



Shasta Vent Inc
All-Fuel HT Chimney Installation Instructions

January 2018

v1.10

A MAJOR CAUSE OF CHIMNEY RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS OF THE UTMOST IMPORTANCE THAT THIS CHIMNEY BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.

Failure to install your Shasta Vent All-Fuel HT Chimney in accordance with these installation instructions may:

- Cause a fire hazard,**
- Adversely affect your homeowner's insurance,**
- Void the chimney's warranty,**
- or cause some other unsafe condition.**

Keep these instructions for future use.

Go to www.shastavent.com for the most up to date version of these instructions.

Important: Read through these complete installation instructions before installing your Shasta Vent All-Fuel HT Chimney system.

Only use listed Shasta Vent All-Fuel HT Chimney components for your installation. Do not mix and match components from different chimney systems or different manufacturers. Do not modify components or use improvised solutions. Always maintain the proper clearance to combustibles. Always follow the appropriate building code requirements for your jurisdiction.

Chimney Listing Information:

Shasta Vent All-Fuel HT Chimney is ETL listed by Intertek Testing Services (Control #4009879) to the HT requirements of UL 103 *Standard for Factory Built Chimneys for Residential Type and Building Heating Appliances*.

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CLEARANCES

SHASTA VENT ALL-FUEL HT CHIMNEY PIPE REQUIRES A MINIMUM OF 2-INCH AIR-GAP CLEARANCE TO COMBUSTIBLES. This minimum clearance is required for any chimney pipe length, elbows, tees, and any other component that contains the exhaust gases from the appliance. For safety consideration, combustible materials are considered to be anything which are not metal or stone. Building insulation of any kind is considered combustible and must be kept at least 2" away from the chimney pipe. The required 2" clearance must be an air gap; the clearance cannot be filled with any other material, combustible or otherwise.

BEFORE YOU BEGIN

Before you begin your Shasta Vent All-Fuel HT Chimney installation, check with your local Building Department or appropriate authority having jurisdiction about the necessary permits and local requirements. Contact your local Building or Fire Officials about restrictions and installation inspection in your area.

Below is a list of equipment and materials you may need to properly install your Shasta Vent All-Fuel HT Chimney system.

Equipment:

- Safety Gloves, Safety Glasses
- Hammer, Drill, Screwdriver (Phillips and Standard)
- Crescent Wrench, Socket Wrench with Sockets
- Tin Snips
- Tape Measure
- Plumb Bob/Laser Level
- Secure Ladder
- Framing Square
- Keyhole Saw, Jig Saw
- Caulking Gun

Materials:

- 8-penny nails and/or #8 1-1/2" & 2-1/2" screws
- Roofing nails (or other roofing hardware appropriate for your roof)
- Roofing sealant
- 500 °F RTV Silicone Sealant

Chimney Listing, Application, and Appropriate Appliances:

Your Shasta Vent All-Fuel HT Chimney has been tested and listed to the HT requirements of UL 103 *Standard for Factory Built Chimneys for Residential Type and Building Heating Appliances*. Your Shasta Vent All-Fuel HT Chimney can be used with stoves, fireplaces, furnaces, boilers, etc. that use gas, oil, or wood as a fuel source and require a UL 103 or UL 103 HT chimney. Check with your appliance's installation instructions to verify its chimney or venting requirements. Important: The chimney must be sized in accordance with the appliance manufacturer's instructions.

GENERAL NOTES

Chimney Diameter:

Always follow the appliance manufacturer's requirements for proper chimney diameter. Follow the appliance manufacturer's requirements for minimum clearance between the appliance and nearby combustibles and plan your chimney installation accordingly. Do not use a chimney with an inside diameter smaller than the outlet of the appliance, unless specifically instructed to do so by the appliance manufacturer's instructions. When selecting the chimney diameter size, it is based on the inside diameter of the pipe carrying the exhaust gases. Shasta Vent All-Fuel HT Chimney has a 1-inch wall thickness which provides an outside diameter that is 2-inches larger than the inside diameter. Refer to Table 1.

Table 1 - Chimney Diameter

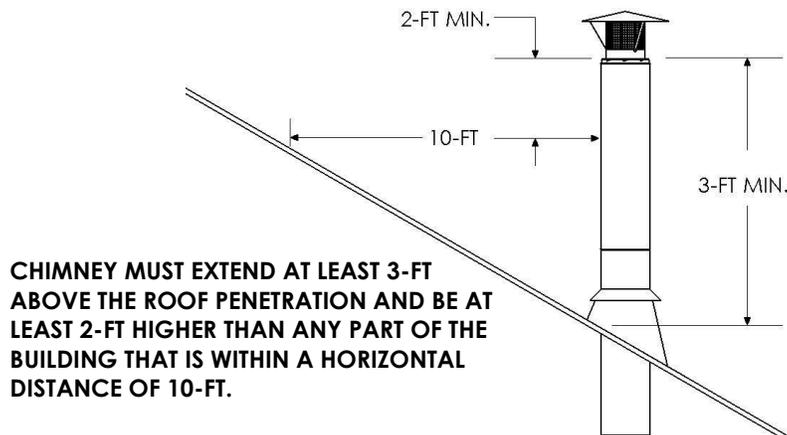
Inside Diameter	Outside Diameter
6"	8"
8"	10"

Chimney Height:

The National Fire Protection Association Standard #211 requires that chimneys must extend at least 3-ft higher than the highest point where the chimney passes through the roof, and must also be at least 2-ft higher than any portion of the structure within a horizontal distance of 10-ft. See Figure 1.

Shasta Vent's Ceiling Support Box for the All-Fuel HT Chimney can support up to a maximum of 50-ft of chimney. If additional chimney height is needed, a Tee Support may be installed in the middle of the chimney installation to help support the additional height of the chimney. The Tee Support can support a maximum of 50-ft of chimney.

Figure 1 - Minimum Height Above Roof



If the chimney extends more than 5-ft beyond where it passes through the roof, the chimney must be stabilized. An Elbow Support Bracket combined with guy-wire can be used to stabilize the chimney. Additional supports must be used at intervals of no more than 5-ft thereafter. To calculate the installed length of a chimney section, subtract 1-inch from its overall length.

Enclosure Requirements:

Chimneys that run through the interior of a residence must be enclosed where they extend through closets, storage areas, or any habitable spaces where the chimney may come into contact with people or combustible materials. Except for installations in one- and two-family dwellings, a factory-built chimney that extends through any zone above that on which the connected appliance is located is to be provided with an enclosure having a fire resistance rating equal to or greater than that of the floor or roof assemblies through which it passes.

In cold regions it is recommended that chimneys mounted on the exterior of the home be installed in a chase enclosure. An enclosure around the chimney helps to reduce or limit condensation, reduce creosote buildup in the chimney, and minimizes drafting problems.

CHIMNEY INSTALLATIONS

These installation instructions are organized so you can refer to typical installations and their necessary components. The general installation procedure for the chimney system and components are then explained. Following the general explanation, the individual components are then described and their more detailed method of installation is explained.

Installations will generally either be 1) a Ceiling Supported type installation, or 2) a Through-the-Wall type installation. Refer to Figure 2 & 3 for versions of these installations and to see the typical components required for each setup. Review the general installation procedure for your type of installation below.

Additionally, your chimney installation will either be enclosed or unenclosed; this could either be in the attic space or in a chase adjacent to the home. Either situation has some specific components that must be used.

Table 2 - Framed Opening Requirements

Component	Framed Opening Requirement	
	6" Diameter	8" Diameter
Ceiling Support Box	12-1/4" x 12-1/4"	14-1/2" x 14-1/2"
Wall Thimble	12-1/4" x 12-1/4"	14-1/2" x 14-1/2"
Firestop Radiation Shield	12-1/4" x 12-1/4"	14-1/2" x 14-1/2"
Insulation Shield	12-1/4" x 12-1/4"	14-1/2" x 14-1/2"

Ceiling Supported Installation:

When the chimney is supported above your appliance at the ceiling level, it is considered to be a Ceiling Supported installation. Ceiling Supported installations start with the location of the Ceiling Support Box at the ceiling level above the appliance. Depending on how many stories the chimney extends through will determine the additional components needed for the system. Refer to Figure 2 for the typical components needed for a Ceiling Supported Installation and refer to the detailed installation requirements for each component.

- Determine where the Ceiling Support Box will be located, keeping in mind the location of structural members. Cut and frame an opening as required in Table 2. Install the Ceiling Support Box in accordance with the directions given in the component section. Avoid cutting

or modifying any structural members. Be aware of the clearance requirements for the connector pipe (stovepipe) you are using and be sure the location of the Ceiling Support Box meets those requirements.

- Install Chimney Pipe into the Ceiling Support Box and continue with additional Chimney Sections. If an offset is required, refer to the Elbows and Elbow Support Bracket component sections.
- If the chimney passes through another ceiling level, a Firestop Radiation Shield must be installed at each additional ceiling. A Firestop Radiation Shield is not installed at the roof.
- The chimney must be secured every 10-ft by either the Ceiling Support Box, Firestop Radiation Shield, Elbow Support Bracket, or an Adjustable Wall Bracket.
- If the chimney enters an attic space, and will be unenclosed (no chase) in the attic, install an Insulation Shield. An Insulation Shield may also be needed at locations other than in the attic to prevent debris or building insulation may come into contact with the chimney pipe. A Non-Ventilated Flashing can be installed at the roof if the chimney is unenclosed (no chase) before the roof level.
- If the chimney will be enclosed in a chase up to the roof, the Roof Radiation Shield and Ventilated Flashing are must be installed. Also, the Insulation Shield is not used if the chimney is enclosed in a chase up to the roof.
- Install the Flashing and seal it to the roof using appropriate roofing sealant for your roof.
- Install the Storm Collar directly above the Flashing and seal it using 500°F RTV silicone sealant.
- Attach the Cap to the top chimney section, being sure to meet the minimum height requirements as shown in Figure 1. If the chimney extends more than 5-ft above the roofline, stabilize the chimney using an Elbow Support Bracket and guy-wires.

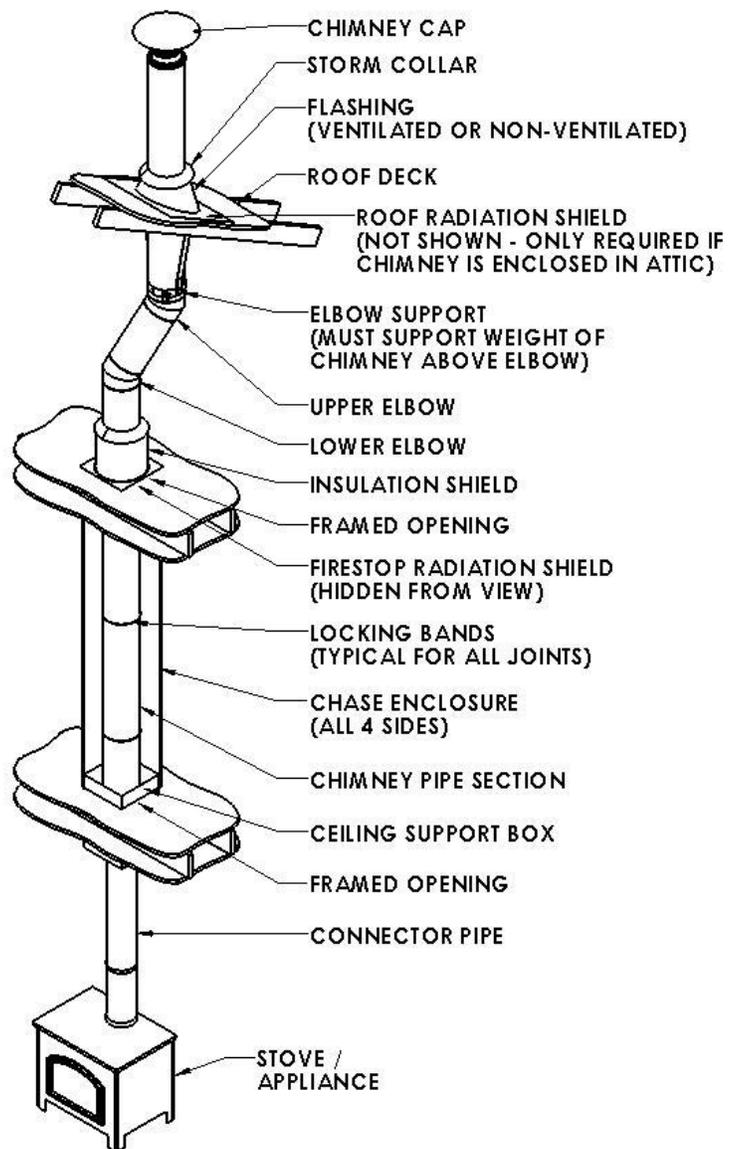


Figure 2 - Typical Ceiling Supported Installation and Components

Through-the-Wall Installation:

If your chimney system will exit horizontally through a wall to the outside before turning vertical, then it is considered a Through-the-Wall type installation. Through-the-Wall installations use a Wall Thimble to penetrate through the wall and a Tee Support instead of a Ceiling Support Box as the primary means of supporting the chimney system. Refer to Figure 3 for the typical components needed for a Through-the-Wall installation.

- Determine where the Wall Thimble will be located, keeping in mind the location of structural members. Avoid cutting or modifying any structural members. Be sure to consider the clearance requirements of the connector pipe that will be used. Cut and frame an opening in accordance with Table 2, and install the Wall Thimble.
- On the exterior of the house, carefully coordinate the location of the Tee Support with the Wall Thimble and Tee. The Tee Support Bracket must be anchored to a wall stud or substantial structural member to support the weight of the chimney. The location of the Tee Support must allow the Tee to properly align with the Wall Thimble. An Adjustable Chimney Section can be used for non-standard lengths. Install the Tee Support Bracket.
- Install the Tee and the horizontal Chimney Pipe Section that will be used to extend through the wall. The Chimney must extend at least 2" into the room.
- Inside the house, install the Finishing Collar to the end of the horizontal Chimney Pipe Section, and secure the Finishing Collar to your connector pipe (stovepipe).
- Outside, install Chimney Pipe Sections vertically as needed for your installation. Install an Adjustable Wall Bracket at least every 10-ft if the Chimney is not otherwise secured by a Tee Support Bracket or Firestop Radiation Shield.

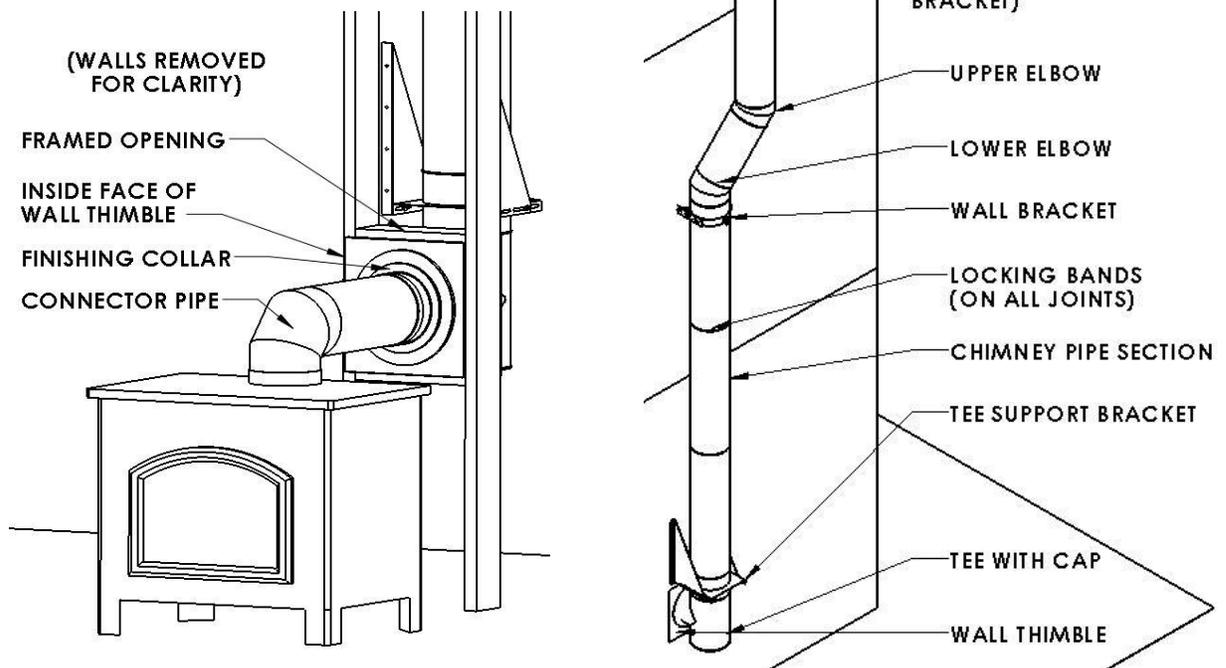


Figure 3 - Typical Through-The-Wall Installation and Components

- If an offset is needed, install the Elbows and chimney for the offset. Depending on your installation, use either an Elbow Support Bracket (if structural members are nearby) or an additional Tee Support Bracket if a wall is available to support the chimney above the offset.
- If the chimney will pass through the eave of the roof, either notch the eave to the minimal required clearance of 2" from the pipe, or cut a hole for the chimney to pass through and install a Flashing.
- If the chimney will offset out and around the eave, verify the 2" clearance requirement is met and the chimney is properly supported.
- If the chimney exits the house and is installed in an exterior chase enclosure, install vertical Chimney Pipe Sections as needed, and install an Adjustable Wall Bracket every 10-ft. At the top of the chase, install a Roof Radiation Shield and a Ventilated Flashing. Seal the Flashing to the chase top. Then install a Storm Collar and seal it with 500°F RTV silicone sealant. A chase enclosure is recommended for cold climates.
- Attach the Chimney Cap to the top chimney section, being sure to meet the minimum height requirements as shown in Figure 1. If the chimney extends more than 5-ft above the roofline, stabilize the chimney using an Elbow Support Bracket and guy-wire.

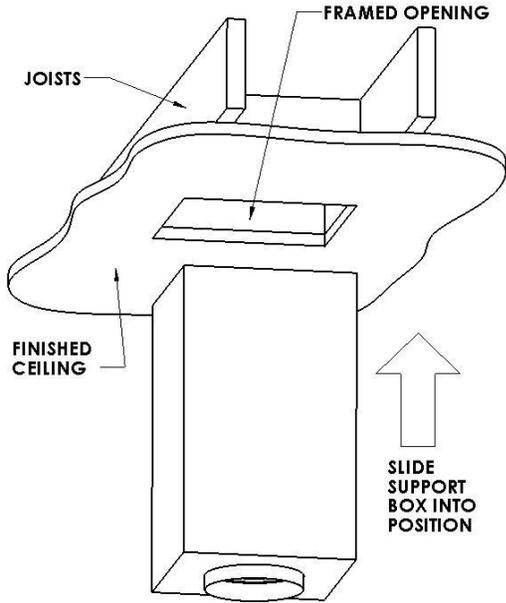
COMPONENT DESCRIPTION AND DETAILED INSTALLATION:

This section describes each component of the chimney system and explains their installation requirements in detail.

Ceiling Support Box: The Ceiling Support Box supports the chimney installation and provides a transition from connector pipe (stove pipe) to the chimney. The Ceiling Support Box is installed in the ceiling above the appliance. The Ceiling Support Box must extend at least 2" below the finished ceiling. The Ceiling Support Box can support a maximum of 50-ft of chimney pipe. If more chimney height is needed, a Tee Support can be installed in the system and mounted to structural members. The Ceiling Support Box fits ceilings between 0/12 and 16/12 pitch.

- Cut and frame an opening in the ceiling where the Ceiling Support Box will be located. Refer to Table 2 for the framed opening dimensions. The size of the box is made to fit in between 16" o.c. joists. Do not cut any load-bearing structural members.
- Position the Support Box. The bottom of the Ceiling Support Box must extend at least 2" below the finished ceiling on all sides and must provide sufficient clearance requirements of the connector pipe (stove pipe) you are using.
- Secure the Ceiling Support Box in place using a minimum of eight (8) 8-penny nails or #8, 1-1/2" screws (two per side) through the sides of the Support Box into the framing (Figure 4A).
- If the Ceiling Support Box is being installed in a vaulted ceiling or A-frame structure, then the Support Box can extend through to the roof level. The sides of the Support Box can be trimmed if they extend above the roof line. See Figure 4B.
- If the Ceiling Support Box is being installed into a scissor-truss system where the Support Box will not reach the floor level above, the sides of the Support Box can be extended using 26-ga galvanized sheet metal. See Figure 4C.
- Slide your connector pipe over the cylindrical extension at the bottom of the Support Box. The extension can be crimped if needed to fit inside your connector pipe. Secure the connector pipe to the Box with at least two (2) sheet metal screws.

Figure 4A - Ceiling Support Box Installation Details



INSTALL SUPPORT BOX INTO FRAMED OPENING SIZED IN ACCORDANCE WITH TABLE 2. POSITION BOTTOM OF BOX SO IT IS AT LEAST 2-IN BELOW FINISHED CEILING. SECURE SUPPORT BOX TO FRAMING WITH AT LEAST TWO NAILS OR SCREWS PER SIDE.

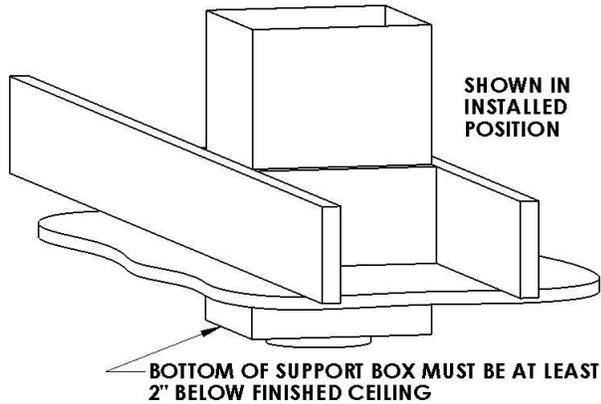
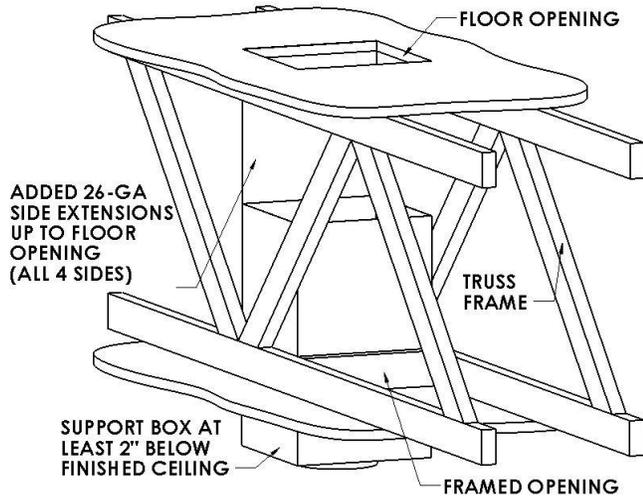
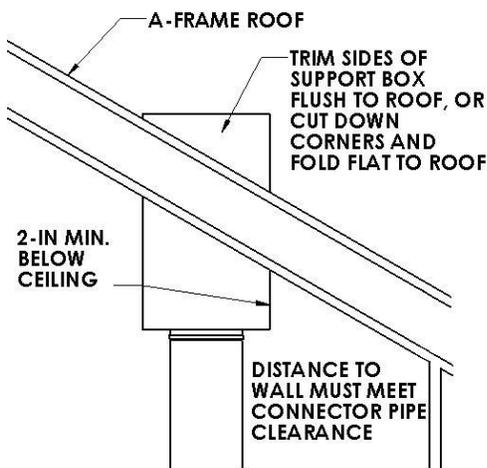


Figure 4B, 4C - Ceiling Support Box Installed at Vaulted Ceiling and Truss System

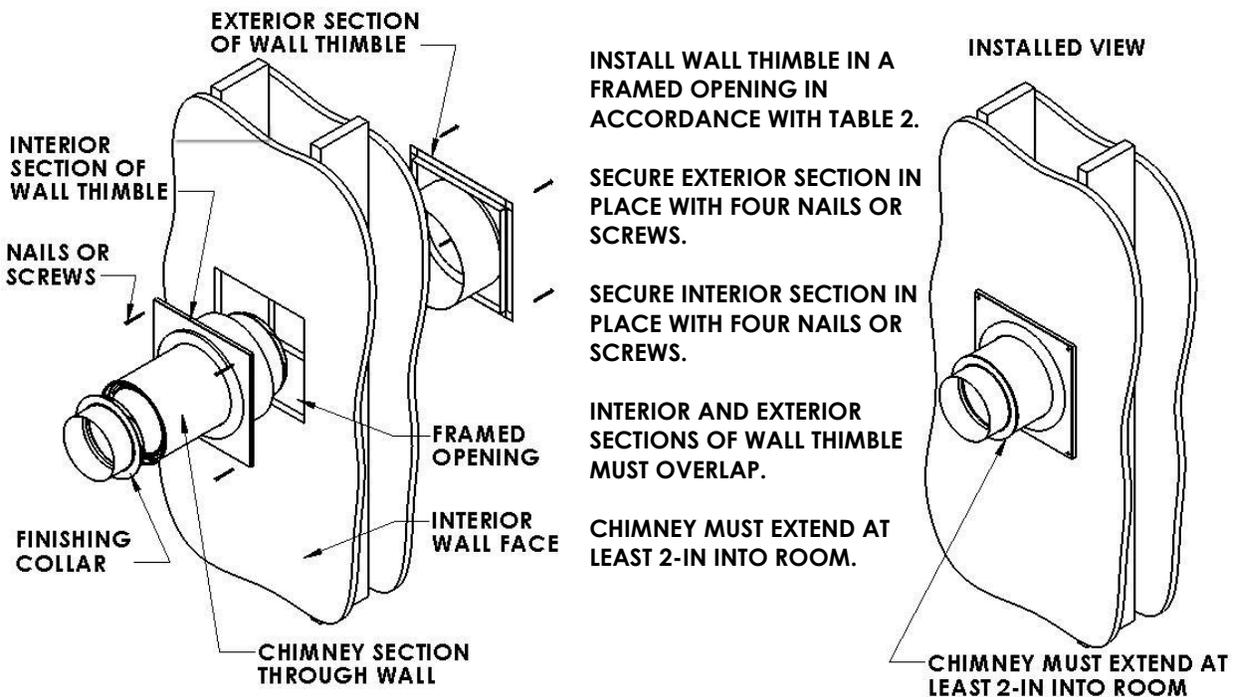


Wall Thimble: The Wall Thimble is used when installing a through-the-wall chimney system. It protects the wall as the chimney passes safely through to the outside, and provides a finished look to the framed opening. The Wall Thimble can adjust to accommodate walls up to 10-inches deep. **Important:** Do not fill the air space between the chimney pipe and the inside of the Wall Thimble with any material; it must be an air space to provide the necessary protection.

- Cut and frame a square opening in the wall where the chimney will pass through, in accordance with the dimensions of Table 2. The Wall Thimble will fit between typical 16" o.c. studs. Refer to Figure 5 for installation details.

- Mount the outside section (the unpainted portion) of the Wall Thimble to the exterior of the framed wall opening. The flanged edges should fit just inside the framing with the cylindrical shield pointing into the opening.
- Secure the outside portion of the Wall Thimble using four (4) 1-1/2" #8 wood screws or 8-penny nails, one in each corner of the Wall Thimble.
- Fit the inside section (the black-painted portion) of the Wall Thimble to the interior wall face, so that the cylindrical shields overlap.
- The Wall Thimble can accommodate walls up to 10-inches deep. If a deeper wall is encountered, a field-fabricated 26-gage galvanized steel sheet metal (or better) cylinder must be installed to bridge the gap. If a narrower wall is encountered, the cylindrical shields can be trimmed, but must still overlap when installed.
- Secure the inside portion of the Wall Thimble using four (4) 1-1/2" #8 wood screws or 8-penny nails, one in each corner of the Wall Thimble.
- After chimney section is installed through the Wall Thimble, the gap can be sealed with 500 °F RTV silicone sealant if desired.

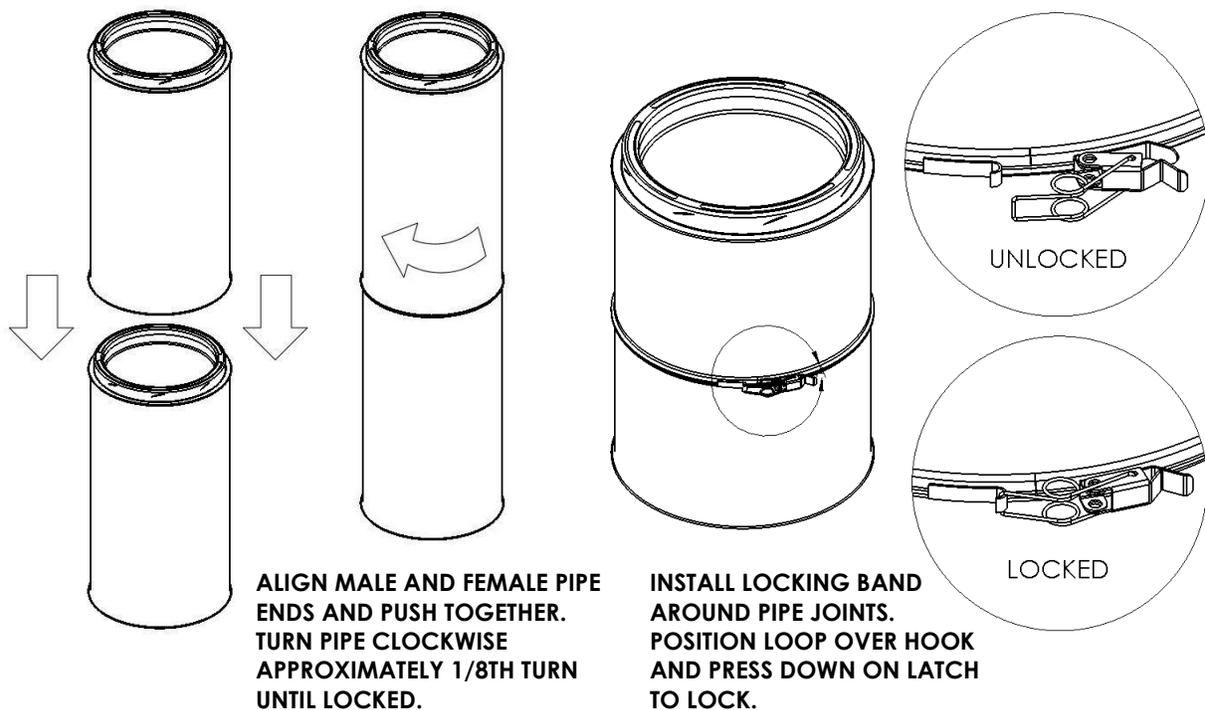
Figure 5 - Wall Thimble Installation



Chimney Pipe Sections: The chimney pipe sections are designed to twist-lock together and use a Locking Band to secure the connection. No screws are needed to secure the chimney in place. If screws are used, do not contact or penetrate the inner wall of the chimney pipe. Chimney Pipe Sections are offered in 39-inch (1000mm), 19-inch (500mm), and 8-inch (200mm) lengths. Installed length of a chimney pipe section is 1-inch less than then nominal length. Note: Chimney Pipe Lengths cannot be cut down to a different length. If a different length is necessary, see the Adjustable Chimney Section below.

- To connect chimney pipe sections together, male end of pipe points up (in the direction of the Chimney Cap), female end of pipe points down (towards the appliance). See Figure 6. Important: the UP arrow on the label must point up in the direction of the exhaust flow.
- Line up pipe ends, press together until completely seated and rotate approximately 1/8th turn clockwise until locked in place.
- Secure connection with Locking Band. The Locking Band will prevent the chimney sections from being inadvertently disconnected. Wrap the Locking Band around the joint where the male and female chimney pipe edges meet. Position the squared loop over the hook and press down on the latch of the Locking Band. Note: If the pipe sections are not fully seated, the latch may be difficult to secure in place.

Figure 6 - Connecting Chimney Sections and Locking Band



Adjustable Chimney Pipe: The Adjustable Chimney Pipe is offered when standard lengths of chimney will not fit for your installation, and can be useful in offsets to achieve a specific vertical position for the chimney. The Adjustable Chimney Pipe comes as two pieces which slide over one another and compresses down to the necessary size. The Adjustable Chimney Pipe adjusts from approximately 11 to 20 inches.

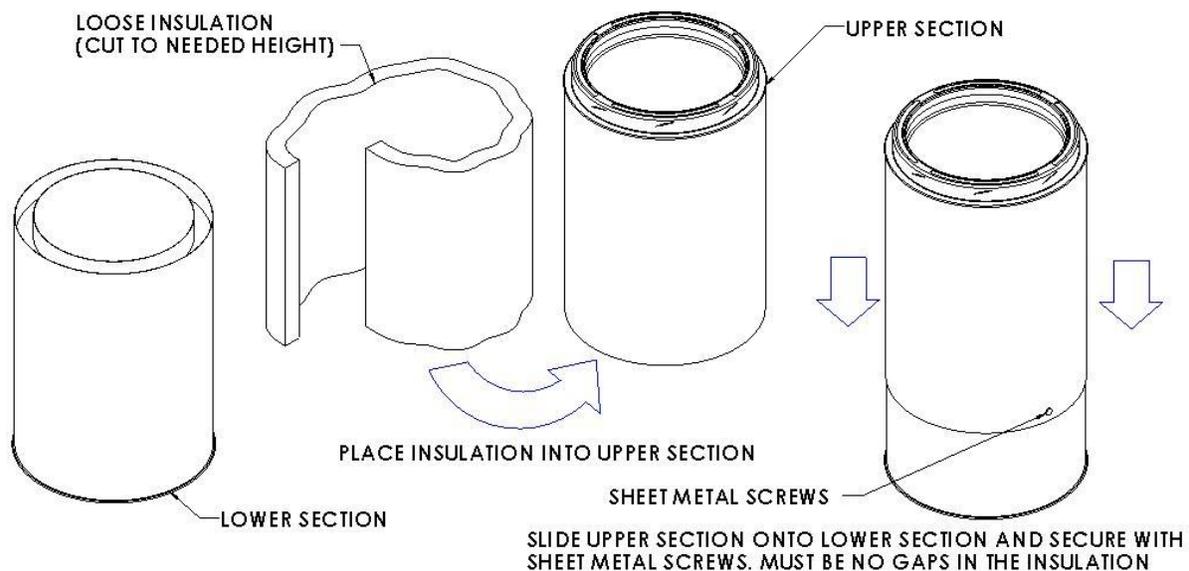
- Determine the length the Adjustable Chimney Pipe needs to be for your installation. The Adjustable Chimney Pipe provides from 11"-20" of adjustment and must have at least 1" of overlap between the upper and lower sections.
- Separate the two sections of the Adjustable Chimney Pipe. Cut the supplied insulation to the necessary height for your installation. The insulation must be pressed together when the two halves of the Adjustable Chimney Pipe are assembled at the desired length.

Warning: No voids or gaps in the insulation are allowed in the final installation. It is

imperative the upper and lower portions of the Adjustable Chimney Pipe have their pieces of insulation in contact with each other to avoid a potential fire hazard.

- Slide the cut insulation into the upper section of the Adjustable Chimney Pipe. The ends of the insulation must touch together so there is no gap running lengthwise along the pipe section. Next, slide the upper section onto the lower section until the insulation from the upper section and lower section are in contact. See Figure 7.
- Secure the Adjustable Chimney Pipe halves in place by using the two (2) sheet metal screws provided.
- Install the Adjustable Chimney Pipe into your chimney system and secure in place by twist locking clockwise and using a Locking Band.

Figure 7 - Adjustable Chimney Pipe Detail

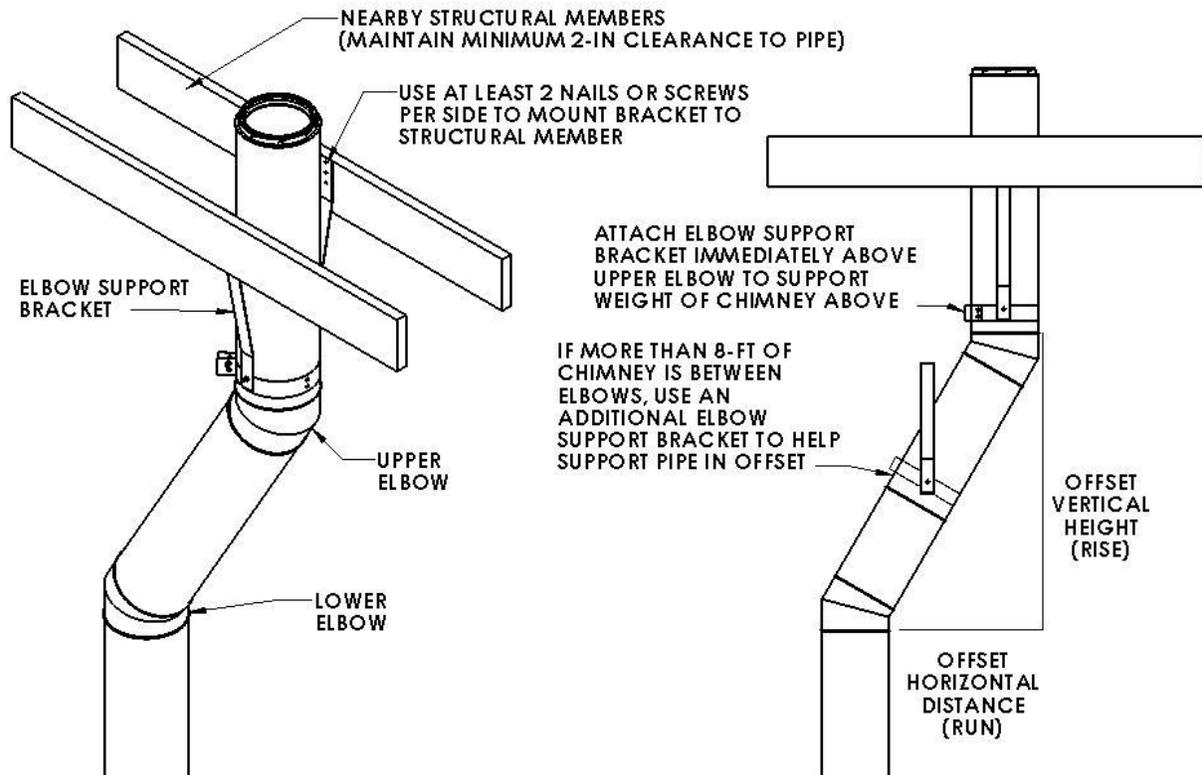


Elbows: Chimney Elbow sections are used for offsets in the chimney system. Elbows allow the installer to avoid structural members or other obstacles. Shasta Vent All-Fuel HT Chimney system can accommodate a maximum two (2) offsets and returns, for a maximum total of four (4) elbows in the system. Each angled offset must have a return back to vertical. Shasta Vent offers 15° & 30° elbows (i.e. elbows angle is 30° from vertical). Elbows cannot be combined to create an angle greater than 30°; that would violate the UL 103 Chimney Standard and the national building codes. Important: Offsets must be supported by either an Elbow Support or Tee Support Bracket. Elbows themselves cannot support the offset or the weight of the chimney above the offset.

- Align the first Elbow in the desired offset direction, on top the section of Chimney Pipe.
- Elbows female end rings do not have the twist lock feature in order to offer 360° rotation. The Locking Band is required to secure the Elbow to the Chimney Pipe Section.
- Add chimney pipe sections to the offset. Refer to the Offset Chart to show the amount of vertical height (rise) and horizontal offset (run) available with different chimney lengths.
- If more than 8-ft of chimney pipe is in the offset, then an additional Elbow Support Bracket must be used to help support the offset. It is important that the Elbows do not carry the weight of the chimney sections in the offset. See Figure 8.

- Align the second Elbow so that the chimney system returns to vertical. Secure the Elbow to the last offset section using the Locking Band.
- Support the second Elbow using either an Elbow Support or a Tee Support Bracket above the second elbow to ensure the rest of the chimney system is properly supported.

Figure 8 - Elbow and Elbow Support Bracket Installation



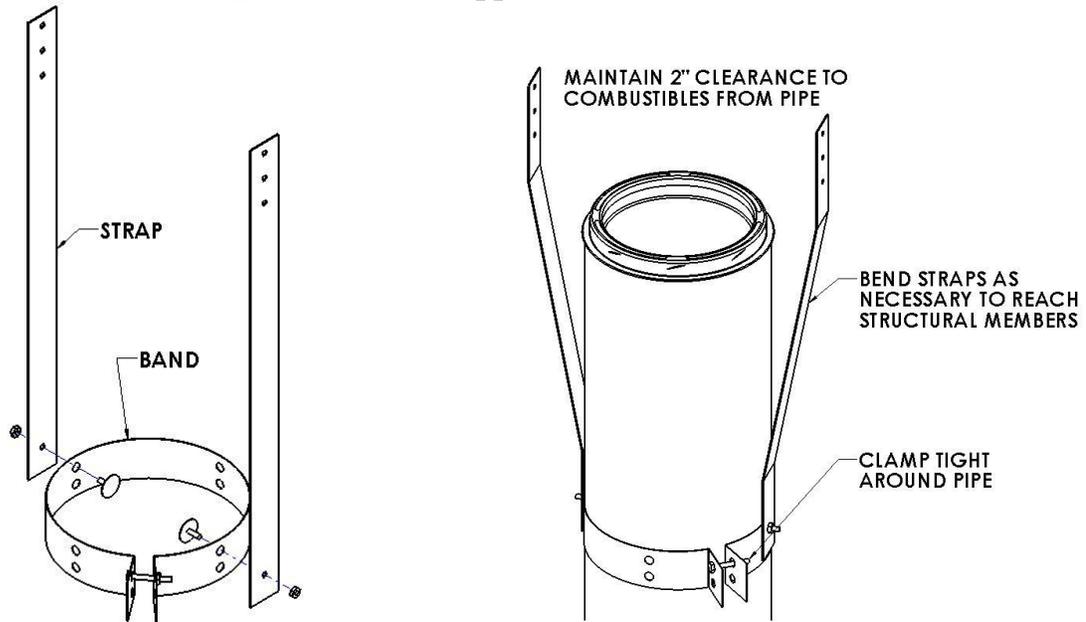
Elbow Support Bracket: The Elbow Support Bracket is a clamping band designed to transfer the weight of a chimney offset to nearby structural members. The Elbow Support Bracket clamps around the Elbow or Chimney Pipe Section, and then its straps are mounted to the roof joists or similar structural member. One or more Elbow Supports are required whenever an offset is made in the chimney system. Additionally, the Elbow Support Bracket can be used as a lateral support when the chimney extends more than 5-ft above the roof if the chimney is not otherwise secured.

- Bolt the straps of the Elbow Support Bracket onto the band portion of the bracket using the nuts and bolts provided. See Figure 9.
- Clamp the band of the Elbow Support Bracket around the chimney section immediately above the upper elbow of an offset. The Elbow Support Bracket (or a Tee Support) must be used to support the weight of the chimney above the offset; the Elbow cannot support the weight of the chimney.
- An additional Elbow Support Bracket is required to support the chimney in the offset if there is more than 8-ft of chimney in the offset.
- Secure the straps of the Elbow Support Bracket to nearby structural members using at least two (2) 8-penny or #8 1-1/2" wood screws, or better. The straps can be bent as

necessary to reach and wrap around the structural members. Always maintain the required 2-inch clearance between the chimney pipe and combustibles.

- Heavy plumbers strap can be used to extend the straps of the Elbow Support Bracket in order to reach structural members if necessary. Attach the plumbers strap to the Elbow Support Bracket using nuts and bolts of sufficient size to carry the weight.

Figure 9 - Elbow Support Bracket Detail



Tee and Cap: A Tee is used when the chimney is being installed through a wall, along with a Wall Thimble. The Tee changes the direction of the chimney from horizontal to vertical. The Tee Cap seals the bottom of the Tee. Verify there is access to the Tee and Cap after installation as they provide a means to clean the chimney. An additional chimney pipe section can be extended off the bottom of the Tee, and then the Tee Cap placed on the bottom of that chimney pipe section if so needed. If more than one chimney pipe section is used below the tee, use Adjustable Wall Brackets to support those chimney sections.

- Align the Tee Branch with the chimney pipe through the wall and the Wall Thimble. Connect the Tee to the male end of the chimney pipe coming through the wall. Secure with a Locking Band. Refer to Figure 10.
- Connect a Tee Support to the Tee and mount the Tee Support as describe below.

Tee Support: The Tee Support is used to support the chimney system when installing a through-the-wall system. The Tee Support is adjustable and allows the installer to adjust the distance from the wall, providing a range of 2"-8" between the chimney pipe and the wall. The Tee Support can support a maximum of 50-ft of chimney pipe. If additional chimney height is needed, another Tee Support can be installed in middle of the system to help support the additional weight. The Tee Support may be installed either above or below the Tee. If the Tee Support is installed above the tee, no more than 10-ft of chimney pipe can be between the Tee and Tee Support.

- Determine where the Tee Support will be located. Choose a location so it will connect properly with the Tee or Chimney Pipe Section.
- Loosely attach the supporting side brackets of the Tee Support to the base plate of the Tee Support using the provided nuts & bolts hardware. The mounting flanges of the side brackets need to face outward, and the tapered ends must be upward to properly support the chimney. The base plate of the Tee Support must have the male pipe end facing upward. See Figures 10 & 11.
- Mount each supporting side brackets of the Tee Support onto the wall using at least four (4) #8 2-1/2" wood screws (or better), making sure they are secured to a structural member. If the Tee Support is mounted to a masonry surface, use an appropriate masonry lag screw instead of wood screws. Ensure the base plate of the Tee Support can be adjusted.
- Adjust the base plate of the Tee Support to the necessary distance away from the wall for your installation, and tighten the nuts & bolts connecting the base plate to the side supporting brackets.
- Place the Tee onto the Tee Support (above or below). In the event that the locking rings do not lock with the Tee branch facing the wall opening, orient the Tee so the branch is facing the opening, and secure in place with a Locking Band. Note: the Tee will be held in place by the chimney section extending through the wall, and the vertical chimney is held secure using the Wall Brackets. A screw may be used to hold the Tee in place if so desired, but do not penetrate the inner wall of the chimney. Secure the Tee Support to adjacent Chimney Pipe Sections or Tee with Locking Bands.

Figure 10 - Installed Wall Thimble, Tee, and Tee Support

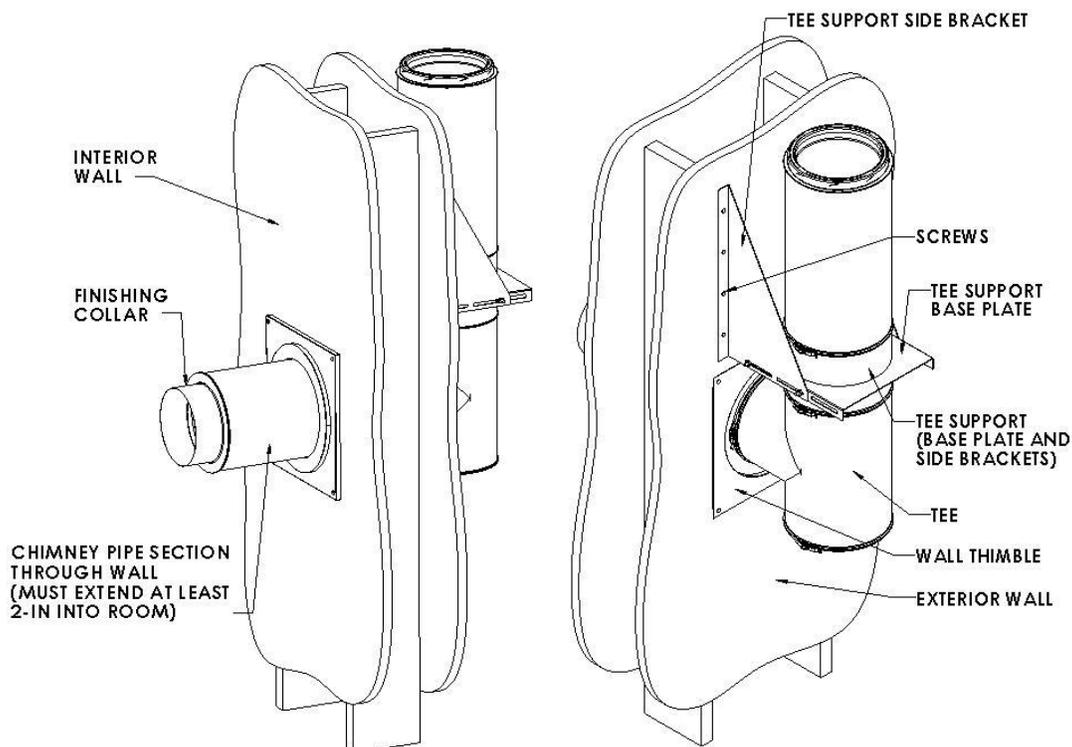
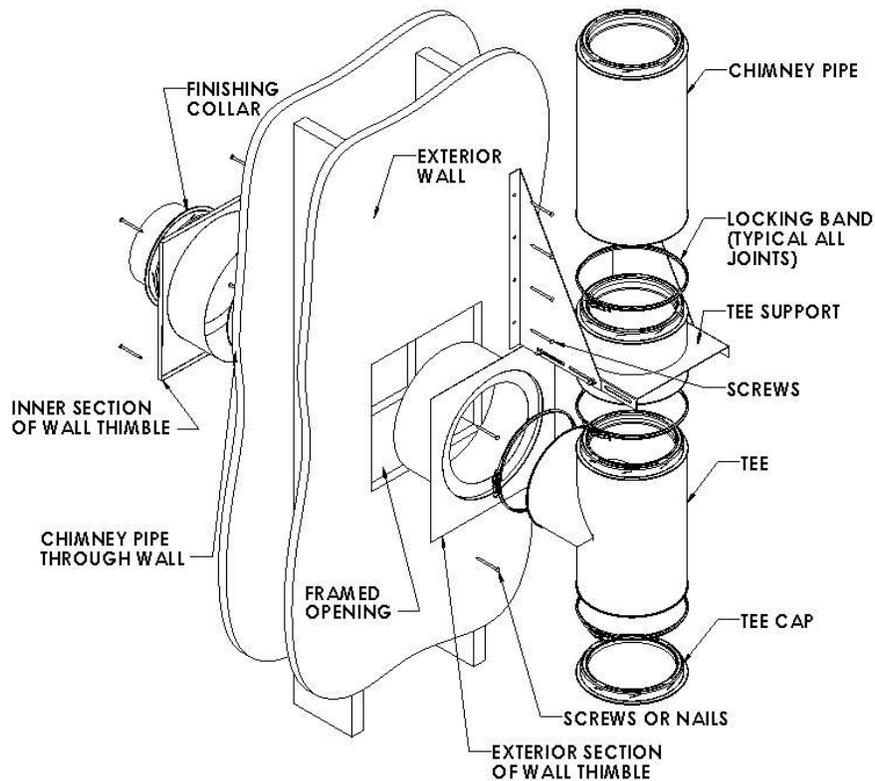


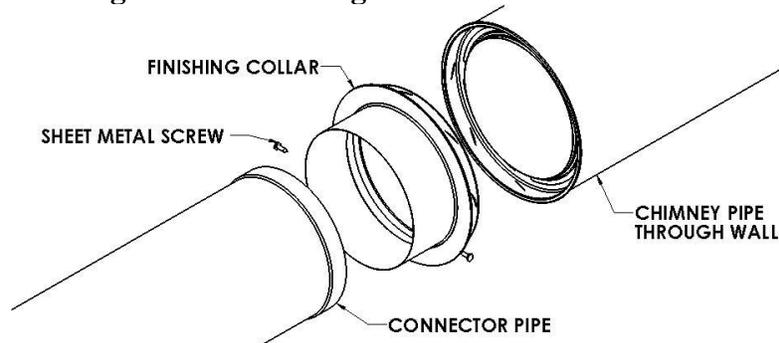
Figure 11 - Exploded View of Wall Thimble, Tee, and Tee Support



Finishing Collar: The Finishing Collar is used to transition from the connector pipe (stovepipe) to the chimney when installing a Wall Thimble. The Finishing Collar is not needed with the Ceiling Support Box, as the transition piece is built into the Support Box. The Finishing Collar provides a cleaner look to the end of the chimney pipe, and also provides a means of securely attaching the connector pipe to the chimney. Refer to Figure 12.

- Twist lock the Finishing Collar onto the female end of the Chimney Pipe that extends into the room (the Chimney Pipe must extend at least 2-inches into the room).
- Secure the Finishing Collar to the Chimney Pipe using an optional Locking Band (a Locking Band is optional at this location).
- Slide the connector pipe over the end of the Finishing Collar and secure using at least two (2) sheet metal screws. If necessary, crimp the end of the Finishing Collar so it may slide into the connector pipe

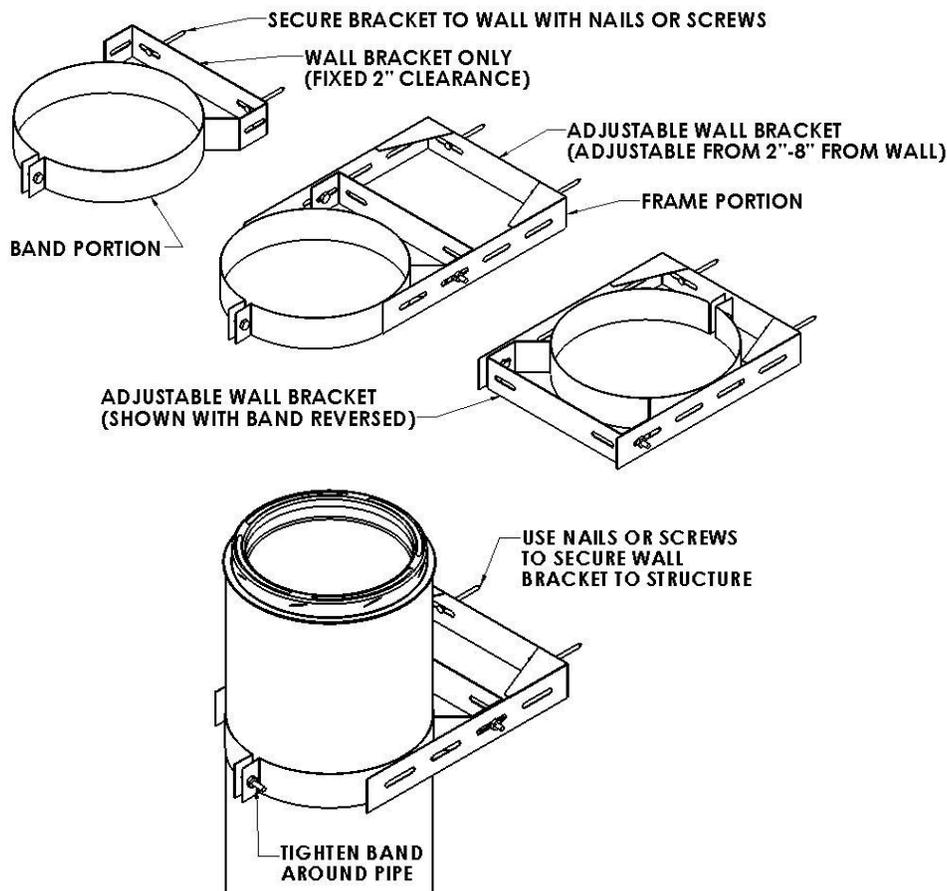
Figure 12 - Finishing Collar Installation Detail



Adjustable Wall Bracket: The Adjustable Wall Bracket helps to secure the chimney in place when mounted against a wall. Adjustable Wall Brackets are required at least every 10-feet, unless the chimney is otherwise held in place by a Ceiling Support Box, Tee Support, or passing through a Firestop Radiation Shield. Note: the Adjustable Wall Bracket does not support the weight of the chimney system; it only provides lateral stability. The weight of the chimney is carried by either a Tee Support or an Elbow Support Bracket. Adjustable Wall Brackets provide between 2" to 8" of adjustment between the chimney pipe and the wall.

- Install an Adjustable Wall Bracket on the chimney system at least every 10-ft if the chimney is not otherwise secured.
- If only 2" clearance is needed, the band-portion alone of the Adjustable Wall Bracket can be used. See Figure 13.
- If additional clearance is needed, use both the band and frame portions together of the Adjustable Wall Bracket. Mount the band-portion to the frame-portion and adjust to the desired clearance. Secure the two portions together using the four (4) nuts and bolts provided. See Figure 13.
- Mount the Adjustable Wall Bracket (band-portion or both portions together) to the wall using at least two (2) 8-penny nails or #8 1-1/2" screws or better.
- Wrap the band-portion of the Adjustable Wall Bracket around a section of chimney. Secure the band to the chimney by tightening the nut and bolt provided.

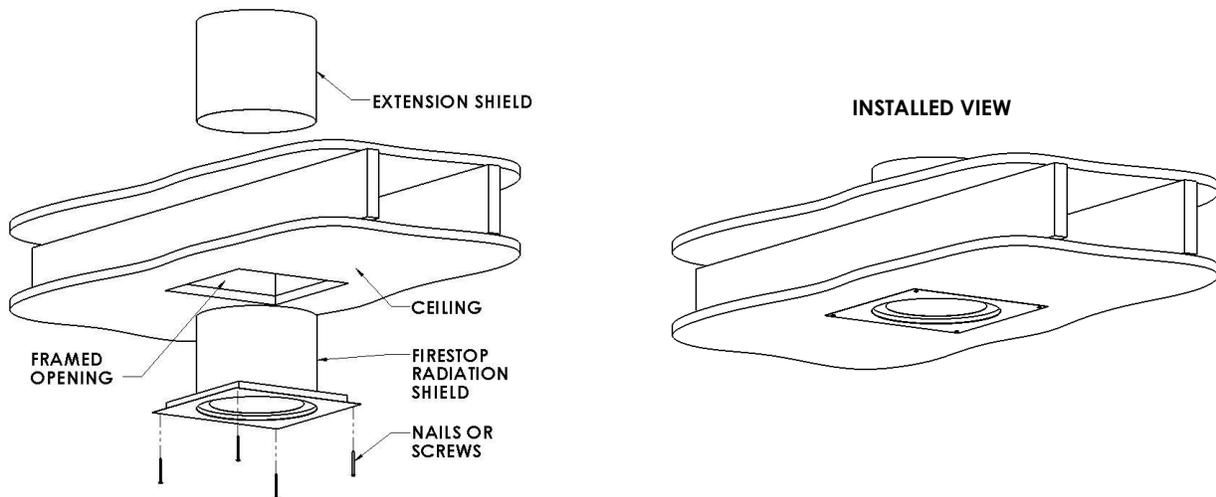
Figure 13 - Adjustable Wall Bracket Detail and Installation



Firestop Radiation Shield: The Firestop Radiation Shield is a fire safety component and is required by the safety standard and the building codes in order to achieve a safe chimney installation as the chimney passes through a ceiling-floor opening. A Firestop Radiation Shield must be installed wherever the chimney system penetrates through a floor level of the structure, except at the roof level or where the Ceiling Support Box is located.

- Cut and frame an opening according to Table 2 where the chimney will pass through the floor level.
- From the underside of the penetration, install the Firestop Radiation Shield with the flanges and cylindrical radiation shield pointing upward. Secure the Firestop Radiation Shield in place with four (4) 8-penny nails or #8, 1-1/2" screws, one per corner. See Figure 14.
- If the thickness of the floor framing is more than 11", the Firestop Radiation Shield can be extended, up to a total of 20" in height. Secure the extension shield in place with two (2) sheet metal screws. Leave at least 1" overlap for the cylindrical radiation shields. Do not allow the screws to contact the chimney pipe. If the floor thickness is more than 20", a field-fabricated 26-ga galvanized sheet metal sleeve can be used to extend the shield.

Figure 14 - Firestop Radiation Shield Installation

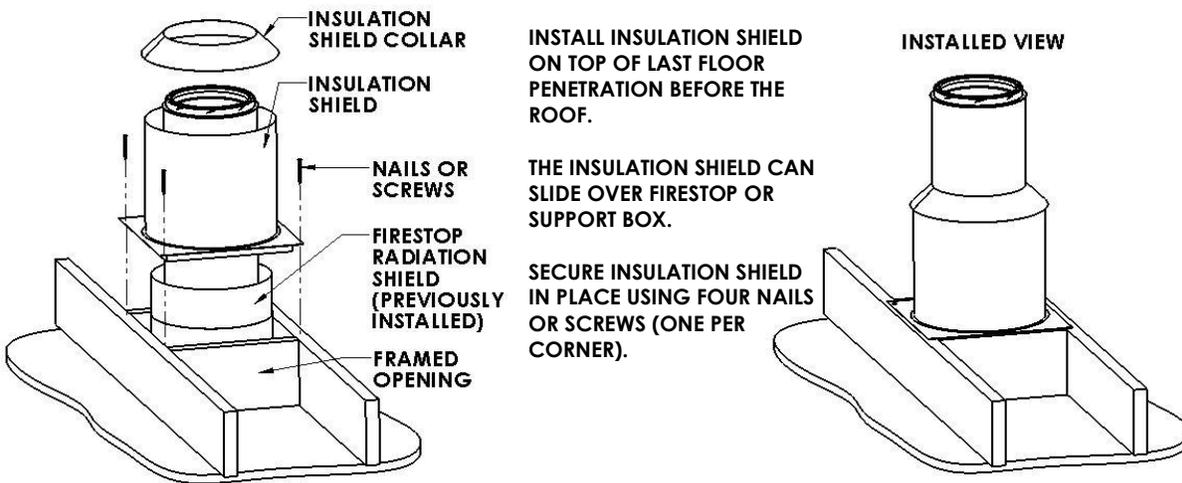


Insulation Shield: The Insulation Shield prevents building insulation and other debris from contacting the Chimney Pipe Sections. Important: The Insulation Shield is a key component to avoid a potential fire hazard. The Insulation Shield is required either in the attic or another location where the chimney pipe could contact building insulation or debris. Normally, the Insulation Shield is placed on top of the framing of the last floor level before the chimney exits the building through the roof. If the chimney is fully enclosed in a chase through the attic or on the exterior of the structure (and thereby separated from building insulation and debris), then an Insulation Shield is not installed.

- Install the Insulation Shield from the top of the last framed opening before the chimney system passes through the roof. Fit the flanged edges into the framed opening, over the top of the Firestop Radiation Shield or trimmed edge of the Ceiling Support Box, depending on your installation. See Figure 15.

- Secure the Insulation Shield in place with four (4) 8-penny nails or #8, 1-1/2" screws, one per corner.
- Wrap the collar around the chimney pipe section so that the collar is in contact with the Insulation Shield. The collar is there to prevent debris or insulation from getting to the inside of the Insulation Shield. Secure the collar in place by tightening the clamping screw provided.

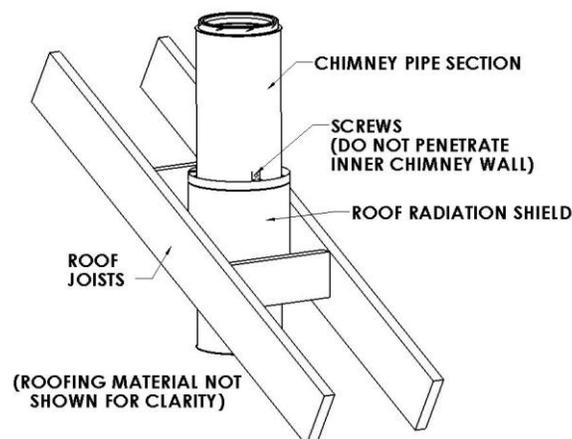
Figure 15 - Insulation Shield Detail and Installation



Roof Radiation Shield: The Roof Radiation Shield provides protection for joists where the chimney system passes through the roof. The Roof Radiation Shield is only required if the chimney is enclosed in a chase immediately prior to passing through the roof. If the chimney system is unenclosed before it passes through the roof, the Roof Radiation Shield is not required.

- Install the Roof Radiation Shield where the chimney system passes through the roof level. Slide the Roof Radiation Shield over the chimney pipe section and position it so that the shield covers the roof framing on all sides of the roof penetration.
- Secure the Roof Radiation Shield in place with three (3) sheet metal screws (3/4" or shorter). Do not contact or penetrate the inner wall of the chimney pipe. See Figure 16.

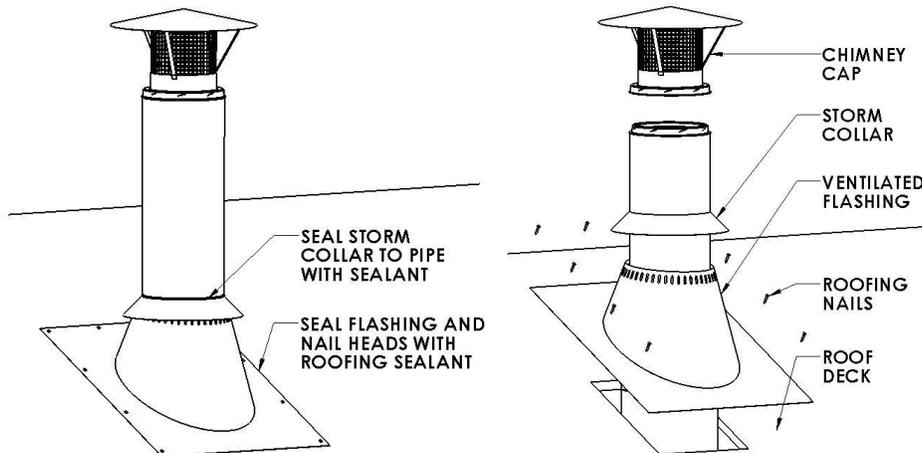
Figure 16 - Roof Radiation Shield Installation



Flashing - Ventilated or Non-Ventilated: The Flashing provides a weather resistant means of sealing the chimney system where it passes through the roof. Flashings are available as either Ventilated, or Non-Ventilated. A Ventilated Flashing is required when the chimney is installed in a chase enclosure or is fully enclosed through the attic. If the chimney is open through the attic or otherwise unenclosed below the roofline, then a Non-Ventilated Flashing may be used. Flashings are available for different roof pitches including flat (0/12 pitch), 2/12-6/12 pitch, and 7/12-12/12 pitch.

- Center the flashing opening above the roof penetration. Verify the opening in the roof meets the 2" minimum clearance requirements for the chimney pipe on all sides.
- Slide the upper portion of the flashing under the shingles, if applicable. Shingles may also cover the sides of the Flashing as well, but the bottom of the Flashing should overlap shingles below for proper rain and weather shedding. See Figure 17.
- Nail the Flashing to the roof along the top and sides of the Flashing using appropriate roofing nails for your roof. Seal the nail heads with roof sealant to ensure a weatherproof seal around the flashing. Do not seal the ventilation holes of a Ventilated Flashing.

Figure 17 - Flashing Detail and Installation



Storm Collar: The Storm Collar works together with the Flashing to provide weatherproofing for the roof penetration. The Storm Collar is installed directly above the Flashing and must be sealed to the chimney using high-temperature silicone sealant (RTV 500°F or better).

- Wrap the Storm Collar around the Chimney Pipe. Slide Storm Collar down until it touches the Flashing. Tighten the clamping screw on the Collar to secure it in place.
- Using a high-temperature silicone sealant (RTV 500°F or better), seal the Storm Collar where it meets the chimney pipe in order to provide a weather proof seal and prevent rain and snow from entering the structure. Refer to Figure 17.

Chimney Cap: The Deluxe Chimney Cap tops off the chimney system, helps to retain sparks and embers, and protects the chimney opening from infiltration of weather, debris, and animals. Important: The chimney system must terminate vertically, not at an angle or offset.

- Align end ring of Chimney Cap with male end of last chimney pipe section, press together until seated completely and rotate 1/8th turn clockwise. See Figure 18.

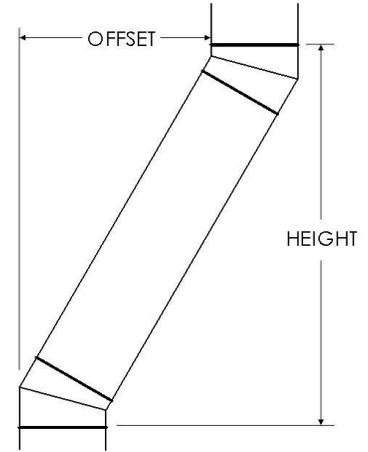


Figure 18 - Chimney Cap

- Secure Chimney Cap to pipe with a Locking Band. The Locking Band will prevent the Chimney Cap from blowing off or being inadvertently disconnected.

OFFSET TABLES

To help with installation planning, the following Offset Tables are provided which shows the approximate offset and height dimensions when installing various chimney lengths between elbows. Offset (Run) is horizontal distance the chimney is moved when using elbows. Height (Rise) is the vertical distance between the bottom of the first elbow to the top of the second elbow. The first two tables show the total Offset and Height including the Elbows and the Chimney Length listed for 15 and 30 degree elbows. The second two tables show the additional Offset and Height provided by additional Chimney Lengths used in 15 and 30 degree offsets.



15-Degree Elbow Offsets

Chimney Length Between Elbows	Total Offset (Run)	Total Height (Rise)
0"	1"	7.625"
8" (200mm)	2.75"	14.375"
18" (500mm)	4.75"	25.625"
24" (610mm)	7"	29.875"
39" (1000mm)	11"	44.625"
48" (1220mm)	13.125"	53"
For Each Additional Length in 15-Degree Offsets		
Chimney Length	Additional Offset	Additional Height
8" (200mm)	+ 1.75"	+ 6.75"
18" (500mm)	+ 4.75"	+ 18"
24" (610mm)	+ 6"	+ 22.25"
39" (1000mm)	+ 10"	+ 37"
48" (1220mm)	+ 12.125"	+ 45.5"

30-Degree Elbow Offsets

Chimney Length Between Elbows	Total Offset (Run)	Total Height (Rise)
0"	3"	11"
8" (200mm)	6.25"	17"
18" (500mm)	12.25"	27.25"
24" (610mm)	14.5"	20"
39" (1000mm)	22"	44.25"
48" (1220mm)	26.5"	51.75"
For Each Additional Length in 30-Degree Offsets		
Chimney Length	Additional Offset	Additional Height
8" (200mm)	+ 3.5"	+ 6"
18" (500mm)	+ 9.25"	+ 16.25"
24" (610mm)	+ 11.5"	+ 20"
39" (1000mm)	+ 19.25"	+ 33.25"
48" (1220mm)	+ 23.5"	+ 40.75"

MAINTENANCE

Chimneys must be installed such that access is available for cleaning and maintenance.

Your Shasta Vent All-Fuel HT Chimney must be inspected and cleaned by a qualified professional at least annually, possibly more often depending on how you burn and the quality of your fuel. Qualified professionals include CSIA Certified Chimney Sweeps, WETT Certified Professionals, and NFI Certified Specialists. Thoroughly cleaning the chimney after the last fire of the heating season can considerably reduce off-season corrosion that can shorten the life of your chimney.

Creosote and Soot: When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. As a result, creosote residue accumulates on the flue lining, which can lead to the potential of a chimney fire. When ignited this creosote makes an extremely hot fire.

Inspect your chimney at least once every 2 months during the heating season to determine if there is a buildup of creosote or soot in the chimney. The buildup of creosote or soot is dangerous and can lead to a chimney fire. If such a buildup occurs, contact a professional to have the creosote removed and the chimney cleaned. Inspection can be done by removing the Chimney Cap and shining a light down into the chimney. To remove the Cap, unlock the Locking Band, and turn the Cap counter-clockwise. Be careful to not untwist a chimney pipe section. Inspection can also be done at the Tee Cap (if you have a Tee in your system) by removing Tee Cap and looking up into the chimney. Remove the Tee Cap by unlocking the Locking Band and twisting the handle counter-clockwise.

Check the spark-arrestor screen of the chimney cap at least every 2-4 weeks to see if there is any blockage of creosote, soot, or debris. Remove the blockage with a wire brush or replace the spark-arrestor screen.

When the chimney is being cleaned, use a brush of the proper diameter. Choose a brush that will not damage or scratch the inner wall of the chimney. Do not use corrosive chemicals in the chimney, as these can damage the chimney and will void your warranty. Shasta Vent will assume no liability for damage to the chimney from the use of chemical cleaners.

Fuel: The fuel used in your appliance directly affects the formation of creosote. It is best to burn bright, hot fires. You should use seasoned, split wood. Follow your appliance manufacturer's recommendations. Do not burn trash, railroad ties, or chemically treated materials, as these can have a corrosive effect on your appliance and chimney system, and will void the warranty.

Coal-Burning Appliances: If you are burning coal, it is important to use coal with a low sulfur content (1% or less), such as anthracite. Coal with a high sulfur content can damage the inside of your chimney. Sulfur is highly corrosive to metal chimneys. To minimize the corrosive effect of coal residue, have the chimney cleaned by a professional within 48-hours of the last burn of the heating season. If the residue from coal is left over the summer, it can be highly corrosive to the walls of the chimney and damage your system.

Oil-Burning Appliances: If you are using Shasta Vent All-Fuel HT Chimney for an oil-burning appliance, be aware of dye that is added to the fuel oil. If the appliance is not burning efficiently, the soot and residue can buildup on your chimney and can possibly stain your roof. The resulting stains have nothing to do with the chimney system, and is an effect of the dyed fuel oil and the appliance.

Paint: Your Shasta Vent All-Fuel HT Chimney can be painted, if so desired. You will need to use a high-temperature paint suitable for metal. The metal surface will need to be cleaned and conditioned prior to painting. Follow the paint-manufacturer's recommendations for painting metal.

In the event of a chimney fire: close all air inlets to the appliance. Contact the local Fire Department. Do not use the chimney again until it has been inspected by a qualified professional.

COMPONENT LIST

Chimney Sections - 8" (200mm), 19" (500mm), 24" (610mm), 39" (1000mm), 48" (1220mm)
Adjustable Chimney Section
Tee with Cap
15° & 30° Elbows
Locking Band
Ceiling Support Box
Wall Thimble
Firestop Radiation Shield
Insulation Shield
Roof Radiation Shield
Tee Support
Elbow Support Bracket
Adjustable Wall Bracket
Finishing Collar
Flashing - Ventilated or Non-Ventilated
 Flat (0 pitch)
 6/12 pitch
 12/12 pitch
Storm Collar
Deluxe Chimney Cap

WARRANTY

Shasta Vent Inc (Shasta Vent) provides this limited lifetime warranty for its Shasta Vent All-Fuel HT Chimney System. Subject to the limitations set forth below, Shasta Vent warrants that its products will be free from defects in material or manufacturing, if properly installed, maintained and used. Shasta Vent products are fully warranted if installed only by a professional installer (see below for definition). This Warranty is not transferable from the original homeowner. This warranty does not cover normal wear and tear, smoke damage or damage caused by chimney fires, acts of God, or any product that was: (1) modified or altered; (2) improperly serviced, inspected or cleaned; or (3) subject to negligence or any use not in accordance with the installation instructions included with the product as determined by Shasta Vent.

Shasta Vent provides the following warranties for its products: One Hundred Percent (100%) replacement for 15 years from the date of purchase, and replacement at 50% of MSRP thereafter. All warranty obligations of Shasta Vent shall be limited to replacement of the warranted item(s). This remedy shall constitute Shasta Vent's sole obligation and sole remedy under this warranty. This warranty provides no cash surrender value. The terms and conditions of this warranty may not be modified, altered or waived by any action, inaction or representation, whether oral or in writing, except upon the express, written authority of an executive officer of Shasta Vent. Corn, bio-fuels, driftwood or other wood containing salt, preservative-treated lumber, creosote treated lumber, plastic and household trash or garbage, or wood pellets containing such materials must not be burned in the appliance or fireplace. In case of a chimney fire, the chimney must be inspected and approved by a certified Chimney Sweep before reuse. It is the homeowner's responsibility to maintain records of each annual inspection, maintenance, and cleaning by a certified Chimney Sweep.

For purposes of this warranty, a trained professional installer is defined as one of the following: licensed contractors with prior chimney installation experience, CSIA Certified Chimney Sweeps, NFI Certified Specialists, or WETT Certified Professionals.

Shasta Vent must be notified and given the opportunity to inspect defective product prior to replacement under the terms of this limited lifetime warranty. All warranty claims must be submitted with proof of purchase. Labor and installation costs are not covered under this warranty. To obtain warranty service contact Shasta Vent Inc, 401 Ryland St. Ste 301, Reno, NV 89502, or call 844-742-7828.

WHERE LAWFUL, SHASTA VENT DISCLAIMS ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL SHASTA VENT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR SPECIAL DAMAGES OR DIRECT OR INDIRECT LOSS OF ANY KIND, INCLUDING BUT NOT LIMITED TO PROPERTY DAMAGE AND PERSONAL INJURY. SHASTA VENT'S ENTIRE LIABILITY IS LIMITED TO THE PURCHASE PRICE OF THIS PRODUCT.

SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS LIMITED LIFETIME WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.