

## BP-60 Series

High Pressure Back Pressure Regulators

### Introduction

The BP-60 Series is the counterpart of the PR-50 pressure reducing series for systems that are higher in pressure and low to moderate flows. This regulator has a diaphragm for maximum sensitivity in providing relief at high pressures. The PTFE stainless seat assembly provides good shutoff in most applications. For economy purposes the cap assembly and knob are of aluminum construction as in the PR-50 companion unit. Good sensitivity and a wide selection of control ranges make this regulator an excellent selection in many research and pilot plant facilities.



### Typical Applications

- Sampling Systems
- Pilot plants
- Research labs

### Technical Data

CONSTRUCTION	316L stainless steel or brass (alloy 360) Monel® and Hastelloy® C-276 (optional)
ADJUSTABLE PRESSURE CONTROL RANGES	0–500, 0–1000 and 0–2000 psig
OPERATING TEMPERATURE	–40° F to +350° F (–40° C to +175° C)
C <sub>v</sub> COEFFICIENT	0.04
INLET/OUTLET CONNECTIONS	¼" FNPT

### Features & Benefits

- Designed for moderate flow applications
- Diaphragm sensing with nylon, PTFE or stainless steel diaphragm
- Bubble tight shutoff

### Options

- Various Cv's available – 0.005, 0.01, 0.025, 0.09
- Panel mounting
- ¾" FNPT, AN 10050-4, SAE J514 or MS 33649 connections

### GO Regulator

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# High Pressure Back Pressure Regulators

## Maximum Temperature and Control Pressures

### Nylon Diaphragm Backing

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM CONTROL RANGE
Tefzel®	175° F (80° C)	@	1000 psig (6.89 MPa)
PTFE	175° F (80° C)	@	1000 psig (6.89 MPa)
Polyimide	175° F (80° C)	@	2000 psig (13.76 MPa)
PEEK™	175° F (80° C)	@	2000 psig (13.76 MPa)

### PTFE Diaphragm Backing

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM CONTROL RANGE
Tefzel®	175° F (80° C)	@	2000 psig (13.76 MPa)
PTFE	175° F (80° C)	@	2000 psig (13.76 MPa)
Polyimide	350° F (176° C)	@	2000 psig (13.76 MPa)
PEEK™	350° F (176° C)	@	2000 psig (13.76 MPa)

## How to Order

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

**BP60 – 1 A 1 1 C E J 1 2 1**

**Body Material**

- 1** 316L stainless steel
- 2 Brass
- 4 Monel®
- 6 Hastelloy® C-276

**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)
- 4** ⅜” FNPT (¼” FNPT gauge ports)
- 6** ½” Tube stub, 2” long (¼” FNPT gauge ports)
- 7** AN 10050-4 (¼” FNPT gauge ports)
- 8** SAE J514 (¼” FNPT gauge ports)
- 9** M/S 33649 (¼” FNPT gauge ports)

**Cavity Finish**

- 1** < 25 Ra
- 5** < 25 Ra with 10-32 mounting holes

**Actuator Material**

- A** Tefzel®
- B** CF PTFE
- C** Polyimide
- I** PTFE
- Q** PEEK™

**Cap Assembly**

- 1** Standard, aluminum
- 4 Panel mount, aluminum
- 5 Captured vent, aluminum

**Diaphragm Facing/Backing Material**

	FACING	BACKING	O-RING	ACTUATOR
<b>1</b>	SS	Nylon	Viton®	SS
<b>2</b>	none	Nylon	PTFE	SS
<b>7</b>	Inconel®	Nylon	Viton®	Monel®
<b>8</b>	Inconel®	Nylon	PTFE	Monel®
<b>0</b>	Hastelloy® C-276	Nylon	PTFE	Hastelloy® C-276
<b>A</b>	Hastelloy® C-276	Nylon	Viton®	Hastelloy® C-276
<b>Q</b>	SS	PTFE	PTFE	SS
<b>S</b>	SS	PTFE	PTFE/ Kalrez®	SS (max. 450° F)
<b>T</b>	SS	PTFE	Kalrez®	SS (max. 450° F)
<b>V</b>	Inconel®	PTFE	PTFE	Monel®
<b>W</b>	Hastelloy® C-276	PTFE	PTFE	Hastelloy® C-276

**Diaphragm Type**

- 1** Standard diaphragm

**Control Range**

- J** 1–500 psig
- K** 1–1000 psig
- L** 1–2000 psig

**Flow Coefficient (C<sub>v</sub>)**

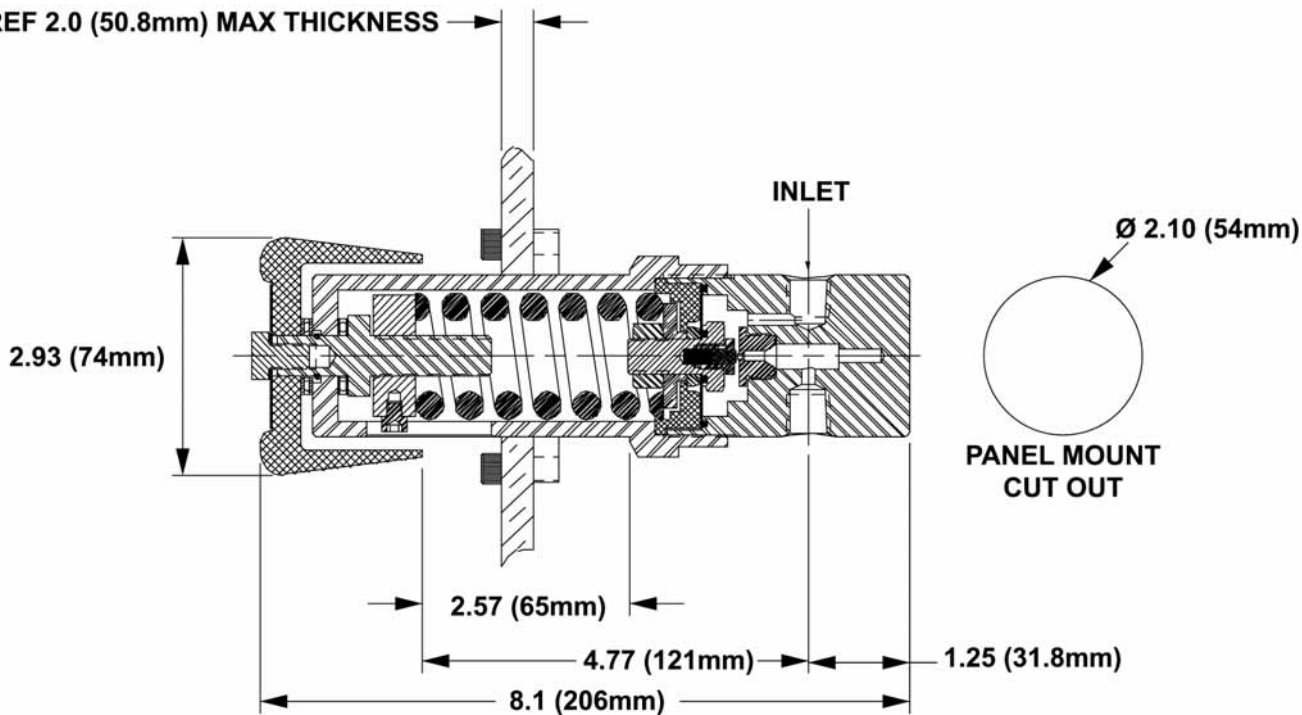
- C** 0.025
- E** **0.04**
- G** 0.09
- I** 0.005
- J** 0.01

**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](http://www.goreg.com) or contact the factory.

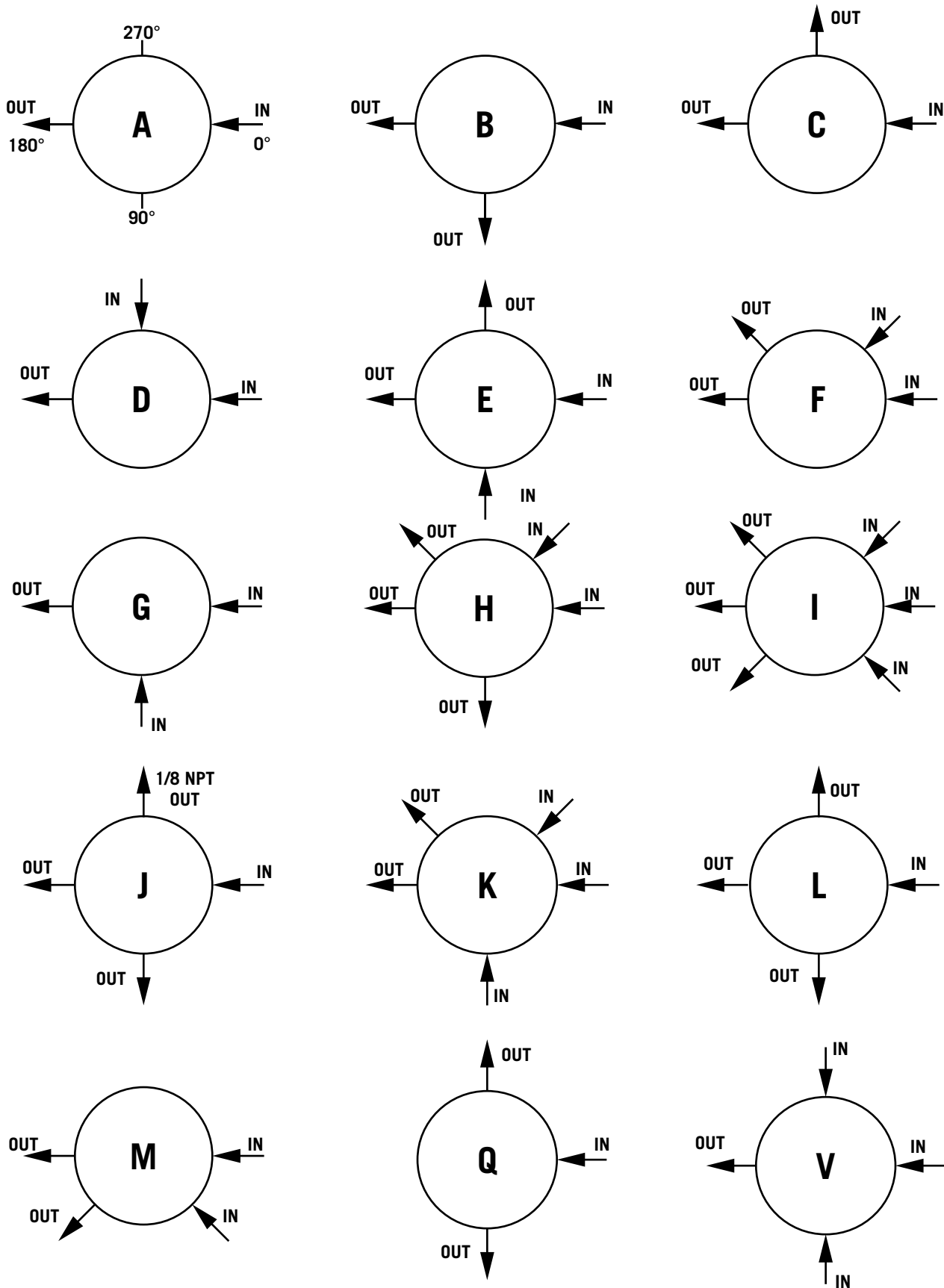
For flow curve charts, visit <http://www.goreg.com>.

# High Pressure Back Pressure Regulators

## Outline and Mounting Dimensions



# Port Locations (Back Pressure Regulators)

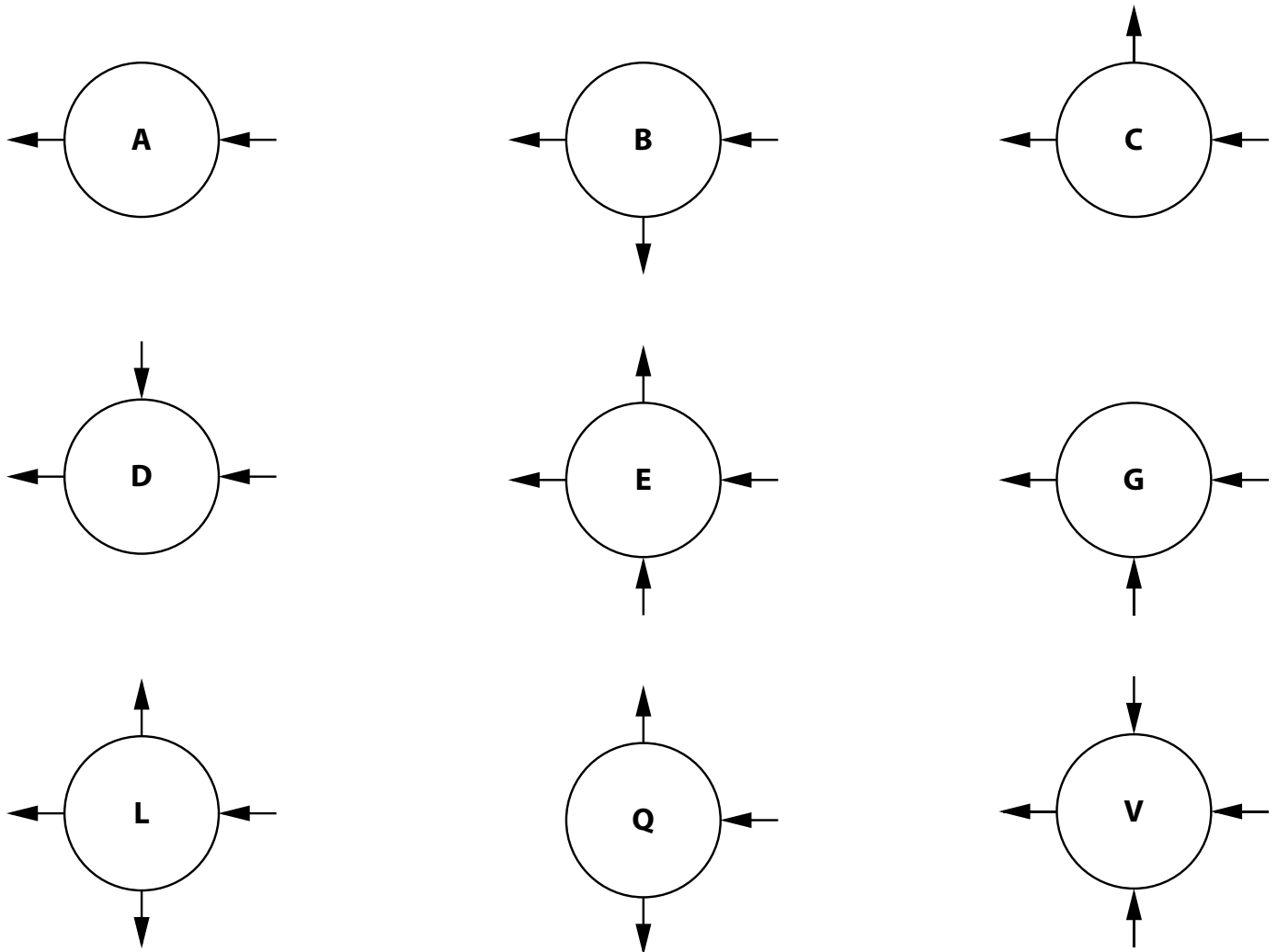


LOCATION OF PORTS FROM  
TOP VIEW

# Porting Options for LB-1 Back Pressure Valve

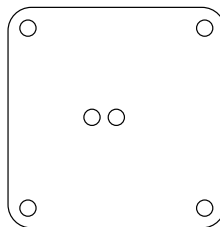
Arrow pointing toward body is inlet, arrow pointing away from body is outlet.

## 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