Pressure Regulators
K Series

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

Swagelok

Contents

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

The KLF series provides high-sensitivity pressure control of gases or liquids with minimum droop in both low-flow and low-pressure applications.

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 2.0 psig (0.13 bar) through 0 to 250 psig (17.2 bar)

Flow Coefficient (C_v)

- 0.02 and 0.06

See page 43 for flow graphs.

- 0.20 and 0.50 also available

Supply-Pressure Effect

Flow Coefficient (C_v)	Pressure Control Range	
	Up to 10 psig (0.68 bar)	25 psig (1.7 bar) and Higher
	Supply Pressure Effect, %	
0.02	0.1	0.2
0.06	0.4	0.6
0.20	0.7	0.9
0.50	1.0	1.4

Maximum Operating Temperature

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

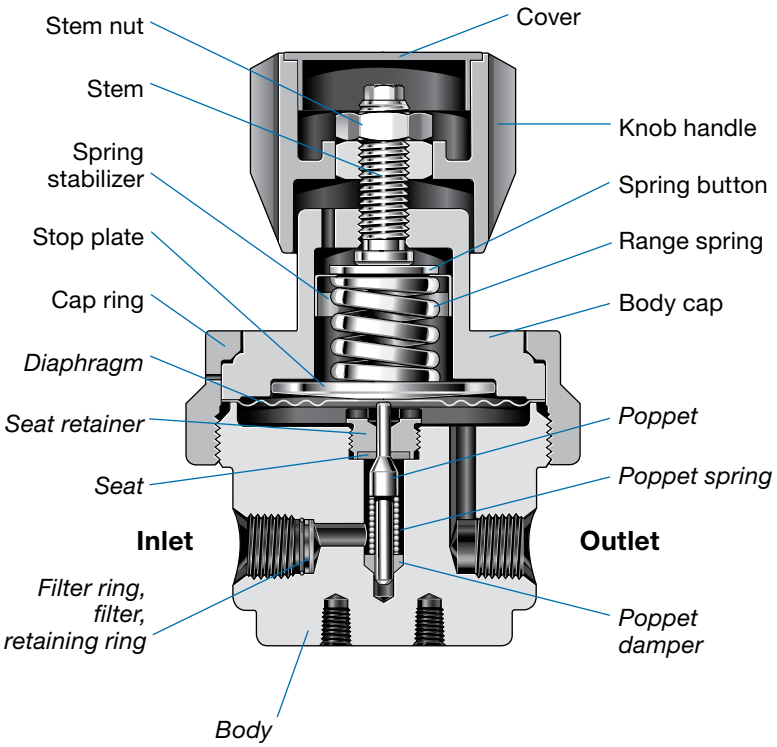
Weight

- 4.0 lb (1.8 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	Zinc-plated steel
Spring stabilizer①	301 SS
Range spring	316 SS or zinc-plated steel, depending on configuration
Stem, stem nut, cap ring, stop plate, body cap, panel nuts②	316 SS
Nonwetted lubricant	Hydrocarbon-based
Body, seat retainer, filter, retaining ring	*316 SS*
Seat	*PCTFE or PEEK*
Diaphragm,③ poppet spring	*Alloy X-750*
Poppet	*S17400 SS*
Poppet damper, filter ring	*PTFE*
Wetted lubricant	*PTFE-based*

Wetted components listed in *italics*.

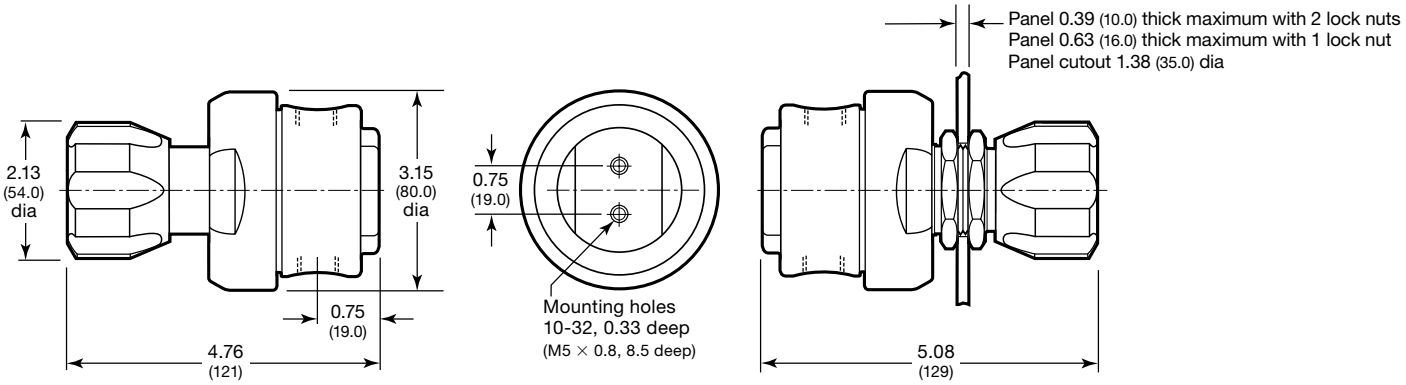
① Not required in all configurations.

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 KLF 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
KLF	1	B	C	F	4	1	2	A	2	0	0	0	0

4 Body Material

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

5 Pressure Control Range

B = 0 to 2.0 psig (0 to 0.13 bar)①
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)

① Available with 15 psig (1.0 bar) maximum inlet pressure only.

6 Maximum Inlet Pressure①

C = 15 psig (1.0 bar)②
F = 100 psig (6.8 bar)
J = 500 psig (34.4 bar)
L = 1000 psig (68.9 bar)
P = 3000 psig (206 bar)③
R = 3600 psig (248 bar)④

① For better resolution and control, select a pressure that closely matches system pressure.
② Available with 0 to 2.0 psig (0 to 0.13 bar) pressure control range only.
③ Available for regulators assembled with CGA cylinder connection or inlet hose only.
④ Not available for regulators assembled with CGA cylinder connection or inlet hose.

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 Material

1 = PCTFE
2 = PEEK

10 Flow Coefficient (C_v)

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

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 connection

For CGA cylinder connection options, see page 53.

15 Gauges

0 = No gauges

For inlet and outlet gauge options, see page 54.

16 Options

0 = No options
3 = 3 ft, 1/4 in. FM series metal flexible hose, 1/4 in. female NPT inlet①
4 = 3 ft, 1/4 in. TH series PTFE-lined, stainless steel braided hose, 1/4 in. female NPT inlet①

For more information about hoses, see page 56.

① Hoses are not available for ASTM G93 Level E-cleaned regulators.