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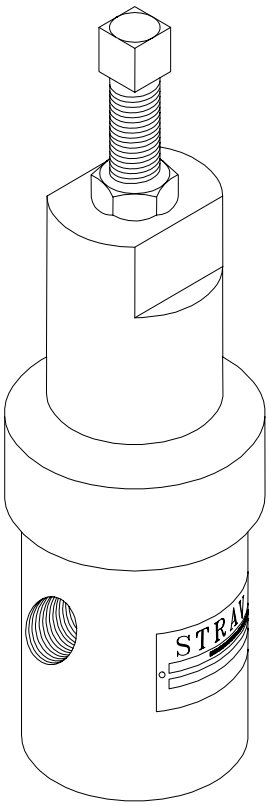
Model PRS-09I THD IN-LINE PRESSURE-REDUCING VALVE



- Spring-diaphragm pressure-reducing valve
- 1/2"-2" NPT THD
- Inlet pressures to 300 PSI (20 Bar)
- Outlet pressures from 5 PSI to 75 PSI (5.1 Bar) (multiple spring ranges)

Features of Our Stainless Steel Valve

- **Water pressure regulator and air pressure regulator parts** made from solid bar stock materials — unlike castings which have wall thickness variations.
- **Body:** Standard valve materials are stainless steel (all sizes) and brass (1/2"-1" sizes only). Monel, titanium, Alloy 20, and Hastelloy also available.
- **Trim:** Stainless steel on valve poppet and seat is standard. Teflon sealing option is also available for air or gas service.
- **Teflon-Viton composite reinforced diaphragm** is designed for much greater poppet travel than the stainless steel diaphragm valve models PRS-05 and PRS-05-1. Teflon film on the wetted side provides superior protection when used as a corrosion-resistant valve for a wide range of fluids and gases, chemicals, petroleum products, and steam. Viton is used on the non-wetted side of the diaphragm. Max temperature rating is 250 °F sizes 1/2" & 3/4", and 350 °F sizes 1"-2".
- **In-line valve ports:** Simplifies installation for new or existing piping. This water pressure regulator and air pressure regulator valve can also be used as a steam pressure regulator and is also available with ANSI flanges (see PRS-09I-FLG). Our pressure-reduction valve is also available as a sanitary valve with sanitary flanges in all-stainless steel construction.
- **Spring chamber:** Standard material is carbon steel as it is non-wetted, but can be upgraded to a stainless steel valve when the external environment is corrosive or sanitary.

Applications

This is a direct-acting diaphragm pressure-reducing valve (most often referred to as a pressure regulator) with an adjustable spring operating against a flexible elastomeric diaphragm subjected to the reduced outlet pressure of the valve which is controlled through an internal sensing port. This makes the valve an accurate pressure-sensing valve, or pressure-control valve used to control outlet pressures with a wide range of inlet pressures.

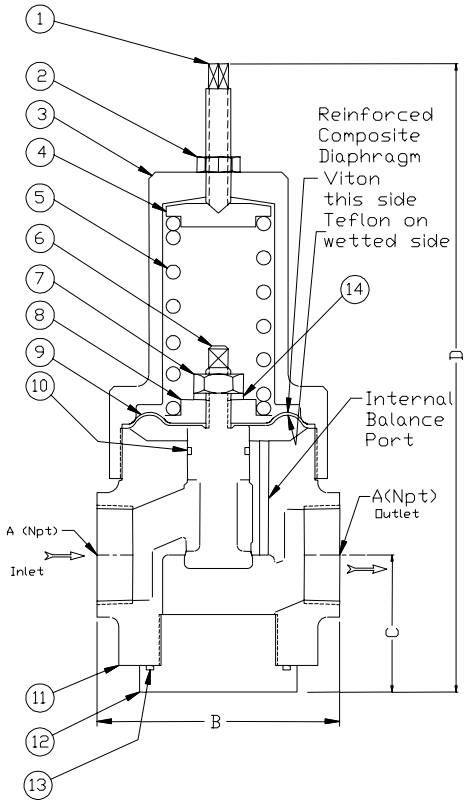
Unlike unbalanced diaphragm pressure-reducing valves, this pressure valve is a balanced inlet design and will work quite well on applications where the inlet pressure will fluctuate widely and will have little effect on outlet pressure.

This valve can be used for non-corrosive or mildly corrosive fluids including steam, depending on the materials selected (consult factory). Use only clean strained or filtered fluids to keep the pressure-regulating valve operating at maximum efficiency without clogging. Use our Stra-Val in-line strainer fitting model STF-05 or basket strainers SBS-10 or SBV-05 to keep the fluids clean.

Applications are for use as a water pressure-reducing valve, water pressure regulator, steam pressure regulator, air pressure regulator, oil pressure regulator. Most applications are sold where a corrosion-resistant valve is preferred, where we manufacture these mostly as a stainless steel valve for the wetted components, using type 303 stainless steel or type 316 stainless steel for chemicals or when a sanitary valve is required with sanitary flanges. For seawater applications the Monel valve, titanium valve, or even Hastelloy valve is used.

When this valve is selected, it is always recommended that a relief valve be installed on the downstream side of the valve to protect the diaphragm and other equipment downstream of the valve in case of excessive pressure buildup which may be from seat wear, corrosion, or external sources other than the valve. Therefore, do not attempt to use this as a shutoff valve. For prolonged or even momentary periods of shutoff, install separate shutoff or isolation valves to keep the relief valve from tripping. The standard construction for this pressure-reducing valve is with a metal seat, but a soft seat option can be ordered, which will improve seat leakage particularly for air or gases.

This in-line pressure regulator has fairly adequate Cv values for most applications. See below. For higher flow rates and larger Cv values, use the pressure valve model PRS-09 with the porting arrangement parallel and slightly offset.



Material List and Specification

1.	Adjusting screw	Steel
2.	Lock nut	Steel
3.	Spring chamber	Steel
4.	Spring pusher	Steel
5.	Adjusting spring	Steel
6.	Main valve	Stainless steel
7.	Lock nut	Steel
8.	Nut, diaphragm	Steel
9.	Diaphragm	TFE / Viton
10.	Seal	Viton
11.	Body	Stainless steel
12.	Bottom plug	Stainless steel
13.	Seal	Viton
14.	Washer	Steel

Dimensions (inch) **Flow data**

NPT A	B	C	D	Cv	Flow orifice inch	GPM*
1/2	2.50	1.88	7.50	2.2	.375	11
3/4	3.00	1.88	7.75	3.9	.50	19
1	4.00	2.13	12.00	8.4	.75	42
1-1/4	4.00	2.38	12.50	10.3	.81	51
1-1/2	5.00	2.63	13.50	14.9	1.00	75
2	5.75	3.25	13.75	23.3	1.25	117

* Flow is in USGPM based on 25 PSI pressure drop

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