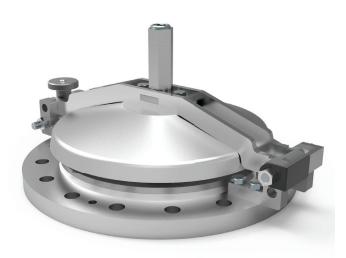


ISO Registered Company

# MODEL 2199 Pressure/Vacuum Thief Hatch & Combo. Gauge Hatch



### **OBJECTIVE**

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.

#### **APPLICATION**

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.

#### **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 reseat to again provide a vapor-tight seal.

#### **CONSTRUCTION**

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

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

Seal Material: FKM (Viton), Buna-N

#### **SPECIAL FEATURES**

**Easy Inspection and Maintenance:** 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.

## STANDARD/GENERAL SPECIFICATIONS

8" Size:

Springs:

Pressure

Settings:

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

Available set points 4, 8, and 12 oz/in<sup>2</sup>

16 oz/in<sup>2</sup> as standard

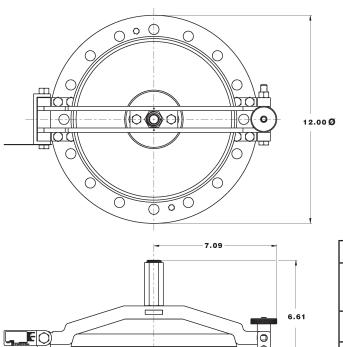
MATERIALS OF CONSTRUCTION		
Flange Base	Pressure/ Vacuum Pallets	
Aluminum	Aluminum	
SST	SST	

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**



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

**Model 2199** 

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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 - # # # # #)

POS 4 POS 5 A POS 7

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

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

POS 9

POS

8

POSITION 5 - WEATHERHOOD	
Options	CODE
None	0
Weatherhood	1

POSITION 7 - O-RING MATERIAL	
Material	CODE
Buna-N	А
FKM (Std)	В

POSITION 8 - PRESSURE SET POINT	
SET POINT RANGE - OZ/ IN <sup>2</sup>	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.

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. 2199-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