



THE ORIGINAL NO POWER NEEDED, GRAVITY FED, ULTRA-EFFICIENT PELLET STOVE

The Clarry[®] Certified Stove CST & CSS Models Owner's Manual

INSTALLATION AND OPERATING INSTRUCTIONS



Clarry® Pellet Stove

This product is patented under US Patent #8020547
and Canadian Patent # CA2604313
Made in the USA

Clarry® is a registered trademark of Clarry Pellet Stove, LLC



Clarry Pellet Stove, LLC
P.O. Box 2097
Battle Ground, WA 98604
1-844-4CLARRY

INTRODUCTION



We welcome you as a new owner of the Clarry® Pellet Stove, CST or CSS model. This manual will explain the installation, operation and maintenance of this pellet-burning heater. Please familiarize yourself with this Owner's Manual before operating your stove and save it for future reference. We offer our continual support and guidance to help you achieve the maximum benefit and enjoyment from your stove.

IMPORTANT INFORMATION

No other Clarry® Pellet Stove has the same serial number as yours. The serial number will be needed in case you require service of any type.

Model: CST/CSS

Serial Number: _____

Purchase Date: _____

Purchased From: _____

To receive full warranty coverage, you will need to show evidence of the date you purchased your stove. We suggest that you attach your bill of sale to this page so that you will have all of the information you need in one place, should the need for service or information occur.

WARNING

**NOT FOR USE IN
MANUFACTURED HOMES,
MOBILE HOMES, MOTOR HOMES
OR CAMPING TRAILERS.**

**INTENDED USE MAY
INCLUDE RESIDENTIAL HOMES,
TENTS, HUNTING CABINS OR LINE
SHACKS, ICE FISHING HOUSES
AND DETACHED SHOP
STRUCTURES WHERE ELECTRICITY
MAY NOT BE AVAILABLE.**

**PLEASE READ THIS ENTIRE MANUAL
BEFORE INSTALLATION AND USE OF
THIS PELLET
FUEL-BURNING HEATER.**

Failure to follow these instructions could result in property damage, bodily injury, or even death.

Contact local building or fire officials about restrictions and installation inspection requirements in your area.

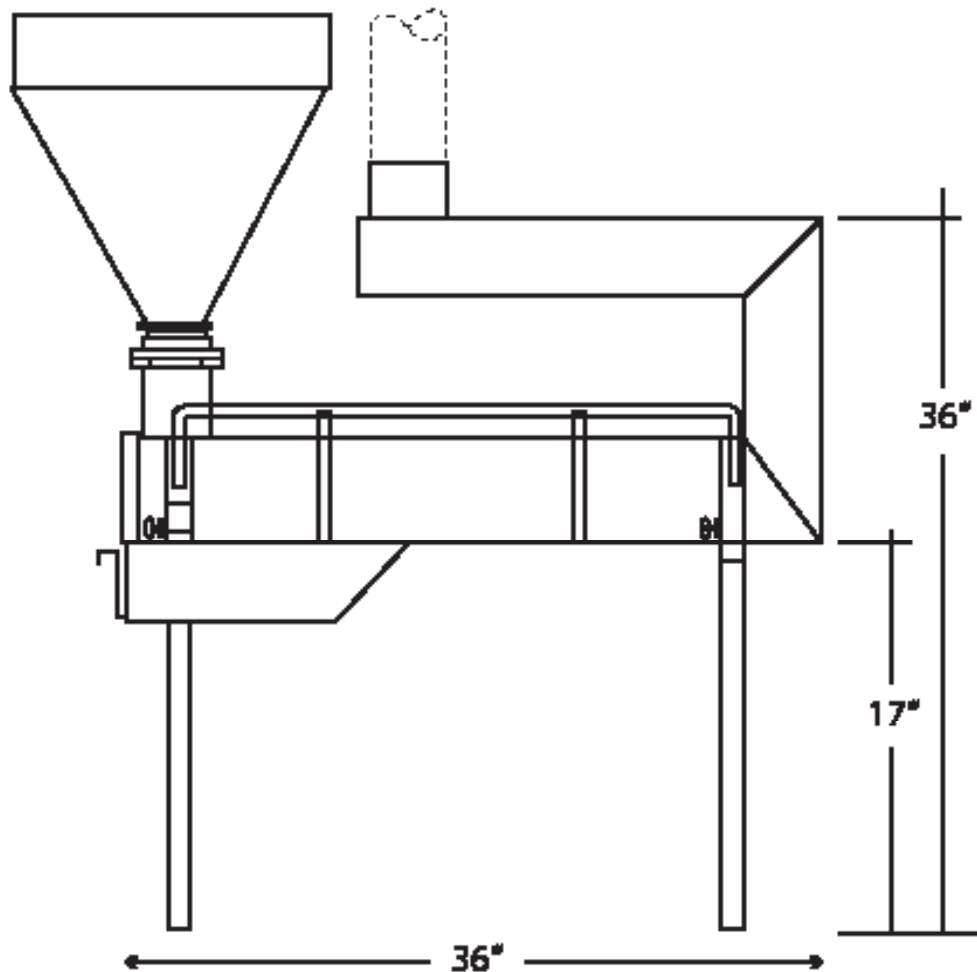
**INSTALLER: AFTER INSTALLATION,
GIVE THIS MANUAL TO THE
HOMEOWNER AND EXPLAIN
OPERATION OF THIS STOVE.**

SAVE THESE INSTRUCTIONS.

SAFETY PRECAUTIONS

- Do not operate your stove if you smell smoke coming from it.
- Use only liquid gel or wax/sawdust fire starter according to the stove's operating instructions. Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this heater. Keep all such liquids well away from the stove while it is in use.
- **CAUTION: DO NOT ATTEMPT TO RESTART THE STOVE WHILE THE STOVE BODY IS STILL HOT. THE GEL FIRE STARTER MAY VAPORIZE RESULTING IN FLAME FLARE UP CAUSING BODILY INJURY.**
- Never try to repair or replace any part of the stove unless instructions are given in this manual. All other work should be done by a trained technician.
- Contact your local building officials to obtain a permit and information on any installation restrictions or inspection requirements in your area. The makers cannot anticipate every possible method of using the stove. Notify your insurance company of this stove installation, as well.
- This stove must be properly installed to prevent the possibility of a structural fire. The instructions must be strictly adhered to. Do not use makeshift methods or compromises in the installation.
- The exhaust system must be completely airtight and properly installed. It is recommended that the stove vent joints be sealed with high temperature sealant.
- Your stove requires periodic maintenance and cleaning (see "Maintaining Your Stove").
- Failure to maintain your stove may lead to smoke spillage.
- Allow the stove to cool before carrying out any maintenance or cleaning.
- Disposal of Ashes – Ashes should be placed in a steel 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 material, 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.
- This stove is designed and approved for pelletized wood fuel only. Any other type of fuel burned in this stove will void the warranty and safety listing.
- Keep foreign objects out of the hopper.
- Do not place clothing or other flammable items on or near the stove.
- The exhaust system should be checked at least twice a year for any build-up of soot or creosote.
- **DO NOT TOUCH THE HOT SURFACES OF THE STOVE. EDUCATE ALL CHILDREN OF THE DANGER OF A HIGH-TEMPERATURE STOVE. YOUR CHILDREN SHOULD BE CLOSELY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE STOVE.**
- Clarry Pellet Stove LLC grants no warranty implied or stated, for the installation or maintenance of your heater, and assumes no responsibility for any consequential damages.
- When this heating appliance is not properly installed, a 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.

1.) DIMENSIONS AND SPECIFICATIONS: CST Model



Note

* Heating capacity will vary depending on the exterior wall material, degree of insulation, and the outside temperature. It is also affected by the fuel size, quality, and moisture level.

** Fuel: This unit is designed for wood pellets that comply with the standards set by the Association of the Pellet Fuel Industry (density of at least 40 lbs. per cubic foot, 1/4" to 5/16" diameter, length no greater than 1 1/2", 8200 BTU's/lb., moisture under 8% by weight, ash under 1% by weight, and salt under 300 parts per million). If the fuel does not comply with this standard, the unit may not operate as designed.

OUR STOVES OPERATE BEST USING PELLETS WITH <6% MOISTURE CONTENT. DO NOT REUSE PELLET FUEL THAT HAS NOT BEEN STORED IN A MOISTURE PROOF CONTAINER. PELLETS NOT STORED IN THIS MANNER MAY DRAW MOISTURE AND WILL NOT BURN PROPERLY.

FIGURE 1 CST MODEL

CST HEATING SPECIFICATIONS:

Approximate Maximum Heating Capacity (in square feet): 1000 sq. ft.*

Approximate Burn Rate (pounds per hour): 5.0**

Approximate Burn Time: 8 hours**

Hopper Capacity: 40 pounds

Stove Weight: 100 pounds assembled



1.) DIMENSIONS AND SPECIFICATIONS: CSS Model

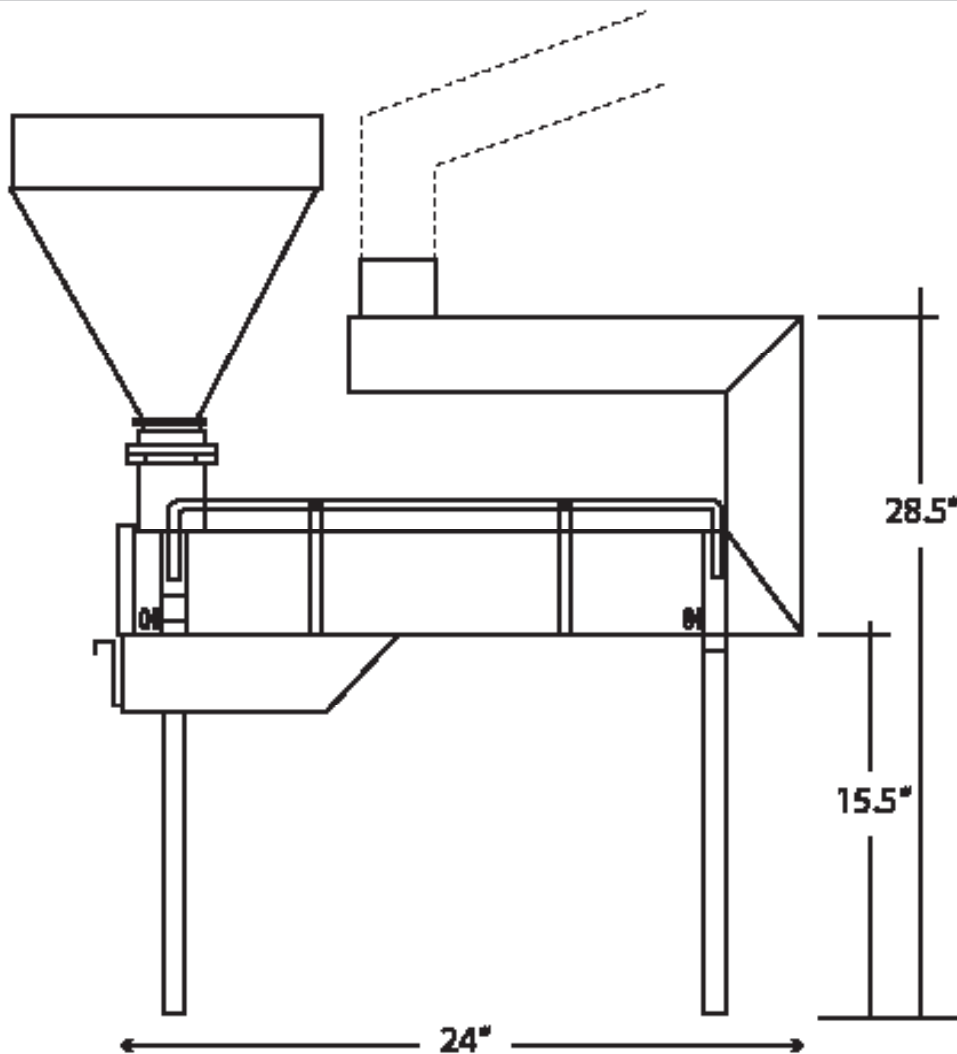


FIGURE 1.1 CSS MODEL

Note

* Heating capacity will vary depending on the exterior wall material, degree of insulation, and the outside temperature. It is also affected by the fuel size, quality, and moisture level.

** Fuel: This unit is designed for wood pellets that comply with the standards set by the Association of the Pellet Fuel Industry (density of at least 40 lbs. per cubic foot, 1/4" to 5/16" diameter, length no greater than 1 1/2", 8200 BTU's/lb., moisture under 8% by weight, ash under 1% by weight, and salt under 300 parts per million). If the fuel does not comply with this standard, the unit may not operate as designed.

OUR STOVES OPERATE BEST USING PELLETS WITH <6% MOISTURE CONTENT. DO NOT REUSE PELLET FUEL THAT HAS NOT BEEN STORED IN A MOISTURE PROOF CONTAINER. PELLETS NOT STORED IN THIS MANNER MAY DRAW MOISTURE AND WILL NOT BURN PROPERLY.

CSS HEATING SPECIFICATIONS:

Approximate Maximum Heating Capacity (in square feet): 500 sq. ft.*

Approximate Burn Rate (pounds per hour): 4.5 lbs/hr.**

Approximate Burn Time: 10 hours**

Hopper Capacity: 40 pounds

Stove Weight: 65 pounds assembled

EPA COMPLIANCE:

The CST and CSS model stoves are EPA exempt from Phase II requirements.

2.) INSTALLATION: Setting up the Stove

PACKING LIST

- CST or CSS Stove Body
- Ash Drawer
- Stainless Steel Grate
- Damper Door and Grate Access Door
- Pellet Hopper
- Owners Manual
- Door Latch Tool
- 4 Legs
- 1 ea. 4"-90° elbow required for Sierra model only to clear hopper

IMPORTANT - THE FOLLOWING MATERIALS NEED TO BE PURCHASED FOR FINAL ASSEMBLY:

1. Enough 4" 28 gauge black Stove Pipe (D.1) to complete flue installation.
2. One or more 4" 45/90 degree elbows may be needed to complete tent side wall installations.
3. A directional wind cap may be used at the top of the stove pipe. No other device, such as a China Hat can be used.

STOVE ELEMENTS (SEE FIGURE 2)

- A) Stove Body (A),
which includes the Grate (A.1),
Ash Drawer (A.2),
and Grate Access Door (A.3) with Damper Door (A.3.1)
- B) Four (4) Legs (B) and four (4) Set Screws (B.1)
- C) Hopper (C). Holds the wood pellets
- D) Stove Pipe.
- D.1) 1 -Ea. 4" 45/90° elbows required for CSS Model only to clear hopper

Before You Begin

**READ THIS ENTIRE MANUAL
BEFORE YOU INSTALL AND USE THE
CLARRY® PELLET STOVE.**

Never a Cold Moment

2.) INSTALLATION: Assembly

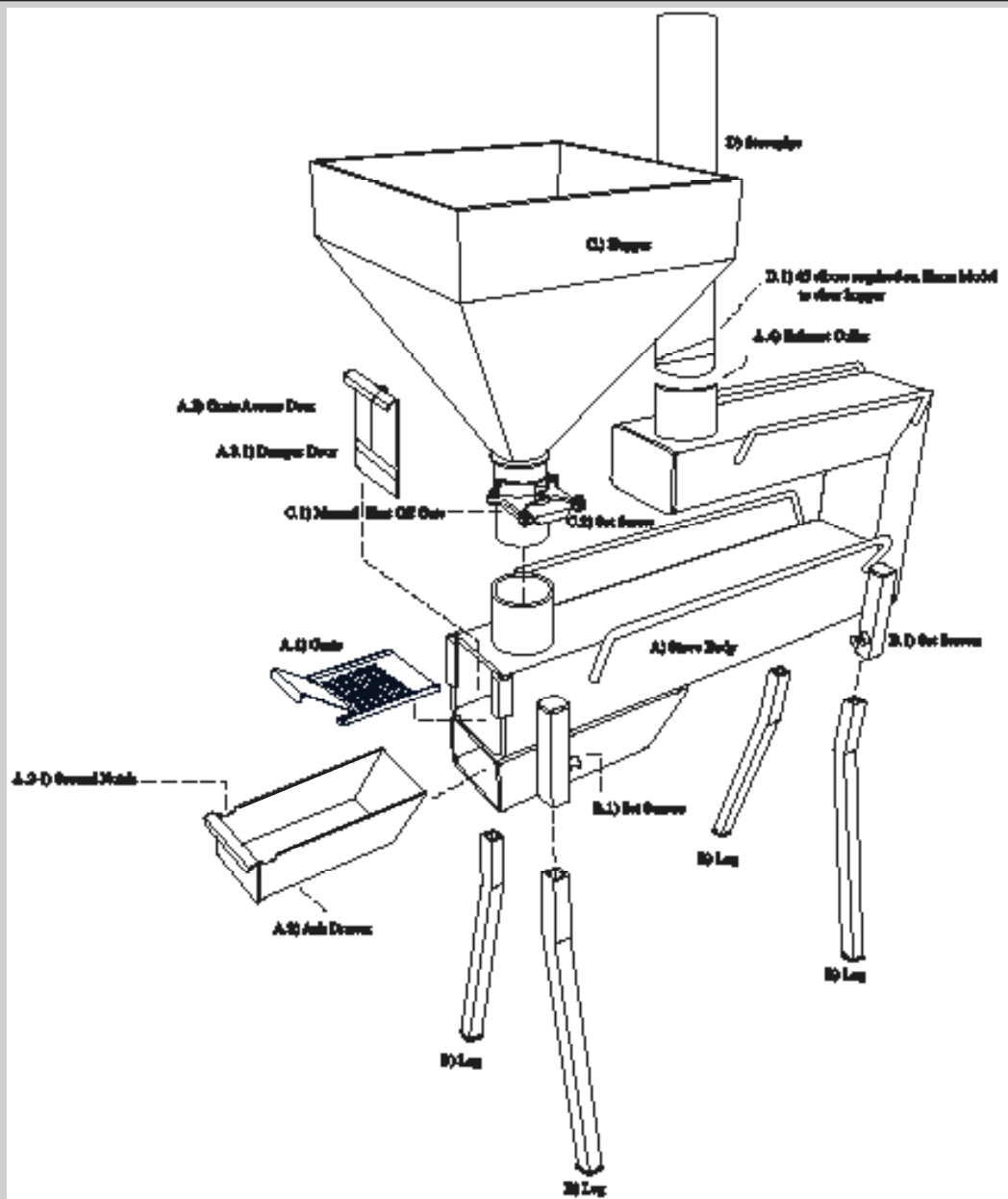


FIGURE 2

1. Tip the stove body (A) on end, insert the legs (B) and loosely tighten the set screws. (B.1)
2. Move the stove (A) into the upright position. Adjust the legs (B) so that the stove is level. Finish tightening the set screws (B.1).
3. Lift fire chamber access door (A.3) and slide grate (A.1) into the fire chamber in body (A). Push in firmly until it stops against the pellet delivery chute. Insert damper door (A.3.1) in access door (A.3) guide rails. Close both doors.

**WARNING: FAILURE TO FOLLOW THIS PROCEDURE MAY CAUSE THE STOVE TO "OVER FIRE".
SEE PAGE 18 FOR AN EXPLANATION OF "OVER FIRING"**

4. Insert the 4" 28 gauge sheet metal stove pipe (D) into the 4" exhaust collar in body (A). The CSS Model will require a 4" 45/90° elbow offset to clear the hopper for a vertical installation. Make sure you have the proper configuration for a ceiling/roof opening or sidewall opening. See FIG. 9, page 17.
5. Put the pellet hopper (C) into the 3" collar in body (A). The manual shut off gate (C.1) should be closed.

2.) INSTALLATION: "Burning In" the Stove

- Prior to placing the Clarry® Pellet Stove in your structure, you must burn the stove in for 20 minutes, to set the stove paint.
- Assemble the stove in an outdoor location according to the directions above; bring it to operating temperature, or to the point where the paint stops smoking.
- Make sure that any time you light the stove outdoors the chimney is not positioned directly under a low hanging tree branch or near a structure.
- Once the stove has been burned in and cooled down, it is ready to install.

INSTALLATION OPTIONS

The Clarry® Pellet Stove is approved for an interior vertical through the roof installation; horizontal through the wall to exterior vertical installation and retrofit to existing masonry chimney installation.

NOTE: When using horizontal through the wall installation, floor protection material must extend under the chimney connector (the 28 gauge stove pipe) from the back or side of stove to the wall. Floor protection width must be a minimum 2" wider on each side of chimney connector, for a total minimum width of 8".

PRE-INSTALLATION RECOMMENDATION

Sketch out a detailed plan of the installation including dimensions. Then verify the dimensions with the requirements listed in this manual.

When determining the location of the stove, locate the ceiling trusses (for vertical penetrations). You may wish to adjust the stove position slightly to ensure the vent does not intersect with a framing member, but never reduce the minimum clearance dimensions shown on the next page in FIG. 3.1 and FIG. 3.2.

STOVE PLACEMENT

Place the stove on non-combustible floor protection using wall clearance dimensions for a straight (Fig. 3.1) or corner installation (Fig. 3.2)

Stove must be placed so that no combustibles are within, or can swing within (doors, drapes, etc.), 36" of any surface of the stove. Heater and floor protection must be installed on a level, secure floor.

WARNING

NEVER REDUCE THE MINIMUM CLEARANCE DIMENSIONS SHOWN IN FIG. 3.1 AND FIG. 3.2.

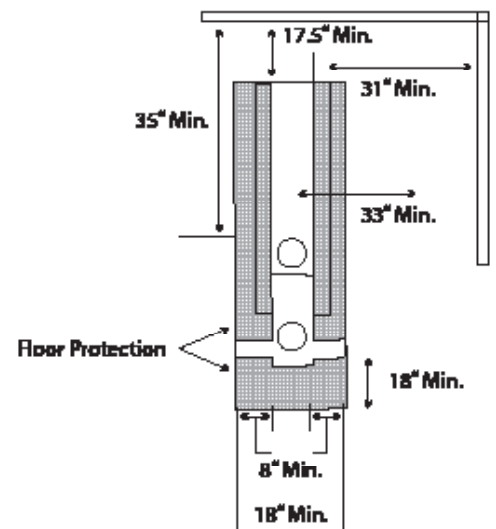


FIGURE 3.1

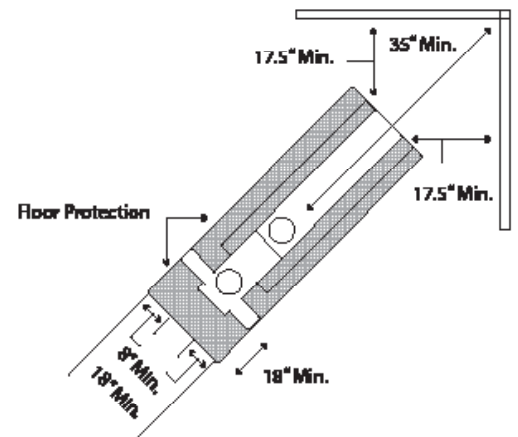


FIGURE 3.2

2.) INSTALLATION: Floor Protection Requirements

The heater must be installed on a non-combustible floor protector extending the full width and depth of the heater and extending 18" in front beyond the pellet hopper and 8" outside of the legs, minimum 30" wide by 56" deep.

Minimum 1" thick with (k=0.84) (R=1.19) (BTU)(in)/(ft²)(hr)(°f).

How to determine if alternate floor protection materials are acceptable.

All floor protection must be non-combustible (i.e., metals, brick, stone, mineral fiber boards, etc.). Any organic materials (i.e., plastics, wood paper products, etc.) are combustible and must not be used. The floor protection specified includes some form of thermal designation such as R-value (thermal resistance) or k-factor (thermal conductivity).

PROCEDURE

1. Convert specification to R-value:

i. R-value given - no conversion needed.

ii. k-factor is given with a required thickness (T) in inches:

$$R = \frac{1}{k} \times T$$

iii. K-factor is given with a required thickness (T) in feet:

$$R = \frac{1}{K \times 12} \times T$$

iv. r-factor is given with a required thickness (T) in inches: $R = r \times T$

2. Determine the R-value of the proposed alternate floor protector.

i. Use the formula in step (1) to convert values not expressed as "R".

ii. For multiple layers, add R-values of each layer to determine overall R-value.

3. If the overall R-value of the system is greater than the R-value of the specified floor protector, the alternate is acceptable.

EXAMPLE: The specified floor protector should be 3/4-inch thick material with a k-factor of 0.84. The proposed alternate is 4" brick with an r-factor of 0.2 over 1/8" mineral board with a k-factor of 0.29.

Step (a): Use formula above to convert specification to R-value.

$$R = \frac{1}{k} \times T = \frac{1}{0.84} \times 0.75 = 0.893$$

Step (b): Calculate R of proposed system. 4" brick of $r = 0.2$, therefore:

$$R_{\text{brick}} = 0.2 \times 4 = 0.431$$

1/8" mineral board of $k = 0.29$, therefore:

$$R_{\text{mineral board}} = \frac{1}{0.29} \times 0.125 = 0.431$$

$$R_{\text{TOTAL}} = R_{\text{BRICK}} + R_{\text{MINERAL BOARD}} = 0.8 + 0.431 = 1.231$$

Step (c): Compare proposed system R_{TOTAL} of 1.231 to specified R of 0.893. Since proposed system R_{TOTAL} is greater than required, the system is acceptable.

DEFINITIONS

$$R = \frac{(\text{ft}^2)(\text{hr})(\text{°F})}{\text{Btu}} \quad k = \frac{(\text{Btu})(\text{in})}{(\text{ft}^2)(\text{hr})(\text{°F})} = K \times 12 \quad K = \frac{(\text{Btu})(\text{ft})}{(\text{ft}^2)(\text{hr})(\text{°F})} \quad r = \frac{(\text{ft}^2)(\text{hr})(\text{°F})}{(\text{Btu})(\text{in})} = \frac{1}{k}$$

2.) INSTALLATION: Venting Requirements

SEE FIG. 4, FIG.5, FIG.6, FIG. 7, FIG. 8, AND FIG. 9

- This 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.
- **A source of fresh air into the room must be provided.**
 - Stove vent must maintain a minimum 36" clearance to any combustible material or at clearance specified by the vent manufacturer if the requirement is greater than 36".
 - Do not connect the stove vent to a vent serving any other appliance or stove.
 - Do not install a flue damper in the exhaust venting system of this unit.

STOVE VENT TYPE

- Four inch (4") 28 gauge sheet metal single wall stove pipe.

INSTALLING THE STOVE VENT

- Sealing each vent section by injecting a liberal amount of high temperature sealant into the gap between sections is recommended.
- Insert stove pipe (D) into the 4" vent collar on the stove body (A) and fasten with 3 sheet metal screws. See FIG. 4. The CSS Model will require a 4" 45/90° elbow offset to clear the hopper.
- Use a listed ceiling support/fire stop spacer when passing through combustible ceiling framing (see FIG. 5 and FIG. 7).

CHECK LOCAL BUILDING CODES FOR SPECIFIC REQUIREMENTS.

- Interior installations, with no ceiling, may pass through a framed opening maintaining a minimum 18" clearance from combustible materials (see FIG 8).
- Use a listed wall thimble when passing the stovepipe horizontally through combustible materials (see FIG. 6 and 9).

CHECK LOCAL BUILDING CODES FOR SPECIFIC REQUIREMENTS.

- Use no more than 180 degrees of elbows (two 90 degrees, or two 45 degree and one 90 degree elbow, etc.) Maximum horizontal run is 36".
- **Consult your local building codes for clearances, thimbles and connections required when connecting the Clarry Pellet Stove to an exiting or new masonry chimney.**

WARNING

DO NOT CONNECT THE STOVE VENT TO A VENT SERVING ANY OTHER APPLIANCE OR STOVE.

DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.

Never a cold moment

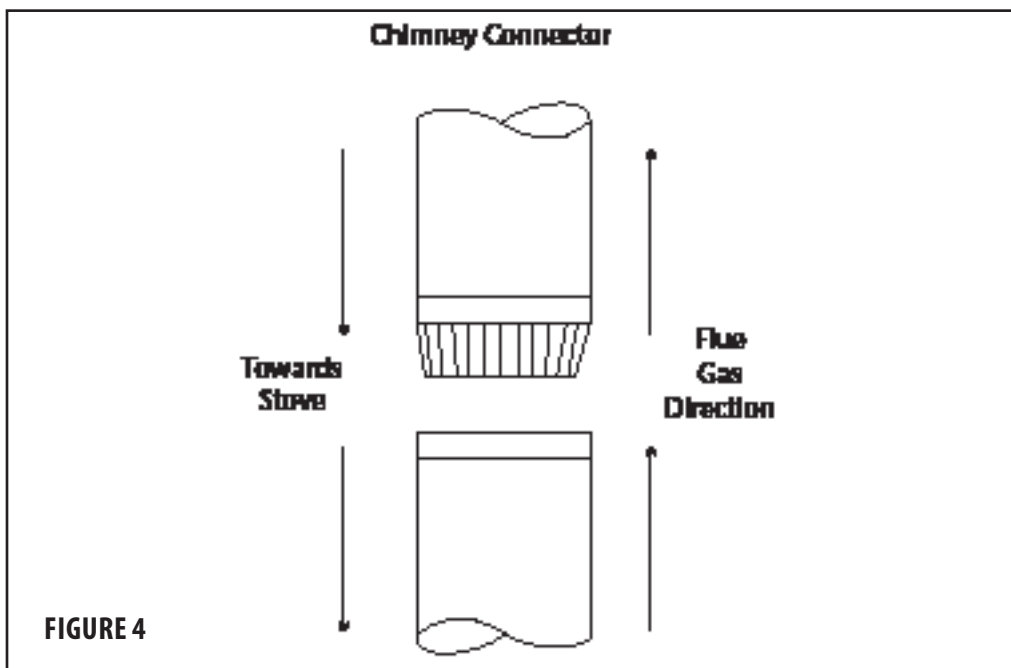
2.) INSTALLATION: Chimney Connection

The chimney connector is a single walled pipe used to connect the stove to the chimney. For use with the Clarry® Pellet Stove, the chimney connector **MUST** be 4" in diameter, with a minimum thickness of 28 gauge black steel.

Aluminum and galvanized steel pipe is not acceptable for use with the Clarry® Pellet Stove. These materials cannot withstand the extreme temperatures of a wood pellet 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 installed to the stove flue collar and to each other with the male (crimped) end toward the stove. See FIG 4.



This prevents any amount of 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 two 90° elbows. The maximum horizontal run is 36" and a recommended total length of stove pipe should not exceed 10 feet. Always slope horizontal runs upward ¼" 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 to NFPA 211, and is also addressed in this manual.

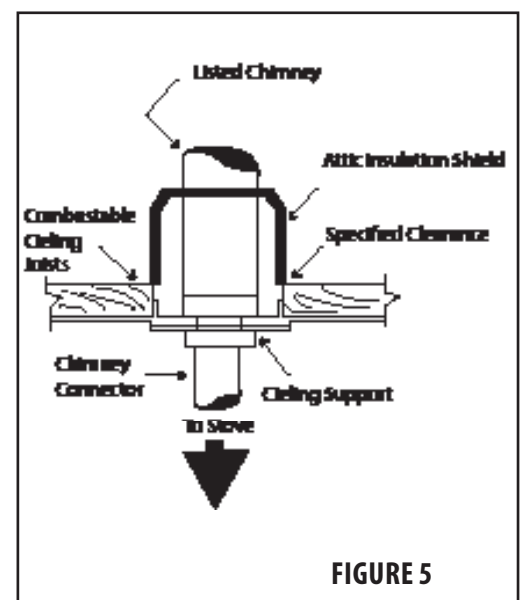
WARNING

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

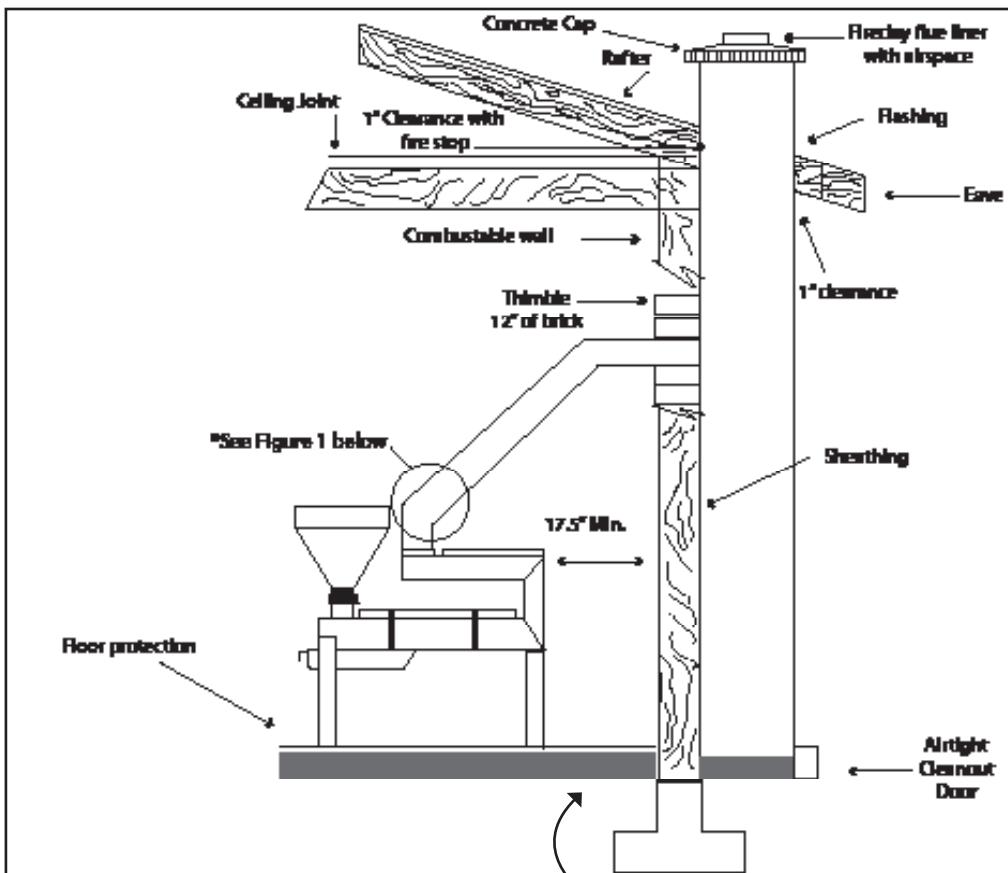
DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.

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, etc. Maintain 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. See page 14 for chimney termination requirements.



2.) INSTALLATION: Chimney Connection



See note page 9 for floor protection extension under chimney connector.

CHIMNEY HEIGHT TYPICAL FOR ALL INSTALLATIONS

A masonry chimney or a listed factory-build chimney must be the required height above the roof and any other nearby obstructions. The chimney must be at least 3' (90 cm) higher than the highest point where it passes through the roof and at least 2' (60 cm) higher than the highest part of the roof or structure that is within 10' (305 cm) of the chimney, measured horizontally.

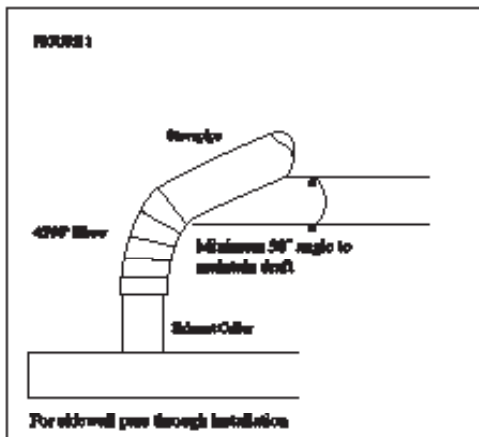
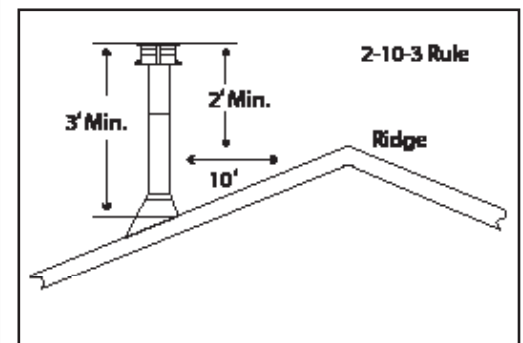


FIGURE 6

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 page 14.

2.) INSTALLATION: Chimney Connection

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 4" (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.

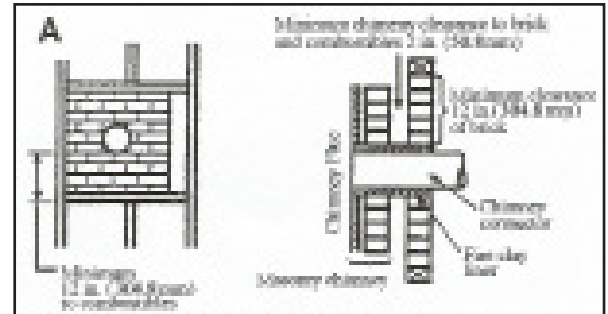
METHOD C.

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 6" (2 inches [51 mm] larger than the 4" [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.

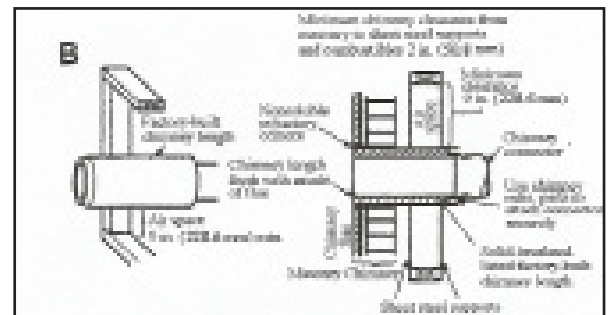
NOTES:

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.

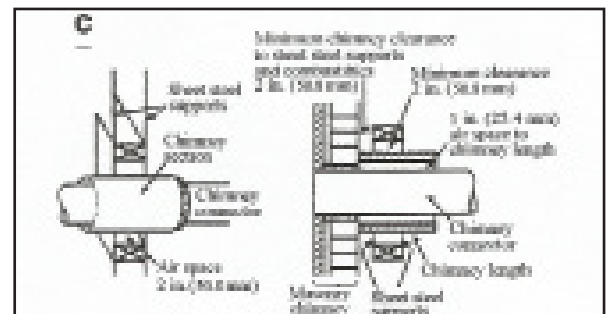
METHOD A.



METHOD B.



METHOD C.



DO NOT TERMINATE THE CLARRY PELLET STOVE VENT PIPE HORIZONTALLY.

CHIMNEY TERMINATION

- Must have a directional wind cap (to prevent water from entering).
- Minimum 3' clearance from any forced air intake of any other appliance.
- Minimum 1' clearance horizontally from combustible wall.
- Must be a minimum of 3' above the roof, or 2' above the roof ridgeline with 10' of roof penetration.
- Minimum 5' clearance from any door opening.

2.) INSTALLATION: Interior Vertical Installations

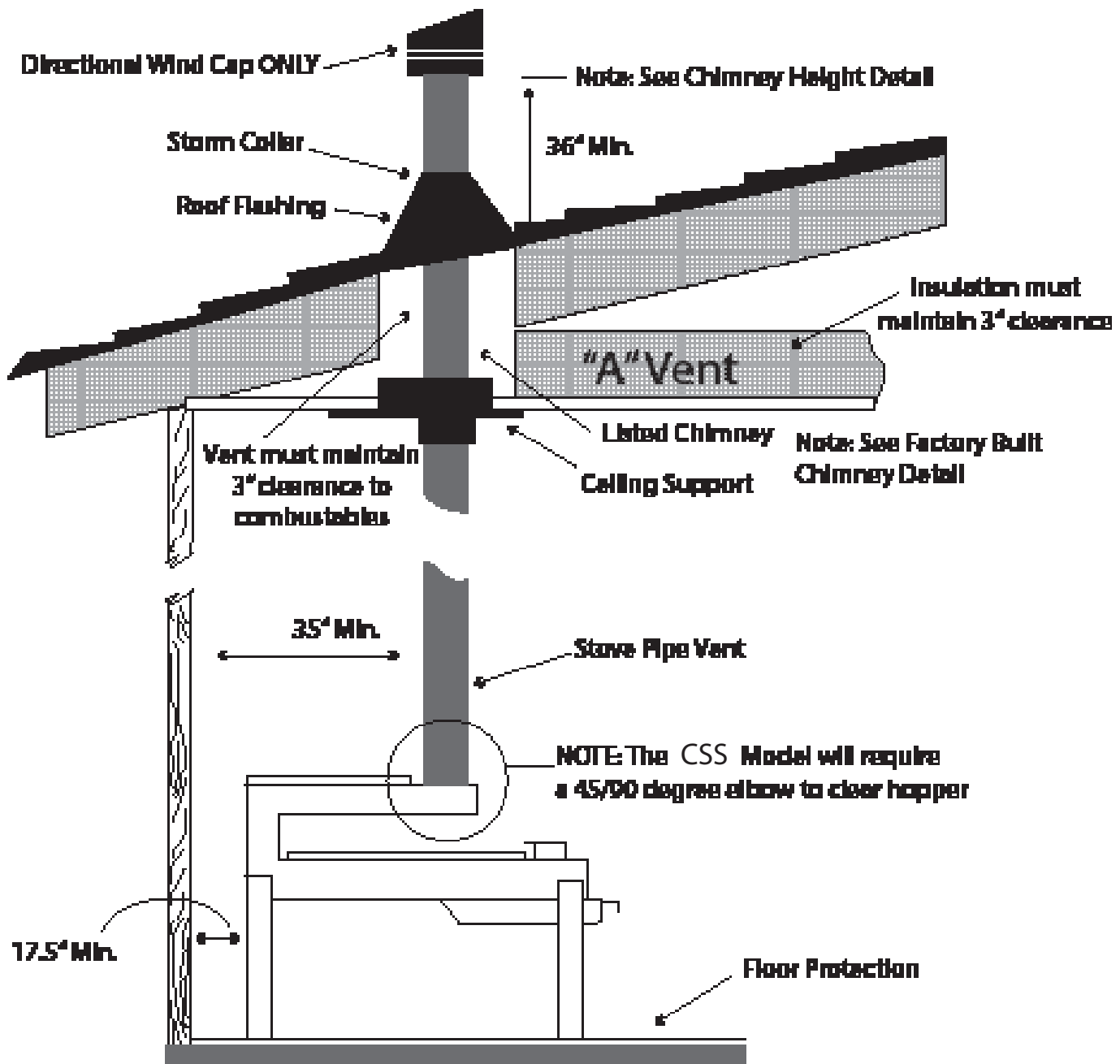


FIGURE 7

2.) INSTALLATION: Interior Vertical Installations

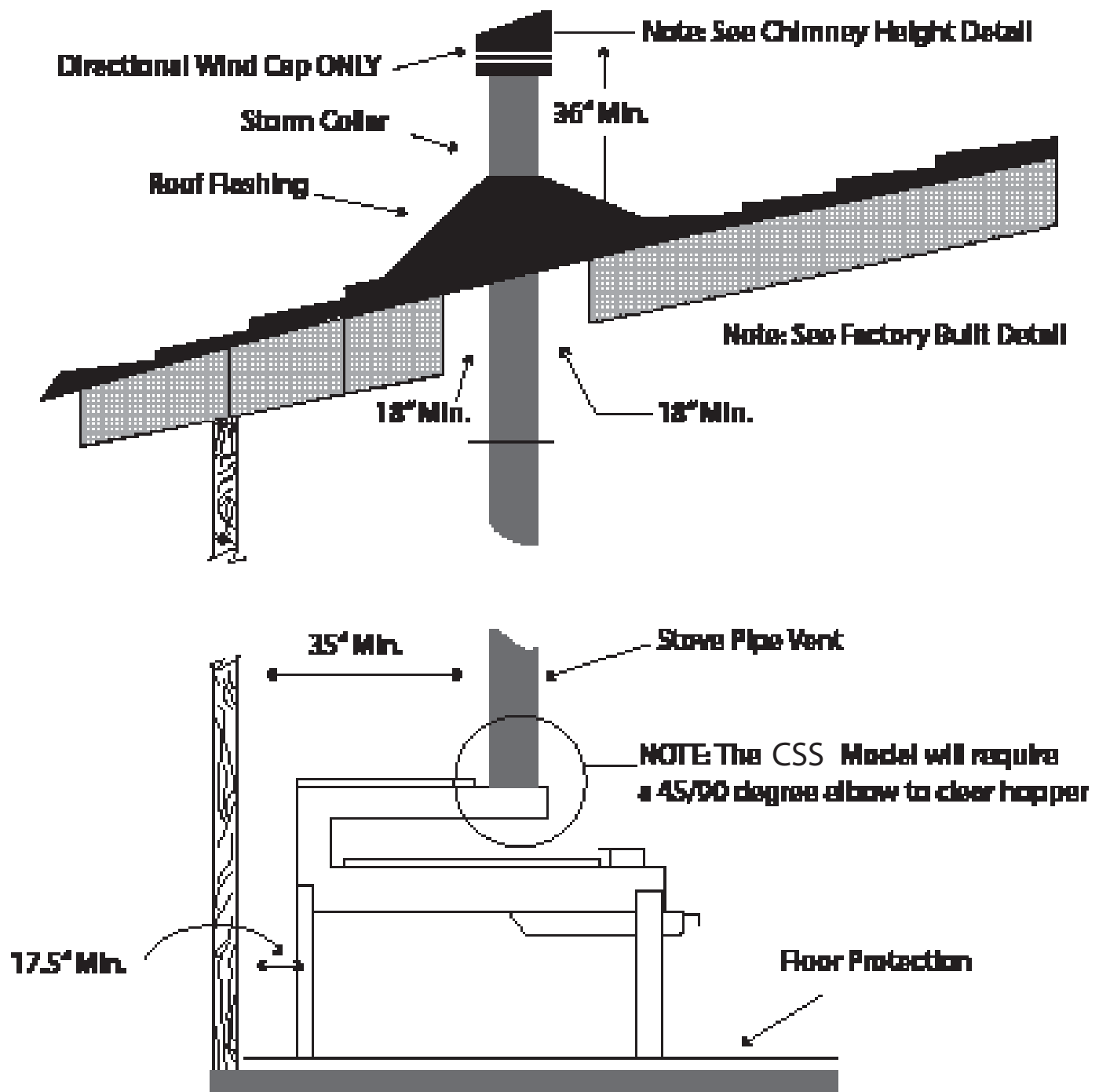
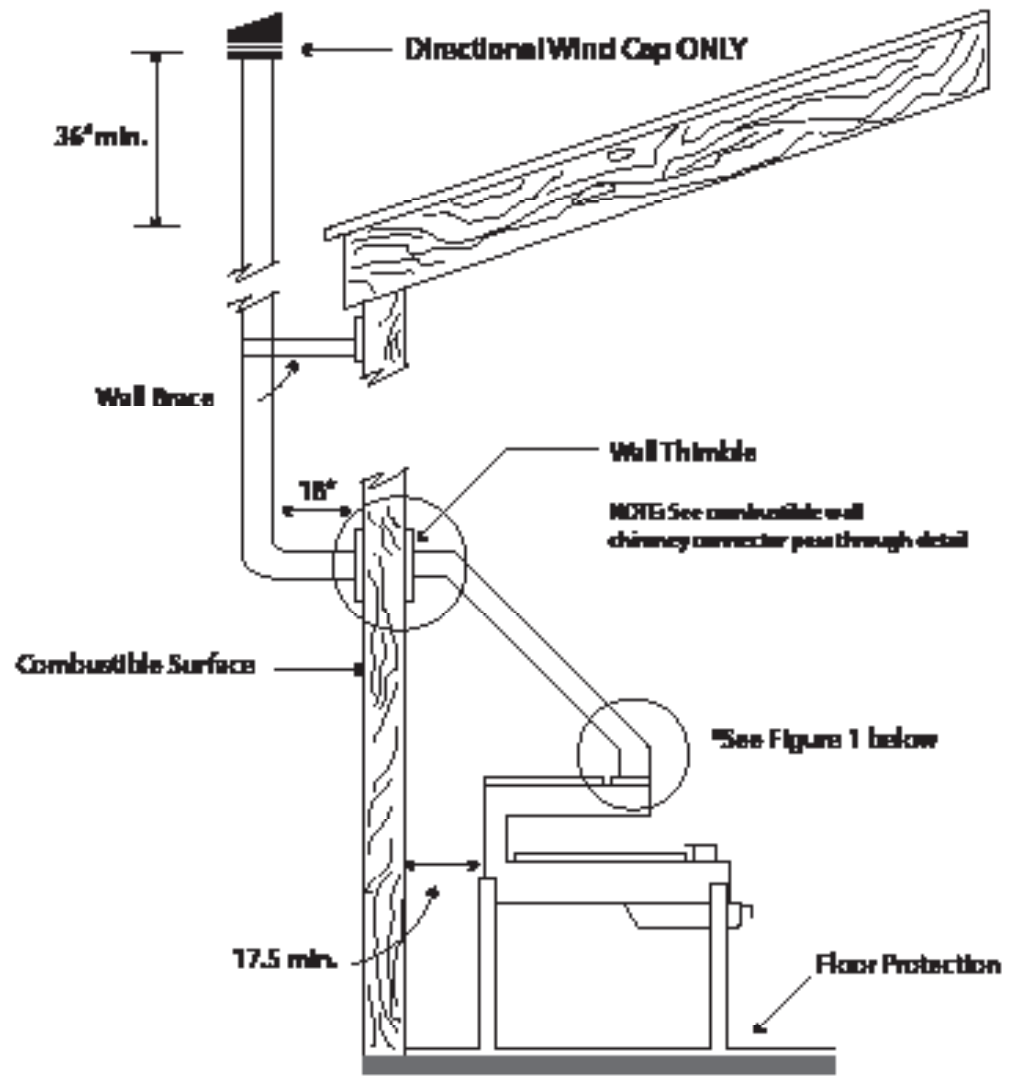


FIGURE 8

2.) INSTALLATION: Interior Horizontal Installation



See note page 9 for floor protection extension under chimney connector.

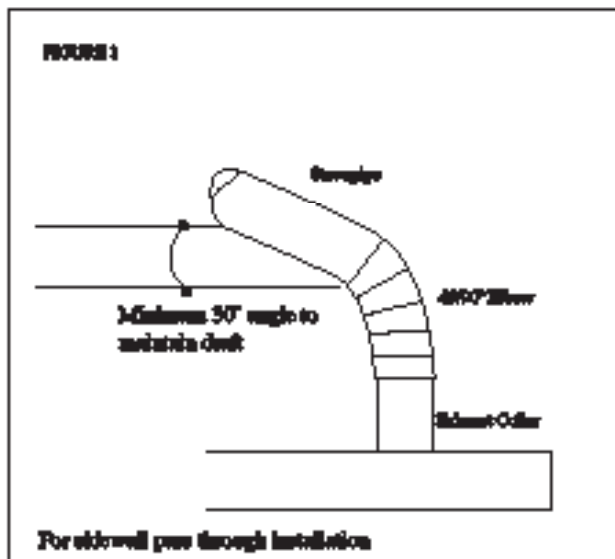


FIGURE 9

3.) OPERATION: Operating Instructions

OPERATING INSTRUCTIONS REFER TO FIGURE 2.)

1. Fill the hopper (C) with one 40-lb. bag of "PREMIUM or Super Premium" pellets. This unit is designed for wood pellets that comply with the standards set by the Association of the Pellet Fuel Industry (density of at least 40 lbs. per cubic foot, 1/4" to 5/16" diameter, length no greater than 1 1/2", 8200 BTU's/lb., moisture under 8% by weight, ash under 1% by weight, and salt under 300 parts per million). If the fuel does not comply with this standard, the unit may not operate as designed. Our stoves operate best using pellets with <6% moisture content.

2. Open the shut off gate (C.1), allowing the pellets to drop into position in the firebox. Note: Tighten the setscrew (C.2) in the shut off gate to avoid misplacing the shut off gate (C.1).

3. Next, open the ash drawer (A.2). A few pellets will have fallen through the fire grate. That's OK. Squeeze a liberal amount of liquid gel fire starter, or stack several wax/sawdust fire sticks into the drawer, aiming at the center of the drawer. Light it with a match, then push the drawer in until you reach the first notch (A.2-2), the fire starting position and push the door (A.3) into the notch. This is also the final burning position and will allow some air control for the fire. Make sure damper door (A.3.1) completely covers the opening in grate access door. (.3)

WARNING: FAILURE TO FOLLOW THIS PROCEDURE WILL LEAD TO "OVER FIRING" THE STOVE. IF THE SIDES OF THE FIRE CHAMBER GLOW CHERRY RED, THE STOVE IS BEING "OVER FIRED"! "OVER FIRE" CAN CAUSE DAMAGE TO THE STOVE, AND MAY RESULT IN CAUSING A FIRE AT THE SURROUNDING SURFACES.

4. Air Control – The stove will reach maximum heating capacity with the Damper Door (A.3.1) closing off the control air opening. Once the stove has reached full heating capacity, begin to slide the Damper Door (A.3.1) up exposing the opening in the Grate Access Door (A.3). Adjust to personal comfort. Exposing the entire 1" x 5" opening allows the stove to operate at a much lower temperature.

5. As fuel is consumed, pellets will continue to slide down into the firebox and your fire will continue to burn. One 40-lb. bag will burn for approximately eight (8) hours.

WARNING

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.

WARNING: FAILURE TO FOLLOW THIS PROCEDURE CAN LEAD TO "OVER FIRING" THE STOVE. IF THE SIDES OF THE FIRE CHAMBER GLOW CHERRY RED, THE STOVE IS BEING "OVER FIRED"! "OVER FIRE" CAN CAUSE DAMAGE TO THE STOVE, AND MAY RESULT IN CAUSING A FIRE AT THE SURROUNDING SURFACES.

3.) OPERATION: Operating Instructions

HEAT OUTPUT

Temperatures exceeding 900 degrees in the fire chamber and 500 degrees at the heat exchanger are reached in 15 minutes. Do not touch the stove, or place any combustible materials within 36 inches.

DANGER – Fire Hazard/Carbon Monoxide Hazard

1. This stove may start other fires. Never operate this stove in places without a fresh air source or in places that contain or may contain volatile and inflammable liquids or vapors. Never operate this stove where airborne combustibles or products such as gasoline, solvents, paint thinners, or unknown chemicals may be found.
2. This stove consumes air (oxygen) and produces carbon monoxide. Using this product in unventilated or enclosed areas, without a source of fresh air make up, may cause injury or death.
3. Carbon Monoxide poisoning may be accompanied by symptoms such as watery eyes, fatigue and dizziness. If you experience these symptoms while using this product, get fresh air immediately.
4. Ensure the stove fire is out and cool before emptying the contents. Pellet embers and ash can smolder and remain very hot for a long period time without smoke.
5. Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible surface 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 disposed, they should be retained in the closed container until all cinders have been thoroughly cooled.

SHUTTING DOWN THE STOVE

1. Close the manual shut off gate (C.1) to keep any more pellets from sliding into the firebox. Re-tighten the set screw (C.2). The fire should go completely out in about 20 minutes.
2. Ensure the stove fire is out and cool before emptying the contents. Using the Door Latch Tool provided, remove the ash drawer to empty the ashes.
3. It is important to leave the Ash Drawer (A.2) open in the operating position notch (A.2-1) to allow air to continue to enter the firebox until the fire has completely burned all of the pellets. Closing the ash drawer prior to completely burning all of the pellets may cause the fire to smolder and put smoke into your shelter due to lack sufficient air to completely burn all of the remaining pellets.

SEE MAINTENANCE INSTRUCTIONS THAT FOLLOW, FOR PROPER DISPOSAL OF ASHES.

WARNING

DANGER: FIRE HAZARD AND CARBON MONOXIDE HAZARD

Never a cold moment

4.) MAINTAINING THE STOVE

CLEANING THE STOVE WHEN YOU'RE USING IT FOR AN EXTENDED PERIOD IS EXTREMELY IMPORTANT.

1. After every use, remove the ash from the ash drawer.

Note: 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 has been thoroughly cooled.

2. Remove the grate daily and clean it with a wire brush.

3. Soot and Fly-ash: Formation and Need for Removal. The products of combustion will contain small particles of fly-ash. The fly-ash will collect in the exhaust venting system and restrict the flow of the flue gases. Incomplete combustion, such as occurs during startup, shutdown, or incorrect operation of the stove will lead to some soot formation which will collect in the exhaust venting system. The exhaust venting system should be inspected at least twice every year to determine if cleaning is necessary.

4. Creosote: Formation and 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 on the flue lining. When ignited, this creosote makes an extremely hot fire.

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

Never a good moment

5.) WARRANTY

Clarry® Pellet Stove LLC warrants to the original retail purchaser of a Clarry® Stove that the stove is free from defects in material and workmanship. This warranty extends only to the original retail purchaser of a Clarry® Stove, is not transferable, and shall expire one year after the date of the original retail purchase of the stove. If a defect in material or workmanship is discovered in the stove or any of its components during the one year warranty period, Clarry® will, at its option, either: (i) repair or replace the stove or the component; or (ii) refund the purchase price of the stove. If Clarry® determines to replace a defective stove or component of the stove, it will do so with a new or re-manufactured stove or component. If the original stove or component which is defective is no longer available, Clarry®, at its option, will replace the defective stove or component with a similar stove or component of equal or greater value.

THE ABOVE WARRANTY IS THE EXCLUSIVE WARRANTY GIVEN FOR THE CLARRY® STOVE. THERE ARE NO OTHER WARRANTIES APPLICABLE TO THE CLARRY® STOVE, EXPRESS OR IMPLIED.

Keep the original sales receipt, as proof of purchase is required to obtain warranty service. The warranty does not extend to normal wear and tear of the stove or its components or damage to the stove or its components caused by: (i) negligent use or misuse of the stove or its components; (ii) use of the stove or components contrary to the operating instructions; (iii) disassembly, repair or alteration of the stove or its components by anyone other than Clarry®; or (iv) natural disasters, such as fire, flood, etc. Clarry® shall in no event be liable to a purchaser of the stove or any third party for consequential, indirect or incidental damages of any type, kind or nature, or for damage to or failure of other equipment, caused by a defect in the stove or component thereof.

Clarry® is a registered Trademark of Clarry Pellet Stove, LLC

Clarry Pellet Stove, LLC
P.O. Box 2097
Battle Ground, WA 98604
1-844-4CLARRY



THE ORIGINAL NO POWER NEEDED, GRAVITY FED, ULTRA-EFFICIENT PELLET STOVE

The Clarry[®] Outdoor Adventure Stove RE & RME Models Owner's Manual

INSTALLATION AND OPERATING INSTRUCTIONS



Clarry® Pellet Stove

This product is patented under US Patent #8020547
and Canadian Patent # CA2604313
Made in the USA

Clarry® is a registered trademark of Clarry Pellet Stove, LLC

Clarry Pellet Stove, LLC
P.O. Box 2097
Battle Ground, WA 98604
1-844-4CLARRY

MODELS RE & RME FOR OUTDOOR ADVENTURES



Never a cold moment

1.) SETTING UP THE STOVE

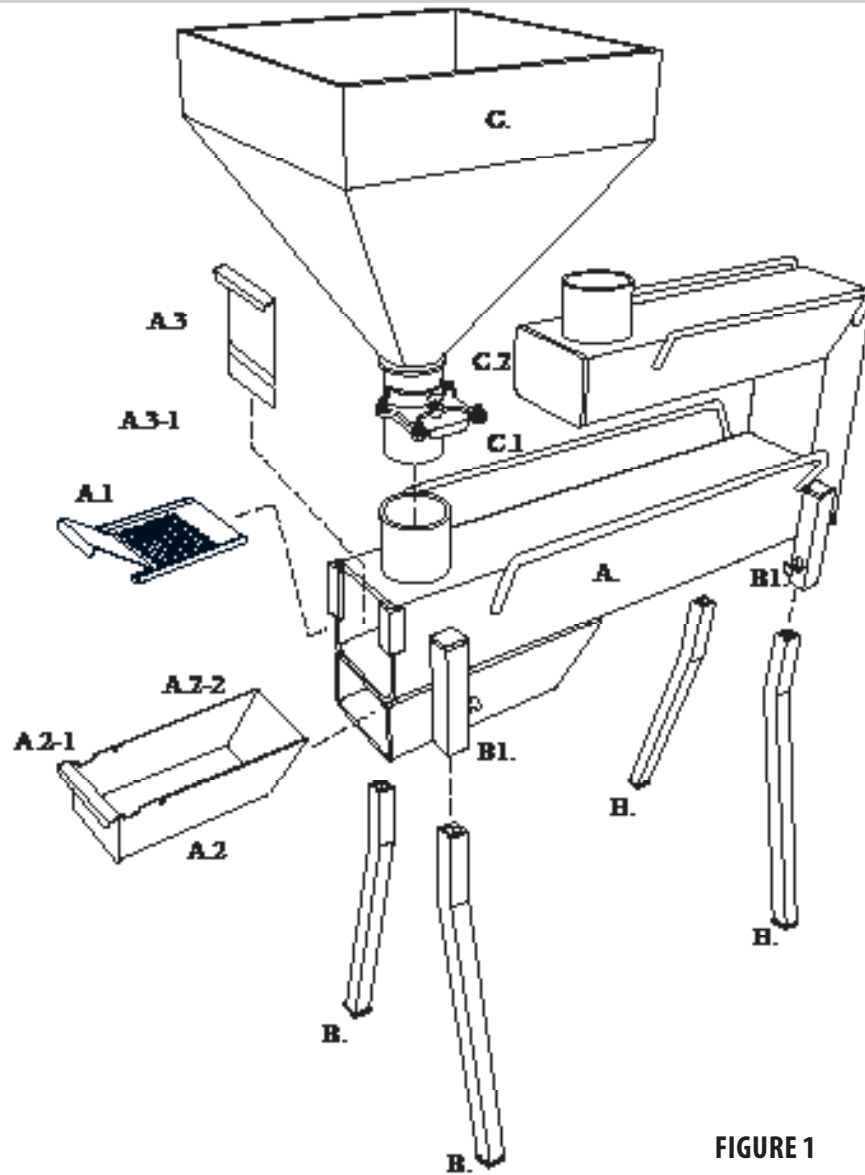
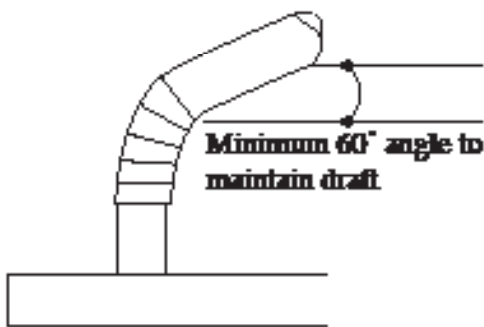
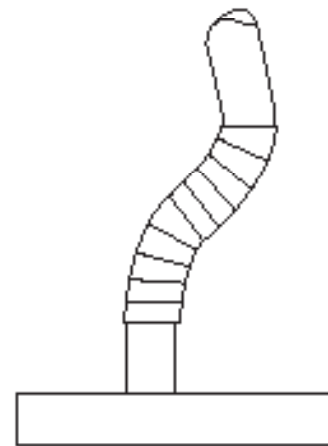


FIGURE 1



**For sidewall pass through installation
APPLIES TO RE & RME MODELS**



**For roof pass through installation
RME MODEL ONLY**

1.) SETTING UP THE STOVE

STOVE ELEMENTS

- A.) Stove body (A), which includes the grate (A.1), ash drawer (A.2), and grate access door (A.3) with damper door (A.3.1)
- B.) Four (4) legs (B) and four (4) set screws (B.1)
- C.) Hopper (C). Holds the wood pellets
- D.) Two (2) each 4", 45/90° elbows (D.1) for the RME only.

IMPORTANT- THE FOLLOWING MATERIALS NEED TO BE PURCHASED FOR FINAL ASSEMBLY:

1. 4" 28 gauge black stovepipe. (D)
2. One or more 4" 45/90 ° elbows for tent sidewall fire boot locations.
3. A directional wind cap may be used at the top of the stovepipe to eliminate snow or rain entering the stovepipe. No other device, such as a China hat can be used.

ASSEMBLY

1. Tip the stove body (A) on end, insert the legs (B) and loosely tighten the set screws (B.1)
2. Move the stove (A) into the upright position. Adjust the legs (B) so that the stove is level. Finish tightening the setscrews (B.1).
3. Lift fire chamber access door (A.3) and slide grate (A.1) into the fire chamber in body (A). Push in firmly until it stops against the pellet delivery chute.

WARNING: FAILURE TO FOLLOW THIS PROCEDURE WILL LEAD TO "OVER FIRING" THE STOVE. IF THE SIDES OF THE FIRE CHAMBER GLOW CHERRY RED, THE STOVE IS BEING "OVER FIRED"! "OVER FIRE" CAN CAUSE DAMAGE TO THE STOVE, AND MAY RESULT IN CAUSING A FIRE AT THE SURROUNDING SURFACES.

4. Insert the stovepipe (D) into the 4" 45/90° elbow (D.1) in the exhaust collar (A.4) on body (A). Make sure you have the proper configuration for a ceiling/roof opening or sidewall opening.
5. Put the pellet hopper (C) into the 3" collar on body (A). The manual shut off gate (C.1) should be closed.

IMPORTANT: The exhaust pipe (D.) must extend a minimum of two (2) feet above the highest point of the tent (structure) to maintain proper draft, regardless of a roof pass through or sidewall pass through installation. Do not put any kind of a weather cap on top the flue, as it will restrict draft flow. Not following this procedure will cause the stove to not burn properly and may force smoke from the stove into your tent or structure.

WARNING

WARNING: FAILURE TO FOLLOW THIS PROCEDURE WILL LEAD TO "OVER FIRING" THE STOVE. IF THE SIDES OF THE FIRE CHAMBER GLOW CHERRY RED, THE STOVE IS BEING "OVER FIRED"! "OVER FIRE" CAN CAUSE DAMAGE TO THE STOVE, AND MAY RESULT IN CAUSING A FIRE AT THE SURROUNDING SURFACES.

IMPORTANT: THE EXHAUST PIPE (D.) MUST EXTEND A MINIMUM OF TWO (2) FEET ABOVE THE HIGHEST POINT OF THE TENT (STRUCTURE) TO MAINTAIN PROPER DRAFT, REGARDLESS OF A ROOF PASS THROUGH OR SIDEWALL PASS THROUGH INSTALLATION. DO NOT PUT ANY KIND OF A WEATHER CAP ON TOP THE FLUE, AS IT WILL RESTRICT DRAFT FLOW. NOT FOLLOWING THIS PROCEDURE WILL CAUSE THE STOVE TO NOT BURN PROPERLY AND MAY FORCE SMOKE FROM THE STOVE INTO YOUR TENT OR STRUCTURE.

2.) OPERATION

OPERATING INSTRUCTIONS: SEE FIGURE 1

1. Fill the hopper (C) with one 40-lb. bag of "PREMIUM or Super Premium" grade pellets. This unit is designed for wood pellets that comply with the standards set by the Association of the Pellet Fuel Industry (density of at least 40 lbs. per cubic foot, 1/4" to 5/16" diameter, length no greater than 1 1/2", 8200 BTU's/lb., moisture under 8% by weight, ash under 1% by weight, and salt under 300 parts per million). If the fuel does not comply with this standard, the unit may not operate as designed. Our stoves operate most efficiently using pellets with <6% moisture content. Operating the stoves at elevations above 5,000 feet may require "Super Premium" pellets with <4%, or <2.5% as elevations increase.
2. Fully open the shut off gate (C.1), allowing the pellets to drop into position in the firebox. Note: Tighten the setscrew (C.2) to avoid misplacing the shut off gate (C.1).
3. Next, open the ash drawer (A.2). A few pellets will have fallen through the fire grate. That's OK. Place several waterproof wax and sawdust fire sticks (such as Coghlan's) in drawer. Light with a match, then push the drawer in until you reach the first notch (A.2-2), the fire starting position. Make sure the grate access door (A.3) fits into the notch and the damper door (A.3.1) completely covers the opening in the grate access door (A.3).

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.

4. Once the fire is burning, but always within 5 minutes, close ash drawer (A.2) down to the second notch (A.2-1) and push the door (A.3) firmly into the notch. This is the final burning position and will allow some air control for the fire. Make sure damper door (A.3.1) completely covers the opening in grate access door. (A.3)

WARNING: FAILURE TO FOLLOW THIS PROCEDURE WILL LEAD TO "OVER FIRING" THE STOVE. IF THE SIDES OF THE FIRE CHAMBER GLOW CHERRY RED, THE STOVE IS BEING "OVER FIRED"! "OVER FIRE" CAN CAUSE DAMAGE TO THE STOVE, AND MAY RESULT IN CAUSING A FIRE AT THE SURROUNDING SURFACES.

5. Air Control- The stove will reach maximum heating capacity with the Damper Door (A.3.1) closing off the control air opening. Once the stove has reached full heating mode, usually after 30 minutes, begin to slide the Damper Door (A.3.1) up exposing the opening in the Grate Access Door. Adjust to personal comfort and set position by tightening the thumbscrew. Exposing the entire 1"x5" opening allows the stove to run at a much lower temperature.
6. As fuel is consumed, pellets will continue to slide down into the firebox and your fire will continue to burn. One 40-lb. bag will burn for approximately eight (8) hour in the RE Model stove and twelve (12) hours in the RME Model stove.

WARNING: NEVER LEAVE A BURNING STOVE IN YOUR TENT UNATTENDED.

WARNING

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.

WARNING: FAILURE TO FOLLOW THIS PROCEDURE WILL LEAD TO "OVER FIRING" THE STOVE. IF THE SIDES OF THE FIRE CHAMBER GLOW CHERRY RED, THE STOVE IS BEING "OVER FIRED"! "OVER FIRE" CAN CAUSE DAMAGE TO THE STOVE, AND MAY RESULT IN CAUSING A FIRE AT THE SURROUNDING SURFACES.

WARNING: NEVER LEAVE A BURNING STOVE IN YOUR TENT UNATTENDED.

2.) OPERATION

“BURNING IN THE STOVE”

- Prior to placing the Clarry® Pellet Stove in your structure, you must burn the stove in for 20 minutes, to set the stove paint.
- Assemble the stove in an outdoor location according to the directions above; bring it to operating temperature, or to the point where the paint stops smoking.
- Make sure that any time you light the stove outdoors the chimney is not positioned directly under a low hanging tree branch or near a structure.
- Once the stove has been burned in and cooled down, it is ready to install.

CONTINUOUS OPERATION

It is extremely important to do the following maintenance during periods of continuous operation:

1. Check ash drawer build up. It is best to empty daily
2. Remove and wire brush clean the grate daily
3. Remove, check and clean the first section of flue pipe and exhaust collar if any soot residue appears.

SHUTTING DOWN THE STOVE

1. Close the manual shut off gate (C.1) to keep any further pellets from sliding into the firebox. Re-tighten the setscrew (C.2) to secure gate in the closed position.
2. It is important to leave the Ash Drawer (A.2) open in the operating position notch (A.2-1), to allow air to continue to enter the firebox, until the fire has completely burned all the pellets.

CAUTION: CLOSING THE ASH DRAWER PRIOR TO COMPLETELY BURNING ALL THE PELLETS MAY CAUSE THE FIRE TO SMOLDER AND PUT SMOKE INTO YOUR SHELTER, DUE TO LACK OF SUFFICIENT AIR TO COMPLETELY BURN ALL THE REMAINING PELLETS.

3. Make sure the fire is completely out and cool before emptying the contents of the ash drawer.

CAUTION

CAUTION: CLOSING THE ASH DRAWER PRIOR TO COMPLETELY BURNING ALL THE PELLETS MAY CAUSE THE FIRE TO SMOLDER AND PUT SMOKE INTO YOUR SHELTER, DUE TO LACK OF SUFFICIENT AIR TO COMPLETELY BURN ALL THE REMAINING PELLETS.

WHY WON'T MY STOVE BURN...?

1. There are only a few reasons your stove will not light or maintain a continuous burn.
2. Pellets: (A) Old pellets from last season, yours or a manufacturer's, may have drawn moisture. (B) Pellets with >8% moisture. (C) Southern Pine Pellets. All of these circumstances will cause grate hole plugging, pellet swelling in the hopper chute or soot build up in the flue.
3. Ash Drawer: Too much ash accumulation may restrict airflow to the burn chamber.
4. Grate: The holes in grate will accumulate residue over time and eventually block air coming to the burn chamber, if not cleaned daily.
5. Obstructions: Obstruction may include; grate hole plugging, exhaust collar and flue pipe soot build up, pellet swelling in the hopper chute, partially open hopper shut-off gate and any flue cap installed on top of the flue pipe, other than a directional wind cap.