

94042 Spring Loaded Conservation Vent (Outlet=Inlet)

The Shand & Jurs Model 94042 Spring Loaded Conservation Vent is designed utilizing over 100 years of experience in producing high quality and dependable conservation vents and safety fittings. This vent meets the need of higher pressure settings required on storage tanks (ideally suited when blanketed with nitrogen or other inert gas), process vessels and piping common to the petroleum, chemical and petro-chemical industries.

Higher pressure settings are accommodated using a unique method of spring loading which ensures highly reliable operation and reduces excessive venting of product at a relatively low cost. Pressure settings range from 1 psig through 15 psig for all sizes except 12" which has a maximum of 12 psig. Vacuum protection is provided utilizing a weight loaded vertical lift pallet assembly that assures optimum air flow into tank.

The pallet to seat diaphragm is air-cushion seated FEP for long service life and optimum reliability. This diaphragm helps to ensure a high resistance to any ice and gum formations, prevents the pallet from sticking to the seat. The carefully engineered body, seat and pallet offers a superior combination of tight sealing and high capacity at lower over-pressure.

An Expanda-Seal is available on the pressure pallet to assure minimal leakage up to 95% of set pressure.

One of the most important features which should be noted in the Model 94042 design is the variety of construction materials available. A wide range of highly corrosive and toxic products common to the petroleum, petro-chemical and chemical industries, require that a conservation vent be able to withstand this environment and still function reliably. For few instances where our standard materials may not be suitable, optional materials are readily available.

Standard materials offered are aluminum, steel and 316 stainless steel. Standard seats are aluminum or 316 stainless steel.



Features

- Guided pressure pallet assures smooth lift and closure
- Unique diaphragm construction assures positive seal and minimal blowdown
- Easy inspection of internal components
- Withstands variety of materials including highly corrosive and toxic products
- Pallet lip design contributes to high flow characteristics

94042**Spring Loaded Conservation Vent (Outlet=Inlet)****SHAND&JURS****Specifications:****Sizes:**

2"x 2", 3"x 3", 4"x 4", 6"x 6", 8"x 8", 10"x 10", 12"x 12"

Pressure:

Minimum 1 psig

Vacuum:2 oz/in² (3.46 in. w.c.)**Maximum Pressure Setting*:**

2"-10" - 15 psig; 12" - 12 psig

***Max. Standard Vacuum Setting (oz/in²):**

Size	Lead Weights	Stainless Steel Weights
2"	7.5 oz.	6 oz.
3"	9 oz.	7.5 oz.
4"	10.5 oz.	7.5 oz.
6"	12 oz.	7.5 oz.
8"	13.5 oz.	9 oz.
10"	16.5 oz.	12 oz.
12"	21 oz.	15 oz.

Higher settings may be available. Consult Factory.

Temperature Range:

Process Temperature ranges for body material:

-65°F to 250°F (Aluminum)

-65°F to 350°F (316 Stainless Steel)

-20°F to 350°F (Carbon Steel)

Type of Flange Connection:

Flanged all sizes

Raised Face flange available, except for aluminum body material. Flange connection matches vent size 150 lb. ANSI compatible.

Diaphragm:

FEP (Fluorinated Ethylene Propylene), FKM (Fluoroelastomer), NBR (Nitrile-Butadiene), PFA (Fluoroplastic Film)

Temperature Limits

Diaphragm Material	Temperature Range
FEP	-65°F to 400°F
FKM	-15°F to 400°F
NBR	-40°F to 250°F
PFA	-65°F to 500°F

Material of Construction:**Normal:**

Low Copper Cast Aluminum, Carbon

Severe:

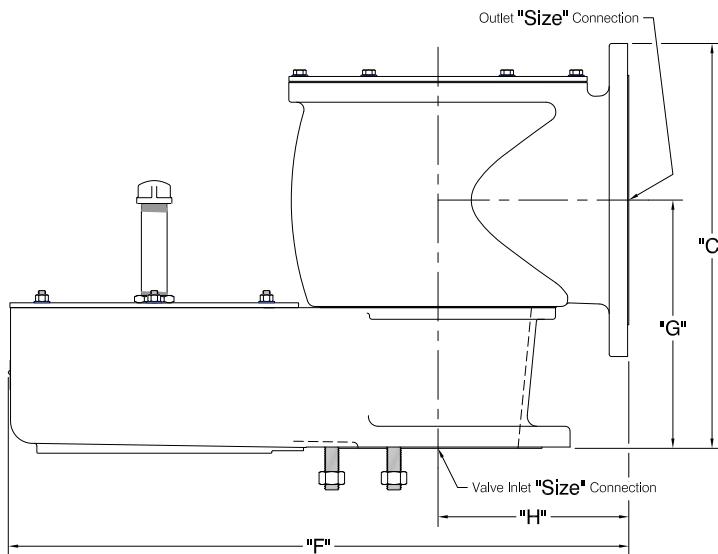
Steel, 316 Stainless Steel

Pressure Seat:

Aluminum or 316 Stainless Steel

Vacuum Integral Seat:

Aluminum, 316, Stainless Steel or Carbon Steel with 316 SS overlay

Dimensions:

Vent Size	Outlet Size	"F"	"C"	"G"	"H"
2"	2"	13	8	5	4 1/4
3"	3"	15 3/8	9 7/8	6 1/8	4 1/4
4"	4"	18 3/4	11 3/4	7 1/4	5 1/4
6"	6"	23 3/16	14 3/8	8 7/8	5 15/16
8"	8"	30 3/8	18 15/16	12 3/16	8 1/4
10"	10"	36 1/4	22 5/8	14 5/8	11 1/16
12"	12"	42 3/16	26 3/16	16 11/16	12 13/16

Tolerances: $\pm \frac{1}{16}$

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

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94042 Ordering Guide

Model Number Selection

The model number will consist of a base number **94042** followed by 5 digit numbers. These digits will represent 5 sets of option tables.

94042 - AB - CD - EF - GH

Ordering Information

Specify:

1. Model 94042 Spring Loaded Conservation Vent
2. Size
3. Pressure and Vacuum Setting
4. Temperature Range
5. Type of Service and Body Material
6. Type of Flange Connection
7. ATEX Certification for II 1 G Ex h II B T1...T6 Ga EU Locations

**Table A - Size (Body & Flange)**

Option A/C/E	Description
2	2" x 2"
3	3" x 3"
4	4" x 4"
6	6" x 6"
8	8" x 8"
0	10" x 10"
1	12" x 12"

Table B - Body (Casting) Material & Flange Type

Option B	Body Material	Flange Type
A	Aluminum I-ST	ANSI-FF 150#
B	Cast Steel I-ST	ANSI-FF 150#
C	Cast Steel I-ST	ANSI-FF 150#
D	316SS I-ST	ANSI-FF 150#
E	316SS I-ST	ANSI-FF 150#
F	Aluminum I-ST	EN1092-1 PN16 FF
G	Cast Steel I-ST	EN1092-1 PN16 FF
H	Cast Steel I-ST	EN1092-1 PN16 FF
I	316SS I-ST	EN1092-1 PN16 FF
J	316SS I-ST	EN1092-1 PN16 FF

Table C/E - Size (Size of Pallets)

Option C/E	Description
2	2"
3	3"
4	4"
6	6"
8	8"
0	10"
1	12"

Table D - Pallet Type & Material

Option D	Description
A	Standard Aluminum
B	Standard 316SS
C	Expanda Seal Aluminum
D	Expanda Seal 316SS

Table F - Spring Ranges

Option F	Description
A	1.0 PSIG - 2.0 PSIG
B	2.1 PSIG - 3.0 PSIG
C	3.1 PSIG - 4.0 PSIG
D	4.1 PSIG - 5.0 PSIG
E	5.1 PSIG - 6.0 PSIG
F	6.1 PSIG - 7.0 PSIG
G	7.1 PSIG - 8.0 PSIG
H	8.1 PSIG - 9.0 PSIG
I	9.1 PSIG - 10.0 PSIG
J	10.1 PSIG - 11.0 PSIG
K	11.1 PSIG - 12.0 PSIG
L	12.1 PSIG - 13.0 PSIG
M	13.1 PSIG - 14.0 PSIG
N	14.1 PSIG - 15.0 PSIG

Table GH - Options

Option GH	Description
10	None
20	ATEX*

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