

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 Keystone or Palladian 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 (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.

LOCATION

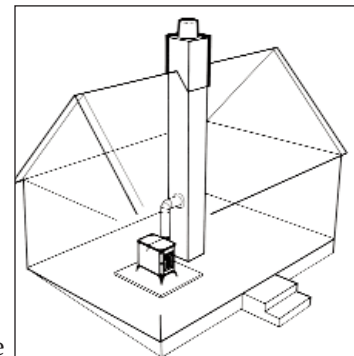
A stove which is centrally located will heat the greatest area of your home. Heat should be able to circulate easily into nearby rooms. Placing your stove near an open stairway or register in the floor will help transfer heat to other rooms.

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 ease of 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 202 & 204 Palladian & Keystone Wood Stoves are **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. This could result in over firing the stove and lead to damage to the cast iron components as well as the catalytic combustor. 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:

Keystone and Palladian stoves have 7" flue collars and are approved for the use of 7" or 6" vent pipe. 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 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 the cross-sectional area of the flue collar.

Recommendation: Woodstock Soapstone recommends the Keystone and Palladian wood stoves, with either the 6" or 7" flue collar, a maximum of 8 inch x 10 inch rectangular or 10 inch round flue tile for an **inside** chimney . For an **outside** chimney, an 8 inch x 8 inch square or 8 inch round would be the largest recommended. The smallest size we recommend is 6 inches round. **DO NOT VENT THE PALLADIAN OR KEYSTONE INTO A CHIMNEY OF LESS THAN 6 INCHES IN DIAMETER.**

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

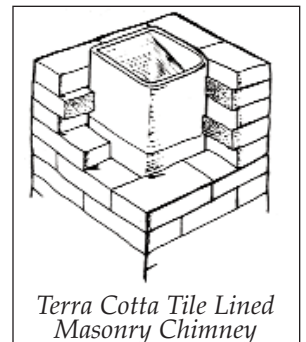
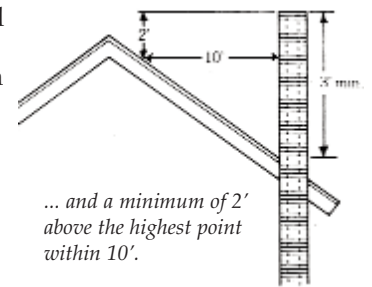
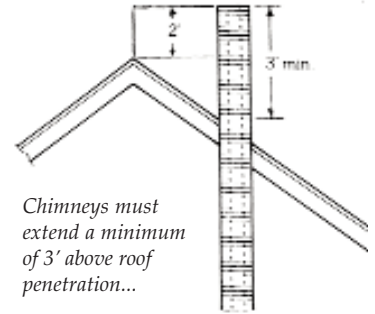
DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

There are two acceptable types of chimneys: Lined Masonry Chimneys and Class A, Pre-fabricated Metal Chimneys rated to 2100° F. Masonry chimneys must meet all applicable codes for a safe installation.

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.

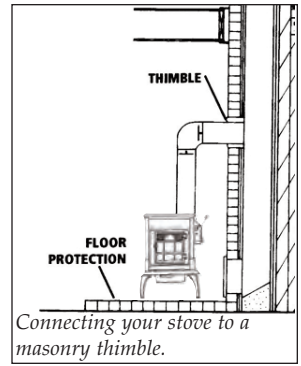
Existing chimneys should be checked twice a year for obstructions, creosote deposits, surface cracks, chemical deterioration and poor construction. Any damage should be repaired immediately. Two other chimney related areas that should be checked are chimney penetrations at the



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 roof line 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 tight 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:

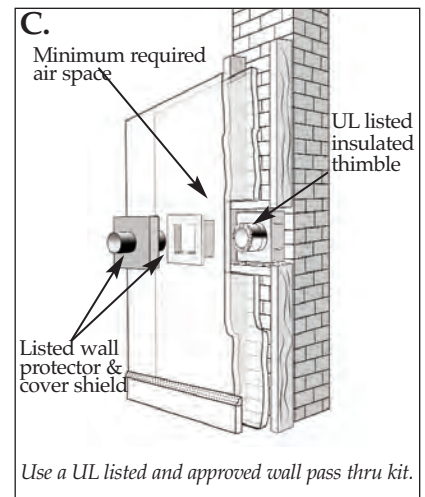
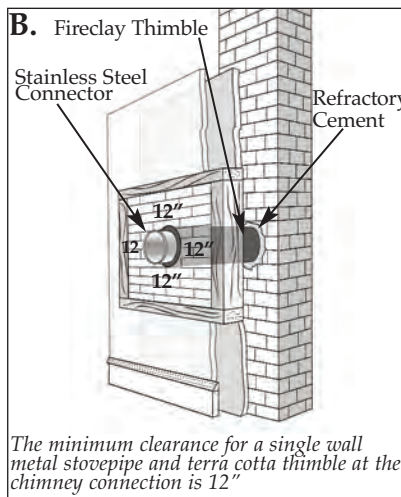
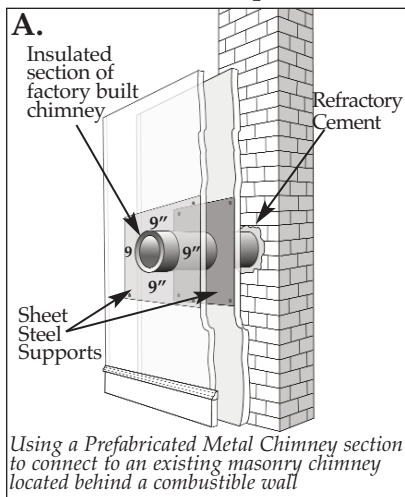
With an exterior chimney, in most cases the chimney connector (or stove pipe) will need to pass through a combustible wall. The following are acceptable methods:

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 Below)

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 Below)

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 manufacturers specific installation instructions. (See Diagram C Below)

For other methods, please refer to NFPA 211.

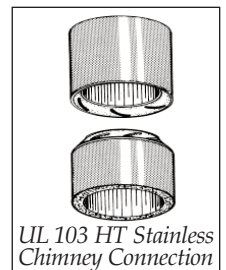


REMEMBER, UNPROTECTED SINGLE OR DOUBLE WALL STOVE PIPE SHOULD NOT PASS THROUGH A COMBUSTIBLE WALL OR CEILING TO CONNECT TO THE CHIMNEY. YOU MUST USE AN APPROVED METHOD WHICH PROVIDES GREATER PROTECTION THAN SINGLE OR DOUBLE WALL PIPE.

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 to 1,700° F and are generally used with fireplace inserts or factory built fireplaces. These **ARE NOT** suitable for use 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

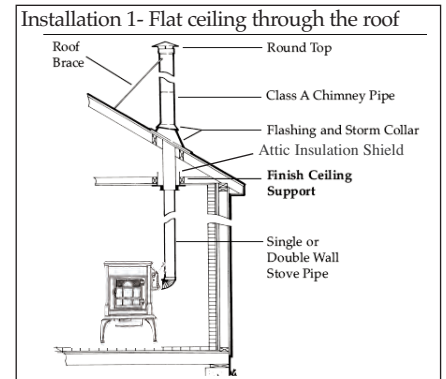
enclosed, and that enclosure must conform to clearance standards for the prefabricated chimney. Your chimney must pass through your roof and extend above the roof line in accordance with code standards. Please refer to height requirements on Page 2.

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 UL-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 MANUFACTURER'S SPECIFIC INSTALLATION INSTRUCTIONS.**

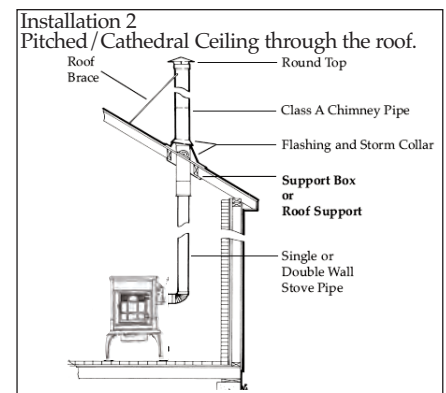
Installation 1- Flat ceiling through the roof

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)



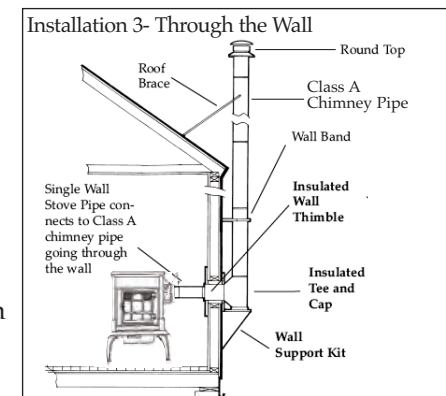
Installation 2- Pitched/Cathedral Ceiling through the roof

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 package). 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 to the connector pipe (steeper slopes require more 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 10' 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 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 wood stove). The connector pipe should be 6 or 7 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 202 Palladian or 204 Keystone wood stove can be installed in front of an existing fireplace with a lintel opening of 26.5" high or taller. Installing the Palladian or Keystone soapstone 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 be difficult to access the control levers, load the stove, and much of the heat radiating off the stove would not circulate into the room.

The preferred method is to install a stove in front of a fireplace and run a stainless steel 'flex' liner down the chimney, connecting it to the stove at the fireplace. Chimneys with large flues should be re-lined to achieve proper draft. If the chimney does not have a tile lined flue or if the tile is 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 MANUFACTURER'S SPECIFIC INSTALLATION INSTRUCTIONS.**

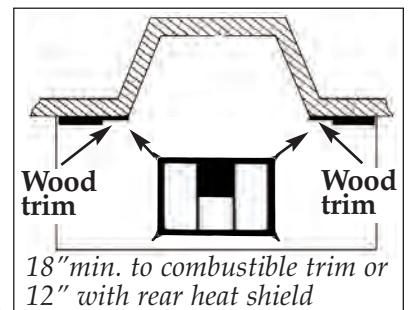
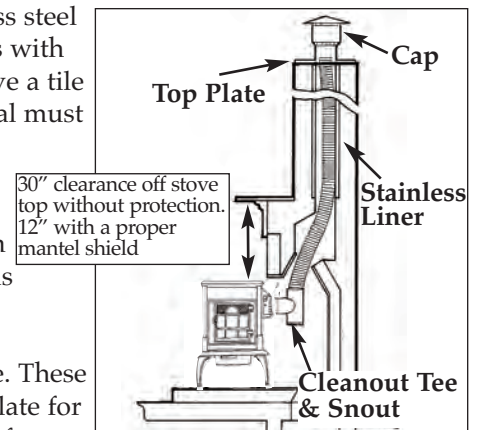
If the fireplace surround is clad in wood trim, the proper clearance to a combustible will need to be maintained. See illustrations to the left. An unprotected wood mantel needs to be a minimum of 30" from the top of the stove. If a mantel shield is installed that clearance can be reduced to 12".

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.



Keystone Stove in front of an existing fireplace



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 UL 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

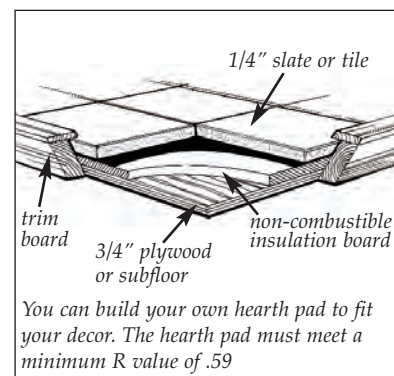
- 1) Start with a plywood base or sub-floor.

Over this apply:

- 2) a layer of insulating board with an R-Value of at least 0.59. 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 at info@woodstove.com.

Over this apply:

- 3) 1/4" or greater of a decorative, non-combustible material such as 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 in inches)

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 0.59 then the materials are acceptable.

R-values of common hearth materials:		
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.

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 used as auxiliary decorative protection. They are not made to be a substitute for an approved hearth pad.

Hearth Sizing:

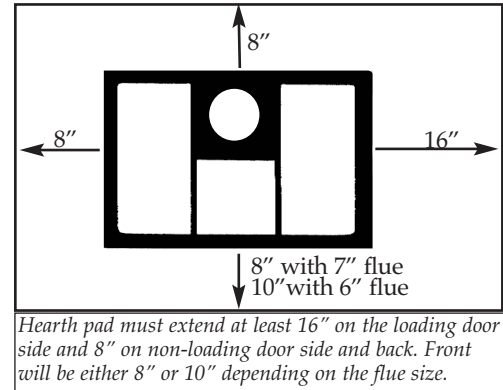
Clearances for your Palladian/Keystone stove on the front, back and sides must be taken into consideration when determining the placement and size of your floor protection. Vertical dimensions can be added to horizontal dimensions on all but the loading door side to equal the clearances needed to a combustible floor surface. For example, if you are required to have 10 inches in front of the stove for clearance and you have a raised hearth that measures 5 inches high, the stove can sit 5 inches from the edge to equal the 10 inches required. The floor protection must extend under any horizontal connector pipe and 2 inches beyond each side.

PARALLEL INSTALLATION HEARTH PAD

- A. Floor protection in front of stove using 7" flue collar = 8"
- Floor protection in front of stove using 6" reducer = 10"
- B. Floor protection at loading door side = 16"
- C. Floor protection non-loading door side = 8"
- D. Floor protection behind stove = 8"

Minimum hearth size in a parallel installation is: 36" D x 49" W

Recommended size is: 48" D x 60" W



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 (12" w/ rear heat shield)

1.414 = a constant

W/2 = one half the appliance width (12.5")

D = appliance depth (20")

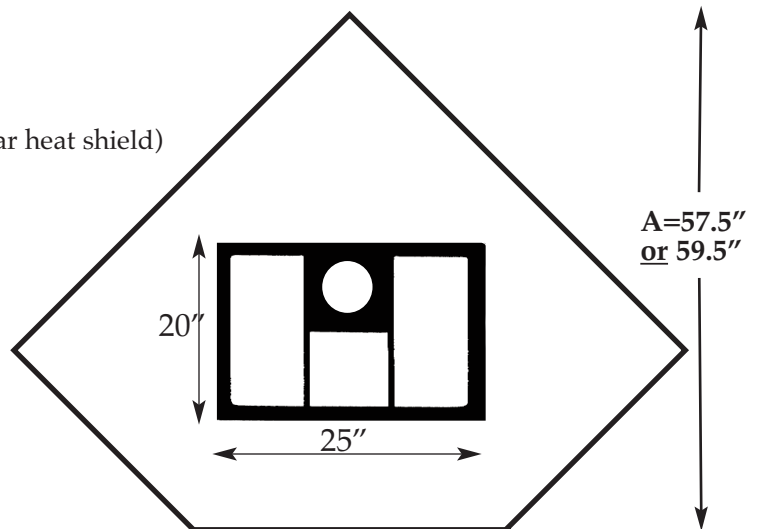
Front Hearth Clearance = 10"

Example:

Palladian/Keystone with the Rear Heat Shield & Pipe Shield & 6" Flue

$$A = 12" \times 1.414 + 12.5" + 20" + 10" \quad A = 59.50"$$

$$\text{Note: If using the 7" Flue} \quad A = 57.50"$$



CORNER HEARTH PAD
Palladian/Keystone shown above
centered left to right

WALL PROTECTION

The Keystone & Palladian models have been tested to UL standards for clearances to combustible walls. The minimum clearances to unprotected walls are as follows:

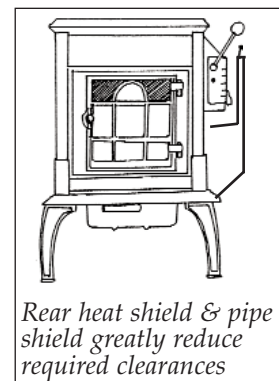
Minimum clearances with no heat shields to unprotected combustible walls:

From the back-----30"

From the sides-----18"

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 a UL approved stove & pipe shield, or mount a protective non-combustible shield on the wall.

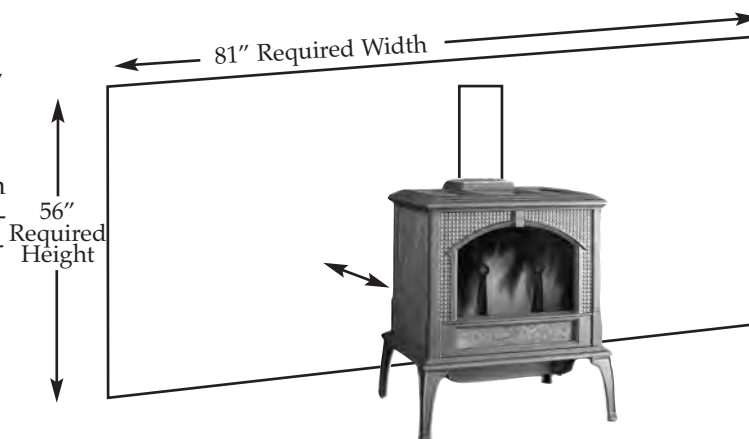


Stove and Pipe Shields:

Clearances can be reduced by attaching a UL approved heat shield and pipe shield. Woodstock Soapstone Company carries heat shields specifically designed for this stove. When using one or both of these shields, the clearance behind the stove can be reduced to 14.5 inches when top venting. The clearance behind the pipe can be reduced to 10 inches

Wall shields:

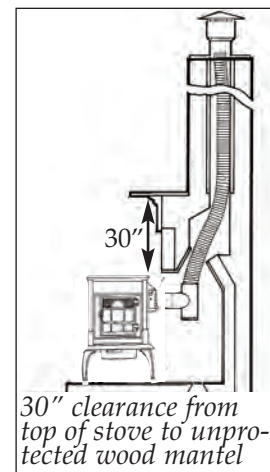
Clearances can also be reduced by mounting a ventilated shield on the wall that extends 36" out beyond the stove (see diagram below). If you are installing wall protection, it should be spaced out from the wall one inch. This air space allows air to flow freely behind the shield, cooling the combustible wall and preventing a pocket of hot air from being trapped behind the shield. The wall protection can be attached to the studs using long screws and ceramic wall spacers. The spacers should not be installed directly behind the stove. The top and either a.) both sides, or b.) the bottom must be left open for adequate ventilation.



EXAMPLE Shown Right
 Wall shield sizing with the 12" Minimum Clearance to Combustible Wall/Top Venting. Note: Wall shield size will vary depending on distance between stove and wall.

Clearance Table For Model 202/204 Palladian & Keystone

Type of Installation▶	Top Vent Clearance from stove back and pipe, which goes straight up	Rear Vent Clearance from stove back and pipe, which goes straight back	Rear Vent with elbow Clearance from stove back and vertical single wall connector pipe. Using reducer & 6" stove pipe.	Stove Sides	
Type of protection▼	Stove Back	Stovepipe			
No Protection	30"	30"	30"	20"	18"
3 1/2" thick Masonry Against Combustible Wall*	20"	20"	26"	14"	14"
3 1/2" thick Masonry with 1" ventilated airspace*	12"	12"	19"	7"	12"
24 ga. sheet metal with 1" ventilated airspace*	12"	12"	19"	7"	12"
1/2" thick non-combustible insulation board with 1" airspace*	12"	12"	19"	7"	12"
UL Listed Rear Heat Shield and 36" Vertical Stack Shield	14.5"	14.5" stove	22"	10"	18"



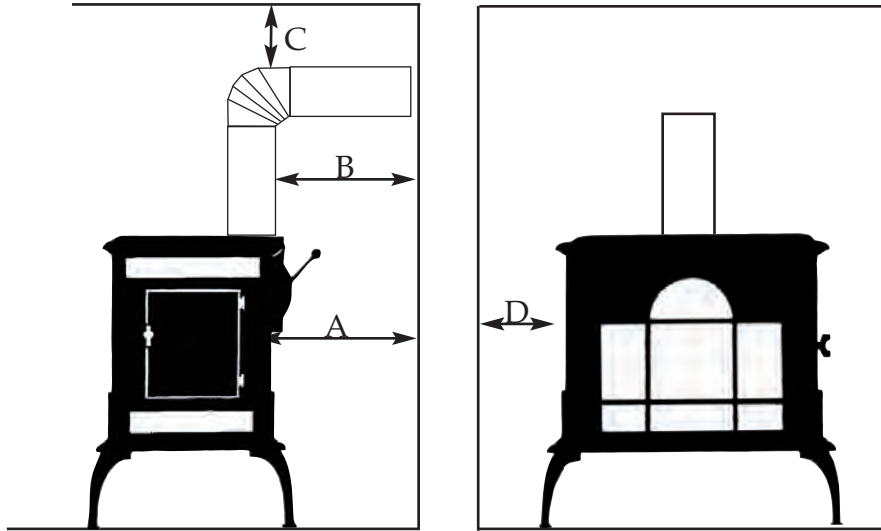
*These clearances meet or exceed requirements of NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances.

- These clearances apply to walls, ceilings, furniture and other combustibles.
- The 36" 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 36" 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



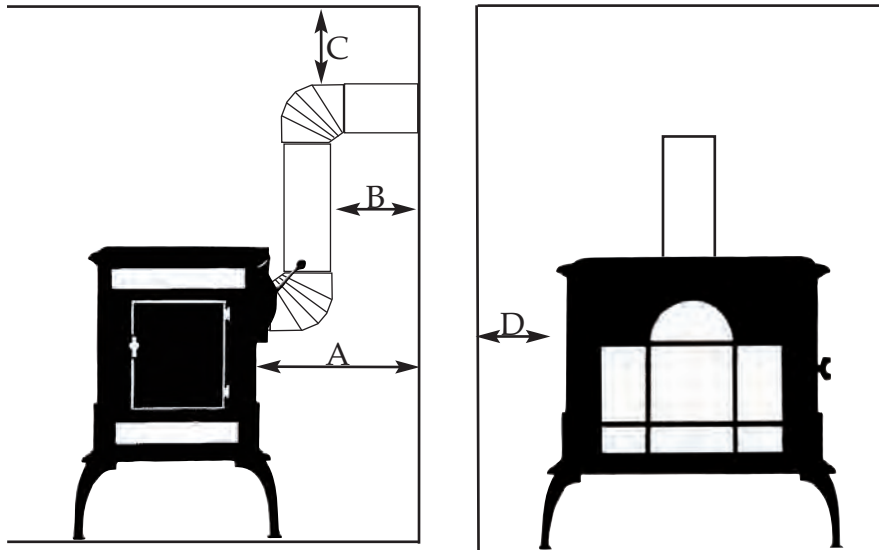
NO HEAT SHIELD

- | | |
|--------------------------------|--------------------------------|
| A. Back of stove to wall = 30" | C. Above pipe to ceiling = 20" |
| B. Back of pipe to wall = 20" | D. Side of stove to wall = 18" |

WITH REAR HEAT SHIELD & PIPE SHIELD ATTACHED

- | | |
|---|--------------------------------|
| A. Back of stove shield to wall = 14.5" | C. Above pipe to ceiling = 20" |
| B. Back of pipe shield to wall = 10" | D. Side of stove to wall = 18" |

2) Parallel Installation, Single Wall Pipe, Back Vent



NO HEAT SHIELD

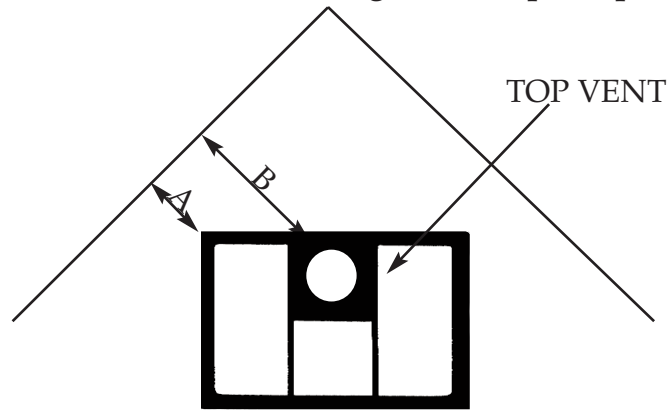
- | | |
|--------------------------------|--------------------------------|
| A. Back of stove to wall = 30" | C. Above pipe to ceiling = 20" |
| B. Back of pipe to wall = 20" | D. Side of stove to wall = 18" |

WITH REAR SHIELD & PIPE SHIELD ATTACHED

- | | |
|---------------------------------------|--------------------------------|
| A. Back of stove shield to wall = 22" | C. Above pipe to ceiling = 20" |
| B. Back of pipe shield to wall = 10" | D. Side of stove to wall = 18" |

CLEARANCE INSTALLATION DIAGRAMS

3) Corner Installation, Single Wall Pipe, Top Vent



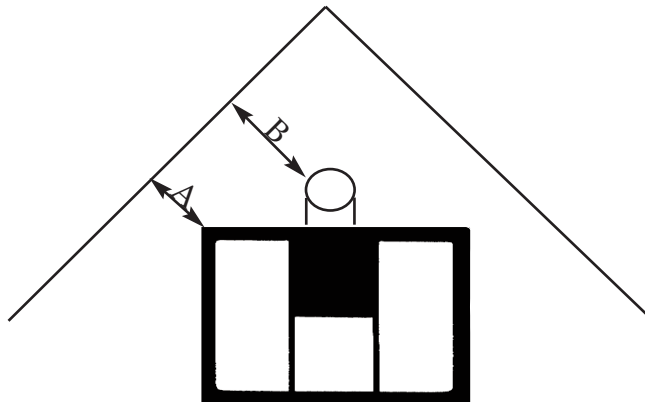
NO HEAT SHIELD

- A. Stove corners to side walls = 18" (determines placement)
- B. Pipe to side walls = 25"

WITH REAR HEAT SHIELD & PIPE SHIELD ATTACHED

- A. Stove corners to side walls = 12" (determines placement)
- B. Pipe to side walls = 10" minimum

4) Corner Installation, Single Wall Pipe, Back Vent



NO HEAT SHIELD

- A. Stove corners to side walls = 18" (determines placement)
- B. Pipe to side walls = 20"

WITH REAR SHIELD & PIPE SHIELD ATTACHED

- A. Stove corners to side walls = 12" (determines placement)
- B. Back of pipe shield to side walls = 10" minimum

MOBILE HOME INSTALLATION

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

Both the Keystone and Palladian stoves are approved for installation in a mobile home. Along with the general installation requirements for your stove, there are further regulations that must be followed for installing a stove in a mobile home. These regulations assume that the structure is very tightly constructed, made of metal, and that the home can be moved. Mobile home regulations vary from one locality to another, and may include some, or all, of the following:

- The stove must be attached to the floor of the home.
- The stove must be grounded to the mobile home's chassis.
- You must maintain the structural integrity of the home.
- You must bring outside air to the stove for combustion.
- You must use close clearance (double wall) connector pipe between stove and chimney.
- You must install a rain cap with spark arrestor.
- You may **NOT** install the appliance in a bedroom.

Since mobile homes are tightly constructed, **YOU MUST SUPPLY OUTSIDE COMBUSTION AIR DIRECTLY TO THE STOVE.** Woodstock Soapstone Company makes an outside air adapter that attaches to the back of the stove. The flange on this adapter will accept a 4" duct. We recommend flexible aluminum duct for ease of installation. Run the duct through the floor to a ventilated crawl space below, and have it terminate in the crawl space underneath the stove. You may want to install a piece of screen at the termination of the duct to keep out unwanted insects.

In a mobile home, the interior connector pipe must be close clearance (double wall) pipe. **SINGLE WALL CONNECTOR PIPE IS NOT ALLOWED IN A MOBILE HOME INSTALLATION.**

Finally, metal straps must be used to bolt the stove to the floor of the mobile home. These straps are available from Woodstock Soapstone Company at no charge.

Additional information about the installation of wood burning appliances in mobile homes is available from the Department of Housing and Urban Development (HUD).

SETTING UP YOUR STOVE

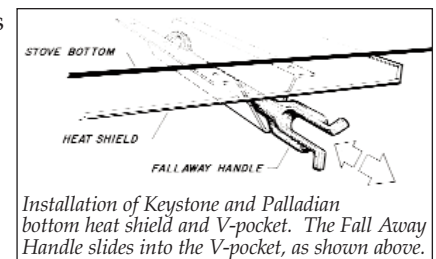
Before you light your stove for the first time, please follow these instructions.

1) Install the bottom heat shield, 2) Install the flue collar/cover plate, 3) Attach the knob for the bypass handle, and 4) Remove the ash pan cover.

(1.)How to attach the Palladian/Keystone bottom heat shield:

The bottom heat shield prevents excess heat from being radiated from the ash pan housing onto the hearth. The bottom heat shield also contains a pocket to hold the Fall-Away Handle.

1. Attach the "V-Shaped" pocket to the bottom of the heat shield. Hardware is included with the manual and the 4 holes are pre-drilled. This pocket serves as storage for the Fall-Away Handle.
2. There are 4 threaded holes in the bottom of the stove that line up with the 4 holes in the shield. Slide the shield under the stove and attach it to the bottom of the stove with the 4 bolts provided in the manual package. The shield hangs down below the bottom of the stove, and rests on the bolt heads, leaving air space for cooling.
3. The "V-Shaped" pocket will be on the bottom of the heat shield, right under the ash door. Slide the Fall-Away Handle into the V-pocket for easy storage.



(2) How to attach the Palladian/Keystone Flue Collar and Cover Plate:

The flue collar and cover plate are interchangeable, so first you must decide whether you will vent your stove from the

top or the back. If you are venting from the top, you will put the flue collar on the top vent and the cover plate on the back vent. If you are venting from the back, you will do the opposite.

TOP VENTING: First, attach the flue collar to the top of the stove using 4 of the 6 flat headed machine screws included in the manual package. (An allen wrench is provided to tighten them.)

Second, attach the remaining cover plate to the back of the stove. When you attach this part, the top two screws are slightly longer than the bottom two screws, and they are already in the screw holes to help eliminate confusion. Remove these two screws from the back, and reuse them to attach the cover plate. The two screws for the bottom are included in the manual package.

Do not overtighten these screws: simply tighten until the gasket has seated and the screws are snug. When you top vent a Keystone and install the cover plate on the back of the stove, you can put the soapstone insert on the top of the stove, right in front of the flue collar. It will provide a convenient raised cooking surface for kettles and pots.

REAR VENTING: Attach the flue collar to the back of the stove using the 2 screws that are already in the top holes plus 2 of the flat headed machine screws included in the manual package. (An allen wrench is provided to tighten them.) The Keystone cover plate has a soapstone insert when it is installed on top of the stove.

(3) How to Attach the Palladian/Keystone Bypass Damper Knob:

Attach the “press-on” black plastic knob on the end of the damper rod at the back of the stove using a pushing, twisting motion; or gently hammer the knob onto the rod with a soft mallet.

(4) Remove your Ash Pan Cover:

Open your ash pan door, located on the right side of the stove, below the loading door, slide the ash pan out and remove the cover and set it aside. The cover can be used when removing the ash pan from the stove for safe disposal of the accumulated ash.

