

# INSTALLATION

For over two centuries, New Englanders have heated their homes with soapstone stoves. A properly installed and operated soapstone stove will warm your home and delight your eye for a lifetime.

**Read this entire manual carefully.** It explains how to install your Woodstock Soapstone Absolute Steel Hybrid Wood Stove safely and how to operate it correctly and efficiently. The clearances and procedures recommended in this guide are in compliance with the recommendations of the National Fire Protection Association (NFPA), the Underwriters Laboratories (UL), and the U. S. Environmental Protection Agency (EPA). You may feel some of them are very stringent, but they should be followed. They were designed to protect you, your home, and the environment. **Improper installations are a major cause of serious fires. Failure to follow instructions may result in property damage, bodily injury, or death.**

Before installing a woodstove, check your local building codes and any requirements established by your insurance company.

You may need a local building permit to install your stove. Any changes in your home must comply with building codes. If the codes have not been fully updated, you may want to check with the Building Inspection Department or your local Fire Department. A qualified stove installer should be aware of any changes and updates to local and

state codes and may be best suited to handle your installation work.

Many chimney sweeps are qualified installers. If you are unfamiliar with sweeps or need to locate a certified sweep in your area, you can check listings at [www.csia.org](http://www.csia.org) (Chimney Safety Institute of America). Builders and contractors are another option. In some cases, homeowners install their own stoves. Before installing your stove, please review carefully the stove installation, clearance, and safety information in this manual. Woodstock Soapstone has NFI (National Fireplace Institute) certified woodburning specialists on staff and available to answer any questions you may have about your installation. If you have questions, please call us toll free at 1-800-866-4344.

You should notify your insurance company that you are using a woodstove. Before you light your first fire, have a local building inspector and your insurance representative inspect, and approve in writing, your installation.

When this room heater 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.



## LOCATION

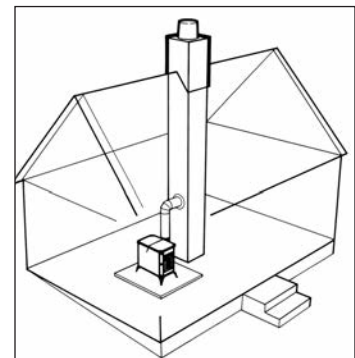
A stove which is centrally located will heat the greatest area of your home. Heat should be able to circulate easily into nearby rooms. Placing your stove near an open stairway or register in the floor will help transfer heat to other rooms.

Other installation considerations are:

- Clearance to Combustibles
- Adequate Space for Wood Loading and Ash Removal
- Room Traffic Patterns

Most people install their stove in a room they use frequently where they can enjoy the beauty and comfort of the stove. This also helps in the monitoring and reloading the stove as needed.

A well-planned placement will enhance your enjoyment of your stove and may save installation costs.



*The best location for a chimney and woodstove is in the center of the house. The chimney will be warmer, draft will be better, and radiant heat will be distributed more evenly.*

### ALCOVE INSTALLATIONS

**THE MODEL 211 ABSOLUTE STEEL HYBRID WOODSTOVE IS NOT APPROVED FOR AN ALCOVE INSTALLATION. AN ALCOVE IS DESCRIBED AS AN AREA LESS THAN 512 CUBIC FEET, WHICH IS EQUIVALENT TO AN 8'X8'X8' SPACE.**

# CHIMNEYS

Your chimney is a critical component of your wood heating system. A properly designed and constructed chimney will help to provide safe and efficient woodstove operation. Hot exhaust rising up through the chimney also pulls combustion air into the stove through the air damper. If a chimney is too short, or the flue too large, the hot exhaust will cool and slow down. This can lead to poor stove performance, smoke spillage, back puffing, and even creosote build up in the chimney itself. An excessively tall chimney could lead to a strong draft, which may make the fire difficult to control with the stove damper. A draft that is too strong could result in over firing the stove and lead to damage to the steel components as well as the catalytic combustor. An uncontrollable burn or excessive stove or pipe temperatures can indicate excessive draft. Whether you are installing a new chimney, or adapting an existing chimney to your woodstove, close attention to chimney height, flue size, and location should be considered.

## Chimney Flue Sizing:

The ideal flue size for the Absolute Steel Hybrid is 6" (28 sq.in.), which is the same diameter as the stove's flue collar.

If upsizing needs to occur due to an existing chimney the following general rules apply:

1. **Interior Chimney** (no walls of the chimney exposed to the outside below the roofline): the inside cross-sectional area of your chimney should be no more than 3x (85 in<sup>2</sup>) the cross-sectional area of the woodstove flue collar.
2. **Exterior Chimney** (if there are one or more walls exposed to the outside below the roofline) - The flue should be no more than 2x (57 in<sup>2</sup>) the cross-sectional area of the flue collar.

**Recommendation:** The Absolute Steel Hybrid has a 6 inch flue collar, thus an 8 inch x 10 inch rectangular or 10 inch round flue tile for an **inside** chimney are the maximum flue sizes we recommend for this stove. For an **outside** chimney, an 8 inch x 8 inch square or 8 inch round would be the largest acceptable. The smallest size we recommend is 6 inches round, as the flue should not be less than the flue collar size.

Note: For flues that exceed the recommended area, a stainless steel chimney liner is recommended.

## Height Requirements:

The chimney must extend 3 ft. above the point where it passes through the roof and must also be 2 ft. higher than any roof surface or obstruction within 10 feet (measured horizontally) of the chimney. You should check your local building codes for any other requirements.

The recommended minimum chimney height is 15 feet from the flue collar of the stove to the top of the chimney. This includes connector pipe and chimney pipe. There may be other factors to conform to code for clearances on the roof, high wind, high altitude, etc., that may make the *minimum* height undesirable or a violation of building codes.

## CHIMNEY TYPES

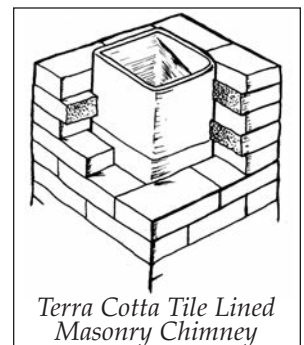
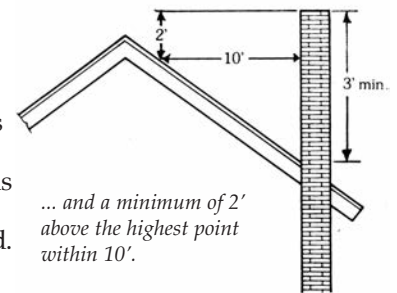
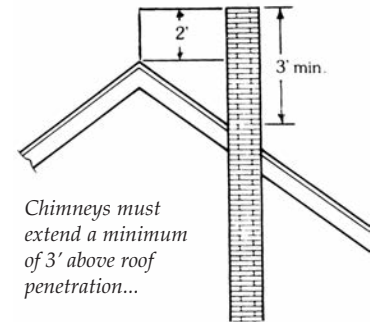
 **DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

There are two acceptable types of chimneys: (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** A code-approved masonry chimney with a flue liner.

## Lined Masonry Chimneys:

Always have the chimney inspected prior to your stove installation. If your chimney is not lined with appropriately sized clay flue tiles, or the clay tiles are old, cracked, damaged or otherwise compromised, a stainless steel chimney liner or poured liner will be required. Depending on the condition of your flue or clay tiles, the stainless steel liner may need to be wrapped in a high temperature insulation blanket. A liner may also be recommended if your flue is too large for the draft to flow properly (please refer to the section on chimney sizing). Our customer service department can answer any questions regarding the use of a liner and/or insulating blanket. Call 1-800-866-4344.

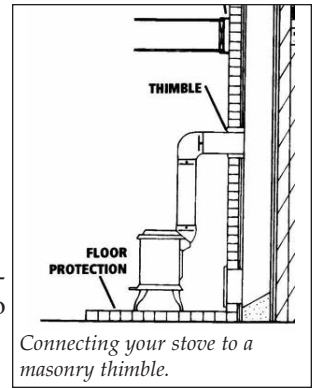
Existing chimneys should be checked twice a year for obstructions, creosote deposits, surface cracks, chemical deterioration and poor construction. Any damage should be repaired immediately. Two other chimney



related areas that should be checked are chimney penetrations at the floor or ceiling joists, and at the roofline. There should be at least 2 inches of clearance between the chimney and floor joists or other combustible materials. Poor flashing between the chimney and the roofline can cause leaks and deterioration of chimney mortar.

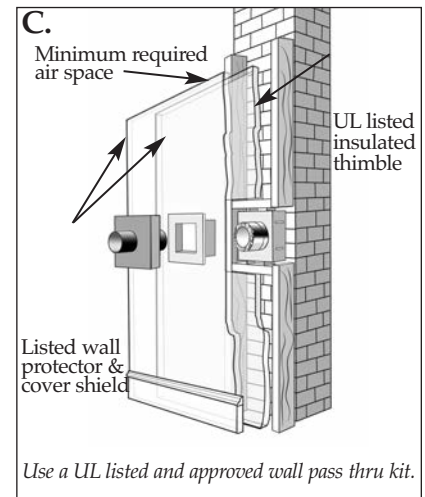
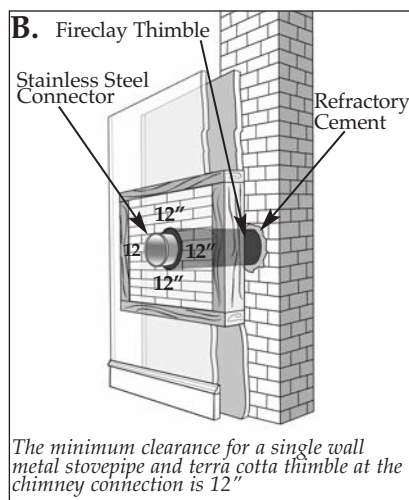
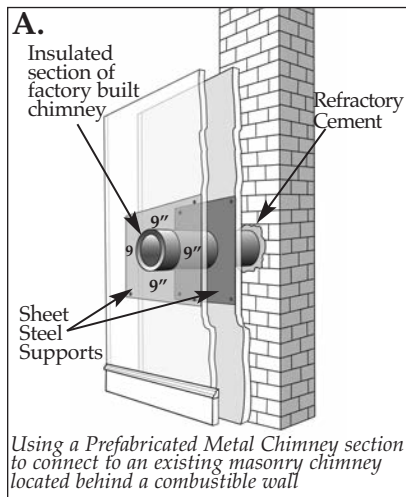
You should make preliminary checks, but if you have any doubts, or are unfamiliar with chimney construction, cleaning, or maintenance, have a local fire official or certified chimney professional inspect your chimney. If repairs are required, be sure to use someone who is knowledgeable in chimney work and familiar with local code requirements.

In addition: All brick or cinder block chimneys should have clean out access with a tightly fitting door. Masonry chimneys should have a wash at the top. All chimneys should have a cap to keep out rain and snow and to minimize downdrafts caused by wind.



## Passing Through A Combustible Wall:

With an exterior chimney, in most cases the chimney connector (or stove pipe) will need to pass through a combustible wall. The following are acceptable methods:



**A.** Use a section of Solid Insulated Prefabricated Metal Chimney to connect to the chimney - Use a section of insulated prefabricated 2100° Class A chimney pipe listed to UL 103 HT (at least 1" of insulation or greater) the same inside diameter as the stove pipe and maintain a 9" air space between the wall of the prefabricated chimney and the combustible wall. This section of chimney pipe can be supported by a sheet metal plate securely fastened to the combustible wall, with a hole cut in the middle of it. This will close the gap around the chimney pipe and the framed opening. (See Diagram A Above)

**B.** Build a solid brick surround around a tile liner - Frame a 3.5" thick brick surround into the combustible wall you need to pass through. Maintain a minimum 12" brick separation from the clay liner to combustibles. The minimum 5/8" thick clay liner should be cemented in place and run from the outer surface of the brick to the inner surface of the chimney. (See Diagram B Above)

**C.** There are also UL Listed kits available that are specifically designed for passing through a combustible wall. For more information on these kits, please contact Woodstock Soapstone Company. Please note: there are several UL listed wall pass through kits available, always follow the specific manufacturers installation instructions. (See Diagram C Above)

For other methods, please refer to NFPA 211.

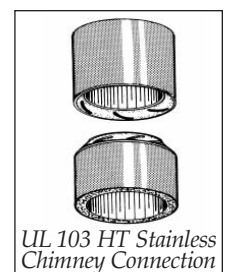
**REMEMBER, UNPROTECTED SINGLE OR DOUBLE WALL STOVE PIPE SHOULD NOT PASS THROUGH A COMBUSTIBLE WALL OR CEILING TO CONNECT TO THE CHIMNEY. YOU MUST USE AN APPROVED METHOD WHICH PROVIDES GREATER PROTECTION THAN SINGLE OR DOUBLE WALL PIPE.**

## Prefabricated Metal Chimneys:

For high efficiency, freestanding woodstoves, like your Woodstock Soapstone stove, a Prefabricated Metal Chimney must be listed as Class A and carry a UL Listing of 103 HT (high temperature). The "UL 103 Type HT Class A" prefabricated chimney will have a temperature rating of 2,100° F.

There are prefabricated chimney systems that are approved only to 1,700° F and are suitable only for fireplace inserts or factory built fireplaces. **DO NOT** use these with your Woodstock Soapstone stove.

At the point of the first penetration of a combustible surface (i.e., wall or ceiling) all subsequent venting components need to be prefabricated "UL Type HT Class A". If your prefabricated chimney goes through a living



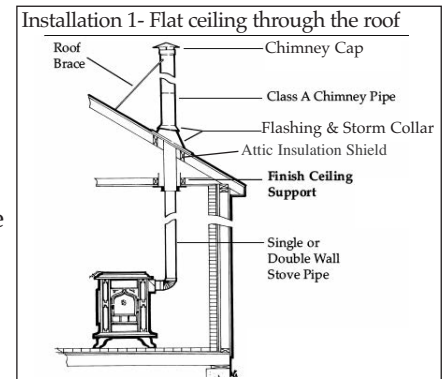
space it must be enclosed, and that enclosure must conform to clearance standards for the prefabricated chimney. Your chimney must pass through your roof and extend above the roof line in accordance with code standards. Please refer to height requirements on Page 2.

## Prefabricated Chimney Configurations

The diagrams below represent the most common and acceptable installations using prefabricated chimney pipe. The necessary components are listed and shown in their appropriate locations. These components are Class A listed to U.L. 103HT (tested to 2100 degrees F.) Only components listed to UL 103HT can be used to install your wood stove. Installation instructions are described below **as examples only**. More detailed instructions are available through Woodstock Soapstone or the pipe manufacturer. **ALWAYS FOLLOW THE SPECIFIC MANUFACTURER'S INSTALLATION INSTRUCTIONS.**

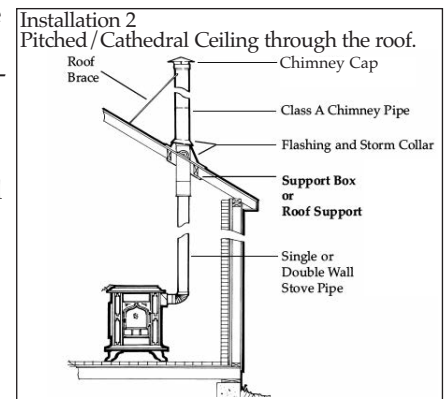
### Installation 1- Flat ceiling through the roof

First, determine where the stove will be placed. Pay close attention to all required clearances for the stove **and** connector pipe. Next, use a plumb line to locate the finish ceiling support in the ceiling above. Cut the appropriate sized hole in the ceiling and frame in the necessary supports to secure the ceiling support. Install the pipe adapter onto the first section of chimney pipe, and lower them into the ceiling support. Use an insulation shield in the attic to keep any insulation away from the pipe. If the attic is a living space the chimney pipe must be fully enclosed. As the pipe extends through the roof, install the appropriate flashing and storm collar to keep the weather out. As the height of the chimney increases to meet code, it may be necessary to install a roof brace (typically recommended at 5' intervals). All chimneys should have the appropriate cap installed at the top to reduce wind and weather related downdrafts as well as deter any animals from building nests. The connector pipe should extend from the flue collar of the stove to the pipe adapter at the ceiling support. The male (crimped) end should always point down toward the stove. Be sure that each joint has enough overlap for a secure connection. All connections should be fastened with screws, including at the flue collar and pipe adapter. (Please refer to the manufacturers full set of installation instructions).



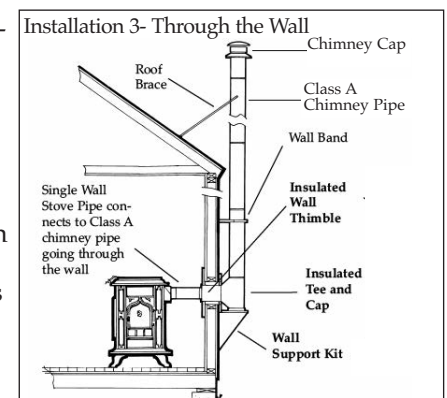
### Installation 2- Pitched/Cathedral Ceiling through the roof

Determine where the stove will be placed. Be sure all clearance requirements are satisfied. Choose the appropriate support for your installation (support box or roof support). Use a plumb line to locate the support in the ceiling above. Cut the appropriate sized hole in the ceiling and install the necessary framing to secure the support. Install the support according to its specific instructions. Be sure that the support hangs down below the ceiling far enough to maintain proper clearance for the connector pipe (steeper slopes require more chimney pipe below the ceiling). Install the pipe adapter to the first section of chimney pipe and lower it into the support box (or connect it to the bottom of the roof support). As the pipe extends through the roof, install the appropriate roof flashing and storm collar. Install the proper chimney pipe lengths to meet code and recommended chimney height. It may be necessary to install a roof brace for stability. Always install the appropriate cap to the top of the chimney. Double wall connector pipe is recommended for installations that have 8' or more from the stove to the chimney. Be sure that all joints in the connector pipe are secure and fastened with screws, including at the flue collar and chimney pipe adapter. (Please refer to the manufacturers full set of installation instructions).



### Installation 3- Through the wall

This installation requires the use of an insulated wall thimble to penetrate a combustible wall. Typically a 9"-12" chimney pipe and pipe adapter will pass through the thimble and make the connection between the interior connector pipe and an insulated tee with a clean out on the outside of the building. The tee and chimney rising up from it rest on a wall support designed to bear the weight of the chimney. Install lateral supports as specified as the chimney rises along the exterior wall. The appropriate flashing and storm collar should be installed if the chimney penetrates an eave or overhang. An offset of 15 or 30 degrees may also be used to go around an overhang. As the chimney extends above the roof to meet code recommended heights it may be necessary to install a roof brace. (Please refer to the manufacturers full set of installation instructions).



## Stovepipe (Connector Pipe):

Connector pipe is either single wall (sheet metal) or double wall (sheet metal outer pipe with a stainless steel inner pipe). We strongly recommend 22 gauge pipe (26 or 28 gauge is too thin for use with a woodstove). The connector pipe should be 6 inch diameter to match the flue collar of the stove. If your connection to either a masonry chimney or prefabricated chimney system is more than 8 feet tall, we recommend the use of double wall connector pipe. If you need to reduce clearances for your connector pipe installation, double wall connector pipe would be recommended. All pipe connections, including at the flue collar, must be secured with screws. **DO NOT USE GALVANIZED SINGLE WALL PIPE.**

Connector pipe is designed to connect your stove to your masonry lined or approved prefabricated chimney system. **CONNECTOR PIPE SHOULD NEVER BE USED AS A CHIMNEY AND SHOULD NEVER PASS THROUGH A COMBUSTIBLE WALL, CEILING, WINDOW, CLOSET, OR ROOF.** At the point where your stovepipe meets the chimney, you must either vent into a masonry chimney with approved non-combustible transition, or a prefabricated chimney system with a specially designed transition piece.

## FIREPLACE INSTALLATION

Your Model 211 Absolute Steel Hybrid Woodstove has an option of rear venting. The centerline height of the rear flue is 28", in order for the exiting pipe to clear the fireplace lintel, the opening height will need to be 31" or greater. Installing the Absolute Steel Hybrid stove in a fireplace setting is a great way to enjoy the view of the fire, while greatly increasing the efficiency and reducing heat loss to the fireplace chimney.

We do not recommend placing the stove inside the fireplace, as it would make routine maintenance such as cleaning the combustor more difficult, and much of the heat radiating off the stove would not circulate into the room.

The preferred method for installing a stove in front of a fireplace is by running a stainless steel 'flex' liner down the chimney, connecting it to the stove at the fireplace. Chimneys with large flues should be relined to achieve proper draft. If the chimney does not have flue tiles or if the tiles are cracked or compromised, an additional insulating material must be used.

It is important that there be a secure connection between the stove and the flue liner. It is **NOT** acceptable to simply install a plate in front of the fireplace and run a stovepipe through it. The stove pipe must connect with the liner for a continuous outlet to the top of your chimney.

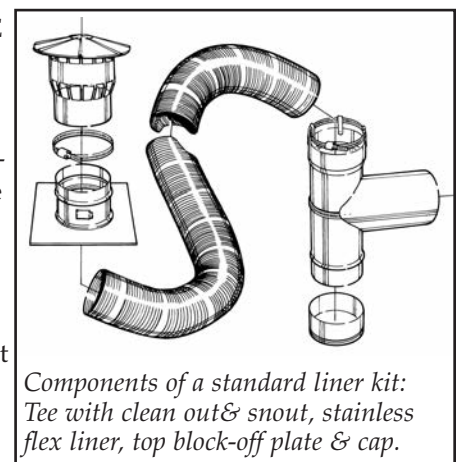
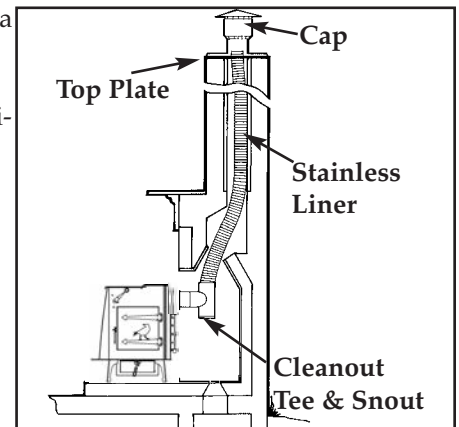
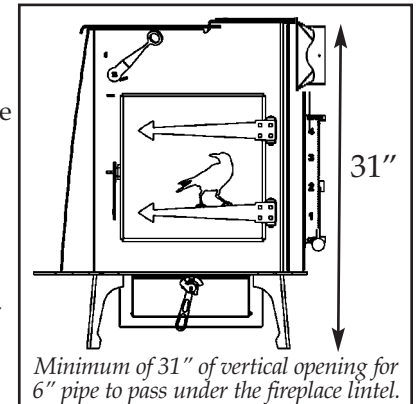
Stainless steel flex liner kits come in a variety of lengths and are readily available. These kits include a flexible stainless steel pipe, tee with snout & clean out, a block-off plate for the top of the chimney, and a cap. Please contact Woodstock Soapstone Company for more information on these kits. **ALWAYS FOLLOW THE SPECIFIC MANUFACTURER'S INSTALLATION INSTRUCTIONS.**

If the fireplace surround is clad in wood trim, the proper clearance to a combustible will need to be maintained. Please refer to the clearance charts on pages 8-10. An unprotected wood mantel needs to be a minimum of 30" from the top of the stove. If a mantel shield is installed that clearance can be reduced to 12".

**DO NOT VENT YOUR WOOD STOVE THROUGH A FACTORY BUILT FIREPLACE UNLESS IT IS SPECIFICALLY LISTED FOR SUCH AN INSTALLATION** Most factory-built fireplace chimney systems are only rated to 1,700° F, which is not sufficient for a freestanding wood burning stove.

## FLOOR PROTECTION REQUIREMENTS

Your Woodstock Soapstone stove must be set on an approved hearth or floor protection. The hearth protects your floor from two hazards:



- Heat Transfer: Heat radiation from the bottom, front, and sides of the woodstove
- Ember Protection: Sparks and hot coals that may fall out during ash removal and reloading of firewood

**DO NOT INSTALL YOUR WOODSTOCK SOAPSTONE STOVE ON A COMBUSTIBLE SURFACE (WOOD, CARPET, LAMINATE, OR VINYL, FOR EXAMPLE).**



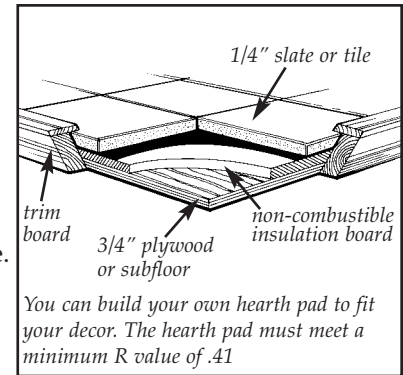
Even if you have a stone or tile overlay on wood, it is still considered combustible since the surface materials will not provide adequate heat transfer protection.

Your stove **MUST** sit on one of the following:

- A hearth pad of solid masonry (brick or tile on concrete and mortared in place)
- A prefabricated hearth pad listed to UL1618 approved standards. These pads are made to be placed on an existing floor.
- A custom designed pad constructed of approved non-combustible materials which will protect the floor from sparks, hot coals, and ashes; and prevents heat from being transferred onto the floor beneath.

**IF YOU CHOOSE TO BUILD YOUR OWN HEARTH PAD**

- 1) Start with a plywood base or subfloor.  
*Over this apply:*
- 2) a layer of insulating board with an R-Value of at least 0.39 (equivalent to 1/2" of cementboard). Depending on the material you choose, the insulating board can be as little as 1/2" thick. For additional help with material specifications, contact Woodstock Soapstone Company at 1-800-866-4344 or info@woodstove.com.  
*Over this apply:*
- 3) Cover with a non-combustible material such as steel, tile, slate, stone, or brick. Use mortar or grout to set the material in place, then grout the seams.



Specifications for floor protectors may be listed in terms of R-value, K-value, or C-value. To convert K or C value to R-value use the following formulas.

K to R:  $R=1/K \times T$  (Thickness of the alternate material)  
 C to R:  $R=1/C$

Once alternate materials have been converted to R-values, the values of multiple layers can be added to determine the combined protection. If the overall R-value meets or exceeds the specified .39 then the materials are acceptable.

**DO NOT USE:** Old-fashioned stove boards that were commonly sold in hardware stores as they **DO NOT** have adequate protection and **ARE NOT** approved for primary floor protection under your stove.

Hearth Rugs also **ARE NOT** meant to be used as primary hearth protection. These are made to be used in addition to an approved hearth, and are an auxiliary decorative protection. They are not a substitute for an approved hearth pad.

<b>R-values of common hearth materials:</b>		
Ceramic Tile	1/4"	0.020
Granite	1/4"	0.020
Slate	1/4"	0.025
Cement Mortar	1/2"	0.025
Cementboard	1/4"-1/2"	0.20-0.39
Common Brick	2.25"	0.450
Common Brick	4.00"	0.800
Mineral/Ceramic Fiber Board	1/2"	1.10-1.470

**Please Note:** Always check with the manufacturer of the hearth material used to verify the R or K value. K Values cannot be added. Convert to R value before adding multiple layers.

**Hearth Sizing:**

Clearances for your Absolute Steel Hybrid stove on the front, back and sides must be taken into consideration when determining the placement and size of your floor protection. The floor protection must extend under any horizontal connector pipe and 2 inches beyond each side of that connector.

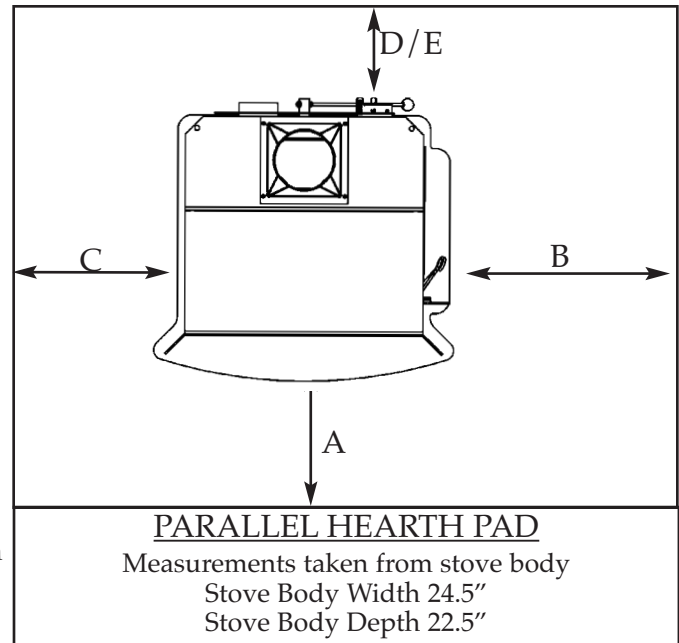
## PARALLEL HEARTH PAD

### MINIMUM DIMENSIONS

- A. Floor protection in front stove = 6"
- B. Protection on loading door side = 16"
- C. Floor protection non-loading door sides = 6"
- D. Floor protection behind stove (top vent or rear vent) = 6"
- E. Floor protection under pipe when rear vented must extend under any horizontal connector pipe and 2 inches beyond each side of that connector.

Minimum hearth size in a parallel installation is 36.5"D x 46.5"W.  
Recommended size is 40" D x 57"W or larger.

A 38.5" x 57" rectangular hearth pad will allow for 8" behind the stove, 16" on either side, and 8" in front of the stove. The hearth pad must have a minimum R value of 0.39 (1/2" of "cementboard" covered with non-combustible material such as sheet metal, tile or stone).



## CORNER HEARTH PAD

Minimum hearth size in a corner installation must be 54"x54" (with the front corner cut off).

**NOTE:** On a hearth of minimum size, the stove will not be centered left to right, but will meet the minimum required clearances.

Calculating a Corner Hearth Pad (per NFPA 211):

$$A = C \times 1.414 + W/2 + D + \text{Front Hearth Requirement}$$

A = distance from corner to the front of the hearth pad

C = clearance from rear corner of appliance to wall (6" w/ rear heat shield)

1.414 = a constant

W/2 = one half the appliance width (12.25")

D = appliance depth (22.5")

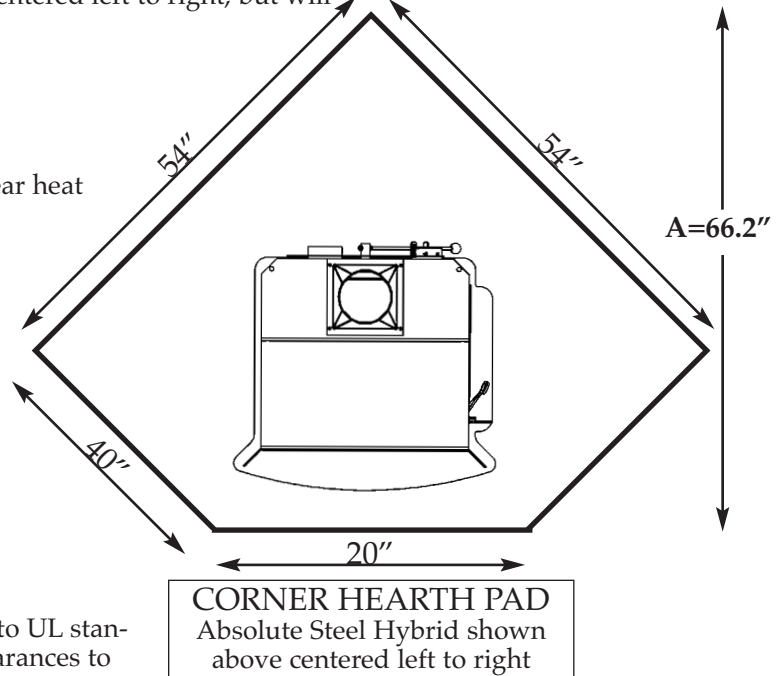
Front Hearth Clearance = 6"

Example:

Absolute Steel with the Rear Heat Shield & Pipe Shield

$$A = 18" \times 1.414 + 12.25 + 22.5" + 6"$$

$$A = 66.2"$$



## **WALL PROTECTION**

The Model 211 Absolute Steel Hybrid stove has been tested to UL standards for clearances to combustible walls. The minimum clearances to unprotected walls are as follows:

Minimum clearances with no heat shields to unprotected combustible walls:

From the back----- 14"

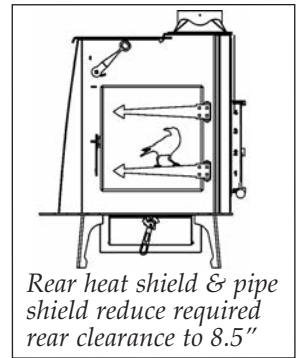
From the sides----- 26"

**DO NOT ASSUME THAT A WALL IS NOT COMBUSTIBLE BECAUSE IT HAS A NONFLAMMABLE SURFACE.** A wall with any combustible materials in it must be considered combustible. For example, a brick wall attached to wood studs is considered a combustible wall. Over time, heat will pass through bricks and heat the wood, lowering the ignition temperature of the studs, possibly resulting in a fire. As waves of radiant heat energy meet a combustible object, heat is absorbed and the temperature of the object is raised, which can result in spontaneous combustion. Similarly, wood-framed walls which are covered with tile, stone or fire-rated sheetrock must be considered combustible. Fire-rated sheetrock is also considered combustible due to the paper covering.

If you wish to install your stove closer to a combustible wall than standard clearances will permit, you can either attach an approved stove & pipe shield, or mount a ventilated, non-combustible shield on the wall.

## Stove and Pipe Shields:

Clearances can be reduced by attaching an approved heat shield, Part R-997 and pipe shield, part #W-413. Woodstock Soapstone Company carries heat shields specifically designed for this stove. When using one or both of these shields, **clearance is measured from the back of the shield to the combustible wall**. The clearance behind the stove can be reduced to 8.5 inches. The clearance behind the pipe can be reduced to 6 inches.



Rear heat shield & pipe shield reduce required rear clearance to 8.5"

### Clearance Table:

The Absolute Steel Hybrid can be installed at a 14" clearance with no additional protection, if the stove pipe is top vented, and the provided shield is installed on the inside of the rear flue cover plate. To further reduce the rear clearance to 8.5", you must attach an approved rear heat shield and a 24" pipe shield.

Type of Installation▶	Clearance from stove back, top vent, with stove pipe which goes straight up	Clearance from stove back and pipe, which goes straight back	Clearance from stove back and vertical single wall connector pipe with elbow at stove back *Controlling clearance	Stove Sides		
Type of protection▼			Stove Back	Stovepipe		
No Protection	14"	14"	23.5"*	15.5"	26"	
With 24" Pipe Shield			18"	10"	26"	
With Approved Rear Heat Shield, 24" Pipe Shield & Side Shield	8.5"		18"	10"*	16"	
3 1/2" thick Masonry Against Combustible Wall*	12"	12"	20"	12"	13"	See note below regarding NFPA 211 clearance reduction methods and implementation.
3 1/2" thick Masonry with 1" ventilated airspace*	12"	12"	14"	6"	12"	See note below regarding NFPA 211 clearance reduction methods and implementation.
24 ga. sheet metal with 1" ventilated airspace*	12"	12"	14"	6"	12"	See note below regarding NFPA 211 clearance reduction methods and implementation.
1/2" thick non-combustible insulation board with 1" airspace*	12"	12"	14"	6"	12"	See note below regarding NFPA 211 clearance reduction methods and implementation.

\*These clearance reductions meet or exceed requirements of NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances. Approved NFPA 211 clearance reduction methods **DO NOT** allow stove clearances to be reduced below 12". **NFPA WALL SHIELDS MUST BE SIZED TO NFPA 211 SPECIFICATIONS. CONSULT NFPA 211 AND A QUALIFIED EXPERT BEFORE IMPLEMENTING THESE REDUCTIONS.**

The only approved method allowing for a rear stove clearance less than 12" is the Approved Rear Heat Shield (#R-997) provided by Woodstock Soapstone Co. If your installation requires the use of the Approved Rear Heat Shield call 1-800-866-4344.

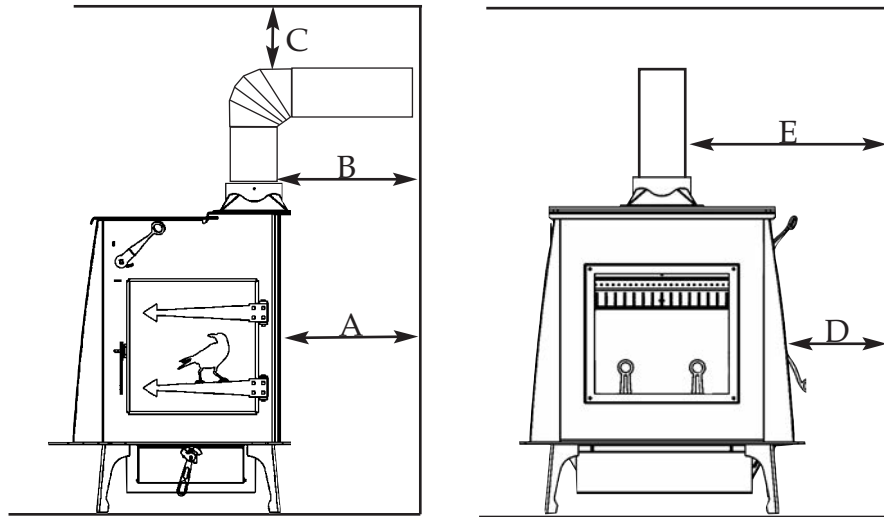
- These clearances apply to walls, ceilings, furniture and other combustibles.
- The 24" Vertical Stack Shield attaches to the back of the stove pipe and prevents excess heat from being radiated from the pipe. Heat shield protection is only required for the first 24" of vertical connector pipe.
- At least 30" is required from the front of the stove to combustibles (such as curtains, wall hangings, and furniture).

The same clearances from your stove and stove pipe apply to both fireplace and freestanding installations. Be particularly careful to check clearances to a wood mantel or a wood fireplace facade. You must maintain a 30" clearance to an unprotected wood mantel. See Fireplace Installations on Page 5.



CLEARANCE INSTALLATION DIAGRAMS

**1) Parallel Installation, Single Wall Pipe, Top Vent**



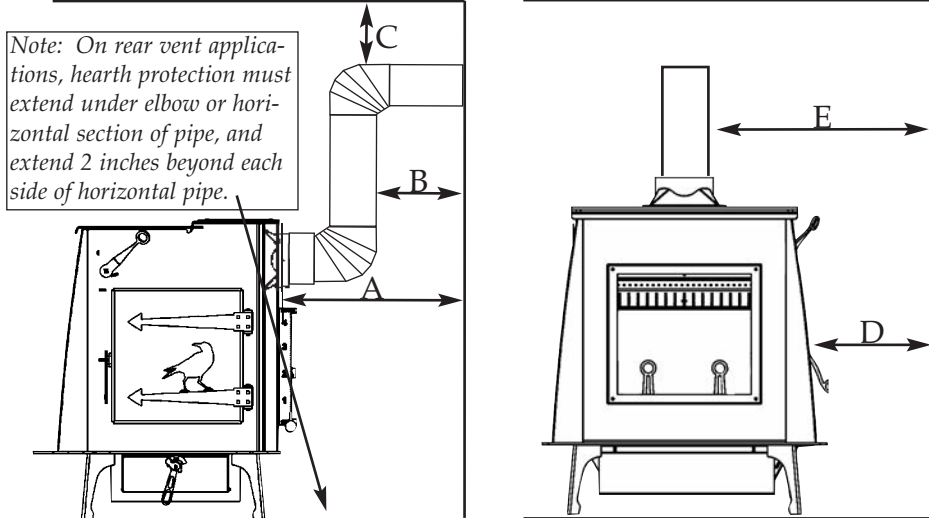
**NO HEAT SHIELD**

- |                          |         |                          |         |
|--------------------------|---------|--------------------------|---------|
| A. Back of stove to wall | = 14"   | D. Side of stove to wall | = 26"   |
| B. Back of pipe to wall  | = 15.5" | E. Side of pipe to wall  | = 35.5" |
| C. Above pipe to ceiling | = 18"   |                          |         |

**WITH REAR HEAT SHIELD & PIPE SHIELD ATTACHED**

- |                                 |        |                          |         |
|---------------------------------|--------|--------------------------|---------|
| A. Back of stove shield to wall | = 8.5" | D. Side of stove to wall | = 26"   |
| B. Back of pipe shield to wall  | = 8.5" | E. Side of pipe to wall  | = 35.5" |
| C. Above pipe to ceiling        | = 18"  |                          |         |

**2) Parallel Installation, Single Wall Pipe, Back Vent**



**NO HEAT SHIELD**

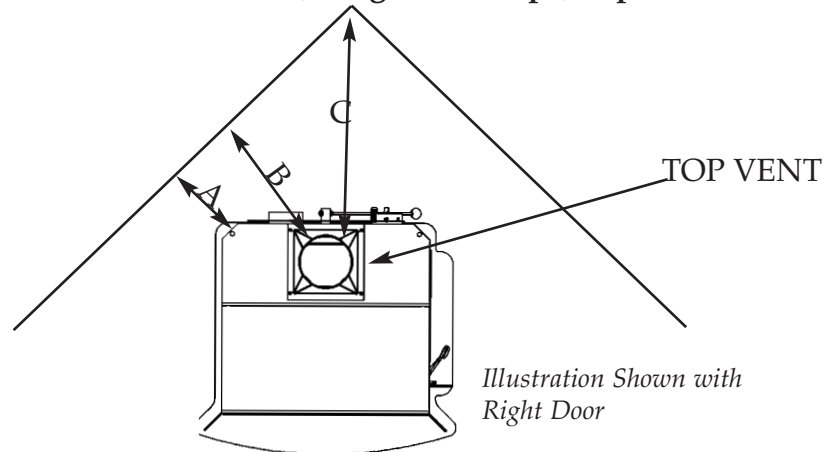
- |                          |         |                          |         |
|--------------------------|---------|--------------------------|---------|
| A. Back of stove to wall | = 23.5" | D. Side of stove to wall | = 26"   |
| B. Back of pipe to wall  | = 15.5" | E. Side of pipe to wall  | = 35.5" |
| C. Above pipe to ceiling | = 18"   |                          |         |

**WITH REAR SHIELD & PIPE SHIELD ATTACHED**

- |                                 |       |                          |         |
|---------------------------------|-------|--------------------------|---------|
| A. Back of stove shield to wall | = 18" | D. Side of stove to wall | = 26"   |
| B. Back of pipe shield to wall  | = 10" | E. Side of pipe to wall  | = 35.5" |
| C. Above pipe to ceiling        | = 18" |                          |         |

## CLEARANCE INSTALLATION DIAGRAMS

### 3) Corner Installation, Single Wall Pipe, Top Vent

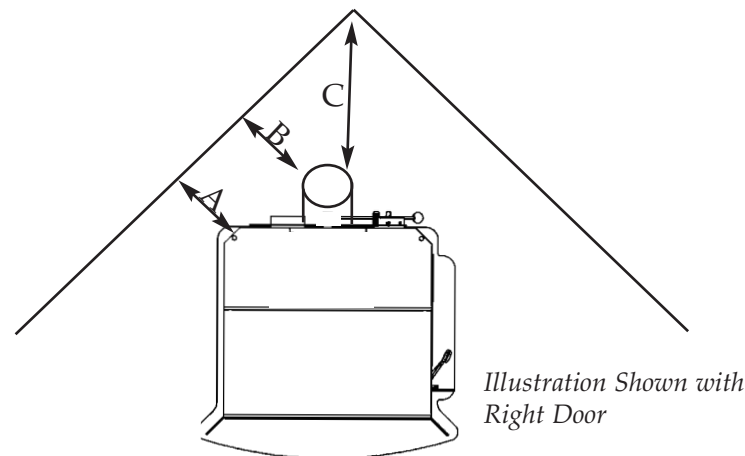


Your stove comes with a rear heat shield attached. Do not remove the rear heat shield; it provides extra protection in corner installations and also allows for installation closer to combustible walls than would be possible with no shield.

#### WITH REAR HEAT SHIELD

- A. Stove corners to side walls = 13" non door side; 18" door side (determines placement)
- B. Pipe to side walls = 20" minimum
- C. Pipe to corner = 26" minimum

### 4) Corner Installation, Double Wall Pipe, Back Vent



If you vent your stove through the rear, rather than the top, and then go up with an elbow, the stovepipe will be closer to the wall than if you top vent (see illustration top of page 10). For this venting configuration, we recommend using double wall pipe along with the rear heat shield provided with the stove. You must adhere to the clearances listed below.

#### WITH REAR SHIELD & DOUBLE WALL CONNECTOR PIPE

- A. Stove corners to side walls = 13" non door side; 18" door side (determines placement)
- B. Back of pipe shield to side walls = 13" min (Approved Double Wall Connector Pipe)
- C. Pipe to corner = 17" min (Approved Double Wall Connector Pipe)

# MOBILE HOME INSTALLATION

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

Because mobile homes are also referred to by HUD as “manufactured” homes, regulations present a gray area. Many “mobile” homes are set on a permanent foundation and connected to public utilities. If you are installing a stove in a mobile or manufactured home, check out the requirements below and check with your local code officials. More questions? Give us a call Monday through Saturday from 9 to 5 Eastern time at 1-800-866-4344.

While all stove installations have to meet National Fire Safety codes, mobile homes are given special consideration when it comes to installing a wood burning stove. These additional regulations were established by the Department of Housing and Urban Development (HUD), and result in the following additional requirements:

1. Double Wall Connector Pipe
2. Outside Air for Combustion
3. Tie Downs for the Stove
4. Spark Arrestor on the Chimney Cap
5. Stove Grounded to Chassis
6. Stoves May Not Be Installed in Mobile Home Bedrooms



**Double wall pipe** must be used to connect the stove to the chimney. This is stove pipe that is constructed with two walls, usually with the inner wall made of stainless steel. It reduces the required clearance to combustible building materials and furnishings.

**Outside Air** must be used for combustion. Because of the tight construction of mobile homes, wood stoves need a way to get adequate air from outside the home for complete combustion in order to avoid the risk of depleting oxygen in the living space. Having outside air for combustion is a requirement for all woodburning stoves in the state of Washington and is recommended for woodstoves in “super tight” new construction.

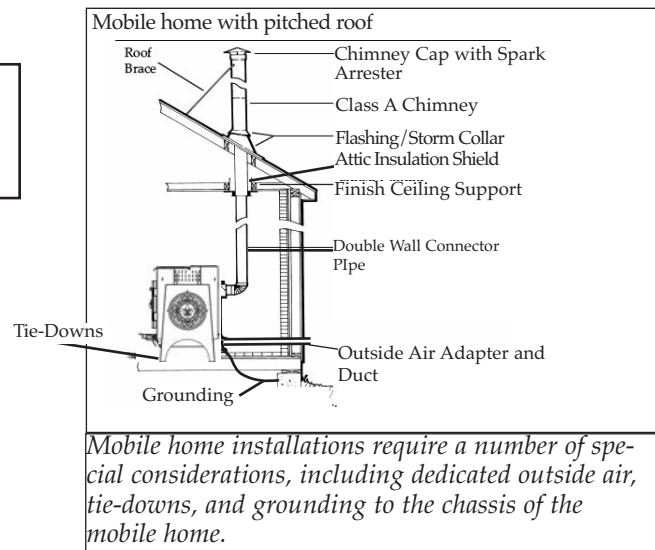
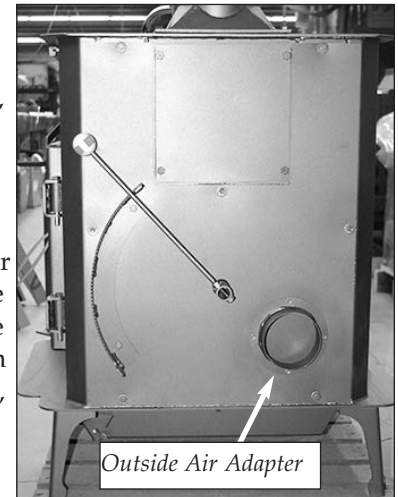
**Tie Downs:** The stove must be attached to the floor. This is to prevent tipping in the event the home is moved. (We can provide tie downs for our stoves at no extra charge).

**Spark Arrestor:** The chimney cap must have a spark arrestor screen. These are available with most prefabricated chimney systems.

**Grounding:** The stove should be grounded to the home chassis.

**Not allowed in mobile home bedrooms:** wood stoves are not permitted for installation in bedrooms in mobile homes.

The Outside Air Adapter is built into the design of the Absolute Steel Hybrid, and is located at the back of the stove. It has a four-inch collar which allows you to attach a four inch pipe, usually flexible dryer duct, from the stove to the outside. For long runs, the flexible pipe can transition to PVC or aluminum pipe, if you wish.



Woodstock Soapstone Company  
66 Airpark Road, West Lebanon, NH 03784  
800-866-4344 • www.woodstove.com

# SETTING UP YOUR STOVE

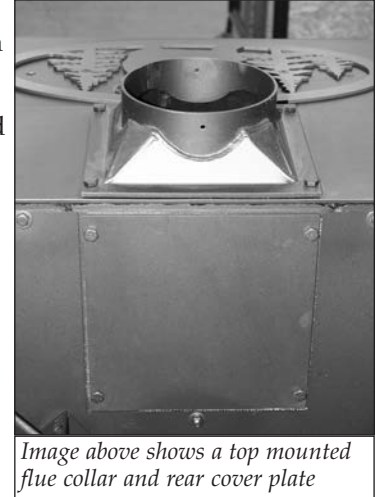
Your Model 211 Absolute Steel Hybrid woodstove has been shipped assembled except for two parts:

1) The flue collar and cover plate, including the internal cover plate shield. 2) Required bottom heat shield.

All necessary hardware and instructions are also packed in the firebox. Any optional items such as heat shields will be packed separately.

## 1) How to attach the Absolute Steel Hybrid flue collar & cover plate, and the cover plate shield:

The Absolute Steel Hybrid is designed to be vented out the top or out the rear with an easily convertible flue collar and cover plate. Each part is secure to the stove body with 4 bolts. You will need a 7/16" wrench or socket and ratchet to install these parts. The stove is shipped with the cover plate installed over the rear flue exit with an internally mounted heat shield. The flue collar is packed inside the firebox.



*Image above shows a top mounted flue collar and rear cover plate*

1. Decide which way you would like to vent your stove. This may be dependent on the location of an existing chimney or the design of an existing hearth. Always pay close attention to required clearances when considering stove placement

### TOP VENTING:

1. If you are **top venting**, use the (4) bolts supplied making sure that the gasket on it is secure and stays in place while installing. Use four of the bolts to attach the flue collar to the stove body. The holes in the stove body are threaded to accept the bolts. Alternate between the bolts while tightening to ensure even pressure. The bolts should be tight enough to firmly compress the gasket. Do not over tighten.

### REAR VENTING:

1. If you are **rear venting**, the cover plate has an internally mounted stainless steel heat shield. Two of the four mounting bolts are longer to accommodate this shield and are diagonally opposite each other. Remove the (2) hex nuts from these longer bolts using a 7/16" wrench or socket. Remove the shield and set the shield and nuts aside for reuse.
2. Remove the (4) mounting bolts from the cover plate and transfer the cover plate to the top of the stove. Install the (2) longer bolts diagonally opposite from each other (doesn't matter which 2 holes). Working through the back flue opening, reinstall the heat shield and snug it down with the (2) nuts. Install the remaining shorter (2) bolts.
3. You can now install the flue collar on the rear of the stove using the (4) 1/4-20 hex bolts supplied.

## 2) Installation of the required bottom heat shield:

The Absolute Steel Hybrid was tested and listed with the use of the bottom heat shield. The bottom heat shield **MUST** be installed prior to lighting the first fire. The attachment instructions can be used for both the ash pan and non-ash pan versions of the Absolute Steel Hybrid. If your stove **DOES NOT** have an ash pan, the shield will be flat sheet metal instead of formed sheet metal.

1. Locate the (4) 1/4-20 studs welded to the bottom of the stove. The studs can be found in each corner, just behind each leg. With the attachment flanges facing up, slide the heat shield under the stove centered on the ash pan housing. The shield is symmetrical so there is no front or back.
2. Each attachment flange has (2) holes, one on each end. Align these holes with the studs and push the shield up over the studs. It may be easier to have a helper during this step.
3. Thread (1) 1/4-20 nut on each stud. 2-3 threads is all that's necessary as you want the shield to drop down and rest on the nuts, this will leave a small air gap. **DO NOT** affix the shield firmly to the bottom of the stove.

