

### **TECHNICAL BULLETIN**

**4400-TB** 02-20

# **MODEL 4400** SPRING LOADED PRSSURE VENT TO ATMOSPHERE

## OVERVIEW

The Model 4400 spring loaded pressure relief vents are designed for higher pressure settings and are used in applications for normal or emergency venting pressure relief. The series 4400 vents are pressure only devices and as such do not provide vacuum relief. Vacuum relief must be supplied by the operating vent with which the tank is equipped. If vacuum relief is needed, see Valve Concepts Technical Bulletin 3300, 3600, 4100, or the 4200.

### SPECIAL FEATURES

Easy Inspection:

The 4400 series vent is light weight and designed for trouble free entry for inspection and maintenance. A course, mesh screen prevents entry of foreign matter into seating area.

Maintains Accurate Settings: The minimum pressure setting is 1.25 psig and the maximum setting is 15 psig. As with every vent supplied by Valve Concepts a certified test report is provided verifying vent setting and a leakage rate of no more than 1 SCFH at 90% of the customer specified set point.

Air-Cushioned Seating: Air-cushion seating provides tight sealing to reduce the unnecessary release of vapors and loss of product to the atmosphere.

# TECHNIQUE

Under normal operating conditions, the spring-loaded pallet assembly is closed providing a vapor-tight seal. In the event the tank pressure reaches the set point of the vent, due to product movement into the tank, thermal expansion of the product and vapors or due to an emergency (fire involvement of the tank), the springloaded pallet lifts to vent excess vapors thereby protecting the tank from dangerous over pressurization. Once the over pressure condition is relieved the spring-loaded pallet closes to provide a vapor tight seal.



**MODEL 4400** 

# LINE SIZES AVAILABLE

2" (DN50), 3" (DN80), 4" (DN100), 6" (DN150)

END CONNECTIONS

# **COMMON APPLICATIONS**

DESIGNED FOR HIGHER PRESSURE SETTINGS FOR NORMAL OR EMERGENCY VENTING PRESSURE RELIEF

## DESIGN PRESSURE

MULTIPLE SET PRESSURE RANGES AVAILABLE

#### CONSTRUCTION

**Housing Material:** Flange base available in Aluminum, Carbon Steel, or 316 SST. Weatherhood available in Carbon Steel or 316 SST.

MATERIALS OF CONSTRUCTION			
Series	Housing	Pallet	
4400CS	CS	316 SST	
4400SST	316 SST	316 SST	
4400A	Aluminum	316 SST	

**Sizes - Connections.** Available is Sizes 2" through 6". CS and SST vents have Raised Face Flange, Aluminum vents have Flat Face Flange to mate with standard ASME150# flange connections.

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

#### STANDARD/GENERAL SPECIFICATIONS

Gaskets:	Standard: TFE/TFE Rope	Painting:	<u>Standard</u> : Exterior coating will be a combination of Cashco Paint Specs #S-1777 epoxy and #S-1743 powder coated.
Diaphragm	FEP-TFE:		Fasteners, seat surfaces and corrosion
Temperature Limits:	-400° to 400° F (-240° to 204°C) <u>Fluorocarbon Elastomer – (FKM):</u> -20° to 400° F (-28° to 204°C) <u>Buna-N (Nitrile-NBR):</u> -30° to 200° F (-34° to 93°C) <u>EPDM (Ethylenepropylene):</u> -40° to 225° F (-40° to 107°C)		resistant parts excluded.



Aluminum, Carbon Steel & Stainless Steel Flange & Carbon Steel & Stainless Steel Weather Hood in. (mm)				Weight Ibs. (kg.)				
Size In (DN)	A (d	iam.)		В		с	Aluminum	CS / SST
2" (50)	7.50"	(191)	9.54"	(242)	N/A	N/A	7 (3)	14 (6)
3" (80)	9.20	(234)	10.56"	(271)	N/A	N/A	11 (5)	22 (10)
4" (100)	9.62"	(244)	12.50"	(317)	17.29	(439)	16 (7)	32 (14)
6" (150)	13.00"	(330)	14.61"	(371)	19.29	(490)	21 (9)	42 (19)

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### 4400 Series PRODUCT CODE 02

02/07/20

POS 8

POS 7 Last 6 Characters reserved for SPQ drawing numbers assigned by Cashco (Format as - # # # # #)





0 0 0 0 0 0 0 0

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

POSITION 5 - BODY / TRIM / WEATHER HOOD MATERIALS		
MATERIAL	W/O Flamescreen	
	CODE	
ALUM/SST/SST	А	
CS/SST/CS	С	
SST/SST/SST	S	

POSITION 7 - DIAPHRAGM MATERIALS			
DIAPHRAGM	CODE		
FEP TFE (Std.)	А		
Buna-N	В		
EPDM	D		
FKM	F		

POSITION 8 - PRESSURE SET POINT			
Spring Loa	CODE		
psig	barg	CODE	
1.25 - 4	.0827	2	
> 4 - 6	> .2741	3	
> 6 - 8	> .4155	4	
> 8 - 10	> .5568	5	
> 10 - 12	> .6883	6	
> 12 - 13	> .8389	7	
> 13 - 15	> .89 - 1.03	8	

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