

SIERRA FLAME

SIERRA FLAME Lynwood W76 Non-Catalytic Woodstove

Installation and Operation Instructions for the United States and Canada



This stove is listed to burn solid wood only. Do not burn any other fuels.

Read this entire manual before you install and use this appliance.

Read this entire manual before installation and use of this wood stove. Failure to follow these instructions could result in property damage, injury or even death.

Manufactured by:
Norflam
BE0437960542
Nijverheidsstraat 18
B-2381 Weelde, Belgium

*Distributed in the United States and
Canada by:*

SIERRA FLAME
502-1027 Davie straat
V6E 4L2 Vancouver
British Columbia, Canada

US Environmental Protection Agency
phase II certified wood stove compliant
with 2020 cord wood standard

This solid fuel heater has been tested and
listed according to ULC S627-00 (2016)
and UL 1482-2011 standards by an
accredited laboratory.

Certified Safety Tests performed by:



03-28312-200 12/2021

READ AND KEEP THIS MANUAL FOR FUTURE REFERENCE

CAUTION !!
IMPORTANT OPERATING AND MAINTENANCE
INSTRUCTIONS INCLUDED. **DO NOT DISCARD.**
LEAVE THIS MANUAL WITH THE HOMEOWNER.



Risk of
Fire

Hot while in operation, keep children, clothing and furniture away. Contact may cause skin burns.

Failure to follow the information in this manual may result in a fire; causing property damage, personal injury, or death. Read this booklet completely before installing or operating this appliance.



Caution

For use with solid wood fuel only. This appliance has not been tested for the use of compressed wood logs or bricks.

Do not modify this appliance in any way.

The chimney connector must be in good condition and kept clean.



Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

Do not use chemicals or fluids to start the fire.

Comply with all minimum clearances to combustibles as specified. Failure to comply may cause a house fire.



HOT

Glass and other surfaces are hot during operation and for some time after the fire has gone out. Supervise children around this appliance. Warn children and adults about high temperatures. High temperatures may ignite clothing or other flammable materials. Keep clothing, furniture, draperies and other combustible materials away.

DO NOT OPERATE WITH THE DOOR OPEN AND KEEP ALL SEALS IN A GOOD CONDITION.



Do not operate
with door open

CALIFORNIA PROP 65 WARNING:

Use of this product may produce smoke which contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Do not store anything including fuel under the appliance.

Table of Contents

1. Introduction.....	4
2. General Information.....	5
Performances	5
Warnings!.....	6
3. Installation	7
Pre Installation Check List.....	7
Floor protection.....	8
Combustible Wall Clearance for top vent installation	9
Ceiling height clearance	10
Alcove clearance	10
Clearance to combustibles	10
Draft Requirements	10
Chimney Installation	10
Factory Built Chimney	10
Masonry Chimney.....	11
Factory Chimney Top vent installation	12
Rear vent installation.....	13
Mounting the connector pipe to the stove.....	13
Combustible Wall Chimney Connector Pass-Throughs.....	14
Chimney height requirements.....	16
4. Prepare the Stove.....	17
5. Instructions	20
Fire resistant inner plates	20
Glass	20
Smoke & Carbon Monoxide Detectors	20
Room Ventilation & Combustion Air Supply.....	21
Outside Air	21
Draft Requirements	21
Operate Efficiently	21
6. Operation.....	22
Fueling the wood-burning stove	22
Starting the Stove	22
Advice.....	24
7. Maintenance	24
Removing the Fire Resistant Plates for Cleaning.....	25
Replacing Door Glass.....	26
Creosote Formation and the Need for Removal.....	26
8. Troubleshooting.....	27
9. SIERRA FLAME Limited Warranty	28
Dimensioned Drawing	30
Spare Parts.....	31

1. Introduction

We welcome you as a new owner of a SIERRA FLAME wood-burning stove. This manual will explain the installation, operation and maintenance of the SIERRA FLAME wood-burning stove. Please familiarize yourself with the owner's manual before operating your stove and save the manual for future reference. 'This manual describes the installation and operation of the SIERRA FLAME Lynwood W76 non-catalytic wood heater. This heater meets the US Environmental Protection Agency phase II cord wood and may be sold after 2020. Under specific test conditions this heater has been shown to deliver 51,600 Btu/hr

'This wood heater has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this wood heater in a manner inconsistent with operating instructions in this manual.

Please read the entire manual carefully before you install and use your new SIERRA FLAME wood-burning stove. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY OR LOSS OF LIFE. This manual contains important user information. Keep this manual with the stove after installation is complete.

Safety and environmental testing

SIERRA FLAME Lynwood W76 has been tested by PFS of Cottage Grove, Wisconsin, to the Environmental Protection Agency 2020 Cord wood standard and is safety listed by PFS to ULC S627-00 (2016) and UL 1482-2011 . The serial number is fixed to the stove and to the guarantee card. If you need to contact the factory please refer to this serial number.

Combustion Efficiency

This wood heater has an EPA tested High Heating Value (HHV) efficiency rate of 76 %. There are, however, aspects of efficiency that you should be aware of in order to get the most from your stove. Operation habits and fuel moisture can have a significant effect on efficiency. Poorly seasoned wood having a higher than optimum moisture content, can reduce the amount of energy transferred to the living area as a result of the energy expended to evaporate the excess fuel moisture in order for the wood to burn. Operational habits - such as not building a robust kindling fire to readily ignite the larger fuel pieces - can result in an inefficient, smoldering fire. Additionally, most modern wood heaters' optimum performance and efficiency are at the medium to medium-low burn rates.

The location of the stove can also have a significant effect on heating efficiency, primarily in regard to distribution of the heat. For example, a wood heater centrally located in an open living area, will likely provide better circulation of heat than will a stove located in a room adjacent to the larger living area.

Items included:

1 instruction and maintenance manual, 1 warranty card, and 1 detachable handle.

2. General Information

Performances

Values are as measured per test method, except for the recommended heating area, firebox volume, maximum burn time and maximum heat output.

Model	Lynwood W76
Type	Solid Fuel Room Heater
Type of Combustion	Non-catalytic
Fuel Type	Dry Cordwood (20% moisture)
Main Material	Cast Iron
Firebox Isolation	Vermiculite
Flue Exit	6" (150 mm) Back and top connector
Recommended Heating Area (sq. ft..)	450 to 2000 ft ² (42 to 185 m ²)
Nominal Firebox Volume	1.55 ft ³ (0.044 m ³)
Maximum burn Time ¹	14 hours
Maximum Heat Output (dry cordwood) ²	51,600 BTU/h (15.13 kW)
Overall Heat Output Rate (min. to max.) ^{2 3}	13,927 BTU/h to 51,616 BTU/h (4.08 kW to 15.13 kW)
Average Overall Efficiency ³	76 % (HHV) ⁴ 82 % (LHV) ⁵
Optimum efficiency ⁶	84.5 %
Average particulate emissions rate ⁷	1.91 g/h (EPA / CSA B415.1-10)
Average CO ⁸	79 g/h

¹ Maximum Burn Time will vary depending on design of home, climate, wood type and operation

² Heat Output Range results are determined during specific emissions tests established by the EPA.

³ As measured per CSA B415.1-10 stack loss method. The Maximum Heat Output value is representative of a more frequent re-fueling cycle than specified

⁴ Higher Heating Value of the fuel is obtained per CSA B415.1-10 test method.

⁵ Lower Heating Value of the fuel is obtained per CSA B415.1-10 test method.

⁶ Optimum overall efficiency at a specific burn rate (LHV).

⁷ This appliance is officially tested and certified by an independent agency. Particulate Emissions rate is obtained using EPA Test Method.

⁸ Carbon Monoxide Emissions rate results from Test Method CSA B415.1-10.

CONTACT YOUR LOCAL BUILDING OFFICIALS FOR INFORMATION ON RESTRICTIONS AND INSTALLATION AND PERMIT REQUIREMENTS IN YOUR AREA.

WARNINGS!

- 1. KEEP ASH DRAWER CLOSED DURING FIRING IN THIS STOVE. USE A METAL CONTAINER WITH A TIGHT FITTING LID TO DISPOSE OF ASHES.**
- 2. NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR 'FRESHEN UP' A FIRE IN THIS STOVE. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE STOVE WHILE IT IS IN USE.**
- 3. DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.**
- 4. THE STOVE IS HOT WHILE IN OPERATION. DO NOT TOUCH AND KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. USE GLOVES WHEN STOKING THE FIRE.**
- 5. DO NOT CONNECT THIS STOVE TO A CHIMNEY FLUE CONNECTED TO ANOTHER STOVE OR APPLIANCE.**
- 6. DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.**
- 7. DO NOT INSTALL IN A MOBILE HOME.**
- 8. BE SURE TO ALLOW AN ADEQUATE SOURCE OF FRESH AIR INTO THE ROOM WHERE THE STOVE IS OPERATING .**
- 9. DO NOT OPERATE THE STOVE WITHOUT THE FIREBOX REFRACTORY PLATES PROPERLY INSTALLED.**
- 10. BUILD FIRES DIRECTLY ON THE BOTTOM OF THE STOVE.**
- 11. DO NOT USE GRATES, IRONS OR ANY OTHER METHOD TO ELEVATE THE FIRE.**
- 12. THIS WOOD HEATER NEEDS PERIODIC INSPECTION AND REPAIR FOR PROPER OPERATION. IT IS AGAINST FEDERAL REGULATIONS TO OPERATE THIS WOOD HEATER IN A MANNER INCONSISTENT WITH OPERATING INSTRUCTIONS IN THIS MANUAL**

What to do if you have a chimney fire

If you realize a chimney fire is occurring, follow these steps:

Get everyone out of the house, including yourself.

Call the fire department. If you can do so without risk to yourself, these additional steps may help save your home. Remember, however, that homes are replaceable, lives are not.

Put a chimney fire extinguisher into the stove.

Close the air controls on the stove and the damper on the chimney connector.

Use a garden hose to spray down the roof (not the chimney) so the fire won't spread to the rest of the structure.

Once it's over, call a CSIA Certified Chimney Sweep to inspect for damage. Chimney fire damage and repair normally is covered by homeowner insurance policies.

3. Installation

WARNING

IF YOUR SIERRA FLAME WOOD-BURNING STOVE IS NOT PROPERLY INSTALLED, OPERATED AND MAINTAINED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW ALL INSTALLATION, OPERATION AND MAINTENANCE DIRECTIONS.

Pre Installation Check List

Before you begin an installation, review your plans, check to see:

- Your stove and chimney connector will be far enough from combustible material to meet all clearance requirements.
- The floor protection is large enough and is constructed properly to meet all requirements.
- You have all necessary permits from your local authorities. Your local building official is the final authority for approving your installation as safe and in determining that it meets all local and state building and safety codes.

The metal label permanently attached to the back of every SIERRA FLAME wood-burning stove shows that it has been tested to current UL and ULC safety standards, and gives the name of the testing laboratory. Clearance and installation information is also printed on the label. Local authorities will generally accept the label as evidence that, when the stove is installed according to the information on the label and in this manual, the installation meets codes and can be approved.

This wood stove must be connected to 1) a chimney complying with the requirements for Type HT chimneys in the standard for Chimneys, Factory-Built, Residential Type and Building Heating Appliance, UL 103, or 2) a code-approved masonry chimney with a flue liner.

For any unresolved questions about installation in the USA, refer to the national Fire Protection Association's publication ANSI/NFPA 211 Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances. For installation in Canada, refer to CSA CAN-B365, Installation Code for Solid Fuel Burning Applications and Equipment. These standards are the basis for many national codes.

They are nationally recognized and are accepted by most local authorities. Your local dealer or your local building official may have a copy of these regulations.

WARNING!

CHECK ALL LOCAL BUILDING AND SAFETY CODES BEFORE INSTALLATION. THE INSTALLATION INSTRUCTIONS AND APPROPRIATE CODE REQUIREMENTS MUST BE FOLLOWED EXACTLY AND WITHOUT COMPROMISE. ALTERATIONS TO THE STOVE ARE NOT ALLOWED. DO NOT CONNECT THE STOVE TO A CHIMNEY SYSTEM SERVING ANOTHER STOVE, APPLIANCE OR ANY AIR DISTRIBUTION DUCT. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL VOID THE MANUFACTURERS WARRANTY.

WARNING!

THE PROTECTIVE MATERIAL FOR TRANSPORT IS PLACED INSIDE YOUR STOVE AND BETWEEN THE PLATES OF THE UPPER BAFFLE, REMOVE IT BEFORE INSTALLATION. YOU CAN REACH THEM FROM THE TOP OF THE COLLAR THROUGH THE FRONT OPENING.

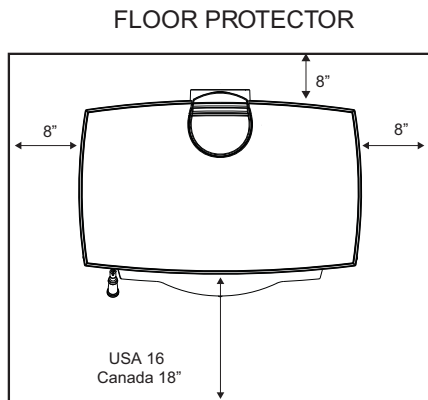
NOTE

If you plan to vent your stove into an existing masonry chimney, have the chimney inspected by a local fire marshal or qualified installer. Remember that the chimney and its location on the roof heavily influences the stoves performance. An oversized flue may not provide effective draft and a flue liner may be required. (Observe draft requirements). Consult your dealer or qualified installer before final selection is made.

You may wish to leave enough room between the stove and the wall to make cleaning easier.

Floor protection

If the stove is to be installed on a combustible floor, the stove must be placed on a noncombustible hearth pad, which extends 8" (200 mm measured from the legs) beyond the stove sides and back, and 18" (455 mm) measured from side and back panels to the front. The floor protection can be any noncombustible material that has a minimum R- value of 1.0 and listed to UL-1618.



FRONT
Floor protection for Canada 18" (45 cm) from unit to front of floor protector - and 8" (20 cm) to the sides.

Floor Protector must be under connector pipe and 2" (5 cm) to the side for a through the wall configuration.

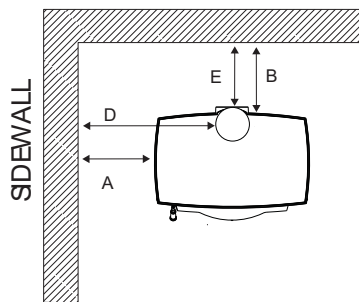
Combustible Wall Clearance for top vent installation

When installing stove the following clearances to combustible materials must be kept.

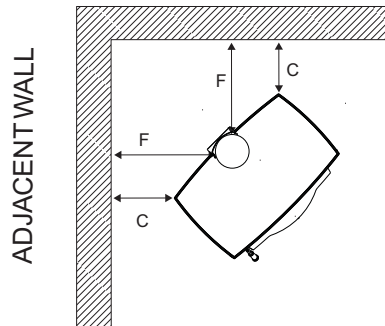
Chimney connector pipe	A	B	C	D	E	F
6" single wall	16" (406 mm)	18" (457 mm)	16" (406 mm)	27.5" (699 mm)	19.5" (495 mm)	18" (457 mm)
6" double wall ventilated	16" (406 mm)	10" (254 mm)	8" (203 mm)	27.5" (699 mm)	11.5" (292 mm)	10" (254 mm)
6" single wall and optional heat shield	16" (406 mm)	11" (279 mm)	16" (406 mm)	27.5" (699 mm)	14" (356 mm)	18" (457 mm)
6" double wall ventilated and optional heat shield	16" (406 mm)	5" (127 mm)	6" (152 mm)	27.5" (699 mm)	8" (203 mm)	8" (203 mm)

CLEARANCE TO COMBUSTIBLE SURFACES

TOP VENT OPTION
BACK WALL



TOP VENT OPTION
ADJACENT WALL



Refer to the chimney connector manufacturer's instructions concerning installation of listed connector pipe, wall thimble and chimney.

Ceiling height clearance

Do not install in a room with a ceiling height below 6'0" (182 cm).

Alcove clearance

The minimum alcove width is 63" (160 cm)

The minimum alcove height is 63" (160 cm)

Clearance to combustibles

You must install the stove with sufficient space between the stove (top, sides, back, front, and under stove pipes) and any material that can catch fire. This includes furniture, especially in front of the stove.

Draft Requirements

SIERRA FLAME Lynwood is only one component of the total system. The venting system is equally important for achieving the required flow of combustion air to the firebox and for safely removing unwanted combustion by-products from the appliance. If the venting system's design does not promote these ends, the system may not function properly. Poorly functioning venting systems may create performance problems as well as be a safety hazard (i.e. an oversized chimney may result in less than optimum performance. Installations into a large, masonry chimney may require a liner to improve performance). A draft test should read greater than .06" W.C. (Inches Water Column) and less than .08" W.C. (15 Pa - 20 Pa). A stove located in a basement may not generate sufficient draft to burn efficiently.

The chimney draft depends on the weather conditions. In stormy weather, you may reduce the chimney draft by closing the damper in the chimney connector pipe (if a damper has been installed). If the chimney draft is strong, the combustion air supply should also be reduced.

Chimney Installation

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE. DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.

SIERRA FLAME Lynwood is listed for installation as a vertically top or rear vented wood-burning stove using a listed class A (UL103HT) for Canada (CAN/ULC-S629) factory built chimney exiting through the ceiling/attic/roof.

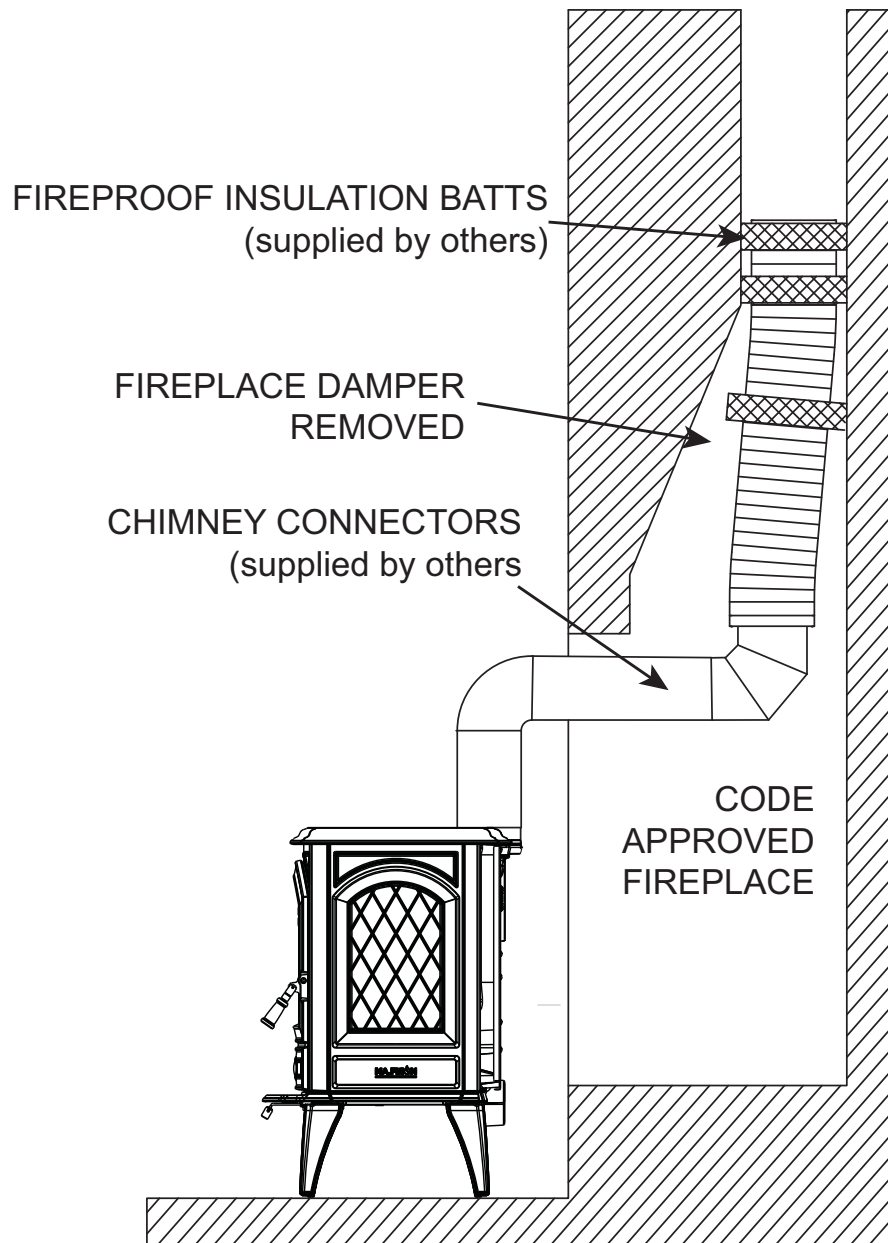
The inside diameter of the chimney and connector pipe must not be smaller than 6" (152 cm) diameter. Single wall 24 gauge MSG (0.58 - 0.71 mm) , this may be used in the room where the stove is installed, follow the chimney manufacturer's instruction for installation of chimney and chimney adapter. In Canada, where passage through wall, or partition of combustible construction is desired, the installation shall conform to CAN/CSA B365.

Factory Built Chimney

When a metal prefabricated chimney is used, the manufacturer's installation instructions must be followed. You must also purchase (from the same manufacturer) and install the ceiling support package or wall pass-through and "T" section package, fire stops (where needed), insulation shield, roof flashing, chimney cap, etc. Maintain the proper clearance to the structure as recommended by the manufacturer. The chimney must be the required height above the roof or other obstructions for safety and proper draft operation.

Masonry Chimney

Ensure that a masonry chimney meets the minimum standards of the National Fire Protection Association (NFPA) by having it inspected by a professional. Make sure there are no cracks, loose mortar or other signs of deterioration and blockage. Have the chimney cleaned before the stove is installed and operated. When connecting the stove through a combustible wall to a masonry chimney, special methods are needed. Refer to Combustible Wall Chimney Connector Pass-Throughs on the following pages. When connecting the SIERRA FLAME Lynwood to an existing chimney: Remove the existing damper and/or any portion of the smoke shelf necessary to accommodate a 6 inch chimney connector. Install fireproof insulation batts between the connector pipes and the existing flue. Connector pipes must be installed to allow access for chimney cleaning. Large chimneys may not generate sufficient draft. A 6 inch stainless steel chimney liner extending to the top of the chimney is recommended.



Factory Chimney Top vent installation

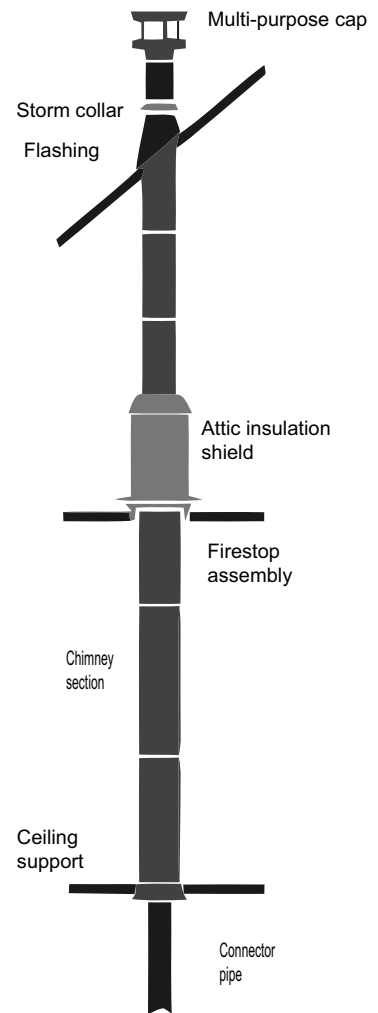
Required installation components:

- Chimney cap
- Insulated chimney
- Storm collar
- Roof flashing
- Ceiling support box or joist shield/fire stop spacer
- Chimney connector pipe
- Chimney connector adapter

Chimney connector

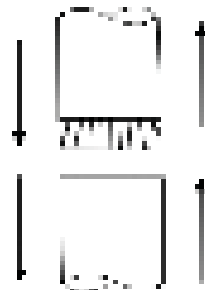
The chimney connector is a single or walled pipe used to connect the stove to the chimney. For use with the SIERRA FLAME wood-burning stoves the chimney connector **MUST** be 6" in diameter, with a minimum thickness of 24 gauge black steel or 26 gauge blued steel

Aluminum and galvanized steel pipe is not acceptable for use with the SIERRA FLAME wood-burning stove. These materials cannot withstand the extreme temperatures of a wood fire and can give off toxic fumes when heated.



DO NOT USE THE CONNECTOR PIPE AS A CHIMNEY

Each chimney connector or stove pipe section must be connected to the stove flue collar and to each other with the male (crimped) end toward the stove. Each adjacent piece of connector must be fastened with 2 screws. This prevents any condensed or liquid creosote from running down the outside of the pipe or the stove top. All joints, including the flue collar connection must be secured with three sheet metal screws to ensure that the sections do not separate. For the best performance the chimney connector should be as short and direct as possible, with no more than one 90 degree elbow. The maximum horizontal run is 36" and a recommended total length of connector pipe should not exceed 10 feet. Always slope horizontal runs upward 1/4" per foot toward the chimney. No part of the chimney connector may pass through an attic or roof space, closet or other concealed-space, or through a floor ceiling. All sections of the chimney connectors must be accessible for cleaning. Where passage through a wall or partition of combustible construction is desired, the installation must conform with NFPA 211 or CAN/CSA-B365.



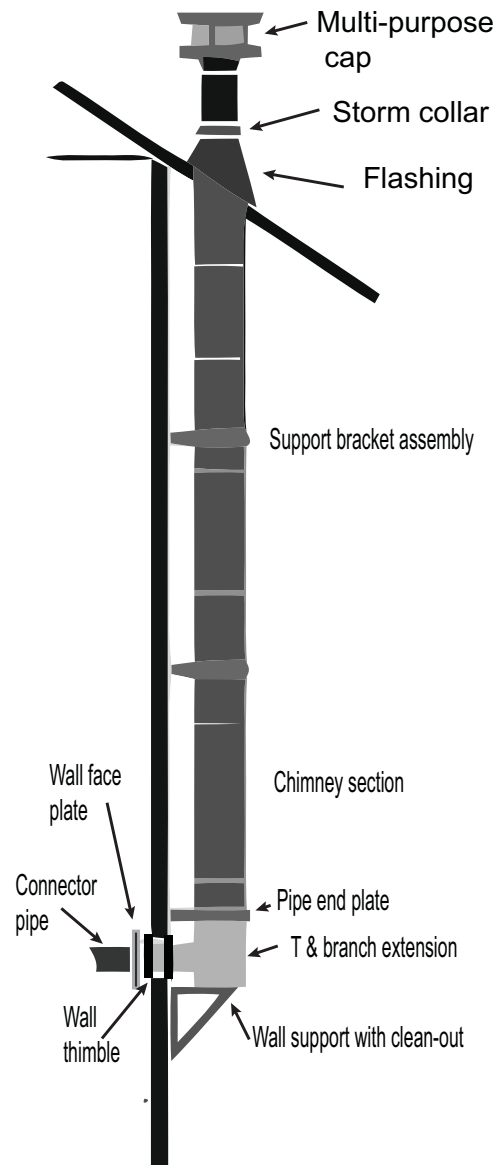
Rear vent installation

For venting into a masonry or a back standing steel chimney through the top vent the top horizontal portion of a single wall connector pipe can be located not closer than 18" below a combustible ceiling.

Rear venting into a masonry or steel chimney through a thimble vent configuration or other than described here must follow local codes or NFPA 211 or CAN/CSA_B365 guidelines and methods.

Required installation components:

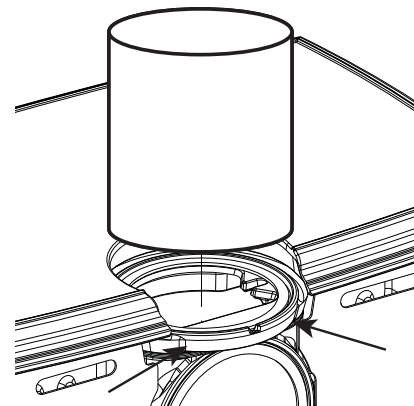
- Chimney cap
- Insulated chimney
- Tee section
- Tee support bracket
- Chimney connector pipe
- Wall thimble
- Wall strap



Mounting the connector pipe to the stove

Place connector pipe in the flue collar.

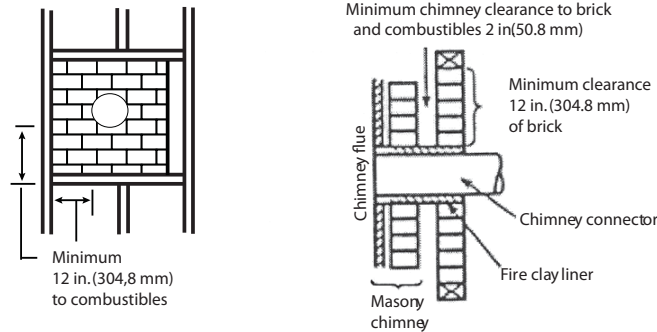
Use two self-tapping screws in the holes provided to secure the connector pipe so that it cannot be lifted or turned from the stove.



Combustible Wall Chimney Connector Pass-Throughs

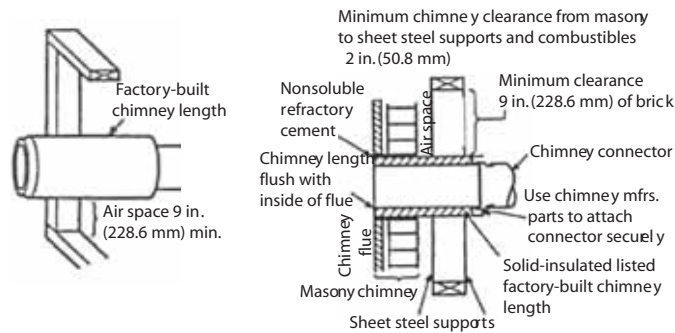
Method A 12" (304.8 mm) Clearance to Combustible Wall Member:

Using a minimum thickness 3.5" (89 mm) brick and a 5/8" (15.9 mm) minimum wall thickness clay liner, construct a wall pass-through. The clay liner must conform to ASTM C315 (Standard Specification for Clay Fire Linings) or its equivalent. Keep a minimum of 12" (304.8 mm) of brick masonry between the clay liner and wall combustibles. The clay liner shall run from the brick masonry outer surface to the inner surface of the chimney flue liner but not past the inner surface. Firmly grout or cement the clay liner in place to the chimney flue liner.



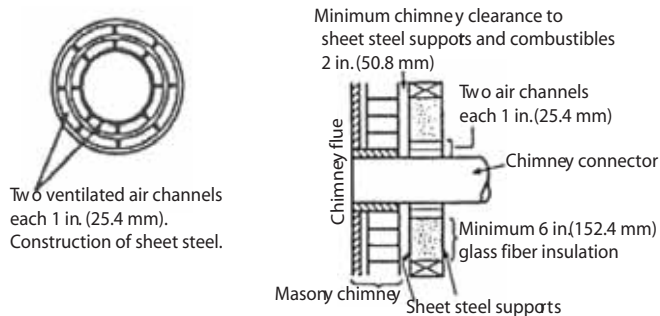
Method B 9" (228.6 mm) Clearance to Combustible Wall Member:

Using a 6" (152.4 mm) inside diameter, listed factory-built Solid-Pak chimney section with insulation of 1" (25.4 mm) or more, build a wall pass-through with a minimum 9" (228.6 mm) air space between the outer wall of the chimney length and wall combustibles. Use sheet metal supports fastened securely to wall surfaces on all sides, to maintain the 9" (228.6 mm) air space. When fastening supports to chimney length, do not penetrate the chimney liner (the inside wall of the Solid-Pak chimney). The inner end of the Solid-Pak chimney section shall be flush with the inside of the masonry chimney flue, and sealed with a non-water soluble refractory cement. Use this cement to also seal to the brick masonry penetration



Method C 6" (152.4 mm) Clearance to Combustible Wall Member:

Starting with a minimum 24 gage (.024" [.61 mm]) 6" (152.4 mm) metal chimney connector, and a minimum 24 gage ventilated wall thimble which has two air channels of 1 in. (25.4 mm) each, construct a wall pass-through. There shall be a minimum 6" (152.4) mm separation area containing fiberglass insulation, from the outer surface of the wall thimble to wall combustibles. Support the wall thimble, and cover its opening with a 24-gage minimum sheet metal support. Maintain the 6" (152.4 mm) space. There should also be a support sized to fit and hold the metal chimney connector. See that the supports are fastened securely to wall surfaces on all sides. Make sure fasteners used to secure the metal chimney connector do not penetrate chimney flue liner.

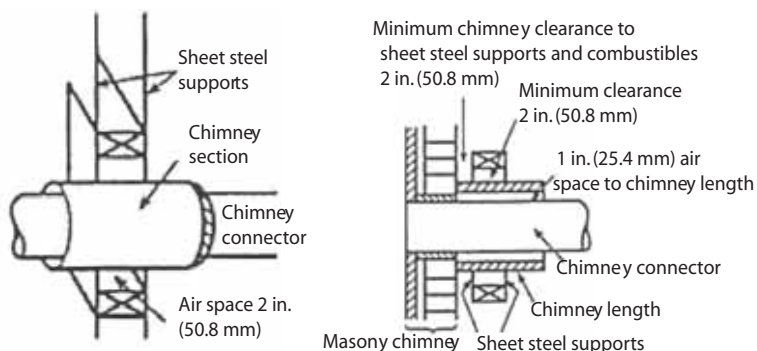


Method D 2" (50.8 mm) Clearance to Combustible Wall Member:

Start with a solid-pak listed factory built chimney section at least 12" (304 mm) long, with insulation of 1" (25.4 mm) or more, and an inside diameter of 8" (2 inches [51 mm] larger than the 6" [152.4 mm] chimney connector). Use this as a pass-through for a minimum 24-gage single wall steel chimney connector. Keep solid-pak section concentric with and spaced 1" (25.4 mm) off the chimney connector by way of sheet metal support plates at both ends of chimney section. Cover opening with and support chimney section on both sides with 24 gage minimum sheet metal supports. See that the supports are fastened securely to wall surfaces on all sides. Make sure fasteners used to secure chimney flue liner do not penetrate the liner.

Notes

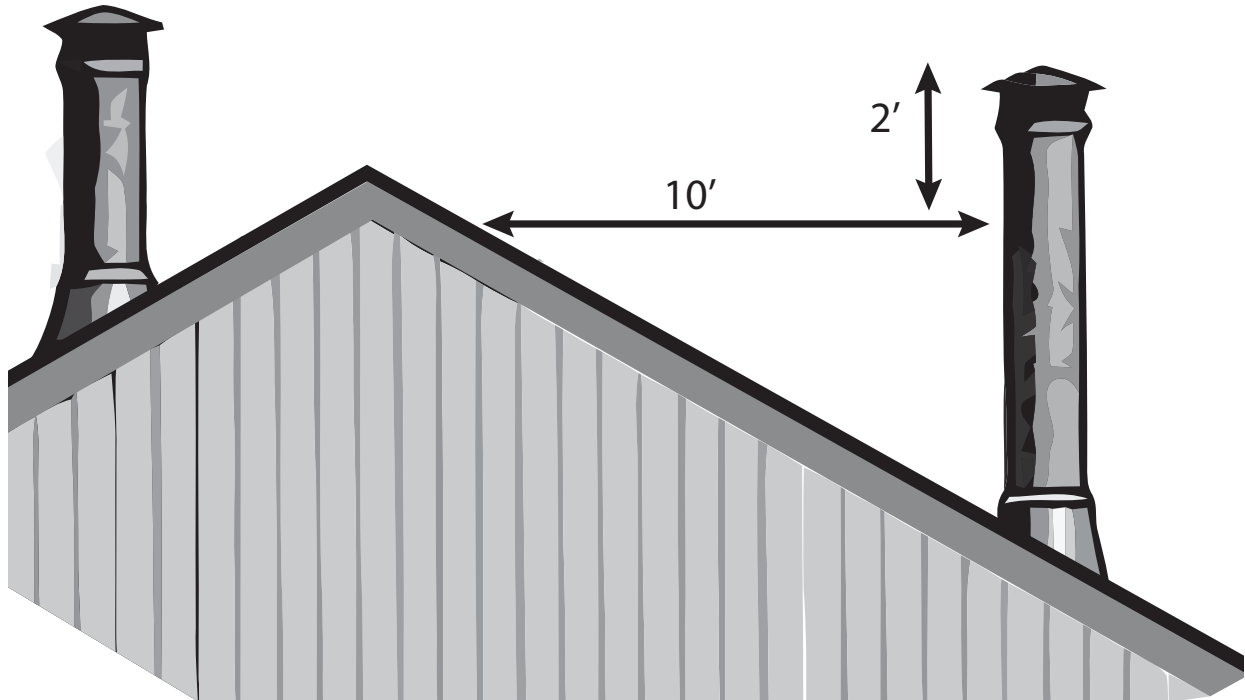
- 1. Connectors to a masonry chimney, excepting method B, shall extend in one continuous section through the wall pass-through system and the chimney wall, to but not past the inner flue liner face.**
- 2. A chimney connector shall not pass through an attic or roof space, closet or similar concealed space, or a floor, or ceiling.**



Chimney height requirements

The chimney must extend 3 feet above the level of roof penetration and a minimum of 2 feet higher than any roof surface within 10 feet. Check with your local building officials for additional requirements for your area.

The condition of the chimney and height is very important; we suggest a total minimum height of 13' (4.0 m). Measured from the top of the stove.

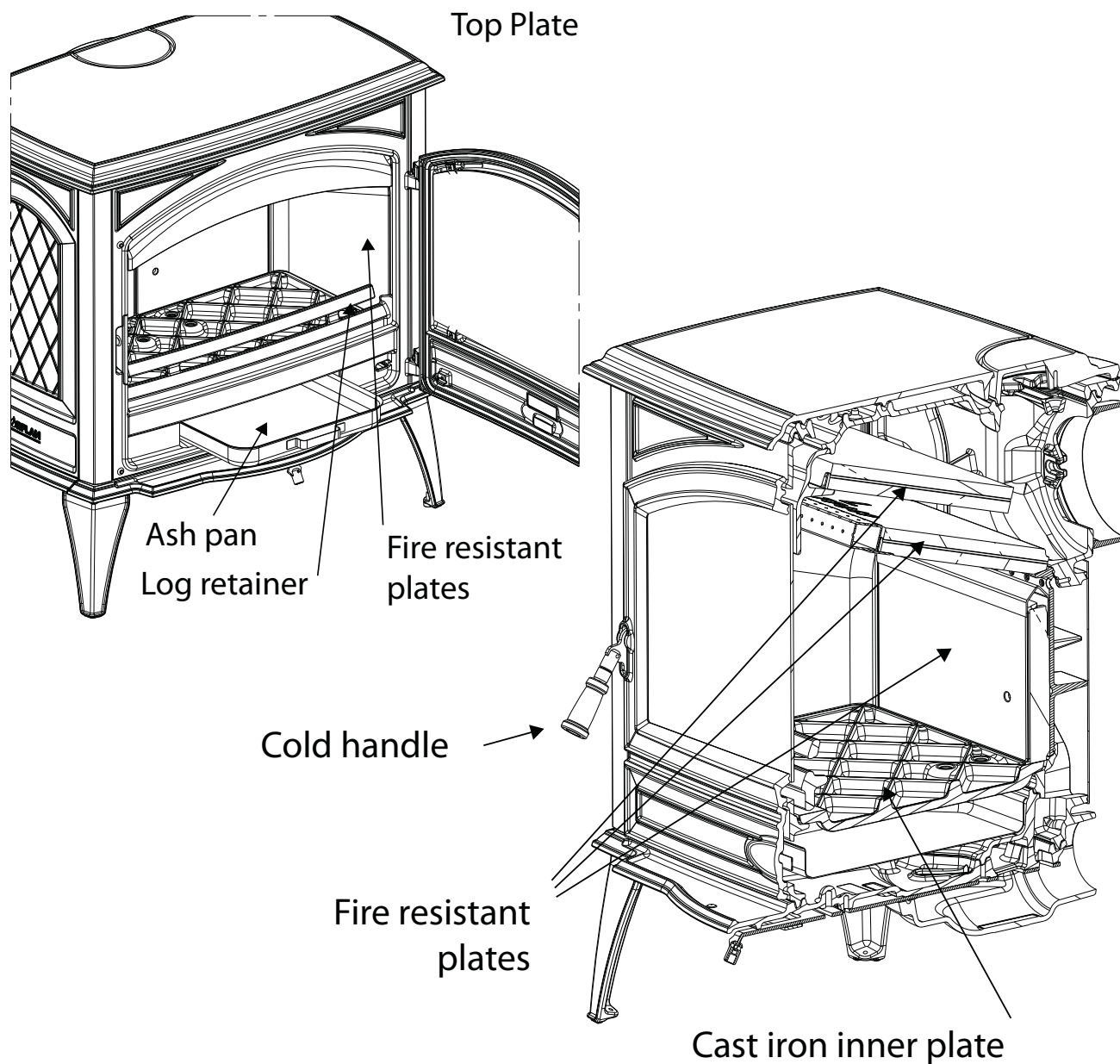


4. Prepare the Stove

Please check the appliance for damage caused during transport or any other damage or defects immediately after delivery. The appliance is attached to the pallet with screws at the bottom. If you detect damage caused during transport or any other damage or defects, do not use the appliance and notify the supplier. Remove the removable parts (fire resistant inner plates, ash pan) from the stove before you start installation. By removing removable parts, it is easier to move the appliance and to avoid damage. Note the location of those removable parts, so that you have no difficulties in installing the parts in the right place later on. Cast iron inner plates protect the combustion chamber and dissipate heat to the environment.

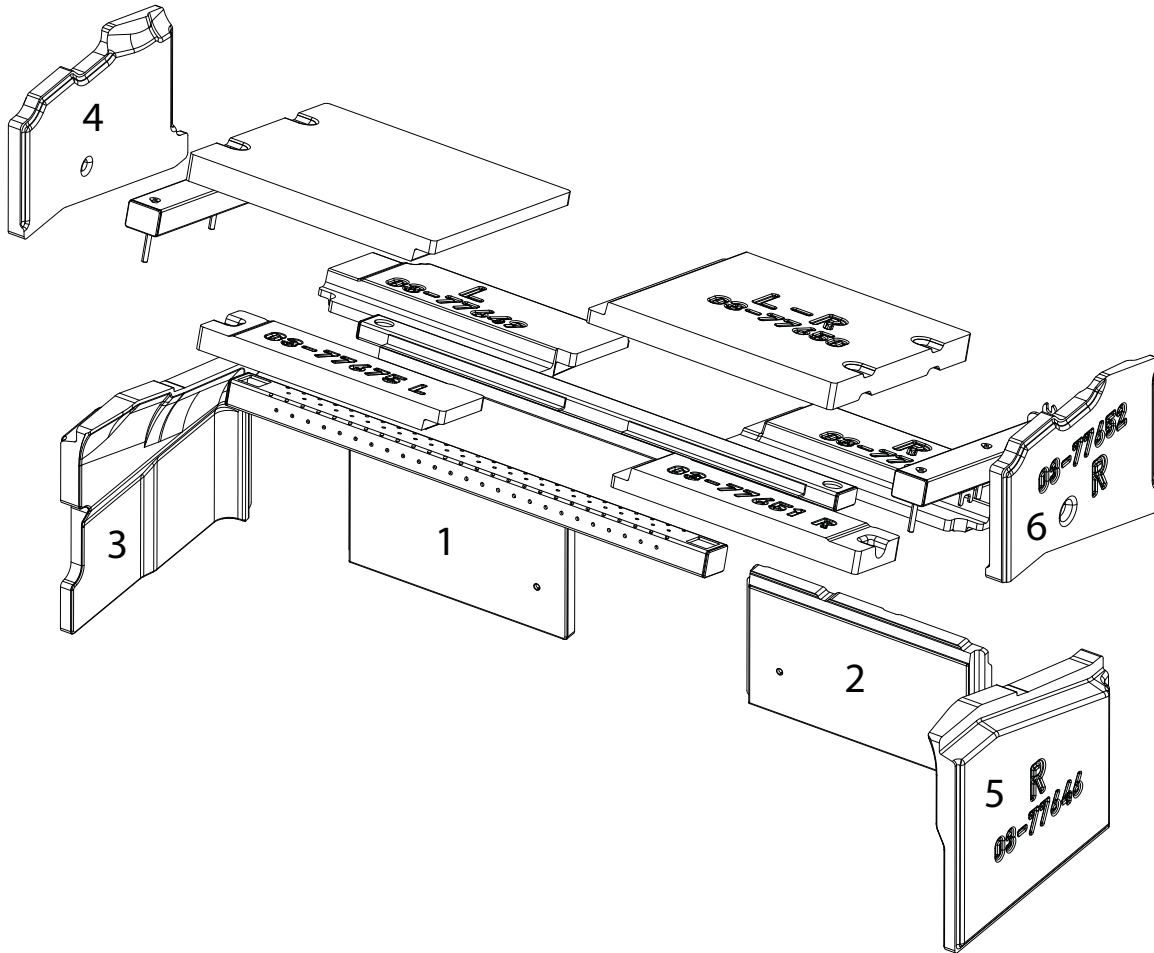
WARNING!

TRANSPORT PROTECTION MATERIAL IS PLACED INSIDE YOUR STOVE AND BETWEEN THE TOP BAFFLE PLATES, REMOVE THESE MATERIALS BEFORE INSTALLATION. YOU CAN REACH THEM THROUGH THE TOP COLLAR AND THROUGH THE FRONT OPENING.



Exploded view of the fire resistant inner plates.

These plates are made from a very heat resistant and highly insulating material made of processed vermiculite. This material is capable of service temperatures up to 1150 C (2101 F) It is however somewhat fragile. Care should be used when handling these pieces and when fueling the stove. Please remove the lower pieces in numerical order when installing or cleaning the stove.

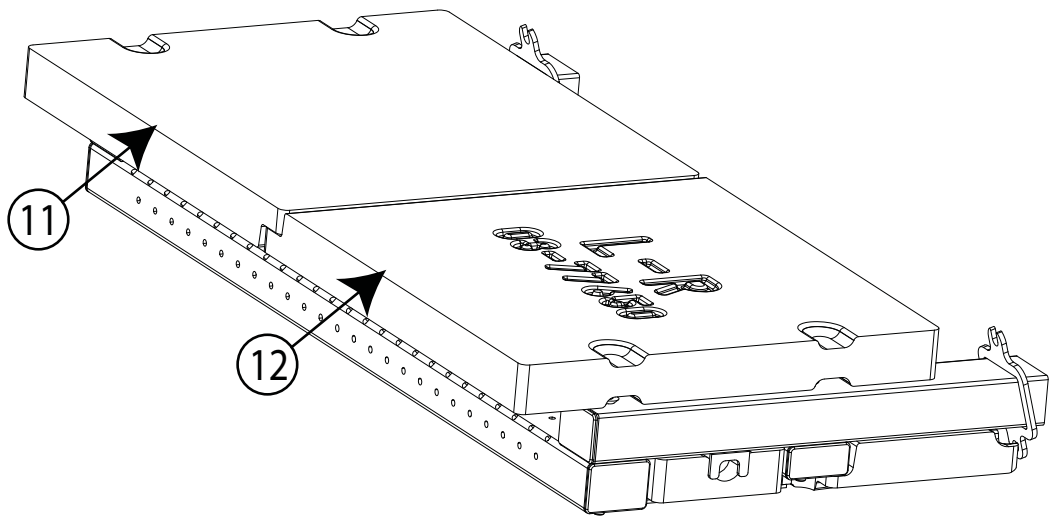
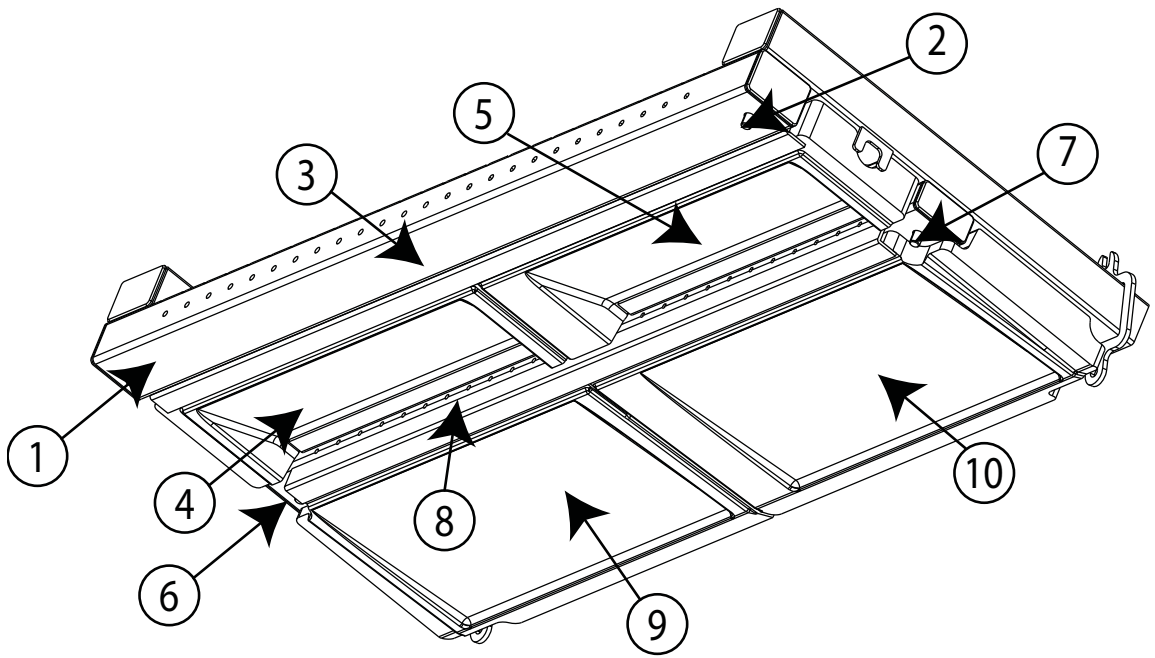


When the baffle plates should be replaced, follow this procedure:

Disassembly:

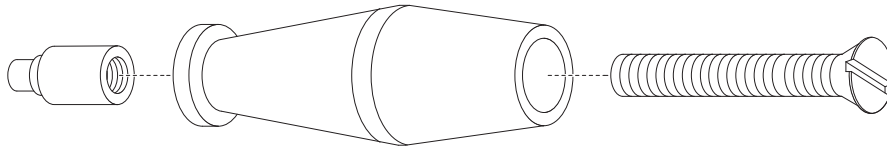
1. Loosen the nuts (1)(2) from the front airtube (3), use penetrating oil
2. Lower front airtube (3), and hold both frontal baffle plates (4)(5) with the other hand.
3. Once the airtube is removed slide out both baffle plates
4. Loosen the nuts (6)(7) from the mid airtube (8), use penetrating oil
5. Lower mid airtube (8), and hold both rear baffle plates (9)(10) with the other hand.
6. Once the airtube is removed slide out both baffle plates
7. Lift the left top baffle plate (9) and slide the right top baffle plate (10) underneath
8. Remove both top baffle plates

Re-assemble in reverse order



Cold Handle

The stove is supplied with a cold handle. Assemble the cold handle using the M8x50 screw provided. When not in use store the handle in the hole provided at the side of the stove.



5. Instructions

Fire resistant inner plates

Fire resistant inner plates are delivered in this SIERRA FLAME wood-burning stoves. We recommend that you treat the plates with care because it is a delicate material (not covered by the limited warranty). Small cracks may arise in the plates from minor water content, especially if the stove is overheated during the first fire. These cracks do not influence the performance of the stove and are not covered by the limited warranty.

Glass

The glass is a heat resistance ceramic glass that can withstand continuous temperatures up to 1390°F (754°C). This temperature is well above the temperatures in which you operate your stove. This stove is designed to provide a flow of air over the inside of the glass. This air combined with high temperatures helps keep the glass optimally clean when the air wash air intake is fully opened. When operating the stove on low for extended periods of time, the glass may become dirty. A short, hot fire will help clean off much of the normal soot buildup (see section 6: Troubleshooting). In order to keep glass soot free the moisture content of the wood must be between 15 and 18%.

Smoke & Carbon Monoxide Detectors

SIERRA FLAME strongly recommends installing smoke detectors throughout your home. However, do not install them too close to the stove as the heat can activate them. Poor draft or improperly installed stoves and chimney components can allow smoke and carbon monoxide to escape into the home. Operating the stove on low-burn settings can make these problems worse. Carbon monoxide is a colorless and odorless gas and extremely toxic.

Gaskets

The stoves are equipped with ceramic gaskets to ensure the tightness of the doors and the glass. These gaskets are wearing parts and must be changed from time to time. Note the position of and remove worn gaskets. Place the new gasket in the same position as the worn one. Secure the new gasket in place with wood stove gasket cement. Place a piece of paper or plastic between the door and the stove until the gasket cement has dried.

Protected Wall Reduced Clearances

Local codes in some areas will allow reduced clearances when the stove is installed adjacent to a protected wall system. Your local building official must approve the variance. Check your local building codes or with a qualified installer.

Room Ventilation & Combustion Air Supply

Provide for an adequate supply of air for combustion. Proper ventilation is essential when using a solid fuel-burning appliance. The combustion process uses oxygen from inside the dwelling and if there is not adequate make-up air (such as in newer homes which are well insulated and weather tight), it may be difficult to obtain an adequate draft in your chimney (caused by a shortage of air in the house). To correct this, it may be necessary to crack a window on the windward side of the dwelling, or provide combustion air to a nearby floor/wall vent (fresh air duct), or directly to the stove. Please refer to your local building codes.

Outside Air

Oxygen is necessary in order for combustion to take place. Whatever combustion air is consumed by the fire must be replaced. Air is replaced via air leakage around windows and under doors. In homes that have tightly sealed doors and windows, an outside air source is needed. This stove is equipped with a standard rear outside air connection (4" / 100mm) located on the lower back of the stove.

Installation: Cut a 4" (100 mm) hole in outside wall or floor to accommodate outside air piping. Use 4" (100 mm) aluminum metal flex or rigid piping to directly connect outside air to appliance intake. Install a termination cap with a rodent screen on the outdoor side of the piping. Seal between the wall (or floor) and the pipe with silicone to prevent moisture penetration.

Draft Requirements

The SIERRA FLAME wood-burning stove is only one component of the total system. The venting system is equally important for achieving the required flow of combustion air to the firebox and for safely removing unwanted combustion by-products from the appliance. If the venting system's design does not promote these ends, the system may not function properly. Poorly functioning venting systems may create performance problems as well as be a safety hazard (i.e. an oversized chimney may result in less than optimum performance. Installations into a large, masonry chimney may require a liner to improve performance). A draft test should read greater than .05" W.C. (Inches Water Column) and less than .08" W.C. The chimney draft also depends on the weather conditions. In stormy weather, you may reduce the chimney draft by closing the damper in the smoke pipe (if a damper has been installed). An uncontrollable burn or excessive temperature indicates excessive draft. If the chimney draft is strong, the combustion air supply should be reduced accordingly.

Operate Efficiently

Use seasoned wood versus high moisture wood to get the most efficient heat; Operate the stove at the medium burn rate setting.

6. Operation

WARNING! DO NOT USE GASOLINE, LIGHTER FLUID, KEROSENE OTHER FLAMMABLE LIQUIDS TO START OR FRESHEN A FIRE IN THE STOVE KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE STOVE WHILE IT IS IN USE.

Fueling the wood-burning stove

Your SIERRA FLAME freestanding wood-burning stove is designed for burning natural wood only. Higher efficiencies and lower emissions generally result when burning air dried seasoned hardwoods, as compared to softwoods or to green or freshly cut hardwoods. Wood should be stored in a dry place for at least two years before being used for fuel. Some trees have very high moisture content and it is necessary to thoroughly dry the wood. Cutting and splitting the wood can speed up the drying process, then stacking it with both ends of the stick exposed. More drying occurs through the end than through the sides even when the wood is split. We recommend that the moisture content of the wood be between 15-18%. If your wood sizzles or you see bubbles coming from the end of the logs, the wood is not dry.

Green or uncured wood does not work well as fuel, and can cause increased creosote buildups. The value of green wood as a source of heat is limited. Do not overload, use kindling wood, or mill ends for primary fuel as this may cause over-firing. Although feeding excessive amounts of fuel to the stove should be avoided, it is important to supply it with sufficient fuel to maintain a moderately hot fire (this is particularly important since burning wood produces volatile substances).

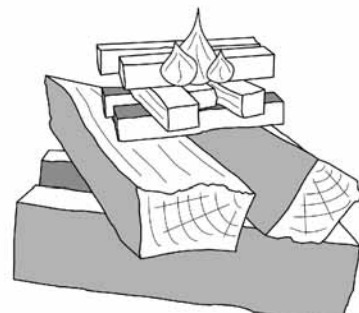
Do not store wood within the installation clearances or within the space required for refueling or ash removal.

WARNING! BURNING MATERIALS OTHER THAN NATURAL DRY WELL SEASONED WOOD MAY SHORTEN THE LIFE OF YOUR STOVE AND POSSIBLY LEAD TO A DANGEROUS OVER-FIRING CONDITION. DO NOT BURN GARBAGE, RUBBER OR PLASTIC, PARTICLE, BOARD, SALT WATER DRIFTWOOD OR PRESSED LOGS USING BONDING AGENTS BECAUSE THEY CAN PRODUCE CONDITIONS, WHICH WILL DETERIORATE METAL. OVER FIRING THE STOVE MAY CAUSE PAINT DISCOLORATION. A WHITE GLAZE ON THE GLASS IS AN INDICATION OF OVER FIRING.

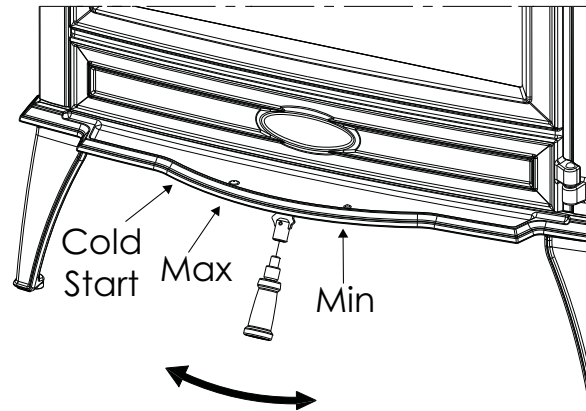
Starting the Stove

Do not elevate the fire on a grate. Build fire directly on the cast iron plates inside the stove. Do not build the fire close to the glass. A cold flue often does not have enough draft, and consequently, some smoke may escape into the room instead of up the chimney. By lighting the fire in the way described here, you can avoid this problem. Building your fire as described here with the kindling on top will decrease visible smoke and emissions.

- Stack two layers of medium sized logs crosswise. Use about 11 lb. or 5 kg of wood.
- Stack two layers of kindling crosswise on top of the logs.
- Place a fire lighter in the lower layer of kindling and light the fire lighter according to the instructions on the packaging.



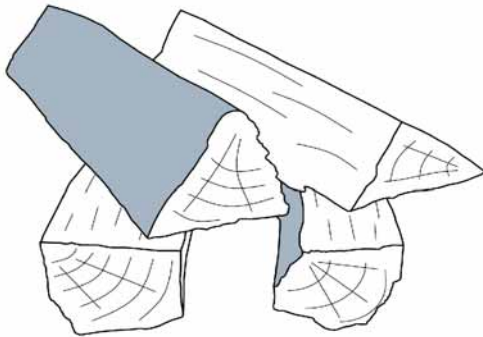
- Close the door of the appliance and move the air control to the cold-start position; see the following figure.
- When the fire is burning well move the control arm to the desired position for heat output.
- Let this fire develop into a good blaze until there is glowing bed of charcoal. You can then add fuel and adjust the appliance, see the following section “Burning Wood”.



Refueling the Stove

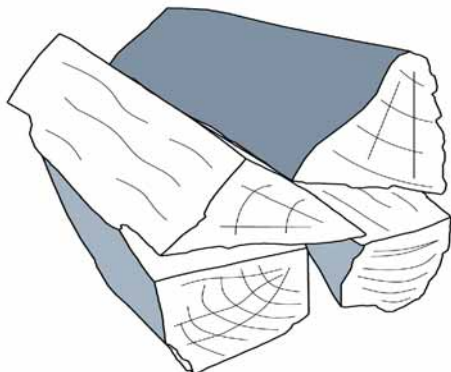
After you have followed the instructions for lighting:

- Slowly open the door of the appliance.
- Move the control arm to the “MAX” position
- Spread out the charcoal bed evenly across the bottom of the fire compartment.
- Stack a few logs on the charcoal bed.
- Close the door of the appliance.
- When the fire is burning well move the control arm to the desired position for heat output.



Open stacking

If the logs are stacked openly, the wood will burn quickly as the oxygen can reach each log easily. If you want to use the stove for a short while, make an open stack.



Compact stacking

If the logs are stacked tightly, the wood will burn more slowly as the oxygen can only reach some logs easily. If you want to burn wood for a longer period, make a compact stack.

Advice

- Never burn wood with an open door.
- Regularly burn wood with intense roaring fires.
- If you frequently have low intensity fires, tar and creosote may be deposited in the chimney. Tar and creosote are highly combustible substances. Thicker layers of these substances might catch fire when the temperature in the chimney increases suddenly and steeply. Therefore it is necessary for the fire to regularly burn very intensely, so that layers of tar and creosote disappear. Low intensity fires also cause tar deposits on the stove window and door.
- When the outside temperature is not very low, it is better to burn wood intensely for a few hours instead of having a low intensity fire for a long period of time.
- It is better to add a small amount of logs regularly than to add many logs at the same time.
- Never slam the door shut or close the door against protruding firewood. Do not strike the door.

Extinguishing the fire

Do not add fuel and just let the fire go out. If a fire is damped down by reducing the supply of air, harmful substances will be produced and released. Therefore, let the fire go out naturally. Keep an eye on the fire until it has gone out. When the fire has died completely, all air inlets can be closed.

7. Maintenance

Ash Disposal and Removal

Caution

Make sure the fire is out and stove is cold before removing ashes! The cast iron inner plates on the bottom of the fire chamber have pockets. You should leave ash in the pockets during the heating season. This helps insulate the bottom of the stove and protects the combustion chamber components. Be careful when you remove ashes from the stove, there may be embers left as long as 24 hours after the stove was last used. Ashes should be placed in a metal container with a tight fitting lid and moved outdoors immediately. Other waste should not be placed in this container. The closed container of ashes should be placed on a noncombustible floor or on the ground well away from all combustible materials, pending final disposal.

If ashes are disposed of by burial in soil or otherwise locally dispersed, they should be kept in the closed container until all cinders have thoroughly cooled.

Cleaning Your Stove

Do not clean the appliance when it is still warm.

Clean the exterior of the appliance with a dry lint-free cloth.

At the end of the heating season, you can clean the interior of the appliance thoroughly: If necessary, first remove the fire-resistant inner plates. Checking fire-resistant inner plates The fire-resistant inner plates are consumables and subject to wear. Check the fire-resistant inner plates frequently and replace them when necessary. The insulating vermiculite inner plates may develop hairline cracks, but that does not affect their performance adversely.

Removing the Fire Resistant Plates for Cleaning

Make sure the fire is out and stove is cold before removing the plates, be careful when handling the plates, they are made of a breakable material.

See paragraph “exploded view of the fire resistant inner plates” for disassembly and re-assembly.

WARNING! DO NOT OPERATE WOOD-BURNING STOVE WITHOUT FIRE RESISTANT PLATES PROPERLY INSTALLED OR WARRANTY WILL BE VOID.

WARNING! DO NOT USE SUBSTITUTE MATERIALS. ALWAYS USE LISTED SPARE PARTS FROM SIERRA FLAME.

Cleaning glass

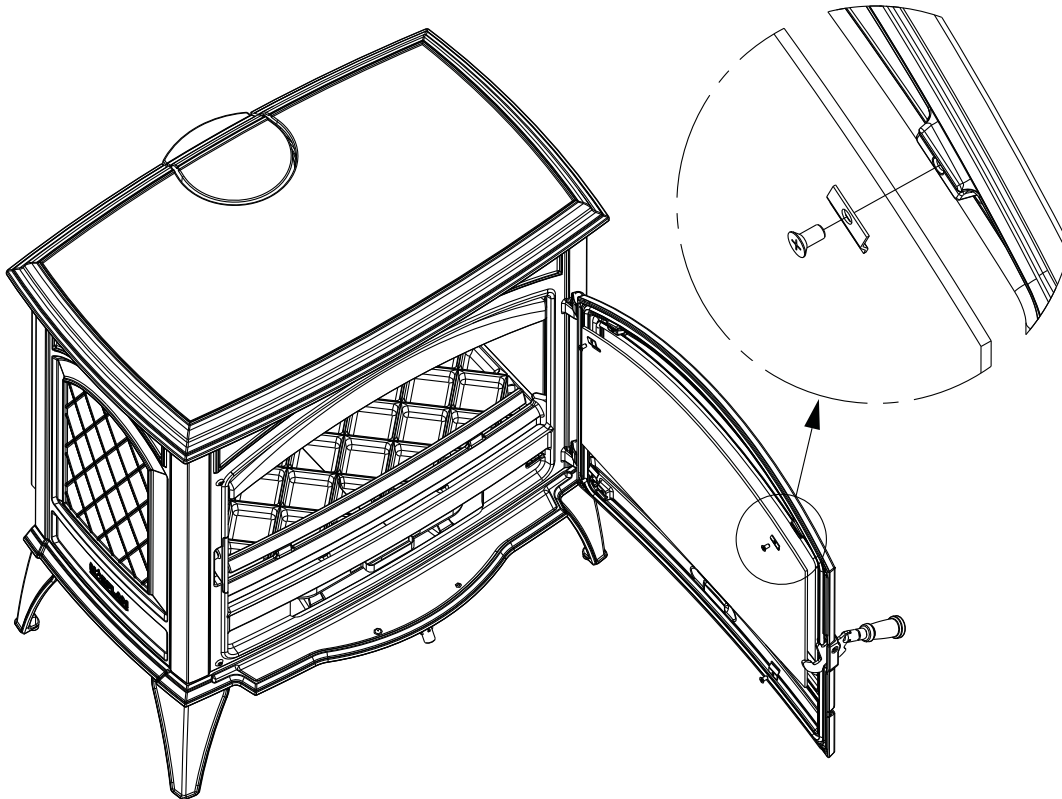
Dirt and soot cling less easily to well-cleaned glass. Proceed as follows:

- Remove dust and loose soot with a dry cloth.
- Clean the glass with stove window cleaner:
 - Apply stove window cleaner to a kitchen sponge, rub down the entire glass surface and give the cleaning agent time to react.
 - Remove the dirt with a moist cloth or kitchen tissue.
- Clean the glass again with a normal glass cleaning product.
- Rub the glass clean with a dry cloth or kitchen tissue.
- Do not clean the glass when hot

Do not use abrasive or aggressive products to clean the glass. Wear household gloves to protect your hands. If the glass in the appliance is broken or cracked, it must be replaced before you can use the appliance again. Make sure that no stove window cleaner runs between the glass and the cast-iron door.

Replacing Door Glass

Use only SIERRA FLAME ceramic replacement glass 4 mm in thickness. The use of any other glass is prohibited. Do not remove the door before installing new glass. When replacing the glass all gaskets must be installed correctly. Make note of the gasket locations as you take the door apart. Remove the steel washers and their gaskets from the screw posts. Remove any left over pieces of broken glass. Replace any damaged or worn gaskets. Center the new glass between the screw posts and reinstall the washers and their gaskets.



Creosote Formation and the Need for Removal

When wood is burned 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 slow-burning fire. As a result, creosote residue accumulates in the flue lining. When ignited this creosote makes an extremely hot and dangerous fire.

The chimney connector and chimney should be inspected at least once every two months during the heating season to determine if soot creosote and ash build up has occurred. If creosote has accumulated it should be removed to reduce the risk of a chimney fire.

8. Troubleshooting

					Problem	
●					Wood does not keep burning	
	●				Gives off insufficient heat	
		●			Smoke emissions into the room when adding wood	
			●		Fire in appliance is too intense, is hard to adjust	
				●	Deposit on the glass	
					Possible cause	Possible solution
●	●	●		●	Insufficient draught	A cold flue usually fails to create sufficient draught. Follow the instructions for lighting in the "Operation" chapter; open a window.
●	●	●		●	Wood too damp	Use wood with no more than 20% moisture.
●	●	●		●	Pieces of wood too big	Use small pieces of kindling. Use split logs no larger than 30 cm in circumference.
●	●	●	●	●	Wood stacked up incorrectly	Stack up the wood in a way that allows an adequate air flow between the logs (open stacking, see "Burning wood")
●	●	●		●	Chimney does not work properly	Check whether the chimney meets the requirements: at least 4 metres high, right diameter, well insulated, smooth inside, not too many bends, no obstructions in chimney (bird's nest, too much soot deposit), hermetically tight (no leaks).
●	●	●		●	Chimney stack incorrect	Sufficiently high above the roof, no obstacles in its vicinity
●	●	●	●	●	Air inlet set incorrectly	Open the air inlet completely.
●	●	●		●	Appliance connected to chimney incorrectly	Connection should be hermetically tight.
●	●	●		●	Vacuum in area where appliance is installed	Switch off extraction systems.
●	●	●		●	Insufficient supply of fresh air	Provide an adequate air supply; if necessary use connection to outside air.
●	●	●		●	Adverse weather conditions? Inversion(reversed airflow in chimney from high outside temperatures), extreme wind velocities	We recommend you don't use the appliance in the case of inversion. Install an extra piece on the flue to increase the draught if need be.
		●			Draft in the living room	Avoid draft in the living room, do not place the appliance near a door or heating air ducts.
				●	Flames touch the glass	Make sure the wood does not lie too close to the glass.
			●		Appliance is leaking air	Check the door seals and the appliance joints.

9. SIERRA FLAME Limited Warranty

What's Covered

SIERRA FLAME warrants, to the original retail buyer only, that the cast iron and steel components of this appliance will be free of defects in material and workmanship for a period of five (5) years from the date of purchase.

The enamel finish on the cast iron components is warranted against peeling or fading for a period of two years from the purchase date to the original retail buyer.

The Warranty expires when the original retail buyer transfers ownership. These warranties are subject to the terms, exclusions and limitations set forth below.

What's not Covered:

- Repair or replacement of parts that are subject to normal wear and tear during the warranty period or to parts that may require replacement in connection with normal maintenance. These parts include paint, gaskets, vermiculite baffles and panels, and glass
- Damage due to incorrect installation that do not comply instructions contained in this owner's manual or local and/or national fire and building regulations.
- Damage, including damage to enamel surfaces, caused by improper operation, over firing, and/or misuse. Do not burn the appliance with the door open. If any part of the stove or chimney connector glows red it is being over-fired. Warped plates, rust colored cast iron, paint pigment that has turned dusty white, or bubbling, cracking and discoloration of the enamel finish are indications of over-firing. Misuse also includes, any use that does not conform with the operating instructions contained in this owner's manual.
- Damage to enamel finish including chipping, mechanical or chemical abrasion, crazing, or staining
- Rust caused by high humidity or salt air environments.
- Damage from or repair of rust.
- Damage due to service performed by an installer or service agency.
- Damage caused by unauthorized modification, use or repair.
- Costs incurred by travel time and/or loss of service.
- Labor or other costs associated with the repair of components beyond the warranty period.
- Damage incurred while the appliance is in transit.
- SIERRA FLAME will not cover labor charges, consequential damages (including, but not limited to: the costs of repairing or replacing other property that is damaged when the warranted product fails), or incidental damages (including, but not limited to: the costs a consumer incurs in order to obtain warranty service, such as shipping charges, telephone charges, time lost from work, transportation costs, and the cost of renting a product temporarily to replace the warranted product). Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

How to Get Service

SIERRA FLAME will repair or replace, at its option, any of the above components determined by SIERRA FLAME to be covered by this warranty. You must, at your own expense, arrange to deliver or ship the component to an authorized SIERRA FLAME dealer and arrange for pickup or delivery of the component after repairs have been made.

For the address of your authorized SIERRA FLAME dealer contact:

Sierra Flame / Canned Heat

2810 Stoner Ct #1

North Liberty IA

52317

USA

Western North America: 604 992 4182 or 877 850 9458 – Ext 5

Eastern North America: 905 442 7797 or 877 850 9458 – Ext 1

If, upon inspection, SIERRA FLAME determines that the component is covered by this warranty, the repair or replacement will be made as set forth above. This warranty is not transferable and is extended only to, and is solely for the benefit of, the original retail purchaser of this SIERRA FLAME appliance.

The warranty period for any replaced component will be the remaining unexpired portion of the warranty period for the original component.

Please retain your dated sales receipt in your records as proof of purchase.

ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WRITTEN WARRANTY. EXCEPT AS EXPRESSLY SET FORTH HEREIN, SIERRA FLAME MAKES NO ORAL, WRITTEN OR OTHER WARRANTY WITH RESPECT TO SIERRA FLAME PRODUCTS.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

SIERRA FLAME reserves the right to discontinue, modify or change the materials used to produce SIERRA FLAME products. SIERRA FLAME shall have the right to replace any defective component with substitute components determined by SIERRA FLAME to be of substantially equal quality.

The dollar value of SIERRA FLAME's liability for breach of this warranty shall be limited exclusively to the cost of furnishing a replacement component.

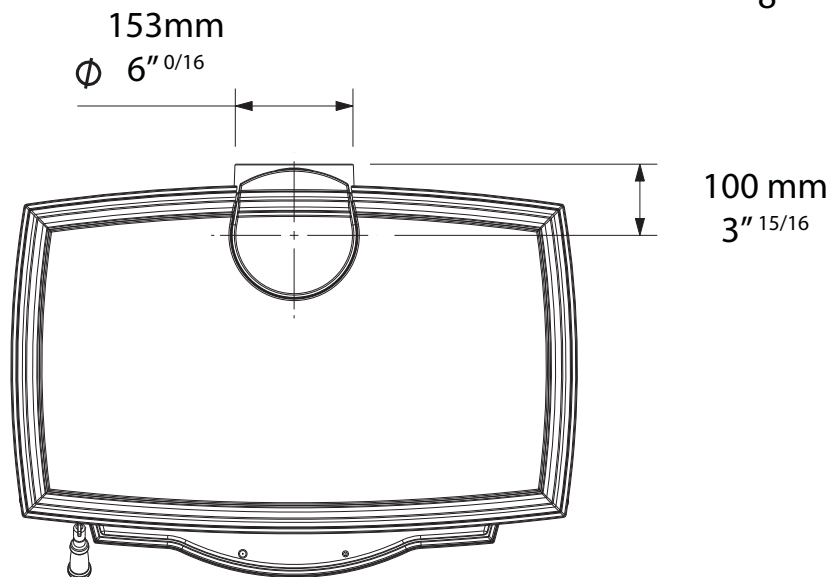
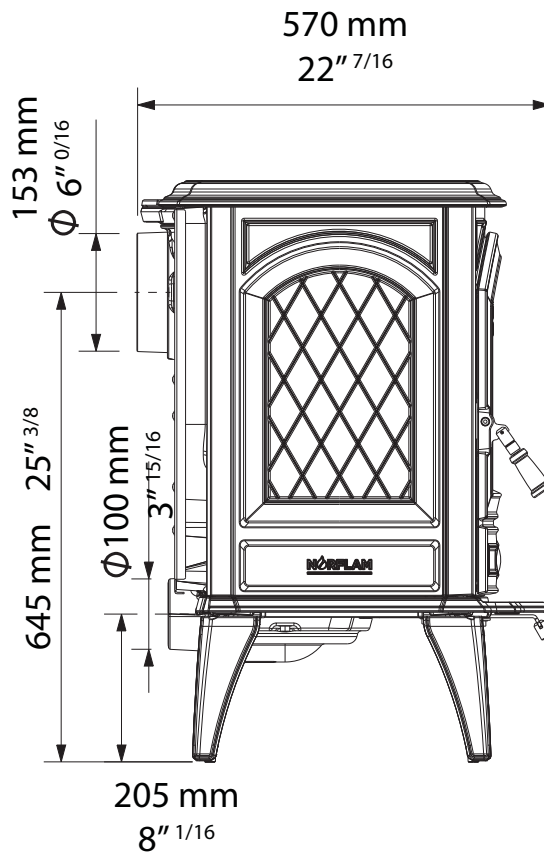
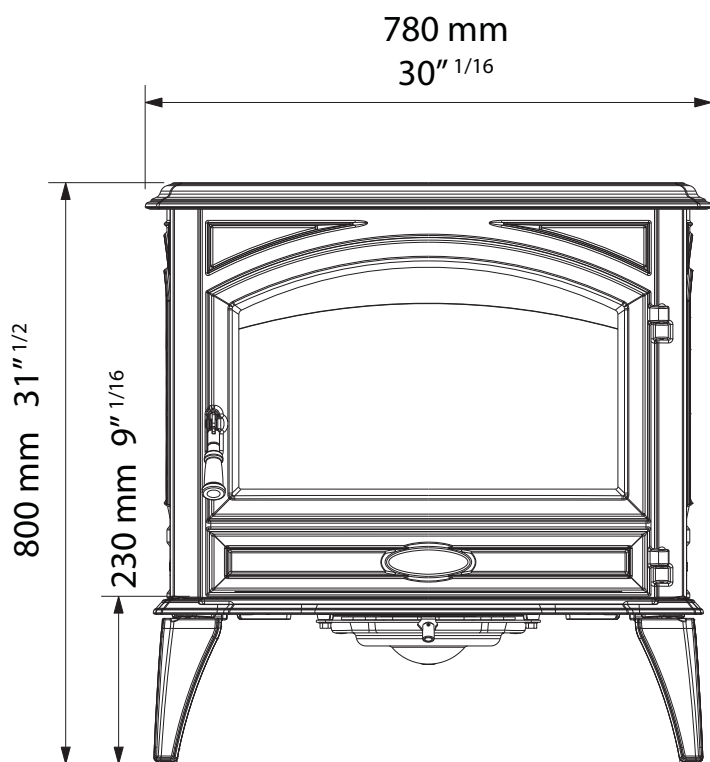
No dealer, distributor, or other person is authorized to modify, augment, or extend this limited warranty on behalf of SIERRA FLAME.

An authorized installer may have been provided with certain information related particularly to the SIERRA FLAME Stove or Fireplace; however, no authorized installer or other person who may service the appliance is an agent of SIERRA FLAME. No inference should be made that SIERRA FLAME has tested, certified, or otherwise pronounced any person as qualified to install or service the appliance. SIERRA FLAME shall not be liable or otherwise responsible for any error or omission by a person installing or servicing a SIERRA FLAME product.

IN ORDER TO QUALIFY FOR WARRANTY COVERAGE, SIERRA FLAME MUST RECEIVE NOTICE OF A POSSIBLE DEFECT WITHIN SIXTY (60) DAYS OF THE DATE THE DEFECT IS FIRST DISCOVERED, OR REASONABLY COULD HAVE BEEN DISCOVERED.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Dimensioned Drawing



Spare Parts