



- Operating pressure between 3" w.c. to 15 psig
- Valve sizes 2" x 3", 3" x 4", 4" x 6", 6" x 8", 8" x 10" and 10" x 12".
- Adjustment of the valve can be made externally
- Seat is Bubble tight to set pressure
- Snap action or modulating mode
- Fully open at set pressure in snap action mode
- Minimize VOC's and odor emissions

The Shand & Jurs Model 94640 Pilot Operated Relief Valve (Diaphragm Pilot)

The Shand & Jurs Pilot Operated Relief Valve is designed to meet very specific pressure needs. The high accuracy of the valve allows the pressure to be set between 3" of water column pressure and 15 psig using sensitive springs for discrete ranges. The valve operates as follows.

As the internal pressure reaches the valves set point, the upward force on the sensing diaphragm overcomes the downward spring force. This causes the pilot seat to slightly lift, resulting in a small release of flow and marginal pressure relief. This enables the large diaphragm cavity to create a large, upward force which fully opens the pilot seat. This causes a large pressure reduction on the upper side of the main valve diaphragm which results in a full lift of the main valve seat. When the pressure reduces to the point its resulting upward force is less than the spring force, the pilot seat begins to close. This, in turn, builds up pressure on the upper side of the main valve diaphragm which closes the main valve seat. The pressures are again returned to their normal operating levels.

The valve's set point and blowdown can both be adjusted externally. The blowdown adjustment allows the valve to be operated in a snap action mode or a modulating mode. The snap action mode provides full opening at set point while the modulating mode provides a proportional opening with respect to over pressure.

APPLICATION

Meeting emissions standards for process and storage tanks requiring pressure relief

Hot hydrocarbon vapors or liquids, corrosive liquids, gas, cryogenics

Tanker ships, vessels, petroleum, chemical, oil, gas, marine, environmental plants, sanitary and cryogenic industries. Tank applications operating very close to set pressure

Low pressure safety-relief valve for vessel applications, from general product tank storage to transportation vessels.

SPECIFICATIONS:

Pressure Setting: 3.0" w.c. psig to 15 psig available in discrete ranges

Standard Blowdown:.... 5% - 20% (adjustable)

Temperature Range: Body and Seal
Options for Process Temperature Ranges of -300°F to 400°F. Consult Factory

Body Construction:Aluminum, Steel, or Stainless Steel

* Diaphragm & Seat Seal:....FEP TEFLON (STD.)

Flange Connection:.....150 lb ANSI

Vacuum:.....See Model 94645

Options: Field test connection, vacuum preventer, backflow preventer and sense line filter available upon request.

*Other Materials available (specify temperature range & product)

FLOW CAPACITIES

(SCFM @ 60°F and 10 % Over Pressure)

Inlet Size Set Pressure	2"	3"	4"	6"	8"	10"
3" w.c.	86	193	328	734	1363	1910
5" w.c.	110	250	420	930	1680	2460
10" w.c.	150	350	590	1320	2390	3460
15" w.c.	190	430	730	1620	2940	4230
1 psig	260	580	980	2200	4020	5750
5 psig	600	1360	2300	5150	9500	13430
10 psig	900	2040	3460	7740	14080	20180
15 psig	1170	2640	4480	10020	18760	25870

VALVE SIZE

VALVE SIZE	APPROXIMATE DIMENSIONS IN INCHES			
	A	B	C	WEIGHT(AI.)
2" x 3"	3.75	5.0	21.0	24 lbs.
3" x 4"	4.5	5.8	22.5	28 lbs.
4" x 6"	5.5	7.0	25.0	38 lbs.
6" x 8"	6.75	9.3	28.0	63 lbs.
8" x 10"	8.0	11.0	30.0	90 lbs
10" x 12"	9.5	12.5	33.0	123 lbs

*Vacuum Operation: This relief valve may operate under vacuum conditions, unless the vacuum preventer option is selected. The 94640 may be mounted on top of a specially configured 94110 vacuum relief valve where precise vacuum control is desired. Consult Factory for specific vacuum setting requirements.



