

# **MODEL 200 & 300 TVTH**



## **Features**

- Economical gauge and thief hatch with integral pressure and vacuum relief.
- Flush top-mounted design does not extend into tank.
- Available in 4, 6, 8, 12, 16 and 32 ozsi pressure relief settings, with fixed 0.4 ozsi vacuum relief.
- Standard sweet trim (TVTH Model 200)
- Sour Service Trim (TVTH 300) with stainless or inconel springs
- Fusion-bond Epoxy (FBE) coating available for acid service

## **FEATURES**

## **Economical Thief Hatch**

 The Tank Vent Thief Hatch (TVTH) Model 200 and 300 are a budget-conscious choice for integrated thief access and pressure + vacuum relief.

# Flush Top-Mount design

 The pressure and vacuum relief mechanism operates above the tank roof to maintain functionality if the thief hatch opening is irregular or undersize.

# **Variety of Pressure Settings**

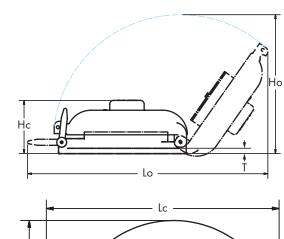
- The TVTH 200 and 300 are available with wide variety of factory-set pressure relief settings
- Vacuum relief is fixed at 0.4 ozsi.

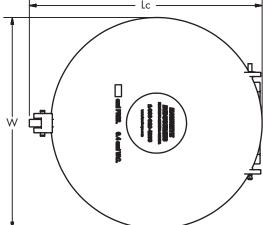
## **Two Trim Levels for Sweet or Sour Service**

- The TVTH 200 is designed for sweet service with polyisoprene pressure and vacuum gaskets and stainless steel springs.
- The TVTH 300 is suitable for sour service, with expanded FKM (Sponge Viton) gaskets and stainless steel, or optionally inconel, springs.

#### **DIMENSIONS**

|     | Dimension                | Value                |        |
|-----|--------------------------|----------------------|--------|
|     |                          | [in.]                | [mm.]  |
| Нс  | Height (Closed)          | 5 ½                  | 140    |
| Но  | Height (Minimum to Open) | 14 1/4               | 362    |
| Lc  | Length (Hatch Closed)    | 13 ½                 | 343    |
| Lo  | Length (Hatch Open)      | 24 1/2               | 622    |
| W   | Width                    | 12 1/4               | 311    |
| T   | Flange Thickness         | 1/2                  | 13     |
|     | Weight                   | 11 ¼ lb              | 5.1 kg |
| В   | Bolt Hole                | 17/32                | 13.5   |
| ID  | Cutout Diameter          | 8                    | 203    |
| BCD | Bolt Circle Diameter     | 10-3/8               | 264    |
|     | Bolt Size & Number       | ½-13UNC-2A x 16 plcs |        |





## **SPECIFICATIONS**

Function Venting Gauge Hatch

Tank Access + Pressure & Vacuum Relief

Temperature Range -40°C to 75°C (TVTH 200, polyisoprene)

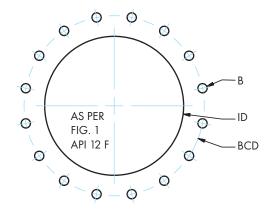
-25°C to 205°C (TVTH 300, eFKM).

Pressure Relief Type Spring-loaded pallet

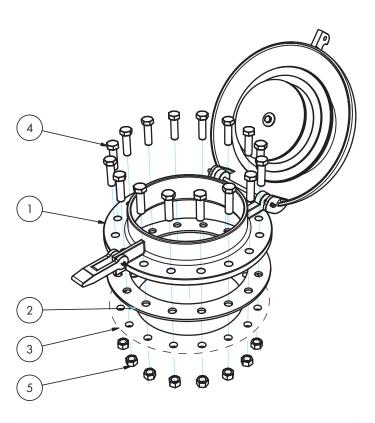
Pressure Relief Range 4 to 32 ozsi (see Relief Settings)

Vacuum Relief Range 0.4 ozsi fixed

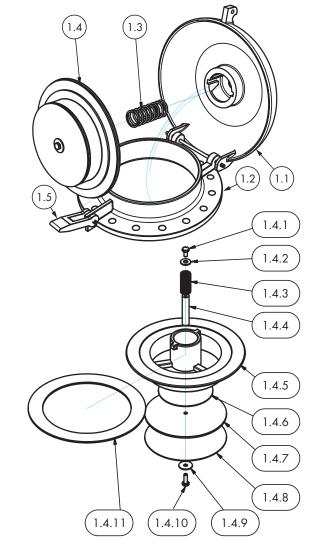
Tank Connection 8" API (Fig 1 API 12F)



# PARTS LIST & MATERIALS OF CONSTRUCTION



| ltem  | Part Name                   | Std. Material  | Opt. Material             |
|---|-----------------------------|--|---------------------------|
| 1   | TVTH Assembly               |  |                           |
| 1.1   | TVTH Lid                    | AL ZLD108  |                           |
| 1.2   | TVTH Lid                    | AL ZLD108  |                           |
| 1.3   | Pressure Spring             | 302 SS   | X750 Inconel <sup>1</sup> |
| 1.4   | Pressure & Vacuum<br>Pallet |  |                           |
| 1.4.1   | Vacuum Spring Screw         | AISI 304 SS  |                           |
| 1.4.2   | Vacuum Spring Washer        | AISI 304 SS  |                           |
| 1.4.3   | Vacuum Spring               | 302 SS   | X750 Inconel <sup>1</sup> |
| 1.4.4   | Vacuum stem                 | AL6061 OR EQ   |                           |
| 1.4.5   | P & V Pallet                | AL ZLD108  |                           |
| 1.4.6   | Vacuum Disc                 | AL 5052 OR EQ  |                           |
| 1.4.7   | Vacuum Gasket               | Polyisoprene   | eFKM²                     |
| 1.4.8   | Vacuum Plate                | AL 5052 OR EQ  |                           |
| 1.4.9   | V. Gasket Washer            | AISI 304 SS  |                           |
| 1.4.10  | V. Gasket Screw             | AISI 304 SS  |                           |
| 1.4.11  | P. Gasket                   | Polyisoprene   | eFKM²                     |
| 1.5   | Latch                       | AL ZLD108  |                           |
| 2   | Base Gasket                 | Chloroprene  | FKM                       |
| 3*  | Tank connection             |  |                           |
| 4†  | Installation Bolt           |  |                           |
| 5†  | Installation Nut            |  |                           |
| * parts supplied by others<br>† parts sold separately |                             | <sup>1</sup> Available on TVTH 300 only<br><sup>2</sup> Standard on TVTH 300 |                           |



# **RELIEF SETTINGS**

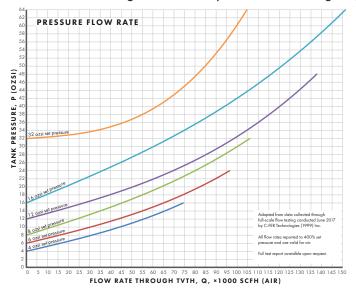
The following relief pressures are available and in stock. Pressures not listed can be achieved, but with additional lead time and a 25 pc minimum order.

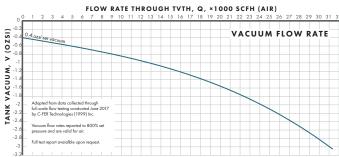
| AISI 3      |   |         |
|-------------|---|---------|
| AISI 302 SS |   | INCONEL |
| •           | • | •       |
| •           | • |         |
| •           | • | •       |
| •           | • |         |
| •           | • | •       |
| •           | • | •       |
|             | • |         |

| Vacuum Setting | TVTH 200    | TVTH 300 |         |
|----------------|-------------|----------|---------|
| [ozsi]         | AISI 302 SS |          | INCONEL |
| 0.4            | •           | •        | •       |

#### FLOW CHARACTERISTIC

Empirical flow rate information for the Model 200 and 300 TVTH below is adapted from data collected from full-scale flow testing conducted by C-FER Technologies (1999) Inc. in June 2017.





# **PACKAGING**

TVTH 200 and 300's are shipped ready-to-install in individual boxes. Package dimensions are 13 in. wide, 12 ¾ in. deep and 6 in. high and weigh 12 ½ lb each. Bulk orders of TVTH 200 and 300s can be palletized in multiples of 21 units (eg 21 pc, 42 pc, 63 pc, etc).

## **CERTIFICATION**

TVTH 200 and 300's pressure and vacuum relief settings can be factory certified at an additional expense. Following assembly, TVTH 200 and 300 are tested on the low-flow test bench for pressure-tightness and confirmation of relief setting. Certified hatches are accompanied by a certificate stating the relief pressure of the hatches.

# ORDERING INFORMATION

TVTH 200 and 300s are stocked in Edmonton, ready to ship 1-day or less.

## **For Sweet Service**

- 1. Specify TVTH 200 Thief Hatch
- 2. Specify Pressure Relief Setting (4, 6, 8, 12, 16 or 32 ozsi).

#### **For Sour Service**

- 1. Specify TVTH 300 Thief Hatch
- Specify spring material (Stainless Steel Standard, Inconel Available)
- 3. Specify Pressure Relief Setting (4, 6, 8, 12, 16 or 32 ozsi).

## **RELATED PRODUCTS**

The TVTH 200 and 300 are just one part of our tankage product lines, which also includes:

# Vapor Control

- Series 5000 EPRV
- Series 6000 PVRV

#### **Mechanical Level Indication**

- Model 375LS Low Profile Liquid Seal Level Indication System
- Model 750 Open Level Indication System and Model 750LS Liquid Seal Level Indication System





Model 375LS

**Level Gauging System**