



OPERATING INSTRUCTIONS AND OWNER'S MANUAL

Model #

C110

READ INSTRUCTIONS CAREFULLY: YOUR SAFETY IS IMPORTANT TO YOU AND TO OTHERS. Read and follow all instructions. Place instructions in a safe place for future reference. Do not allow anyone who has not read these instructions to assemble, light, adjust or operate the stove.

WOOD FIRE STOVE



THE AUTHORITY HAVING JURISDICTION (SUCH AS MUNICIPAL BUILDING DEPARTMENT, FIRE DEPARTMENT, FIRE PREVENTION BUREAU, ETC.) SHOULD BE CONSULTED BEFORE INSTALLATION TO DETERMINE ANY NEED TO OBTAIN A PERMIT. OBSERVE ALL LOCAL BUILDING CODES.

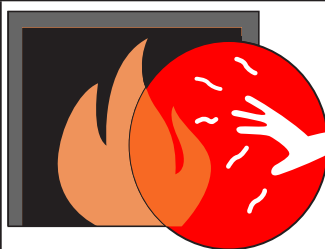
⚠ WARNING: IN CASE OF CHIMNEY FIRE:

1. CLOSE AIR INLET CONTROL BY PUSHING AIR CONTROL IN TOWARDS STOVE.
2. GET OUT OF THE HOUSE OR BUILDING.
3. CALL THE FIRE DEPARTMENT.

⚠ CAUTION: A CHIMNEY FIRE MAY CAUSE IGNITION OF WALL STUDS OR RAFTERS WHICH WERE ASSUMED TO BE A SAFE DISTANCE FROM THE CHIMNEY. IF A CHIMNEY FIRE HAS OCCURRED, HAVE YOUR CHIMNEY INSPECTED BY A QUALIFIED EXPERT BEFORE USING AGAIN.



DANGER



**HOT GLASS WILL CAUSE BURNS.
DO NOT TOUCH GLASS UNTIL COOLED.
NEVER ALLOW CHILDREN TO TOUCH THE GLASS.**

- Due to the high surface temperatures this unit should be located an appropriate distance from any and all combustible materials. Comply with all clearances to combustibles, see page 5.
- Assembled stove must be connected to a flue vented to the outdoors in accordance with local guidelines, see installation requirements & guidelines page 6 through page 12.
- Only use with permitted fuels, see page 14. **DO NOT BURN GARBAGE.**

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.

GENERAL HAZARD WARNING:

- ⚠ FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS STOVE, CAN RESULT IN DEATH, SERIOUS BODILY INJURY AND PROPERTY LOSS OR DAMAGE FROM HAZARDS OF FIRE, EXPLOSION, BURN, ASPHYXIATION, CARBON MONOXIDE POISONING, AND/OR ELECTRICAL SHOCK.
- ⚠ ONLY PERSONS WHO CAN UNDERSTAND AND FOLLOW THE INSTRUCTIONS SHOULD USE OR SERVICE THIS STOVE.
- ⚠ IF YOU NEED ASSISTANCE OR STOVE INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABELS, ETC. CONTACT THE MANUFACTURER.

CAUTION:

- ⚠ IF THE STOVE OR STOVE PIPE GLOWS RED THE UNIT IS OVERFIRING. CLOSE STOVE DOOR AND IMMEDIATELY SHUT ALL AIR CONTROLS (PUSH AIR CONTROL TO THE "IN" POSITION) TO REDUCE AIR SUPPLY AND SLOW DOWN COMBUSTION.

CAUTION:

- ⚠ DO NOT CONNECT A WOOD BURNING STOVE TO AN ALUMINUM TYPE B GAS VENT. Use only the exhaust ventilation systems specified in these instructions.

WARNING:

- ⚠ FIRE, BURN, INHALATION, AND EXPLOSION HAZARD. KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE STOVE AS RECOMMENDED BY THE INSTRUCTIONS NEVER USE THE STOVE IN SPACES WHICH DO OR MAY CONTAIN VOLATILE OR AIRBORNE COMBUSTIBLES, OR PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNER, DUST PARTICLES OR UNKNOWN CHEMICALS.

- ⚠ **WARNING:** This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information visit www.P65Warnings.ca.gov

CAUTION:

- ⚠ A DRAFT READING OF 0.05 TO 0.06 INCHES WATER COLUMN OF NEGATIVE PRESSURE IN THE CHIMNEY IS REQUIRED FOR PROPER BURNING OF THIS STOVE. OTHER APPLIANCES, ENVIRONMENTAL FACTORS, CHIMNEY TEMPERATURE, AND CHIMNEY INSTALLATION CAN AFFECT AND ALTER DRAFT. BE ATTENTIVE TO YOUR STOVE'S OPERATION.

Contents

SPECIFICATIONS.....	3	CHIMNEY REQUIREMENTS.....	10
SAFETY PRECAUTIONS.....	4	VENTILATION.....	13
CLEARANCE TO COMBUSTIBLES.....	5	OPERATION.....	14
INSTALLATION.....	6	MAINTENANCE.....	18
CHIMNEY CONNECTORS REQUIREMENTS AND INSTALLATION.....	7	TROUBLESHOOTING.....	21
ADDITIONAL MOBILE HOME REQUIREMENTS....	9	SERVICE PARTS.....	22

SPECIFICATIONS

Model #	C110
	DIMENSIONS
Stove Dimensions WxLxH [in (cm)]	22.75 x 28 x 31.5 (57.8 x 71.1 x 80)
Flue Collar	6.0 in. Round
	OPERATION SPECIFICATIONS
Fuel	Wood
Maximum Burn Time (Mins.)*	583
	EPA and SAFETY COMPLIANCE SPECIFICATIONS
EPA Compliance**	Certified
Heat Output Range (BTU/HR)	15,536 to 58,030
Particulate Emissions (g/hr)	2.1
Avg Overall Efficiency (HHV)	72% (1)(2)
Avg Overall Efficiency (LHV)	78% (1)(3)
Optimal Efficiency (LHV)	78% (3)(4)
Heat Transfer Efficiency (HHV)	77% (2)(4)(5)
Tested To	UL-1482 7th ed. Standard for solid-fuel type room heater
	ULCS-627-00 Standard for Space Heaters for use with Solid Fuels

*Maximum burn times are heavily dependent on the type of wood burned in the stove, so these numbers may vary.

** U.S. ENVIRONMENTAL PROTECTION AGENCY Certified to comply with 2020 particulate emission standards using cord wood.

Wood Stove Efficiency Reference:

1. Measured per CSA B415.1-10
2. Higher Heating Value of the fuel
3. Lower Heating Value of the fuel
4. Low Burn Rate & Extended Burn Time
5. Heat transfer efficiency represents the appliance's ability to convert the energy contained in the solid fuels into energy transferred to the room in the form of heat and does not take into account the chemical losses during combustion.

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.

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.

SAFETY PRECAUTIONS

HAVE AN ESTABLISHED PLAN FOR WHAT TO DO IN THE EVENT OF A FIRE. CONTACT YOUR LOCAL FIRE AUTHORITY TO ACQUIRE INFORMATION AND A PLAN FOR WHAT TO DO IN THE EVENT OF A CHIMNEY FIRE.

⚠ WARNING: FOR INSTALLATIONS IN A MOBILE HOME, DO NOT INSTALL IN A SLEEPING ROOM. OBEY ALL ADDITIONAL REQUIREMENTS. SEE PAGE 9.

⚠ CAUTION: DO NOT CONNECT TO OR USE IN CONJUNCTION WITH ANY AIR DISTRIBUTION DUCTWORK UNLESS SPECIFICALLY APPROVED FOR SUCH INSTALLATIONS.

⚠ CAUTION: DO NOT USE CHEMICALS OR FLUIDS TO START THE FIRE.

⚠ CAUTION: DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.

⚠ CAUTION: HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.

⚠ CAUTION: DO NOT STORE FLAMMABLE VAPORS, LIQUIDS, OR SOLID FUELS WITHIN THE VICINITY OF THIS STOVE, NEAR ELECTRICITY SOURCES, OR NEAR ASH REMOVAL SITES.

⚠ CAUTION: THIS STOVE HAS ONLY BEEN TESTED WITH FIRES BUILT DIRECTLY ON THE PROVIDED FIRE BRICKS AT BOTTOM OF FIREBOX. DO NOT USE ANY ACCESSORY TO ELEVATE FIRE.

⚠ WARNING: NEVER LEAVE A RUNNING STOVE UNATTENDED WHILE DOOR IS OPEN. THE DOOR MAY ONLY BE OPEN FOR FIRE STARTING AND FIRE TENDING. TO CLOSE: FIRMLY ROTATE DOOR HANDLE CLOCK WISE UNTIL THE DOOR IS SECURELY LATCHED.

⚠ WARNING: NEVER LEAVE CHILDREN NEAR THE STOVE UNATTENDED WHILE THE STOVE IS OPERATING.

⚠ WARNING: OTHER THAN THE DESIGNED AIR CONTROL WITH THE PRIMARY AIR INLET AIR CONTROL, DO NOT TAMPER WITH AIR SUPPLY IN CHIMNEY OR INLET DUCT AS AN ATTEMPT TO INCREASE FIRING RATE.

CARBON MONOXIDE

WARNING:

⚠ WHEN USED WITHOUT ADEQUATE COMBUSTION AND VENTILATION AIR OR WITH PROHIBITED FUELS, THIS STOVE MAY GIVE OFF EXCESSIVE CARBON MONOXIDE, AN ODORLESS, POISONOUS GAS.

WARNING:

⚠ EARLY SIGNS OF CARBON MONOXIDE POISONING RESEMBLE THE FLUE, WITH HEADACHE, DIZZINESS AND/OR NAUSEA. IF YOU HAVE THESE SIGNS, STOVE MAY NOT BE WORKING PROPERLY. GET FRESH AIR AT ONCE! HAVE STOVE SERVICED.

SOME PEOPLE - PREGNANT WOMEN, PERSONS WITH HEART OR LUNG DISEASE, ANEMIA, THOSE UNDER THE INFLUENCE OF ALCOHOL, THOSE AT HIGH ALTITUDES - ARE MORE AFFECTED BY CARBON MONOXIDE THAN OTHERS.

Regardless of how safe this stove is, every fuel burning appliance creates Carbon Monoxide. It is strongly recommended to reduce risk to you and your loved ones as much as possible by installing a Carbon Monoxide detector. Follow the installation, operation, & maintenance instructions provided by the manufacturer of your detector.

SMOKE DETECTORS

Have at least 1 smoke detector on each floor of your building. Follow the installation, operation, & maintenance instructions provided by the manufacturer of your detector. Avoid nuisance alarms by not placing the detector outside the immediate vicinity of the stove. Typically a good installation location for smoke detectors is near bedrooms.

FOR MORE SAFETY INFORMATION

For auxiliary information regarding wood stove safety and operation information contact the National Fire Protection Association (NFPA) by mail at:

NFPA, Batterymarch Park, Quincy, MA 02269

or visit the NFPA website:

<https://www.nfpa.org/>

CLEARANCE TO COMBUSTIBLES

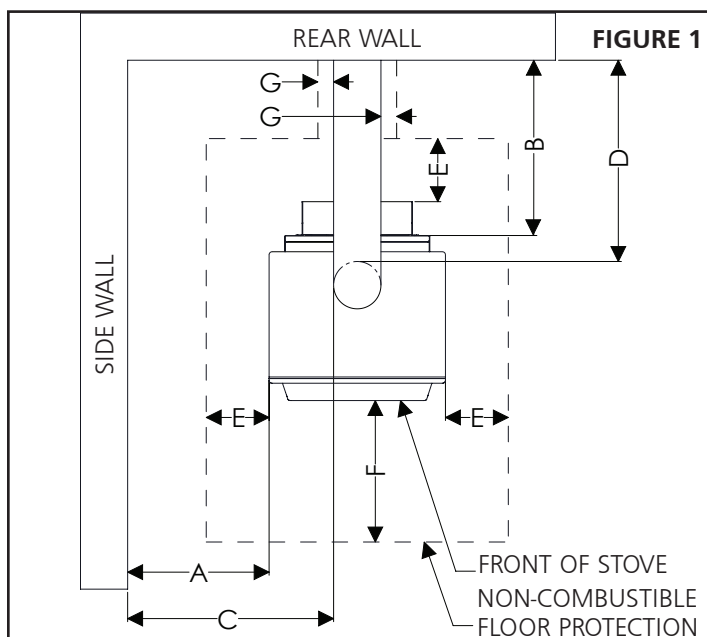
(Refer to Figure 1 and Table 1)

The following stated clearances represent the minimum distances between the stove and any other object. No objects should encroach into this space. This includes but is not limited to carpet, furniture, children, pets, clothing, fuel, or any other object. These clearances may not be reduced by any means or regulatory authority within United States or Canada.

The stove shall not be less than 17 inches (43.2 cm) (A) from a side wall and 8.25 inches (21 cm) (B) from the back wall. The wall of a vertical vent pipe must not be less than 25 inches (63.5 cm) (C) from the back wall.

The Minimum floor-to-ceiling distance of the room is 84 inches (213.4 cm).

The minimum distance between the ceiling and the wall of any horizontal vent pipe is 18 inches (45.7 cm).

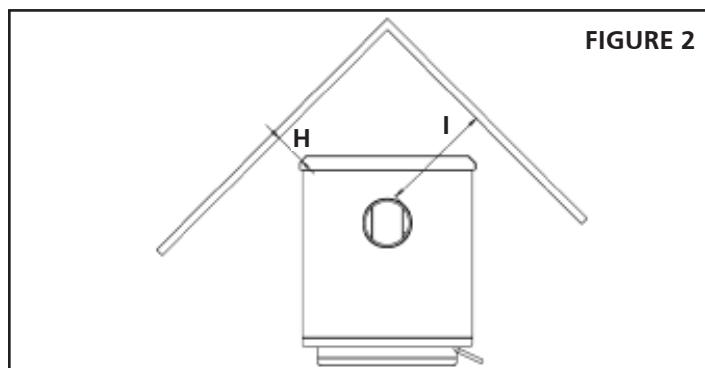


	USA	CANADA
A	17 in. (43.2 cm)	17 in. (43.2 cm)
B	8.25 in. (21 cm)	8.25 in. (21 cm)
C	25 in. (63.5 cm)	25 in. (63.5 cm)
D	14 in. (35.6 cm)	14 in. (35.6 cm)
E	8 in. (20.3 cm)	8 in. (20.3 cm)
F	16 in. (40.6 cm)	18 in. (45.7 cm)
G	2 in. (5.1 cm)	2 in. (5.1 cm)
H	6.5 in. (16.5 cm)	6.5 in. (16.5 cm)
I	16 in. (40.6 cm)	16 in. (40.6 cm)

Table 1

CORNER INSTALLATION

The stove shall not be less than 6.5 inches (16.5 cm) (H) from a corner. The wall of a vertical vent pipe must not be less than 16 inches (40.6 cm) (I) from any corner.



FLOORING SPACE (Refer to Figure 1 and Table 1)

The floor protector must extend at least [in U.S. - 16 in. (40.6 cm); in Canada - 18 in. (45.7 cm)] (F) to the front and at least 8 in. (20.3 cm) (E) beyond each side of the fuel loading and ash removal opening. The floor protection must extend under the flue connector and extend 2 in. (5.1 cm) (G) beyond each side of the pipe.

FLOORING MATERIAL

The stove may be installed on solid concrete or solid masonry flooring. If the stove is to be installed on combustible flooring, the floor must be protected with non-insulated ember board.

ACCESSORY INSTALLATION

BLOWER KIT (F500308) (Not Included)

The blower may be mounted to the rear of the stove. When plugged in and while the stove is in use this blower will propagate air along the outside of the fire box, warming the air before it is then circulated into the area to be heated.

⚠ WARNING: BLOWER MUST BE DISCONNECTED FROM POWER SUPPLY BEFORE INSTALLING. IT IS ONLY INTENDED FOR USE WITH THIS STOVE.

Using a 5/16" open end or socket wrench, remove the 4 screws holding the rear panel. Attach the blower mounting box to the rear of the unit using 4 of the supplied #10 screws. Mount the blower assembly to the mounting box with the 4 remaining #10 screws.

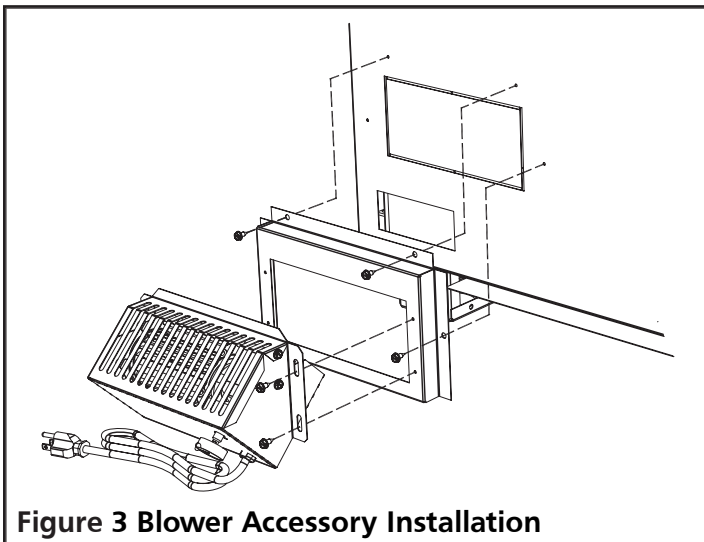


Figure 3 Blower Accessory Installation

ELECTRICAL CONSIDERATIONS

The Blower Motor requires 120V, 60 Hz AC and will draw 0.26 amps of current. If you plan to ever use the blower, the rear of the stove will need to be within power cord distance, which is roughly 65 inches (165 cm) of an electrical outlet. Lay the power cord out such that it will not come into contact with the stove's surface. Keep power cord at least 12 inches from stove surfaces.

INSTALLATION

Take measurements of your space and plan for your chimney system as detailed in the following instructions.

This stove may also be installed for use in a mobile home in the U.S. ONLY. In addition to the following instructions, review and adhere to the mandatory requirements on page 9.

⚠ WARNING: When this stove is not properly installed, a house fire may result. To reduce the risk of fire, follow the installation instructions. Contact local building or fire officials about restrictions and installation inspection requirements in your area.

TOOLS REQUIRED (NOT SUPPLIED)

- Safety Glasses
- Gloves
- Pencil
- Tape Measure
- Tin Snips
- Phillips Screwdriver or comparable electric screw driver & drill bit.
- A friend (the stove is heavy, do not attempt to move the stove without assistance)

PARTS & MATERIALS REQUIRED (NOT SUPPLIED)

- Floor Protection (see "FLOORING SPACE" and "FLOORING MATERIAL" on page 5)
- If for use not in a mobile home: 24 MSG (minimum standard gauge) black, or 26 MSG blue steel, Chimney Connector single wall stove pipe having 6" (152mm) diameter.
If for use in a mobile home: see MOBILE HOME REQUIREMENTS
- UL 103HT (US)/ULC-S629 (CAN) listed manufactured chimney or approved lined masonry chimney. Must have a minimum 6" (152mm) diameter to maximum 10" (254mm) or otherwise maximum 85 sq. in. (550 sq. cm) area. Install per chimney manufacturer's instructions.
- Furnace Cement (manufacturer recommends Rutland Code 78 or equivalent)

⚠ CAUTION: ANY DEVIATION OR ALTERATION FROM THESE INSTALLATION INSTRUCTIONS MAY RESULT IN DAMAGE TO YOU, THE STOVE, YOUR CHIMNEY, AND YOUR HOME. YOUR WARRANTY MAY BECOME VOID. READ AND FOLLOW ALL INSTRUCTIONS. Contact Cleveland Iron Works with any comments, concerns, or questions.

POSITIONING THE STOVE

When deciding on a location for the stove, choose a location that will favor the most efficient heat distribution possible throughout the house. Install the stove in the room where the most time is spent and in the most spacious room possible. A stove installed in an open living room will have a higher efficiency than one placed in a basement or outdoors in sub-freezing temperatures. Burning dry wood will also make the stove more efficient than burning wet wood.

When deciding on the position and orientation of the stove be sure to obey all clearance to combustibles, have the stove on smooth level floor and not raised up, and if using the blower accessory have the stove within 65 inches (165 cm) distance of a 120v electrical supply.

⚠ WARNING: DO NOT INSTALL NEAR EXITS OR STAIRS. ENSURE STOVE CAN NOT BLOCK AN EVACUATION IN THE EVENT OF A FIRE.

CHIMNEY CONNECTORS REQUIREMENTS AND INSTALLATION

If you have any questions regarding ventilation options of your stove, contact either:

- The manufacturer Enerco Group, Inc. at 1-800-251-0001. Our office hours are 8:00 AM – 5:00 PM, EST, Monday through Friday.
- The National Fire Protection Association (NFPA) and request a copy of the latest editions of NFPA Standard 211 and NFPA Standard 908. The mailing address of the NFPA is Battery March Park, Quincy, MA 02269.

⚠ CAUTION: THIS STOVE SHALL NOT BE INSTALLED IN A BEDROOM OR BATHROOM

The chimney connector must be stove pipe meeting these requirements:

- Have a 6 inch (152 mm) diameter
- Single wall (double wall for mobile homes)
- Be made of 24 MSG (minimum standard gauge) blue steel.

Insert the chimney pipe's crimped edge into the stove's exhaust at the top of the stove. Secure the pipe in place with three sheet metal screws through three evenly spaced holes.

Any additional connector pipes or elbows should be installed with crimped end on the stove end of the path (not on the chimney end) and should be secured with three evenly spaced sheet metal screws.

The following venting pipe precautions need to be adhered to:

- At least 2 feet (61 cm) of vertical pipe coming out of the stove is required, at minimum, before the system is permitted to have a horizontal section of venting.
- Horizontal vent pipe must be sloped downward away from the chimney 1/4" (0.6 cm) for every 1' (0.3m).
- Minimum clearance between the highest point of horizontal vent pipe and the ceiling is 18" (45.7 cm)
- A total of two (2) elbows are permitted for venting installation. Do not exceed two elbows as this may result in inadequate draft and cause leakage of smoke. When using elbows the integrity of the draft can be best protected by using non adjustable corrugated elbows.

⚠ CAUTION: THE JOINTS OF ANY AND ALL CONNECTIONS FOR ANY VENTILATION SYSTEMS (COMBUSTION EXHAUST AND OPTIONAL INLET AIR DUCT) MUST BE SEALED WITH HIGH TEMPERATURE SILICONE.

⚠ CAUTION: A CHIMNEY CONNECTOR SHALL NOT PASS THROUGH AN ATTIC OR ROOF SPACE, CLOSET OR SIMILAR CONCEALED SPACE, OR A FLOOR, OR CEILING. WHERE PASSAGE THROUGH A WALL, OR PARTITION OF COMBUSTIBLE CONSTRUCTION IS DESIRED, THE INSTALLATION SHALL CONFORM TO CAN/CSA-B365, INSTALLATION CODE FOR SOLID-FUEL-BURNING APPLIANCES AND EQUIPMENT.

⚠ CAUTION: DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

Where passage through a wall or partition of combustible construction is desired, the installation shall conform to chimney manufacturer's instructions.

NOTE: For Canadian residential and transportable homes or structures installations, where passage through a wall, or partition of combustible construction is desired, the installation must conform to CAN/CSA-B365. See Figure 4.

NFPA 211 (US ONLY) APPROVED WALL PASS THROUGH TECHNIQUES

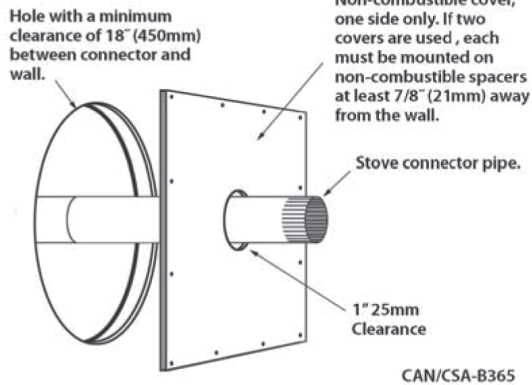


Figure 4
ONLY APPROVED CANADIAN WALL PASS THROUGH

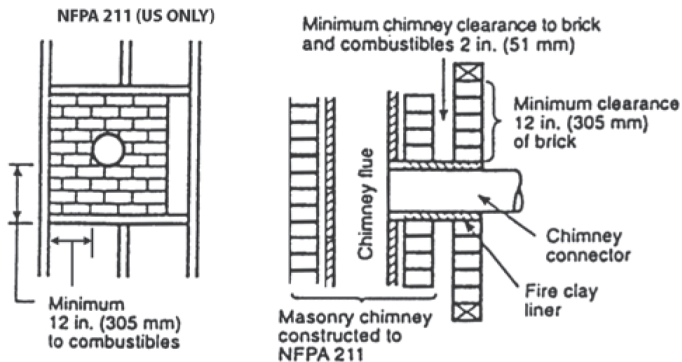


Figure 5 (US ONLY)

Brick Masonry: Minimum 3.5 inch (89 mm) thick brick masonry all framed into combustible wall with a minimum of 12 inch (305 mm) brick separation from clay liner to combustibles. The fireclay liner shall run from outer surface of brick wall to, but not beyond, the inner surface of chimney flue liner and shall be firmly cemented in place.

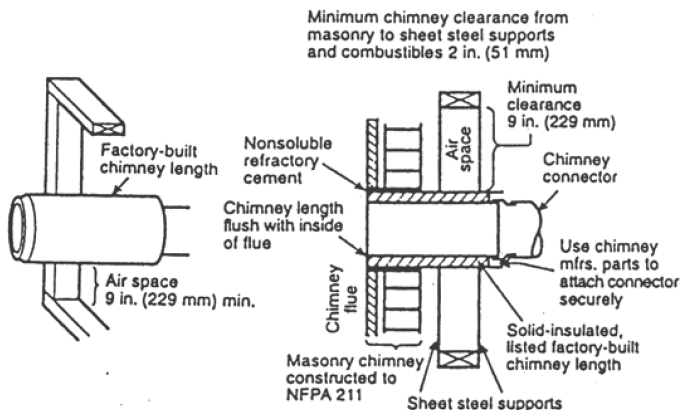


Figure 6 (US ONLY)

Insulated Sleeve: Solid-insulated, listed factory-built chimney length of the same inside diameter as the chimney connector and having 1 inch (25.4 mm) or more of insulation with a minimum 9 inch (229 mm)

air space between the outer wall of the chimney length and combustibles.

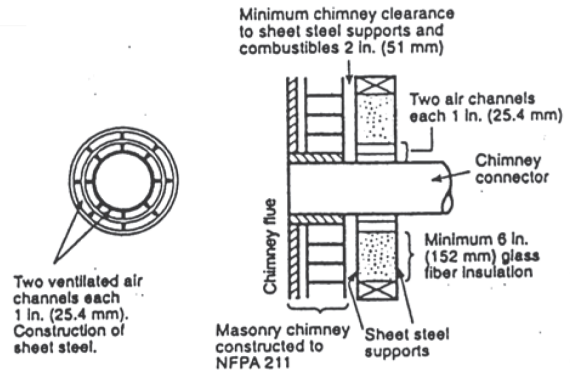


Figure 7 (US ONLY)

Ventilated Thimble: Sheet steel chimney connector, minimum 24 gauge in thickness, with a ventilated thimble, minimum 24 gauge in thickness, having two 1 inch (25.4 mm) air channels, separated from combustibles by a minimum of 6 inches (152 mm) of glass fiber insulation. Opening shall be covered, and thimble supported with a sheet steel support, minimum 24 gauge in thickness.

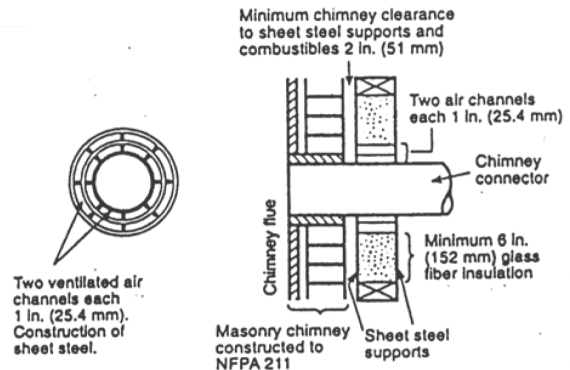


Figure 8 (US ONLY)

Chimney Section Pass-through: Solid insulated, listed factory-built chimney length with an inside diameter 2 inches (51 mm) larger than the chimney connector and having 1 inch (25.4 mm) or more of insulation, serving as a pass-through for a single wall sheet steel chimney connector of minimum 24 gauge thickness, with a minimum 2 inches (51 mm) of air space between the outer wall of chimney section and combustibles. Minimum length of chimney section shall be 12 inches (305 mm) chimney section spaced 1 inch (25.4 mm) away from connector using sheet steel support plates on both ends of chimney section. Opening shall be covered, and chimney section supported on both sides with sheet steel support securely fastened to wall surfaces of minimum 24 gauge thickness. Fasteners used to secure chimney section shall not penetrate chimney flue liner.

ADDITIONAL MOBILE HOME REQUIREMENTS

NOTE: Only approved for US mobile home, not approved for mobile home in Canada.

All mobile home installations must be made in accordance to Manufactured Home and Safety Standard (HUD), CFR 3280, part 24.

PARTS & MATERIALS REQUIRED (NOT SUPPLIED)

⚠ WARNING: USE OF SINGLE WALL CONNECTOR PIPE ANYWHERE IN MOBILE HOME INSTALLATION IS NOT PERMITTED.

⚠ CAUTION: IT IS IMPORTANT TO USE ONLY THE SPECIFIED COMPONENTS. USE OF COMPONENTS OTHER THAN SPECIFIED COMPONENTS MAY RESULT IN INCREASED RISK TO YOU, YOUR STOVE, AND YOUR HOME.

- #8 grounding wire.
 - Two (2) National Electrical Code (NEC) approved grounding device.
 - A paint penetrating washer, such as a star washer.
- All components of the ventilation system listed below must be of the HT type and listed to UL 103 HT. Install per chimney manufacturer's instructions.
- Double wall stove pipe having 6" (152mm) diameter and made of either 24 MSG (minimum standard gauge) black or 26 MSG blue steel.
 - Ceiling thimble suitable for use in mobile home.
 - Roof thimble suitable for use in mobile home.
 - Spark arrestor suitable for use in mobile home.
 - Roof flashing suitable for use in mobile home.
 - Chimney cap which does not permit the entrance of a 1/2" (13 mm) diameter rod.
 - A factory-built chimney, minimum 15 ft (4.6m) tall which conforms to ULC-S629, Standard for 650 °C Factory-Built Chimneys.

ADDITIONAL INSTALLATION REQUIREMENTS

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

- The stove must be installed on a level surface which can support the weight of the stove.
- The stove must be bolted to the level surface so that it is permanently secured and can not be moved, tipped, or have ventilation seals compromised.
- The stove must be grounded with #8 grounding wire and terminated at each end with a National Electrical Code (NEC) approved grounding device. A paint penetrating washer such as a star washer shall be installed where connected to steel frame of the

Mobile Home.

Wood Fire Stove

- The use of outside combustion air is mandatory when installing this wood stove in a mobile or manufactured home.
 - The outside air connection pipe protrudes from the bottom center of the stove; a kit (F500313) is available from Cleveland Iron Works, Inc. designed for connecting this unit to outside combustion air.
 - If it is not feasible to use the F500313 outside air hookup kit in your stove installation, other materials may be used, provided the following rules are followed:
 - The duct must have a minimum diameter of 4 inches (10.2 cm).
 - The duct must be made of metal exclusively, not other materials such as plastic.
- The end of this duct on the outside of the mobile home must meet the following requirements:
- The duct hole must be equipped with a screen which prevents rodents from infiltrating.
 - The duct hole must be kept free of leaves, snow, ice, or other debris that could restrict air supply when the appliance is in operation.
- If the chimney exits the mobile home at any location besides the roof and if that location is less than 7 feet (2.13 m) from the ground that the mobile home is settled on, then the system must meet the following requirements:
 - A guard from the exit location up to a height of 7 feet (2.13 m) from the ground that the mobile home is settled on.

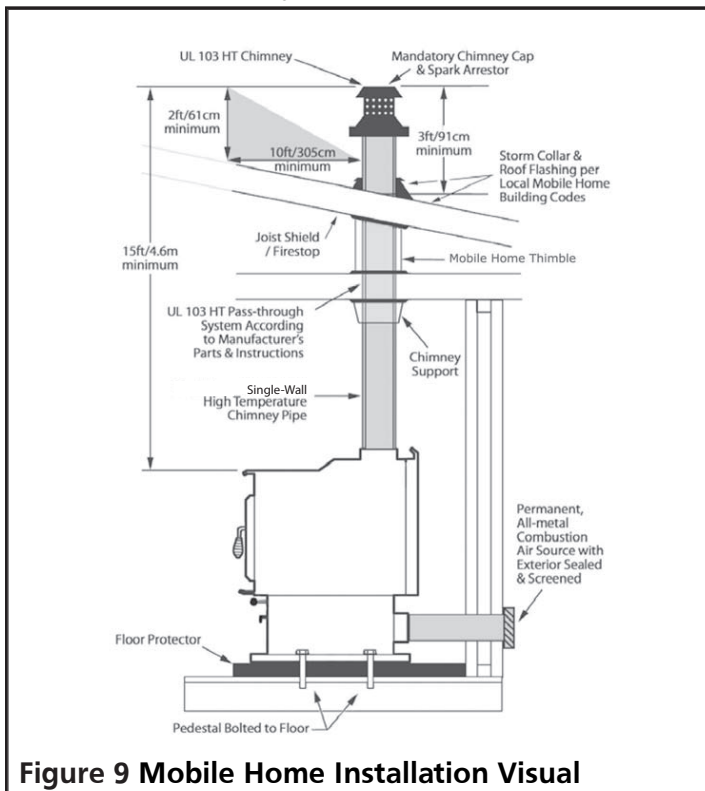


Figure 9 Mobile Home Installation Visual

- The joints of any and all connections for both of ventilation systems (the inlet air and the combustion exhaust) must be sealed with high temperature silicone.
- The chimney must comply with all applicable codes and requirements of the authority having jurisdiction.
- The chimney must be removed for any mobile home transportation, and reinstalled per all instructions after transportation.

CHIMNEY REQUIREMENTS

GENERAL

⚠ CAUTION: DO NOT USE MAKESHIFT COMPROMISES WHEN INSTALLING THE VENTING SYSTEM; HAVE EXISTING CHIMNEY SYSTEMS INSPECTED BEFORE USE AND BE CERTAIN ALL NEW CHIMNEY SYSTEMS ARE INSTALLED TO THE MANUFACTURER'S SPECIFICATIONS AND WITH ONLY UL LISTED COMPONENTS (ULC IF CANADA).

For the sake of exhausting combustion products and also establishing a draft which provides oxygen for combustion, the stove must be installed for use in conjunction with one of the following approved chimney systems:

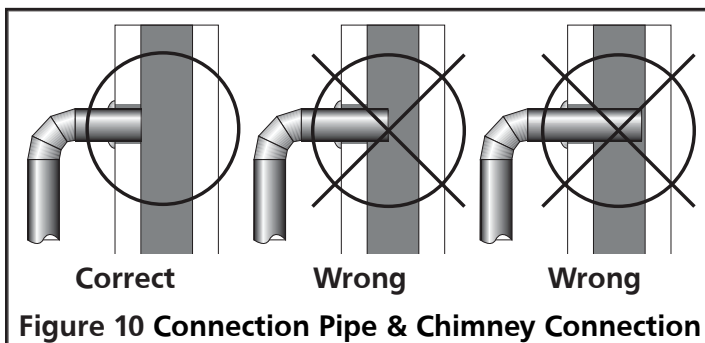
- A chimney complying with the requirements for Type HT (2100 °F) chimneys in the Standard for Chimneys, Factory-Built, Residential Type and Building Heating Appliance, UL 103 or ULC S629 or a code-approved masonry chimney with a flue liner.
- The chimney size should not be less than or more than three times greater than the cross-sectional area of the flue collar.
- An existing fireplace that is structurally sound, incorporates flue liner (clay tile which protects chimney), has its damper closed and sealed, and has been approved for conversion by a qualified expert.

Any/All chimney systems:

- Must meet the following minimum requirements:
 - Be at least 15 feet (4.6 m) tall, measured from the top of the stove to the tip of the chimney cap
 - Must be at least 3 feet above the roof, measured from the highest point of contact with the roof and the tip of the chimney cap.
 - Must be at least 2 feet (61 cm) above the highest point of the slope of the roof within 10 feet (305 cm) horizontally.
- Must have a negative pressure of 0.05 to 0.06 inches water column to create an appropriate draft.
- Must not be stove pipe material. Instead, only the three structures specified above may be used.

- Must not be installed for the purposes of venting a cellar or basement.
- Must not be used for this stove if it also serves any other appliance.
- Must not be obstructed by the chimney connector pipes, such as the Figure 10 below illustrates.

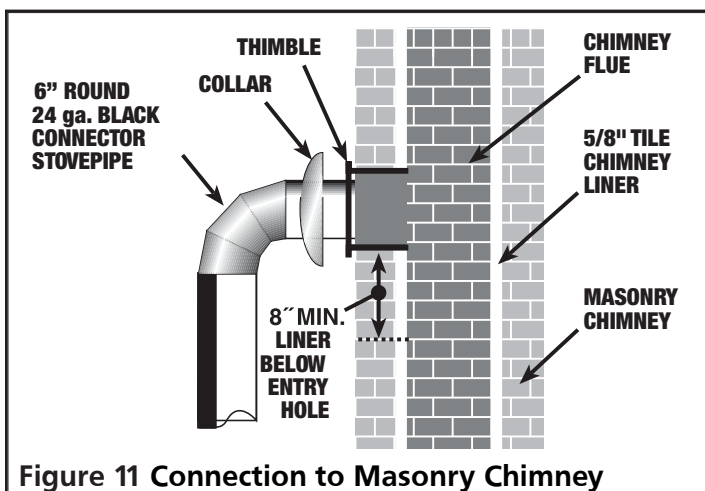
Contact your local building authority for approved methods of installation and any necessary permits and/or inspections.



LINED MASONRY CHIMNEY INSTRUCTIONS & DIAGRAM

This stove is designed to be vented through a masonry chimney with flue liner (clay tile which protects chimney) which conforms to local building codes, fire codes, and latest edition of NFPA 211 US or CAN/CSA-B365.

1. Clean the code-approved lined masonry chimney
2. Inspect the lining of the chimney and make any required repairs.
3. If the connection piping from the stove to a masonry chimney is made through a combustible wall, consult a qualified mason or chimney dealer for consultation. To ensure safety, the installation should only be done by a qualified installer. The installation must conform to the regulations established by local fire codes and building codes.



If there is an opening at the base of the chimney it must be closed tightly.

MANUFACTURED CHIMNEY INSTRUCTIONS & DIAGRAM

⚠ WARNING: DO NOT USE SINGLE-WALL CONNECTION PIPE AS A CHIMNEY.

This stove is designed to be used with either a UL 103 or ULC S629 (CAN) listed manufactured chimney or an approved UL-1777 (US)/ULC S635 or ULCS640 (CAN) lined masonry chimney. Not all manufactured chimney are UL 103 or ULC S629 (CAN). Home centers, hardware stores, HVAC supply stores, and the Online websites of chimney manufacturers will be able to provide stove pipe that is rated to these standards.

This listing indicates that the Chimney is rated for high temperatures up to 2100°F (1149°C).

Only use components that all come from the same manufacturer. Do not mix brands of components for the same ventilation system.

The following figures illustrate various methods and requirements of using a manufactured chimney and connection pipes to vent the wood stove.

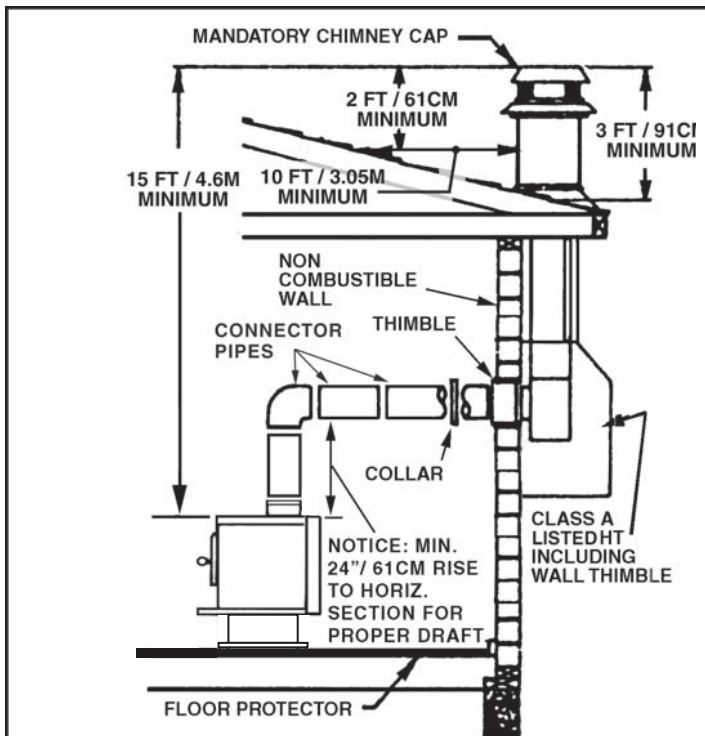
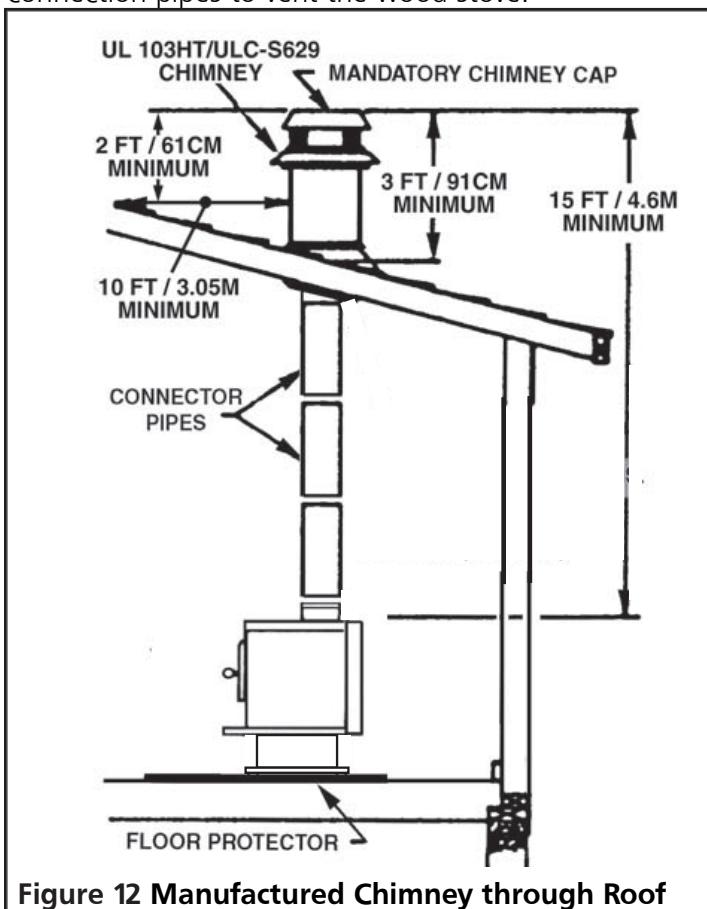
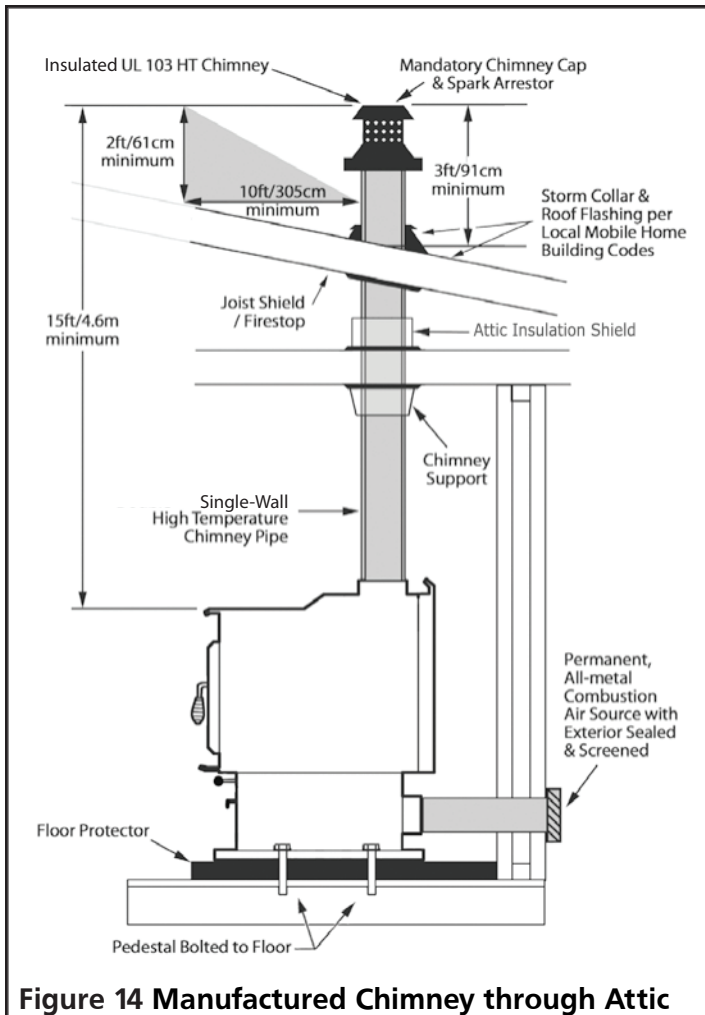


Figure 13
Manufactured Chimney through Masonry Wall



EXISTING FIREPLACE INSTRUCTIONS & DIAGRAM

This stove may be vented through a fireplace with flue liner (clay tile which protects chimney) only if all of the warnings, requirements and processes below are obeyed. Installation should be executed so that the system can be dismantled for periodic cleaning and inspection.

⚠ WARNING: VENTING A STOVE INTO A FIREPLACE BY ANY METHOD NOT EXPLICATIVELY COVERED, OR WHICH OTHERWISE DOES NOT SATISFY LOCAL CODES, SHOULD NOT BE ATTEMPTED. DOING SO WILL VOID THE WARRANTY ON THIS STOVE, AND MAY CREATE A HAZARD IN YOUR HOME.

⚠ CAUTION: HAVE A QUALIFIED EXPERT INSPECT THE FIREPLACE CHIMNEY AND APPROVE IT FOR CONVERSION FOR USE WITH A WOOD STOVE.

NOTE: MANY FIREPLACES ARE DESIGNED TO WITHSTAND CONTACT WITH COMBUSTIBLES AT THE FLOOR BUT MAY NOT HAVE BEEN TESTED FOR USE WITH A WOOD STOVE. CONNECTION OF A WOOD STOVE TO FIREPLACE CHIMNEY MAY VOID EXISTING WARRANTY ON THE FIREPLACE CHIMNEY.

1. Inspect the chimney. Any questions regarding the condition of the chimney may be directed at a qualified licensed contractor, qualified engineer, competent mason, certified Chimney Sweep, or knowledgeable inspector. The chimney must be:
 - Structurally sound
 - Equipped with flue liner that is in good condition. **If the chimney is unlined or damaged it can not be approved for conversion for use with this wood stove.**
 - Able to be secured and sealed at the throat damper and (if present) clean out or other openings at the base of the chimney which could leak the pressure seal.
2. If the connection piping from the stove to a masonry chimney is to be made through a combustible wall, consult a qualified mason or chimney dealer for consultation. To ensure safety, the installation should only be done by a qualified installer. The installation must conform to the regulations established by local fire codes and building codes.
3. The stove pipe must enter the chimney at least 8 inches higher than the bottom of the chimney liner. The distance between the ceiling and the vent pipe edge closest to the ceiling must be at least 18 inches (46 cm).
4. Install a thimble into the created opening. The thimble must:
 - Be made of clay
 - Be at least 5/8 inch (16 mm) thick
 - Be oversized for stovepipe so that there is approximately a 1/2 inch (13 mm) air gap. This is a requirement so that the pipe can safely expand and contract as it warms and cools.
 - Be located so that it will be surrounded by either 12 inches (305 mm) or masonry brickwork or 24 inches (61 cm) of stone.
 - Be installed so that its butt is flush with the chimney lining (see Figure 11 page 10)
5. Secure the thimble with refractory mortar.
6. Install the stove pipe so that it is as far as possible into the thimble without protruding passed the flue lining (again, see Figure 11 page 10)
7. Seal the airspace between the stove pipe and the thimble with either high temperature sealant or ceramic wool.
8. Using either high-temperature caulk, ceramic wool, or furnace cement secure and seal the throat damper and (if present) any clean out or other openings at the base of the chimney.

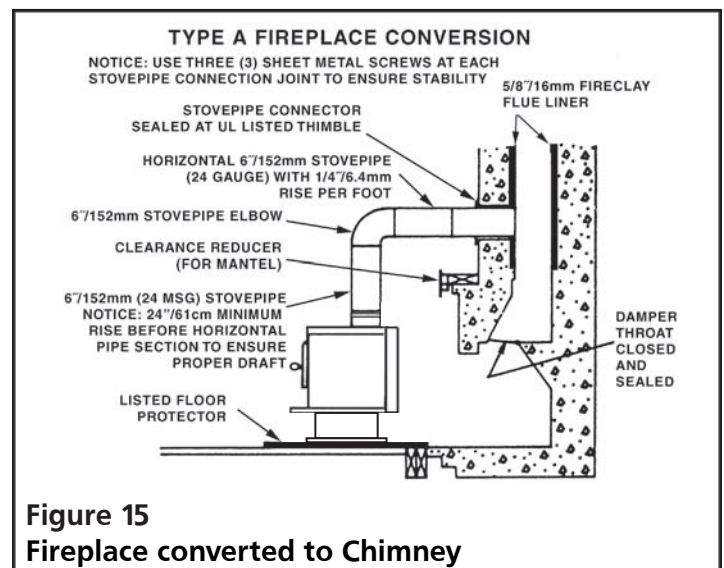


Figure 15
Fireplace converted to Chimney

VENTILATION

Air introduction to stove happens in three locations:

1. The Lower Primary Air Orifice (LPAO), behind the door.
2. The primary air inlet.
3. The secondary stage air tubes.

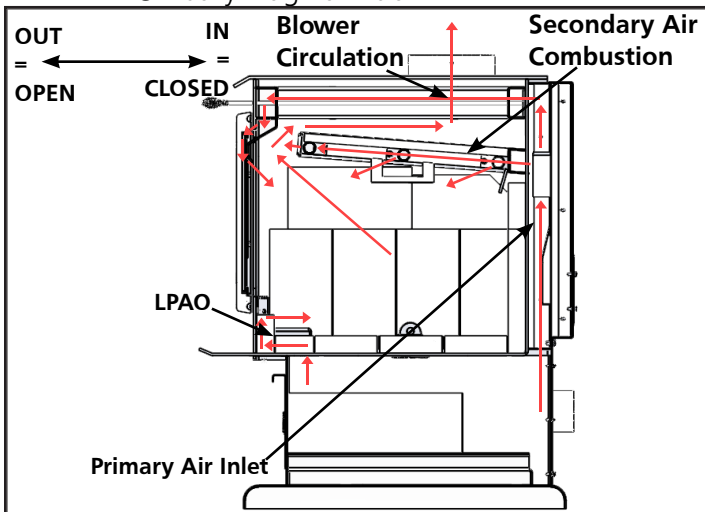


Figure 16 Stove Air Flow

- By pushing the air control (on the front of the stove) into the stove the primary air inlet hole at the back of the stove is closed.
- Pulling the primary air inlet air control away from the stove increases the size of the opening for air to enter the firebox.

In general, the further the air control is pulled out the hotter the stove will get. The best position for the air control will depend on the chimney specifications, weather, and fuel.

In order to find the best position for the air control in your installation, start a stove fire as this manual details. For 15 to 20 minutes have the air control pulled away from the stove to fully open the Primary Air Inlet. At the secondary air combustion (top of the firebox) you should be able to observe a secondary combustion taking place. Push the air control in towards the stove to the desired heat setting. If the secondary combustion disappears, restart it by pulling the air control away from the stove. Move the air control to the desired heat setting by gradually pushing it in and ensuring that secondary air combustion is still being supported. Secondary air combustion is important for maximizing the heat transfer from the stove to you and minimizing the amount of smoke which can condense within your chimney as creosote.

NOTE: SECONDARY COMBUSTION MINIMIZES, BUT DOES NOT ELIMINATE, CREOSOTE FORMATION AND BUILD UP IN CHIMNEY.

- ⚠ WARNING: Additional combustion air should be provided from the outdoors if these or other indications suggest that infiltration air is inadequate:**
- The solid-fuel-fired appliance does not draw steadily, experiences smoke roll-out, burns poorly, or back-drafts whether or not there is combustion present.
 - Existing fuel-fired equipment in the house, such as fireplaces or other heating appliances, smell, do not operate properly, suffer smoke roll-out when opened, or back-draft, whether or not there is combustion present.
 - Any of the above symptoms are alleviated by opening a window slightly on a calm (windless) day.
 - The house is equipped with a well-sealed vapor barrier and tight fitting windows and/or has any powered devices which exhaust house air.
 - There is excessive condensation on windows in the winter and
 - A ventilation system is stalled in the house.

CHIMNEY DRAFT CONSIDERATIONS

Draft is the force which moves air from the appliance 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 excessive temperatures in the appliance. Inadequate draft may cause backpuffing into the room and 'plugging' of the chimney or the catalyst.

Inadequate draft will also cause the appliance to leak smoke into the room through appliance and chimney connector joints.

An uncontrollable burn or excessive temperature indicates excessive draft.

Please be mindful of installation location: Inversion and other air quality issues can arise in valleys or if unit is installed close to neighboring homes. To achieve and maintain the draft:

- After the fuel has burned out and you are finished with the stove, open the Primary Air Inlet all the way by pulling the air control away from the heater.
- Obey all chimney requirements, page 7 through page 12.
- Seal any and all connections of intake and exhaust piping.

- Avoid elbows and long horizontal runs of piping.
- Clean exhaust piping frequently.
- Warm the chimney up by building a large fire at the beginning of use of the stove. **DO NOT OVERFIRE THE STOVE. IT IS NEVER PERMITTED TO OVERFIRE THE STOVE.**
- If another appliance is venting air outside and creating a negative pressure, air can be sucked down your chimney in the reverse direction instead of exhausting out of the heater. Nullify that effect by opening a nearby door or window.

FIREBRICKS

Firebricks which line the firebox should already be installed in your wood burning stove. Inspect the firebricks inside your stove to ensure that they have not shifted or shattered during shipping or installation.

⚠ CAUTION: NEVER OPERATED STOVE WITHOUT FIREBRICKS IN PLACE AS SHOWN.

BEFORE FIRING, PUSH FIREBRICKS TOWARDS REAR OF THE STOVE. THERE SHOULD BE NO GAPS BETWEEN FIREBRICKS.

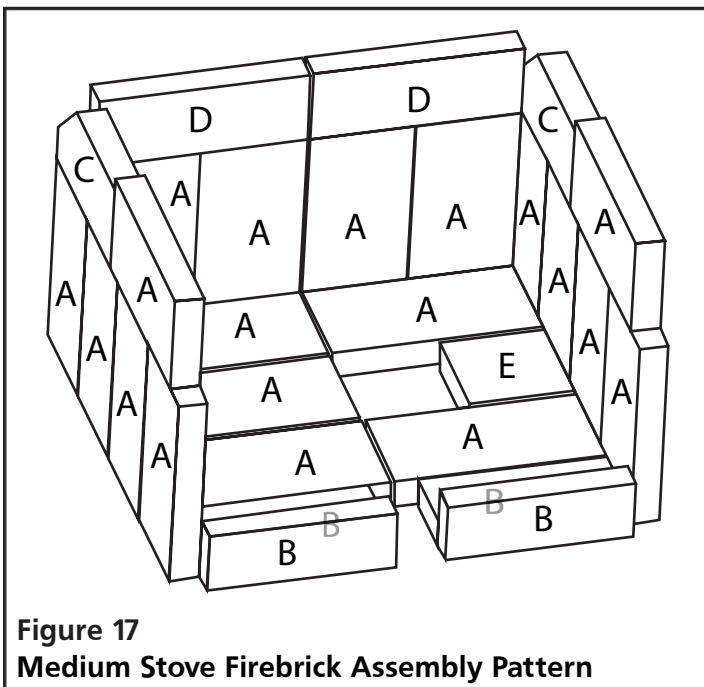


Figure 17
Medium Stove Firebrick Assembly Pattern

NOTE: WHEN REMOVING OR INSTALLING FIREBRICK BE SURE TO NOT DAMAGE THE FIREBRICKS.

- Once your wood-burning stove is properly installed, building an effective fire requires good firewood (using the correct wood in the correct amount) and good fire-building practices. The following section will help you obtain the best efficiency from your wood stove.

OPERATION

⚠ CAUTION: NEVER ATTEMPT TO USE ANY OF THE FOLLOWING MATERIALS AS FUEL.

- Unseasoned wood (green, wet, or freshly cut wood);
- Pressure treated wood;
- Paper products, cardboard, or particleboard;
- Salt water driftwood or other previously salt water saturated materials;
- Garbage;
- Animal remains or manures;
- Lawn clippings or yard waste;
- Waste petroleum products,
- Materials containing
 - asbestos
 - plastic
 - rubber (including tires)
- Petroleum products such as
 - paints
 - paint thinners
 - asphalt products

Burning these materials may result in release of toxic fumes or render the heater ineffective and cause smoke.

APPROVED FUEL:

⚠ CAUTION: BURN UNTREATED WOOD ONLY. OTHER MATERIALS SUCH AS WOOD PRESERVATIVES, METAL FOILS, COAL, PLASTIC, GARBAGE, SULPHUR, OR OIL, MAY DAMAGE THE CATALYST.

Natural cordwood is the only fuel approved for use with these wood burning stoves. Abide by the specifications below:

- Hardwood that has been air dried (seasoned) for at least 1 year. Properly seasoned wood is darker, has cracks in the end grain, and sounds hollow when smacked against another piece of wood.
- The wood should be 16 inches (41 cm) to 20 inches (50 cm) long.
- If a log has a diameter larger than 6 inches the log should be split.
- The humidity content of the wood must be less than 19%-25% of the weight of the log.
- Newly-cut logs can have a moisture content (MC) of 80% or more, depending on species. Since wood shrinks, and can also split, twist or otherwise change shape as it dries, most wood is dried before being used. Air drying, or 'seasoning,' is the most

common method used for cord wood. In most parts of the United States, the minimum moisture content that can be generally obtained in air drying is about 12 to 15 percent. Most air-dried material is usually closer to 20 percent moisture content when used.

- To test your firewood, simply push the pins into the wood and wait for a reading. Remember, don't just stick the meter into the ends of your firewood. To get the most accurate reading, split the wood and test the center. The center of the log will contain the most moisture.

⚠ CAUTION: Attempts to use wet or unseasoned wood will result in:

- Ignition difficulty.
- Accelerated creosote build-up resulting in chimney fire.
- Incomplete combustion.
- Low heat yield.
- Blackening of the glass in door.

Some fire starters may be used at the very beginning to help wood catch fire. Examples of potentially effective fire starters include paper wads, cardboard, saw dust, wax, and similar products marketed explicitly for the purpose of starting fires. Burning these materials may result in the release of toxic fumes, rendering the stove ineffective, and causing smoke. Research and understand the guidelines and risks for your chosen fire starter(s).

⚠ CAUTION: 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.

Do not store fire wood or fire starting materials on floor protector, underneath stovepipe, or anywhere withing minimum clearances from combustible surfaces specified on page 5.

Wood should be stored in a dry, well ventilated area.

OPERATING PRECAUTIONS

⚠ CAUTION: A CHIMNEY FIRE MAY CAUSE IGNITION OF WALL STUDS OR RAFTERS WHICH WERE ASSUMED TO BE A SAFE DISTANCE FROM THE CHIMNEY. IF A CHIMNEY FIRE HAS OCCURRED, HAVE YOUR CHIMNEY INSPECTED BY A QUALIFIED EXPERT BEFORE USING AGAIN.

1. Inspect stovepipe at the start of the season and at

least once every 60 days. Replace immediately if stovepipe is rusting or leaks smoke into room.

2. Use only the approved fuel.

⚠ WARNING: BURNING FUELS OTHER THAN CORDWOOD, PARTICULARLY COAL AND CHARCOAL, CAN RESULT IN HAZARDOUS CONCENTRATIONS OF CARBON MONOXIDE BEING EMITTED INTO THE DWELLING. FOR THESE REASONS, NEVER BURN COAL OR CHARCOAL IN THIS CORDWOOD STOVE. INSTALLING A CARBON MONOXIDE DETECTOR AND BEING AWARE OF THE SYMPTOMS OF CARBON MONOXIDE POISONING CAN HELP REDUCE THE RISK OF CARBON MONOXIDE RELATED ISSUES.

3. Inspect the glass door. **CAUTION:** Do not operate if the glass is cracked or broken. Never load fuel to a height that could present a hazard when opening the door again later.
4. Do not position fuel against the glass.

⚠ WARNING: THIS UNIT WAS DESIGNED FOR OPERATION ONLY WITH THE DOOR CLOSED AND TIGHTLY LATCHED. OPERATING THIS UNIT WITH THE DOOR LATCHED LOOSELY OR OPEN WILL ALLOW EXCESSIVE COMBUSTION AIR TO REACH THE FIRE AND WILL RESULT IN DANGEROUSLY HIGH UNIT TEMPERATURES. HIGH UNIT TEMPERATURES "OVERFIRING" CAN DAMAGE THE UNIT, VOID THE WARRANTY OR IGNITE CREOSOTE DEPOSITED IN THE CHIMNEY SYSTEM BY PREVIOUS, SLOW BURNING FIRES.

5. Do not obstruct the lower air inlet (bottom of the firebox by door) or the secondary air tubes (along the top of the firebox).

PAINT CURING

NOTE: BECAUSE OF HIGH OPERATING TEMPERATURES, THIS STOVE USES A SPECIAL HIGH-TEMPERATURE PAINT. TO ENABLE THE PAINT TO BOND DURABLY TO THE STOVE, FOLLOW THE FOLLOWING PROCEDURE:

1. Build a small fire in the stove for 20 minutes.
2. Build another small fire in the stove which lasts 20 minutes.
3. Build a final medium sized fire in the stove which lasts 20 minutes. The paint curing process is now complete. Provide cross ventilation to eliminate odors or smoke cause by curing process.

HIGH FIRE WITH A COLD START

To start the fire from a “cold” stove:

1. Inspect that all seals on the door, ash drawer, and ash plug are in good condition. Close the ash drawer. Plug ash hole. Inspect the chimney and chimney connector, see maintenance on page <?>.

⚠ CAUTION: DO NOT OPERATE STOVE IF THE GLASS IS BROKEN.

⚠ WARNING: THE CHIMNEY CONNECTOR MUST BE IN GOOD CONDITION AND BE KEPT CLEAN TO SAFELY USE THIS STOVE.

2. Cut and split approximately 15 kindling pieces 15 inches long. Half of them should be approximately inch square, the rest ½ inch square. The kindling should be very dry and weigh approximately 4.5 lbs.

⚠ WARNING: DO NOT USE GRATE OR ELEVATE FIRE – BUILD WOOD FIRE DIRECTLY ON HEARTH. DO NOT OPERATE WITH THE MAIN DOOR OPEN – OPERATING THE STOVE WITH THE MAIN DOOR OPEN WILL CREATE AN OVER-FIRE.

3. Cut and split approximately 15 start-up fuel pieces 15 inches long. Half of the pieces should be larger cross-section (approximately 1 ½ inches square) and the rest smaller cross-section (approximately 1 inch’s square). These can be split from larger fuel pieces that are in the range of 19-25% moisture (Dry-basis). The total weight of the start-up fuel should be approximately 6.8 lbs.

⚠ CAUTION: WHEN TENDING THE STOVE ALWAYS WEAR FIRE RETARDANT CLOTHING AND PROTECTIVE EYEWARE.

4. Arrange the start-up fuel pieces in a grid as shown in the figures. Place two of the larger pieces about six inches apart going front to back. Next, two more pieces the same size left to right about six inches apart. Place about seven of the small pieces front to back on top of the grid. See Figure 18. Place the remaining start up fuel sideways on top.



Figure 18 Start Up Fuel

5. Next, arrange the kindling pieces in a similar alternation grid pattern with the larger pieces first followed by the smallest with a layer of three pieces going left to right as shown with six or seven pieces on the top. See Figure 19.



Figure 19

Start up fuel and kindling on top, start up fuel on the bottom, stacked in the fire box from largest cross-section on the bottom to smallest on the top.

⚠ WARNING: NEVER LEAVE A RUNNING STOVE UNATTENDED WHILE DOOR IS OPEN. THE DOOR MAY ONLY BE OPEN FOR FIRE STARTING AND FIRE TENDING. TO CLOSE: FIRMLY ROTATE DOOR HANDLE CLOCKWISE UNTIL THE DOOR IS SECURELY LATCHED. DO NOT SLAM THE DOOR.

6. To start make sure the air control is pulled all the way out.
7. Using a propane torch, light the top front of the kindling grid. The torch should be operated for 60 seconds.

8. Close the door fully, and secure door latch.
9. Make sure the air control is still in the maximum open position.

ADDING THE HIGH FIRE FUEL LOAD

1. When the kindling and start up fuel have burned down by approximately 3/4, rake the remaining coals and fuel pieces forward until they are equally distributed and level.
2. Place the wood so there is space on either side for good airflow. All Fuel pieces should be in a front-to-back orientation. Air control should be set to maximum open (all the way out).

LOW FIRE FUELING AND OPERATION (LOADING ON COALS AFTER HIGH FIRE OPERATION)

1. At the end of the high fire rake the remaining coals forward until they are equally distributed and level across the firebox.
2. Place the wood so there is space on either side for good airflow.
3. Immediately close the door and open the air control to maximum open (all the way out).
4. Leave the air control on the max setting for up to 15min or min allowable weight. Then push the air control all the way in.

MEDIUM FIRE FUELING AND OPERATION (LOADING ON COALS AFTER HIGH FIRE OPERATION)

1. At the end of the high fire rake the remaining coals forward until they are equally distributed and level across the firebox.
2. Place the wood so there is space on either side for good airflow. All fuel pieces should be in front-to-back orientation.
3. Immediately close the load door and set the air control to maximum open (all the way out)..
4. Leave the air control on the max setting for up to 12 min or min allowable weight. Then push the air control halfway between the high and low settings.

⚠ CAUTION: IF THE STOVE OR STOVE PIPE GLOWS RED THE UNIT IS OVERFIRING. CLOSE STOVE DOOR AND IMMEDIATELY SHUT AIR CONTROL (PUSH AIR CONTROL TO THE "IN" POSITION) TO REDUCE AIR SUPPLY AND SLOW DOWN COMBUSTION.

⚠ WARNING: IN CASE OF CHIMNEY FIRE:
1. CLOSE AIR INLET CONTROL BY PUSHING AIR CONTROL IN TOWARDS STOVE.
2. GET OUT OF THE HOUSE OR BUILDING.
3. CALL THE FIRE DEPARTMENT.

MINIMIZING CREOSOTE FORMATION

See "MAINTENANCE" on page 18 for an explanation on Creosote formation and removal. To slow the build up of creosote within your chimney, comply with the following guidelines:

- Burn only the recommended fuel "APPROVED FUEL" on page <?>.
- Do not mix green or wet wood with the approved fuel. Wood that does not ignite but instead hisses, sizzles, and blackens is definitely too wet. It will cause accelerated creosote build up in chimney and will also reduce the heat output of the stove.
- Only add to ½ the fuel capacity of the fire box at a time to ensure thorough combustion and temper the amount of smoke produced.
- Every time fuel is added, fully open the Primary Air Inlet by pulling the air control away from the stove.
- Periodically throughout the day, fully open the Primary Air Inlet by pulling the air control away from the stove for a few minutes. This will help keep the chimney at a warm temperature and subsequently reduce the condensation of creosote.

DISPOSAL OF ASHES

Whenever ash accumulates within the fire box or ash pan to a height of 3-4 inches:

1. After ashes have cooled, remove ash plug and carefully sweep ashes down into the ash bin.
2. Replace ash plug, remove ash bin, and empty into a suitable container.
NOTE: You may also purchase a Cleveland Ironworks Ash Vacuum, model# AV65GALB/AV65GALSS.
3. Ashes should be placed in a metal container with a tight fitting lid. 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 the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.
4. Other waste shall not be placed in ash containers.

MAINTENANCE

DAILY MAINTENANCE

- Inspect the firebox for ash accumulation; remove excess ash and follow instructions below regarding disposal.

MONTHLY MAINTENANCE

- Check the blower for dust accumulation (if installed); check the door handle for proper operation and to be certain an airtight seal is still being made by the door.
- Inspect the chimney system and chimney connector and sweep if necessary. Although cleaning may be required less than monthly, ALWAYS inspect the venting system monthly to decrease the chance of a chimney fire.
- Visually inspect the ceramic fiberboards in the firebox for cracks and/or breakage. Slight surface cracks will not affect the performance of the boards, but cracked or crumbling boards should be replaced immediately.
- Visually inspect the secondary combustion pipes for cracks, warping and corrosion. Although these tubes are constructed from stainless steel, they operate at very high temperatures and can eventually wear out from normal use.

YEARLY MAINTENANCE

- Check all gaskets (window and door) for wear and to be certain they still maintain an airtight seal. See the following page for instructions.
- Thoroughly clean the chimney system and the chimney connector system. Since the chimney connector is generally exposed to high exhaust temperatures, inspect it carefully for leaks and weak spots; replace any questionable pieces. In the case of straight through the roof chimney system, be certain to remove the ceramic fiberboards before pushing the chimney sweeping brush down into the firebox. Forcefully hitting the top of the board with a cleaning brush or rod can damage or destroy the boards.
- Remove all ash from the stove. Leave the air control open during the non-heating months to allow some air to flow through the stove to help prevent corrosion.

⚠ WARNING: DO NOT ATTEMPT TO CLEAN OR SERVICE WHILE THE STOVE IS HOT. BEFORE OPENING THE CLEVELAND IRONWORKS WOOD FIRE STOVE DOOR FOR ANY TYPE OF SERVICE, BE SURE THAT THE STOVE IS COOL AND THAT THE BLOWER IS UNPLUGGED.

⚠ WARNING: USE ONLY MANUFACTURER'S REPLACEMENT PARTS. USE OF ANY OTHER PARTS COULD CAUSE INJURY OR DEATH.

CREOSOTE - FORMATION AND NEED FOR REMOVAL

Failure to remove creosote may result in a dangerous chimney fire.

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 on the flue lining. When ignited this creosote makes an extremely hot fire. The chimney connector and chimney should be inspected at least once every two months during the heating season to determine if a creosote buildup has occurred. If a significant layer of creosote has accumulated (eighth of an inch, 3 mm, or more) it should be removed to reduce the risk of a chimney fire.

Establish a routine for the fuel, wood burner and firing technique. Check daily for creosote build-up until experience shows how often you need to clean to be safe. Be aware that the hotter the fire the less creosote is deposited, and weekly cleaning may be necessary in mild weather even though monthly cleaning may be enough in the coldest months. Contact your local municipal or provincial fire authority for information on how to handle a chimney fire. Have a clearly understood plan to handle a chimney fire.

CLEANING GLASS

Be certain the stove and the glass are completely cool. The build-up on the glass will generally be light and water is normally sufficient to remove the deposits. If stubborn soot persists, use a cleaner made specifically for this purpose. Rinse the glass with clean water and dry the glass before resuming normal operation. These cleanings help prevent the accumulation of acidic ash build up which can weaken the glass and result in cracks. It is not acceptable to operate the stove with cracked or broken glass.

⚠ WARNING: DO NOT CLEAN GLASS WITH ABRASIVE CLEANERS OR BY ANY OTHER PROCESS WHICH MAY SCRATCH OR DAMAGE THE GLASS. DO NOT CLEAN WHEN HOT!

REPLACING GLASS

⚠ WARNING: DO NOT ABUSE THE GLASS DOOR BY STRIKING IT OR SLAMMING THE DOOR SHUT.

Replace the door glass only with 5 mm high-temperature ceramic single-pane glass. The glass size is 15 in.(381 mm) x 11.25 in.(285.75 mm). DO NOT use substitute materials! Never replace ceramic glass with tempered or any other type of glass. Contact the manufacturer for more information on ordering factory original or equivalent parts.

1. Remove the door from the stove and rest it face down on a firm work surface.
2. Using a 5/16" wrench, remove the ten window bracket retaining screws.
3. Remove the four window tabs from the door. Take extra care to avoid shards of glass if the glass window has been broken.
4. Lift the old glass panel out of the door and discard.
5. The glass panel must be wrapped with a self-adhesive fiberglass rope gasket. If you purchased a new glass, it will come already wrapped. If reusing the same piece of glass, remove old gasket, scrape off old adhesive and wrapped with the new gasket. This gasket serves to cushion the glass from the

cast iron door.

6. Reinstall the window retaining tabs using the ten screws previously removed. Do not over-tighten the screws.

REMOVING DAMAGED GASKETS

Over time the sealing gaskets along the glass (3mm x 16mm flat, fiberglass rope) and door (9/16" dia. fiberglass rope) may lose their rigidity. These seals are essential for providing a seal which allows the stove to operate safely. Inspect the gaskets periodically, and if they become worn contact the manufacturer for information on original or equivalent gasket.

To replace the gasket:

1. Ensure that all coals and fuel are extinguished and that the stove is cool to the touch.
2. Remove old gasket and clean the gasket gutter.
3. Apply a thin coat of high temperature gasket cement along the inside of the gasket gutter.
4. Press the beginning of the replacement gasket into the most up and most left position of the prepared gasket gutter.
5. Continue pressing the replacement gasket clockwise along the gasket gutter until it has wrapped back to where the gasket was pressed in initially.
6. Trim any excess replacement gasket away ,and press the remaining butt into the gutter to complete the seal.
7. Close the door, drawer, or ash plunger and allow 3 to 4 hours for the cement to set before operating the stove.

Replacing Air Tubes

NOTE: HANDLE THE FRONT AIR TUBE DELICATELY TO AVOID DAMAGING IT OR DAMAGING THE STOVE ITSELF.

1. Use a 5/16" open end or socket wrench to remove the screw securing the air tube.
2. Remove the air tube by sliding it into the space to the right, followed by sliding the tube left and partially forward, and finally remove the tube by sliding to the right and out of the firebox. Overall this pattern looks like the letter Z. See Figure 20.

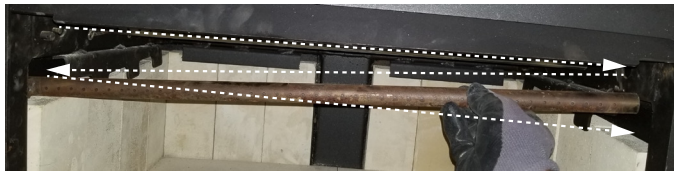


Figure 20 Front Air Tube Removal

3. Installation of the same, or a replacement, front air tube is step 1 done in reverse. The other air tubes may be removed and replaced by the same manner.

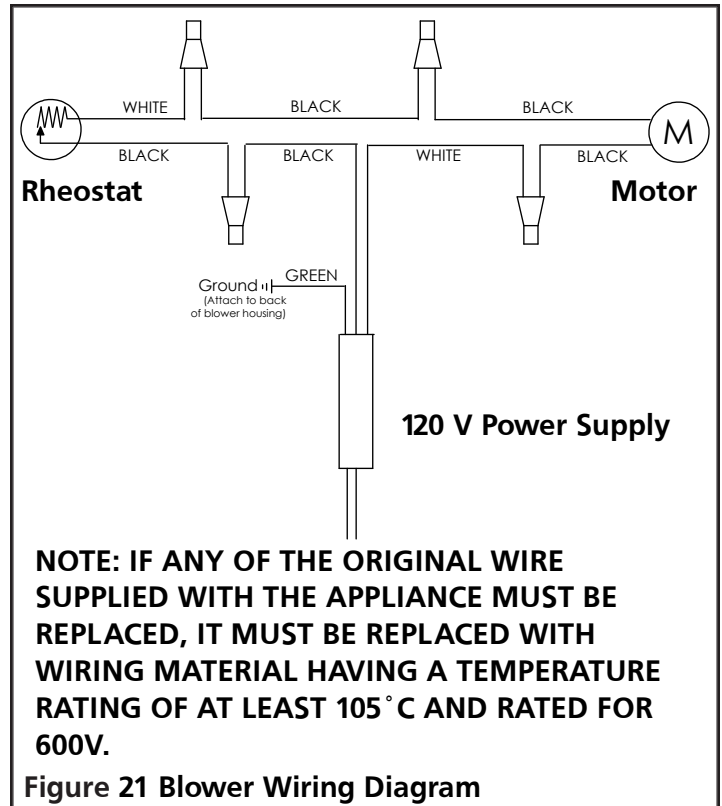
CERAMIC FIBERBOARD REPLACEMENT

To replace a cracked or broken board, first remove the front burner tube as described above. Then tilt the front of the board down and slide out the board you need to replace. Install the new board (the two boards should sit flush on the tubes side by side). Replace the tube previously removed.

To replace the ceramic blanket, follow the previous steps to remove the ceramic boards, then pull out the blanket. Replace with new blanket following the previous steps in reverse order.

BLOWER CLEANING

To remove debris such as dust and dirt, lightly vacuum the outside of the enclosure of the 120 Volt / 60 Hz / 0.26 Amp blower. Be sure that the motor is unplugged before vacuuming, or before performing any other stove maintenance.

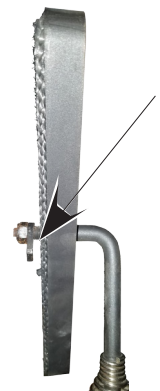


DOOR LATCH

When opening and closing the door repeatedly it is possible to unintentionally move the door handle thread so that the door no longer latches shut. If this happens, open the door and inspect the position of the door handle thread. Adjust the door handle until it is possible to close and seal the door tightly with the latch by rotating the handle counterclockwise.

- Rotate the door handle clockwise to extend the latch further into the firebox to allow the door latch to catch the inside frame of the stove.
- Rotate the door handle counterclockwise to decrease the distance between the latch and the stove.

**Figure 22
Door
Handle
Latch Gap**



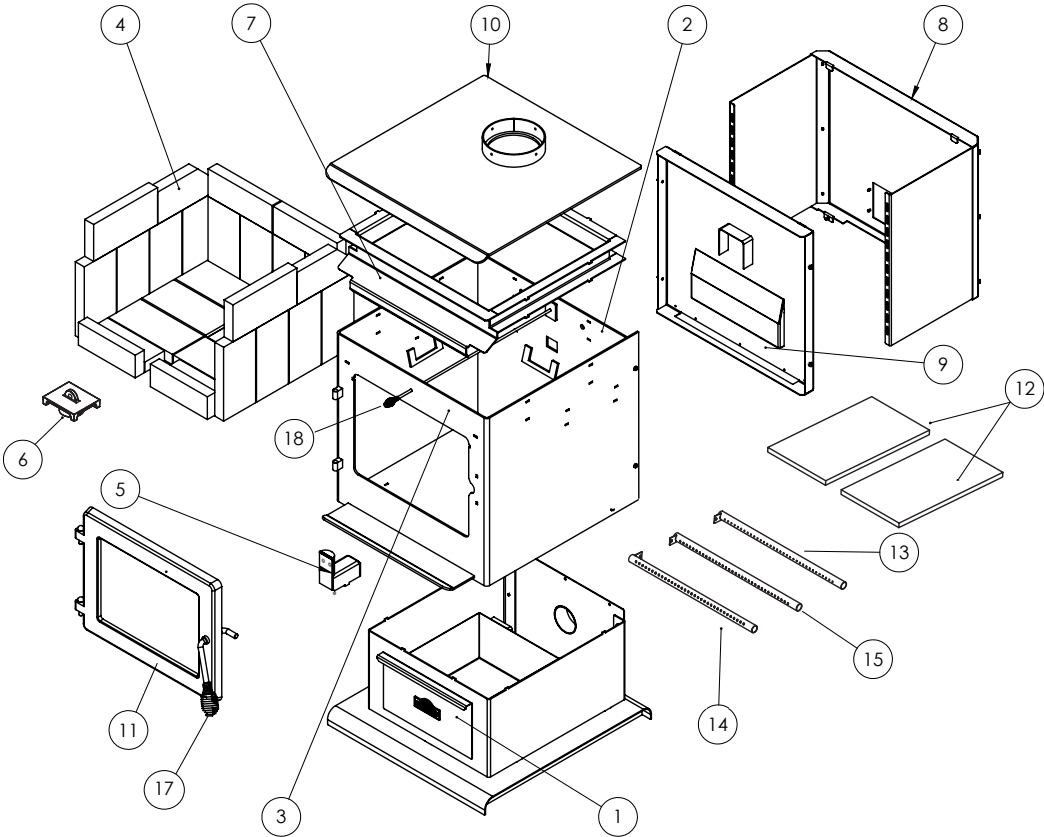
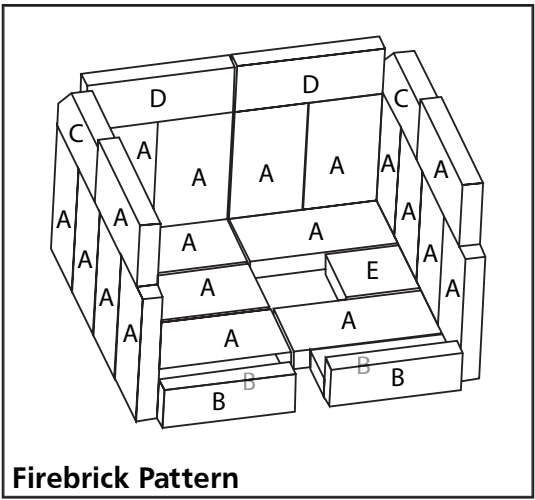
TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
Stove smokes into room	Weak Draft.	Be certain chimney is sufficiently tall. Refer to Chimney Requirements on Page 10. If necessary, add additional height to chimney.
	Negative Pressure in the Home.	Add an outside combustion air hookup to the unit.
Fire is difficult to start	Weak Draft.	Be certain chimney is sufficiently tall. Refer to Chimney Requirements on Page 10. If necessary, add additional height to chimney.
	Cold Chimney	Heat the flue by burning crumbled newspaper in the stove.
		Install an insulated chase around external chimney.
	Downdraft in Chimney	Be certain chimney is sufficiently tall. Refer to Chimney Requirements on Page 10.
		Try heating the flue with a hair dryer to correct the draft.
Glass is dirty	Wet or Green Wood.	Only burn wood that is seasoned for at least one year and that is dry and free of ice and snow..
	Operating Stove at Low Burn Rate.	Operate the stove at higher burn rates to help keep the glass clean.
	Wood Loaded too Close to Glass.	Never load wood so that it is touching the glass viewing window.
Coals build up in firebox	Operating Stove at High Burn Rates.	Reduce combustion air control and allow coals to burn down before reloading.
Fire burns out of control	Excessive Draft.	Reduce chimney height.
	Air Leakage.	Inspect window and door gaskets and replace if necessary.
	Burning Excessively Dry Wood.	Only burn seasoned cord wood. Do not burn kiln dried or pallet wood.
Excessive smoke from stack	Operating Stove at Low Burn Rate.	Operate the stove at a higher burn rate which will create secondary combustion.
	Wet or Green Wood.	Only burn wood that is seasoned for at least one year and that is dry and free of ice and snow.
	Not Charring Fresh Wood Load	Char the fresh wood load until it is completely ignited and active secondary combustion is present in the firebox.

SERVICE PARTS MODEL C110

NOTE: Not all parts available. For questions contact Manufacturer.

ITEM NO.	PART NUM.	BRICK SIZE
A	66710	9" x 4.5" x 1.25"
B	66914	8" x 2.5" x 1.25"
C	66712	8" x 4" x 1.25"
D	66713	9" x 3.35" x 1.25"
E	66714	4.5" x 4.5" x 1.25"



⚠ WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this stove may result in property damage or personal injury.

ITEM NO.	PART NUM.	DESCRIPTION
1	66835	Ash Pan
2	N/A	Back & Base Panel
3	N/A	Main Housing & Air Control
4	*	Fire Bricks - See Table Above
5	N/A	Igniter
6	66715	Ash Plug
7	N/A	Primary Manifold
8	N/A	Back Panel & Heat Shields
9	N/A	Blower Panel
10	N/A	Top

ITEM NO.	PART NUM.	DESCRIPTION
11	66716	Door
12	66717	Ceramic Board
13	66718	Rear Air Tube
14	66719	Front Air Tube
15	66720	Middle Air Tube
16	66721	Ceramic Blanket (Not Shown)
17	66836	Spring Handle
18	66853	Flue Spring Handle
*	66860	Door Pin (Not Shown)

THIS PAGE INTENTIONALLY LEFT BLANK
ESTA PÁGINA INTENCIONALMENTE SE DEJA EN BLANCO
CETTE PAGE A ÉTÉ INTENTIONNELLEMENT LAISSÉE VIERGE



OPERATING INSTRUCTIONS AND OWNER'S MANUAL

Model #

C110

READ INSTRUCTIONS CAREFULLY: YOUR SAFETY IS IMPORTANT TO YOU AND TO OTHERS. Read and follow all instructions. Place instructions in a safe place for future reference. Do not allow anyone who has not read these instructions to assemble, light, adjust or operate the stove.



WARNING:

USE ONLY MANUFACTURER'S REPLACEMENT PARTS. USE OF ANY OTHER PARTS COULD CAUSE INJURY OR DEATH. REPLACEMENT PARTS ARE ONLY AVAILABLE DIRECT FROM THE FACTORY AND MUST BE INSTALLED BY A QUALIFIED SERVICE AGENCY.

PARTS ORDERING INFORMATION:

PURCHASING: ACCESSORIES MAY BE PURCHASED AT ANY LOCAL DEALER OR DIRECT FROM THE FACTORY

FOR INFORMATION REGARDING SERVICE:

Please call Toll-Free 1-800-251-0001

Our office hours are 8:00 AM – 5:00 PM, EST, Monday through Friday.

Please include the model number, date of purchase, and description of problem in all communication.

LIMITED WARRANTY:

The company warrants this product (excluding firebricks) to be free from imperfections in material or workmanship, under normal and proper use in accordance with instructions of The Company, for a period of 5 years from the date of delivery to the buyer. The Company, at its option, will repair or replace products returned by the buyer to the factory, transportation prepaid within said five year period and found by the Company to have imperfections in material or workmanship.

If a part is damaged or missing, call our Technical Support Department at 1-800-251-0001.

Address any Warranty Claims to the Service Department, Enerco Group, Inc., 4560 W. 160TH ST., CLEVELAND, OHIO 44135. Include your name, address and telephone number and include details concerning the claim. Also, supply us with the purchase date and the name and address of the dealer from whom you purchased our product.

The foregoing is the full extent of the responsibility of the Company. There are no other warranties, express or implied. Specifically there is no warranty of fitness for a particular purpose and there is no warranty of merchantability. In no event shall the Company be liable for delay caused by imperfections, for consequential damages, or for any charges of the expense of any nature incurred without its written consent. The cost of repair or replacement shall be the exclusive remedy for any breach of warranty. There is no warranty against infringement of the like and no implied warranty arising from course of dealing or usage of trade. This warranty will not apply to any product which has been repaired or altered outside of the factory in any respect which in our judgment affects its condition or operation.

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

Enerco Group, Inc. reserves the right to make changes at any time, without notice or obligation, in colors, specifications, accessories, materials and models.

Enerco Group Inc., 4560 W. 160TH ST., CLEVELAND, OHIO 44135 • 1-800-251-0001
© 2026, Enerco Group, Inc. All rights reserved