

94210

Emergency Vent & Manhole Cover (Hinged)

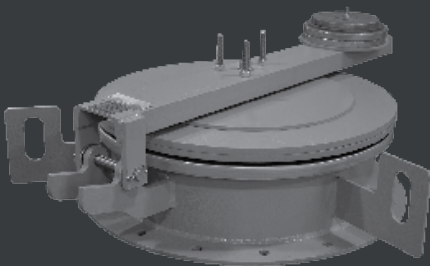
The Shand & Jurs® Model 94210 provides emergency pressure relief and rapid tank access in a single hinged assembly for atmospheric and low-pressure storage tanks. The device protects tanks from abnormal internal pressure while allowing immediate manual opening for inspection or cleaning without unbolting or replacing the gasket.

A flexible diaphragm seals the pallet against a corrosion-resistant seat below the set pressure, minimizing leakage. When pressure rises above the set point, the pallet lifts and flow capacity increases rapidly, reaching approximately 60% of a perfect orifice at 40% overpressure and approximately 75% at higher overpressure.

The hinged cover exposes the entire opening in seconds for rapid inspection access. After an overpressure event, the cover automatically reseats and reseals, unlike conventional emergency vents that remain open after actuation and require manual reinstallation.

Available in sizes "8", 10", 12", 16", 18", 20", 24", 30", 36" with ANSI 150 or API 650 mounting compatibility, the unit supports a wide range of intermediate pressure settings and optional Expanda-Seal diaphragm sealing.

The 94210 can also serve fire-case emergency venting requirements. For applications requiring the highest fire-case capacity, also see the 9420X lift-cover series.



Key Features

Flexible diaphragm pallet

Tight seal below set pressure, minimizing leakage.

Hinged full-opening cover

Immediate tank access without unbolting

Intermediate pressure settings

Wide range of adjustable relief setpoints

Rapid capacity increase

~60% perfect orifice at 40% overpressure

ANSI and API mounting

Fits standard roof maintenance holes

Expanda-Seal option

An expanding diaphragm improves sealing performance



Benefits



INTEGRATED MANWAY AND VENT

Eliminates the separate maintenance hole cover installation cost



ELIMINATED COVER GASKET REPLACEMENT

Hinged cover provides full tank access without breaking the flange gasket seal, reduces reinstallation time and gasket replacement costs compared to conventional bolt-on emergency vents



CONTROLLED INTERMEDIATE RELIEF

Prevents tank damage from routine pressure upsets



QUICK INSPECTION ACCESS

Shortens the outage duration and confined space preparation



REDUCED LEAKAGE SEALING

Expanda-Seal™ reduces evaporative losses, translating into thousands of dollars in annual product retention per tank, depending on volatility and operating conditions.



STANDARD ROOF COMPATIBILITY

Avoids tank modification during retrofit

Available Options



Aluminum, steel, or 316SS body

Matches corrosion and weight requirements



Expanda-Seal diaphragm

Improves shutoff performance



ANSI or API base

Fits tank maintenance hole standards



EN1092 sizes

Metric compatibility



Limit switch

Remote open indication



ATEX certification

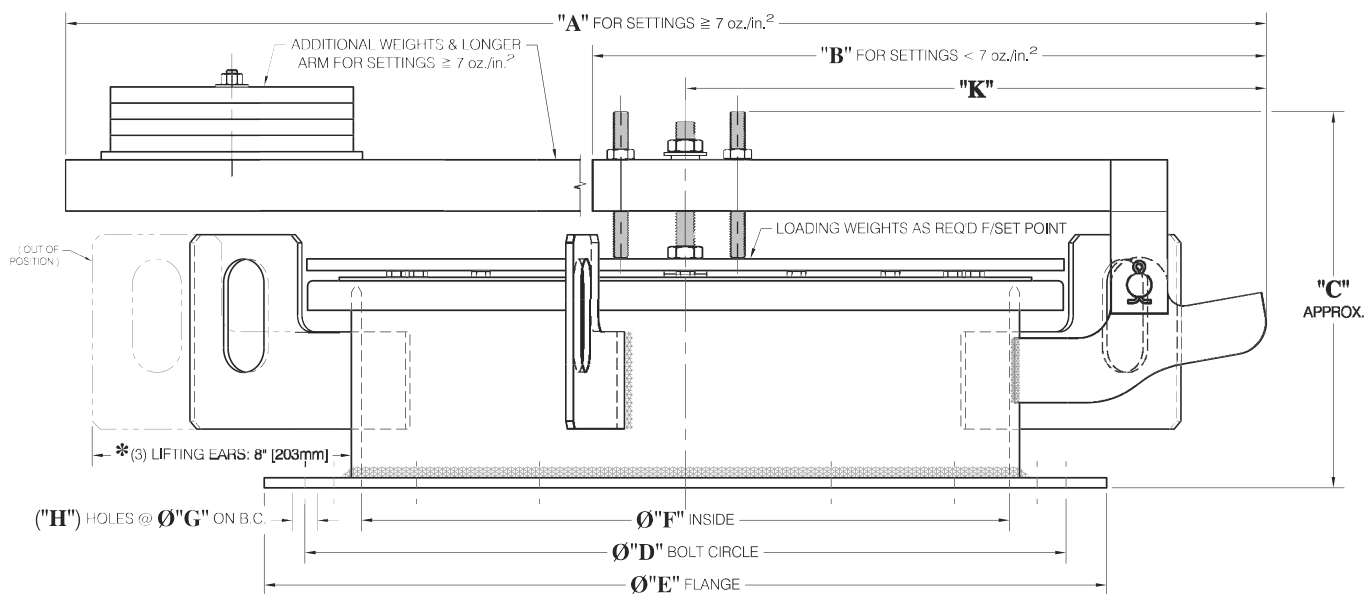
Hazardous area compliance



Key Performance Data

Parameter	Value
Sizes	8", 10", 12", 16", 18", 20", 24", 30", 36"
Set Pressure Range	Standard settings from 1.0 oz/in ² (8") to 1.5 oz/in ² (20"-24"). Maximum up to 20 oz/in ² (size-dependent). 30" and 36" consult factory. Expanda-Seal minimum 1.5 oz/in ² .
Leakage Performance	Standard pallet: ~1.0 SCFH at 90% of setpoint. Expanda-Seal™: <0.5 SCFH at 95% of setpoint.
Flow Efficiency	~60% @ 40% overpressure, ~75% higher
Mounting	ANSI Class 150 FF/RF. API 650 (20" and 24" only). EN1092 sizes available.
Materials	Body and Seat: Aluminum, Steel, or 316 Stainless Steel
Connections	ANSI Class 150 or EN PN10 / PN16
Materials	Body: Aluminum, Carbon Steel, 316 Stainless Steel Seats: Aluminum or 316 Stainless Steel Pallets: Aluminum or 316 Stainless Steel Diaphragm: FEP, FKM, PFA, NBR Fasteners & Trim: 316 Stainless steel

Dimensions



*(3) EARS SPACED APPROX. EQ'LY BETWEEN FASTENERS; NOT INCLUDED ON ALL SIZES.

Lifting Ears not available on 8", 10", and 16" sizes.



Vent Size	Connection Matching Size	"A"	"B"	"C"	Diameter "D"	Diameter "E"	Diameter "F"	Diameter "G"	"H"	"K"
8"	8" ANSI Class 150	18 13⁄16	9 13⁄16	9	11 3⁄4	13 1⁄2	8	7⁄8	8	8 1⁄16
10"	10" ANSI Class 150	20 13⁄16	11 13⁄16	10	14 1⁄4	16	10	1	12	10 1⁄16
12"	12" ANSI Class 150	24	13 1⁄2	10	17	19	12	1	12	12
16"	16" ANSI Class 150	28 9⁄16	16 1⁄2	10	21 1⁄4	23 1⁄2	16	1 1⁄8	16	14
18"	18" ANSI Class 150	37 1⁄16	20 13⁄16	12 1⁄8	22 3⁄4	25	18	1 1⁄4	16	17 15⁄16
20"	20" API Roof Man-hole	37 1⁄16	20 13⁄16	12 1⁄8	23 1⁄2	26	20	3⁄4	16	17 15⁄16
20"	20" ANSI Class 150	37 1⁄16	20 13⁄16	12 1⁄8	25	27 1⁄2	20	1 1⁄4	20	17 15⁄16
24"	24" API Roof Man-hole	41 5⁄16	22 13⁄16	12 1⁄4	27 1⁄2	30	24	3⁄4	20	20 1⁄16
24"	24" ANSI Class 150	41 5⁄16	22 13⁄16	12 1⁄4	29 1⁄2	32	24	1 3⁄8	20	20 1⁄16
30"	30" ANSI Class 150	50 1⁄8	26	18 1⁄4	36	38 3⁄4	30	1 3⁄8	28	23 3⁄4
36"	36" ANSI Class 150	71 7⁄16	31 3⁄16	13 3⁄4	42 3⁄4	46	36	1 5⁄8	32	27 9⁄16

Model Number Selection

The model number will consist of a base number 94210 followed by 6 digit numbers. These digits will represent 4 option tables.

94210 - AB - CD - EF

Ordering Information

Specify:

- 1. Model 94210 Emergency Vent / Manhole Cover
- 2. Size Required
- 3. Base and Cover Material
- 4. Pressure Setting
- 5. Tank Product and Temperature
- 5. ANSI or API Base
- 6. Seal Type Standard or Expanda-Seal
- 7. CE for Ordinary EU Locations specify Table E, Option 1
- 8. ATEX Certification for II 1 G Ex h II B T1...T6 Ga EU Locations, specify Table E, Option 2

Table A - Size (Mounting Flange & Pallet)

Table A	Description
01	8"
02	10"
03	12"
04	16"
05	18"
06	20"
07	24"
08	30"
09	36"
00	24×36"

Table B - Base Material, Flange Drilling

Table B	Base Material	Flange Drilling	Pallet Type
A	Steel	ANSI-FF	Standard
B	316SS		
C	Aluminum		
D	Steel	API-650**	
E	316SS		
F	Aluminum		
G	Steel	ANSI-RF	ExpandaSeal
H	316SS		
I	Steel	ANSI-FF	
J	316SS		
K	Aluminum		
L	Steel	API-650**	
M	316SS		
N	Aluminum		
O	Steel	ANSI-RF	
P	316SS		

** API Only Available in 20" & 24" Sizes



Table C - Size (Mounting Flange & Pallet)

Table C	Description
01	8"
02	10"
03	12"
04	16"
05	18"
06	20"
07	24"
08	30"
09	36"

Table E - Certification

Table E	Description
01	Standard
02	ATEX

Table D - Pallet Type & Set Point Range

Table D	Description
A	STD Set Point
B	STD to 4 oz/in2
C	4 oz/in2 to 8 oz/in2
D	8 oz/in2 to 12 oz/in2
E	Above 12 oz/in2

Table F - Options

Table F	Description
00	None

Summary

The Shand & Jurs® 94210 delivers emergency pressure relief and immediate manway access from a single hinged assembly, protecting atmospheric storage tanks and fixed digester covers during both routine and fire-case overpressure events. Its hinged cover reseats and reseals automatically after actuation—eliminating the reinstallation labor required by conventional emergency vents. Optional Expanda-Seal™ reduces vapor emissions during normal operation. Available in sizes from 8" to 36" with ANSI and API 650 mounting compatibility.

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This document is for information purposes only. All designs subject to change. Certified dimensions, specifications, and performance data available upon request