

# MODEL CS & CSplus



## DOUBLE WALL AIR & FIBER INSULATED SPECIAL GAS VENTS

### TESTING & APPLICATIONS

Models CS (1" of air space) and CSplus (available with 1" to 4" fiber insulation) special gas vents have been tested in accordance with the procedures and methods as set forth by UL1738 / ULC S636 (*Venting Systems for Gas Burning Appliances, Categories II, III, & IV*). Models CS and CSplus are suitable for venting condensing and near condensing appliances burning natural gas or propane. These vents have a maximum operating temperature of 550° F (288° C) and may be used with negative, neutral, and positive vent pressures (40" water column maximum positive pressure). These vents are suitable for either interior or exterior installations.

### LISTING & CODE COMPLIANCE

Van-Packer's Model CS and CSplus special gas vents are listed by Underwriters Laboratories file MH45778 as a "Special Gas Vent" in the United States and as a "Type BH Vent" in Canada when installed in accordance with local and national code requirements and our installation instructions.

### WARRANTY

Standard and extended are available. Specific terms & conditions apply, contact factory for additional information.

### STANDARD SIZES

4" I.D. to 10" I.D. available in 1" increments and from 10" I.D. to 36" I.D. available in 2" increments.

### MATERIALS

Liner diameters (vent I.D.) from 4" to 24" are constructed from 24 gauge (0.025") materials and liner diameters from 26" to 36" are constructed from 20 gauge (0.035") materials. All shell diameters (vent O.D.) for Model CS (1" air space) are constructed from 24 gauge (0.025") materials. Model CSplus series having vent O.D.'s from 6" to 26" are constructed from 24 gauge (0.025") materials and vent O.D.'s from 28" to 44" are constructed from 20 gauge (0.035") materials. Standard liner materials are type VP1738 S.S. and type VP1738A S.S. Standard shell materials are aluminized steel and type 430 S.S. Consult the factory for availability of additional material types and thicknesses. Model CSplus series components are 1" to 4" mineral wool fiber insulated.

### CLEARANCES

Model CS & CSplus series components have a 2" clearance to combustibles and 0" clearance to non-combustibles. The clearance space surrounding the venting system shall not be insulated. Insulation of any type or combustible materials cannot be within the required clearance space. The 2" air space clearance must be maintained throughout the entire length of the vent to allow for proper air flow and circulation.

### PART IDENTIFICATION

Model CS (1" of air space), part numbers have only the letter "C" as a prefix where as Model CSplus series will have a "C+" (for 1" Insulation), "C+2" (for 2" Insulation), "C+3" (for 3" Insulation), or "C+4" (for 4" Insulation) prefix. The prefix is then followed by the vent size inside diameter (I.D.), then by the part description code, next by the liner/shell designation, and last by special qualifier code(s). Part description codes are typically three characters and are either alpha or alpha numeric. Qualifier codes are most often used to designate section lengths, tee projection diameters, and the large end I.D. of increasers. The following are a couple examples of part numbers with their associated description and part number breakdown.

#### C10STRL24

Refers to a Model CS 10" I.D., 24" long straight section constructed with a VP 1738 S.S. liner and an aluminized steel shell.

- C = Model CS Product Code
- 10 = Section I.D.
- STR = Part Code (Straight Section)
- L = Liner / Shell Code (VP1738 S.S. Liner / ALZ Steel Shell)
- 24 = Qualifier Code (24" Long)

#### LINER / SHELL MATERIAL CODES

- L = VP1738 S.S. Liner / ALZ Steel Shell
- M = VP1738 S.S. Liner / 430 S.S. Shell

#### C+212BTTM08

Refers to a Model CSplus2 (2" fiber insulated) 12" I.D. bodied boot tee section with an 8" I.D. projection constructed with a VP1738 S.S. liner and a 430 S.S. shell.

- C+2 = Model CSplus2 Product Code
- 12 = Tee Body I.D.
- BTT = Part Code (Boot Tee Section)
- M = Liner / Shell Code (VP1738 S.S. Liner / 430 S.S. Shell)
- 08 = Qualifier Code (8" I.D. Projection)

- Q = VP1738A S.S. Liner / ALZ Steel Shell
- S = VP1738A S.S. Liner / 430 S.S. Shell

## DUCT SECTIONS & FITTINGS, SUPPORTS & GUIDES, PENETRATIONS

We offer a wide variety of components to complete virtually any venting system. Standard straight sections are available in 12", 24", and 36" lengths. Variable length sections will accommodate lengths from 5-1/2" to 18". We have a variety of sections available with factory installed pipe nipples to accommodate drainage and effluent sampling. Standard elbows: 15°, 30°, and 45°. Several types of tee sections: 90° centered, boot, and 45°. Supports & guides include: plate supports, full angle rings, breeching hanger bands. Penetrations: wall penetrations, flashings, and counter flashings. Our product line also includes adapters, terminations, transitions, etc.

### WEIGHT PER FOOT (Approximate Assembled Weight per Foot)

MODEL		CS		CSplus		CSplus2		CSplus3		CSplus4	
I.D.	O.D.	Lbs.	O.D.	Lbs.	O.D.	Lbs.	O.D.	Lbs.	O.D.	Lbs.	
4"	6"	3.5	6"	4.4	8"	6.0	10"	8.2	12"	10.5	
5"	7"	4.1	7"	5.1	9"	6.9	11"	9.3	13"	11.7	
6"	8"	4.7	8"	5.9	10"	7.9	12"	10.3	14"	13.0	
7"	9"	5.3	9"	6.6	11"	8.8	13"	11.4	15"	14.2	
8"	10"	5.9	10"	7.4	12"	9.7	14"	12.5	16"	15.5	
9"	11"	6.6	11"	8.2	13"	10.7	15"	13.6	17"	16.7	
10"	12"	7.2	12"	9.0	14"	11.6	16"	14.7	18"	17.9	
12"	14"	8.4	14"	10.5	16"	13.4	18"	16.8	20"	20.4	
14"	16"	9.6	16"	12.0	18"	15.2	20"	18.9	22"	22.8	
16"	18"	10.8	18"	13.5	20"	17.0	22"	21.1	24"	25.3	
18"	20"	12.1	20"	15.1	22v	18.9	24"	23.4	26"	27.9	
20"	22"	13.3	22"	16.6	24"	20.8	26"	25.5	28"	34.3	
22"	24"	14.5	24"	18.1	26"	22.7	28"	31.8	30"	37.2	
24"	26"	15.7	26"	19.7	28"	28.5	30"	34.2	32"	39.9	
26"	28"	20.5	28"	28.7	30"	34.1	32"	40.2	34"	46.2	
28"	30"	22.0	30"	30.8	32"	36.5	34"	42.9	36"	49.2	
30"	32"	23.5	32"	32.9	34"	38.9	36"	45.6	38"	52.2	
32"	34"	25.0	34"	35.2	36"	41.4	38"	48.5	40"	55.5	
34"	36"	26.5	36"	37.2	38"	43.8	40"	51.2	42"	58.5	
36"	38"	28.0	38"	39.3	40"	46.1	42"	53.9	44"	61.4	

### GENERAL LIMITATIONS

Where the vent is outside the building, the maximum height above a top lateral brace or guy is 10 feet. Subsequent lateral braces, guys, or supports must be spaced at not more than 20 feet.

The maximum spacing between horizontal (breeching) supports is 10 feet.

For specific component limitations; e.g., maximum height above plate support assemblies, etc. please contact the factory.

### INSTALLATION CONSIDERATIONS

Each part of the vent system must be assembled and installed correctly. Improper or lack of installation of required parts may result in the improper function of the vent system. Installation must be made in accordance with local and national code requirements.

The vent layout should be carefully planned to allow adequate space for assembly, installation of supports, connection of support framing, accommodate standard fitting dimensions, rough openings for penetrations, etc. Do not assume all equipment within a facility can be exhausted with a single system. Before multiple vents are manifolded together verify compatibility of the equipment, vapors being vented, draft requirements, etc. with their respective providers. Consult a design professional as required.

One prime coat and finish coat of appropriate paint is recommended on installations which are exposed to the weather when the outer shell of components or accessories is constructed from aluminized steel.

Sealing of draw bands, overlapped or butted seams, etc. with an appropriate sealant is recommended on installations exposed to the weather in order to avoid moisture from entering the space between the vent shell and liner.

### SALES, SERVICE & MANUFACTURING

Van-Packer welcomes the opportunity to assist you with your venting needs. For nearly seventy years Van-Packer has been supplying the commercial and industrial market with venting products. From our double wall stainless steel, to refractory lined, to free standing engineered chimneys, Van-Packer is a one stop shop that offers a product to fit your requirements. Call the technical service department for assistance with job specific price quotations, sketches or submittal drawings, chimney sizing and draft analyses, thermal analyses, and much more. For more information please call or visit our website [www.vpstack.com](http://www.vpstack.com).



PRODUCT SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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