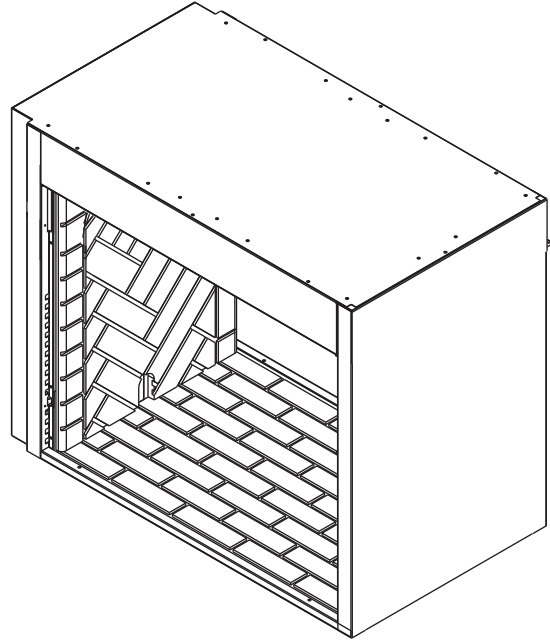




Lo-Rider Designer Vent-Free Fireboxes

Model: LSTF36

Installation and Operating Instructions



WARNINGS

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS**
 - Do not try to light any appliance.
 - Do not touch any electrical switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

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



For use only with a listed gas-fired unvented decorative room heater not to exceed 40,000 BTU/hr. **DO NOT BUILD A WOOD FIRE.**

Carefully review the instructions supplied with the decorative type unvented room heater for the minimum fireplace size requirement.

DO NOT INSTALL AN APPLIANCE IN THIS FIREBOX UNLESS THIS FIREBOX MEETS THE MINIMUM DIMENSIONS REQUIRED FOR THE INSTALLATION.

INSTALLER: Leave this manual with the appliance.
CONSUMER: Retain this manual for future reference.

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IMPORTANT

Read these instructions carefully before installing this vent-free firebox.

INSTALLER

Please leave this manual with the appliance.

OWNER

Please retain this manual for future reference.

WARNING	<ul style="list-style-type: none"> • Improper installation or use of the firebox can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning. • Do not allow fans to blow directly into the fireplace. Avoid drafts that alter burner flame patterns. • Do not use a blower insert, heat exchanger insert or other accessory, not approved for use with this firebox where applicable.
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1. Due to high temperatures, the firebox should be located out of traffic and away from furniture and draperies.
2. Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
3. Young children should be carefully supervised when they are in the same room with the firebox.
4. Do not place clothing or other flammable material near the fireplace when the firebox is in use.
5. Any safety screen or guard removed for servicing, must be replaced prior to operating a heater within the firebox.
6. Installation and repair should be done by a qualified service person.
7. To prevent malfunction and/or sooting, an unvented gas heater/firebox should be cleaned at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, etc. It is imperative that control compartments, burners and circulating air passageways be kept clean.

8. The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54.
9. **This unit complies with Z21-91 Ventless Firebox Enclosures for gas-fired unvented decorative room heaters.**
10. Do not install the firebox in a bathroom.
11. Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into fireplace. Do not place a blower inside burn area of firebox. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning will occur.
12. **Caution:** Candles, incense, oil lamps, etc. produce combustion byproducts including soot. Vent-free appliances will not filter or clean soot produced by these types of products. In addition, the smoke and/or aromatics (scents) may be reburnt in the vent-free appliance which can produce odors. It is recommended to minimize the use of candles, incense, etc. while the vent-free appliance is in operation.
13. Keep room area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
14. During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful but may produce annoying smoke and smells as they are burned off during the initial operation of the appliance; possibly causing headaches or eye or lung irritation. This is a normal and temporary occurrence.
The initial break-in operation should last 2-3 hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in period will be slight and will disappear with continued use.
15. Always have a fireplace screen in place when the appliance is in operation and, unless other provisions for combustion air are provided, the screen shall have an opening(s) for induction of combustion air.

DO NOT ATTEMPT TO BURN SOLID WOOD FUELS, VENTED GAS LOG SETS, OR ANY OTHER COMBUSTIBLE IN THIS UNVENTED FIREBOX. ALSO, DO NOT INSTALL A VENT-FREE GAS LOG SET IN THIS FIREBOX IF THE MINIMUM CLEARANCE AND HEIGHT REQUIREMENTS OF THE LOG SET ARE TOO LARGE FOR THE FIREBOX.

The LSTF36, Series is a vent-free firebox. It features a self-contained heat-circulating system. This unit also feature a 2-in-1 flexible-face system that converts the circulating system into a radiant system in seconds.

This installation manual enables you to obtain a safe, efficient, and dependable installation of your vent-free fireplace system.

Do not alter or modify the firebox or its components under any circumstances. Any modification or alteration of the firebox system, including but not limited to the firebox and accessories, may void the warranty, listings and approvals of this system and could result in an unsafe and potentially dangerous installation.

BEFORE YOU START:

CHECK YOUR PACKING LIST TO VERIFY THAT ALL LISTED PARTS HAVE BEEN RECEIVED.

ALSO INSPECT THE CONTENTS FOR SHIPPING DAMAGE AND IMMEDIATELY INFORM YOUR DEALER IF ANY DAMAGE IS FOUND.

You should have the following:

1. Vent-Free Gas Firebox
2. Two (2) - 36" Canopys (LSTF36/LPF36)
3. Installation and Operating Instructions
4. Five (5) drywall spacers

ITEMS REQUIRED FOR INSTALLATION

TOOLS:

Phillips screwdriver	Square
Hammer	Piping complying with local codes
Saw and/or saber saw	Tee joint
Level	Pipe wrench
Measuring tape	Pliers
Electric drill and bits	Pipe sealant approved for use with propane/LPG (<i>resistant to sulfur compounds</i>)

BUILDING SUPPLIES:

Framing materials
Wall finishing materials
Caulking material (*noncombustible*)
Fireplace surround materials
(*noncombustible*)

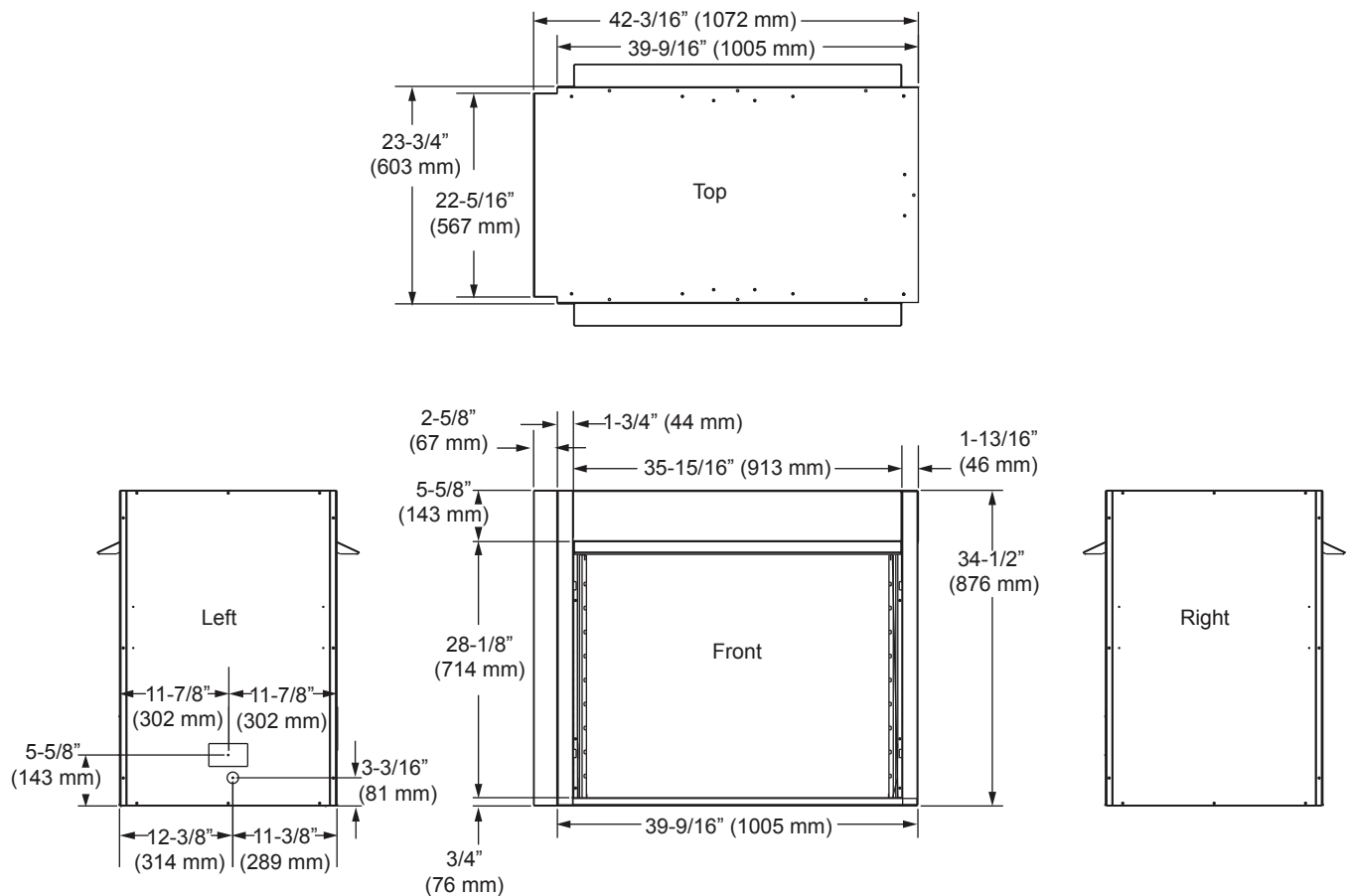
Refer to the installation instructions provided with the log sets for items required for log set installation.

NOTICE

Illustrations shown in this manual reflect "typical" installations with nominal dimensions and are for design and framing reference only. Actual installations may vary due to individual design preferences. However, always maintain minimum clearances to combustible materials and do not violate any specific installation requirements.

In planning the installation for the appliance it is necessary to determine where the unit is to be installed and whether optional accessories are desired. Gas supply piping should also be planned. The following steps represent the normal sequence of installation. Each installation is unique, however, and might require a different sequence.

1. Position firebox prior to framing or into prepared framing.
2. Field wire main power supply to circulating models with fan kit. (Electrical connections should only be performed by an experienced, licensed/certified tradesman).
3. Plumb gas line. (Gas connections should only be performed by an experienced, licensed/certified tradesman).
4. Install vent-free gas log heater per the instructions provided with the vent-free gas log heater.
5. Complete finish wall material and surround to your individual taste.



**Figure 1 -
Firebox Dimensions**

Firebox framing can be built before or after the appliance is set in place. Construct firebox framing following *Figures 2 and 3 on page 7* for your specific installation requirements. *Refer to Figure 1 on Page 5* for firebox dimensions. The framing headers may rest on the top of the firebox standoffs.

The firebox may be installed directly on a combustible floor or raised on a platform of an appropriate height. Do not place firebox on carpeting, vinyl, or other soft floor coverings. It may, however, be placed on a flat wood, plywood, particle board, or other hard surfaces. Be sure firebox rests on a solid continuous floor or platform with appropriate framing for support so that no cold air can enter room from under the firebox.

The classification "noncombustible material" includes, but is not limited to: stone, brick, and mortar. Noncombustibles are safe to overlay the black-painted metal face, including radiant plates, and do not pose a fire hazard. Any noncombustible finish material must not extend past or interfere with the fireplace opening.

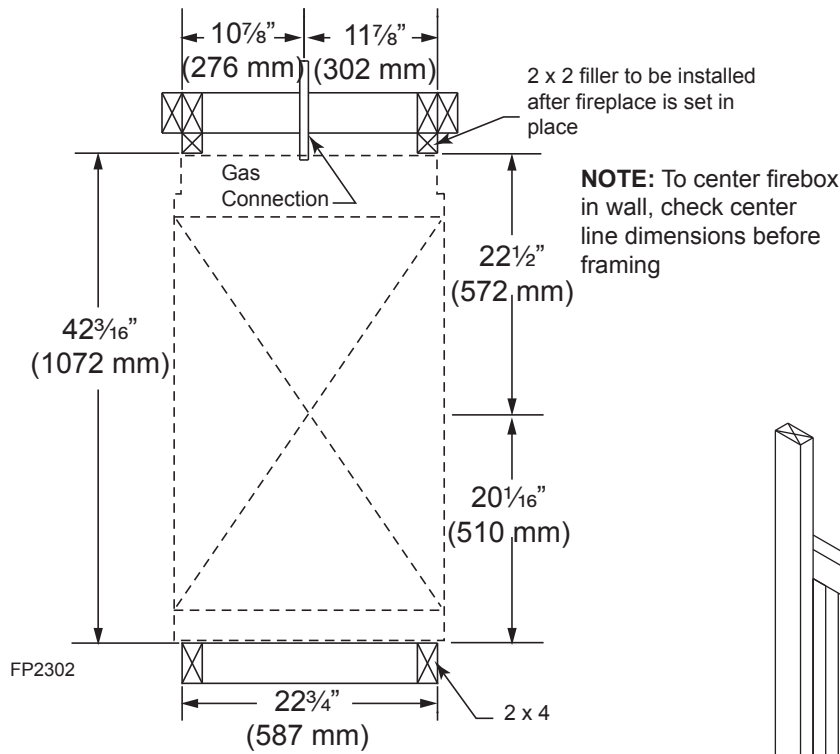
The classification "combustible material" includes, but is not limited to: plywood, drywall, and particle board. Combustible materials may contact the sides, bottom, or back of the firebox. Do not overlay the black painted face with combustible materials.

WARNING

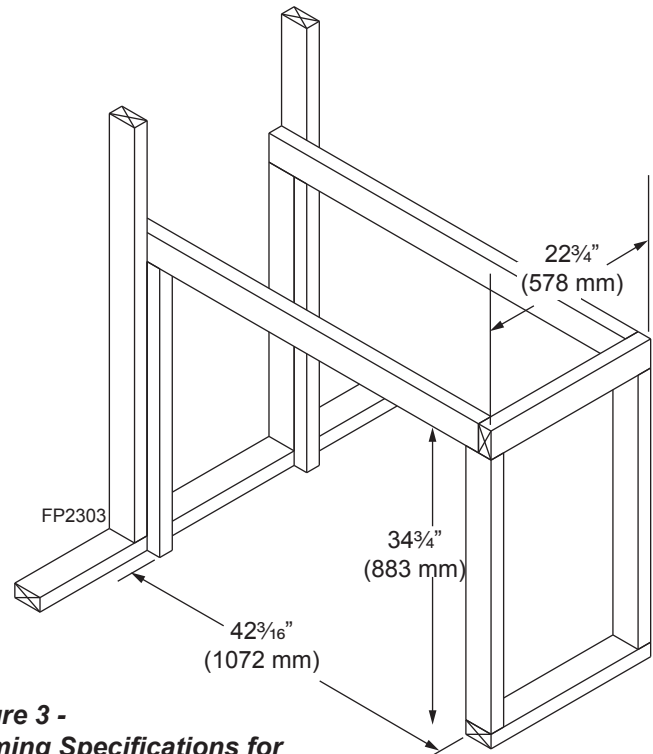
Do not fill spaces around firebox with insulation or other materials. This could cause a fire.

NOTE

All dimensions are based on 1/2" drywall. If 5/8" drywall is used, dimensions must be changed accordingly.



**Figure 2 -
Top View of Framing Specifications for
See-Through Unit (Model LSTF36)**

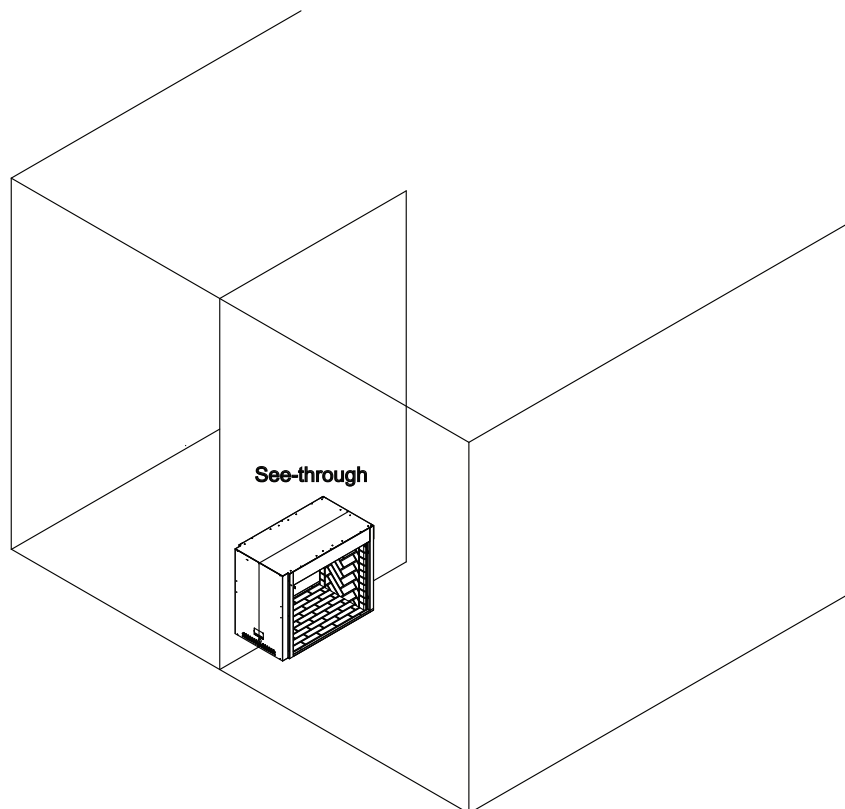


**Figure 3 -
Framing Specifications for
See-Through Unit (Model LSTF36)**

WARNING
The fireplace must be installed giving full consideration to the clearance and height requirements identified in this manual.

Carefully select the best location for installation of your vent-free firebox. The following factors should be taken into consideration.

- Clearance to side wall, ceiling, woodwork, and windows. Refer to “CLEARANCES and HEIGHT REQUIREMENTS” section below and on pages 9 and 10. Minimum clearances to combustibles **must be maintained**.
- Location must not be affected by drafts caused by kitchen exhaust fans, ceiling fans, return air registers for forced air furnaces/air conditioners, windows, or doors.
- Installation must provide adequate ventilation and combustion air.
- **DO NOT INSTALL THIS FIREBOX IN A BATHROOM.**
- This firebox enclosure is approved for bedrooms on the condition that the unvented room heater does not exceed 10,000 BTUs input and the room is properly sized for combustion air.
- Location should be out of high traffic or windy or drafty areas.
- **DO NOT INSTALL WHERE CURTAINS, FURNITURE, CLOTHING OR OTHER FLAMMABLE OBJECTS ARE LESS THAN 36" FROM FRONT OF HEATER.**
- Never obstruct the front opening of the vent-free firebox or restrict the flow of combustion and ventilation air.
- Minimize modifications to existing construction. *Refer to Figure 4* for location suggestions.
- Do not install in the vicinity where gasoline or other flammable liquids may be stored. The vent-free firebox must be kept clear and free from these combustible materials.



**Figure 4 -
Suggested Firebox Locations**

Ensure that minimum clearances shown in *Figures 5 through 9* are maintained. Left and right clearances are determined when facing the front of the firebox.

Follow these instructions carefully to ensure safe installation. Failure to follow these requirements may create a fire hazard.

1. **Sidewall Clearances** — The clearance from the inside of the appliance to any combustible adjacent wall should not be less than 5B\,".
2. **Ceiling Clearance** — The ceiling must be at least 42" from the top of the firebox opening (bottom of hood).
3. **Back Wall Clearance** — The appliance may be placed against a combustible back wall.
4. **Parallel Wall Clearance** — The clearance from the opening of the firebox to any wall that is parallel to the opening should not be less than 36" (LSTF36 and LPF36 models only). Refer to *Figure 5*.

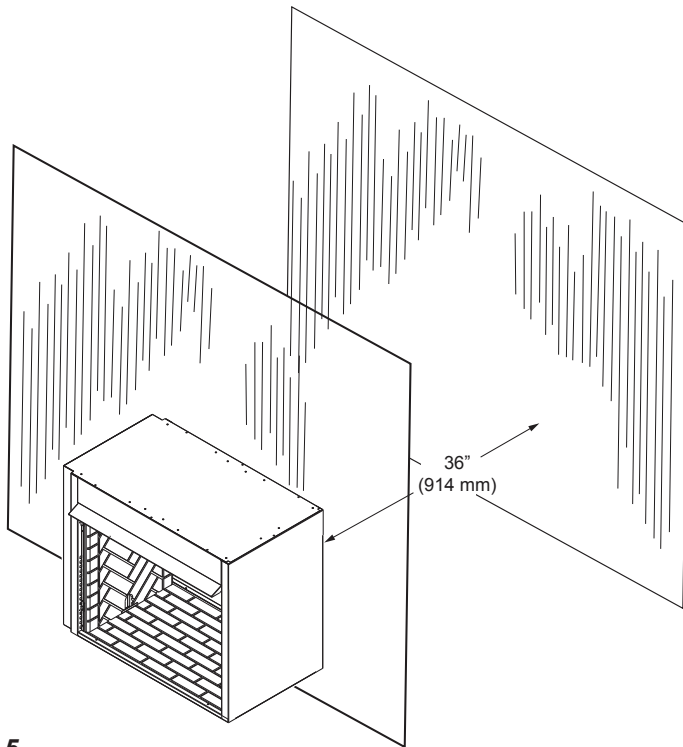


Figure 5 - Parallel Wall Clearance

Hearth Dimensions			
	A	B	C
See-thru	33-3/16" (843 mm)	21-15/16" (608 mm)	27-3/4" (705 mm)

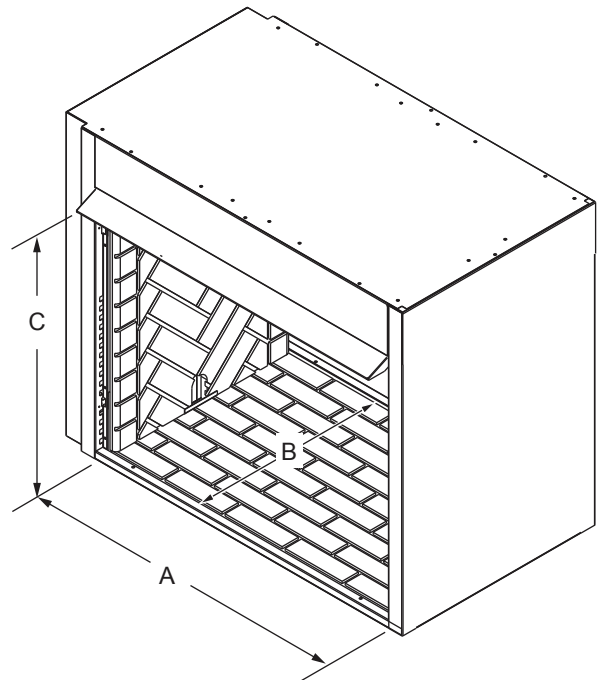


Figure 6 - Hearth Dimensions

5. **Mantel clearances** — **The canopy supplied with the unit must be installed.** If a combustible mantel is installed, it must meet the clearance requirements detailed in *Figure 7*.

6. **Floor clearance** — This firebox hearth opening (inter-chamber floor) must be installed at least 1/2" above any combustible flooring material *Figure 8* or, the firebox hearth may be installed flush with the floor if noncombustible material such as slate or marble is installed between the base of the firebox and the combustible flooring. The firebox may be installed directly on a combustible floor or raised on a platform of an appropriate height. Do not place firebox on carpeting, vinyl, or other soft floor coverings. It may, however, be placed on a flat wood, plywood, particle board, or other hard surfaces. Be sure firebox rests on a solid continuous floor or platform with appropriate framing for support so that no cold air can enter room from under the firebox. *Figure 9*.

NOTE: The combustible area above the facing must not protrude more than 3/4" from the facing. If it does, it is considered a mantel and must meet the mantel requirements listed in this manual.

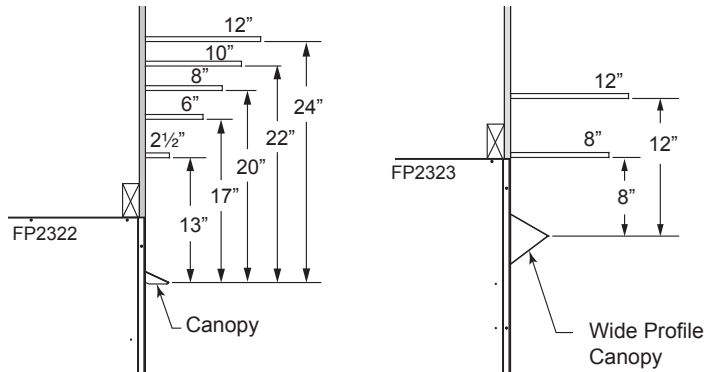


Figure 7 - Minimum Mantel Clearances for Canopy and Wide Profile Canopy

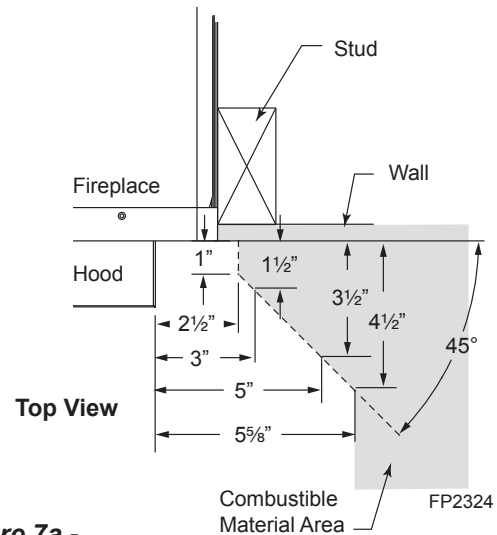


Figure 7a - Minimum Mantel Clearances

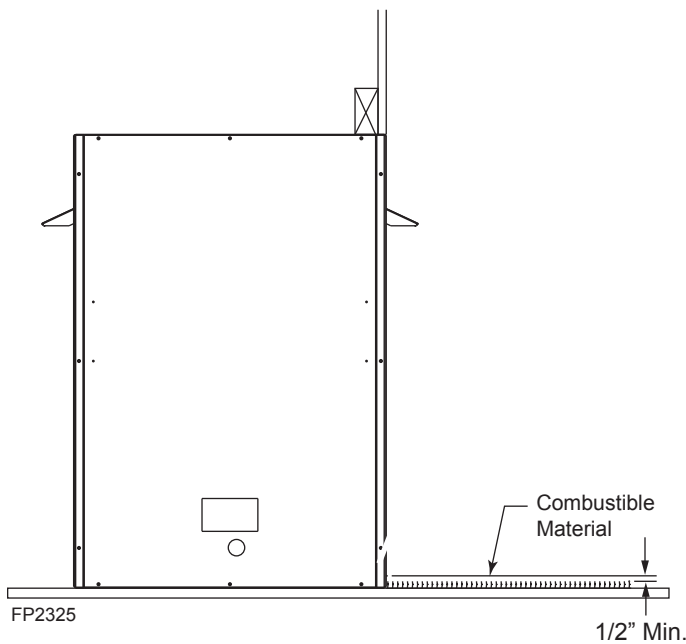


Figure 8 - Floor Clearance above Combustible Flooring Material

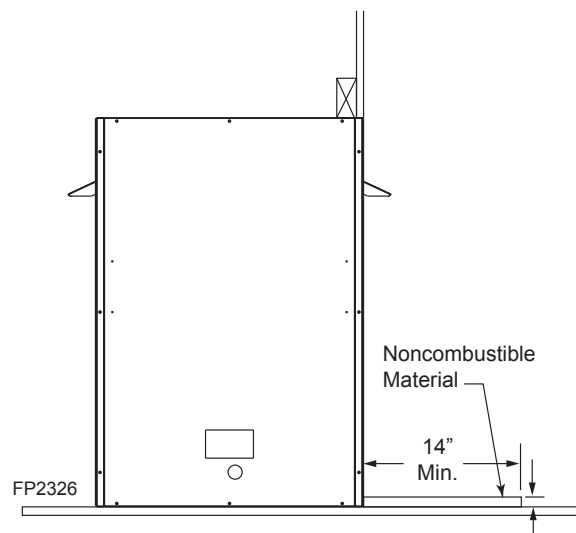
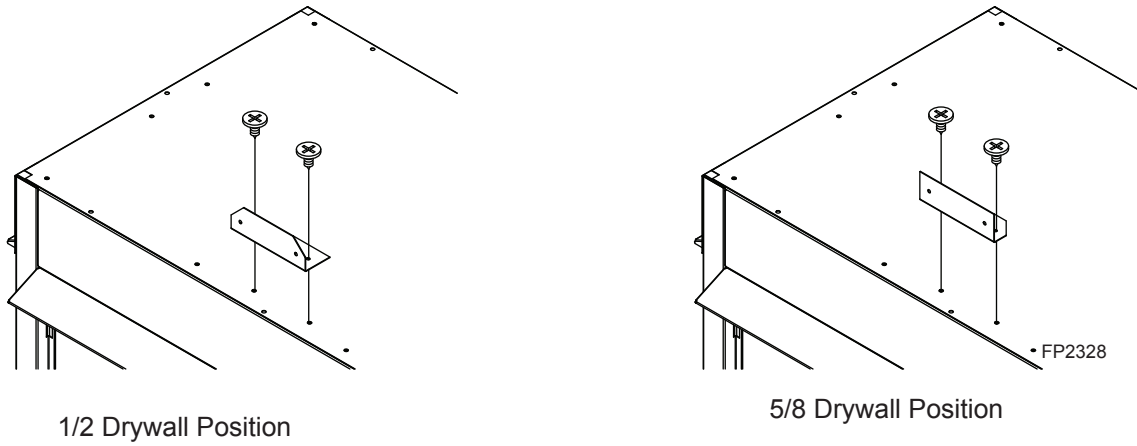


Figure 9 - Floor Clearance above Noncombustible Flooring Material

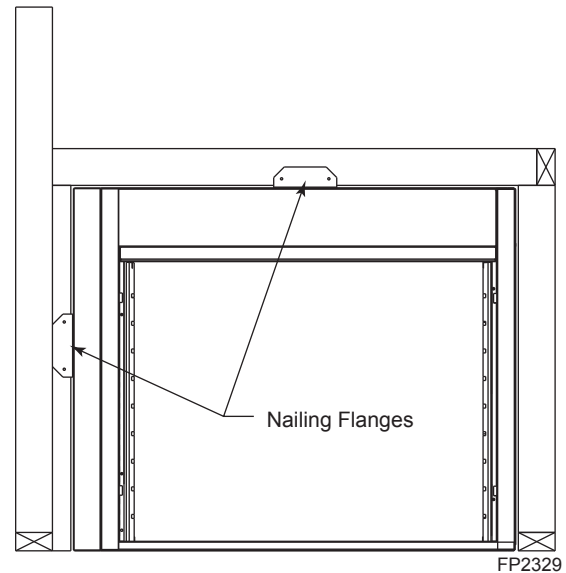


**Figure 10 -
Nailing Flanges with Different Drywall Depths**

SEE-THROUGH UNIT (LSTF36) INSTALLATION

1. Attach nailing flanges in desired position. *Figure 10*
2. Slide firebox into prepared framing or position firebox in its final position and frame later.
3. Level and plumb firebox by checking edges of firebox. Shim if necessary.
4. Attach nailing flanges to studs. *Figure 11*
5. Install canopy. *Refer to Page 15 for canopy installation.*

**Figure 11 -
Location of Nailing Flanges
and Floor Screws**



CAUTION

Plumbing connections should only be performed by a qualified, licensed plumber. Main gas supply must be off when plumbing gas line to fireplace or performing service.

Consult all local codes. All gas piping must be installed to comply with local codes, or in the absence of local codes, with the latest edition of the National Fuel Gas Code, ANSI Z223.1/ NFPA54.

The gas supply line must have an ANSI approved manual shutoff valve, upstream of the appliance. Either a recessed valve with a key should be mounted to the wall or floor outside the firebox, or an on/off appliance-style valve with union can be placed inside the firebox. A plugged 1/8" NPT pressure taping point is recommended for service and may be incorporated to the valve assembly. Bring a minimum 1/2" gas supply line through the knockout hole provided in the firebox.

A sediment trap may be upstream of the heater to prevent moisture and contaminants from passing through trap to the heater controls and burners. Failure to do so could prevent the heater from operating reliably. Consult applicable codes.

In addition to the regulator fitted to the heater, an external regulator must be used on all propane/LPG heaters to reduce the supply tank pressure to 13" w.c. (maximum). Any copper tubing used to supply propane/LPG from the tank must be internally tinned. **NOTE: When connecting propane/LPG vent-free room heaters, you must use pipe sealant resistant to propane/LPG.**

Check gas type: The gas supply must be the same as stated on the heater's rating plate. If the gas supply is different, DO NOT INSTALL THE HEATER. Contact your dealer for the correct model.

WARNING

Connecting directly to an unregulated propane/LPG tank can cause an explosion.

After completing connection, test all gas joints from the gas meter to the gas heater regulator for leaks. Using soap and water solution or a gas sniffer. **DO NOT USE AN OPEN FLAME.**

WARNING

Do not connect directly to natural gas 1/2 PSI or 2 PSI systems. Always make sure natural gas pressure is regulated 10.5 w.c. (maximum before operating the unit).

A canopy is furnished with each firebox and **MUST** be installed for safe operation.

Figure 12

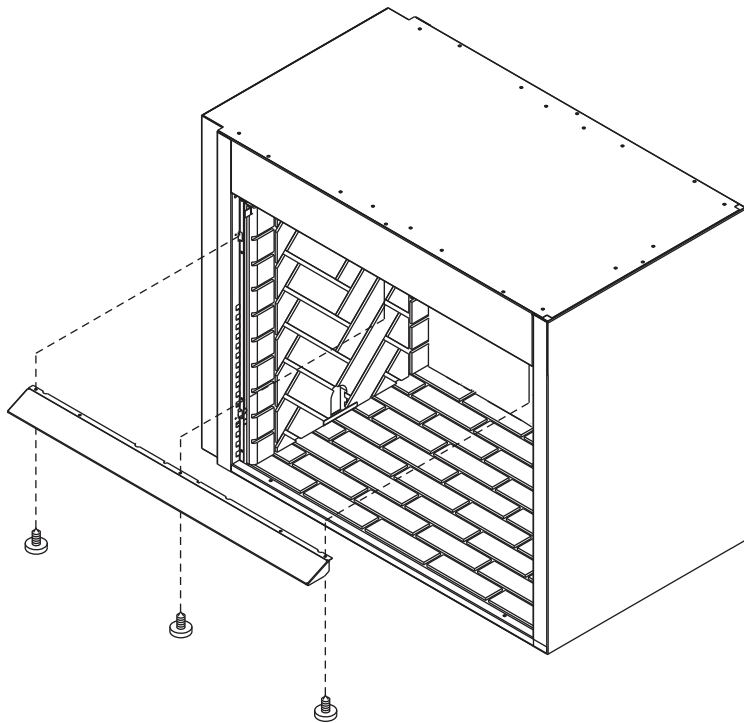
1. Align the canopy with the holes in the top frame.
2. Secure canopy with five (5) screws provided.
- 3 Repeat on other side.

WARNING

The firebox canopy must not be modified or replaced with a canopy that may be provided with the unvented decorative room heater.

WARNING

Close fireplace screen panel before operating decorative type unvented room heater.



**Figure 12 -
Canopy Installation**

FORCED AIR KIT

If you are installing the forced air kit Model BLOTDL on the LSTF36, LPF36, GCRF36 or GCLF36 units, see the installation instructions below supplied with kit.

CAUTION Electrical connections should only be performed by a qualified, licensed electrician, main power must be off when connecting to main electrical power supply or performing service.
 The blower when installed, must be electrically grounded in accordance with local codes or in the absence of local codes, with the National Electrical Code ANSI/NFPA 70.

WIRING TO JUNCTION BOX

NOTE: The wire must be run to the junction box before framing the firebox.

1. Wire the receptacle into an electrical circuit. Use minimum 60°C wire in accordance to pre-vailing codes.
2. The junction box is preinstalled at the factory. Remove junction box cover by removing the screw from the outside firebox wall.
3. The junction box cover has a factory-installed “romex” style strain relief connector. Connect the wires according to the wiring diagram below. Route the connected wire leads through the strain relief connector. *Figure 13*

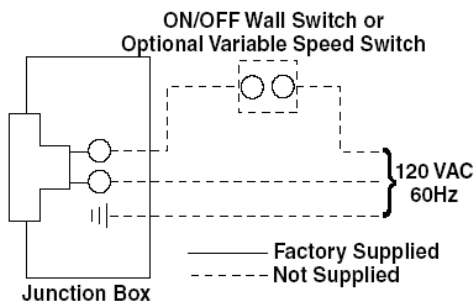


Figure 13a -
Wiring Diagram for Junction Box

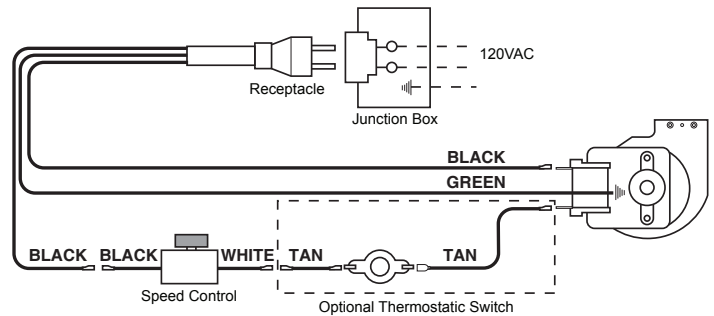


Figure 13b -
Wiring Diagram for Blower

NOTE: Two blower kits may be used and will be controlled independently.

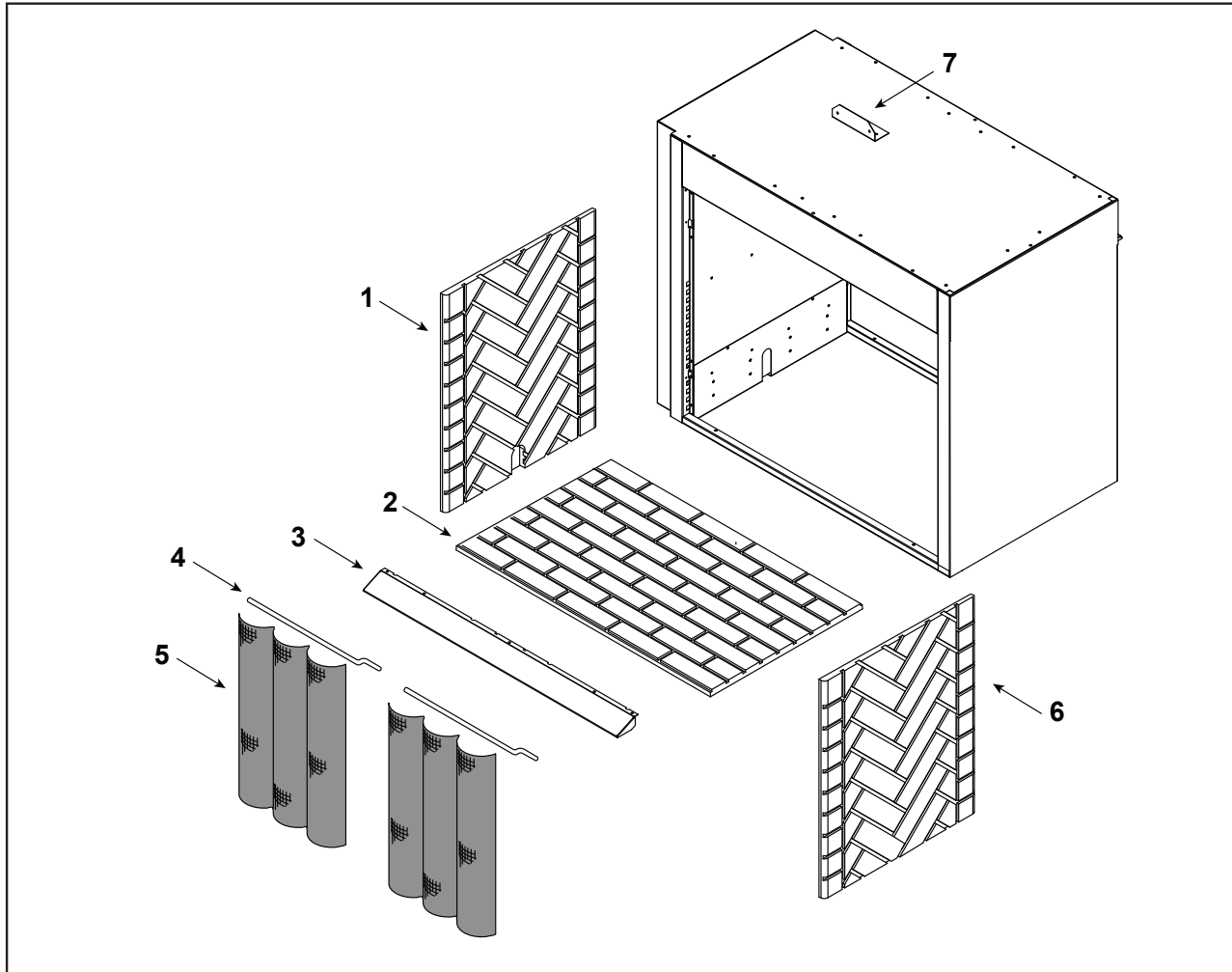


Service Parts

LSTF36

Lo-Rider
36" Vent Free See Through Fireplace

Beginning Manufacturing Date: NA
Ending Manufacturing Date: Active



IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Brick Panel, Common		79D0093K	
2	Brick Panel, Hearth		79D0095K	
3	Canopy	Qty 2 req	71D0011K	
4	Screen Rod	Qty 4 req	26D0138K	
5	Screen Panel	Qty 4 req	79D0001	
6	Brick Panel		79D0096K	
7	Nailing Flange	Qty 5 req	79D0091K	
Accessories				
	Blower Kit		BLOTDL	
	Outside Air Kit		AK4	

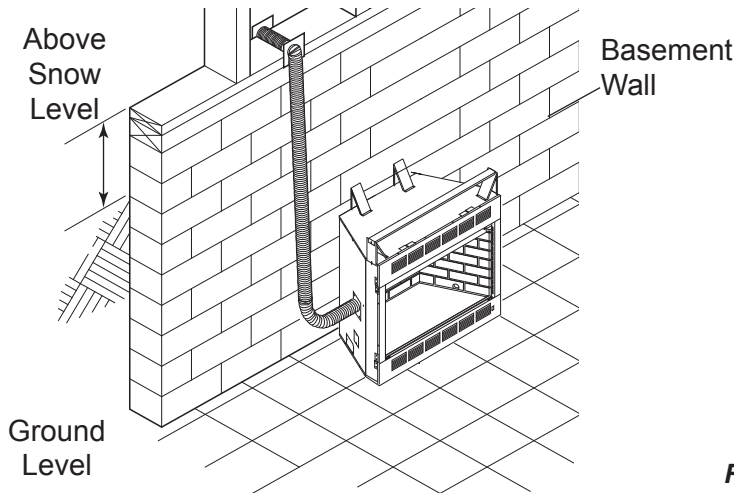
Additional service part numbers appear on following page.

6/18

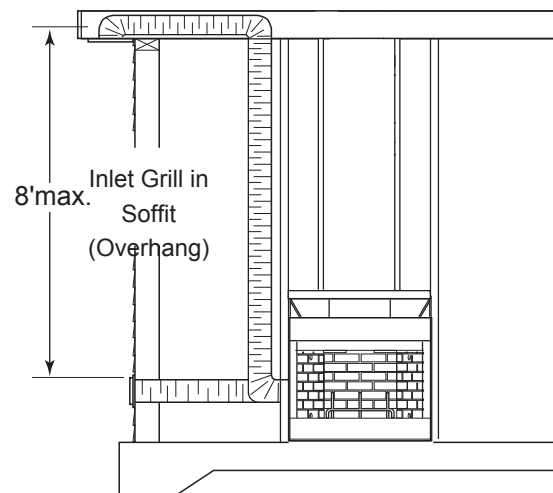
COMBUSTION AIR

1. Locate combustion air assembly at an exterior location which is not likely to be accidentally blocked in any manner. Locate assembly a min. of 12" above the snow line to prevent blockage by snow accumulation.
2. Never mount the combustion air inlet assembly in a garage or storage area where combustible fumes such as gasoline might be drawn into the fireplace.
3. Combustion air can be drawn from the crawl space under a house when an adequate supply of air is provided by open ventilation.
4. **CAUTION: Do not take combustion air from attic space or garage space.**
5. locate air supply at least 3' away from any appliance vent terminal.
6. Avoid extremely long runs and numerous turns in the duct leading from the fireplace to the combustion air assembly. These conditions increase the resistance to the free flow of air through the duct. Refer to Figures 14 through 17 for methods of installing the outside air for combustion assemblies.

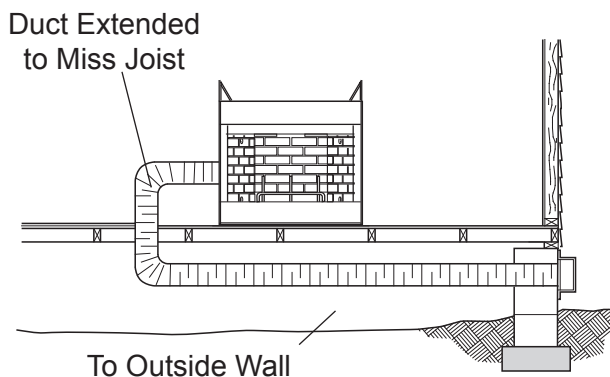
Note: Fireplace model in illustrations may not be representative of your appliance.



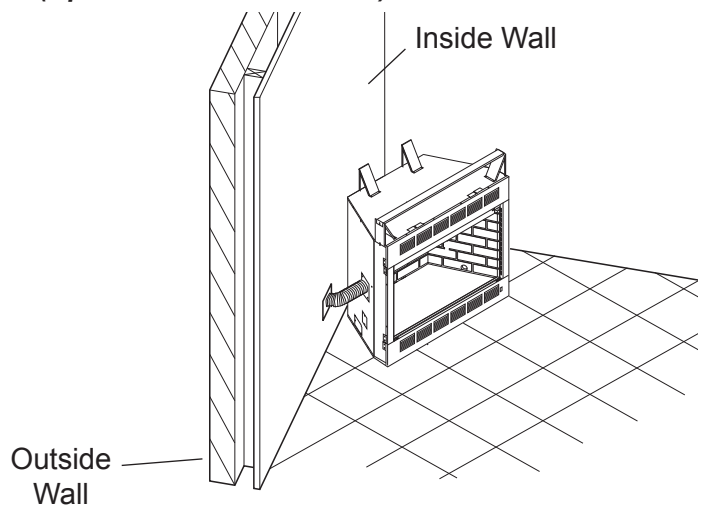
**Figure 14 -
Basement Installation**



**Figure 15 -
Concrete Slab Installation
(Optional Outside Air Runs)**



**Figure 16 -
Installation Above Basement or Crawl Space**



**Figure 17 -
45° Corner Installation on Slab Floor**

The use of outside air for combustion is optional unless required by building codes. It is only necessary to supply outside combustion air to one side of the fireplace. Use the model AK4 combustion air kit.

MODEL AK-4 COMBUSTION AIR ASSEMBLY

1. Remove the cover plate from the 4" outlet opening location on the left or right outside of the fireplace.
2. Place the insulation ring between the AK-4 starting collar and fireplace wall.
3. Place the starting collar (4") into the hole on the side of fireplace. Fasten it in place with the four sheet metal screws provided. *Figures 18 and 20*

WARNING DO NOT remove the cover if the outside air will not be connected.

NOTE: The air starting collar extends through the fireplace outer wrap. When the air starting collar is securely attached, it will form a seal against the fireplace wall.

4. Attach outside duct to starting collar with duct clamp or screws. *Figure 19*

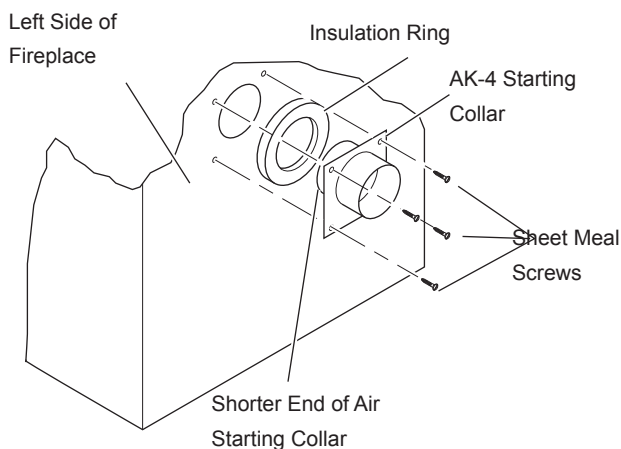


Figure 18 - Attaching Outside Air Starting Collar and Insulation Ring to Left Side of Fireplace

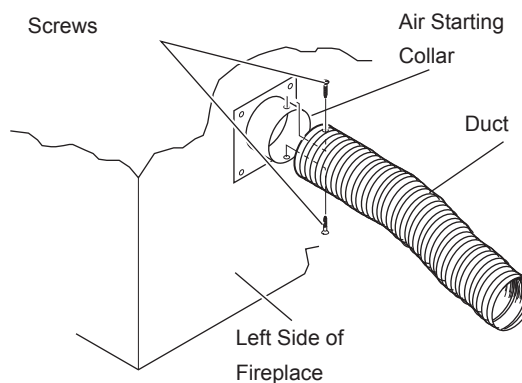


Figure 19 - Attaching Outside Duct to Starting Collar

5. Cut a 6-inch diameter opening for model AK-4 in the outside wall covering where the outside vent is to be located. *Figure 20.*
6. Select and cut a piece of duct long enough to attach to the fireplace and stick out at least 3" beyond the face of the wall to which the AK-4 inlet air vent will be attached. *Figure 19*

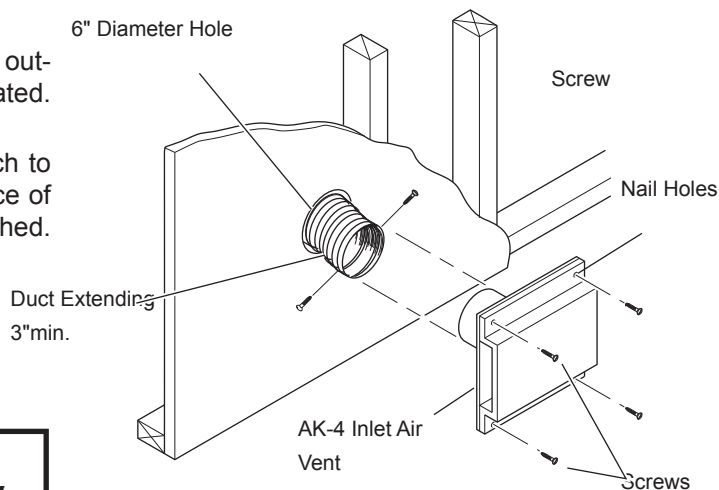


Figure 20 - Combustion Air Assembly for Model No. AK-4

WARNING Use FP-4 U duct for maximum efficiency and safety. Do not use a combustible duct. Always use UL Listed Class 0 or 1 duct material.

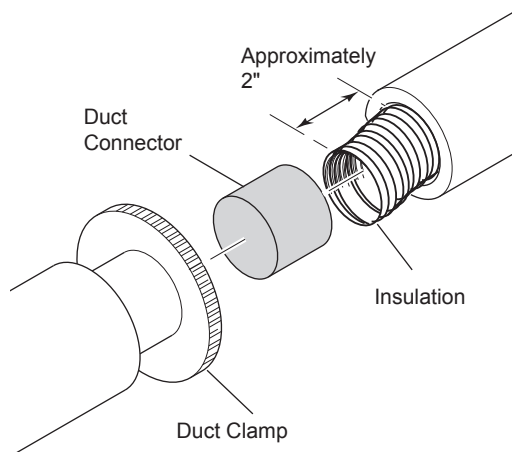
MODEL AK-4 COMBUSTION AIR ASSEMBLY (CONTINUED)

7. If the duct is the insulated type, push the insulation back from one end of the duct approximately 2". See Figure 21.
8. Slip the exposed end of the duct over the starting collar on the fireplace.
9. Using the sheet metal screws provided, secure the duct end to the collar attached to the fireplace.
10. Nail or screw the combustion air assembly to the surface of the wall.

NOTE: If the wall covering is brick or stone, use appropriate masonry fasteners. If necessary, splice the duct. Use a model 403-duct connector to splice duct sections.

INSTALLING MODEL 403 DUCT CONNECTOR

1. Push insulation back approximately 2" from the end of each duct.
2. Slip each duct over duct connector until an equal length of connector extends into each duct.
3. Place duct clamp over the end of each duct. Tighten duct clamp down snugly.
4. Push insulation back into place and over duct clamp.



**Figure 21 -
Install Duct Connector 403**

Limited Lifetime Warranty Policy

LIFETIME WARRANTY

The following components are warranted for life to the original owner, subject of proof of purchase: Firebox, Combustion Chamber, Heat Exchanger, Grate, and Stainless Steel Burners.

FIVE YEAR WARRANTY

The following components are warranted for 5 years to the original owner, subject of proof of purchase: Vent Free Ceramic Fiber Logs, Catalytic Filter and Aluminized Burners.

BASIC WARRANTY

Vermont Castings Group warrants the components and materials in your gas appliance to be free from manufacturing and material defects for a period of two years from date of installation. After installation, if any of the components manufactured by Vermont Castings Group in the appliance are found to be defective in materials or workmanship, Vermont Castings Group will, at its option, replace or repair the defective components at no charge to the original owner. Vermont Castings Group will also pay for reasonable labor costs incurred in replacing or repairing such components for a period of two years from the date of installation. Any products presented for warranty repair must be accompanied by a dated proof of purchase.

This Limited Lifetime Warranty will be void if the appliance is not installed by a qualified installer in accordance with the installation instructions. The Limited Lifetime Warranty will also be void if the appliance is not operated and maintained according to the operating instructions supplied with the appliance, and does not extend to (1) firebox/burner assembly damage by accident, neglect, misuse, abuse, alteration, negligence of others, including the installation thereof by unqualified installers, (2) the costs of removal, reinstallation or transportation of defective parts on the appliance, or (3) incidental or consequential damage. All service work must be performed by an authorized service representative.

This warranty is expressly in lieu of other warranties, express or implied, including the warranty of merchantability of fitness for purpose and of all other obligations or liabilities. Vermont Castings Group does not assume for it any other obligations or liability in connection with the sale or use of the appliance. In states that do not allow limitations on how long an implied warranty lasts, or do not allow exclusion of indirect damage, those limitations of exclusions may not apply to you. You may also have additional rights not covered in this Limited Lifetime Warranty.

Vermont Castings Group reserves the right to investigate any and all claims against the Limited Lifetime Warranty and decide upon method of settlement.

IF WARRANTY SERVICE IS NEEDED...

1. Contact your supplier. Make sure you have your warranty, your sales receipt and the model/serial number of your Vermont Castings Group product.
2. DO NOT ATTEMPT TO DO ANY SERVICE WORK YOURSELF.