



Valve Concepts, Inc.
ISO Registered Company



Model 4500 Spring Loaded Pressure Vent with Pipe-Away

OBJECTIVE

The Model 4500 spring loaded pressure vent with pipe-away is intended for use where higher set pressures are required and the relieving vapors must be piped away and not emitted into the atmosphere. May also be used for in-line vacuum relief.

TECHNIQUE

A spring loaded pallet allows for the discharge of vapors to the outlet piping when the tank pressure exceeds the pressure set point. Once the tank over pressure is relieved the spring loaded pallet closes providing a tight vapor seal. A flanged outlet connection is provided for easy pipe-away of vapors, eliminating their emission into the atmosphere and allowing compliance with applicable regulations.

CONSTRUCTION

Housing Material: The Model 4500 vent is a rugged design made to last. Available in Aluminum, Carbon Steel, or 316 SST.

Sizes - Connections. Available in Sizes 2" thru 6". CS and SST vents have Raised Face Flange, Aluminum vents have Flat Face Flange to mate with standard ASME 150# flange connections. On sizes 2" thru 6", the Model 4500 is available with the same size inlet and outlet to reduce outlet piping cost.

Pallet Diaphragm Material: FEP TFE is Standard. Also available Buna-N, EPDM or Fluorocarbon Elastomer (FKM).

SPECIAL FEATURES

Modular. The Model 4500 spring loaded pressure vent is part of the Valve Concepts, Inc. modular vent line. It is used in the assembly of the Model 3200, 4200, and 5200 pressure/vacuum vents with pipe away and the Model 3600 and the 4600 side mounted vacuum vent.

Maintains Accurate Settings. The minimum setting available is 1.25 psig. Maximum pressure setting is 15 psig. All vents are tested to Valve Concepts, Inc. high standard for leakage and set point prior to shipment. A certified test certificate is included with each vent verifying the accuracy. A leakage rate of less than 1 SCFH at 90% of customer specified set point is verified.

Condensate Drainage. Self-draining housing body and drip rings keep condensate away from seating surfaces, preventing freezing, binding and clogging.

Air-Cushioned Seating. Air-cushion seating provides tight sealing to reduce evaporation losses. The pallets have outer guiding and center stabilizing stem to provide self alignment and tight seating.

MATERIALS OF CONSTRUCTION		
Series	Housing	Pallet
4500CS	CS	316 SST
4500SST	316 SST	316 SST
4500A	Aluminum	316 SST

STANDARD/GENERAL SPECIFICATIONS

Gaskets: Standard: TFE/TFE Rope

Painting: Standard: Exterior coating will be a combination of Cashco Paint Specs #S-1777 epoxy and #S-1743 powder coated. Fasteners, seat surfaces and corrosion resistant parts excluded.

Diaphragm FEP-TFE:
Temperature -400° to 400° F (-240° to 204°C)
Limits: Fluorocarbon Elastomer – (FKM):
0° to 400° F (0° to 204°C)
Buna-N (Nitrile-NBR):
-30° to 200° F (-34° to 93°C)
EPDM (Ethylenepropylene):
-40° to 225° F (-40° to 107°C)

Alternate Paint: See Opt-95OS.

OPTION SPECIFICATIONS

ELECTRIC TRACE - Electric heat tape is wrapped around external surface of the vent body. A thermal insulation jacket is secured over the tape and vent body to minimize heat loss. Commonly used to prevent the formation of ice during freezing conditions. See STEAM JACKETING if elevated process temperatures are desired.

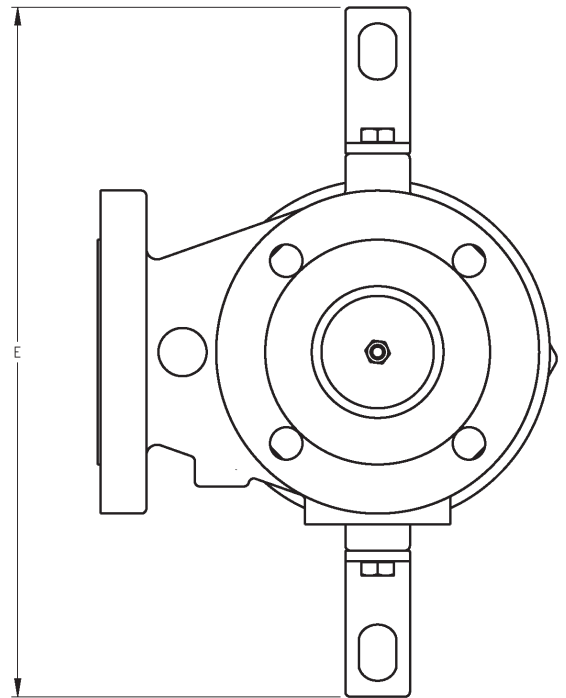
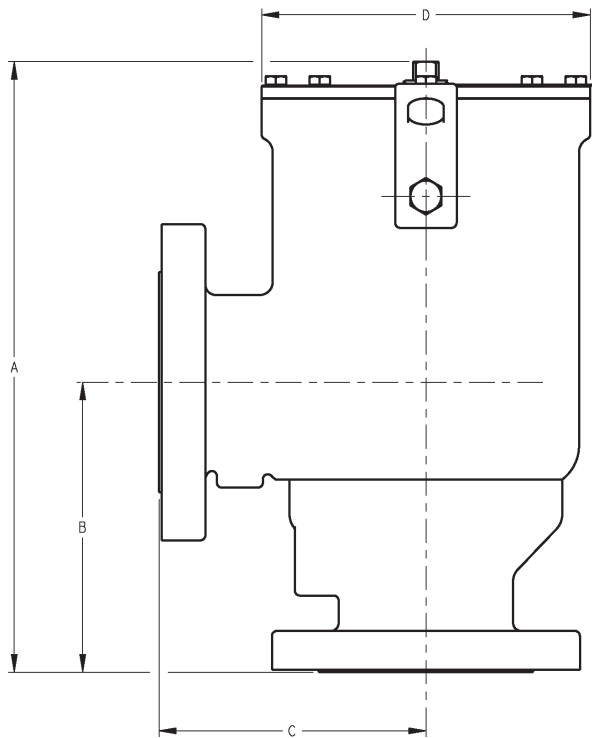
STEAM TRACE - Copper tubing is wrapped around the external surface of the vent body. A thermal insulation jacket is secured over the tubing and vent body to minimize heat loss. Commonly used to prevent the formation of ice during freezing conditions. See STEAM JACKETING if elevated process temperatures are desired.

STEAM JACKETING - Cast aluminum jacket with integrated carbon steel steam chambers are bolted around the vent body. Vent valve and jacket are shipped unassembled as vent valve must first be installed. Commonly used to prevent stored media vapors from crystallizing at ambient temperatures.

Option -40: **NACE CONSTRUCTION:** Internal wetted portions meet NACE standard MR0175, when exterior of the vent is not directly exposed to a sour gas environment, buried, insulated or otherwise denied direct atmospheric exposure.

Option -95OS: **OFFSHORE** installations. Coating of all exterior surfaces will be per Cashco Paint Specs #S-1777 epoxy. Fasteners, seat surfaces and corrosion resistant parts excluded. Painting of fasteners optional upon special request.

DIMENSIONS



ENGLISH Units - in Aluminum, Carbon Steel & Stainless Steel Body						Weight lbs.	
SIZE In	A	B	C	D (diam.)	E	Alum	CS/SST
2" x 2"	12.34"	5.71"	6.00"	7.28"	15.16"	21	55
2" x 3"	12.34"	6.26"	6.19"	7.28"	15.19"	22	60
3" x 3"	14.48"	6.91"	6.50"	8.12"	16.00"	28	76
3" x 4"	14.48"	7.41"	6.50"	8.12"	16.00"	29	80
4" x 4"	16.97"	8.78"	8.00"	10.88"	18.62"	44	123
4" x 6"	16.97"	9.78"	8.00"	10.88"	18.62"	46	128
6" x 6"	18.21"	10.34"	9.00"	12.51"	20.84"	64	178
6" x 8"	18.59"	11.53"	9.00"	12.51"	20.84"	68	191

METRIC Units - (mm) Aluminum, Carbon Steel & Stainless Steel Body						Weight kg.	
SIZE (DN)	A	B	C	D (diam.)	E	Alum	CS/SST
(50) x (50)	313	145	152	185	385	10	25
(50) x (80)	313	159	157	185	385	10	27
(80) x (80)	368	176	165	206	406	13	34
(80) x (100)	368	188	165	206	406	13	36
(100) x (100)	431	223	203	276	473	20	56
(100) x (150)	431	248	203	276	473	21	58
(150) x (150)	462	263	229	318	529	29	81
(150) x (200)	472	293	229	318	529	31	87

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4500 Series PRODUCT CODE

04/06/16

Last 6 Characters reserved for SPQ drawing numbers assigned by Cashco Inc.
(Format as - # # # # #)

45 POS 3 POS 4 POS 5 **B** POS 7 POS 8 **00** POS 11 POS 12 **000000**

POSITION 3 - FLANGE - INLET SIZE			
ASME INCH	CODE	DIN FLANGE DN (rating)	CODE
2"	2	50 (PN16)	H
3"	3	80 (PN16)	J
4"	4	100 (PN16)	K
6"	6	150 (PN16)	L

POSITION 4 - FLANGE - OUTLET SIZE			
ASME INCH	CODE	DIN FLANGE DN(rating)	CODE
2"	2	50 (PN16)	H
3"	3	80 (PN16)	J
4"	4	100 (PN16)	K
6"	6	150 (PN16)	L
8"	8	200 (PN10)	M
		200 (PN16)	T

POSITION 5 - BODY / TRIM MATERIALS		
MATERIAL	W/O Flame-screen	W/ Flame-screen
	CODE	CODE
ALUM/SST	A	B
CS/SST *	C	D
SST/SST *	S	T

* Select for NACE Construction.

POSITION 7 - DIAPHRAGM MATERIALS	
DIAPHRAGM	CODE
FEP TFE (Std.) *	A
Buna-N	B
EPDM	D
FKM *	F

* Select for NACE Construction.

POSITION 8 - PRESSURE SET POINT		
Spring Loaded Range		CODE
psig	barg	
1.25 - 4	.08 - .27	2
> 4 - 6	> .27 - .41	3
> 6 - 8	> .41 - .55	4
> 8 - 10	> .55 - .68	5
> 10 - 12	> .68 - .83	6
> 12 - 13	> .83 - .89	7
> 13 - 15	> .89 - 1.03	8

POSITION 11 - OPTION		
DESCRIPTION	OPTION	CODE
No Option	-	0
NACE Constr.	-40	N
Offshore Paint	-95OS	Y

POSITION 12 - ACCESSORY / CERTS			
OPTION	Certification		
	Std	ATEX *	PED *
	CODE	CODE	CODE
None	0	A	E
Electric Trace	H	B	F
Steam Jacket	J	C	G
Steam Trace	S	D	K

* Forward Completed "EU" Application Recorder prior to quotation. (Without Recorder- Processing of Purchase Order will be delayed).
"PED" Compliance - Ref to Directive 97/23/EC.
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