

Compact Piston-Sensing Back-Pressure Regulators (KCB Series)

The KCB series provides high sensitivity back-pressure control of sampling conditioning systems. It is ideally suited for use in portable or laboratory analytical systems as well as being embedded in the instrument bays of OEM equipment or sampling cabinets.

Features

- Low internal volume
- Fully contained piston
- Excellent flow characteristics with a C_v of 0.20
- ANSI/ISA 76.00.02-compliant modular platform component (MPC) configuration available

Technical Data

Maximum Inlet Pressure

- Equal to pressure control range

Pressure Control Ranges

- 0 to 10 psig (0.68 bar) through 0 to 375 psig (25.8 bar)

Flow Coefficient (C_v)

- 0.20

See page 49 for flow graphs.

- 0.10 also available with MPC platform

Maximum Operating Temperature

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

Weight

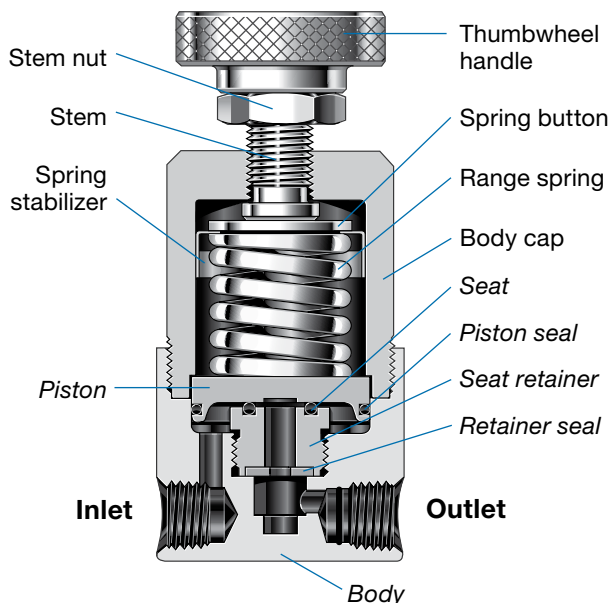
- 1.0 lb (0.5 kg)

Ports

- 1/8 in. female NPT inlet and outlet(s)
- MPC platform



Materials of Construction



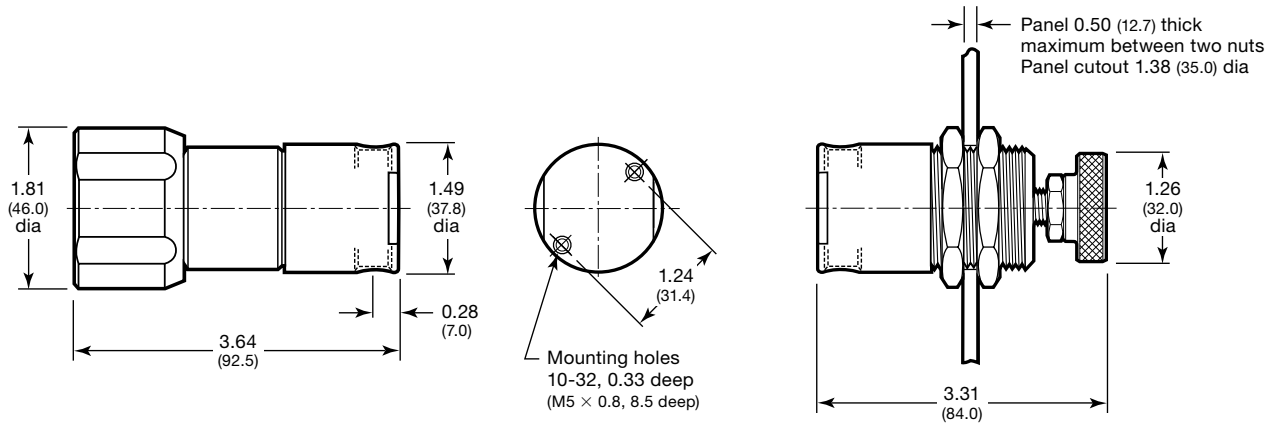
Component	Material
Thumbwheel handle	Anodized aluminum
Knob handle, ^① cover ^①	Nylon with 316 SS insert
Spring button	Zinc-plated steel
Spring stabilizer	301 SS
Range spring	316 SS (0 to 10 through 0 to 50 and 0 to 375 psig control ranges) Zinc-plated steel (all other control ranges)
Stem, stem nut, body cap, panel nuts ^①	316 SS
Nonwetted lubricant	Hydrocarbon-based
<i>Body, seat retainer, piston</i>	<i>316 SS</i>
<i>Seat, piston seal</i>	<i>Fluorocarbon FKM or Kalrez</i>
<i>Retainer seal</i>	<i>PCTFE or PEEK</i>
<i>Wetted lubricant</i>	<i>PTFE-based</i>

Wetted components listed in *italics*.

^① Not shown.

Dimensions

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



Ordering Information

Build a KCB 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
KCB 1 F 0 D 2 A 5 P 1 0 0 0 0

4 Body Material

1 = 316 SS
 A = 316 SS, ASTM G93 Level E-cleaned
 C = 316 SS, SC-11-cleaned

5 Pressure Control Range

C = 0 to 10 psig (0 to 0.68 bar)
 D = 0 to 25 psig (0 to 1.7 bar)
 E = 0 to 50 psig (0 to 3.4 bar)
 F = 0 to 100 psig (0 to 6.8 bar)
 G = 0 to 250 psig (0 to 17.2 bar)
 H = 0 to 375 psig (0 to 25.8 bar)

6 Maximum Inlet Pressure

0 = Not applicable (equal to pressure control range)

7 Port Configuration

A, D, G, V, 7, 8
 See *Port Configurations*, page 52.

8 Ports

2 = 1/8 in. female NPT
 M = MPC platform

9 Seat, Retainer Seal Material

A = Fluorocarbon FKM, PCTFE
 B = Kalrez, PCTFE
 C = Fluorocarbon FKM, PEEK
 D = Kalrez, PEEK

10 Flow Coefficient (C_v)

4 = 0.10 (MPC platform only)
 5 = 0.20 (1/8 in. female NPT ports only)

11 Sensing Mechanism

P = 316 SS piston

12 Handle, Mounting

1 = Thumbwheel^①
 2 = Knob
 3 = 316 SS antitamper nut
 5 = Thumbwheel, panel mount^①
 6 = Knob, panel mount
 7 = 316 SS antitamper nut, panel mount

For knob handle color options, see page 56.

^① Not available with 0 to 375 psig (0 to 25.8 bar) pressure control range.

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