

Medium- to High-Pressure Piston-Sensing Back-Pressure Regulators (KPB Series)

The KPB series provides back-pressure control in gas or liquid applications. This compact and lightweight regulator provides an ideal pressure-control solution within high-density compact OEM equipment, as well as other applications.

Features

- Integral high-pressure overrange protection
- Lightweight, compact design

Technical Data

Maximum Inlet Pressure

- Equal to pressure control range

Pressure Control Ranges

- 0 to 1000 psig (68.9 bar) through 0 to 4000 psig (275 bar)

Flow Coefficient (C_v)

- 0.06 and 0.2

See page 50 for flow graphs.

Maximum Operating Temperature

- 176°F (80°C) with PCTFE seat
- 392°F (200°C) with PEEK seat

Weight

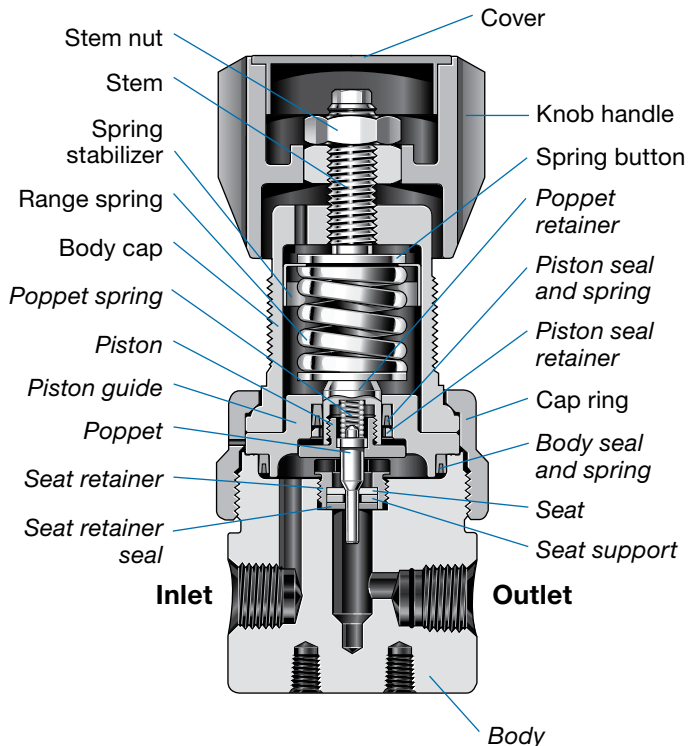
- 2.5 lb (1.2 kg)

Ports

- 1/4 in. female NPT inlet, outlet, and gauge ports



Materials of Construction



Component	Material
Knob handle, cover	Nylon with 316 SS insert
Spring button	316 SS (0 to 500 psig range) Zinc-plated steel (all other ranges)
Spring stabilizer ^①	301 SS
Range spring	316 SS (0 to 3000 and 0 to 4000 psig range) Zinc-plated steel (all other ranges)
Stem, stem nut, cap ring, body cap, panel nuts ^②	316 SS
Nonwetted lubricant	Hydrocarbon-based
<i>Body, seat retainer, seat support, poppet retainer, piston, piston guide</i>	316 SS
<i>Seat, seat retainer seal</i>	PCTFE or PEEK
<i>Piston seal retainer</i>	PEEK
<i>Poppet</i>	S17400 SS
<i>Poppet spring</i>	302 SS
<i>Piston seal, body seal</i>	PTFE
<i>Piston seal spring, body seal spring</i>	Elgiloy
<i>Wetted lubricant</i>	PTFE-based

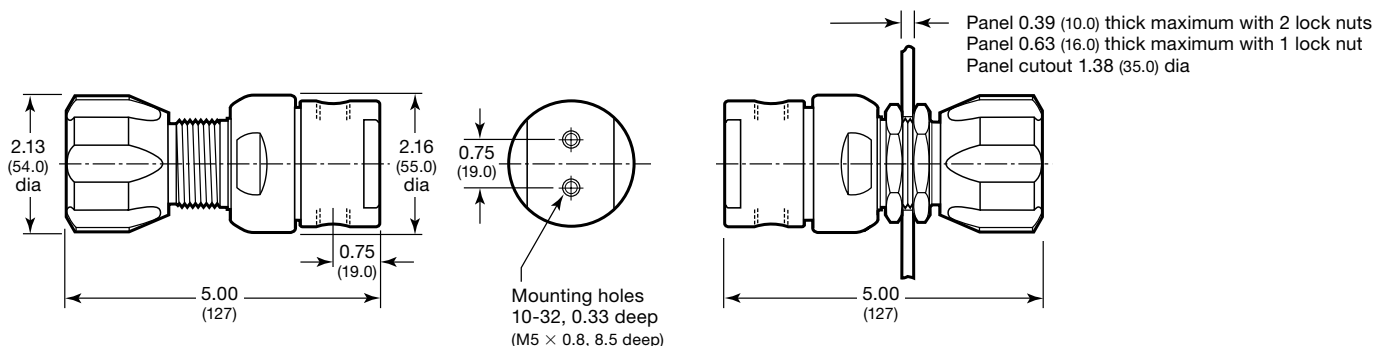
Wetted components listed in *italics*.

^① Not included in regulators with 0 to 3000 psig (0 to 206 bar) and 0 to 4000 psig (0 to 275 bar) control ranges.

^② Not shown.

Dimensions

Dimensions, in inches (millimeters), are for reference only and are subject to change.



Ordering Information

Build a KPB series regulator ordering number by combining the designators in the sequence shown below.

4 5 6 7 8 9 10 11 12 13 14 15 16
KPB 1 L 0 A 4 2 2 P 2 0 0 0 0

4 Body Material

- 1 = 316 SS
- A = 316 SS, ASTM G93 Level E-cleaned

5 Pressure Control Range

- L = 0 to 1000 psig (0 to 68.9 bar)
- N = 0 to 2000 psig (0 to 137 bar)
- P = 0 to 3000 psig (0 to 206 bar)
- S = 0 to 4000 psig (0 to 275 bar)

6 Maximum Inlet Pressure

- 0 = Not applicable (equal to pressure control range)

7 Port Configuration

A, D, G, V
 See *Port Configurations*, page 52.

8 Ports

- 4 = 1/4 in. female NPT

9 Seat, Seal Material

- 1 = PCTFE
- 2 = PEEK

10 Flow Coefficient (C_v)

- 2 = 0.06
- 5 = 0.20

11 Sensing Mechanism

- P = 316 SS piston

12 Handle, Mounting

- 2 = Knob
- 3 = 316 SS antitamper nut
- 6 = Knob, panel mount
- 7 = 316 SS antitamper nut, panel mount

For knob handle color options, see page 56.

13 Valves

- 0 = No valves

14 Cylinder Connections

- 0 = No connections

15 Gauges

- 0 = No gauges
- For inlet gauge options, see page 54.

16 Options

- 0 = No options