

Country Flame, Inc.  
P.O. Box 151  
Mt. Vernon, MO 65712

# Catalytic

Models Freestanding (-6) BBF, B, SBF, E1, E2, R  
Inserts (-I) BBF, B, SBF, E1, E2, 02

**Installation,  
Operation &  
Maintenance  
Manual**



Mountain View Hearth Products  
manuals.stove-parts-unlimited.com

### Excessive Creosote

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**POOR QUALITY WOOD:**

Unseasoned wood will produce more creosote than dry, seasoned wood. Buying your wood early will avoid these problems.

**STOVE SHUT DOWN TOO TIGHT:**

Closing the draft controls too tight prevents the entry of air necessary for complete combustion. Open your draft controls for up to 20 minutes once a day to burn off accumulations of creosote. Proper use of commercial preparations will also give satisfactory results.

**FLUE TOO LARGE OR ON NORTH SIDE:**

Large flues and those on the north side tend to be cold and generate creosote condensation. We suggest insulating the chimney with a liner or restricting the draft with an approved chimney cap.

**HUMIDIFIER:**

Adding moisture to the air, as when a humidifier is used, will increase creosote formation. Be sure to clean your flue more often and burn your fires hotter.

### Brass Tarnishes

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**NORMAL:**

Flitz and other commercial preparations work very well for a bright, clear shine. Avoid placing fingers on brass to preserve the appearance.

### Walls Get Too Hot

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**CLEARANCES:**

Double check the clearances on the back of your heater and this manual. You may want to create a wall shield to protect your finish.

## Attention Installer... Return This Book To The Fireplace

## Installation, Operation & Maintenance Instructions

### SAVE THIS BOOK

ALONG WITH INSTRUCTIONS ON INSTALLATION, IT INCLUDES OPERATING INSTRUCTIONS, BURN TECHNIQUES AND WARRANTY INFORMATION FOR THE CONSUMER. READ CAREFULLY AND THOROUGHLY BEFORE INSTALLING YOUR UNIT.

Safety tested at Warnock Hersey test labs to the appropriate standards for the U.S. To UL 127 for inserts and UL 1428 for freestanding models. Emissions tested at EEMC. These heaters meet the U.S. Environmental Protection Agency's Phase II emissions limits for wood heaters sold between July 1, 1990 and July 1, 1992.

IF THESE UNITS ARE NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

ALL CATALYTIC MODELS MUST BE CONNECTED TO A LISTED HIGH TEMPERATURE (COMPLYING WITH UL 1985) RESIDENTIAL TYPE AND BUILDING HEATING APPLIANCE CHIMNEY OR AN APPROVED MASONRY CHIMNEY WITH FLUE LINER.

NOTE: UNITS "USE SOLID FUEL ONLY".

Cracking of firebrick is normal and will not affect the efficiency of your heater. A good brass cleaner will restore brightness to tarnished brass. The glass will blacken with use, but may be cleaned. The first few times you use your stove, paint smoke may be seen rising from the unit and through the air discharge grill. This condition will cease after a few uses. You may wish to open doors and/or windows to ventilate the room during the first firing of your heater. Some warpage inside the firebox is normal. Minor imperfections in the solid brass door may be considered normal.

**CAUTION: DO NOT OPERATE BLOWERS FOR 30 MINUTES AFTER FIRE STARTS.**

### TOO HIGH A SPEED ON BLOWER:

Always adjust the speed of the blower to the size of the fire. Too high a fan speed produces a cooling effect.

### SEVERELY COLD WEATHER:

Naturally you will require more fuel in the middle of winter than in the fall.

### OVERDRAFT:

If the existing flue is substantially larger than the heater's exhaust flue we suggest reducing the exhaust flue opening or having a chimney cap installed to restrict the draft.

### DRAFT CONTROLS NOT ADJUSTED:

Combustion is restricted when the air is restricted. Be certain that the air intake is properly adjusted and open enough.

### BAD WOOD:

Hard wood gives more heat than soft wood. Rotten wood of any type gives very poor heat, burns quickly and produces excessive ash.

### COLD INSERT:

It may be necessary to wrap the rear sides and back of your insert with a fiberglass blanket to insulate it from an exceptionally cold and large fireplace.

### CONTROLS:

Check to be certain that the blower system is plugged into the proper receptacle and the fuse box is working. The fan speed should be set to the appropriate speed, not to "off".

## Blower Will Not Work

### SENSOR SWITCH:

Fan only comes on when the heated air reaches 110 degrees F and the fan (blower) switch is on. You may test the sensor on your unit by carefully heating the sensor switch with a match. The fan should begin to operate. (See page 49.)

**PAINT CURING:** New heaters always smoke on start up as the paint is heated. Open windows and doors for ventilation.

**LEAKY CHIMNEY:** Joint leaks or mortar leaks will cause draft to be weak. Use cement or mortar to correct these leaks.

### **Glass Gets Dirty**

**WET WOOD:** Dry wood produces much less creosote buildup than wet wood and less glass staining.

**NORMAL BUILDUP:** A damp cloth dipped in wood ashes removes creosote well. Good chemical preparations are available from your dealer.

**WOOD BLOCKING AIR WASH:** Wood placed too close to the glass may interfere with the Air Wash. Cut wood shorter or rearrange the fire.

**GASKETS BLOCK AIR WASH:** Use a razor blade to trim any window gasketing that interferes with the Air Wash.

### **Not Enough Heat**

**WET WOOD:** Dry wood produces almost twice the BTUs and burns at the same rate as wet wood. Wood cut in January and allowed to dry will give excellent results for the fall season.

**WOOD NOT LOADED PROPERLY:** Wood loaded front to back may give better performance than wood loaded sideways.

**TOO SMALL A FIRE:** When starting a fire, allow it to burn rapidly for several minutes to warm the entire heater and burn off excess creosote. A well built fire is much more efficient and heats better than a few sticks.

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- Denotes usage of freestanding and inserts

Congratulations on your purchase of a Country Flame solid fuel appliance. Your stove or insert is designed for a lifetime of durable, reliable performance and easy operation.

Before installing your Country Flame, **PLEASE READ ALL OF THE OWNER'S MANUAL AND SAFETY NOTES.**

#### SAFETY NOTES - IMPORTANT

1. Never use gasoline or similar liquids to start or freshen a fire. Keep all such liquids away from your stove or insert.
2. Watch your unit closely during operation. If any part starts to glow red or white, it is in an overfire condition. Close the air controls completely until the glowing has stopped.
3. Never burn wet or green wood. Store all wood in a dry location, away from the elements.
4. Never burn garbage.
5. Do not let an accumulation of either soot or creosote build up in your chimney or inside the firebox. If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.
6. Check your chimney system carefully before installation. If in doubt about its condition, contact a professional.
7. Do not connect your solid fuel appliance to a chimney flue already venting another appliance.
8. Dispose of cool ashes with care. They should be stored in a non-combustible, metal container.
9. Comply with all minimum clearances to combustibles as they appear in this manual.
10. Consult your local building codes before installation.
11. You will need to cure the painted surfaces of your Country Flame. For the first few fires, adjust the air control to the almost closed position after ignition. This will allow paint to cure in an even manner. *(There may be small amounts of paint fumes on initial fires.)*
12. Start your fire with paper and kindling. Adding of fuel should be moderate as the fire progresses. Do not burn large quantities of paper or foreign materials that create an extremely hot, quick fire.
13. When reloading your stove, always open the air controls and the catalyst bypass and wait a short period of time before opening the door.
14. For further information on using your woodstove, obtain a copy of the National Fire Protection Association's "Using Coal and Woodstoves Safely", NFPA No. NS-10-1978. The address of the NFPA is 470 Atlantic Ave., Boston, Massachusetts 02210.
15. Never allow the combustion or blower air intake to be blocked. When installed as an insert care must be taken to insure that a raised hearth does not create a blockage.
16. **Do not** use a grate to elevate the fire off the firebrick. Always burn directly on the firebox floor.
17. **Never** slam the door or strike the glass.
18. **Do not** burn coal in your stove.
19. **Keep** the door closed except during fueling
20. **Warn** your children about the dangers of fire and of touching the hot stove.
21. **Do not** place burning logs against the viewing glass.
22. **Do not** modify your combustion air control to increase air intake.
23. **Check** the door and glass seal frequently and keep them in good condition.
24. **INSTALL** a smoke detector within the proximity of your stove.

#### Stove Smokes

- |   |   |
|---|---|
| <b>CHIMNEY CAP RESTRICTED:</b>                  | Clean the chimney cap and remove any debris that may have accumulated in the screen.  |
| <b>DAMPER NOT ADJUSTED:</b>                     | Secure the damper into the open position.   |
| <b>FLUE TOO SHORT:</b>                          | Add a section to increase the chimney height.   |
| <b>DOWNDRAFT:</b>                               | Add a chimney cap designed to prevent downdrafts.   |
| <b>OBSTRUCTION:</b>                             | Remove tree limbs or obstructions at least 10' from top of chimney or increase chimney height.  |
| <b>ATMOSPHERIC CONDITIONS:</b>                  | Occasional atmospheric conditions will cause a smoking condition if the stove pipe is not straight up or the stove being burned is a rear vent. It is best to wait for conditions to change before burning. |
| <b>CHIMNEY OBSTRUCTION:</b>                     | Check the flue system for obstructions and clean.   |
| <b>STOVE PIPE INTERFERES WITH FLUE OPENING:</b> | Be sure that the stovepipe has not been installed so far into the flue that the draft is restricted.  |
| <b>TOO MANY ELBOWS OR LONG RUNS:</b>            | An installation with few elbows and runs both prevents smoking and excessive creosote.  |
| <b>TOO MANY FLUES TO A CHIMNEY</b>              | Only one flue should be in operation to ensure best results.  |
| <b>HOUSE TOO TIGHT:</b>                         | Open windows at first floor and close upper floor windows.  |

## Care of Brass Doors

A non-abrasive brass cleaner and soft cloth should be used to polish brass. Polishes with abrasive agents will scratch.

## Care of Blower

**CAUTION: MOVING PARTS MAY CAUSE INJURY. DO NOT OPERATE UNIT WITH SCREEN REMOVED. DO NOT OPERATE UNIT WITH COVER PLATE REMOVED.**

The blower motor must be oiled every 6 months during the heating season. The blower tray assembly can be removed very easily. For models B, BBF, SBF, E1 and E2, disconnect power, remove the clamping bolt located under the blower tray assembly and pull out approximately 4" (100mm). Remove the wire nuts that connect the power cord. (Black and green wires - Be sure to tag the black wires that connect to the white wire.) (See section on blowers.) On the ends of the motor shaft are oil slots - oil using only 3 or 4 drops of oil. **EXCESS OIL WILL DAMAGE THE MOTOR.** Place unit back into opening, connect wire (black to black, black to white, green to mechanical ground). Place unit in the rest of the way to the back fan stop. Check to be sure wires are not cut or connections have not become loose. Place clamp bar over bolt and tighten down. Connect power cord. Unit should now be ready to operate.

The R model is equipped with an optional blower unit, which is mounted on the back of the stove and easily accessible.

The O2 model fan motor's are located to L and R side of unit repeat procedure for each side of the unit. Remove 3 screws and open, motor housing will swing out. Remove red rubber seal on top of housing. Put 1 or 2 drops of oil on bushing in side cavity, close reversing procedure.

**NOTE:** Caution. Red cup is formed to provide a seal to housing. Must be seated evenly to prevent side loading of motor.

## Preparing the Stove for Installation

1. Remove the protective plastic wrapping from the stove and from the brass trim.
2. Inspect the stove for any obvious physical damage.
3. Check the air draft controls to be sure that they slide freely.
4. Check the operation of the damper control to be sure that it will open and close properly.

THIS MANUAL CONTAINS INFORMATION ON THE FOLLOWING COUNTRY FLAME UNITS:

• = STANDARD WITH UNIT

FREE – STANDING	PROBE	CATALYST	BLOWER	DELUXE LEG FRAME	PEDESTAL
B26/B23	•	RECT. •	•	OPTION	OPTION
BBF26/BBF23	•	RECT. •	•	OPTION	OPTION
SBF	•	ROUND •	•	OPTION	OPTION
E126/E123	•	RECT. •	•	OPTION	OPTION
E2	•	ROUND •	•	OPTION	OPTION
R	•	RECT. •	OPTION	OPTION	OPTION

INSERTS	PROBE	CATALYST	BLOWER	FLUE TRANSITION	(SHROUD)* PANEL TRIM	CFC **
B26/B23	•	RECT. •	•	OPTION	•	
BBF26/BBF23	•	RECT. •	•	OPTION	•	OPTION
SBF	•	ROUND •	•	OPTION	•	
E126/E123	•	RECT. •	•	OPTION	•	
E2	•	ROUND •	•	OPTION	•	
O2	•	ROUND •	•		•	

\* PANELS AND TRIM SOMETIMES REFERRED TO AS SHROUDS

\*\* COUNTRY FLAME CABINET AVAILABLE FOR THE MODEL BBF INSERTS. CHECK WITH YOUR DEALER FOR FURTHER INFORMATION.

CHECK CONTENTS (PG. 2) FOR INFORMATION ON YOUR COUNTRY FLAME CATALYTIC WOOD HEATER.

## Components

Familiarize yourself with the components of your stove before installation and operation. This owner's manual has been designed to assist you in installing, operating and maintaining your Country Flame stove efficiently, and safely. Keep it in a safe place for future reference.

1. **Manual Draft Controls** - Controls burn rate by regulating air entering the stove. They are located on the front of the stove directly below the fuel door. Slide each control toward the center of the unit for maximum air intake. Slide each control toward the side of the unit for minimum air intake.

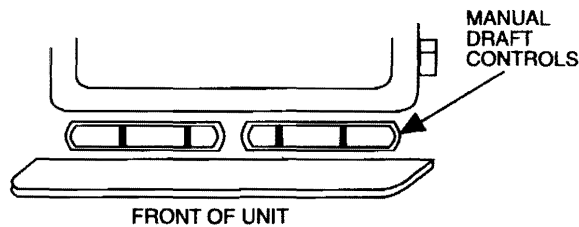


Figure #1

2. **Catalytic Combustors** - The stoves and inserts contain catalytic combustors, which need periodic inspection for proper operation. They are designed to burn the smoke, carbon monoxide and particulates which are not burned by the fire. Once the fire has been established, you can engage the catalytic combustor by shutting the bypass. (Minimum catalytic light off will not occur until the stove reaches approx. 700°F.)

3. **Catalytic Bypass** - The catalytic bypass handle should be pulled out all the way to allow smoke to bypass the catalytic combustors, until the unit reaches approx. 700°F, necessary for light off. The catalytic bypass should also be pulled out all the way when loading the stove with fuel. For installation of replacement catalyst, see pg. 15.

4. **Blower** - The blower is designed to provide additional heating value. See blower section for additional information.

## Heating With Wood

Maintaining comfortable heat for extended periods of time throughout your home is a talent that you will acquire with time and experience. Your exact technique will vary with the layout of your home, your flue and wood. We can however, make suggestions for you to use as guidelines.

**Timing** - When you add wood to your fire influences how long the fire will last. A full charge added to a good set of coals and embers will burn several hours and produce even heat, ideal for overnight burns. The same charge when added to a very hot fire produces more intense heat for a shorter period of time.

**Quantity** - Adding a large quantity of wood to a fire will cool the fire substantially. Naturally the heat output will be reduced for a period of time. Adding smaller quantities will produce faster starting and more even heating.

**Ashes** - Ashes in your heater insulate the coals in your fire and make them last longer. Remember that failure to clean your heater regularly will allow the ash to build up, which will reduce the size of your firebox and lower heat output.

## Ashes

Ashes should be removed and stored in a fireproof metal container with a tight fitting lid. The container should be kept on a noncombustible floor or on the ground, well away from all combustible materials, until all cinders have thoroughly cooled. An accumulation of too much ash restricts air flow and reduces the available burning area. A layer of an inch or two of ash should be maintained however, to support combustion and insulate the bottom of the firebox.

## Care of Glass

Your Country Flame is equipped with safety approved, high temperature ceramic glass, available through your Country Flame retailer. The glass can only be broken by impact or misuse. It should be handled as any other breakable glass. Heat or flames from the fire will not break the glass. However, rough handling when the glass is hot or forcing the door closed against the wood can cause breakage. Never slam the door or impact the glass. When loading fuel, be sure logs don't touch the glass. In case of breakage, glass should be replaced **ONLY** with Country Flame dealer-supplied glass.

Soot and smoke may cloud the glass pane when using soft wood such as pine on a low setting. However, in time, this will burn off or may be cleaned with a non-abrasive glass cleaner. Abrasive cleaners may scratch and cause the glass to crack.

## Creosote

### Maintaining Your Country Flame

When wood burns slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a newly started fire or from a slowly burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire which may damage the chimney or even destroy the house.

The chimney connector and chimney should be inspected at least twice monthly during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

Inspect the system at the stove connection and at the chimney top. Cooler surfaces tend to build creosote-deposits quicker, so it is important to check the chimney from the top as well as from the bottom.

Creosote should be removed with a brush specifically designed for the type of chimney in use. A chimney sweep can perform this service. It is also recommended that before each heating season, the entire system be professionally inspected, and cleaned and repaired if necessary.

## Wood Quality

You may purchase wood by the stack, rick, pickup load, and by the cord. Buying wood can be frustrating if you don't know what to expect and how to avoid problems.

A cord is 128 cubic feet of wood. It can be of various widths and lengths, but the cubic measurement is always the same. You should measure the loads that you purchase and asking your woodcutter to stack the wood makes this job considerably easier.

The ideal moisture content of wood is 12 - 20%, but this is seldom available for purchase - it is normally the product of careful cutting, splitting, stacking and seasoning. The moisture content of green wood, full of sap, is approximately 80%. This green wood has so much moisture that it is hard to establish a fire with it, and half of its energy content is expended just to boil out its water content. This results in much less heat output for your home. A moisture meter, available from most woodstove dealers, is an invaluable aid in evaluating your wood purchases and your choice of woodcutters. When ordering your wood it is advisable to request wood 2-6" shorter than your firebox to assure a proper fit.

Ordering your wood split will certainly be a convenience. But if you decide to split wood yourself it is best to have the proper equipment. Do not attempt to split logs with an axe - use an 8 pound maul. Protect your feet and legs with a log placed between your body and the maul.

## Chimney

You must use either an approved masonry chimney or a prefabricated 6" (150mm) chimney for models R and O2 - 8" (200mm) for all other models and listed high temperature (tested to 2100°F) residential and building type heating appliance chimney. Components required by manufacturers for installation such as the chimney support base, firestop (as appropriate), attic insulation shield, insulated tee, etc., are necessary to assure a safe chimney installation. Use only components manufactured for the chimney.

## Chimney Connector

Also known as flue pipe or stove pipe, the chimney connector joins the stove to the chimney. It should be 6" (150mm) for models R and O2, 8" (200mm) diameter for all other units, minimum 24 MSG black or 25 MSG blue steel.

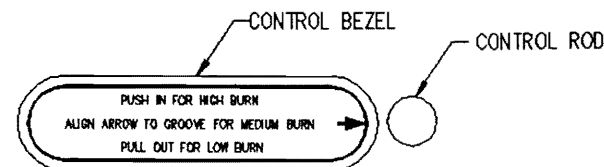
## Thimble

A manufactured or site-constructed device installed in combustible walls and ceilings through which the chimney connector passes to the chimney. It is intended to keep walls from igniting.

MODEL R/90  
MANUAL AIR CONTROL

LOCATED UNDER THE HEARTH ON THE FRONT OF THE UNIT IS THE AIR CONTROL ROD AND CONTROL BEZEL.

BURN RATE IS CONTROLLED BY:  
PUSHING ROD IN FOR MAXIMUM AIR INTAKE.  
PULLING ROD OUT FOR MINIMUM AIR INTAKE.  
ALIGN ARROW TO GROOVE FOR MEDIUM BURN  
FOR MEDIUM BURN RATE.



## Freestanding

Stove Clearances  
(Figures 2 & 3)

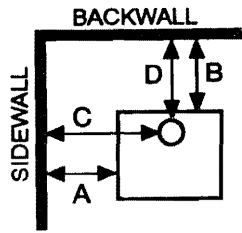


Figure #2

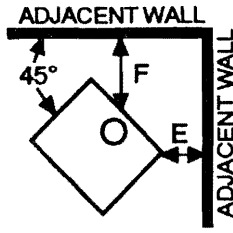


Figure #3

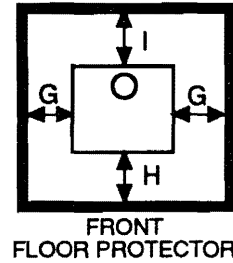


Figure #4

## Stove Clearances

Wall Clearances: Official clearances to combustibles for all Country Flame stove models are located on the testing label located on the back of the stove and the following diagram. Remember that clearances must be measured from the part of the stove nearest to the combustible.

## Stove Clearance References

	S*					D*
	BBF	B	SBF	E1	E2	R
A	21	18	12	26	22	12
B	20	20	14	15	20	3
C	18	29	13	12	33	-
D	20	21	14	12	21	-
E	20	20	12	21	22	5
F	18	24	14	12	26	-
G	8	8	8	8	8	8
H	18	18	18	16	16	16
I	8	8	8	8	8	3

\*S - Single wall connector pipe

\*D - Double wall connector pipe

\* The single wall clearances above may be reduced when installed with floor to ceiling wall protection. See page 9, check with your dealer and local codes.

When locating your stove, consider safety, convenience, traffic flow, and the fact that the stove will need a chimney and chimney connector. Your stove should be located away from doors and hallways and in an open area to allow for necessary clearances.

## Check List

**Step 1.** Check automatic fan switch thermal disc to make sure switch has not shorted out or cracked during shipment. Check wiring for any loose connections or shorts. (See blower section, page 39.)

**Step 2.** Heat automatic fan switch to 110 degrees F using match or lighter held to back side of automatic fan switch.

**Step 3.** If the fan fails to run, turn off the power and bypass the automatic fan switch by disconnecting the black and common (may be black or white) wires from the automatic fan switch and join these two wires together. Make sure that the fan switch is not in the off position. If the fan runs when power is restored, replace the defective automatic fan switch and wire it correctly.

**Step 4.** If the fan still does not run, unplug the power cord and bypass the 3 speed switch by wiring the high speed black wire and common (may be black or white) wires together at the 3 speed switch and set the 3 speed switch on high. If the fan runs when power is restored, replace the 3 speed switch and restore the connection to the automatic fan switch described in Step 3.

**Step 5.** If fan still does not work, contact your Country Flame dealer.

During a power failure you will still have a source of heat because room air flows through the air intake and out the discharges as it is warmed and expands. This is called gravity flow. You can enhance this flow during a power outage by performing the following. (Only for models B, BBF, SBF, E1 & E2.)

1. Unplug supply cord from wall receptacle.
2. Pull motor drawer assembly out by loosening the two screws beneath the ash fender.
3. When power is restored, slide in the motor drawer assembly to the original position and replace the cord into the wall receptacle for normal fan operation.

**NOTE:** If you have a power failure, we recommend that you slide the blower drawer part way out to enhance the gravity flow. If you choose to leave the blower drawer in place, it will not harm the blower.

## Fan Malfunction

In the event of any malfunction in the electrical system of your insert/ stove, please refer to previous section, electrical system check list, and blower section, starting on page 39, for wiring details.

4. Do not clean the glass with materials which may scratch it (such as steel wool) or otherwise damage the glass.

The glass can be cleaned with a chemical preparation available from your dealer. You may want to dip a wet rag in ashes and rub the glass until it is clean.

**If Your Stove Smokes...**

High tech stoves of all types are more sensitive to drafting problems. Their higher efficiency means that more heat is going into your home - and less heat up the chimney. A chimney that is cold will not draw well until it is warmed. Follow these guidelines to remedy drafting problems:

1. Be sure to open the damper before opening the door.
2. Open the damper and air slides completely 30 seconds to 1 minute before opening the door. This will allow the flue to warm more completely.
3. After lighting, leave the door open 1/2" until the fire has started well, then close the door. (Note: Never leave the fire unattended.)
4. Turn off vent or exhaust fans, close off open fireplace doors or openings, and check for the presence of other draft-robbing appliances. Slightly crack a door or window near your stove/insert to promote a good draft.
5. In severe cases with inserts a positive connection to the fireplace damper or to the top of the chimney may be necessary to correct leaks caused by broken or cracked tiles.

**Operating the Circulating Blower (Optional on Model R)**

**WARNING: ROUTE POWER SUPPLY CORD AWAY FROM UNIT. NEVER COVER AIR INLETS ON THE STOVE.**

**WARNING: MODIFICATION OR INCORRECT INSTALLATION OF THIS FAN WILL VOID WARRANTY.**

**NOTE: MODIFYING FAN INSTALLATION WILL MAKE THE UNIT OPERATE IN A LESS THAN EFFICIENT MANNER.**

**NOTE: The fan and motor assembly shall be cleaned and the motor oiled every 6 months, using several drops of SAE #20 motor oil in each oil hole (2). (See Page 53).**

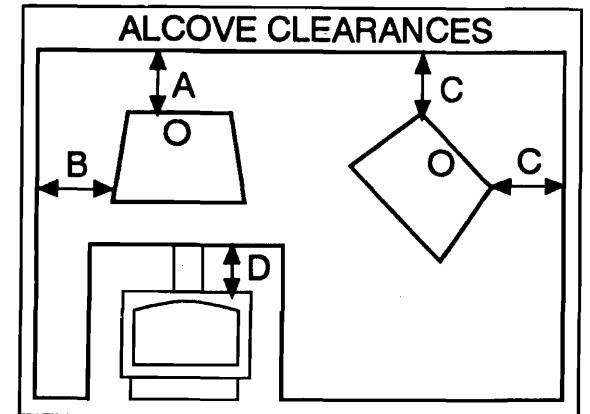
**Floor Protection**

Use a listed floor protector or any noncombustible material having a thermal conductivity of K-0.85 BTU - inches per foot square - per hour - Fahrenheit degrees; or equivalent to 3/8" (9.5mm) non-asbestos millboard. Clearances are 8" (200mm) from unit sides and back, and 16" (400mm) from the front for models E2, E1 and R. For models B, BBF, SBF - 18" (450mm).

The stove must be placed on a floor protector if the floor is wood or other combustible flooring. **IF CARPETING IS PRESENT, IT MUST BE REMOVED. THE FLOOR PROTECTOR MUST NOT BE PLACED ON CARPET.**

(See page 7.)

**Alcove**



**ALCOVE CLEARANCES**

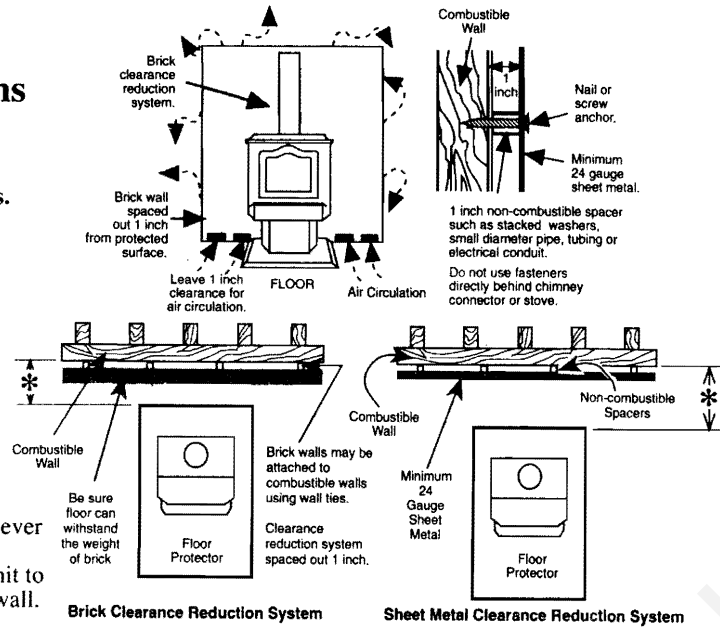
	A	B	C	D
R	3"	12"	5"	42"

Figure #5

Alcove clearances for the Model R are determined using double wall chimney connector pipe.

## Reduced Clearance Instructions

**NOTE:** Always check local and state regulations.



## Alternatives For Wall Protection

These reductions apply only to the clearances found on page 7. They may not be applied to the already reduced clearances with heat shield and double wall air insulated pipe.

Example: The rear clearance for the Model B from page 7 is 20" (500mm) (*Measurement B*.) This clearance may be reduced up to 66% but not less than 12" (300mm) by using either of the wall protection devices mentioned below. See **ALCOVE CLEARANCES** Pg. 8.

**NOTE:** If your installation is a reduced clearance using double wall chimney connector pipe as shown under D\* of the reference chart on page 7, then clearances may not be reduced.

Clearances to combustibles may be reduced if a tested and listed wall protector is installed over a combustible surface when the following conditions exist:

1. A dead air space of 1" separates the listed and tested wall protector from the combustible surface.
2. The tested and listed wall protector extends from floor to ceiling with a 1" clearance for air circulation at both the floor and ceiling.
3. The 1" spacers (*preferably ceramic rather than metal*) must be located at the corners rather than behind the heater or the chimney connector.

## Unlisted & Untested Protector

Wall protectors may be constructed of masonry, 24 gauge or thicker sheet metal, or non-combustible 1/2" (12.5mm) thick insulation board. Conditions 2 through 4 above must be observed but the air space in condition 1 must be increased to 1 1/2" (37.5mm).

## Helpful Hints

### NEVER OPERATE THE UNIT WITH FUEL DOOR OPEN.

Do not overfire. Using flammable liquids or too much wood, or burning trash in the stove, may result in overfiring. If the chimney connector or stove glows red, or even worse, white, the stove is overfired. This condition may ignite creosote in the chimney, possibly causing a house fire.

If you overfire, immediately close the stove damper and door to reduce the air supply to the fire.

**CURING THE PAINT ON YOUR STOVE.** During the first several firings, burn small fires to cure the paint and to prevent damage to the finish. It is a good idea to run your blower during these first firings. This will allow the paint to cure at a slower rate and creates a better overall finish.

**ASH BED:** For maximum efficiency from your Country Flame, allow an ash bed of about 1 to 2 inches to build up in the stove.

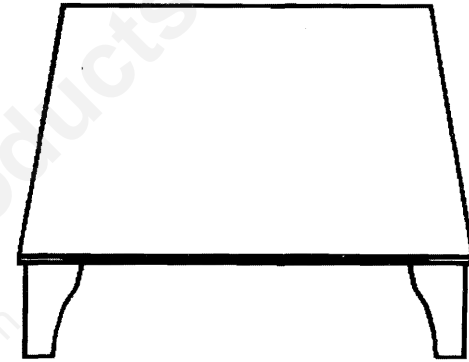
**CAUTION:** Never remove ashes from your Country Flame with the blower running. Blown air could scatter the ashes and hot embers across your room.

**CARE OF GLASS DOOR:** The glass door on your Country Flame permits you to enjoy the beauty of the fire while retaining the efficiency of your stove. Although the brand of glass used in the Country Flame door has well established and recognized heat resistant and strength characteristics, it can be broken through improper use. To achieve the maximum utility and safety of your glass door, we advise that you observe the following use and safety tips:

1. Inspect the glass regularly for cracks or breaks. If you detect a crack or break, extinguish the fire immediately and return the glass to your stove dealer for glass replacement before further use.
2. Do not slam stove door or otherwise impact the glass. When closing door, make sure that no logs or other objects protrude to impact against the glass.
3. The glass will normally require occasional cleaning but several techniques are advised to reduce creosote buildup. Pull your fire forward to intensify the heat near the glass. Open the air slides slightly to insure that enough air is entering the Air Wash to be effective. Very long, low fires starve the Air Wash System for air and hasten creosote buildup. Trim the gasket around the glass if it has curled and is interfering with the flow of air over the inside of the glass.

9. When opening the door to tend an established fire, you must disengage the catalyst to prevent smoke from spilling into your room. After tending your fire you can engage the catalyst immediately. There is no need to wait to engage the catalyst at this point because the temperature in the catalyst area will be in excess of 700 degrees F.

**A TIP** - The performance of your catalyst will vary according to your flue draft. You will want to experiment with your controls to determine your best setting and performance. We especially recommend that you experiment with engaging the catalyst at different temperatures. You may find that you prefer leaving the air slides open until temperatures climb above 1000 degrees F before reducing the air setting.



**DeLuxe Leg  
Frame  
(Option for  
Freestanding  
Stoves)**

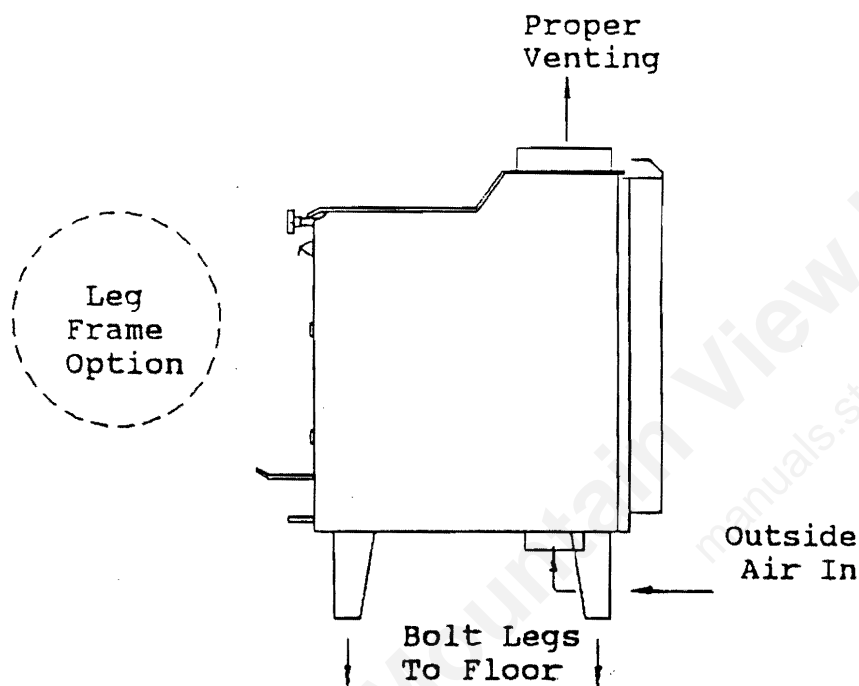
The DeLuxe Leg Frame, pictured above, is the easiest and most attractive leg kit offered. Simply position the DeLuxe Kit in the final location of the stove and place the stove body on top of the frame. Make sure that the frame is centered beneath the stove body.

Mountain View Hearth Products  
manuals.stove-parts-unlimited.com

**WARNING: DO NOT INSTALL IN SLEEPING ROOM**

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

1. The R-6 must be permanently bolted to the floor of the mobile home. (see illustrations)
2. This unit must be permanently electrically grounded to steel frame of the mobile home.



3. The inlet air tube must be installed in all applications to the outside floor of the unit. Necessary hardware has been provided;
  - 4 - 1/4" Spring Clips
  - 4 - 1/4" x 3/4" Screws

The other end must be installed so that outside air is available to the unit. Pedestal model may run air intake up through floor, rather than wall.

4. Directly on top of the newspaper, place a good sized bundle of light wood, small dry kindling, or rolled up newspaper.

5. Light the wadded newspapers, leave the damper open, and close the door completely. Open the slide controls and allow the kindling to catch.

6. When the kindling has caught, add another small, well-seasoned log over the kindling to catch.

7. Allow the stove to warm thoroughly and all logs to begin burning well before either adding additional wood or closing your draft controls. This will normally require fifteen minutes or longer. The paint on your Country Flame heater will smoke slightly when it is initially fired and you may wish to ventilate the room by opening doors or windows.

Allow a minimum of 20 minutes to establish a good fire. If you have a slow drawing or lazy flue, you may require a considerably longer burn time to acquire a well established fire.

8. When you feel that you have a well established fire, engage the catalyst by pushing the bypass handle all the way in. At this point the fire will diminish slightly, which is normal. If the fire diminishes to the point of going out, pull the bypass handle out until the fire is better established. At this point, the air drafts are still in the full open position and the catalyst is disengaged. You will need to continue burning for a short period of time (15-20 minutes) to re-establish your fire. When your fire is re-established, engage the catalyst and begin to close the air slides. If you are still experiencing problems at this point, consult the trouble shooting guide.

**NOTE:** The catalyst begins to work when the temperatures in the catalyst area reach approx. 700 degrees F. When the probe is inserted through the hole on the front of the unit you will be able to monitor the temperature in the catalyst area.

Temperatures may reach 2000 degrees or better when the fuel mixture is rich, but a more normal operating range is 900 to 1400 degrees.

The catalyst is unaffected by the blower. Surface thermometers only measure temperatures on the surface of the heater and are not reliable for monitoring interior temperature. The use of the probe is a more accurate way to monitor the interior temperature and will eliminate some of the guesswork.

## Starting Your Fire

Immediately after your Country Flame heater has been properly installed, it should be tested for draft. This draft test is a simple test in which one sheet of wadded newspaper is set afire in the middle of the firebox, the door closed, and the flue damper pulled fully open. Open the draft controls by pushing the sliding controls completely open. If your chimney is drawing properly, the smoke from this burning newspaper and the flames themselves will be drawn into the direction of the open flue in your Country Flame heater. If, on the other hand, the smoke blows into your room or burns very slowly, this is an indication that your existing chimney system is not operating properly with your Country Flame heater.

**Things To Check If Draft Is Poor** - Make sure the chimney flue damper inside the fireplace has been removed or securely tied open.

See that the flue and raincap are clear of obstructions such as creosote, nests, etc.

Your flue may not extend high enough above your roof or may be obstructed.

Your chimney system may have leaks substantial enough to reduce the draw.

After you have checked your installation for proper draft, you are ready to build your first fire. The first fire should be relatively light. This breaks in the heater slowly, rather than the sometimes damaging effect of a huge flash fire in the initial firing. For this first firing we suggest the following procedure:

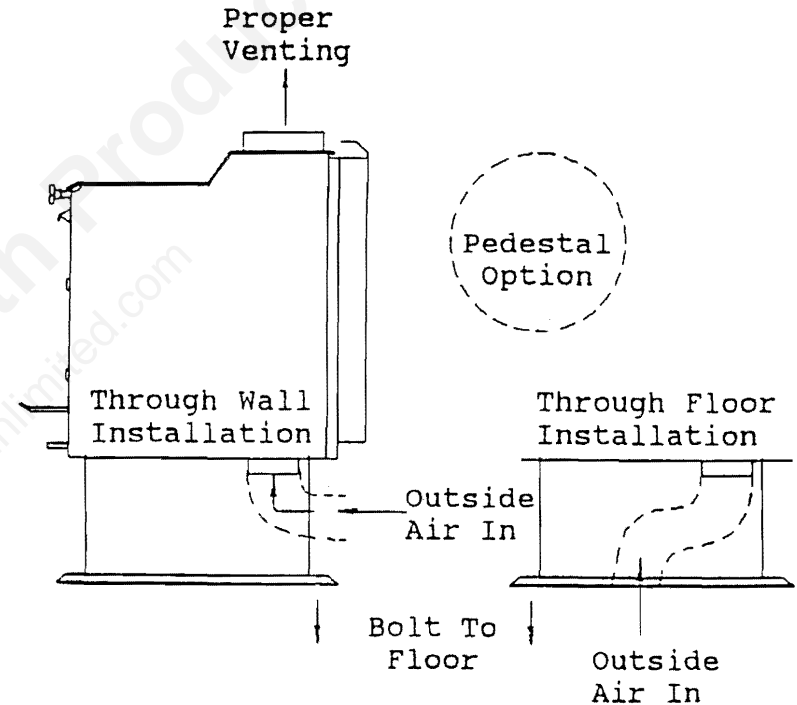
## Operation

**Caution:** The catalytic bypass handle will be very hot. We recommend the use of a protective glove when disengaging or engaging the catalyst.

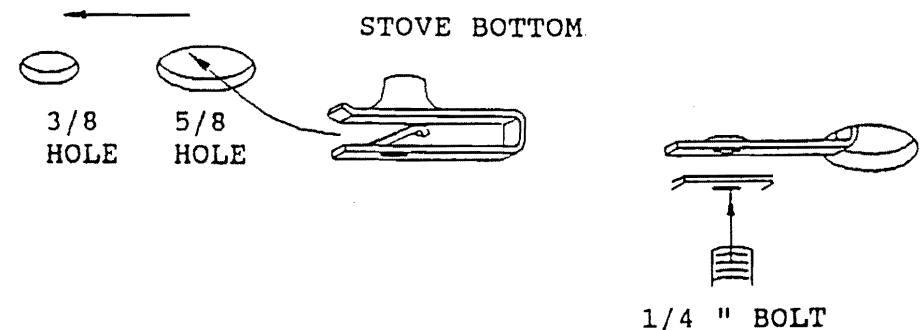
1. During the first firing of your Country Flame heater, and any time it is refired in the future, the catalytic bypass handle should be all the way out in the fully open position. This allows for maximum draft. Fully open the pipe damper if you have one.
2. Air slides should be in the full open position when starting your fire. With the air slides in the full open position, air is going directly into the fire for a quicker start, as well as to the air Wash.
3. Place several pieces of wadded up newspaper between two well-seasoned\*, average size logs.

\* Our particular definition of well-seasoned wood is wood that has been cut and split in the late winter and left to dry out during the summer months. This well-seasoned wood will provide the best burn with the least creosote build-up.

Inlet air intake should be fitted with suitable size mesh screen or approved cap, provided by installer, to keep foreign material out of air intake. Mesh or cap should not be window screen type, as it would tend to plug up with debris.



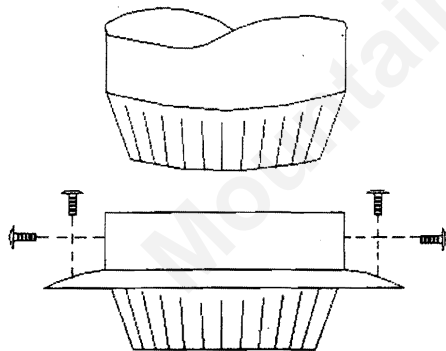
Bolt Pedestal or Leg Frame to stove using 1/4" bolts and clips provided. (see illustration)



### Installation Instruction For Transition

Flue transition is used on Freestanding models B, BBF, SBF, and E1, and can be an added option for some inserts - (see chart in preparation section.)

- Step 1: Squeeze a "bead" of high temperature RTV sealer underneath bottom edge of flue collar. Place into flue opening on top of stove and tighten into place with three sheet metal screws.
- Step 2: Insert flue into flue collar and secure with three sheet metal screws.



The outside portion of the slide (the last section to be covered as the slide closes) is called the Air Wash. It channels preheated combustion air into the firebox through long slots just inside the door opening on the top and sides.

This hot air sweeps over the glass and helps prevent the buildup of creosote. Remember however, that long, slow burns will generate some creosote formation. A hot fire will burn off a good deal of this accumulation but sometimes a chemical preparation, or a razor blade is necessary to remove the creosote from the glass. Your glass will remain cleaner if you allow your fire to become hot before reducing your air intake slides.

### Catalytic Bypass Handle

After your fire has started you will want to push in the damper rod. This allows temperatures in the firebox to intensify and slows combustion. When your fire is well established you can begin to close the air slides. Continue to close the air slides until you reach your desired setting for heat and duration of burn.

### 8" Probe Thermometer

The best way to monitor the condition of your fire is with a 8" (200mm) probe thermometer, available from your dealer. The 8" (200 mm) probe thermometer is included with the catalytic combustor kit. This thermometer can be installed into the plug hole located directly above and slightly to the left of the smoke shelf. (See figure in probe section.)

This thermometer displays the temperature measured above the front exhaust and over the catalyst. The thermometer reading will be slightly affected when the blower is engaged as air blows over it. The firebox and catalyst temperatures are not influenced when the blower comes on.

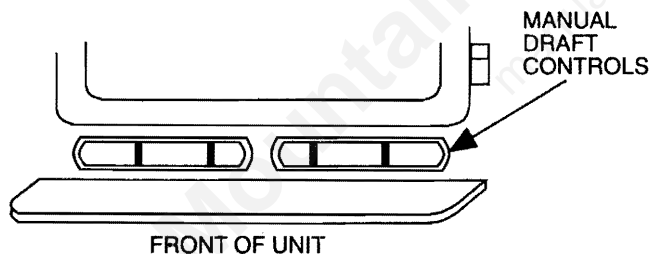
## Burning Your Country Flame

**PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW STOVE. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, OR EVEN DEATH.**

### Operating Your Country Flame Catalytic Stove Or Insert

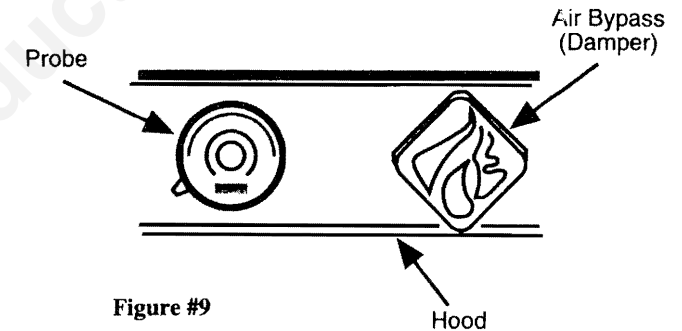
**Before You Start** - It is important to burn only NATURAL, UNTREATED WOOD. Coal, synthetic logs, plywood, paint, particle board, chemical lighters, or chemically treated fuel may poison your Country Flame catalyst. The catalyst will work best with dry, seasoned wood. When provided with enough fuel the catalyst will develop temperatures within its core of 1600 degrees F and may glow red hot. As temperatures drop the catalyst will continue to function long after the red glow is gone.

**Slide Controls** - All models have slides beneath the single piece door which control the rate of combustion and make it easier to start your fires. When the slide is completely open, the divider can be seen behind the grill work. Air coming through the inside portion of the slide (the first side to be covered as the slide is closed) is channeled directly into the firebox. This direct feed of air accelerates the combustion when you are starting a new fire or adding wood to an established fire and is called the Quik Start.



## 8" Probe Thermometer

The probe thermometer is available from your dealer, and is also included with the catalytic combustor kit. The probe can be installed into the hole located directly above the hood and slightly to the left of the air bypass (damper).



The probe can assist in determining when to close the air bypass. (Damper.)

Probe displays the temperature measured above the front exhaust and over the catalyst.

**NOTE: THE PROBE THERMOMETER READING WILL BE AFFECTED WHEN THE BLOWER IS ENGAGED. (EXCEPT MODEL R-6.)**

Engaged blower will not influence temperatures in firebox or catalyst.

### INLET AIR TUBE

#### IMPORTANT NOTE: MODEL R/90

THE INLET AIR TUBE MUST BE INSTALLED IN ALL APPLICATIONS TO THE OUTSIDE FLOOR OF THE UNIT!  
\* MOBILE HOME INSTALLATION REQUIRES OUTSIDE AIR INSTALLATION!  
NECESSARY HARDWARE HAS BEEN PROVIDED.

- 4 - 1/4" Spring Clips
- 4 - 1/4" x 3/4" Screws



## Catalytic Combustor - Is it Working?

Ask yourself the following questions. If your answers are YES, your catalytic combustor is working properly.

1. Am I burning less wood to get the same amount of heat?
2. Does my catalyst glow red for a short amount of time during my wood load? The combustor can be seen by looking inside the stove directly over the damper rod.
3. Is there substantially less creosote in my chimney?
4. Is the smoke exiting my chimney white in color and usually odorless?
5. Does a visual inspection of the catalyst show it to be clean of any fly ash, creosote or soot?

If the answer to any of the above questions is NO the Trouble Shooting Guide may help you to activate your catalyst again.

**NOTE: KEEP AND REFER TO CATALYST WARRANTY/ INSTRUCTIONS INCLUDED WITH YOUR CATALYST INSTALLATION.**

## Catalytic Trouble Shooting Guide

**FIRE GOES OUT BEFORE CATALYST IS ENGAGED:**

Open the slide adjustments and the bypass entirely to maximize the draft. Use plenty of kindling and paper to start the fire. Check the entire flue system for closed damper, obstruction, clogged flue cap, insufficient flue height, to many elbows or long horizontal runs, or a leaky chimney. Do not connect an 8"(200mm) flue opening to a 6"(150mm) chimney system.

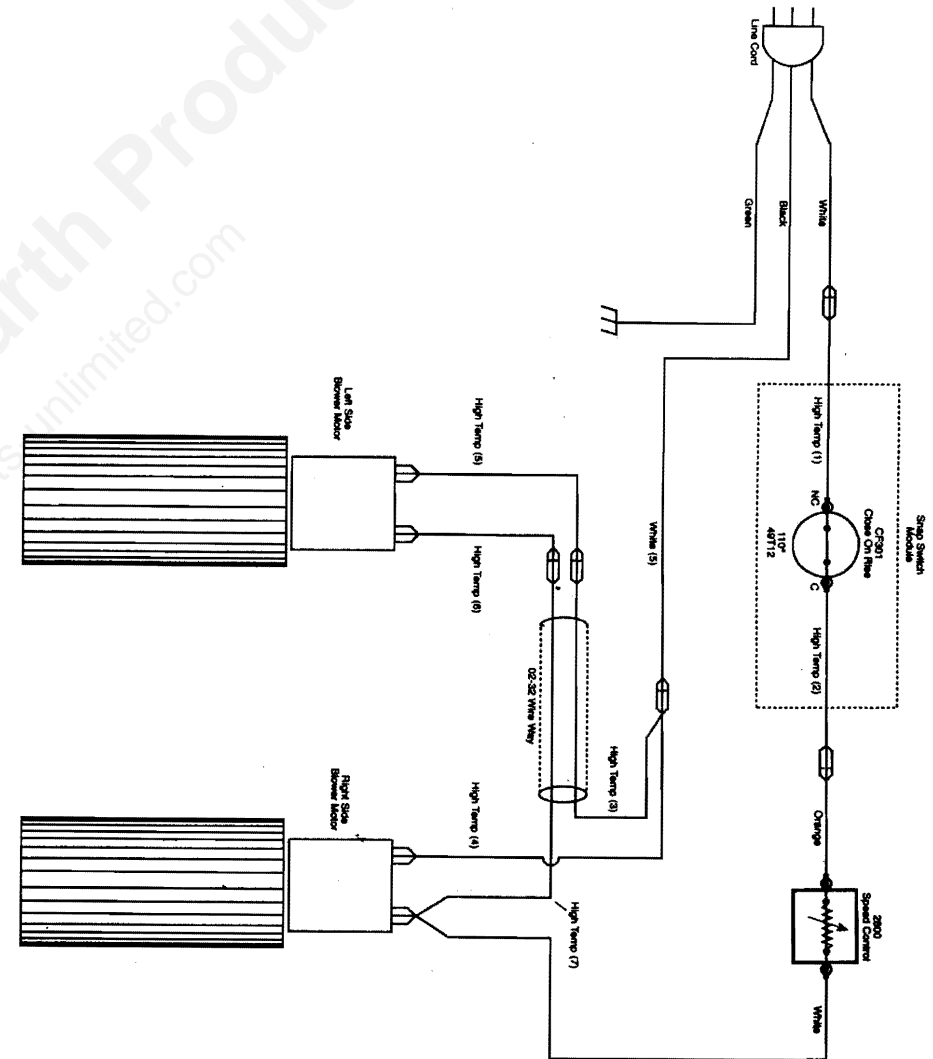
**FIRE GOES OUT AFTER THE CATALYST IS ENGAGED:**

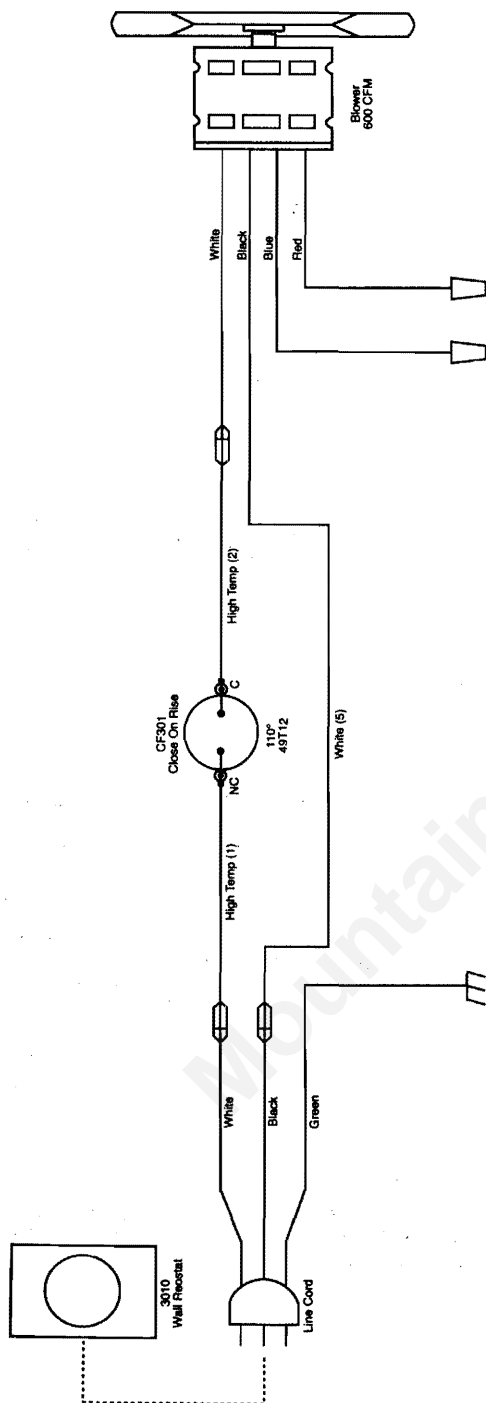
**NOTE:** The fire will normally diminish somewhat when the catalyst is engaged because of draft reduction. If the fire appears in danger of dying out, open the air slides entirely and slightly disengage the catalyst until the fire is better established.

**CATALYST ENGAGED AND FIRE CONTINUALLY DIES OUT:**

1. Remove the fly ash by removing the lower impingement plate and brushing the bottom of the holder with the exhaust of a vacuum cleaner or a burst of compressed air.
2. Lightly brush the face of the catalytic holder with a soft bristle brush or toothbrush to remove the accumulation.

## Model O2



**Model R****CREOSOTE ACCUMULATION OR DIRTY SMOKE FROM THE CHIMNEY:**

1. You are not getting "light-off" on the catalyst.
2. You are burning wet wood or improper fuels.
3. Your bypass mechanism is not fully closing; allowing smoke to go around the combustor rather than through it.
4. Your catalyst is not functioning and needs to be cleaned or replaced.

1. Make sure you have achieved approximately 700 ° (necessary for "light off") before engaging the combustor.
2. Burn only dry seasoned wood.
3. When the stove is not burning, make sure mechanism is closing fully and that there are no obstructions.
4. Replace or clean your catalytic combustor. (See #3 below.)

**PLUGGED CATALYST OR CATALYST HOLDER**

1. You did not achieve "light-off" temperature prior to closing your bypass mechanism and engaging your combustor.
2. You are burning materials which are coating the catalyst, such as heavy papers, wet wood, garbage, etc.
3. Your catalytic combustor is no longer functioning and needs to be cleaned or replaced.

1. Make sure that you have at least the approximate 700 degrees (necessary for light off) before you engage the combustor.
2. Burn only dry seasoned wood.
3. Build a hot fire in your stove, engage the catalyst half-way, then two-thirds, then fully, to "burn" the accumulation of materials off the combustor.
  - 3.1. Remove the fly ash by removing the lower impingement plate and brushing the bottom of the holder with the exhaust of a vacuum cleaner or a burst of compressed air.
  - 3.2. Lightly brush the face of the combustor holder with a soft bristle brush or toothbrush to remove the accumulation.
  - 3.3. Replace the catalytic combustor. See page 15 for installation.

**MODELS:** B, B-23, BBF, BBF-23, R, E1, E1-23

### Catalyst Inspection & Replacement

Be certain that there is no fire in your Country Flame stove and that the unit has had sufficient time to cool.

Visually inspect the catalytic combustor (s) (located in firebox) at least 3 times during the heating season to determine if physical deterioration has occurred. Only replace if damaged or no longer operating. Replace only with E.P.A. approved catalytic kit from your Country Flame dealer. (See your catalytic warranty.)

### Inspection

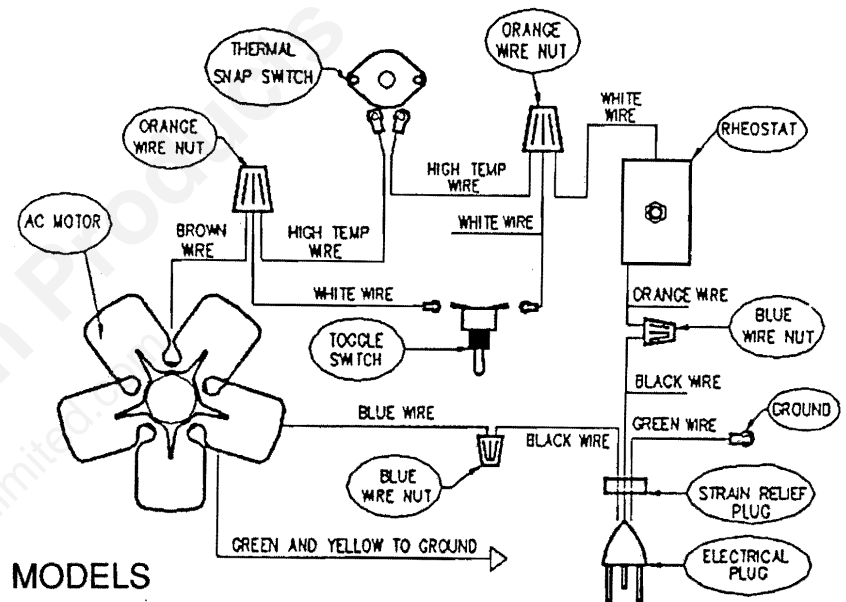
To inspect catalyst, look up inside the stove and locate the catalytic combustor retainer plate. Remove the four bolts on the plate and remove the plate. Inspect for flyash. Flyash may be removed by lightly brushing surfaces with a soft paint brush. Return the plate and bolt into place.

### To Replace

Make sure your kit is complete and the two gaskets are located properly.

To replace catalyst, remove retainer plate by removing the four bolts on the plate. Loosen and remove carriage bolt on left side of the catalyst holder. Slide entire holder to the right. The holder, gaskets, and catalyst will drop down to be removed. Install catalyst and new gaskets into holder. Push holder securely against top and align slots and wedges, slide holder to the left. Make sure the gasket between

### AC WIRING DIAGRAM 23" UNITS



**MODELS**  
B 23, BBF 23  
E 123

THE THERMAL SNAP SWITCH IS LOCATED IN THE BLOWER TRAY ASSEMBLY NEAR THE BOTTOM OF THE BURN BOX. THIS SWITCH IS ACTIVATED WHEN TEMPERATURES IN THE AREA REACH 110° TURNING ON THE BLOWER MOTOR, AND DEACTIVATES AT APPROXIMATELY 90° TURNING OFF THE BLOWER MOTOR.

BLOWER SPEED SELECTION IS DONE BY A VARIABLE SPEED CONTROL UNIT LOCATED ON THE GRILL UNDERNEATH THE HEARTH LIP. A CLOCKWISE ROTATION OF THE ROUND KNOB IS REQUIRED TO MOVE THE SWITCH OUT OF THE OFF POSITION.

A MANUALLY OPERATED OVER RIDE SWITCH IS PROVIDED THAT ALLOWS THE AIR SYSTEM TO BE USED AS A ROOM AIR CIRCULATOR, (WHEN NOT BEING USED AS A HEATER.)

### CARE OF BLOWER

COUNTRY FLAME 23" UNITS ARE SUPPLIED WITH A SERVICE FREE 600 CFM MOTOR. THIS MOTOR COMES WITH DEALED BEARINGS, ELIMINATING THE NEED FOR OILING.

**Model O2**

The thermal disc is located on the right hand side, at the top of the burn unit (inside the right-hand blower housing).

Blower speed selection is done by a variable control rheostat unit located on the lower portion of the right-hand blower housing. There is no off position. Control is for fan speed only.

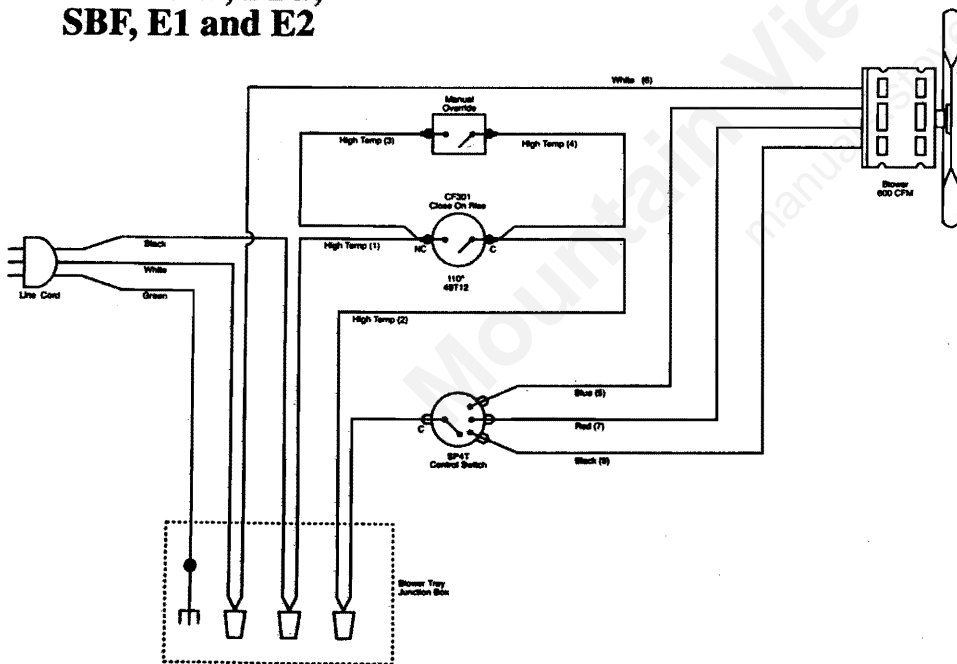
**Model B**

Thermal disc is located inside the right side of the discharge vent.

Blower speed is selected with the variable control switch located on the front of the unit below the hearth plate.

**Blower Electrical Wiring Diagrams**

**Models B, BBF, SBF, E1 and E2**



**MODELS:**

**B, B-23, BBF, BBF-23, R, E1, E1-23**

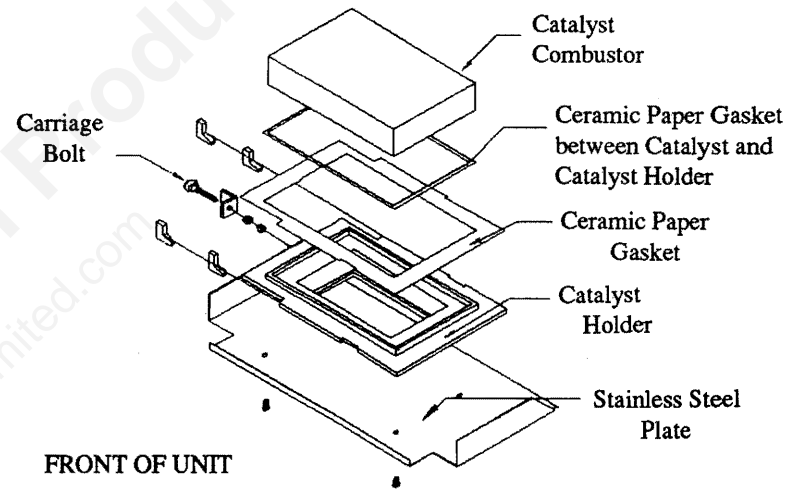


FIGURE #10

Bolts (short)  
4 Places

the unit's top and catalyst holder has fixed an airtight seal. Position carriage bolt, washer, and nut and tighten into place. Replace retainer plate, bolt into place with the four bolts.

Model: 02, SBF

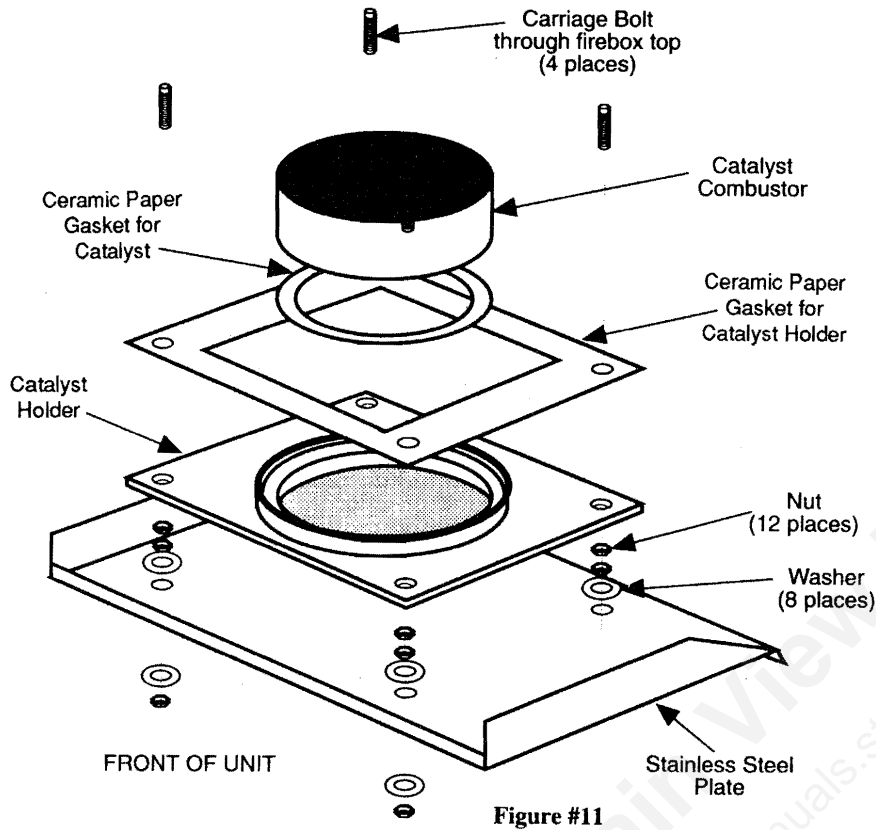


Figure #11

**REPLACE**

To replace catalyst, loosen and remove nuts and washers under retainer plate. Remove nuts (8), washers (8). Catalyst holder, catalyst and gaskets will drop down. Replace only with E.P.A. approved catalyst kit from your Country Flame dealer.

To install, assemble catalyst and gaskets in catalyst holder, align holder with carriage bolts. Place washer, then nut, wrench tight (4 places). Finger screw the nuts (4) approximately 5/8" up the exposed screw threads. Put on washers (4). Align plate (with bent up to the front). Replace remaining washers (4) and screw remaining nuts (4) to bottom of plate.

The catalyst holder has a stop on the bottom of the part. This is to insure that the shield plate cannot be drawn up to close to the holder for proper air passage.

**Internal Thermostat (Thermal Disc)**

On all Country Flame catalytic units, the room air circulation blower is activated by a thermally triggered switch.

The thermal disc switch will turn on the blowers when the discharge air temperature reaches approximately 110° F.

When the unit's discharge air cools to approximately 90° F, the switch deactivates, turning off the stove blowers.

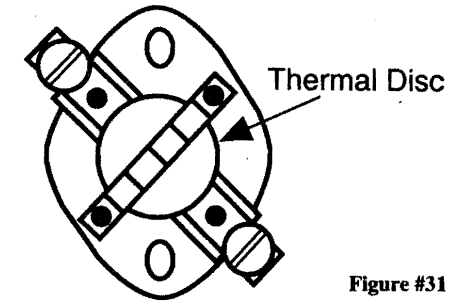


Figure #31

Listed are individual stove units, and instructions on locating their thermal disc, and on blower speed selection.

**Model R**

Blower is optional and thermal disc is located at the top rear of the burn box. When blower is installed, on, off and speed is controlled by a 3010 rheostat wall plug which the unit connects to.

**Models BBF, SBF, E1, E2**

The thermal disc is located in the blower tray assembly (at the base of the front of the unit).

Blower speed is regulated by a three way switch with an off position - there is also a toggle switch. This is a manual override (bypassing the thermal disc) which allows the unit's air systems to be used as a room air circulator, (when the unit is not being used as a heater).

7. The hearth extension to support the insert must be of noncombustible materials.

**NOTE:** When installing an O2-I into a zero clearance fireplace the insert flue exhaust must be at least 2" (50mm) from the back of the fireplace lintel. (See figure 30) Be certain to confirm the presence of adequate insulation between the lintel and the zero clearance fireplace. It may be necessary to provide additional insulation if settling has occurred.

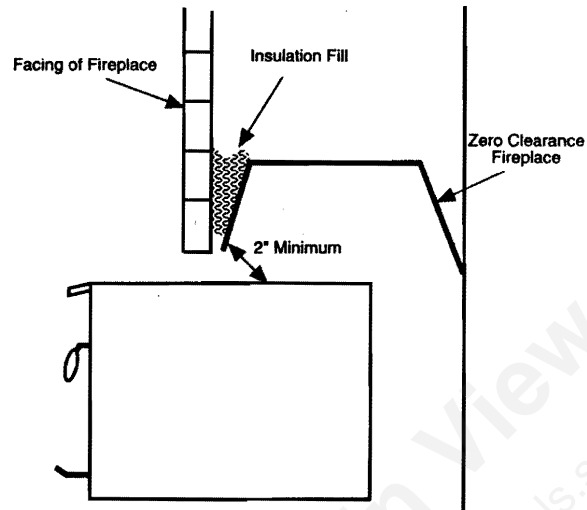


Figure #30

## Model O2

The O2 Catalytic insert has self leveling bolts under the front of the stove to assist in leveling the front of the unit.

If the distance from unit to floor exceeds bolt length, (which came with your insert), consumer may purchase the required length to **EXCEED 2" (50mm)** penetration in the bottom of the unit. (Bolt requirement - 1/2 X #13)

**NOTE:** Country Flame has an optional beauty skirt in two sizes.

## Venting System

A chimney connector and chimney make up the venting system. Inside, chimney temperatures may exceed 2000°F. To protect against a chimney fire therefore, the connector and chimney must be properly installed and maintained. When a connection is made through a combustible wall to the chimney, a thimble must be used. A chimney support package must be used when a connection is made through the ceiling to a prefabricated chimney. These accessories are of primary importance to provide safe clearances to combustible wall and ceiling material.

The unit may be connected to either an approved masonry chimney or a prefabricated chimney. **DO NOT CONNECT IT TO A CHIMNEY SERVING ANOTHER APPLIANCE.**

**PROPER DRAFT** must be provided for your Country Flame unit. Draft is the force which moves air from the stove up through the chimney. The amount of draft in your chimney depends on the length of the chimney, local geography, nearby obstructions, and other factors. Too much draft may cause backpuffing into the room and plugging of the chimney.

## Chimney Connector

Your chimney connector should be 6" (150mm), or 8" (200mm) diameter, minimum 24 MSG black or 25 MSG blued steel. Aluminum and galvanized steel should not be used, since they cannot withstand the high temperatures a wood fire produces. Never use chimney connector pipe as a chimney. You must connect your stove to a chimney like those illustrated in this manual.

**DO NOT PASS CHIMNEY CONNECTOR THROUGH COMBUSTIBLE WALL OR CEILING.**

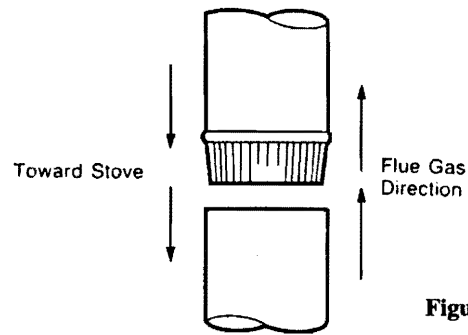


Figure #12

Chimney connector sections must be attached to the stove and to each other with the crimped end toward the stove. This allows creosote to run into the stove and not onto the outside of the pipe. All joints including transition to chimney connector should be secured with three sheet metal screws. Otherwise, in the event of a creosote fire, the connector may vibrate apart.

For proper operation the chimney connector should be as short as possible. Horizontal lengths of chimney connector should have an upward slope from the stove of 1/2" (12.5mm) per foot.

Maintain 18" (450mm) clearance between the chimney connector and the wall and ceiling, unless a wall protection system is installed.

4. Install according to the greater clearances of the zero clearance fireplace's stated clearance.
5. Hearth extension as supplied as part of the zero-clearance fireplace must always be used. There must also be at least 18" (450mm) of floor protection in front of the insert as measured from the face of the insert. This floor protection should be 3/8" (9.5mm) non-asbestos millboard or the equivalent.
6. A positive connection is required of the 02-I. We recommend that a 2' (61cm) piece of starter pipe be attached to the 6" (150mm) flue opening on the 02-I and extended from the appliance to a listed chimney liner. This liner must extend to the chimney top. At this time you may want to put insulation between the 6" pipe and the existing flue to provide a better seal. Refer to **Figure #25**.

**NOTE:** In the event that this insert is removed from the fireplace, it is imperative that the fireplace be restored to its original condition for safe use without the insert.

## Model O2 Insert

### Before You Start

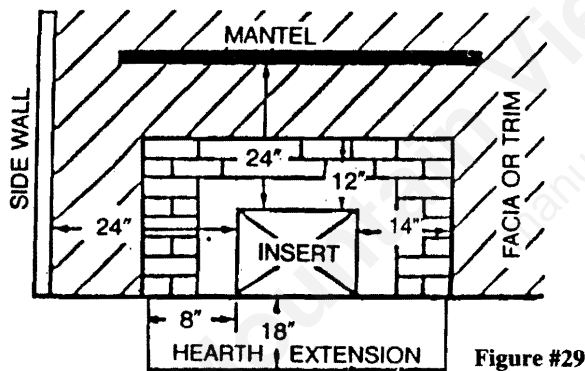
**CAUTION: DO NOT OPERATE THE UNIT WITHOUT THE BLOWER SYSTEM ON.**

1. The Country Flame O2-I has been tested and is approved for the following fireplace manufacturers: Heatilator, Superior, Preway, Marco, Majestic, Martin. The approval for these manufacturers extends to all models provided that the minimum fireplace cavity allows a 1" (25mm) air space between the O2-I insert and the sides, back and top of the zero clearance firebox.

Only two modifications may be made to the zero clearance fireplace before installing the O2-I.

- The damper may be removed.
  - The ember catcher located in the base of the flue can be removed.
2. See Figure 29 for clearances to combustibles in a masonry fireplace.

#### Minimum Clearance to Combustible Materials (In Inches) - O2-I

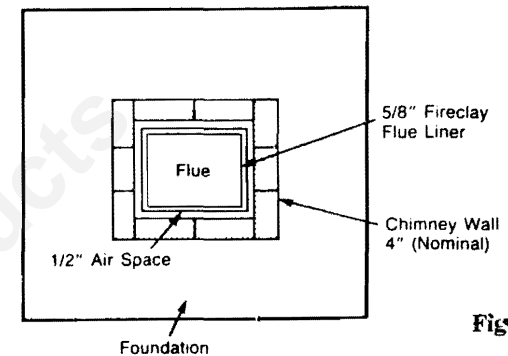


### Installing An O2 Insert

Install the O2-I with a minimum of 24" (600mm) clearance to combustible sidewall, 14" (350mm) to a flush side facia or 14" (350mm) to an extended facia and 12" (300mm) to top trim, 24" (600mm) from top of insert mantel. Floor protector must be 3/8" (9.5mm) minimum noncombustible material or equivalent extending 18" (450mm) in front of insert and 8" (200mm) to both sides.

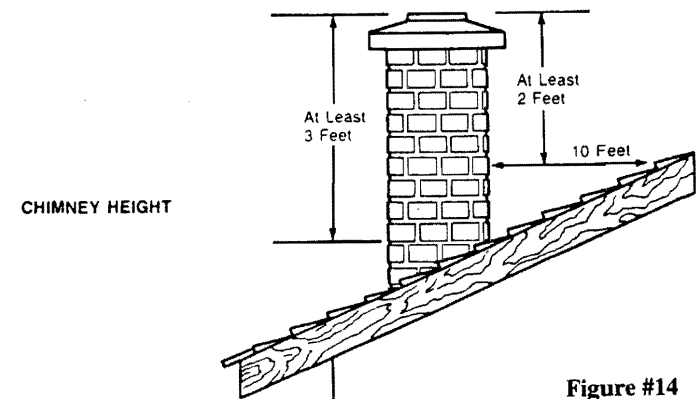
- Do not block any of the zero clearance fireplace's vents with the shroud when installing the O2-I.

### Brick Chimney



When installing the stove into a masonry chimney, be sure to check for signs of deterioration and blockage. Once the chimney is determined to be safe, installation can proceed. The size of the flue should also be checked, and should not exceed 8" (200mm) by 8" (200mm). The chimney must have a fire clay flue liner or a stainless steel lining must be installed. The stainless steel lining should be single wall pipe, 6" (150mm) in diameter, painted, low carbon, cold roll steel and a minimum 24 gauge. If a flue lining is used, an air space between the flue liner and the chimney wall of 1/2" (12.5mm) must be maintained.

A list of the more important minimum requirements for a properly constructed chimney follow.



- For proper operation and safety, the chimney must be at least 3 feet (90cm) higher than the highest point where it passes through the roof, and at least 2 feet (60cm) higher than the highest part of the roof or structure that is within 10 feet (300cm) of the chimney, measured horizontally.

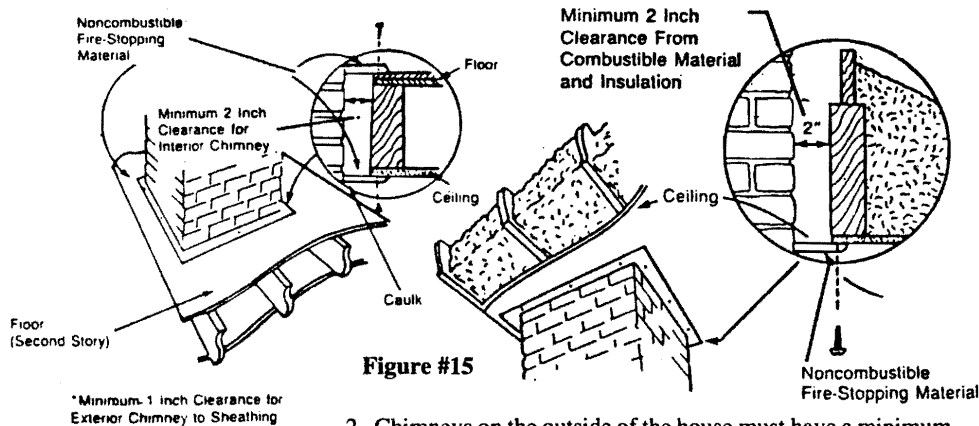


Figure #15

2. Chimneys on the outside of the house must have a minimum of one inch clearance to the combustible structure, while a chimney inside the house and through the ceiling must have at least two inches of clearance to the combustible structures. At all points where the chimney passes through floors and/or ceiling, fire stops must be installed. An air space between the chimney and insulation of 2" (50mm) or more must be maintained.

3. The wall of the chimney, if constructed of brick or modular block, must measure a minimum of 4" (100mm) nominal thickness. Mountain or rubble stone wall must be at least 12" (300mm) thick.

4. Installation of single wall pipe from the heater to the masonry flue should rise 1/2" (12.5mm) per every one foot of pipe distance from the heater to the chimney.

## Firestopping

Remember that insulation must not contact the chimney. There must be air space around the chimney.

Insulation must be 2" (50mm) or more from the chimney.

**DO NOT PASS CHIMNEY CONNECTOR THROUGH COMBUSTIBLE WALL OR CEILING. SEE LOCAL BUILDING CODE AND MANUFACTURER'S INSTRUCTIONS FOR PRECAUTIONS REQUIRED FOR PASSING THROUGH COMBUSTIBLE WALL OR CEILINGS.**

## Thimble

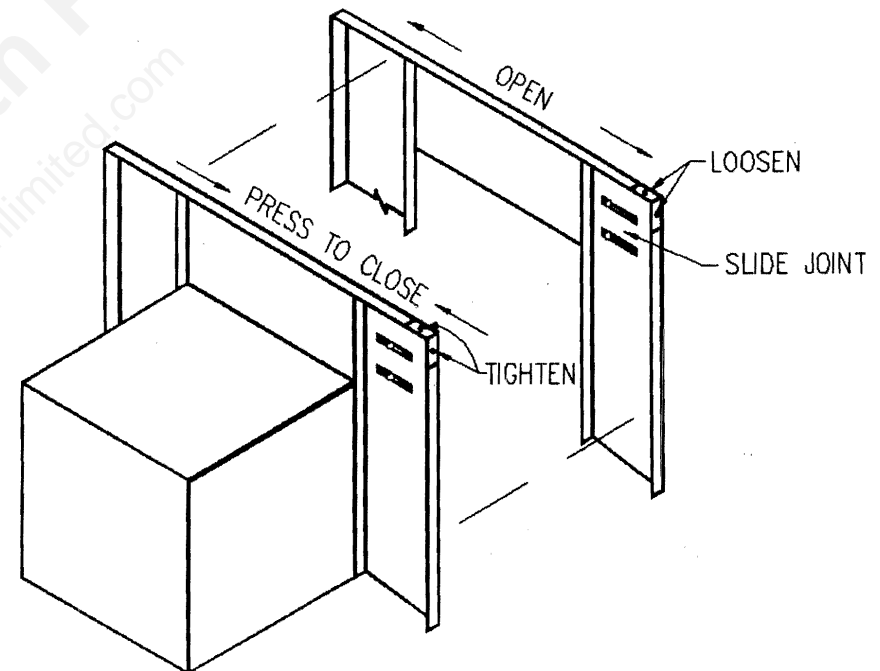
When installation entails connection from the stove through a combustible wall to a masonry chimney, a thimble must be used.

Two of several methods of connection through a combustible wall are illustrated below. For alternatives, consult your local building authority or NFPA 211.

Listed prefabricated metal thimbles can be bought for use with woodstoves. The manufacturer's installation for the thimbles must be strictly followed. Maintain all designated clearance to combustible materials as per manufacturer instructions.

## Trim Panels (Shroud)

After you have properly aligned the insert in the fireplace, you are now ready to attach the shroud. Remove the backing from the roll of fiberglass insulation included in your trim panel. Attach to back of shroud. (Note: Cut insulation at point where shroud separates. This will allow for adjustment of shroud.) For stone or irregular surfaces you may require additional fiberglass to fill voids. Very irregular surfaces with large voids will require some masonry fill.

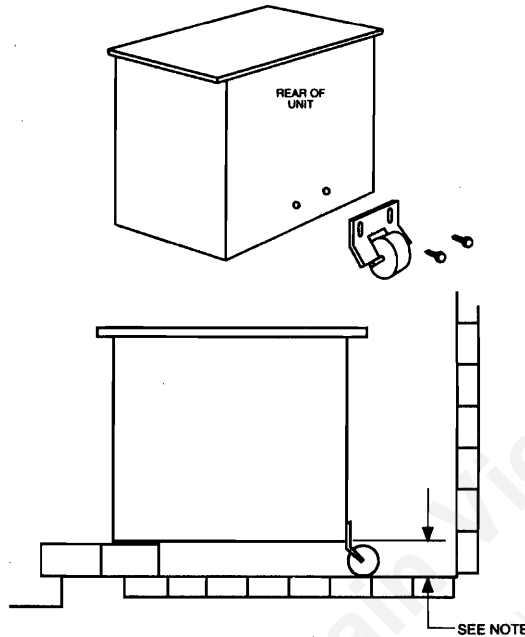


- LOOSEN BRASS CORNER SCREWS
- PULL SHROUD OPEN SUFFICIENT TO SLIDE OVER STOVE FRONT. THE LEFT HAND SIDE OF THE SHROUD WILL SLIDE IN SLOTS.  
NOTE: SLIGHT LOOSENING OF THE TWO (2) HEX NUTS MAY BE REQUIRED TO PROVIDE SLIP, HOWEVER, THESE MUST BE AS TIGHT AS POSSIBLE AND STILL SLIP.
- PUT SHROUD IN PLACE AND PRESS TOGETHER CLAMPING ON THE STOVE.  
NOTE: REPOSITION SIDE BRASS TRIM OVER SHROUD TOP END IF REQUIRED.
- TIGHTEN BRASS CORNER SCREW.

## Inserts Leveling Roller

The Country Flame leveling roller is boxed separately and is supplied with all inserts.

**NOTE:** Using a level of sufficient length, determine the noted dimension. Position roller assembly at this dimension and secure using self drilling and tapping screws supplied. Locate initial screw position in the center of the slot to allow additional adjustment if required.



**NOTE:** Using a level of sufficient length determine the noted dimension. Position roller assembly at this dimension and secure using the self drilling & tapping screws supplied. Locate initial screw position in the center of the slot to allow additional adjustment if required.

Figure #26

## Inserts Into Fireplace

If you have a removable damper in your fireplace, we recommend that you remove it entirely. If your damper is not the removable type, then it must be wired in the open position with a heavy wire.

After removing the damper so that any additional soot has fallen out of the flue, vacuum your fireplace thoroughly.

Place the stove on the hearth of the fireplace, being careful not to scratch or chip the brick or stone hearth. A flat piece of thick cardboard will protect your hearth and allow easier sliding adjustment. Push the insert approximately 2" (50mm) into the fireplace. Use shims to level the fireplace if it is not flush with the hearth.

## Brick Chimney Thimble Assembly

Construction of the brick thimble assembly requires 12" (300mm) of brick around a fire clay liner. Be sure the point of penetration allows an 18" (450mm) clearance from the connector to the ceiling. An opening of 32" (800mm) (for an 8" (200mm) chimney connector) must be cut in the wall to maintain the required 12" (300mm) of brick separation from combustibles. It will be necessary to cut wall studs and install a header and sill frame to maintain proper dimensions and to hold the weight of the brick.

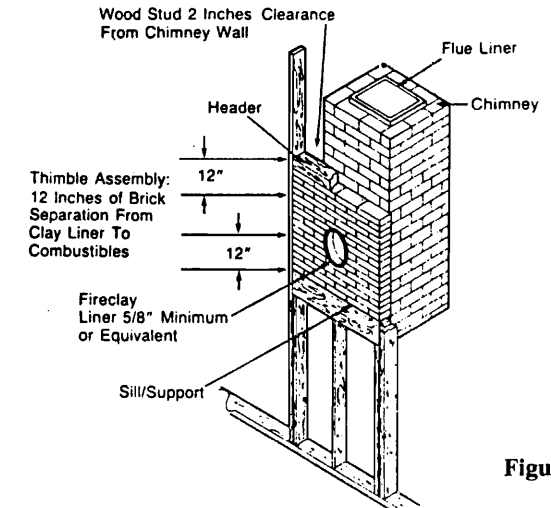


Figure #16

Minimum 3 1/2" (87mm) 4" (100mm) nominal thick solid bricks are to be used. The fire clay liner (ASTM C35 or equivalent), minimum 5/8" (15.6mm) wall thickness, must not penetrate into the chimney beyond the inner surface of the chimney flue liner and must be firmly cemented in place. If it is necessary to cut a hole in the chimney liner, use extreme care to keep it from shattering. Refractory mortar must be used at the junction to the chimney liner. After the assembly is complete, insert the chimney connector in the fire clay liner. Do not push it beyond the inside edge of the chimney liner, because this will affect the draw of the chimney.

Install an attic insulation shield to maintain the specified clearance to insulation. Insulation in this air space will cause a heat buildup which may ignite the ceiling joists.

This method of installation requires at a minimum a ceiling support package, an insulation shield and roof flashing.

This method of installation also requires at a minimum a wall pass through device, a wall support package an insulated "T" section and roof flashing.

## 6" Solid Pack Chimney With Metal Support as a Thimble

To install your stove into a masonry chimney, purchase a 6" (150mm) diameter, 12" (300mm) long section of prefabricated, listed solid pack chimney. Also buy a wall band, a wall spacer, and a trim collar that are all manufactured to fit the chimney section you choose.

Safety features of this system include the 2" (50mm) air space between the chimney section and the combustible wall, and the 1" (25mm) air space around the chimney connector as it passes through the chimney section to the chimney.

The opening through the wall to the chimney must leave at least a 24" (600mm) vertical clearance between the connector pipe and the ceiling to prevent the ceiling from igniting.

Cut a 14 1/2" (362.5mm) opening in the wall. You may also need to cut wall studs and install a sill frame and header to maintain the wall support. The hole in the chimney should have at least an 8" (200mm) diameter fire clay liner or equivalent, secured with refractory mortar. If you must cut a hole in the chimney liner, use extreme care to keep it from shattering.

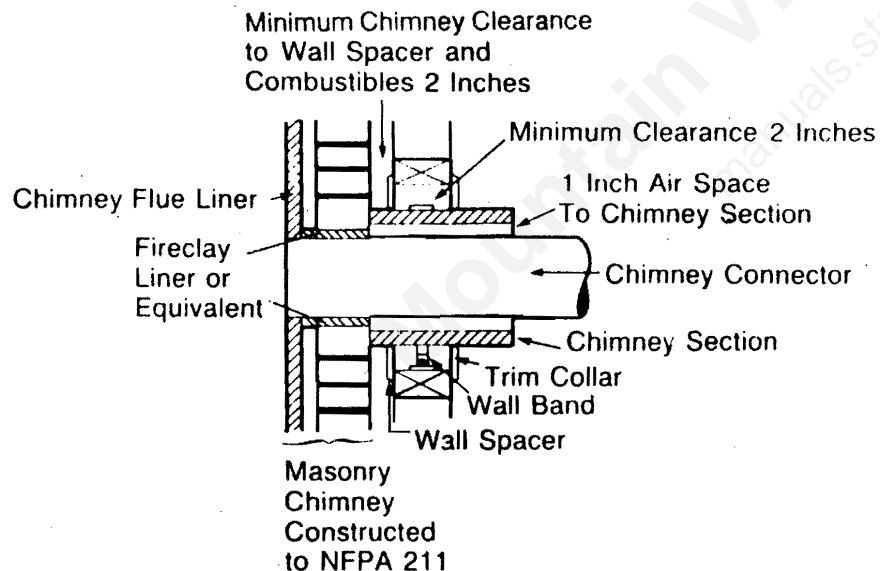


Figure #17

## Connection To A Masonry Fireplace

There are several kits available to connect the stove to a masonry fireplace. Look for a listed kit. The kit is an adaptor which is installed at the location of the fireplace damper. The existing damper may have to be removed to allow installation of the kit. The key points of this type of stove connection are that the connector pipe (6", 150mm, 8", 200mm) must extend up the chimney above where the fire clay liner starts, and the areas of the kit installation and connector penetration should fit tightly and be sealed with high temperature furnace cement unless the kit's instructions state otherwise.

The TIGHT FITTING installation aids the PROPER DRAW of the chimney.

**DO NOT REMOVE BRICKS OR MORTAR FROM MASONRY FIREPLACE. INSTALL AND USE ONLY IN MASONRY FIREPLACE. USE A LISTED FLOOR PROTECTOR OR ANY NONCOMBUSTIBLE MATERIAL. FIREPLACE INSERT FLOOR PROTECTOR MUST EXTEND AT LEAST 8" (200mm) TO EACH SIDE OF UNIT AND 18" (450mm) IN FRONT.**

## Before Installation

a. Check to make sure your masonry fireplace and chimney are in safe condition. Check the chimney for cracks, loose mortar, other signs of deterioration and blockage. The insert should not be installed until it is determined that the chimney is safe for use. Since an oversized flue contributes to the accumulation of creosote, the size of the flue should be checked to determine that it is not too large for the insert. The flue should be no larger than 8" (200mm) by 8" (200mm) in diameter. The fireplace must be constructed to meet UBC 37 standards.

b. Clean the fireplace thoroughly.

c. Remove damper plate or block into open position with a noncombustible material.

d. Flue and chimney should be cleaned before installation.

e. Do not allow the combustion or blower air intake to become blocked. When installed as an insert, care must be taken to insure that a raised hearth does not create a blockage.

**Suggested  
Insert  
Venting  
Options  
for Masonry  
Chimney  
Installations**

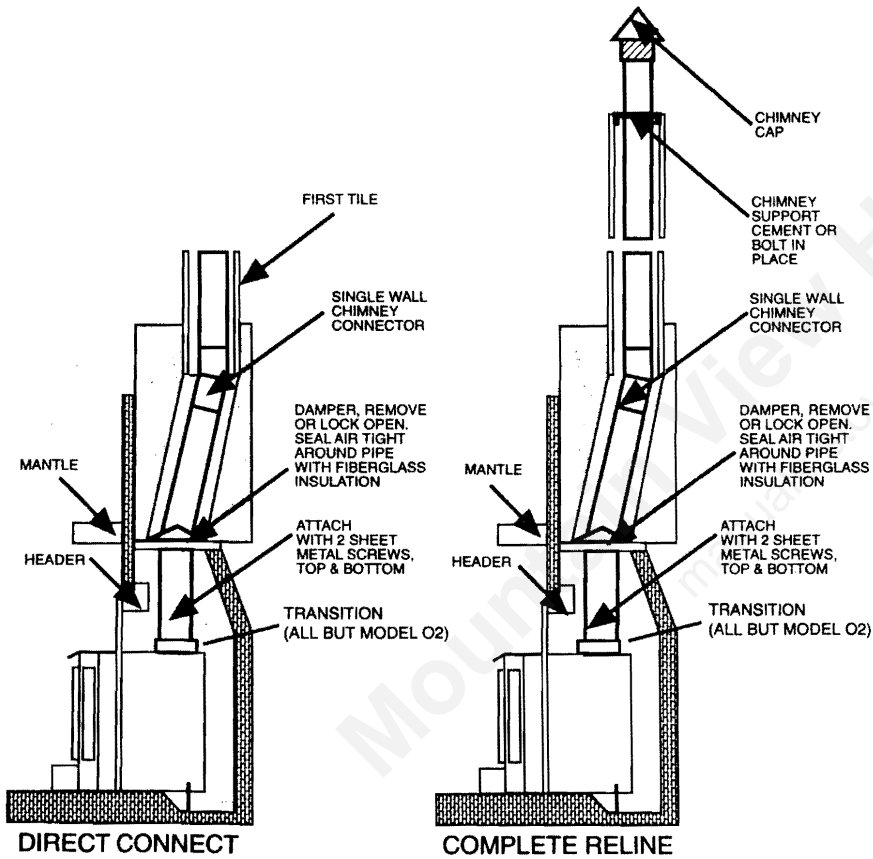


Figure #24

Figure #25

**Safety Notice**

**IF THIS STOVE IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.**

**Metal Prefabricated Chimney**

When a metal prefabricated chimney is used, THE CHIMNEY MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE FOLLOWED PRECISELY. You must also purchase (from the same manufacturer) and install, the ceiling support package or wall pass through and "T" section package, firestops (when needed), insulation shield, roof flashing, chimney cap, etc. Maintain the proper clearance to the structure as recommended by the manufacturer. This clearance is usually a minimum of 2" (50mm), although it may vary by manufacturer or for certain components.

There are basically two methods of metal chimney installation. One method is to install the chimney inside the residence through the ceiling and the roof. The other method is to install an exterior chimney that runs up the outside of the residence. The components illustrated may not look exactly like the system you purchase, but they demonstrate the basic components you will need for a proper and safe installation.

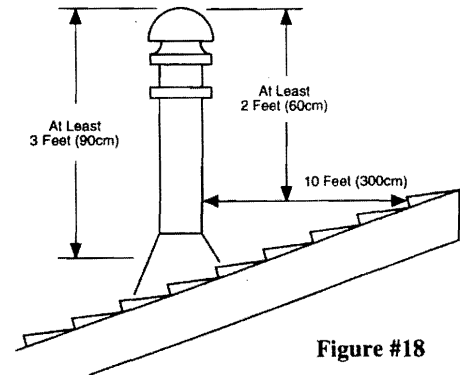


Figure #18

The chimney must be the required height above the roof or other obstruction for safety and for proper draft operation. The requirement is that the chimney must be at least 3' (90cm) higher than the highest point where it passes through the roof or structure that is within 10' (300cm) of the chimney, measured horizontally.

**REMEMBER:** Follow the manufacturer's installation instructions and maintain the manufacturer's specified clearance distances.

## 6" Solid Pack Chimney With Metal Supports as a Thimble

Make the frame for the thimble, ensuring it is no smaller than 14 1/2" (362.5mm) in diameter to maintain a 2" (50mm) air space to the chimney side of the frame. Next, insert the frame into the opening, toenailing it to the wall studs. To secure the chimney section in place, install the wall band into the framing, but do not allow it to protrude into the chimney beyond the edge of the chimney flue lining. Then apply high temperature furnace cement to the end of the chimney section and install it over the connector, through the wall band and the wall spacer. Tighten the wall band to hold the chimney section firmly in place and against the chimney. Finally, on the outside of the opening, install the trim collar. Be sure the 1" (25mm) air space in between the chimney section and the connector has been maintained, and throughout installation, be sure that a 2" (50mm) air space is maintained to the wood framing. Filling this space with insulation will cause a heat buildup which may result in the ignition of wood framing.

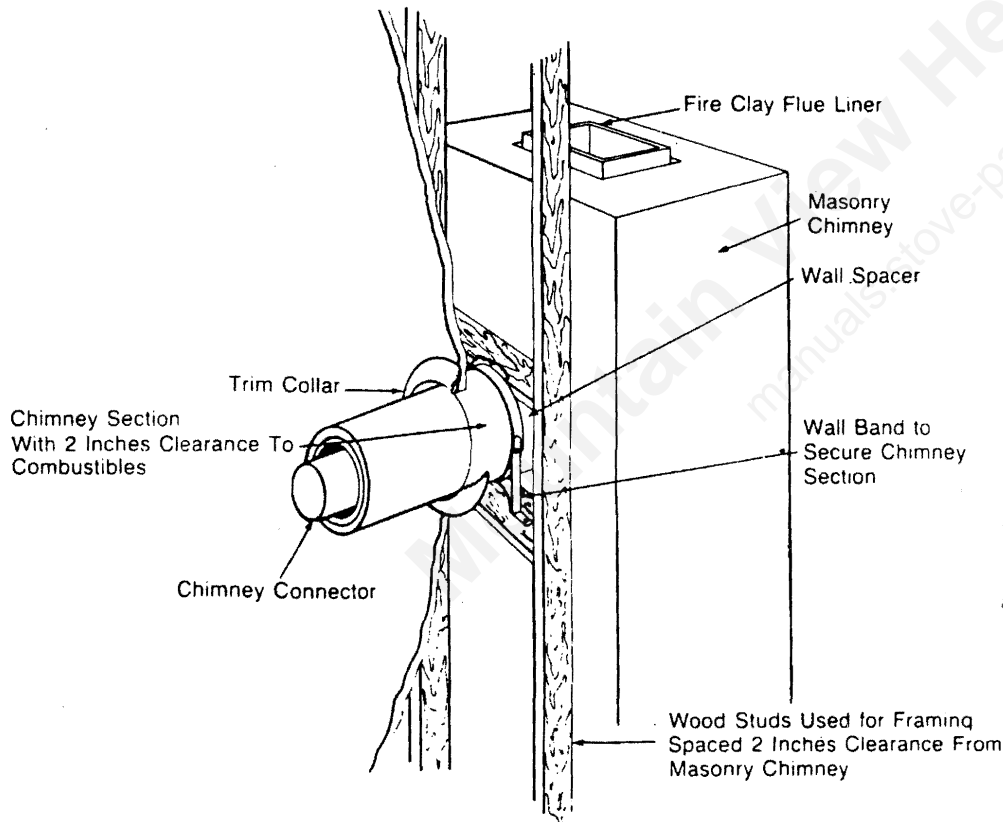


Figure #19

## Venting System (Fireplace Inserts)

**PROPER DRAFT** must be provided for your Country Flame unit. Draft is the force which moves air from the stove up through the chimney. The amount of draft in your chimney depends on the length of the chimney, local geography, nearby obstructions, and other factors. Too much draft may cause backpuffing into the room and plugging of the chimney.

Although Country Flame catalytic insert units are approved for installation and use with a face seal only, we strongly recommend the use of one of the following techniques to provide proper draft:

**GOOD** - Minimum 12" (300mm) starter pipe.

**BETTER** - Direct connection to first flue liner in accordance with the requirements of the Standard for Chimneys, Fireplaces and Vents, NFPA 211 or applicable local codes.

**BEST** - Complete relining of chimney system to 8" (150mm) diameter standard steel chimney connector. (Figure 13)

The Country Flame catalytic insert is intended only for installation into a masonry fireplace constructed in accordance with the requirements of the Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances, NFPA No. 211, or applicable local code requirements.

**FOR USE WITH SOLID FUEL ONLY.**

**SEE PAGE 36 FOR 02 ZERO CLEARANCE INSTALLATION**

**Fireplace Inserts**

**INSERT SPECIFICATIONS**

Model	A	B	C	D*	E
BBF / SBF	18"	8"	21"	10"	26"
B	18"	8"	18"	8"	16"
O2	18"	8"	8"	14"	24"
E1 / E2	16"	8"	16"	13"	30"

\* See plate on rear of insert for additional construction clearances to combustibles.

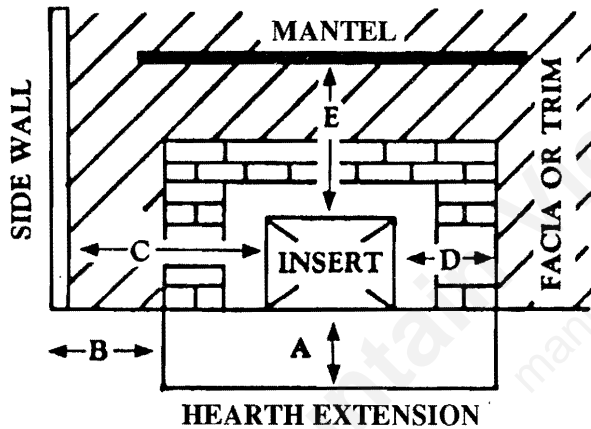


Figure #23

**Floor Protector**

**DO NOT INSTALL FIREBRICK IN THE UNIT UNTIL UNIT IS IN PLACE.**

Use a listed floor protector of material having a thermo conductivity of K-0.85 BTU - inches per foot square - hour - Fahrenheit degrees; or equivalent to 3/8" (9.4mm) non-asbestos millboard.

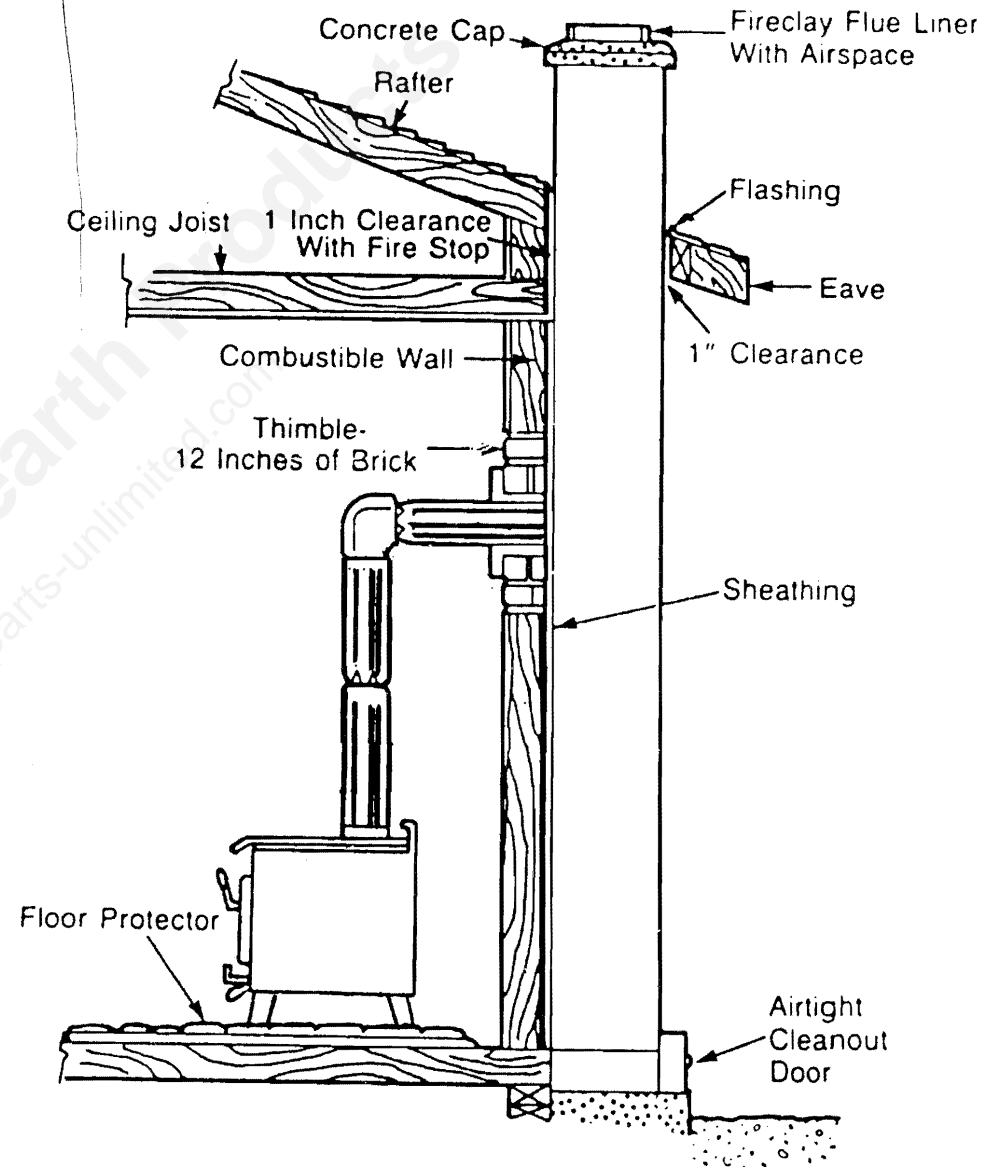
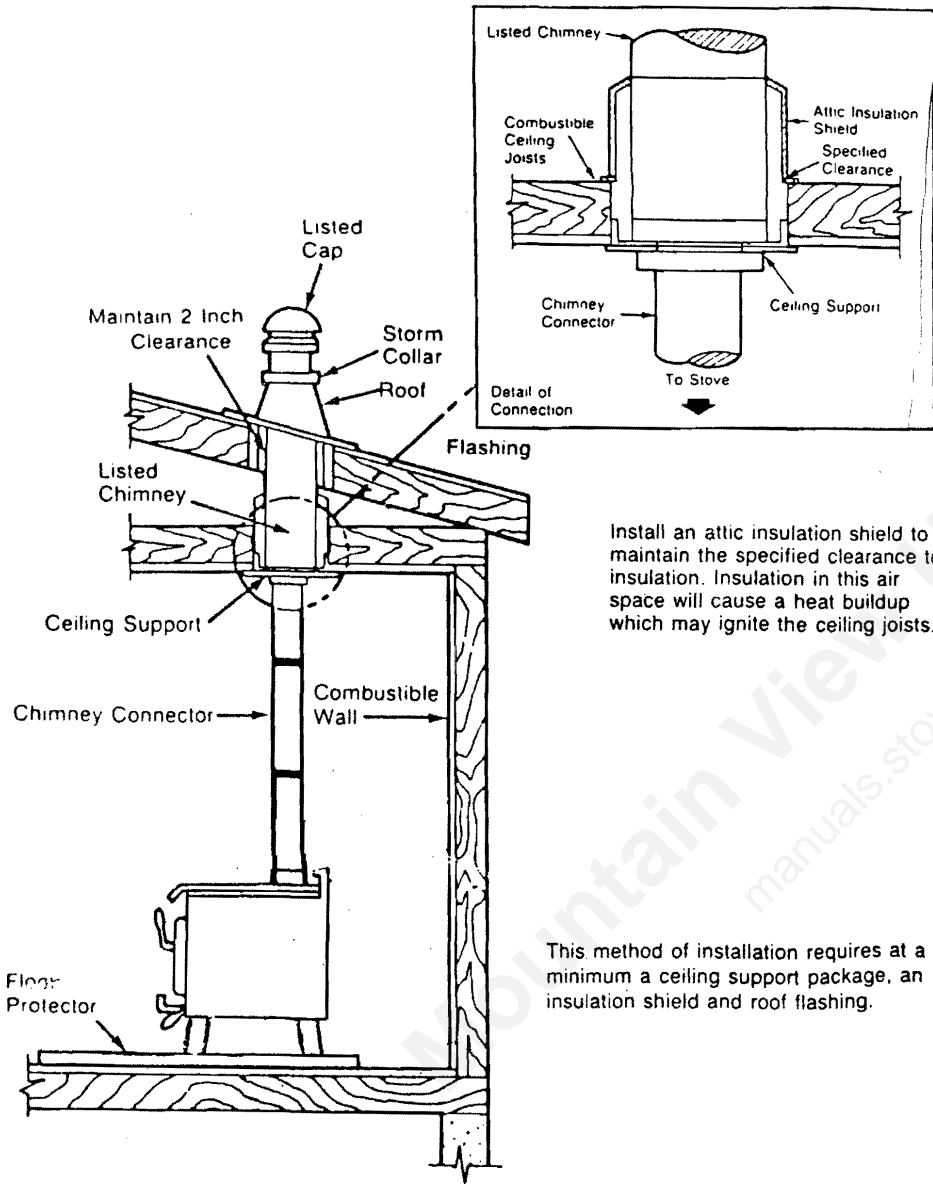


Figure #20



Install an attic insulation shield to maintain the specified clearance to insulation. Insulation in this air space will cause a heat buildup which may ignite the ceiling joists.

This method of installation requires at a minimum a ceiling support package, an insulation shield and roof flashing.

Figure #21

**Connection To A Metal Prefabricated Chimney**

(Continued from page 25)

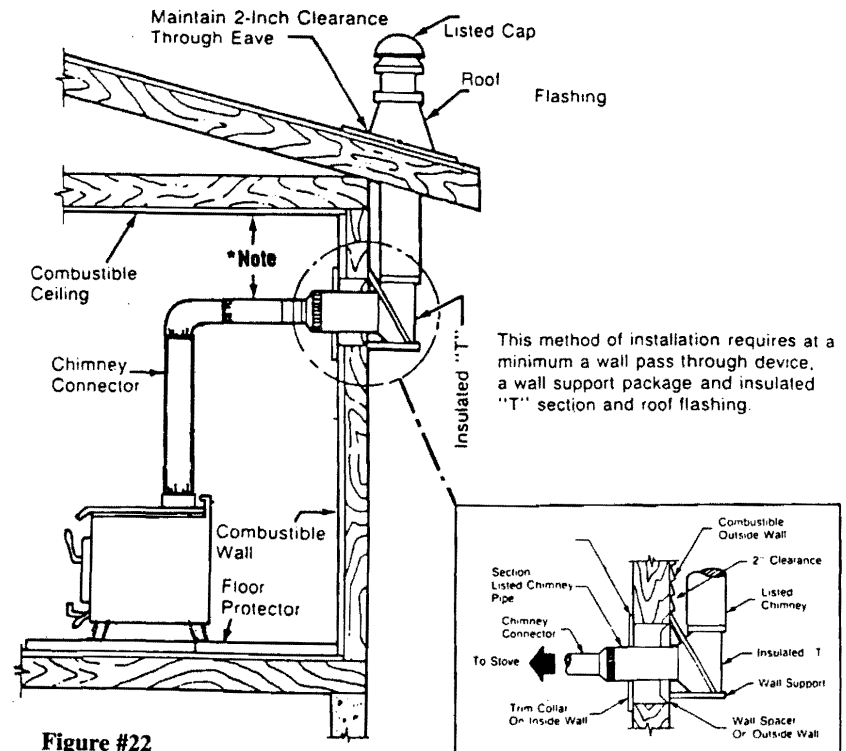
Installation	Clearances	Chimney & Pipe	Dimension A
Residential	Standard	Note: 1	0" (0mm)
Residential	Reduced	Note: 2	0" (0mm)
Alcove	Standard	Note: 2,3	0" (0mm)

**Note 1:** 6" (150mm) diameter single wall, minimum 24 MSG black or blued steel connector pipe with listed factory-built chimney suitable for use with solid fuels or a masonry chimney.

**Note 2:** 6" (150mm) diameter double wall air insulated connector pipe with listed factory-built Class "A" chimney or a masonry chimney.

**Note 3:** Alcove specifications and maximum depth of alcove to be maintained to unit's label specifications. Model R is the only unit cleared for alcoves. Maximum 42" (1050mm) height clearance. (See section on clearance to combustibles.)

**Note:** Unit was tested with a horizontal connector. Refer to local building codes.



This method of installation requires at a minimum a wall pass through device, a wall support package and insulated "T" section and roof flashing.

Figure #22

Mountain View Hearth Products  
manuals.stove-parts-unlimited.com