

High-Sensitivity, Spring-Loaded Back-Pressure Regulators—LBS4 Series

Features

- Diaphragm sensing
- Bottom mounting and panel mounting

Options

- NACE MR0175/ISO 15156-compliant model
- Special cleaning to ASTM G93 Level C



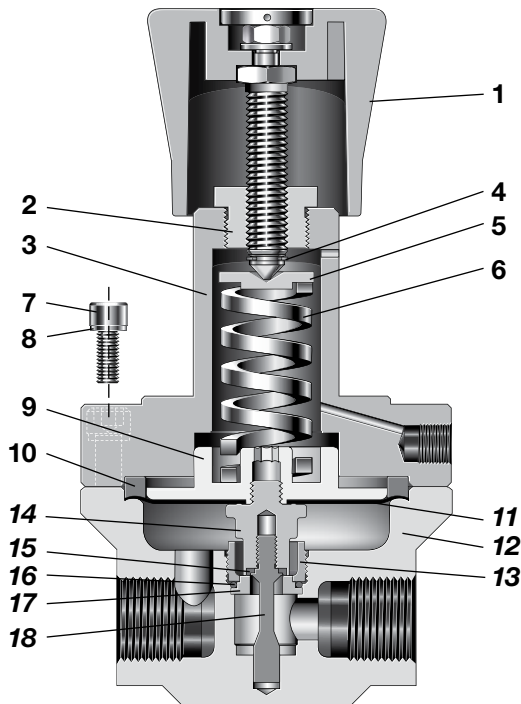
Technical Data

Series	Maximum Inlet Pressure psig (bar)	Maximum Inlet Control Pressure psig (bar)	Sensing Type	Temperature Range °F (°C)	Flow Coefficient (C _v)	Seat Diameter in. (mm)	Inlet and Outlet Connection	Gauge Connection	Weight lb (kg)
LBS4	507 (35.0)	290 (20.0)	Diaphragm	-4 to 176 (-20 to 80) See Pressure-Temperature Ratings , page 60.	1.3	0.31 (8.0)	1/2 in. NPT	1/4 in. NPT	5.7 (2.6)

See pages 72 and 72 for flow data.

Materials of Construction

LBS Series Regulator with Soft Seat



Component	Material / Specification
1 Knob assembly with adjusting screw, nuts	Blue ABS with A2-70
2 Spring housing cover	316L SS / A479 or EN10088
3 Spring housing	
4 C-ring	A2
5 Spring guide	316L SS / A479 or EN10088
6 Set spring	50CRV4
7 Cap screw	A4-80
8 Washer	A2
9 Bottom spring guide	316L SS / A479 or EN10088
10 Clamp ring	
11 Diaphragm	<i>PTFE or 316L SS</i>
12 Body	316L SS / A479 or EN10088
13 Seat retainer	
14 Poppet housing	
15 Seat seal	<i>FKM, FFKM, EPDM, or nitrile</i>
16 O-ring	<i>PTFE</i>
17 Seat	316L SS / A479 or EN10088
18 Poppet	431 SS / A276

Wetted lubricants: Silicone-based, synthetic hydrocarbon-based

Wetted components listed in italics.

Gauge plugs (not shown): 431 SS / A276.

Flow Data

The graphs illustrate the change in inlet or outlet pressure as the flow rate increases. For more flow curve information, contact your authorized Swagelok representative.

LBS4 Series

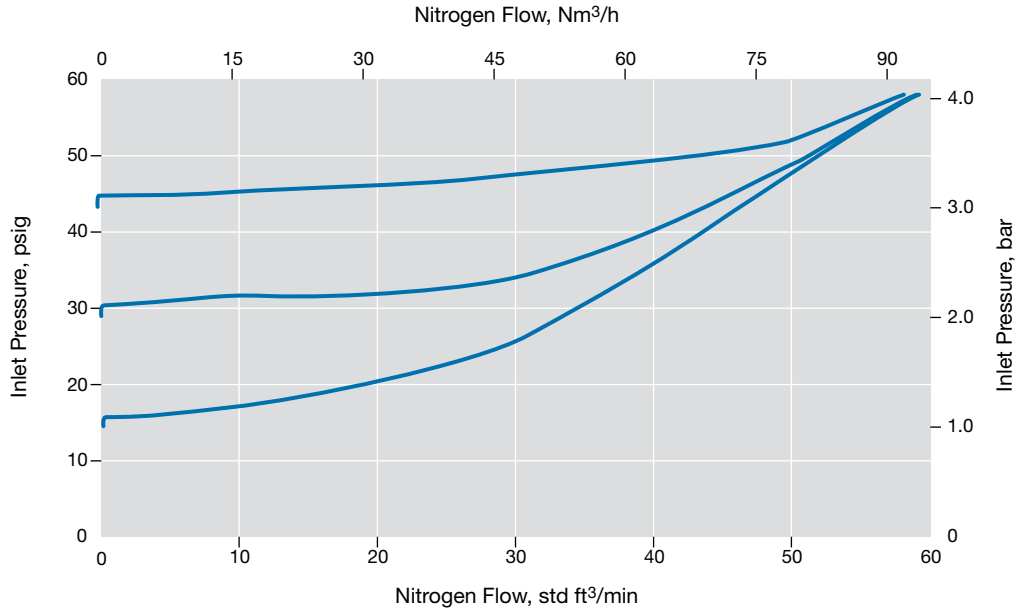
Flow Coefficient: 1.3

Maximum Inlet Pressure: LBS4—507 psig (35.0 bar)

Inlet Pressure Control Range: 0 to 43 psig (0 to 3.0 bar)

Pressure Control Range

— 0 to 43 psig (0 to 3.0 bar)



LBS4 Series

Flow Coefficient: 1.3

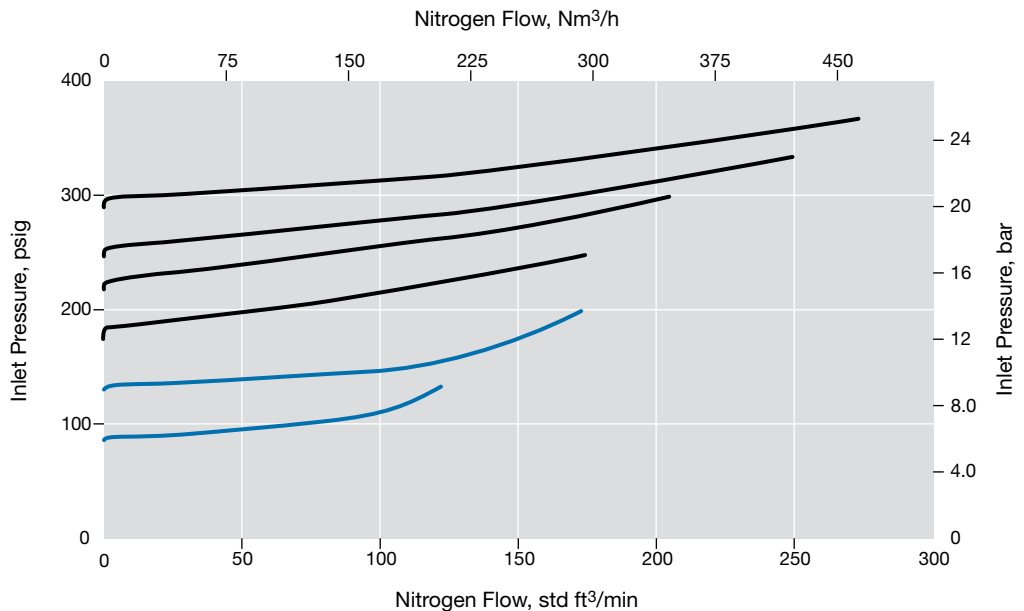
Maximum Inlet Pressure: LBS4—507 psig (35.0 bar)

Inlet Pressure Control Range: 0 to 290 psig (0 to 20.0 bar)

Pressure Control Range

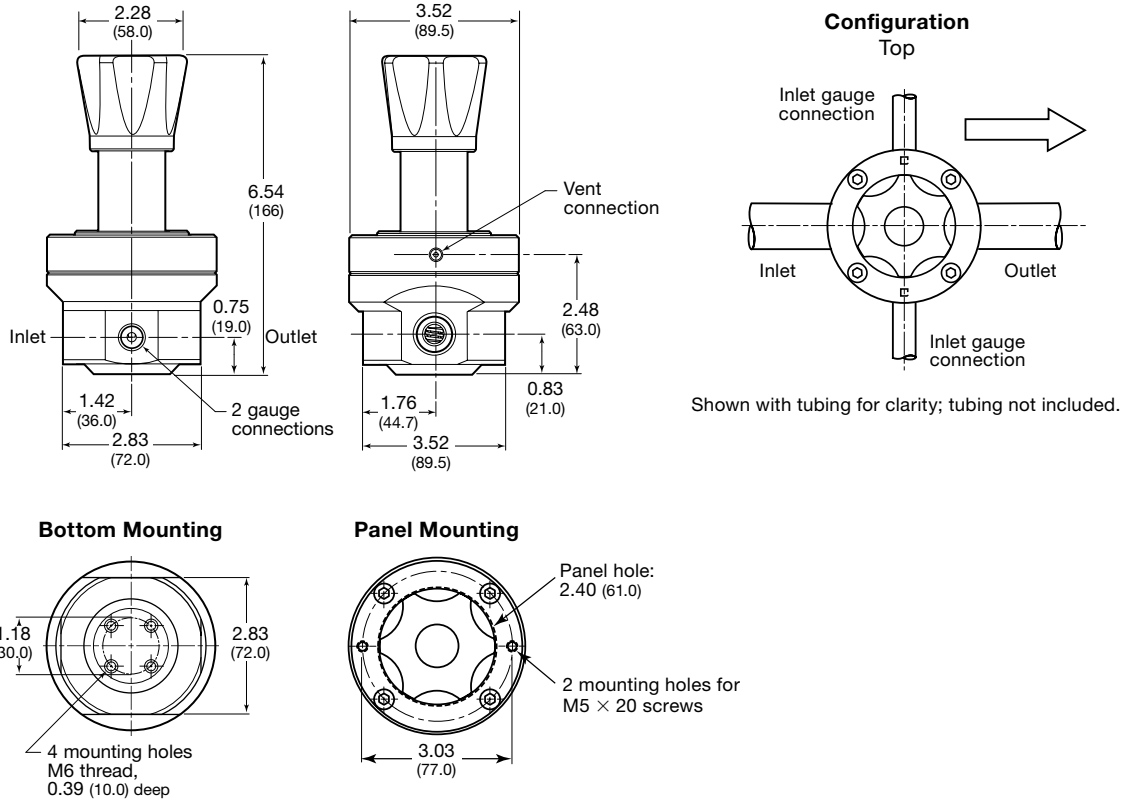
— 0 to 290 psig (0 to 20.0 bar)

— 0 to 130 psig (0 to 9.0 bar)



Dimensions

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



Ordering Information

Build an LBS4 series regulator ordering number by combining the designators in the sequence shown below.

1 **2** **3** **4** **5** **6** **7** **8**
LBS N4 - 02 - 1 - T T V - N

1 Series

LBS = 507 psig (35.0 bar) maximum inlet pressure

2 Inlet / Outlet

N4 = 1/2 in. female NPT

3 Body Material

02 = 316L SS

4 Pressure Control Range

1 = 0 to 43 psig (0 to 3.0 bar)
2 = 0 to 130 psig (0 to 9.0 bar)
3 = 0 to 290 psig (0 to 20.0 bar)

5 Seal Material

T = PTFE

6 Diaphragm

T = PTFE
M = 316L SS: only for 0 to 43 psig (0 to 3.0 bar) and 0 to 130 psig (0 to 9.0 bar) pressure control ranges

7 Seat Seal Material

V = Fluorocarbon FKM
N = Nitrile
E = EPDM
F = FFKM

8 Options

N = NACE MR0175/ISO 15156
G93 = ASTM G93 Level C-cleaned