Back-Pressure, Spring-Loaded Regulators—BS Series

The BS series back-pressure regulators are suitable for most gases and liquids. The BS series regulators feature a choice of sensing types (diaphragm or piston), and seat and seal materials to accommodate a variety of pressure, temperature, and flow conditions.

The BS series regulators are available in sizes from 1/4 to 1 1/2 in. with a choice of threaded or flange end connections.

The BSH series regulators are high-pressure versions of the BS series regulators, and the LBS series are low-pressure, high-accuracy versions of the BS series regulators.

The BS series regulators are available with several options, including a variety of gauge connection configurations, antitamper, special cleaning to ASTM G93 Level C, and NACE MR0175/ISO 15156-compliant models.

Features

- Spring-loaded pressure control
- Diaphragm or piston sensing types
- Blue knob or screw adjustment
- 316L SS materials of construction for corrosion resistance
- Maximum inlet pressure rating: 507 to 10 150 psig (35.0 to 700 bar)
- Inlet control pressure range: Up to 0 to 10 150 psig (0 to 700 bar)

BS(H)2

BS(H)4, 6, 8

BS(H)10, 15

LBS4

Pressure-Temperature Ratings

Seal Material	PCTFE		PEEK			Fluorocarbon FKM①, Nitrile, EPDM, FFKM②	
Series	BS2 BS(H)4 BS(H)6, 8	BSH10 BSH15	BSH2	BS2 BS(H)4 BS(H)6, 8	BSH10 BSH15	BS10 BS15	LBS4
Temperature °F (°C)	Maximum Inlet Pressure / Working Pressure psig (bar)						
–4 (–20) to 95 (35)	5800 (400)	3625 (250)	10 150 (700)	5800 (400)	3625 (250)	1015 (70.0)	507 (35.0)
149 (65)	3987 (275)						
176 (80)	1812 (125)						

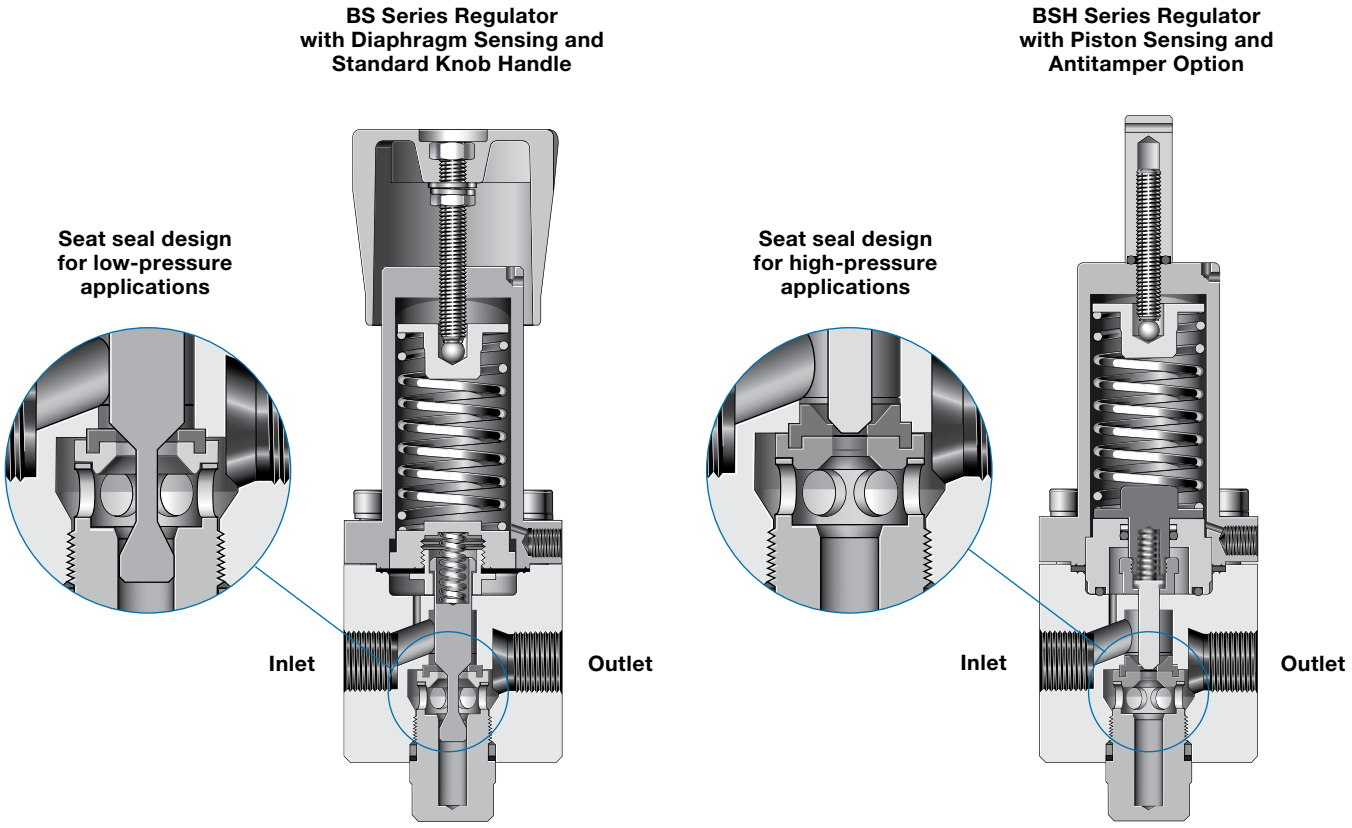
① Regulators with fluorocarbon FKM seat seal / O-ring materials limited to 5°F (–15°C).

② Regulators with FFKM seat seal / O-rings materials limited to 14°F (–10°C).

Technical Data—Performance Ratings

Series	Maximum Inlet Pressure psig (bar)	Maximum Inlet Control Pressure psig (bar)	Flow Coefficient (C_v)	Sensing Type	Flow Data on Page
BS2	5 800 (400)	5 075 (350)	0.10	Piston	63
BSH2	10 150 (700)	10 150 (700)			
BS4	1 015 (70.0)	406 (28.0) diaphragm 5 220 (360) piston	1.84 (0.39 in. [10.0 mm] seat) 0.49 (0.19 in. [5.0 mm] seat)	Diaphragm or piston	66
BSH4	5 800 (400)				
BS6	1 015 (70.0)	203 (14.0) diaphragm 5 220 (360) piston	1.95 (0.39 in. [10.0 mm] seat) 0.49 (0.19 in. [5.0 mm] seat)	Diaphragm or piston	66
BSH6	5 800 (400)				
BS8	1 015 (70.0)	203 (14.0) diaphragm 5 220 (360) piston	2.07 (0.39 in. [10.0 mm] seat) 0.49 (0.19 in. [5.0 mm] seat)	Diaphragm or piston	67
BSH8	5 800 (400)				
BS10	1 015 (70.0)	290 (20.0) diaphragm 3 625 (250) piston	3.84	Diaphragm or piston	—
BSH10	3 625 (250)				
BS15	1 015 (70.0)	290 (20.0) diaphragm 3 625 (250) piston	7.3	Diaphragm or piston	—
BSH15	3 625 (250)				
LBS4	507 (35.0)	290 (20.0)	1.3	Diaphragm	72

Back-Pressure, Spring-Loaded Regulators—BS Series



Technical Data—Design

Series	Seat Diameter in. (mm)	Inlet and Outlet Connections	Gauge Connection	Weight (Without Flanges) lb (kg)	More Information on Page
BS2 BSH2	0.087 (2.2)	1/4 in. NPT	1/4 in. NPT	3.3 (1.5)	62
BS4 BSH4	0.39 (10.0) or 0.19 (5.0)	1/2 in. NPT, ISO/BSP parallel thread, EN or ASME flanges	1/4 in. NPT	7.7 (3.5)	65
BS6 BSH6	0.39 (10.0) or 0.19 (5.0)	3/4 in. NPT, ISO/BSP parallel thread, EN or ASME flanges	1/4 in. NPT	9.9 (4.5)	65
BS8 BSH8	0.39 (10.0) or 0.19 (5.0)	1 in. NPT, ISO/BSP parallel thread, EN or ASME flanges	1/4 in. NPT	9.9 (4.5)	65
BS10 BSH10	0.53 (13.5)	1 in. NPT, ISO/BSP parallel thread, EN or ASME flanges	1/4 in. NPT or ISO/BSP parallel thread	16.7 (7.6)	69
BS15 BSH15	0.75 (19.0)	1 1/2 in. NPT, ISO/BSP parallel thread, EN or ASME flanges	1/4 in. NPT or ISO/BSP parallel thread	22.0 (10)	69
LBS4	0.31 (8.0)	1/2 in. NPT	1/4 in. NPT	5.7 (2.6)	71