

High-Flow, High-Sensitivity Diaphragm-Sensing, Pressure-Reducing Regulators (KHF Series)

The KHF series combines the high-flow capabilities—1.0 C_v —of a bulk distribution regulator with the high sensitivity and accuracy of a point-of-use regulator.

Features

- Large-diameter convoluted, nonperforated diaphragm for increased pressure sensitivity
- Metal-to-metal diaphragm seal
- High-flow dual-gauze type filter positively retained in inlet port

Technical Data

Maximum Inlet Pressure

- 3600 psig (248 bar)

Pressure Control Ranges

- 0 to 10 psig (0.68 bar) through 0 to 250 psig (17.2 bar)

Flow Coefficient (C_v)

- 1.0

See page 44 for flow graphs.

Supply-Pressure Effect

Flow Coefficient (C_v)	Pressure Control Range	
	Up to 50 psig (3.4 bar)	100 psig (6.8 bar) and Higher
1.0	0.3	0.4

Maximum Operating Temperature

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

Weight

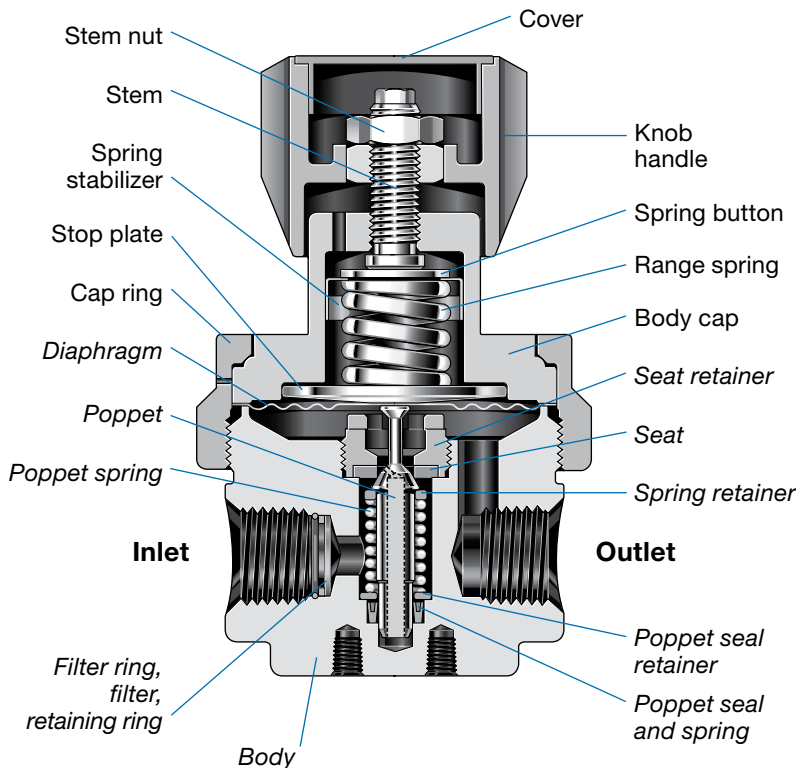
- 4.4 lb (2.0 kg)

Ports

- 1/2 in. female NPT inlet and outlet;
- 1/4 in. female NPT gauge port



Materials of Construction



Component	Material
Knob handle, cover	Nylon with 316 SS insert
Spring button	316 SS (0 to 250 psig range) Zinc-plated steel (all other ranges)
Spring stabilizer ^①	301 SS
Range spring	316 SS (0 to 10 and 0 to 25 psig control ranges) Zinc-plated steel (0 to 50 through 0 to 250 psig control ranges)
Stem, stem nut, cap ring, stop plate, body cap, panel nuts ^②	316 SS
Nonwetted lubricant	Hydrocarbon-based
Body, spring retainer, seat retainer, filter, retaining ring, poppet seal retainer	316 SS
Seat	<i>PCTFE or PEEK</i>
Diaphragm ^③	<i>Alloy X-750</i>
Poppet	<i>S17400 SS</i>
Poppet spring	302 SS
Poppet seal, filter ring	<i>PTFE</i>
Poppet seal spring	<i>Elgiloy®</i>
Wetted lubricant	<i>PTFE-based</i>

Wetted components listed in *italics*.

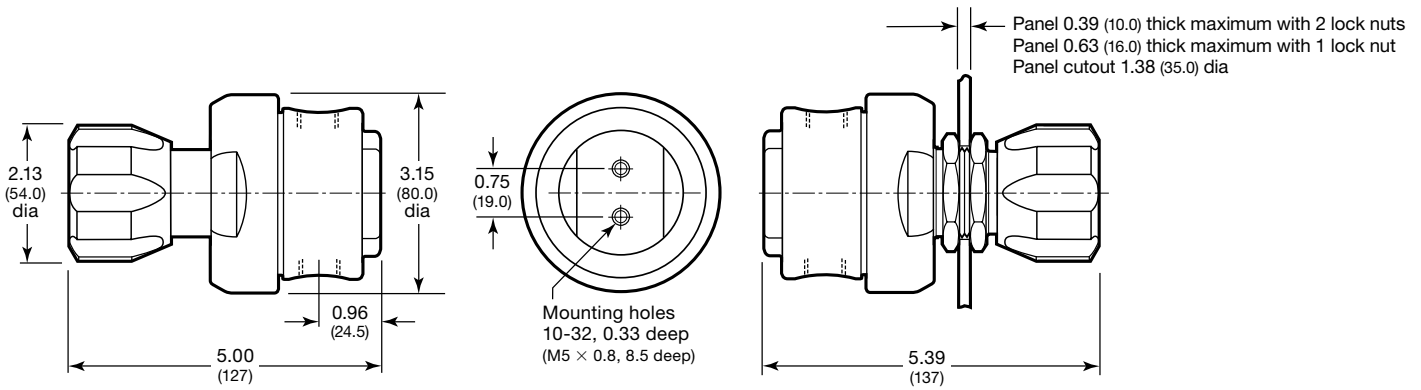
① Not included in regulators with 0 to 250 psig (0 to 17.2 bar) control range.

② Not shown.

③ Regulators with control range 0 to 250 psig (0 to 17.2 bar) are assembled with two diaphragms.

Dimensions

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



Ordering Information

Build a KHF 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
KHF 1 F R F 8 1 8 A 2 0 0 0 0

4 Body Material

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

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
- See **Port Configurations**, page 52.

8 Ports

- 8 = 1/2 in. female NPT inlet and outlet;
1/4 in. female NPT gauge port

9 Seat Material

- 1 = PCTFE
- 2 = PEEK

10 Flow Coefficient (C_v)

- 8 = 1.0

11 Sensing Mechanism, Vent

- A = Alloy X-750 diaphragm, no vent
- E = Alloy X-750 diaphragm, 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 and Relief Valves

- 0 = No valves
- For isolation and relief 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