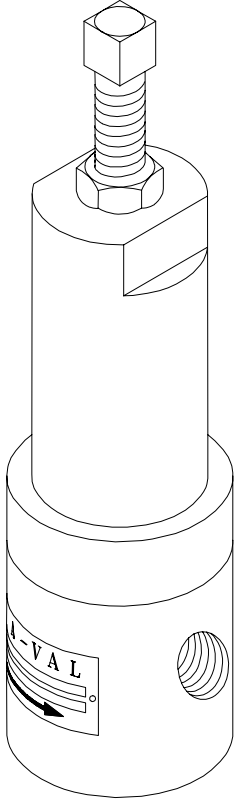


Model PRH-04 THD PRESSURE-REDUCING VALVE



- Spring and piston operated
- 1/2"-2" NPT THD
- Inlet pressures to 5000 PSI (340 Bar)
- Outlet pressures to 4500 PSI (306 Bar) (multiple spring ranges; see table below)
- Max operating temperatures -40 to 300 °F (-40 to 150 °C)

Features

- **Pressure-containing parts** made from solid bar stock materials — unlike castings which have wall thickness variations.
- **Body and trim:** Standard material is type 303 or 316 stainless steel. Special alloys (e.g. Hastelloy, Monel, titanium, and Alloy 20) also available.
- **Teflon PTFE V packing seals:** High-pressure, low-friction, self-expanding design permits operation with small differences between inlet and outlet pressures as low as 25-50 PSI (approx), as long as the packing nut is not overtightened and piston surfaces are kept clean.
- **Spring chamber and adjusting spring:** These parts are non-wetted, are not in contact with the fluid or gas, and are normally offered in carbon steel, painted for minimal exterior corrosion-resistant protection. When these parts are submerged or located in a corrosive atmosphere, they can be upgraded to a stainless steel or other corrosion-resistant materials at an additional cost. The spring chamber is not offered in aluminum or plastic.
- **Standard porting:** Right-angle porting, NPT threads (side inlet, bottom outlet). Valve works in any orientation, upright as illustrated, horizontal, etc. See also flanged model PRH-04-FLG.
- **Optional porting:** Side outlet (parallel port), or in-line porting can be supplied at additional cost when requested.
- **Other options:** Reduced trim for low-flow applications, locking cap, inlet or outlet pressure gauge ports, Teflon or Viton seats for inlet pressures below 3000 psig (20 barg), 1/2 and 3/4" sizes only. Pressures are derated for larger sizes.

Applications

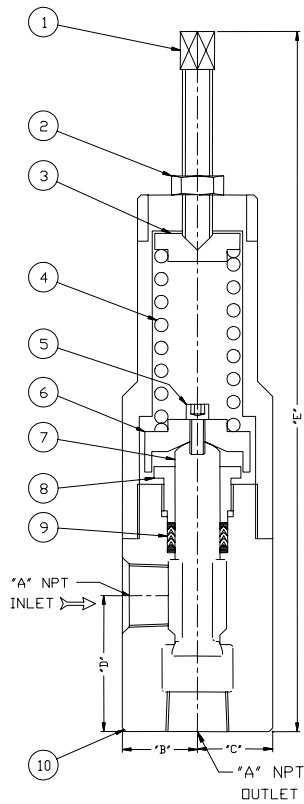
Designed for clean, filtered or strained, non-abrasive liquid service: oils, lubricants, greases, solvents, and most non-fluorinated chemicals compatible with Teflon PTFE seals. Valve is piston-operated, metal-seated without any elastomers. **Do not use for shutoff service** or for extremely low flows (less than 5% of maximum capacity). Requires a relief or bypass valve installed on the outlet side of the regulator (not included with valve). Do not use with liquids that tend to crystallize or solidify under operating conditions. Not for use on steam service. Consult factory for gas service. Balanced design accommodates large variations in inlet pressure. Valves are set to minimum pressure setting for range selected. To increase outlet pressure, loosen adjusting screw lock nut to increase spring compression. Valve can operate in any orientation: vertical, horizontal, etc. A high-pressure filter or strainer, which should be no coarser than #60 mesh, can be ordered from Stra-Val. See model SBS-10.

Options that can be special-ordered are:

- Reduced trim for low-flow applications, all sizes.
- Locking cap to enclose adjusting screw (1).
- Wetted materials (7,10) in type 316SS, Monel, titanium, and Hastelloy.
- Upgrade non-wetted spring chamber (2), spring hardware (3,5), and adjusting screw (1) to 300 series stainless steel.
- Hard-chromed piston (7) for longer life and seal (9) wear.
- 1/4" NPT inlet and outlet pressure gauge connection.
- Custom materials for special applications where PTFE seals (9) may not be suitable.

Principle of Operation

This valve operates with a compression spring acting on the main valve which is used to adjust the outlet pressure with an adjusting screw. Therefore a desired increase in outlet pressure requires an increase in spring compression. Similarly, to get a reduction in outlet pressure requires a reduction in spring compression.



Material List and Specification

1. Adjusting screw	Steel
2. Spring chamber	Steel
3. Spring pusher	Steel
4. Spring	Steel
5. Screw	Steel
6. Spring follower	Steel
7. Piston	303SS 316SS
8. Packing nut	303SS
9. Packing rings	Teflon
10. Body	303SS 316SS

Dimensions (inch)

	A	B	C	D	E
NPT					
1/2	1	1	1-7/8	11-1/2	
3/4	1-1/4	1-1/4	2-1/4	12	
1	1-1/2	1-1/2	2-5/8	14	
1-1/4	1-1/2	1-1/2	2-5/8	14	
1-1/2	2-1/2	1-1/2	3	14-1/2	
2	2-1/2	1-1/2	4	16-1/2	

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

Standard Valve Ordering Specifications

In the tables below, materials are as illustrated in column one. Wetted materials are type 303SS with non-wetted materials carbon steel painted. Valves are full trim with Cv's as listed. Valves can be ordered preset to customer specification, or shipped with setting at low range.

1/2" PRH0405T-SS

Spec#	Spring Range	Cv
N0240	150-450 PSI	3.9
N0241	200-900 PSI	3.9
N0242	300-1400 PSI	3.9
N0243	500-1800 PSI	3.9
N0280	500-2300 PSI	3.9
N0244	750-3100 PSI	3.9
N0245	1000-4500 PSI	3.9

3/4" PRH0407T-SS

Spec#	Spring Range	Cv
N0281	150-450 PSI	4.9
N0249	200-650 PSI	4.9
N0250	250-975 PSI	4.9
N0251	300-1250 PSI	4.9
N0257	500-2200 PSI	4.9
N0258	750-3100 PSI	4.9
N0259	1000-4500 PSI	3.9

1" PRH0410T-SS

Spec#	Spring Range	Cv
N0261	150-500 PSI	9.5
N0262	250-1200 PSI	9.5
N0263	300-1900 PSI	9.5
N0264	500-2200 PSI	4.9
N0265	750-3300 PSI	4.9
N0266	900-3900 PSI	4.9
N0267	1000-4500 PSI	3.7

1-1/4" PRH0412T-SS

Spec#	Spring Range	Cv
N0326	150-450 PSI	12.1
N0327	250-1200 PSI	12.1
N0328	500-2200 PSI	10.7
N0329	750-3100 PSI	6.7
N0330	1000-4500 PSI	3.7

1-1/2" PRH0415T-SS

Spec#	Spring Range	Cv
N0269	150-450 PSI	17.3
N0270	200-750 PSI	17.3
N0271	500-1750 PSI	10.7
N0272	700-2200 PSI	10.7
N0278	750-3200 PSI	6.7
N0273	1000-4500 PSI	3.7

2" PRH0420T-SS

Spec#	Spring Range	Cv
N0274	150-600 PSI	35.3
N0282	250-1200 PSI	23.5
N0276	500-2200 PSI	10.7
N0279	750-3200 PSI	6.7
N0277	1000-4500 PSI	3.7

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