

## 94225 Emergency Vent & Manhole Cover (Pressure & Vacuum)

The Shand & Jurs 94225 Emergency Vent and Manhole Cover provides emergency relief of excessive internal pressure and vacuum beyond that provided by tank conservation vent requirements.

The weight loaded pressure vent section employs a flexible diaphragm or an Expand-a-Seal diaphragm (option), which provides a tight seal between the pallet and seat. Special diaphragm materials are available for most product environments. Corrosion resistant pressure/vacuum seat is standard.

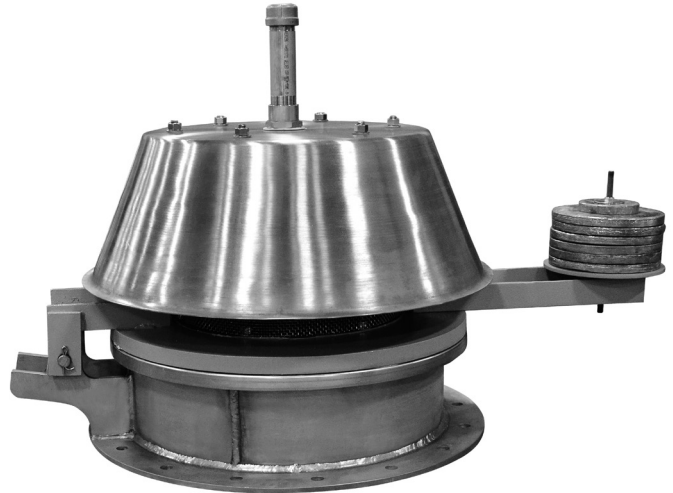
The pressure pallet starts to lift when set pressure is approached. Flow efficiency rises rapidly to approximately 60% of a perfect orifice at 40% excess of the set pressure. At higher overpressure, the flow efficiency approximates 75%.

Vacuum relief is spring operated and adjustable, which permits a wide range of vacuum settings without affecting the pressure set point.

For tank venting or examination, the entire hinged cover may be lifted open in a matter of seconds, offering clear passage through the unobstructed opening. Since no gasket replacement or unbolting is necessary, this vent eliminates the expensive manpower needed to put conventional manhole covers back in operation.

Model 94225 is available for standard ANSI and API flat face flange connections. Raised face connections and special flanges are available including EN1092-1.

Pallet construction permits a wide variety of pressure settings. See specifications for various pressure settings of all vent sizes.



### Features

- Design incorporates pressure and adjustable vacuum relief
- 16", 18", 20" and 24" ANSI sizes
- 20" and 24" API roof manhole sizes
- "Self-energizing" Expand-a-Seal diaphragm (optional) assures a tight seal
- Hinged cover provide precise sealing and safety
- No unbolting of vent for seal replacement or tank examination

## Specifications

Size	16"	18"	20"	24"	16"	18"	20"	24"
Type	Low Setting				High Setting			
Pressure Settings	Standard	2.5 oz/in <sup>2</sup>			> 4.0 oz/in <sup>2</sup>			
	Maximum	4.0 oz/in <sup>2</sup>			16 oz/in <sup>2</sup>			
Vacuum Settings	0.6 oz/in <sup>2</sup> through 2.9 oz/in <sup>2</sup> , Adjustable (1" W.C. - 5" W.C.)							

## Standard Materials of Construction

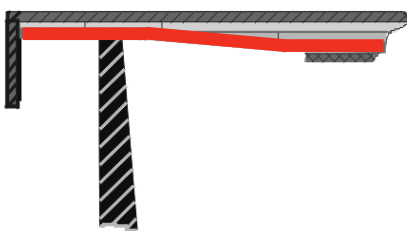
Base	Aluminum	Steel	316 Stainless Steel
Pallet	Aluminum	Aluminum	316 Stainless Steel
Seat - Pressure	Aluminum	Stainless Steel Inlay	316 Stainless Steel
Seat - Vacuum	Aluminum	316 Stainless Steel	316 Stainless Steel
Internal Diaphragm Clamp Ring	Aluminum	Steel	316 Stainless Steel
Load Weight(s)	Steel / Lead		Stainless Steel / Lead
Fasteners	Zinc Plated Steel	Zinc Plated Steel	316 Stainless Steel
Cover / Hood	Steel / Aluminum		
Hinge Arm	Steel		Stainless Steel
Hinge Pin	Stainless Steel	Stainless Steel	Stainless Steel
Diaphragm	FEP Teflon	FEP Teflon	FEP Teflon
Back-up Disk	N-8090	N-8090	N-8090

\* Steel Pallets are available. Alternate materials of construction available including stainless steel trim and all teflon softgoods. Consult Factory.

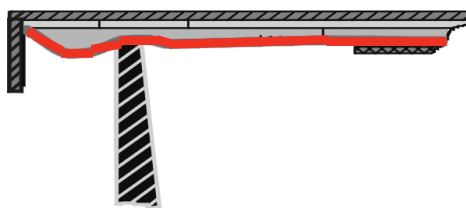
## Expand-Seal

Shand & Jurs "Expand-Seal" option is available on all pressure pallet assemblies. This feature significantly reduces leakage. The ballooning effect of the Teflon diaphragm effectively seals the valve.

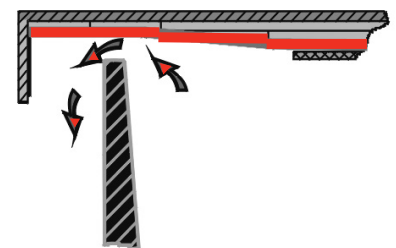
**Pressure Below Set Point**



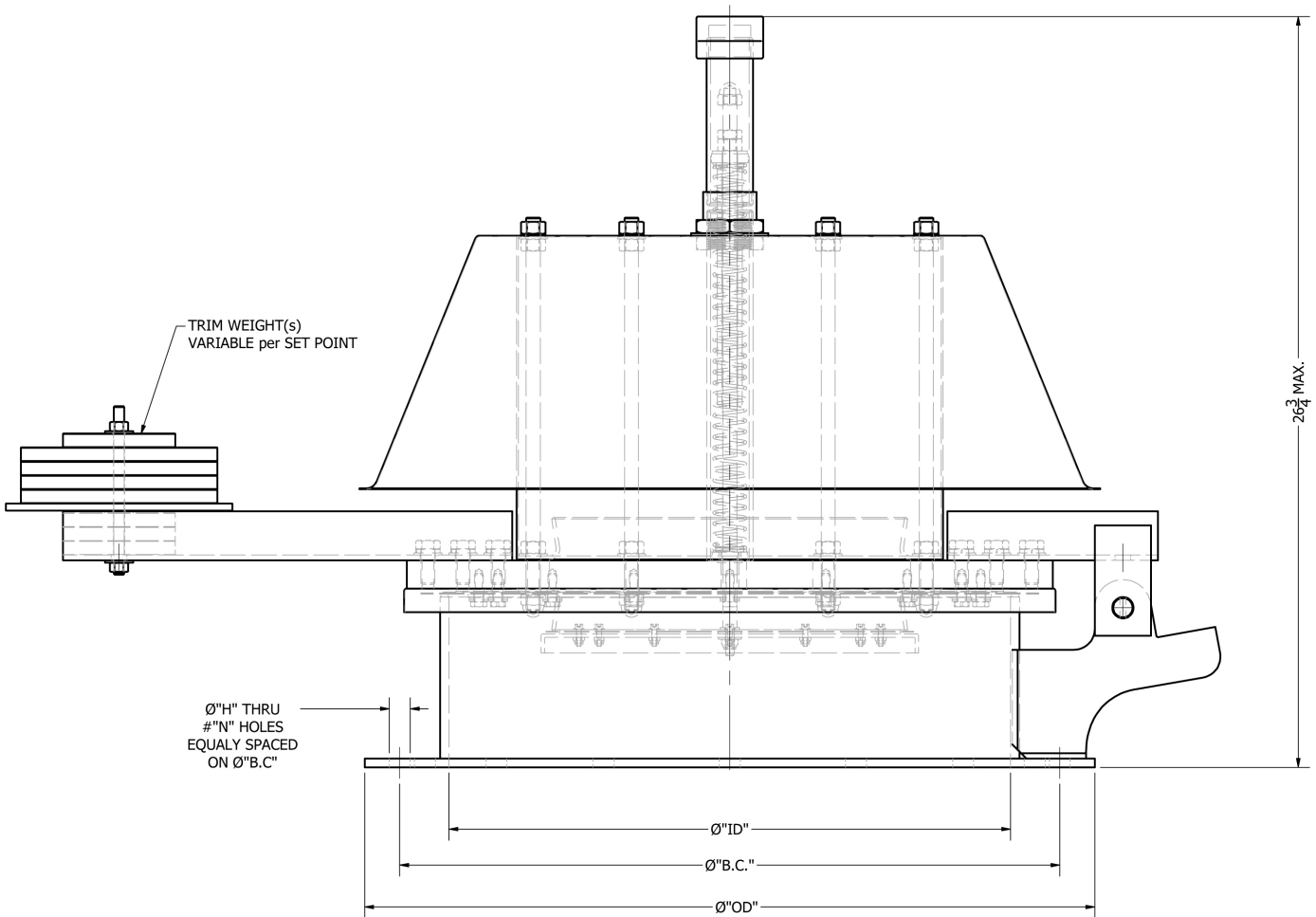
**Approaching Set Point**



**Set Point Exceeded**



### Dimensions



Vent Size	Connection Matching Size	Diameter "BC"	Diameter "OD"	Diameter "ID"	Diameter "H"	"N" Holes
16"	16" ANSI Class 150	21 ¼	23 ½	16	1 ⅛	16
18"	18" ANSI Class 150	22 ¾	25	17 ¼	1 ¼	16
20"	20" API Roof Manhole	23 ½	26	20	¾	16
20"	20" ANSI Class 150	25	27 ½	20	1 ¼	20
24"	24" API Roof Manhole	27 ½	30	24	¾	20
24"	24" ANSI Class 150	29 ½	32	24	1 ⅜	20

All designs subject to change. Certified dimensions and specifications available upon request.

## 94225 Ordering Guide

### Model Number Selection

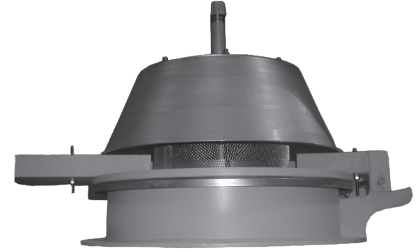
The model number will consist of a base number **94225** followed by 6 digit numbers. These digits will represent 6 option tables.

**94225 - AB - CD - EF**

### Ordering Information

Specify:

1. Model 94225 Emergency Vent / Manhole Cover
2. Size Required
3. Base and Cover Material
4. Pressure and Vacuum Setting
5. ANSI or API Base
6. Seal Type Standard or Expanda-Seal



**Table A - Size & Flange Type**

Option A	Size	Flange Type
1	16"	ANSI Flat Face
2	18"	ANSI Flat Face
3	20"	ANSI Flat Face
4	20"	API Flat Face
5	24"	ANSI Flat Face
6	24"	API Flat Face

**Table C - Pallet, Cover, Hood**

Option C	Material		
	Pallet	Cover	Hood
0	Aluminum	Aluminum	Aluminum
1	Aluminum	Steel	Aluminum
2	316 SS	Steel	Aluminum
3	316 SS	Steel	316 SS
4	316 SS	316 SS	316 SS
5	316 SS	Aluminum	Aluminum
6	316 SS	Aluminum	316 SS

\* **NOTE:** Cover selection affects minimum pressure set point. Consult Factory Minimum Pressure Set Point for Options 1, 2, 3, 4 is 4 oz/in<sup>2</sup>

**Table E - Seal Material**

Option E	Description
0	FEP Teflon / N8090
1	Buna-N / N8090

**Table B - Base Material**

Option B	Material
1	Steel
2	Aluminum
3	316 Stainless Steel

**Table D - Pressure Setting**

Option D	Description
1	2.5 oz/in <sup>2</sup> (Standard)
2	2.5 oz/in <sup>2</sup> to 4 oz/in <sup>2</sup>
3	4 oz/in <sup>2</sup> to 8 oz/in <sup>2</sup>
4	8 oz/in <sup>2</sup> to 12 oz/in <sup>2</sup>
5	12 oz/in <sup>2</sup> to 16 oz/in <sup>2</sup>

\* Consult Factory for settings greater or less than shown

**Table F - Seal Type**

Expanda-Seal Option F	Standard Option F
1	0