

BP-3 Series

Adjustable Back Pressure Regulators

Introduction

The BP-3 Series is designed for either liquid or gas service in instrumentation systems. Similar in design to pressure reducing control regulators which regulate outlet pressures, back pressure regulators control the inlet pressure. The many features of this regulator, particularly its precise throttling action, make it ideal for this type of application. In low flow or closed systems, over-pressures often are released by pressure relief valves. This type of relief is on-off with no throttling control. In contrast to relief valves, the back pressure control regulator with its throttling action substantially improves system pressure regulation.



pressure regulators

Typical Applications

- Analytical instrumentation
- Gas and liquid sampling
- Petrochemical industry
- Air compressors
- Research labs
- Pilot plants

Technical Data

CONSTRUCTION	316L stainless steel
ADJUSTABLE PRESSURE CONTROL RANGES	0-6, 0-10, 0-25, 0-50, 0-100, 0-250, 0-500, 0-750 & 0-1000 psig
OPERATING TEMPERATURE	-40° F to +500° F (-40° C to +260° C)
C _v COEFFICIENT	0.2
OPTIONAL VARIOUS ORIFICE SIZES	0.005, 0.01, 0.025, 0.03, 0.04, 0.05, 0.06, 0.095, 0.12, 0.24, and 0.3

Features & Benefits

- Only 316L stainless steel and PTFE in flow stream
- Bubble tight shutoff
- Gas or liquid service

Options

- Wetted materials of construction brass, Monel®, Hastelloy® C-276, titanium
- Extra ports
- Panel mount (requires a 1³/₈" mounting hole)
- High purity connections
- Pressure gauges

Adjustable Back Pressure Regulators

Maximum Temperature and Control Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM CONTROL RANGE
Viton®	250° F (121° C)	@	250 psig (1.71 MPa)
Kalrez®	300° F (148° C)	@	250 psig (1.72 MPa)
High Density PTFE	200° F (93° C)	@	500 psig (5.16 MPa)
Polyimide	500° F (260° C)	@	1000 psig (6.88 MPa)
PEEK™	500° F (260° C)	@	1000 psig (6.88 MPa)

Note: Temperatures in excess of 175° F (79° C) require the use of a metal knob or the tamper proof option.

To Order, contact your local Distributor Link below:
www.goreg.com/distributor/index.htm

Verify that your chosen part number is valid using the GO Wizards at
www.goreg.com/products/matrix/index.htm

How to Order

For additional configurations, consult the factory. **Standard items in bold.**

BP3 – 1 A 1 1 D 5 E 1 1 1 A

Body Material

- 1** 316L stainless steel, stainless steel backing
- 2 Brass, stainless steel backing
- 4 Monel®, Inconel® backing
- 5** Hastelloy B®, Inconel® backing
- 6 Hastelloy® C-276, Inconel® backing
- C 316L stainless steel, Inconel® backing

Port Configuration

A Standard (body "A")
See pg. 28 for port locations.

Process Port Types

- 1** ¼" FNPT (¼" FNPT gauge ports)
- 2 ¼" Tube stub, 2" long (¼" FNPT gauge ports)
- 3 ¼" Sch 80 Pipe stub, 4" long (¼" FNPT gauge ports)
- 4** ⅜" FNPT (¼" FNPT gauge ports)
- 6 ½" Tube stub, 2" long (¼" FNPT gauge ports)
- 0 ⅛" FNPT (⅛" FNPT gauge ports)
- K ¼" Sch 40 Pipe stub, 4" long (¼" FNPT gauge ports)

Cavity Finish

1 < 25 Ra

Actuator Material

- B** CF PTFE
- C** Polyimide (metal knob standard)
- D** Viton®
- I** High density PTFE
- K** Kalrez®
- Q** PEEK™

Options

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

Cap Assembly

- 1** Standard
- 4** Panel mount
- 8 Tamper proof
- C Metal knob, panel mount
- E** Tamper proof, panel mount
- G Metal knob
- H ¼" FNPT dome loaded
- L BP-6 Top Works, stainless steel
- O BP-6 Top Works, panel mount, stainless steel

Diaphragm Facing/Backing Material

- 1** PTFE / metal backing
- 6 Tefzel® ring / metal backing
- 7 Viton® / metal backing
- 0 PTFE / Hastelloy® C-276

Diaphragm Type

- 1** Standard diaphragm
- 4 Vacuum assist spring, standard diaphragm

Control Range

- B** 0–6 psig
- C 0–10 psig
- D** 0–25 psig
- E 0–50 psig
- G 0–100 psig
- I 0–250 psig
- J 0–500 psig

Flow Coefficient (C_v)

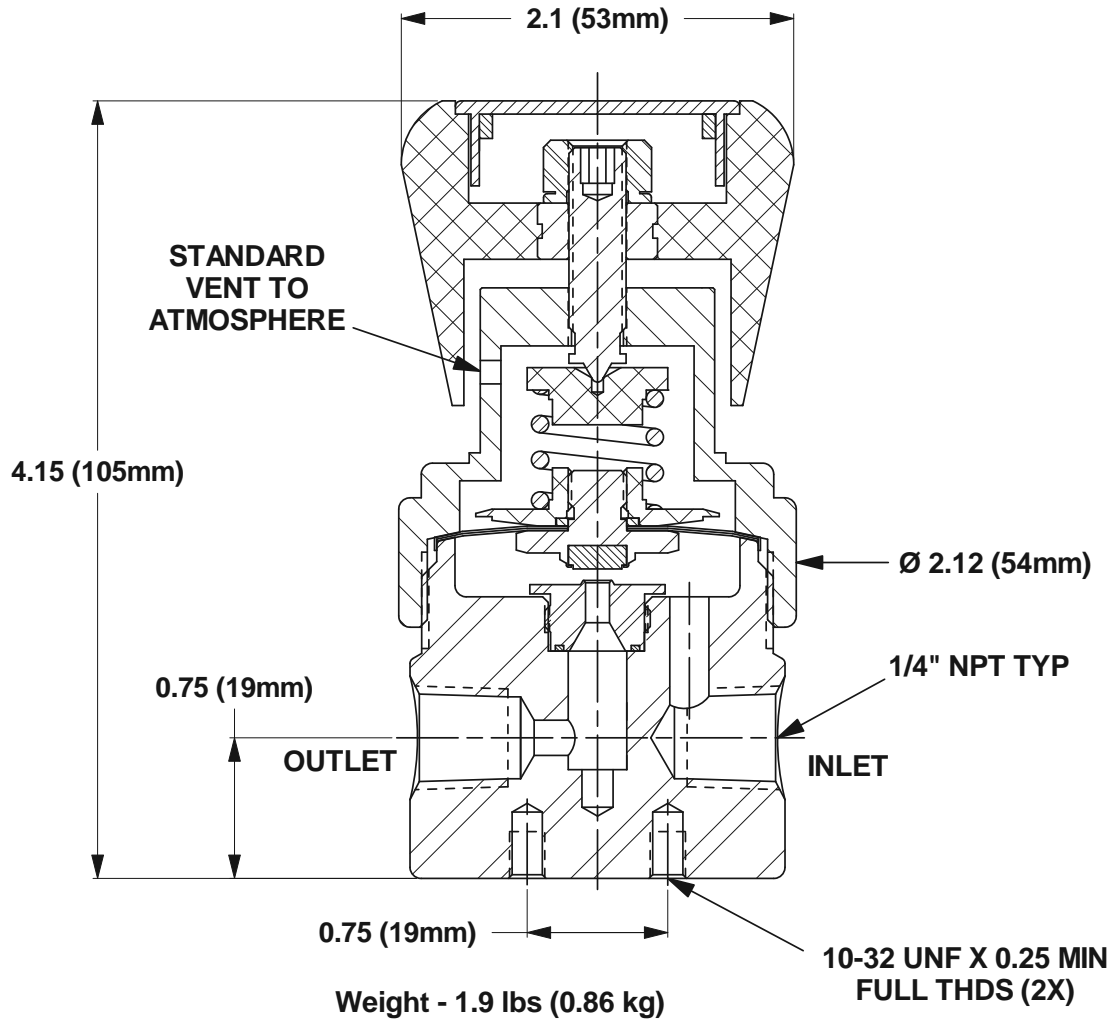
5 0.2

NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at www.goreg.com or contact the factory.

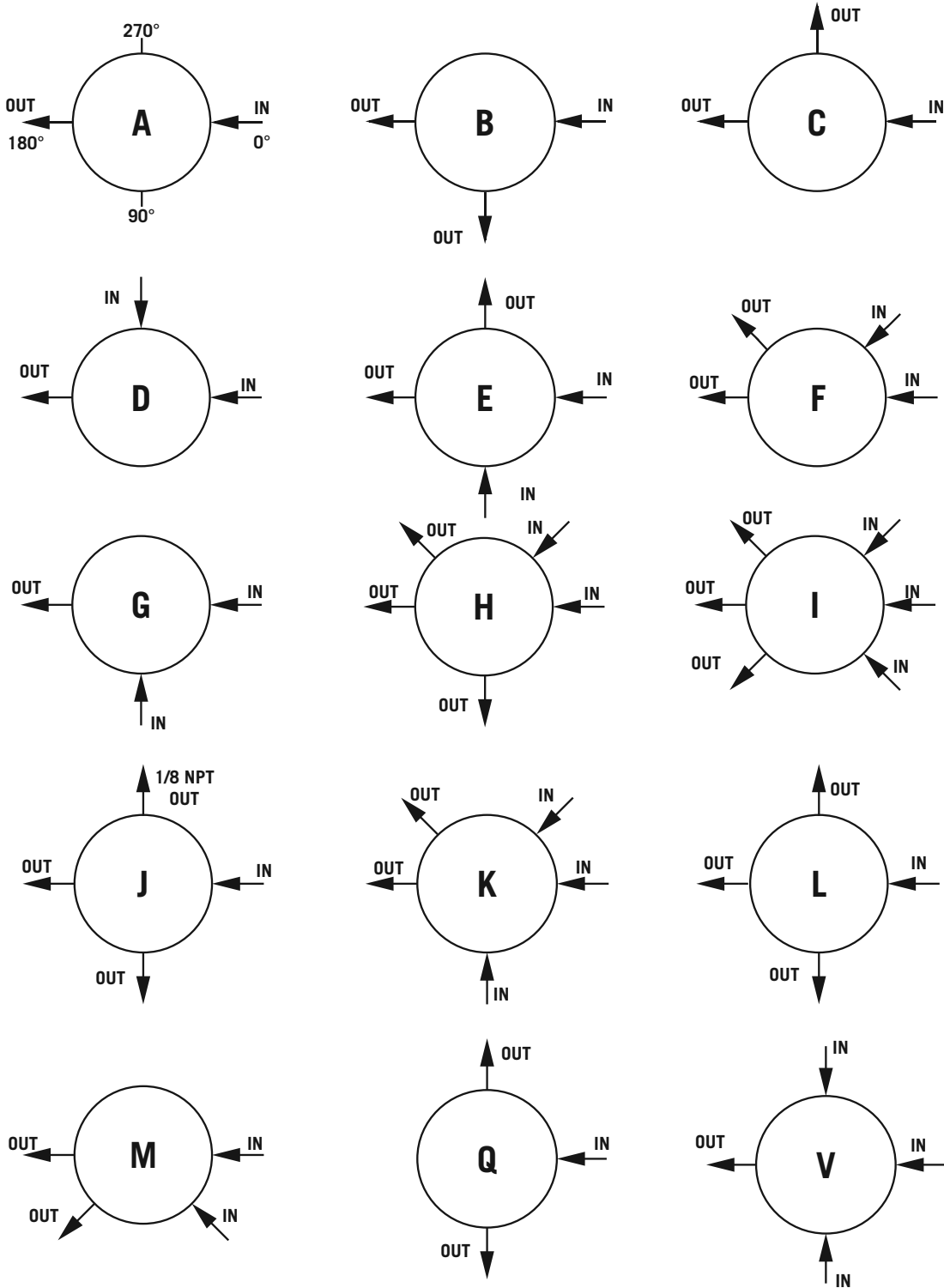
For flow curve charts, visit <http://www.goreg.com>.

Adjustable Back Pressure Regulators

Outline and Mounting Dimensions



Port Locations (Back Pressure Regulators)

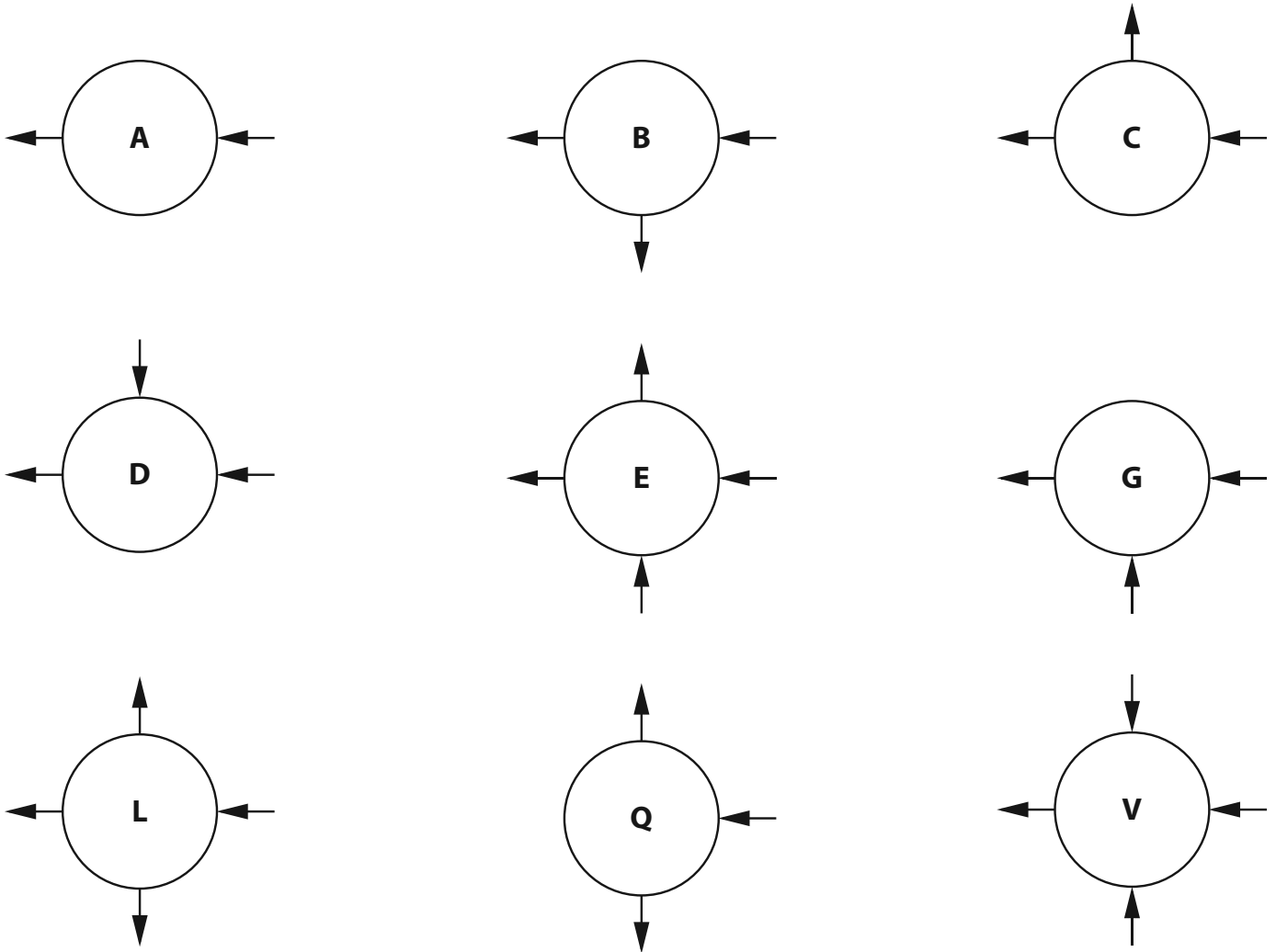


LOCATION OF PORTS FROM TOP VIEW

Porting Options for LB-1 Back Pressure Valve

Arrow pointing toward body is inlet, arrow pointing away from body is outlet.

Location of ports from top view



SURFACE MOUNT STYLES
requires "Surface Mount" port type connections

#1

Center port is outlet, all other ports are inlets.
Location of ports from bottom view

The diagram shows a square valve body with four small circles at the corners representing ports. Two larger circles are positioned in the center, representing a center port. The label #1 is centered below the diagram.