

Model BPS09-P

Plastic Back Pressure Reducing Valve



- Spring diaphragm operated
- 1/2"-2" NPT THD (More models of Plastic Valves)
- Control pressures to 80 PSI (5.2 Bar)
- PVC, CPVC, PVDF, PTFE and other exotic plastics

Features

- **Pressure-containing parts** made from solid bar stock materials for PTFE and PVDF, PVC, CPVC assemblies.
- **Valve body:** The construction is entirely manufactured of plastic for optimal flow, strength and chemical resistance.
- **Trim:** Same as body materials selected.
- **Teflon-Viton composite reinforced diaphragm** is designed for improved main valve travel. Teflon diaphragm on the wetted side provides corrosion resistance for a wide range of liquids. Viton is the elastomeric seal on the non-wetted side. Special elastomers are also available.

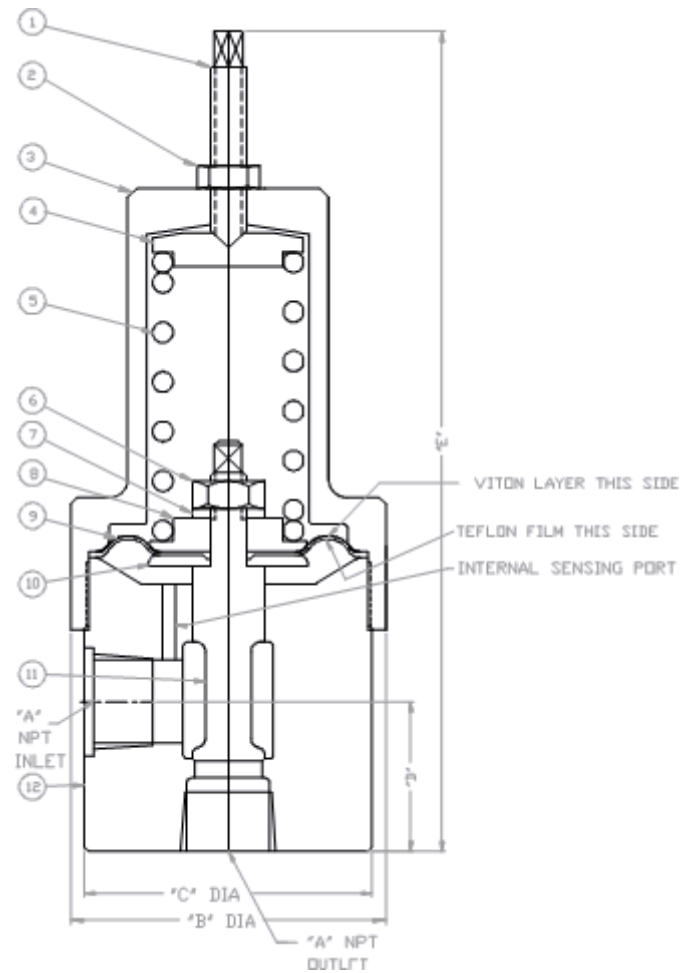
- **Right-angle porting** is the standard piping arrangement which allows the valve to be self-draining.
- **Poppet:** Is made from the same high grade plastic selected for the body. PTFE can be requested for custom application.
- **Elastomeric Poppet seal:** Choice of elastomers (e.g. Kalrez, Parfluor, Buna, and EPDM) expands relief valve usage to a wide range of applications for chemical compatibility.
- **Soft Seats:** Elastomeric seats are for liquid (Chemical) service to insure bubble tight leakage.
- **Spring chamber:** Standard construction is PVC non-wetted; can upgrade upon request for specific application needs.
- **Hardware & Spring:** Adjustment screw, lock nut, and springs will be stainless steel. (302, 303 default and 316SS optional)
- **Right-angle valve porting:** Standard construction is bottom inlet, side outlet with NPT pipe threads.

Applications

This valve is used for back pressure control applications such as maintaining constant pump discharge pressures, bypassing excessive pressures from various types of process equipment, and wherever a constant pressure must be maintained in a process or piping system. Valve is designed corrosive liquids, depending on the materials selected.

Principle of Operation

This is a direct-acting valve with an adjustable spring operating against a flexible elastomeric diaphragm subjected to the inlet pressure of the valve. Increasing the spring compression will increase the system or line pressure to be maintained. Reducing the spring compression will reduce the system or line pressure to be maintained. An increase in system pressure beyond the set point will cause the main valve to open and relieve the excess pressure.



BPS09-P

Material List and Specification

#	Item	Materials
1.	Adjusting screw	Stainless steel
2.	Lock nut	Stainless steel
3.	Spring chamber	PVC
4.	Spring Pusher	Stainless steel
5.	Spring	Stainless steel
6.	Lock Nut	Stainless steel
7.	Lock Washer	Stainless steel
8.	Spring Follower	Stainless Steel
9.	Diaphragm	TFE/Viton
10.	Diaphragm Disc.	PVC, CPVC, PTFE, PVDF
11.	Main Valve	PVC, CPVC, PTFE, PVDF
12.	Body	PVC, CPVC, PTFE, PVDF

- Alternate elastomers available.
- Max inlet pressure 100 PSI (5.2 Bar) based on diaphragm rated press.

Dimensions (NPT)

Dimensions (inch)				
A	B	C	D	E
1/2	3.25	3.00	1.31	8.25
3/4	3.25	3.00	1.50	9.50
1	4.50	4.50	2	12.38
1-1/4	4.50	5.00	3.44	13.25

1-1/2	4.50	5.00	3.56	16.56
2	4.50	5.00	4.13	17.25

Note: Dimensions are approximate and are subject to change without notice. Request certified dimensions before final product installation.

1/2" BPS09-05T-P

Max inlet pressure 150 psi (10 barg)

Multiple Spring Ranges from:7- psig (0.483- barg) Select spring from pricing page

3/4" BPS09-07T-P

Max inlet pressure 150 psi (10 barg)

Multiple Spring Ranges from:7- psig (0.483- barg) Select spring from pricing page

1" BPS09-10T-P

Max inlet pressure 150 psi (10 barg)

Multiple Spring Ranges from:7- psig (0.483- barg) Select spring from pricing page

1 1/2" BPS09-15T-P

Max inlet pressure 150 psi (10 barg)

Multiple Spring Ranges from:7- psig (0.483- barg) Select spring from pricing page

2" BPS09-20T-P

Max inlet pressure 150 psi (10 barg)

Multiple Spring Ranges from:7- psig (0.483- barg) Select spring from pricing page

The spring ranges listed above are not achievable with one spring, but are compressed to show overall product capability. Select a specific spring range in the pricing pages or specify a set pressure when ordering.