

94040 Spring Loaded Conservation Vent

The Shand & Jurs Model 94040 Spring Loaded Conservation Vent is designed utilizing over 80 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.

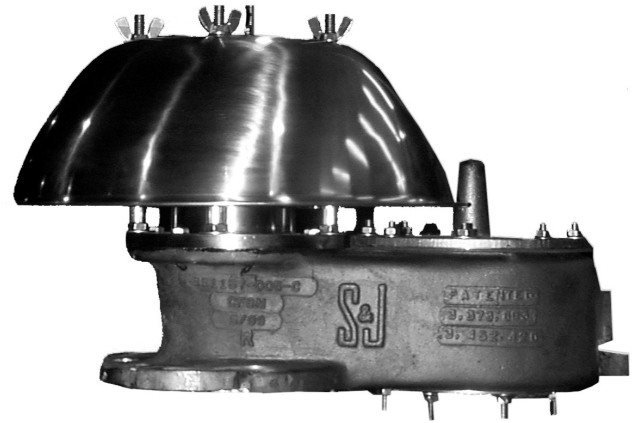
Higher pressure settings are accommodated using a unique method of spring loading which ensures highly reliable operation and reduces excessive venting of product at a relatively low cost. Pressure settings range from 1 psig through 15 psig for all sizes except 12" which has a maximum of 12 psig. Screw and flange type connections are offered for the 2" and 3" size and flange only for sizes 4" to 12". 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 94040 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, iron, steel and 316 stainless steel. Standard seats are aluminum or 316 stainless steel.



Features

- Low copper aluminum alloy minimizes special materials needs
- 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

Specifications:

Sizes:

2", 3", 4", 6", 8", 10" & 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)

-20°F to 325°F (Iron)

Type of Flange Connection:

Screwed or flanged for 2" & 3" sizes

Flanged for 4", 6", 8", 10" & 12" 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)

Service and Body Material:

Normal:

Low Copper Cast Aluminum

Severe:

Steel, Cast Iron, 316 Stainless Steel

Pressure Seat:

Aluminum or 316 Stainless Steel

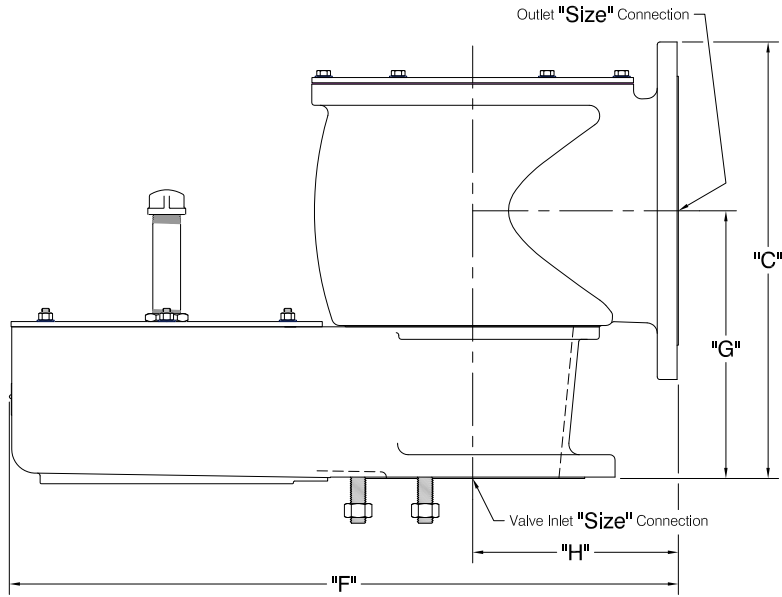
Vacuum Integral Seat:

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

Hood (Open Vent):

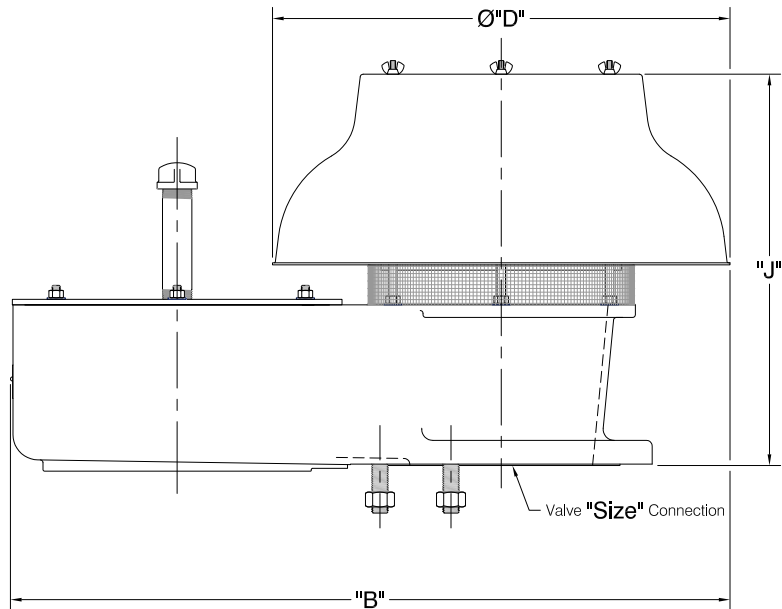
Stainless Steel, Aluminum, 316 Stainless Steel

Dimensions:



Vent Size	Outlet Size	"F"	"C"	"G"	"H"
2"	2"	13	8	5	4 1/4
2"	3"	13	10 3/8	5	4 1/4
3"	3"	15 3/8	9 7/8	6 1/8	4 1/4
3"	4"	16 3/16	12 1/8	5 15/16	5 1/4
4"	4"	18 3/4	11 3/4	7 1/4	5 1/4
4"	6"	19 1/4	14 1/8	7	5 15/16
6"	6"	23 3/16	14 3/8	8 7/8	5 15/16
6"	8"	26 1/8	17 1/4	10 5/16	8 1/4
8"	8"	30 3/8	18 15/16	12 3/16	8 1/4
8"	10"	31 7/8	20 7/8	12 11/16	9 3/4
10"	10"	36 1/4	22 5/8	14 5/8	11 9/16
10"	12"	38 1/8	24 5/8	14 7/8	11 9/16
12"	12"	42 3/16	26 3/16	16 11/16	12 13/16
12"	14"	43 3/8	27 5/8	16 7/8	12 13/16

Tolerances: $\pm 1/16$



Vent Size	"B"	"J"	Diameter "D"
2"	15 1/4	10 3/4	12 7/8
3"	17 15/16	11 9/16	13 9/16
4"	21 1/2	13 5/8	15 15/16
6"	26	14 7/8	18 5/8
8"	29 25/32	16 3/4	18 5/8
10"	37 7/16	18 1/2	25 9/16
12"	43 15/16	21 1/8	29 7/8

Tolerances: $\pm 1/16$

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

94040 Ordering Guide

Model Number Selection

The model number will consist of a base number **94040** followed by 8 digit numbers. These digits will represent 4 sets of option tables.

94040 - AB - CD - EF - GH

Ordering Information

Specify:

1. Model 94040 Spring Loaded Conservation Vent
2. Size
3. Pressure and Vacuum Setting
4. Type of Seat
5. Temperature Range
6. Type of Service and Body Material
7. Type of Flange Connection
8. Seal Type
9. To Specify CE for Ordinary EU Locations use Table G2
10. ATEX Certification for Group IIB, IIA EU Locations use Table G

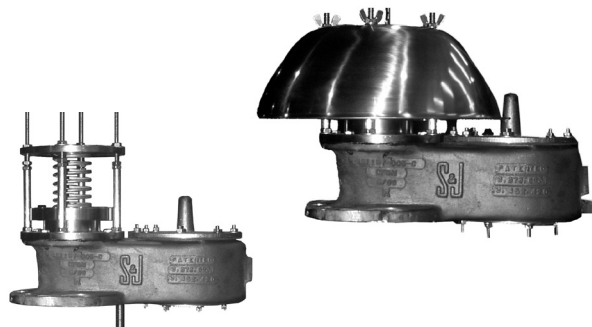


Table CD - Pressure Setting Ranges (PSIG)

Option CD	Range From	Range To
01	1.0	2.0
02	2.1	3.0
03	3.1	4.0
04	4.1	5.0
05	5.1	6.0
06	6.1	7.0
07	7.1	8.0
08	8.1	9.0
09	9.1	10.0
10	10.1	11.0
11	11.1	12.0
12	12.1	13.0
13	13.1	14.0
14	14.1	15.0

ATEX and CE Models are Limited to Options 01-06.
12" Size Maximum Set Point 12 PSIG

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

Table EF - Flange Type & Seal Material

Option EF	Description
0X	ANSI 125/150lb. FF
1X	ANSI 125/150lb. RF*
2X	EN1092-1 PN 16 FF
3X	EN1092-1 PN 16 RF*
4X	JIS 10K FF
5X	JIS 10K RF*
X0	FEP
X1	PFA
X2	NBR
X3	FKM

* RF Not Available in Aluminum

Note: Raised faced flanges with smooth finish are standard. For optional serrated raised faced flanges, consult factory.

Table GH - Seal Type & Trim

Option GH	Description
00	Standard / SS
01	Expand-Seal / SS
*10	ATEX Certified / 316 SS
*11	ATEX Certified Expand-Seal / 316 SS
20	CE Standard Seal / SS
21	CE Expand-Seal / SS
**30	Standard / 316 SS
**31	Expand-Seal / 316 SS

* Pallet, Side Guides, Nuts, Bolts, Screen and Spring are 316 Stainless Steel (ATEX Only - Max. Set Pressure 7 PSIG).

**Pallet, Side Guides, Nuts, Bolts, Screen and Spring are 316 SS

Table AB - Size, Material, Configuration & Flange

Option A	Materials: Body, Trim	Vent Type	CV Type
1	Aluminum, SS	Open, FF	-
2	Aluminum, SS	Closed, FF	Outlet > Inlet
3	Cast Iron, SS	Open, FF	-
4	Cast Iron, SS	Closed, FF	Outlet > Inlet
5	Cast Iron, SS	Closed, RF	Outlet > Inlet
6	Steel, SS	Closed, FF	Outlet > Inlet
7	Steel, SS	Closed, RF	Outlet > Inlet
8	316 SS, 316 SS	Closed, FF	Outlet > Inlet
9	316 SS, 316 SS	Closed, RF	Outlet > Inlet
A	Cast Iron, SS	Open, RF	-
B	Steel, SS	Open, FF	-
C	Steel, SS	Open, RF	-
D	316 SS, 316 SS	Open, FF	-
E	316 SS, 316 SS	Open, RF	-
F	Aluminum, SS	Closed, FF	Outlet = Inlet
G	Cast Iron, SS	Closed, FF	Outlet = Inlet
H	Cast Iron, SS	Closed, RF	Outlet = Inlet
I	Steel, SS	Closed, FF	Outlet = Inlet
J	Steel, SS	Closed, RF	Outlet = Inlet
K	316 SS, 316 SS	Closed, FF	Outlet = Inlet
L	316 SS, 316 SS	Closed, RF	Outlet = Inlet

Trim includes: Stem, Stem Guide, Side Guides, Nuts, Bolts, Screen.

SS - Stainless Steel

302 SS Spring as Standard (Other material available depending on set point 316 SS (lower SP) or 17-7PH (higher SP)).

Option B	Size
2	2"
4	3"
5	4"
6	6"
7	8"
8	10"
9	12"