

Pressure Regulators K Series



- Pressure-reducing models
- Back-pressure models
- Gas cylinder changeover model
- Vaporizing models

Contents

- Features, 2
- Operation, 3
- Selection, 3
- Testing, 4
- Cleaning and Packaging, 4

Pressure-Reducing



**General-Purpose
(KPR Series), 6**



**Two-Stage
(KCY Series), 8**



**High-Sensitivity
(KLF Series), 10**



**High-Flow,
High-Sensitivity
(KHF Series), 12**



**Compact
(KCP Series), 14**



**Medium- to
High-Pressure
(KPP Series), 16**



**High-Flow
(KPF Series), 18**



**High-Pressure
(KHP Series), 20**



**High-Pressure
Hydraulic
(KHR Series), 22**

Back-Pressure



**General-Purpose
(KBP Series), 24**



**High-Flow,
High-Sensitivity
(KFB Series), 26**



**Compact
(KCB Series), 28**



**Medium- to
High-Pressure
(KPB Series), 30**



**High-Pressure
(KHB Series), 32**

Specialty Pressure-Reducing



**Gas Cylinder
Changeover
(KCM Series), 34**



**Steam-Heated
Vaporizing
(KSV Series), 36**



**Electrically Heated
Vaporizing
(KEV Series), 38**

Flow Data

- Pressure-Reducing Regulators, 41
- Back-Pressure Regulators, 49

Port Configurations, 52

Options and Accessories, 53

Maintenance Kits, 56

Medium- to High-Pressure Piston-Sensing, Pressure-Reducing Regulators (KPP Series)

The KPP series meets the demands of a wide range of gas or liquid applications in a lightweight, compact installation footprint. These features make the KPP pressure regulator an ideal pressure control solution within high-density OEM equipment.

Features

- Lightweight, compact design
- Live-loaded body seals
- Low internal volume
- High-flow, dual-gauze type filter positively retained in inlet port

Technical Data

Maximum Inlet Pressure

- 6000 psig (413 bar)

Pressure Control Ranges

- 0 to 1000 psig (68.9 bar) through 0 to 3600 psig (248 bar)

Flow Coefficient (C_v)

- 0.02 and 0.06

See page 48 for flow graphs.

Supply-Pressure Effect

Flow Coefficient (C _v)	Supply Pressure Effect, %
0.02	2.2
0.06	7.2

Maximum Operating Temperature

- 392°F (200°C) with 2000 psig (137 bar) maximum inlet pressure
- 212°F (100°C) with maximum inlet pressure greater than 2000 psig (137 bar)

Weight

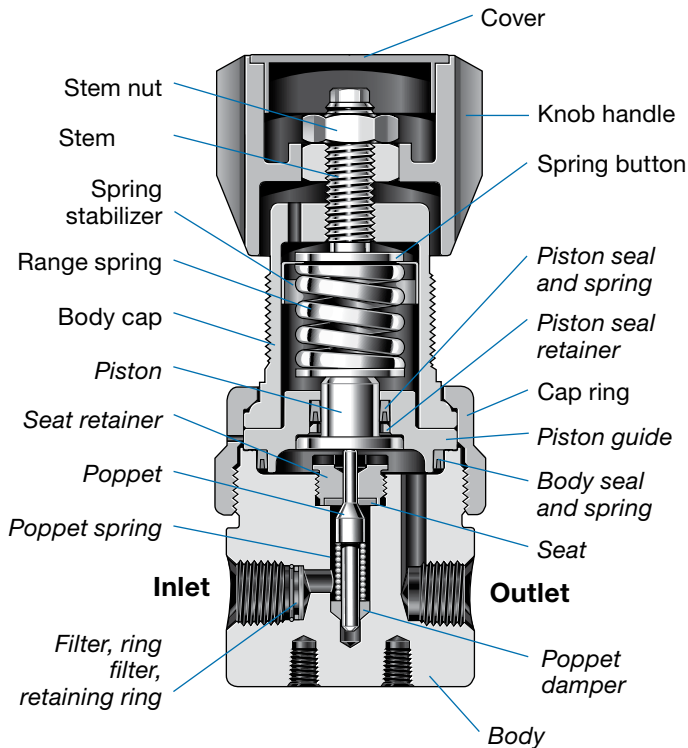
- 2.5 lb (1.2 kg)

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 3000 and 0 to 3600 psig range) Zinc-plated steel (all other ranges) ^①
Spring stabilizer ^②	301 SS
Range spring	Zinc-plated steel
Stem, stem nut, cap ring, body cap, panel nuts ^③	316 SS
Nonwetted lubricant	Hydrocarbon-based
<i>Body, seat retainer, filter, retaining ring, piston, piston guide</i>	316 SS
<i>Seat, piston seal retainer</i>	PEEK
<i>Poppet</i>	S17400 SS
<i>Poppet spring</i>	Alloy X-750
<i>Piston seal spring, body seal spring</i>	Elgiloy
<i>Poppet damper, filter ring, piston seal, body seal</i>	PTFE
<i>Wetted lubricant</i>	PTFE-based

Wetted components listed in *italics*.

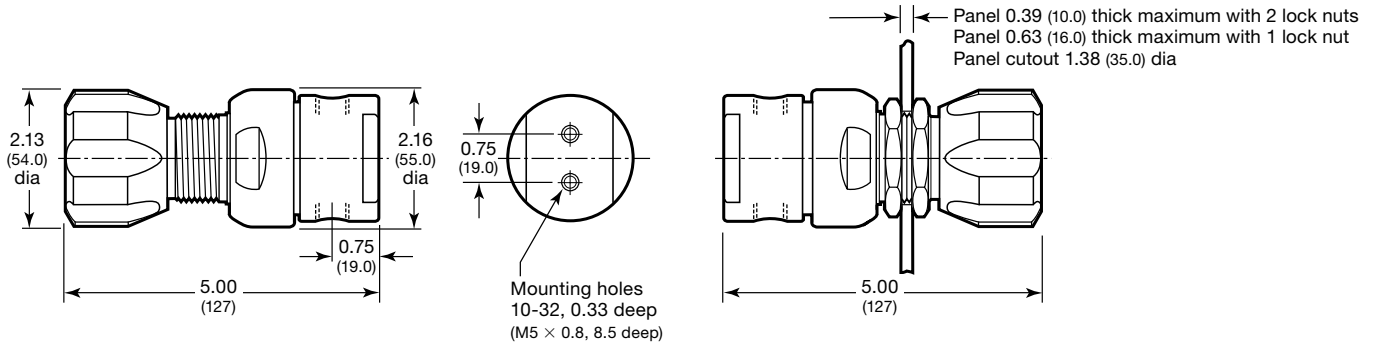
① 316 SS in regulators with 0 to 2000 psig (0 to 137 bar) control range with 6000 psig (413 bar) inlet pressure and regulators with 0 to 2000 psig (0 to 137 bar) control range, 4000 psig (275 bar) inlet pressure, and 0.06 C_v.

② Not included in regulators with 316 SS spring button.

③ Not shown.

Dimensions

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



Ordering Information

Build a KPP 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
KPP 1 L W 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)

M = 0 to 1500 psig (0 to 103 bar)

N = 0 to 2000 psig (0 to 137 bar)

P = 0 to 3000 psig (0 to 206 bar)^①

R = 0 to 3600 psig (0 to 248 bar)^①

^① Not available with 2000 psig (137 bar) maximum inlet pressure.

6 Maximum Inlet Pressure^①

N = 2000 psig (137 bar)

S = 4000 psig (275 bar)

W = 6000 psig (413 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

See *Port Configurations*, page 52.

8 Ports

4 = 1/4 in. female NPT

9 Seat, Seal Material

2 = PEEK, PTFE

10 Flow Coefficient (C_v)

1 = 0.02

2 = 0.06

11 Sensing Mechanism, Vent

P = 316 SS piston, no vent

V = 316 SS piston, captured vent, no self vent

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 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