

Compact, Piston-Sensing, Pressure-Reducing Regulators (KCP Series)

The KCP series is a compact, piston-sensing pressure regulator with a short stroke to minimize wear in high-cycling applications.

Features

- Low internal volume
- Fully contained piston
- High-flow, dual-gauze type filter positively retained in inlet port
- ANSI/ISA 76.00.02-compliant modular platform component (MPC) configuration available; MPC platform regulator does not contain a filter

Technical Data

Maximum Inlet Pressure

- 3600 psig (248 bar)

Pressure Control Ranges

- 0 to 10 psig (0.68 bar) through 0 to 1500 psig (103 bar)

Flow Coefficient (C_v)

- 0.06 and 0.20

See page 45 for flow graphs.

- 0.02 and 0.50 also available

Supply-Pressure Effect

Flow Coefficient (C _v)	Pressure Control Range	
	Up to 250 psig (17.2 bar)	500 psig (34.4 bar) and Higher
	Supply Pressure Effect, %	
0.02	0.4	2.6
0.06	1.3	8.6
0.20	2.1	14.5
0.50	3.0	22.6



Maximum Operating Temperature

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

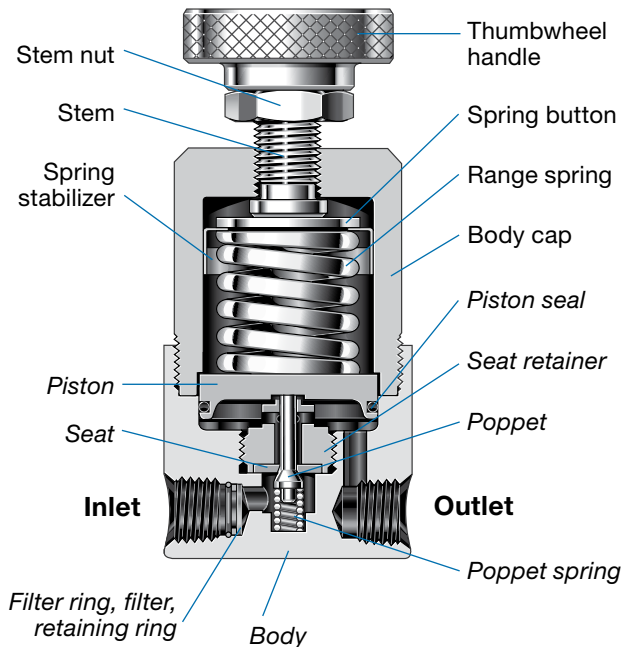
Weight

- 1.0 lb (0.45 kg)

Ports

- 1/8 in. female NPT inlet, outlet, and gauge ports
- 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 or zinc-plated steel, depending on configuration
Stem, stem nut, body cap, panel nuts ^①	316 SS
Nonwetted lubricant	Hydrocarbon-based
<i>Body, seat retainer, piston, filter,^② retaining ring^②</i>	316 SS
<i>Piston seal</i>	Fluorocarbon FKM or Kalrez [®]
<i>Seat</i>	PCTFE or PEEK
<i>Poppet</i>	S17400 SS
<i>Poppet spring</i>	302 SS
<i>Filter ring^②</i>	PTFE
<i>Wetted lubricant</i>	PTFE-based

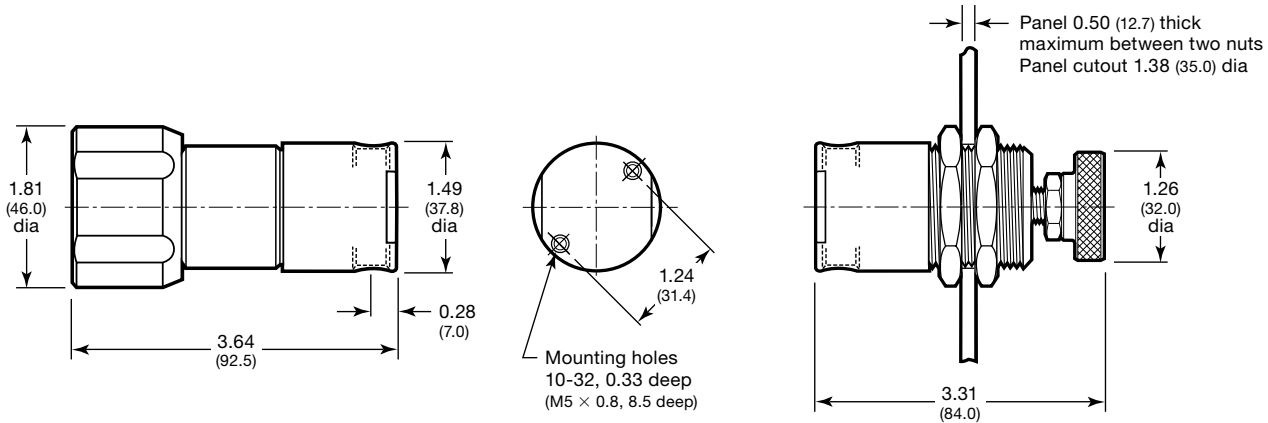
Wetted components listed in italics.

^① Not shown.

^② MPC platform regulator does not contain a filter.

Dimensions

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



Ordering Information

Build a KCP 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
 KCP 1 F R A 2 A 2 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)
- J = 0 to 500 psig (0 to 34.4 bar)
- L = 0 to 1000 psig (0 to 68.9 bar)
- M = 0 to 1500 psig (0 to 103 bar)

6 Maximum Inlet Pressure^①

- F = 100 psig (6.8 bar)
- J = 500 psig (34.4 bar)
- L = 1000 psig (68.9 bar)
- R = 3600 psig (248 bar)

^① For better resolution and control, select a pressure that closely matches system pressure.

7 Port Configuration

- A, B, C, E, F, H, K, L, M, N, 5, 6
- See **Port Configurations**, page 52.

8 Ports

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

9 Seat, Seal Material

- A = PCTFE, fluorocarbon FKM
- B = PCTFE, Kalrez
- C = PEEK, fluorocarbon FKM
- D = PEEK, Kalrez

10 Flow Coefficient (C_v)

- 1 = 0.02
- 2 = 0.06
- 5 = 0.20^①
- 7 = 0.50^①

^① Not available with MPC platform port configuration.

11 Sensing Mechanism

- P = 316 SS piston

12 Handle, Mounting

- 1 = Thumbwheel
 - 2 = Knob
 - 3 = 316 SS antitamper nut
 - 5 = Thumbwheel, panel mount
 - 6 = Knob, panel mount
 - 7 = 316 SS antitamper nut, panel mount
- For knob handle color options, see page 56.

13 Isolation Valves

- 0 = No valves
- For isolation valve options, see page 54.

14 Cylinder Connections

- 0 = No connections

15 Gauges

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

16 Options

- 0 = No options