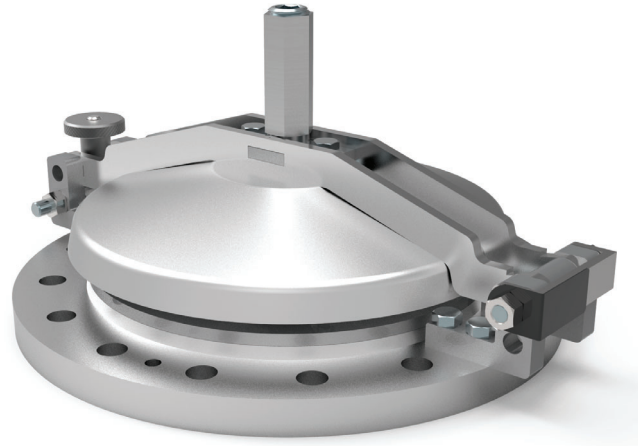


# MODEL 2199

## PRESSURE/VACUUM THIEF HATCH & COMBO. GAUGE HATCH



MODEL 2199

### OVERVIEW

The Model 2199 pressure/vacuum relief hatch provides over pressure relief beyond that furnished by the normal pressure vent for atmospheric and low pressure tanks. The Model 2199 can also be used as a spring operated conservation vent and tank hatch that provides convenient access for tank cleaning, inspection and repair.

### SPECIAL FEATURES

- Easy Inspection:** The 2199 vent is low-profile in design, and light weight for easy, convenient handling, inspection, installation, and maintenance. The pressure pallet assembly can be opened to allow unobstructed access to the tank for inspection, repairs, and gauge reading. No adjustment is required after cleaning or maintenance to establish set point.
- Maintains Accurate Pressure Settings:** Controlled design for an accurate, repeatable set point.
- Shutoff:** Set point exceeds all 2016 EPA Emissions Requirements.

### TECHNIQUE

When the tank is not in a venting condition, the pressure pallet assembly provides a vapor-tight seal. If the tank out breathing requirements exceeds the capability of the normal pressure relief vent the pallet assembly lifts off the seat to allow escape of vapors, preventing damage to the tank due to excess pressure. When the over pressure is relieved the pallet assembly will reseal to again provide a vapor-tight seal.

### APPLICATIONS

Used primarily for upstream oil and gases on 12F tanks. Used in all types of fluids, including gases, sour gas, industrial gases, chemicals, as well as the common industrial fluids - water, oil, and compressed air.



**LINE SIZES AVAILABLE**  
8" (DN200)



**END CONNECTIONS**  
FLANGED



**COMMON APPLICATIONS**  
ATMOSPHERIC & LOW-PRESSURE  
TANKS



**DESIGN PRESSURE**  
16, 12, 8, 4 oz/in<sup>2</sup>

## CONSTRUCTION

Standard aluminum flange base is machined from premium billet stock to accommodate a variety of set-ups. Also available in stainless steel.

**Seal Material:** FKM (Viton), Buna-N

This unit comes standard with ANSI 150# FF or API 12D/12F/12P bolt pattern for easy bubble tight replacement of old tank hatches.

## STANDARD/GENERAL SPECIFICATIONS

**Size:** 8"

**Springs:** Vacuum Spring Range set at 0.4 oz/sq.in<sup>2</sup>

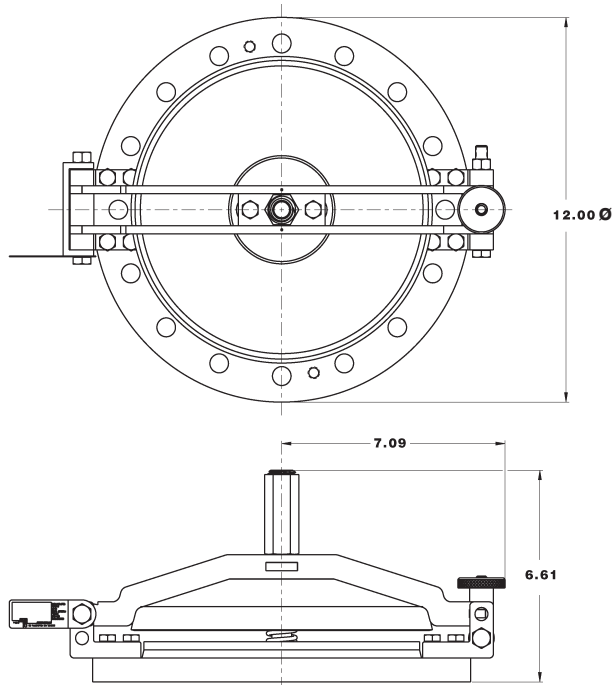
MATERIALS OF CONSTRUCTION	
Flange Base	Pressure/ Vacuum Pallets
Aluminum	Aluminum
SST	SST

**Pressure Settings:** 16 oz/in<sup>2</sup> as standard  
Available set points 4, 8, and 12 oz/in<sup>2</sup>

**Temperature Limits:** Buna-N (Nitrile-NBR):  
-30° to 250° F (-34° to 121°C)

Fluorocarbon Elastomer – (FKM):  
-40° to 400° F (-26° to 204°C)

## DIMENSIONS & WEIGHTS



**Model 2199**

WEIGHTS - lbs		
	Without Weather hood	With Weather hood
Gauge Hatch	8.44	9.88
Pressure Only	8.58	10.02
Pressure-Vac	--	10.37

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# 2199 Series PRODUCT CODE 02/07/20

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



POSITION 3 - FLANGE - BOLTING PATTERN		
To Specification	Aluminum CODE	SST CODE
API 12D/12F/12P	F	S
ANSI 150# FF	A	T

POSITION 4 - SIZE		
Inch	(DN)	CODE
8"	(200)	8

POSITION 5 - WEATHERHOOD	
Options	CODE
None	0
Weatherhood	1

POSITION 7 - O-RING MATERIAL	
Material	CODE
Buna-N	A
FKM (Std)	B

POSITION 8 - PRESSURE SET POINT	
SET POINT RANGE - OZ/ IN²	CODE
Hatch only	0
4	1
8	2
12	3
16 (Std)	4

POSITION 9 - FUNCTION	
Description	CODE
Hatch Only	0
Pressure Relief	1
Pressure/Vacuum Relief *	2
* Weatherhood Required	

POSITION 11 - LIMIT SWITCH	
Options	CODE
None	0
Includes Limit Switch	1

**\* For information on ATEX see  
pages 6 & 7 on the IOM.**

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