VAN-PACKER® COMPANY

MODEL CS

Installation Instructions

UL Listed under Standard 1738 for Flue Gas
Temperatures up to 550°F (288°C) and
5” water column positive pressure
Venting Systems for Gas-Burning Appliances,
Categories II, III, and IV

c UL US

BEFORE ASSEMBLY, examine all components for possible shipping damage.

REQUIREMENTS:

Installation must be made in accordance with local and national code requirements. Follow these instructions carefully and contact local building or fire officials about restrictions and installation inspection in your area. Consult the authority having jurisdiction to determine the need to obtain a permit.

Venting system must be installed and terminate in accordance with the requirements of CAN/CGA-B149.1, Natural Gas Installation Code, or CAN/CGA-B149.2, Propane Installation Code, as applicable.

Each part of the venting system must be installed correctly. Improper or lack of installation of any required part may result in improper operation of the appliance being vented or performance of the venting system.

A venting system that extends through any zone above where the connected appliance is located shall 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.

Due to ice build up and blockage, it is required that the proper sloping be employed when the vent is installed in a horizontal installation. Any horizontally installed portion of a venting system shall have a slope (upwards for Category II, III, or IV appliances or downwards for Category III or IV appliances) not less than 1/4 inch (6.4mm) every 12 inches (305mm) to prevent collection of condensate at any location in the assembly. Provision shall be made to collect and dispose of condensate. Refer to the appliance manufacturer's installation instructions for further details regarding the installation of the condensate drain fittings.

The venting system shall not be routed into, through, or within any other vent, such as an existing masonry or factory-built chimney flue. *Exception: An abandoned masonry chimney flue may be used as a chase to route the venting system*.

Any penetration of ceilings, floors, or walls must be properly fire-stopped.

Venting system must be free to expand and contract.

Vent must extend minimum 3' above the highest point where it passes through a roof and minimum 2' above any portion of a building within a horizontal distance of 10'.

Vents must extend at least 5' above the highest connected appliance draft hood outlet.

Vent must terminate at least 3' above any forced air inlet within 10' and at least 4' below, 4' horizontally from, or 1' above any door, operable window, or gravity air inlet into any building.

Vents terminating horizontally must be located not less than 12" above grade, above anticipated snow line where snow accumulation is expected, and at least 7' above grade when adjacent to a public walkway.

RECOMMENDATIONS:

Refer to the appliance's instructions to determine limitations with respect to installation and use, such as maximum horizontal length from the appliance, maximum height, joining of two or more parts to constitute the intended assembly, maximum number of joints or sections of pipe for use in the assembly, and the required installation clearances (air spaces).

Refer to the appliance's instructions to determine proper sizing and connection of the venting system to the appliance.

Exterior mounted vents should be enclosed below the roof line to reduce condensation and protect against mechanical damage.

SILICONE SEALANT shall be used on all joints. Proper joint assembly is essential. Follow these instructions exactly as written. Check appearance of joints upon completion of assembly. Different manufacturers have different joint systems and adhesives. Do not mix pipe, fittings, or joining methods from different manufacturers. It is required to check the joints and seams for gas tightness when using the venting system with a Category III or IV appliance.

SILICONE SEALANT CHART (ESTIMATED)

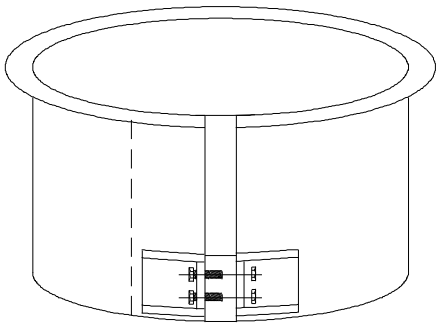
Inside Diameter	4" (100 mm)	5" (125 mm)	6" (150 mm)	7" (175 mm)	8" (200 mm)	9" (225 mm)	10" (250 mm)	12" (300 mm)	14" (350 mm)	16" (400 mm)	18" (450 mm)	20" (500 mm)	22" 550 mm)	24" (600 mm)
Joints per Tube	32	27	23	20	18	16	14	12	10	9	8	7	6	6

CLEARANCE to combustibles is 2". The clearance space surrounding the venting system shall not be insulated. A 2" air space must be maintained throughout the entire length of the vent for air flow and circulation. Clearance to non-combustibles is 0".

SUPPORT SPACING

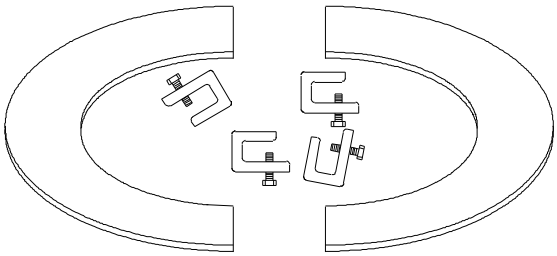
Stacks must be laterally braced no more than 10' below top of stack and at 20' maximum spacing for additional braces. Horizontal support spacing shall be 10' maximum. Vertical supports are required after every transition to vertical. Offsets may require additional supports. Additional supports may be required during installation to avoid damage to vent.

Flangeless Outlet Adapter
Part FOAB-1
Use the FOAB-1 on appliance collars without a flange. Apply a bead of sealant around the collar. Tighten with nuts and screws supplied by Van-Packer. The first section of piping is connected to the flange of the FOAB-1.



Flangeless Outlet Adapter

Boiler Adapter Flange
Part BAF
Use the BAF when the appliance has a blank flanged outlet. Place a bead of sealant around flanged outlet about 1/8 inch from inside diameter. Next place flue on top of outlet, align, set clamp flange around liner flange of flue pipe, and fasten down with “C” clamps.

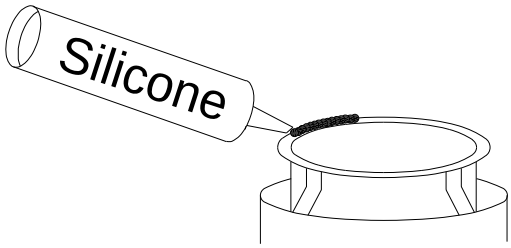


Boiler Adapter Flange

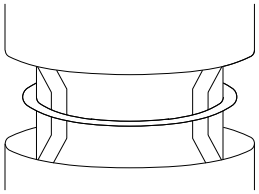
Joint Installation

The Model CS is a double wall constructed venting system. The inner liner and outer jacket have a one-inch air gap. The inner liner has a 7/16” rolled flange. The inner liners connect with a Vee Band. The outer jacket connects with a Draw Band. Use a 1/4” bead of silicone sealant at all Vee Band connections on the 7/16” flange. Apply silicone sealant on exterior Draw Bands to prevent rain from entry. The installer shall supply silicone for Draw Bands on exterior portions of venting system.

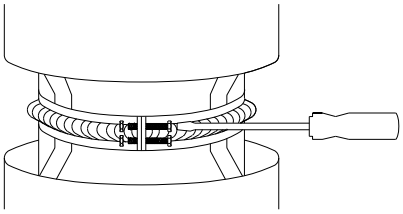
1. Apply a continuous bead of sealant to one of the flanges to be joined.



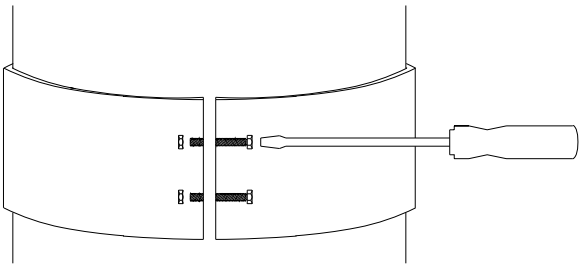
2. Join the two-flanged ends of the pipe sections together.



3. Install vee band around flanges.



4. Secure the outer shell with the Draw Band. It is recommended that silicone sealant be applied around the top of the Draw Band to prevent moisture from entering between the chimney walls. This should be done on all components exposed to the atmosphere.

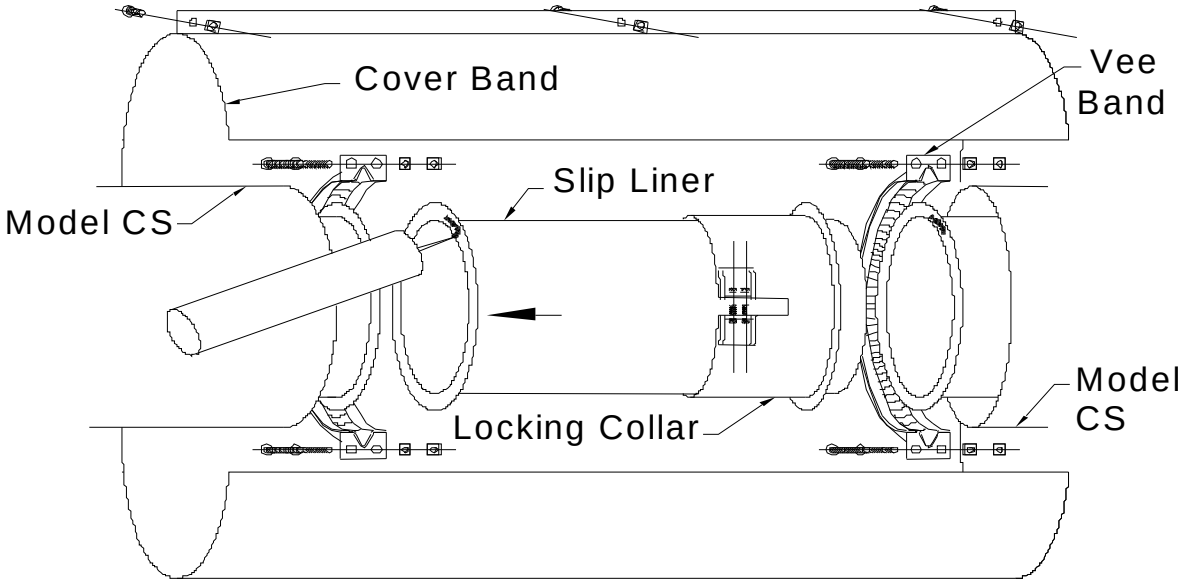


Variable Length Section
Part VLS

The VLS is used for custom length sections. Length ranges from 5-1/2” to 18”. It includes a Locking Collar, Vee Band, Slip Liner, and Cover Band.

1. Place the locking collar over the slip liner with the flange of the locking collar toward the un-flanged end of the slip liner. Then slide the slip liner into the end of the section that is already in place and adjust to the required length. The slip liner may require field-trimming if used between two fittings (elbows, tee, etc.).
2. Place sealant on adjoining section liner flange around the slip liner.
3. Slide the flange of the locking collar up to the adjoining section liner flange. Tighten the bolts on the locking collar and install a vee band.
4. Install the next section using a vee band in accordance with the joint installation instructions.
5. Install cover band. The cover band may require field-trimming if used between two fittings (elbows, tee, etc.).

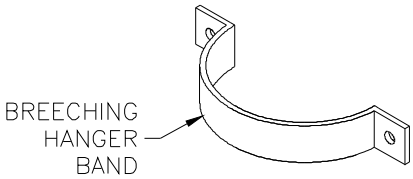
Note: This is a non-load bearing section



Breeching Hanger Band
Part BHB

The BHB is used to support horizontal lengths of pipe.

Note: Breeching support rods are to be installing contractor



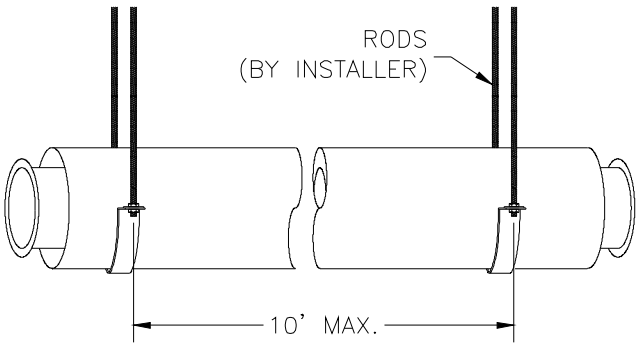
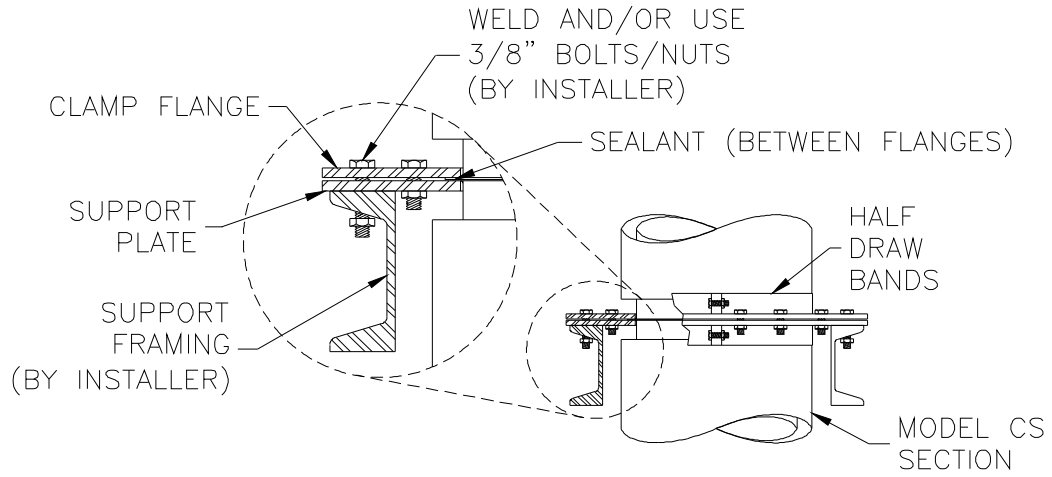


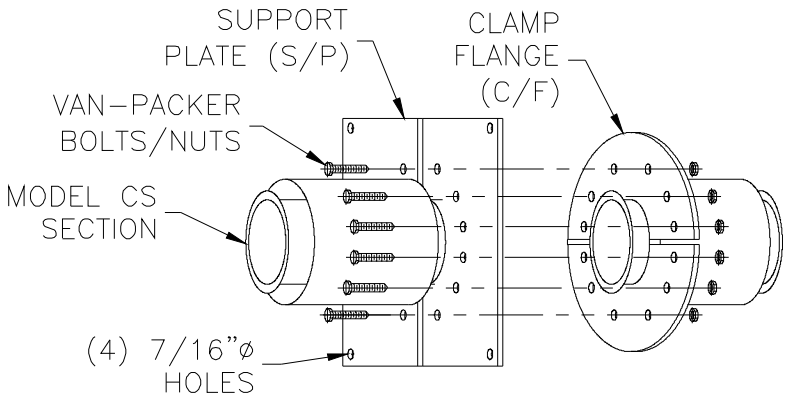
Plate Support Assembly
Part PLS

1. The PLS consists of one square two-piece Support Plate (S/P), one round two-piece Clamp Flange (C/F), bolts and nuts. The PLS, in conjunction with field fabricated support members, provides support for the chimney.
2. Apply sealant on one end of liner flange. Join the two liners together (no Vee Band is required) to capture the flanges between the support plate and the clamp flange. Bolt together the support plate and the clamp flange with the 3/8" (9.52mm) bolts provided. Fully tighten all the bolts except those at the locations where the support members will attach.
3. Using a 7/16" (11.11mm) drill bit, drill through the existing holes in the assembly into the support members and bolt in place. You may also weld support members to the support plate.
4. Support all four sides of the support plate. Construct structural support members from 1-1/2" x 1-1/2" x 3/16" or larger steel angles, steel channels, beams or other appropriate material (depending on the load to be supported).

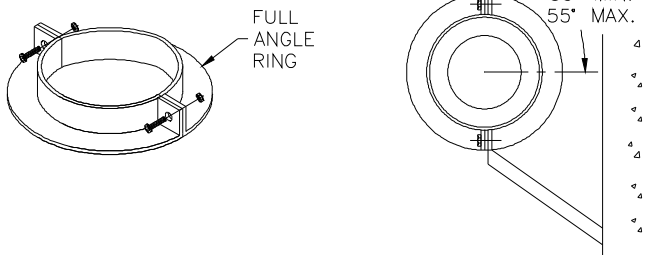
Note: Design support members and fasteners in accordance with *Good Engineering Practice* to suit each specific application (by others). Van-Packer assumes no responsibility for the design and/or modification of buildings to accept the given loads.

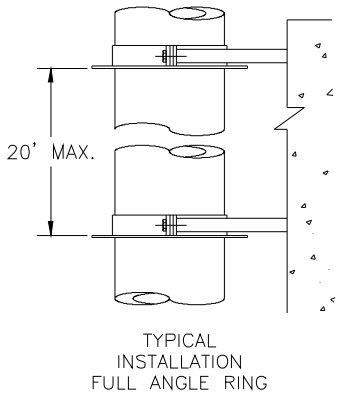


VERTICAL INSTALLATION

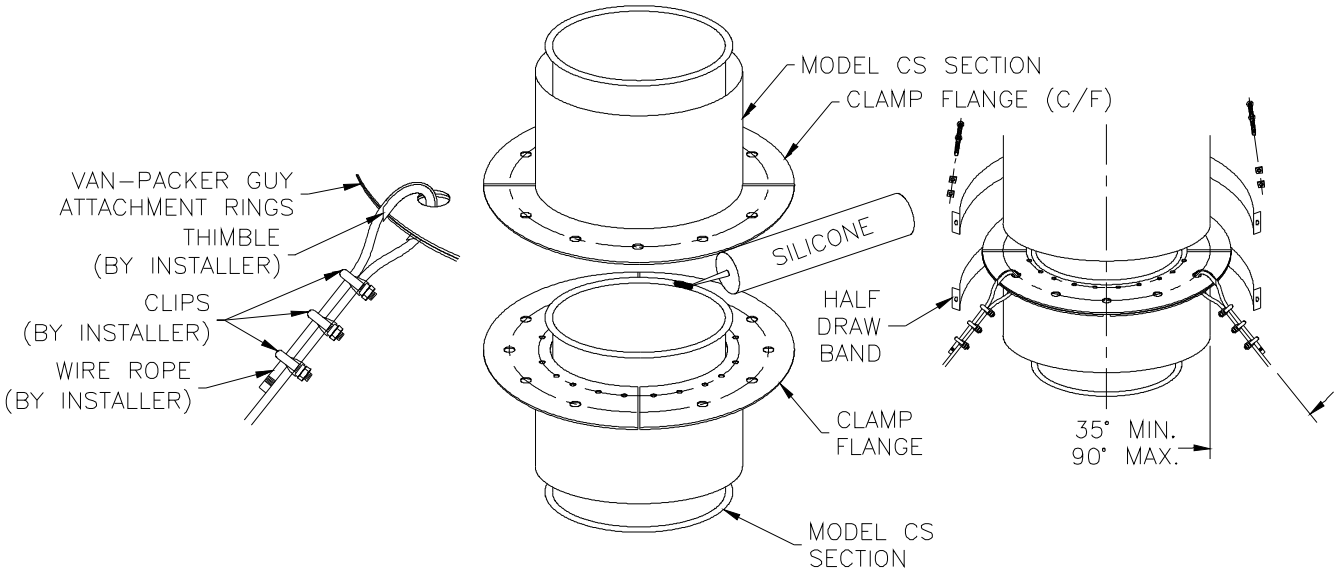


Full Angle Ring
Part FAR
The FAR is used to provide lateral support for vertical lengths of pipe.

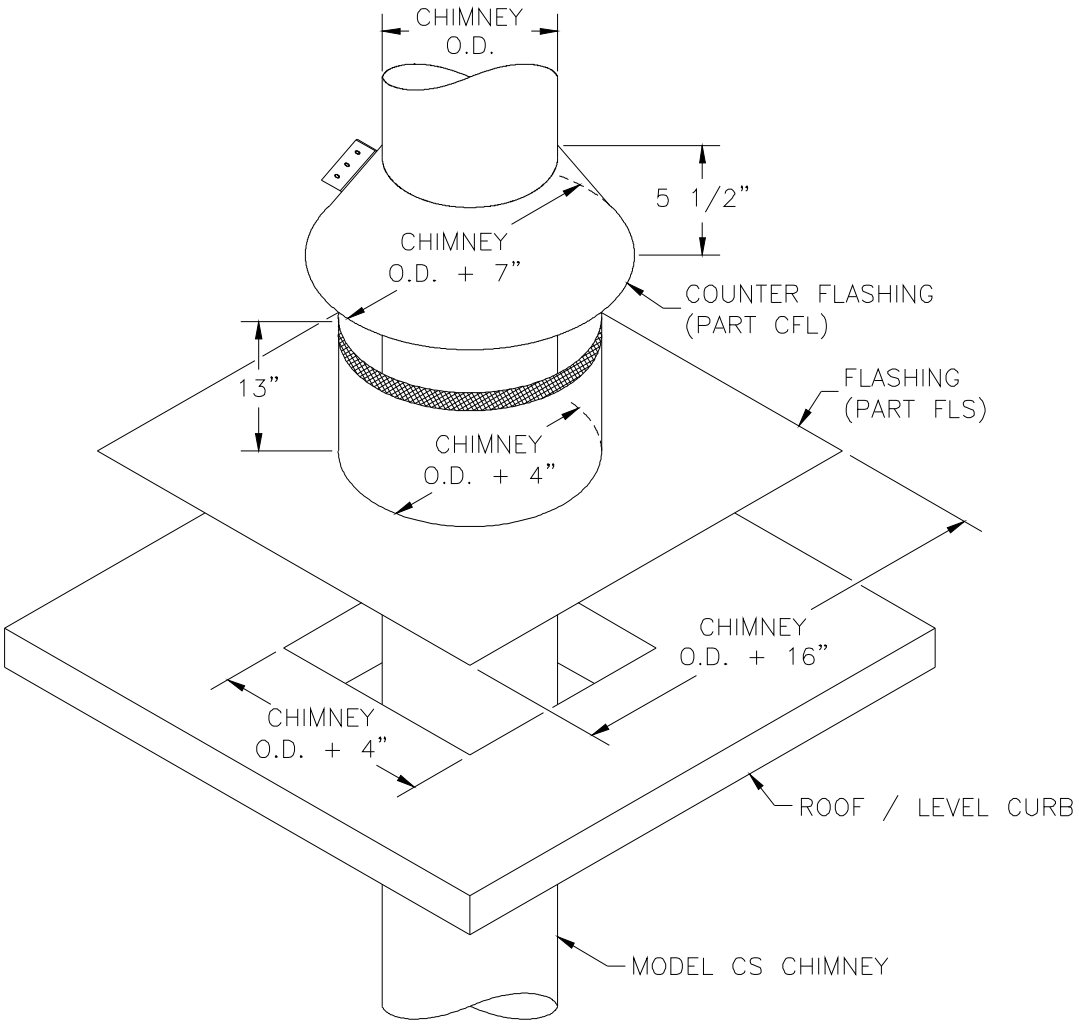




Guy Attachment Ring
Part GAR
Chimneys that extend above the roof, or are installed in severe weather regions, may require a Guy Attachment Ring to enable the chimney to resist wind loads. The Guy Attachment Ring connects to the building or other structure by means of cables. The Guy Attachment Ring consists of two sets of Clamp Flanges (C/F) (or four identical half rings) with hardware to secure them together. The cables, which attach to the Guy Attachment Ring, must be tight. Most stack configurations pre-load the guy-cables for a satisfactory installation. A minimum of three cables spaced 120° apart is required for one Guy Attachment Ring assembly. Place two sections together following the sealant guidelines and sandwich the section flanges between the clamp

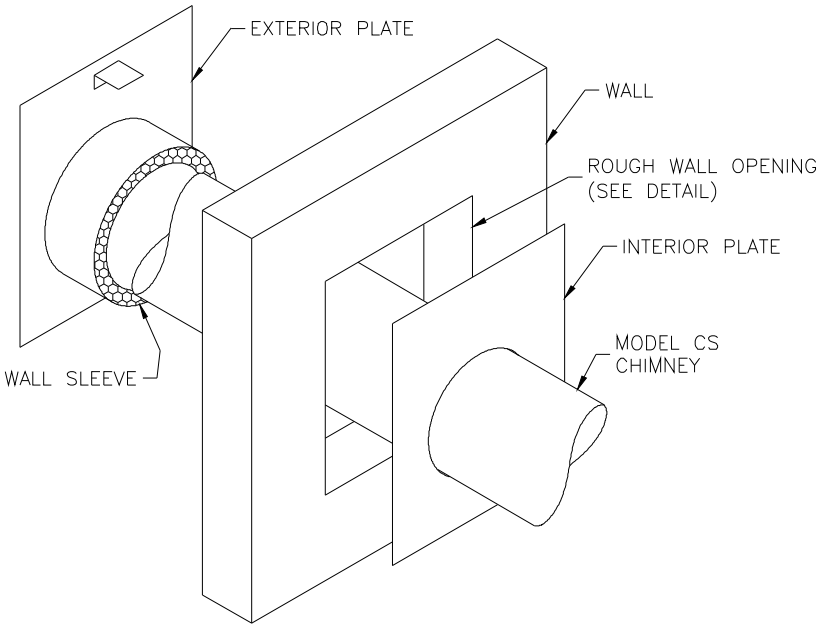


Counter Flashing
Part CFL
Install a counter flashing above the flashing to provide rain protection. The counter flashing fits around the chimney and rests on the flashing screen. Apply sealant around top of counter flashing to prevent leakage.

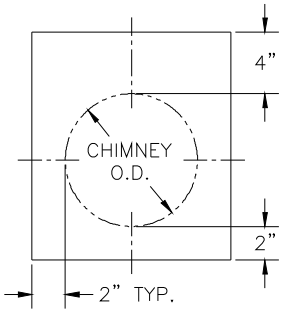


Flashing
Part FLS
Use when the vent system penetrates a roof structure. Install the flashing on the roof deck. There is a 1" screen to prevent the counter flashing from sliding down and blocking off airflow around the stack.

Exterior Wall Penetration
Part EWP
The EWP is for use when penetrating a wall of combustible or non-combustible construction. It includes an interior plate and exterior plate with insulated wall sleeve. Refer to detail below for wall opening size. EWP must be installed with the spacer clip on top. Wall sleeve must be field

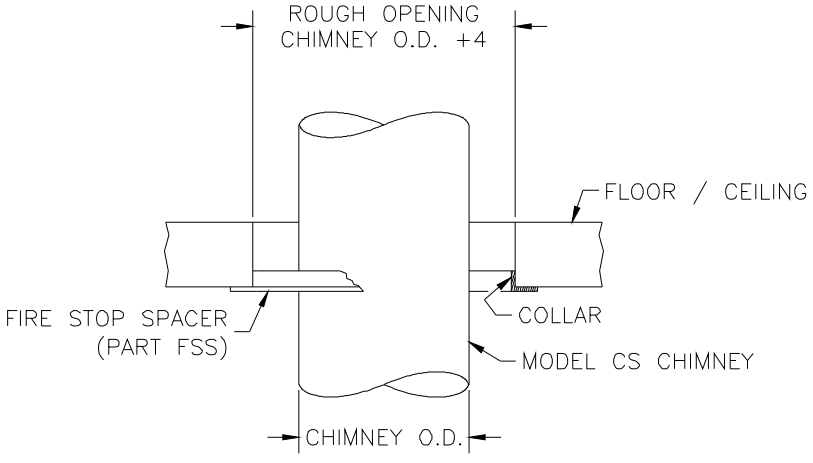


EXTERIOR WALL PENETRATION

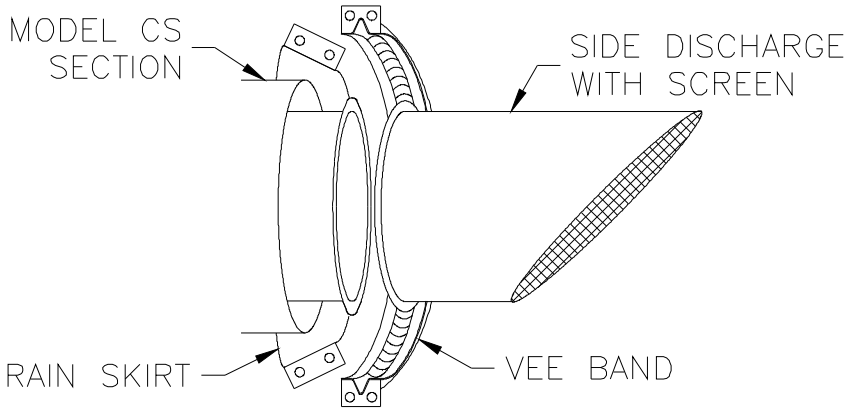


ROUGH WALL OPENING

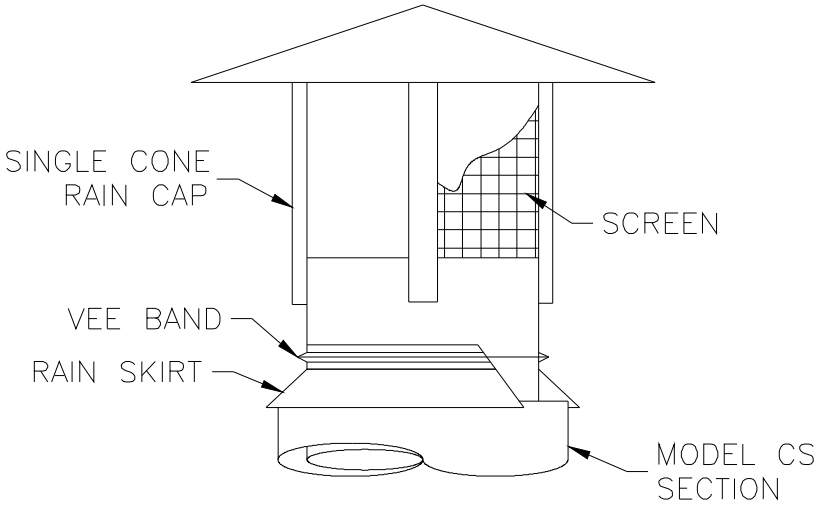
Fire Stop Spacer
Part FSS
The FSS is for use when penetrating a ceiling or floor. See below for required opening.
Note: Fasteners to ceiling or floor are to be by installing contractor



Side Discharge with Screen
Part SDS
The SDS is for horizontal terminations. Part includes one side discharge with screen and one rain skirt. Connect the discharge to the vent pipe with a vee band. Follow joint installation instructions for sealant. Place a small bead of silicone between rain skirt and vee band and rain skirt and venting system shell for weatherproofing.



Single Cone Rain Cap
Part SCS
The SCS is for vertical terminations. Part Includes one single cone rain cap with screen and one rain skirt. Connect the rain cap to the vent pipe with a vee band. Follow joint installation instructions for sealant. Place a small bead of silicone between the rain skirt and vee band for weatherproofing.



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