

# Pilot Operated Relief Valve Model 94640 (Diaphragm Pilot)

The 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 50 and 1030 mbar using sensitive springs for discrete ranges. The valve operates as follows.

As the internal pressure reaches the valve's setpoint, 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.

- 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.

## Features and Benefits

- Operating pressure between 50 to 1030 mbar
- 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
- Fully open at 10% above set pressure
- Minimize VOC's and odor emissions

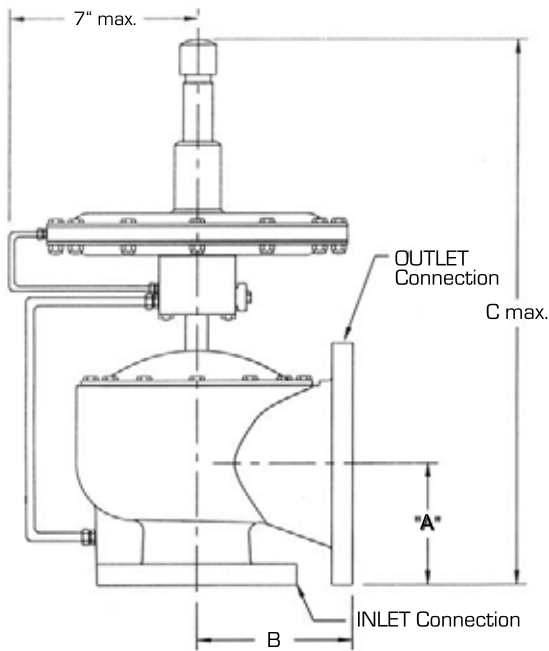
## Pilot Operated Relief Valve Setting Range

Model Numbers	Sizes Available	Connections	Pressure	Blowdown
Model 94640	2", 3", 4", 6", 8", 10" and 12"	ANSI 150 lb.	50 to 1030 mbar	5% - 20% adjustable

## Materials of Construction

Body material	Diaphragm	Seat Seal
Aluminum Steel Stainless Steel	FEP Teflon Std.	FEP Teflon Std.

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## DIMENSIONS

Valve Size	A	B	F	Weight
2" x 3"	86	127	533	10,9 Kg
3" x 4"	114	147	572	12,7 Kg
4" x 6"	140	178	635	17,2 Kg
6" x 8"	171	236	711	28,6 Kg
8" x 10"	203	297	762	40,8 Kg
10" x 12"	241	318	838	55,8 Kg

Dimensions in mm. Certified dimensions and specifications available upon request

## Key to Pilot Operated Relief Valve Model Number

94640	—	□	—	□		□	/	□		□
		Connection Size		Body Material		Seal Material		Pressure Settings in mbar		Certification
		1. 2 x 3		1. Alu FF		1. Teflon				0. Standard
		2. 3 x 4		2. CS FF		2. Viton				1. CE
		3. 4 x 6		3. CS RF		3. Buna-N				2. ATEX
		4. 6 x 8		4. SS FF						Certificated
		5. 8 x 10		5. SS RF						
		6. 7 x 12								

Example:

94640 — 2 — 1 2 / 105 2

Indicates a Pilot Operated Relief Valve with 3 x 4", ANSI 150 lb Faced Flange. Body material is Aluminum, sealed with Viton, Pressure Setting of 76 mbar and is ATEX Certified.