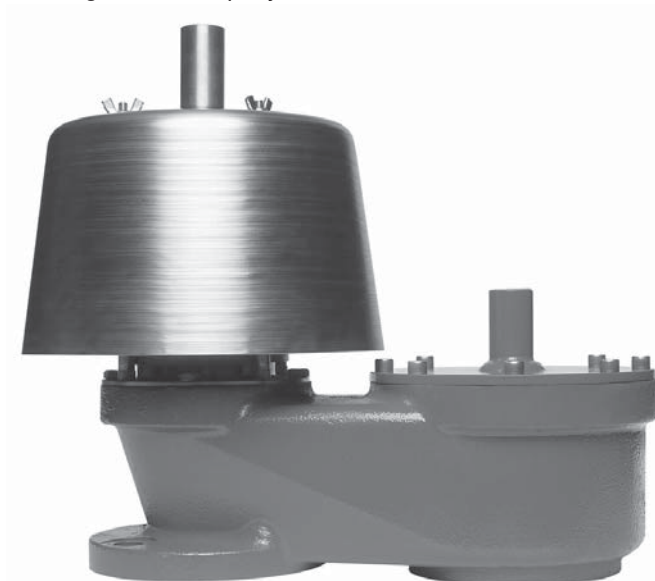




Valve Concepts, Inc.
ISO Registered Company



Model 4100

Spring Loaded Pressure / Vacuum Vent End-of-Line

OBJECTIVE

The Model 4100 end-of-line spring loaded conservation vent provides pressure and vacuum relief in applications where higher pressure settings are required.

TECHNIQUE

A spring loaded pallet on the pressure side of the vent allows the discharge of vapors to the atmosphere when the tank pressure exceeds the set point and a weight loaded/spring pallet on the vacuum side of the vent allows the intake of air when the tank vacuum exceeds the set point. The pallets open and close to regulate the tank pressure within permissible limits to avoid damage to the low pressure tank as the tank normally breathes due to thermal changes or product movement. Virtually eliminates the intake of air and the escape of vapors, except during normal tank breathing, thus reducing product loss.

CONSTRUCTION

Housing Material: The Model 4100 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.

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

SPECIAL FEATURES

Modular: The Model 4100 spring loaded end-of-line conservation vent is part of the Valve Concepts, Inc. modular vent product line. The Model 4100 can easily be field converted to a vacuum only vent, a pressure/vacuum vent with pipe away and can either be direct acting or pilot operated. Only Valve Concepts offer complete modularity throughout its complete vent product line.

Maintains Accurate Settings. The minimum pressure setting is .5 oz./in² and the minimum vacuum setting is .5 oz./in². Maximum pressure setting is 15 psig and maximum vacuum setting is 15 psig. Lower settings may require weights instead of springs on the vacuum side. All vents are tested to Valve Concepts, Inc. high standards for both leakage and set point prior to shipment. A certified test certificate is included with each vent verifying the accuracy of both the pressure and vacuum setting and leakage. A leakage rate of less than 1 SCFH at 90% of set point is verified for both pressure and vacuum.

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 and the release of toxic vapors to the atmosphere, except under normal breathing conditions. The pallets have outer guiding and center stabilizing stem to provide self alignment and tight seating.

MATERIALS OF CONSTRUCTION		
Series	Housing	Pallet
4100CS	CS	316 SST
4100SST	316 SST	316 SST
4100A	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 (Ethylene propylene):
-40° to 225° F (-40° to 107°C)

Alternate Paint: See Opt-95OS.

Pressure & Vacuum Ranges: See Table 4 and Table 6 on the coder. Differential Pressures greater than 2 psid will limit the minimum vacuum set point to 2 oz/in².

OPTION SPECIFICATIONS

BUG SCREEN - 304 stainless steel, 4x4 welded mesh.

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.

FLAME SCREEN - 304 stainless steel, 30x30 woven mesh

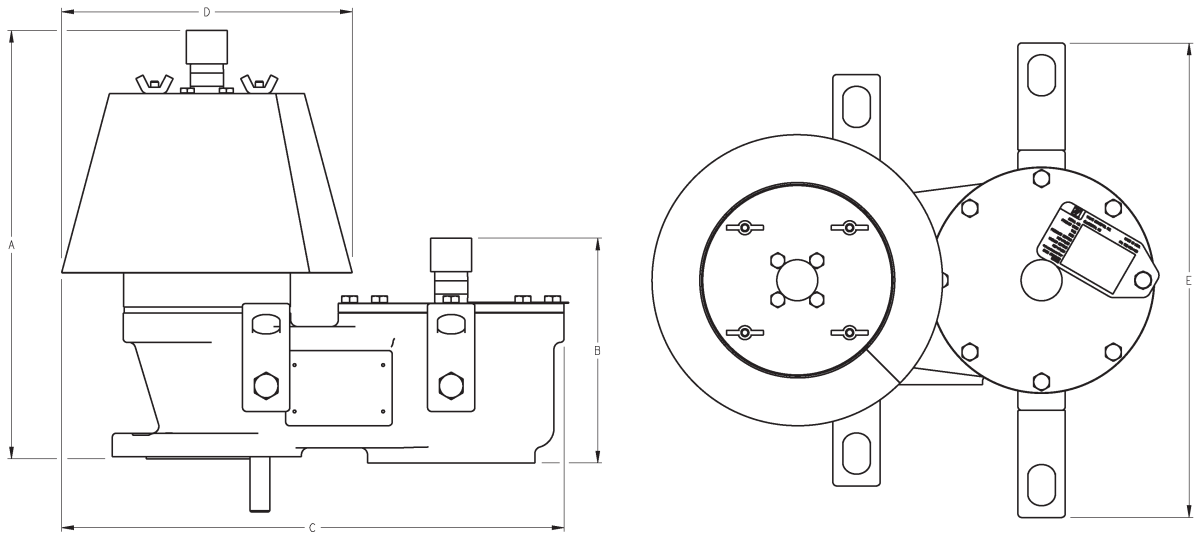
ELECTRIC TRACE - Electric heat tape is wrapped around external surface of the vent body. A thermal insulation jacket is secured over the tape and vent body to minimize heat loss. Commonly used to prevent the formation of ice during freezing conditions. See STEAM JACKETING if elevated process temperatures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

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

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.

DIMENSIONS



ENGLISH Units – in Aluminum, Carbon Steel & Stainless Steel Body							
SIZE	A	B	C	D	E	Wt. Alum lbs.	Wt. CS/ SST lbs.
2"	13.56"	7.12"	15.97"	9.22"	14.83"	26	49
3"	15.84"	8.16"	17.19"	9.74"	15.59"	32	65
4"	18.64"	9.59"	22.90"	13.04"	18.23"	51	104
6"	20.71"	10.69"	28.13"	16.05"	22.71"	72	152

METRIC Units - mm Aluminum, Carbon Steel & Stainless Steel Body							
SIZE (DN)	A	B	C	D	E	Wt. Alum kg.	Wt. CS/ SST kg.
(50)	344	181	406	234	377	11	22
(80)	402	207	436	247	396	14	29
(100)	473	244	582	331	463	23	47
(150)	526	272	714	408	577	32	69

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. We reserve the right to modify or improve the designs or specifications of such product at any time without notice. Cashco, Inc. does not assume responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use and maintenance of any Cashco, Inc. product remains solely with the purchaser.

4100 Series PRODUCT CODE

04/06/16

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



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

POSITION 5 - BODY / TRIM / WEATHER HOOD MATERIALS			
MATERIAL	Std. W/O Flamescreen	W/ Flame Screen	W/ Bug Screen
	CODE	CODE	CODE
ALUM/SST/SST	A	B	N
CS/SST/CS *	C	D	P
SST/SST/SST *	S	T	R

* 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			
Weight Loaded Range		WEIGHT MATERIAL	
		STD *	SST
psig	barg	CODE	CODE
< 1.25	< .08	1	A
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	

* Lead or Lead / SST combination.
For NACE application must select SST weight material code.

POSITION 9 - SIGHT GLASS		
None (Std)	CODE	
	0	
Location	Vacuum Side Only	Pressure Side Only
	1	2
Weight loaded range only.		

POSITION 10 - VACUUM SET POINT			
Weight Loaded Range		WEIGHT MATERIAL	
		STD *	SST
psig	barg	CODE	CODE
< 1.0	< .06	1	A
Spring Loaded Range		CODE	
psig	barg		
1 - 4	.06 - .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	

* Lead or Lead / SST combination.
For NACE application must select SST weight material code.

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.
Contact Cashco for Assistance

Cashco, Inc.
P.O. Box 6
Ellsworth, KS 67439-0006
PH (785) 472-4461
Fax. # (785) 472-3539
www.cashco.com
email: sales@cashco.com
Printed in U.S.A. 4100-TB

Cashco GmbH
Handwerkerstrasse 15
15366 Hoppegarten, Germany
PH +49 3342 30968 0
Fax. No. +49 3342 30968 29
www.cashco.com
email: germany@cashco.com

Cashco do Brasil, Ltda.
Al.Venus, 340
Indaiatuba - Sao Paulo, Brazil
PH +55 11 99677 7177
Fax. No.
www.cashco.com
email: brazil@cashco.com