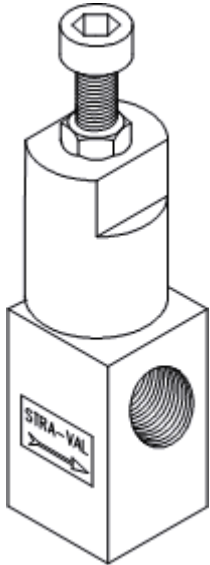


Model BPS-04

1/2" Npt ADJUSTABLE PRESSURE BACK PRESSURE/BYPASS VALVE-Product Discontinued



- Brass (no longer in stock) For 303 stainless steel use BPS05
- 1/2" NPT THD For this and other sizes see BPS05
- Adjustable relief pressures from 25 psi (1.7 barg) to 500 psi (34 Bar) for SS, 300 psi (20 barg) for brass

Features

- **Pressure-containing parts** made from solid bar stock materials, unlike castings which have wall thickness variations.
- **Body:** Standard materials are brass and 303 series stainless steel . Special alloys (e.g. Monel, titanium, and Hastelloy) are available only in model BPS05
- **Poppet:** 303 series stainless steel and brass are standard. Teflon is available for low pressure service (<150 PSI) and where required for corrosion resistance.
- **Elastomeric seal:** Standard elastomers are Viton, Buna, Epdm and Teflon (PTFE). Choice of elastomer determines final temperature limitation.
- **Spring chamber:** Standard construction is aluminum or carbon steel depending on relief pressures and can also be supplied in stainless steel for corrosive environments. This part is non-wetted
- **Right-angle porting:** Standard construction is bottom inlet, side outlet. For special threads see model BPS05.

Applications

This model is no longer active. See replacement model BPS05. Spares can still be ordered by typing in the serial number or model number in the search box which will display recommended spares to order.

This adjustable back pressure/bypass valve should only be used for non-corrosive fluids, or where the materials selected are compatible with the fluid and will not cause corrosive buildup that could keep the poppet from opening. When liquids contain debris or other solid matter that might cause internal clogging or improper operation of the stainless steel valve, a strainer with a fine wire mesh should be installed before the inlet of the valve. In-line strainer fittings or basket strainers can be purchased from Stra-Val to solve this problem. This stainless steel valve should not be applied where Canadian CRN or ASME approval is required as it does not carry the ASME approval stamp. This stainless steel safety valve or brass valve however is generally designed to meet their design, performance, and test criteria. The seat diameter for this back pressure/bypass valve is 0.625 with a Cv of 5.5.

Avoid locating the valve where freezing can occur, and if unavoidable, take precautions to insulate or heat wrap valve and piping to keep from freezing.

These valves do not carry the Canadian CRN or ASME approval stamp and should not be applied where this requirement must be met. However, the valves generally meet or exceed ASME design criteria with wall thicknesses that are much heavier than the minimums required. For an additional charge, valves can be ordered with material certs and with a certified hydro-test certificate and other tests to meet special documentation and acceptance requirements.

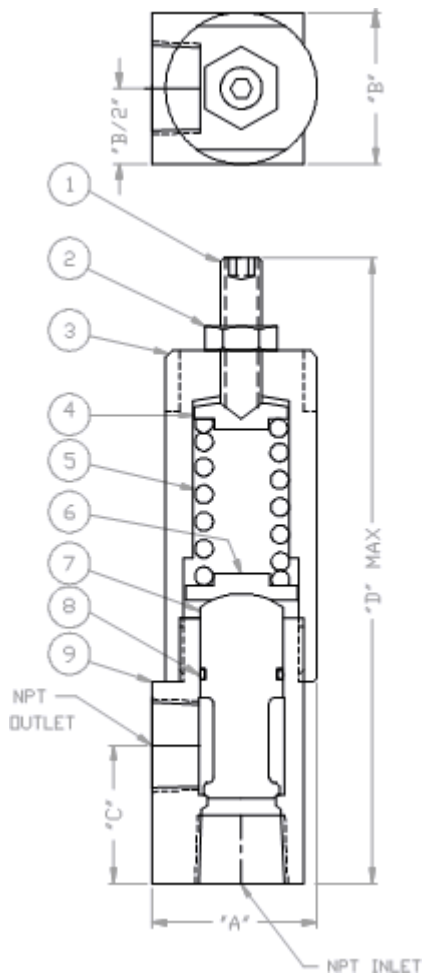
Standard metal seated valves meet ANSI/FCI Class IV seat leakage standards (0.01% of rated valve capacity, not bubble tight).

Options

This product is no longer available. See model BPS05 that has more options and material choices

Principle of Operation

This is a poppet and spring type back pressure/bypass valve where the spring constantly opposes the pressure acting against the poppet which seals off the inlet port from the outlet port at the valve seat. The desired set pressure or relief is achieved by compressing the spring until the spring force is adequate to balance the pressure force acting against the poppet. When the inlet pressure exceeds the set pressure, the poppet will open to relieve the excess pressure. Reseat pressure will depend on the piston seal material used. Typically, the Buna, Viton or Epdm seal will reseal within 5% of the set pressure and 10% with a PTFE seal that is harder.



BPS-04 now replaced by BPS05

Material List and Specification

- 1. Adjusting screw Steel or SS
- 2. Lock nut Steel or SS
- 3. * Spring chamber Aluminum, steel or SS
- 4. Spring pusher Steel or SS
- 5. Adjusting spring Steel or SS
- 6. Spring Carrier Steel or SS
- 7. † Poppet 303 SS, brass, or PTFE
- 8. ‡ Piston Seal Buna, EPDM, Viton PTFE
- 9. † Body 303 SS or brass

* Aluminum used for low pressures

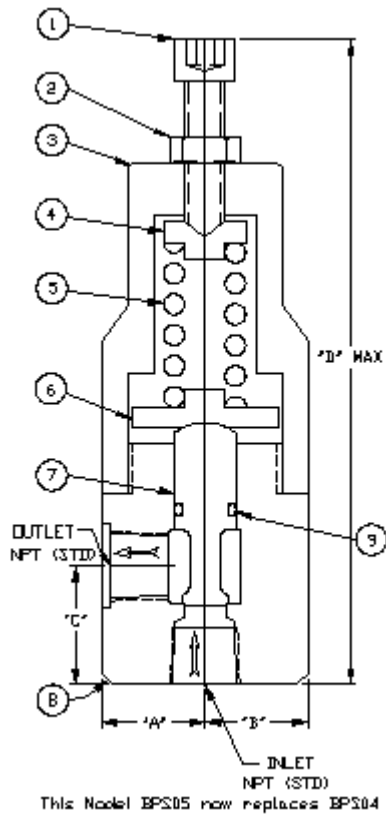
† Stainless steel standard or when required at higher temperatures

‡ Alternate elastomers available

Dimensions

| Size | A | B | C | D |
|------|-------|-------|-------|---|
| 1/2 | 1-1/2 | 1-3/8 | 1-1/4 | 6 |

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



BPS05 is now the current model