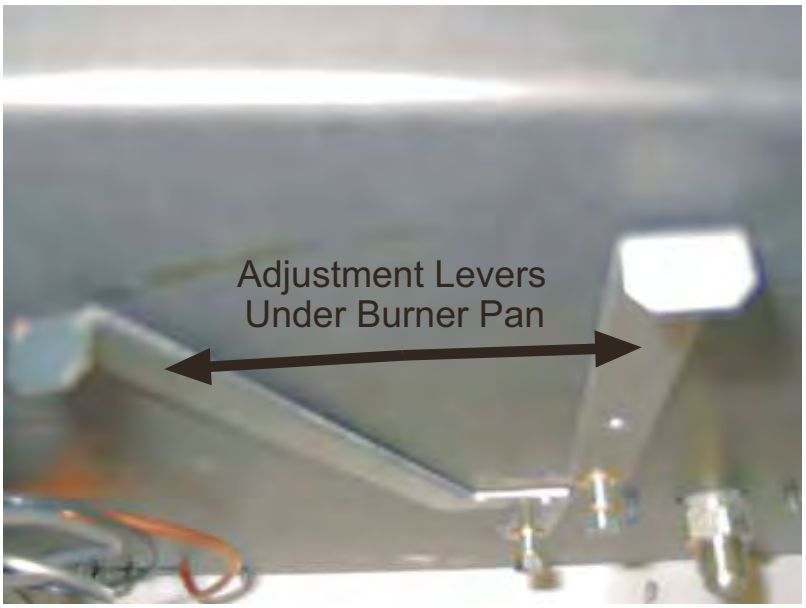
Tube Style Shutter
Used with original Ember-Fyre Burners

Air Shutter Configurations

U-Style Shutter

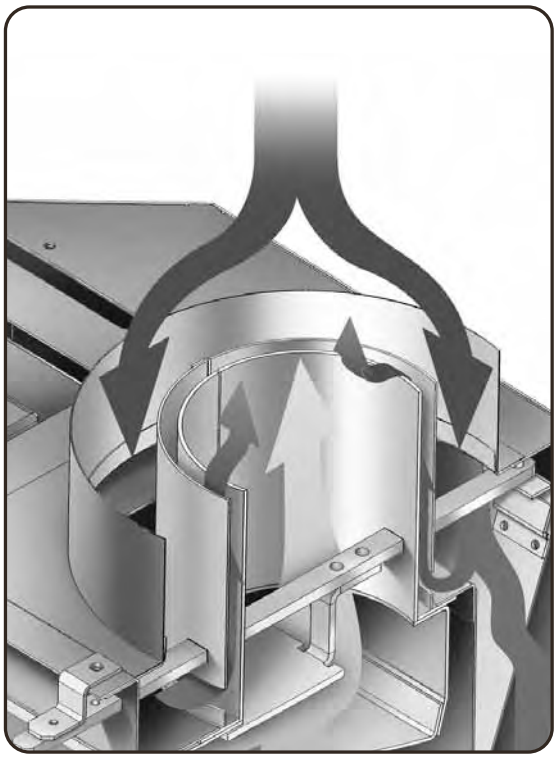
Used with newest
Ember-Fyre Burners





TRAVIS INDUSTRIES
HOUSE OF FIRE

Self-Balancing Flue System



- Occasionally atmospheric conditions at the vent termination will result in the flue gas being drawn out of the appliance too quickly. The increased flue gas exiting will cause the combustion air to be drawn in at faster rate, creating flame disruption.

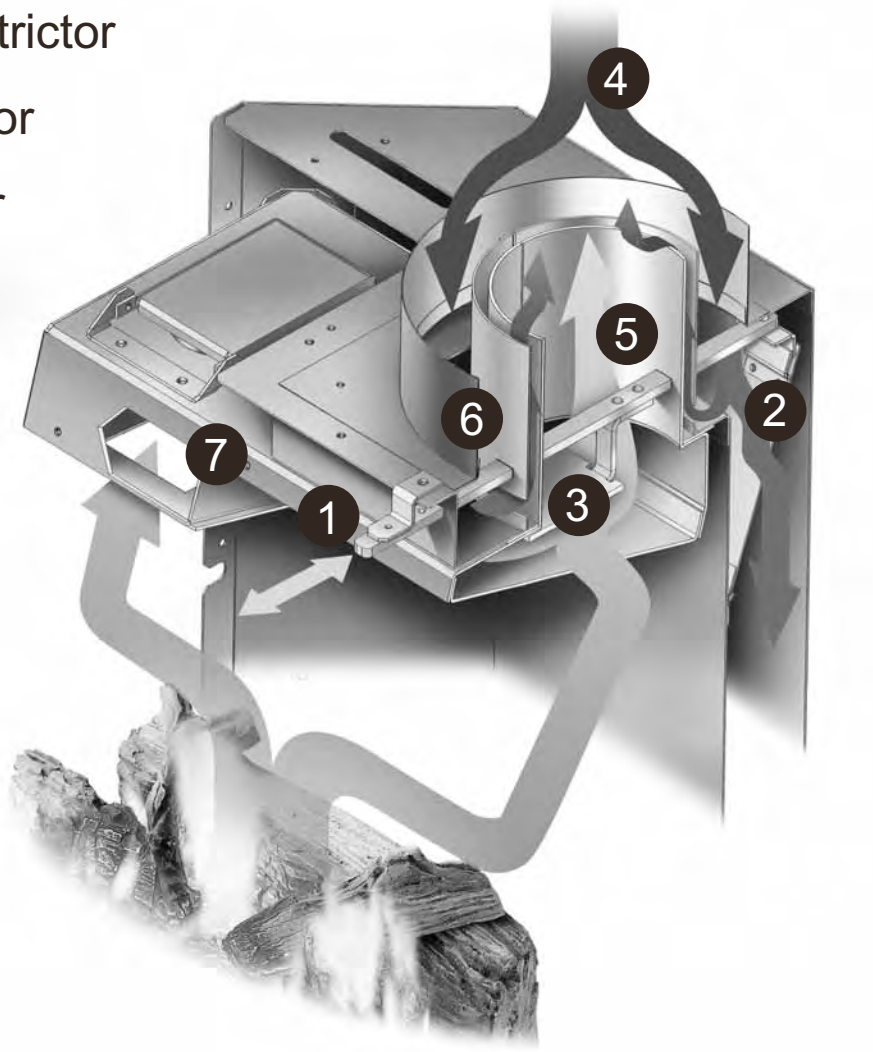
- The self-balancing flue system works much like a barometric damper and prevents over-drafting.

- When overdrafting occurs, fast rising flue gases pull combustion air through the slots at the base of the collar and up into the vent. This decreases the incoming speed and volume of the combustion air keeping the system balanced.

TRAVIS INDUSTRIES
HOUSE OF FIRE

Self-Balancing Flue System

1. Synchronized Restrictor
2. Air Intake Restrictor
3. Exhaust Restrictor
4. Combustion Air
5. Exhaust Gases
6. Self-Balancing Flue System
7. Heat Exchanger



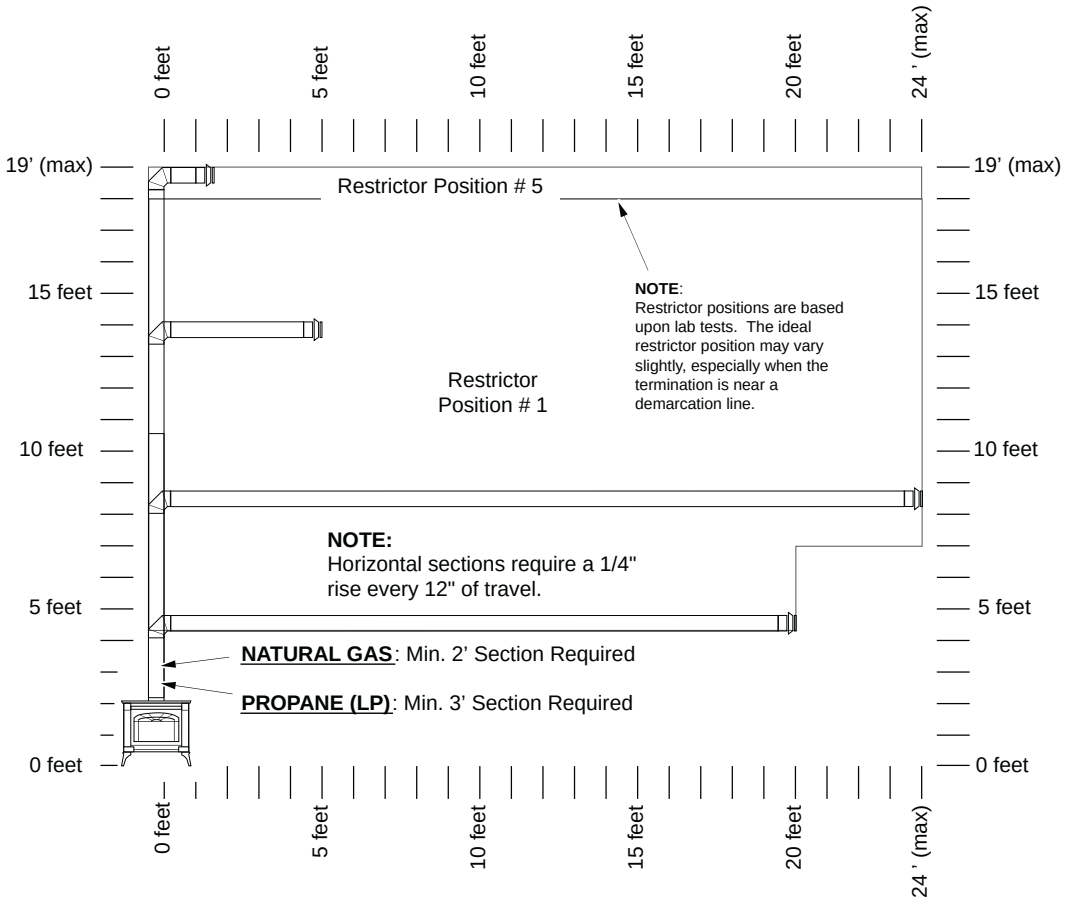
TRAVIS INDUSTRIES
HOUSE OF FIRE

Restrictor Setting

- Setting of the gas appliance restrictor is a very critical part of the appliance set-up.
- All Travis Industries gas appliances are shipped in the wide open position.
- Failure to set the restrictor may result in poor flame appearance or frequent pilot/burner outages.
- Only professionals should make restrictor adjustments.
- Improper setting may lead to sooting, carbon build-up and/or dangerous delayed ignition.

Restrictor Adjustment

1. Set restrictor in accordance with installation recommendations



2. Adjust Air Shutter to Wide Open Position
3. Burn Appliance for 15-20 Minutes (Bring Everything Up to Heat)
4. After 15-20 Minutes of Burn Time Move Air Restrictor Until You Archive the Best Looking Flame
5. Secure Air Restrictor

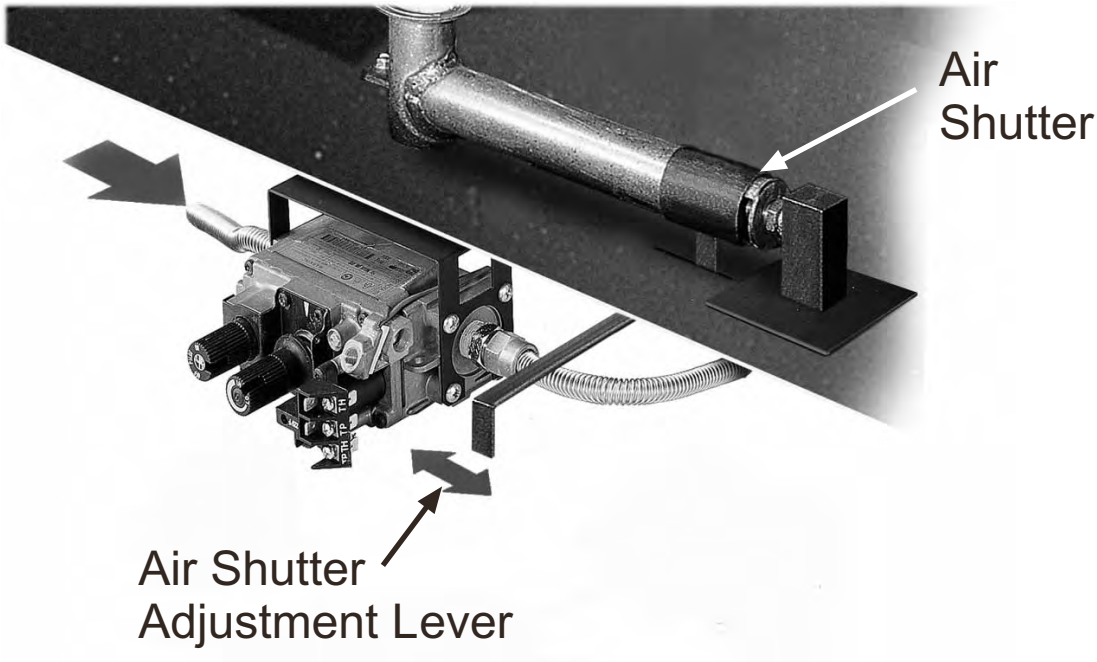
TRAVIS INDUSTRIES
HOUSE OF FIRE

Air Restrictor Adjustment

1. Adjust to Desired Ember-Fyre Look

2. The More Closed the More Ember-Fyre Look

3. The More Open the Less Ember-Fyre Look



Pre-Ember-Fyre Technology - Shutters should be adjusted by a professional - NOT the consumer!

Ember-Fyre Technology - Allows for the consumer to adjust flame to match their mood at any given time.

Must Have Diagnostic Tools

MUST HAVE

IMPORTANT TO HAVE

Multimeter

Gas Pressure Gauge

Digital Air Pressure Gauge

CO Analyzer

Thermocouple Adaptor

Gas Leak Detector

Use of the Multimeter

Use of the Multimeter

- Our gas appliances are controlled by electrical circuits.
  - Operational functions are controlled by millivolt circuits
  - Blowers are controlled by 110 volt circuits

- Troubleshooting gas operational problems. can be quickly diagnosed with a multimeter
  - Trust your multimeter

- Multimeter care
  - Delicate diagnostic instrument
  - Don’t drop or bang
  - Keep clean and dry
  - Think before you put the test leads into a circuit

- Personal Safety
  - When measuring 110 volts use caution to **not** come in contact with “HOT’ wires.

Use of the Multimeter

- In servicing gas hearth appliances 3 functions on the multimeter will be used - OHMS (or continuity) DC volts and AC volts

- OHMS - The measurement of the resistance to the flow of electricity

- The OHM function will be used to check for **continuity** in circuits and parts.

The OHMS SCALE or Ω

- Ω
- ((((- audible beep - indicating continuity

Testing For Continuity

- Place the black lead into the bottom socket marked "COM".

BLACK LEAD

RED LEAD

- Place the RED LEAD into the bottom socket marked VΩ

- Set the pointer on the center selector knob to the audible beep symbol or on the Ω setting.
- Turn on power - ON/OFF button.
- Digital screen will light up and show a O.L off to the left side.
- This indicates there is no continuity between the leads, or an infinite amount of resistance.

When Testing For Continuity

- Touch the two leads together and hold tightly.
- The “O.L.” should disappear and the digital display should read zero or close to zero.
- If set on the audible beep it will also beep at this time.

- When testing a circuit or part for “goodness” or continuity:

A **GOOD** circuit or component	A **BAD** or defective circuit or component
• Will read zero or close to zero • Will beep if on audible	• Will remain with the O.L in the left hand side of the screen • Will not beep if set on audible

Testing For Continuity

CAUTION!

- Always turn off any power (voltage) before testing for continuity with your multimeter (failure to do so may damage your multimeter).

- Remember to disconnect one side of the circuit being tested to avoid “back door sneak”.

Millivolt Testing

- Using the DC volt scale
- Millivolt production of thermopiles and thermocouples will be read using the DCV function of the multimeter
- Millivolt is 1/1000 of a volt D.C. (direct current)

The DCV SCALE

DCV - Auto Range will read millivolts D.C.

Millivolt Testing

When Measuring Millivolts:

- Place the test leads in the same sockets as we measured OHMS.
- Turn your center selector knob so the pointer is on the D.C.V. scale auto range.
- When measuring D.C. millivolts the power must be on (pilot burning) and we must measure across both sides of the power source.
- If a **-** (minus sign) shows up on your screen simply reverse your black and red leads in the circuit you're testing (reverse polarity).

Alternating Current (AC Volt)

Using the A.C.* Volt Scale

- Accessory voltage for fans will be read using the ACV scale
- The accessory voltage will be household voltage or 110-120 volts A.C.*

* A.C. stands for alternating current

The ACV SCALE

- ACV Auto Range will read AC Voltage

Measuring A. C. Volts

- With your test leads plugged into the same sockets used for reading OHMS and D.C. volts turn the center selector knob to the ACV scale.

CAUTION!!

When testing a 110 volt circuit, be careful to not touch the ends of the test leads as you will receive an electrical shock.

Using the Pressure Gauge

- Measure incoming and outgoing gas pressure
- Never blow (with your mouth) into the tube as you may damage the meter
- Always check pressures with the main burner on high and burning to get an accurate reading
- To zero out the gauge: Press the ON/OFF button - hold until all 888's appear then O then release button
- Follow test procedures as outlined in the trouble-shooting manual

Using the Electronic Leak Detector

- You are responsible to make sure the gas appliance has no gas leaks
- Test incoming gas supply to gas control valve
- Turn on pilot and test pilot gas circuit
- Turn on burner and test burner circuit
- Test all field made connections
- Test all factory made connections
- Test after adjusting pilot
- Test after changing the regulator body
- Test after testing incoming or outgoing

TRAVIS INDUSTRIES
WOOD PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Wood Line-Up by Brand

Wood As Fuel

Emissions

Wood Venting

Wood Stove Placement

Wood Accessories

Wood Maintenance

TRAVIS INDUSTRIES WOOD PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

AVALON

- Spokane 1250
- Spokane 1750
- Pendleton Wood Stove
- Rainier Wood Stove
- Olympic Wood Stove
- Arbor Cast Wood Stove
- Pendleton Wood Insert
- Perfect Fit Wood Insert
- Rainier Wood Insert
- Olympic Wood Insert

TRAVIS INDUSTRIES WOOD PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Avalon Wood Burning Stoves SPOKANE

Model 1250

Height - Legs 26 1/2 Height - Pedestal 29 3/4
Width - 23 5/8 Depth - 14 5/8
Flue Center From Back - 4 1/8

EPA Emissions 4.4 Grams/Hr.	Efficiency Up To 79.6 %	Maximum Btu s/Hour** 66,800	Firebox Size 1.6 Cu. Ft.
Heating Capacity* 600 to 1,200 Sq. Ft.	Maximum Burn Time** Up to 8 Hours	Maximum Log Length Up to 18 inches	Weight 243 Lbs.

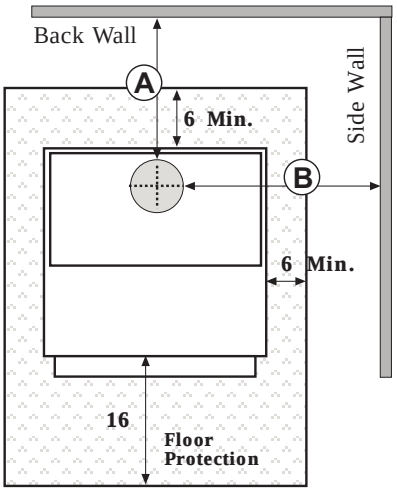
Model 1750

Height - Legs 26 1/2 Height - Pedestal 30 5/8
Width - 24 Depth - 23 1/2
Flue Center From Back - 5 3/4

EPA Emissions 1.9 Grams/Hr.	Efficiency Up To 79.6 %	Maximum Btu s/Hour** 72,400	Firebox Size 2.2 Cu. Ft.
Heating Capacity* 1.200 to 2,000 Sq. Ft.	Maximum Burn Time** Up to 10 Hours	Maximum Log Length Up to 18 inches	Weight 430 Lbs.

* Heating Capacity may vary depending on the degree of home insulation, floor plan, ambient temperature zone of the area in which you live.
** BTU Output and Burn Times may vary depending on moisture content of wood, wood type, chimney draft and oxygen supply.

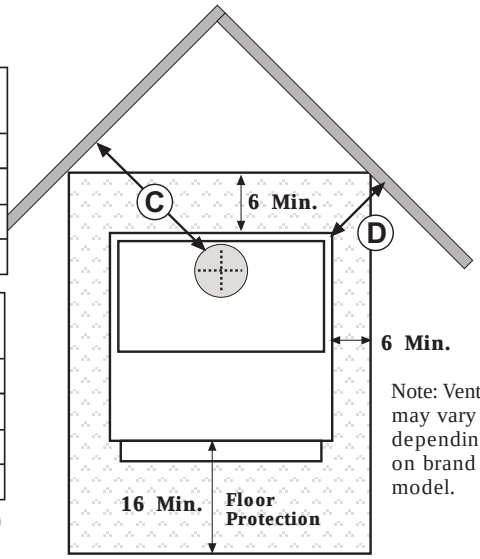
Clearances To Combustibles



Model 1250	Single Wall Connector	Double Wall Connector
A =	19 1/4	11 1/4
B =	27	26 1/2
C =	17 3/4	17 1/4
D =	10	10

Model 1750	Single Wall Connector	Double Wall Connector
A =	15	4 1/4
B =	15	13
C =	24	15
D =	15	6 1/2

Measure rear and side clearances (A) (B) & (C) from edge of the stove flue. Measure corner clearance (D) from the top corner of stove.



Note: Vent diameter may vary depending on brand and model.

Measure front, rear and side Hearth Pad clearances from edges of the stove top. Floor protection must be non-combustible and at least .018 thick (26 gauge). Minimum Hearth Pad Sizes: **Model 1250** - 36 Wide x 37 Depth **Model 1750** - 36 Wide x 45 1/2 Depth
For all installation and clearance information please consult the Owner s Manual or visit www.avalonfirestyles.com.

TRAVIS INDUSTRIES WOOD PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Avalon Wood Burning Stoves

	PENDLETON		RAINIER		OLYMPIC
Emissions:	3.0 gr/hr		2.0 gr/hr		2.6 gr/hr
Heating Capacity:	600 to 1,200 sq. ft.		800 to 1,800 sq. ft.		1,500 to 2,500 sq.
Heat Output* (cord wood):	64,200 btu's/hr		71,800 btu's/hr		74,300 btu's/hr
Efficiency:	68%		71.7%		70%
Maximum Burn Times:	Up to 8 hours		Up to 9 hours		Up to 12 hours
Maximum Log Size:	Up to 17″		Up to 20″		Up to 24″
Fuel Capacity:	16 lbs.		22 lbs.		36 lbs.
	90˚ Flue	45˚ Flue	90˚ Flue	45˚ Flue	90˚ Flue
Width:	23 3/4″	23 3/4″	25 3/4″	25 3/4″	29 3/8″
Height (All Legs):	28 5/8″*	27 7/8″	29 3/4″*	29″	30″*
Height (Pedestal):	32 1/8″*	31 3/8″	33 1/4″*	32 3/8″	33 3/8″*
Depth:	16 3/8″	16 1/8″	19 3/8″	19 3/8″	20 1/2″
Flue Diameter:	6″	6″	6″	6″	6″
Weight:	285 lbs.	260 lbs.	345 lbs.	305 lbs.	465 lbs.
Steel Thickness: Top:	1/4″	1/4″	1/4″	1/4″	5/16″
Steel Thickness: Unibody:	3/16″	3/16″	3/16″	3/16″	3/16″
Firebox Capacity:	1.3 cu. ft.	1.3 cu. ft.	1.8 cu. ft.	1.8 cu. ft.	3.1 cu. ft.

* Includes flue collar

CLEARANCES TO COMBUSTIBLES

Diagrams at bottom of page. Complete installation information is available at your local Avalon dealer or at www.avalonfirestyle.com

	PENDLETON				RAINIER				OLYMPIC	
	Residential Single Wall Pipe	Reduced Clearance Double Wall Pipe	Residential Single Wall Pipe	Reduced Clearance Double Wall Pipe	Residential Single Wall Pipe	Reduced Clearance Double Wall Pipe	Residential Single Wall Pipe	Reduced Clearance Double Wall Pipe	Residential Single Wall Pipe	Reduced Clearance Double Wall Pipe
A = Stove to Side Wall	10″	11″	10″	11″	14″	14″	14″	16″	16″	16″
B = Stove to Back Wall	16 1/2″	8 1/2″	19 1/2″	13″	14 1/2″	9 1/2″	17 1/2″	14″	15″	10″
C = Stove to Corner Wall	9 1/2″	7 1/2″	9 1/2″	7 1/2″	11″	7 1/2″	11″	7 1/2″	9 1/2″	7 1/2″
D = Pipe to Side Wall	19″	19 1/2″	19″	19 1/2″	24″	23 1/2″	24″	25 1/2″	27 3/4″	27 1/4″
E = Pipe to Back Wall	17 1/4″	8 3/4″	17 1/2″	9″	15 3/4″	10 1/4″	15 1/2″	10″	17 3/4″	12 1/4″
F = Pipe to Corner Wall	17 1/2″	15″	16″	11″	20″	16″	16 1/2″	12″	21″	18 1/2″

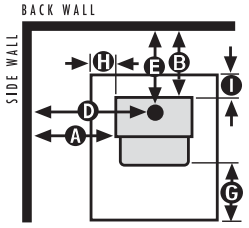
HEARTH PROTECTION

	PENDLETON		RAINIER		OLYMPIC
G = Stove Front	16″	16″	16″	16″	16″
H = Stove Sides	6″	6″	6″	6″	6″
I = Stove Back	6″	6″	6″	6″	6″

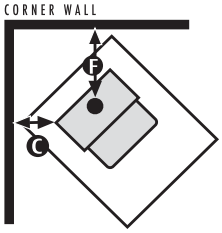
ALCOVE

	PENDLETON		RAINIER		OLYMPIC
J = Minimum Width	45 3/4″	45 3/4″	53 3/4″	57 3/4″	61 3/8″
K = Maximum Depth	48″	48″	48″	48″	48″
L = Maximum Height	84″	84″	84″	84″	84″

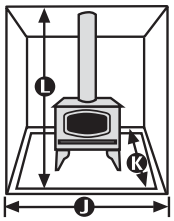
Parallel Wall Installation



Corner Installation



Alcove Installation



Approved Double Wall Connectors/Chimney

Components required for mobile home, alcove and reduced clearance residential installations.

DURA VENT™ Model DVL with DURA-PLUS™ chimney
SECURITY™ Model DP with SECURITY™ Model ASHT or S2100
AMERI-TEC™ Model DCC with Model HS chimney
METAL-FAB™ Model DW with Model TG

In addition to the chimney systems above, the model Pendleton & Rainier can utilize the following chimneys.

OLIVER MacLEOD™ Provent Model PV with Model 3103 chimney
SELKIRK METALBESTOS™ Model DS with Model SSII chimney
GS W-JAKES EVANS™ Super pipe 2100

NOTE: Clearances for double wall pipe will vary depending on type and brand of connector used, please maintain all stove clearances.

The clearances on this page are for reference only, refer to the Owner's Manual for exact specifications prior to installation.
HEATING CAPACITY: May vary depending on the degree of home insulation, floor plan, and ambient terperature zone of the area in which you live.
BTU OUTPUT & BURN TIME: May vary depending on woodstove size, moisture content of wood, wood type, chimney draft and oxygen supply.

TRAVIS INDUSTRIES WOOD PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Avalon Wood Burning Stoves

ARBOR

EPA Emissions	Overall Efficiency	Maximum Btu s/Hour**	Firebox Size	Heating Capacity*	Maximum Burn Time**	Maximum Log Length	Wood Capacity	Weight
2.4 Grams/Hr.	70 %	73,100	2.3 Cu. Ft.	Up to 2,000 Sq. Ft.	Up to 12 to 18 Hours	Up to 21 inches	45-65 Pounds	375 Lbs.

* Heating Capacity may vary depending on the degree of home insulation, floor plan, ambient temperature zone of the area in which you live.
¥¥ BTU Output and Burn Times may vary depending on moisture content of wood, wood type, chimney draft and oxygen supply.

Dimensions

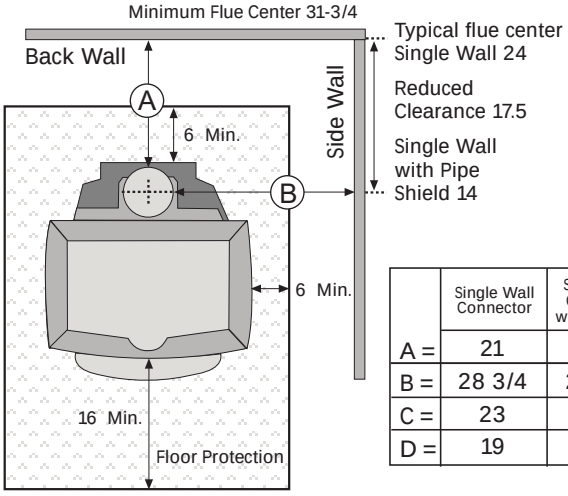
27 1/4 WIDE
22 7/8 DEEP
27 3/4 HEIGHT
25 1/4 HEIGHT TO FLUE CENTER (REAR VENT)
2 5/8 DEPTH TO FLUE CENTER FROM BACK (TOP VENT)

Alcove Clearances

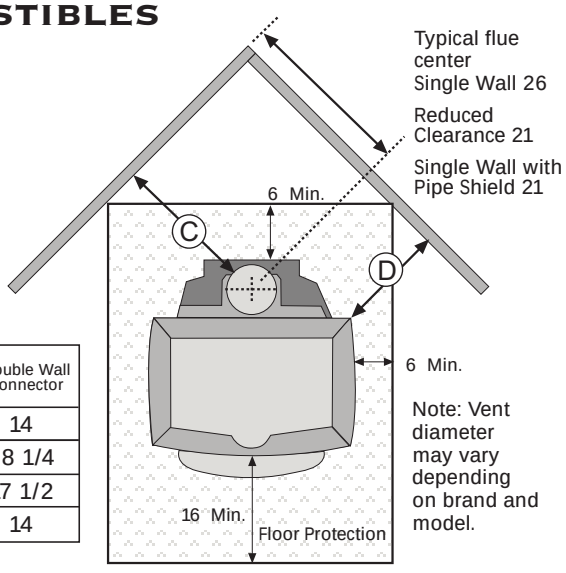
Maximum Depth	48	Measured From Combustible Surfaces
Maximum Width	63 1/4	
Minimum Height	84	

Close Clearances To Combustibles

(Rear heat shield is a standard feature)



	Single Wall Connector	Single Wall Connector w/Pipe Shield	Double Wall Connector
A =	21	11	14
B =	28 3/4	28 3/4	28 1/4
C =	23	18	17 1/2
D =	19	14	14



Measure front clearances from the face of the stove (door opening).

Measure rear and side clearances from the nearest edge of the stove top.

Measure rear and side clearances from the nearest edge of the stove top.

Measure front clearances from the face of the stove (door opening).

TRAVIS INDUSTRIES WOOD PRODUCTS

TRAVIS INDUSTRIES HOUSE OF FIRE

Avalon Wood Burning Inserts

	PENDLETON		RAINIER		PERFECT-FIT	OLYMPIC	
	For smaller homes and for zonal heating needs. 45˚ Flue or 90˚ Flue Models		For mid-sized homes and for zonal heating needs. 45˚ Flue or 90˚ Flue Models		Flush wood insert for mid-sized homes and for zonal heating.	For larger homes and those who need a primary heat source.	
Heating Capacity*:	600 to 1,200 SQ. FT.		800 to 1,800 SQ. FT.		1,200 to 2,000 SQ. FT.	1,500 to 2,500 SQ. FT.	
Heat Output:	64,200 BTU's/HR		71,800 BTU's/HR		73,300 BTU's/HR	74,300 BTU's/HR	
Overall Efficiency*:	68%		71.7%		71.7%	70%	
Max. Burn Time:	Up to 8 Hours		Up to 9 Hours		Up to 12 Hours	Up to 12 Hours	
Max. Log Size:	Up to 17"		Up to 20"		Up to 24"	Up to 24"	
Fuel Capacity:	16 Lbs. of Wood		22 Lbs. of Wood		22 Lbs. of Wood	24 Lbs. of Wood	
Weight:	285 Lbs.		345 Lbs.		450 Lbs.	465 Lbs.	
Firebox Size:	1.3 Cu. In.		1.8 Cu. In.		2.9 Cu. In.	3.1 Cu. In.	
Flue Diameter:	6"		6"		6"	6"	
	45˚ Flue	90˚ Flue	45˚ Flue	90˚ Flue	90˚ Flue	90˚ Flue	
Height:	20 "	20 3/4"	21 1/8"	21 7/8"	21 1/2"	22 1/8"	
Width in Front:	23 3/4"	23 3/4"	25 3/4"	25 3/4"	28 7/8"	29 3/8"	
Width in Back:	23 3/4"	23 3/4"	25 3/4"	25 3/4"	21 1/4"	29 3/8"	
Overall Depth:	16 1/8"	16 3/8"	19 3/8"	19 3/8"	21 3/4"	20 1/2"	
Depth on Hearth:	4 3/4"	4 7/8"	10"	5 1/8"	1 1/4"	6 3/8" FL	8 7/8" EXT
Depth Into Fireplace:	11 3/8"	11 5/8" Masonry 12 5/8" ZC	9 1/2" Masonry 10 1/2" ZC	14 1/2" Masonry 15 1/2" ZC	20 1/2"	14 1/8" FL	11 5/8" EXT

* Wood appliance performance can be affected by negative pressure in the home and by prevailing atmospheric conditions. Contact local building or fire officials about restrictions and installation requirements in your area.

SURROUND FACING Select the panels to enclose your fireplace opening. Measurements indicate maximum coverage area.

OUTSIDE FIT PANELS - Designed to fit over the existing fireplace opening. Comes standard with black trim.

8" x 8" Panels:	39 3/4" W x 28" H	41 3/4" W x 28 7/8" H	45 1/2" W x 29 1/2" H	45 1/4" W x 28 7/8" H
10" x 10" Panels:	43 3/4" W x 30" H	45 3/4" W x 30 7/8" H	49 1/2" W x 31 1/2" H	49 1/4" W x 30 7/8" H
12" x 12" Panels:	47 3/4" W x 32" H	49 3/4" W x 32 7/8" H	53 1/2" W x 33 1/2" H	53 1/4" W x 32 7/8" H

INSIDE FIT PANELS - All Avalon panels sets can be cut down for a custom fit to the inside edges of your existing fireplace opening. It is the least obtrusive panel system and showcases your Avalon insert.

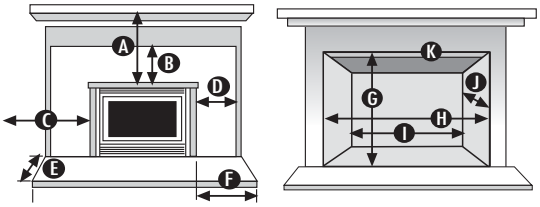
CLEARANCES TO COMBUSTIBLES complete installation information is avaialbe at your local Avalon dealer or on our website at www.avalonstyle.com.

	Masonry Fireplace	Metal (ZC) Fireplace	Masonry Fireplace	Metal (ZC) Fireplace	Masonry Fireplace	Metal (ZC) Fireplace	Masonry Fireplace	Metal (ZC) Fireplace	Metal (ZC) Fireplace	Metal (ZC) Fireplace Flush	Metal (ZC) Fireplace Extended
A = To Mantle	22"	24"	22"	24"	31 1/2"	24"	31 1/2"	24"	41 1/2" (Measured From Floor)	32"	33"
A = To Mantle w/Shield*	16 1/2"	N/A	16 1/2"	N/A	16 1/2"	N/A	16 1/2"	N/A	N/A	19"	20"
B = To Top Facing	20"	12"	20"	12"	29 1/2"	12"	29 1/2"	12"	39" (Measured From Floor)	30"	31"
B = To Top Facing w/Shield*	14 1/2"	N/A	14 1/2"	N/A	14 1/2"	N/A	14 1/2"	N/A	N/A	17"	18"
C = To Sidewall	10"	30"	10"	30"	14"	30"	14"	30"	9"	15"	15"
D = To Side Facing	9"	12"	9"	12"	13"	12"	13"	12"	9"	13 1/2"	13 1/2"
E = Hearth Depth	20 3/4"	20 3/4"	20 3/4"	20 3/4"	26 "	26 "	21 1/8 "	21 1/8 "	17 1/4 "	22 3/8 "	24 7/8 "
F = Hearth Sides	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"

* Mantle and Top Facing clearances can be reduced with the optional Mantle Shield

SIZING YOUR EXISTING FIREPLACE Minimum fireplace measurements required for installation

Minimum Requirements:	45˚ Flue	90˚ Flue	45˚ Flue	90˚ Flue	90˚ Flue	Flush	Extended
G = Height	20 1/2"	21 1/4"	21 1/2"	22 1/4"	21 1/2"	22 1/4"	22 1/4"
H = Front Width	24"	24"	26"	26"	30 7/8"	29 1/2"	29 1/2"
I = Back Width	24"	24"	26"	26"	21 1/4"	29 1/2	29 1/2"
J = Depth	11 3/8"	11 5/8" Masonry 12 5/8" ZC	9 1/2" Masonry 10 1/2" ZC	14 1/2" Masonry 15 1/2" ZC	20 1/2	14 1/8"	11 5/8"
K = Min. Lintel Depth	6 1/2"	4 1/2"	3 1/4"	7"	11"	5"	2 1/2"



Write In Your Fireplace Dimensions:

G = Height _____

H = Front Width _____

I = Back Width _____

APPROVED ZERO CLEARANCE (METAL) FIREPLACES

Both the Pendleton and Rainier Inserts are approved for installation in the following zero clearance fireplaces. See the Owner's Manual for details.

MARCO
MAJESTIC
TEMPCO
HEATILATOR PREWAY
SUPERIOR

TRAVIS INDUSTRIES WOOD PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

- Unibody construction
- Single Air Control
- Minimum clearances to combustibles
- Operation/Care manual and touch-up paint
- Easy start-up and refueling with bypass damper (most models)
- Non-Catalytic EPA Phase II clean burning
- 6” flue on all models
- 3/16” - 1/4” - 5/16” steel construction
- Long burn times
- Easy operation cam lever door lock

TRAVIS INDUSTRIES WOOD PRODUCTS

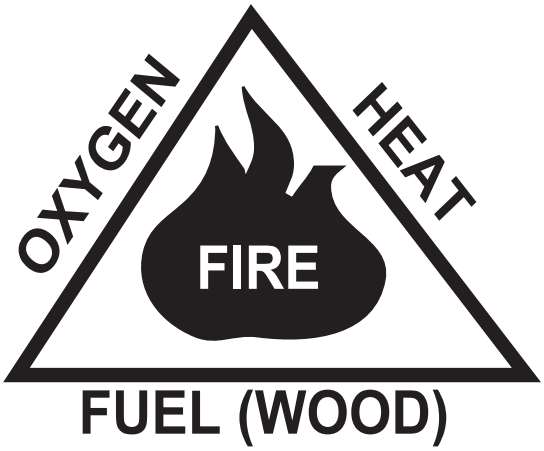
TRAVIS INDUSTRIES
HOUSE OF FIRE

- One out of every five woodstoves sold in North America is a Travis product
- “Real World” seven year warranty
- Clean burn airwash
- Replaceable air tubes, firebrick baffle and baffle retainers
- Radiant and convection heaters (3 and 5 sides to convection chamber)
- Heats up to 2,500 Sq. Ft.
- Clearview ceramic glass
- Clay, kiln fired firebrick

Wood As Fuel

- Wood is renewable natural resource.

- Wood is a hydrocarbon, or in other words - it is made up of hydrogen and carbon atoms.



- Combustion of wood takes place when we mix the right quantities of fuel (wood), heat & oxygen.

- When proper balance exist between these items complete combustion takes place and produces:

  - Water Vapor
  - Carbon Dioxide
  - Heat
  - Non-Combustible Ash

Wood As Fuel

STAGES OF WOOD COMBUSTION

STAGE 1 - Moisture Evaporation

- The wood is heated and the contained moisture evaporates to form steam.

- **NO HEAT** is given off - it is all absorbed in drying out the wood.

STAGE 2 - Vaporization of Hydrocarbon Compounds

- The chemical structure of wood molecules begin to breakdown and hydrocarbons begin to vaporize. This process is known as pyrolysis.

- During pyrolysis liquid tar droplets and combustible gas are produced from the hydrocarbons.

- This stage is still absorbing heat rather than giving off heat.

Wood As Fuel

STAGES OF WOOD COMBUSTION

STAGE 3 - Gas Vapor Ignition & Combustion

- Gases and tar droplets produced in stage two, ignite in stage 3. They ignite between the temperatures of 540˚F to1225˚F.

- Temperatures in the firebox may reach upwards of 2000˚F during this stage of burning.

STAGE 4 - Char Burning

- After pyrolysis, moisture evaporation, and the release of gases have subsided (about 950˚F), the char burning stage begins.

- The carbon in charcoal is the only remaining combustible material. Charcoal burns with little or no flame and produces temperatures of about 1100˚F.

Emissions

- Over the years, air quality has become an issue and wood burning products were sited as contributing to poor air quality.

- In 1990, EPA (Environmental Protection Agency) became the agency to regulate the emissions of wood products.

- Today's EPA particulate emission standards are:

  - Catalytic products
    4.1 Grams/Hour

  - Non-Catalytic products:
    7.5 Grams/Hour

- Most states follow the EPA standard however states may have more stringent requirements.

- Washington State is one of those States:

  - Catalytic products
    2.5 Grams/Hour

  - Non-Catalytic products:
    4.5 Grams/Hour

Emissions

- Wood burning products must adhere to the EPA emissions standards having the following characteristics.

    1. Minimum burn rate less than 5 grams/hour (11 lbs.)
    2. Average air-to-fuel ratio of less then 35 to 1.
    3. Usable firebox of less than 20 cubic feet.
    4. Weigh less than 800 kilograms (about 1760 lbs.)

EPA EMISSION TESTING

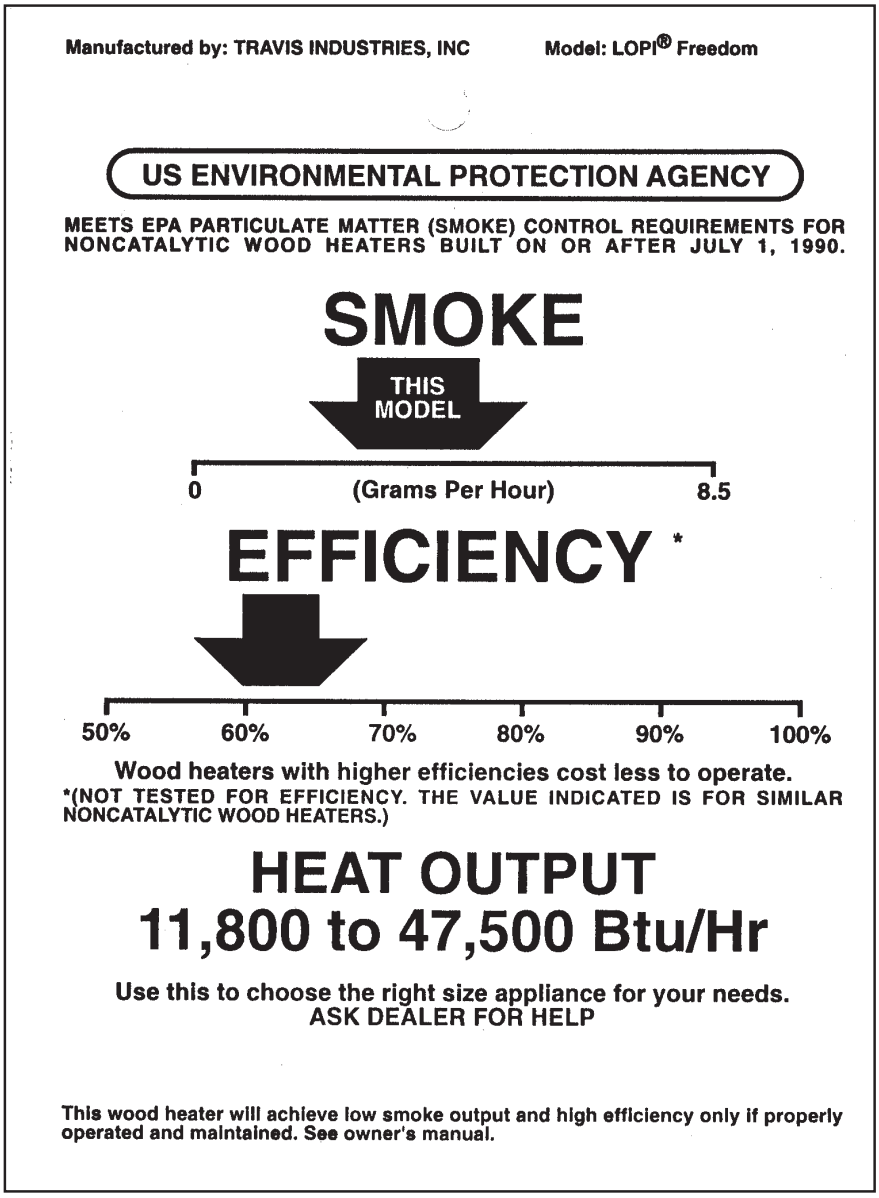
- EPA tests follow a very specific, stringent protocol. All of the smoke from the wood burning appliance is drawn through a filter before exiting up the chimney.

- The stove is burned in a series of 4 tests all at different burn rates.

- In each test the filter is weighed before the test and is dried and weighted at the conclusion of each test. The difference is the stated grams/hour of particulate emission.

- The combined tested emissions for all 4 burn tests is then averaged. The averaged total MUST meet or be below the EPA standard in order for the stove to get a EPA certification.

EPA Hang Tag



Manufactured by: TRAVIS INDUSTRIES, INC Model: LOPI® Freedom

US ENVIRONMENTAL PROTECTION AGENCY

MEETS EPA PARTICULATE MATTER (SMOKE) CONTROL REQUIREMENTS FOR NONCATALYTIC WOOD HEATERS BUILT ON OR AFTER JULY 1, 1990.

SMOKE

THIS MODEL

0 (Grams Per Hour) 8.5

EFFICIENCY *

50% 60% 70% 80% 90% 100%

Wood heaters with higher efficiencies cost less to operate.

*(NOT TESTED FOR EFFICIENCY. THE VALUE INDICATED IS FOR SIMILAR NONCATALYTIC WOOD HEATERS.)

HEAT OUTPUT
11,800 to 47,500 Btu/Hr

Use this to choose the right size appliance for your needs.
ASK DEALER FOR HELP

This wood heater will achieve low smoke output and high efficiency only if properly operated and maintained. See owner's manual.

- EPA hang tags must be present ON each woodburning in your showroom.
- Non-compliance may result in a $5,000 fine per unit.

Wood Combustion

- The three T's are critical to high efficiencies.
- Time, Temperature and Turbulence of the flue gases.
- Our stoves are designed and constructed to provide maximum residence time of the flue gas at a good mix of primary and secondary air.

"T" Factor	Accomplished By:
Time	• **Firebrick Free Floating Baffle** • **Single Air Control**
Temperature	• **Firebrick Baffle**
Turbulence	• **Primary Air** • **Glass Door Airwash** • **Secondary Air**

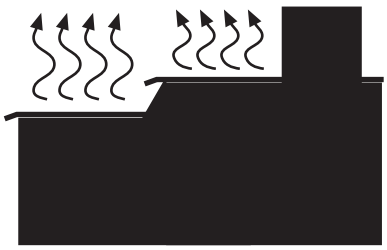
Stove Construction

- The Three T's

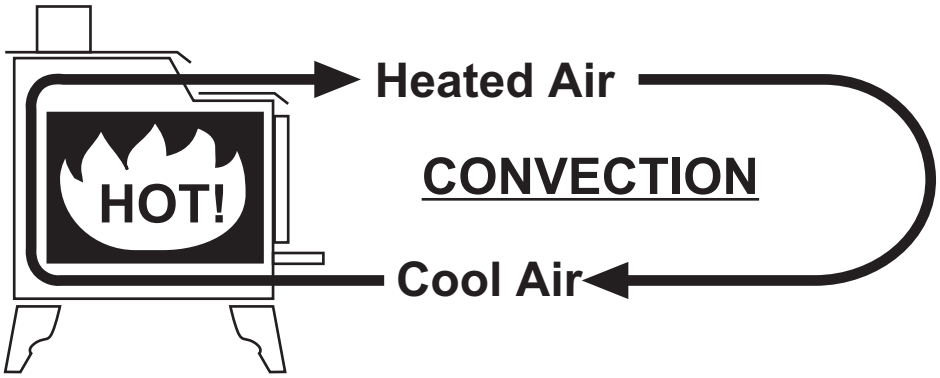
ACCOMPLISHED BY

1. **EFFICIENCY**
2. **"GOOD HEAT"**
3. **TRANSFER**

- Use of clay fired firebrick - conducts the heat through the brick lining to the convection chambers.
- Use of clear view Neoceram™ glass - reflects the heat through the glass door into the room.
- Use of large radiant surfaces.



- Use of three and five-sided convection chambers.



- Three-sided convection- Heat is washed off of the bottom, back and top.
- Five-sided convection - Heat is washed off of the bottom, back, top and two sides.

Wood Stove Venting

- The pipe which connects the stove to the chimney is called a connector.

- The stove connector must connect to a masonry chimney or a metal factory built type UL103 HT chimney.

- Connectors must never pass through a wall or ceiling. Stove connectors may be single wall pipe or double wall pipe with an air space between the inner and outer wall.

- The system shall not have more than 180˚ of turn (2-90˚ elbows or 1-90˚ elbow and 2-45˚ elbows).

- Chimney must be masonry constructed in accordance with NFPA 211 standards or factory built chimney tested to the UL103 HT standard.

Single Wall Connector

Single Wall
Pipe

Single Wall Slip
Connector

Single Wall
Elbow

• Single Wall Connector

Construction	• 24 MSG Black or 26 MSG Blued Steel
Lengths	• 12”-24”- 48” Slip connector which allows for 10” adjustment
Advantages	• Radiates heat into room • Inexpensive
Disadvantages	• Requires 18” clearance to combustibles • Removes too much heat potentially creating creosote build-up and harder start-up

Double Wall Connector

Double Wall
Pipe

Double Wall
Telescoping

Double Wall
Elbow

• Double Wall Connector

Construction	**• Stainless steel inner liner - Galvanized outer shell**
Lengths	**• 6”-12”-18”-24”- 48” Telescoping 29”to48’ & 40’ to 68”**
Advantages	**• Close clearance reduction** NOTE: Only listed, tested close clearance connectors may be used on Travis wood products. Must be used for close clearance, alcove and mobile home installations. **• Keeps chimney cleaner as flue stays hotter.** **• Makes for easier start-up of the fire**
Disadvantages	**• More expensive**

Factory Built Chimney

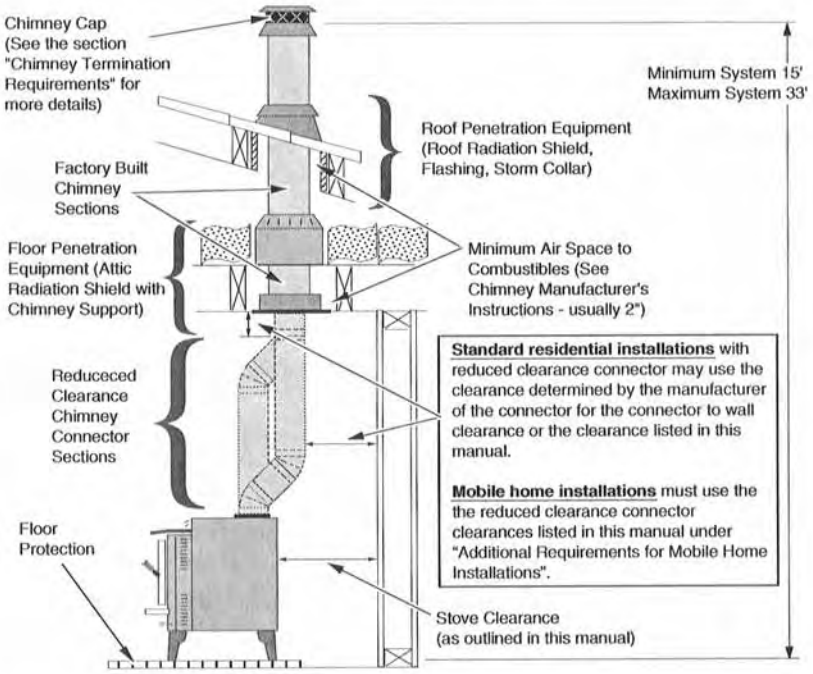
- **Factory Built Chimney**

Construction	**• Stainless steel inner and stainless steel or galvanized outer with blanket insulation in between inner and outer and or air space**
Lengths	**• 6”-12”-18”-24”-36”-48”**
Listings	**• UL103 HT listing 2100˚**

Chimney Requirements

- **DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**
- Chimney connector must be a minimum 24 MSG black or 26 MSG blued steel (6" diameter). Chimney must be used from the first floor or wall penetration to the chimney cap.
- Use 6" diameter type UL 103 HT chimney from one manufacturer (do not mix brands) or code approved masonry chimney with a flue liner.
- Chimney connector and chimney must be fastened to the stove and each adjoining section.
- Follow the chimney manufacturer's clearances and requirements.
- Use the chimney manufacturer's fire stops, attic guards, roof supports, and flashings when passing through a ceiling or thimble when passing through a combustible wall.
- No more than 180° of elbows (two 90° elbows, or two 45° & one 90° elbow, etc.).

NOTE: Additional elbows may be allowed if draft is sufficient. Whenever elbows are used the draft is adversely affected. Additional chimney height may be required to boost draft.



Drafting Performance	This appliance relies upon natural draft to operate. External forces, such as wind, barometric pressure, topography, or factors of the home (negative pressure from exhaust fans, chimneys, air infiltration, etc.), may adversely affect draft. Travis Industries can not be responsible for external forces leading to less than optimal performance.

- Standard residential installations may use single-wall connector (Mobile-Homes may **not**)
- Standard residential installations with reduced clearance connector may use the clearance determined by the manufacturer of the connector for the connector to wall clearance or the clearance listed in this manual. Offsets must be used to maintain the stove to wall clearance. Mobile homes must use the clearances listed in this manual under "Additional Requirements for Mobile Home Installations".

Alcove Installation Requirements

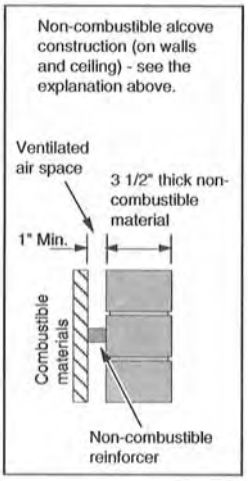
Whenever the stove is placed in a location where the ceiling height is less than 7' tall, it is considered an alcove installation. Because of the reduced height, the special installation requirements listed below must be met.

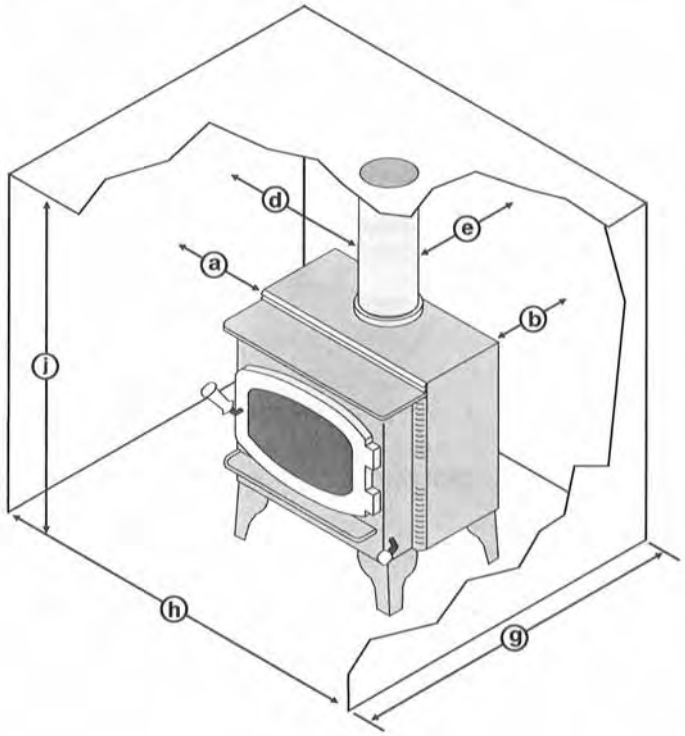
- Chimney connector and chimney must be one of the following types:

  - DURAVENT model DVL with DURATEC chimney
  - DURAVENT model DVL with DURA-PLUS chimney
  - AMERI-TEC model DCC with model HS chimney
  - SECURITY model DL with SECURITY model ASHT or S2100 chimney
  - METAL-FAB model DW with TG chimney
  - GSW Double Wall Chimney Connector with Super Chimney Twenty-One
  - SELKIRK METALBESTOS model DS connector with model SSII chimney
  - I.C.C. Excel (2100-2 Can.) (103-HT USA) chimney with HP connector
  - Standard Masonry Chimney with any one of the above listed connectors

Minimum Clearance (See the illustration below)		Pendleton-45°		Pendleton-90°	
		Combustible Alcove	Non-Combustible Alcove	Combustible Alcove	Non-Combustible Alcove
A	Sidewall to stove	11"	6"	11"	6"
B	Backwall to stove	13"	5"	8 1/2"	2"
D	Connector to sidewall	19 1/2"	14 1/2	19 1/2"	14 1/2"
E	Connector to backwall	9"*	2 1/2"*	8 3/4"	2 1/4"
G	Maximum depth of alcove	48"	48"	48"	48"
H	Minimum width of alcove	45 3/4"	35 3/4"	45 3/4"	35 3/4"
J	Minimum height of alcove	84"	6" above stove top	84"	6" above stove top

- Alcoves are classified as combustible or non-combustible. Non-combustible alcoves must have walls and a ceiling that are 3 1/2" thick of a non-combustible material (brick, stone, or concrete). This non-combustible material must be spaced and ventilated at least 1" off of all combustible materials (walls, ceiling, etc.) to allow air to move around the non-combustible walls and ceiling. All other alcoves are considered combustible. The clearances below must be met:





Mobile Home Requirements

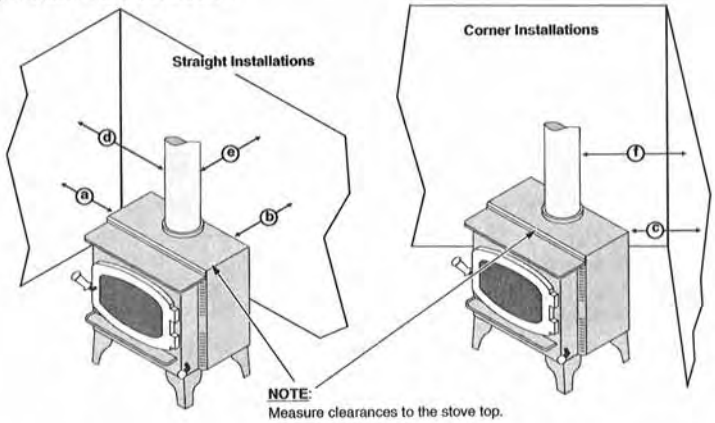
- Outside air must be installed - see "Outside Air Requirements" on page 11
- Chimney connector and chimney must be one of the following types:
  - DURAVENT model DVL with DURATEC chimney
  - DURAVENT model DVL with DURA-PLUS chimney
  - AMERI-TEC model DCC with model HS chimney
  - SECURITY model DL with SECURITY model ASHT or S2100 chimney
  - METAL-FAB model DW with TG chimney
  - GSW Double Wall Chimney Connector with Super Chimney Twenty-One
  - SELKIRK METALBESTOS model DS connector with model SSII chimney
  - I.C.C. Excel (2100-2 Can.) (103-HT USA) chimney with HP connector
  - Standard Masonry Chimney with any one of the above listed connectors

NOTE: Reduced clearance connectors may not connect to the flue collar – order an appliance adapter for the connector being used.

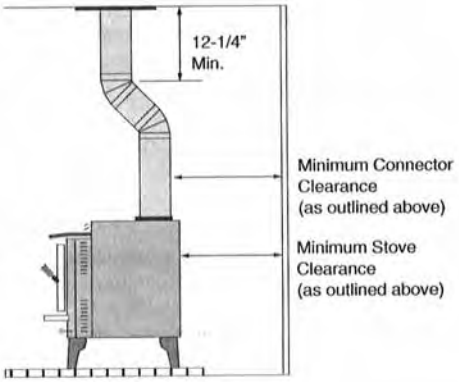
- Stove placement must maintain the following clearances to combustibles (drywall, furniture, etc.)

Minimum Clearance (See the illustration below)		745 Reduced Clearance Connector	790 Reduced Clearance Connector
A	Sidewall to stove	11"	11"
B	Backwall to stove	13"	8 1/2"
C	Cornerwall to stove	7 1/2"	7 1/2"
D	Connector to sidewall	19 1/2"	19 1/2"
E	Connector to backwall	9"*	8 3/4"
F	Connector to cornerwall	11"*	15"

* **These are minimum clearances, not installation dimensions.** Connector position will vary depending upon brand. First establish the stove clearances, install the 45° connector to the stove, then determine the position of the connector.



- If using offsets, use the connector clearance listed to the right, **not the connector manufacturer's clearance.**
- The appliance must be secured to the floor (consult your building official). Secure the outside air boot to the floor and stove to insure the stove does not dislocate.
- Mobile home installations require a spark arrester at the chimney termination.
- The appliance must be grounded to the chassis of the mobile home (consult your building official).



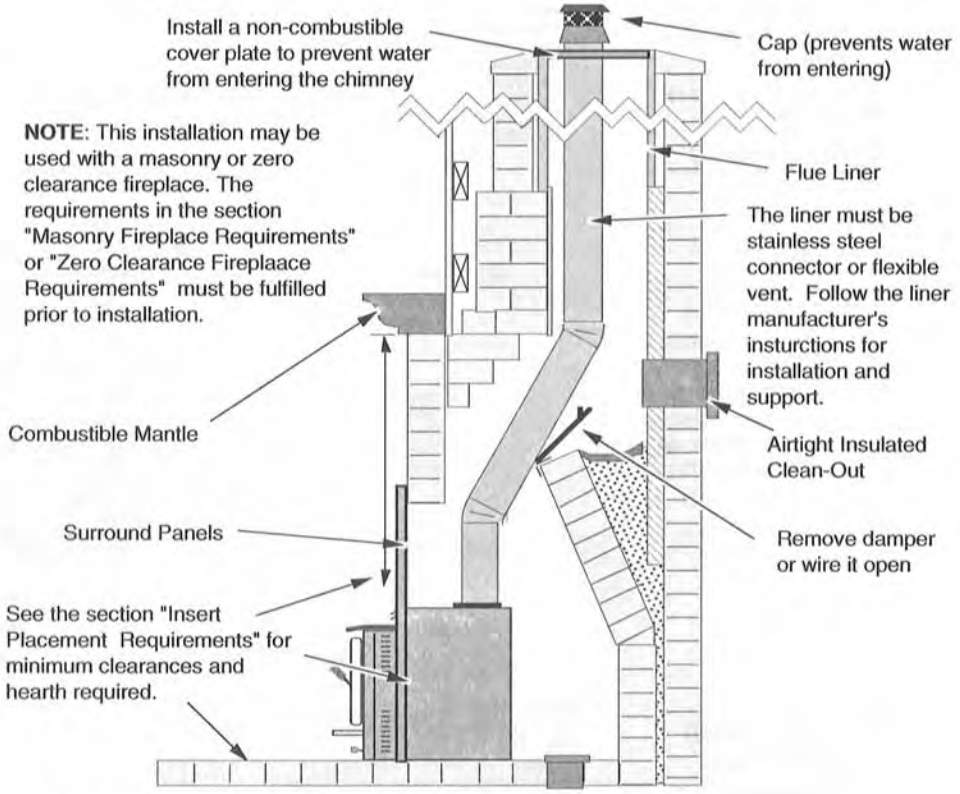
WARNING: DO NOT INSTALL IN SLEEPING ROOM.

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

Insert with Positive Connection

NOTE:

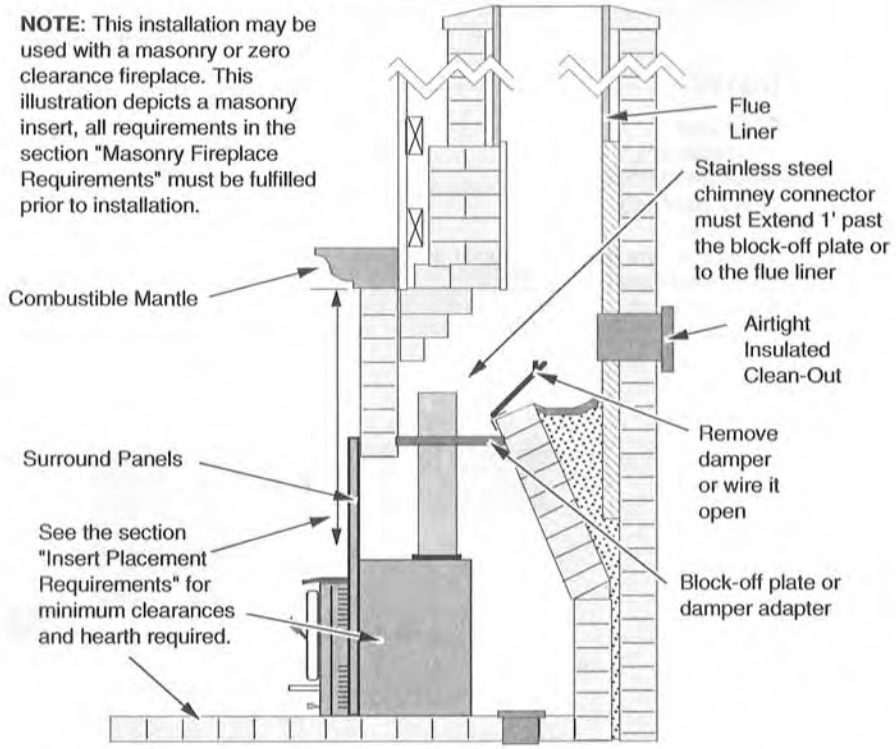
Most factory-built chimney manufacturers make stainless steel chimney liners, either flexible or rigid. This provides a wide variety of installation options. Make sure to follow the manufacturer's instructions for installation and support.



Insert with Direct Connection (Masonry Fireplace)

NOTE:

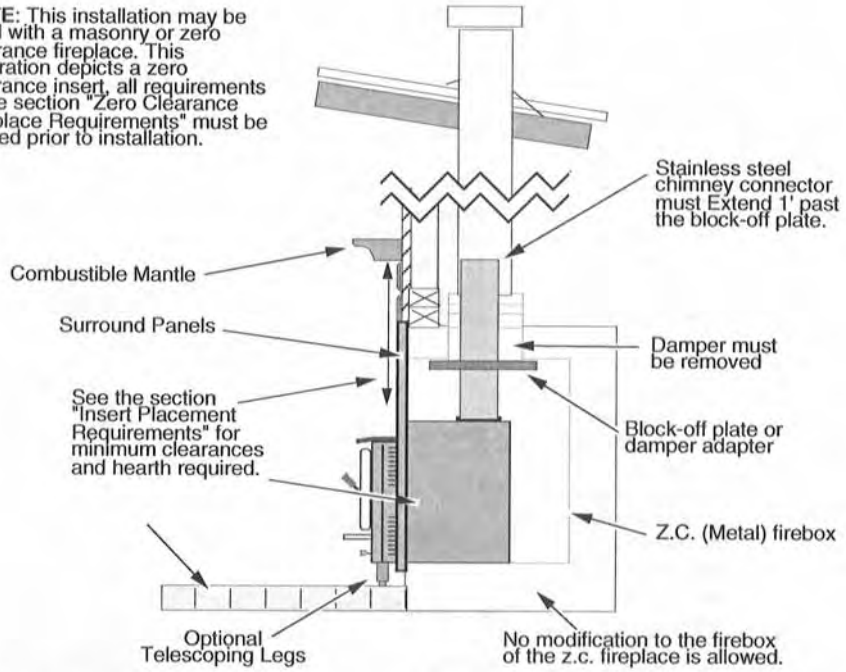
Direct connections require installation of an airtight block-off plate or damper adapter (see "Block-off Plate Installation" on page 20).



Insert with Direct Connection (Z.C. Fireplace)

NOTE:

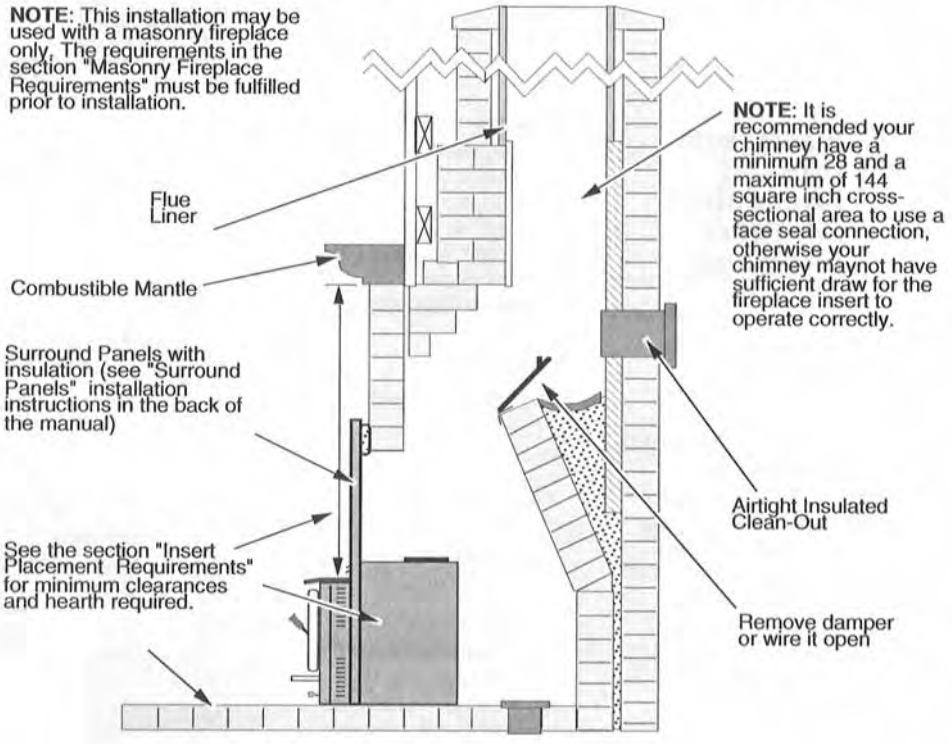
Direct connections require installation of an airtight block-off plate or damper adapter (see "Block-off Plate Installation" on page 20).



Insert with Face Seal Connection

NOTE:

Face seal connections require installation of the surround panels and insulation (see the "Surround Panel Installation" on page 42).



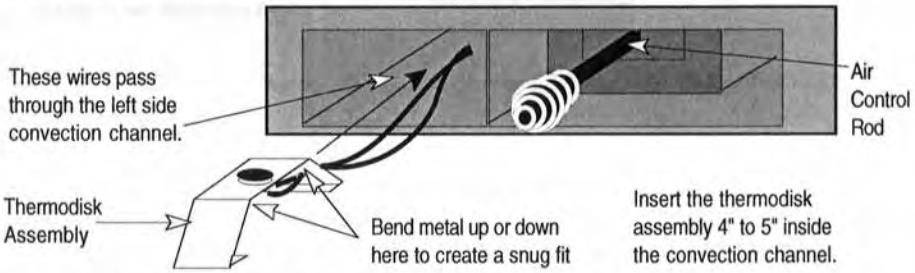
Rear Blower

Rear Blower Installation (Part number 99000138)

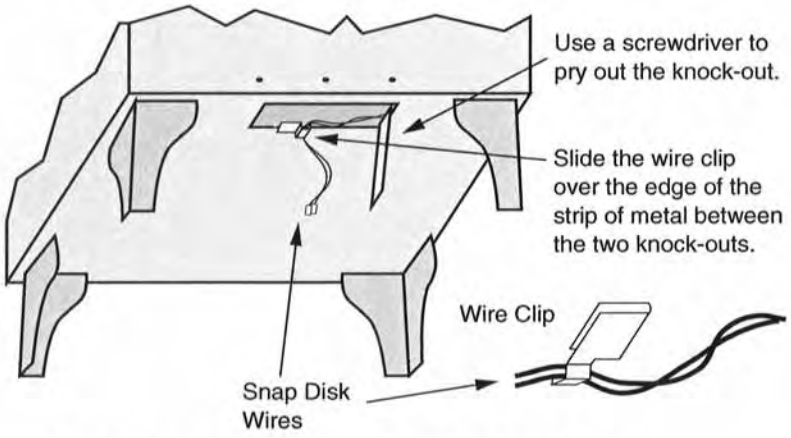
The rear blower improves heat transfer by pushing heated air through the convection channel. Operating instructions are described in the section "Blower Operation" on page 26.

1 The stove should be in place with the legs installed prior to installing the rear blower.

2 Follow the directions below to install the thermodisk.



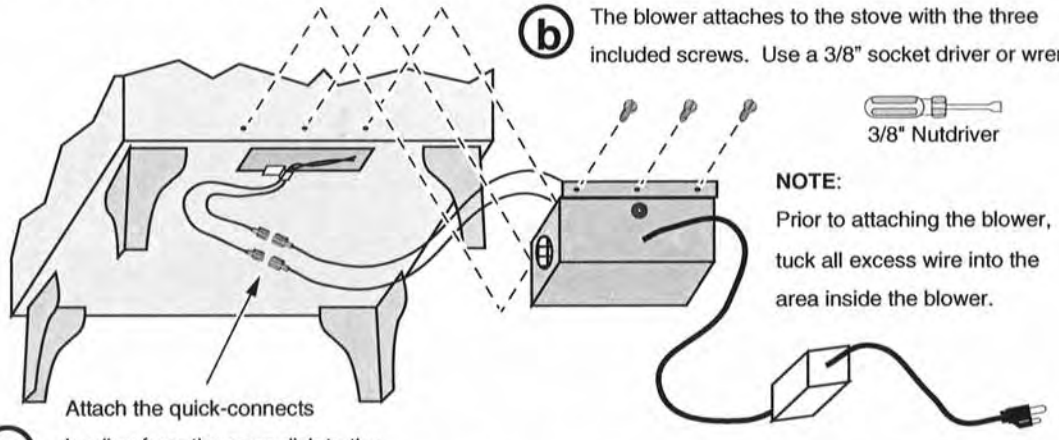
3 Install the wire clip following the directions below.



Feed the two snap disk wires into the eye of the wire clip. Remove all slack from the wire, making sure not to dislodge the snap disk. Pinch the eye of the wire clip to secure the wires.

WARNING:
To prevent electrical shock, the wires must be secured so they do not contact the firebox above the convection channel.

4 Attach the blower following the directions below.



(a) Attach the quick-connects leading from the snap disk to the quick-connects from the blower (orientation does not matter).

(b) The blower attaches to the stove with the three included screws. Use a 3/8" socket driver or wrench.

3/8" Nutdriver

NOTE:
Prior to attaching the blower, tuck all excess wire into the area inside the blower.

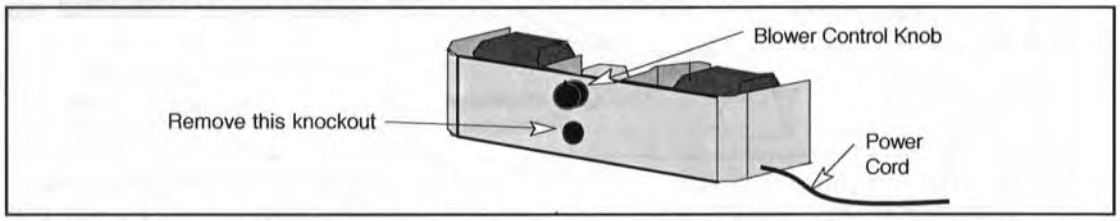
(c) Plug the power cord into a 110 V. outlet after installing the blower.

Front Blower

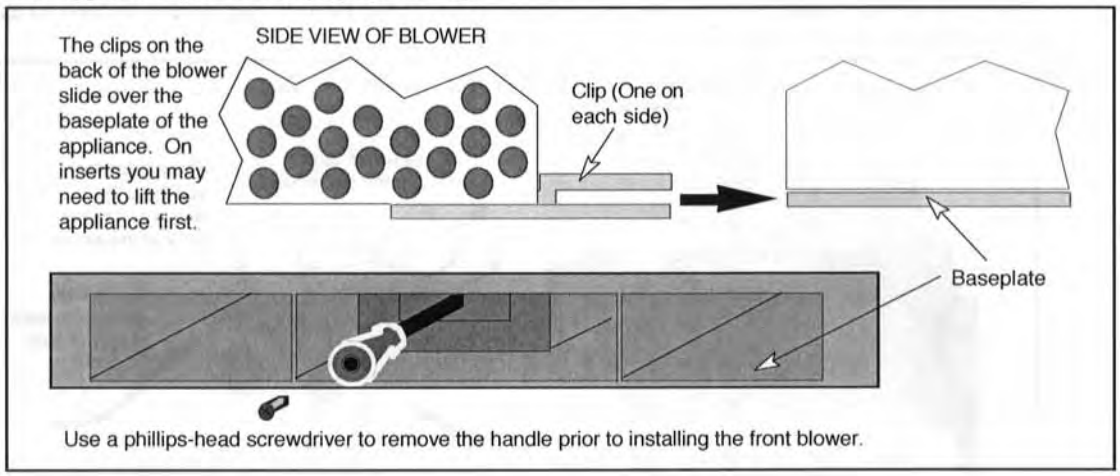
FRONT BLOWER INSTALLATION (PART NUMBER 99000137)

The front blower is designed to improve the natural convection of the appliance by pushing air through the convection chamber of the appliance and causing the heated air to exit through the vents along the top of the appliance. It attaches below the ashlip and can be used on appliance or insert applications. Operating instructions are described in the section "Blower Operation" on page 25. The directions below detail its installation.

1. Remove the air control handle by unscrewing the screw that holds it in place (phillips-head).
2. Remove the knockout from the front blower (see the illustration below).



3.. Place the blower underneath the ashlip so the two clips on the blower lock into the baseplate of the appliance (see the illustration below).



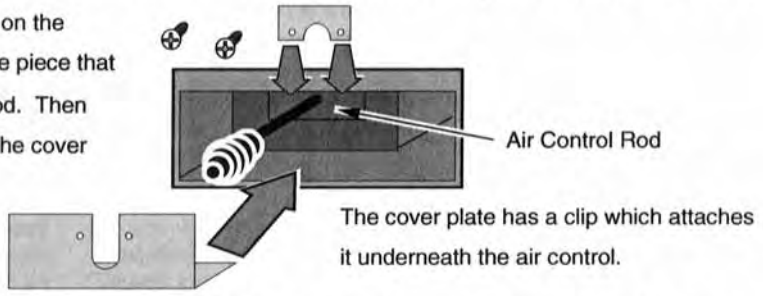
Outside Air Boot

Outside Air Boot Installation (Part number 99200134)

The outside air boot routes outside air to the stove for combustion. Refer to the section "Outside Air Requirements" on page **Error! Bookmark not defined.** for installation concerns. The directions below detail installation.

1 Install the cover plate following the directions below (use the cover plate that is 6-1/2" wide).

Remove the two screws on the cover plate to remove the piece that fits over the air control rod. Then replace the piece when the cover plate is in place.

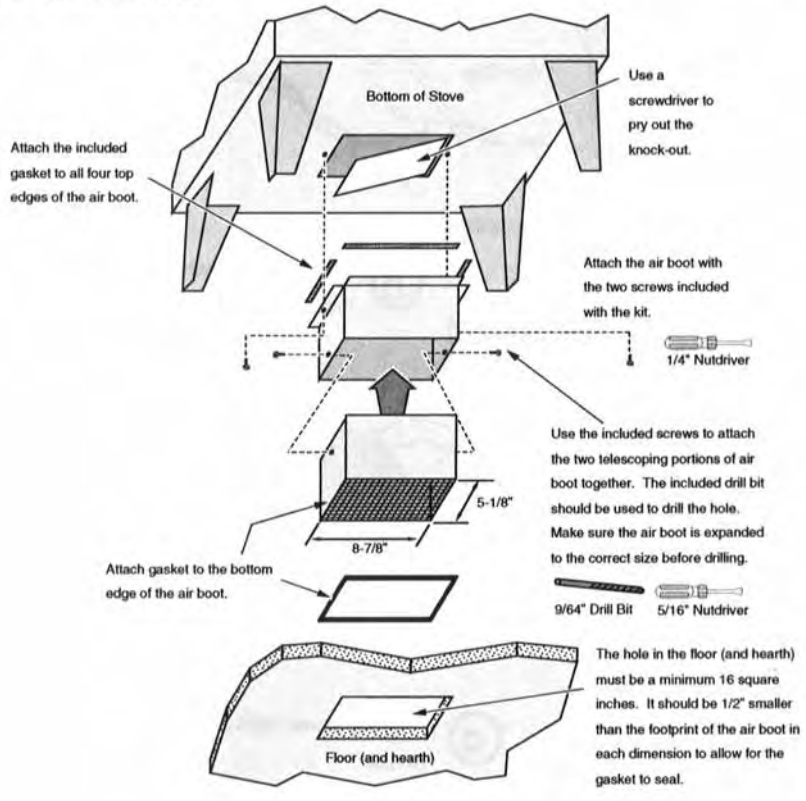


2 Refer to the illustration on the following page to determine the location and size of the hole penetrating the floor and. Cut the hole prior to locating the stove.

3 Attach gasket to the bottom edge of the lower air boot section (near the screen). Attach gasket on top of the flanges on the upper air boot section. Slide the two sections together with both seams facing the rear (do not attach the two sections at this time).

4 Follow the directions below for attaching the upper section of the air boot (with gasket) to the stove.

5 Slide the lower section down until it contacts the hearth. Attach the two sections together following the directions below

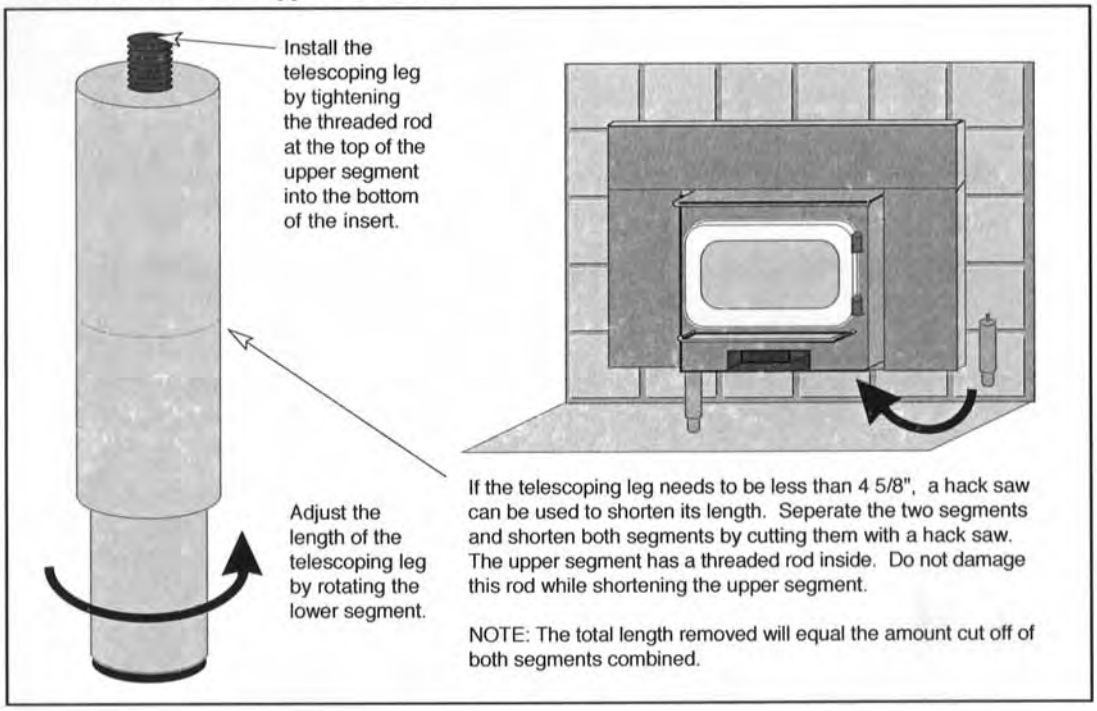


Telescoping Leg

TELESCOPING LEG INSTALLATION (PART NUMBER 99200120)

The telescoping legs are designed to support the front end of fireplace inserts on raised hearths. It is adjustable from 4 5/8" to 7 1/2". It can be cut shorter by using a hacksaw (see the illustration below).

1. Place the end caps into each lower segment of the telescoping legs (see the illustration below).
2. Screw the telescoping legs together so the leg can be screwed into the bottom of the insert. Hand tighten the telescoping leg into position.
3. While grasping the upper segment of the telescoping leg, unscrew the bottom segment until it reaches the floor and supports the insert.



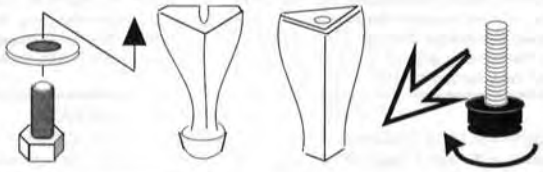
Legs

STOVE LEGS INSTALLATION (BRASS # 99200500, CAST BLACK # 99200800, BLACK STEEL # 99200100)

There are three different stove legs available for your wood stove: cast brass; cast black; and black steel. The instructions for installing the legs are the same for each type of leg.

Raise the stove by inserting some pieces of lumber in the middle of the stove to a height of about 8". Line up the hole in the top of the leg with the threaded bolt hole in each corner of the stove bottom. Using a 9/16" open end or socket wrench, fasten the leg to the stove with the supplied attachment bolts and washers, making sure the legs are flush with the corners of the stove. Unscrew the leveling bolts enough so the stove will rest on the upper tips, not the metal portion of the legs. Lower the stove down.

Attach each leg to the stove by inserting a bolt and washer through the hole or slot in the leg and into the threaded hole on the stove. Use a 9/16" socket wrench to tighten.



Leveling bolts are attached to the leg. Do not have any weight on the bolts while adjusting them – the rubber tips may tear.

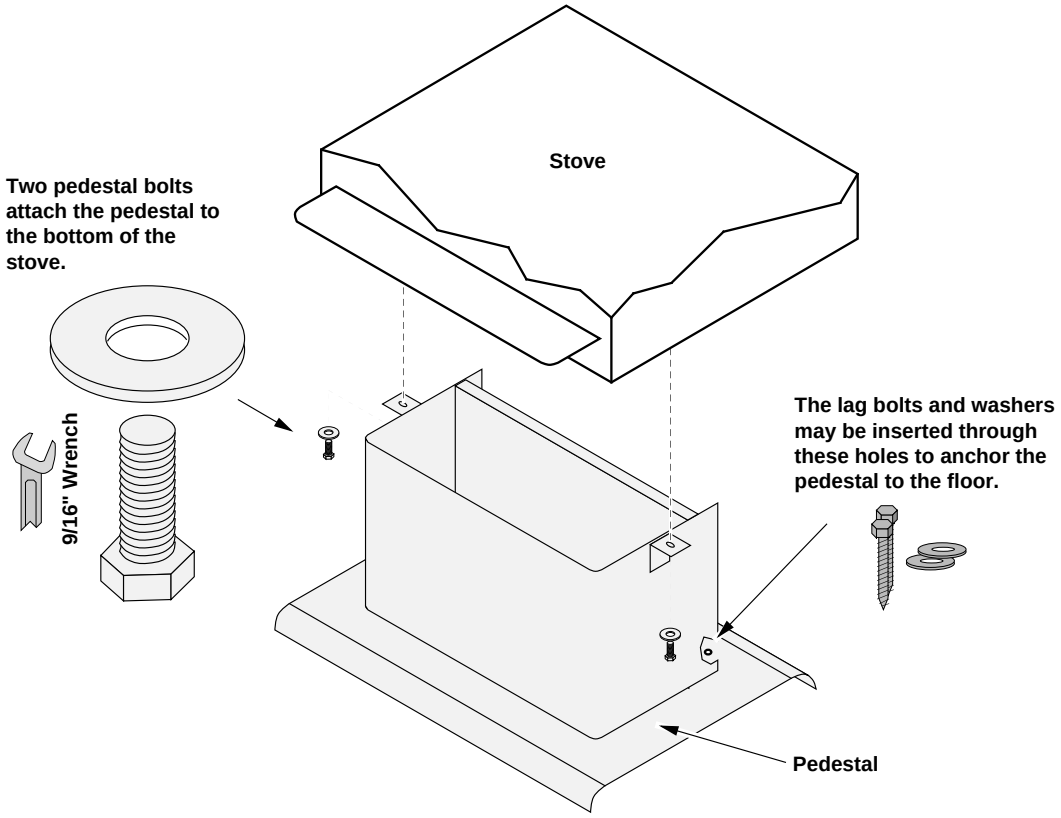
To level the stove, lift the stove up and unscrew each leveling bolt the appropriate amount. The rubber tips of the leveling bolts will tear if they are adjusted while weight is applied to them.

Cast Solid Brass

Cast Black

Sculptured Black Steel
or
Pewter*
*Lopi only

New Small Pedestals



TRAVIS INDUSTRIES
HOUSE OF FIRE

New Small Pedestals

ⓐ
Tuck insulation (included with the pedestal) under both sides of the pedestal and under the holes on the base of the pedestal. This prevents air from being drawn from below the pedestal.

ⓑ Remove the cover plate on the pedestal.

Seal the area around the tube to prevent air from entering through the wall.

NOTE: If wall is thicker than 8", attach the flex duct to the hood then slide the hood into place.

ⓒ
Slide the hood through the wall and secure to the outside wall with the two included screws.

Cover Plate

3" Dia. Flex Duct
(4' max. length)

Min. 3"
Dia. Hole

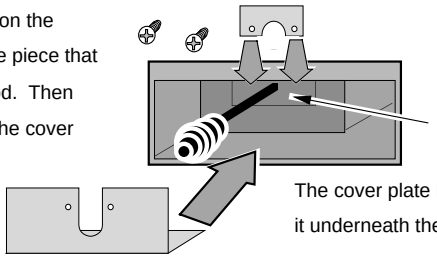
8"

Hood with Rodent Screen

ⓓ
Slide the cover plate over the flex duct then attach the flex duct to the hood with the included hose clamp. Secure the cover plate to the wall with the included screws (and drywall anchors if needed).
HINT: The flex must be fully stretched and the ends cut square and flatted for it to fit properly. The tube on the hood and air duct may be crimped if necessary.

ⓔ
Secure the flex duct to the air duct assembly using the included hose clamp. Attach the outside air duct assembly to the pedestal with the same screws that held the cover plate in place.

Remove the two screws on the cover plate to remove the piece that fits over the air control rod. Then replace the piece when the cover plate is in place.



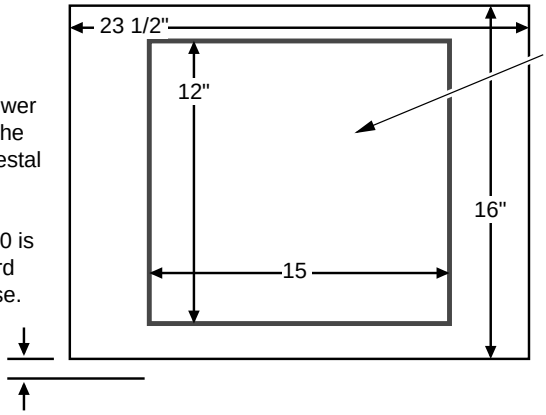
The cover plate has a clip which attaches it underneath the air control.

New Small Pedestals

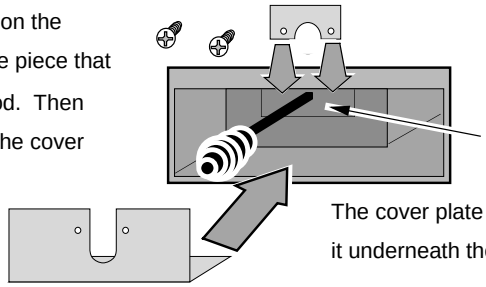
Top View

The faceplate of the Answer is flush with the front of the forward edge of the pedestal base.

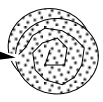
The faceplate of the 1250 is 1/4" in front of the forward edge of the pedestal base.



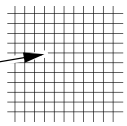
Remove the two screws on the cover plate to remove the piece that fits over the air control rod. Then replace the piece when the cover plate is in place.



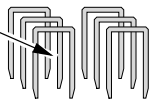
Insulation is used to seal the side edges of the pedestal .



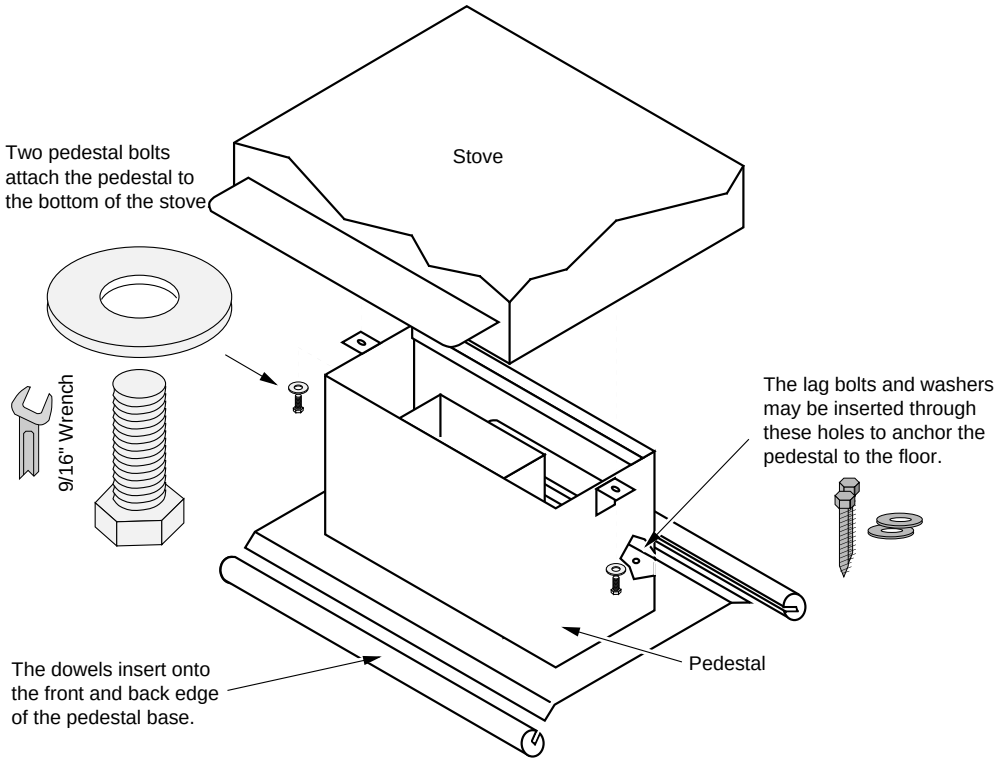
Screen is used to prevent rodents from entering.



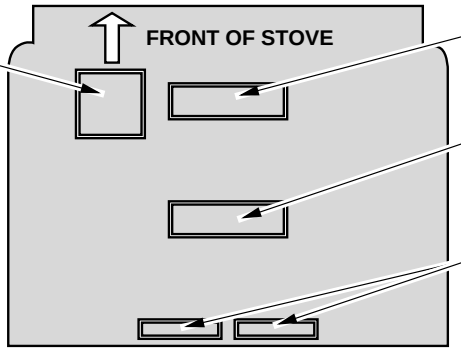
Staples are used to attach the screen to the floor.



New Large Pedestals



New Large Pedestals



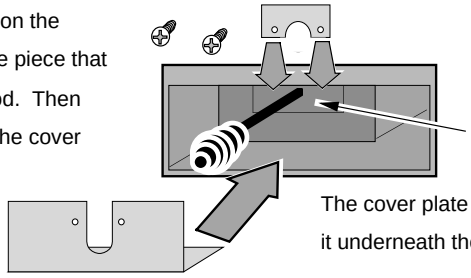
Knock-Out for the Ash Pan Pedestal Drop Chute

Outside Air Knock-Out for Standard Pedestals

Outside Air Knock-Out for Stoves on Legs or Stoves Using Ash Pan Pedestal

Rear Blower Knock-Outs

Remove the two screws on the cover plate to remove the piece that fits over the air control rod. Then replace the piece when the cover plate is in place.

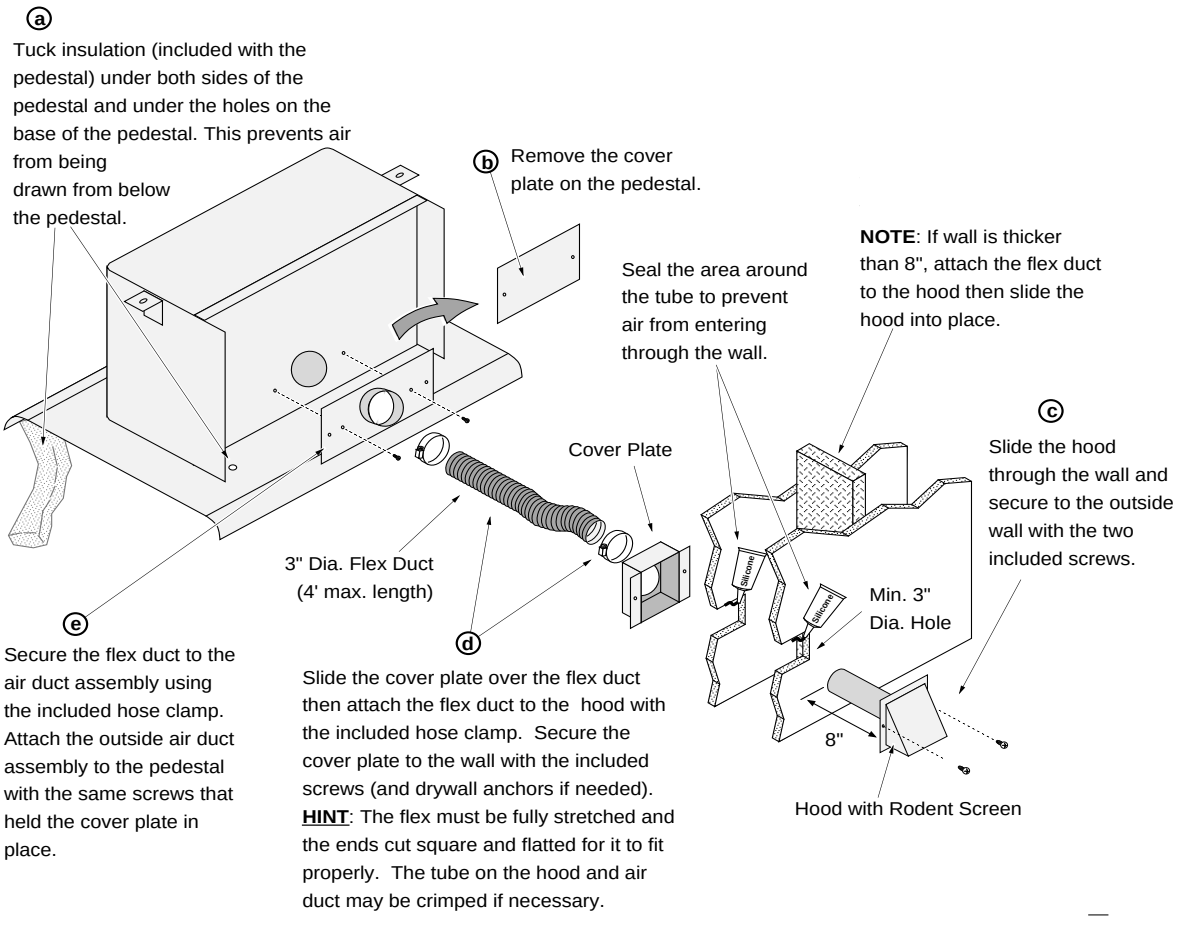


Air Control Rod

The cover plate has a clip which attaches it underneath the air control.

TRAVIS INDUSTRIES
HOUSE OF FIRE

New Large Pedestals



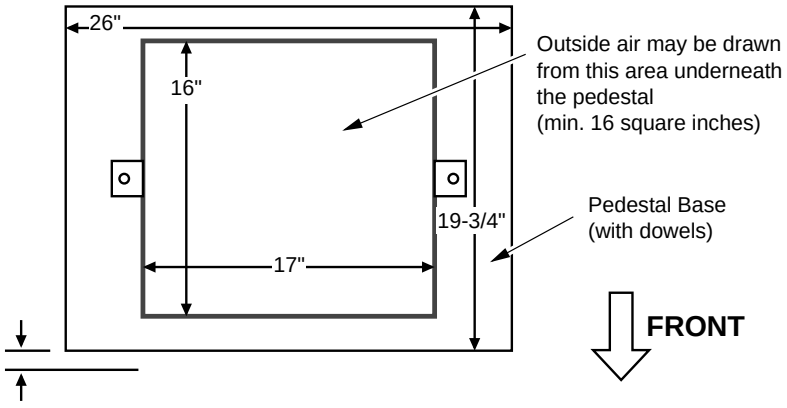
New Large Pedestals

Top View

The faceplate of the Rainier (45/90) is 1-1/2" behind the forward edge of the pedestal base.

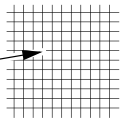
The faceplate of the Olympic is 1/4" in front of the forward edge of the pedestal base.

The faceplate of the 1750 is 2-1/2" in front of the forward edge of the pedestal base.

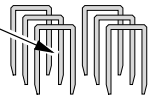


Insulation is used to seal the side edges of the pedestal .

Screen is used to prevent rodents from entering.



Staples are used to attach the screen to the floor.



Pedestal - Avalon Ashpan

Avalon Ashpan Installation Instructions

Part # 99200125

CHECK CONDITION OF SHIPMENT

Upon receipt of this kit, check the condition of the packaging. Damage to the package should be noted on the carrier's freight receipt. Any damage claims as a result of shipping must be handled through the shipper. Travis Industries will provide assistance in resolving shipping claims or replacing items not included in the package. Please report any missing items immediately.

COMPATIBILITY

Avalon Rainier-90's (990) with Serial Number 4076 or Larger
Avalon Olympics (1190) with Serial Number 9760 or Larger

TOOLS REQUIRED

• Large Screwdriver • 9/16" Wrench • 7/16" Wrench

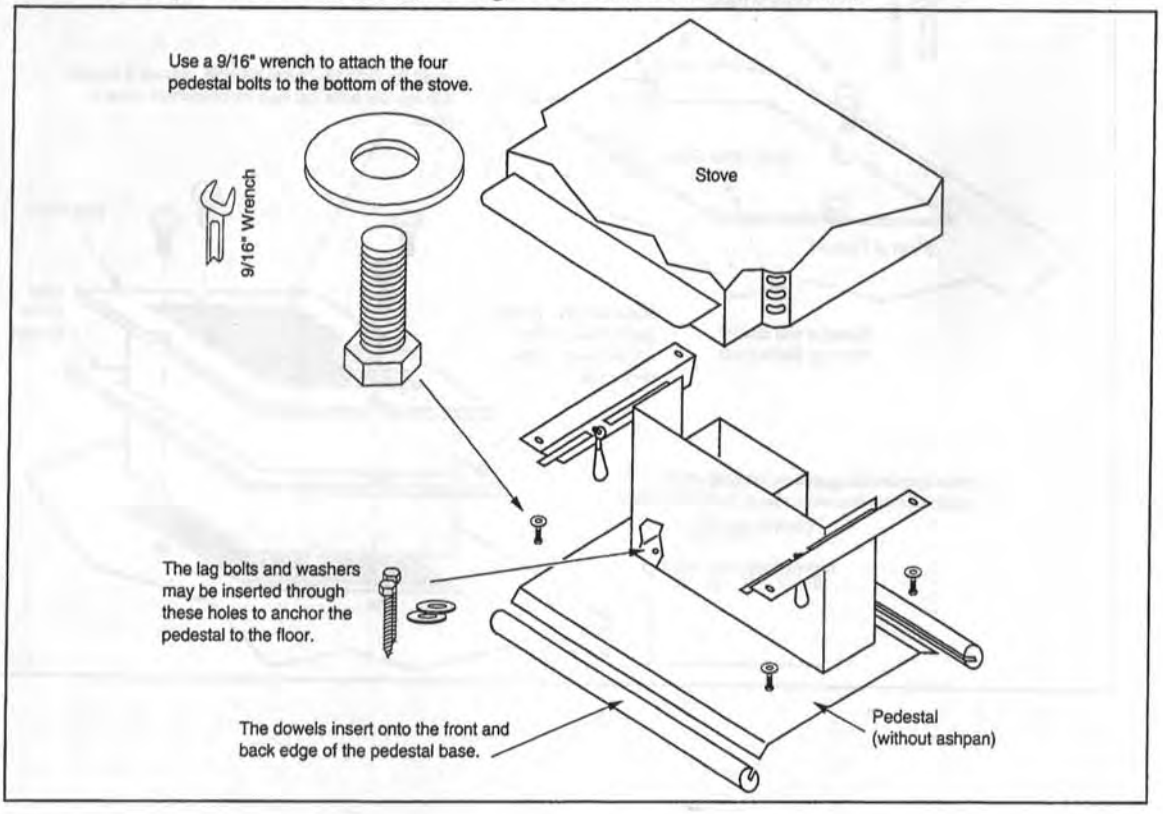
PACKING LIST

• Pedestal • Ashpan • Four 3/8"x3/4" Bolts & Washers • Four Bricks (only two are used - see the instructions below)
• Drop Chute • Stove Gasket Cement • Two Dowels • Two Lag Bolts, Washers • Drop Chute Gasket
• Outside Air Equipment (Rodent Screen, Staples, Cover Plate, Insulation)

INSTALLATION INSTRUCTIONS

? If using outside air, see "Outside Air Installation" on page 4 & 5 of these instructions.

1 Place the pedestal into position on the floor protection. Lift the pedestal up and insert the two dowels included with this kit onto the forward and rear edge of the pedestal base. Lift the stove onto the pedestal base (with the ashpan removed). Line up the press-nuts on the bottom of the stove with the two attachment brackets on the pedestal. Insert the four bolts, with washers, through the brackets on the pedestal and into the stove. Tighten the bolts with a 9/16" wrench.



Mantle Shield

Mantel Shield #99100100

CHECK CONDITION OF SHIPMENT

Upon receipt of this kit, check the condition of the packaging. Damage to the package should be noted on the carrier's freight receipt. Any damage claims as a result of shipping must be handled through the shipper. Travis Industries will provide assistance in resolving shipping claims or replacing items not included in the package. Please report any missing items immediately.

COMPATIBILITY

- Lopi Revere
- Avalon 745/790
- Avalon 945/990
- Avalon 1190

PACKING LIST

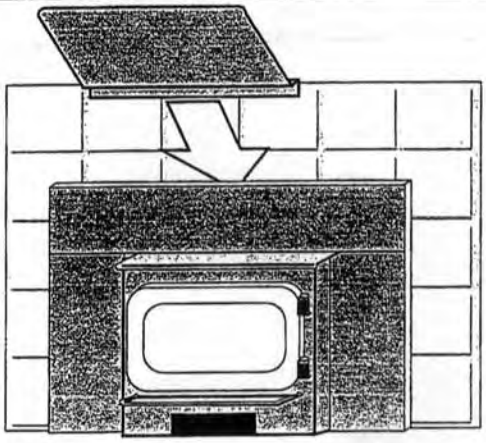
- Mantel Shield
- Instruction Sheet

INSTALLATION INSTRUCTIONS

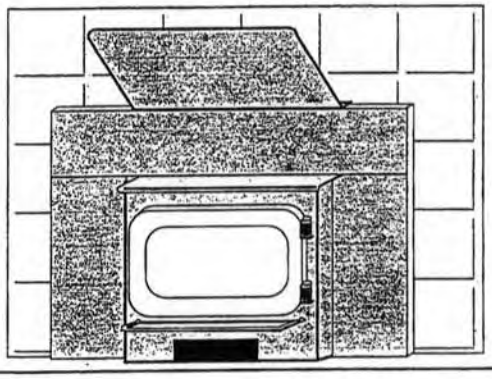
The mantel shield may be used with the fireplace inserts listed above to reduce the mantel clearance. Follow the clearances listed in the owner's manual.

1. Slide the mantel shield between the top surround panel and facing (see the illustration below). Gravity will hold it in place.

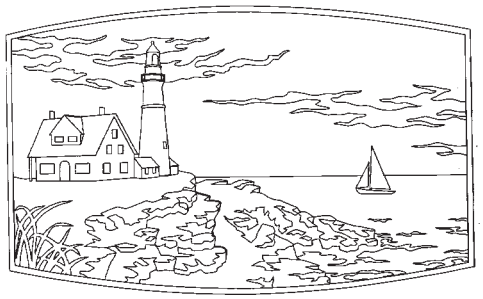
Center the mantel shield over the insert and slide it behind the surround panel.



When in place it will look like this.



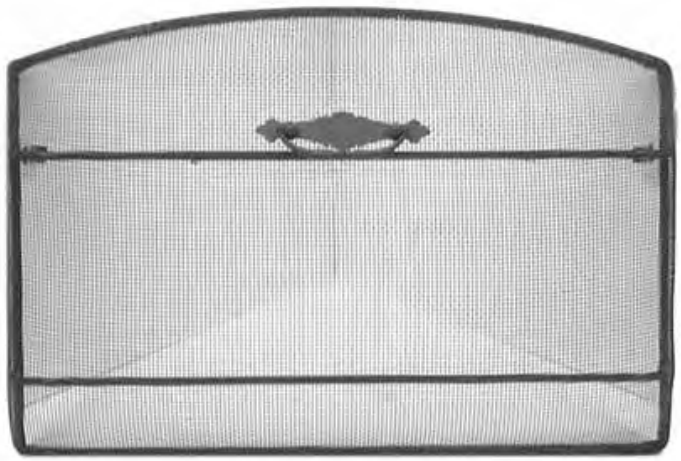
Etched Glass



LIGHTHOUSE

Avalon Etched Glass
Large & Small Sizes

Fire Screens



**For Avalon
in Large Only**

Panels

Panel Set, Avalon

CHECK CONDITION OF SHIPMENT

Upon receipt of this kit, check the condition of the packaging. Damage to the package should be noted on the carrier's freight receipt. Any damage claims as a result of shipping must be handled through the shipper. Travis Industries will provide assistance in resolving shipping claims or replacing items not included in the package. Please report any missing items immediately.

COMPATIBILITY

- Avalon Pendleton
- Avalon Rainier
- Avalon Olympic

ITEMS NEEDED FOR ASSEMBLY

- 5/16" and 3/8" Nutdriver
- Small & Large Standard Screwdriver
- Drill with 11/64" Bit

PACKING LIST

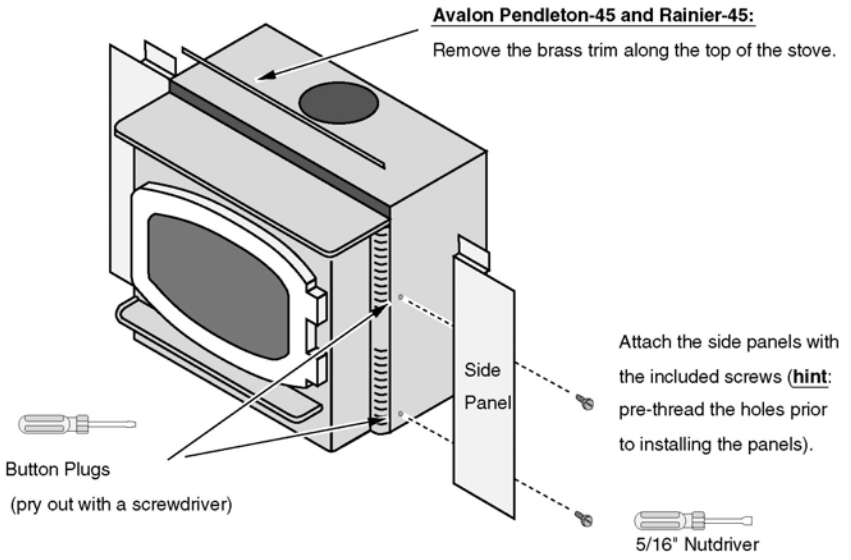
- Top Panel
- Two Side Panels
- Trim (& hardware)
- Insulation
- (4) 10-24 Type F Thread-Cutting Screws
- 7 Spring Clips

PANEL SIZING and PART NUMBERS

Model	Size	Size Installed (including trim)	Black Trim
Pendleton (745/790)	8"	39 7/8" wide by 28" high	99300300
Pendleton (745/790)	10"	43 7/8" wide by 30" high	99300301
Pendleton (745/790)	12"	47 7/8" wide by 32" high	99300302
Rainier (945/990)	8"	41 3/4" wide by 28 7/8" high	99300306
Rainier (945/990)	10"	45 3/4" wide by 30 7/8" high	99300307
Rainier (945/990)	12"	49 3/4" wide by 32 7/8" high	99300308
Olympic (1190)	8"	45 1/4" wide by 28 7/8" high	99300312
Olympic (1190)	10"	49 1/4" wide by 30 7/8" high	99300313
Olympic (1190)	12"	53 1/4" wide by 32 7/8" high	99300314

INSTALLATION INSTRUCTIONS

1. With the insert 12" from the fireplace, install the side surround panels (see the directions below).

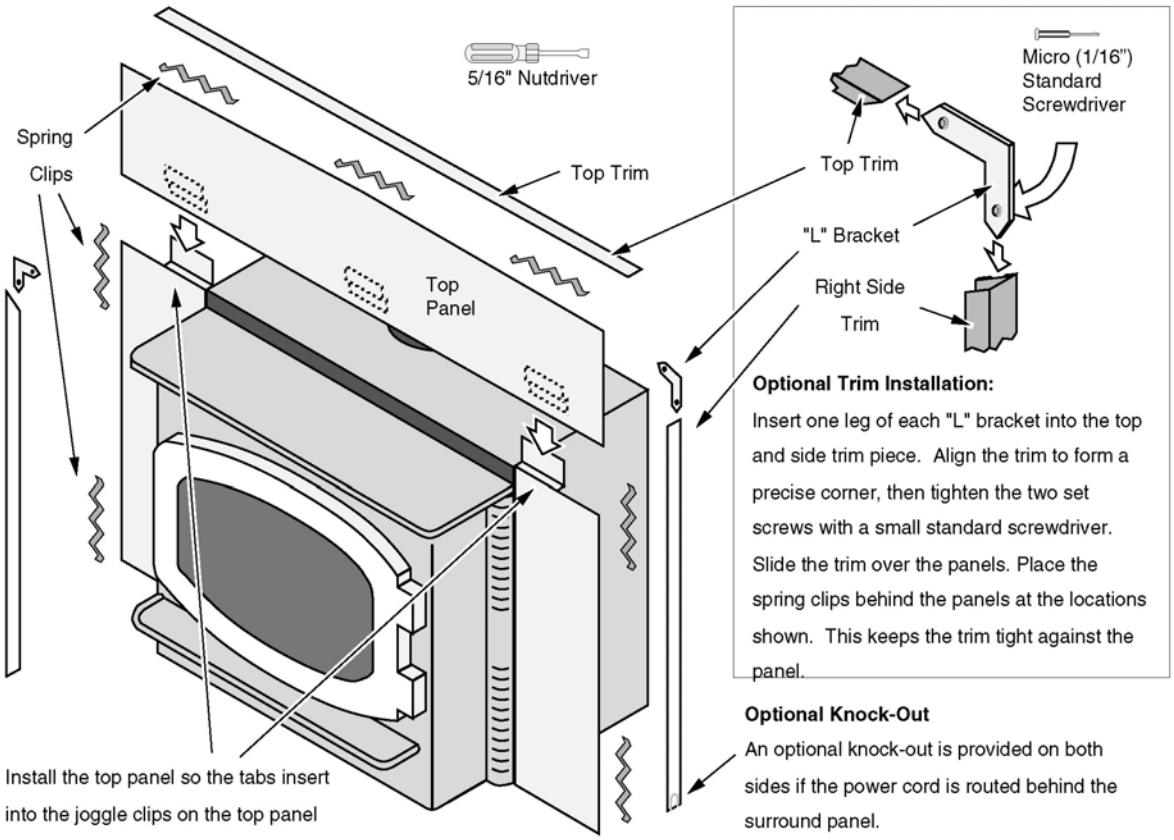


Panels

Panel Set, Avalon

2. Adjust the position of the side panels so they are: 1) flush with the bottom of the insert; 2) both the same distance back from the front of the insert; 3) perpendicular to the floor (use the top panel, if necessary, to judge alignment). Tighten the screws that hold the side panels in place.

3. Place the insert into the fireplace and connect the flue (if using a positive or direct connection). Install the top panel and trim following the directions below.



Insulation Installation (required only for face seal installations)

1. With the insert drawn 6" from the fireplace, glue the insulation strip included with the insert to the back of the panels using RTV silicon or stove gasket cement. The insulation should be installed so it overlaps the fireplace opening to form a seal between the panels and the fireplace face. Let the silicon or cement dry.

2. Push the insert into the fireplace, allowing the insulation to form a seal between the panels and the fireplace. Use a screwdriver to tuck any exposed insulation behind the panels.

Wood Appliance Maintenance

WEEKLY	BI-MONTHLY	YEARLY
• Remove ash • Clean glass • Clean brass • Check for creosote build-up in the connector and chimney	• Door, door gasket, and glass gasket inspection • Lubricate door hinge with high temperature lubricant	• Check and clean chimney connector, chimney and cap • Check - Baffle refractory - Baffle supports - Secondary air tubes - Secondary air tube collars - Floor and wall firebrick - Bypass assembly • Pull and clean the blower • Clean and touch-up paint the stove • Lubricate the air slide with high temperature lubricant

MAINTENANCE SCHEDULE

Your appliance requires periodic maintenance to work correctly. The steps involved with maintenance are usually quick and easy. Look through this maintenance schedule and plan accordingly.

WARNING: Failure to properly maintain and inspect your appliance may reduce the performance and life of the appliance, void your warranty, and create a fire hazard.

PERIODIC MAINTENANCE (every week when appliance is in use):

- Remove ash from the firebox (if necessary)
- Clean the viewing glass (if necessary)
- Clean the brass (if necessary)
- Check for creosote buildup in the chimney and connector

BI-MONTHLY MAINTENANCE (every two months during the heating season):

- Door and glass inspection
- Lubricate the door hinge

YEARLY MAINTENANCE (before every heating season):

- Touch-up paint
- Blower cleaning
- Firebrick and baffle inspection and cleaning

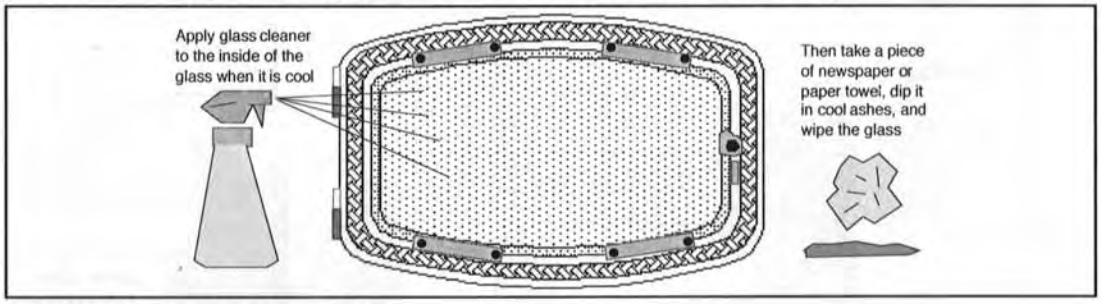
REMOVE ASH FROM THE FIREBOX (IF NECESSARY)

At least once a week while the appliance is in use, check the level of ash on the floor of the firebox. If 1" or more of ash has accumulated, let the appliance cool and place the excess ash into an airtight container away from any structure. After the ash is fully extinguished it may be disposed. A 1/2" to 1" bed of ash is desirable, for it allows the appliance to burn at a slightly lower speed.

WARNING: Ashes removed from the appliance must be stored in an airtight container away from any structure until fully extinguished before disposing.

CLEAN THE VIEWING GLASS (IF NECESSARY)

This appliance has an airwash to keep the glass clean. However, burning un-seasoned wood or burning on lower burn rates leads to dirtier glass (especially on the sides). Clean the glass by following the directions below. For especially dirty glass, use fine steel wool to remove build-up.



CLEAN THE BRASS (IF NECESSARY)

If your unit has a brass door, it may be cleaned using a non-abrasive polish (such as FLITZ®) when the appliance is cool. The brass trim and ashlip is anodized, and should be cleaned with soap and water.

CHECK FOR CREOSOTE BUILDUP

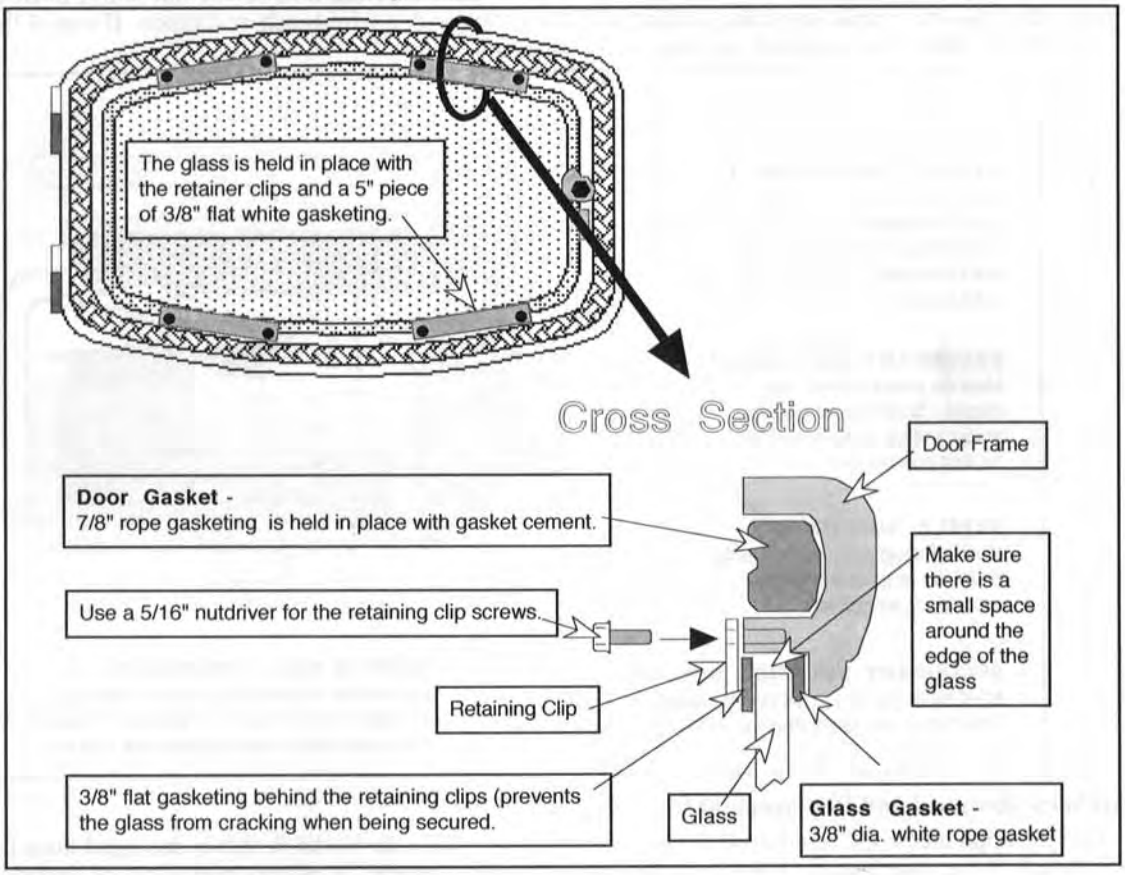
Creosote buildup should be checked twice monthly during the heating season. Either look down the chimney from the top or remove a chimney connector section. Any more than 1/4" of buildup requires chimney cleaning. Creosote develops quickest when burning at a low temperature or when burning un-seasoned wood. When wood is burned slowly, it produces tar and other vapors which combine with moisture to form creosote. Creosote vapors condense in the relatively cool chimney flue and creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

Replacing the Door Gasket

Remove the door by opening it and lifting it off the hinges. Remove the old gasket by stripping it away with a screwdriver or other tool (see the illustration below). Apply a line of gasket cement (available from your dealer) in the groove that follows the perimeter of the door. Insert the gasket into the groove. Do not stretch the gasket as you place it into the groove. Cut off any excess gasket when done. Allow 2 hours for the cement to dry. When re-installing the door, the gasket may need to be flattened by repeatedly opening and closing the door.

Replacing the Glass or Glass Gasket

Remove the door by opening it and lifting it off the hinges. Unscrew the eight screws that hold the retaining clips in place with a 5/16" nutdriver (see the illustration above). Carefully remove the glass. Align the 3/8" white rope gasket (new or old) along the ledge that follows the perimeter of the window opening. If using a new gasket, trim off any excess. Place the glass (new or old) in place so there is a small gap between the edge of the glass and the door frame. Make sure the gasket is tucked underneath the glass so the glass does not touch the door frame. Replace the glass retaining clips with 3/8" flat gasketing attached to secure the glass in place. The gasketing is required to prevent the glass from cracking or moving when the clips are secured. Tighten the retaining clips with a 5/16" nutdriver until the gaskets start to flatten. Do not overtighten.

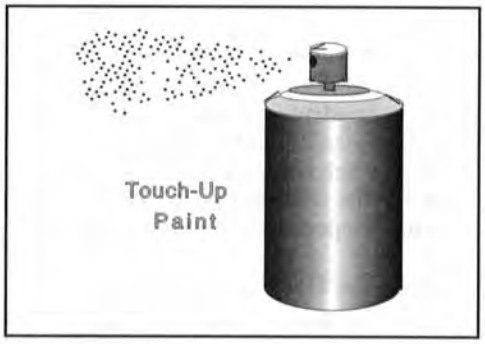


LUBRICATE THE DOOR HINGE

Periodically lubricate the door hinges with a high temperature lubricant (such as Permatex Industrial ® Anti-Seize). Lubricating the door involves removing the door by opening it and lifting it off the hinges, and placing lubricant on the hinge pins.

TOUCH-UP PAINT

Included with the owner's pack of this appliance is a can of Stove-Brite® paint. To touch up nicks or dulled paint, apply the paint while the appliance is cool. Use 120 grit sandpaper (clean with water and dry with a piece of cloth) if the surface requires smoothing. Wait at least one hour before starting the appliance. The touched up area will appear darker than the surrounding paint until it cures from heat. Curing will give off some fumes while curing – open windows to ventilate the fumes.

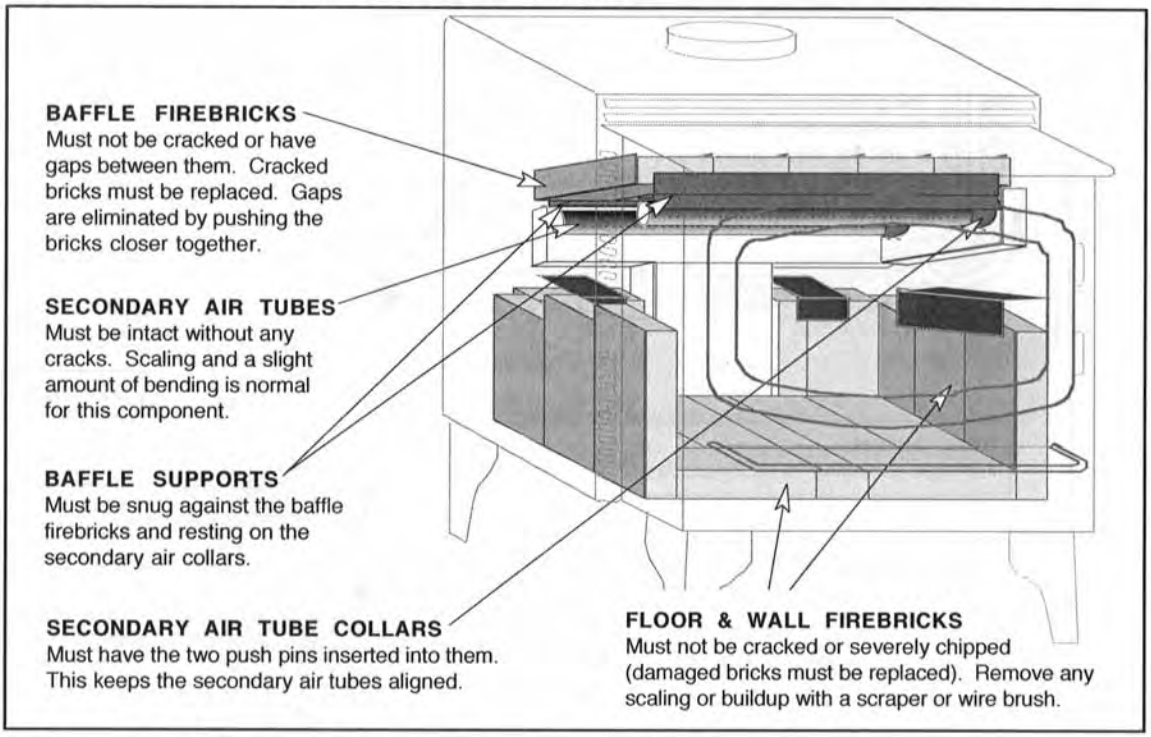


BLOWER CLEANING

The optional blower for this appliance will gather dust as it circulates air. Before cleaning, remove the blower from the appliance (instructions are included in "Optional Equipment" section in the back of this manual). Remove all dust and debris from the blower grill and around the interior of the blower.

FIREBRICK AND BAFFLE INSPECTION AND CLEANING

With the appliance cool, check the items below. Remove all ash from the firebox and scrape away any scale that may have built up on the surface of the firebrick with a wire brush or scraper. If any of the components need to be replaced, see the sections that follow.



Firebrick Removal and Replacement Instructions

With the appliance cool, remove all ash from the firebox. Only the firebrick that is damaged must be replaced. If the damaged firebrick is on the floor, it can be replaced by simply removing the firebrick in front of it. **NOTE: Do not pry firebrick to remove, this will chip or crack the firebrick**. If a firebrick on the wall of the firebox needs replacement, the floor firebrick near it will need to be removed first. The wall firebrick is held upright by a clip on the walls of the firebox. To remove, pivot it out from the bottom. See the illustration on the following page.

Firebrick Removal and Replacement Instructions (Continued)

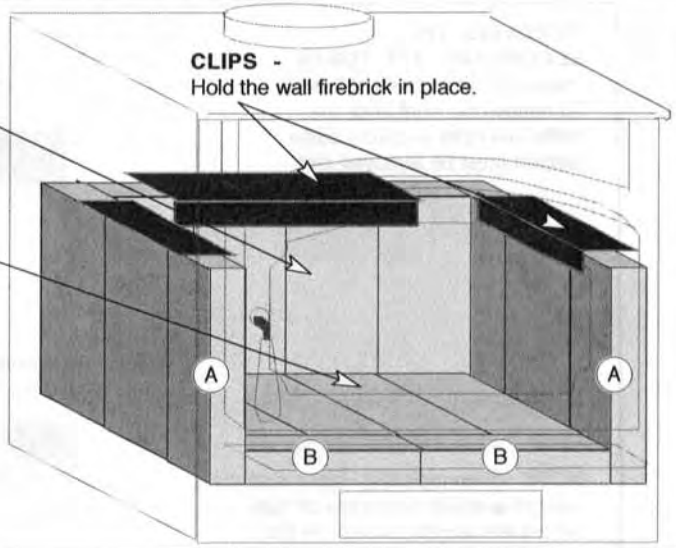
WALL FIREBRICKS
First remove the firebricks on the floor in front of the firebrick needing replacement. Then pivot it out from the bottom to clear the clip that holds it in place.

FLOOR FIREBRICKS
Remove the firebricks in front of the firebrick needing replacement.

FIREBRICK SIZES -
All firebrick is 1 1/4" x 4 1/2" x 9" except those labeled.

Firebrick labeled (A) are 1 1/4" x 2 1/2" x 9".

Firebrick labeled (B) are 1 1/4" x 1 3/8" x 9".



Baffle Removal and Replacement Instructions

All of the baffle components are removable to facilitate easy cleaning and repairs. Make sure the appliance is cool before removing any of the components. The directions below detail the procedure for removing the baffle firebricks and front baffle support. See the instructions on the following page for removing the secondary air tubes.

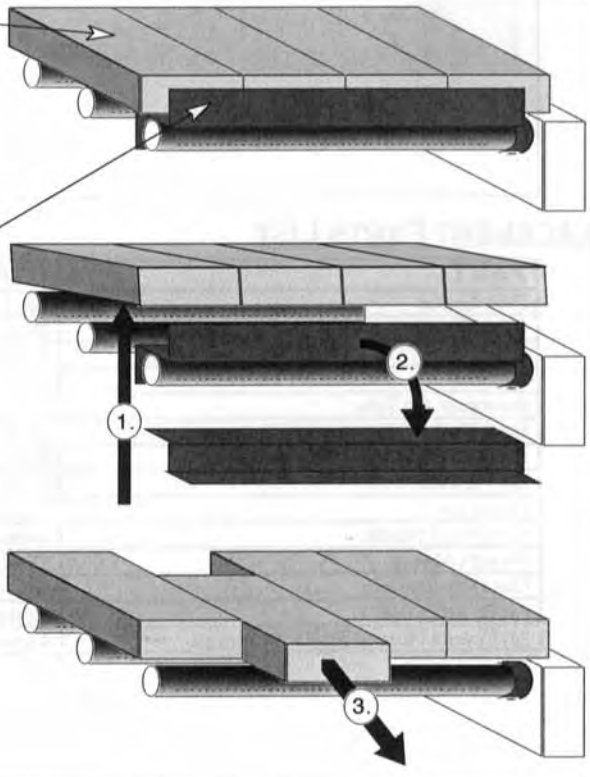
REMOVING BAFFLE FIREBRICKS AND FRONT BAFFLE SUPPORT
Lift up on the front portion of all four firebricks. Then rotate the front baffle support forward until it can be removed. Then slide the baffle firebricks forward and out the door opening. The center bricks must be removed prior to removing the outer bricks.

Front Baffle Support

NOTE:
When replacing the front baffle support, make sure it rests squarely on the secondary air tube sleeves on both ends.

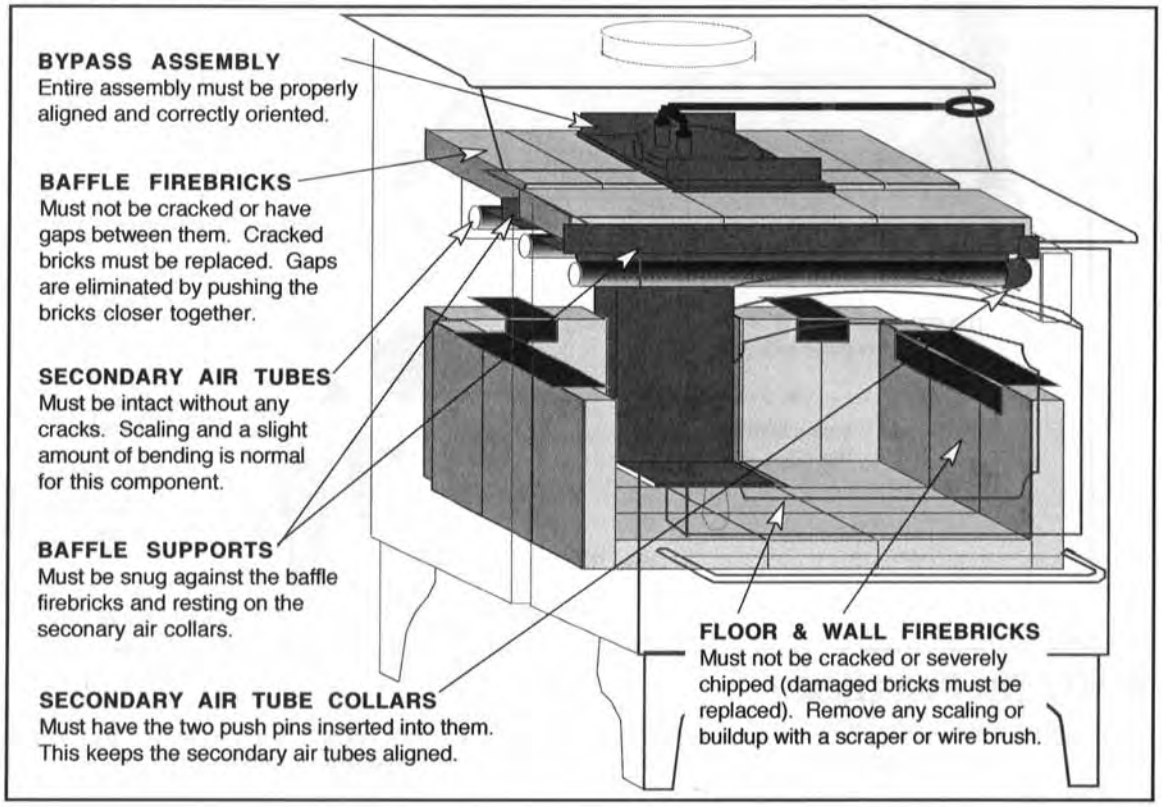
Secondary Air Tube Sleeve

Secondary Air Tube (removal instructions are on the following page)



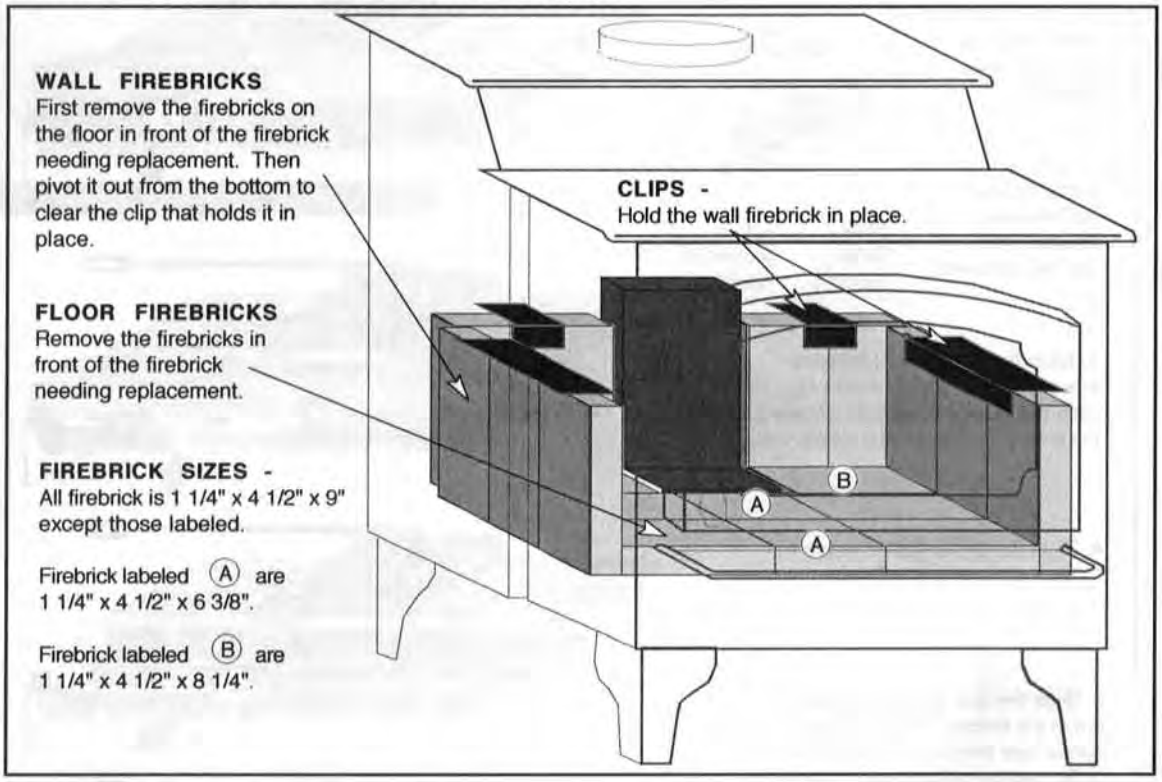
FIREBRICK AND BAFFLE INSPECTION AND CLEANING

With the appliance cool, remove all ash from the firebox and scrape away any scale that may have built up on the surface of the firebrick with a wire brush or scraper. Any of the firebrick on the floor or walls of the firebrick that is cracked must be replaced (see the section "Firebrick Removal and Replacement Instructions"). Next, inspect the baffle components. The illustration below details the areas that must be inspected. If any of the components need to be replaced, see the section "Baffle Removal and Replacement Instructions".



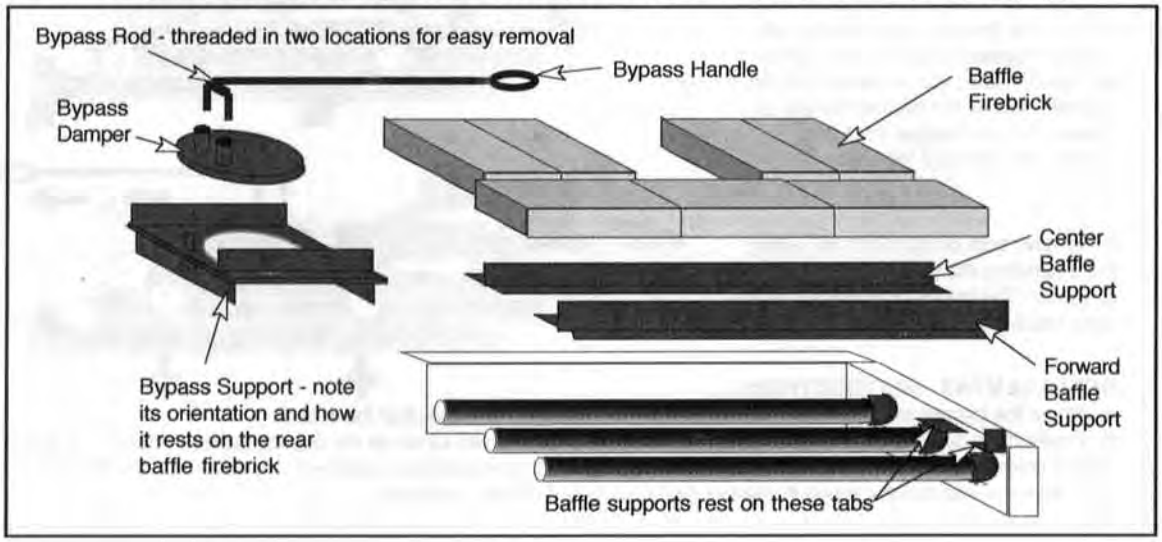
Firebrick Removal and Replacement Instructions

With the appliance cool, remove all ash from the firebox. Only the firebrick that is damaged must be replaced. If the damaged firebrick is on the floor, it can be replaced by simply removing the firebrick in front of it. **NOTE: Do not pry firebrick to remove, this will chip or crack the firebrick**. If a firebrick on the wall of the firebox needs replacement, the floor firebrick near it will need to be removed first. The wall firebrick is held upright by a clip on the walls of the firebox. To remove, pivot it out from the bottom. See the illustration on the following page.



Baffle Removal and Replacement Instructions

The view below details the baffle components. Instructions for removal are on the following page.



Baffle Removal and Replacement Instructions (continued)

All of the baffle components are removable to facilitate easy cleaning and repairs. Make sure the appliance is cool before removing any of the components. See the instructions on the following page for removing the secondary air tubes.

REMOVING BAFFLE COMPONENTS

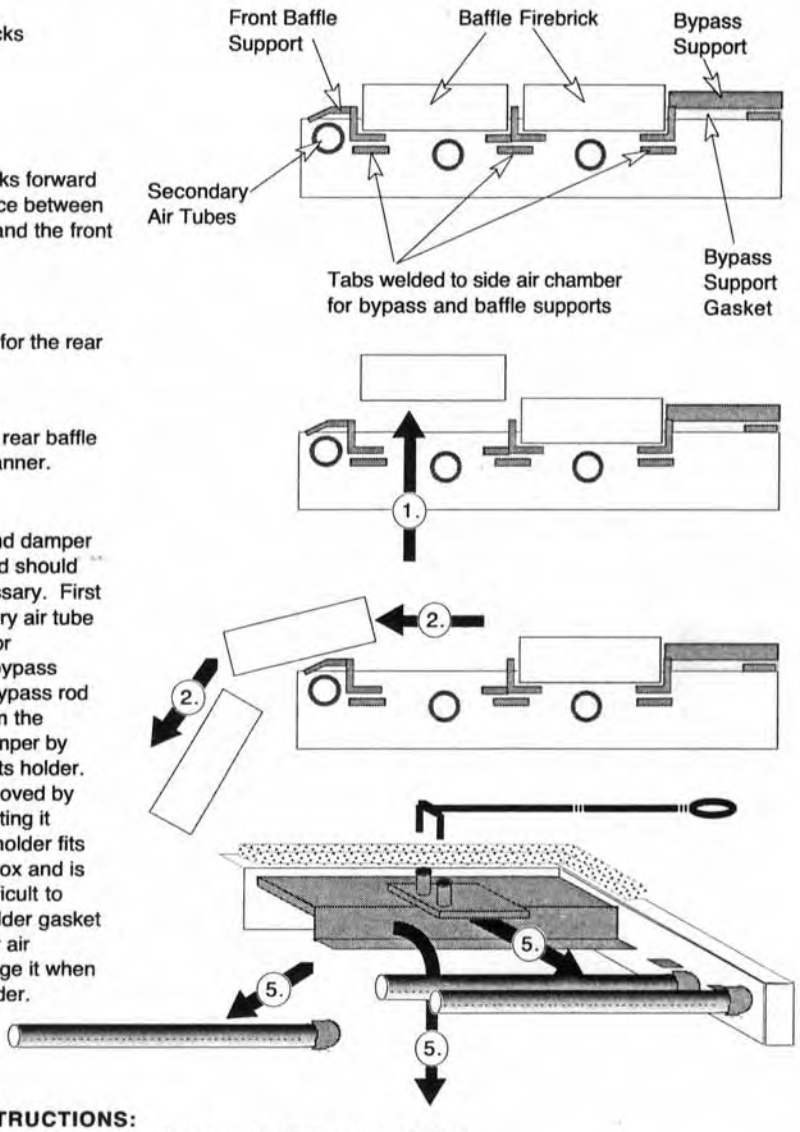
1. Push the front firebricks up from the bottom.

2. Feed the front firebricks forward and out through the space between the front baffle support and the front of the firebox.

3. Repeat steps 1 and 2 for the rear baffle firebricks.

4. Remove the front and rear baffle supports in the same manner.

5. The bypass support and damper are difficult to remove and should only be removed if necessary. First remove the rear secondary air tube (see the following page for instructions). Slide the bypass holder forward until the bypass rod can be disconnected from the damper. Remove the damper by sliding it forward and off its holder. The bypass holder is removed by sliding it forward and rotating it downwards (the bypass holder fits very snug inside the firebox and is very heavy, making it difficult to remove). The bypass holder gasket rests on the side and rear air channels, try not to damage it when removing the bypass holder.

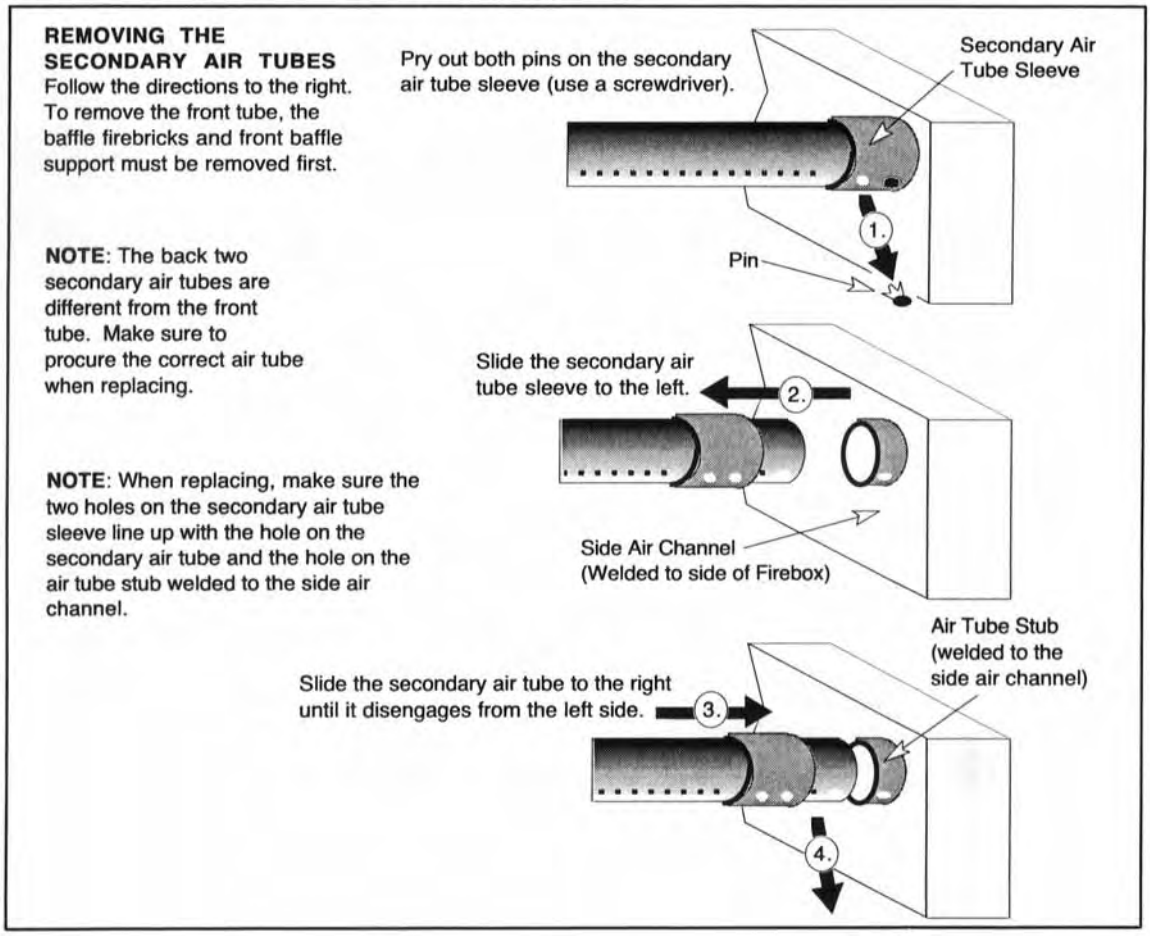


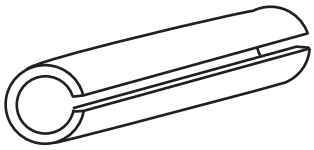
REPLACEMENT INSTRUCTIONS:

Follow the instructions in reverse order, making sure the following is fulfilled:

- Make sure the bypass holder is all the way back when reinstalled
- Once the bypass holder is in place, tuck the bypass holder gasket underneath it to form an air-tight seal
- Make sure the bypass damper is oriented correctly (see the illustration above)
- Make sure the bypass rod inserts correctly into the bypass damper
- Make sure the front baffle support is oriented correctly and put in flat

Baffle Removal and Replacement Instructions (Continued)





- New roll pins to hold air tube
- Hammer in to install
- Drive through into air tube to remove

TRAVIS INDUSTRIES
HOUSE OF FIRE

TRAVIS INDUSTRIES
HOUSE OF FIRE

Wood Appliance Annual Service Procedure

Name _____ Phone # _____

Address _____

City _____ State _____ Zip _____

Appliance Brand _____ Model _____

Check Procedure	✔	Comments Corrections or Recommendations
Check Clearance to Combustibles		
Check Chimney Connector for Blockage/Creosote Etc.		
Check Chimney Integrity		
Tile		
Class A Chimney		
Liner System		
Check Chimney for Creosote Build-Up/Soot Etc.		
Check Flashing Seal		
Check Wall Trim Seal		
Check Attic Space Where Chimney Passes Through		
Check Air Tube Integrity		
Check Baffle Retainers		
Check Baffle and Ceramic Brick		
Check Door Gasket & Glass Gasket		
Check Door Seal		
Check Air Control Operation		
Check Bypass Operation		
Clean Out Ashes		
Check Ash Pan Seal		
Empty Ash Pan		
Check Face Seal (Insert)		
Remove and Clean Convection Blower		
Clean Glass		
Polish Brass		
Finish/Looks Touch-Up		

TRAVIS INDUSTRIES WOOD PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Homeowner Questions About Operations:

Appliance Concerns:

Recommendations:

Date _____ Serviced By _____

Company _____

This Annual Service Was Reviewed With Me

_____

Homeowner Signature

_____

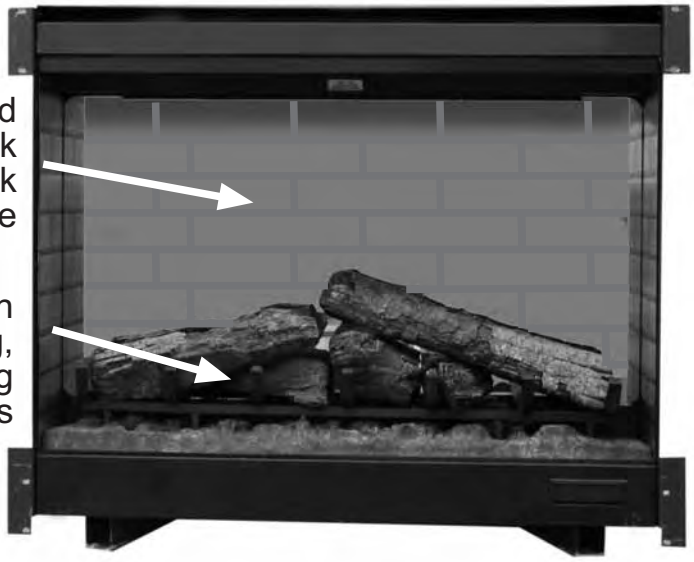
Next years Service Appointment:

Month _____ Date _____ Time _____

TRAVIS 564
ELECTRIC FIREPLACE FACES

TRAVIS INDUSTRIES
HOUSE OF FIRE

Standard Features



Body
Sku 98500253

Multi-function Remote Control:

1. Flame On/Off
2. Clean Air On/Off
3. Flame Speed
4. Interior Accent Light
5. Room Temperature Monitor
6. Set Temperature
7. Sleep Timer

- Instant ambiance of a real fireplace to any living area in just minutes
- Patented electric flame technology
- Variable speed flame image
- Purfire™ clean air purification system Filters your rooms (12' x 14') air four time per hour
- Realistic flame image
- Easy access manual controls
- Plug and Play - simply plug into any 110v outlet
- Effective heat - Thermostatically controlled 1500W fan provides supplemental heat for up to 400 sq. ft
- No venting required
- Safe-to-touch glass
- Economical operation
- Variable interior light
- Operates with or without heat

TRAVIS 564
ELECTRIC FIREPLACE FACES

TRAVIS INDUSTRIES
HOUSE OF FIRE

Avalon Electric Fireplace -Seattle E Options

Frames

Bronze
Powder
Coated

Upgrade Faces

Victorian Lace

Black Painted
Sku 95400267

Bungalow

Charcoal Powder Coated
Double Door
Sku 95400270

Tree of Life

Bronze Powder Coated
Double Door
Sku 95400270

Wood Cabinets

Oak Finish
Sku 96900911

Walnut Finish
Sku 96900913

564 E
ELECTRIC FIREPLACES

- Dimplex™ licensed technology with Travis Industries face designs
- Fabricated steel firebox featuring patented flame technology
- Realistic wood-like flame
- Instant ambiance of a real fireplace to any living area in just minutes
- Safe clean operation - stay cool glass, no combustibles to vent
- Effective heat - Thermostatically controlled 1500W fan provides supplemental heat for up to 400 sq. ft.
- Plug and Play - simply plug into any 110v outlet
- Clean air purification system - filters your rooms (12’ x 14’) air four time per hour
- Variable speed flame image
- Pulsing, glowing logs and ember bed
- Brick liner appearance
- Variable interior light
- Multi-function Remote Control:
    1. Flame On/Off
    2. Clean Air On/Off
    3. Flame Speed
    4. Interior Accent Light
    5. Room Temperature Monitor
    6. Set Temperature
    7. Sleep Timer
- Year-round enjoyment of the fire

TRAVIS INDUSTRIES
HOUSE OF FIRE

564 E FIREPLACES

IMPORTANT INSTRUCTIONS
SAVE THESE INSTRUCTIONS
PLEASE RETAIN THIS USER'S GUIDE FOR FUTURE REFERENCE

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

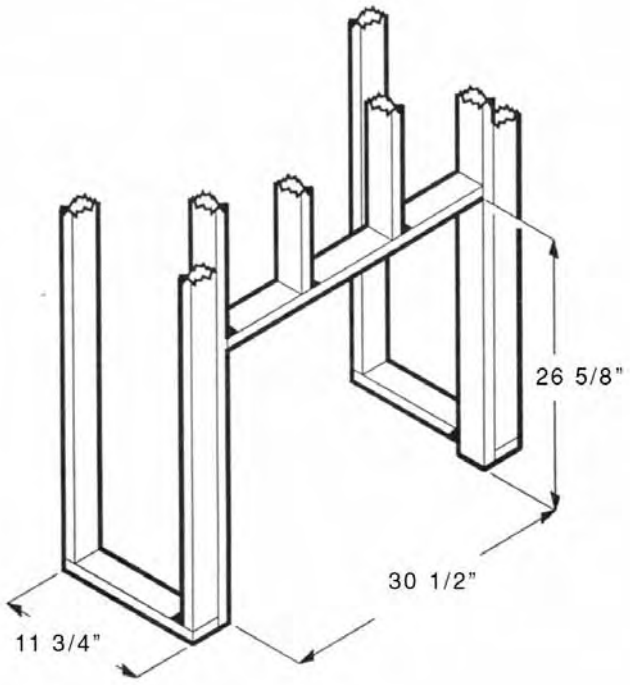
1. Read all instructions before using the electric fireplace.
2. The heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. The trim around the heater outlet becomes hot during heater operation. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains at least 3 feet (0.9m) from the front of the unit.
3. Extreme caution is necessary when any heater is used by or near children or invalids and whenever the unit is left operating and unattended.
4. Always unplug the electric fireplace when not in use.
5. Do not operate any unit with a damaged cord or plug, or if the heater has malfunctioned, or if the electric fireplace has been dropped or damaged in any manner. Return heater to authorized service facility for examination, electrical or mechanical adjustment, or repair.
6. Do not use outdoors.
7. The electric fireplace is not intended for use in bathrooms, laundry areas and similar indoor locations. Never locate heater where it may fall into a bathtub or other water container.
8. Do not run the cord under carpeting. Do not cover cord with throw rugs, runners, or the like. Arrange cord away from traffic area and where it will not be tripped over.
9. To disconnect the unit, turn the controls off, then remove the plug from the outlet.
10. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage to the heater.
11. To prevent a possible fire, do not block air intake or exhaust in any manner. Do not use on soft surfaces, like a bed, where openings may become blocked.
12. All electrical heaters have hot and arcing or sparking parts inside. Do not use in areas where gasoline, paint, or flammable liquids are used or stored or where the unit will be exposed to flammable vapors.
13. Do not modify the electric fireplace. Use it only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock or injury to persons.
14. Avoid the use of an extension cord. Extension cords may overheat and cause a risk of fire. If you must use an extension cord, the cord must be No. 16 AWG minimum size and rated no less than 1875 watts.
15. Do not burn wood or other materials in the electric fireplace.
16. Do not strike the fireplace glass.
17. Always use a certified electrician should new circuits or outlets be required.
18. Always use properly grounded, fused and polarized outlets.
19. Disconnect all power supply before performing any cleaning, maintenance or relocation of the unit.
20. When transporting or storing the unit and cord, keep in a dry place, free from excessive vibration and store so as to avoid damage.

NOTE: Procedures and techniques that are considered important enough to emphasize.
CAUTION: Procedures and techniques which, if not carefully followed, will result in damage to the equipment.
WARNING: Procedures and techniques which, if not carefully followed, will expose the user to the risk of fire, serious injury, illness or death.

1

TRAVIS INDUSTRIES
HOUSE OF FIRE

564 E FIREPLACE FRAMING



NEW WALL CONSTRUCTION

1. Select a suitable location that is not susceptible to moisture and is away from drapes, furniture and high traffic.
2. Place the fireplace in the desired location to see how it will look in the room.
3. Mark the desired location on the floor and store the fireplace in a safe, dry and dust free location.
4. Use studs to frame an opening of 30 ½" wide X 26 5/8" high X 11 ¾" deep.

Option #1-The power cord can be lead from behind the trim and along the wall to an outlet near the fireplace.

Option #2-A new outlet can be installed inside the new frame construction.

Plug the unit into a 15Amp/120Volt outlet. If the cord does not reach, you may use an extension cord rated for a **minimum of 1875 watts**.

CAUTION

TRAVIS
ELECTRIC FIREPLACES

TRAVIS INDUSTRIES
HOUSE OF FIRE

564 E FIREPLACE MANTELS

Avaliable From Travis Industries

Mantel, 564 E Oak Finish	Sku # 96900911
Mantel, 564 E Walnut Finish	Sku # 96900913

564 E FIREPLACE OPERATION

OPERATION

ELECTRIC FIREPLACE MANUAL CONTROL

The manual controls for the fireplace are located in the lower right hand corner.

A. Main On/Off Switch
Supplies power to the 3 position manual control switch.

B. 3 Position Manual Control Switch
Remote (right position): The unit is operated with the remote control.
Flame (center position): The flame effect is turned ON.
Flame & Heat (left position): The flame effect and heater are turned ON simultaneously. When the manual control is in the **Flame & Heat** position the heater does not run on the remote operated thermostat.
NOTE
When the manual control switch is in the **Flame** and **Flame & Heat** positions, the fireplace unit will not operate with the remote control.

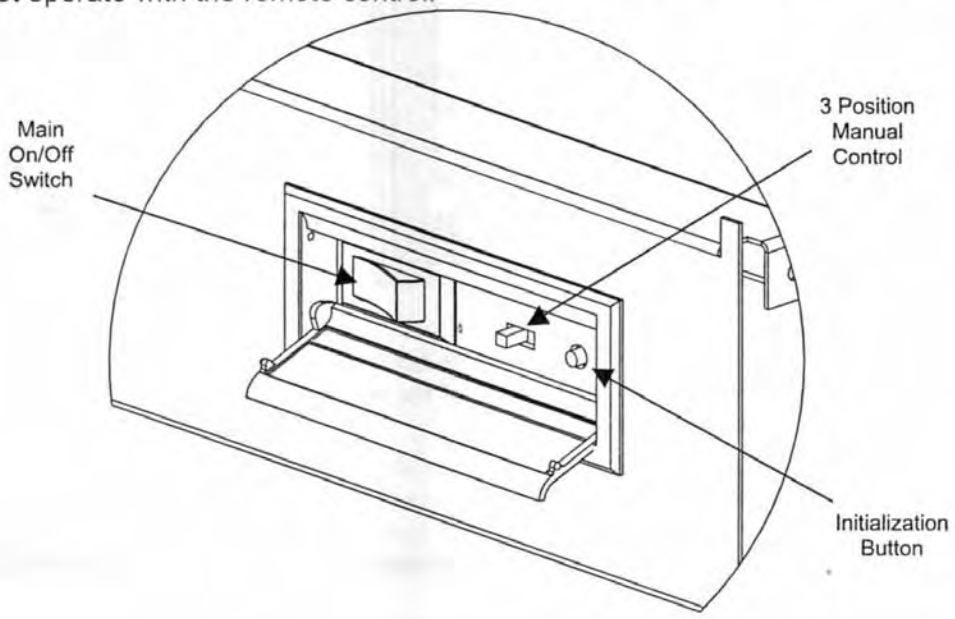
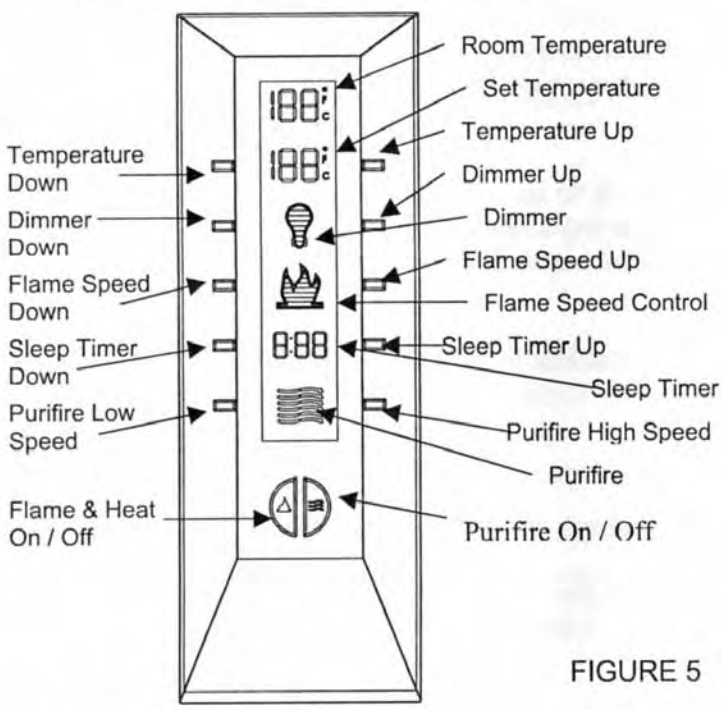


FIGURE 2

564 E FIREPLACE REMOTE

REMOTE CONTROL FUNCTIONS



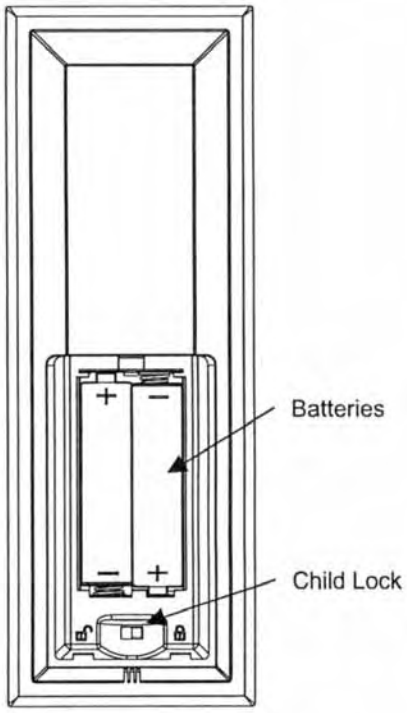


FIGURE 5

FLAME/HEAT ON/OFF BUTTON

Press the "**Flame/Heat On/Off** "button to turn the Flame/Heat function **ON**. When the "**Set Temperature**" is higher then the "**Room Temperature**" the heat will come on. To turn the heat off, lower the "**Set Temperature**" so that it's setting is lower then the "**Room Temperature**". The default temperature setting is 72°F (22°C).

NOTE

When using the remote control the heater runs on a thermostat. Press the "**Temperature Up**" or "**Temperature Down**" button to adjust the set temperature. Once the desired set temperature is reached the heater will turn **OFF**. The heater will cycle **ON** and **OFF** to maintain the desired set temperature.

564 E FIREPLACE REMOTE

PURIFIRE ON/OFF BUTTON

Press the "**Purifire™ On/Off**" button to turn the Purifire™ function **ON**. When the Purifire™ function is **ON** the Purifire™ symbol will flash. When off the symbol will be solid. The default setting for the Purifire™ is set at low speed. Press the "**Purifire™ On/Off**" button to turn the Purifire™ function **OFF**.

NOTE

To turn the Flame/Heat and Purifire™ "**OFF**" at the same time, press both control buttons simultaneously.

SET TEMPERATURE

1. Press "**Flame Heat On/Off**" button to turn fireplace on.
2. Press "**Temperature Up**" to raise thermostat.
3. Press "**Temperature Down**" to lower thermostat.
4. Press both "**Temperature Up**" and **Temperature Down**" to change °F to °C.

FLAME SPEED

1. Press the "**Flame/Heat On/Off**" button to turn the Flame/Heat **ON**.
2. Press the "**Flame Speed Up**" to increase the speed of the flame.
3. Press the "**Flame Speed Down**" to decrease the speed of the flame.

LIGHT DIMMER

1. Press the Flame/Heat button to turn the Flame/Heat **ON**.
2. Repeatedly press the "**Light Dimmer Up**" or "**Light Dimmer Down**" button to decrease or increase the brightness of the upper lights.

CHILD LOCK

1. Depress tab on the battery cover on the back of the remote transmitter and remove the battery cover.
2. Move "**Child Lock**" tab to the right to lock the remote transmitter.
3. Move "**Child Lock**" tab back to the left to unlock the remote transmitter.
4. Replace the battery cover.

NOTE

To temporarily unlock the remote transmitter press (in order) "**Temperature Down**" then "**Temperature Up**" then "**Dimmer Down**".
When the remote transmitter's back light is illuminated the "**Child Lock**" is bypassed.
When the back light is off the "**Child Lock**" is re-activated.

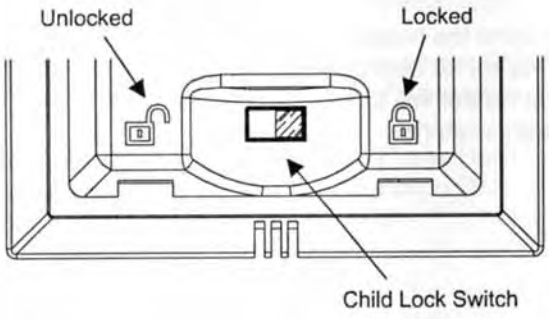


Figure 6

564 E FIREPLACE ACCESS

To access the lower light bulb area:

NOTE
Figure 7

1. Slide fireplace out of mantel 2-3 inshes.
2. Remove 4 Phillips screws from the right side of trim.
3. Slide glass to right side of fireplace to remove.
4. Pull the front edge of the plastic ember bed or plastic grate up and forward until the rear tab releases from the ledge located at the bottom of the mirror.

IMPORTANT
Only handle the logset by the emberbed.

NOTE
Logset fits tightly into firebox, some force may be necessary to remove.

5. Set logset in front of fireplace.
6. Disconnect the logset LED wire harness from unit.
7. Unscrew bulbs counter clockwise.
8. Insert new bulbs.
9. Reconnect the logset LED wire harness.
10. Replace the logset by inserting the front edge of the fireplace and push down on the rear edge of the emberbed until it snaps into place. (Figure 8)

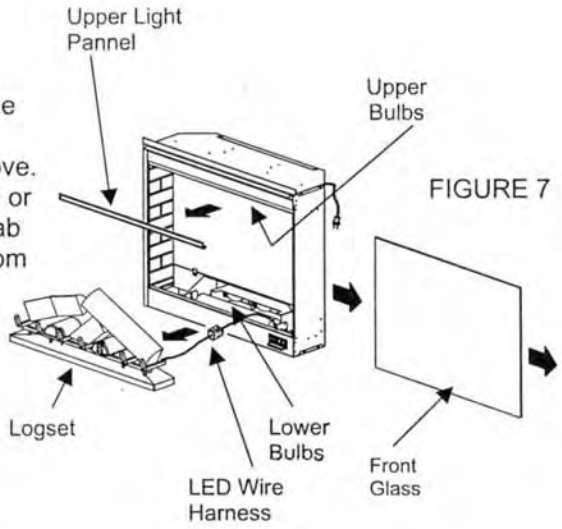


FIGURE 7

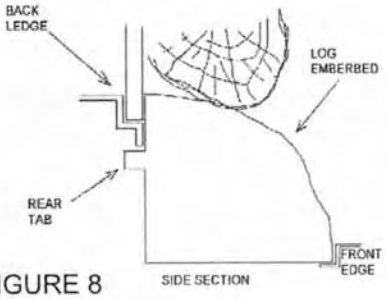


FIGURE 8

NOTE
Ensure the logset is installed tightly under the back ledge to prevent light leakage.

11. Slide front galss back into position and attach trim.

UPPER LIGHT BULB REQUIREMENTS
Quantity of 2 clear chandelier or candelabra bulbs with an E-12 (small) socket base, 25 watt rating.
DO NOT EXCEED 25 WATTS PER BULB
To access the upper light bulb area:
Figure 7

1. Slide fireplace out of mantel 2-3 inches.
2. Remove 4 Phillips screws from right side of trim.
3. Remove trim.
4. Slide glass to the right side of the fireplace to remove.
5. Remove upper light panel.
6. Upper bulbs located in the upper left and upper right corners of fireplace.
7. Unscrew bulbs counter clockwise. Insert new bulbs.
8. Re-install upper light bracket. Slide front glass back into position and attach trim.

564 E FIREPLACE AIR FILTER

PURIFIRE™ FILTER

The Purifire™ filter supplied in your fireplace is reusable and washable. The filter should be cleaned or replaced on average once a year. To clean the filter gently tap filter on a hard surface to dislodge any loose dirt or debris, and then clean with water. No soap or cleaning products are recommended. The filter size is 20" X 10" X 1" rated at MERV 10. If using an after market filter follow the manufacturers recommended replacement instructions.

To replace filter:

1. Remove fireplace from mantel.
2. Filter can be accessed from the top rear of the unit.
3. Grasp filter and slide filter straight up.
4. Replace or clean filter.

NOTE

If after market air filter is used ensure it is installed according to the manufacturers recommended instructions.

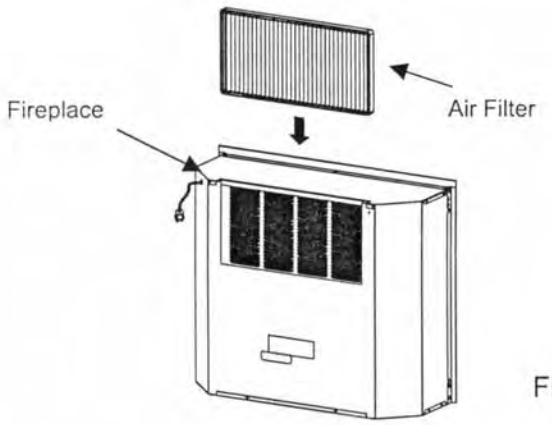


FIGURE 9

GLASS CLEANING

The glass is cleaned in the factory during the assembly operation. During shipment, installation, handling, etc., the glass may collect dust particles, these can be removed by dusting lightly with a clean dry cloth.

To remove fingerprints or other marks, the glass can be cleaned with a damp cloth. To prevent scratching, do not use abrasive cleaners or spray liquids on the glass surface.

FIREPLACE SURFACE CLEANING

Use a cloth dampened with warm water only to clean painted surfaces of the electric fireplace. Do not use abrasive cleaners.

TRAVIS INDUSTRIES
PELLET PRODUCTS

Pellet Stoves & Inserts

Pellet Venting

Pellet Restrictors

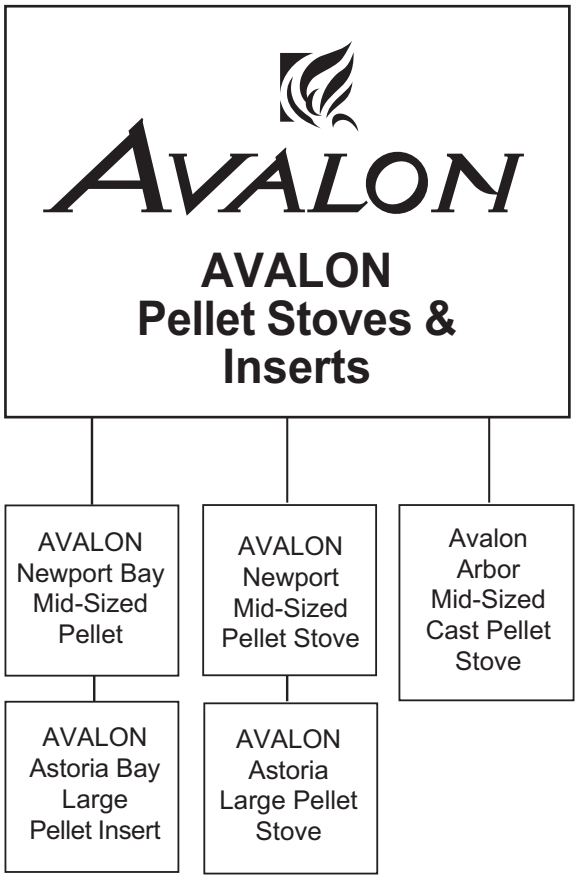
Pellet Maintenance

Wood & Pellet Installation

Wood & Pellet Lab Activities

Installation Lab Activities

TRAVIS INDUSTRIES
PELLET PRODUCTS



TRAVIS INDUSTRIES
PELLET PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

AVALON Pellet Stoves & Inserts

Pellet Appliance	Square Feet Heating Space	Burn Rate	BTU's Range	Burn Time	Efficiency	Electrical Usage	Automatic Igniter	Hopper Capacity	Installation Approvals	Venting Size
NEWPORT BAY	800 - 1,600 Sq. Ft	High 3.5 Lbs./Hr. Low 1.2 Lbs./Hr.	Low 9,600 High 28,000	Low 29 Hours High 10 Hours	Up to 82%	400 W - Start Up 180 W - Operation 3.6 AMPS	YES 1,500˚ F	35 Lbs.	Horizontal & Vertical Class A Retro Masonry ZC Mobile Home	3" 4" at High Elevations or Tall Vertical Terminations
NEWPORT	800 - 1,600 Sq. Ft	High 3.5 Lbs./Hr. Low 1.2 Lbs./Hr.	Low 9,600 High 28,000	Low 50 Hours High 15 Hours	Up to 82%	400 W - Start Up 180 W - Operation 3.6 AMPS	YES 1,500˚ F	55 Lbs.	Horizontal & Vertical Class A Retro Mobile Home	3" 4" at High Elevations or Tall Vertical Terminations
ASTORIA	800 - 2,250 Sq. Ft	High 5.5 Lbs./Hr. Low 1.7 Lbs./Hr.	Low 13,940 High 45,100	Low 67 Hours High 21 Hours	Up to 82%	400 W - Start Up 180 W - Operation 3.6 AMPS	YES 1,500˚ F	115 Lbs.	Horizontal & Vertical Class A Retro Mobile Home	4"
ASTORIA BAY	800 - 2,250 Sq. Ft	High 5.5 Lbs./Hr. Low 1.7 Lbs./Hr.	Low 13,940 High 45,100	Low 32 Hours High 10 Hours	Up to 82%	400 W - Start Up 180 W - Operation 3.6 AMPS	YES 1,500˚ F	55 Lbs.	Horizontal & Vertical Class A Retro Mobile Home	4"
ARBOR	800 - 2,250 Sq. Ft	High 5.5 Lbs./Hr. Low 1.7 Lbs./Hr.	Low 13,940 High 45,100	Low 47 Hours High 15 Hours	Up to 82%	400 W - Start Up 180 W - Operation 3.6 AMPS	YES 1,500˚ F	47 Lbs.	Horizontal & Vertical Class A Retro Mobile Home	4"

AVALON Pellet Stoves & Inserts

Model	Glass Viewing Area	Heat Exchanger Tubes	Restrictor	Manual Operation	Wall Thermostat Operation	Remote Operation	Convection Blower	Exhaust Blower	3/16" 309 Stainless Steel Burn Pot	Options
NEWPORT BAY	167 Sq. In.	6	Intake Air	YES	YES Optional	YES	Cross Flow Transaxial 130 CFM	Centrifugal 75 CFM	YES	Gold or Nickel Door, Gold Convection Grill, Log Set
NEWPORT	167 Sq. In.	6	Intake Air	YES	YES Optional	YES	Cross Flow Transaxial 130 CFM	Centrifugal 75 CFM	YES	Gold or Nickel Door, Gold Convection Grill, Log Set
ASTORIA	321 Sq. In.	10	Intake Air & Exhaust	YES	YES Standard with Astoria	YES	Centrifugal 165 CFM	Centrifugal 92 CFM	YES Curved Bottom Wide Flame Dispersal	Gold or Nickel Door & Convection Grill, Universal Log with Modified Holder
ASTORIA Bay	321 Sq. In.	12	Intake Air & Exhaust	YES	YES Standard with Astoria	YES	Centrifugal 165 CFM	Centrifugal 92 CFM	YES Curved Bottom Wide Flame Dispersal	Gold or Nickel Door & Convection Grill, Universal Log with Modified Holder
ARBOR	308 Sq. In.	12	Intake Air and Exhaust	YES	YES Standard	YES	Centrifugal 165 CFM	Centrifugal 92 CFM	YES Curved Bottom for Wide Flame Dispersal	Universal Log with Modified Holder

TRAVIS INDUSTRIES PELLET PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Features of Travis Brand Pellet Stoves and Inserts

- Small and Large Heating Capacities
- 800 to 1,600 Sq. Ft. Heating Capacity
- Large Hopper Capacity
- Gravity Flow Feed
- Heavy-Duty Auger Shaft and Flight
- Removable Auger Cover
- Self-Lubricating Bronze Auger Bearings
- Heavy-Duty Auger Motor
- Heat Exchanger Ash Rake Cleaner
- No Tools Requires for Cleaning
- 3/16” Stainless Steel Firepot
- Cast Iron Fireback
- Air Tight Door Seal
- Airwash Keeps Glass Clear
- Options of Black, Gold Door & Nickel Door - Avalon
- Operation Instructions on Inside of Lid
- “Real World” Seven Year Warranty
- Horizontal or Vertical Termination Flue Options
- Outside Air kit
- Minimal Clearances to Combustibles
- Minimal Floor Protection Requirements
- Easy Access Components
- Fuse Protected Systems
- Inserts Masonry and ZC Approved
- Adjustable Door
- Spring Loaded Rails on Ash Dump
- Hopper Safety Snap Disc
- Flow Safety Snap Disk
- Quiet Operation
- Automatic ignition
- Thermostat/Remote Control Option
- Auto or Manual Operation Option
- Single Control Feed/Air Control

TRAVIS INDUSTRIES
HOUSE OF FIRE

Features of Avalon Arbor Cast Iron Pellet Stove

Features:

- Medium-size pellet stove.
- Black painted cast iron design of the wood burning Leyden
- Organic tree cast iron detail.
- Cast double doors with large fireview.
- Ash Glide Ash Pan:
  - Most convenient ash removal system on the market, no special tool needed.
  - Large ash holding capacity.
- Uses a 4” chimney.
- EPA Exempt.
- Uses same pellet components found in the Yankee pellet stove.
- Will have same performance statistics as the Astoria.
- 47 lbs. hopper.
- Unique burn pot designed to burn wood pellets or a 50/50 mix of wood pellets and corn.
- Most efficient heat exchange system of any Avalon pellet stove.
- Self-starting ignitor standard.
- Whisper quiet performance - variable combustion fan synchronized with adjustable burn rate.
- Wall thermostat standard.
- Stay clean airwash.
- Stainless-steel burn pot removes easily for cleaning.
- Electronic control board for manual or automatic operation with use of low voltage thermostat or programmable wall thermostat or remote control.

Pellet Appliance Components

When designing pellet appliances the following considerations need to take place.

Safety - The appliance must be designed to contain fire and keep the fuel in the pellet hopper from catching on fire.

Efficiency - Today's heating costs push the public to demand efficient economical appliance operation.

Styling - Appliance appearance and customer choice are an important consideration of the appliance purchase.

Quality - Today's consumer expects top quality for many years of operation.

Easy to operate - Consumers want simple easy-to-operate (consumer friendly) appliances.

Easy to service and maintain - Consumers and service people demand simple easy serviceability.

Quiet operation - A pellet appliance has the potential of being very noisy. Two blowers, auger motor, auger flight and dropping pellets can be very distracting. Therefore, dampening vibration devices have to be incorporated into the appliance design.

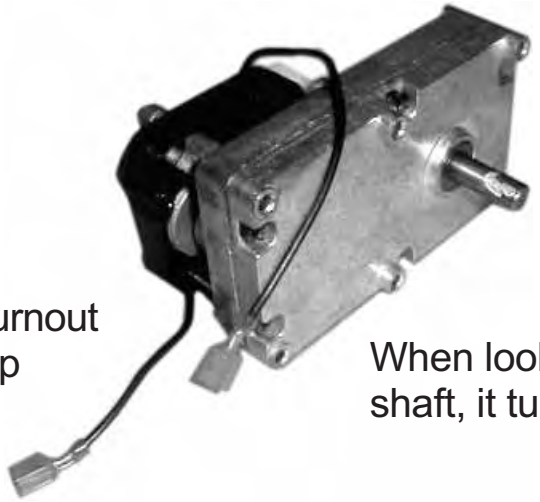
TRAVIS INDUSTRIES
HOUSE OF FIRE

Pellet Appliance Components

- Pellet Hopper
  - Angled to ensure non-bridging gravity feed
  - Aluminized steel construction
  - Large capacities

- Auger
  - 3/4” steel shaft
  - 1 1/4” pitch spacing (small stoves)
  - 2” pitch spacing (large stoves)
  - Easy, removable access cover
  - Sintered bronze bearings

- Auger Motor
  - Merkl Korff motor
  - Turns at 1 RPM
  - Impedance protected to prevent burnout if the auger freezes up
  - Rubber stops for quiet operation



When looking at output shaft, it turns clockwise

Pellet Appliance Components

• Control Board

- Remote, automatic, and manual selection
- Remote and thermostat ready
- Single control air/feed rate
- LED panel display
- Fuse protected

• Flow Switch

- Senses vacuum from exhaust blower
- N.O. switch
- Wires in series with the auger circuit

• Snap Disk

Hopper Snap Disc

- Set point 200˚ F
- N.C. switch
- Large stove uses (2)
- Wires in series with auger circuit

System Snap Disc

- Senses heat (pellets are burning)
- Large stove - mounted on exhaust blower
- Small stove mounted on horizontal exhaust port
- Set point 120˚ F
- N.O. switch
- Large stove uses (2)

Pellet Appliance Components

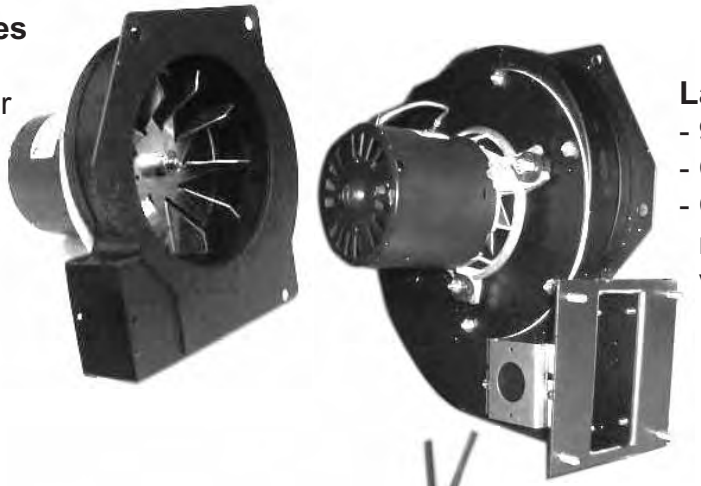
• Convection Blower

Small Pellet Stoves
- 130 CFM
- Cross flow transaxial blower
- Cushion mounting vibration control

Large Pellet Stoves
- 165 CFM
- Centrifugal blower
- Cushion mounting for vibration control

• Exhaust Blower

Small Pellet Stoves
- 75 CFM
- Centrifugal blower
- Cushion mounting for vibration control



Large Pellet Stoves
- 92 CFM
- Centrifugal blower
- Cushion mounting for vibration control

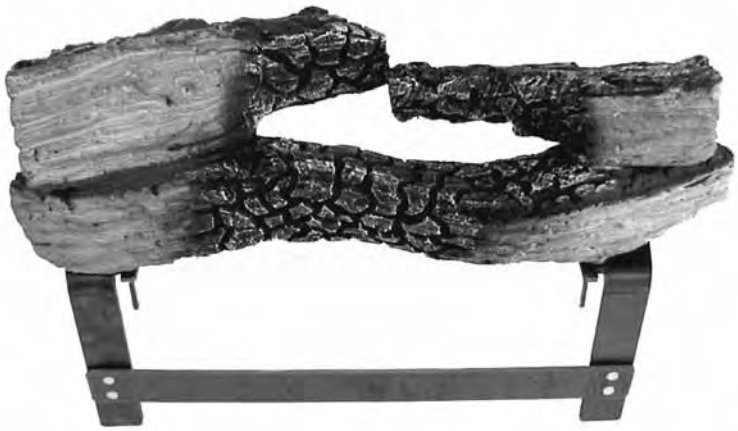
• Igniter

- 110 volt
- Heats to 1500˚ F
- Sheath on large stoves 1/2” longer

Pellet Appliance Components

• Log Set

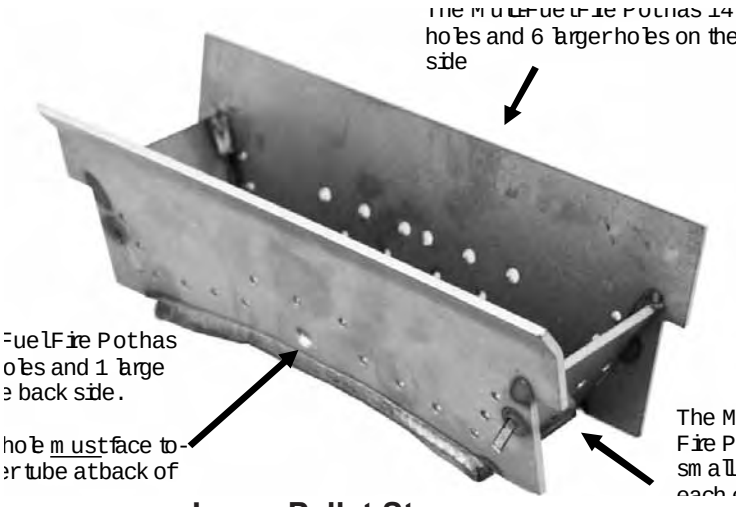
- Optional universal cast log
- Large stoves use a modified holder



• Burn Pot

- Stainless steel burn pot
- Bottom 3/16” - Type 309 Stainless Steel
- Large burn pot features arched bottom
- Easily removed for maintenance
- One way fit up

Small Pellet Stoves



Large Pellet Stoves
& Cast Iron Stoves
Multi-Fuel Burn Pot

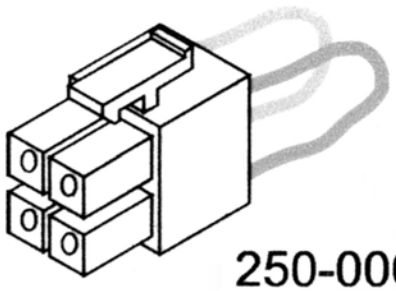
Configuring the Control Board

Overview

The new AVR control board is the next generation control board that is compatible with all pellet stoves and inserts, large and small manufactured from 1997 to today. Circuitry on the board allows it to be programmed for either the large or small pellet heaters (these heaters use different voltage settings). See “” for details. It also includes a diagnostic feature that allows a service person to diagnose a fault without having to inspect the wiring or components. The indicator lights on the control board will display a fault code after a fault has been detected. This allows the service person to determine which component caused the fault. See “Diagnostic Codes” for details. NOTE: the new wiring harness (250-00017) is required to utilize this feature.

Configuring for Large or Small Heaters

The control board is initially configured for the large heaters (Astoria and Yankee models). To change the configuration the control board must be in the off position plugged into a cold stove, (no lights or running components) with the jumper molex removed (see the illustration below). In this condition press and hold the manual auger button down and press both fan up and fan down arrow keys at the same time. All heat output lights will flash. One flash denotes the large pellet heater configuration. Two flashes denote the small pellet heater configuration (Newport and Pioneer models). Repeat pressing the keys until the correct configuration is obtained.



250-00012

Configuring the Control Board

Using this Control Board with Older Wiring Harnesses

When the control board is installed on an older wire harness the 4 pin molex jumper plug on the back of the control board next to the stock wire harness must be installed. This jumper replaces the diagnostic wires (see “”) that are present on the new wiring harness. The control board will work normally, but the diagnostic capabilities will not function.

Technical Notes for Operation

The new pellet control board is essentially the same as our old board. The biggest difference between them is that buttons were used in place of knobs on the heat and fan controls.

Make sure to give the home owner the “Pellet Heater Operating Instructions” if you are replacing an older board (the final 4 pages of this instruction sheet). It contains the new operating instructions for this control board.

A few changes were made to accommodate the new control board. The start up cycle indicator on the old board illuminates all heat output indicator lights to show the unit is in a start-up cycle and adjusting the heat setting knob would not change them. On the new board to enable adjusting the run settings during start-up we made the start-up indicator the blinking #1 heat output light. If the #1 heat output light is blinking the board is in a start-up mode and the blower and auger outputs can not be adjusted. The run settings the unit will go to after start-up are displayed on the heat output indictor. These settings can be adjusted any time during start up by pushing the up or down heat buttons on the panel. When the fan setting is adjusted up or down the heat output indicators will turn off and the fan setting will display.

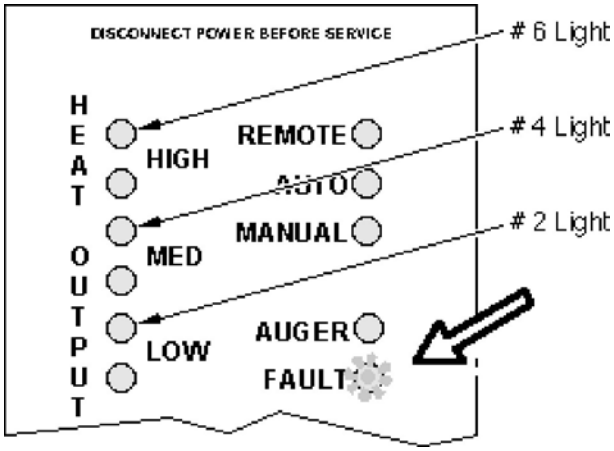
Another feature we added to the control board is a manual auger feed. This button can be used to prime and empty the auger or speed the initial delivery of pellets to the burn pot. All start-up timing remains the same and the stove will still self prime the auger tube – this option allows the operator an additional option. It is not needed for normal operation.

All voltage outputs and feed rates remain the same as the old board. There is a difference in respect to the auger on/off times. The auger timing was changed to shorten the interval between pellet drops to the burn pot. For example, on low the auger used to turn for 3 seconds and remain off for 13 seconds, for this same condition this control board turns the auger for 2.5 seconds and remains off for 10.7 seconds. This produces the same amount of time the auger is turning and not turning but gives a steadier flame height and less incidental outages on low.

Configuring the Control Board

Diagnostic Codes (Qualified Service Personnel Only)

- Fault and #2 (LOW) Light Flash = Flow Switch Fault
- Fault and # 4 (MED) Light Flash = System Snap Disk Fault (pellets run out & stove goes cold)
- Fault and # 6 (HIGH) Light Flash = Safety or Hopper Snap Disk Fault



Flow Switch Fault

Fault light and #2 heat indicator blinking.

This fault code indicates pressure/flow switch opened or broke its electrical connection during operation.

Likely causes:

- Pinched, cracked or broken pressure tubing.
- Plugged tubing nipple on blower housing.
- Heavy ash build up in the exhaust fan housing,
- Faulty wiring, bad or broken connection of flow switch gray wires.
- Weak or bad combustion blower
- Faulty pressure switch.

Configuring the Control Board

Diagnostic Codes (Qualified Service Personnel Only) - Continued

System Snap Disk Fault

Fault light and #4 heat indicator blinking.

This fault code is caused by a heat sensitive switch that tells the control board if the appliance is hot or cold. During operation if the unit runs out of pellets or looses its fire this switch will communicate to the control board that the stove is getting cold. The control board will shut off the auger functions and initiate a twenty minute combustion fan safety cool down. Another condition that will trigger this fault code is a failed start. When the appliance is started the control board initiates a 30 minute timer, if the appliance is cold at the end of this 30 minute start up timer the control board will indicate a #4 fault and initiate a 20 minute combustion fan cool down.

Likely causes:

- Unit ran out of pellets.
- Fire went out during operation.
- Unit was cold at the end of a start cycle (fire did not light).
- Faulty snap disk.

Configuring the Control Board

Diagnostic Codes (Qualified Service Personnel Only) - Continued

Safety or Hopper Snap Disk Fault

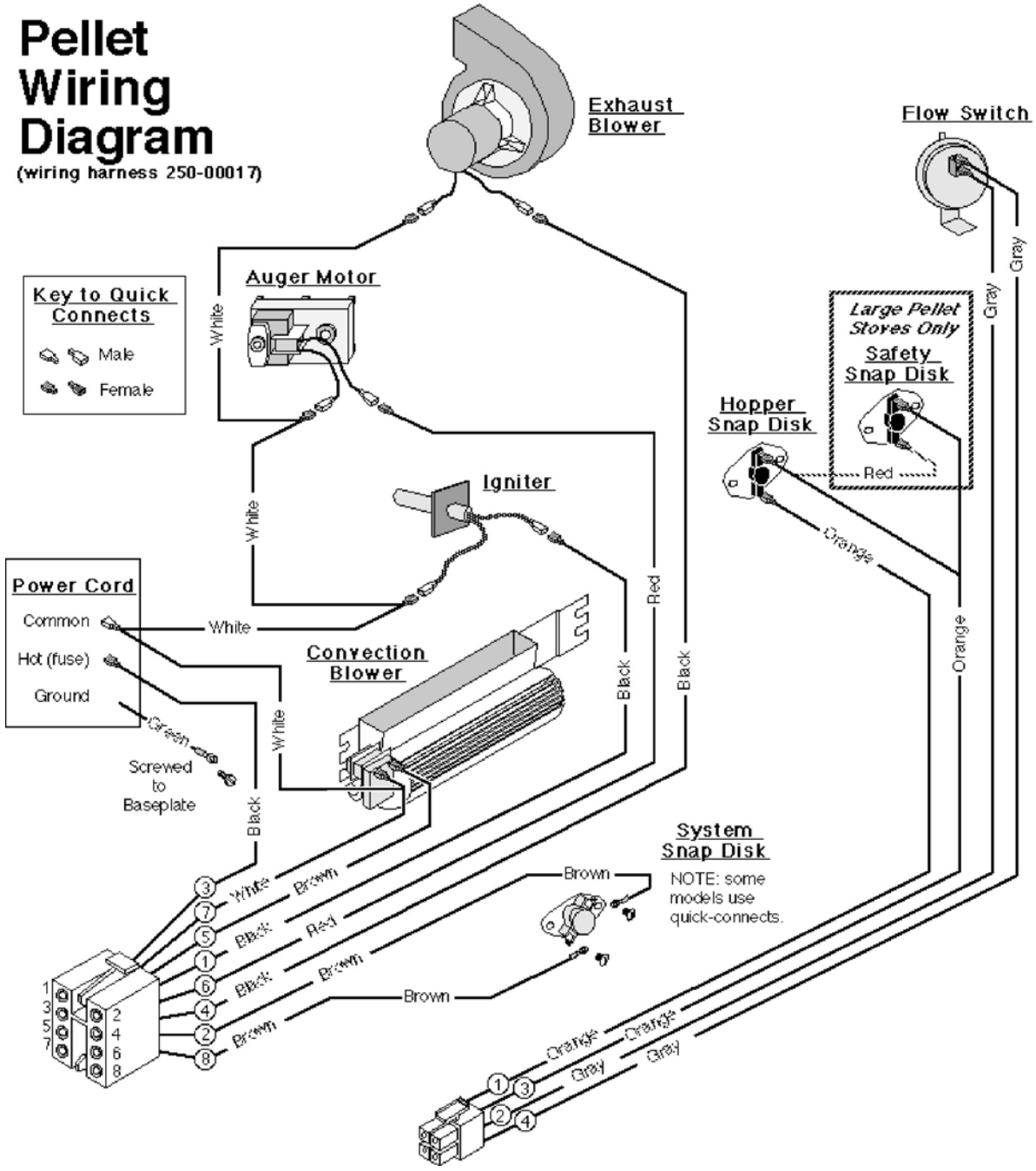
Fault light and #6 heat indicator blinking.

This fault code is caused by the safety or hopper snap disk registering an over-heated appliance during operation. The control board then shuts down the auger and the convection and combustion blower will run at maximum output for a 40 minute safety cool down cycle. The only way to stop this cool down is to unplug the appliance to reset the control board.

Likely causes:

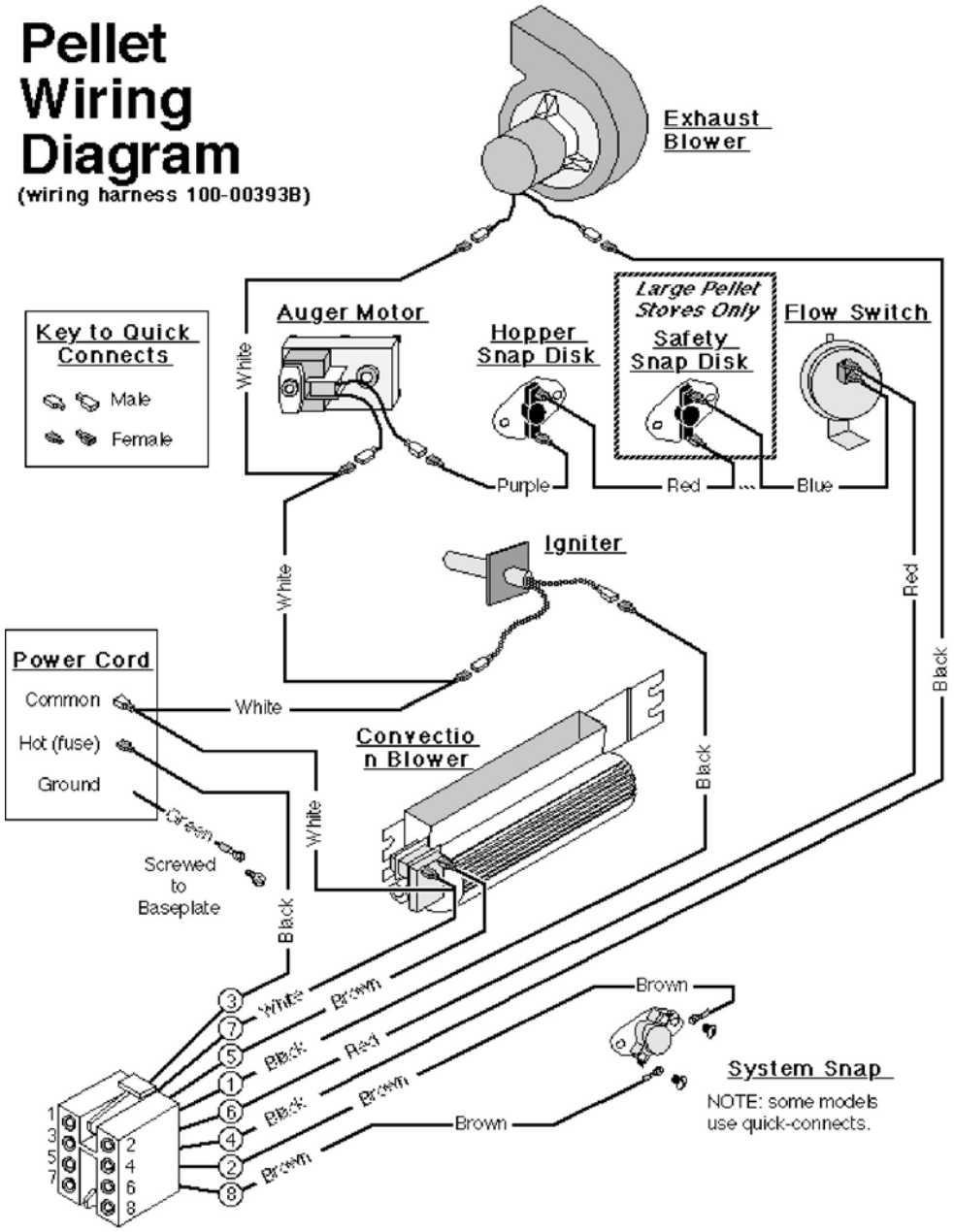
- Faulty snap disk
- Corroded, loose or broken Snap Disk wiring.
- Failed, plugged or blocked convection blower.
- Reduced air flow into the motor compartment such as blocked air vents on panels or doors.
- Missing refractory.
- Improper fuel type.
- Unauthorized parts used in the pellet feed system.

Wiring Diagram
(New, 2005 Version - 250-00017)



Wiring Diagram
(Old Version - 100-00393B)

NOTE: Wire coloring may not be identical to this diagram



Control Board Operation

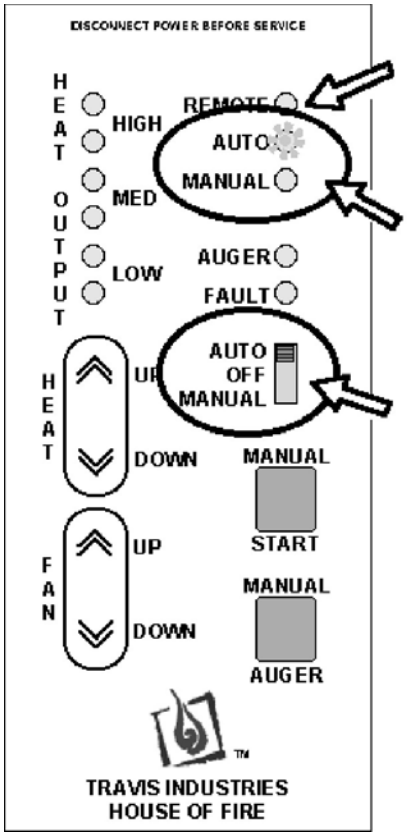
The Two Modes of Operation:

Manual

Manual mode requires the user to turn the heater on and off manually.

Auto (requires a thermostat)

Auto mode allows you to use a thermostat to control room temperature. The stove automatically turns on when the temperature drops below the thermostat setting. Once the stove reaches operating temperature, the stove then turns off at the heat output setting selected.



NOTE: If using a modulating remote, this light will come on to indicate the remote is controlling the heater.

These indicator lights are used to determine which mode you are in.

Use the mode switch to determine the mode.

Switching Modes While in Operation

Whenever the stove is switched from one mode to another while in operation, the stove will enter the "start-up" sequence for a minimum of 20 minutes.

Control Board Operation

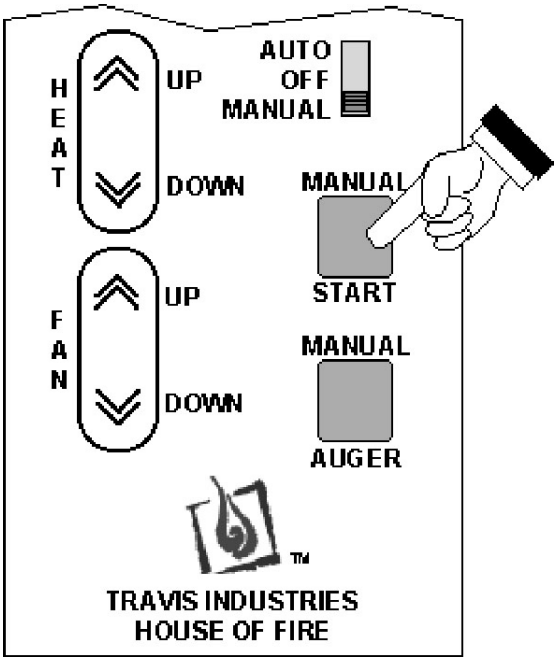
Manual Mode

Manual mode requires the user to turn the heater on and off manually.

To Start

Press the "Manual Start" button. That's it. The stove automatically goes to a medium burn rate and high fan while the igniter starts the fire burning within 10 minutes. During this period the lowest “HEAT OUTPUT” light will flash. If the stove does not start in 30 minutes, the stove turns off.

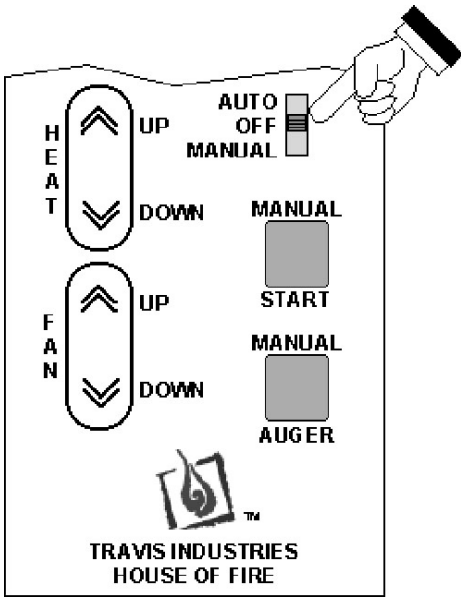
Once up to temperature, the stove will then run at the heat output setting selected on the control panel (see “To Adjust the Heat” below).



Control Board Operation

To Shut Down

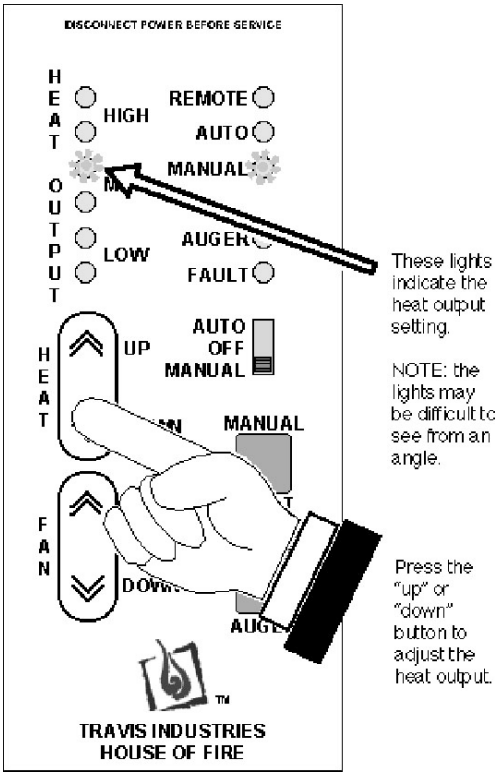
Move the mode switch to "OFF". The exhaust blower will still run until the heater cools down.



To Adjust the Heat

Press the "Heat" buttons to adjust the heat output.

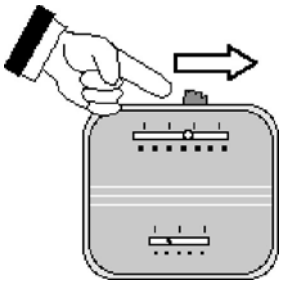
NOTE: During start-up you may adjust the heat setting. This heat setting will take affect once the start-up sequence is complete.



Control Board Operation

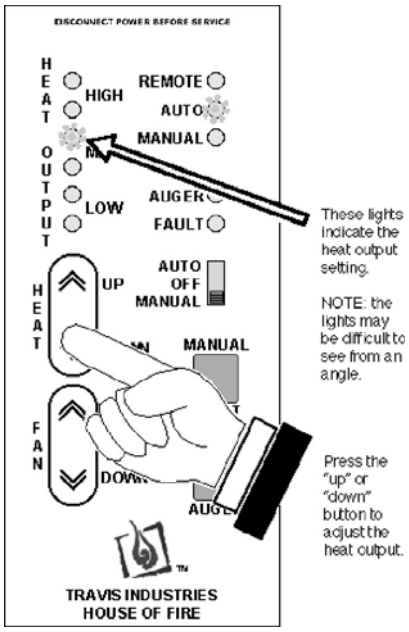
Auto Mode

Auto mode allows you to use a thermostat to control room temperature. The stove automatically turns on when the temperature drops below the thermostat setting. Once the stove reaches operating temperature, the stove then runs at the heat output setting selected.



To Adjust Room Temperature (or Start the Stove)

Move the thermostat to the heat setting desired. If the room is cooler than the setting, the stove will go through the start-up sequence for approximately 10 minutes. During this period the lowest “HEAT OUTPUT” light will flash. Once up to temperature, the stove will then run at the heat output setting selected on the control panel. If the room is too hot, move the thermostat to a lesser setting.



To Adjust the Heat

Press the "Heat” buttons to adjust the heat output.

HINT:

If you find that the stove turns on and off repeatedly, you may wish to turn the heat output to a lesser setting. The lower setting will provide a more consistent heat output over time, eliminating the need for the thermostat to repeatedly turn the stove off.

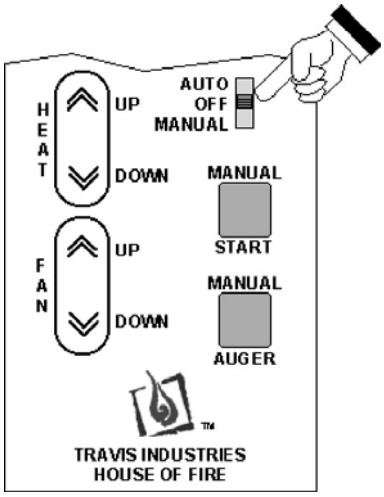
NOTE:

If the thermostat calls for heat while the stove is still cooling down, the stove will go through the start-up sequence (for a minimum of 20 minutes).

Control Board Operation

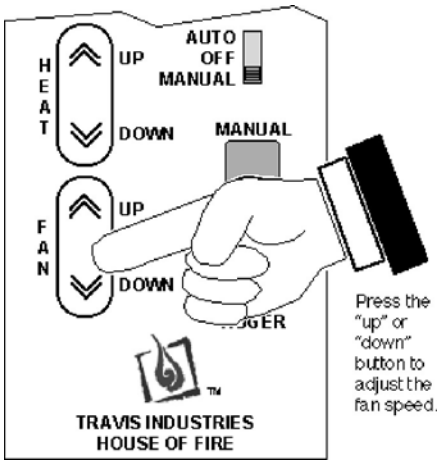
To Shut Down

Move the mode switch to "OFF". The exhaust blower will still run until the heater cools down.



Adjusting the Fan Speed

NOTE: When you press the Fan speed buttons the “Heat Output” lights will indicate fan speed (not “Heat Output”). After a few seconds the “Heat Output” lights will go back to displaying the heat output setting.

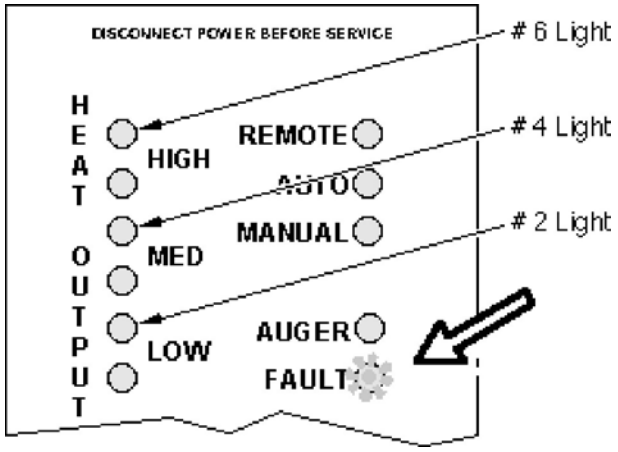


Control Board Operation

"FAULT" Light

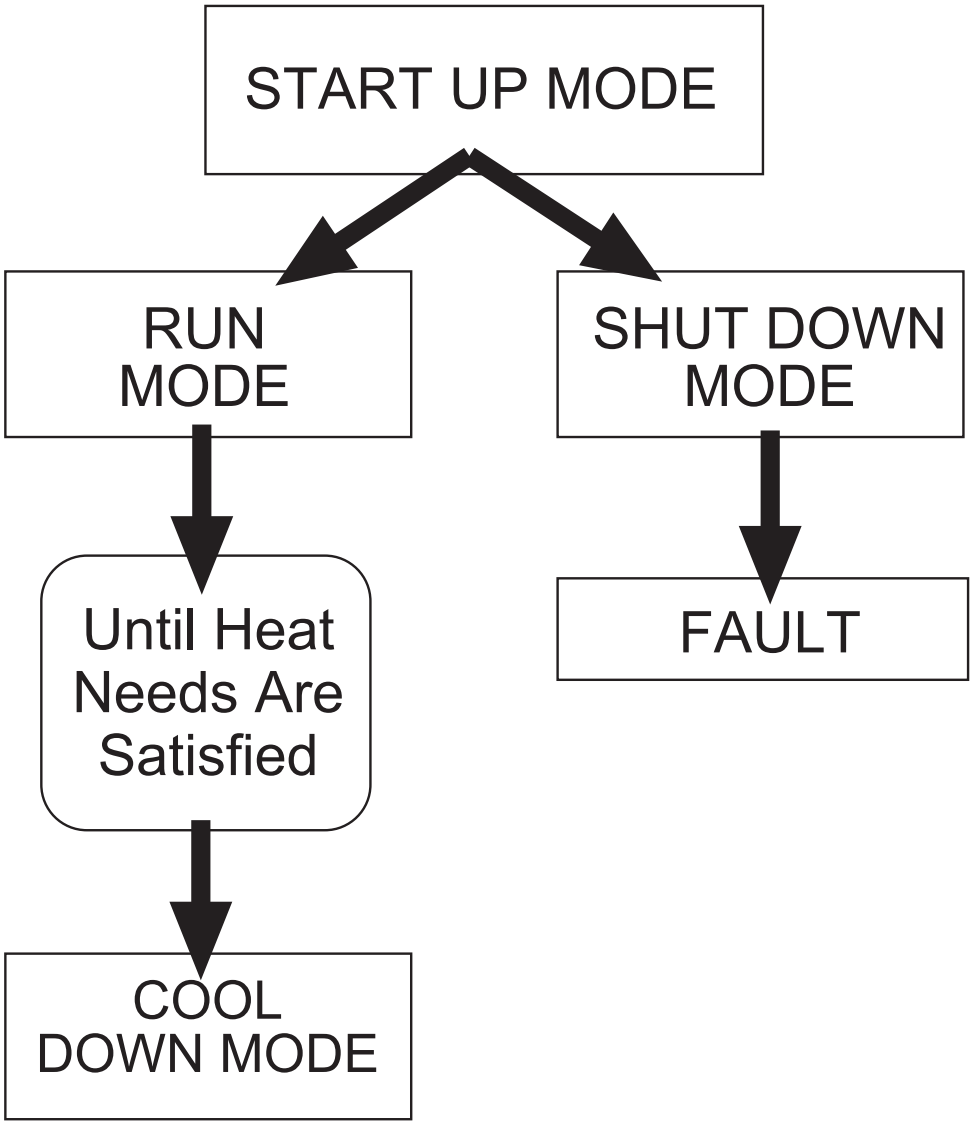
This light comes on when an error occurs:

- The stove runs out of pellets
- During initial start-up (for a split second) or for improper electrical frequency
- A start-up sequence that does not result in the heater coming up to temperature
- To reset the fault light, turn the mode switch to off and re-start the stove.

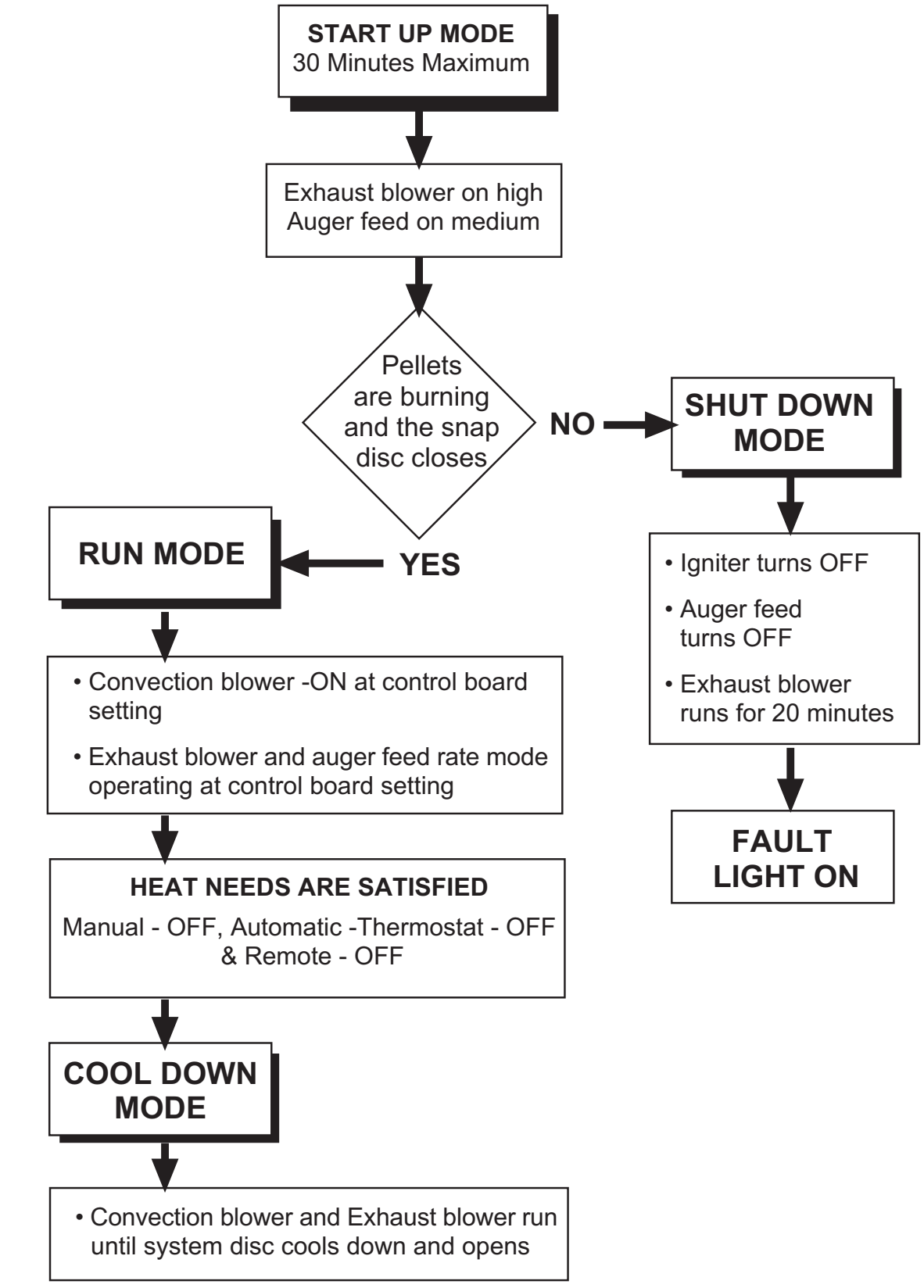


Pellet Appliance Operation Sequence

- Pellet appliance operation sequence is important to understand when servicing pellet appliances.
- Below are the steps our pellet appliances go through. The following page provides a detailed flow chart of what happens in each step.

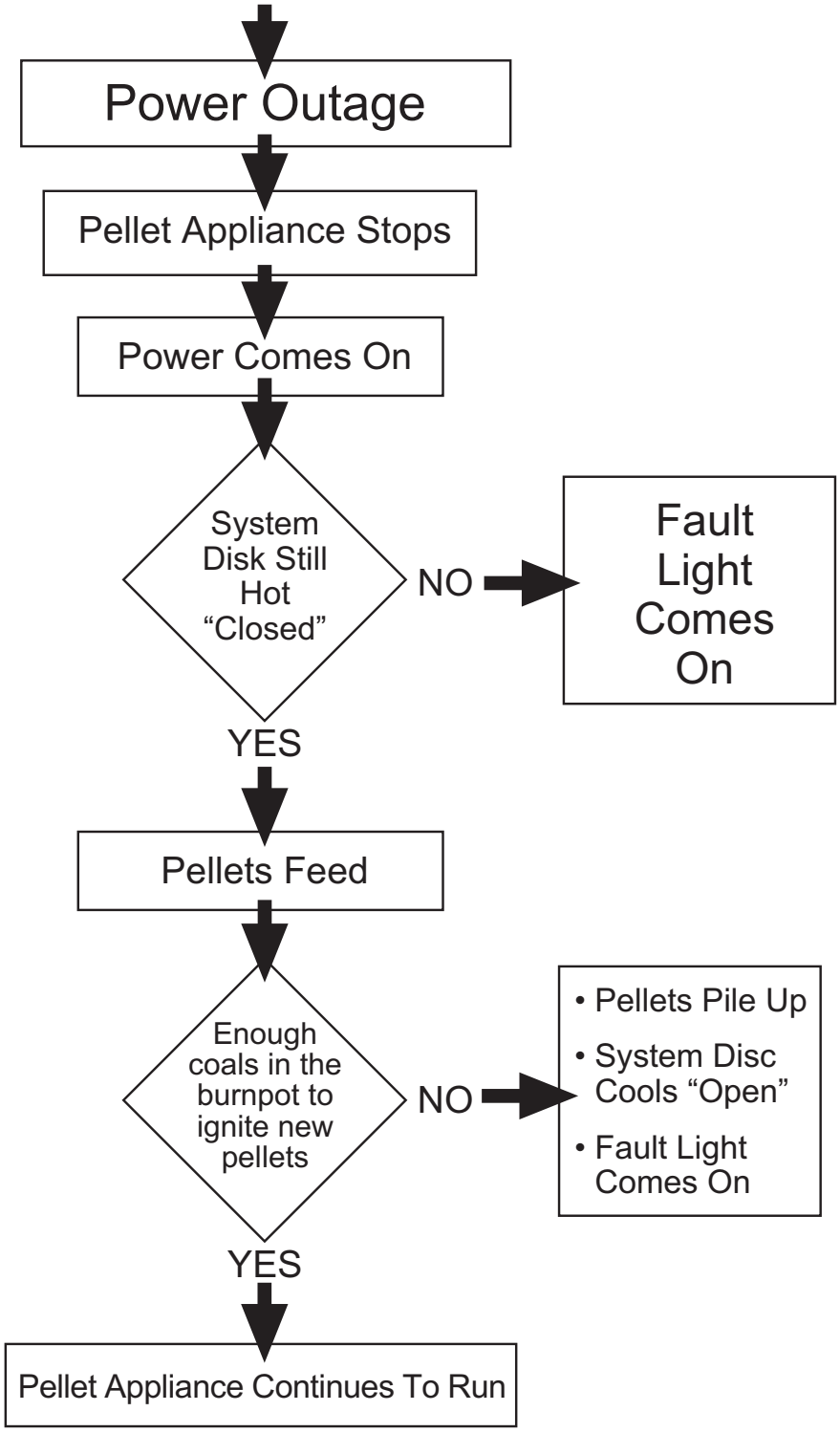


TRAVIS INDUSTRIES PELLET PRODUCTS



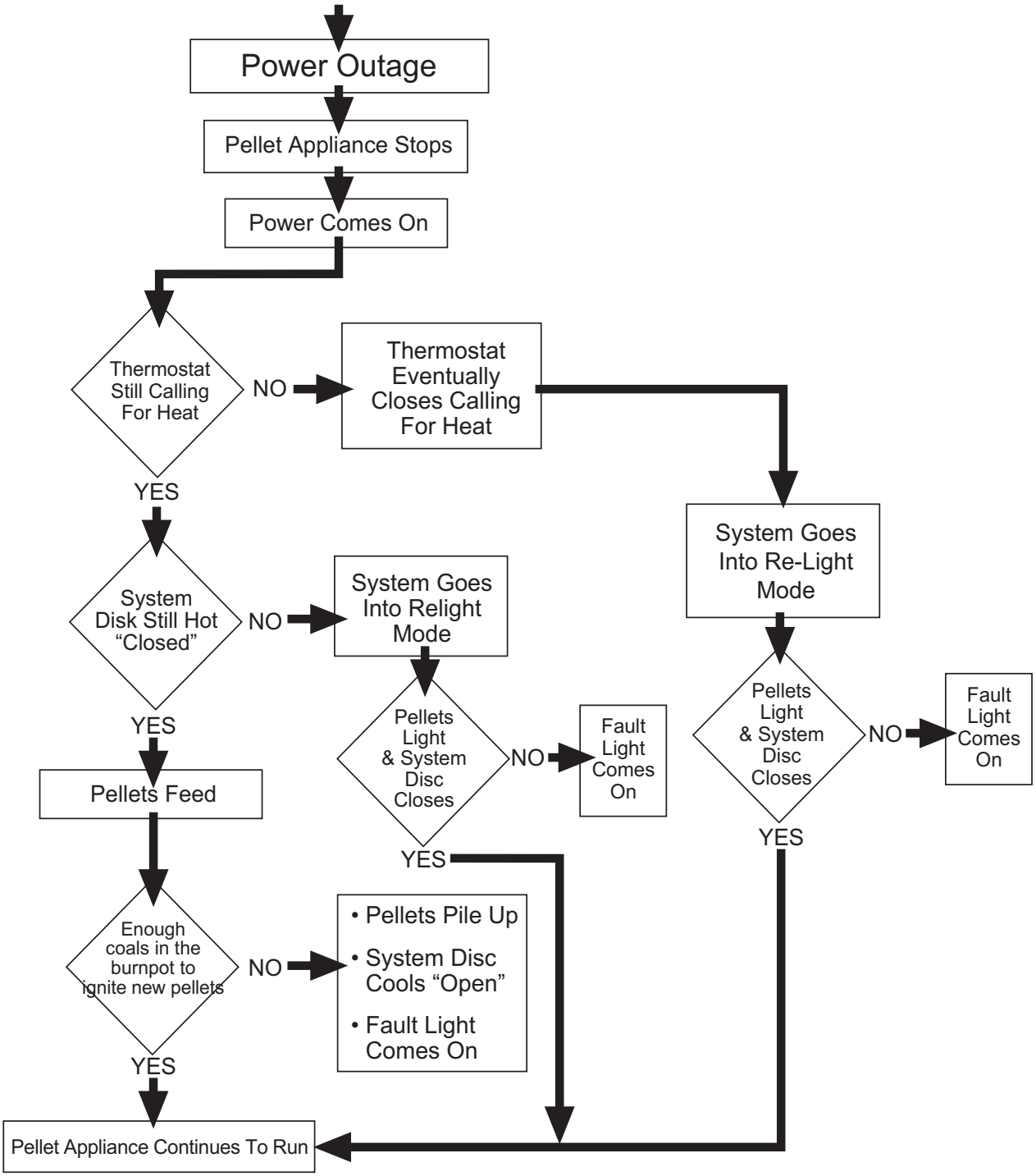
Power Outage

In manual operation or remote (but is not remote thermostat)



Power Outage

In automatic operation or remote thermostat (but is not remote thermostat)



TRAVIS INDUSTRIES
PELLET PRODUCTS

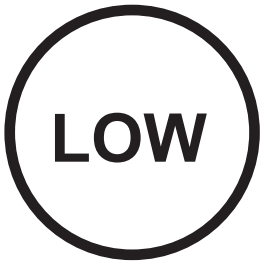
TRAVIS INDUSTRIES
HOUSE OF FIRE

RED
LIGHT

3 Seconds ON
OFF 2 Seconds

YELLOW
LIGHT

3 Seconds ON
OFF 6 - 9 Seconds

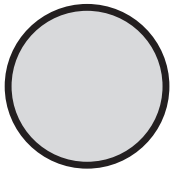
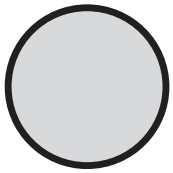
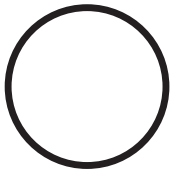
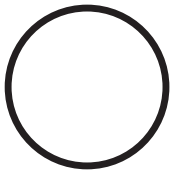


GREEN
LIGHT

3 Seconds ON
OFF 12 - 15 Seconds

TRAVIS INDUSTRIES
PELLET PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

			ON	OFF
HIGH RED LIGHT		6	2.5	2.2
		5	2.5	2.9
MED. YELLOW LIGHT		4	2.5	3.8
		3	2.5	4.6
LOW GREEN LIGHT		2	2.5	7.5
		1	2.5	10.7

Thermostats & Remotes

- Thermostats and remotes make for convenient and automatic operation of the pellet appliance.
- Our large pellet stoves and inserts ship with a wall thermostat.
- A wall thermostat is the best automatic device for customers who desire a more constant room temperature comfort.
- Not all people are qualified to operate remotes, some will always have problems with their remote.
- Remote operation will not show an immediate fire change (like channel changing on a TV)
- Our modulating remote has 6 fire and fan settings.

TRAVIS INDUSTRIES
HOUSE OF FIRE

Pellet Wall Thermostat

COMPATIBILITY

- All Travis Gas Stoves & Inserts
- Newport Pellet Stoves & Inserts
- Pioneer Pellet Stoves & Inserts
- Astoria Pellet Stoves & Inserts
- Yankee Pellet Stoves & Inserts

ITEMS NEEDED FOR ASSEMBLY

- Standard Screwdriver
- Additional tools may be required for laying the thermostat wire
- You may need additional tools to access the on/off switch on certain gas heaters - refer to the instructions in the owner's manual.

PACKING LIST

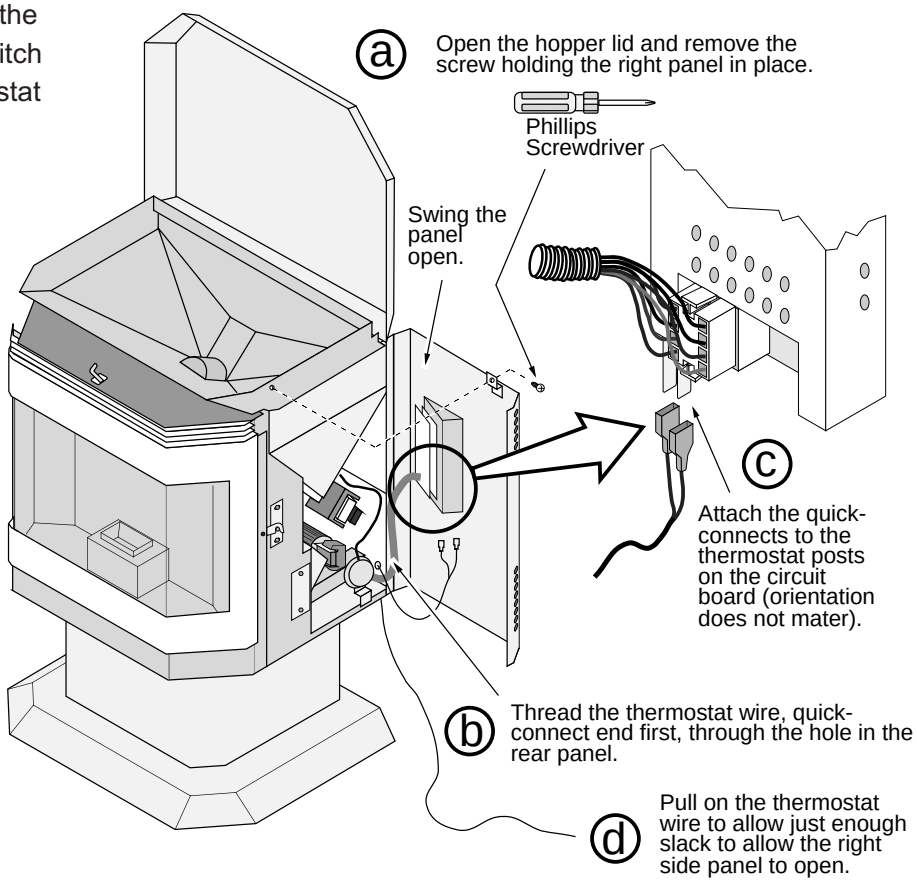
- Thermostat
- Thermostat wire (20' long)
- 2 Screws (for attaching the thermostat to wall)

INSTALLATION INSTRUCTIONS

! This kit must be installed by a qualified technician.

! Do not connect 110 VAC to the gas control valve or on/off switch on gas heaters or the thermostat posts on pellet heaters.

Pellet Heater Installation
Attach the thermostat wire to the circuit board.

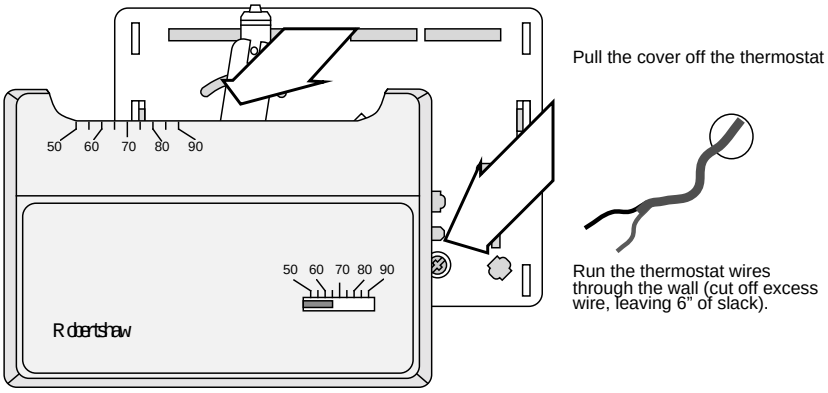


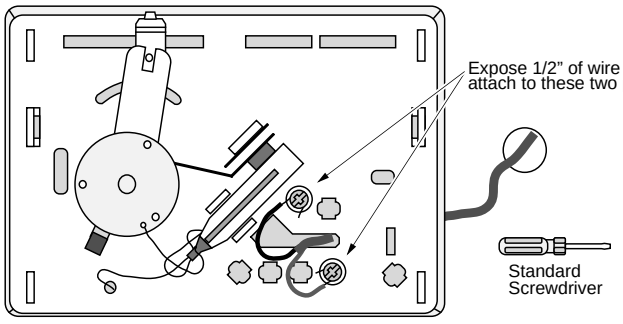
Pellet Wall Thermostat

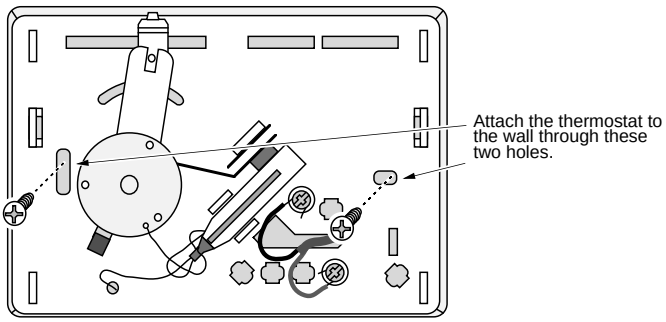
Thermostat Placement and Installation

1. Determine a location for the thermostat that is within range of the 20' length of thermostat wire. It should be centralized in the room and away from the heater. The wire may be routed externally on the wall or behind the wall (preferred). Run the thermostat wire to this location. Use nylon ties, if necessary to keep the wire from contacting any hot portions of the heater.

2. Follow the directions below to attach the thermostat and thermostat wires.







Pellet Remote Control

CHECK CONDITION OF SHIPMENT

Upon receipt of this kit, check the condition of the packaging. Damage to the package should be noted on the carrier's freight receipt. Any damage claims as a result of shipping must be handled through the shipper. Travis Industries will provide assistance in resolving shipping claims or replacing items not included in the package. Please report any missing items immediately.

COMPATIBILITY

• All Travis Gas Stoves & Inserts • Newport (Avanti) Pellet Stoves & Inserts • Pioneer (Heritage Bay) Pellet Stoves & Inserts

ITEMS NEEDED FOR ASSEMBLY

You may need tools for to access the on/off switch on gas heaters - refer to the instructions below and in the owner's manual.

PACKING LIST

• Receiver • Transmitter • Receiver Hanger • Pellet Stove Connector Wires • Gas Stove Connector Wires • 3 AAA Batteries

FCC REQUIREMENTS

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions,, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiver.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

CANADIAN EQUIPMENT REQUIREMENTS

This digital apparatus does not exceed the (Class A/Class B) limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications. Le present appareil numerique n'emet pas de bruits radioelectricques depassant les limites applicables aux appareils numeriques (de la class A/de la class B) prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

This device complies with RSS-210 of Industry and Science Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

INSTALLATION INSTRUCTIONS

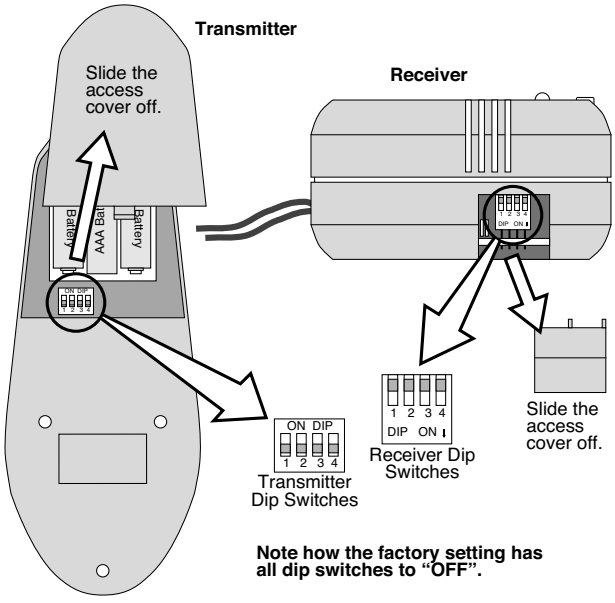
! Shut off power to the appliance and allow it to cool prior to installation.

! This kit must be installed by a qualified technician.

! All 110 VAC wiring must be done by a qualified electrician and shall be in compliance with local codes and the National Electric Code ANSI/NFPA No. 70 (in the United States), or with the current CSA C22.1 Canadian Electric Code (in Canada).

! Do not connect 110 VAC to the gas control valve or on/off switch on gas heaters or the thermostat posts on pellet heaters.

1 Remove the cover from the back of the transmitter and receiver. Slide the code switches to a random position on the receiver. Then position the switches on the transmitter to match the dip switch positions on the receiver. Prior to replacing the cover, place three AAA batteries inside the transmitter.



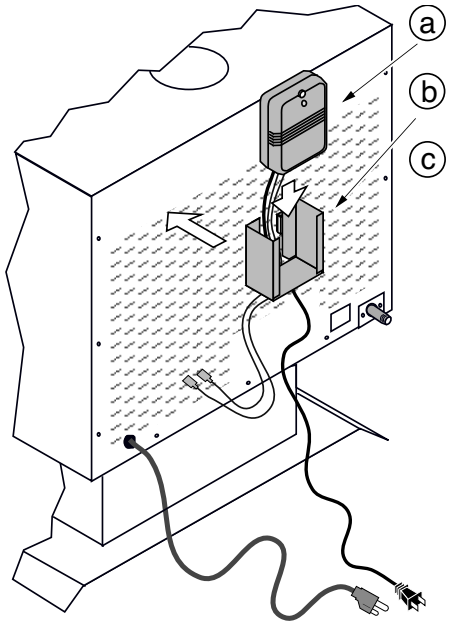
TRAVIS INDUSTRIES
HOUSE OF FIRE

Pellet Remote Control

Gas Stove Installation

Place the receiver, with holder, on the back of the heater and route the receiver wires to the on/off switch (see the illustration below). Connect the receiver power cord to a 110 VAC outlet.

Attach one receiver and one gas control valve wire (orientation does not matter) to each gas stove connector wire - then attach the gas stove connector wires to the on/off switch (see the illustration at the bottom of the page).

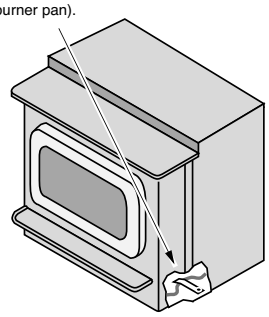


(a) Place the receiver into the holder with the wires exiting the rear.

(b) Place the holder against the rear panel. Route the power cord to a 110 VAC outlet.

(c) **Stoves with the on/off switch in back:** Route the thermostat wires through the rear panel, to the on/off switch (refer to the owner's manal for details on accessing the back of the on/off switch).

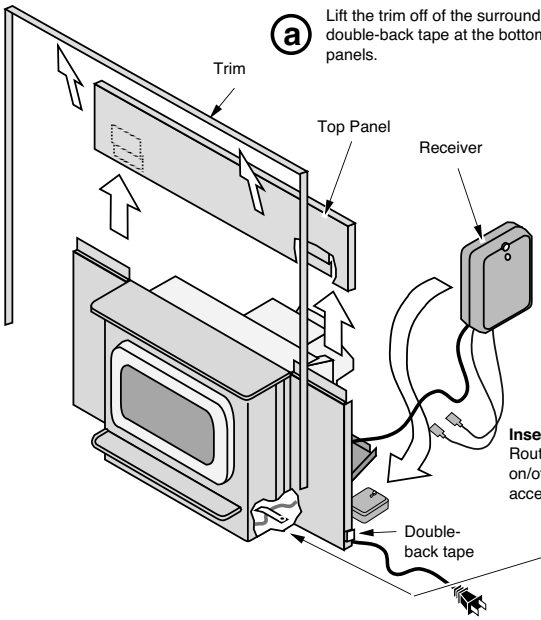
Stoves with the on/off switch in front: Route the thermostat wires through the rear panel, along the base, under the wire clip (make sure the wires do not contact the burner pan).



Gas Fireplace Insert Installation

Place the receiver, with holder, on the back of the right side surround panel and route the receiver wires to the on/off switch (see the illustration to the right). Connect the receiver power cord to a 110 VAC outlet.

Attach one receiver and one gas control valve wire (orientation does not matter) to each gas stove connector wire - then attach the gas stove connector wires to the on/off switch (see the illustration below).



(a) Lift the trim off of the surround panels (you may need to peel the trim off the double-back tape at the bottom of the panels). Lift the top panel off the side panels.

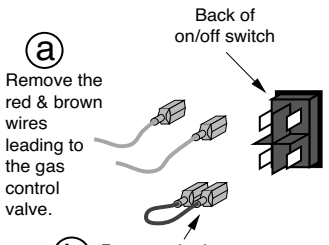
(b) Place the receiver on the floor of the firebox, as far away from the insert as possible.

WARNING:
The receiver must be 3" away from the heater and below the top convection channel.

(c) Route the power cord away from hot or moving objects and behind the surround panel to a 110 VAC outlet.

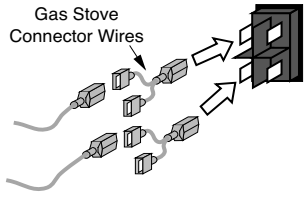
Inserts with the on/off switch on the surround panel: Route the thermostat wires through the rear panel, to the on/off switch (refer to the owner's manal for details on accessing the back of the on/off switch).

Inserts with the on/off switch in front: Route the thermostat wire along the base of the insert and under the wire clip (make sure the wires do not contact the burner pan).

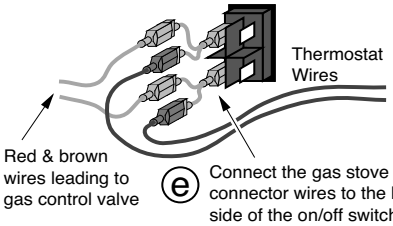


(a) Remove the red & brown wires leading to the gas control valve.

(b) Remove the jumper wire and discard.



(c) Connect the red & brown wire (removed in step "a") to each gas stove connector wire.



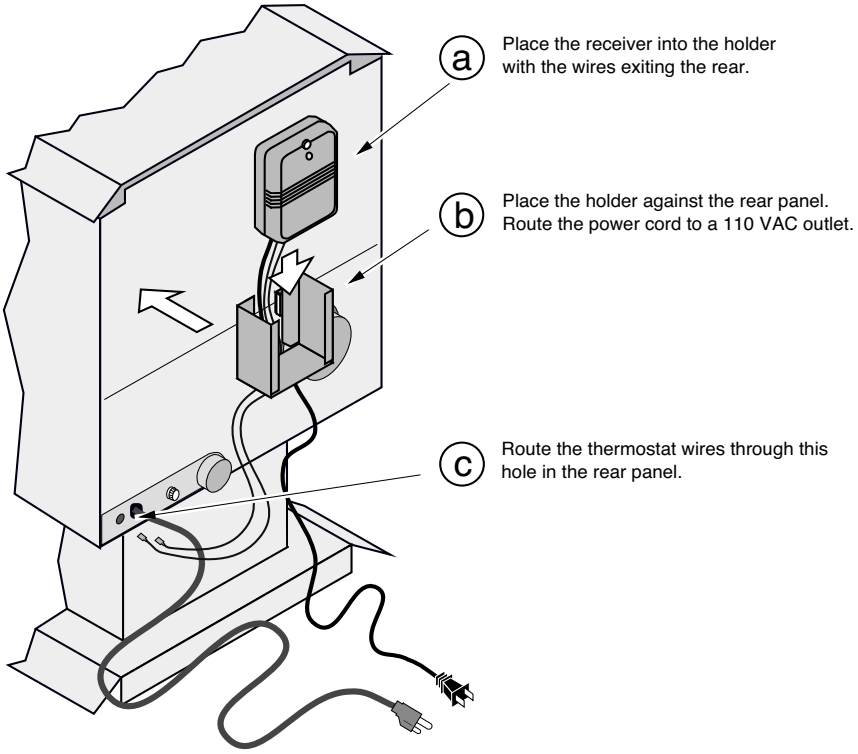
(e) Connect the gas stove connector wires to the left side of the on/off switch.

(d) Connect each thermostat wire to each gas stove connector wire.

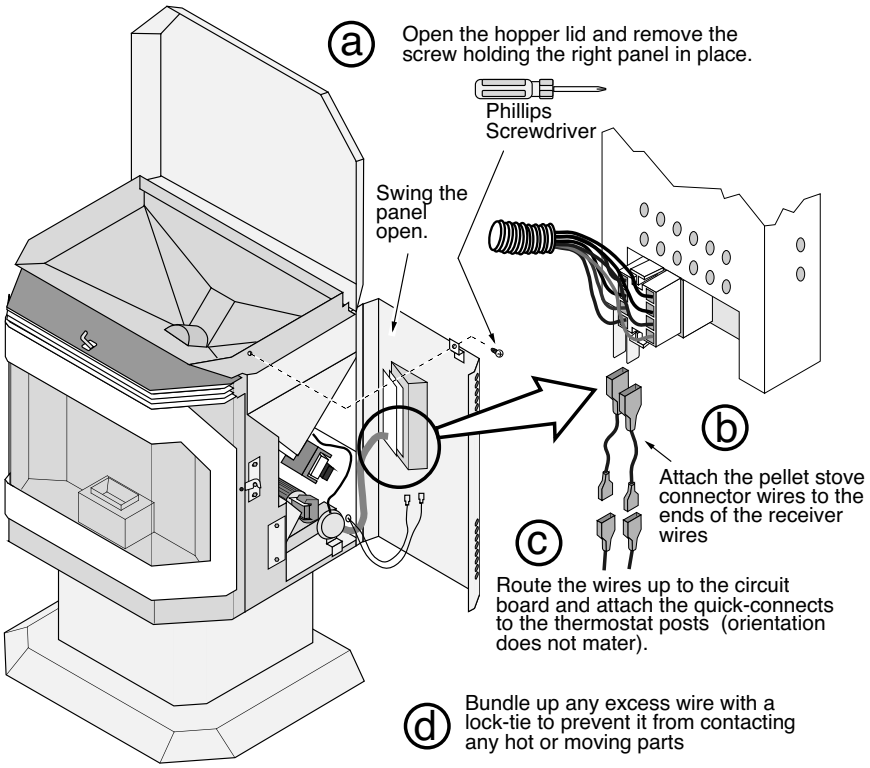
Pellet Remote Control

Pellet Stove Installation

Place the receiver holder on the back of the heater and route the receiver wires to the on/off switch (see the illustration to the right). Connect the receiver power cord to a 110 VAC outlet.



Attach the pellet stove connector wires to the ends of the receiver wires. Then attach the connector wires to the back of the circuit board (see the illustration to the right).

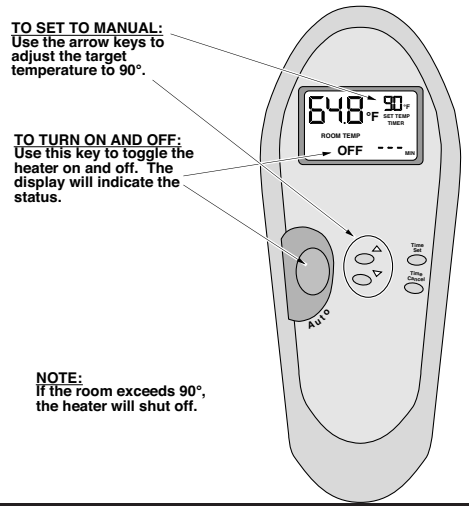


Pellet Remote Control

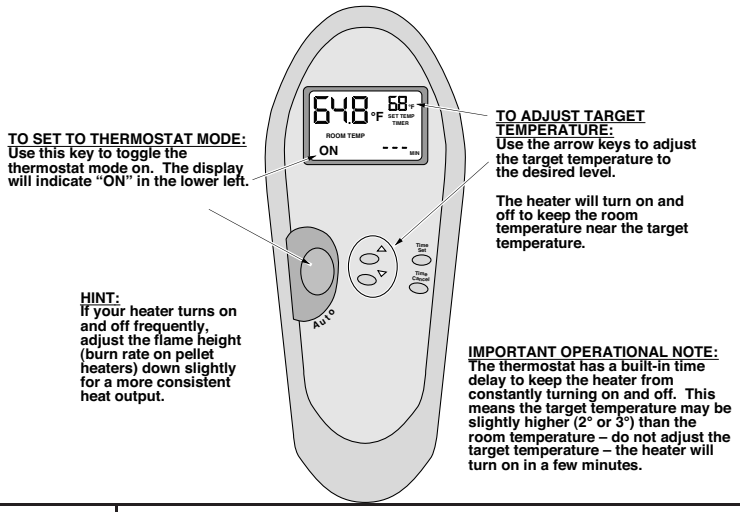
NOTE: The pilot flame must be lit, the gas control valve turned to "ON", and the on/off switch turned to "OFF" for the remote to work correctly.

NOTE: This kit must be installed by a qualified technician.

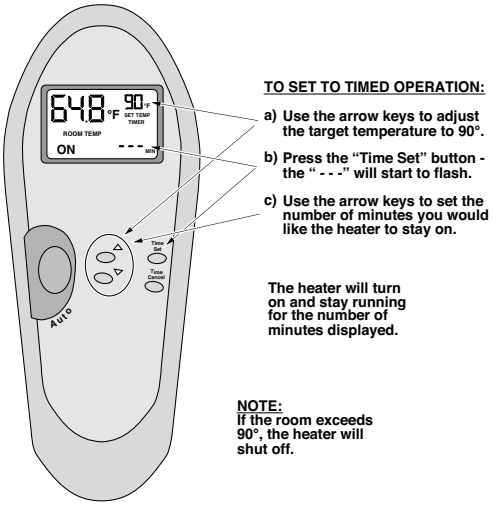
MANUAL MODE:



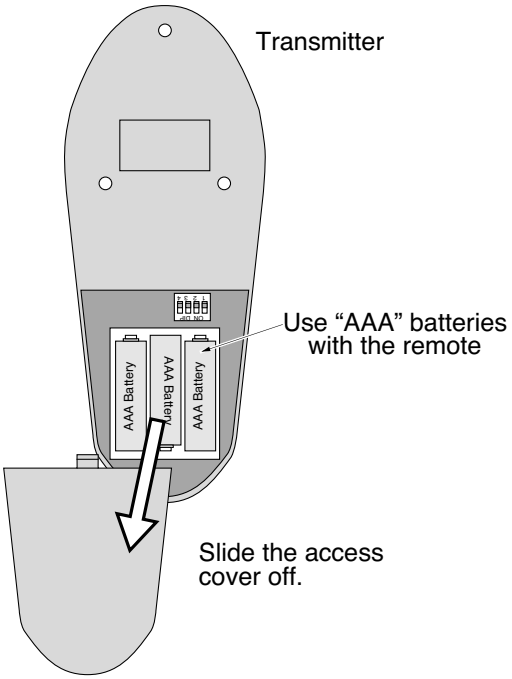
THERMOSTAT MODE:



TIMED MODE:



REPLACING THE BATTERIES:



POWER OUTAGES:

If a power outage occurs, the receiver will turn the heater off. Once power is restored, the remote will turn the heater on (if the remote calls for heat) within 30 minutes. If you wish to over-ride the remote and turn the heater on (gas stoves only), turn the on/off switch on the gas heater to "ON".

Freestanding Stove Outside Air (Small or Large Pellet Stove)

Outside Air (used for combustion)

• Must not be drawn from an enclosed space (garage, unventilated crawl space).

HINT: Travis Industries strongly suggests outside air for all residential installations, especially for those that are energy efficient, air-tight homes.

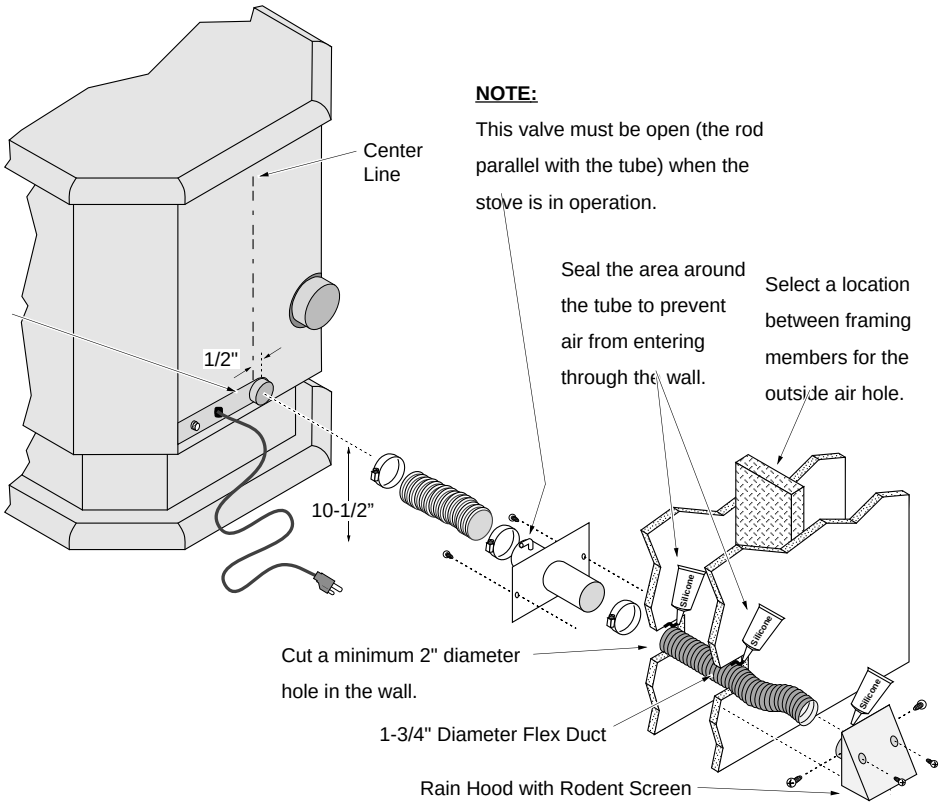
• Must not be over 15' long.

• Must be made with 1 3/4" diameter or larger metal or aluminum duct with a metal screen attached to the end to keep out rodents (P.V.C. or other combustible materials may not be used). We recommend the Travis Industries Outside Air Kit (part # 99200136).

• Must not terminate above or within 1' of the chimney termination.

• Must have a rain cap or down-turned elbow to prevent water from entering.

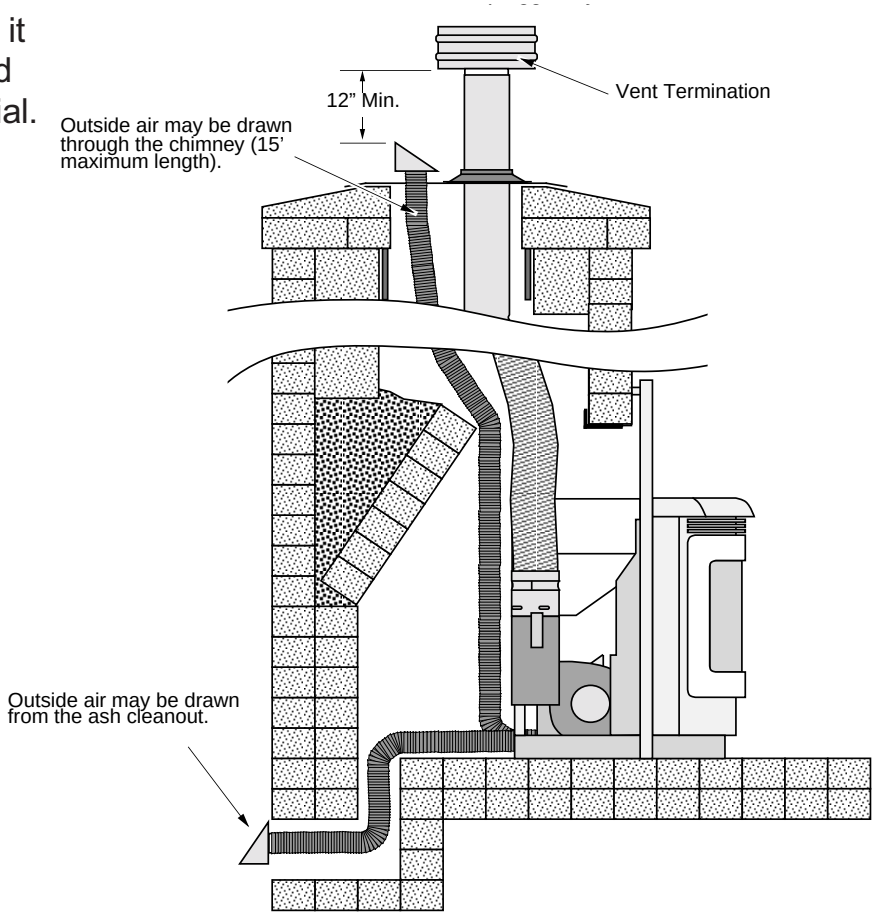
• Must be located so that it will not become plugged by snow or other material.



Fireplace Insert Outside Air (Small or Large Pellet Insert)

Outside Air (used for combustion)

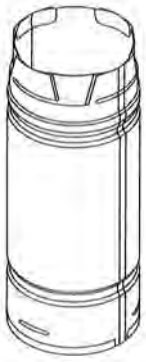
- Outside air is optional (except in mobile homes or when required by local building codes).
- Must not be drawn from an enclosed space (garage, unventilated crawl space).
- Must not be over 15' long.
- Must be made with 1 3/4" diameter or larger metal or aluminum duct with a metal screen attached to the end to keep out rodents (P.V.C. or other combustible materials may not be used). Use the Travis Industries Outside Air Kit (part # 99200136).
- Must not terminate above or within 1' of the chimney termination.
- Must have a rain cap or down-turned elbow to prevent water from entering.
- Must be located so that it will not become plugged by snow or other material.



Pellet Vent

Pellet Vent

- Rigid Pipe - 3” & 4”
- 6”, 1’, 2’, 3’, & 5’ Lengths
- Galvanized or Black

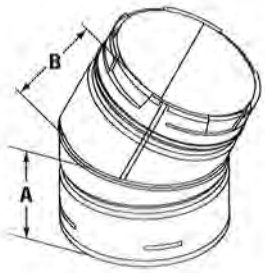


- Ridged pipe comes in 3” & 4” diameters.
- Lengths include 6”, 1’, 2’, 3’, & 5’.
- Galvanized or painted black
- Flex pellet vent comes in 3” & 4” diameters.
- Length is 5’.
- 4 ply Type 430 S.S. flex.
- Ceramic rope gasket is used to prevent fly ash leakage.
- Flex pipe may be used in combination with ridged pipe when venting an insert.

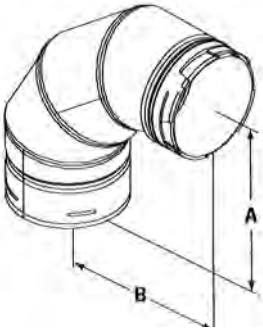
Pellet Vent

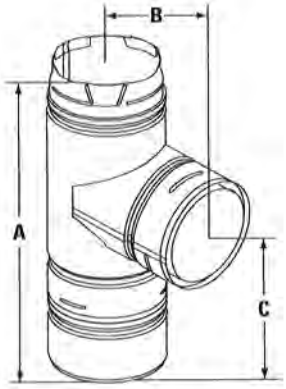
- Flex Pipe - 3” & 4” Dia.
- 5’ Length
- 4 Ply S.S. Flex
- Twist Lock
- Ceramic Rope Gasket

Pellet Vent

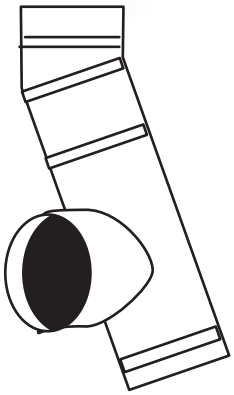


- Elbow comes in 45˚ or 90˚ and in 3” or 4” diameters.





- Tee with clean-cut in 3” or 4” diameters.

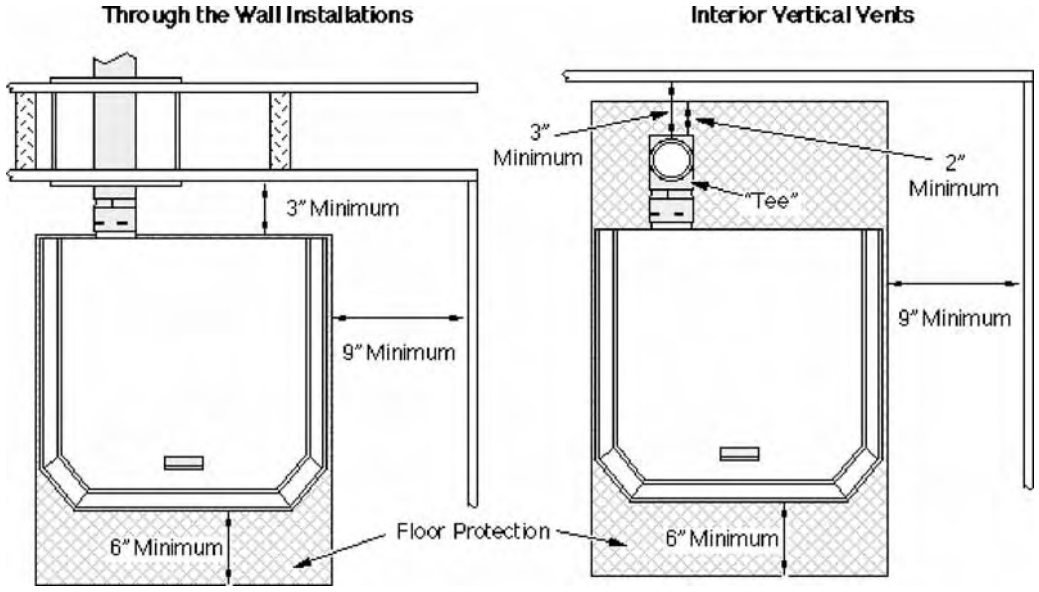


- Center flue adapter in 3” or 4” diameters.

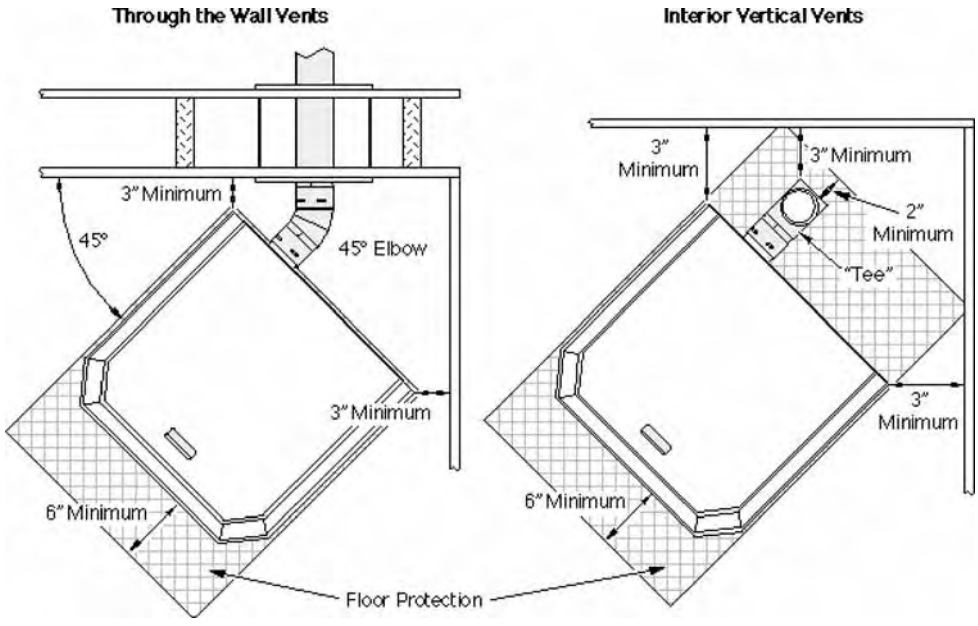
Pellet Vent

- Pellet vent is a Type “L” classified vent.
- Type “L” vent is rated for flue temperatures up to 570˚F.
- Pellet Vent is a two wall constructed vent
- The inner vent is made of stainless steel - .012 Type 430 SS.
- The outer liner is made of galvanized steel - .018.
- Each joint contains a high temperature ceramic rope gasket to prevent fly ash leakage.
- Pellet vent employs easy, twist lock connections.

Clearances - Straight Installation



Clearances - Corner Installation



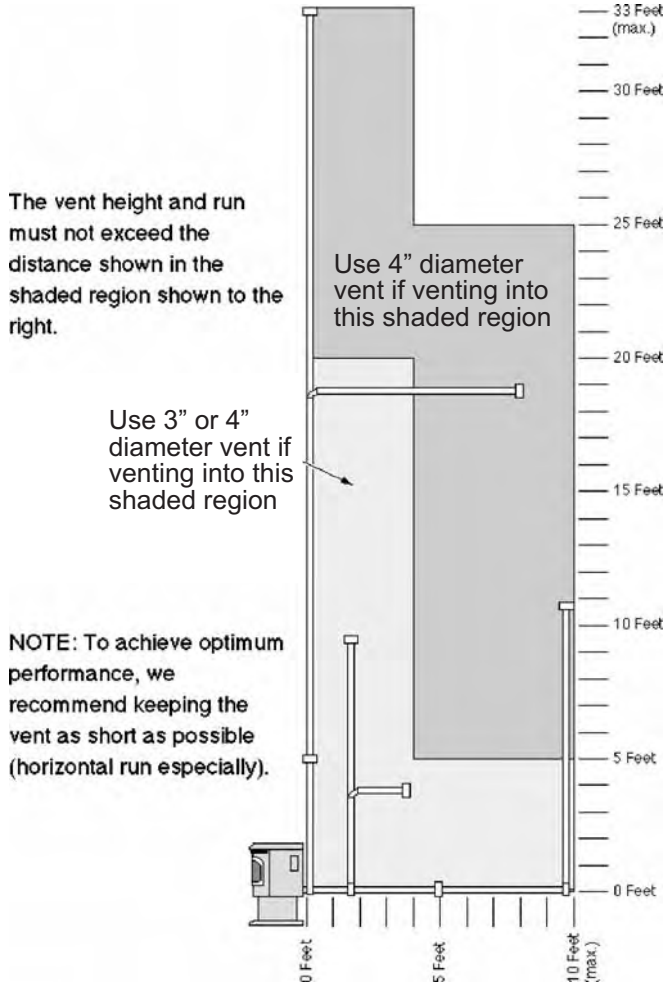
Note: If interior vertical pellet vent is used, the clearance to the backwall is determined by the upward-turning elbow or "Tee." It will vary in depth depending on the brand of pellet vent used (it is approximately 5"). Before placing the heater, connect the elbow or "Tee" and measure off the 3" clearance.

Venting the Pellet Stove

- Pellet vent must maintain a minimum 3” clearance to any combustible (install vent at clearances specified by the vent manufacturer).
- Do not connect the pellet vent to a vent serving any other appliance or stove.
- Do not install a flue damper in the exhaust venting system of this unit.
- Use an approved wall thimble when passing the vent through walls and a ceiling support/fire stop spacer when passing the vent through ceilings (make sure to maintain 3” clearance to any combustibles).
- No more than 180 degrees of elbows (two 90 degree elbows, or two 45

Maximum Venting Distance:

- Vent must have a support bracket every 5’ of pellet vent when exterior of structure.
- If the heater is installed at an altitude over 4,000’ use 4” diameter for all applications.



Pellet Vent Type

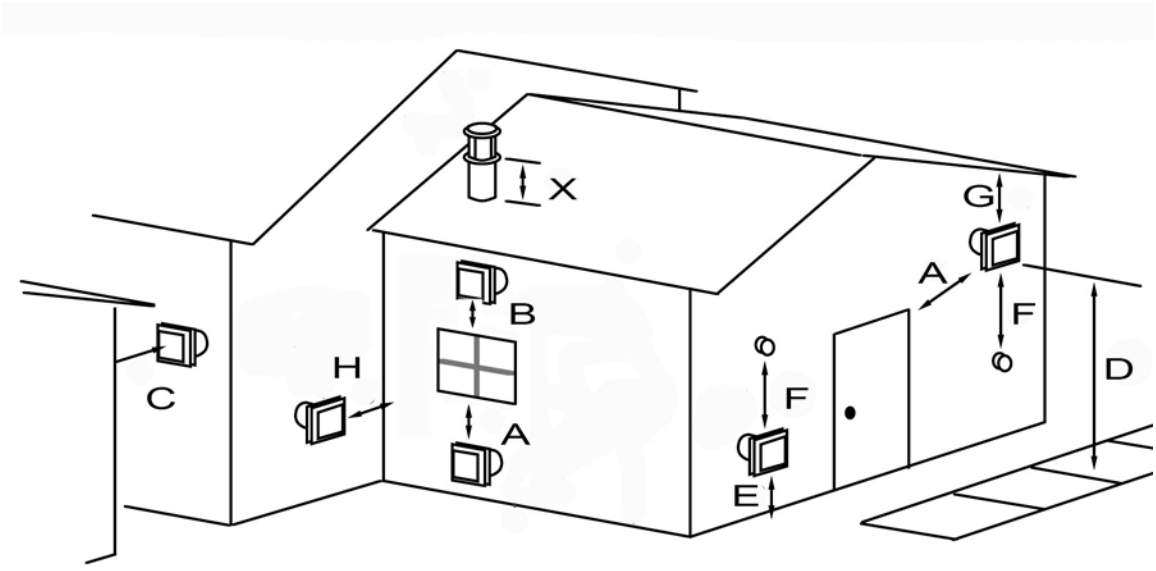
- Must be Type "L"(except for masonry fireplace installations) - or - connect the vent to a factory built type "A" chimney (use an adapter and seal all joints).

Installing the Pellet Vent

Seal each vent section by applying a liberal amount of 500˚F RTV silicone around the gap between sections.

- Horizontal sections must have a 1/4" rise every 12" of travel.
- Pellet vent connections must be sealed airtight with 500° F. RTV silicone and screwed together with at least three sheet metal screws.

HINT: The Travis Industries Center Flue Adapter has less depth than a standard "tee" and centers the flue, easing installation.



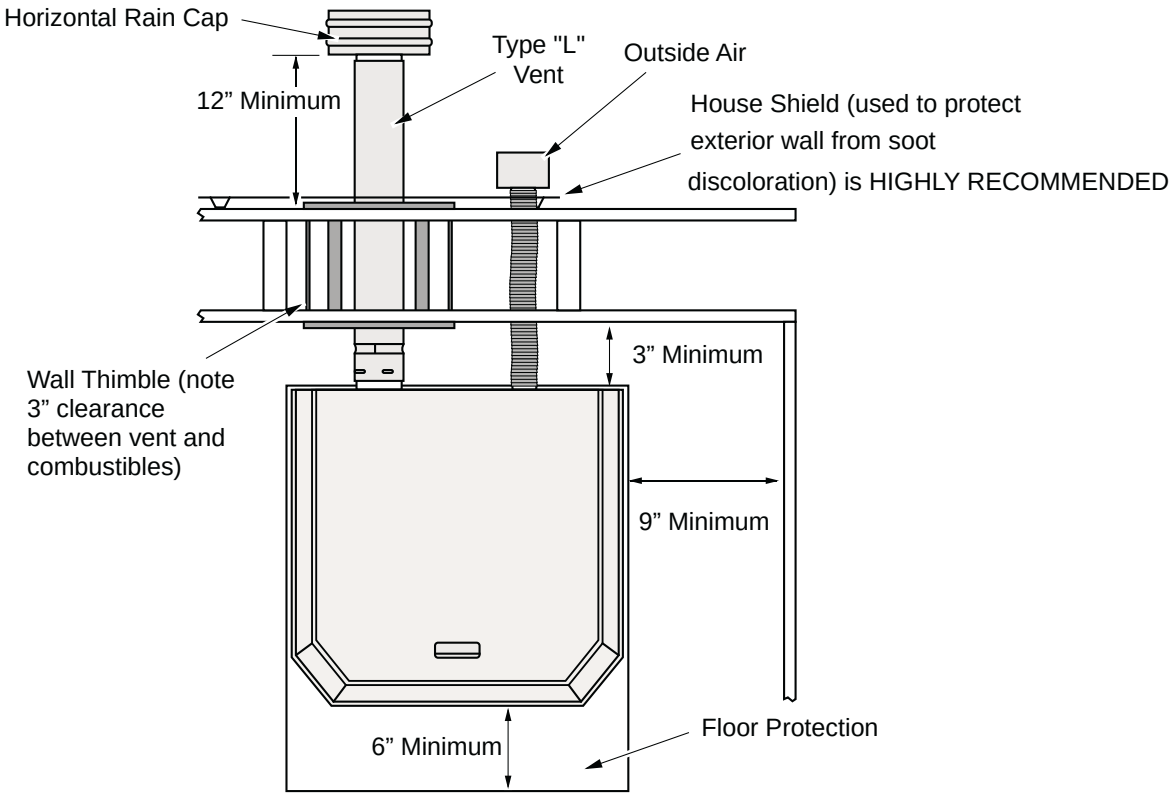
NOTE: Measure clearances to the nearest edge of the exhaust hood.

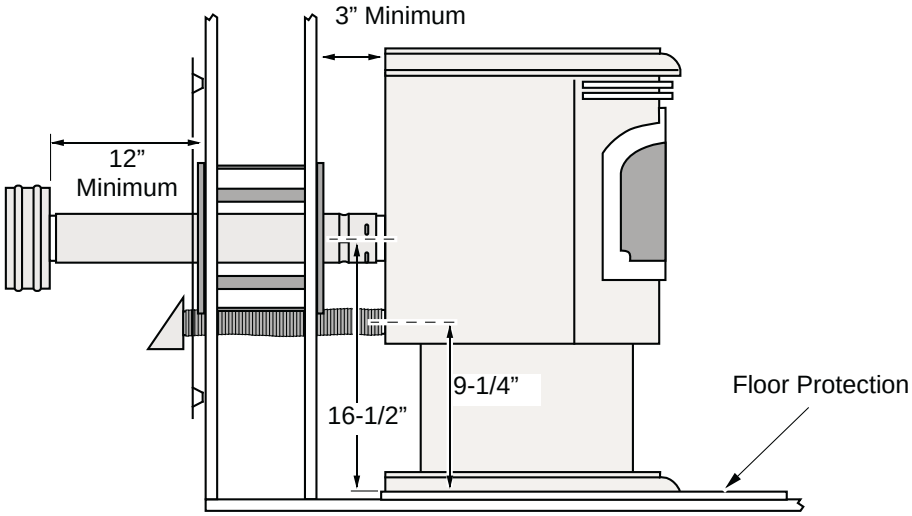
Pellet Vent Termination (See the illustration above)

- Must have an approved cap (to prevent water from entering) or a 45° downturn.
- If the termination is located on a windy side of the house, an approved house shield is recommended to prevent soot from building up on the side of the house.
- Must not be located where it will become plugged by snow or other material.
- Horizontal terminations must protrude 12" from the wall, vertical terminations require 24".

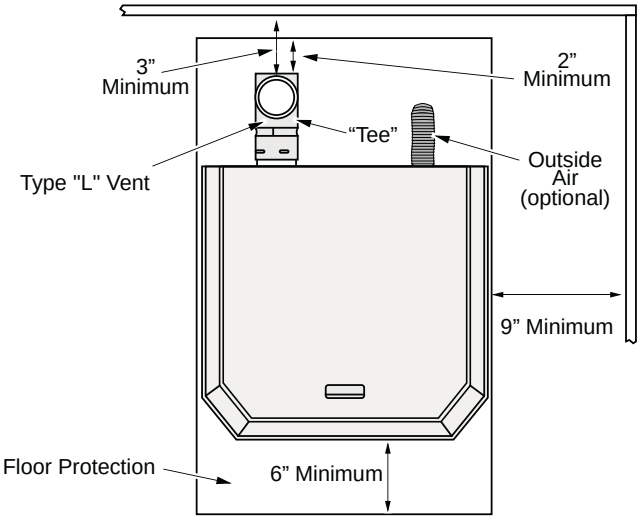
A	Minimum 4' clearance below or beside any door or window that opens
B	Minimum 1' clearance above any door or window that opens
C	Minimum 2' clearance from any adjacent building
D	Minimum 7' clearance above any grade when adjacent to public walkways NOTE: Vent may not terminate in covered walkway or breezeway.
E	Minimum 2' clearance above any grass, plants, or other combustible materials
F	Minimum 3' clearance from any forced air intake of any other appliance
G	Minimum 2' clearance below eaves or overhangs
H	Minimum 1' clearance horizontally from combustible wall
X	Must be a minimum of 2' above the roof

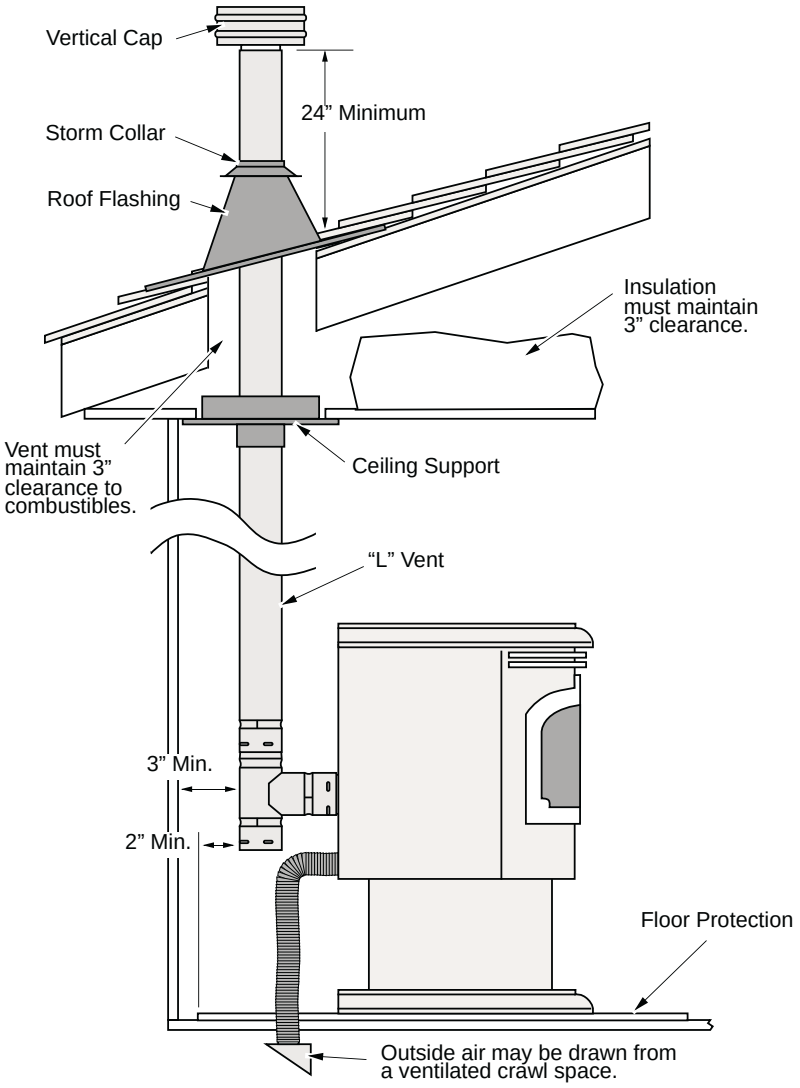
Installation Example: Direct "Through-the-wall" Installation



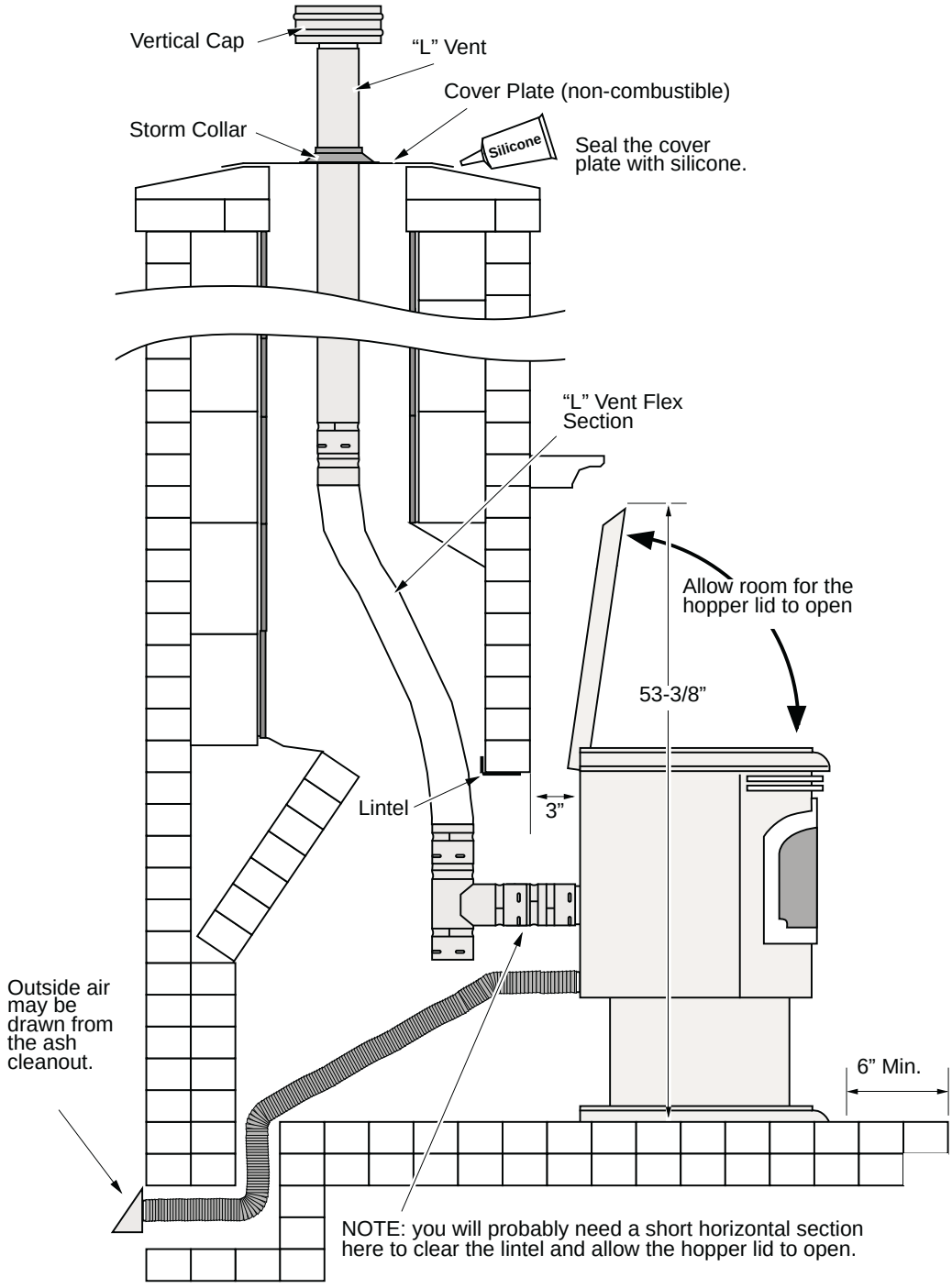


Installation Example: Direct "Through-the-wall" Installation



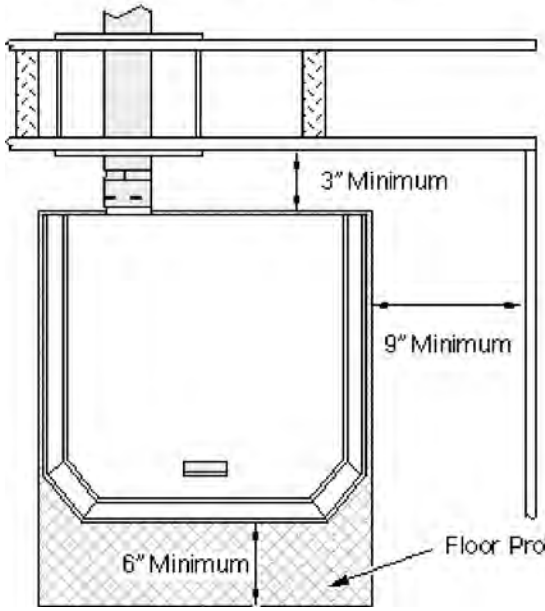


Installation Example: Hearth Fireplace (Masonry or Z.C. (metal)

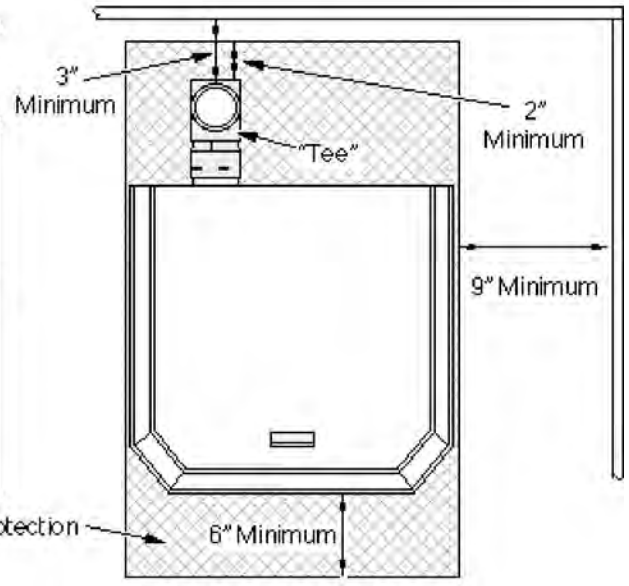


Clearances - Straight Installation

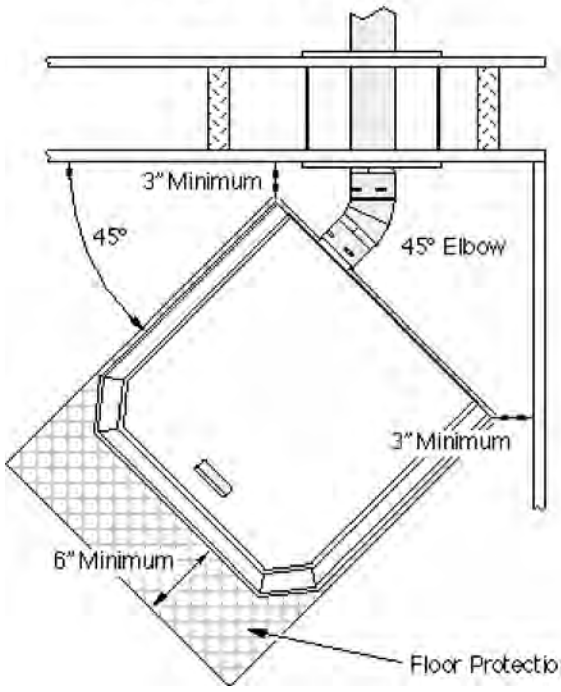
Through the Wall Installations



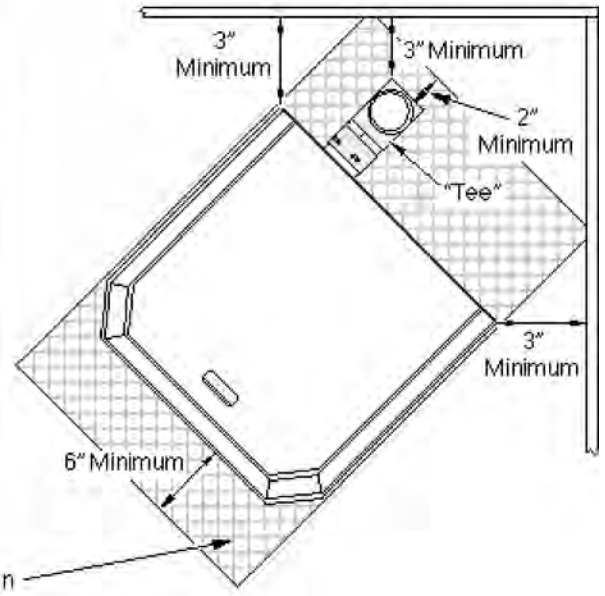
Interior Vertical Vents



Through the Wall Vents



Interior Vertical Vents



Small Stoves/Inserts Upgrade Kit

TRAVIS INDUSTRIES
HOUSE OF FIRE

Restrictor Retrofit Installation

For the Pioneer PS & PI, Newport PS & PI -- See the SKU's below

Compatibility

Pioneer PS or Newport PS	221-11090
Pioneer Bay PI	221-11085
Newport Bay PI	221-11088

When to Use This Kit

This kit replaces the stock intake restrictor with a new restrictor that allows for restrictor adjustment while the heater is in operation. This kit is only intended for those units requiring frequent restrictor adjustment (often due to inconsistent fuel).

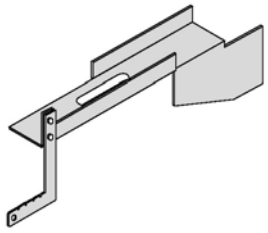
Important Warnings

Turn off electricity to the appliance and make sure it has fully cooled prior to conducting service.

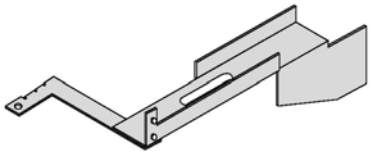
Packing List

- Restrictor Plate with Handle (see the illustration below)

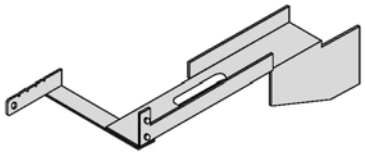
Pioneer PS and Newport PS



Newport Bay PI



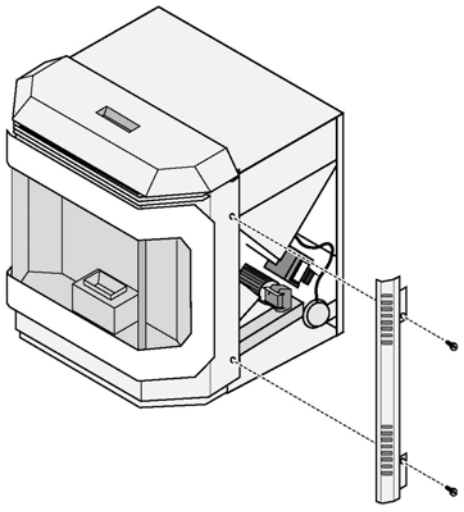
Pioneer Bay PI



- Bullet Catch Bracket
- Hex Nut (1/4-20)

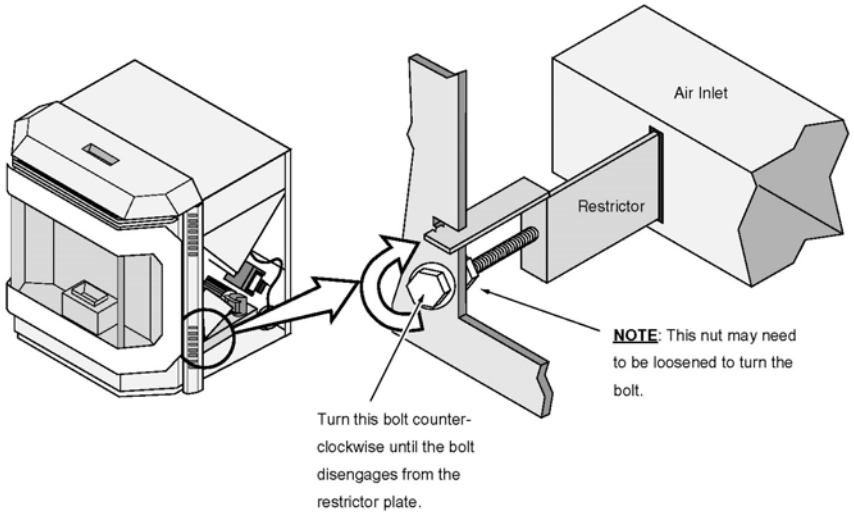
Installation

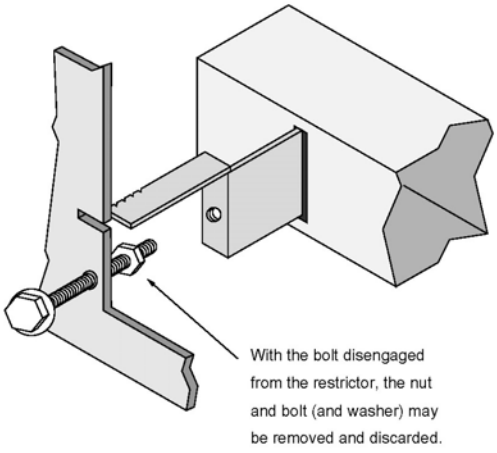
1. Gain access to the right side of the heater. On inserts, remove the surround panels. On stoves, open the hopper, remove the screw holding the right side panel in place, and swing the panel open.
2. For inserts, remove the right side convection front (see the illustration to the right).

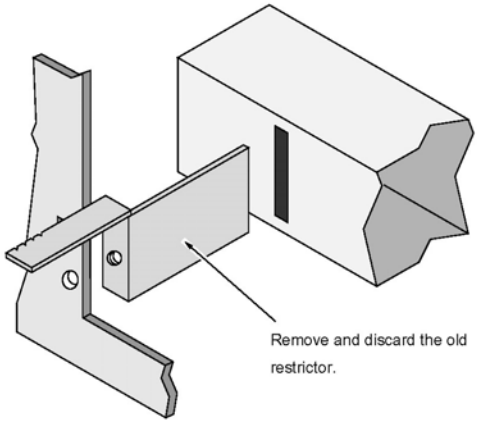


Small Stoves/Inserts Upgrade Kit

3. Remove the stock restrictor following the directions below.

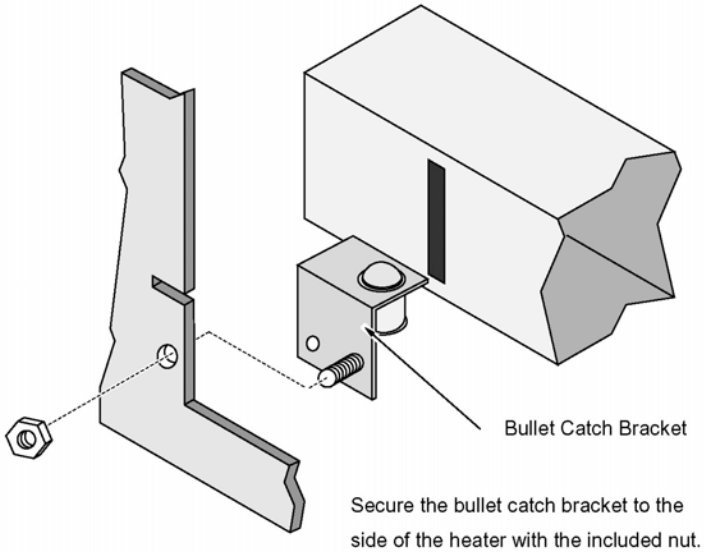




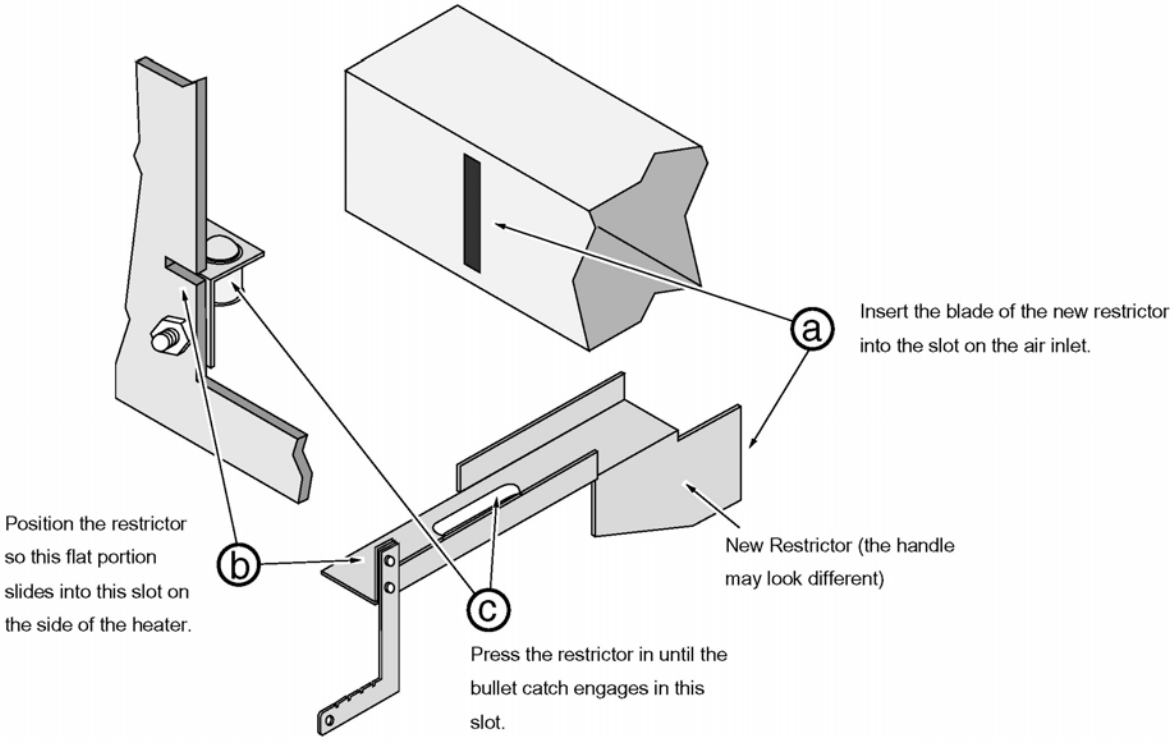


Small Stoves/Inserts Upgrade Kit

4. Install the bullet catch bracket following the directions below.



5. Install the new restrictor following the directions below.



6. Return the heater to its original configuration (on inserts replace the side convection front).

TRAVIS INDUSTRIES
HOUSE OF FIRE

Small Stoves/Inserts
Restrictor Setting Instructions

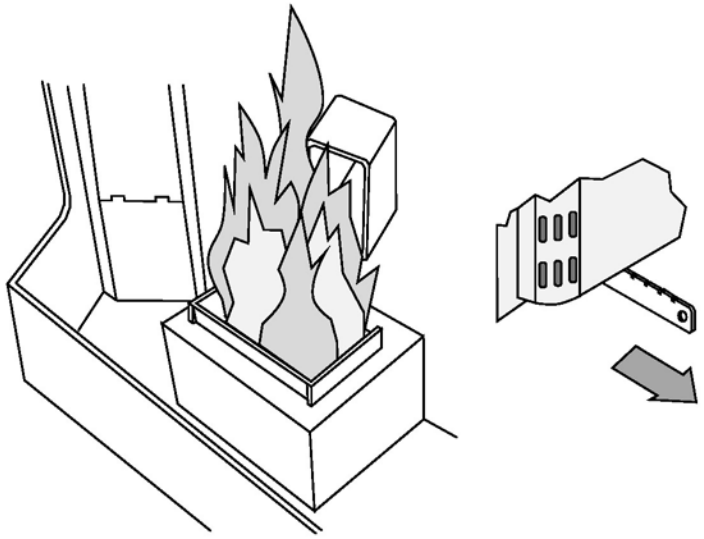
Restrictor Adjustment

The restrictor "fine tunes" your appliance, adjusting the amount of air flowing to the flame.

NOTE: the optimal restrictor position will vary over time as soot builds up inside the exhaust system.

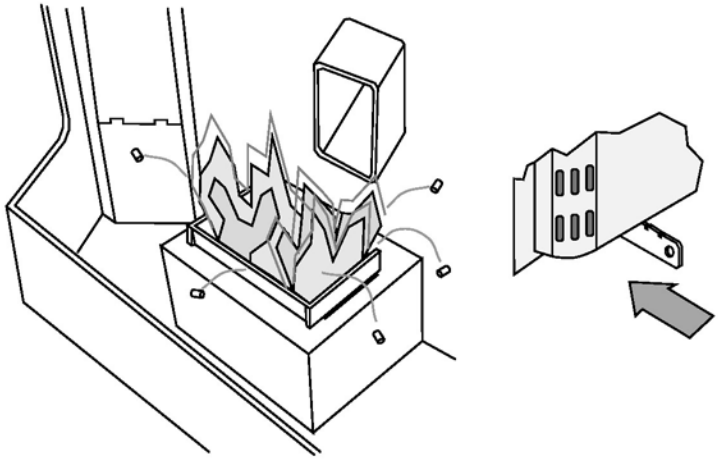
Not Enough Air:

If clinkers develop or the flame appears lazy and slow to blow the ash out of the firepot, pull the restrictor outward until the flame becomes active and the firepot holes remain clean. NOTE: If the restrictor is fully out yet the firepot does not remain clean, the stove needs to be cleaned and checked for air leaks (see "Maintenance" section of this manual).



Too Much Air:

If the flames are too active (small, flickering flames) or if burning pellets are expelled from the firepot, move the restrictor rod inwards until the flame slows down and no burning pellets are expelled. Another symptom of too much air is the heater "blowing the fire out" – a condition in which the pellets burn faster than they are fed (this is most common on low).



Large Stoves/Inserts
Restrictor Setting Instruction

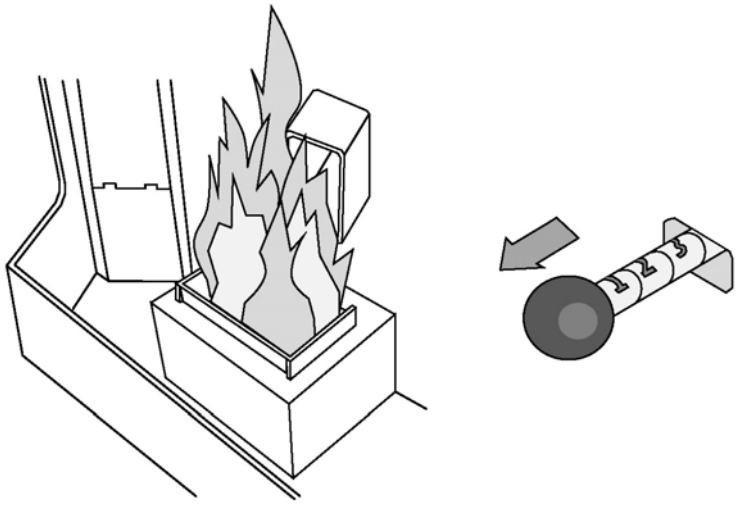
Restrictor Adjustment

The exhaust restrictor "fine tunes" your appliance, ensuring it pulls the correct amount of air through the firebox. Altitude, vent configuration, and other factors make restrictor adjustment necessary for every installation.

NOTE: the optimal restrictor position will vary over time as soot builds up inside the exhaust system – make sure the homeowner knows how to visually inspect the flame and adjust the restrictor.

Not Enough Air:

If clinkers develop or the flame appears lazy and slow to blow the ash out of the firepot, pull the restrictor outward until the flame becomes active and the firepot holes remain clean. NOTE: If the restrictor is fully out ("5"), yet the firepot does not remain clean, the stove needs to be cleaned and checked for air leaks (see "Maintenance" section of this manual).



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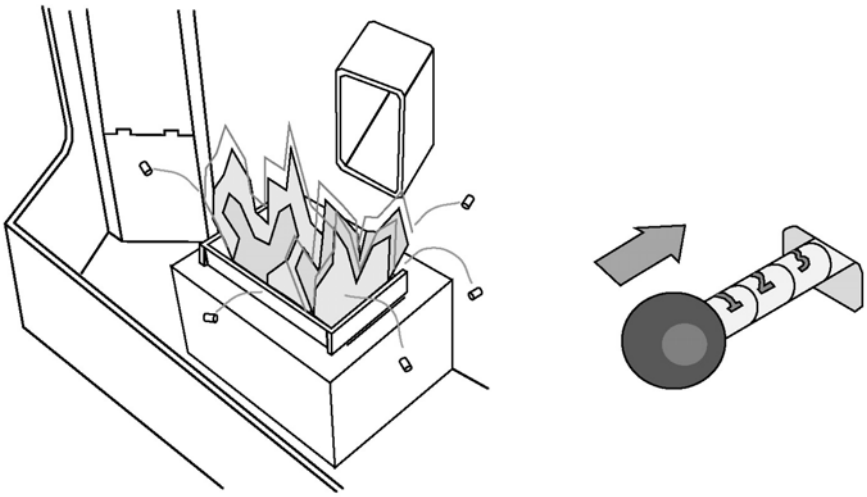


Restrictor Adjustment

- The appliance should be fully up to temperature (15-20 Min.) before attempting adjustment.
- Turn the appliance to low.
- Watch the burn pot activity to determine need for adjustment.
- Adjust as necessary.
- Turn heat setting to high to verify it operates well on this setting.

AIR FLOW INTO THE BURN POT	
SHOULD	**SHOULD NOT**
Be strong enough to create complete burning of the pellets	Burn so slow that incoming pellets smoother the fire
Be strong enough to blow ash out of the burn pot	Let excessive amounts of ash lie in the burn pot
	Blow unburned pellets out of the burn pot

Pellet Stove Restrictor Setting

CONDITION	More Restriction of Air Flow (Too Much Air)	Less Restriction of Air Flow (Too Little Air)
Stove goes out on low burn	X	
Unburnt pellets are blowing out of burn pot	X	
Fly ash remains in the burn pot		X
Pellets smother the fire		X
Stove works fine during day but at night goes out leaving an unburnt pile of pellets (Due to cooler night temperature, draft in vent increases)	X	

TRAVIS INDUSTRIES
HOUSE OF FIRE

Pellet Stove Maintenance

DAILY	Bi-Weekly or Every 10 Bags of Pellets	Annually or Every Two Tons of Pellets
• Inspect burn for proper attributes of proper color and no excessive build up of pellets. • Check firepot for clinkers and clean as necessary.	• Clean heat exchange tubes with built-in rake. • Vacuum out hopper (let pellets run out) to remove all fines and debris. • Cleaning of plated surfaces - CAUTION: follow instructions to prevent damage to the plating. • Check ashbox (all inserts) and empty as necessary. • Check ash pan - empty as necessary. • Clean the glass with a nonabrasive cleaner. • Open ash dump and sweep ash into ashpan (all stoves).	• Remove fireback and clean vertical exhaust duct. • Open access panel on each side and clean the horizontal exhaust duct. • Remove exhaust blower and clean exhaust duct, blower housing and blower fan. • Clean the vacuum hose barbed connection. • Remove auger cover and vacuum out auger flight. • Remove auger and clean lower auger bearing. • Remove convection blower and clean. • Clean pellet vent. • Check gasketing and replace as necessary - Door Gasket - Side Access Panel Cover Gasket - Blower and Blower Housing Gasket - Ash Pan Gasket • Door closure and adjust as necessary. • Check glass door air wash openings and clean as necessary

TRAVIS INDUSTRIES
PELLET PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Pellet Appliance Annual Service Procedure

Name_____ Phone #_____
Address_____
City_____ State_____ Zip_____
Appliance Brand_____ Model_____

Check Procedure	✔	Comments Corrections or Recommendations
Check Clearance to Combustibles		
Check Vent for Blockage, Soot or Ash		
Check Outside Air for Blockage		
Clean Vertical Exhaust		
Clean Fire Back		
Clean Burn Pot		
Clean Heat Exchanger Tubes		
Take Apart and Clean Exhaust Blower		
Remove and Clean Convection Blower		
Dust/Vacuum Inner Appliance Body		
Clean Ash Traps and Ash Pans		
Clean Glass		
Check Door Gasket & Glass Gasket		
Check Ashpan Gasket		
Check Horizontal Side Cover Gaskets		
Check Exhaust Blower Gasket		
Cycle Unit and Check Control Board, Auger Motor, Snap Discs and Flow Switch		
Check Convection Blower Turn Up/Down		
Check Feed Rate Turn Up/Down		
Check Wall Trim Seal		
Check Roof Flashing Seal		
Remove Log & Clean		
Check Thermostat Operation		
Check Remote Operation & Replace Batteries		
Check Door Alignment		
Pellet Hopper Lid, Operation		
Finish/Looks Touch-Up		
Clean Hopper/Check for Pellets		

TRAVIS INDUSTRIES
PELLET PRODUCTS

TRAVIS INDUSTRIES
HOUSE OF FIRE

Homeowner Questions About Operations:

Appliance Concerns:

Recommendations:

Date _____ Serviced By _____

Company _____

This Annual Service Was Reviewed With Me

_____

Homeowner Signature

_____

Next year s Service Appointment:

Month _____ Date _____ Time _____

TRAVIS INDUSTRIES INSTALLATION

TRAVIS INDUSTRIES
HOUSE OF FIRE

Ladder Safety

Tools

Installation Practices

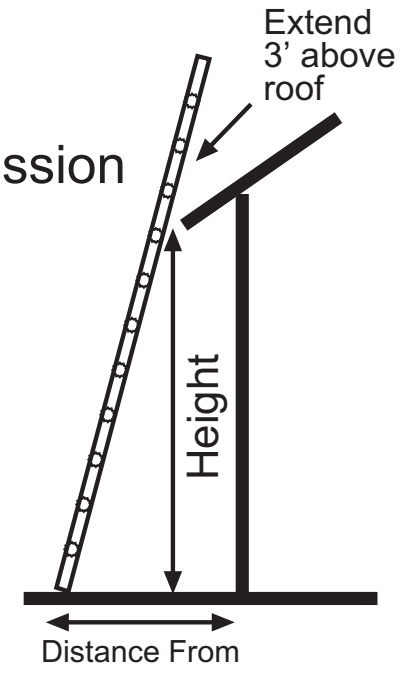
Roof Pitch

Ceiling Penetration

TRAVIS INDUSTRIES INSTALLATION SAFETY

TRAVIS INDUSTRIES
HOUSE OF FIRE

Ladder Safety



For every 4 feet of height - 1 foot out from wall

- Locate best access place
  - Check with customer for permission
- Watch for electrical lines
- Use toes/90˚ arm method to determine correct angle
- Use two hand contact when climbing
- Tie off the ladder at the top
- Ladder should extend at least three rung above the roof edge
- Invest in ladder levelers
- **Use only type I or type II ladders**

Roof Safety

- Keep electrical cords from under feet
- Use a safety harness where appropriate
- Never throw anything off the roof
- Keep parts and tools from rolling /blowing off

Power Tool/Extension Cord Safety

- Make sure all tools and extension cords are properly grounded. (GFI) Ground Fault Interrupter cords are recommended for outdoor use
- Make sure all tools are in good working order and kept clean
- Make sure all guards are in place and working

Personal Safety

- Protect soot from contacting skin.
- Wear gloves for protection from sharp edges
- Eye protection
- Shoe/boots with soft soles for roof climbing.
- Ear protection
- Lifting belt

Installation Tools

- Invest in the right tool to do the job
- Invest in good tools as they will perform better and last a lifetime
- Make sure your tools and equipment are kept clean and well maintained
- Bring industrial quality tools and equipment into your customers' home will allow you to charge more for your services
- **If necessary** invest in **your future** by buying your tools

Installation Tools

Installation Tools:

- Pry bars
- Tape measure
- Plumb bob
- Chalk line
- Torpedo level
- Stud sensor
- Combination square
- Utility knife
- 5 blade crimping pliers
- Hand seamer pliers
- Hammer
- Roofing nail pry bar
- Aviation snips
- Tin snips
- Pipe snips
- Caulking gun
- Tile breakers and rod
- Vinyl siding tools
- Dry wall hand saw
- 1” wood chisel
- Staple gun
- Masonry drill and 7/8” masonry drill bit
- Electricians knockout punch
- 72” flexible drill bit
- Wire sock for above
- Metal drill bit set
- Center punch
- 7/8” wood drill bit
- Rivet gun
- Strap wrenches
- Compass beam (Large circle compass)
- Stud finder

Gas Piping Tools:

- Tubing cutters - regular & mini
- Flaring tool
- Tube bending tool
- 1/2” & 3/4” pipe threaded
- Thread cutting oil
- Pipe cutter
- Unbilt or pipe reamer
- 1/2” & 3/4” pipe extractor
- Pipe vice
- Metal file
- Pipe caddies for nipples
- Pipe fitting bucket organizers
- Pipe joint compound - make sure it is approved for propane gas
- Teflon tape
- Pipe wrenches - 8”, 10’, 12” & 14”
- Hacksaw/mini hacksaw
- Air pressure test gage
- Air pressure test gage adaptors
- Portable air tank or air compressor
- Liquid leak detection fluid

Installation Tools

Power Tools:

- Reciprocating saw (wood and metal cutting blades)
- Heavy gage extension cords
- Cordless drill (extra battery)
- Circular saw (wood and masonry blades)
- Masonry hammer drill

Safety Equipment:

- Lift belt
- Safety glasses
- Safety harness (fall protection)
- GFI (ground fault interrupter outlet)
- Ear plugs
- Ridge hook
- Ladder levelers
- Fire extinguisher

Convenience:

- Hand truck
- Stove lift/stair climbing equipment
- 20' extension ladder
- FM - communication head set
- 6' step ladder
- Insert puller
- 4 wheel furniture dolly
- Knee pads

Customer Home Protection:

- Drop cloth
- Rug runners
- Shop vacuum
- Vinyl gloves
- Denatured alcohol
- Broom
- Hand broom/dust pan
- Carpet sweeper
- Waterless hand cleaner
- Disposable coveralls
- Soot sponge

Tile & Masonry Installation:

- Brick hammer
- Masonry chisel
- 1/4" & 3/8" Tuck pointing trowel
- Brick trowel
- 6" x 2" Utility trowel
- Brick jointer 3/8" x 1/2" 1/2" x 5/8" & 5/8" x 3/4"
- Small Tuck pointing trowel
- Tuck pointers plugging chisel
- 5 gallon pails
- Grouting trowel
- Tile nipper
- Tile/marble saw
- Screeting trowel
- 24" Masons level
- Masons brush
- Skate wheeled joint raker
- Mixing paddle

Installation of Travis Industries Products

- **Read** Travis Industries installation directions
- **Follow** Travis Industries Installation directions
- **Failure** to follow Travis Industries installation directions may result in:

➲ Poor appliance performance

➲ Voiding of listing and or warranty

➲ Your assumption of all liability

➲ LOSS OF PROPERTY AND/OR LIFE

Installation of Travis Industries Products

- Know Your Markets Requirements

✔ Building Permit Required

✔ Final Inspection Required

✔ License Requirements
- Venting
- Gas Piping
- Electrical

✔ Which codes and/or standards apply
- Local
- County
- State
- Code Bodies

Installation of Travis Industries Products

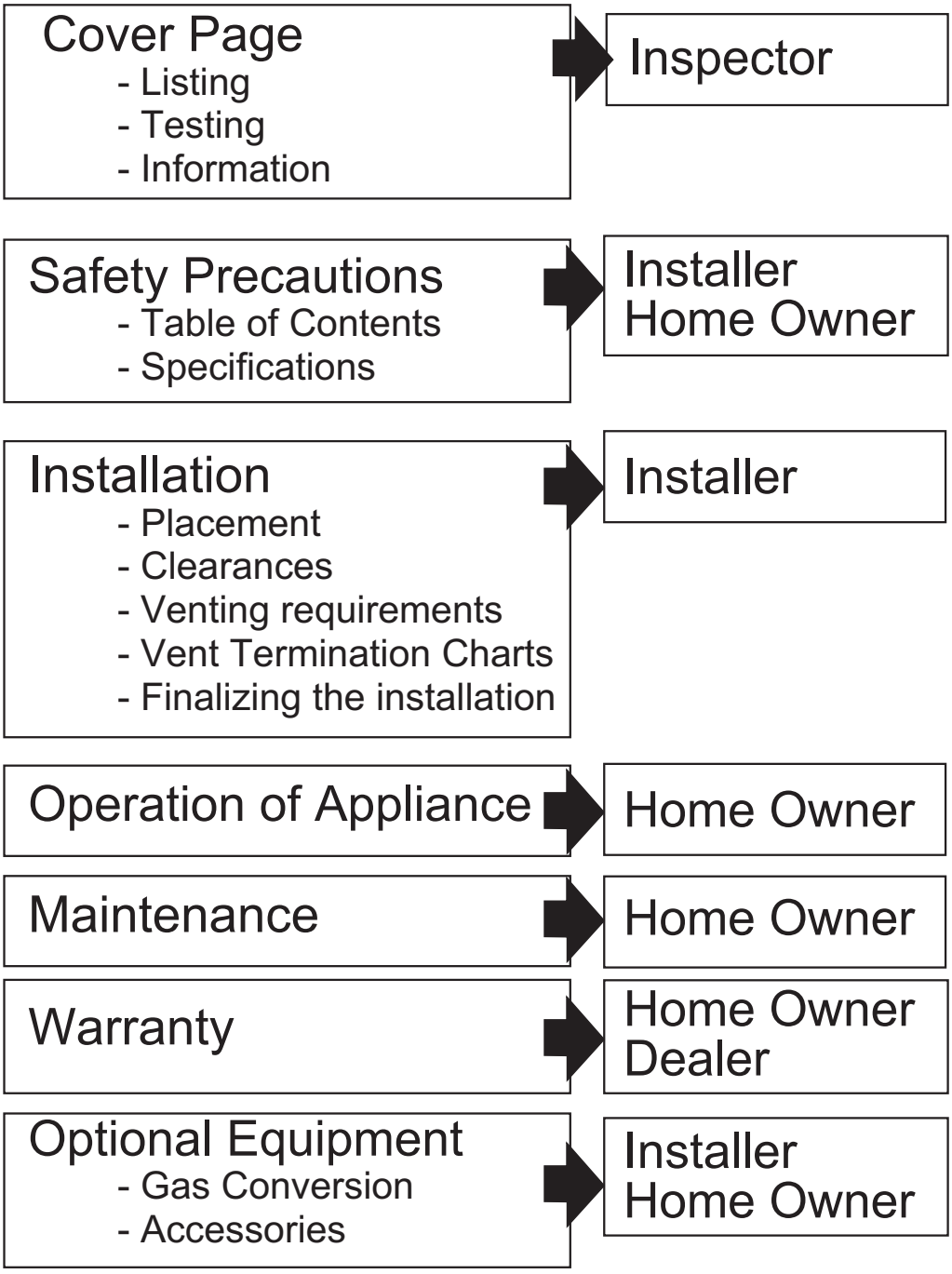
- Use only Travis Industries specified, listed and tested components
- Do not modify product/components unless authorized by Travis Industries
- Follow Travis Industries Prescribed.....
  - Clearance to Combustibles
  - Venting Parameters
  - Placement
  - Venting Termination
  - Finalizating the Installation

Installation of Travis Industries Products

When reading Travis Industries Installation Directions, pay particular attention to the following:

- ✔ Items required for installation
- ✔ Stove/insert/fireplace clearance
  - Framing
  - Adjacent walls
  - Ceiling
  - Mantels and decorative trim
- ✔ Stove/insert/fireplace placement requirements
- ✔ Floor protection requirements

Typical Breakdown of All Travis Installation Manuals

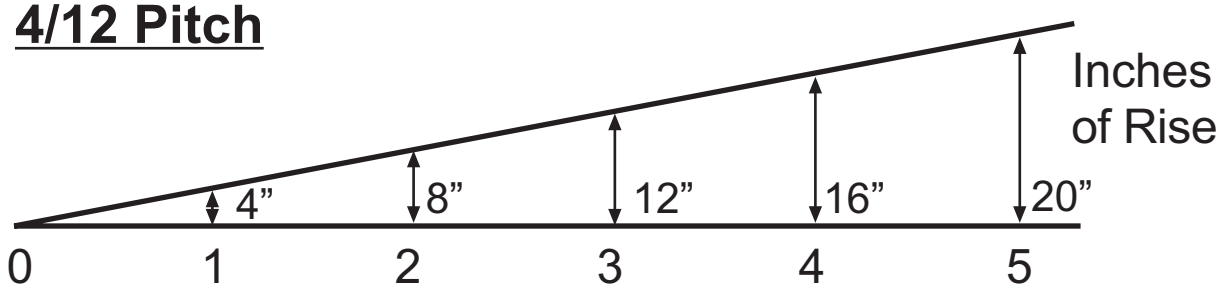


Roof Pitch

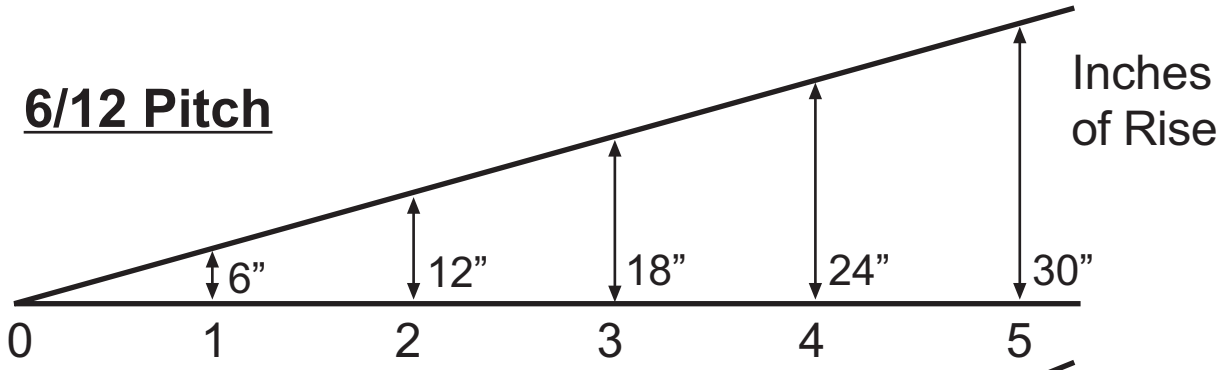
- Rise in inches per foot of run

Common Pitches:

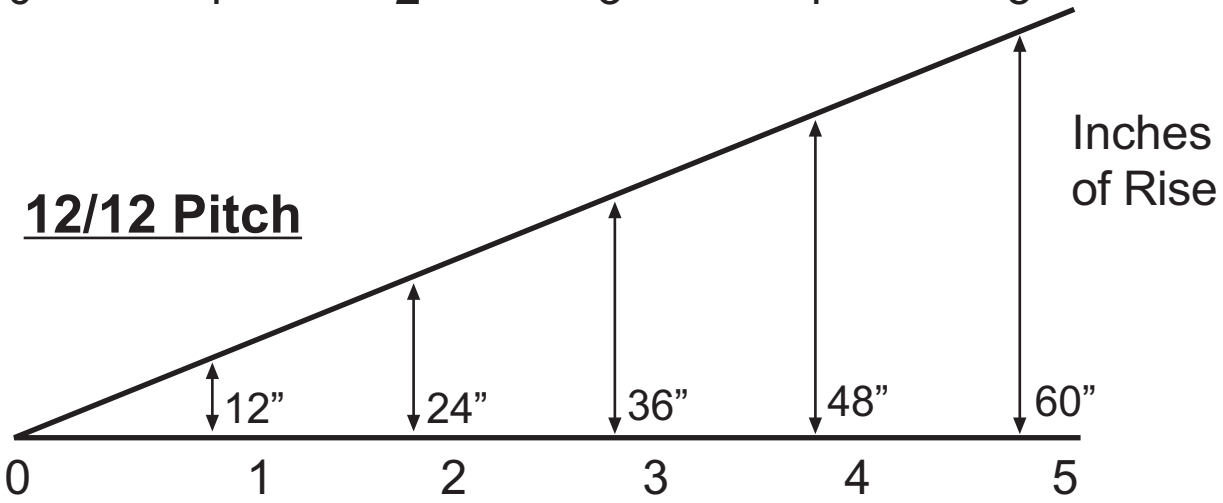
4/12 Pitch



6/12 Pitch

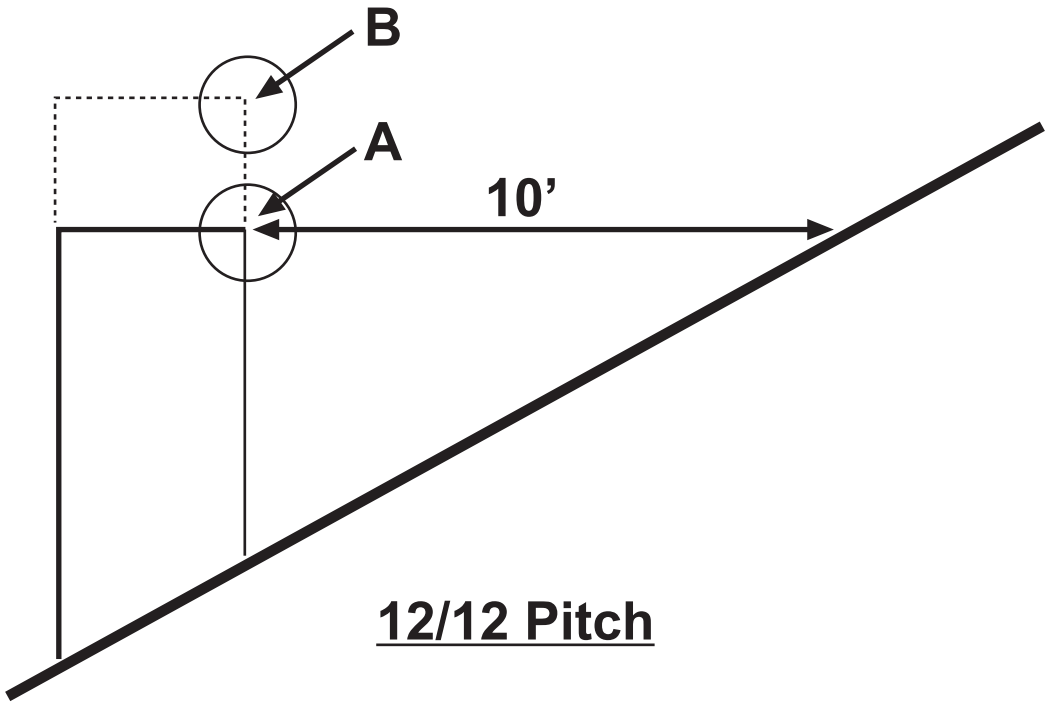


12/12 Pitch



Roof Pitch

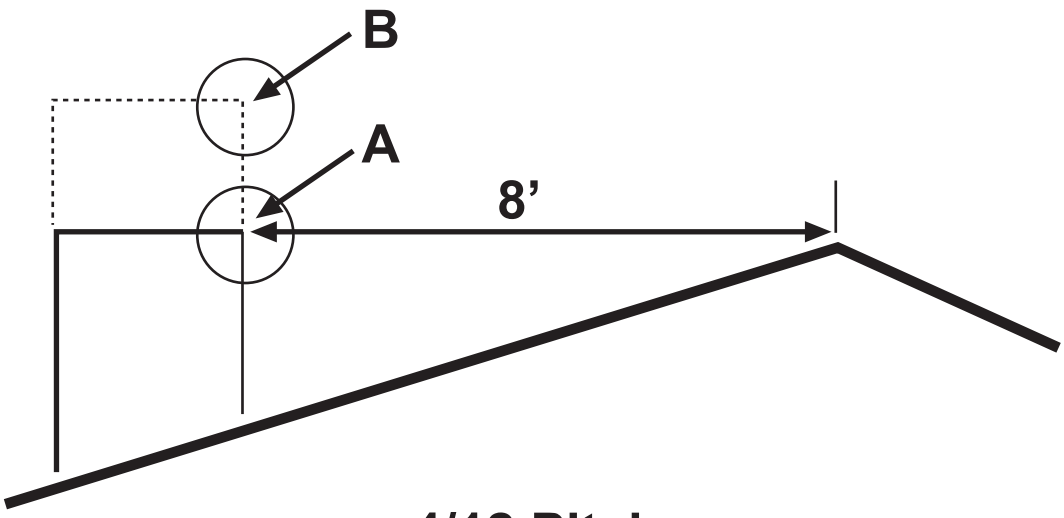
- Calculate: 3’ -2’ -10’ Chimney Requirements for Wood Burning Chimney



- Chimney must be 2’ higher than any roof portion within 10’ and be a minimum of 3’ above the roof

- 10’ x 12” = 120” Point A = 120”
  120” + 24” (2 foot above) = 164” above roof

Roof Pitch



4/12 Pitch

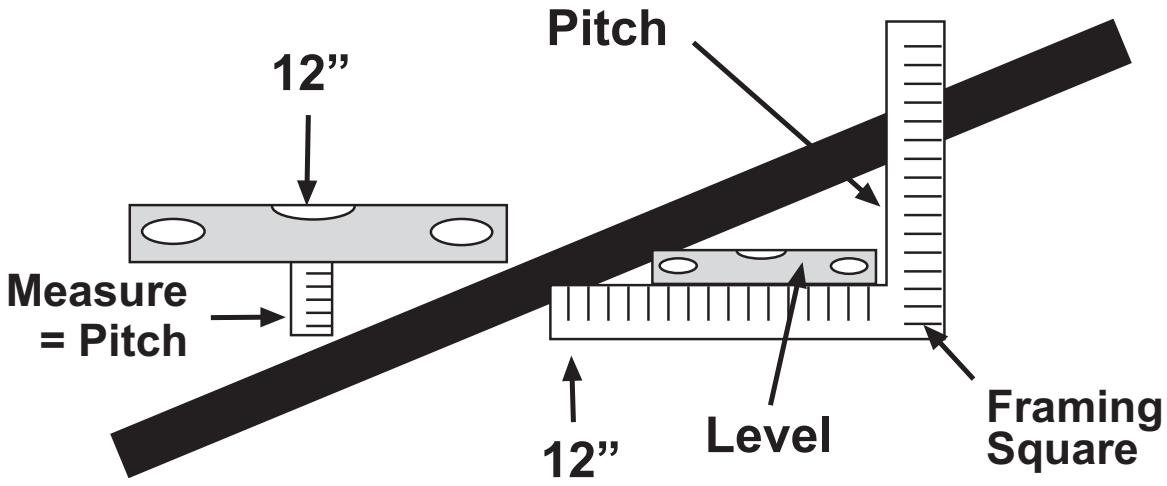
QUESTION

What amount of chimney must be extended above the roof line to satisfy the 3’ - 2’ - 10’ chimney rule

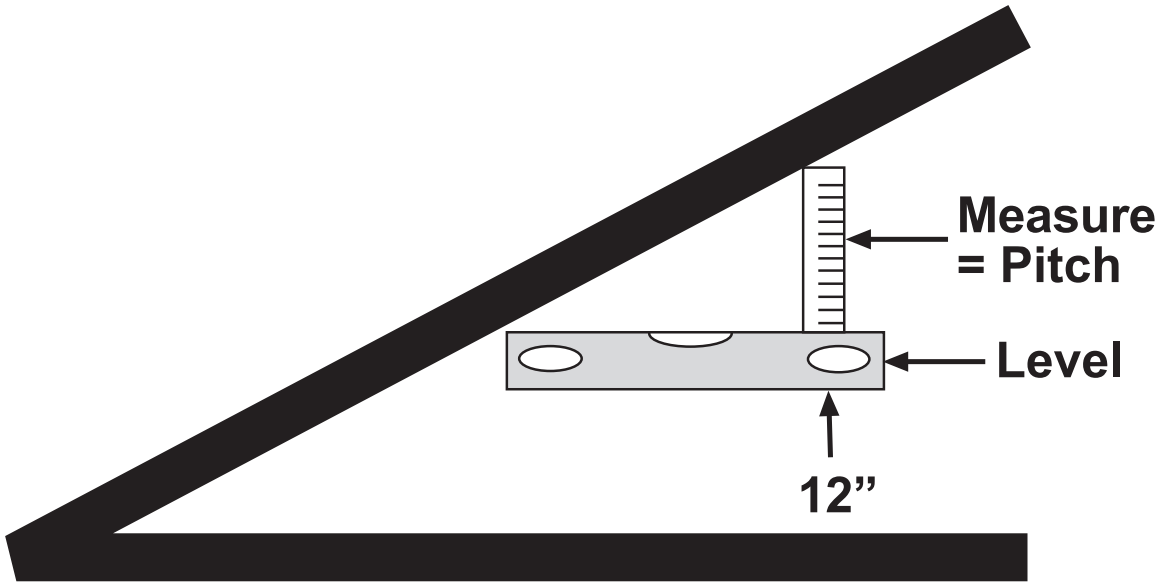
A =

B =

Measuring Roof Pitch

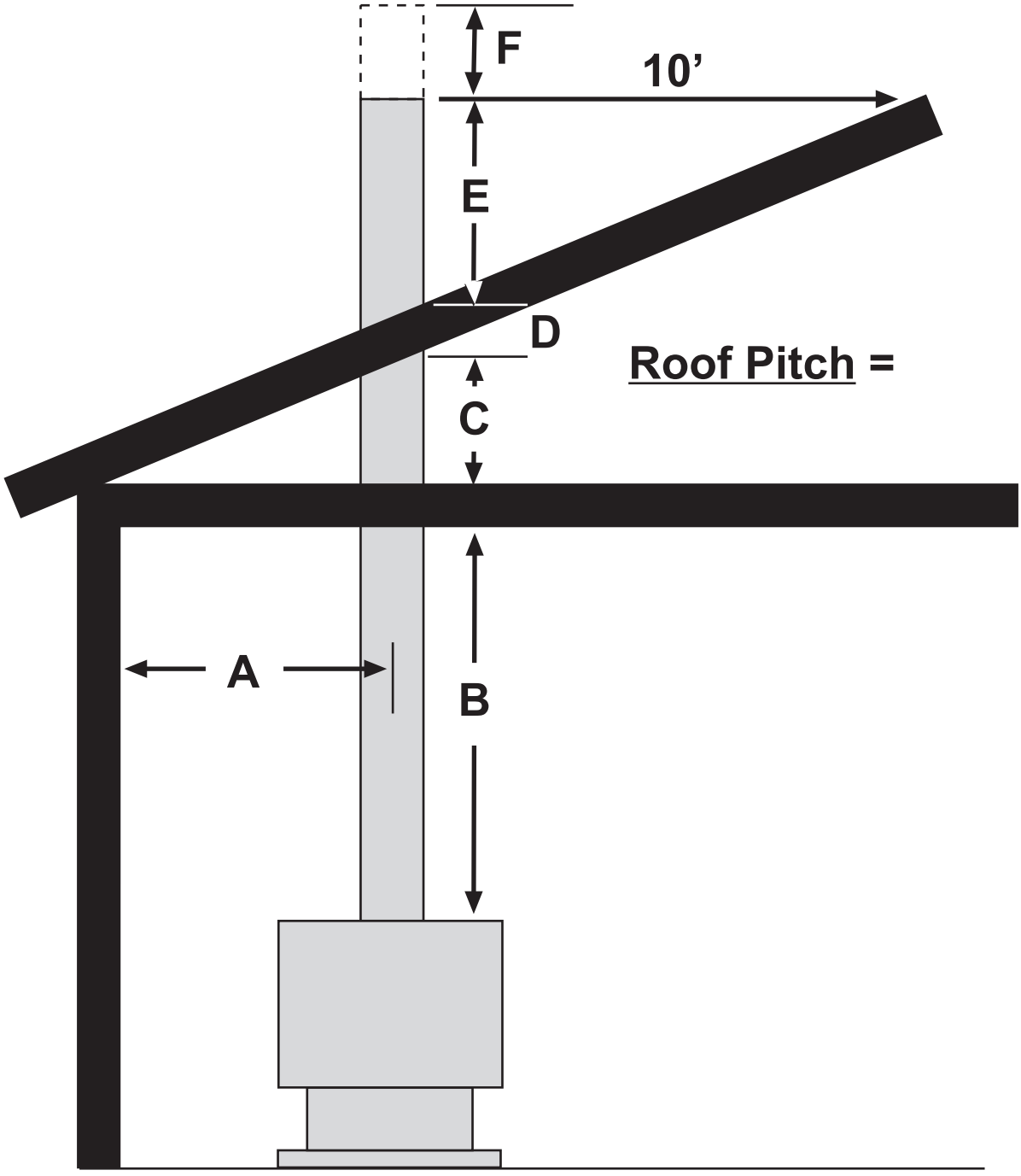


Outside Roof Line

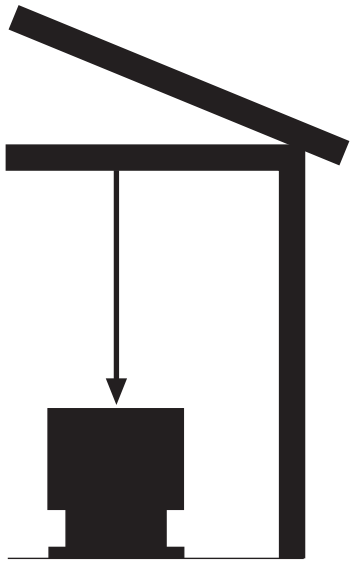


Inside Attic Space or Cathedral Ceiling

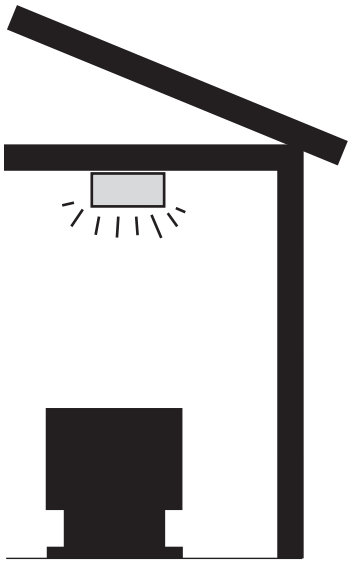
Measuring Roof Pitch



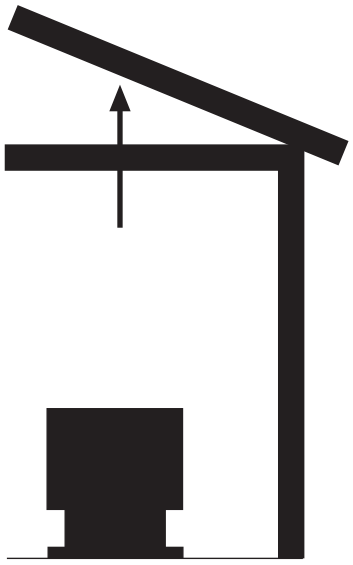
Passing Through the Ceiling and Roof



1. Plumb to ceiling and mark ceiling.

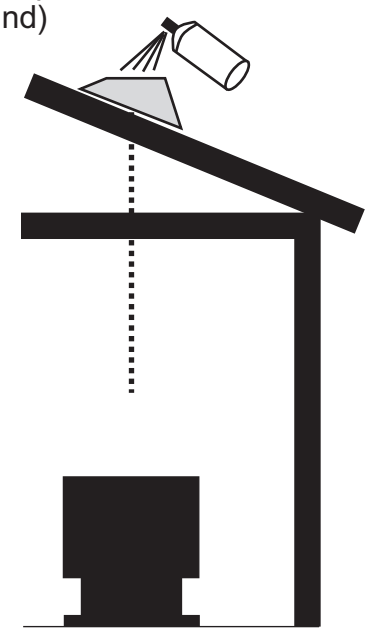


2. Locate ceiling joist with stud finder - relocate center and mark as necessary. (Keep stove clearances in mind)

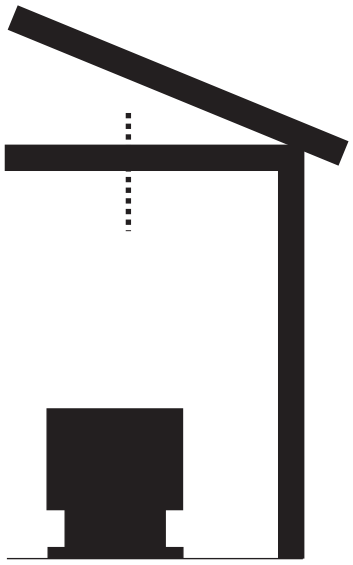


3. With a coat hanger, drill into the attic space If possible access attic space. Check for any obstructions (Ducting, piping, wires)

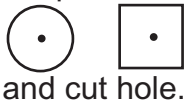
4. Plumb or drill through roof. (Plumb - drive nail)



5. Center flashing. Spray paint inside opening.

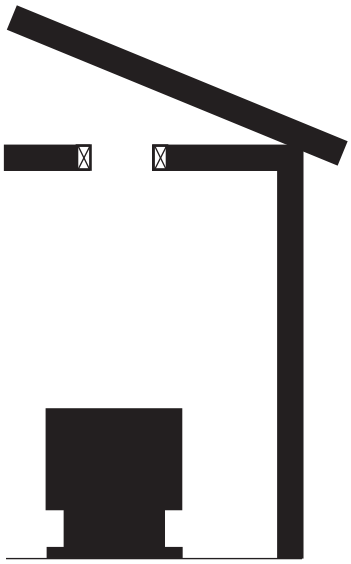


6. Mark ceiling with template

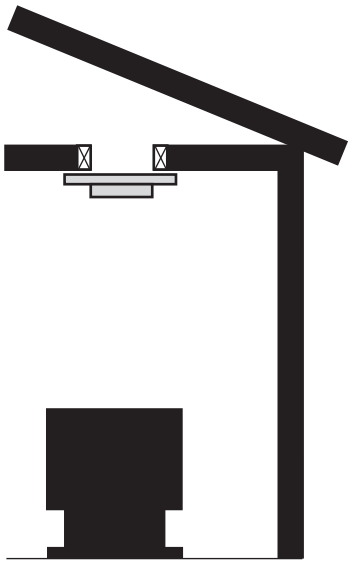


and cut hole.

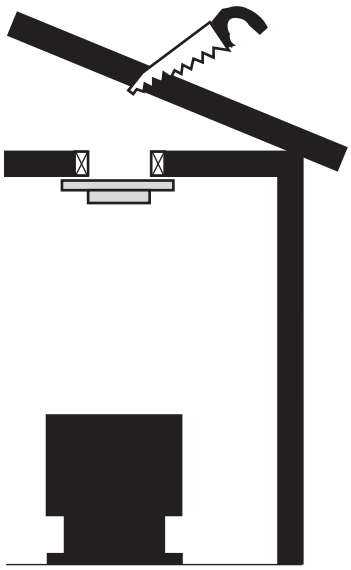
Passing Through the Ceiling and Roof



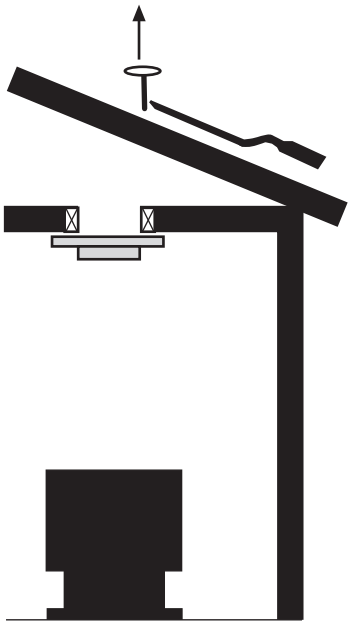
7. Frame opening with 2 x __ and right angle Simpson brackets



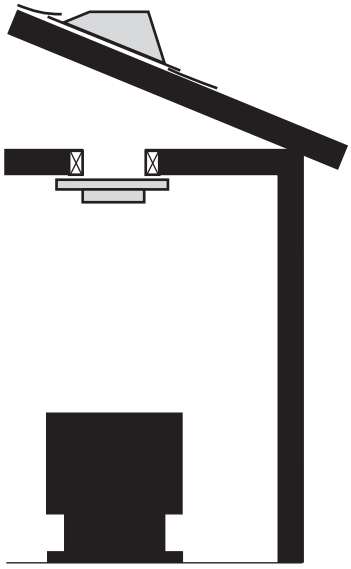
8. Install ceiling support



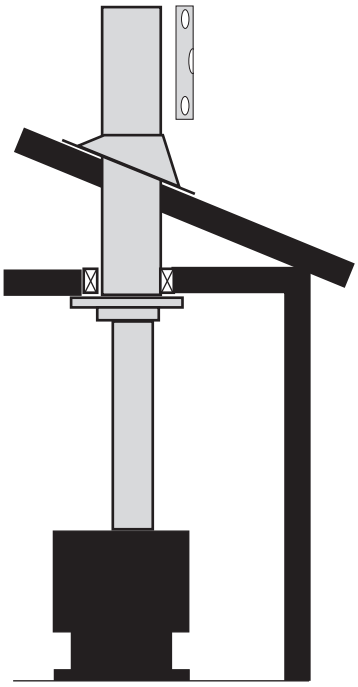
9. Cut hole in roof with saw



10. Loosen and remove roofing nails



11. Slip flashing under shingles as necessary



12. Install pipe - LEVEL - Nail flashing & shingles - and install connector pipe. Install storm collar - caulk storm collar

Passing Through the Ceiling and Roof

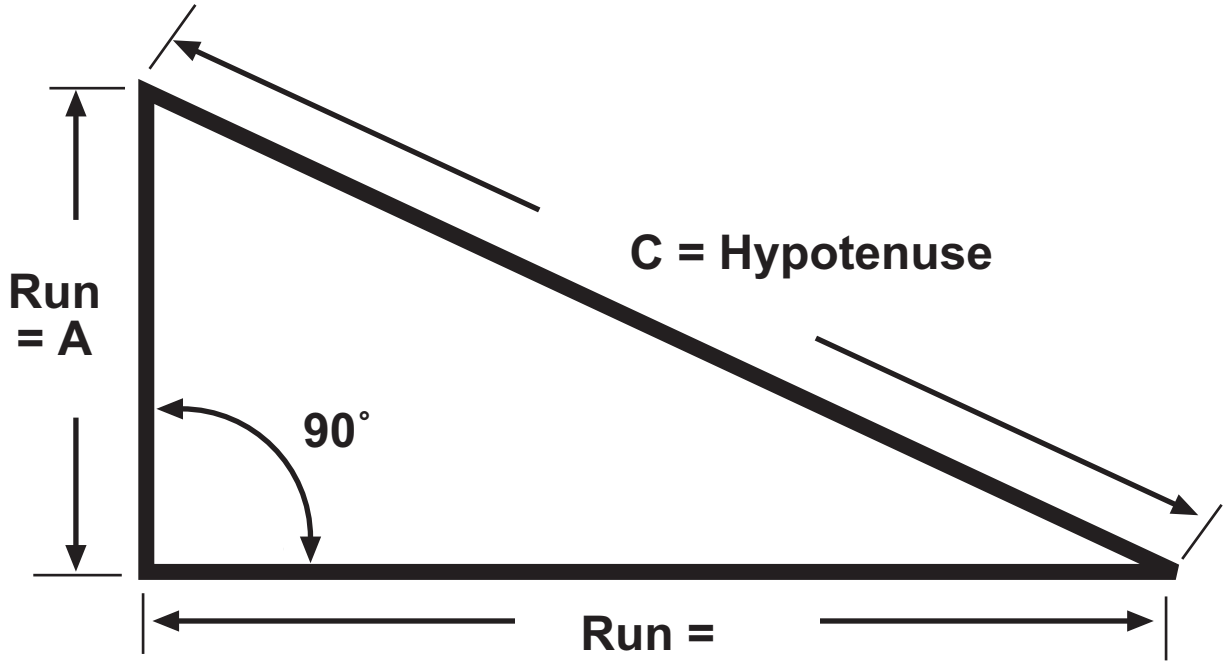
- **AVOID CUTTING THROUGH...**

  - Ceiling Joists
  - Rafters
  - Support Beams
  - Trusses

- Talk to the customer about alterations

- Walk if necessary

Calculating the Hypotenuse of a Right Triangle

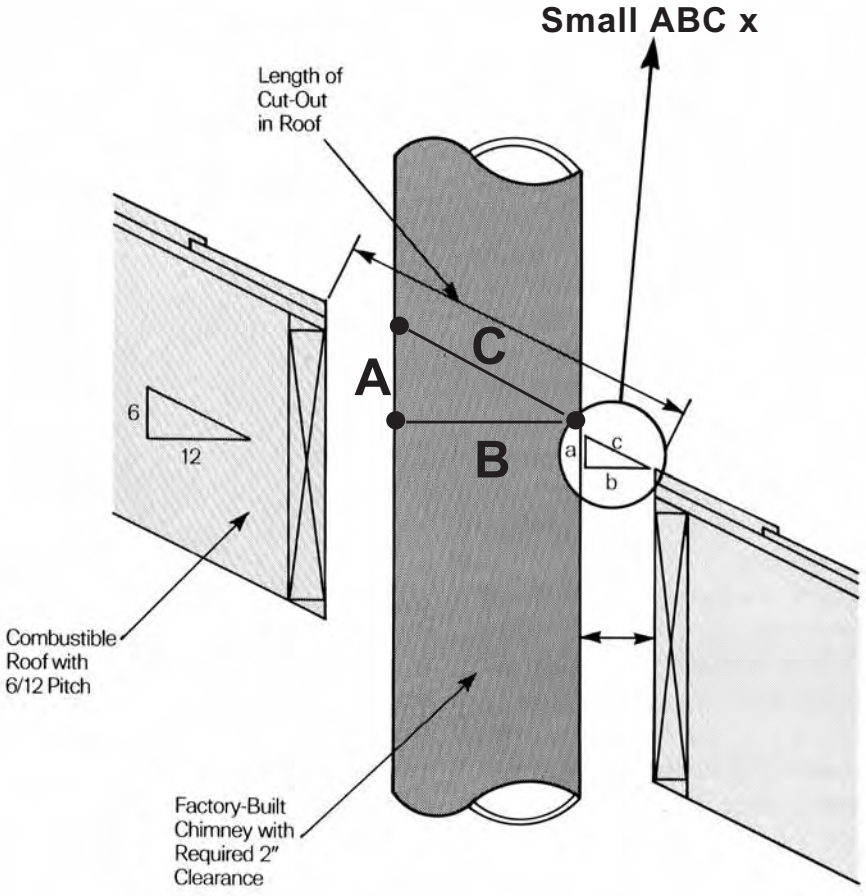


$A^2 + B^2 = C^2$

- A = 6”
- B = 10”

$$A^2 + B^2 = C^2$$
$$(A \times A) + (B \times B) = C^2$$
$$(6 \times 6) + (10 \times 10) = C^2$$
$$36” + 100” = C^2$$
$$\sqrt{136}” = C^2$$
$$11.66 = C^2$$

Calculating Length of the Roof Cutout



Small ABC

$A^2 + B^2 = C^2$

A - Unknown
B - 2”
C - Unknown
Pitch - 6/12

A/2 = 6/12
x
12A/2 = 6
x
12A = 12
÷
A = 1

$A^2 + B^2 = C^2$
$(A \times A) + (B \times B) = C^2$
$(1 \times 1) + (2 \times 2) = C^2$
$1 + 4 = C^2$
$5 = C^2$
$2.23 = C$

Large ABC

$A^2 + B^2 = C^2$

A - Unknown
B - 12”
C - Unknown
Pitch - 6/12

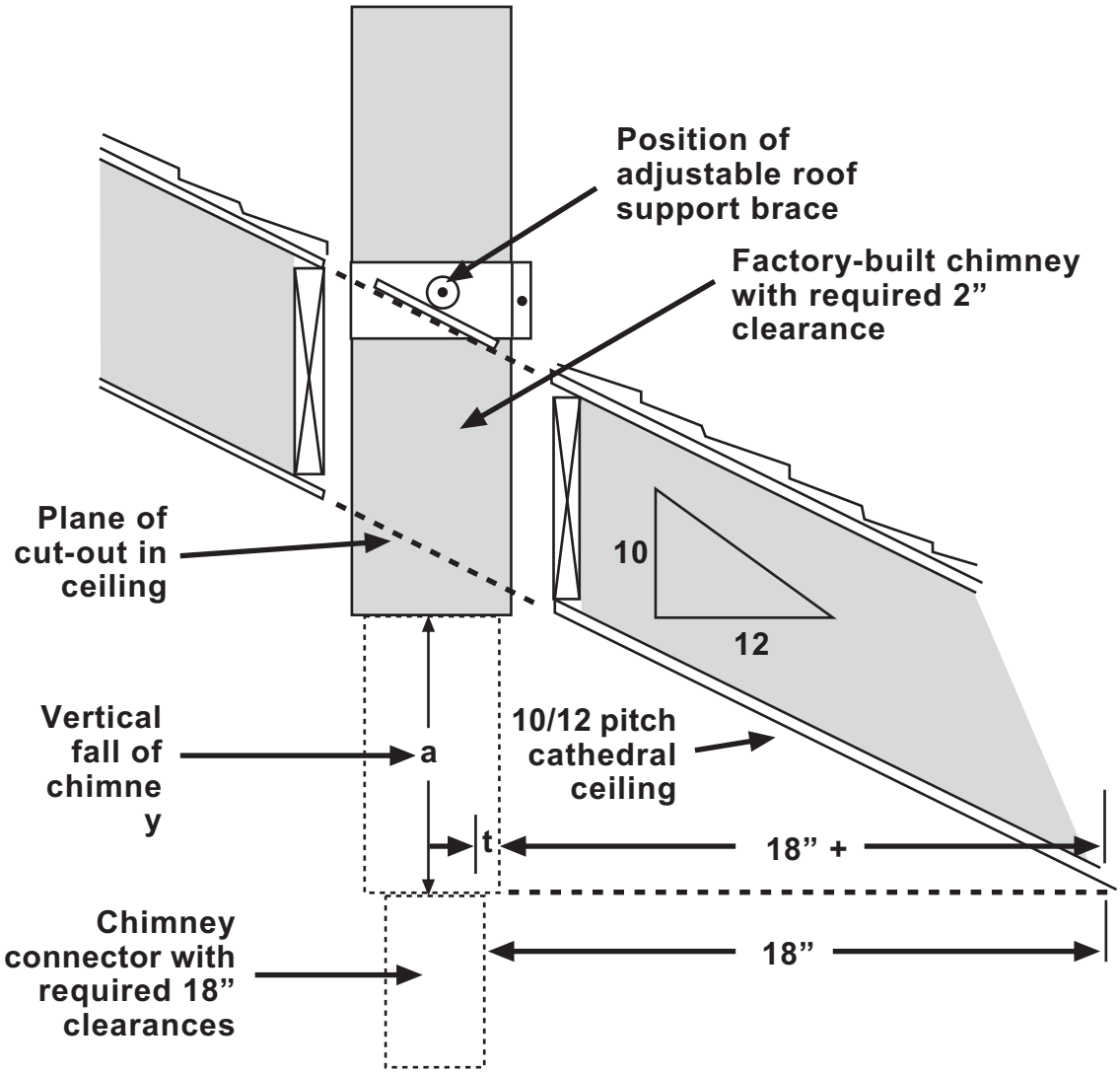
A/12 = 6/12
x
12A/12 = 6
x
12A = 72
÷
A = 6”

$A^2 + B^2 = C^2$
$(A \times A) + (B \times B) = C^2$
$(6 \times 6) + (12 \times 12) = C^2$
$36 + 144 = C^2$
$180 = C^2$
$\sqrt{180}$
C = 13.41

Small C Plus
Big C Plus
Small C =
Length of Roof Cut Out

2.23 - Small C
13.41 - Big C
2.23 - Small C
17.87
or
17 7/8”

Calculating Support Box Length



A = Unknown
B = 18 -+
C = Unknown
+= 1.5"
Pitch 10/12

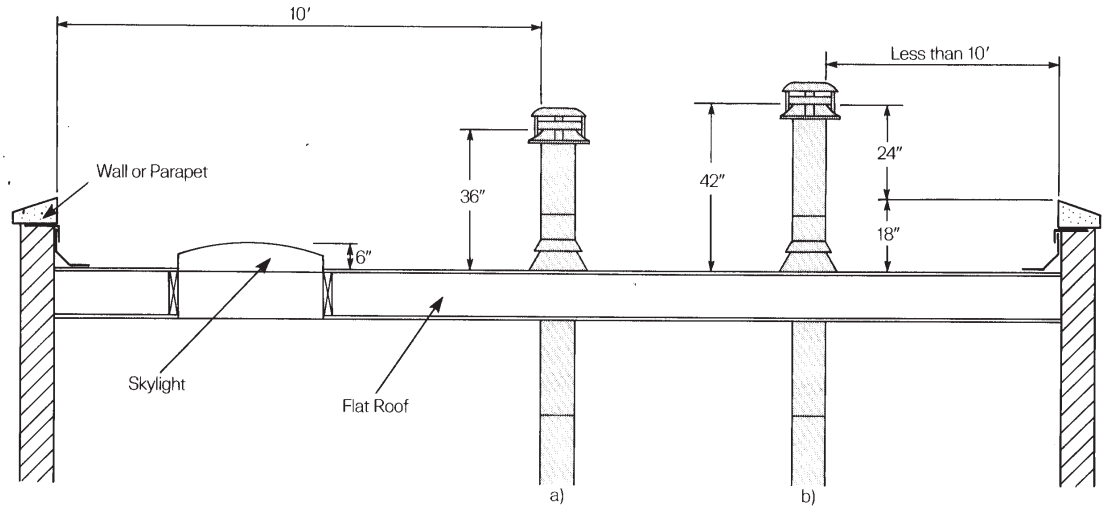
A/16.5+ = 10/12
(x)

12A/16.5 = 10
(x)

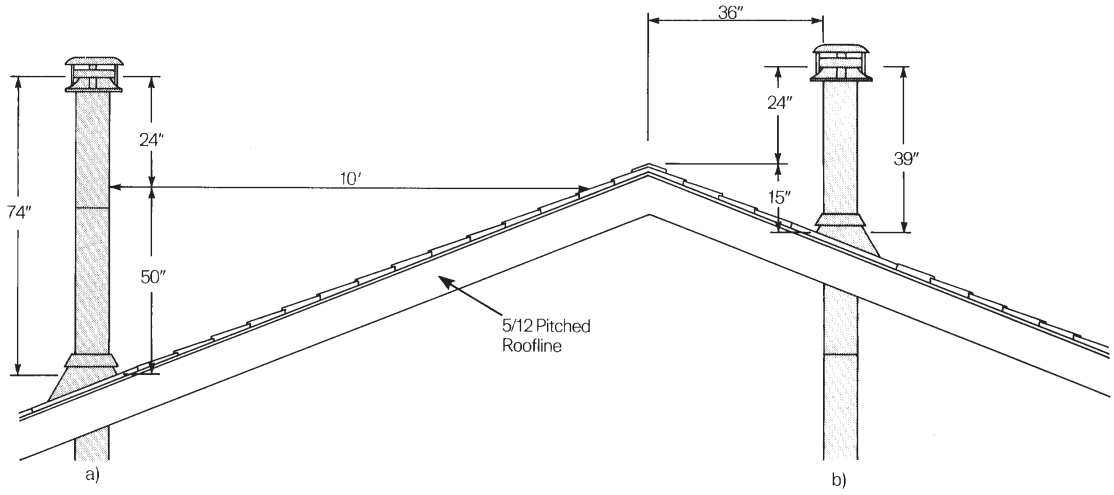
12A = 165
(÷)

A = 13.75"

3 Foot - 2 Foot - 10 Foot Rule



CALCULATING CHIMNEY HEIGHTS WITH FLAT ROOFS (Example with 18″ Parapets)

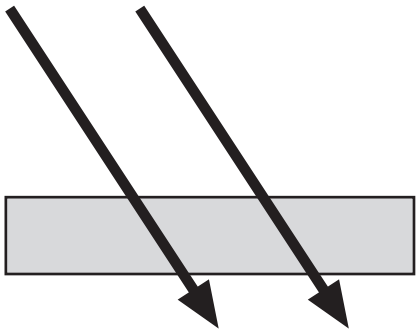


Typical Insulating Values

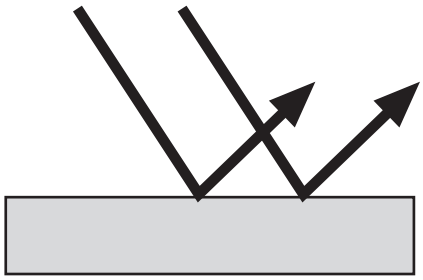
TYPICAL INSULATING VALUES OF HEARTH MATERIALS

Typical Hearth Extension Materials	Ceramic Fiber Millboard	Mineral Fiber Millboard	Ceramic Tile, Stone*	Face Brick*	Common Brick, Cement Mortar*
k Value (per inch) (BTU-in/ft² hr F°)	0.56	0.84	12.50	9.00	5.00
r Value (per inch) (1/k)	1.78	1.19	0.08	0.11	0.20
Typical Standard Thickness	0.50″	1.00″	2.00″	2.50″	4.00″
R value (actual) (r × thickness)	0.89	1.19	0.16	0.28	0.80
Thickness of material having R value = 1.78 (1.78/r)	1.00″	1.50″	22.00″	16.00″	9.00″

* *The insulating value of most masonry materials (including tile, brick, stone, concrete, cement), is minimal. In using traditional masonry hearth materials, it is often necessary to use in combination with an insulating board of appropriate k or R values as per the manufacturer's specifications.*

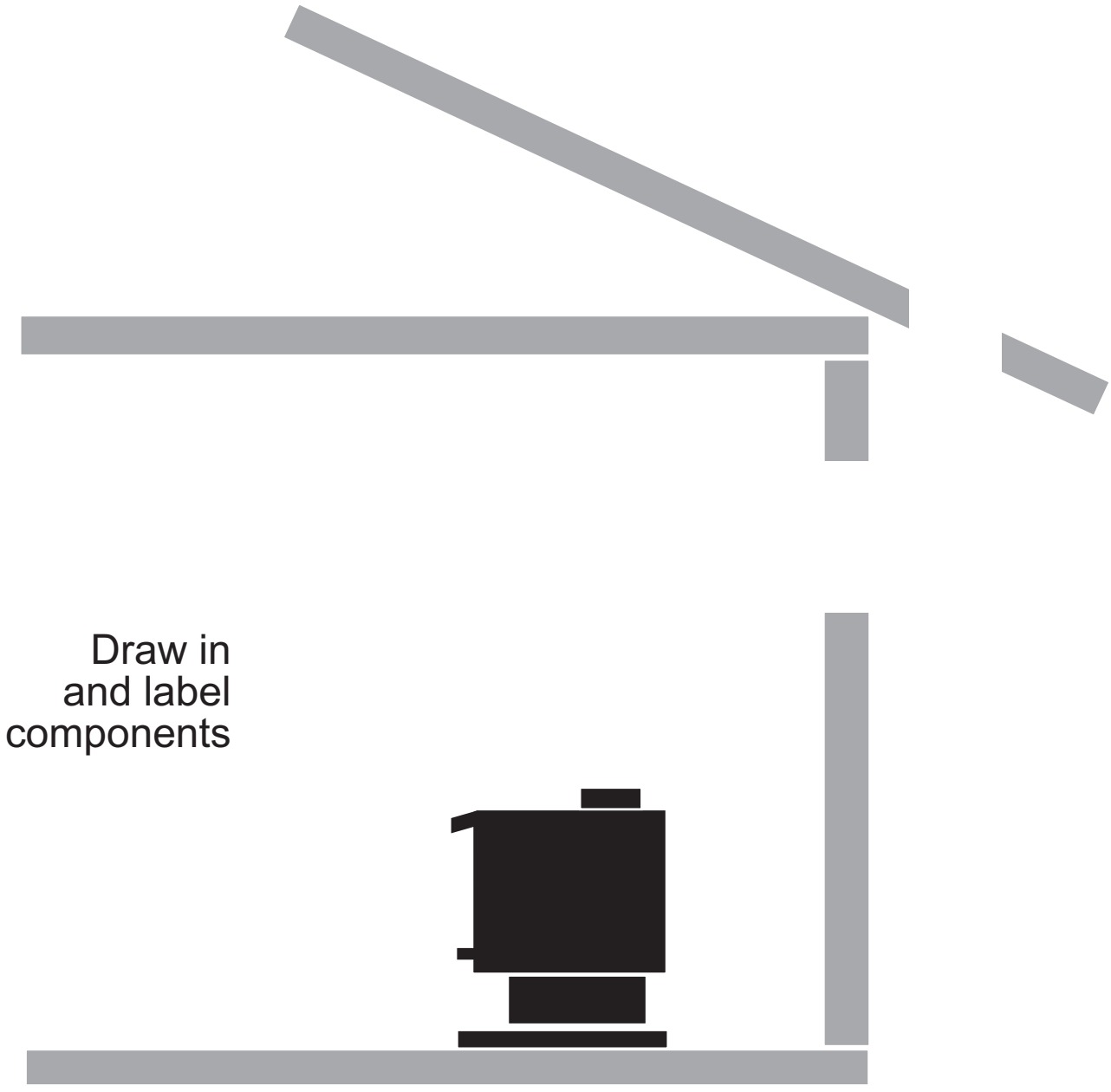


k-Value

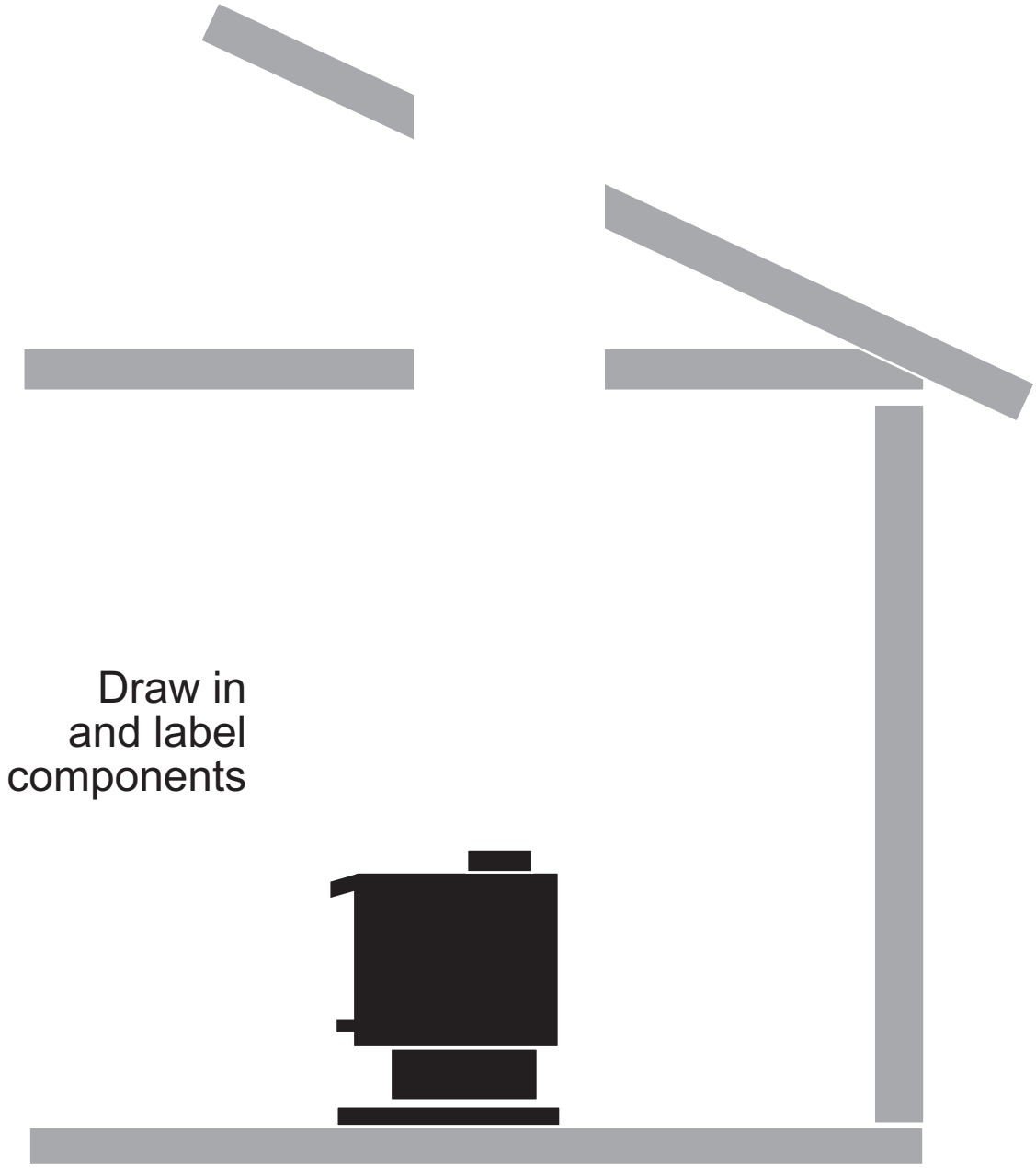


r-Value

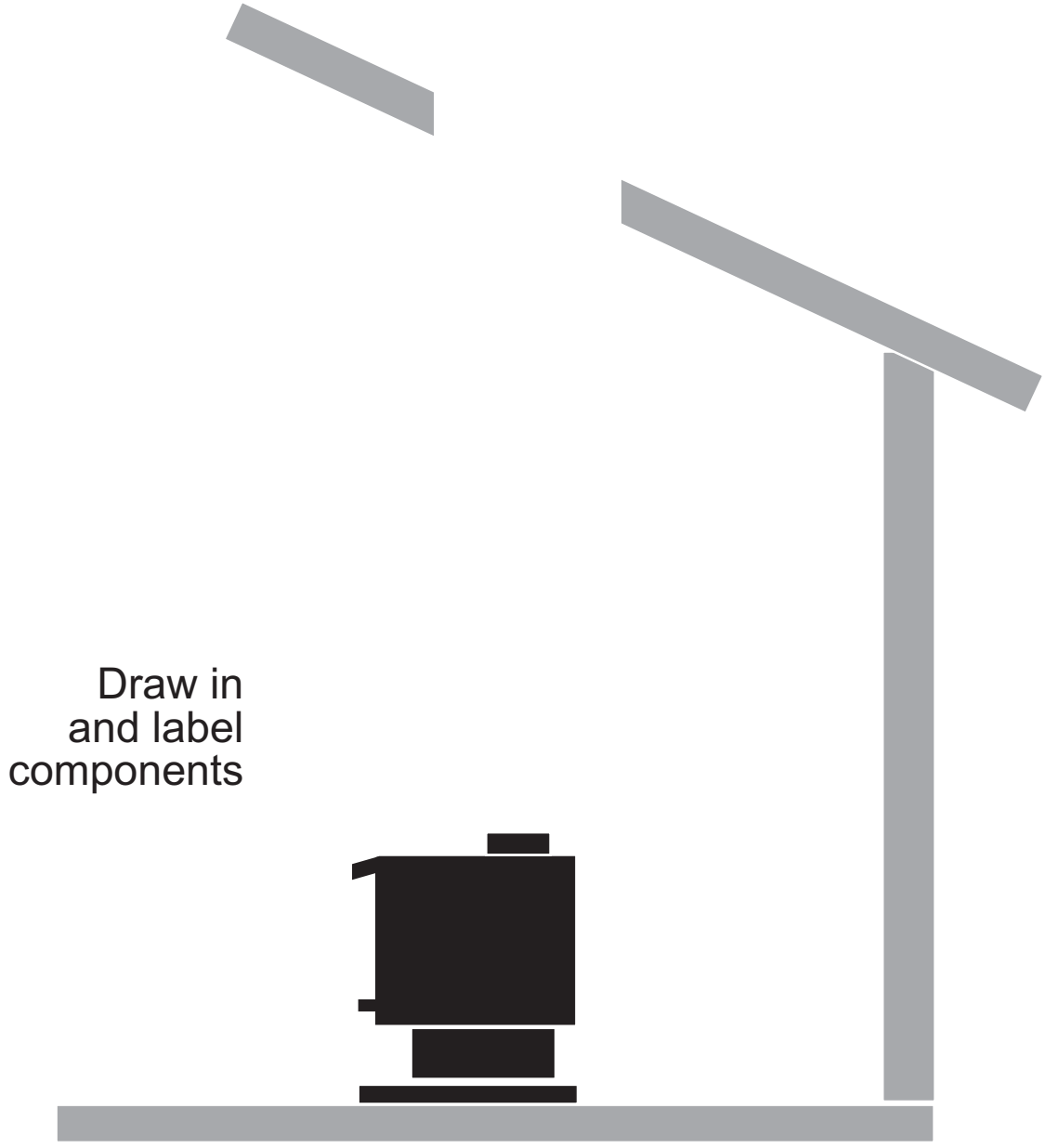
PELLET STOVE
Thru-the-Wall Penetration



PELLET STOVE
Ceiling Penetration

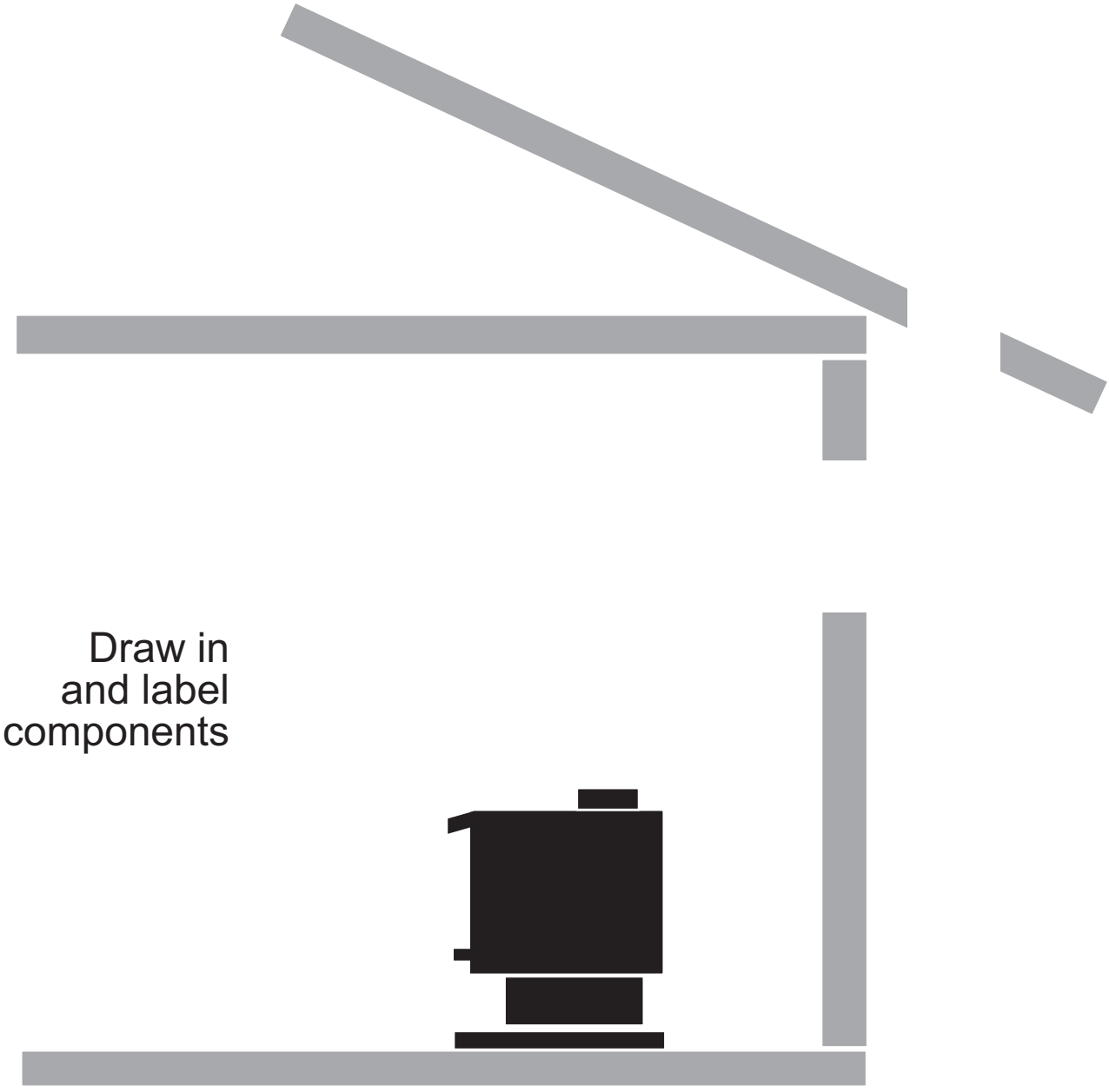


PELLET STOVE
Cathedral Ceiling Penetration

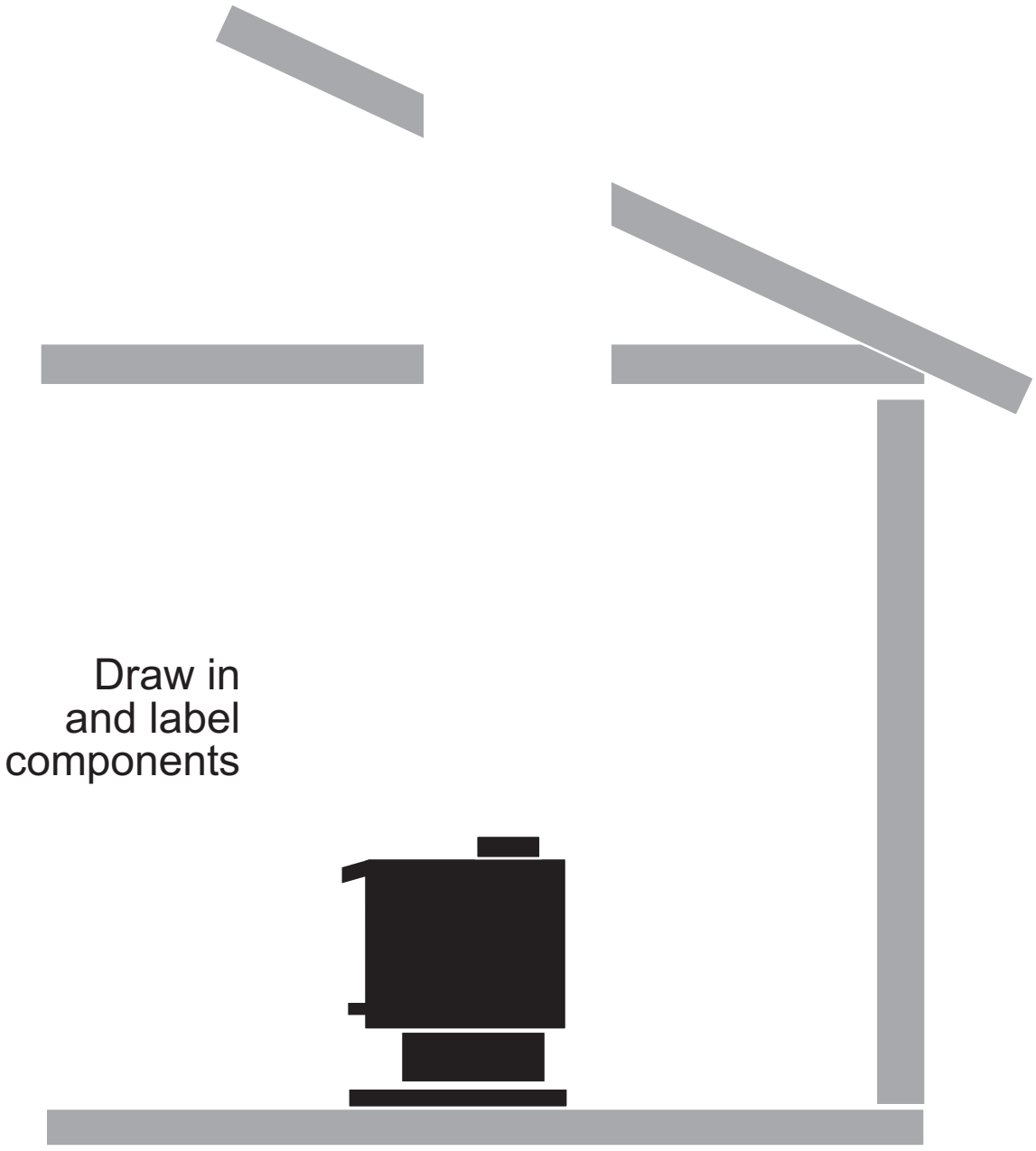


TRAVIS INDUSTRIES
HOUSE OF FIRE

WOOD STOVE
Thru-the-Wall Penetration



WOOD STOVE
Ceiling Penetration



TRAVIS INDUSTRIES
HOUSE OF FIRE

WOOD STOVE
Cathedral Ceiling Penetration