



When shopping for venting pipe to exhaust your wood burning appliance it can be a bit confusing. There are so many different types of pipe and different components needed for each type of system. Today I am going to go over Class A [Chimney](#) Pipe, the different components and what each components purpose is. Class A Chimney pipe is used for venting a wood, coal, or oil burning stove or Pre-fab fireplace. Chimney pipe can be the more costly part of installing a wood stove at times so you want to make sure that you have the necessities but not more than what you need. The investment is worth it because as long as you maintain your Class A chimney pipe properly it should hold up for many, many years!

What is Class A Chimney Pipe?



You may hear Class A chimney pipe referred to a few different names such as double wall chimney pipe, triple wall chimney pipe, all fuel chimney pipe, or insulated chimney pipe. No matter what someone refers to it as it all serves the same purpose: to vent an appliance that burns wood, coal, or oil to which the exhaust gases reach very high temperatures. Wood burning appliances are the most common type of heating appliance that will require Class A chimney pipe for its venting system. Others heating appliances that could require Class A chimney pipe are boilers, stoves, pre-fab fireplaces, or oil burning furnaces. Class A chimney pipe usually has a UL-listing, which allows it to be used with a wider variety of manufacturer's stoves, fireplaces, etc. The majority of brands have an inner layer constructed of stainless steel but the out layer can be either stainless steel or galvanized steel. Any components that will be exposed to the elements should be stainless steel so it will not rust. Galvanized steel will show signs of rust over time and eventually wear through needing to be replaced sooner.

No Mixing and Matching Brands



There are many, many brands of Class A chimney pipe on the market. However they all have the same basic components. Each of the brands have specific types of connections making each component brand specific, meaning that you cannot use components from more than one brand and have them be compatible. If you have an obsolete or discontinued brand that is currently installed and just need to replace a component or two this is going to be very difficult. You will have to locate that specific brand or it may come down to you needing to update the whole chimney run to a current brand of class A pipe. Every brand can only be used with that specific brand. Even different series by the same company usually are not interchangeable.

Now let's get a little more familiar with Class A Chimney Pipe components.

Class A Chimney Pipe Lengths



What better place to start than with Class A Chimney Pipe itself? There are two types of Class A chimney pipe: Solid-packed chimney pipe and Air-cooled chimney pipe. Solid-pack has a layer of insulation between the inner and outer layer of the pipe. The insulation can be either fiberglass or ceramic. The insulation allows the pipe to remain cooler on the outside and have a 2" clearance to combustibles.

This type of pipe is commonly found in sizes ranging from 5" to 8" inner diameters. Both double wall and triple wall pipe can have a solid-packed insulation layer. Air-cooled pipe also has a 2" clearance to combustibles but it differs by not having any insulation. Instead this type of pipe has a space in between the inner and outer layer of the pipe where air can flow through. There are normally holes in the connecting ends of the pipe to allow air flow. Many times triple wall will have both of these types of layers. This type of pipe is commonly found in sizes ranging from 6" to 24" inner diameters. Pipe lengths will usually range in length from 6" to 60". Some brands also offer an adjustable length in case of that awkward measurement and it give a little wiggle room for a measurement error.

Ceiling Support Box



A ceiling support box is going to be your connection point for stove pipe and chimney pipe to come together. The ceiling support box is located in the same room that the appliance is in. Once the black stove pipe reaches the ceiling you will need a ceiling support box to convert the stove pipe to Class A chimney pipe. There are 3 main types of ceiling support boxes: flat, round, square cathedral support boxes. The flat or round ceiling support boxes will be used when there is a flat level ceiling to pass through. The square cathedral support box will be needed in a room that has sloped/cathedral ceilings. The heights differ in the cathedral

boxes, the one that you will need would depend on what the pitch is of the ceiling. A steeper pitch is going to need a taller support box and vice versa. If your ceiling is bare or unfinished then there are Adjustable Roof Supports that can be used in place of a support box. These supports will hold the weight of the entire chimney system. Most brands can support between 50'-60' of class A chimney pipe. All types have trim collars available to give it a more finished appearance.

Wall Thimble



A wall thimble serves the same purpose as a ceiling support box except it is used when going through a wall. At the wall thimble is again where you would convert from the black inside stove pipe to Class A chimney pipe. The wall thimble is not a support point itself but the Tee and the Tee Support that connects to the pipe running through the wall thimble is. The Tee is just that, a pipe in the shape of a "T" with all three ends open. The snout of the Tee is where you will connect it to the pipe passing through the wall thimble. Then you will connect a clean out cap to the bottom of the Tee once it has been secured in the Tee Support Bracket. The

Tee and the Tee Support Bracket will bare all of the weight from the vertical pipe outside of the building.

Elbow Kits



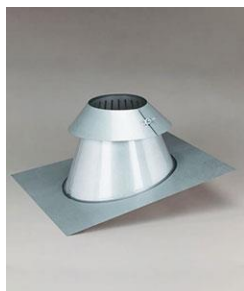
An elbow kit will be necessary if you have an obstruction to maneuver the Class A chimney around such as an eave on the side of the house or trusses/beams in the attic space. The most common obstruction is getting around an eave when venting through the wall and the Class A chimney pipe runs up the outside of the home. An elbow kit will include (2) 15 or 30 degree elbows and (1) elbow strap. If your planned Class A chimney run requires you to use an elbow kit you will want to take a look at your appliance's owner's manual to ensure that you are able to have bends. Venting Class A chimney pipe straight up is the most ideal venting for drafting optimal drafting but there are instances where you are just not capable of running straight up and that is where you will use an elbow kit.

Protective Shields



There are 3 types of protective shields that you may need for your Class A Chimney installation. The first one is the Attic Insulation Shield. This is the most commonly used shield. It is installed above the ceiling support box to keep the insulation and other materials away from the Class A pipe. The second type is a Firestop Radiation Shield. It is required when passing through a ceiling or flooring where a support box is not present. This protective shield is most commonly used in installations where the Class A chimney will be passing through multi-levels or running through a chaise. The third protective shield is going to be the Roof Radiation Shield. This shield is installed when the chimney pipe is enclosed at the roof exit point. These shields are not as commonly needed as the attic insulation shield and the firestop radiation shield.

Roof Flashing & Storm Collar



The roof flashing and storm collar necessary chimney components and they go hand in hand. Their jobs are to protect your home from the weather getting in through the hole in the roof. The flashing is installed over the hole that was cut in the roof so the Class A chimney pipe could pass through it. It gets secured to the roof with nails and then sealed with high temp silicone to weatherproof all of the seams. Then storm collar is then installed over the pipe and secured to the top of the roof flashing with a bead of silicone. The storm collar covers the space between the flashing opening and the chimney pipe.

Chimney Termination Cap



Each brand of Class A chimney pipe has their own specific Termination Cap but each of them serve the same purpose; to keep debris out of the chimney system and also to contain sparks and flying embers. Every Class A chimney system is required to have a chimney cap installed. Some areas require you to have a spark arrestor installed in your chimney cap. Not all chimney caps include a Spark Arrestor; a mesh lining that helps to contain sparks and flying embers even better. If the cap for your Class A chimney pipe does not include a spark arrestor you can check to see if one is available to be purchased separately. Most companies offer them separately if they are not already built into the cap itself.

Miscellaneous Class A Chimney Components

There are a few components that are not as commonly required as the ones we have talked about already but they are still important and needed from time to time so it does not hurt to know what they are.



Extended Roof Bracket - An Extended Roof Bracket is needed when the Class A chimney pipe extends more than 60 inches above the roof line. It provides stability for the pipe against the winds. If you live in high wind areas it is not a bad idea to consider installing a roof bracket even if the chimney is not over 60 inches above the roof line.

Locking Bands - A locking band is a ring that slips over the pipe to secure the connection. Some brands require locking bands for all connections and include a locking band with every component that will need one. While other brands have them as an additional security feature and they can be purchased separately from the pipe.

Wall Straps – Wall straps needed when the class A chimney pipe runs vertically up the outside of a building or through a chaise. Usually it is recommended that you install one wall strap for every 4-5 feet of vertical rise. Each manufacturer is different on their requirements so I would suggest checking in to what they recommend and purchase accordingly.

Now that you are familiar with many different Class A chimney components you can click [HERE](#) to start planning for your chimney pipe installation.

I could keep going on and on about all of the many Class A [chimney](#) components but then we would be here for days! I touched on the most commonly used, there are other components that are rarely used and usually only requested by professionals that know what they are looking for. However if you still have questions or did not find the component in question in this article please give our knowledgeable Customer Service Team a call at 1-866-667-8454.