



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

## The Shand & Jurs Model 94225 Emergency Vent and Manhole Cover (Pressure & Vacuum)

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

The weight loaded pressure vent section employs a flexible diaphragm or an Expanda-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.

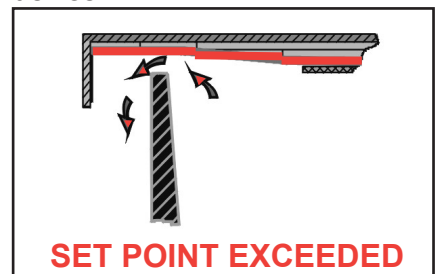
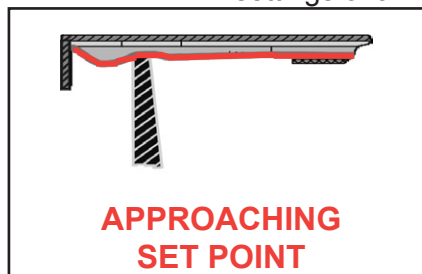
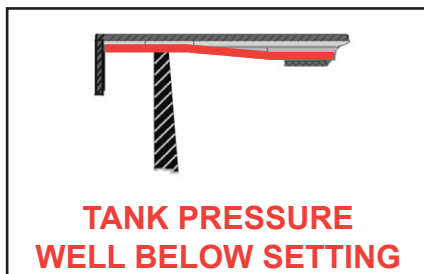
The pressure pallet starts to lift when set pressure is approached. Flow efficiency rises rapidly to approximately 60% of a perfect orifice at 40% excess of the set pressure. At higher overpressure, the flow efficiency approximates 75%.

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 flange connections. Special Flanges are available including DIN.

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

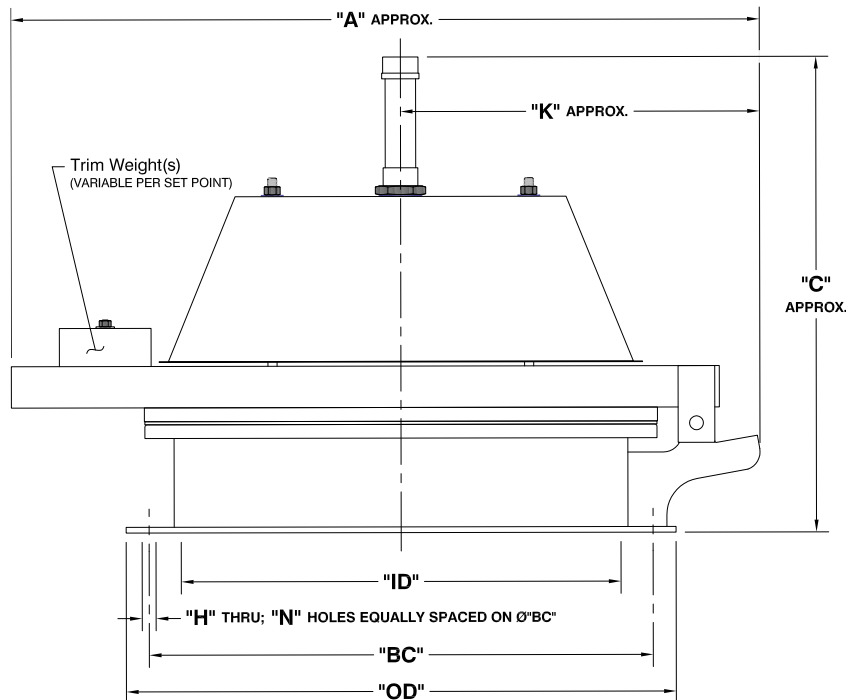


Shand & Jurs "Expanda-Seal" option is available on all pressure pallet assemblies. This feature, shown in red, significantly reduces leakage. The ballooning effect of the teflon diaphragm effectively seals the valve. The "Expanda-Seal" feature ensures less than .5 SCFH of leakage at 95% of the set point.

| Specifications                     |                   |  |        |        |                 |                 |     |     |     |
|------------------------------------|-------------------|--|--------|--------|-----------------|-----------------|-----|-----|-----|
| Size                               |                   | 16"  | 18"    | 20"    | 24"             | 16"             | 18" | 20" | 24" |
| Type                               |                   | Low Setting  |        |        |                 | High Settings   |     |     |     |
| Pressure Settings                  | Standard          | 2.5 oz   | 2.5 oz | 2.5 oz | 2.5 oz          | > 4.0 oz/sq.in. |     |     |     |
|                                    | Maximum           | 4.0 oz/sq. in.   |        |        |                 | 12 oz/sq. in.   |     |     |     |
| Vacuum Settings                    |                   | 0.6 oz/sq. in. through 2.9 oz/sq.in., Adjustable (1" w.c. - 5" w.c.) |        |        |                 |                 |     |     |     |
| Standard Materials of Construction |                   |  |        |        |                 |                 |     |     |     |
| Base                               | Aluminum          | Steel  |        |        | 316SS           |                 |     |     |     |
| Pallets                            | Aluminum          | Aluminum   |        |        | 316SS           |                 |     |     |     |
| Seat - Pressure                    | Aluminum          | Stainless Steel Inlay  |        |        | 316SS           |                 |     |     |     |
| Seat - Vacuum                      | Aluminum          | 316SS  |        |        | 316SS           |                 |     |     |     |
| Internal Diaphragm Clamp Ring      | Aluminum          | Steel  |        |        | 316SS           |                 |     |     |     |
| Load Weight(s)                     | Steel/Lead        | Steel/Lead   |        |        | Steel/Lead      |                 |     |     |     |
| Fastners                           | Zinc Plated Steel | Zinc Plated Steel  |        |        | 316SS           |                 |     |     |     |
| Cover / Hood                       | Steel / Aluminum  |  |        |        |                 |                 |     |     |     |
| Hinge Arm                          | Steel             | Steel  |        |        | Steel           |                 |     |     |     |
| Hinge Pin                          | Stainless Steel   | Stainless Steel  |        |        | Stainless Steel |                 |     |     |     |
| Diaphragm                          | FEP Teflon        | FEP Teflon   |        |        | FEP Teflon      |                 |     |     |     |
| Back-up Disc                       | N-8090            | N-8090   |        |        | N-8090          |                 |     |     |     |

\*Steel pallets are available. Alternate materials of construction available. Consult Factory

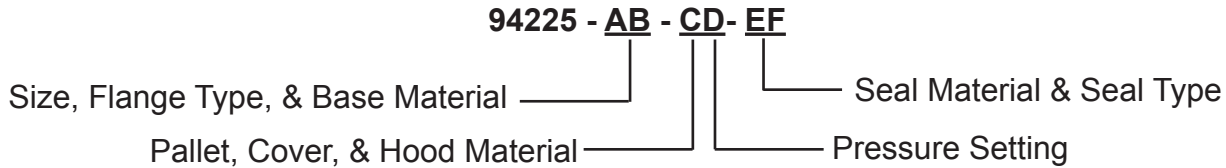
| Vent Size | Connection Matching size | "A"      | "C"    | Diameter "BC" | Diameter "OD" | Diameter "ID" | Diameter "H" | "N" Holes | "K"      |
|-----------|--------------------------|----------|--------|---------------|---------------|---------------|--------------|-----------|----------|
| 16"       | 16" ANSI Class 150       | 28 9/16  | 10     | 21 1/4        | 23 1/2        | 16            | 1 1/8        | 16        | 14       |
| 18"       | 18" ANSI Class 150       | 32       | 17     | 22 3/4        | 25            | 17 1/4        | 1 1/4        | 16        | 16       |
| 20"       | 20" API Roof Manhole     | 36 13/16 | 12 1/8 | 23 1/2        | 26            | 20            | 3/4          | 16        | 17 15/16 |
| 20"       | 20" ANSI Class 150       | 36 13/16 | 12 1/8 | 25            | 27 1/2        | 20            | 1 1/4        | 20        | 17 15/16 |
| 24"       | 24" API Roof Manhole     | 41 5/16  | 12 1/4 | 27 1/2        | 30            | 24            | 3/4          | 20        | 20 1/16  |
| 24"       | 24" ANSI Class 150       | 41 5/16  | 12 1/4 | 29 1/2        | 32            | 24            | 1 3/8        | 20        | 20 1/16  |



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

**MODEL NUMBER SELECTION:**

The model number will consist of a base number 94225 followed by six numbers which represent the options listed in the following tables.



**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 I (A) - SIZE & FLANGE TYPE**

| OPTION # | SIZE | FLANGE TYPE |
|----------|------|-------------|
| 1        | 16   | ANSI        |
| 2        | 18   | ANSI        |
| 3        | 20   | ANSI        |
| 4        | 20   | API         |
| 5        | 24   | ANSI        |
| 6        | 24   | API         |

**TABLE I (B) - BASE MATERIAL**

| OPTION # | MATERIAL |
|----------|----------|
| 1        | STEEL    |
| 2        | ALUMINUM |
| 3        | 316SS    |

**TABLE II (C) - PALLET, COVER, HOOD**

| OPTION # | DESCRIPTION                  |
|----------|------------------------------|
| 0        | Aluminum, Aluminum, Aluminum |
| 1        | Aluminum, Steel, Aluminum    |
| 2        | 316SS, Steel, Aluminum       |
| 3        | 316SS, Steel, 316SS          |
| 4        | 316SS, 316SS, 316SS          |

Note: Cover selection affects minimum pressure set point.  
Consult Factory.

**TABLE II (D) - PRESSURE SETTING**

| OPTION # | DESCRIPTION                    |
|----------|--------------------------------|
| 1        | Standard                       |
| 2        | Above Standard to 4 oz./sq.in. |
| 3        | 4 oz./sq.in. to 8 oz./sq.in.   |
| 4        | 8 oz./sq.in. to 12 oz./sq.in.  |

\* Consult Factory for settings greater or less than shown.

**TABLE III (E) - SEAL MATERIAL**

| OPTION # | DESCRIPTION        |
|----------|--------------------|
| 0        | FEP TEFLON / N8090 |
| 1        | BUNA-N / N8090     |

**TABLE III (F) SEAL TYPE**

| EXPANDA SEAL<br>OPTION # | STANDARD<br>OPTION # |
|--------------------------|----------------------|
| 1                        | 0                    |