



## High Performance Pressure Vacuum Relief Valve Spring Loaded, Model 960

**The Model 960 Spring Loaded Pressure Relief Valves** are designed to handle higher pressure settings than standard dead weight loaded valves. Enardo's spring loaded line are designed for pressures up to 15 psig for tanks with higher maximum allowable working pressures.

The model 960 is part of Enardo's line of high performance pressure vacuum relief valves. The model 960 was designed with features to exceed the performance of standard valves on the market. Standard features include:

- The only dual guided (top and bottom) pallet for smoother valve stroke, less flutter and valve wear,
- Polyphenylene Sulfide (PPS), advanced composite thermoplastic material for seat and pallet providing superior resistance to corrosion, chemical attack, liquid and vapor adhesion, temperature extremes (-50° F to 500° F) and sticking due to valve seat freeze.
- Fully field replaceable pallet and seat assemblies without need for special tools or complex procedures which eliminates the need to send out for rebuilding or total valve replacement. (Can be maintained by in house maintenance personnel)



The model 960 vent to atmosphere design maintains a tight seal until system pressure or vacuum exceed the set pressure of the valve. When overpressure occurs the spring loaded pallet lifts, breaking the seal between the seat and pallet, allowing vapors to pass through the valve orifice and relieving the pressure or vacuum buildup. The valve reseals upon relief and remains sealed.

### Features and Benefits

- Advanced composite thermoplastic (PPS) materials for seat and trim provide superior resistance to corrosion, chemical attack, liquid and vapor adhesion, temperature extremes (-50° F to 500° F) and sticking due to valve seat freeze.
- Patented Saber Guide (U.S. Patent No. 591330) valve system provides for smooth valve stroke during operation and reduces valve wear.
- Exceeds the most stringent standards for allowable leakage (1 scfh @ 90% set point per valve) and provides excellent set point accuracy (+/-3%).
- Fully field replaceable pallet and seat assemblies.
- Available in ANSI, DIN and JIS flanges.

### Valve Setting Range

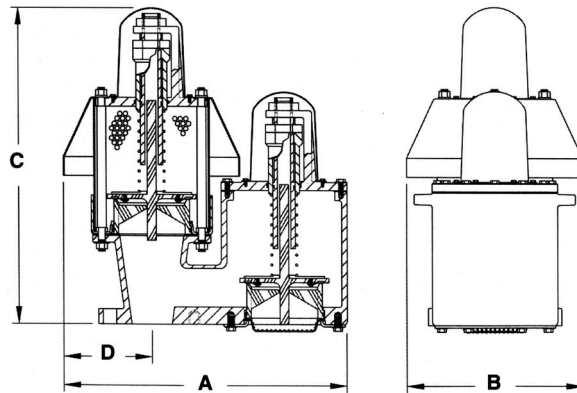
Model	Sizes Available	Pressure	Vacuum
Model 960	2" (50 mm) through 6" (150 mm)	0.5 to 15.0 psi (0.5 psi Increments) 0.5 to 32.0 oz/sq. in. (0.5 oz Increments) 1.0 to 55.0 inH <sub>2</sub> O (0.5 in. Increments) (2.0 to 1034.0 mbar)	0.5 to 15.0 psi (0.5 psi Increments) 0.5 to 32.0 oz/sq. in. (0.5 oz Increments) 1.0 to 55.0 inH <sub>2</sub> O (0.5 in. Increments) (2.0 to 1034.0 mbar)

### Materials of Construction

Housing	Seat / Pallet	Pallet Seal	Hardware	Weights	Gaskets
Aluminum Stainless Steel Carbon Steel	PPS 316 S.S. (standard above 5 psi)	Buna-N FEP Teflon Viton	Zinc Plated C.S. Stainless Steel	Zinc Plated C.S. Stainless Steel Lead	Buna-N Teflon Viton



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**Model 960 Dimensions and Weights**

Model	Inlet onn. In. (mm)	A Overall Length In. (mm)	B Overall Width In. (mm)	C Overall Height In. (mm)	D CL Inlet In. (mm)	Aluminum Unit Lb. (kg)	Carbon Steel Unit Lb. (kg)	Stainless Steel Unit Lb. (kg)
960	2 (50)	16 (406)	10 (254)	19-3/4 (502)	5 (127)	21 (10)	50 (23)	54 (24)
960	3 (80)	16 (406)	10 (254)	20-1/8 (511)	5 (127)	23 (10)	54 (24)	58 (26)
960	4 (100)	22-1/2 (572)	14 (356)	25-1/2 (648)	7 (178)	41 (19)	102 (46)	110 (50)
960	6 (150)	22-3/4 (578)	14 (356)	27-5/16 (694)	7 (178)	45 (20)	114 (52)	123 (56)

Unit weights indicate Net Weight of valve in pounds at standard set pressure (10.5 oz/sq.in. pressure and 0.5 oz/sq.in. vacuum), does not include shipping crate or box. Add 20% for gross shipping weight (Domestic Only).

**Key to Enardo Pressure/Vacuum Relief Valve Model Number**

**960** —  —  —  —  —   /   —

<b>Inlet Connection Size</b> (2" thru 6")	<b>Housing Material</b> 1. Aluminum 4. Stainless Steel 5. Carbon Steel	<b>Pallet &amp; Seat Ring Material</b> 1. Advanced Composite (PPS) 2. 316 Stainless Steel 3. Other	<b>Pallet Seal Material</b> 1. FEP Teflon 2. Buna-N 3. Viton 4. Other	<b>Pressure Settings</b> p - psig z - oz/sq.in. n - inH <sub>2</sub> O  0.5 psi to 15 psi (0.5 psi increments)  0.5 oz/sq.in. to 32 oz/sq.in. (0.5 oz/sq.in. increments)  1.0 inH <sub>2</sub> O to 55 inH <sub>2</sub> O (0.5 inH <sub>2</sub> O increments)	<b>Vacuum Settings</b> p - psig z - oz/sq.in. n - inH <sub>2</sub> O  0.5 psi to 15 psi (0.5 psi increments)  0.5 oz/sq.in. to 32 oz/sq.in. (0.5 oz/sq.in. increments)  1.0 inH <sub>2</sub> O to 55 inH <sub>2</sub> O (0.5 inH <sub>2</sub> O increments)	<b>Options</b> O. No Options A. Special Coating B. S.S. Weights C. Optional Weight Material D. Optional Hardware E. Optional Gasket Material F. Opt. FRP Resins G. Steam Jacket or Trace H. Other
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**Example:**

**960** —  —  —  —  —   /   —

Indicates a Vent-to-Atmosphere pressure vacuum relief valve with 4" inlet, ANSI 150 lb. flat face flange pattern connections, aluminum housing, advanced composite PPS pallet & seat ring and Buna-N pallet seal. Pressure setting is 4 psi and vacuum setting is 6 inH<sub>2</sub>O.