

# COMPACT & ECONOMICAL PTFE BELLOWS THERMOPLASTIC SOLENOID VALVE

## SERIES EAST



### FEATURES:

For applications requiring a compact, cost-effective and high-pressure rated valve with extended cycle life.

- **Compact Size:** Only 4-9/16" high, these valves are ideal for limited space installations.
- **Economical:** Low unit cost coupled with high pressure ratings and considerable flow rates (Cv of 0.5 or 0.8) offer excellent opportunities for systems requiring quick opening/quick closing solenoid valves.
- **High Pressures:** Particularly for applications where high back-pressures (up to 70 PSI) are required e.g. controlling flow to spray nozzles, high pressure chemical injections, etc. Inlet pressure to 140 PSI.
- **Unique Design:** PTFE Bellows barrier type dynamic seal prevents leaking of fugitive emissions to the atmosphere.
- **Versatility:** Can be used with all type solutions. Includes acids, caustics, solvents, chlorine solutions and ultra-pure liquids. For pressure, drain or vacuum service.

- **Superior Performance:** 2,000,000 cycle design.
- **Energy Efficient:** Molded 11 watt NEMA 4X style coil with DIN standard connector results in low energy consumption.
- **Sizes:** 1/4" and 1/2" pipe sizes with 3/16" (4.8 mm) or 1/4" (6.4 mm) orifice.
- **Corrosion Resistant:** Rugged thermoplastic construction is resistant to both internal and atmospheric corrosion. No metal parts in wetted areas.
- **Safety/Dependability:** Patented Fail-Dry® safety design feature provides advance visual warning if seal malfunctions, while permitting valves to continue operating until maintenance can be scheduled.
- **Coil Connector Light:** Can be ordered with this optional feature, which lights up brightly to show when the solenoid is energized.
- **Material Construction:** *Bodies:* PTFE Bellows solenoid valve bodies are available in PVC, Polypropylene, and PVDF (Kynar®). *Seals:* Standard seal material for all Bellows solenoid valves is a special treated Viton®, so that a single valve can handle virtually all types of solutions. Multi-purpose capability results in significant convenience and cost-efficiency. EPDM also available.



### DESIGN AND OPERATION:

Valves are spring return normally closed and direct acting with a simple push-pull plunger design. There is no minimum pressure required for operation. The PTFE bellows shaft seal eliminates the need for an elastomer seal which can weaken as a result of chemical attack. The PTFE bellows assures non sticking operation and exceptionally long cycle life. The bellows design also allows a stock valve to be used for vacuum or pressure. The poppet seat ensures bubble tight shutoff.

### PRESSURE RATING CONSIDERATIONS:

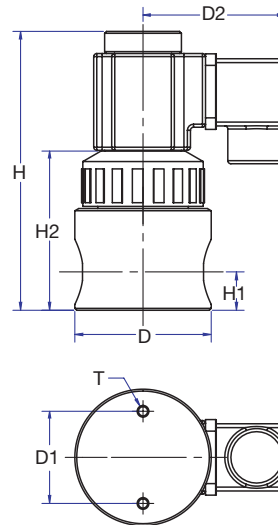
**Inlet Pressure:** Inlet pressure rating in the tables below are at full rated line voltage for alternating current (A.C.). If line voltage is 10% lower, inlet pressure rating will be about 30% lower. If rated pressures are exceeded the valve will not open and the coil will burn out.

**Outlet (Back) Pressure:** An important consideration in solenoid valve selection is back pressure rating (max. outlet) shown in the spec table. Back pressure is caused by the resistance to flow in the piping downstream of the valve and is the most common source of solenoid valve problems during start up. Nozzles, goosenecks, fittings, tubing, or reduced outlet piping all create restrictions that raise the back pressure so these sources must be considered in planning a piping system. Although the EAST valve is capable of handling high back pressures, values shown in the spec table should not be exceeded.

### W11 COIL:

This continuous duty NEMA 4X style coil is water and dust tight, and is suited for corrosive atmospheres compatible with polyester. Most coils CSA certified.

Insulation Class: F
Coil Surface Temperature: 185°F (85°C)
Max. Allowable Ambient Temperature: 104°F (40°C)
VA Inrush: 66                      VA Holding: 24



### DIMENSIONS:

Pipe Size	H		H1		H2		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
1/4 & 1/2	4.50	114.3	0.63	16.0	2.59	65.8	1 5/8	41.3	1 5/16	58.7

Pipe Size	D		D1		D2		T
	In.	mm	In.	mm	In.	mm	THREAD SIZE
1/4 & 1/2	2.20	55.9	1.50	38.1	2.3	58.4	#10-24

### SPECIFICATIONS:

Pipe Size	Orifice Size		Watts	C <sub>v</sub>	Max. Inlet PSI / Bar	Max. Outlet PSI / Bar
	In.	mm				
1/4" & 1/2"	3/16	4.8	11	0.5	140 / 9.5	70 / 4.8
1/4"	1/4	6.4	11	0.8	70 / 4.8	60 / 4.1

### NOTES:

- Valves are rated for full vacuum of 30" of mercury (Hg).
- Standard voltages are 110/50, 220/50, 120/60, 230/50, 240/60 AC and 24 VDC (DC coil not recommended with 1/4" orifice). For other voltages, minimum quantities required.

### PART NUMBERS:

<b>EAST</b>	<b>2</b>	<b>V</b>	<b>8</b>	<b>W11</b>	<b>-</b>	<b>120/60</b>	<b>PV</b>
Model	Pipe Size	Seals	Orifice Size			Coil Voltage	Material
EAST	2 - 1/4" 4 - 1/2"	V - Viton EP - EPDM	6 - 3/16" 8 - 1/4"			012DC - 12V DC (consult Factory) 024/60 - 24V AC, 60Hz 024DC - 24V DC 120/60 - 120V AC, 60Hz 230/50 - 230 V AC, 50 Hz 240/60 - 240V AC, 60Hz	PV - PVC CP - CPVC PP - Natural PolyPropylene PF - PVDF

MATERIAL TEMPERATURE VS. PRESSURE															
MAT'L	MAX. TEMP. RATING	Maximum Inlet Pressure and Temperature													
		75°F (24°C) PSI BARS		110°F (43°C) PSI BARS		140°F (60°C) PSI BARS		180°F (82°C) PSI BARS		220°F (105°C) PSI BARS		240°F (116°C) PSI BARS		284°F (140°C) PSI BARS	
PVC	140°F ( 60°C)	140	9,6	100	6,8	40	2,7	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
PP*	180°F ( 82°C)	140	9,6	100	6,8	80	5,4	40	2,7	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
PVDF	284°F (140°C)	140	9,6	130	8,8	120	8,2	100	6,8	60	4,1	30	2,0	10	0,7

\*NATURAL POLYPROPYLENE                      N.R. = NOT RECOMMENDED

The chart below is to provide overall guidelines on various thermoplastics relative to their pressure and temperature relationships. The information should be used to determine limitations of the various materials.