

BP-60 Series*

High Pressure Back Pressure Regulator



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 Teflon® 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.

* Replaces the BPR9A Series.

Applications

- Pilot plants
- Analytical instrumentation
- Compressors
- Pump bypass
- Pressure vessel protection
- Hydrostatic testing

Features & Specifications

- Adjustable pressure control ranges of 0–500 psig, 0–1,000 psig and 0–2,000 psig
- 316L stainless steel or brass (alloy 360) body construction
- Designed for moderate flow applications with standard Cv flow coefficient of 0.04
- Diaphragm sensing with nylon, Teflon®, or stainless steel diaphragm
- Operating temperatures of –40° F to +350° F (–40° C to +176° C)
- Bubble-tight shutoff
- Inlet/outlet connections ¼" FNPT

Options

- Option Cv's available: 0.025, 0.005, 0.01
- Panel mounting
- ¾" FNPT, AND10050–4, SAE J514 or MS33649 connections
- Monel® and Hastelloy® C body construction

Maximum Temperature & Control Pressures

Nylon Diaphragm Backing

Seat Material	Maximum Temperature	@	Maximum Control Range
Tefzel®	175° F (80° C)	@	1,000 psig (6.89 MPa)
Teflon®	175° F (80° C)	@	1,000 psig (6.89 MPa)
Polyimide	175° F (80° C)	@	2,000 psig (13.79 MPa)
PEEK™	175° F (80° C)	@	2,000 psig (13.79 MPa)

Teflon® Diaphragm Backing

Seat Material	Maximum Temperature	@	Maximum Control Range
Tefzel®	175° F (80° C)	@	2,000 psig (13.79 MPa)
Teflon®	175° F (93° C)	@	2,000 psig (13.79 MPa)
Polyimide	350° F (176° C)	@	2,000 psig (13.79 MPa)
PEEK™	350° F (176° C)	@	2,000 psig (13.79 MPa)

Circle Seal Controls

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back pressure regulators

BP-3 Series

How to Order

BP60 - 1 A 1 1 I 5 G 1 1 1 C

BODY MATERIALS

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

PORT CONFIGURATION

- A Standard (one inlet & one outlet port)
For more port configurations, see page 13.

PROCESS PORT TYPES

- 1 ¼" FNPT (¼" FNPT gauge ports) (standard)
- 2 ¼" tube (¼" tube gauge ports)
- 4 ⅜" FNPT (¼" FNPT gauge ports)
- 7 AND10050-4 (¼" FNPT gauge ports)
- 8 SAE J514 (¼" FNPT gauge ports)
- 9 MS 33649 (¼" FNPT gauge ports)

SURFACE FINISH/DIAPHRAGM CAVITY

- 1 < 25 Ra (standard)
- 5 < 25 Ra with 10-32 mounting holes

ACTUATOR MATERIALS

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

CAP ASSEMBLY

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

DIAPHRAGM FACING/BACKING MATERIAL

Facing	O-rings	Actuator
<i>Nylon backing</i>		
1 SS	Viton®	SS
2 —	Teflon®	SS
7 Inconel®	Viton®	Monel®
8 Inconel®	Teflon®	Monel®
0 Hastelloy® C	Teflon®	Hastelloy® C
A Hastelloy® C	Viton®	Hastelloy® C
<i>Teflon® backing</i>		
Q SS	Teflon®	SS
S SS	Teflon®/Kalrez®	SS (max. 450° F)
T SS	Kalrez®	SS (max. 570° F)
V Inconel®	Teflon®	Monel®
W Hastelloy® C	Teflon®	Hastelloy® C

DIAPHRAGM TYPE

- 1 Standard

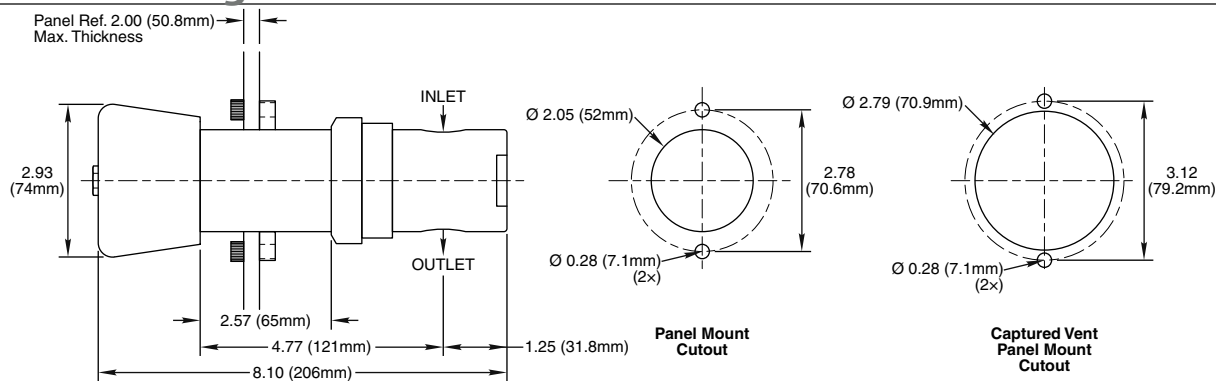
CONTROL RANGE

- J 0-500 psig
- K 0-1,000 psig
- L 0-2,000 psig

FLOW COEFFICIENT (CV)

- C 0.025
- E 0.04 (standard)
- I 0.005
- J 0.01
- G 0.09

Outline & Mounting Dimensions



For Your Safety

It is solely the responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation, and maintenance of these products. Material compatibility, product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.

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