



- Design incorporates pressure and vacuum relief
- 20" and 24" roof manhole
- "Self-energizing" Expanda-Seal diaphragm assures a tight seal
- Reduced maintenance costs
- No unbolting of vent for gasket replacement or tank examination

The Shand & Jurs Model 94221 Emergency Vent and Manhole Cover (Pressure & Vacuum)

The Shand & Jurs Model 94221 Emergency Vent and Manhole Cover provides emergency relief of excessive internal pressure and vacuum beyond that provided by tank breather requirements.

This weight loaded vent utilizes Expanda-Seal diaphragms which provide tight seals between pallets and seats. Special diaphragm materials are available for vents subjected to severe low temperatures or used on tanks storing heated stock. Corrosion resistant pressure/vacuum seat is standard.

Model 94221 is available in 20" and 24" size to fit a standard API or ANSI flange. Special Flanges are available including DIN.

The 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 a higher overpressure, the pallet completely clears the manhole and the efficiency approximates 75%. For a standard setting the capacity at 1.4 oz./sq. in. (40% overpressure) is approximately 500,000 SCFH for the 20" size.

Pallet construction permits settings from 1.0 oz./sq. in. for aluminum pallet & 1.3 oz./sq. in. for S.S. pallet standard to 8 oz./sq. in. maximum pressure. Vacuum settings are from 1.1 oz./sq. in. standard to 4.0 oz./sq. in. maximum. If specifying other than standard vacuum setting, it must be recognized that increased vacuum setting automatically increases the set point of pressure relief.

SPECIFICATIONS:

Type Vent: Normal Service, Low Temperature Service and Low Base for Liquid Overflow

Connection Size: 20" or 24" Flange

Standard Settings:

Pressure: 1.0 oz./sq. in. (1.75" W.C.) in Alum.
 1.3 oz./sq. in. in Stainless Steel
 Vacuum: 1.1 oz./sq. in. (1.9" W.C.)

Maximum Settings:

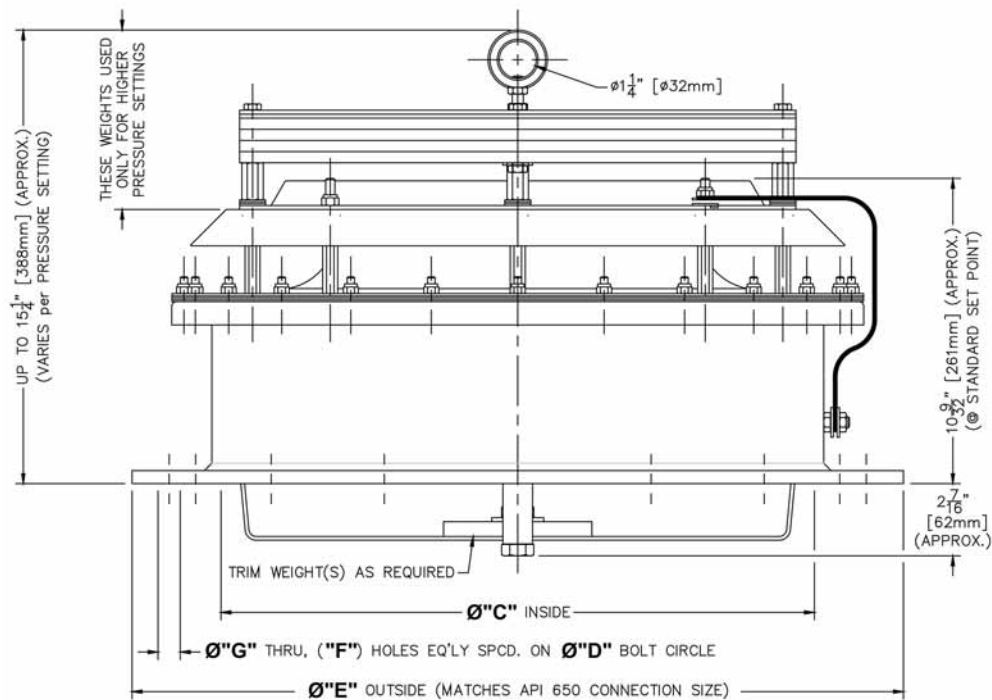
Pressure: 8 oz./sq. in.
 Vacuum: 4.0 oz./sq. in. (6.92" W.C.)

MATERIALS OF CONSTRUCTION*:

Base:	Vacuum Seat	Aluminum
Normal Service or Low Base	Vacuum Cover	Aluminum
Low Temperature	Vacuum Pallet	Aluminum
Pressure Seat:	Pallet Guide	Aluminum
Normal Service or Low Base	Pressure Pallet	Aluminum
Low Temperature	Pressure Diaphragm	FEP Teflon
Diaphragm Clamp Ring:	Vacuum Diaphragm	FEP Teflon
Normal Service or Low Base	Back-up Disk	N8090
Low Temperature	Vacuum Diaphragm Gasket	N8090
	Diaphragm Spacer	N8090

*Optional: All Steel, Stainless Steel and Other Materials Available.

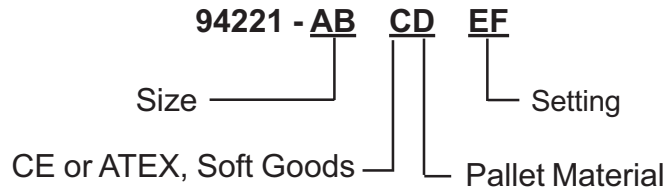
Vent Size	Connection Matching Size	Ø"C"	Ø"D" Bolt Circle	Ø"E"	"F" # Holes	Ø"G"
20"	20" 125#/150# ANSI	Ø20	Ø25	Ø27 1/2	20	Ø1 1/4
20"	24" 125#/150# ANSI	Ø20	Ø29 1/2	Ø32	20	Ø1 3/8
24"	24" 125#/150# ANSI	Ø24	Ø29 1/2	Ø32	20	Ø1 3/8
20"	20" API Roof Manhole	Ø20	Ø23 1/2	Ø26	16	Ø3/4
20"	24" API Roof Manhole	Ø20	Ø27 1/2	Ø30	20	Ø3/4
24"	24" API Roof Manhole	Ø24	Ø27 1/2	Ø30	20	Ø3/4



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

MODEL NUMBER SELECTION:

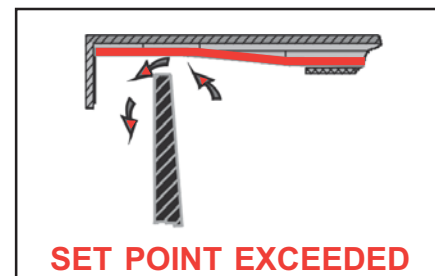
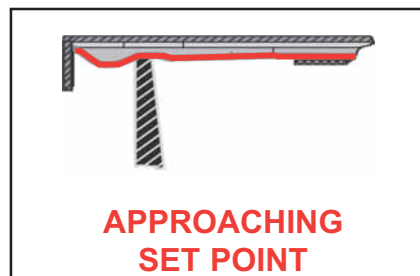
The model number will consist of a base number 94221 followed by 6 digits which represent the options listed in the following tables.



ORDERING INFORMATION

Specify:

1. Model 94221 Emergency Vent and Manhole Cover
2. Size Vent Required
3. Body Material & Style
4. Pressure Setting
5. Soft Goods
6. Pallet Material
7. CE for Ordinary EU Locations, specify Table C2 or C3
8. ATEX Certification for Group IIC, Group IIA EU Locations, specify Table C4 or C5



Shand & Jurs "Expanda-Seal" option is available on all pressure pallet assemblies. This feature, shown in blue, 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.

**TABLES I & II - (AB) BASE SIZE AND MATERIAL
- (D) PALLET MATERIAL**

OPTION AB API 650	OPTION AB ANSI FF	SIZE	MATERIAL & STYLE	OPTION D	PALLET MATERIAL
01	41	20"	STD. BASE STEEL	2	ALUM
01	41	20"	STD. BASE STEEL	3	SS 316
02	42	20"	STD. BASE ALUM	2	ALUM
02	42	20"	STD. BASE ALUM	3	SS 316
03	43	20"	STD. BASE STAINLESS	2	ALUM
03	43	20"	STD. BASE STAINLESS	3	SS 316
05	45	20"	LOW BASE STEEL	2	ALUM
05	45	20"	LOW BASE STEEL	3	SS 316
06	46	20" x 24"	STD. BASE STEEL	2	ALUM
06	46	20" x 24"	STD. BASE STEEL	3	SS 316
07	47	20" x 24"	STD. BASE ALUM	2	ALUM
07	47	20" x 24"	STD. BASE ALUM	3	SS 316
08	48	20" x 24"	STD. BASE STAINLESS	2	ALUM
08	48	20" x 24"	STD. BASE STAINLESS	3	SS 316
10	50	20" x 24"	LOW BASE STEEL	2	ALUM
10	50	20" x 24"	LOW BASE STEEL	3	SS 316
21	31	24"	STD. BASE STEEL	2	ALUM
21	31	24"	STD. BASE STEEL	3	SS 316
22	32	24"	STD. BASE ALUM	2	ALUM
22	32	24"	STD. BASE ALUM	3	SS 316
23	33	24"	STD. BASE STAINLESS	2	ALUM
23	33	24"	STD. BASE STAINLESS	3	SS 316
24	34	24"	LOW BASE STEEL	2	ALUM
24	34	24"	LOW BASE STEEL	3	SS 316

TABLE C - SOFT GOODS OPTION

Chart 1

OPTION C
0=FEP w/ N8090 Back up Disc & Spacer
1=ALL FEP
2=CE w/ FEP / N8090
3=CE / ALL FEP
4=ATEX w/ FEP / N8090
5=ATEX w/ ALL FEP

TABLE III - (EF) SETTINGS

OPTION # LEAD	OZ	OPTION # S.S.
01	Std.*	21
02	1.5	22
03	2	23
04	2.5	24
05	3	25
06	3.5	26
07	4	27
08	4.5	28
09	5	29
10	5.5	30
11	6	31
12	6.5	32
13	7	33
14	7.5	34
15	8	35

* 1 oz. (Al.) 1.3 oz (SS)